

35mm Ammunition Handbook

**Response to DMOLSD/RFT0016/2014
TDR F-1-3 – Attachment 2**

**LAND 400 Phase 2
Mounted Combat Reconnaissance Capability (MCRC)
MOTS Plus**

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

CONTENTS

SECTION 1: AMMUNITION INTRODUCTION	5
SECTION 2: APDS-T 35MM x 228 AMMUNITION/PMD369	
SECTION 2a: FACT SHEET	63
SECTION 2b: CERTIFICATE	67
SECTION 2c: ARTICLE SAFETY DATA SHEET	71
SECTION 2d: EXTERIOR BALLISTICS DATA	81
SECTION 3: APFSDS-T ...	
SECTION 3a: FACT SHEET	137
SECTION 3b: CERTIFICATE	139
SECTION 3c: ARTICLE SAFETY DATA SHEET	141
SECTION 3d: EXTERIOR BALLISTICS DATA	143
SECTION 4: HEI-T 35MM x 228 AMMUNITION/PMD040	
SECTION 4a: FACT SHEET	145
SECTION 4b: CERTIFICATE	149
SECTION 4c: MATERIAL SAFETY DATA SHEET	153
SECTION 4d: EXTERIOR BALLISTICS DATA	159
SECTION 5: ABM/KETF 35MM x 228 AMMUNITION/PMD330	
SECTION 5a: FACT SHEET	211
SECTION 5b: CERTIFICATE	215
SECTION 5c: MATERIAL SAFETY DATA SHEET	219
SECTION 5d: EXTERIOR BALLISTICS DATA	235
SECTION 6: TP-T 35MM x 228 AMMUNITION/PMD064	
SECTION 6a: FACT SHEET	287
SECTION 6b: CERTIFICATE	291
SECTION 6c: MATERIAL SAFETY DATA SHEET	295
SECTION 6d: EXTERIOR BALLISTICS DATA	311
SECTION 7: TPFDS-T 35MM x 228 AMMUNITION/PMD346	
SECTION 7a: FACT SHEET	313
SECTION 7b: CERTIFICATE	317
SECTION 7c: MATERIAL SAFETY DATA SHEET	321
SECTION 7d: EXTERIOR BALLISTICS DATA SHEET	337

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 1

AMMUNITION INTRODUCTION

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



COMBAT SYSTEMS

RWMS Medium Caliber Ammunition

Ammunition Characteristics, Principles & Performance



Contents

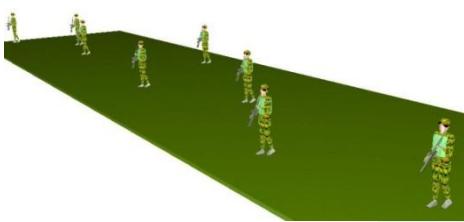
RWMS Ammunition Overview

- Mission
- Training Ammunition
- High Explosive Ammunition
- Air Burst Ammunition
- Frangible Armour Piercing Ammunition
- Armour Piercing Ammunition





RWMS mission

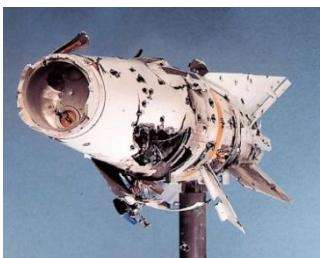


To encounter a wide variation of threats





RWMS mission



High operational effectiveness





RWMS mission overview

Ammunition Characteristics			Effective against:												
Type (Hazard Class)	Muzzle Velocity (m/s)	Ammunition Effect	Troops in the open	Covered Troops	Pick-up incl. Troops	Urban Area	Truck	APC BTR class	IFV BMP 1-2 class	IFV BMP 3 class	MBT (neutralize)	Utility Helicopter / Light Aircraft	Armoured Attack Helicopter	Aircraft	UAV
HE (1.2E)	~1100		Suppression	Suppression											
PELE-T (PEN) (1.2C)	~1100														
KETF (1.2E)	~1100		(AB mode)		(AB mode)	(AB mode)	(PEN mode)	(AB mode)	(PEN mode)		(AB mode)		(AB mode)	(AB mode)	(AB mode)
(F)APDS-T (1.2C)	~1400														
APFSDS-T (1.2C)	~1400														



Training Ammunition

TP(FDS)-T: Target Practice (Frangible Discarding Sabot) - Tracer

Available in:

- 20mm x 128
- 25mm x 137
- 30mm x 173
- 35mm x 228

TP(-T) key features

- Spin stabilised
- In insensitive Munition
- Reduced ricochet
- Trajectory comparable up to 2km to full caliber rounds

Available in:

- 25mm x 137
- 30mm x 173
- 35mm x 228

TPFDS-T key features

- Spin stabilised
- In sensitive Munition
- Frangible Function
- Reduced ricochet
- Trajectory comparable up to 2km to sub caliber rounds

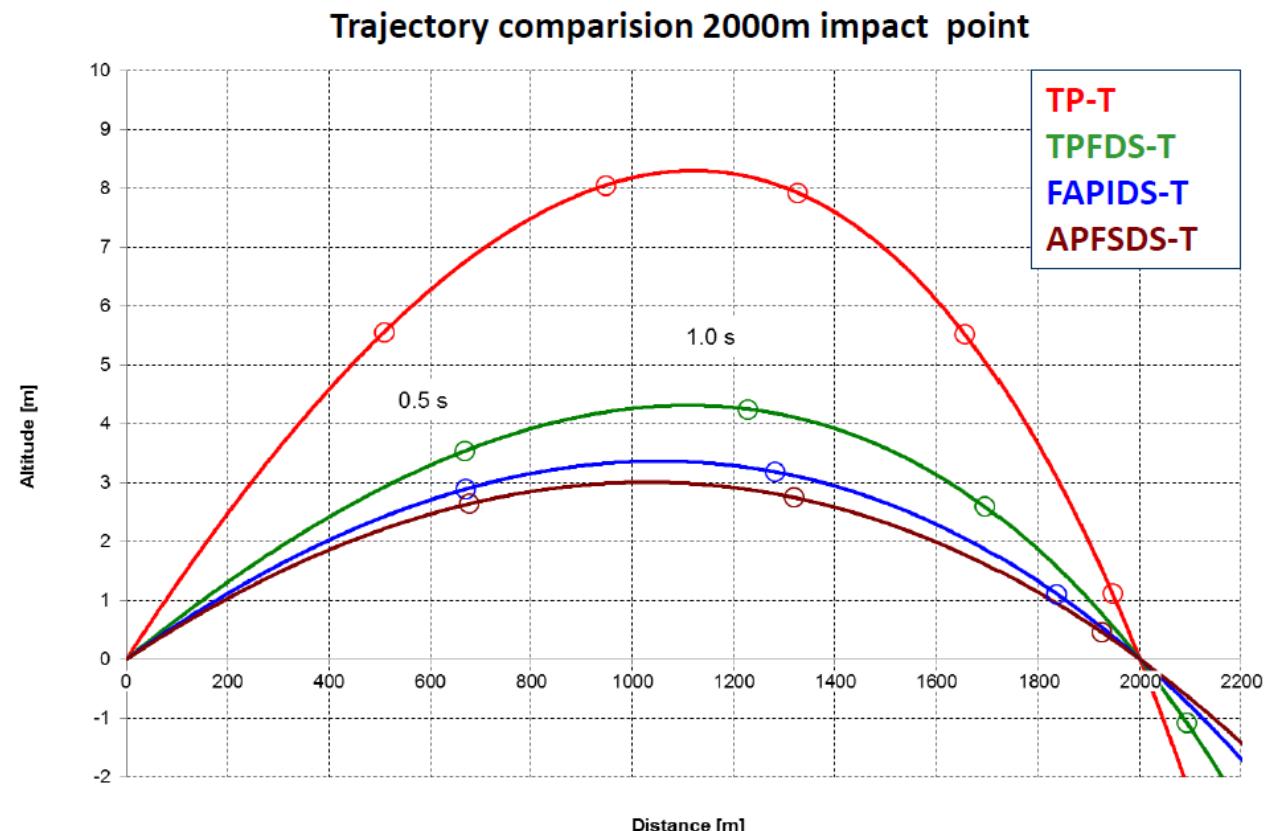




Basic Principles

Main differences full & sub caliber ammunition:

- Sub Caliber with Higher Muzzle Velocity (ca. 1400 m/s) in combination with Shorter Time of Flight due to Lower Drag yields in Higher Hit probability compared to full caliber





Training Ammunition

Key features

- Projectile break-up:

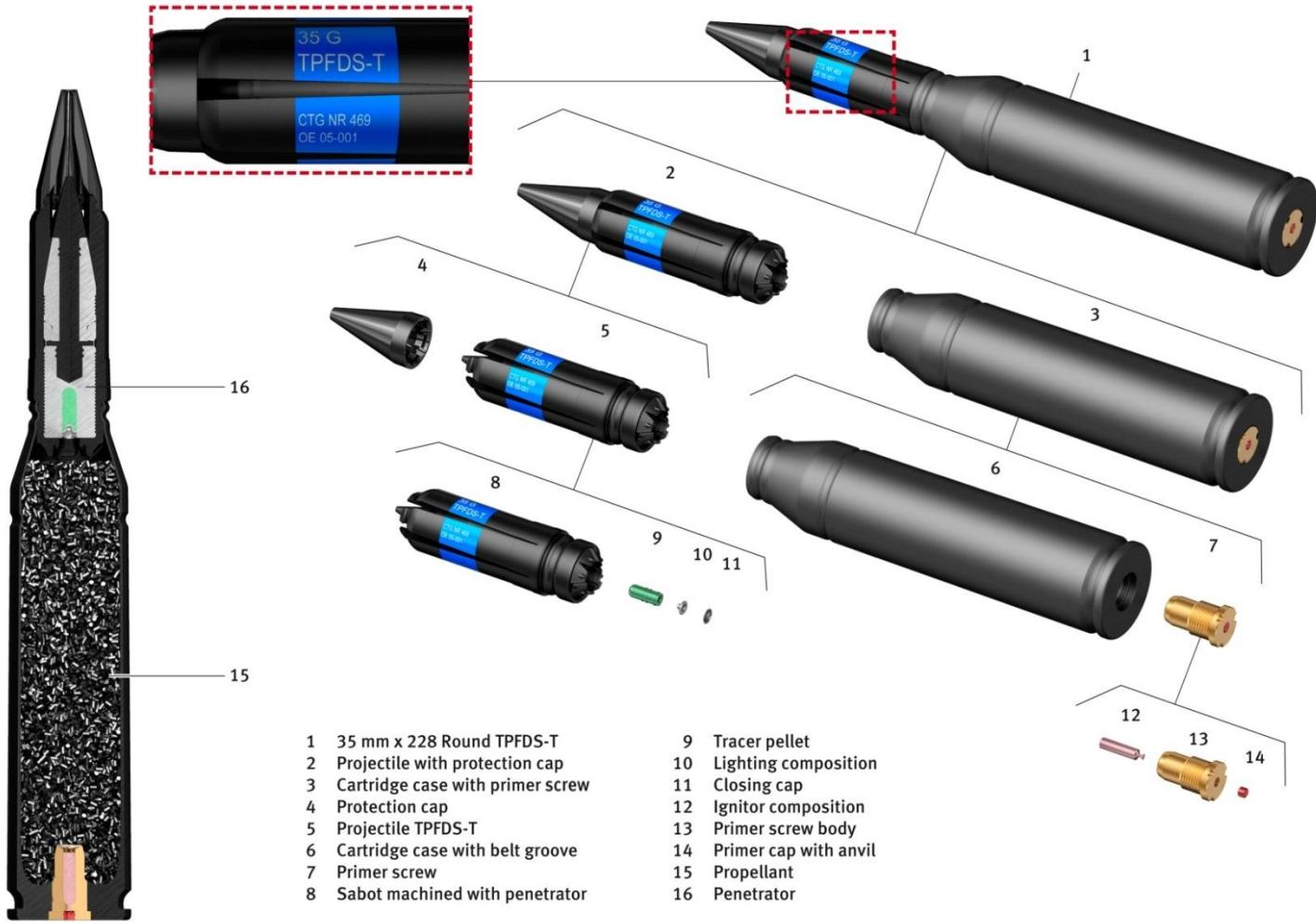
After the break-up of the projectile in several fragments, the tracer continues to burn.





Training Ammunition

35 mm x 228 TPFDS-T





HEI-T ammunition

HEI-T: High Explosive Incendiary - Tracer

Key features

- Full caliber
- Spin stabilised
- Muzzle Velocity (ca. 1100 m/s)
- Projectile with Mechanical Fuze
 - Nr. of fragments: approx. 1000
 - Time delay: Approx. 200 μ sec
- Explosive material results in spherical fragmentation & blast effect
- Small penetration capacity
- Effective against:
 - Soft material targets (helicopters, aircraft, trucks, boats)



Available in:

- 20mm x 128**
- 25mm x 137**
- 35mm x 228**





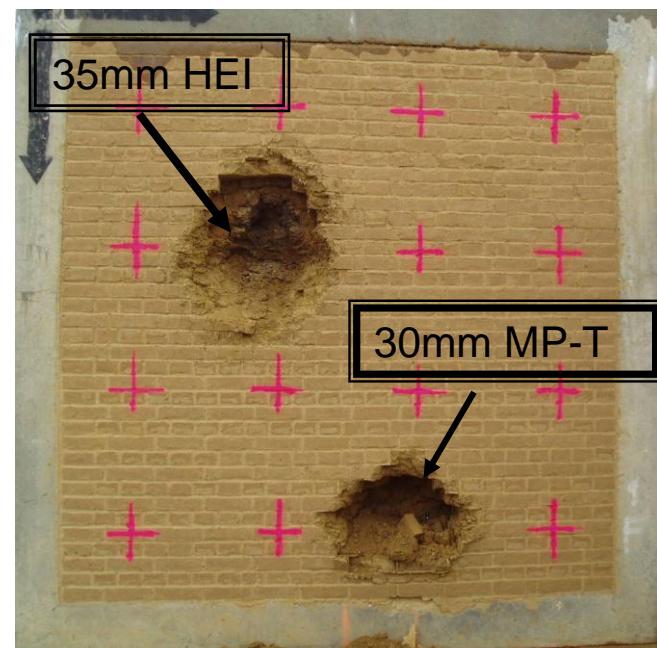
HEI-T ammunition

Operational performance against urban target

- Not effective: detonation inside the wall,
no fragments behind the wall, only wall debris

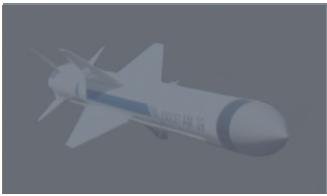


In general all medium caliber projectiles with impact fuze (20 to 35mm HE & MP) are not capable to defeat these targets

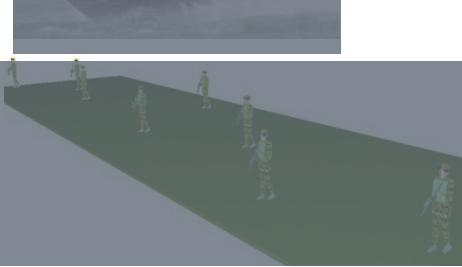




Operational capability



HEI-T





ABM/KETF ammunition

KETF: Kinetic Energy Time Fuze (Air Burst)

Key features

- Programmable time fuze
- Air burst ammunition
- Spin stabilised
- Muzzle Velocity (ca. 1100 m/s)
- Enhanced Hit & Kill Probability
- Very small explosive charge
- Fragmentation capability & good penetration capability
- Heavy metal alloy sub projectiles
- Designed to defeat a wide range of targets:
 - Soft material targets (helicopters, aircraft, trucks, boats)
 - Lightly armoured targets (attack helicopters, BTR80)
 - Urban Targets (Adobe, Concrete, Brick)
 - Asymmetric threat, personnel targets

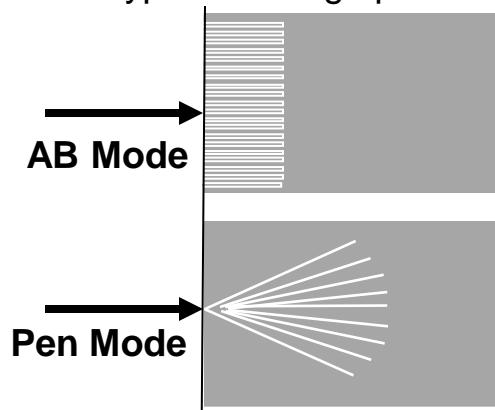
Available in:

30mm x 173

35mm x 228



Typical damage pattern





KETF ammunition

Operational

Vehicles:

- PUMA - 30mm
- CV9035 - 35mm
- Skyranger - 35mm



Navy:

- Millennium Gun - 35mm



Air Defence:

- Skyguard; GDF 006 / GDF 007 - 35mm
- Skyshield; GDF 007 - 35mm



Object protection:

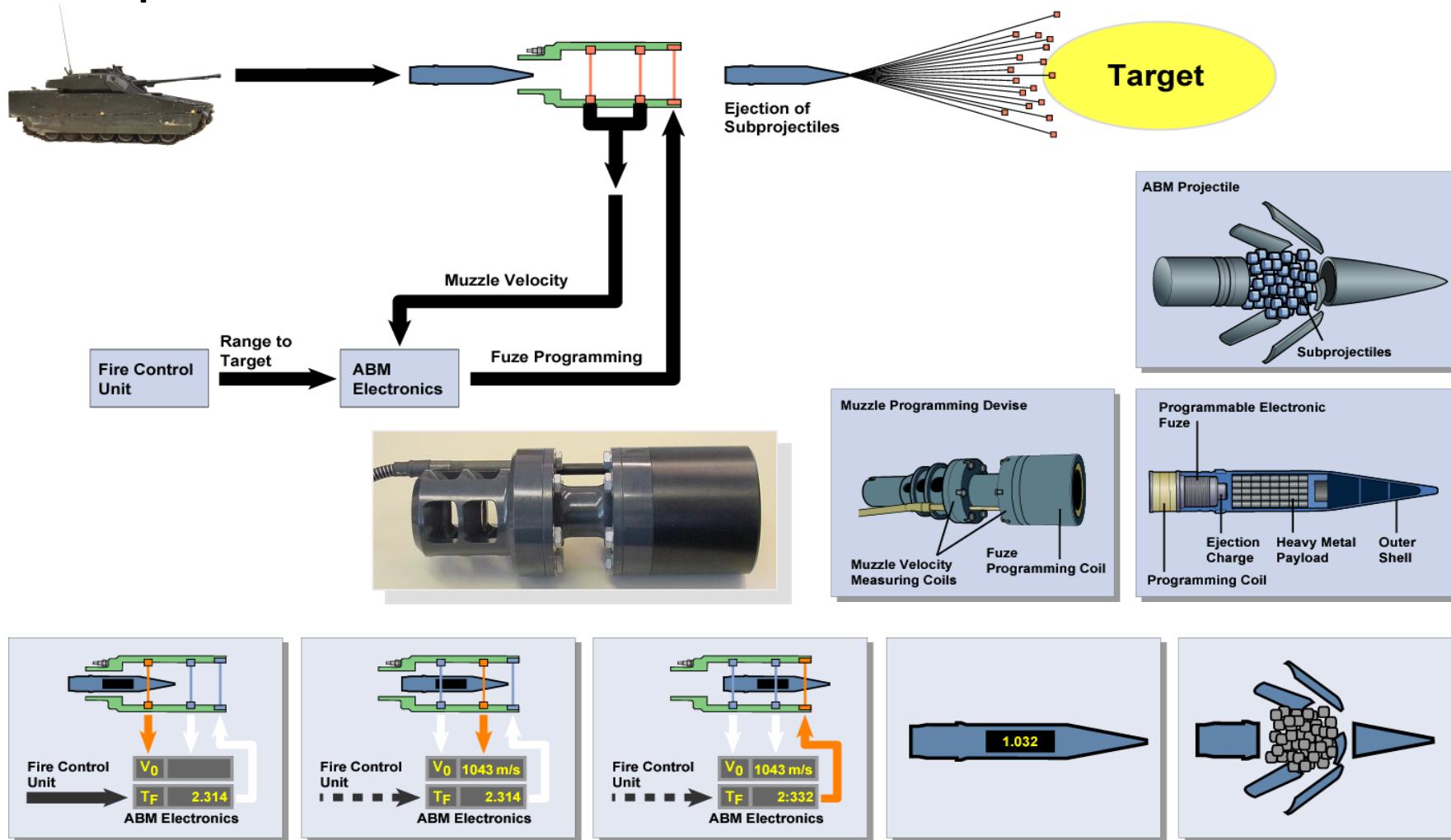
- Mantis NBS C-RAM; C-RAM Gun - 35mm





KETF ammunition

Principle

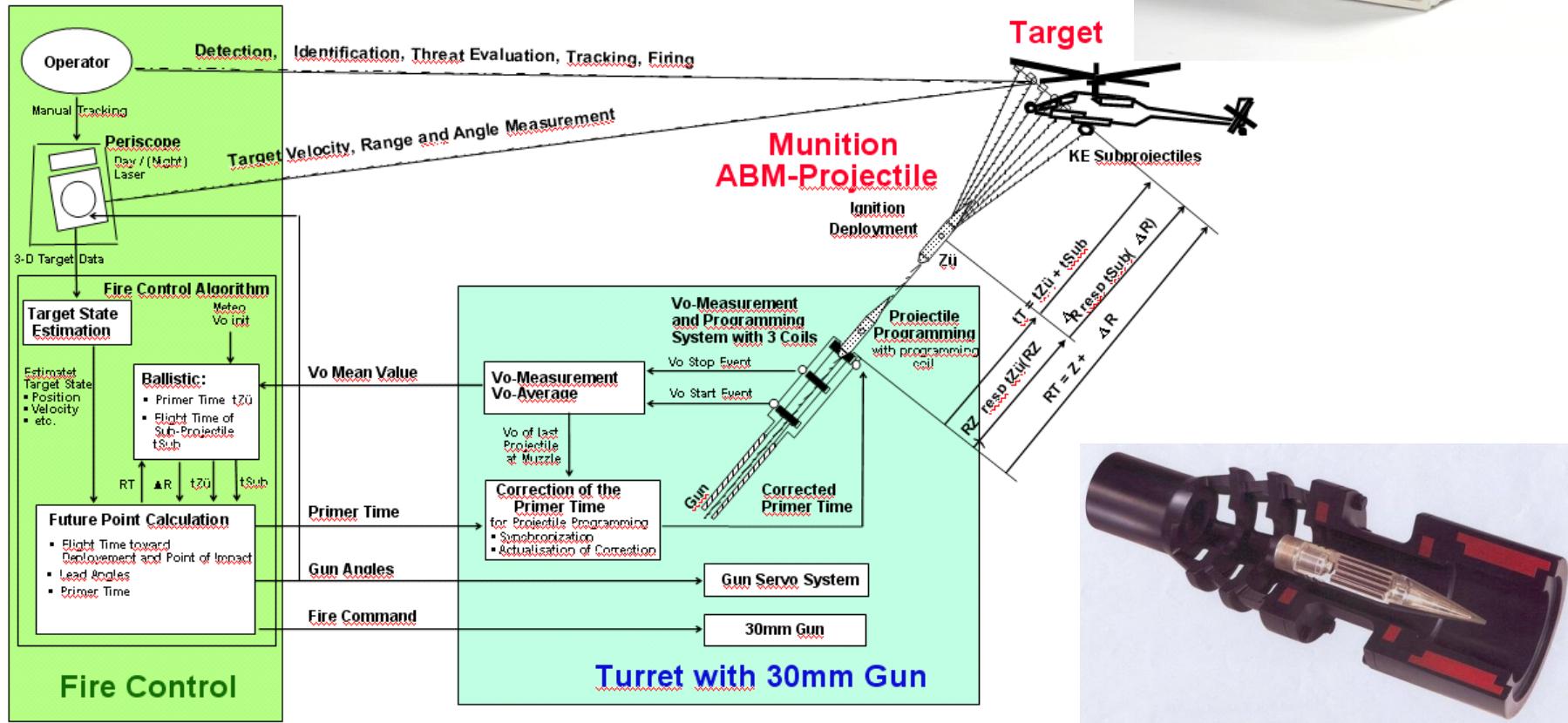




KETF ammunition

Principle

- Additional electronic box communicates with fire control system





KETF ammunition

Principle





KETF ammunition

Principle

- The Vo measurement of each round and adaptation of the fuse-time (compensation) according to the actual Vo will reduce the dispersion in depth significantly



Control the deployment of the sub-projectiles (distance to target)



Without muzzle velocity correction

Burst of 7 shots 35mm to a distance of 1.6 km



With muzzle velocity correction



KETF ammunition

Principle

- Each KETF projectile will be corrected individually and is programmed individually
- Each projectile will have its own initiation time
- String of Pearls

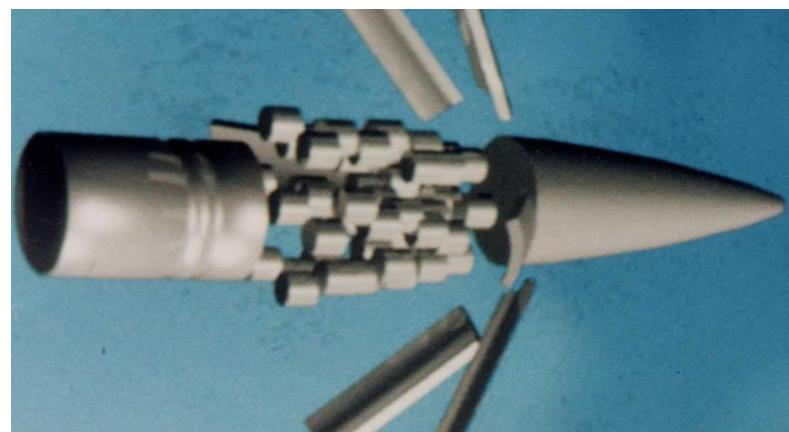
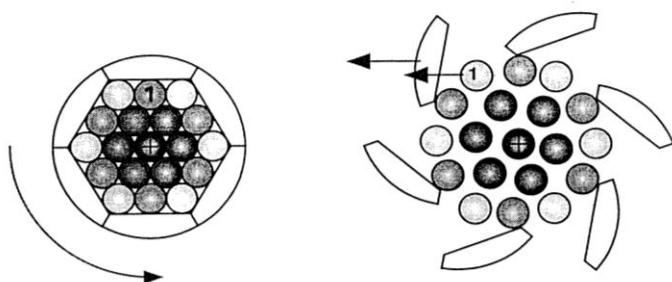
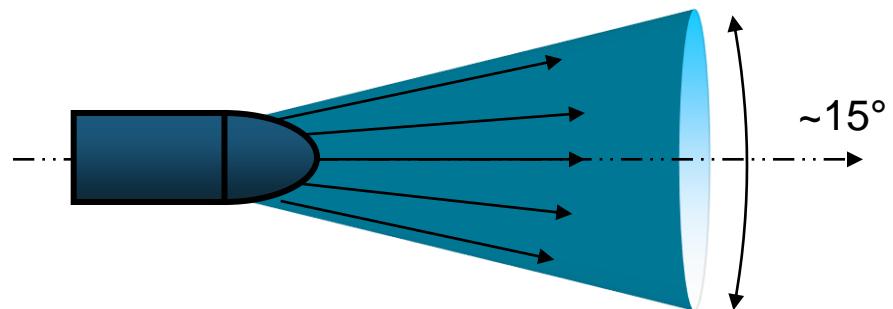




KETF ammunition

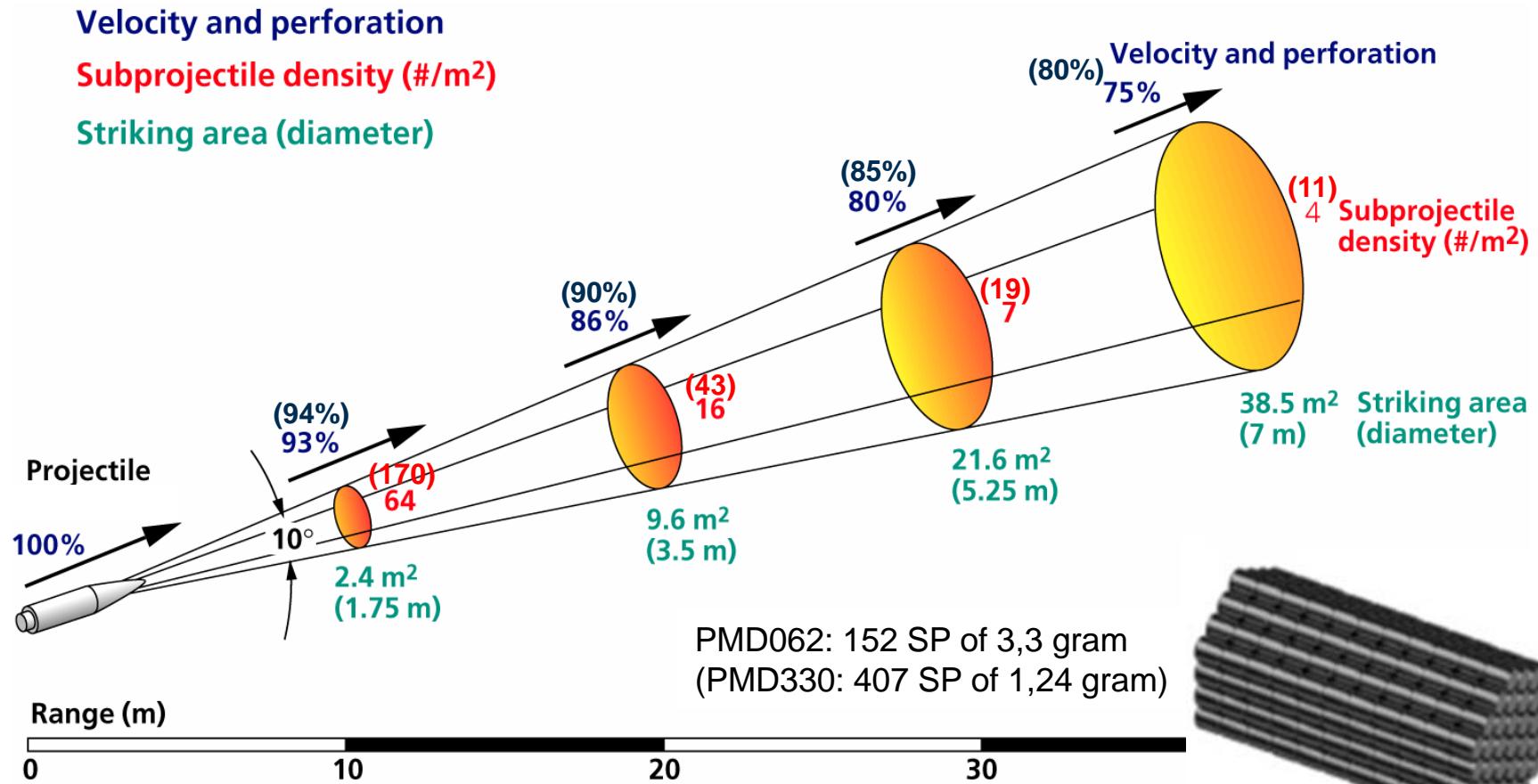
Characteristics

- Small explosive charge opens the projectile body
- Due to the combination of the spin of projectile and projectile velocity the sub-projectiles are ejected in a forward directed cone





Fragmentation characteristics (35mm KETF)



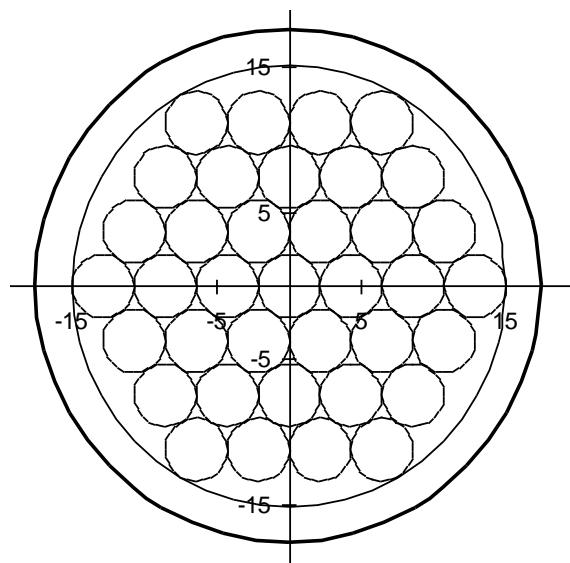


KETF ammunition

Fragmentation characteristics

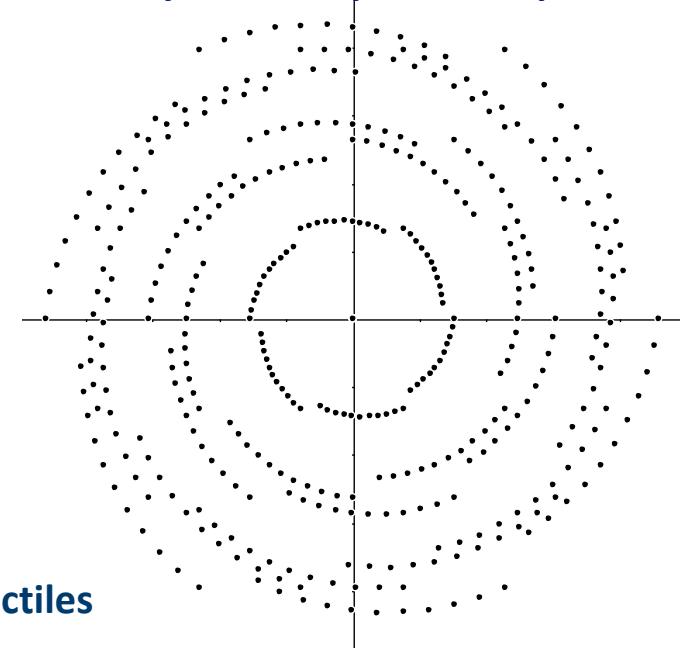
- Concentrated fragment beam of sub-projectiles:
 - high hit probability also against small targets
- Tungsten sub-projectiles have a high penetration capability:
 - high kill probability

11 Layers of 37 Sub-projectiles



Total: 407 Sub-projectiles

Payload foot print at impact





KETF ammunition

Sub-projectile optimisation

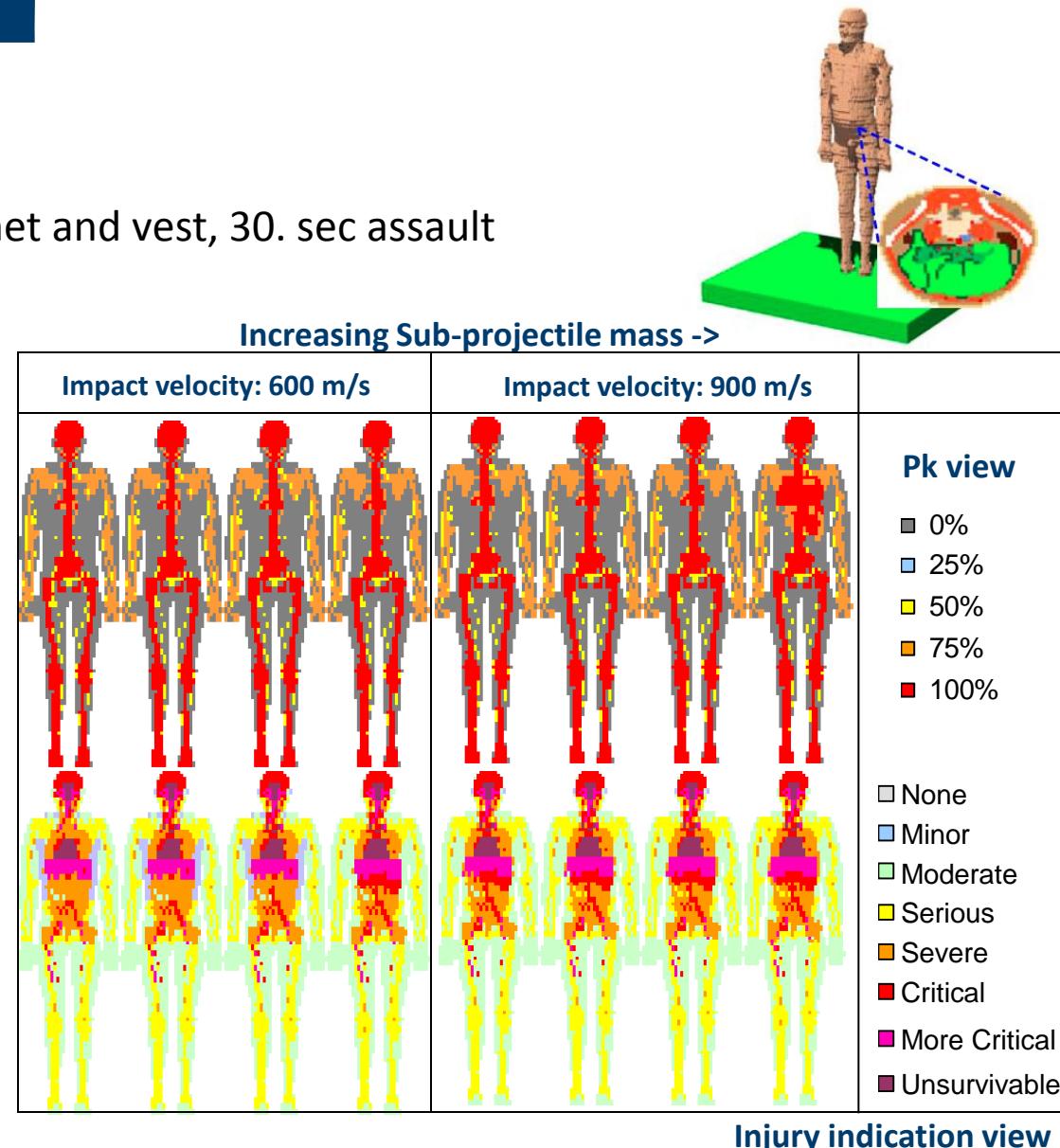
- Standing soldier, including helmet and vest, 30. sec assault
- ComputerMan simulations
- Ballistic protection based on experimental data



- Fixed total payload mass:
variation of sub-projectile mass



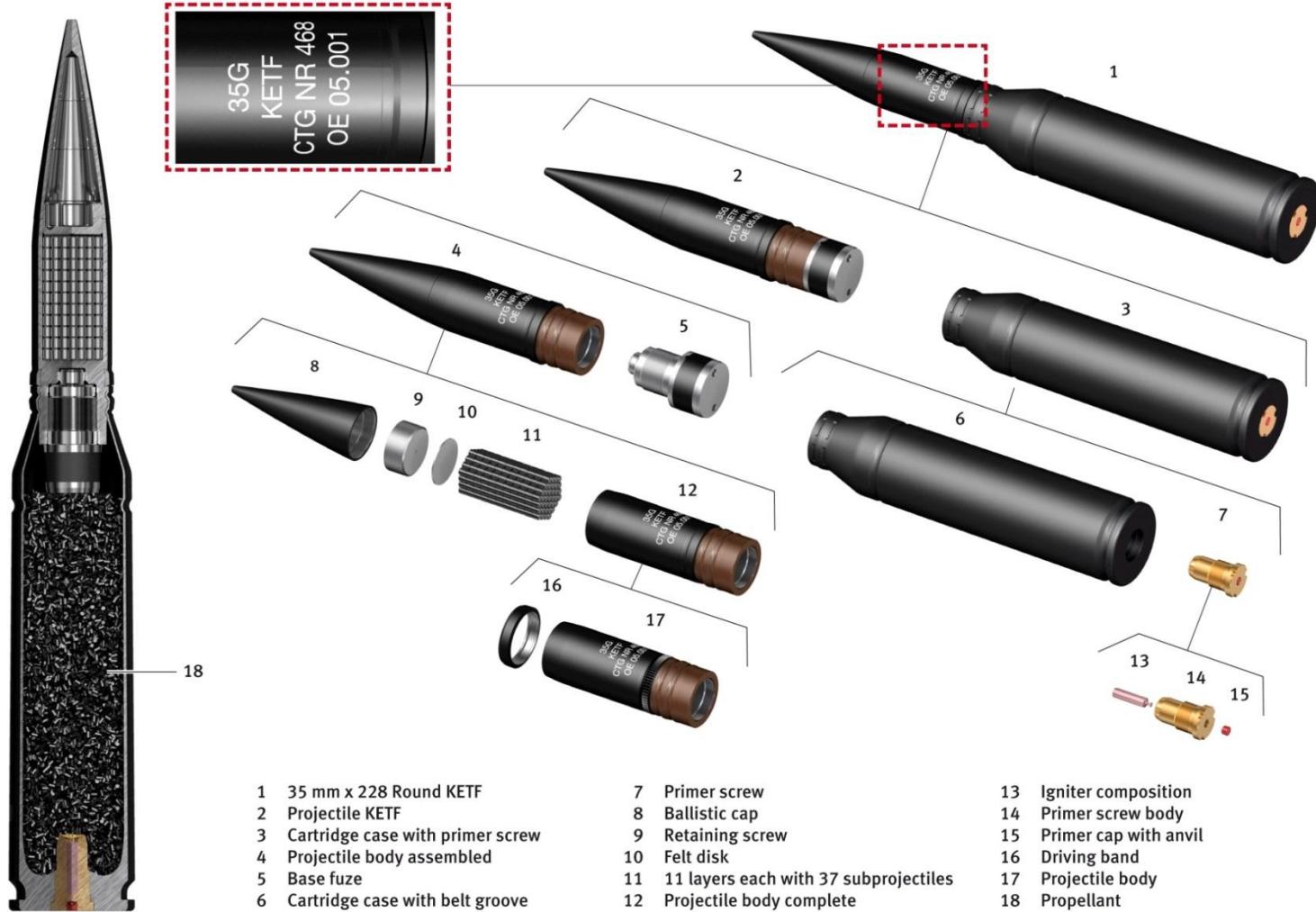
- Optimal sub-projectile mass:
 - 1.24 gram





KETF ammunition

35 mm x 228 KETF





KETF ammunition

Operational performance in impact/penetration mode

- Projectile unprogrammed (impact mode)
 - Monobloc target:



Range 200 m

Angle of Impact: No. 1 45° NATO
No. 2 45° NATO

Target Arrangement:	No. 1	35 mm Armour Plate
	No. 2	0.5 mm Witness Plate

1050 N/mm² (BHN320)



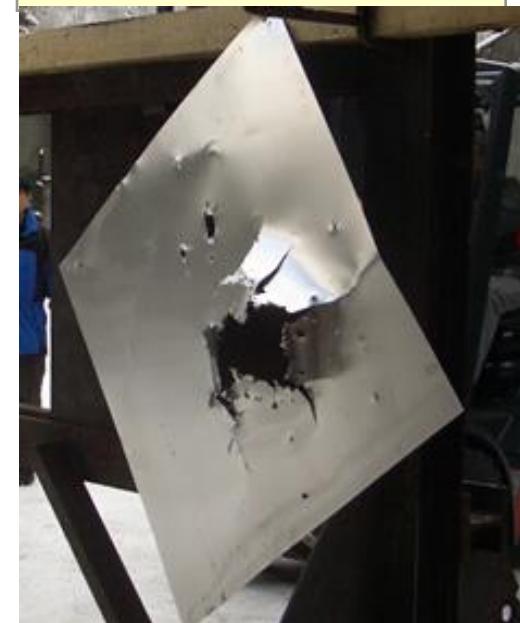
KETF ammunition

Operational performance in impact/penetration mode

- Projectile unprogrammed (impact mode)
- Monobloc target:



The KETF easily perforates the RHA armour plate (35mm/45°) creating a huge after penetration effect.

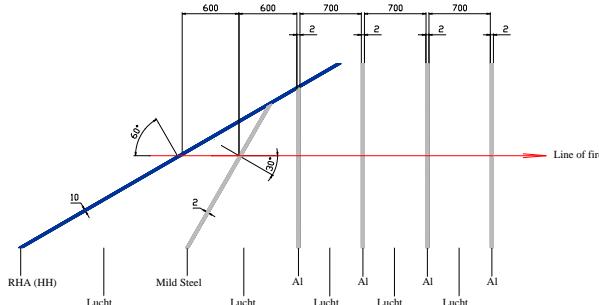




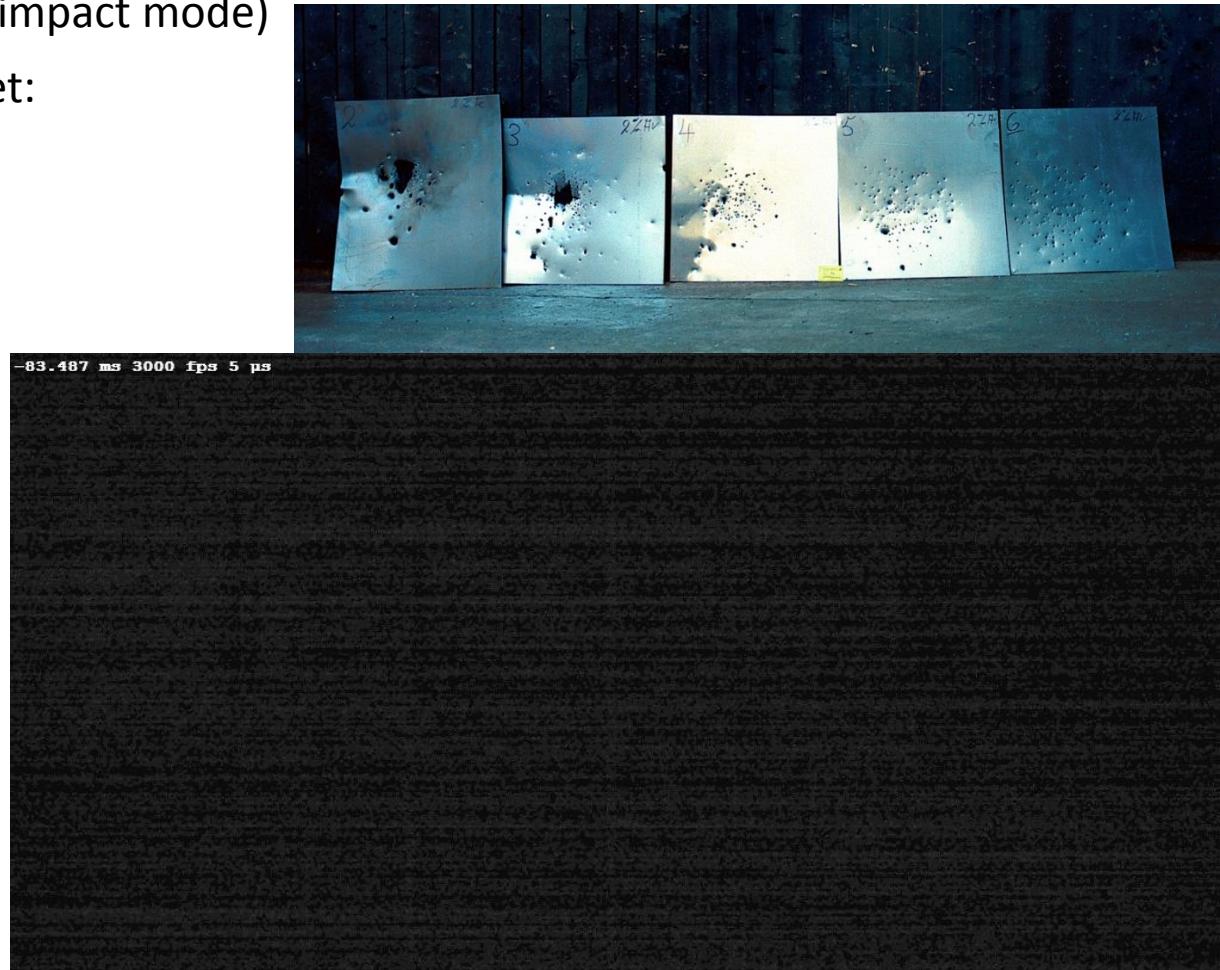
KETF ammunition

Operational performance in impact/penetration mode

- Projectile unprogrammed (impact mode)
- RHA/Aluminium plate target:



The KETF easily perforates the RHA armour plate (10mm/60°) creating a huge after penetration effect.

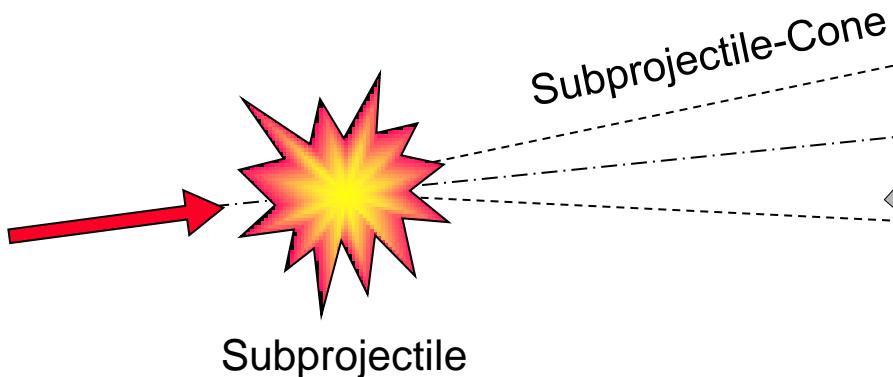




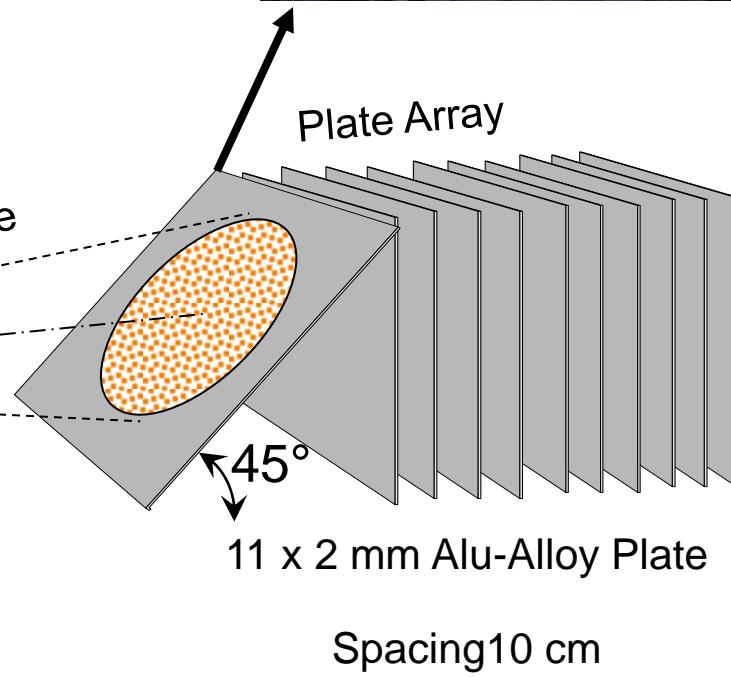
KETF ammunition

Operational performance in air burst mode

- Projectile programmed (air burst mode)
- Aluminium spaced target:



Ejection Position
ca. 6 m before target





KETF ammunition

Operational performance in air burst mode

- Projectile programmed (air burst mode)
- Aluminium spaced target:

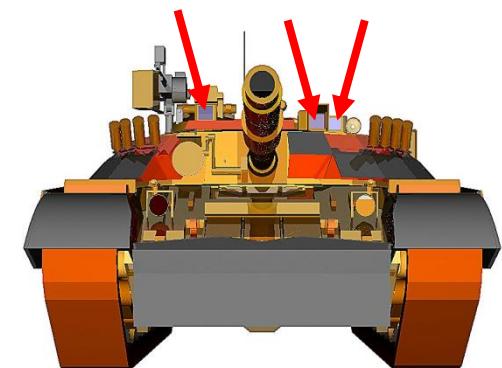




KETF ammunition

Operational performance against main battle tank

- 1 Projectile programmed (air burst mode) to neutralize MBT
- All optical sights were hit and destroyed





KETF ammunition

Operational performance against covered fox hole

- Projectile programmed (air burst mode)
- Soldiers, weaponry and optics were killed

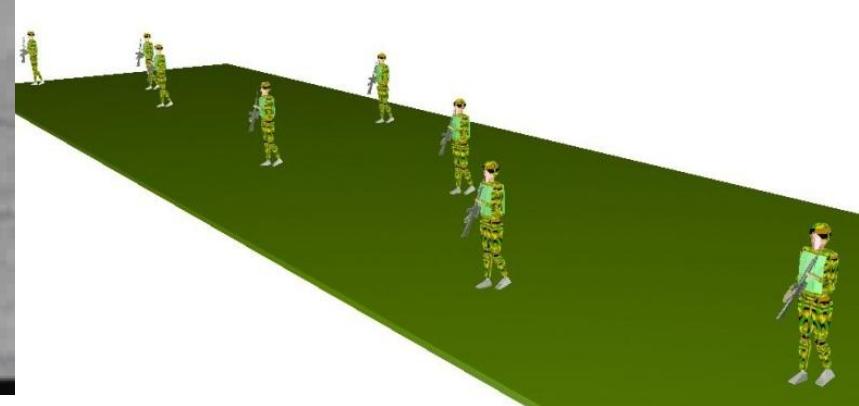




KETF ammunition

Operational performance against infantry soldiers

- Projectile programmed (air burst mode)
- Many soldiers were hit and killed

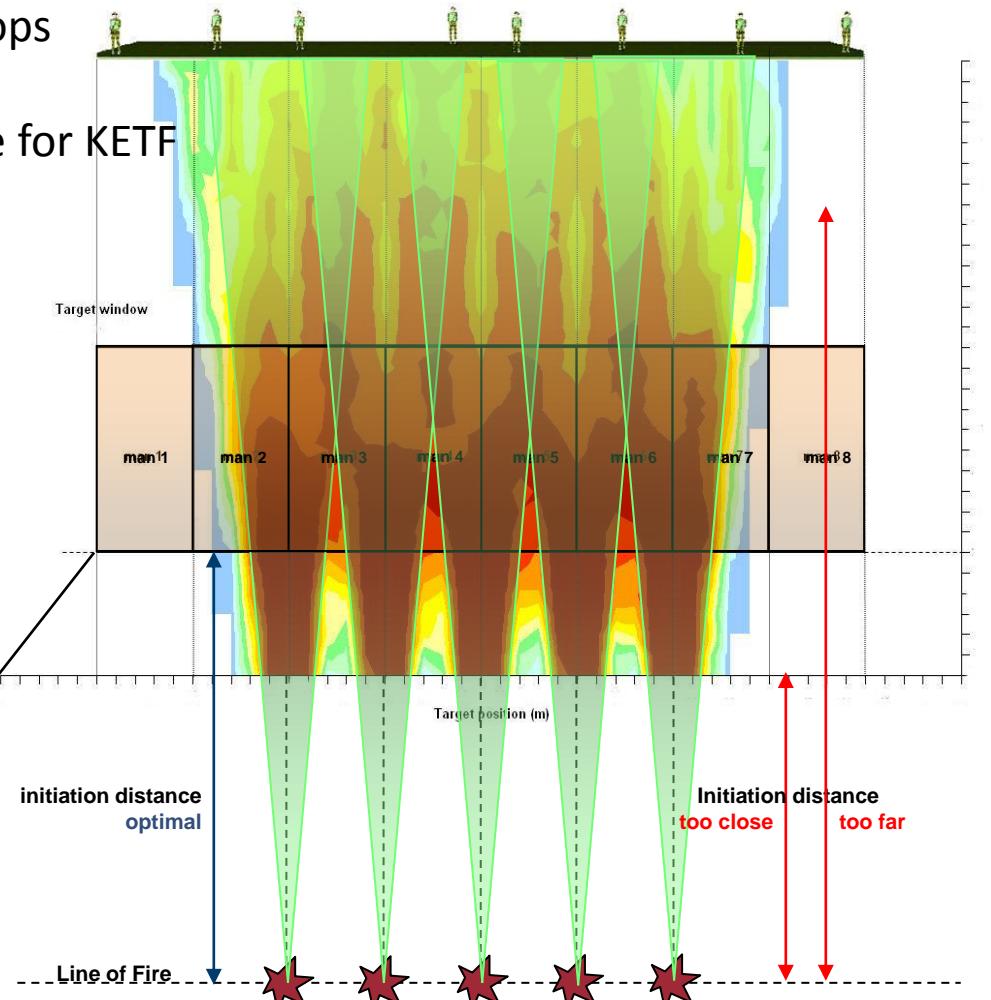
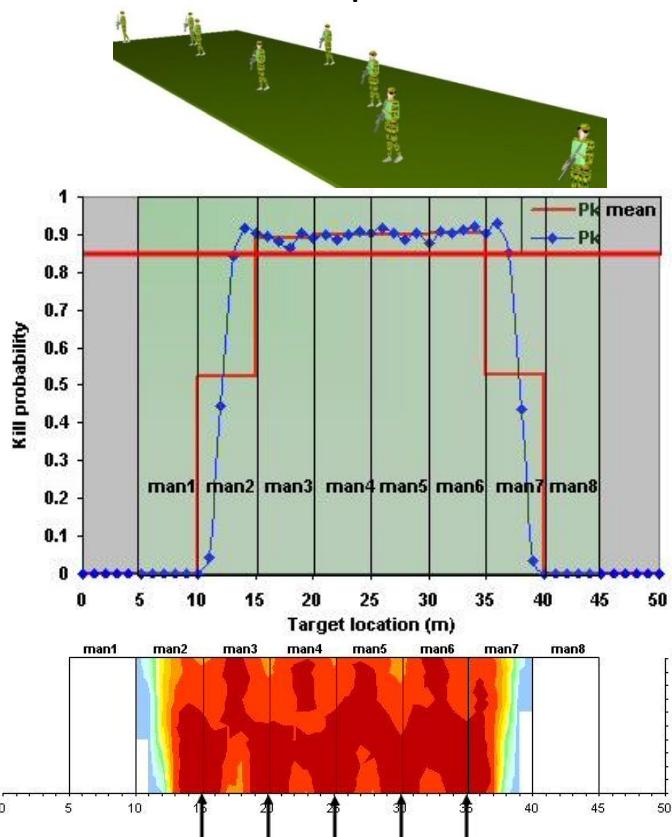




KETF ammunition

Operational performance against infantry soldiers

- Effectiveness simulations against troops in the open
- Determine optimal initiation distance for KETF





KETF ammunition

Operational performance against commercial vehicle

- Projectile programmed (burst of in air burst mode)
- Sub-projectiles perforates the outer skin killing internal components, driver and engine





KETF ammunition

Operational performance against armoured personnel carrier

- 1 Projectile unprogrammed (impact mode)
- KETF projectile perforated armoured hull releasing lethal tungsten sub-projectiles inside the target killing internal components and personnel



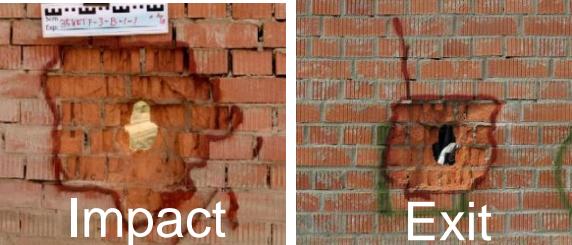


KETF ammunition

Operational performance against urban structure

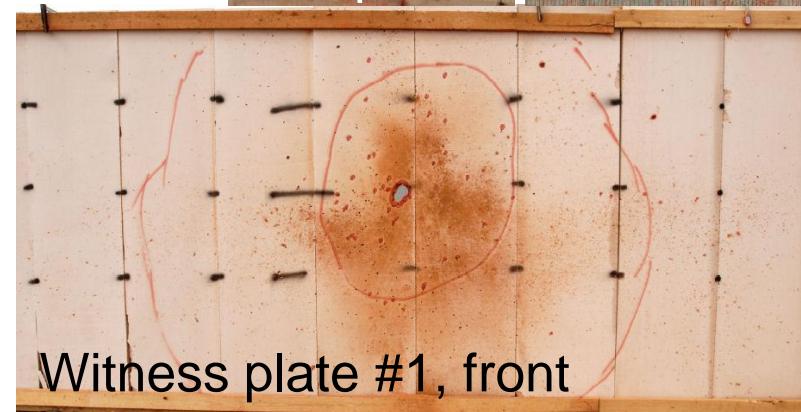
- 1 Projectile unprogrammed (impact mode)
- KETF projectile perforated brick wall releasing lethal tungsten sub-projectiles behind wall

Brick wall



Impact

Exit



Witness plate #1, front



Witness plate #1, aft



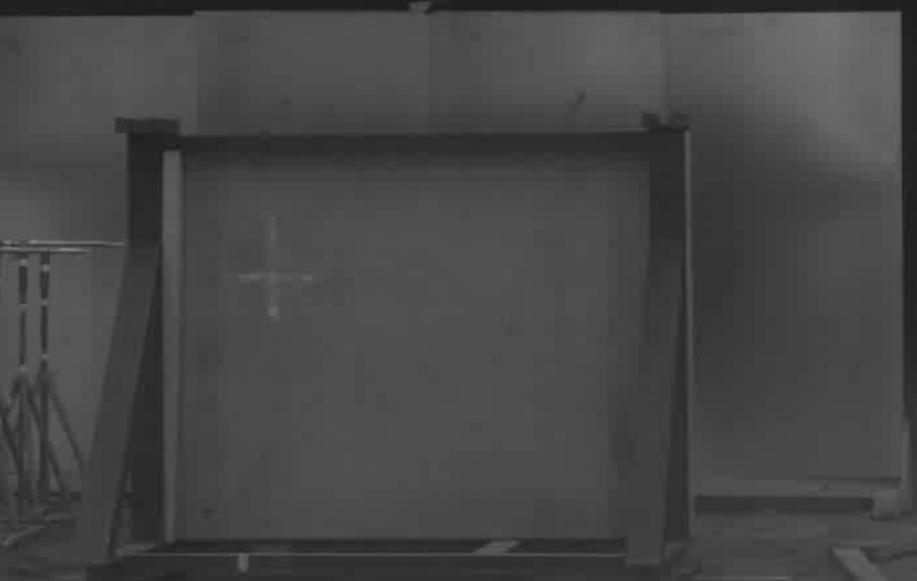
KETF ammunition

Operational performance against urban structure

- 1 Projectile unprogrammed (impact mode)
- KETF projectile perforated wall releasing lethal tungsten sub-projectiles behind wall



Concrete wall



Adobe wall

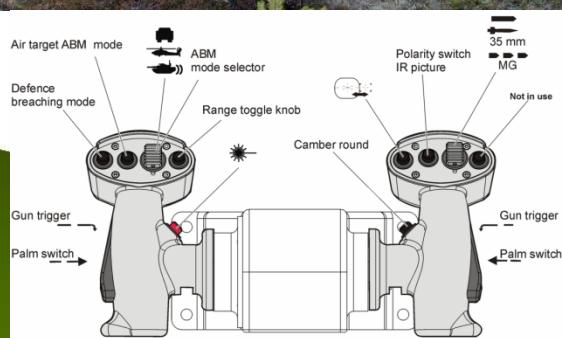
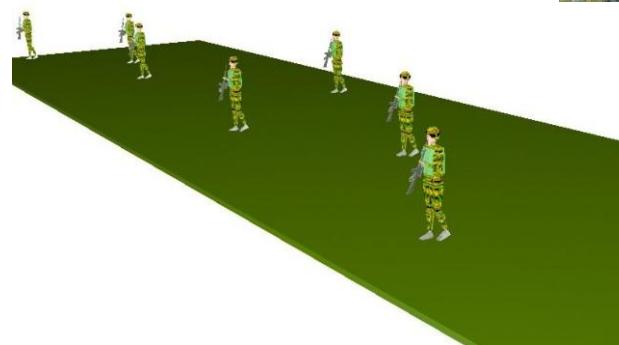




KETF ammunition

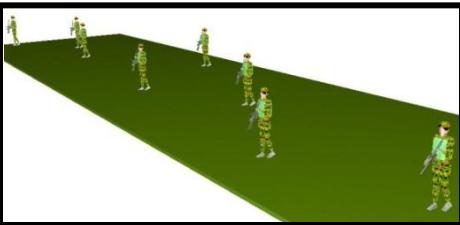
Operational effectiveness

- The KETF ammunition can be very effective
- To achieve the best effectiveness for the KETF ammunition the balance has to be found between:
 - The number of fired projectiles
 - Initiation distance
 - Initiation height
 - Distance between initiation points
 - Time setting of the fuze





Operational capability



KETF
Programmed / **Unprogrammed**





FAPDS ammunition

FAPDS-T: Frangible Armour Piercing Discarding Sabot - Tracer

Key features

- Sub caliber
- Spin stabilised
- High Muzzle Velocity (ca. 1400 m/s)
- Short Time of Flight
- Enhanced Hit & Kill Probability
- No fuze or explosives; Inert Munition (IM)
- Frangible heavy metal alloy penetrator
- Good penetration capability & fragmentation capability
- Designed to defeat a wide range of targets:
 - Soft material targets (helicopters, aircraft, trucks, boats)
 - Lightly armoured targets (attack helicopters)
 - Medium armoured vehicles (BTR80, BMP-2)
 - Urban Targets (Adobe, Concrete, Brick)
- Ground to ground and ground to air capability
- 100% reliability

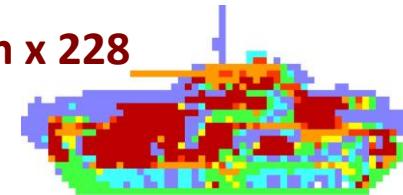
Available in:

25mm x 137

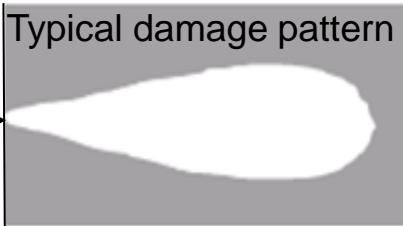
27mm x 145

30mm x 173

35mm x 228



Typical damage pattern





FAPDS ammunition

Characteristics

- High penetration capacity in combination with radial fragmentation
- No explosive in projectile, insensitive
- Very lethal against soft and hard targets on short and long ranges

Fragment trajectories

Ordinary munitions
HE: radial damage pattern
AP: axial damage pattern

Frangible munition
axial, as well as radial damage pattern

Diagram illustrating damage patterns:

- HE: Shows a radial damage pattern with a jagged, fan-like shape.
- APDS: Shows an axial damage pattern with a clean, straight horizontal cut.
- FAPDS: Shows both axial and radial damage patterns, resulting in a complex, multi-directional fragmentation effect.



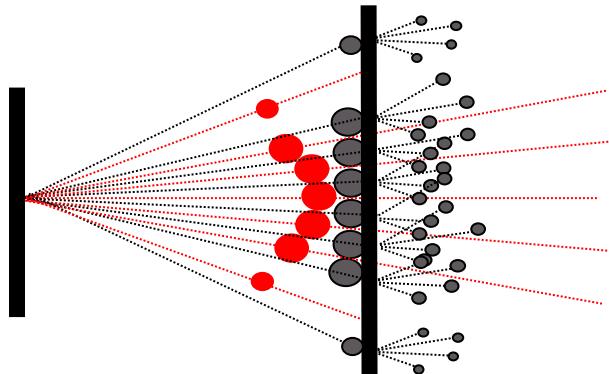
FAPDS ammunition

Characteristics

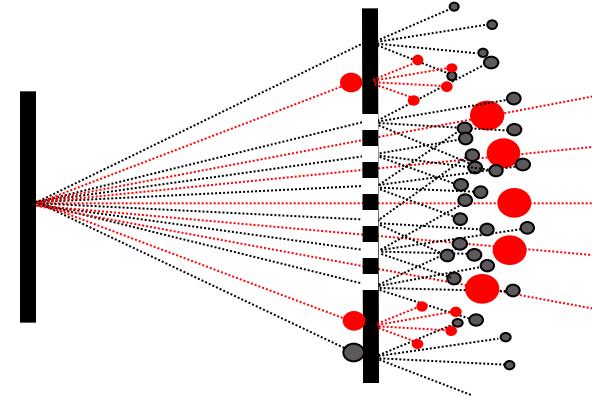
- Penetrator break-up after 1st perforation
- Fragment break-up after perforation, continuous process, cascade effect
- Deep fragment penetration due to synergistic effect

- **Slower fragments**
- **Faster fragments**

Time 1



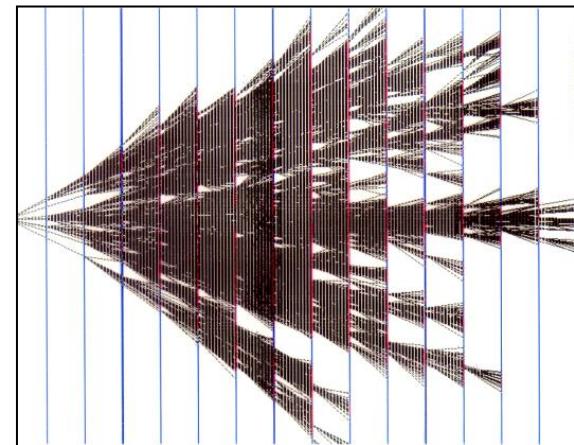
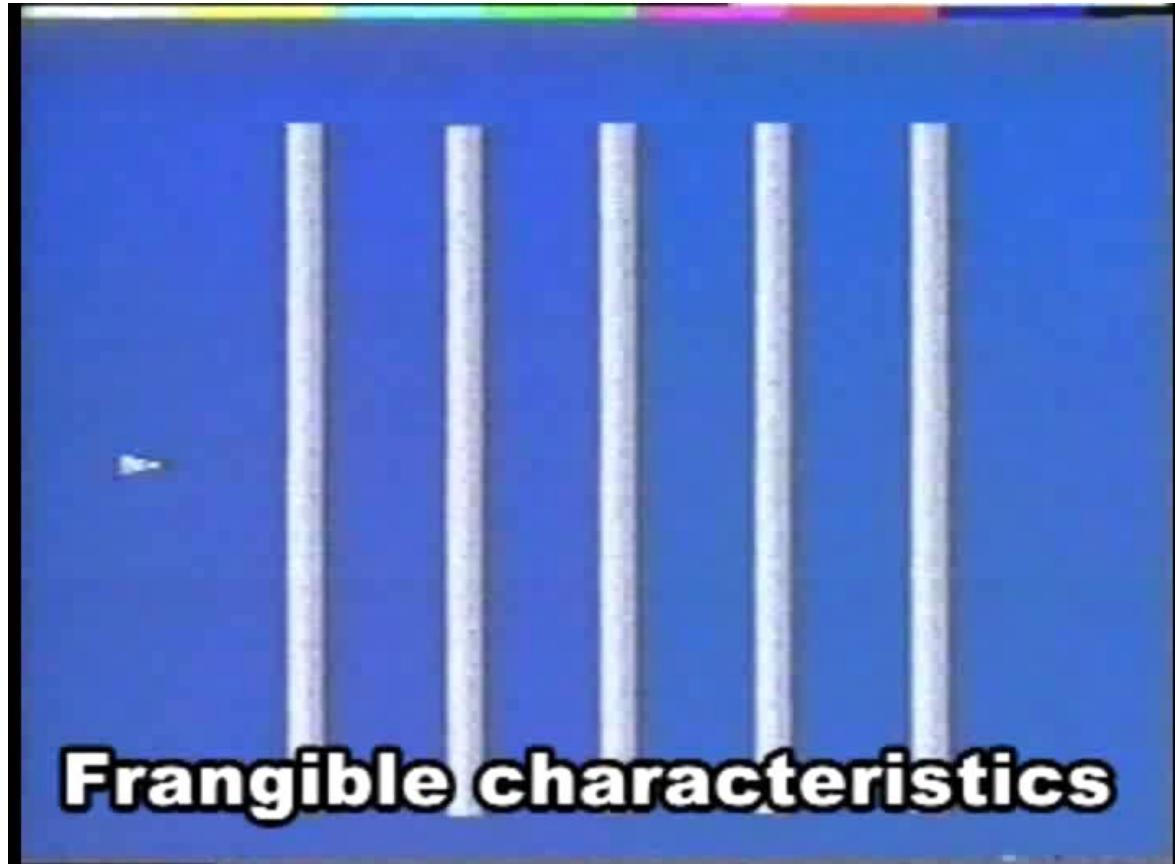
Time 2





FAPDS ammunition

Characteristics



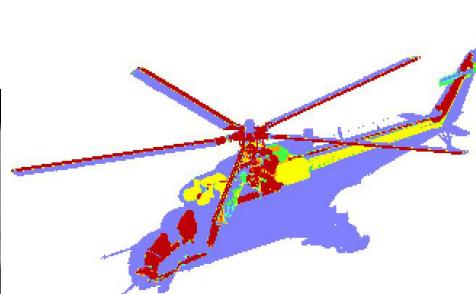
Typical frangible fragmentation



FAPDS über ammunition

Operational performance against Helicopter

- Frangible Ammunition perforates the light structure resulting in lethal fragmentation

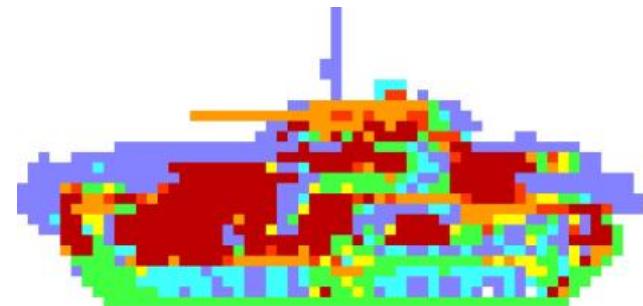




FAPDS ammunition

Operational performance against Infantry Fighting Vehicle

- Frangible Ammunition perforates the armour resulting in lethal fragmentation

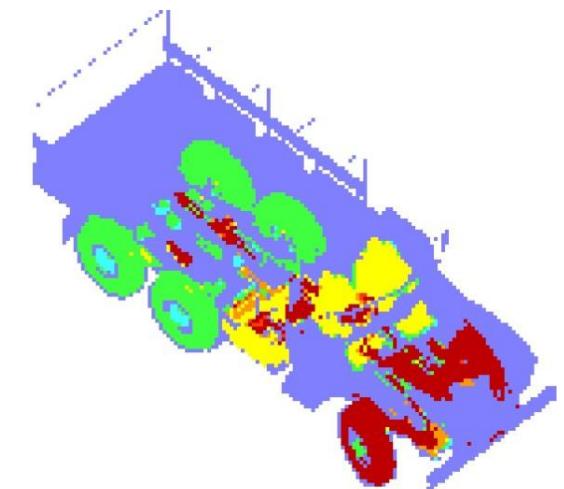




FAPDS er ammunition

Operational performance against Truck

- Frangible Ammunition perforates the light structure resulting in lethal fragmentation

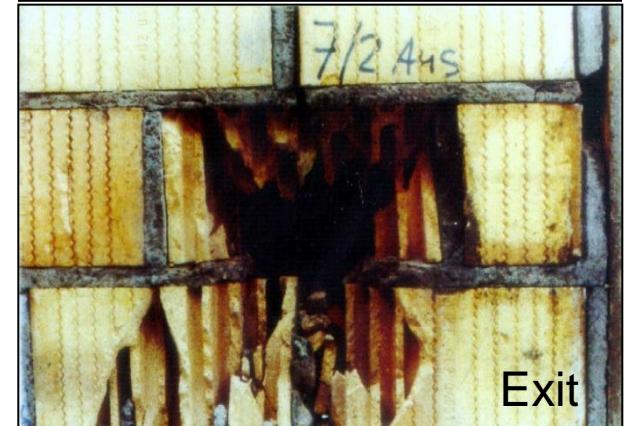




FAPDS ammunition

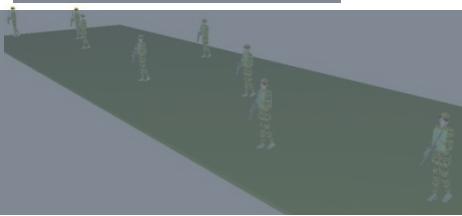
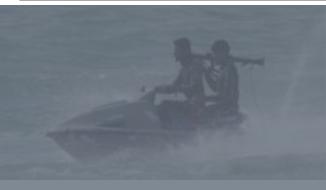
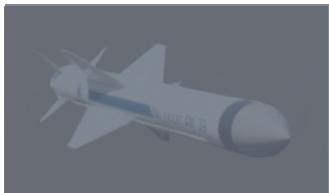
Operational performance against Double Brick Wall

- Frangible Ammunition perforates the wall resulting in lethal fragmentation





Operational capability



FAPDS





APFSDS-T ammunition

APFSDS-T: Armour Piercing Fin Stabilised Discarding Sabot - Tracer

Key features

- Sub caliber
- Fin stabilised
- Fired with full spin
- High Muzzle Velocity (ca. 1400 m/s)
- Short Time of Flight
- Enhanced Hit & Kill Probability
- Heavy metal alloy penetrator
- High penetration capability
- In insensitive Munition (IM)
- Designed to defeat modern armoured targets

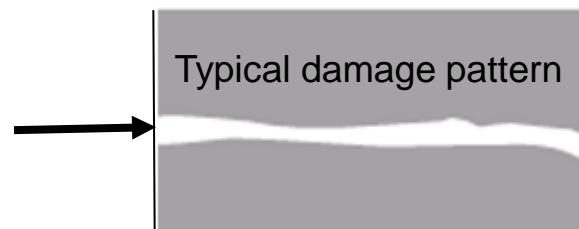
Available in:

25mm x 137

30mm x 170

30mm x 173

35mm x 228

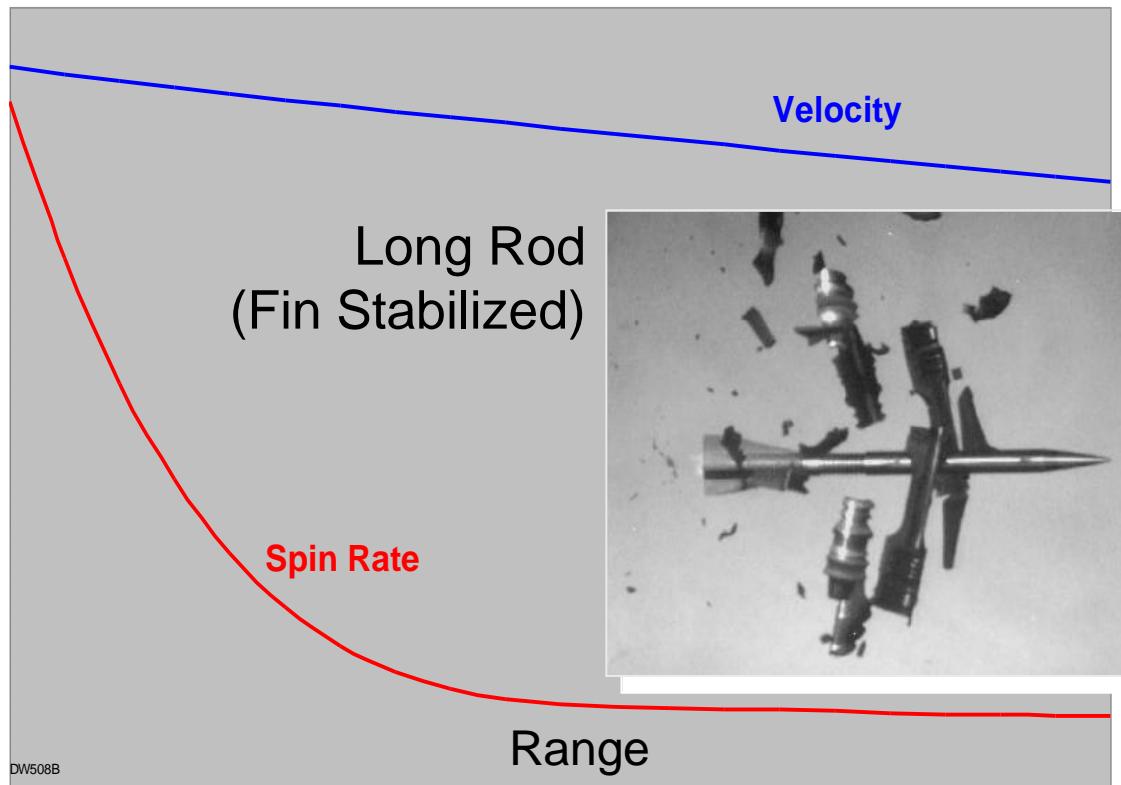




APFSDS-T ammunition

Technology

- Sabot Discarding at Muzzle with Full Spin
- Spin rate decrease as a function of range

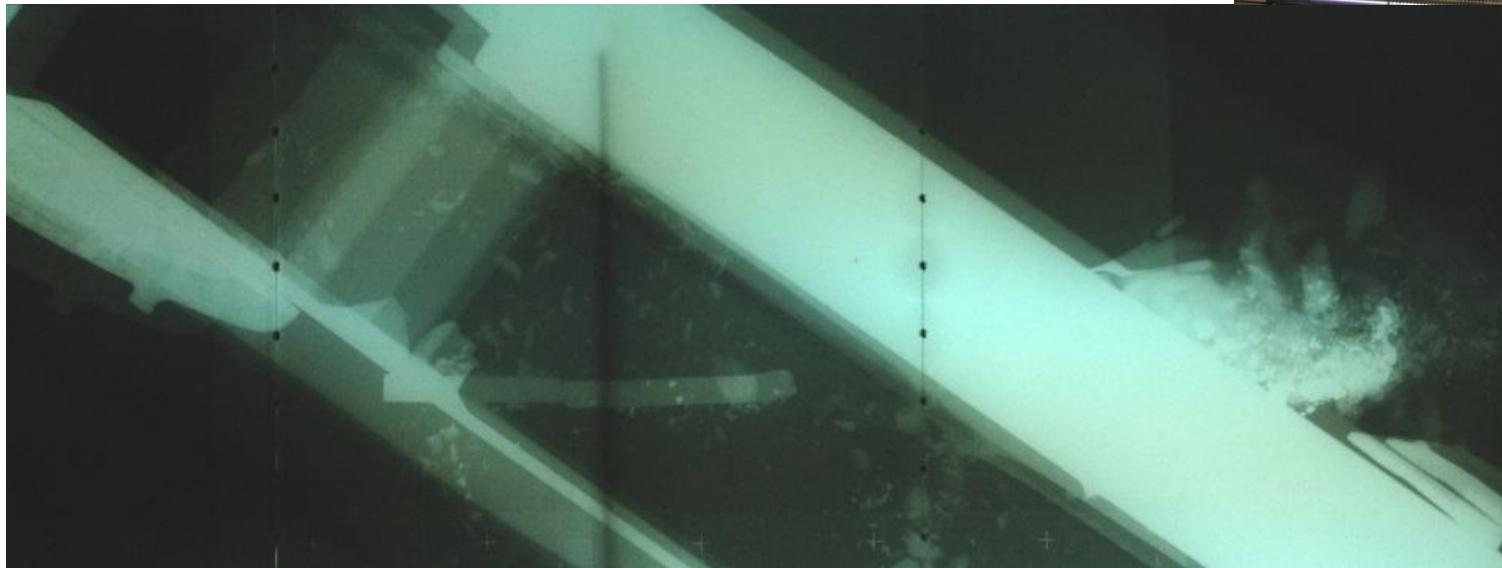




APFSDS-T ammunition

Penetrator design

- Tungsten alloy
- Optimised against modern spaced armour:
 - **High elongation**
 - **Flat nose, better penetration at oblique angles**
 - **Spall after perforation of armour**





APFSDS-T ammunition

Penetrator design

- Performance against spaced armour

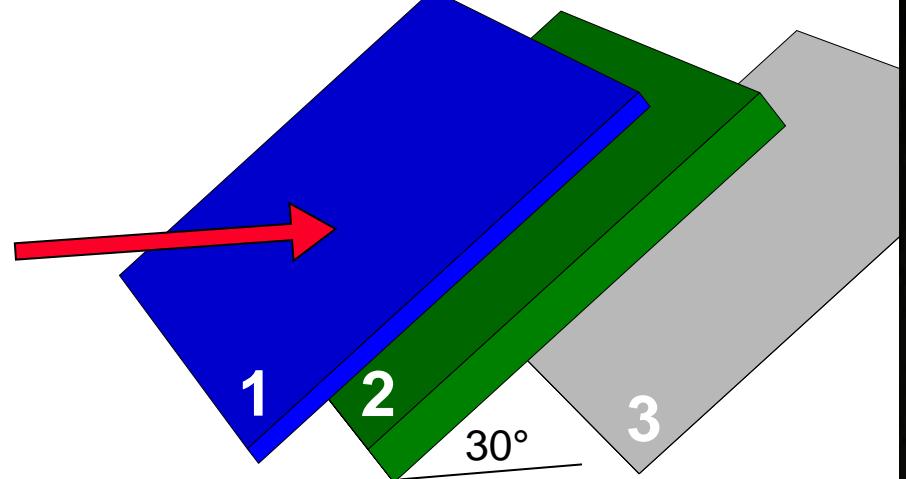


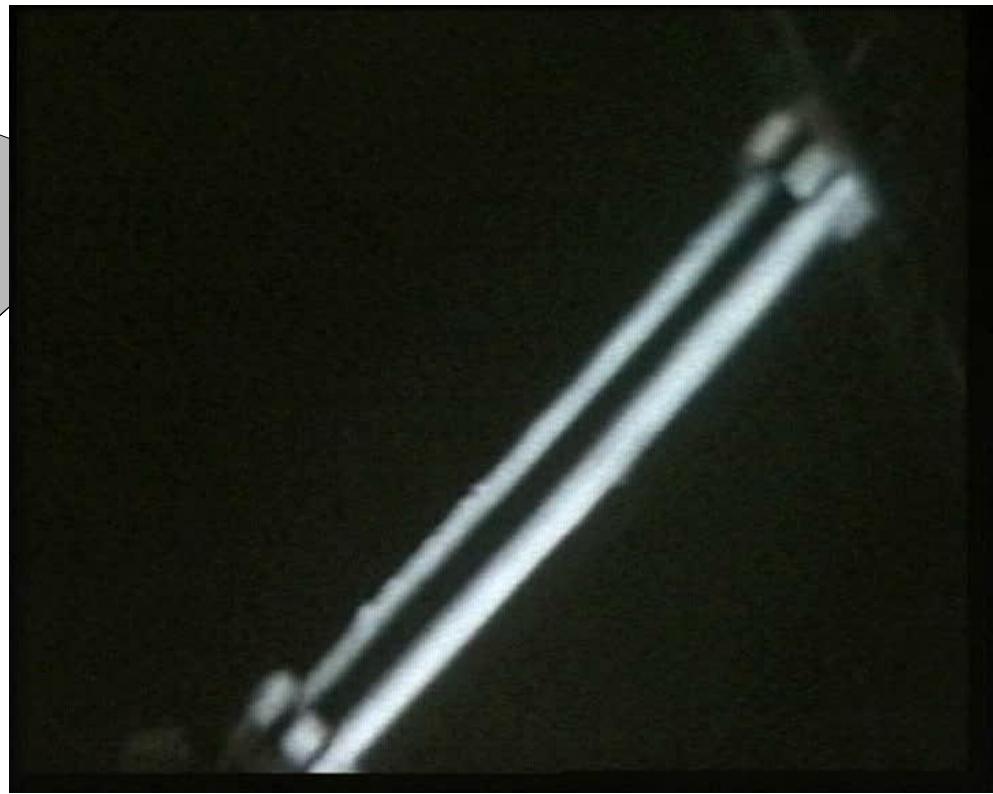
Plate Spacing: 6 cm 15 cm

Obliquity: 60° NATO

Plate 1: 10mm Armour Plate HHA

Plate 2: 30mm Armour Plate RHA

Plate 3: 0.5mm Witness Plate Alu





APFSDS-T ammunition

Penetrator design

- Performance against spaced armour



Freeze-Sequence
(Frame Rate: 50 fps,
i.e. 20 ms between
2 Frames):

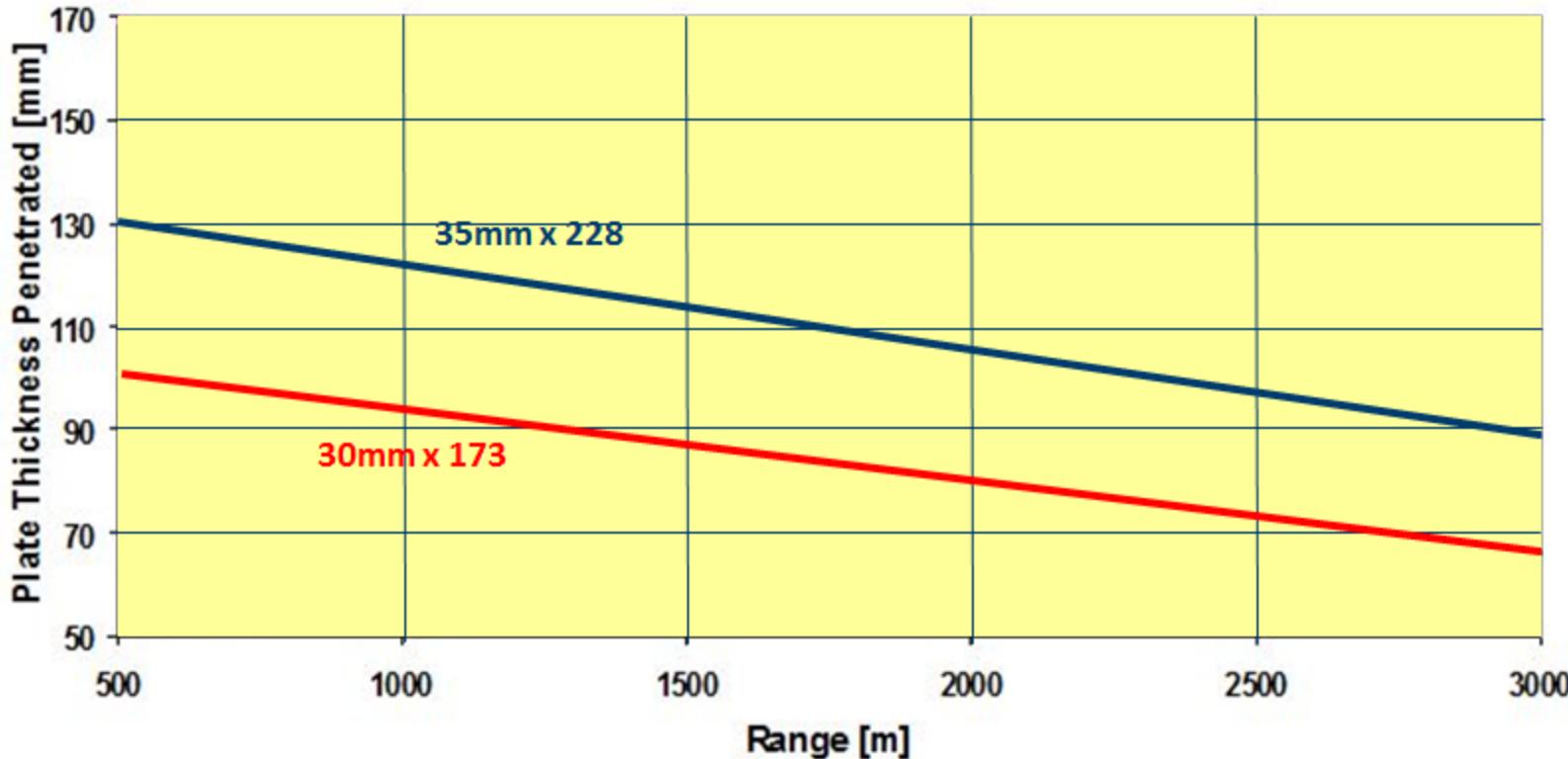




APFSDS-T ammunition

Performance

Armour Plate Material: RHA
Plate Obliquity: 0° NATO

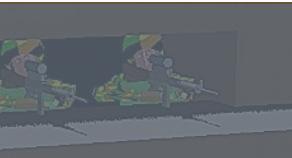




Operational capability



APFSDS





Information

Point of Contact:

Eelko van Meerten

T: +31 6 22 99 10 56

M: eelko.vanmeerten@rheinmetall.com



SECTION 2A

APDS-T 35MM X 228 AMMUNITION/PMD369

ARMOUR PIERCING DISCARDING SABOT WITH TRACER

FACT SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

APDS-T 35 MM X 228 AMMUNITION/PMD369

ARMOUR PIERCING DISCARDING SABOT WITH TRACER



- Penetration capability analogous BMP2
- Spaced armour target, obliquity 45° NATO
 - 1. Plate 10 mm
 - 2. Plate 30 mm
- Fragmentation after penetration
- Tracer for enhanced observation

Main Features

Performance	Excellent penetration capability fragmentation
Firing mode	Single shot and automatic mode
Safety	Insensitive munition (no HE)
Environment	No toxic elements
Transport/Storage	UN Classification 1.2C
Gun/System	Bush III

Technical Data

Total length of round	331 mm
Mass of round	1,460 g
Mass of projectile	377 g
Propellant	NC type
Muzzle velocity	1,400 m/s
Cartridge case	Steel
Temperature range (functional)	-46°C to +63°C

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 2B

APDS-T 35MM X 228 AMMUNITION/PMD369

ARMOUR PIERCING DISCARDING SABOT WITH TRACER

CERTIFICATE

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



Certificate No. 4'204'758

Transportklassifizierung von Gefahrgut / Transport Classification of Dangerous Goods

Auftraggeber

Customer

RWM Schweiz AG

Birchstrasse 155

CH – 8050 Zürich

Ihr Auftrag / your order

email dated January 23, 2008

Ihre Referenz / your reference

Mr Diewald

Unsere Referenz / our reference

SM 65737

Stoff / Gegenstand

Substance / object

Cartridges with inert projectile, type 35 mm x 228, APDS-T
according to WK PMD 369

Mitgelieferte Unterlagen

Documents to consider

- drawing No WK303885AZ, dated January 15, 2008,
RWM Schweiz AG, CH – 8050 Zürich
- drawing No WK303886AZ, dated January 15, 2008,
RWM Schweiz AG, CH – 8050 Zürich
- drawing No WV209826AU, dated March 01, 2005,
RWM Schweiz AG, CH – 8050 Zürich

Based on the results of the tests, carried out in accordance with the UN-Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, ST/SG/AC.10/11/Rev. 4, the above mentioned articles shall be classified as dangerous goods of class 1 as follows:

UN 0328 CARTRIDGES FOR WEAPONS, INERT PROJECTILE

- | | | | |
|------------------------|-------|-----------------------|-------|
| • Classification code: | 1.2 C | • Label: | No 1 |
| • Packing instruction: | P 130 | • Special provisions: | PP 67 |

This transport classification refers to the cartridges, packed in:

- Inner packagings: plastics foam parts or paper tubes
- Intermediate packagings: not necessary
- Outer packagings: steel boxes (4A), type Standard-METALBOX M 548, containing not more than 20 linked or unlinked cartridges;
UN-marking of the steel box:
UN 4A / Y80 / S / year of manufacture / CH 2338 / OE

This certificate was issued by the Swiss competent authority, the Federal Inspectorate of Dangerous Goods (EGI), CH – 8304 Wallisellen. It is valid for the carriage according to the transport regulations RID, ADR and IMDG-Code.

Wallisellen, 30.01.2008

SVTI / ASIT

Federal Inspectorate of Dangerous Goods (EGI)

Dr. Silke Holzinger

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 2C

APDS-T 35MM X 228 AMMUNITION/PMD369

ARMOUR PIERCING DISCARDING SABOT WITH TRACER

ARTICLE SAFETY DATA SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

1. Identification of the Article and of the Company

Product Name	ROUND 35mm x 228, APDS-T (Armour Piercing Discarding Sabot with Tracer [Subcalibre])
Product No.	WKPMD369
Application	35mm Gun Systems
Company	RWM Schweiz AG Birchstrasse 155 / P.O.Box CH-8050 Zürich
General phone number	+41 44 316 22 11
Telefax	+41 44 316 24 79
E-Mail	safety@rwmschweiz.ch

2. Hazards Identification)*

-)* The chemicals are sealed within the munitions;
hazards would occur upon detonation, deflagration or disassembly.

Hazard declaration : E Explosive



Special hazard declaration : Quick burn-off of the propellant powder
Human and environment index : R-Phrases: 2-6-9-15-17-22

GHS Label Elements :



H201 Explosive; mass explosion hazard.
H203 Explosive; fire, blast or projection hazard.

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P370+P380+P375 In case of fire: Evacuate area.
Fight fire remotely due to the risk of explosion.

Eye	Gases may irritate the eyes
Skin	Should not irritate the intact skin.
Ingestion	Unlikely to occur
Inhalation	Contains a small amount of lead, antimony, copper, strontium and barium per unit, however prolonged exposure (breathing dust or fumes) will increase the blood-heavy-metals- levels causing the following: Central nervous system damage; cause kidney damage; adversely affect the blood-forming process causing anemia; affect male and female reproductive system and the developing fetus.
Cancer Information	Not classifiable as a human carcinogen: Inadequate data on which to classify the substance as a carcinogen.

			Date	Name	Dept.	Dokumentart / Doc. Type
			Auth.	17.09.09	J.Lagler	O-ZSC
			Std.			
			Exp.	10.05.10	G.Diewald	O-ZSC
			Rel.	21.05.10	Et.Rochat	O-ZSC
AB	M.K-0186	21.05.10	J.Lagler			
M. I.	Mod. No.	Date	Name			
without sep. parts list	x					
sep. parts list, same number						
sep. parts list, different number						
				Patrone PMD369, 35mm x 228, TL		
RWM SCHWEIZ AG, ZÜRICH ©				Sachnummer / Article number	DI	Sheet 1
WU425572AV				B		8

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

3. Composition / Information on Ingredients

Component description	EC-No.	CAS-No.	R-Phrases	Weight	%
Round WKPM369AA				Total [1430 g]	100
1. Propellant WUPGD385AA				Total [368 g]	approx. 26
Nitrocellulose (NC)	603-037-01-3	9004-70-0	1-3-6	approx. 334 g	approx. 23
Akardit II (methyldiphenylurea)	236-039-7	13114-72-2	no data	approx. 3.4 g	approx. 0.2
Camphor	207-354-7	464-48-2	22-36/38	approx. 20 g	approx. 1.4
Potassium sulfate	231-915-5	7778-80-5	20/21/22	approx. 3.4 g	approx. 0.2
Calcium carbonate	215-279-6	1317-65-3	no data	approx. 0.7 g	< 0.1
Graphite	231-955-3	7782-42-5	no data	approx. 3.7 g	approx. 0.2
Ethanol	200-578-6	64-17-5	11	approx. 1.3 g	approx. 0.1
Ether	200-467-2	60-29-7	12-19-22-66-67	approx. 1.3 g	approx. 0.1
2. Primer Composition to WK402902A			3-6	Total [0.04 g]	< 0.1
Primer 5346, RUAG					
Lead styphnate	239-290-0	15245-44-0	3-20/22-33-50/53-	approx. 0.02 g	<<0.1
Barium nitrate	233-020-5	10022-31-8	20/22	approx. 0.02 g	<<0.1
Lead dioxide (PbO ₂)	215-174-5	1309-60-0	20/22-33-50/53	approx. 0.02 g	<<0.1
Tetracene	203-659-4	109-27-3	3-36/38	Traces	<<0.1
Antimony trisulfide	215-713-4	1345-04-06	20/21/22-36/37/38-40	Traces	<<0.1
Calcium silicide	234-587-1	12013-55-7	no data	Traces	<<0.1
3. Primer Charge YIP613/1 to			3-6	Total [0.65g]	< 0.1
Primer screw WKZSD304					
Titanium	231-142-3	7440-32-6	15-17	approx. 0.2 g	<< 0.1
Potassium perchlorate	231-912-9	7778-74-7	9-22	approx. 0.4 g	<< 0.1
Silicon dioxide	231-545-4	7631-86-9	no data	Traces	<< 0.1
4. Tracer Composition YLT565				Total [1.4 g]	approx. 0.1
WU365127AU					
Strontium nitrate	233-131-9	10042-76-9	8	approx. 0.6 g	< 0.1
Strontium peroxide	212-415-6	814-95-9	8-20/22	approx. 0.06 g	< 0.1
Lead stearate	214-005-2	1072-35-1	20/22-33-50-53-61-62	approx. 0.03 g	<< 0.1
Magnesium	231-104-6	7439-95-4	15-17	approx. 0.56 g	< 0.1
Chlorine carrier (PVC-C)	---	---	no data	approx. 0.08 g	< 0.1
Phenolic resin (Bakelite)	---	---	no data	approx. 0.08 g	< 0.1
Graphite	231-955-3	7782-42-5	no data	approx. 0.01 g	<< 0.1



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Round PMD369, 35mm x 228, APDS-T

Blatt / Sheet

2

Anz. Bl. / Sheets

8

Sachnummer / Article Number

WU425572AV

DI

B

Patrone PMD369, 35mm x 228, TL

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

Component description	EC-No.	CAS-No.	R-Phrases	Weight	%
5. Lighting Composition (Tracer)			3-6	Total [0.2g]	< 0.1
WUYIS507					
Barium peroxide	215-128-4	1304-29-6	8-20/22	approx. 0.14 g	< 0.1
Magnesium	231-104-6	7439-95-4	15-17	approx. 0.03 g	< 0.1
Silicon	231-130-8	7440-21-3	no data	approx. 0.02 g	< 0.1
Graphite	231-955-3	7782-42-5	no data	Traces	<< 0.1
Binder (EC)	---	---	no data	approx. 0.01 g	<< 0.1
6. Cartridge case primed				Total [684 g]	approx. 48
WK700153					
Alloying constituents					
Iron	231-096-4	7439-89-6	no data	approx. 630 g	approx. 43
Copper	231-159-6	7440-50-8	11-17-36/38-48/20-51/53-62	approx. 40 g	approx. 2.8
Zinc	231-175-3	7440-66-6	15-17-19-22-36/37/38-50/53	approx. 15 g	approx. 1
Chromium	231-157-5	7440-47-3	11-20/21/22-23-34-40	approx. 0.6 g	< 0.1
Nickel	231-111-4	7440-02-0	40-43-48/23-52/53	approx. 0.3 g	< 0.1
Lead	231-100-4	7439-92-1	20/22-33-36/38-40-	approx. 0.3 g	< 0.1
7. Projectile WKTL369				Total [376 g]	approx. 43
Alloying constituents					
Tungsten	231-143-9	7440-33-7	no data	approx. 280 g	approx. 20
Aluminium	231-072-3	7429-90-5	15-17	approx. 37 g	approx. 2.6
Iron	231-096-4	7439-89-6	no data	approx. 1.7 g	approx. 0.1
Copper	231-159-6	7440-50-8	11-17-36/38-48/20-51/53-62	approx. 0.8 g	< 0.1
Zinc	231-175-3	7440-66-6	15-17-19-22-36/37/38-50/53	approx. 2.2 g	approx. 0.1
Chromium	231-157-5	7440-47-3	11-20/21/22-23-34-40	approx. 0.1 g	< 0.1
Nickel	231-111-4	7440-02-0	40-43-48/23-52/53	approx. 0.6 g	< 0.1
Plastic, PEI	---	---	no data	approx. 42 g	approx. 3
Plastic, HDPE	--	--	no data	approx. 4 g	approx. 0.3
Varnish, EP, EEA, PTFE	---	---	no data	approx. 3 g	approx. 0.2
Sealing compound, SI, POM	---	---	no data	approx. 1 g	< 0.1



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Round PMD369, 35mm x 228, APDS-T

Blatt / Sheet

3

Anz. Bl. / Sheets

8

Sachnummer / Article Number

WU425572AV

DI

B

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

4. First-Aid Measures

First aid measures apply to compositions and combustion products. It does not apply to the entire round.

Eyes	Flush eyes with water for 15 minutes
Skin	Remove with a mild soap and water. Burning propellant can cause burns.
Ingestion	Do not induce vomiting until consultation with doctor
Inhalation	Remove to fresh air
Note to Physician	No specific instructions

5. Fire-Fighting Measures

Flammable Properties	In case of fire, the rounds can explode and have secondary effects: Shock wave, fragmentation of surrounding structures, splinters.
Ignition Temperature	approx. 170°C (propellant)
Hazardous Decomposition Products	Oxides of nitrogen, carbon monoxide, various dusts and fumes (lead, antimony, copper, strontium and barium).
Extinguishing Media	Water , Carbon dioxide (CO ₂) extinguisher, Sand, Talc
Special Fire Fighting Instructions	Fight fire, if possible, and WITHOUT RISK , use unmanned hose holders or monitor nozzles from maximum distance. Stop all traffic and clear the area for least 1000 meters in all directions. ERI-Card Nr. 1-02

6. Accidental Release Measures

Spills and Leaks	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Cleanup spills with a soft bristle brush and conductive rubber-pan or rubber shovel. Use conductive containers or original packaging. Note the possibility of a mass reaction. Avoid pinching material or metal to contact. Avoid sharp objects, sand, glass, grit or other material that sensitizes explosives. Wet with water to desensitize. Water and steam may be used for decontaminating. In case of packaging rupture, do transfer the product in a similar packaging by avoiding aggressions.
Waste Disposal Procedures	Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Round PMD369, 35mm x 228, APDS-T

Patrone PMD369, 35mm x 228, TL

Blatt / Sheet

4

Anz. Bl. / Sheets

8

Sachnummer / Article Number

WU425572AV

DI

B

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

7. Handling and Storage

Handling	The quantity of rounds in the manufacturing area shall be limited to the required minimum for production. Keep away from flames, heat, shock, friction, sparks or static electricity. Smoking is prohibited
Advice on Storage	Store in original packaging Take note of storage group assignment, clustering prohibition and safety requirements before use. Store in a cool and dry place, temperature < 30°C

8. Exposure Controls / Personal Protection

Respiratory Protection	The round is enclosed and does not pose an exposure problem unless disassembled, deflagrated or detonated. It is the responsibility of the employer to determine under what circumstances require respiratory protection.
Hand Protection	Following testing: Gloves
Ventilation	Following testing allow products of combustion to clear before entering test range.
Eye Protection	Wear as minimum safety glasses with side shields.
Hearing Protection	Hearing protection recommended

Personnel safety

The usual safety measures on handling of ammunition and explosives must be observed:

Keep away from heat and do not expose to mechanical shocks.

Normal handling of rounds does not involve any harm to the environment by hazardous materials.

Resulting gases and particles during the firing can be harmful if inhaled.

After firing, residues may be able traces of harmful substances.

9. Physical and Chemical Properties

Appearance	Solid object	min. temperature of Ignition	approx. 170°C (propellant)
Color	Projectile : Black Cartridge Case: Grayish black	max. burning temperature Sound intensity	approx. 2500°C not determined
Odor	N / A	Light intensity	N / A
Melting Point	N / A	Boiling Point	N / A
Vapor Pressure	N / A	Vapor Density	N / A
Specific Gravity	N / A	Solubility	N / A
pH	N / A		



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Round PMD369, 35mm x 228, APDS-T

Patrone PMD369, 35mm x 228, TL

Blatt / Sheet

5

Anz. Bl. / Sheets

8

Sachnummer / Article Number

WU425572AV

DI

B

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

10. Stability and Reactivity

Stability	Stable until +71°C (deflagration temperature propellant: +170°C)
Incompatibilities	Oxidizers, corrosive agents, humidity
Conditions to avoid	Heat, shock, static electric discharge, open flame, sparks

11. Toxicological Information

Fired cartridge cases, residue of combustion or rests resulting of reactions not intended, may include toxically substances. Appropriated protection orders are required (gloves).

Due to burning of the inner packaging's (internal furniture) of KiMu (AmmoBox) toxically gas is evaporated as well as toxic residues remain.

12. Ecological Information

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles. For rounds no data are available. Avoid release into waters or drains.

13. Disposal Considerations

Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.

Waste key (European waste code): **16 04 01*** (waste ammunition)
16 04 03* (other waste explosives)

14. Transport Information

UN ID No.	0328										
Proper Shipping Name	Cartridges for Weapons, Inert Projectile										
Class & Division	1.2C										
UN	Chapter 3.2, dangerous goods list										
ADR / RID	Chapter 3.2, dangerous goods list										
IMDG-Code	Chapter 3.2, dangerous goods list										
ICAO / IATA	Chapter 4.2, dangerous goods list										
Net quantity of explosives NEQ	<table border="1"> <tr> <td>Primer</td> <td>0.04 g</td> </tr> <tr> <td>Primer charge</td> <td>0.65 g</td> </tr> <tr> <td>Propellant</td> <td>370 g</td> </tr> <tr> <td>Tracer with lighting composition</td> <td>1.5 g</td> </tr> <tr> <td>Total NEQ</td> <td>372 g</td> </tr> </table>	Primer	0.04 g	Primer charge	0.65 g	Propellant	370 g	Tracer with lighting composition	1.5 g	Total NEQ	372 g
Primer	0.04 g										
Primer charge	0.65 g										
Propellant	370 g										
Tracer with lighting composition	1.5 g										
Total NEQ	372 g										

Permits SVTI Documents No.: 4'204'758

Principle of operation: Initiation of propellant after mechanical percussion of primer cap of cartridge case.

 RHEINMETALL DEFENCE	Bezeichnung / Item	Blatt / Sheet	Anz. Bl. / Sheets
	Round PMD369, 35mm x 228, APDS-T	6	8
	Sachnummer / Article Number	DI	
RWM SCHWEIZ AG, ZÜRICH ©	Patrone PMD369, 35mm x 228, TL	WU425572AV	B

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

Package Type : Ammunition Steel Box A4		UN certificates : Approval of packaging for dangerous goods No. CH 2338 or No. EGI 4205343 Inspection Fédérale des Matières Dangereuses 30.03.2005 and 06.07.2009			
Packings	Description	Exterior dimensions (m)	Number of items	Masse (kg)	
Steel Box M548 WV202903A	UN4A/Y80/S/»year»/CH 2338-OE	0.371 H x 0.211 B x 0.474 L	20 rounds	Nt Wt approx. 32 kg	Gr Wt approx. 49 kg
Inner packaging	Cardboard tubes or formed plastic-foams parts				

15. Regulatory Information

UN ID No.:	0328	Cartridges for Weapons, Inert Projectile
Hazard symbols	E	Explosive
		
R-Phrases	R 3	Extreme risk of explosion by shock, friction fire or other sources of ignition.
	R 7	May cause a fire.
S-Phrases	S 16	Keep away from sources of ignition – No smoking.
	S 33	Take precautionary measures against static discharges.
	S 41	In case of fire and/or explosion do not breathe fumes.
	S 49	Keep only in the original container
	S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.

15.1 EPA SARA 313 Chemical Listing, Environmental Informations

Chemicals	EC No. [CAS No.]
Lead and Compounds	231-100-4 [7439-92-1]
Barium and Compounds	231-149-1 [7440-39-3]
Copper and Compounds	231-159-6 [7440-50-8]
Chromium and Compounds	231-157-5 [7440-47-3]
Antimony and Compounds	231-146-5 [7440-36-0]
Camphor	207-354-7 [464-48-2]



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item
Round PMD369, 35mm x 228, APDS-T

Patrone PMD369, 35mm x 228, TL

Blatt / Sheet
7Anz. Bl. / Sheets
8

Sachnummer / Article Number

WU425572AV

DI

B

ARTICLE SAFETY DATA SHEET

according to 1907/2006/EG, Article 33

Round PMD369, 35mm x 228, APDS-T, WKPM369

Revision Date: 21.05.2010

Print Date: 05.11.2010

16. Other Information

This ASDS was composed to comply with the Swiss Government (FOEN) Hazard Communication Standard. It has been prepared from information obtained from one or more of the following:

- The manufacturer of the components.
- Recommendations of the Transport of Dangerous Goods, United Nations, ST/SQ/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.
- Federal Office of Public Health (FOPH).
- USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Restrictions

The declarations in this safety data sheet are based on the actual knowledge of the manufacturer. These declarations have reference to the described product in its original condition.

The safety data sheet does not lay claim to completeness.

RWM Schweiz AG is not responsible for false conclusions, either regarding the data or the recommendations for handling.

The data and recommendations may not be directly applicable or sufficient, depending on the application.

The user has to interpret the data and recommendations, to analyse the safety measures for the application, and to complete for the specific requirements, if necessary.

The declarations are not guarantees of characteristics.

The ASDS is not an explosive component data sheet or intended to provide detailed information concerning the explosive.

Abuse or unforeseen circumstances are not addressed here.

Information may be developed from time to time which may render the conclusions of the MSDS obsolete.

RWM Schweiz AG makes no warranties to its agents, employees, or contractors as to the applicability of this information to the user's intended purpose or for consequences for its use or misuse.



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Round PMD369, 35mm x 228, APDS-T

Patrone PMD369, 35mm x 228, TL

Blatt / Sheet

8

Anz. Bl. / Sheets

8

Sachnummer / Article Number

WU425572AV

DI

B

SECTION 2D

APDS-T 35MM X 228 AMMUNITION/PMD369

ARMOUR PIERCING DISCARDING SABOT WITH TRACER

EXTERIOR BALLISTICS DATA

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

INHALT

CONTENTS

1. ANWENDUNG

Für 35 mm Oerlikon Munition
mit Geschoss TL zu 35 mm x 228

1. SCOPE

For 35 mm Oerlikon Ammunition
with Projectile APDS-T for 35 mm x 228

2. AUSSENBALLISTISCHE DATEN

2. EXTERIOR BALLISTICS DATA

2.1	Allgemeine Daten	2	2.1	General Data	2
2.2	Erdschusstafel	3	2.2	Ground Firing Table	3
2.3	Korrekturtafel zur Erdschusstafel	9	2.3	Correction Table for Ground Firing Table	9
2.4	Flabschusstafel	15	2.4	Anti-Aircraft Firing Table	15
2.5	Korrekturtafel zur Flabschusstafel	32	2.5	Correction Table for Anti-Aircraft Firing Table	32
2.6	Temperaturkorrektur für 100% relative Luftfeuchtigkeit	49	2.6	Correction of Temperature for 100% relative Humidity	49
2.7	Gebrauch der Tafel (Beispiel)	50	2.7	Use of the Table (Example)	50
2.8	Flugbahnskizze	53	2.8	Trajectory Chart	53
3.	DOKUMENTENVERZEICHNIS	54	3.	DOCUMENTARY LIST	54

Anschlussdokumente:

WK802279AV

CW-GESETZ-DATEN
CD-LAW-DATA

			Datum	Name	Abt.	Dokumentart / Doc. Type		
			Erst.	12.01.10	M. Engler	<i>Ulf</i>	E-MM	Spezifikation
			Norm					
			Exp.			<i>10</i>		
			Freig.	12.01.10	R. Rossmann	<i>12</i>	E-MM	
Ae.-I.	Ae.-Nr.	Datum	Name		Bezeichnung / Item			
					Spec. exterior ballistic			
					Spez. Aussenballistik			
					Sachnummer / Article number		DI	Blatt
					WK802280AV		A	1
							Blätter 54	

2. AUSSENBALLISTISCHE DATEN

2.1 ALLGEMEINE DATEN

Diese Spezifikation enthält Schusstafeln, sowohl für den Erd- als auch für den Flabeinsatz. Die zugehörigen Korrekturtafeln erlauben die Berücksichtigung von Abweichungen gegenüber den Standardbedingungen.

Die Standardbedingungen in den Tafeln sind durch folgende Größen charakterisiert:

STANDARDBEDINGUNGEN

a) Kanone und Geschoss

Rohr:	Kaliber	35 mm
Mündungsgeschwindigkeit (V_0)	1400 m/s	
Treibladungstemperatur	+21°C	
Geschossmasse	0.2937 kg	
Geschossdurchmesser	19.2 mm	
Geschosstyp(en)	Geschoss TL	
Widerstandsbeiwert (C_W)	WK802279AV	
Patronentyp(en)	Patrone MT	
Einsatzdistanz	Max. 4.5 km	

b) Atmosphäre an der Mündung

ICAO-Normatmosphäre	DIN ISO 2533
Mündungshöhe	0 m ü.M.
Luftdichte (ρ_0)	1.2250 kg/m³
Temperatur (T_0)	15° C
Druck (P_0)	1013.25 mbar
Wind-Geschwindigkeit	0 m/s
Relative Feuchtigkeit	0 %

Bemerkung:

Diese ballistischen Tafeln basieren auf genauen ballistischen Messungen (Doppler Radar), in einem Bereich, der die maximale Einsatzdistanz der entsprechenden Munition abdeckt und sind auf Normatmosphäre umgerechnet. Für grössere Distanzen haben die Angaben lediglich informativen Charakter.

2. EXTERIOR BALLISTICS DATA

2.1 GENERAL DATA

This specification contains firing tables for use in ground firing as well as for anti-aircraft firing. The influence of deviations from standard conditions may be taken into account by using the corresponding correction tables.

The standard conditions in the tables are characterized by the following values:

STANDARD CONDITIONS

a) Gun an Projectile

Barrel: Caliber	35 mm
Muzzle Velocity (V_0)	1400 m/s
Propellant Temperature	+21°C
Projectile Mass	0.2937 kg
Projectile Diameter	19.2 mm
Projectile Type(s)	Projectile APDS-T
Drag Coefficient (C_D)	WK802279AV
Ammunition Type(s)	Round KETF
Practical Range	Max. 4.5 km

b) Atmosphere at Muzzle

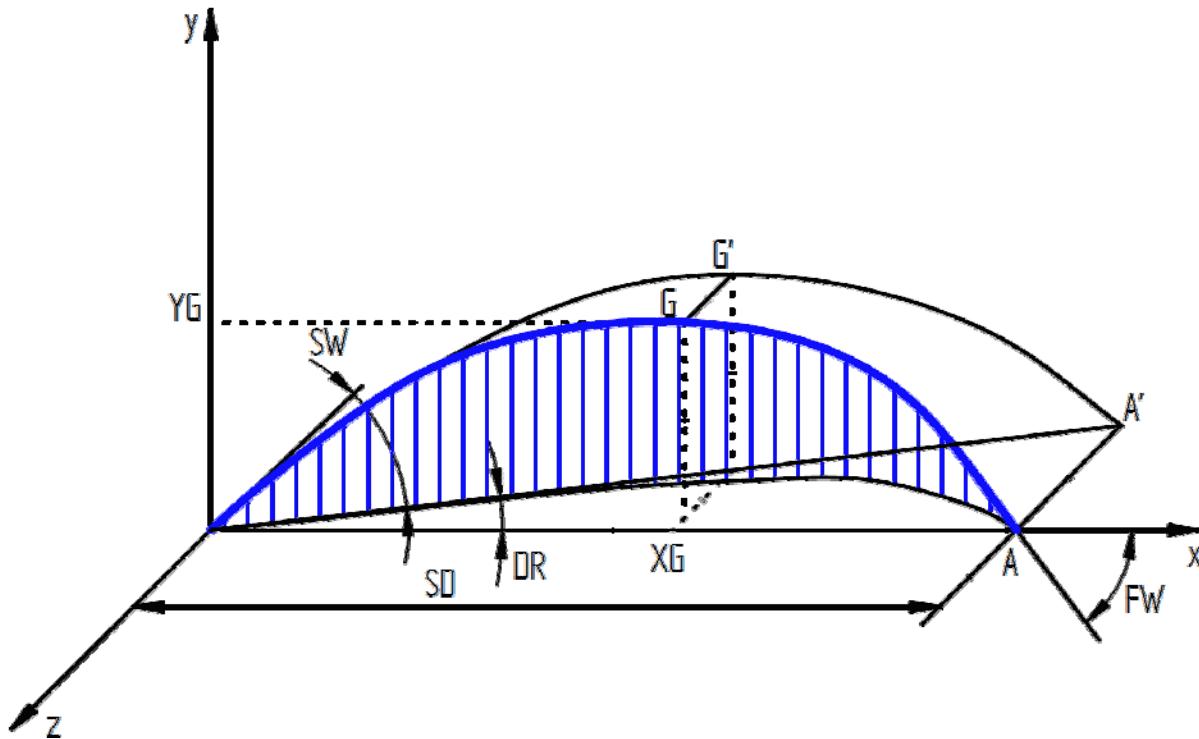
ICAO-Standard Atmosphere	ISO 2533
Muzzle Altitude	0 m above Sea Level
Density (ρ_0)	1.2250 kg/m³
Temperature (T_0)	15° C
Pressure (P_0)	1013.25 mbar
Wind Speed	0 m/s
Relative Humidity	0 %

Note:

The present tables are based on accurate ballistic measurements (Doppler Radar) taken over the maximum practical range and reduced to standard atmospheric conditions. Data given for greater ranges are for information only.

2.2 ERDSCHUSSTAFEL

2.2 GROUND FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel (**A**)

SW Schusswinkel: Winkel, der eingestellt werden muss, um das Ziel (**A**) auf der gegebenen Distanz (**SD**) zu treffen

FZ Flugzeit des Geschosses von der Mündung bis zum Ziel (**A**)

DR Derivation: nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Drallein-fluss; die Korrektur muss deshalb nach links erfolgen. Der Derivationswinkel **DR** liegt in der Ebene (**X,Z**)

XG Gipfelentfernung (horizontal) der Geschossflugbahn

YG Gipfelhöhe der Geschossflugbahn über Mündungshöhe

VE Geschossgeschwindigkeit bei Distanz **SD**

FW Fallwinkel des Geschosses bei Distanz **SD**

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben
(mils = A‰).

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target (**A**)

SW Superelevation: angle to be set, in order to hit the target (**A**) at a range (**SD**)

FZ Time-of-Flight of the projectile from muzzle to target (**A**)

DR Drift: the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle lies in the plane (**X,Z**)

XG Vertex Abscissa: horizontal distance to the vertex

YG Vertex Height: vertical distance to the vertex above the muzzle

VE Remaining Velocity of the Projectile at range **SD**

FW Angle of Fall of the projectile at range **SD**

All angles are given in **mils** ($360^\circ = 6400$ mils).
(mils = A‰).

SD [m]	SW [A %]	FZ [s]	DR [A %]	XG [m]	YG [m]	VE [m/s]	FW [A %]	SD [m]
0	0.0	0.000	0.0	0	0.0	1400.0	0.0	0
100	0.3	0.072	0.0	50	0.0	1386.1	0.3	100
200	0.5	0.144	0.0	100	0.0	1372.3	0.5	200
300	0.8	0.218	0.0	151	0.1	1358.5	0.8	300
400	1.0	0.292	0.0	201	0.1	1344.8	1.1	400
500	1.3	0.366	0.0	252	0.2	1331.2	1.4	500
600	1.6	0.442	0.0	303	0.2	1317.7	1.7	600
700	1.9	0.518	0.0	354	0.3	1304.2	2.0	700
800	2.2	0.595	0.0	405	0.4	1290.8	2.3	800
900	2.4	0.673	0.1	457	0.6	1277.5	2.6	900
1000	2.7	0.752	0.1	508	0.7	1264.3	2.9	1000
1100	3.0	0.831	0.1	560	0.9	1251.1	3.3	1100
1200	3.3	0.912	0.1	612	1.0	1238.0	3.6	1200
1300	3.6	0.993	0.1	664	1.2	1225.0	4.0	1300
1400	3.9	1.075	0.1	717	1.4	1212.0	4.3	1400
1500	4.2	1.158	0.1	769	1.7	1199.2	4.7	1500
1600	4.6	1.242	0.1	822	1.9	1186.4	5.1	1600
1700	4.9	1.326	0.1	875	2.2	1173.7	5.5	1700
1800	5.2	1.412	0.1	928	2.5	1161.0	5.9	1800
1900	5.5	1.499	0.1	981	2.8	1148.5	6.3	1900
2000	5.9	1.586	0.1	1035	3.1	1136.0	6.7	2000
2100	6.2	1.675	0.1	1088	3.5	1123.7	7.2	2100
2200	6.6	1.764	0.1	1142	3.8	1111.3	7.6	2200
2300	6.9	1.855	0.2	1196	4.2	1099.1	8.1	2300
2400	7.3	1.946	0.2	1251	4.7	1086.8	8.6	2400
2500	7.6	2.039	0.2	1305	5.1	1074.7	9.1	2500
2600	8.0	2.132	0.2	1360	5.6	1062.5	9.6	2600
2700	8.4	2.227	0.2	1415	6.1	1050.2	10.1	2700
2800	8.7	2.323	0.2	1470	6.7	1037.5	10.7	2800
2900	9.1	2.420	0.2	1525	7.2	1024.5	11.2	2900
3000	9.5	2.518	0.2	1580	7.8	1011.4	11.8	3000
3100	9.9	2.617	0.2	1636	8.4	998.4	12.4	3100
3200	10.3	2.718	0.2	1692	9.1	985.3	13.0	3200
3300	10.7	2.820	0.2	1748	9.8	972.2	13.6	3300
3400	11.1	2.924	0.3	1805	10.5	959.2	14.3	3400
3500	11.6	3.029	0.3	1861	11.3	946.2	15.0	3500
3600	12.0	3.135	0.3	1918	12.1	933.2	15.7	3600
3700	12.4	3.243	0.3	1976	12.9	920.3	16.4	3700
3800	12.9	3.353	0.3	2033	13.8	907.4	17.1	3800
3900	13.3	3.464	0.3	2091	14.7	894.6	17.9	3900
4000	13.8	3.576	0.3	2150	15.7	881.8	18.7	4000
4100	14.3	3.690	0.3	2208	16.7	869.0	19.5	4100
4200	14.7	3.806	0.4	2267	17.8	856.4	20.4	4200
4300	15.2	3.924	0.4	2327	18.9	843.7	21.3	4300
4400	15.7	4.043	0.4	2386	20.1	831.1	22.2	4400
4500	16.2	4.165	0.4	2446	21.3	818.6	23.2	4500

SD [m]	SW [A %]	FZ [s]	DR [A %]	XG [m]	YG [m]	VE [m/s]	FW [A %]	SD [m]
4600	16.8	4.288	0.4	2507	22.5	806.0	24.2	4600
4700	17.3	4.413	0.4	2568	23.9	793.6	25.2	4700
4800	17.8	4.540	0.4	2629	25.3	781.1	26.3	4800
4900	18.4	4.669	0.5	2691	26.7	768.7	27.4	4900
5000	18.9	4.800	0.5	2753	28.2	756.4	28.5	5000
5100	19.5	4.933	0.5	2815	29.8	744.2	29.7	5100
5200	20.1	5.068	0.5	2878	31.4	732.0	31.0	5200
5300	20.7	5.206	0.5	2941	33.2	719.8	32.2	5300
5400	21.3	5.346	0.5	3004	35.0	707.6	33.6	5400
5500	22.0	5.488	0.6	3068	36.9	695.5	35.0	5500
5600	22.6	5.633	0.6	3132	38.8	683.4	36.4	5600
5700	23.3	5.781	0.6	3197	40.9	671.3	38.0	5700
5800	23.9	5.931	0.6	3262	43.0	659.3	39.5	5800
5900	24.6	6.084	0.6	3327	45.2	647.4	41.2	5900
6000	25.3	6.239	0.7	3393	47.6	635.6	42.9	6000
6100	26.0	6.398	0.7	3459	50.0	623.9	44.7	6100
6200	26.8	6.559	0.7	3526	52.5	612.2	46.5	6200
6300	27.5	6.724	0.7	3593	55.2	600.6	48.5	6300
6400	28.3	6.892	0.8	3660	58.0	589.1	50.5	6400
6500	29.1	7.063	0.8	3728	60.9	577.8	52.6	6500
6600	29.9	7.237	0.8	3797	63.9	566.5	54.9	6600
6700	30.8	7.415	0.8	3865	67.1	555.4	57.2	6700
6800	31.6	7.596	0.9	3935	70.4	544.3	59.6	6800
6900	32.5	7.781	0.9	4004	73.8	533.4	62.1	6900
7000	33.4	7.970	0.9	4075	77.5	522.5	64.8	7000
7100	34.4	8.163	1.0	4145	81.2	511.8	67.5	7100
7200	35.3	8.360	1.0	4217	85.2	501.1	70.4	7200
7300	36.3	8.561	1.0	4289	89.3	490.6	73.5	7300
7400	37.3	8.766	1.1	4361	93.6	480.1	76.6	7400
7500	38.4	8.976	1.1	4434	98.2	469.7	80.0	7500
7600	39.5	9.190	1.1	4507	102.9	459.5	83.5	7600
7700	40.6	9.409	1.2	4581	107.9	449.3	87.1	7700
7800	41.7	9.633	1.2	4655	113.0	439.2	91.0	7800
7900	42.9	9.862	1.3	4730	118.5	429.2	95.0	7900
8000	44.1	10.096	1.3	4806	124.2	419.3	99.3	8000
8100	45.3	10.336	1.3	4882	130.1	409.3	103.8	8100
8200	46.6	10.581	1.4	4959	136.4	399.5	108.5	8200
8300	48.0	10.833	1.4	5036	142.9	389.7	113.4	8300
8400	49.3	11.091	1.5	5114	149.8	380.0	118.7	8400
8500	50.8	11.355	1.5	5192	157.0	370.4	124.2	8500
8600	52.2	11.626	1.6	5271	164.5	360.8	130.0	8600
8700	53.7	11.904	1.7	5351	172.5	351.3	136.2	8700
8800	55.3	12.190	1.7	5432	180.8	342.0	142.7	8800
8900	56.9	12.483	1.8	5513	189.6	333.6	149.6	8900
9000	58.6	12.783	1.8	5594	198.8	325.6	156.8	9000

SD [m]	SW [A %]	FZ [s]	DR [A %]	XG [m]	YG [m]	VE [m/s]	FW [A %]	SD [m]
9100	60.4	13.089	1.9	5677	208.4	319.6	164.3	9100
9200	62.2	13.401	2.0	5760	218.6	314.9	172.1	9200
9300	64.1	13.717	2.1	5843	229.2	310.2	180.1	9300
9400	66.0	14.038	2.1	5927	240.4	305.3	188.3	9400
9500	68.0	14.365	2.2	6011	252.2	300.5	196.8	9500
9600	70.0	14.696	2.3	6095	264.5	295.9	205.5	9600
9700	72.2	15.033	2.4	6180	277.3	291.3	214.4	9700
9800	74.4	15.375	2.5	6264	290.8	286.9	223.6	9800
9900	76.6	15.722	2.5	6349	304.9	282.6	233.1	9900
10000	79.0	16.074	2.6	6434	319.6	278.4	242.9	10000
10100	81.4	16.433	2.7	6519	334.9	274.3	252.9	10100
10200	83.8	16.796	2.8	6603	350.9	270.3	263.2	10200
10300	86.4	17.165	2.9	6688	367.6	266.4	273.7	10300
10400	89.0	17.540	3.0	6772	385.0	262.7	284.5	10400
10500	91.7	17.921	3.1	6856	403.2	259.0	295.6	10500
10600	94.5	18.307	3.2	6940	422.1	255.5	307.0	10600
10700	97.3	18.698	3.3	7024	441.7	252.1	318.7	10700
10800	100.3	19.096	3.4	7108	462.2	248.8	330.6	10800
10900	103.3	19.499	3.6	7191	483.5	245.6	342.8	10900
11000	106.4	19.908	3.7	7274	505.7	242.5	355.3	11000
11100	109.6	20.324	3.8	7356	528.8	239.5	368.0	11100
11200	112.8	20.744	3.9	7438	552.7	236.7	381.0	11200
11300	116.2	21.171	4.0	7520	577.6	233.9	394.3	11300
11400	119.6	21.604	4.2	7601	603.3	231.3	407.8	11400
11500	123.1	22.043	4.3	7682	630.0	228.7	421.5	11500
11600	126.7	22.488	4.4	7763	657.7	226.3	435.5	11600
11700	130.4	22.939	4.6	7843	686.3	224.0	449.8	11700
11800	134.2	23.397	4.7	7922	716.0	221.8	464.2	11800
11900	138.0	23.860	4.9	8002	746.7	219.7	478.9	11900
12000	142.0	24.330	5.0	8080	778.4	217.7	493.8	12000
12100	146.0	24.805	5.2	8158	811.3	215.8	508.8	12100
12200	150.2	25.287	5.3	8236	845.2	214.0	524.1	12200
12300	154.4	25.776	5.5	8313	880.2	212.3	539.5	12300
12400	158.8	26.270	5.7	8389	916.4	210.8	555.0	12400
12500	163.2	26.771	5.8	8465	953.8	209.3	570.7	12500
12600	167.7	27.278	6.0	8541	992.4	207.9	586.5	12600
12700	172.4	27.792	6.2	8615	1032.1	206.6	602.4	12700
12800	177.1	28.312	6.4	8690	1073.2	205.5	618.4	12800
12900	181.9	28.838	6.6	8763	1115.5	204.4	634.5	12900
13000	186.9	29.371	6.8	8836	1159.0	203.4	650.6	13000
13100	191.9	29.910	7.0	8909	1203.9	202.5	666.7	13100
13200	197.0	30.456	7.2	8981	1250.1	201.7	682.9	13200
13300	202.2	31.008	7.4	9052	1297.8	200.9	699.1	13300
13400	207.6	31.567	7.6	9123	1347.0	200.3	715.2	13400
13500	213.0	32.132	7.8	9193	1397.6	199.8	731.4	13500

SD [m]	SW [A %]	FZ [s]	DR [A %]	XG [m]	YG [m]	VE [m/s]	FW [A %]	SD [m]
13600	218.6	32.704	8.0	9262	1449.6	199.3	747.4	13600
13700	224.2	33.283	8.2	9331	1503.1	198.9	763.5	13700
13800	230.0	33.868	8.5	9400	1558.0	198.6	779.4	13800
13900	235.8	34.461	8.7	9468	1614.4	198.4	795.3	13900
14000	241.8	35.060	8.9	9536	1672.4	198.2	811.0	14000
14100	247.9	35.666	9.2	9603	1731.8	198.1	826.6	14100
14200	254.1	36.279	9.4	9670	1792.9	198.1	842.1	14200
14300	260.4	36.899	9.7	9737	1855.6	198.2	857.5	14300
14400	266.8	37.527	10.0	9805	1919.9	198.3	872.7	14400
14500	273.3	38.161	10.2	9872	1985.9	198.4	887.7	14500
14600	279.9	38.803	10.5	9939	2053.7	198.7	902.6	14600
14700	286.7	39.453	10.8	10006	2123.2	199.0	917.3	14700
14800	293.5	40.109	11.1	10073	2194.5	199.3	931.7	14800
14900	300.5	40.774	11.4	10139	2267.7	199.7	946.0	14900
15000	307.6	41.445	11.7	10206	2342.9	200.1	960.1	15000
15100	314.8	42.124	12.0	10272	2420.0	200.6	973.9	15100
15200	322.1	42.811	12.3	10338	2499.1	201.2	987.6	15200
15300	329.6	43.506	12.6	10404	2580.1	201.8	1001.0	15300
15400	337.1	44.210	12.9	10470	2663.1	202.4	1014.2	15400
15500	344.8	44.922	13.3	10535	2748.1	203.1	1027.2	15500
15600	352.6	45.642	13.6	10601	2835.3	203.8	1039.9	15600
15700	360.5	46.372	14.0	10665	2924.6	204.5	1052.4	15700
15800	368.6	47.111	14.3	10730	3016.2	205.2	1064.7	15800
15900	376.8	47.858	14.7	10794	3110.0	206.0	1076.8	15900
16000	385.1	48.616	15.0	10858	3206.2	206.8	1088.6	16000
16100	393.6	49.383	15.4	10922	3304.8	207.7	1100.2	16100
16200	402.2	50.160	15.8	10985	3405.9	208.6	1111.6	16200
16300	410.9	50.945	16.2	11047	3509.9	209.5	1122.7	16300
16400	419.8	51.742	16.6	11109	3616.4	210.4	1133.6	16400
16500	428.8	52.550	17.0	11171	3725.6	211.4	1144.3	16500
16600	438.0	53.369	17.5	11232	3837.6	212.3	1154.7	16600
16700	447.3	54.201	17.9	11293	3952.5	213.3	1165.0	16700
16800	456.8	55.045	18.4	11353	4070.4	214.3	1175.0	16800
16900	466.5	55.902	18.8	11412	4191.5	215.3	1184.9	16900
17000	476.4	56.774	19.3	11471	4315.9	216.3	1194.6	17000
17100	486.4	57.660	19.8	11530	4443.7	217.3	1204.1	17100
17200	496.6	58.561	20.3	11587	4575.2	218.4	1213.4	17200
17300	507.1	59.476	20.8	11644	4710.8	219.5	1222.4	17300
17400	517.7	60.406	21.4	11699	4850.4	220.6	1231.3	17400
17500	528.5	61.355	21.9	11754	4994.2	221.7	1240.0	17500
17600	539.6	62.325	22.5	11808	5142.5	222.8	1248.5	17600
17700	551.0	63.316	23.1	11861	5295.7	223.9	1256.9	17700
17800	562.7	64.330	23.7	11913	5454.2	225.0	1265.2	17800
17900	574.7	65.370	24.3	11964	5618.3	226.2	1273.4	17900
18000	587.0	66.438	25.0	12013	5788.7	227.3	1281.5	18000

The English version is a translation. In case of dispute the German original will govern.

SD [m]	SW [A %]	FZ [s]	DR [A %]	XG [m]	YG [m]	VE [m/s]	FW [A %]	SD [m]
18100	599.7	67.537	25.7	12062	5966.0	228.5	1289.5	18100
18200	612.8	68.663	26.4	12108	6151.2	229.7	1297.2	18200
18300	626.3	69.829	27.1	12152	6344.8	231.0	1304.8	18300
18400	640.4	71.039	27.9	12195	6547.9	232.3	1312.4	18400
18500	655.1	72.302	28.8	12235	6762.2	233.5	1320.1	18500
18600	670.7	73.629	29.7	12273	6989.7	234.8	1327.8	18600
18700	687.1	75.032	30.7	12309	7233.4	236.1	1335.6	18700
18800	704.8	76.530	31.7	12340	7497.5	237.6	1343.4	18800
18900	723.9	78.146	32.9	12365	7788.3	239.2	1351.3	18900
19000	745.1	79.937	34.2	12384	8114.6	240.8	1359.6	19000
19100	769.8	82.001	35.8	12395	8496.4	242.6	1368.8	19100
19200	801.0	84.599	38.0	12388	8985.7	244.8	1379.6	19200



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

8

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A

2.3 KORREKTURTAFEL ZUR ERDSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrekturen kann unter gestörten Bedingungen die Distanz **SD** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel),
sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind
(parallel zur X-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind
(von links, parallel zur Z-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils)
angegeben (mils = A%).

2.3 CORRECTION TABLE TO THE GROUND FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction(Superelevation),
as well as

FZ-Variation (Time-of-Flight)

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind
(parallel to X-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind
(from the left, parallel to Z-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).
(mils = A%).

SW-Correction [A %] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ
SD	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10	
[m]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	
0	0.0	0.0	0.0	0.0	0.000	0.000	0.000	0.000	0.0	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.1	
500	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2	
600	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2	
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.3	
800	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.3	
900	0.0	0.0	0.0	0.0	0.005	0.001	-0.003	0.000	0.3	
1000	0.0	0.0	0.0	0.0	0.006	0.001	-0.004	0.000	0.4	
1100	0.0	0.0	0.0	0.0	0.006	0.001	-0.005	-0.001	0.4	
1200	0.0	0.0	0.0	0.0	0.007	0.002	-0.006	-0.001	0.5	
1300	0.1	0.0	0.0	0.0	0.007	0.002	-0.007	-0.001	0.5	
1400	0.1	0.0	0.0	0.0	0.008	0.002	-0.008	-0.001	0.5	
1500	0.1	0.0	0.0	0.0	0.009	0.003	-0.009	-0.001	0.6	
1600	0.1	0.0	-0.1	0.0	0.009	0.003	-0.010	-0.001	0.6	
1700	0.1	0.0	-0.1	0.0	0.010	0.003	-0.012	-0.001	0.7	
1800	0.1	0.0	-0.1	0.0	0.011	0.004	-0.014	-0.002	0.7	
1900	0.1	0.0	-0.1	0.0	0.011	0.004	-0.015	-0.002	0.8	
2000	0.1	0.0	-0.1	0.0	0.012	0.005	-0.017	-0.002	0.8	
2100	0.1	0.0	-0.1	0.0	0.013	0.005	-0.019	-0.002	0.8	
2200	0.1	0.0	-0.1	0.0	0.013	0.006	-0.021	-0.003	0.9	
2300	0.1	0.0	-0.1	0.0	0.014	0.007	-0.023	-0.003	0.9	
2400	0.1	0.0	-0.1	0.0	0.015	0.007	-0.026	-0.003	1.0	
2500	0.1	0.0	-0.1	0.0	0.016	0.008	-0.028	-0.003	1.0	
2600	0.1	0.0	-0.2	0.0	0.016	0.009	-0.031	-0.004	1.1	
2700	0.1	0.0	-0.2	0.0	0.017	0.009	-0.033	-0.004	1.1	
2800	0.1	0.1	-0.2	0.0	0.018	0.010	-0.036	-0.004	1.2	
2900	0.1	0.1	-0.2	0.0	0.019	0.011	-0.040	-0.005	1.2	
3000	0.1	0.1	-0.2	0.0	0.020	0.012	-0.043	-0.005	1.3	
3100	0.2	0.1	-0.2	0.0	0.021	0.013	-0.047	-0.006	1.3	
3200	0.2	0.1	-0.3	0.0	0.022	0.014	-0.051	-0.006	1.4	
3300	0.2	0.1	-0.3	0.0	0.023	0.015	-0.055	-0.006	1.4	
3400	0.2	0.1	-0.3	0.0	0.024	0.016	-0.059	-0.007	1.5	
3500	0.2	0.1	-0.3	0.0	0.025	0.017	-0.064	-0.007	1.5	
3600	0.2	0.1	-0.4	0.0	0.026	0.018	-0.069	-0.008	1.6	
3700	0.2	0.1	-0.4	0.0	0.027	0.019	-0.074	-0.008	1.7	
3800	0.2	0.1	-0.4	0.0	0.028	0.020	-0.080	-0.009	1.7	
3900	0.2	0.1	-0.4	0.0	0.029	0.022	-0.085	-0.010	1.8	
4000	0.2	0.1	-0.5	0.0	0.030	0.023	-0.091	-0.010	1.8	
4100	0.2	0.1	-0.5	-0.1	0.032	0.025	-0.098	-0.011	1.9	
4200	0.2	0.1	-0.5	-0.1	0.033	0.026	-0.104	-0.012	2.0	
4300	0.2	0.2	-0.6	-0.1	0.034	0.028	-0.111	-0.013	2.0	
4400	0.3	0.2	-0.6	-0.1	0.035	0.029	-0.119	-0.013	2.1	
4500	0.3	0.2	-0.7	-0.1	0.037	0.031	-0.126	-0.014	2.1	

SD [m]	SW-Correction [A %] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ [m/s]
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
	WQ 10				WQ 10			WQ 10	
4600	0.3	0.2	-0.7	-0.1	0.038	0.033	-0.134	-0.015	2.2
4700	0.3	0.2	-0.7	-0.1	0.040	0.035	-0.143	-0.016	2.3
4800	0.3	0.2	-0.8	-0.1	0.041	0.037	-0.152	-0.017	2.4
4900	0.3	0.2	-0.8	-0.1	0.043	0.039	-0.161	-0.018	2.4
5000	0.3	0.2	-0.9	-0.1	0.044	0.042	-0.171	-0.020	2.5
5100	0.3	0.2	-0.9	-0.1	0.046	0.044	-0.181	-0.021	2.6
5200	0.3	0.3	-1.0	-0.1	0.047	0.047	-0.191	-0.022	2.7
5300	0.4	0.3	-1.1	-0.1	0.049	0.049	-0.202	-0.023	2.7
5400	0.4	0.3	-1.1	-0.1	0.051	0.052	-0.214	-0.025	2.8
5500	0.4	0.3	-1.2	-0.1	0.053	0.055	-0.226	-0.027	2.9
5600	0.4	0.3	-1.3	-0.1	0.054	0.058	-0.239	-0.028	3.0
5700	0.4	0.3	-1.4	-0.1	0.056	0.061	-0.253	-0.030	3.1
5800	0.4	0.4	-1.4	-0.2	0.058	0.065	-0.267	-0.032	3.1
5900	0.4	0.4	-1.5	-0.2	0.060	0.068	-0.281	-0.034	3.2
6000	0.5	0.4	-1.6	-0.2	0.062	0.072	-0.297	-0.036	3.3
6100	0.5	0.4	-1.7	-0.2	0.065	0.076	-0.313	-0.038	3.4
6200	0.5	0.5	-1.8	-0.2	0.067	0.080	-0.330	-0.040	3.5
6300	0.5	0.5	-1.9	-0.2	0.069	0.085	-0.348	-0.043	3.6
6400	0.5	0.5	-2.0	-0.2	0.072	0.089	-0.366	-0.045	3.7
6500	0.5	0.5	-2.1	-0.2	0.074	0.094	-0.386	-0.048	3.8
6600	0.6	0.6	-2.3	-0.3	0.076	0.099	-0.406	-0.051	3.9
6700	0.6	0.6	-2.4	-0.3	0.079	0.104	-0.427	-0.054	4.0
6800	0.6	0.6	-2.5	-0.3	0.082	0.110	-0.449	-0.057	4.1
6900	0.6	0.7	-2.7	-0.3	0.085	0.115	-0.472	-0.061	4.2
7000	0.7	0.7	-2.8	-0.3	0.087	0.121	-0.496	-0.065	4.3
7100	0.7	0.8	-3.0	-0.3	0.090	0.128	-0.521	-0.068	4.4
7200	0.7	0.8	-3.1	-0.4	0.093	0.134	-0.547	-0.073	4.5
7300	0.7	0.8	-3.3	-0.4	0.097	0.141	-0.575	-0.077	4.7
7400	0.8	0.9	-3.5	-0.4	0.100	0.149	-0.603	-0.082	4.8
7500	0.8	0.9	-3.7	-0.4	0.103	0.156	-0.633	-0.087	4.9
7600	0.8	1.0	-3.9	-0.5	0.107	0.164	-0.664	-0.092	5.0
7700	0.8	1.1	-4.1	-0.5	0.110	0.173	-0.697	-0.097	5.2
7800	0.9	1.1	-4.3	-0.5	0.114	0.182	-0.731	-0.103	5.3
7900	0.9	1.2	-4.6	-0.6	0.118	0.191	-0.767	-0.109	5.4
8000	0.9	1.2	-4.8	-0.6	0.122	0.201	-0.805	-0.116	5.6
8100	1.0	1.3	-5.1	-0.7	0.126	0.212	-0.844	-0.123	5.7
8200	1.0	1.4	-5.4	-0.7	0.131	0.223	-0.885	-0.131	5.9
8300	1.1	1.5	-5.7	-0.8	0.135	0.234	-0.929	-0.139	6.0
8400	1.1	1.6	-6.0	-0.8	0.140	0.246	-0.974	-0.147	6.2
8500	1.1	1.7	-6.3	-0.9	0.145	0.259	-1.022	-0.156	6.3
8600	1.2	1.8	-6.7	-0.9	0.150	0.273	-1.072	-0.166	6.5
8700	1.2	1.9	-7.0	-1.0	0.156	0.287	-1.126	-0.176	6.7
8800	1.3	2.0	-7.4	-1.1	0.162	0.302	-1.181	-0.187	6.8
8900	1.3	2.1	-7.8	-1.1	0.167	0.316	-1.240	-0.199	7.0
9000	1.4	2.2	-8.3	-1.2	0.172	0.330	-1.301	-0.211	7.2

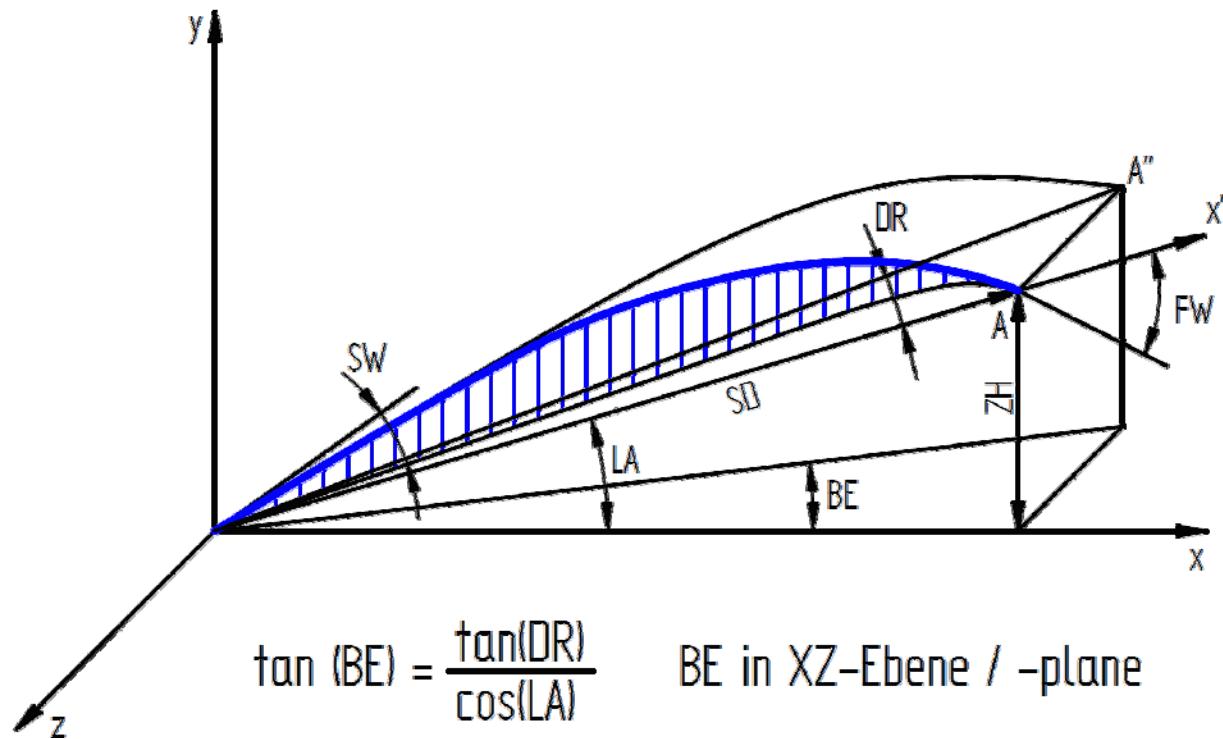
SD [m]	SW-Correction [A %] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ [m/s]
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
	WQ 10 [m/s]								
9100	1.4	2.3	-8.7	-1.3	0.176	0.342	-1.363	-0.223	7.4
9200	1.5	2.5	-9.2	-1.4	0.180	0.354	-1.425	-0.235	7.5
9300	1.6	2.6	-9.7	-1.5	0.183	0.367	-1.486	-0.247	7.7
9400	1.6	2.7	-10.3	-1.6	0.187	0.380	-1.547	-0.260	7.9
9500	1.7	2.9	-10.8	-1.7	0.191	0.394	-1.606	-0.273	8.1
9600	1.7	3.0	-11.4	-1.8	0.195	0.408	-1.665	-0.287	8.3
9700	1.8	3.2	-12.0	-1.9	0.200	0.422	-1.723	-0.301	8.5
9800	1.9	3.4	-12.6	-2.0	0.204	0.436	-1.779	-0.316	8.7
9900	1.9	3.5	-13.3	-2.2	0.208	0.451	-1.835	-0.331	8.9
10000	2.0	3.7	-13.9	-2.3	0.212	0.466	-1.889	-0.347	9.1
10100	2.1	3.9	-14.6	-2.5	0.217	0.482	-1.943	-0.364	9.3
10200	2.1	4.1	-15.3	-2.6	0.221	0.498	-1.998	-0.381	9.5
10300	2.2	4.3	-16.0	-2.8	0.226	0.514	-2.054	-0.398	9.7
10400	2.3	4.5	-16.8	-2.9	0.230	0.530	-2.112	-0.417	9.9
10500	2.3	4.7	-17.5	-3.1	0.235	0.547	-2.171	-0.435	10.1
10600	2.4	4.9	-18.3	-3.3	0.240	0.564	-2.231	-0.455	10.3
10700	2.5	5.1	-19.1	-3.5	0.244	0.581	-2.293	-0.475	10.5
10800	2.6	5.3	-19.9	-3.7	0.249	0.599	-2.356	-0.496	10.7
10900	2.7	5.5	-20.7	-3.9	0.254	0.617	-2.420	-0.517	10.9
11000	2.7	5.8	-21.6	-4.1	0.259	0.635	-2.486	-0.539	11.1
11100	2.8	6.0	-22.5	-4.3	0.264	0.654	-2.552	-0.562	11.3
11200	2.9	6.3	-23.4	-4.5	0.269	0.673	-2.620	-0.585	11.5
11300	3.0	6.5	-24.3	-4.8	0.274	0.692	-2.690	-0.609	11.8
11400	3.1	6.8	-25.3	-5.0	0.279	0.711	-2.760	-0.634	12.0
11500	3.2	7.0	-26.2	-5.3	0.285	0.731	-2.832	-0.660	12.2
11600	3.3	7.3	-27.2	-5.6	0.290	0.751	-2.906	-0.686	12.4
11700	3.4	7.6	-28.3	-5.8	0.296	0.771	-2.981	-0.713	12.6
11800	3.5	7.9	-29.3	-6.1	0.301	0.792	-3.057	-0.741	12.9
11900	3.6	8.2	-30.4	-6.4	0.307	0.813	-3.134	-0.769	13.1
12000	3.7	8.5	-31.5	-6.8	0.312	0.834	-3.213	-0.799	13.3
12100	3.8	8.8	-32.6	-7.1	0.318	0.855	-3.293	-0.829	13.5
12200	3.9	9.1	-33.8	-7.4	0.324	0.876	-3.375	-0.860	13.8
12300	4.0	9.4	-35.0	-7.8	0.330	0.898	-3.458	-0.891	14.0
12400	4.1	9.7	-36.2	-8.1	0.336	0.920	-3.543	-0.924	14.2
12500	4.2	10.0	-37.4	-8.5	0.342	0.942	-3.629	-0.957	14.4
12600	4.3	10.4	-38.7	-8.9	0.348	0.964	-3.716	-0.992	14.7
12700	4.4	10.7	-40.0	-9.3	0.354	0.987	-3.805	-1.027	14.9
12800	4.5	11.1	-41.3	-9.7	0.361	1.010	-3.895	-1.063	15.1
12900	4.6	11.4	-42.7	-10.1	0.367	1.033	-3.987	-1.100	15.4
13000	4.8	11.8	-44.1	-10.6	0.374	1.056	-4.081	-1.138	15.6
13100	4.9	12.1	-45.5	-11.0	0.381	1.079	-4.176	-1.176	15.8
13200	5.0	12.5	-46.9	-11.5	0.387	1.102	-4.273	-1.216	16.1
13300	5.1	12.8	-48.4	-12.0	0.394	1.126	-4.371	-1.257	16.3
13400	5.3	13.2	-49.9	-12.4	0.401	1.150	-4.470	-1.298	16.6
13500	5.4	13.6	-51.4	-12.9	0.409	1.174	-4.572	-1.340	16.8

SD [m]	SW-Correction [A %] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ [m/s]
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	WQ 10 [m/s]		
	[m]										
13600	5.5	14.0	-53.0	-13.5	0.416	1.198	-4.675	-1.384	17.0		
13700	5.7	14.4	-54.6	-14.0	0.424	1.222	-4.780	-1.429	17.3		
13800	5.8	14.7	-56.2	-14.6	0.432	1.247	-4.887	-1.474	17.5		
13900	5.9	15.1	-57.9	-15.1	0.440	1.272	-4.995	-1.521	17.8		
14000	6.1	15.5	-59.5	-15.7	0.448	1.297	-5.106	-1.569	18.0		
14100	6.2	15.9	-61.3	-16.3	0.456	1.322	-5.219	-1.618	18.3		
14200	6.4	16.3	-63.0	-16.9	0.465	1.347	-5.333	-1.668	18.5		
14300	6.5	16.7	-64.8	-17.6	0.474	1.373	-5.450	-1.720	18.8		
14400	6.7	17.1	-66.6	-18.2	0.483	1.398	-5.570	-1.773	19.0		
14500	6.9	17.6	-68.5	-18.9	0.492	1.424	-5.691	-1.827	19.3		
14600	7.0	18.0	-70.4	-19.6	0.502	1.450	-5.816	-1.882	19.5		
14700	7.2	18.4	-72.4	-20.3	0.511	1.476	-5.942	-1.939	19.8		
14800	7.4	18.8	-74.3	-21.0	0.521	1.501	-6.071	-1.997	20.0		
14900	7.5	19.2	-76.4	-21.7	0.531	1.527	-6.203	-2.056	20.3		
15000	7.7	19.6	-78.4	-22.5	0.542	1.554	-6.337	-2.116	20.5		
15100	7.9	20.0	-80.5	-23.2	0.553	1.581	-6.474	-2.178	20.8		
15200	8.1	20.5	-82.6	-24.0	0.565	1.608	-6.614	-2.241	21.0		
15300	8.3	20.9	-84.8	-24.8	0.577	1.636	-6.757	-2.307	21.3		
15400	8.5	21.3	-87.0	-25.7	0.589	1.663	-6.903	-2.374	21.5		
15500	8.7	21.8	-89.3	-26.6	0.602	1.691	-7.053	-2.444	21.8		
15600	9.0	22.2	-91.6	-27.4	0.616	1.720	-7.207	-2.515	22.1		
15700	9.2	22.6	-94.0	-28.4	0.630	1.748	-7.365	-2.588	22.3		
15800	9.4	23.1	-96.4	-29.3	0.644	1.777	-7.526	-2.664	22.6		
15900	9.7	23.5	-98.9	-30.3	0.660	1.806	-7.693	-2.741	22.9		
16000	9.9	23.9	-101.4	-31.3	0.676	1.833	-7.863	-2.821	23.1		
16100	10.2	24.3	-104.0	-32.3	0.691	1.861	-8.039	-2.904	23.4		
16200	10.4	24.8	-106.6	-33.3	0.707	1.890	-8.218	-2.988	23.7		
16300	10.7	25.2	-109.3	-34.4	0.726	1.921	-8.402	-3.074	23.9		
16400	11.0	25.7	-112.1	-35.5	0.745	1.952	-8.593	-3.162	24.2		
16500	11.3	26.1	-115.0	-36.6	0.766	1.984	-8.789	-3.254	24.5		
16600	11.7	26.6	-117.9	-37.8	0.788	2.016	-8.992	-3.349	24.7		
16700	12.0	27.1	-121.0	-39.1	0.810	2.049	-9.202	-3.450	25.0		
16800	12.4	27.6	-124.1	-40.3	0.835	2.083	-9.420	-3.555	25.3		
16900	12.7	28.0	-127.3	-41.7	0.861	2.118	-9.645	-3.664	25.6		
17000	13.1	28.5	-130.6	-43.1	0.888	2.151	-9.879	-3.777	25.9		
17100	13.6	28.9	-134.1	-44.5	0.918	2.183	-10.123	-3.895	26.1		
17200	14.0	29.4	-137.6	-46.1	0.945	2.216	-10.376	-4.019	26.4		
17300	14.4	29.9	-141.3	-47.6	0.978	2.254	-10.638	-4.145	26.7		
17400	15.0	30.5	-145.0	-49.2	1.015	2.295	-10.909	-4.277	27.0		
17500	15.5	31.0	-149.0	-50.9	1.056	2.338	-11.194	-4.416	27.3		
17600	16.2	31.6	-153.1	-52.7	1.100	2.383	-11.494	-4.563	27.6		
17700	16.8	32.3	-157.4	-54.6	1.148	2.431	-11.809	-4.719	27.9		
17800	17.6	32.9	-161.9	-56.7	1.202	2.481	-12.142	-4.889	28.3		
17900	18.4	33.5	-166.7	-58.9	1.262	2.530	-12.497	-5.071	28.6		
18000	19.2	34.2	-171.8	-61.3	1.325	2.580	-12.874	-5.267	28.9		

SD [m]	SW-Correction [A %] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	
18100	20.1	34.9	-177.2	-63.9	1.393	2.636	-13.276	-5.478	29.3
18200	21.3	35.8	-182.8	-66.6	1.480	2.706	-13.699	-5.700	29.6
18300	22.7	36.8	-188.8	-69.5	1.581	2.786	-14.154	-5.943	30.0
18400	24.2	38.0	-195.3	-72.8	1.701	2.879	-14.649	-6.212	30.3
18500	26.1	39.3	-202.4	-76.5	1.847	2.988	-15.190	-6.513	30.7
18600	28.5	40.8	-210.1	-80.6	2.028	3.113	-15.786	-6.855	31.1
18700	31.4	42.7	-218.8	-85.4	2.255	3.264	-16.453	-7.250	31.5
18800	35.4	45.3	-228.4	-91.2	2.567	3.468	-17.208	-7.717	32.0
18900	41.5	49.0	-239.5	-97.9	3.045	3.773	-18.074	-8.273	32.5
19000	52.5	55.3	-252.7	-106.5	3.917	4.286	-19.106	-8.969	33.1

2.4 FLABSCHUSSTAFEL

2.4 ANTI-AIRCRAFT FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- LA **Lagewinkel:** Winkel unter welchem das Ziel (A) von der Mündung aus sichtbar ist
- SD **Schussdistanz:** Schrägdistanz von Mündung bis Ziel (A)
- SW **Schusswinkel:** Winkel, der eingestellt werden muss, um das Ziel (A) auf gegebener Distanz (SD) zu treffen
- FZ **Flugzeit** des Geschosses von Mündung bis Ziel (A)
- DR **Derivation:** nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Winkel DR liegt in der Ebene (X',Z)
- ZH **Zielhöhe** über Mündungshorizont
- VE **Geschossgeschwindigkeit** bei Distanz SD
- FW **Fallwinkel** des Geschosses bei Distanz SD

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben
(mils = A%).

DEFINITION of TABLE SYMBOLS

- LA **Angle of Site:** angle between muzzle target (A) vector and horizontal axis
- SD **Range:** slant distance from muzzle to target (A)
- SW **Superelevation:** angle to be set, in order to hit the target (A) at a range (SD)
- FZ **Time-of-Flight** of the projectile from muzzle to target (A)
- DR **Drift:** the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle DR lies in the plane (X',Z)
- ZH **Altitude of Target** above muzzle level
- VE **Remaining Velocity of the Projectile** at range SD
- FW **Angle of Fall** of the projectile at range SD

All angles are given in **mils** ($360^\circ = 6400$ mils).
(mils = A%).

LA: 0 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.3	0.072	0.0	0.0	1386.1	0.3	100
200	0.5	0.144	0.0	0.0	1372.3	0.5	200
300	0.8	0.218	0.0	0.0	1358.5	0.8	300
400	1.0	0.292	0.0	0.0	1344.8	1.1	400
500	1.3	0.366	0.0	0.0	1331.2	1.4	500
600	1.6	0.442	0.0	0.0	1317.7	1.7	600
700	1.9	0.518	0.0	0.0	1304.2	2.0	700
800	2.2	0.595	0.0	0.0	1290.8	2.3	800
900	2.4	0.673	0.1	0.0	1277.5	2.6	900
1000	2.7	0.752	0.1	0.0	1264.3	2.9	1000
1100	3.0	0.831	0.1	0.0	1251.1	3.3	1100
1200	3.3	0.912	0.1	0.0	1238.0	3.6	1200
1300	3.6	0.993	0.1	0.0	1225.0	4.0	1300
1400	3.9	1.075	0.1	0.0	1212.0	4.3	1400
1500	4.2	1.158	0.1	0.0	1199.2	4.7	1500
1600	4.6	1.242	0.1	0.0	1186.4	5.1	1600
1700	4.9	1.326	0.1	0.0	1173.7	5.5	1700
1800	5.2	1.412	0.1	0.0	1161.0	5.9	1800
1900	5.5	1.499	0.1	0.0	1148.5	6.3	1900
2000	5.9	1.586	0.1	0.0	1136.0	6.7	2000
2100	6.2	1.675	0.1	0.0	1123.7	7.2	2100
2200	6.6	1.764	0.1	0.0	1111.3	7.6	2200
2300	6.9	1.855	0.2	0.0	1099.1	8.1	2300
2400	7.3	1.946	0.2	0.0	1086.8	8.6	2400
2500	7.6	2.039	0.2	0.0	1074.7	9.1	2500
2600	8.0	2.132	0.2	0.0	1062.5	9.6	2600
2700	8.4	2.227	0.2	0.0	1050.2	10.1	2700
2800	8.7	2.323	0.2	0.0	1037.5	10.7	2800
2900	9.1	2.420	0.2	0.0	1024.6	11.2	2900
3000	9.5	2.518	0.2	0.0	1011.5	11.8	3000
3100	9.9	2.617	0.2	0.0	998.4	12.4	3100
3200	10.3	2.718	0.2	0.0	985.3	13.0	3200
3300	10.7	2.820	0.2	0.0	972.2	13.6	3300
3400	11.1	2.924	0.3	0.0	959.2	14.3	3400
3500	11.6	3.029	0.3	0.0	946.2	15.0	3500
3600	12.0	3.135	0.3	0.0	933.2	15.7	3600
3700	12.4	3.243	0.3	0.0	920.3	16.4	3700
3800	12.9	3.353	0.3	0.0	907.4	17.1	3800
3900	13.3	3.464	0.3	0.0	894.6	17.9	3900
4000	13.8	3.576	0.3	0.0	881.8	18.7	4000
4100	14.3	3.690	0.3	0.0	869.0	19.5	4100
4200	14.7	3.806	0.4	0.0	856.4	20.4	4200
4300	15.2	3.924	0.4	0.0	843.7	21.3	4300
4400	15.7	4.043	0.4	0.0	831.1	22.2	4400
4500	16.2	4.164	0.4	0.0	818.6	23.2	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

16 54

Sachnummer / Article Number

DI

WK802280AV

A

LA: 100 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.3	0.072	0.0	9.8	1386.0	0.3	100
200	0.5	0.144	0.0	19.6	1372.2	0.5	200
300	0.8	0.218	0.0	29.4	1358.4	0.8	300
400	1.0	0.292	0.0	39.2	1344.7	1.1	400
500	1.3	0.366	0.0	49.0	1331.1	1.4	500
600	1.6	0.442	0.0	58.8	1317.5	1.7	600
700	1.9	0.518	0.0	68.6	1304.1	2.0	700
800	2.1	0.595	0.0	78.4	1290.7	2.3	800
900	2.4	0.673	0.1	88.2	1277.4	2.6	900
1000	2.7	0.752	0.1	98.0	1264.2	2.9	1000
1100	3.0	0.831	0.1	107.8	1251.1	3.2	1100
1200	3.3	0.912	0.1	117.6	1238.1	3.6	1200
1300	3.6	0.993	0.1	127.4	1225.1	3.9	1300
1400	3.9	1.075	0.1	137.2	1212.3	4.3	1400
1500	4.2	1.158	0.1	147.0	1199.5	4.7	1500
1600	4.5	1.242	0.1	156.8	1186.8	5.1	1600
1700	4.9	1.326	0.1	166.6	1174.3	5.5	1700
1800	5.2	1.412	0.1	176.4	1161.8	5.9	1800
1900	5.5	1.498	0.1	186.2	1149.4	6.3	1900
2000	5.8	1.586	0.1	196.0	1137.0	6.7	2000
2100	6.2	1.674	0.1	205.8	1124.8	7.1	2100
2200	6.5	1.764	0.1	215.6	1112.7	7.6	2200
2300	6.9	1.854	0.2	225.4	1100.6	8.1	2300
2400	7.2	1.945	0.2	235.2	1088.6	8.5	2400
2500	7.6	2.038	0.2	245.0	1076.6	9.0	2500
2600	7.9	2.131	0.2	254.8	1064.7	9.5	2600
2700	8.3	2.226	0.2	264.6	1052.7	10.1	2700
2800	8.7	2.321	0.2	274.4	1040.5	10.6	2800
2900	9.1	2.418	0.2	284.2	1027.9	11.1	2900
3000	9.5	2.516	0.2	294.1	1015.2	11.7	3000
3100	9.8	2.615	0.2	303.9	1002.4	12.3	3100
3200	10.2	2.715	0.2	313.7	989.6	12.9	3200
3300	10.7	2.817	0.2	323.5	976.9	13.5	3300
3400	11.1	2.920	0.3	333.3	964.2	14.2	3400
3500	11.5	3.024	0.3	343.1	951.6	14.8	3500
3600	11.9	3.130	0.3	352.9	939.0	15.5	3600
3700	12.3	3.237	0.3	362.7	926.4	16.2	3700
3800	12.8	3.346	0.3	372.5	913.9	16.9	3800
3900	13.2	3.456	0.3	382.3	901.4	17.7	3900
4000	13.7	3.568	0.3	392.1	889.0	18.5	4000
4100	14.2	3.681	0.3	401.9	876.6	19.3	4100
4200	14.6	3.796	0.3	411.7	864.3	20.1	4200
4300	15.1	3.913	0.4	421.5	852.1	21.0	4300
4400	15.6	4.031	0.4	431.3	839.9	21.9	4400
4500	16.1	4.151	0.4	441.1	827.8	22.8	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

17 54

Sachnummer / Article Number

WK802280AV

DI

A

LA: 200 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.3	0.072	0.0	19.5	1386.0	0.3	100
200	0.5	0.144	0.0	39.0	1372.0	0.5	200
300	0.8	0.218	0.0	58.5	1358.2	0.8	300
400	1.0	0.292	0.0	78.0	1344.5	1.1	400
500	1.3	0.366	0.0	97.5	1330.9	1.3	500
600	1.6	0.442	0.0	117.1	1317.3	1.6	600
700	1.8	0.518	0.0	136.6	1303.9	1.9	700
800	2.1	0.595	0.0	156.1	1290.6	2.2	800
900	2.4	0.673	0.1	175.6	1277.3	2.5	900
1000	2.7	0.752	0.1	195.1	1264.2	2.9	1000
1100	3.0	0.831	0.1	214.6	1251.1	3.2	1100
1200	3.3	0.912	0.1	234.1	1238.1	3.5	1200
1300	3.6	0.993	0.1	253.6	1225.3	3.9	1300
1400	3.9	1.075	0.1	273.1	1212.5	4.2	1400
1500	4.2	1.158	0.1	292.6	1199.9	4.6	1500
1600	4.5	1.242	0.1	312.1	1187.3	5.0	1600
1700	4.8	1.326	0.1	331.7	1174.8	5.4	1700
1800	5.1	1.412	0.1	351.2	1162.5	5.8	1800
1900	5.4	1.498	0.1	370.7	1150.2	6.2	1900
2000	5.8	1.586	0.1	390.2	1138.0	6.6	2000
2100	6.1	1.674	0.1	409.7	1125.9	7.0	2100
2200	6.4	1.763	0.1	429.2	1114.0	7.5	2200
2300	6.8	1.854	0.1	448.7	1102.1	7.9	2300
2400	7.1	1.945	0.2	468.2	1090.2	8.4	2400
2500	7.5	2.037	0.2	487.7	1078.4	8.9	2500
2600	7.8	2.130	0.2	507.2	1066.7	9.4	2600
2700	8.2	2.225	0.2	526.7	1055.0	9.9	2700
2800	8.6	2.320	0.2	546.3	1043.2	10.4	2800
2900	8.9	2.416	0.2	565.8	1031.1	11.0	2900
3000	9.3	2.514	0.2	585.3	1018.7	11.5	3000
3100	9.7	2.613	0.2	604.8	1006.3	12.1	3100
3200	10.1	2.713	0.2	624.3	993.8	12.7	3200
3300	10.5	2.814	0.2	643.8	981.4	13.3	3300
3400	10.9	2.916	0.2	663.3	969.1	13.9	3400
3500	11.3	3.020	0.3	682.8	956.8	14.5	3500
3600	11.7	3.125	0.3	702.3	944.5	15.2	3600
3700	12.1	3.232	0.3	721.8	932.3	15.9	3700
3800	12.6	3.340	0.3	741.3	920.1	16.6	3800
3900	13.0	3.449	0.3	760.9	908.0	17.3	3900
4000	13.5	3.560	0.3	780.4	895.9	18.1	4000
4100	13.9	3.673	0.3	799.9	883.9	18.9	4100
4200	14.4	3.786	0.3	819.4	872.0	19.7	4200
4300	14.9	3.902	0.4	838.9	860.2	20.5	4300
4400	15.3	4.019	0.4	858.4	848.4	21.4	4400
4500	15.8	4.138	0.4	877.9	836.7	22.3	4500

LA: 300 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	29.0	1385.9	0.2	100
200	0.5	0.144	0.0	58.1	1371.9	0.5	200
300	0.7	0.218	0.0	87.1	1358.1	0.8	300
400	1.0	0.292	0.0	116.1	1344.3	1.0	400
500	1.3	0.366	0.0	145.1	1330.7	1.3	500
600	1.5	0.442	0.0	174.2	1317.2	1.6	600
700	1.8	0.518	0.0	203.2	1303.7	1.9	700
800	2.1	0.595	0.0	232.2	1290.4	2.2	800
900	2.3	0.673	0.0	261.3	1277.2	2.5	900
1000	2.6	0.752	0.1	290.3	1264.1	2.8	1000
1100	2.9	0.831	0.1	319.3	1251.1	3.1	1100
1200	3.2	0.912	0.1	348.3	1238.2	3.5	1200
1300	3.5	0.993	0.1	377.4	1225.4	3.8	1300
1400	3.8	1.075	0.1	406.4	1212.8	4.1	1400
1500	4.1	1.158	0.1	435.4	1200.2	4.5	1500
1600	4.4	1.242	0.1	464.5	1187.7	4.9	1600
1700	4.7	1.326	0.1	493.5	1175.4	5.2	1700
1800	5.0	1.412	0.1	522.5	1163.1	5.6	1800
1900	5.3	1.498	0.1	551.5	1151.0	6.0	1900
2000	5.6	1.586	0.1	580.6	1138.9	6.4	2000
2100	5.9	1.674	0.1	609.6	1127.0	6.9	2100
2200	6.3	1.763	0.1	638.6	1115.2	7.3	2200
2300	6.6	1.853	0.1	667.7	1103.5	7.7	2300
2400	6.9	1.944	0.2	696.7	1091.8	8.2	2400
2500	7.3	2.036	0.2	725.7	1080.2	8.7	2500
2600	7.6	2.129	0.2	754.7	1068.7	9.1	2600
2700	8.0	2.223	0.2	783.8	1057.2	9.6	2700
2800	8.3	2.319	0.2	812.8	1045.7	10.1	2800
2900	8.7	2.415	0.2	841.8	1034.1	10.7	2900
3000	9.1	2.512	0.2	870.9	1022.1	11.2	3000
3100	9.5	2.610	0.2	899.9	1010.0	11.8	3100
3200	9.8	2.710	0.2	928.9	997.8	12.3	3200
3300	10.2	2.811	0.2	957.9	985.7	12.9	3300
3400	10.6	2.913	0.2	987.0	973.7	13.5	3400
3500	11.0	3.016	0.3	1016.0	961.7	14.1	3500
3600	11.4	3.121	0.3	1045.0	949.7	14.8	3600
3700	11.8	3.227	0.3	1074.1	937.9	15.4	3700
3800	12.2	3.334	0.3	1103.1	926.0	16.1	3800
3900	12.7	3.443	0.3	1132.1	914.3	16.8	3900
4000	13.1	3.553	0.3	1161.1	902.5	17.6	4000
4100	13.5	3.664	0.3	1190.2	890.9	18.3	4100
4200	14.0	3.777	0.3	1219.2	879.3	19.1	4200
4300	14.5	3.892	0.3	1248.2	867.8	19.9	4300
4400	14.9	4.008	0.4	1277.3	856.4	20.7	4400
4500	15.4	4.125	0.4	1306.3	845.1	21.5	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

Anz. Bl. / Sheets

19

54

Sachnummer / Article Number

DI

WK802280AV

A

LA: 400 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	38.3	1385.9	0.2	100
200	0.5	0.144	0.0	76.5	1371.8	0.5	200
300	0.7	0.218	0.0	114.8	1357.9	0.7	300
400	1.0	0.292	0.0	153.1	1344.2	1.0	400
500	1.2	0.366	0.0	191.3	1330.5	1.3	500
600	1.5	0.442	0.0	229.6	1317.0	1.5	600
700	1.7	0.518	0.0	267.9	1303.6	1.8	700
800	2.0	0.595	0.0	306.1	1290.3	2.1	800
900	2.3	0.673	0.0	344.4	1277.1	2.4	900
1000	2.5	0.752	0.1	382.7	1264.0	2.7	1000
1100	2.8	0.831	0.1	421.0	1251.1	3.0	1100
1200	3.1	0.912	0.1	459.2	1238.3	3.3	1200
1300	3.3	0.993	0.1	497.5	1225.6	3.7	1300
1400	3.6	1.075	0.1	535.8	1213.0	4.0	1400
1500	3.9	1.158	0.1	574.0	1200.5	4.3	1500
1600	4.2	1.242	0.1	612.3	1188.1	4.7	1600
1700	4.5	1.326	0.1	650.6	1175.9	5.1	1700
1800	4.8	1.412	0.1	688.8	1163.7	5.4	1800
1900	5.1	1.498	0.1	727.1	1151.7	5.8	1900
2000	5.4	1.585	0.1	765.4	1139.8	6.2	2000
2100	5.7	1.674	0.1	803.6	1128.0	6.6	2100
2200	6.0	1.763	0.1	841.9	1116.4	7.0	2200
2300	6.4	1.853	0.1	880.2	1104.8	7.5	2300
2400	6.7	1.944	0.1	918.4	1093.3	7.9	2400
2500	7.0	2.036	0.2	956.7	1081.9	8.4	2500
2600	7.4	2.129	0.2	995.0	1070.6	8.8	2600
2700	7.7	2.222	0.2	1033.2	1059.3	9.3	2700
2800	8.0	2.317	0.2	1071.5	1048.1	9.8	2800
2900	8.4	2.413	0.2	1109.8	1036.8	10.3	2900
3000	8.8	2.510	0.2	1148.1	1025.3	10.8	3000
3100	9.1	2.608	0.2	1186.3	1013.5	11.3	3100
3200	9.5	2.708	0.2	1224.6	1001.6	11.9	3200
3300	9.9	2.808	0.2	1262.9	989.8	12.4	3300
3400	10.2	2.910	0.2	1301.1	978.1	13.0	3400
3500	10.6	3.013	0.2	1339.4	966.4	13.6	3500
3600	11.0	3.117	0.3	1377.7	954.7	14.2	3600
3700	11.4	3.222	0.3	1415.9	943.1	14.8	3700
3800	11.8	3.329	0.3	1454.2	931.6	15.5	3800
3900	12.2	3.437	0.3	1492.5	920.2	16.2	3900
4000	12.6	3.546	0.3	1530.7	908.8	16.8	4000
4100	13.1	3.657	0.3	1569.0	897.5	17.6	4100
4200	13.5	3.769	0.3	1607.3	886.3	18.3	4200
4300	13.9	3.882	0.3	1645.5	875.1	19.0	4300
4400	14.4	3.997	0.3	1683.8	864.0	19.8	4400
4500	14.8	4.114	0.4	1722.1	853.0	20.6	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

Anz. Bl. / Sheets

Sachnummer / Article Number

DI

WK802280AV

A

LA: 500 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	47.1	1385.8	0.2	100
200	0.5	0.144	0.0	94.3	1371.7	0.5	200
300	0.7	0.218	0.0	141.4	1357.8	0.7	300
400	0.9	0.292	0.0	188.6	1344.0	0.9	400
500	1.2	0.366	0.0	235.7	1330.4	1.2	500
600	1.4	0.442	0.0	282.8	1316.8	1.5	600
700	1.7	0.518	0.0	330.0	1303.4	1.7	700
800	1.9	0.595	0.0	377.1	1290.2	2.0	800
900	2.2	0.673	0.0	424.3	1277.0	2.3	900
1000	2.4	0.752	0.1	471.4	1264.0	2.6	1000
1100	2.7	0.832	0.1	518.5	1251.1	2.9	1100
1200	2.9	0.912	0.1	565.7	1238.3	3.2	1200
1300	3.2	0.993	0.1	612.8	1225.7	3.5	1300
1400	3.5	1.075	0.1	660.0	1213.2	3.8	1400
1500	3.7	1.158	0.1	707.1	1200.8	4.1	1500
1600	4.0	1.242	0.1	754.2	1188.5	4.5	1600
1700	4.3	1.326	0.1	801.4	1176.4	4.8	1700
1800	4.6	1.412	0.1	848.5	1164.3	5.2	1800
1900	4.9	1.498	0.1	895.7	1152.4	5.6	1900
2000	5.2	1.585	0.1	942.8	1140.7	5.9	2000
2100	5.5	1.673	0.1	989.9	1129.0	6.3	2100
2200	5.8	1.762	0.1	1037.1	1117.5	6.7	2200
2300	6.1	1.852	0.1	1084.2	1106.0	7.1	2300
2400	6.4	1.943	0.1	1131.4	1094.7	7.5	2400
2500	6.7	2.035	0.1	1178.5	1083.5	8.0	2500
2600	7.0	2.128	0.2	1225.6	1072.3	8.4	2600
2700	7.3	2.222	0.2	1272.8	1061.2	8.9	2700
2800	7.7	2.316	0.2	1319.9	1050.2	9.3	2800
2900	8.0	2.412	0.2	1367.1	1039.2	9.8	2900
3000	8.4	2.509	0.2	1414.2	1028.1	10.3	3000
3100	8.7	2.607	0.2	1461.3	1016.7	10.8	3100
3200	9.0	2.705	0.2	1508.5	1005.2	11.3	3200
3300	9.4	2.806	0.2	1555.6	993.6	11.8	3300
3400	9.8	2.907	0.2	1602.7	982.1	12.4	3400
3500	10.1	3.009	0.2	1649.9	970.7	12.9	3500
3600	10.5	3.113	0.2	1697.0	959.4	13.5	3600
3700	10.9	3.218	0.3	1744.2	948.1	14.1	3700
3800	11.3	3.324	0.3	1791.3	936.8	14.7	3800
3900	11.6	3.431	0.3	1838.4	925.7	15.3	3900
4000	12.0	3.540	0.3	1885.6	914.6	16.0	4000
4100	12.4	3.650	0.3	1932.7	903.6	16.7	4100
4200	12.8	3.761	0.3	1979.9	892.7	17.4	4200
4300	13.3	3.874	0.3	2027.0	881.9	18.1	4300
4400	13.7	3.988	0.3	2074.1	871.1	18.8	4400
4500	14.1	4.103	0.3	2121.3	860.4	19.5	4500

LA: 600 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	55.6	1385.7	0.2	100
200	0.4	0.144	0.0	111.1	1371.6	0.4	200
300	0.6	0.218	0.0	166.7	1357.7	0.7	300
400	0.9	0.292	0.0	222.2	1343.9	0.9	400
500	1.1	0.366	0.0	277.8	1330.2	1.1	500
600	1.3	0.442	0.0	333.3	1316.7	1.4	600
700	1.6	0.518	0.0	388.9	1303.3	1.6	700
800	1.8	0.595	0.0	444.5	1290.0	1.9	800
900	2.0	0.673	0.0	500.0	1276.9	2.2	900
1000	2.3	0.752	0.0	555.6	1263.9	2.4	1000
1100	2.5	0.832	0.1	611.1	1251.1	2.7	1100
1200	2.8	0.912	0.1	666.7	1238.4	3.0	1200
1300	3.0	0.993	0.1	722.2	1225.8	3.3	1300
1400	3.3	1.075	0.1	777.8	1213.3	3.6	1400
1500	3.5	1.158	0.1	833.4	1201.0	3.9	1500
1600	3.8	1.242	0.1	888.9	1188.9	4.2	1600
1700	4.1	1.326	0.1	944.5	1176.8	4.6	1700
1800	4.3	1.412	0.1	1000.0	1164.9	4.9	1800
1900	4.6	1.498	0.1	1055.6	1153.1	5.2	1900
2000	4.9	1.585	0.1	1111.1	1141.4	5.6	2000
2100	5.2	1.673	0.1	1166.7	1129.9	6.0	2100
2200	5.4	1.762	0.1	1222.3	1118.5	6.3	2200
2300	5.7	1.852	0.1	1277.8	1107.2	6.7	2300
2400	6.0	1.943	0.1	1333.4	1096.0	7.1	2400
2500	6.3	2.034	0.1	1388.9	1084.9	7.5	2500
2600	6.6	2.127	0.1	1444.5	1073.9	7.9	2600
2700	6.9	2.221	0.2	1500.0	1063.0	8.3	2700
2800	7.2	2.315	0.2	1555.6	1052.2	8.8	2800
2900	7.6	2.411	0.2	1611.2	1041.4	9.2	2900
3000	7.9	2.507	0.2	1666.7	1030.6	9.7	3000
3100	8.2	2.605	0.2	1722.3	1019.6	10.1	3100
3200	8.5	2.703	0.2	1777.8	1008.4	10.6	3200
3300	8.9	2.803	0.2	1833.4	997.1	11.1	3300
3400	9.2	2.904	0.2	1888.9	985.9	11.6	3400
3500	9.5	3.006	0.2	1944.5	974.7	12.2	3500
3600	9.9	3.109	0.2	2000.1	963.6	12.7	3600
3700	10.2	3.214	0.2	2055.6	952.6	13.2	3700
3800	10.6	3.319	0.2	2111.2	941.7	13.8	3800
3900	11.0	3.426	0.3	2166.7	930.8	14.4	3900
4000	11.3	3.534	0.3	2222.3	920.0	15.0	4000
4100	11.7	3.643	0.3	2277.8	909.3	15.6	4100
4200	12.1	3.754	0.3	2333.4	898.7	16.3	4200
4300	12.5	3.866	0.3	2389.0	888.1	16.9	4300
4400	12.9	3.979	0.3	2444.5	877.6	17.6	4400
4500	13.3	4.094	0.3	2500.1	867.3	18.3	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

54

Sachnummer / Article Number

DI

WK802280AV

A

LA: 700 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	63.4	1385.7	0.2	100
200	0.4	0.144	0.0	126.9	1371.6	0.4	200
300	0.6	0.218	0.0	190.3	1357.6	0.6	300
400	0.8	0.292	0.0	253.8	1343.7	0.8	400
500	1.0	0.366	0.0	317.2	1330.1	1.1	500
600	1.2	0.442	0.0	380.6	1316.5	1.3	600
700	1.4	0.518	0.0	444.1	1303.2	1.5	700
800	1.7	0.596	0.0	507.5	1289.9	1.8	800
900	1.9	0.673	0.0	571.0	1276.8	2.0	900
1000	2.1	0.752	0.0	634.4	1263.9	2.3	1000
1100	2.3	0.832	0.0	697.8	1251.1	2.5	1100
1200	2.6	0.912	0.1	761.3	1238.4	2.8	1200
1300	2.8	0.993	0.1	824.7	1225.9	3.1	1300
1400	3.0	1.075	0.1	888.2	1213.5	3.3	1400
1500	3.3	1.158	0.1	951.6	1201.3	3.6	1500
1600	3.5	1.242	0.1	1015.0	1189.2	3.9	1600
1700	3.8	1.326	0.1	1078.5	1177.2	4.2	1700
1800	4.0	1.412	0.1	1141.9	1165.4	4.6	1800
1900	4.3	1.498	0.1	1205.3	1153.7	4.9	1900
2000	4.5	1.585	0.1	1268.8	1142.1	5.2	2000
2100	4.8	1.673	0.1	1332.2	1130.7	5.5	2100
2200	5.1	1.762	0.1	1395.7	1119.4	5.9	2200
2300	5.3	1.852	0.1	1459.1	1108.2	6.2	2300
2400	5.6	1.942	0.1	1522.5	1097.2	6.6	2400
2500	5.9	2.034	0.1	1586.0	1086.2	7.0	2500
2600	6.2	2.126	0.1	1649.4	1075.4	7.4	2600
2700	6.4	2.220	0.1	1712.9	1064.6	7.8	2700
2800	6.7	2.314	0.2	1776.3	1054.0	8.2	2800
2900	7.0	2.410	0.2	1839.7	1043.4	8.6	2900
3000	7.3	2.506	0.2	1903.2	1032.8	9.0	3000
3100	7.6	2.603	0.2	1966.6	1022.2	9.4	3100
3200	7.9	2.702	0.2	2030.1	1011.3	9.9	3200
3300	8.2	2.801	0.2	2093.5	1000.3	10.3	3300
3400	8.5	2.902	0.2	2156.9	989.3	10.8	3400
3500	8.9	3.003	0.2	2220.4	978.4	11.3	3500
3600	9.2	3.106	0.2	2283.8	967.6	11.8	3600
3700	9.5	3.210	0.2	2347.3	956.8	12.3	3700
3800	9.8	3.315	0.2	2410.7	946.1	12.8	3800
3900	10.2	3.421	0.2	2474.1	935.5	13.3	3900
4000	10.5	3.529	0.2	2537.6	924.9	13.9	4000
4100	10.9	3.638	0.3	2601.0	914.5	14.5	4100
4200	11.2	3.747	0.3	2664.5	904.1	15.0	4200
4300	11.6	3.859	0.3	2727.9	893.8	15.6	4300
4400	11.9	3.971	0.3	2791.3	883.6	16.3	4400
4500	12.3	4.085	0.3	2854.8	873.5	16.9	4500

LA: 800 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	70.7	1385.6	0.2	100
200	0.4	0.144	0.0	141.4	1371.5	0.4	200
300	0.6	0.218	0.0	212.1	1357.5	0.6	300
400	0.7	0.292	0.0	282.8	1343.6	0.8	400
500	0.9	0.366	0.0	353.6	1329.9	1.0	500
600	1.1	0.442	0.0	424.3	1316.4	1.2	600
700	1.3	0.518	0.0	495.0	1303.0	1.4	700
800	1.5	0.596	0.0	565.7	1289.8	1.6	800
900	1.7	0.673	0.0	636.4	1276.7	1.8	900
1000	1.9	0.752	0.0	707.1	1263.8	2.1	1000
1100	2.1	0.832	0.0	777.8	1251.1	2.3	1100
1200	2.3	0.912	0.0	848.5	1238.4	2.6	1200
1300	2.6	0.993	0.1	919.2	1226.0	2.8	1300
1400	2.8	1.075	0.1	989.9	1213.7	3.1	1400
1500	3.0	1.158	0.1	1060.7	1201.5	3.3	1500
1600	3.2	1.242	0.1	1131.4	1189.5	3.6	1600
1700	3.4	1.326	0.1	1202.1	1177.6	3.9	1700
1800	3.7	1.412	0.1	1272.8	1165.8	4.2	1800
1900	3.9	1.498	0.1	1343.5	1154.2	4.5	1900
2000	4.1	1.585	0.1	1414.2	1142.8	4.8	2000
2100	4.4	1.673	0.1	1484.9	1131.4	5.1	2100
2200	4.6	1.762	0.1	1555.6	1120.2	5.4	2200
2300	4.9	1.851	0.1	1626.3	1109.2	5.7	2300
2400	5.1	1.942	0.1	1697.1	1098.3	6.0	2400
2500	5.4	2.033	0.1	1767.8	1087.4	6.4	2500
2600	5.6	2.126	0.1	1838.5	1076.7	6.7	2600
2700	5.9	2.219	0.1	1909.2	1066.1	7.1	2700
2800	6.1	2.313	0.1	1979.9	1055.6	7.4	2800
2900	6.4	2.409	0.1	2050.6	1045.2	7.8	2900
3000	6.7	2.505	0.2	2121.3	1034.8	8.2	3000
3100	7.0	2.602	0.2	2192.0	1024.4	8.6	3100
3200	7.2	2.700	0.2	2262.7	1013.9	9.0	3200
3300	7.5	2.799	0.2	2333.5	1003.2	9.4	3300
3400	7.8	2.899	0.2	2404.2	992.4	9.8	3400
3500	8.1	3.001	0.2	2474.9	981.7	10.3	3500
3600	8.4	3.103	0.2	2545.6	971.1	10.7	3600
3700	8.7	3.207	0.2	2616.3	960.5	11.2	3700
3800	9.0	3.311	0.2	2687.0	950.1	11.7	3800
3900	9.3	3.417	0.2	2757.7	939.7	12.2	3900
4000	9.6	3.524	0.2	2828.4	929.4	12.7	4000
4100	9.9	3.632	0.2	2899.1	919.1	13.2	4100
4200	10.2	3.742	0.2	2969.8	909.0	13.7	4200
4300	10.6	3.852	0.2	3040.6	899.0	14.2	4300
4400	10.9	3.964	0.3	3111.3	889.0	14.8	4400
4500	11.2	4.077	0.3	3182.0	879.1	15.4	4500

LA: 900 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.2	0.072	0.0	77.3	1385.6	0.2	100
200	0.3	0.144	0.0	154.6	1371.4	0.3	200
300	0.5	0.218	0.0	231.9	1357.4	0.5	300
400	0.7	0.292	0.0	309.2	1343.5	0.7	400
500	0.8	0.367	0.0	386.5	1329.8	0.9	500
600	1.0	0.442	0.0	463.8	1316.3	1.1	600
700	1.2	0.518	0.0	541.1	1302.9	1.2	700
800	1.4	0.596	0.0	618.4	1289.7	1.4	800
900	1.5	0.674	0.0	695.7	1276.7	1.6	900
1000	1.7	0.752	0.0	773.0	1263.8	1.9	1000
1100	1.9	0.832	0.0	850.3	1251.0	2.1	1100
1200	2.1	0.912	0.0	927.6	1238.5	2.3	1200
1300	2.3	0.993	0.0	1004.9	1226.1	2.5	1300
1400	2.5	1.075	0.1	1082.2	1213.8	2.7	1400
1500	2.7	1.158	0.1	1159.5	1201.7	3.0	1500
1600	2.9	1.242	0.1	1236.8	1189.7	3.2	1600
1700	3.1	1.326	0.1	1314.1	1177.9	3.5	1700
1800	3.3	1.411	0.1	1391.4	1166.2	3.7	1800
1900	3.5	1.498	0.1	1468.7	1154.7	4.0	1900
2000	3.7	1.585	0.1	1546.0	1143.3	4.3	2000
2100	3.9	1.673	0.1	1623.3	1132.1	4.5	2100
2200	4.1	1.761	0.1	1700.6	1121.0	4.8	2200
2300	4.4	1.851	0.1	1777.9	1110.0	5.1	2300
2400	4.6	1.942	0.1	1855.2	1099.2	5.4	2400
2500	4.8	2.033	0.1	1932.5	1088.5	5.7	2500
2600	5.0	2.125	0.1	2009.8	1077.9	6.0	2600
2700	5.3	2.219	0.1	2087.1	1067.4	6.4	2700
2800	5.5	2.313	0.1	2164.4	1057.0	6.7	2800
2900	5.8	2.408	0.1	2241.7	1046.7	7.0	2900
3000	6.0	2.504	0.1	2319.0	1036.5	7.4	3000
3100	6.2	2.601	0.1	2396.3	1026.4	7.7	3100
3200	6.5	2.699	0.1	2473.6	1016.1	8.1	3200
3300	6.7	2.798	0.2	2550.9	1005.7	8.4	3300
3400	7.0	2.897	0.2	2628.2	995.2	8.8	3400
3500	7.3	2.999	0.2	2705.5	984.7	9.2	3500
3600	7.5	3.101	0.2	2782.8	974.2	9.6	3600
3700	7.8	3.204	0.2	2860.1	963.9	10.0	3700
3800	8.1	3.308	0.2	2937.4	953.6	10.4	3800
3900	8.3	3.414	0.2	3014.7	943.4	10.9	3900
4000	8.6	3.520	0.2	3092.0	933.3	11.3	4000
4100	8.9	3.628	0.2	3169.3	923.3	11.8	4100
4200	9.2	3.737	0.2	3246.6	913.3	12.2	4200
4300	9.5	3.847	0.2	3323.9	903.5	12.7	4300
4400	9.8	3.958	0.2	3401.2	893.7	13.2	4400
4500	10.1	4.071	0.2	3478.5	884.1	13.7	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

25 54

Sachnummer / Article Number

DI

WK802280AV

A

LA: 1000 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.1	0.072	0.0	83.1	1385.6	0.1	100
200	0.3	0.144	0.0	166.3	1371.3	0.3	200
300	0.4	0.218	0.0	249.4	1357.3	0.4	300
400	0.6	0.292	0.0	332.6	1343.4	0.6	400
500	0.7	0.367	0.0	415.7	1329.7	0.8	500
600	0.9	0.442	0.0	498.9	1316.2	0.9	600
700	1.0	0.518	0.0	582.0	1302.8	1.1	700
800	1.2	0.596	0.0	665.2	1289.6	1.3	800
900	1.4	0.674	0.0	748.3	1276.6	1.4	900
1000	1.5	0.752	0.0	831.5	1263.7	1.6	1000
1100	1.7	0.832	0.0	914.6	1251.0	1.8	1100
1200	1.8	0.912	0.0	997.8	1238.5	2.0	1200
1300	2.0	0.993	0.0	1080.9	1226.1	2.2	1300
1400	2.2	1.075	0.0	1164.1	1213.9	2.4	1400
1500	2.4	1.158	0.1	1247.2	1201.8	2.6	1500
1600	2.5	1.242	0.1	1330.4	1189.9	2.8	1600
1700	2.7	1.326	0.1	1413.5	1178.2	3.0	1700
1800	2.9	1.411	0.1	1496.6	1166.6	3.3	1800
1900	3.1	1.498	0.1	1579.8	1155.1	3.5	1900
2000	3.3	1.585	0.1	1662.9	1143.8	3.7	2000
2100	3.4	1.672	0.1	1746.1	1132.6	4.0	2100
2200	3.6	1.761	0.1	1829.2	1121.6	4.2	2200
2300	3.8	1.851	0.1	1912.4	1110.8	4.5	2300
2400	4.0	1.941	0.1	1995.5	1100.0	4.7	2400
2500	4.2	2.033	0.1	2078.7	1089.4	5.0	2500
2600	4.4	2.125	0.1	2161.8	1078.9	5.3	2600
2700	4.6	2.218	0.1	2245.0	1068.5	5.6	2700
2800	4.8	2.312	0.1	2328.1	1058.3	5.8	2800
2900	5.0	2.407	0.1	2411.3	1048.1	6.1	2900
3000	5.2	2.503	0.1	2494.4	1038.0	6.4	3000
3100	5.5	2.600	0.1	2577.6	1028.0	6.7	3100
3200	5.7	2.697	0.1	2660.7	1018.0	7.1	3200
3300	5.9	2.796	0.1	2743.8	1007.8	7.4	3300
3400	6.1	2.896	0.1	2827.0	997.5	7.7	3400
3500	6.3	2.997	0.1	2910.1	987.2	8.0	3500
3600	6.6	3.098	0.2	2993.3	976.9	8.4	3600
3700	6.8	3.201	0.2	3076.4	966.7	8.8	3700
3800	7.0	3.305	0.2	3159.6	956.6	9.1	3800
3900	7.3	3.410	0.2	3242.7	946.6	9.5	3900
4000	7.5	3.517	0.2	3325.9	936.7	9.9	4000
4100	7.8	3.624	0.2	3409.0	926.9	10.3	4100
4200	8.0	3.732	0.2	3492.2	917.1	10.7	4200
4300	8.3	3.842	0.2	3575.3	907.4	11.1	4300
4400	8.5	3.953	0.2	3658.5	897.9	11.5	4400
4500	8.8	4.065	0.2	3741.6	888.4	12.0	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

Anz. Bl. / Sheets

Sachnummer / Article Number

DI

WK802280AV

A

LA: 1100 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.1	0.072	0.0	88.2	1385.5	0.1	100
200	0.2	0.144	0.0	176.4	1371.3	0.2	200
300	0.4	0.218	0.0	264.6	1357.2	0.4	300
400	0.5	0.292	0.0	352.8	1343.3	0.5	400
500	0.6	0.367	0.0	441.0	1329.6	0.6	500
600	0.8	0.442	0.0	529.2	1316.1	0.8	600
700	0.9	0.519	0.0	617.3	1302.7	0.9	700
800	1.0	0.596	0.0	705.5	1289.5	1.1	800
900	1.2	0.674	0.0	793.7	1276.5	1.2	900
1000	1.3	0.752	0.0	881.9	1263.7	1.4	1000
1100	1.4	0.832	0.0	970.1	1251.0	1.5	1100
1200	1.6	0.912	0.0	1058.3	1238.5	1.7	1200
1300	1.7	0.993	0.0	1146.5	1226.2	1.9	1300
1400	1.9	1.075	0.0	1234.7	1214.0	2.0	1400
1500	2.0	1.158	0.0	1322.9	1202.0	2.2	1500
1600	2.1	1.242	0.0	1411.1	1190.1	2.4	1600
1700	2.3	1.326	0.0	1499.3	1178.4	2.6	1700
1800	2.5	1.411	0.1	1587.5	1166.9	2.8	1800
1900	2.6	1.498	0.1	1675.7	1155.5	3.0	1900
2000	2.8	1.585	0.1	1763.8	1144.2	3.2	2000
2100	2.9	1.672	0.1	1852.0	1133.1	3.4	2100
2200	3.1	1.761	0.1	1940.2	1122.2	3.6	2200
2300	3.2	1.851	0.1	2028.4	1111.4	3.8	2300
2400	3.4	1.941	0.1	2116.6	1100.7	4.0	2400
2500	3.6	2.032	0.1	2204.8	1090.2	4.2	2500
2600	3.7	2.124	0.1	2293.0	1079.8	4.5	2600
2700	3.9	2.218	0.1	2381.2	1069.5	4.7	2700
2800	4.1	2.311	0.1	2469.4	1059.3	5.0	2800
2900	4.3	2.406	0.1	2557.6	1049.2	5.2	2900
3000	4.5	2.502	0.1	2645.8	1039.3	5.5	3000
3100	4.6	2.599	0.1	2734.0	1029.4	5.7	3100
3200	4.8	2.696	0.1	2822.1	1019.5	6.0	3200
3300	5.0	2.795	0.1	2910.3	1009.6	6.3	3300
3400	5.2	2.894	0.1	2998.5	999.5	6.5	3400
3500	5.4	2.995	0.1	3086.7	989.4	6.8	3500
3600	5.6	3.097	0.1	3174.9	979.2	7.1	3600
3700	5.8	3.199	0.1	3263.1	969.2	7.4	3700
3800	6.0	3.303	0.1	3351.3	959.2	7.7	3800
3900	6.2	3.408	0.1	3439.5	949.4	8.0	3900
4000	6.4	3.514	0.1	3527.7	939.6	8.4	4000
4100	6.6	3.621	0.2	3615.9	929.9	8.7	4100
4200	6.8	3.729	0.2	3704.1	920.3	9.0	4200
4300	7.0	3.838	0.2	3792.3	910.8	9.4	4300
4400	7.2	3.948	0.2	3880.5	901.4	9.8	4400
4500	7.5	4.060	0.2	3968.6	892.1	10.1	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

Anz. Bl. / Sheets

27

54

Sachnummer / Article Number

DI

WK802280AV

A

LA: 1200 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.1	0.072	0.0	92.4	1385.5	0.1	100
200	0.2	0.144	0.0	184.8	1371.2	0.2	200
300	0.3	0.218	0.0	277.2	1357.1	0.3	300
400	0.4	0.292	0.0	369.6	1343.2	0.4	400
500	0.5	0.367	0.0	461.9	1329.5	0.5	500
600	0.6	0.442	0.0	554.3	1316.0	0.6	600
700	0.7	0.519	0.0	646.7	1302.6	0.8	700
800	0.8	0.596	0.0	739.1	1289.5	0.9	800
900	0.9	0.674	0.0	831.5	1276.5	1.0	900
1000	1.0	0.752	0.0	923.9	1263.6	1.1	1000
1100	1.2	0.832	0.0	1016.3	1251.0	1.3	1100
1200	1.3	0.912	0.0	1108.7	1238.5	1.4	1200
1300	1.4	0.993	0.0	1201.0	1226.2	1.5	1300
1400	1.5	1.075	0.0	1293.4	1214.1	1.7	1400
1500	1.6	1.158	0.0	1385.8	1202.1	1.8	1500
1600	1.7	1.242	0.0	1478.2	1190.3	1.9	1600
1700	1.9	1.326	0.0	1570.6	1178.6	2.1	1700
1800	2.0	1.411	0.0	1663.0	1167.1	2.3	1800
1900	2.1	1.498	0.0	1755.4	1155.8	2.4	1900
2000	2.2	1.584	0.0	1847.8	1144.6	2.6	2000
2100	2.4	1.672	0.1	1940.1	1133.5	2.7	2100
2200	2.5	1.761	0.1	2032.5	1122.6	2.9	2200
2300	2.6	1.850	0.1	2124.9	1111.9	3.1	2300
2400	2.8	1.941	0.1	2217.3	1101.3	3.3	2400
2500	2.9	2.032	0.1	2309.7	1090.8	3.4	2500
2600	3.0	2.124	0.1	2402.1	1080.5	3.6	2600
2700	3.2	2.217	0.1	2494.5	1070.3	3.8	2700
2800	3.3	2.311	0.1	2586.9	1060.2	4.0	2800
2900	3.5	2.406	0.1	2679.3	1050.2	4.2	2900
3000	3.6	2.501	0.1	2771.6	1040.3	4.4	3000
3100	3.8	2.598	0.1	2864.0	1030.5	4.6	3100
3200	3.9	2.696	0.1	2956.4	1020.8	4.9	3200
3300	4.1	2.794	0.1	3048.8	1011.0	5.1	3300
3400	4.2	2.893	0.1	3141.2	1001.1	5.3	3400
3500	4.4	2.994	0.1	3233.6	991.1	5.5	3500
3600	4.5	3.095	0.1	3326.0	981.1	5.8	3600
3700	4.7	3.198	0.1	3418.4	971.2	6.0	3700
3800	4.8	3.301	0.1	3510.7	961.3	6.3	3800
3900	5.0	3.406	0.1	3603.1	951.6	6.5	3900
4000	5.2	3.511	0.1	3695.5	941.9	6.8	4000
4100	5.3	3.618	0.1	3787.9	932.4	7.0	4100
4200	5.5	3.726	0.1	3880.3	922.9	7.3	4200
4300	5.7	3.835	0.1	3972.7	913.5	7.6	4300
4400	5.9	3.945	0.1	4065.1	904.2	7.9	4400
4500	6.0	4.056	0.1	4157.5	895.0	8.2	4500

LA: 1300 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.1	0.072	0.0	95.7	1385.5	0.1	100
200	0.1	0.144	0.0	191.4	1371.2	0.2	200
300	0.2	0.218	0.0	287.1	1357.1	0.2	300
400	0.3	0.292	0.0	382.8	1343.2	0.3	400
500	0.4	0.367	0.0	478.5	1329.5	0.4	500
600	0.5	0.442	0.0	574.2	1315.9	0.5	600
700	0.5	0.519	0.0	669.9	1302.6	0.6	700
800	0.6	0.596	0.0	765.6	1289.4	0.7	800
900	0.7	0.674	0.0	861.2	1276.4	0.8	900
1000	0.8	0.752	0.0	956.9	1263.6	0.9	1000
1100	0.9	0.832	0.0	1052.6	1251.0	0.9	1100
1200	1.0	0.912	0.0	1148.3	1238.5	1.0	1200
1300	1.1	0.993	0.0	1244.0	1226.2	1.2	1300
1400	1.1	1.075	0.0	1339.7	1214.1	1.3	1400
1500	1.2	1.158	0.0	1435.4	1202.2	1.4	1500
1600	1.3	1.242	0.0	1531.1	1190.4	1.5	1600
1700	1.4	1.326	0.0	1626.8	1178.8	1.6	1700
1800	1.5	1.411	0.0	1722.5	1167.3	1.7	1800
1900	1.6	1.498	0.0	1818.2	1156.0	1.8	1900
2000	1.7	1.584	0.0	1913.9	1144.8	2.0	2000
2100	1.8	1.672	0.0	2009.6	1133.8	2.1	2100
2200	1.9	1.761	0.0	2105.3	1123.0	2.2	2200
2300	2.0	1.850	0.0	2201.0	1112.3	2.3	2300
2400	2.1	1.941	0.0	2296.7	1101.7	2.5	2400
2500	2.2	2.032	0.0	2392.4	1091.3	2.6	2500
2600	2.3	2.124	0.1	2488.0	1081.1	2.8	2600
2700	2.4	2.217	0.1	2583.7	1070.9	2.9	2700
2800	2.5	2.311	0.1	2679.4	1060.9	3.0	2800
2900	2.6	2.405	0.1	2775.1	1050.9	3.2	2900
3000	2.7	2.501	0.1	2870.8	1041.1	3.4	3000
3100	2.9	2.597	0.1	2966.5	1031.4	3.5	3100
3200	3.0	2.695	0.1	3062.2	1021.7	3.7	3200
3300	3.1	2.793	0.1	3157.9	1012.1	3.8	3300
3400	3.2	2.893	0.1	3253.6	1002.3	4.0	3400
3500	3.3	2.993	0.1	3349.3	992.5	4.2	3500
3600	3.4	3.094	0.1	3445.0	982.6	4.4	3600
3700	3.6	3.196	0.1	3540.7	972.7	4.6	3700
3800	3.7	3.300	0.1	3636.4	963.0	4.7	3800
3900	3.8	3.404	0.1	3732.1	953.3	4.9	3900
4000	3.9	3.509	0.1	3827.8	943.8	5.1	4000
4100	4.1	3.616	0.1	3923.5	934.3	5.3	4100
4200	4.2	3.724	0.1	4019.1	924.9	5.5	4200
4300	4.3	3.832	0.1	4114.8	915.6	5.8	4300
4400	4.4	3.942	0.1	4210.5	906.5	6.0	4400
4500	4.6	4.053	0.1	4306.2	897.4	6.2	4500

LA: 1400 [A‰]

SD [m]	SW [A ‰]	FZ [s]	DR [A ‰]	ZH [m]	VE [m/s]	FW [A ‰]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.1	0.072	0.0	98.1	1385.5	0.1	100
200	0.1	0.144	0.0	196.2	1371.2	0.1	200
300	0.2	0.218	0.0	294.2	1357.0	0.2	300
400	0.2	0.292	0.0	392.3	1343.1	0.2	400
500	0.3	0.367	0.0	490.4	1329.4	0.3	500
600	0.3	0.442	0.0	588.5	1315.9	0.3	600
700	0.4	0.519	0.0	686.5	1302.5	0.4	700
800	0.4	0.596	0.0	784.6	1289.4	0.4	800
900	0.5	0.674	0.0	882.7	1276.4	0.5	900
1000	0.5	0.752	0.0	980.8	1263.6	0.6	1000
1100	0.6	0.832	0.0	1078.9	1251.0	0.6	1100
1200	0.6	0.912	0.0	1176.9	1238.5	0.7	1200
1300	0.7	0.993	0.0	1275.0	1226.3	0.8	1300
1400	0.8	1.075	0.0	1373.1	1214.2	0.8	1400
1500	0.8	1.158	0.0	1471.2	1202.2	0.9	1500
1600	0.9	1.242	0.0	1569.3	1190.5	1.0	1600
1700	1.0	1.326	0.0	1667.3	1178.9	1.1	1700
1800	1.0	1.411	0.0	1765.4	1167.4	1.1	1800
1900	1.1	1.497	0.0	1863.5	1156.1	1.2	1900
2000	1.1	1.584	0.0	1961.6	1145.0	1.3	2000
2100	1.2	1.672	0.0	2059.6	1134.1	1.4	2100
2200	1.3	1.761	0.0	2157.7	1123.2	1.5	2200
2300	1.3	1.850	0.0	2255.8	1112.6	1.6	2300
2400	1.4	1.941	0.0	2353.9	1102.1	1.7	2400
2500	1.5	2.032	0.0	2452.0	1091.7	1.8	2500
2600	1.6	2.124	0.0	2550.0	1081.5	1.9	2600
2700	1.6	2.217	0.0	2648.1	1071.3	1.9	2700
2800	1.7	2.310	0.0	2746.2	1061.3	2.0	2800
2900	1.8	2.405	0.0	2844.3	1051.4	2.2	2900
3000	1.8	2.501	0.0	2942.4	1041.7	2.3	3000
3100	1.9	2.597	0.0	3040.4	1032.0	2.4	3100
3200	2.0	2.694	0.0	3138.5	1022.4	2.5	3200
3300	2.1	2.793	0.0	3236.6	1012.8	2.6	3300
3400	2.1	2.892	0.0	3334.7	1003.2	2.7	3400
3500	2.2	2.992	0.1	3432.7	993.4	2.8	3500
3600	2.3	3.093	0.1	3530.8	983.6	2.9	3600
3700	2.4	3.195	0.1	3628.9	973.8	3.1	3700
3800	2.5	3.299	0.1	3727.0	964.2	3.2	3800
3900	2.6	3.403	0.1	3825.1	954.6	3.3	3900
4000	2.6	3.508	0.1	3923.1	945.1	3.4	4000
4100	2.7	3.614	0.1	4021.2	935.7	3.6	4100
4200	2.8	3.722	0.1	4119.3	926.4	3.7	4200
4300	2.9	3.830	0.1	4217.4	917.2	3.9	4300
4400	3.0	3.940	0.1	4315.5	908.0	4.0	4400
4500	3.1	4.051	0.1	4413.5	899.0	4.2	4500



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

Anz. Bl. / Sheets

Sachnummer / Article Number

DI

WK802280AV

A

LA: 1500 [A%]

SD [m]	SW [A %]	FZ [s]	DR [A %]	ZH [m]	VE [m/s]	FW [A %]	SD [m]
0.0	0.0	0.0	0.0	0.0	1400.0	0.0	0.0
100	0.0	0.072	0.0	99.5	1385.5	0.0	100
200	0.1	0.144	0.0	199.0	1371.1	0.1	200
300	0.1	0.218	0.0	298.6	1357.0	0.1	300
400	0.1	0.292	0.0	398.1	1343.1	0.1	400
500	0.1	0.367	0.0	497.6	1329.4	0.1	500
600	0.2	0.442	0.0	597.1	1315.9	0.2	600
700	0.2	0.519	0.0	696.6	1302.5	0.2	700
800	0.2	0.596	0.0	796.1	1289.4	0.2	800
900	0.2	0.674	0.0	895.7	1276.4	0.3	900
1000	0.3	0.752	0.0	995.2	1263.6	0.3	1000
1100	0.3	0.832	0.0	1094.7	1251.0	0.3	1100
1200	0.3	0.912	0.0	1194.2	1238.5	0.4	1200
1300	0.4	0.993	0.0	1293.7	1226.3	0.4	1300
1400	0.4	1.075	0.0	1393.3	1214.2	0.4	1400
1500	0.4	1.158	0.0	1492.8	1202.3	0.5	1500
1600	0.4	1.242	0.0	1592.3	1190.5	0.5	1600
1700	0.5	1.326	0.0	1691.8	1178.9	0.5	1700
1800	0.5	1.411	0.0	1791.3	1167.5	0.6	1800
1900	0.5	1.497	0.0	1890.9	1156.2	0.6	1900
2000	0.6	1.584	0.0	1990.4	1145.1	0.7	2000
2100	0.6	1.672	0.0	2089.9	1134.2	0.7	2100
2200	0.6	1.761	0.0	2189.4	1123.4	0.7	2200
2300	0.7	1.850	0.0	2288.9	1112.7	0.8	2300
2400	0.7	1.940	0.0	2388.4	1102.3	0.8	2400
2500	0.7	2.032	0.0	2488.0	1091.9	0.9	2500
2600	0.8	2.124	0.0	2587.5	1081.7	0.9	2600
2700	0.8	2.217	0.0	2687.0	1071.6	1.0	2700
2800	0.9	2.310	0.0	2786.5	1061.6	1.0	2800
2900	0.9	2.405	0.0	2886.0	1051.8	1.1	2900
3000	0.9	2.500	0.0	2985.6	1042.0	1.1	3000
3100	1.0	2.597	0.0	3085.1	1032.4	1.2	3100
3200	1.0	2.694	0.0	3184.6	1022.8	1.2	3200
3300	1.0	2.792	0.0	3284.1	1013.3	1.3	3300
3400	1.1	2.892	0.0	3383.6	1003.7	1.4	3400
3500	1.1	2.992	0.0	3483.1	994.0	1.4	3500
3600	1.2	3.093	0.0	3582.7	984.2	1.5	3600
3700	1.2	3.195	0.0	3682.2	974.5	1.5	3700
3800	1.2	3.298	0.0	3781.7	964.9	1.6	3800
3900	1.3	3.402	0.0	3881.2	955.3	1.7	3900
4000	1.3	3.507	0.0	3980.7	945.9	1.7	4000
4100	1.4	3.614	0.0	4080.3	936.5	1.8	4100
4200	1.4	3.721	0.0	4179.8	927.2	1.9	4200
4300	1.5	3.829	0.0	4279.3	918.1	1.9	4300
4400	1.5	3.939	0.0	4378.8	909.0	2.0	4400
4500	1.5	4.049	0.0	4478.3	900.0	2.1	4500

2.5 KORREKTURTAFEL ZUR FLABSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrektur kann unter gestörten Bedingungen die Distanz **SD** für den entsprechenden Lagewinkel **LA** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel), sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind (parallel zur X-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind (von links, parallel zur Z-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A%).

2.5 CORRECTION TABLE TO THE ANTI-AIRCRAFT FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** for the given angle of site **LA** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction (Superelevation), as well as

FZ-Variation (Time-of-Flight),

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind (parallel to X-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind (from the left, parallel to Z-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils). (mils = A%).

SD [m]	LA: 0 [A%]					DQ				
	SW-Correction [A%] due to Variation of:					FZ-Variation [s] due to Variation of:				
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	WQ 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.1	
500	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2	
600	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2	
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.3	
800	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.3	
900	0.0	0.0	0.0	0.0	0.005	0.001	-0.003	0.000	0.3	
1000	0.0	0.0	0.0	0.0	0.006	0.001	-0.004	0.000	0.4	
1100	0.0	0.0	0.0	0.0	0.006	0.001	-0.005	-0.001	0.4	
1200	0.0	0.0	0.0	0.0	0.007	0.002	-0.006	-0.001	0.5	
1300	0.1	0.0	0.0	0.0	0.007	0.002	-0.007	-0.001	0.5	
1400	0.1	0.0	0.0	0.0	0.008	0.002	-0.008	-0.001	0.5	
1500	0.1	0.0	0.0	0.0	0.009	0.003	-0.009	-0.001	0.6	
1600	0.1	0.0	-0.1	0.0	0.009	0.003	-0.010	-0.001	0.6	
1700	0.1	0.0	-0.1	0.0	0.010	0.003	-0.012	-0.001	0.7	
1800	0.1	0.0	-0.1	0.0	0.011	0.004	-0.014	-0.002	0.7	
1900	0.1	0.0	-0.1	0.0	0.011	0.004	-0.015	-0.002	0.8	
2000	0.1	0.0	-0.1	0.0	0.012	0.005	-0.017	-0.002	0.8	
2100	0.1	0.0	-0.1	0.0	0.013	0.005	-0.019	-0.002	0.8	
2200	0.1	0.0	-0.1	0.0	0.013	0.006	-0.021	-0.003	0.9	
2300	0.1	0.0	-0.1	0.0	0.014	0.007	-0.023	-0.003	0.9	
2400	0.1	0.0	-0.1	0.0	0.015	0.007	-0.026	-0.003	1.0	
2500	0.1	0.0	-0.1	0.0	0.016	0.008	-0.028	-0.003	1.0	
2600	0.1	0.0	-0.2	0.0	0.016	0.009	-0.031	-0.004	1.1	
2700	0.1	0.0	-0.2	0.0	0.017	0.009	-0.033	-0.004	1.1	
2800	0.1	0.1	-0.2	0.0	0.018	0.010	-0.036	-0.004	1.2	
2900	0.1	0.1	-0.2	0.0	0.019	0.011	-0.040	-0.005	1.2	
3000	0.1	0.1	-0.2	0.0	0.020	0.012	-0.043	-0.005	1.3	
3100	0.2	0.1	-0.2	0.0	0.021	0.013	-0.047	-0.006	1.3	
3200	0.2	0.1	-0.3	0.0	0.022	0.014	-0.051	-0.006	1.4	
3300	0.2	0.1	-0.3	0.0	0.023	0.015	-0.055	-0.006	1.4	
3400	0.2	0.1	-0.3	0.0	0.024	0.016	-0.059	-0.007	1.5	
3500	0.2	0.1	-0.3	0.0	0.025	0.017	-0.064	-0.007	1.5	
3600	0.2	0.1	-0.4	0.0	0.026	0.018	-0.069	-0.008	1.6	
3700	0.2	0.1	-0.4	0.0	0.027	0.019	-0.074	-0.008	1.7	
3800	0.2	0.1	-0.4	0.0	0.028	0.020	-0.080	-0.009	1.7	
3900	0.2	0.1	-0.4	0.0	0.029	0.022	-0.085	-0.010	1.8	
4000	0.2	0.1	-0.5	0.0	0.030	0.023	-0.091	-0.010	1.8	
4100	0.2	0.1	-0.5	-0.1	0.032	0.025	-0.098	-0.011	1.9	
4200	0.2	0.1	-0.5	-0.1	0.033	0.026	-0.104	-0.012	2.0	
4300	0.2	0.2	-0.6	-0.1	0.034	0.028	-0.111	-0.013	2.0	
4400	0.3	0.2	-0.6	-0.1	0.035	0.029	-0.119	-0.013	2.1	
4500	0.3	0.2	-0.7	-0.1	0.037	0.031	-0.126	-0.014	2.1	

LA: 100 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10		
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]		
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.000	0.1	
500	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.000	0.2	
600	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.000	0.2	
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.000	0.3	
800	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.000	0.3	
900	0.0	0.0	0.0	0.0	0.005	0.001	-0.003	0.000	0.000	0.3	
1000	0.0	0.0	0.0	0.0	0.006	0.001	-0.004	0.000	0.000	0.4	
1100	0.0	0.0	0.0	0.0	0.006	0.001	-0.005	-0.001	0.000	0.4	
1200	0.0	0.0	0.0	0.0	0.007	0.002	-0.006	-0.001	0.000	0.5	
1300	0.1	0.0	0.0	0.0	0.007	0.002	-0.007	-0.001	0.000	0.5	
1400	0.1	0.0	0.0	0.0	0.008	0.002	-0.008	-0.001	0.000	0.5	
1500	0.1	0.0	0.0	0.1	0.009	0.003	-0.009	-0.001	0.000	0.6	
1600	0.1	0.0	-0.1	0.1	0.009	0.003	-0.010	-0.001	0.000	0.6	
1700	0.1	0.0	-0.1	0.1	0.010	0.003	-0.012	-0.001	0.000	0.7	
1800	0.1	0.0	-0.1	0.1	0.011	0.004	-0.013	-0.002	0.000	0.7	
1900	0.1	0.0	-0.1	0.1	0.011	0.004	-0.015	-0.002	0.000	0.8	
2000	0.1	0.0	-0.1	0.1	0.012	0.005	-0.017	-0.002	0.000	0.8	
2100	0.1	0.0	-0.1	0.1	0.013	0.005	-0.019	-0.002	0.000	0.8	
2200	0.1	0.0	-0.1	0.1	0.013	0.006	-0.021	-0.003	0.000	0.9	
2300	0.1	0.0	-0.1	0.1	0.014	0.006	-0.023	-0.003	0.000	0.9	
2400	0.1	0.0	-0.1	0.1	0.015	0.007	-0.025	-0.003	0.000	1.0	
2500	0.1	0.0	-0.1	0.1	0.016	0.008	-0.028	-0.003	0.000	1.0	
2600	0.1	0.0	-0.2	0.1	0.016	0.009	-0.030	-0.004	0.000	1.1	
2700	0.1	0.0	-0.2	0.1	0.017	0.009	-0.033	-0.004	0.000	1.1	
2800	0.1	0.1	-0.2	0.1	0.018	0.010	-0.036	-0.004	0.000	1.2	
2900	0.1	0.1	-0.2	0.1	0.019	0.011	-0.039	-0.005	0.000	1.2	
3000	0.1	0.1	-0.2	0.1	0.020	0.012	-0.042	-0.005	0.000	1.3	
3100	0.2	0.1	-0.2	0.1	0.021	0.012	-0.046	-0.005	0.000	1.3	
3200	0.2	0.1	-0.3	0.1	0.022	0.013	-0.050	-0.006	0.000	1.4	
3300	0.2	0.1	-0.3	0.1	0.023	0.014	-0.054	-0.006	0.000	1.4	
3400	0.2	0.1	-0.3	0.1	0.024	0.015	-0.058	-0.007	0.000	1.5	
3500	0.2	0.1	-0.3	0.1	0.025	0.016	-0.063	-0.007	0.000	1.5	
3600	0.2	0.1	-0.3	0.1	0.026	0.017	-0.068	-0.008	0.000	1.6	
3700	0.2	0.1	-0.4	0.1	0.027	0.018	-0.073	-0.008	0.000	1.6	
3800	0.2	0.1	-0.4	0.1	0.028	0.020	-0.078	-0.009	0.000	1.7	
3900	0.2	0.1	-0.4	0.1	0.029	0.021	-0.084	-0.009	0.000	1.7	
4000	0.2	0.1	-0.5	0.1	0.030	0.022	-0.089	-0.010	0.000	1.8	
4100	0.2	0.1	-0.5	0.1	0.032	0.024	-0.096	-0.011	0.000	1.9	
4200	0.2	0.1	-0.5	0.1	0.033	0.025	-0.102	-0.011	0.000	1.9	
4300	0.2	0.1	-0.6	0.1	0.034	0.027	-0.109	-0.012	0.000	2.0	
4400	0.3	0.2	-0.6	0.1	0.035	0.028	-0.116	-0.013	0.000	2.0	
4500	0.3	0.2	-0.6	0.1	0.037	0.030	-0.123	-0.014	0.000	2.1	

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

34

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 200 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.1	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.1	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.1	0.006	0.001	-0.005	-0.001	0.4
1200	0.0	0.0	0.0	0.1	0.007	0.002	-0.006	-0.001	0.5
1300	0.1	0.0	0.0	0.1	0.007	0.002	-0.007	-0.001	0.5
1400	0.1	0.0	0.0	0.1	0.008	0.002	-0.008	-0.001	0.5
1500	0.1	0.0	0.0	0.1	0.009	0.003	-0.009	-0.001	0.6
1600	0.1	0.0	-0.1	0.1	0.009	0.003	-0.010	-0.001	0.6
1700	0.1	0.0	-0.1	0.1	0.010	0.003	-0.012	-0.001	0.7
1800	0.1	0.0	-0.1	0.1	0.011	0.004	-0.013	-0.002	0.7
1900	0.1	0.0	-0.1	0.1	0.011	0.004	-0.015	-0.002	0.7
2000	0.1	0.0	-0.1	0.1	0.012	0.005	-0.017	-0.002	0.8
2100	0.1	0.0	-0.1	0.2	0.013	0.005	-0.019	-0.002	0.8
2200	0.1	0.0	-0.1	0.2	0.013	0.006	-0.021	-0.002	0.9
2300	0.1	0.0	-0.1	0.2	0.014	0.006	-0.023	-0.003	0.9
2400	0.1	0.0	-0.1	0.2	0.015	0.007	-0.025	-0.003	1.0
2500	0.1	0.0	-0.1	0.2	0.016	0.008	-0.028	-0.003	1.0
2600	0.1	0.0	-0.2	0.2	0.016	0.008	-0.030	-0.004	1.1
2700	0.1	0.0	-0.2	0.2	0.017	0.009	-0.033	-0.004	1.1
2800	0.1	0.1	-0.2	0.2	0.018	0.010	-0.036	-0.004	1.2
2900	0.1	0.1	-0.2	0.2	0.019	0.011	-0.039	-0.005	1.2
3000	0.1	0.1	-0.2	0.2	0.020	0.011	-0.042	-0.005	1.2
3100	0.1	0.1	-0.2	0.2	0.021	0.012	-0.045	-0.005	1.3
3200	0.2	0.1	-0.2	0.2	0.022	0.013	-0.049	-0.006	1.3
3300	0.2	0.1	-0.3	0.2	0.023	0.014	-0.053	-0.006	1.4
3400	0.2	0.1	-0.3	0.3	0.024	0.015	-0.057	-0.007	1.4
3500	0.2	0.1	-0.3	0.3	0.025	0.016	-0.062	-0.007	1.5
3600	0.2	0.1	-0.3	0.3	0.026	0.017	-0.066	-0.008	1.6
3700	0.2	0.1	-0.4	0.3	0.027	0.018	-0.071	-0.008	1.6
3800	0.2	0.1	-0.4	0.3	0.028	0.019	-0.077	-0.009	1.7
3900	0.2	0.1	-0.4	0.3	0.029	0.020	-0.082	-0.009	1.7
4000	0.2	0.1	-0.4	0.3	0.030	0.021	-0.088	-0.010	1.8
4100	0.2	0.1	-0.5	0.3	0.031	0.023	-0.094	-0.010	1.8
4200	0.2	0.1	-0.5	0.3	0.033	0.024	-0.100	-0.011	1.9
4300	0.2	0.1	-0.5	0.3	0.034	0.025	-0.106	-0.012	1.9
4400	0.2	0.1	-0.6	0.3	0.035	0.027	-0.113	-0.013	2.0
4500	0.3	0.2	-0.6	0.3	0.036	0.028	-0.120	-0.013	2.1

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

35

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 300 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10		
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]		
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.000	0.1	
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.000	0.2	
600	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.000	0.2	
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.000	0.3	
800	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.000	0.3	
900	0.0	0.0	0.0	0.1	0.005	0.001	-0.003	0.000	0.000	0.3	
1000	0.0	0.0	0.0	0.1	0.006	0.001	-0.004	0.000	0.000	0.4	
1100	0.0	0.0	0.0	0.1	0.006	0.001	-0.005	-0.001	0.000	0.4	
1200	0.0	0.0	0.0	0.1	0.007	0.002	-0.006	-0.001	0.000	0.5	
1300	0.1	0.0	0.0	0.1	0.007	0.002	-0.007	-0.001	0.000	0.5	
1400	0.1	0.0	0.0	0.2	0.008	0.002	-0.008	-0.001	0.000	0.5	
1500	0.1	0.0	0.0	0.2	0.009	0.002	-0.009	-0.001	0.000	0.6	
1600	0.1	0.0	0.0	0.2	0.009	0.003	-0.010	-0.001	0.000	0.6	
1700	0.1	0.0	-0.1	0.2	0.010	0.003	-0.012	-0.001	0.000	0.7	
1800	0.1	0.0	-0.1	0.2	0.011	0.004	-0.013	-0.002	0.000	0.7	
1900	0.1	0.0	-0.1	0.2	0.011	0.004	-0.015	-0.002	0.000	0.7	
2000	0.1	0.0	-0.1	0.2	0.012	0.005	-0.017	-0.002	0.000	0.8	
2100	0.1	0.0	-0.1	0.2	0.013	0.005	-0.019	-0.002	0.000	0.8	
2200	0.1	0.0	-0.1	0.2	0.013	0.006	-0.021	-0.002	0.000	0.9	
2300	0.1	0.0	-0.1	0.3	0.014	0.006	-0.023	-0.003	0.000	0.9	
2400	0.1	0.0	-0.1	0.3	0.015	0.007	-0.025	-0.003	0.000	1.0	
2500	0.1	0.0	-0.1	0.3	0.016	0.007	-0.027	-0.003	0.000	1.0	
2600	0.1	0.0	-0.1	0.3	0.016	0.008	-0.030	-0.004	0.000	1.0	
2700	0.1	0.0	-0.2	0.3	0.017	0.009	-0.032	-0.004	0.000	1.1	
2800	0.1	0.0	-0.2	0.3	0.018	0.010	-0.035	-0.004	0.000	1.1	
2900	0.1	0.1	-0.2	0.3	0.019	0.010	-0.038	-0.004	0.000	1.2	
3000	0.1	0.1	-0.2	0.3	0.020	0.011	-0.041	-0.005	0.000	1.2	
3100	0.1	0.1	-0.2	0.3	0.021	0.012	-0.045	-0.005	0.000	1.3	
3200	0.2	0.1	-0.2	0.4	0.022	0.013	-0.048	-0.006	0.000	1.3	
3300	0.2	0.1	-0.3	0.4	0.023	0.014	-0.052	-0.006	0.000	1.4	
3400	0.2	0.1	-0.3	0.4	0.024	0.014	-0.056	-0.006	0.000	1.4	
3500	0.2	0.1	-0.3	0.4	0.025	0.015	-0.061	-0.007	0.000	1.5	
3600	0.2	0.1	-0.3	0.4	0.026	0.016	-0.065	-0.007	0.000	1.5	
3700	0.2	0.1	-0.3	0.4	0.027	0.017	-0.070	-0.008	0.000	1.6	
3800	0.2	0.1	-0.4	0.4	0.028	0.018	-0.075	-0.008	0.000	1.6	
3900	0.2	0.1	-0.4	0.4	0.029	0.019	-0.080	-0.009	0.000	1.7	
4000	0.2	0.1	-0.4	0.5	0.030	0.021	-0.086	-0.009	0.000	1.7	
4100	0.2	0.1	-0.5	0.5	0.031	0.022	-0.092	-0.010	0.000	1.8	
4200	0.2	0.1	-0.5	0.5	0.032	0.023	-0.098	-0.011	0.000	1.9	
4300	0.2	0.1	-0.5	0.5	0.034	0.024	-0.104	-0.011	0.000	1.9	
4400	0.2	0.1	-0.5	0.5	0.035	0.026	-0.111	-0.012	0.000	2.0	
4500	0.3	0.1	-0.6	0.5	0.036	0.027	-0.117	-0.013	0.000	2.0	

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

36

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 400 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.1	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.1	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.2	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.2	0.007	0.002	-0.006	-0.001	0.5
1300	0.0	0.0	0.0	0.2	0.007	0.002	-0.007	-0.001	0.5
1400	0.1	0.0	0.0	0.2	0.008	0.002	-0.008	-0.001	0.5
1500	0.1	0.0	0.0	0.2	0.009	0.002	-0.009	-0.001	0.6
1600	0.1	0.0	0.0	0.2	0.009	0.003	-0.010	-0.001	0.6
1700	0.1	0.0	-0.1	0.2	0.010	0.003	-0.012	-0.001	0.7
1800	0.1	0.0	-0.1	0.3	0.011	0.004	-0.013	-0.001	0.7
1900	0.1	0.0	-0.1	0.3	0.011	0.004	-0.015	-0.002	0.7
2000	0.1	0.0	-0.1	0.3	0.012	0.005	-0.017	-0.002	0.8
2100	0.1	0.0	-0.1	0.3	0.013	0.005	-0.018	-0.002	0.8
2200	0.1	0.0	-0.1	0.3	0.013	0.006	-0.020	-0.002	0.9
2300	0.1	0.0	-0.1	0.3	0.014	0.006	-0.023	-0.003	0.9
2400	0.1	0.0	-0.1	0.4	0.015	0.007	-0.025	-0.003	1.0
2500	0.1	0.0	-0.1	0.4	0.016	0.007	-0.027	-0.003	1.0
2600	0.1	0.0	-0.1	0.4	0.016	0.008	-0.030	-0.003	1.0
2700	0.1	0.0	-0.2	0.4	0.017	0.009	-0.032	-0.004	1.1
2800	0.1	0.0	-0.2	0.4	0.018	0.009	-0.035	-0.004	1.1
2900	0.1	0.0	-0.2	0.4	0.019	0.010	-0.038	-0.004	1.2
3000	0.1	0.1	-0.2	0.4	0.020	0.011	-0.041	-0.005	1.2
3100	0.1	0.1	-0.2	0.5	0.021	0.012	-0.044	-0.005	1.3
3200	0.1	0.1	-0.2	0.5	0.022	0.012	-0.048	-0.005	1.3
3300	0.2	0.1	-0.2	0.5	0.023	0.013	-0.051	-0.006	1.4
3400	0.2	0.1	-0.3	0.5	0.024	0.014	-0.056	-0.006	1.4
3500	0.2	0.1	-0.3	0.5	0.025	0.015	-0.060	-0.006	1.5
3600	0.2	0.1	-0.3	0.5	0.026	0.016	-0.064	-0.007	1.5
3700	0.2	0.1	-0.3	0.6	0.027	0.017	-0.069	-0.007	1.6
3800	0.2	0.1	-0.4	0.6	0.028	0.018	-0.074	-0.008	1.6
3900	0.2	0.1	-0.4	0.6	0.029	0.019	-0.079	-0.008	1.7
4000	0.2	0.1	-0.4	0.6	0.030	0.020	-0.084	-0.009	1.7
4100	0.2	0.1	-0.4	0.6	0.031	0.021	-0.090	-0.009	1.8
4200	0.2	0.1	-0.5	0.6	0.032	0.022	-0.096	-0.010	1.8
4300	0.2	0.1	-0.5	0.7	0.034	0.023	-0.102	-0.011	1.9
4400	0.2	0.1	-0.5	0.7	0.035	0.025	-0.108	-0.011	1.9
4500	0.2	0.1	-0.6	0.7	0.036	0.026	-0.115	-0.012	2.0

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

37

Anz. Bl. / Sheets

54

Sachnummer / Article Number

DI

WK802280AV

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 500 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.2	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.2	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.2	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.2	0.007	0.002	-0.006	-0.001	0.5
1300	0.0	0.0	0.0	0.2	0.007	0.002	-0.007	-0.001	0.5
1400	0.1	0.0	0.0	0.2	0.008	0.002	-0.008	-0.001	0.5
1500	0.1	0.0	0.0	0.3	0.009	0.002	-0.009	-0.001	0.6
1600	0.1	0.0	0.0	0.3	0.009	0.003	-0.010	-0.001	0.6
1700	0.1	0.0	-0.1	0.3	0.010	0.003	-0.012	-0.001	0.7
1800	0.1	0.0	-0.1	0.3	0.011	0.004	-0.013	-0.001	0.7
1900	0.1	0.0	-0.1	0.3	0.011	0.004	-0.015	-0.002	0.7
2000	0.1	0.0	-0.1	0.4	0.012	0.004	-0.017	-0.002	0.8
2100	0.1	0.0	-0.1	0.4	0.013	0.005	-0.018	-0.002	0.8
2200	0.1	0.0	-0.1	0.4	0.013	0.005	-0.020	-0.002	0.9
2300	0.1	0.0	-0.1	0.4	0.014	0.006	-0.022	-0.002	0.9
2400	0.1	0.0	-0.1	0.4	0.015	0.007	-0.025	-0.003	0.9
2500	0.1	0.0	-0.1	0.5	0.016	0.007	-0.027	-0.003	1.0
2600	0.1	0.0	-0.1	0.5	0.016	0.008	-0.029	-0.003	1.0
2700	0.1	0.0	-0.1	0.5	0.017	0.009	-0.032	-0.003	1.1
2800	0.1	0.0	-0.2	0.5	0.018	0.009	-0.035	-0.004	1.1
2900	0.1	0.0	-0.2	0.5	0.019	0.010	-0.037	-0.004	1.2
3000	0.1	0.1	-0.2	0.5	0.020	0.011	-0.040	-0.004	1.2
3100	0.1	0.1	-0.2	0.6	0.021	0.011	-0.044	-0.005	1.3
3200	0.1	0.1	-0.2	0.6	0.022	0.012	-0.047	-0.005	1.3
3300	0.1	0.1	-0.2	0.6	0.023	0.013	-0.051	-0.005	1.3
3400	0.2	0.1	-0.3	0.6	0.023	0.014	-0.055	-0.006	1.4
3500	0.2	0.1	-0.3	0.6	0.024	0.015	-0.059	-0.006	1.4
3600	0.2	0.1	-0.3	0.7	0.026	0.015	-0.063	-0.007	1.5
3700	0.2	0.1	-0.3	0.7	0.027	0.016	-0.068	-0.007	1.5
3800	0.2	0.1	-0.3	0.7	0.028	0.017	-0.072	-0.007	1.6
3900	0.2	0.1	-0.4	0.7	0.029	0.018	-0.077	-0.008	1.6
4000	0.2	0.1	-0.4	0.8	0.030	0.019	-0.083	-0.008	1.7
4100	0.2	0.1	-0.4	0.8	0.031	0.020	-0.088	-0.009	1.7
4200	0.2	0.1	-0.4	0.8	0.032	0.021	-0.094	-0.009	1.8
4300	0.2	0.1	-0.5	0.8	0.033	0.022	-0.100	-0.010	1.8
4400	0.2	0.1	-0.5	0.8	0.035	0.024	-0.106	-0.011	1.9
4500	0.2	0.1	-0.5	0.9	0.036	0.025	-0.112	-0.011	2.0

LA: 600 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10		
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]		
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.000	0.1	
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.000	0.2	
600	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.000	0.2	
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.002	0.000	0.000	0.3	
800	0.0	0.0	0.0	0.2	0.004	0.001	-0.002	0.000	0.000	0.3	
900	0.0	0.0	0.0	0.2	0.005	0.001	-0.003	0.000	0.000	0.3	
1000	0.0	0.0	0.0	0.2	0.006	0.001	-0.004	0.000	0.000	0.4	
1100	0.0	0.0	0.0	0.2	0.006	0.001	-0.005	0.000	0.000	0.4	
1200	0.0	0.0	0.0	0.2	0.007	0.002	-0.006	-0.001	0.000	0.5	
1300	0.0	0.0	0.0	0.3	0.007	0.002	-0.007	-0.001	0.000	0.5	
1400	0.0	0.0	0.0	0.3	0.008	0.002	-0.008	-0.001	0.000	0.5	
1500	0.1	0.0	0.0	0.3	0.009	0.002	-0.009	-0.001	0.000	0.6	
1600	0.1	0.0	0.0	0.3	0.009	0.003	-0.010	-0.001	0.000	0.6	
1700	0.1	0.0	0.0	0.4	0.010	0.003	-0.012	-0.001	0.000	0.7	
1800	0.1	0.0	-0.1	0.4	0.011	0.004	-0.013	-0.001	0.000	0.7	
1900	0.1	0.0	-0.1	0.4	0.011	0.004	-0.015	-0.001	0.000	0.7	
2000	0.1	0.0	-0.1	0.4	0.012	0.004	-0.016	-0.002	0.000	0.8	
2100	0.1	0.0	-0.1	0.4	0.013	0.005	-0.018	-0.002	0.000	0.8	
2200	0.1	0.0	-0.1	0.5	0.013	0.005	-0.020	-0.002	0.000	0.9	
2300	0.1	0.0	-0.1	0.5	0.014	0.006	-0.022	-0.002	0.000	0.9	
2400	0.1	0.0	-0.1	0.5	0.015	0.006	-0.024	-0.002	0.000	0.9	
2500	0.1	0.0	-0.1	0.5	0.016	0.007	-0.027	-0.003	0.000	1.0	
2600	0.1	0.0	-0.1	0.6	0.016	0.008	-0.029	-0.003	0.000	1.0	
2700	0.1	0.0	-0.1	0.6	0.017	0.008	-0.032	-0.003	0.000	1.1	
2800	0.1	0.0	-0.1	0.6	0.018	0.009	-0.034	-0.004	0.000	1.1	
2900	0.1	0.0	-0.2	0.6	0.019	0.010	-0.037	-0.004	0.000	1.2	
3000	0.1	0.0	-0.2	0.6	0.020	0.010	-0.040	-0.004	0.000	1.2	
3100	0.1	0.1	-0.2	0.7	0.021	0.011	-0.043	-0.004	0.000	1.2	
3200	0.1	0.1	-0.2	0.7	0.022	0.012	-0.047	-0.005	0.000	1.3	
3300	0.1	0.1	-0.2	0.7	0.022	0.013	-0.050	-0.005	0.000	1.3	
3400	0.1	0.1	-0.2	0.7	0.023	0.013	-0.054	-0.005	0.000	1.4	
3500	0.1	0.1	-0.3	0.8	0.024	0.014	-0.058	-0.006	0.000	1.4	
3600	0.2	0.1	-0.3	0.8	0.025	0.015	-0.062	-0.006	0.000	1.5	
3700	0.2	0.1	-0.3	0.8	0.027	0.016	-0.067	-0.007	0.000	1.5	
3800	0.2	0.1	-0.3	0.8	0.028	0.017	-0.071	-0.007	0.000	1.6	
3900	0.2	0.1	-0.3	0.9	0.029	0.018	-0.076	-0.007	0.000	1.6	
4000	0.2	0.1	-0.4	0.9	0.030	0.019	-0.081	-0.008	0.000	1.7	
4100	0.2	0.1	-0.4	0.9	0.031	0.020	-0.086	-0.008	0.000	1.7	
4200	0.2	0.1	-0.4	0.9	0.032	0.021	-0.092	-0.009	0.000	1.8	
4300	0.2	0.1	-0.4	1.0	0.033	0.022	-0.098	-0.009	0.000	1.8	
4400	0.2	0.1	-0.5	1.0	0.035	0.023	-0.104	-0.010	0.000	1.9	
4500	0.2	0.1	-0.5	1.0	0.036	0.024	-0.110	-0.010	0.000	1.9	

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

39

Anz. Bl. / Sheets

54

Sachnummer / Article Number

DI

WK802280AV

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 700 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.2	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.2	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.2	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.3	0.007	0.001	-0.006	0.000	0.5
1300	0.0	0.0	0.0	0.3	0.007	0.002	-0.007	-0.001	0.5
1400	0.0	0.0	0.0	0.3	0.008	0.002	-0.008	-0.001	0.5
1500	0.0	0.0	0.0	0.4	0.009	0.002	-0.009	-0.001	0.6
1600	0.1	0.0	0.0	0.4	0.009	0.003	-0.010	-0.001	0.6
1700	0.1	0.0	0.0	0.4	0.010	0.003	-0.012	-0.001	0.6
1800	0.1	0.0	-0.1	0.4	0.011	0.003	-0.013	-0.001	0.7
1900	0.1	0.0	-0.1	0.5	0.011	0.004	-0.015	-0.001	0.7
2000	0.1	0.0	-0.1	0.5	0.012	0.004	-0.016	-0.002	0.8
2100	0.1	0.0	-0.1	0.5	0.013	0.005	-0.018	-0.002	0.8
2200	0.1	0.0	-0.1	0.5	0.013	0.005	-0.020	-0.002	0.9
2300	0.1	0.0	-0.1	0.6	0.014	0.006	-0.022	-0.002	0.9
2400	0.1	0.0	-0.1	0.6	0.015	0.006	-0.024	-0.002	0.9
2500	0.1	0.0	-0.1	0.6	0.016	0.007	-0.027	-0.003	1.0
2600	0.1	0.0	-0.1	0.6	0.016	0.008	-0.029	-0.003	1.0
2700	0.1	0.0	-0.1	0.7	0.017	0.008	-0.031	-0.003	1.1
2800	0.1	0.0	-0.1	0.7	0.018	0.009	-0.034	-0.003	1.1
2900	0.1	0.0	-0.1	0.7	0.019	0.010	-0.037	-0.004	1.1
3000	0.1	0.0	-0.2	0.7	0.020	0.010	-0.040	-0.004	1.2
3100	0.1	0.0	-0.2	0.8	0.021	0.011	-0.043	-0.004	1.2
3200	0.1	0.0	-0.2	0.8	0.021	0.012	-0.046	-0.004	1.3
3300	0.1	0.1	-0.2	0.8	0.022	0.012	-0.049	-0.005	1.3
3400	0.1	0.1	-0.2	0.8	0.023	0.013	-0.053	-0.005	1.4
3500	0.1	0.1	-0.2	0.9	0.024	0.014	-0.057	-0.005	1.4
3600	0.1	0.1	-0.2	0.9	0.025	0.015	-0.061	-0.006	1.5
3700	0.1	0.1	-0.3	0.9	0.026	0.016	-0.066	-0.006	1.5
3800	0.2	0.1	-0.3	0.9	0.028	0.016	-0.070	-0.006	1.6
3900	0.2	0.1	-0.3	1.0	0.029	0.017	-0.075	-0.007	1.6
4000	0.2	0.1	-0.3	1.0	0.030	0.018	-0.080	-0.007	1.6
4100	0.2	0.1	-0.3	1.0	0.031	0.019	-0.085	-0.008	1.7
4200	0.2	0.1	-0.4	1.1	0.032	0.020	-0.090	-0.008	1.7
4300	0.2	0.1	-0.4	1.1	0.033	0.021	-0.096	-0.009	1.8
4400	0.2	0.1	-0.4	1.1	0.034	0.022	-0.102	-0.009	1.8
4500	0.2	0.1	-0.4	1.2	0.036	0.023	-0.108	-0.010	1.9

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

40

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 800 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.2	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.2	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.3	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.3	0.007	0.001	-0.006	0.000	0.4
1300	0.0	0.0	0.0	0.3	0.007	0.002	-0.007	-0.001	0.5
1400	0.0	0.0	0.0	0.4	0.008	0.002	-0.008	-0.001	0.5
1500	0.0	0.0	0.0	0.4	0.009	0.002	-0.009	-0.001	0.6
1600	0.0	0.0	0.0	0.4	0.009	0.003	-0.010	-0.001	0.6
1700	0.1	0.0	0.0	0.5	0.010	0.003	-0.012	-0.001	0.6
1800	0.1	0.0	0.0	0.5	0.011	0.003	-0.013	-0.001	0.7
1900	0.1	0.0	-0.1	0.5	0.011	0.004	-0.015	-0.001	0.7
2000	0.1	0.0	-0.1	0.5	0.012	0.004	-0.016	-0.001	0.8
2100	0.1	0.0	-0.1	0.6	0.013	0.005	-0.018	-0.002	0.8
2200	0.1	0.0	-0.1	0.6	0.013	0.005	-0.020	-0.002	0.8
2300	0.1	0.0	-0.1	0.6	0.014	0.006	-0.022	-0.002	0.9
2400	0.1	0.0	-0.1	0.6	0.015	0.006	-0.024	-0.002	0.9
2500	0.1	0.0	-0.1	0.7	0.016	0.007	-0.026	-0.002	1.0
2600	0.1	0.0	-0.1	0.7	0.016	0.007	-0.029	-0.002	1.0
2700	0.1	0.0	-0.1	0.7	0.017	0.008	-0.031	-0.003	1.1
2800	0.1	0.0	-0.1	0.8	0.018	0.009	-0.034	-0.003	1.1
2900	0.1	0.0	-0.1	0.8	0.019	0.009	-0.037	-0.003	1.1
3000	0.1	0.0	-0.1	0.8	0.020	0.010	-0.039	-0.003	1.2
3100	0.1	0.0	-0.2	0.8	0.021	0.011	-0.042	-0.004	1.2
3200	0.1	0.0	-0.2	0.9	0.021	0.012	-0.046	-0.004	1.3
3300	0.1	0.0	-0.2	0.9	0.022	0.012	-0.049	-0.004	1.3
3400	0.1	0.1	-0.2	0.9	0.023	0.013	-0.053	-0.005	1.4
3500	0.1	0.1	-0.2	1.0	0.024	0.014	-0.056	-0.005	1.4
3600	0.1	0.1	-0.2	1.0	0.025	0.014	-0.060	-0.005	1.4
3700	0.1	0.1	-0.2	1.0	0.026	0.015	-0.065	-0.005	1.5
3800	0.1	0.1	-0.3	1.1	0.027	0.016	-0.069	-0.006	1.5
3900	0.1	0.1	-0.3	1.1	0.029	0.017	-0.074	-0.006	1.6
4000	0.2	0.1	-0.3	1.1	0.030	0.018	-0.079	-0.007	1.6
4100	0.2	0.1	-0.3	1.1	0.031	0.019	-0.084	-0.007	1.7
4200	0.2	0.1	-0.3	1.2	0.032	0.019	-0.089	-0.007	1.7
4300	0.2	0.1	-0.4	1.2	0.033	0.020	-0.094	-0.008	1.8
4400	0.2	0.1	-0.4	1.2	0.034	0.021	-0.100	-0.008	1.8
4500	0.2	0.1	-0.4	1.3	0.036	0.022	-0.106	-0.009	1.9

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

41

Anz. Bl. / Sheets

54

Sachnummer / Article Number

DI

WK802280AV

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

LA: 900 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.2	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.3	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.3	0.007	0.001	-0.006	0.000	0.4
1300	0.0	0.0	0.0	0.4	0.007	0.002	-0.007	0.000	0.5
1400	0.0	0.0	0.0	0.4	0.008	0.002	-0.008	-0.001	0.5
1500	0.0	0.0	0.0	0.4	0.009	0.002	-0.009	-0.001	0.6
1600	0.0	0.0	0.0	0.5	0.009	0.003	-0.010	-0.001	0.6
1700	0.0	0.0	0.0	0.5	0.010	0.003	-0.011	-0.001	0.6
1800	0.0	0.0	0.0	0.5	0.011	0.003	-0.013	-0.001	0.7
1900	0.1	0.0	0.0	0.6	0.011	0.004	-0.015	-0.001	0.7
2000	0.1	0.0	-0.1	0.6	0.012	0.004	-0.016	-0.001	0.8
2100	0.1	0.0	-0.1	0.6	0.013	0.005	-0.018	-0.001	0.8
2200	0.1	0.0	-0.1	0.6	0.013	0.005	-0.020	-0.002	0.8
2300	0.1	0.0	-0.1	0.7	0.014	0.006	-0.022	-0.002	0.9
2400	0.1	0.0	-0.1	0.7	0.015	0.006	-0.024	-0.002	0.9
2500	0.1	0.0	-0.1	0.7	0.016	0.007	-0.026	-0.002	1.0
2600	0.1	0.0	-0.1	0.8	0.016	0.007	-0.029	-0.002	1.0
2700	0.1	0.0	-0.1	0.8	0.017	0.008	-0.031	-0.002	1.0
2800	0.1	0.0	-0.1	0.8	0.018	0.009	-0.034	-0.003	1.1
2900	0.1	0.0	-0.1	0.9	0.019	0.009	-0.036	-0.003	1.1
3000	0.1	0.0	-0.1	0.9	0.020	0.010	-0.039	-0.003	1.2
3100	0.1	0.0	-0.1	0.9	0.021	0.011	-0.042	-0.003	1.2
3200	0.1	0.0	-0.2	1.0	0.021	0.011	-0.045	-0.004	1.3
3300	0.1	0.0	-0.2	1.0	0.022	0.012	-0.048	-0.004	1.3
3400	0.1	0.0	-0.2	1.0	0.023	0.013	-0.052	-0.004	1.3
3500	0.1	0.0	-0.2	1.0	0.024	0.013	-0.056	-0.004	1.4
3600	0.1	0.1	-0.2	1.1	0.025	0.014	-0.060	-0.005	1.4
3700	0.1	0.1	-0.2	1.1	0.026	0.015	-0.064	-0.005	1.5
3800	0.1	0.1	-0.2	1.1	0.027	0.016	-0.068	-0.005	1.5
3900	0.1	0.1	-0.2	1.2	0.028	0.016	-0.073	-0.005	1.6
4000	0.1	0.1	-0.3	1.2	0.030	0.017	-0.078	-0.006	1.6
4100	0.1	0.1	-0.3	1.2	0.031	0.018	-0.083	-0.006	1.7
4200	0.1	0.1	-0.3	1.3	0.032	0.019	-0.088	-0.006	1.7
4300	0.2	0.1	-0.3	1.3	0.033	0.020	-0.093	-0.007	1.8
4400	0.2	0.1	-0.3	1.3	0.034	0.021	-0.099	-0.007	1.8
4500	0.2	0.1	-0.4	1.4	0.035	0.022	-0.104	-0.008	1.8

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

42

Anz. Bl. / Sheets

54

Sachnummer / Article Number

DI

WK802280AV

A



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

SD [m]	LA: 1000 [A‰] SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ [m/s]
	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	WQ 10 [m/s]		
	SD [m]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]		
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.000	0.1	
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.000	0.2	
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.000	0.2	
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.000	0.3	
800	0.0	0.0	0.0	0.2	0.004	0.001	-0.002	0.000	0.000	0.3	
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.000	0.3	
1000	0.0	0.0	0.0	0.3	0.006	0.001	-0.004	0.000	0.000	0.4	
1100	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	0.000	0.000	0.4	
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.006	0.000	0.000	0.4	
1300	0.0	0.0	0.0	0.4	0.007	0.002	-0.007	0.000	0.000	0.5	
1400	0.0	0.0	0.0	0.4	0.008	0.002	-0.008	0.000	0.000	0.5	
1500	0.0	0.0	0.0	0.5	0.009	0.002	-0.009	-0.001	0.000	0.6	
1600	0.0	0.0	0.0	0.5	0.009	0.003	-0.010	-0.001	0.000	0.6	
1700	0.0	0.0	0.0	0.5	0.010	0.003	-0.011	-0.001	0.000	0.6	
1800	0.0	0.0	0.0	0.6	0.011	0.003	-0.013	-0.001	0.000	0.7	
1900	0.0	0.0	0.0	0.6	0.011	0.004	-0.014	-0.001	0.000	0.7	
2000	0.0	0.0	0.0	0.6	0.012	0.004	-0.016	-0.001	0.000	0.8	
2100	0.1	0.0	-0.1	0.7	0.013	0.005	-0.018	-0.001	0.000	0.8	
2200	0.1	0.0	-0.1	0.7	0.013	0.005	-0.020	-0.001	0.000	0.8	
2300	0.1	0.0	-0.1	0.7	0.014	0.006	-0.022	-0.001	0.000	0.9	
2400	0.1	0.0	-0.1	0.8	0.015	0.006	-0.024	-0.002	0.000	0.9	
2500	0.1	0.0	-0.1	0.8	0.016	0.007	-0.026	-0.002	0.000	1.0	
2600	0.1	0.0	-0.1	0.8	0.016	0.007	-0.028	-0.002	0.000	1.0	
2700	0.1	0.0	-0.1	0.9	0.017	0.008	-0.031	-0.002	0.000	1.0	
2800	0.1	0.0	-0.1	0.9	0.018	0.008	-0.033	-0.002	0.000	1.1	
2900	0.1	0.0	-0.1	0.9	0.019	0.009	-0.036	-0.002	0.000	1.1	
3000	0.1	0.0	-0.1	1.0	0.020	0.010	-0.039	-0.003	0.000	1.2	
3100	0.1	0.0	-0.1	1.0	0.021	0.010	-0.042	-0.003	0.000	1.2	
3200	0.1	0.0	-0.1	1.0	0.021	0.011	-0.045	-0.003	0.000	1.2	
3300	0.1	0.0	-0.1	1.1	0.022	0.012	-0.048	-0.003	0.000	1.3	
3400	0.1	0.0	-0.2	1.1	0.023	0.013	-0.052	-0.004	0.000	1.3	
3500	0.1	0.0	-0.2	1.1	0.024	0.013	-0.055	-0.004	0.000	1.4	
3600	0.1	0.0	-0.2	1.2	0.025	0.014	-0.059	-0.004	0.000	1.4	
3700	0.1	0.0	-0.2	1.2	0.026	0.015	-0.063	-0.004	0.000	1.5	
3800	0.1	0.0	-0.2	1.2	0.027	0.015	-0.067	-0.004	0.000	1.5	
3900	0.1	0.1	-0.2	1.3	0.028	0.016	-0.072	-0.005	0.000	1.6	
4000	0.1	0.1	-0.2	1.3	0.029	0.017	-0.077	-0.005	0.000	1.6	
4100	0.1	0.1	-0.2	1.3	0.031	0.018	-0.081	-0.005	0.000	1.6	
4200	0.1	0.1	-0.3	1.4	0.032	0.019	-0.087	-0.006	0.000	1.7	
4300	0.1	0.1	-0.3	1.4	0.033	0.019	-0.092	-0.006	0.000	1.7	
4400	0.1	0.1	-0.3	1.4	0.034	0.020	-0.097	-0.006	0.000	1.8	
4500	0.1	0.1	-0.3	1.5	0.035	0.021	-0.103	-0.007	0.000	1.8	

LA: 1100 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.3	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.3	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.005	0.000	0.4
1300	0.0	0.0	0.0	0.4	0.007	0.002	-0.006	0.000	0.5
1400	0.0	0.0	0.0	0.5	0.008	0.002	-0.008	0.000	0.5
1500	0.0	0.0	0.0	0.5	0.009	0.002	-0.009	0.000	0.6
1600	0.0	0.0	0.0	0.5	0.009	0.003	-0.010	-0.001	0.6
1700	0.0	0.0	0.0	0.6	0.010	0.003	-0.011	-0.001	0.6
1800	0.0	0.0	0.0	0.6	0.011	0.003	-0.013	-0.001	0.7
1900	0.0	0.0	0.0	0.6	0.011	0.004	-0.014	-0.001	0.7
2000	0.0	0.0	0.0	0.7	0.012	0.004	-0.016	-0.001	0.8
2100	0.0	0.0	0.0	0.7	0.013	0.005	-0.018	-0.001	0.8
2200	0.0	0.0	0.0	0.7	0.014	0.005	-0.020	-0.001	0.8
2300	0.0	0.0	-0.1	0.8	0.014	0.006	-0.022	-0.001	0.9
2400	0.1	0.0	-0.1	0.8	0.015	0.006	-0.024	-0.001	0.9
2500	0.1	0.0	-0.1	0.8	0.016	0.007	-0.026	-0.001	1.0
2600	0.1	0.0	-0.1	0.9	0.016	0.007	-0.028	-0.002	1.0
2700	0.1	0.0	-0.1	0.9	0.017	0.008	-0.031	-0.002	1.0
2800	0.1	0.0	-0.1	0.9	0.018	0.008	-0.033	-0.002	1.1
2900	0.1	0.0	-0.1	1.0	0.019	0.009	-0.036	-0.002	1.1
3000	0.1	0.0	-0.1	1.0	0.020	0.010	-0.039	-0.002	1.2
3100	0.1	0.0	-0.1	1.0	0.021	0.010	-0.042	-0.002	1.2
3200	0.1	0.0	-0.1	1.1	0.021	0.011	-0.045	-0.003	1.2
3300	0.1	0.0	-0.1	1.1	0.022	0.012	-0.048	-0.003	1.3
3400	0.1	0.0	-0.1	1.1	0.023	0.012	-0.051	-0.003	1.3
3500	0.1	0.0	-0.1	1.2	0.024	0.013	-0.055	-0.003	1.4
3600	0.1	0.0	-0.1	1.2	0.025	0.014	-0.059	-0.003	1.4
3700	0.1	0.0	-0.2	1.3	0.026	0.014	-0.063	-0.004	1.5
3800	0.1	0.0	-0.2	1.3	0.027	0.015	-0.067	-0.004	1.5
3900	0.1	0.0	-0.2	1.3	0.028	0.016	-0.071	-0.004	1.5
4000	0.1	0.0	-0.2	1.4	0.029	0.017	-0.076	-0.004	1.6
4100	0.1	0.0	-0.2	1.4	0.031	0.017	-0.081	-0.004	1.6
4200	0.1	0.1	-0.2	1.4	0.032	0.018	-0.086	-0.005	1.7
4300	0.1	0.1	-0.2	1.5	0.033	0.019	-0.091	-0.005	1.7
4400	0.1	0.1	-0.2	1.5	0.034	0.020	-0.096	-0.005	1.8
4500	0.1	0.1	-0.3	1.6	0.035	0.021	-0.102	-0.006	1.8

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

44

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

WK802280AV / TDE / DE / 00 / A /



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

A

SD [m]	LA: 1200 [A‰] SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ [m/s]
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10		
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]		
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.000	0.1	
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.000	0.2	
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.000	0.2	
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.000	0.3	
800	0.0	0.0	0.0	0.3	0.004	0.001	-0.002	0.000	0.000	0.3	
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.000	0.3	
1000	0.0	0.0	0.0	0.3	0.006	0.001	-0.004	0.000	0.000	0.4	
1100	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	0.000	0.000	0.4	
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.005	0.000	0.000	0.4	
1300	0.0	0.0	0.0	0.4	0.007	0.002	-0.006	0.000	0.000	0.5	
1400	0.0	0.0	0.0	0.5	0.008	0.002	-0.008	0.000	0.000	0.5	
1500	0.0	0.0	0.0	0.5	0.009	0.002	-0.009	0.000	0.000	0.6	
1600	0.0	0.0	0.0	0.5	0.009	0.003	-0.010	0.000	0.000	0.6	
1700	0.0	0.0	0.0	0.6	0.010	0.003	-0.011	-0.001	0.000	0.6	
1800	0.0	0.0	0.0	0.6	0.011	0.003	-0.013	-0.001	0.000	0.7	
1900	0.0	0.0	0.0	0.7	0.011	0.004	-0.014	-0.001	0.000	0.7	
2000	0.0	0.0	0.0	0.7	0.012	0.004	-0.016	-0.001	0.000	0.8	
2100	0.0	0.0	0.0	0.7	0.013	0.005	-0.018	-0.001	0.000	0.8	
2200	0.0	0.0	0.0	0.8	0.014	0.005	-0.020	-0.001	0.000	0.8	
2300	0.0	0.0	0.0	0.8	0.014	0.006	-0.022	-0.001	0.000	0.9	
2400	0.0	0.0	0.0	0.8	0.015	0.006	-0.024	-0.001	0.000	0.9	
2500	0.0	0.0	-0.1	0.9	0.016	0.007	-0.026	-0.001	0.000	1.0	
2600	0.0	0.0	-0.1	0.9	0.016	0.007	-0.028	-0.001	0.000	1.0	
2700	0.0	0.0	-0.1	0.9	0.017	0.008	-0.031	-0.001	0.000	1.0	
2800	0.1	0.0	-0.1	1.0	0.018	0.008	-0.033	-0.002	0.000	1.1	
2900	0.1	0.0	-0.1	1.0	0.019	0.009	-0.036	-0.002	0.000	1.1	
3000	0.1	0.0	-0.1	1.1	0.020	0.010	-0.038	-0.002	0.000	1.2	
3100	0.1	0.0	-0.1	1.1	0.021	0.010	-0.041	-0.002	0.000	1.2	
3200	0.1	0.0	-0.1	1.1	0.021	0.011	-0.044	-0.002	0.000	1.2	
3300	0.1	0.0	-0.1	1.2	0.022	0.012	-0.048	-0.002	0.000	1.3	
3400	0.1	0.0	-0.1	1.2	0.023	0.012	-0.051	-0.002	0.000	1.3	
3500	0.1	0.0	-0.1	1.2	0.024	0.013	-0.054	-0.003	0.000	1.4	
3600	0.1	0.0	-0.1	1.3	0.025	0.014	-0.058	-0.003	0.000	1.4	
3700	0.1	0.0	-0.1	1.3	0.026	0.014	-0.062	-0.003	0.000	1.4	
3800	0.1	0.0	-0.1	1.4	0.027	0.015	-0.066	-0.003	0.000	1.5	
3900	0.1	0.0	-0.1	1.4	0.028	0.016	-0.071	-0.003	0.000	1.5	
4000	0.1	0.0	-0.2	1.4	0.029	0.016	-0.075	-0.003	0.000	1.6	
4100	0.1	0.0	-0.2	1.5	0.030	0.017	-0.080	-0.004	0.000	1.6	
4200	0.1	0.0	-0.2	1.5	0.032	0.018	-0.085	-0.004	0.000	1.7	
4300	0.1	0.0	-0.2	1.5	0.033	0.019	-0.090	-0.004	0.000	1.7	
4400	0.1	0.0	-0.2	1.6	0.034	0.020	-0.095	-0.004	0.000	1.8	
4500	0.1	0.0	-0.2	1.6	0.035	0.020	-0.101	-0.004	0.000	1.8	

LA: 1300 [A‰]

SD [m]	SW-Correction [A‰] due to Variation of:				FZ-Variation [s] due to Variation of:				DQ
	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	
	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.2	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.3	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.4	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.005	0.000	0.4
1300	0.0	0.0	0.0	0.5	0.007	0.002	-0.006	0.000	0.5
1400	0.0	0.0	0.0	0.5	0.008	0.002	-0.008	0.000	0.5
1500	0.0	0.0	0.0	0.5	0.009	0.002	-0.009	0.000	0.6
1600	0.0	0.0	0.0	0.6	0.009	0.003	-0.010	0.000	0.6
1700	0.0	0.0	0.0	0.6	0.010	0.003	-0.011	0.000	0.6
1800	0.0	0.0	0.0	0.6	0.011	0.003	-0.013	0.000	0.7
1900	0.0	0.0	0.0	0.7	0.011	0.004	-0.014	0.000	0.7
2000	0.0	0.0	0.0	0.7	0.012	0.004	-0.016	-0.001	0.8
2100	0.0	0.0	0.0	0.8	0.013	0.005	-0.018	-0.001	0.8
2200	0.0	0.0	0.0	0.8	0.014	0.005	-0.020	-0.001	0.8
2300	0.0	0.0	0.0	0.8	0.014	0.005	-0.022	-0.001	0.9
2400	0.0	0.0	0.0	0.9	0.015	0.006	-0.024	-0.001	0.9
2500	0.0	0.0	0.0	0.9	0.016	0.007	-0.026	-0.001	1.0
2600	0.0	0.0	0.0	0.9	0.016	0.007	-0.028	-0.001	1.0
2700	0.0	0.0	0.0	1.0	0.017	0.008	-0.030	-0.001	1.0
2800	0.0	0.0	-0.1	1.0	0.018	0.008	-0.033	-0.001	1.1
2900	0.0	0.0	-0.1	1.1	0.019	0.009	-0.036	-0.001	1.1
3000	0.0	0.0	-0.1	1.1	0.020	0.009	-0.038	-0.001	1.2
3100	0.0	0.0	-0.1	1.1	0.021	0.010	-0.041	-0.001	1.2
3200	0.0	0.0	-0.1	1.2	0.021	0.011	-0.044	-0.002	1.2
3300	0.0	0.0	-0.1	1.2	0.022	0.011	-0.047	-0.002	1.3
3400	0.0	0.0	-0.1	1.2	0.023	0.012	-0.051	-0.002	1.3
3500	0.1	0.0	-0.1	1.3	0.024	0.013	-0.054	-0.002	1.4
3600	0.1	0.0	-0.1	1.3	0.025	0.013	-0.058	-0.002	1.4
3700	0.1	0.0	-0.1	1.4	0.026	0.014	-0.062	-0.002	1.4
3800	0.1	0.0	-0.1	1.4	0.027	0.015	-0.066	-0.002	1.5
3900	0.1	0.0	-0.1	1.4	0.028	0.016	-0.070	-0.002	1.5
4000	0.1	0.0	-0.1	1.5	0.029	0.016	-0.075	-0.003	1.6
4100	0.1	0.0	-0.1	1.5	0.030	0.017	-0.079	-0.003	1.6
4200	0.1	0.0	-0.1	1.6	0.032	0.018	-0.084	-0.003	1.7
4300	0.1	0.0	-0.1	1.6	0.033	0.018	-0.089	-0.003	1.7
4400	0.1	0.0	-0.1	1.6	0.034	0.019	-0.095	-0.003	1.7
4500	0.1	0.0	-0.2	1.7	0.035	0.020	-0.100	-0.003	1.8

Bezeichnung / Item

Spec. exterior ballistic

Blatt / Sheet

46

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

WK802280AV / TDE / DE / 00 / A /



RWM SCHWEIZ AG, ZÜRICH ©

Spez. Aussenballistik

A

LA: 1400 [A‰]

SW-Correction [A‰] due to Variation of:					FZ-Variation [s] due to Variation of:					DQ
SD	V -10	T -10	P -100	WL 10	V -10	T -10	P -100	WL 10	WQ 10	
[m]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	[°C]	[mbar]	[m/s]	[m/s]	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0	
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1	
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1	
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1	
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2	
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2	
700	0.0	0.0	0.0	0.3	0.004	0.000	-0.002	0.000	0.3	
800	0.0	0.0	0.0	0.3	0.004	0.001	-0.002	0.000	0.3	
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.3	
1000	0.0	0.0	0.0	0.4	0.006	0.001	-0.004	0.000	0.4	
1100	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	0.000	0.4	
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.005	0.000	0.4	
1300	0.0	0.0	0.0	0.5	0.007	0.002	-0.006	0.000	0.5	
1400	0.0	0.0	0.0	0.5	0.008	0.002	-0.008	0.000	0.5	
1500	0.0	0.0	0.0	0.5	0.009	0.002	-0.009	0.000	0.6	
1600	0.0	0.0	0.0	0.6	0.009	0.003	-0.010	0.000	0.6	
1700	0.0	0.0	0.0	0.6	0.010	0.003	-0.011	0.000	0.6	
1800	0.0	0.0	0.0	0.7	0.011	0.003	-0.013	0.000	0.7	
1900	0.0	0.0	0.0	0.7	0.011	0.004	-0.014	0.000	0.7	
2000	0.0	0.0	0.0	0.7	0.012	0.004	-0.016	0.000	0.8	
2100	0.0	0.0	0.0	0.8	0.013	0.005	-0.018	0.000	0.8	
2200	0.0	0.0	0.0	0.8	0.014	0.005	-0.020	0.000	0.8	
2300	0.0	0.0	0.0	0.8	0.014	0.005	-0.022	-0.001	0.9	
2400	0.0	0.0	0.0	0.9	0.015	0.006	-0.024	-0.001	0.9	
2500	0.0	0.0	0.0	0.9	0.016	0.006	-0.026	-0.001	0.9	
2600	0.0	0.0	0.0	1.0	0.016	0.007	-0.028	-0.001	1.0	
2700	0.0	0.0	0.0	1.0	0.017	0.008	-0.030	-0.001	1.0	
2800	0.0	0.0	0.0	1.0	0.018	0.008	-0.033	-0.001	1.1	
2900	0.0	0.0	0.0	1.1	0.019	0.009	-0.036	-0.001	1.1	
3000	0.0	0.0	0.0	1.1	0.020	0.009	-0.038	-0.001	1.1	
3100	0.0	0.0	0.0	1.2	0.021	0.010	-0.041	-0.001	1.2	
3200	0.0	0.0	0.0	1.2	0.021	0.011	-0.044	-0.001	1.2	
3300	0.0	0.0	0.0	1.2	0.022	0.011	-0.047	-0.001	1.3	
3400	0.0	0.0	-0.1	1.3	0.023	0.012	-0.050	-0.001	1.3	
3500	0.0	0.0	-0.1	1.3	0.024	0.013	-0.054	-0.001	1.4	
3600	0.0	0.0	-0.1	1.3	0.025	0.013	-0.058	-0.001	1.4	
3700	0.0	0.0	-0.1	1.4	0.026	0.014	-0.061	-0.001	1.4	
3800	0.0	0.0	-0.1	1.4	0.027	0.015	-0.065	-0.002	1.5	
3900	0.0	0.0	-0.1	1.5	0.028	0.015	-0.070	-0.002	1.5	
4000	0.0	0.0	-0.1	1.5	0.029	0.016	-0.074	-0.002	1.6	
4100	0.0	0.0	-0.1	1.5	0.030	0.017	-0.079	-0.002	1.6	
4200	0.0	0.0	-0.1	1.6	0.032	0.018	-0.084	-0.002	1.6	
4300	0.0	0.0	-0.1	1.6	0.033	0.018	-0.089	-0.002	1.7	
4400	0.0	0.0	-0.1	1.7	0.034	0.019	-0.094	-0.002	1.7	
4500	0.0	0.0	-0.1	1.7	0.035	0.020	-0.099	-0.002	1.8	

LA: 1500 [A‰]

SW-Correction [A‰]
due to Variation of:FZ-Variation [s]
due to Variation of:

DQ

SD [m]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	V -10 [m/s]	T -10 [°C]	P -100 [mbar]	WL 10 [m/s]	WQ 10 [m/s]
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.0
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
300	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.1
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.1
500	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
600	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.2
700	0.0	0.0	0.0	0.3	0.004	0.000	-0.002	0.000	0.3
800	0.0	0.0	0.0	0.3	0.004	0.001	-0.002	0.000	0.3
900	0.0	0.0	0.0	0.3	0.005	0.001	-0.003	0.000	0.3
1000	0.0	0.0	0.0	0.4	0.006	0.001	-0.004	0.000	0.4
1100	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	0.000	0.4
1200	0.0	0.0	0.0	0.4	0.007	0.001	-0.005	0.000	0.4
1300	0.0	0.0	0.0	0.5	0.007	0.002	-0.006	0.000	0.5
1400	0.0	0.0	0.0	0.5	0.008	0.002	-0.008	0.000	0.5
1500	0.0	0.0	0.0	0.6	0.009	0.002	-0.009	0.000	0.6
1600	0.0	0.0	0.0	0.6	0.009	0.003	-0.010	0.000	0.6
1700	0.0	0.0	0.0	0.6	0.010	0.003	-0.011	0.000	0.6
1800	0.0	0.0	0.0	0.7	0.011	0.003	-0.013	0.000	0.7
1900	0.0	0.0	0.0	0.7	0.011	0.004	-0.014	0.000	0.7
2000	0.0	0.0	0.0	0.7	0.012	0.004	-0.016	0.000	0.8
2100	0.0	0.0	0.0	0.8	0.013	0.005	-0.018	0.000	0.8
2200	0.0	0.0	0.0	0.8	0.014	0.005	-0.020	0.000	0.8
2300	0.0	0.0	0.0	0.9	0.014	0.005	-0.022	0.000	0.9
2400	0.0	0.0	0.0	0.9	0.015	0.006	-0.024	0.000	0.9
2500	0.0	0.0	0.0	0.9	0.016	0.006	-0.026	0.000	0.9
2600	0.0	0.0	0.0	1.0	0.016	0.007	-0.028	0.000	1.0
2700	0.0	0.0	0.0	1.0	0.017	0.008	-0.030	0.000	1.0
2800	0.0	0.0	0.0	1.1	0.018	0.008	-0.033	0.000	1.1
2900	0.0	0.0	0.0	1.1	0.019	0.009	-0.035	0.000	1.1
3000	0.0	0.0	0.0	1.1	0.020	0.009	-0.038	0.000	1.1
3100	0.0	0.0	0.0	1.2	0.021	0.010	-0.041	0.000	1.2
3200	0.0	0.0	0.0	1.2	0.021	0.011	-0.044	-0.001	1.2
3300	0.0	0.0	0.0	1.2	0.022	0.011	-0.047	-0.001	1.3
3400	0.0	0.0	0.0	1.3	0.023	0.012	-0.050	-0.001	1.3
3500	0.0	0.0	0.0	1.3	0.024	0.013	-0.054	-0.001	1.3
3600	0.0	0.0	0.0	1.4	0.025	0.013	-0.057	-0.001	1.4
3700	0.0	0.0	0.0	1.4	0.026	0.014	-0.061	-0.001	1.4
3800	0.0	0.0	0.0	1.4	0.027	0.015	-0.065	-0.001	1.5
3900	0.0	0.0	0.0	1.5	0.028	0.015	-0.070	-0.001	1.5
4000	0.0	0.0	0.0	1.5	0.029	0.016	-0.074	-0.001	1.6
4100	0.0	0.0	0.0	1.6	0.030	0.017	-0.079	-0.001	1.6
4200	0.0	0.0	0.0	1.6	0.032	0.017	-0.083	-0.001	1.6
4300	0.0	0.0	0.0	1.7	0.033	0.018	-0.089	-0.001	1.7
4400	0.0	0.0	0.0	1.7	0.034	0.019	-0.094	-0.001	1.7
4500	0.0	0.0	-0.1	1.7	0.035	0.020	-0.099	-0.001	1.8



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

48

Anz. Bl. / Sheets

54

Sachnummer / Article Number

DI

WK802280AV

A

Temperaturkorrektur ΔT_F
für 100% relative Luftfeuchtigkeit r

Correction of Temperature ΔT_F
for 100% relative Humidity r

$$T_{\text{virtuell}} = T_{\text{ball.}} + \frac{r[\%]}{100} \cdot \Delta T_F \quad [\text{°C}]$$

Luftdruck Barometric Pressure [mb]	ΔT_F - Tafel										ΔT_F - Table									
	-40	-35	-30	-25	-20	-15	-10	-5	0	+5	+10	+15	+20	+25	+30	+35	+40	+45	+50	
500	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.9	1.3	1.8	2.7	3.8	5.3	7.3	10.1	13.7	18.5	24.9	33.4	
550	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.7	2.4	3.4	4.8	6.6	9.1	12.4	16.8	22.5	30.1	
600	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.2	3.1	4.4	6.1	8.3	11.3	15.3	20.5	27.4	
650	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.4	2.0	2.9	4.0	5.6	7.7	10.4	14.1	18.8	25.1	
700	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.7	3.7	5.2	7.1	9.7	13.0	17.4	23.2	
750	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.8	1.2	1.8	2.5	3.5	4.8	6.6	9.0	12.1	16.2	21.5	
800	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.8	1.2	1.7	2.3	3.3	4.5	6.2	8.4	11.3	15.1	20.1	
850	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.6	2.2	3.1	4.3	5.8	7.9	10.6	14.2	18.9	
900	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.5	2.1	2.9	4.0	5.5	7.5	10.0	13.4	17.7	
950	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.4	2.0	2.8	3.8	5.2	7.1	9.5	12.7	16.8	
1000	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.6	3.6	4.9	6.7	9.0	12.0	15.9	
1050	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.8	2.5	3.4	4.7	6.4	8.6	11.4	15.1
1100	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.2	1.7	2.4	3.3	4.5	6.1	8.2	10.9	14.4	
1150	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.3	3.1	4.3	5.8	7.8	10.4	13.7	
1200	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.2	3.0	4.1	5.6	7.5	9.9	13.1	
1250	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.9	3.9	5.3	7.2	9.5	12.6		

2.7 GEBRAUCH DER TAFEL

Für den Gebrauch der Korrekturtafel sind folgende Abweichungen von den Standardbedingungen (V_0 , T_0 , P_0) zu berechnen:

$$V_0 - \text{Abweichung: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperaturabweichung: } \Delta T_1 = T_1 - T_0$$

$$\text{Druckabweichung: } \Delta P_1 = P_1 - P_0$$

Ballistischer Längswind: WL1

Ballistischer Querwind: WQ1

V_1 = gemessene Mündungsgeschwindigkeit

T_1 = gemessene Lufttemperatur an der Mündung

P_1 = gemessene Luftdruck an der Mündung

Beispiel:

Bestimme den Schusswinkel, die Geschossflugzeit und die Seitenkorrektur für ein Ziel in 4500 m Horizontaldistanz (**SD**):

Mündungsgeschwindigkeit (gem.) $V_1 = 1385$ m/s

Für die atmosphärischen Bedingungen auf Mündungshöhe werden (als Beispiel) folgende ballistische Werte gemessen:

$$\text{Lufttemperatur} \quad T_1 = +22^\circ\text{C}$$

$$\text{Luftdruck} \quad P_1 = 943.25 \text{ mbar}$$

$$\text{Längswind (Gegenwind)} \quad WL1 = -3 \text{ m/s}$$

$$\text{Querwind (von rechts)} \quad WQ1 = -2 \text{ m/s}$$

Bemerkung 1: Der ballistische Wind ist die Basis für die Wind-Korrektur. Er stellt den mittleren konstanten Wind entlang der Flugbahn dar, der die selben Korrekturfaktoren benötigt wie das wirkliche Windprofil.

Bemerkung 2: Die relative Luftfeuchtigkeit r wird berücksichtigt, indem anstelle von T_1 (T_{ball}) die Temperatur T_{virtuell} verwendet wird (s. § 2.6).

Transformation der Daten auf Tafelbedingungen

$$\Delta V_1 = V_1 - V_0 = 1385 - 1400 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 \text{ (Mitwind (+); Gegenwind (-))} = -3 \text{ m/s}$$

$$WQ1 \text{ (von links (+); von rechts (-))} = -2 \text{ m/s}$$

2.7 USE OF THE TABLE

To use the correction table the following deviations from the standard conditions (V_0 , T_0 , P_0) must be calculated:

$$V_0\text{-deviation: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperature deviation: } \Delta T_1 = T_1 - T_0$$

$$\text{Pressure deviation: } \Delta P_1 = P_1 - P_0$$

Ballistic down range wind: WL1

Ballistic cross wind: WQ1

V_1 = measured muzzle velocity

T_1 = measured air temperature at muzzle

P_1 = measured air pressure at muzzle

Example:

Determine the superelevation, the time of flight of the projectile and the lateral correction, for a target at a horizontal range of 4500 m (**SD**):

Muzzle velocity (measured) $V_1 = 1385$ m/s

Following ballistic values (for example) are measured for the atmospheric conditions at muzzle altitude :

$$\text{Air temperature} \quad T_1 = +22^\circ\text{C}$$

$$\text{Air pressure} \quad P_1 = 943.25 \text{ mbar}$$

$$\text{Head wind} \quad WL1 = -3 \text{ m/s}$$

$$\text{Cross wind (from right)} \quad WQ1 = -2 \text{ m/s}$$

Notice 1: Basis for wind correction is the ballistic wind. This is the mean constant wind along the trajectory, which needs the same correction factors as the actual wind profile.

Notice 2: Because of the relative air humidity r the temperature T_1 (T_{ball}) is replaced by the virtual temperature T_{virtuell} (cf. § 2.6).

Transformation of the data to conform with table conditions

$$\Delta V_1 = V_1 - V_0 = 1385 - 1400 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 \text{ (tail wind(+); head wind (-))} = -3 \text{ m/s}$$

$$WQ1 \text{ (from left (+); from right (-))} = -2 \text{ m/s}$$

Berechnung des Schusswinkels SW auf eine Distanz von 4500 m

Schusswinkel für Standardbedingungen:
SW = 16.2 mils (s. Blatt 10)

Schusswinkel-Korrekturen für eine Distanz **SD** von 3000 m (s. Blatt 8):

$$\Delta SW(V) = 0.3 \text{ mils} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.2 \text{ mils} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -0.7 \text{ mils} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.1 \text{ mils} \quad \text{für } WL = +10 \text{ m/s}$$

SW(korrigiert) =

$$\begin{aligned} SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T \\ + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL = \\ 16.2 + (-15) * 0.3 / (-10) + 7 * 0.2 / (-10) + (-70) * \\ (-0.7) / (-100) + (-3) * (-0.1) / 10 \\ = 16.05 \text{ mills} \end{aligned}$$

Calculation of the superelevation SW at a range of 4500 m

Superelevation for standard conditions:
SW = 16.2 mils (see sheet 10)

Superelevation correction for a range **SD** of 3000 m (see sheet 8):

$$\Delta SW(V) = 0.3 \text{ mils} \quad \text{for } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.2 \text{ mils} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -0.7 \text{ mils} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.1 \text{ mils} \quad \text{for } WL = +10 \text{ m/s}$$

SW(corrected) =

$$\begin{aligned} SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T \\ + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL = \\ 16.2 + (-15) * 0.3 / (-10) + 7 * 0.2 / (-10) + (-70) * \\ (-0.7) / (-100) + (-3) * (-0.1) / 10 \\ = 16.05 \text{ mills} \end{aligned}$$

Berechnung der Geschossflugzeit auf einer Schussdistanz von 4500 m

Flugzeit für Standardbedingungen:
FZ = 4.165 s (s. Blatt 4)

Flugzeitänderungen für eine Schussdistanz **SD** von 4500 m (s. Blatt 10):

$$\Delta FZ(V) = 0.037 \text{ s} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.031 \text{ s} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.126 \text{ s} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.014 \text{ s} \quad \text{für } WL = +10 \text{ m/s}$$

FZ(korrigiert) =

$$\begin{aligned} FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T \\ + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL = \\ 4.165 + (-15) * 0.037 / (-10) + 7 * 0.031 / (-10) + \\ (-70) * (-0.126) / (-100) + (-3) * (-0.014) / 10 \\ = 4.1148 \text{ s} \end{aligned}$$

Calculations of the time of flight of the projectile at a range of 4500 m.

Time-of flight for standard conditions:
FZ = 4.165 s (see sheet 4)

Changes in time-of-flight for a range **SD** of 4500 m (see sheet 10):

$$\Delta FZ(V) = 0.037 \text{ s} \quad \text{for } \Delta V_0 = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.031 \text{ s} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.126 \text{ s} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.014 \text{ s} \quad \text{for } WL = +10 \text{ m/s}$$

FZ(corrected) =

$$\begin{aligned} FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T \\ + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL = \\ 4.165 + (-15) * 0.037 / (-10) + 7 * 0.031 / (-10) + \\ (-70) * (-0.126) / (-100) + (-3) * (-0.014) / 10 \\ = 4.1148 \text{ s} \end{aligned}$$

Berechnung der Seitenkorrektur DL auf einer Schussdistanz von 4500 m

Seitenkorrektur DR infolge Derivation:
DR = 0.4 mils (s. Blatt 4)

In Schussrichtung gesehen muss man nach links korrigieren (+), da der Rechtsdrall eine Rechtsabweichung (Derivation) des Geschosses bewirkt.

Seitenkorrektur DQ infolge Querwindes WQ (s. Blatt 10):

DQ = + 2.1 mils (nach links),
 für WQ = + 10 m/s (von links)

$$\text{DQ (korrigiert)} = \\ \text{WQ} * \text{DQ} / \text{WQ} = (-2) * 2.1 / 10 = -0.42 \text{ mils}$$

Definition: DQ (+): Korrektur nach links;
 DQ (-): Korrektur nach rechts

Totale Seitenkorrektur DL:

$$\text{DL} = \text{DR} + \text{DQ} = 0.4 + (-0.42)$$

$$= -0.02 \text{ mils (nach rechts)}$$

Calculation of the lateral correction DL at a range of 4500 m

Drift correction DR due to projectile spin:
DR = 0.4 mils (see sheet 4):

When viewing in the direction of flight, the correction must be made towards the left (+) because the right-hand spin causes a drift of the projectile to the right.

Lateral correction DQ due to cross wind WQ (see sheet 10):

DQ = + 2.1 mils (to the left),
 for WQ = + 10 m/s (from the left)

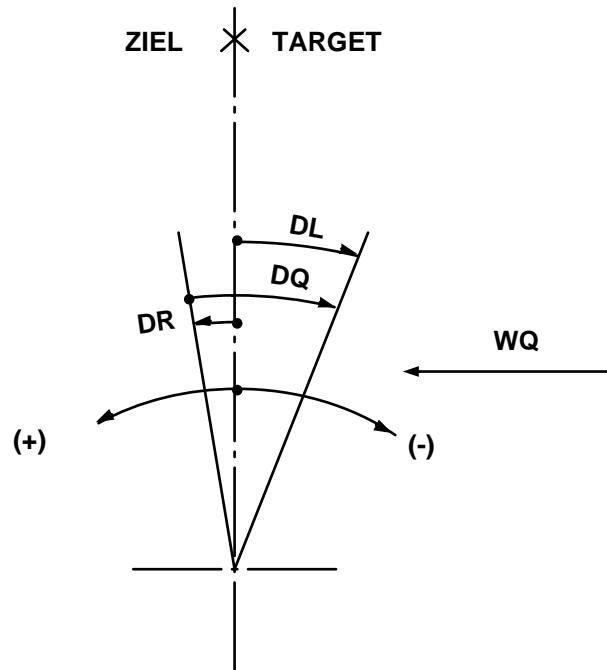
$$\text{DQ (corrected)} = \\ \text{WQ} * \text{DQ} / \text{WQ} = (-2) * 2.1 / 10 = -0.42 \text{ mils}$$

Definition: DQ(+): correction to the left;
 DQ(-): correction to the right

Total lateral correction DL:

$$\text{DL} = \text{DR} + \text{DQ} = 0.4 + (-0.42)$$

$$= -0.02 \text{ mils (to the right)}$$

**Einschränkung beim Gebrauch der Korrekturtafeln**

Der Gebrauch der Korrekturtafeln für die Behandlung kombinierter Störungseinflüsse bei Distanzen grösser als 4500 m sollte nach Möglichkeit vermieden werden, da die Methode der Ueberlagerung von explizierten, linearisierten Störungsbeträgen in diesem Bereich zu merkbaren Schusswinkel- bzw. Distanzfehlern führen kann.

Restriction in the use of the correction tables

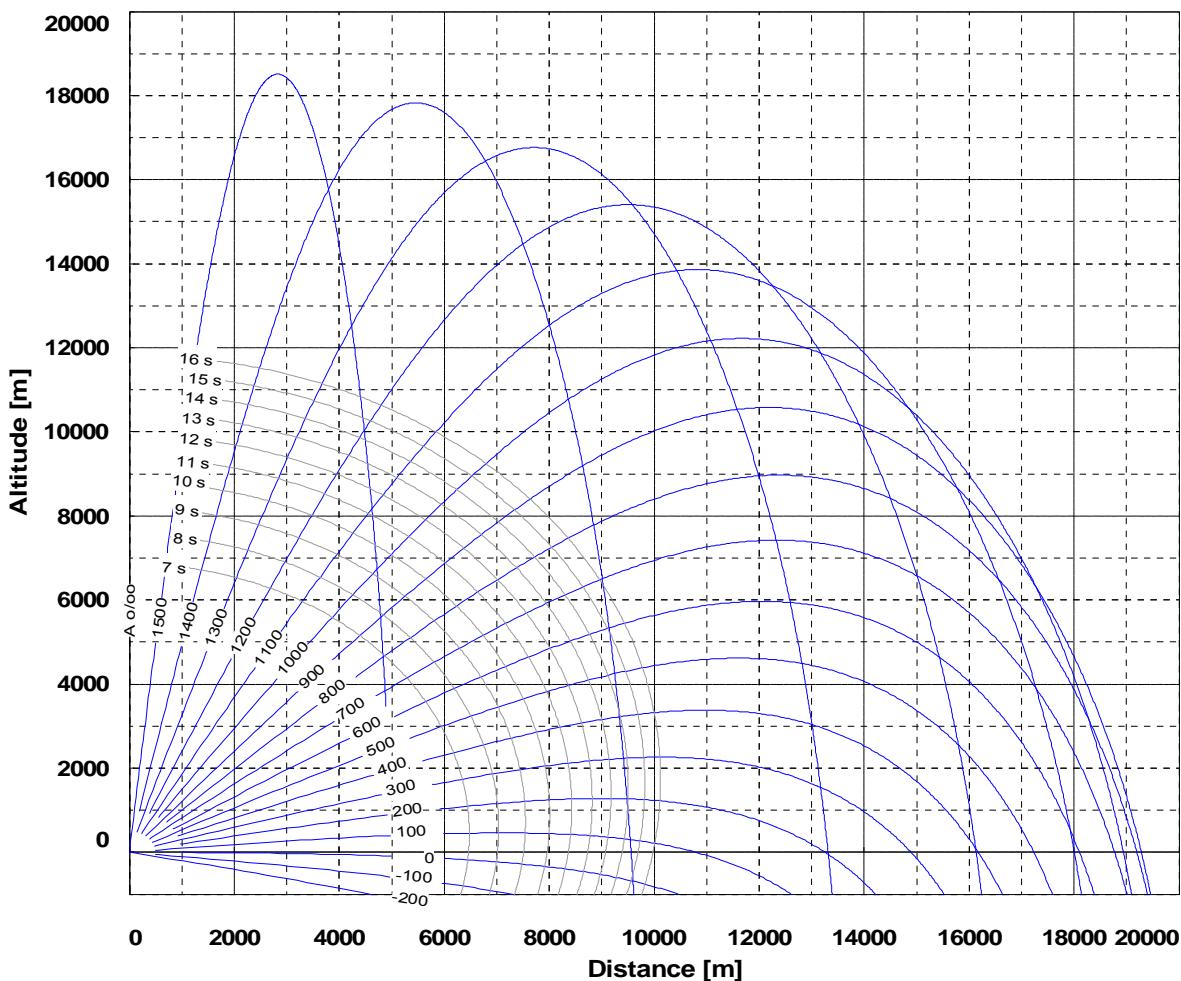
The use of the correction tables for the determination of combined perturbation effects should be avoided as far as possible for distances exceeding 4500 m, as beyond this range the method of superposition of explicit, linearized perturbation values may result in appreciable errors in superelevations and in distance.

2.8 FLUGBAHNKARTE

Geschosstyp	TLD369
Mündungsgeschwindigkeit	1400 m/s
Geschossmasse	0.2937 kg
ICAO-Atmosphäre nach	DIN ISO 2533
Mündungshöhe	0 m ü M.
Lufttemperatur (an der Mündung)	15 °C
Luftdichte	1.2250 kg/m ³
Luftdruck	1013.25 mbar
C _W -Diagramm	WK802279AV

2.8 TRAJECTORY CHART

Projectile Type	TLD369
Muzzle Velocity	1400 m/s
Projectile Mass	0.2937 kg
ICAO-Standard Atmosphere	ISO 2533
Muzzle Altitude	0 m a. S.L.
Air Temperature (at Muzzle)	15 °C
Air Density	1.2250 kg/m ³
Air Pressure	1013.25 mbar
C _D -Diagram	WK802279AV

External Ballistic (Trajectory Chart)

3. DOKUMENTENVERZEICHNIS

gültig letzter Index

WKTLD369AA 35 mm x 228 Geschoss TL

WK802279AV C_w-Gesetz-Daten

DIN ISO 2533 ICAO-Normatmosphäre

3. DOCUMENTARY LIST

latest index valid

WKTLD369AA 35 mm x 228 Projectile APDS-T

WK802279AV C_D-law-data

ISO 2533 ICAO-Standard Atmosphere



RWM SCHWEIZ AG, ZÜRICH ©

Bezeichnung / Item

Spec. exterior ballistic

Spez. Aussenballistik

Blatt / Sheet

54

Anz. Bl. / Sheets

54

Sachnummer / Article Number

WK802280AV

DI

A

PLACEHOLDER FOR APFSDS-T FACT SHEET

APFSDS-T DATA IS AVAILABLE ON A GOVERNMENT TO GOVERNMENT BASIS
FROM THE NETHERLAND GOVERNMENT.

CONTACT: F.P (Felix) Slot
Senior Technical Engineer

M+31 (0)630479938 FP.Slot@minderf.nl

Weapon Systems | Ground-Based Weapon Systems Division
Frederik Kazerne | Van Alkamadelaan 786 | 2597BC Den Haag
P.O. Box 90822 | 2509 LV Den Haag | www.defensie.nl

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

PLACEHOLDER FOR APFSDS-T CERIFICATE

APFSDS-T DATA IS AVAILABLE ON A GOVERNMENT TO GOVERNMENT BASIS
FROM THE NETHERLAND GOVERNMENT.

CONTACT: F.P (Felix) Slot
Senior Technical Engineer

M+31 (0)630479938 FP.Slot@minderf.nl

Weapon Systems | Ground-Based Weapon Systems Division
Frederik Kazerne | Van Alkamadelaan 786 | 2597BC Den Haag
P.O. Box 90822 | 2509 LV Den Haag | www.defensie.nl

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

PLACEHOLDER FOR APFSDS-T MATERIAL SAFETY DATA SHEET

APFSDS-T DATA IS AVAILABLE ON A GOVERNMENT TO GOVERNMENT BASIS
FROM THE NETHERLAND GOVERNMENT.

CONTACT: F.P (Felix) Slot
Senior Technical Engineer

M+31 (0)630479938 FP.Slot@minderf.nl

Weapon Systems | Ground-Based Weapon Systems Division
Frederik Kazerne | Van Alkamadelaan 786 | 2597BC Den Haag
P.O. Box 90822 | 2509 LV Den Haag | www.defensie.nl

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

PLACEHOLDER FOR APFSDS-T EXTERIOR BALLISTICS DATA

APFSDS-T DATA IS AVAILABLE ON A GOVERNMENT TO GOVERNMENT BASIS
FROM THE NETHERLAND GOVERNMENT.

CONTACT: F.P (Felix) Slot
Senior Technical Engineer

M+31 (0)630479938 FP.Slot@minderf.nl

Weapon Systems | Ground-Based Weapon Systems Division
Frederik Kazerne | Van Alkamadelaan 786 | 2597BC Den Haag
P.O. Box 90822 | 2509 LV Den Haag | www.defensie.nl

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 4A

HEI-T 35MM X 228 AMMUNITION/PMD040

HIGH EXPLOSIVE INCENDIARY WITH TRACER

FACT SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

HEI-T 35 MM X 228 AMMUNITION / PMD 040

HIGH EXPLOSIVE INCENDIARY WITH TRACER



- Designed to defeat both soft skinned and airborne targets
- Devastating effects inside the target
- Response delay of the nose fuze
- Powerful blast effects due to the large quantity of high explosive contained in the shell body
- Long endurance flame giving excellent incendiary effects
- Optimised fragmentation of the shell body material
- Excellent tracer signature for enhanced gunner observation

Main Features

Performance

Short time of flight

Effective against soft skinned ground and air targets

Firing mode Single shot and automatic mode

Environment No toxic elements

Transport/Storage UN Classification 1.2E

Gun/System

incl. Bush III, RH503, KDA, KDB, KDC, KDG35/1,000

Technical Data

Total length of round	387 mm
Mass of round	1,550 g
Mass of projectile	535 g
Propellant	NC type
Muzzle velocity	1,175 m/sec
Cartridge case	Steel
Temperature range (functional)	-30°C to +50°C
Dispersion	1.0 mil

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 4B

HEI-T 35MM X 228 AMMUNITION/PMD040

HIGH EXPLOSIVE INCENDIARY WITH TRACER

CERTIFICATE

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



EIDG. GEFAHRGUTINSPEKTORAT (EGI)
FEDERAL INSPECTORATE OF DANGEROUS GOODS

Überlandstrasse 129, Postfach 212, CH-8600 Dübendorf, Tel.: 01/ 823 41 41, Fax: 01/ 822 01 32

**SVTI
ASIT**

Certificate No. 104'253/10

Transport classification of dangerous goods

Customer Oerlikon-Contraves Pyrotec AG
Birchstrasse 155
8050 Zürich

Your order Order No.001/00016076 from Januar 21, 1997

Object cartridges with bursting charge, type 35 mm HEI-T,
WK PMD 040

Based on the test results of the Federal Institute for Testing of Materials (EMPA) at CH-8600 Dübendorf and on the classification of the Health and Safety Executive Tb 5 from March 14, 1984 as well as on the hazard classification of the Swiss Government Section for Military Explosives and Munition at CH-3602 Thun, KTA-Report No.219 (Balmholz), the above mentioned ammunition has to be classified as a dangerous good as follows:

- | | | |
|--|--|----------------|
| - Class : 1.2 | - Compatibility group: E | - UN-No.: 0321 |
| - Proper shipping name: <i>Cartridges for weapons</i> , with bursting charge | | |
| - Special provisions : none | - Label: No. 1 | |
| - Packing method:
inner packaging: plastics tube WV 421 639 and formed styropor-foam parts WV 102 722 A
outer packaging: steel box, type M 548, UN 4A1/X80/S/**/CH-2338/OE, containing not more than 18 cartridges in horizontal multi-layer configuration | | |
| or | inner packaging: formed styropor-foam parts 5 WV 011 206-U
outer packaging: steel box, type J 136, UN 4A1/X100/S/**/CH-2337/OE, containing not more than 30 cartridges, linked | |
| or | inner packaging: paper tube 5 WV 203 167
outer packaging: wooden box, type WV 102 434-U, UN 4C2/X60/S/**/CH-2335/OE, containing not more than 25 cartridges in horizontal, multi-layer configuration. | |

This certificate was issued by the swiss competent authority, the Federal Inspectorate of Dangerous Goods (EGI) at CH-8600 Dübendorf.

Dübendorf, November 20, 1997 / ST-FI

SVTI

Federal Inspectorate of Dangerous Goods
Safety Technology

Dr. Alexander Filip, Head of ST

Diese Bescheinigung umfasst 1 Seite(n)
Cette attestation comprend page(s)

Anmerkung: Der Inhalt dieser Bescheinigung darf nur in vollständiger Form veröffentlicht oder weitergegeben werden.
Observation: La publication ou la reproduction de cette attestation n'est autorisée que dans la forme intégrale.

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 4C

HEI-T 35MM X 228 AMMUNITION/PMD040

HIGH EXPLOSIVE INCENDIARY WITH TRACER

MATERIAL SAFETY DATA SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

Dok. Art:	SICHERHEITSDATENBLATT			Doc. Type:	MATERIAL SAFETY DATA SHEET			50
Blatt Sheet	Deutsch/German bis to	Blatt Sheet	Englisch/English bis to	Blatt Sheet	Französisch/French bis to	Blatt Sheet	Italienisch/Italian bis to	49
			1	4				48

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.

1. Scope

This document includes the Material Safety Data Sheet of 35mm complete round HEI-T according to WKPMDO40.

2. Restrictions

The declarations in this safety data sheet are based on the actual knowledge of OCP. These declarations have reference to the described product in its original condition.

The safety data sheet does not lay claim to completeness.

OCP is not responsible for false conclusions, either regarding the data or the recommendations for handling.

The data and recommendations may not be directly applicable or sufficient, depending on the application.

The user has to interpret the data and recommendations, to analyse the safety measures for the application, and to complete for the specific requirements, if necessary.

The declarations are not guarantees of characteristics.

This MSDS was composed to comply with the Swiss Government (BUWAL) Hazard Communication Standard. The MSDS is not an explosive component data sheet or intended to provide detailed information concerning the explosive.

3. Personnel safety

The usual safety measures on handling of ammunition and explosives must be observed.

Erstverwendung First Use		Position Item	Index Index	Änderung Modification		Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name		
	Gewicht/Weight kg	Aehnlich wie/Similar to		Ersatz für/Replaces		Abt./Dept. P-CC	Freigabe Experte/Release Expert Datum Date 03.12.97 Name Name G.Diewald <i>fie</i>				
Datum Date	© 02.12.97	Name Name		J.Lagler		Abt. Dept. P-CC	Freigabe/Release Datum Date 3.12.97 Name Name Et.Rochat <i>K</i>				
Oerlikon Contraves Pyrotec AG Zürich / Switzerland		ROUND PMD040, 35MM, HEI-T PATRONE PMD040, 35MM, HEI-T				Massstab Scale	Entw.-Stufe Design Stage 3	Blatt Sheet 1	Blätter Sheets 4		
						WU425540AV			DI A		

1. MATERIAL SAFETY DATA SHEET

PRODUCT NAME	OCP, 35mm HEI-T
PRODUCT No.	WKPMD040
General Phone Number	0041 1 316 22 11

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	No.	EXPOSURE LIMIT	WEIGHT	%
HIGH EXPLOSIVE (HEXAL)	WUESBP30	N / A	95 g	6.07
HIGH EXPLOSIVE (HMX)	WU315105	N / A	0.5	0.03
PROPELLANT (NC)	WUPGD550	N / A	330 g	21.09
TRACER COMPOSITION	WU365114	N / A	7.2 g	0.46
DARK COMPOSITION	WU359108	N / A	0.8 g	0.05
PRIMER COMPOSITION	DNAG / 5346	N / A	0.1 g	0.01
PRIMER CHARGE	WUYIP613	N / A	1.0 g	0.06
PRIMER COMPOSITION	ZE 8	N / A	0.1 g	0.01
ALUMINIUM	—	N / A	72.3 g	4.62
STEEL	—	N / A	996 g	63.64
BRASS	—	N / A	54 g	3.45
VARNISH	—	N / A	8 g	0.51

3. HAZARD IDENTIFICATION *

EYE	Gases may irritate the eyes
SKIN	Should not irritate the intact skin
INGESTION	Unlikely to occur
INHALATION	Contains a small amount of Lead, Barium and Strontium per unit, however prolonged exposure (breathing dust or fumes) will increase the blood-heavy-metals-levels causing the following: Central nervous system damage; cause kidney damage; adversely affect the blood-forming process causing anemia; affect male and female reproductive system and the developing fetus.
CANCER INFORMATION	N / A

- * The chemicals are sealed within the munitions; hazards would occur upon detonation, deflagration or disassembly

4. FIRST AID MEASURES

EYES	Flush eyes with water for 15 minutes
SKIN	Remove with a mild soap and water
INGESTION	Do not induce vomiting until consultation with doctor
INHALATION	Remove to fresh air
NOTE TO PHYSICIAN	No specific instructions

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

IGNITION TEMPERATURE approx. 170°C (propellant)

FLAMMABLE LIMITS

LOWER EXPLOSIVE LIMIT: % N / A UPPER EXPLOSIVE LIMIT: % N / A

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of nitrogen, carbon monoxide, various dusts and fumes (lead, barium, strontium, aluminium, titanium, zinc and magnesium).

EXTINGUISHING MEDIA Metal extinguisher, Sand, Talc

6. SPILLS \ LEAKS \ AND DISPOSAL PROCEDURES

SPILLS AND LEAKS	Cleanup spills with a soft bristle brush and conductive rubber-pan or rubber shovel. Use conductive containers. Avoid pinching material or metal to contact. Avoid sharp objects, sand, glass, grit or other material that sensitizes explosives. Wet with water to desensitize. Water and steam may be used for decontaminating.
WASTE DISPOSAL PROCEDURES	Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.

7. REACTIVITY INFORMATION

STABILITY	Stable
INCOMPATIBILITIES	Oxidizers, corrosive agents
CONDITIONS TO AVOID	Heat, shock, static electric discharge, open flame
EXPLOSIVE CLASSIFICATION	UN No. 0321, Class 1.2E, Cartridges for weapons, with bursting charge

Oerlikon Contraves Pyrotec AG Zürich / Switzerland	ROUND PMD040, 35MM, HEI-T PATRONE PMD040, 35MM, HEI-T	Massstab Scale	Entw.-Stufe Design Stage 3	Blatt Sheet 3	Blätter Sheets 4
WU425540AV			DI	A	

8. EXPOSURE CONTROL MEASURES

RESPIRATORY PROTECTION	This item is enclosed and does not pose an exposure problem unless disassembled, deflagrated or detonated. It is the responsibility of the employer to determine under what circumstances require respiratory protection
HAND PROTECTION	Following testing: Gloves
VENTILATION	Following testing allow products of combustion to clear before entering test range.
EYE PROTECTION	Wear as a minimum safety glasses with side shields.

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point	N / A	Solubility	N / A
Melting Point	N / A	Specific Gravity	N / A
Vapor Pressure	N / A	pH	N / A
Vapor Density	N / A	Odor	N / A
Appearance	Projectile : Olive, Light-red, Yellow		
	Case: Green		

10. SARA 313 CHEMICALS

11. INFORMATION SOURCES

This MSDS has been prepared from information obtained from one or more of the following:
The manufacturer of the components, Recommendations of the Transport of Dangerous Goods, United Nations, ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards, Swiss-Office Federal of Sanitation (care of health), USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data. Abuse or unforeseen circumstances are not addressed here.

Information may be developed from time to time which may render the conclusions of the MSDS obsolete. Oerlikon Contraves Pyrotec AG makes no warranties to its agents, employees, or contractors as to the applicability of this information to the user's intended purpose or for consequences for its use or misuse.

SECTION 4D

HEI-T 35MM X 228 AMMUNITION/PMD040

HIGH EXPLOSIVE INCENDIARY WITH TRACER

EXTERIOR BALLISTICS DATA

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

Dok. Art:	SPEZIFIKATION		Doc. Type:	SPECIFICATION		
Blatt Sheet	Deutsch/German bis to 50	Blatt Sheet	Englisch/English bis to 50	Blatt Sheet	Französisch/French bis to	Italienisch/Italian bis to
						50
1		1				49
						48
						47
						46
						45
						44
						43
						42
						41
						40
						39
						38
						37
						36
						35
						34
						33
						32
						31
						30
						29
						28
						27
						26
						25
						24
						23
						22
						21
						20
						19
						18
						17
						16
						15
						14
						13
						12
						11
						10
						9
						8
						7
						6
						5
						4
						3
						2
						Kl.
						Bl./Sh.

INHALT

CONTENTS

1. ANWENDUNG

Für 35mm Oerlikon Munition
Vollkaliber

1. SCOPE

For 35mm Oerlikon Ammunition
Full Caliber

2. AUSSENBALLISTISCHE DATEN

2.1 Allgemeine Daten	2
2.2 Erdschusstafel	3
2.3 Korrekturtafel zur Erdschusstafel	7
2.4 Flabschusstafel	11
2.5 Korrekturtafel zur Flabschusstafel	28
2.6 Temperaturkorrektur für 100% relative Luftfeuchtigkeit	45
2.7 Gebrauch der Tafel (Beispiel)	46
2.8 Flugbahntafel	49

2. EXTERIOR BALLISTICS DATA

2.1 General Data	2
2.2 Ground Firing Table	3
2.3 Correction Table for Ground Firing Table	7
2.4 Anti-Aircraft Firing Table	11
2.5 Correction Table for Anti-Aircraft Firing Table	28
2.6 Correction of Temperature for 100% relative Humidity	45
2.7 Use of the Table (Example)	46
2.8 Trajectory Chart	49

3. DOKUMENTENVERZEICHNIS

50

3. DOCUMENTARY LIST

50

		AB		M.D-0362		15.02.95	J.Huber
Erstverwendung <i>First Use</i>	Position <i>Item</i>	Index <i>Index</i>	Aenderung <i>Modification</i>	Ae-Nr. <i>Rev.-No.</i>	Feld <i>Zone</i>	Datum <i>Date</i>	Name <i>Name</i>
	Gewicht/Weight kg	Ähnlich wie/Similar to	Ersatz für/Replaces	Abt./Dept. P-TG	Freigabe Expert/Release Expert Datum Date	Name Name	<i>6. J. Huber</i>
Datum Date © 24.06.94	Name <i>Name</i>	J. Huber	Abt. <i>Dept.</i>	P-E2	Datum Date 7.06.95	Name <i>Name</i>	<i>J. Huber</i>
					Massstab Scale 3	Entw.-Stufe Design Stage 1	Blatt Sheet 50
OERLIKON-CONTRAVES PYROTEC AG		(Vo=1175m/s)					
		Exterior Ballistics 35mm					
		Aussenballistik 35mm					
					WK801103AV		Kl. B

2. AUSSENBALLISTISCHE DATEN

2.1 ALLGEMEINE DATEN

Diese Spezifikation enthält Schusstafeln, sowohl für den Erd- als auch für den Flab-einsatz. Die zugehörigen Korrekturtafeln erlauben die Berücksichtigung von Abweichungen gegenüber den Standardbedingungen. Die Standardbedingungen in den Tafeln sind durch folgende Größen charakterisiert:

STANDARDBEDINGUNGEN

a) Kanone und Geschoss

Kanonentyp(en)	KDA-KDB-KDC-KDE	
Rohr:	Kaliber	35 mm
	Länge (in Kaliber)	90
	Anzahl Züge	24
	Drallwinkel	0° bis 6.5°, rechts
Mündungsgeschwindigkeit (Vo)	1175	m/s
Treibladungstemperatur	+15°C	
Geschossmasse	0.550 kg	
Geschossdurchmesser	35 mm	
Geschosstyp(en)	Vollkaliber	
Widerstandsbeiwert (Cw)	WK 801 102AV	
Identisch (Cw)	WW 853 000	
Patronentyp(en)	Alle Vollkaliber	
Einsatzdistanz	Max. 4.5 km	

b) Atmosphäre an der Mündung

ICAO-Normatmosphäre	DIN ISO 2533	
Mündungshöhe	0 m ü.M.	
Luftdichte (po)	1.2250	kg/m³
Temperatur (To)	15° C	
Druck (Po)	1013.25	mbar
Wind-Geschwindigkeit	0 m/s	
Relative Feuchtigkeit	0 %	

Bemerkung:

Diese ballistischen Tafeln basieren auf genauen ballistischen Messungen (Doppler Radar), in einem Bereich, der die maximale Einsatzdistanz der entsprechenden Munition abdeckt und sind auf Normatmosphäre umgerechnet. Für grössere Distanzen haben die Angaben lediglich informativen Charakter.

2. EXTERIOR BALLISTICS DATA

2.1 GENERAL DATA

This specification contains firing tables for use in ground firing as well as for anti-aircraft firing. The influence of deviations from standard conditions may be taken into account by using the corresponding correction tables.

The standard conditions in the tables are characterized by the following values:

STANDARD CONDITIONS

a) Gun and Projectile

Gun Type(s)	KDA-KDB-KDC-KDE	
Barrel: Caliber	35 mm	
Length (in Caliber)	90	
Number of Rifling Grooves	24	
Twist Angle: 0° to 6.5°, right hand		
Muzzle Velocity (Vo)	1175 m/s	
Propellant Temperature	+15°C	
Projectile Mass	0.550 kg	
Projectile Diameter	35 mm	
Projectile Type(s)	Full Caliber	
Drag Coefficient (Cd)	WK 801 102AV	
Identical (Cd)	WW 853 000	
Ammunition Type(s)	All Full Caliber	
Practical Range	Max. 4.5 km	

b) Atmosphere at Muzzle

ICAO-Standard Atmosphere	ISO 2533	
Muzzle Altitude	0 m above Sea Level	
Density (po)	1.2250 kg/m³	
Temperature (To)	15° C	
Pressure (Po)	1013.25 mbar	
Wind Speed	0 m/s	
Relative Humidity	0 %	

Note:

The present tables are based on accurate ballistic measurements (Doppler Radar) taken over the maximum practical range and reduced to standard atmospheric conditions. Data given for greater ranges are for information only.



OERLIKON-CONTRAVES
PYROTEC AG

Exterior Ballistics 35mm
Aussenballistik 35mm

(Vo=1175m/s)

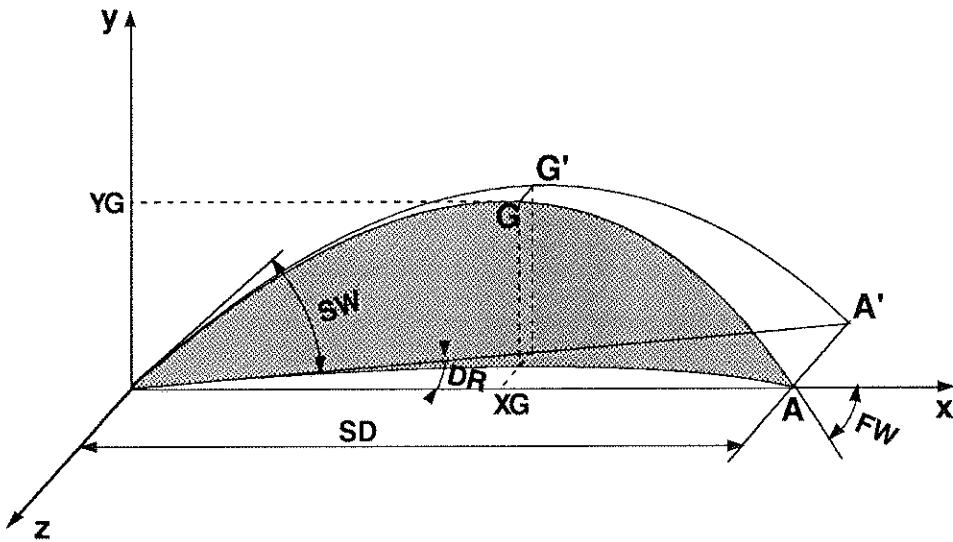
Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
3	2	50	B

WK801103AV

KI
B

2.2 ERDSCHUSSTAFEL

2.2 GROUND FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- SD** Schussdistanz von Mündung bis Ziel (**A**)
- SW** Schusswinkel: Winkel, der eingestellt werden muss, um das Ziel (**A**) auf der gegebenen Distanz (**SD**) zu treffen
- FZ** Flugzeit des Geschosses von der Mündung bis zum Ziel (**A**)
- DR** Derivation: nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Derivationswinkel **DR** liegt in der Ebene (**X,Z**)
- XG** Gipfelentfernung (horizontal) der Geschossflugbahn
- YG** Gipfelhöhe der Geschossflugbahn über Mündungshöhe
- VE** Geschossgeschwindigkeit bei Distanz **SD**
- FW** Fallwinkel des Geschosses bei Distanz **SD**

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A‰).

DEFINITION of TABLE SYMBOLS

- SD** Range from muzzle to target (**A**)
- SW** Superelevation: angle to be set, in order to hit the target (**A**) at a range (**SD**)
- FZ** Time-of-Flight of the projectile from muzzle to target (**A**)
- DR** Drift: the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle lies in the plane (**X,Z**)
- XG** Vertex Abscissa: horizontal distance to the vertex
- YG** Vertex Height: vertical distance to the vertex above the muzzle
- VE** Remaining Velocity of the Projectile at range **SD**
- FW** Angle of Fall of the projectile at range **SD**

All angles are given in **mils** ($360^\circ = 6400$ mils).



SD m	SW A 0/00	FZ S	DR A 0/00	XG m	YG m	VE m/s	FW A 0/00	SD m
100	0.4	0.086	0.0	50	0.0	1149.6	0.4	100
200	0.7	0.174	0.0	101	0.0	1124.5	0.8	200
300	1.1	0.264	0.0	152	0.1	1099.6	1.2	300
400	1.5	0.356	0.0	203	0.2	1075.0	1.6	400
500	1.9	0.450	0.0	255	0.2	1050.7	2.1	500
600	2.4	0.546	0.1	307	0.4	1026.6	2.6	600
700	2.8	0.645	0.1	359	0.5	1002.8	3.1	700
800	3.3	0.746	0.1	412	0.7	979.2	3.7	800
900	3.7	0.849	0.1	465	0.9	955.9	4.3	900
1000	4.2	0.955	0.1	519	1.1	932.9	4.9	1000
1100	4.7	1.064	0.1	573	1.4	910.2	5.6	1100
1200	5.2	1.175	0.1	628	1.7	887.7	6.3	1200
1300	5.8	1.289	0.1	683	2.0	865.5	7.1	1300
1400	6.3	1.406	0.1	739	2.4	843.6	7.9	1400
1500	6.9	1.526	0.2	795	2.9	821.9	8.8	1500
1600	7.5	1.649	0.2	851	3.4	800.6	9.7	1600
1700	8.1	1.776	0.2	908	3.9	779.4	10.7	1700
1800	8.8	1.906	0.2	966	4.5	758.5	11.7	1800
1900	9.4	2.040	0.2	1023	5.1	737.9	12.8	1900
2000	10.1	2.177	0.2	1082	5.8	717.5	14.0	2000
2100	10.8	2.318	0.3	1141	6.6	697.4	15.3	2100
2200	11.6	2.464	0.3	1201	7.5	677.5	16.7	2200
2300	12.3	2.614	0.3	1261	8.4	657.9	18.2	2300
2400	13.1	2.768	0.3	1321	9.5	638.6	19.7	2400
2500	14.0	2.927	0.3	1383	10.6	619.6	21.4	2500
2600	14.9	3.091	0.4	1445	11.8	600.9	23.2	2600
2700	15.8	3.260	0.4	1507	13.1	582.5	25.2	2700
2800	16.7	3.434	0.4	1570	14.6	564.4	27.2	2800
2900	17.7	3.614	0.5	1634	16.1	546.6	29.5	2900
3000	18.8	3.800	0.5	1698	17.8	529.1	31.9	3000
3100	19.8	3.992	0.5	1763	19.7	512.0	34.5	3100
3200	21.0	4.191	0.6	1829	21.7	495.2	37.3	3200
3300	22.2	4.396	0.6	1895	23.9	478.7	40.3	3300
3400	23.4	4.609	0.6	1963	26.3	462.6	43.6	3400
3500	24.7	4.829	0.7	2030	28.8	446.8	47.1	3500
3600	26.1	5.056	0.7	2099	31.6	431.4	50.9	3600
3700	27.6	5.292	0.8	2168	34.7	416.3	55.0	3700
3800	29.1	5.537	0.8	2238	38.0	401.6	59.4	3800
3900	30.7	5.790	0.9	2309	41.6	387.3	64.2	3900
4000	32.4	6.053	0.9	2380	45.5	373.4	69.4	4000
4100	34.2	6.326	1.0	2452	49.7	359.9	75.0	4100
4200	36.0	6.609	1.1	2525	54.3	347.1	81.1	4200
4300	38.0	6.901	1.1	2599	59.3	336.0	87.7	4300
4400	40.1	7.203	1.2	2673	64.7	326.7	94.6	4400
4500	42.3	7.513	1.3	2747	70.6	319.0	102.0	4500



SD m	SW A 0/00	FZ s	DR A 0/00	XG m	YG m	VE m/s	FW A 0/00	SD m
4600	44.6	7.830	1.4	2822	76.9	312.5	109.6	4600
4700	47.1	8.153	1.4	2898	83.8	307.0	117.5	4700
4800	49.6	8.482	1.5	2973	91.2	302.0	125.7	4800
4900	52.3	8.817	1.6	3048	99.1	297.2	134.0	4900
5000	55.1	9.157	1.7	3122	107.5	292.6	142.6	5000
5100	58.0	9.503	1.8	3196	116.6	288.0	151.5	5100
5200	61.0	9.855	1.9	3269	126.2	283.6	160.6	5200
5300	64.2	10.212	2.0	3342	136.4	279.3	170.0	5300
5400	67.4	10.576	2.1	3414	147.2	275.1	179.6	5400
5500	70.8	10.945	2.2	3485	158.7	271.0	189.6	5500
5600	74.3	11.321	2.3	3555	170.9	267.0	199.8	5600
5700	78.0	11.703	2.4	3624	183.7	263.1	210.2	5700
5800	81.7	12.091	2.6	3692	197.2	259.3	221.0	5800
5900	85.6	12.486	2.7	3759	211.5	255.6	232.1	5900
6000	89.6	12.887	2.8	3826	226.5	252.1	243.5	6000
6100	93.8	13.295	3.0	3891	242.2	248.6	255.2	6100
6200	98.0	13.710	3.1	3955	258.7	245.2	267.2	6200
6300	102.5	14.132	3.2	4019	276.1	242.0	279.6	6300
6400	107.0	14.560	3.4	4082	294.4	238.8	292.3	6400
6500	111.7	14.996	3.5	4143	313.5	235.8	305.3	6500
6600	116.5	15.440	3.7	4204	333.5	232.8	318.6	6600
6700	121.5	15.890	3.8	4264	354.4	230.0	332.3	6700
6800	126.7	16.349	4.0	4324	376.2	227.3	346.3	6800
6900	131.9	16.815	4.2	4383	399.0	224.6	360.7	6900
7000	137.4	17.289	4.3	4441	422.8	222.1	375.3	7000
7100	143.0	17.772	4.5	4500	447.6	219.7	390.4	7100
7200	148.8	18.262	4.7	4558	473.5	217.4	405.7	7200
7300	154.7	18.762	4.9	4617	500.5	215.2	421.4	7300
7400	160.8	19.270	5.1	4676	528.7	213.1	437.4	7400
7500	167.1	19.787	5.3	4735	558.0	211.1	453.7	7500
7600	173.6	20.313	5.5	4794	588.6	209.2	470.4	7600
7700	180.2	20.849	5.7	4854	620.5	207.4	487.4	7700
7800	187.1	21.394	6.0	4914	653.8	205.7	504.6	7800
7900	194.1	21.950	6.2	4974	688.5	204.2	522.2	7900
8000	201.4	22.516	6.5	5035	724.7	202.7	540.0	8000
8100	208.9	23.093	6.7	5096	762.6	201.4	558.1	8100
8200	216.6	23.681	7.0	5157	802.2	200.1	576.5	8200
8300	224.5	24.280	7.2	5218	843.4	199.0	595.1	8300
8400	232.7	24.892	7.5	5280	886.3	198.0	614.0	8400
8500	241.1	25.516	7.8	5342	931.2	197.1	633.1	8500
8600	249.8	26.154	8.1	5404	978.0	196.3	652.4	8600
8700	258.7	26.806	8.4	5466	1026.9	195.6	671.9	8700
8800	268.0	27.472	8.7	5528	1078.0	195.0	691.7	8800
8900	277.5	28.153	9.1	5591	1131.4	194.5	711.6	8900
9000	287.4	28.851	9.4	5653	1187.3	194.2	731.6	9000



SD m	SW A 0/00	FZ s	DR A 0/00	XG m	YG m	VE m/s	FW A 0/00	SD m
9100	297.6	29.566	9.8	5716	1245.8	193.9	751.9	9100
9200	308.2	30.299	10.2	5779	1307.4	193.8	772.3	9200
9300	319.1	31.053	10.6	5841	1372.1	193.8	792.8	9300
9400	330.5	31.828	11.0	5904	1440.1	193.8	813.5	9400
9500	342.3	32.626	11.4	5966	1511.5	194.0	834.3	9500
9600	354.6	33.449	11.9	6029	1586.8	194.3	855.3	9600
9700	367.5	34.300	12.4	6092	1666.2	194.8	876.4	9700
9800	380.9	35.182	12.9	6154	1750.4	195.3	897.7	9800
9900	395.0	36.098	13.4	6216	1839.7	196.0	919.2	9900
10000	409.9	37.054	14.0	6278	1935.3	196.8	940.9	10000
10100	425.6	38.056	14.6	6339	2037.7	197.7	962.8	10100
10200	442.3	39.110	15.3	6401	2147.9	198.8	985.1	10200
10300	460.2	40.227	16.0	6461	2267.2	200.0	1007.8	10300
10400	479.5	41.420	16.8	6521	2397.6	201.4	1031.1	10400
10500	500.7	42.711	17.7	6580	2542.2	202.9	1055.2	10500
10600	524.3	44.139	18.7	6638	2706.8	204.8	1080.5	10600
10700	551.5	45.754	19.9	6694	2897.9	206.9	1107.6	10700
10800	584.4	47.677	21.4	6747	3132.2	209.6	1137.9	10800
10900	630.5	50.315	23.7	6793	3466.1	213.3	1176.2	10900
10964	702.7							10964



2.3 KORREKTURTAFEL ZUR ERDSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrekturen kann unter gestörten Bedingungen die Distanz **SD** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel), sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind (parallel zur X-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind (von links, parallel zur Z-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A%).

2.3 CORRECTION TABLE TO THE GROUND FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction(Superelevation), as well as

FZ-Variation (Time-of-Flight)

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind (parallel to X-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind (from the left, parallel to Z-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).



SD m	SW-Correction (A 0/00) due to Variation of:					FZ-Variation (s) due to Variation of:					DQ	
	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s		V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s		WQ +10 m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.000	0.000	0.1	
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.000	0.000	0.2	
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.000	0.000	0.3	
400	0.0	0.0	0.0	0.0	0.003	0.000	-0.002	0.000	0.000	0.000	0.4	
500	0.0	0.0	0.0	0.0	0.004	0.001	-0.003	0.000	0.000	0.000	0.5	
600	0.0	0.0	0.0	0.0	0.005	0.001	-0.004	0.000	0.000	0.000	0.6	
700	0.1	0.0	0.0	0.0	0.006	0.001	-0.005	-0.001	-0.001	0.001	0.7	
800	0.1	0.0	0.0	0.0	0.007	0.002	-0.007	-0.001	-0.001	0.001	0.8	
900	0.1	0.0	-0.1	0.0	0.008	0.002	-0.009	-0.001	-0.001	0.001	0.9	
1000	0.1	0.0	-0.1	0.0	0.009	0.003	-0.011	-0.002	-0.002	1.1		
1100	0.1	0.0	-0.1	0.0	0.010	0.004	-0.014	-0.002	-0.002	1.2		
1200	0.1	0.0	-0.1	0.0	0.011	0.005	-0.017	-0.002	-0.002	1.3		
1300	0.1	0.0	-0.1	0.0	0.012	0.006	-0.021	-0.003	-0.003	1.4		
1400	0.1	0.0	-0.2	0.0	0.013	0.007	-0.025	-0.004	-0.004	1.6		
1500	0.1	0.0	-0.2	0.0	0.014	0.008	-0.029	-0.004	-0.004	1.7		
1600	0.1	0.1	-0.2	0.0	0.016	0.009	-0.034	-0.005	-0.005	1.8		
1700	0.2	0.1	-0.2	0.0	0.017	0.011	-0.039	-0.006	-0.006	2.0		
1800	0.2	0.1	-0.3	0.0	0.018	0.012	-0.045	-0.007	-0.007	2.1		
1900	0.2	0.1	-0.3	0.0	0.020	0.014	-0.051	-0.008	-0.008	2.3		
2000	0.2	0.1	-0.4	0.0	0.021	0.016	-0.059	-0.009	-0.009	2.4		
2100	0.2	0.1	-0.4	-0.1	0.023	0.018	-0.066	-0.010	-0.010	2.6		
2200	0.2	0.1	-0.5	-0.1	0.025	0.021	-0.075	-0.012	-0.012	2.7		
2300	0.2	0.2	-0.5	-0.1	0.026	0.023	-0.084	-0.013	-0.013	2.9		
2400	0.3	0.2	-0.6	-0.1	0.028	0.026	-0.094	-0.015	-0.015	3.1		
2500	0.3	0.2	-0.7	-0.1	0.030	0.029	-0.105	-0.017	-0.017	3.3		
2600	0.3	0.2	-0.8	-0.1	0.032	0.033	-0.117	-0.019	-0.019	3.4		
2700	0.3	0.3	-0.9	-0.1	0.034	0.037	-0.130	-0.022	-0.022	3.6		
2800	0.3	0.3	-1.0	-0.1	0.037	0.041	-0.144	-0.024	-0.024	3.8		
2900	0.4	0.3	-1.1	-0.2	0.039	0.045	-0.160	-0.027	-0.027	4.0		
3000	0.4	0.4	-1.2	-0.2	0.041	0.050	-0.176	-0.031	-0.031	4.2		
3100	0.4	0.4	-1.4	-0.2	0.044	0.055	-0.194	-0.034	-0.034	4.4		
3200	0.4	0.4	-1.5	-0.2	0.046	0.061	-0.213	-0.038	-0.038	4.7		
3300	0.5	0.5	-1.7	-0.3	0.049	0.067	-0.234	-0.042	-0.042	4.9		
3400	0.5	0.5	-1.8	-0.3	0.052	0.073	-0.256	-0.047	-0.047	5.1		
3500	0.5	0.6	-2.0	-0.3	0.055	0.081	-0.280	-0.052	-0.052	5.4		
3600	0.6	0.7	-2.3	-0.4	0.058	0.088	-0.306	-0.058	-0.058	5.6		
3700	0.6	0.7	-2.5	-0.4	0.062	0.097	-0.334	-0.065	-0.065	5.9		
3800	0.6	0.8	-2.7	-0.5	0.065	0.106	-0.364	-0.072	-0.072	6.2		
3900	0.7	0.9	-3.0	-0.5	0.069	0.116	-0.396	-0.079	-0.079	6.4		
4000	0.7	1.0	-3.3	-0.6	0.073	0.126	-0.431	-0.088	-0.088	6.7		
4100	0.8	1.1	-3.7	-0.7	0.077	0.138	-0.468	-0.097	-0.097	7.0		
4200	0.8	1.2	-4.0	-0.7	0.081	0.149	-0.507	-0.107	-0.107	7.4		
4300	0.9	1.4	-4.4	-0.8	0.085	0.161	-0.549	-0.118	-0.118	7.7		
4400	0.9	1.5	-4.9	-0.9	0.088	0.173	-0.591	-0.129	-0.129	8.0		
4500	1.0	1.6	-5.3	-1.0	0.091	0.184	-0.632	-0.141	-0.141	8.3		

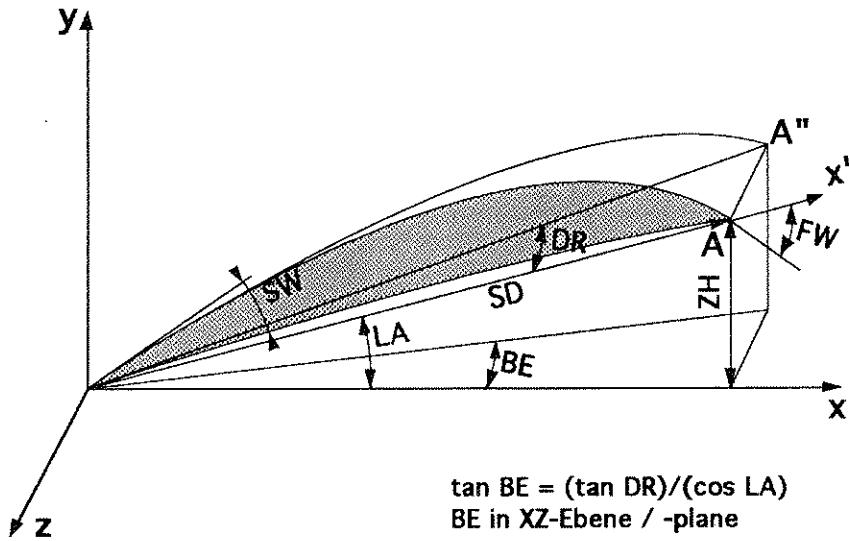
SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ	
	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	WQ +10 m/s	
4600	1.1	1.8	-5.8	-1.2	0.093	0.194	-0.672	-0.153	8.7	
4700	1.1	2.0	-6.3	-1.3	0.096	0.205	-0.709	-0.165	9.0	
4800	1.2	2.1	-6.9	-1.4	0.098	0.216	-0.742	-0.178	9.3	
4900	1.2	2.3	-7.4	-1.6	0.100	0.227	-0.773	-0.191	9.6	
5000	1.3	2.5	-8.0	-1.7	0.103	0.238	-0.803	-0.204	10.0	
5100	1.4	2.7	-8.6	-1.9	0.105	0.250	-0.833	-0.219	10.3	
5200	1.4	2.9	-9.2	-2.1	0.107	0.262	-0.862	-0.234	10.6	
5300	1.5	3.1	-9.8	-2.2	0.110	0.275	-0.892	-0.249	10.9	
5400	1.5	3.3	-10.5	-2.4	0.112	0.288	-0.923	-0.265	11.3	
5500	1.6	3.5	-11.1	-2.7	0.115	0.301	-0.955	-0.282	11.6	
5600	1.7	3.8	-11.8	-2.9	0.117	0.315	-0.988	-0.299	11.9	
5700	1.7	4.0	-12.5	-3.1	0.120	0.329	-1.022	-0.318	12.2	
5800	1.8	4.3	-13.2	-3.3	0.123	0.344	-1.058	-0.336	12.5	
5900	1.9	4.5	-13.9	-3.6	0.126	0.359	-1.095	-0.356	12.9	
6000	2.0	4.8	-14.7	-3.9	0.128	0.375	-1.133	-0.377	13.2	
6100	2.0	5.1	-15.4	-4.2	0.131	0.391	-1.172	-0.398	13.5	
6200	2.1	5.4	-16.2	-4.5	0.134	0.408	-1.212	-0.420	13.8	
6300	2.2	5.7	-17.1	-4.8	0.137	0.425	-1.254	-0.443	14.1	
6400	2.3	6.1	-17.9	-5.1	0.140	0.443	-1.298	-0.467	14.5	
6500	2.3	6.4	-18.8	-5.5	0.143	0.461	-1.343	-0.492	14.8	
6600	2.4	6.8	-19.7	-5.8	0.147	0.480	-1.389	-0.518	15.1	
6700	2.5	7.1	-20.6	-6.2	0.150	0.500	-1.437	-0.545	15.4	
6800	2.6	7.5	-21.6	-6.6	0.153	0.520	-1.487	-0.573	15.8	
6900	2.7	7.9	-22.6	-7.0	0.157	0.541	-1.538	-0.602	16.1	
7000	2.8	8.3	-23.7	-7.5	0.161	0.562	-1.591	-0.632	16.4	
7100	2.9	8.8	-24.7	-8.0	0.164	0.585	-1.646	-0.664	16.7	
7200	3.0	9.2	-25.9	-8.5	0.168	0.608	-1.703	-0.697	17.1	
7300	3.1	9.7	-27.0	-9.0	0.172	0.631	-1.762	-0.731	17.4	
7400	3.2	10.2	-28.2	-9.5	0.176	0.656	-1.823	-0.766	17.7	
7500	3.3	10.7	-29.5	-10.1	0.180	0.681	-1.886	-0.803	18.1	
7600	3.4	11.2	-30.8	-10.7	0.185	0.708	-1.952	-0.842	18.4	
7700	3.5	11.8	-32.1	-11.3	0.189	0.735	-2.020	-0.882	18.8	
7800	3.6	12.3	-33.5	-12.0	0.194	0.763	-2.091	-0.924	19.1	
7900	3.7	12.9	-35.0	-12.7	0.199	0.793	-2.165	-0.968	19.5	
8000	3.8	13.6	-36.5	-13.4	0.204	0.823	-2.241	-1.014	19.8	
8100	4.0	14.2	-38.1	-14.2	0.209	0.855	-2.321	-1.062	20.2	
8200	4.1	14.9	-39.8	-15.0	0.215	0.889	-2.404	-1.113	20.5	
8300	4.2	15.6	-41.5	-15.9	0.221	0.924	-2.490	-1.165	20.9	
8400	4.4	16.4	-43.3	-16.8	0.227	0.960	-2.581	-1.221	21.3	
8500	4.5	17.2	-45.2	-17.8	0.234	0.999	-2.675	-1.279	21.7	
8600	4.7	18.0	-47.2	-18.8	0.241	1.039	-2.774	-1.340	22.0	
8700	4.9	18.9	-49.3	-19.9	0.248	1.082	-2.878	-1.404	22.4	
8800	5.1	19.8	-51.5	-21.1	0.256	1.127	-2.988	-1.472	22.8	
8900	5.3	20.8	-53.9	-22.3	0.264	1.174	-3.103	-1.544	23.2	
9000	5.5	21.9	-56.3	-23.6	0.273	1.226	-3.224	-1.620	23.6	



SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	
9100	5.7	23.0	-58.9	-25.0	0.283	1.280	-3.353	-1.702	24.0
9200	5.9	24.3	-61.7	-26.5	0.293	1.339	-3.489	-1.788	24.5
9300	6.2	25.6	-64.6	-28.1	0.304	1.402	-3.634	-1.881	24.9
9400	6.4	27.0	-67.7	-29.9	0.317	1.471	-3.790	-1.981	25.3
9500	6.7	28.5	-71.0	-31.7	0.330	1.547	-3.956	-2.088	25.8
9600	7.1	30.2	-74.6	-33.8	0.345	1.630	-4.135	-2.203	26.3
9700	7.4	32.1	-78.5	-36.0	0.362	1.722	-4.328	-2.329	26.7
9800	7.8	34.2	-82.7	-38.5	0.381	1.828	-4.538	-2.467	27.2
9900	8.3	36.7	-87.2	-41.2	0.403	1.948	-4.768	-2.619	27.8
10000	8.8	39.4	-92.3	-44.2	0.428	2.086	-5.022	-2.789	28.3
10100	9.4	42.7	-97.8	-47.7	0.457	2.250	-5.305	-2.981	28.9
10200	10.1	46.6	-104.0	-51.6	0.492	2.448	-5.622	-3.198	29.5
10300	11.0	51.5	-111.1	-56.1	0.535	2.702	-5.983	-3.448	30.1
10400	12.0	58.1	-119.2	-61.4	0.589	3.042	-6.399	-3.740	30.8
10500	13.5	67.4	-128.7	-67.8	0.666	3.527	-6.891	-4.093	31.6
10600	15.5	82.8	-140.2	-75.9	0.769	4.339	-7.495	-4.540	32.4
10700	18.7	129.8	-154.8	-86.6	0.933	6.840	-8.259	-5.124	33.4

2.4 FLABSCHUSSTAFEL

2.4 ANTI-AIRCRAFT FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- LA **Lagewinkel:** Winkel unter welchem das Ziel (A) von der Mündung aus sichtbar ist
- SD **Schussdistanz:** Schrägdistanz von Mündung bis Ziel (A)
- SW **Schusswinkel:** Winkel, der eingestellt werden muss, um das Ziel (A) auf gegebener Distanz (SD) zu treffen
- FZ **Flugzeit:** des Geschosses von Mündung bis Ziel (A)
- DR **Derivation:** nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Winkel DR liegt in der Ebene (X',Z)
- ZH **Zielhöhe:** über Mündungshorizont
- VE **Geschossgeschwindigkeit:** bei Distanz SD
- FW **Fallwinkel:** des Geschosses bei Distanz SD

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils)
angegeben (mils = A%

DEFINITION of TABLE SYMBOLS

- LA **Angle of Site:** angle between muzzle-target (A) vector and horizontal axis
- SD **Range:** slant distance from muzzle to target (A)
- SW **Superelevation:** angle to be set, in order to hit the target (A) at a range (SD)
- FZ **Time-of-Flight:** of the projectile from muzzle to target (A)
- DR **Drift:** the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle DR lies in the plane (X',Z)
- ZH **Altitude of Target:** above muzzle level
- VE **Remaining Velocity of the Projectile:** at range SD
- FW **Angle of Fall:** of the projectile at range SD

All angles are given in **mils** ($360^\circ = 6400$ mils).

LA: 0 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.4	0.086	0.0	0.0	1149.6	0.4	100
200	0.7	0.174	0.0	0.0	1124.5	0.8	200
300	1.1	0.264	0.0	0.0	1099.6	1.2	300
400	1.5	0.356	0.0	0.0	1075.0	1.6	400
500	1.9	0.450	0.0	0.0	1050.7	2.1	500
600	2.4	0.546	0.1	0.0	1026.6	2.6	600
700	2.8	0.645	0.1	0.0	1002.8	3.1	700
800	3.3	0.746	0.1	0.0	979.2	3.7	800
900	3.7	0.849	0.1	0.0	955.9	4.3	900
1000	4.2	0.955	0.1	0.0	932.9	4.9	1000
1100	4.7	1.064	0.1	0.0	910.2	5.6	1100
1200	5.2	1.175	0.1	0.0	887.7	6.3	1200
1300	5.8	1.289	0.1	0.0	865.5	7.1	1300
1400	6.3	1.406	0.1	0.0	843.6	7.9	1400
1500	6.9	1.526	0.2	0.0	821.9	8.8	1500
1600	7.5	1.649	0.2	0.0	800.6	9.7	1600
1700	8.1	1.776	0.2	0.0	779.4	10.7	1700
1800	8.8	1.906	0.2	0.0	758.5	11.7	1800
1900	9.4	2.040	0.2	0.0	737.9	12.8	1900
2000	10.1	2.177	0.2	0.0	717.5	14.0	2000
2100	10.8	2.318	0.3	0.0	697.4	15.3	2100
2200	11.6	2.464	0.3	0.0	677.5	16.7	2200
2300	12.3	2.614	0.3	0.0	657.9	18.2	2300
2400	13.1	2.768	0.3	0.0	638.6	19.7	2400
2500	14.0	2.927	0.3	0.0	619.6	21.4	2500
2600	14.9	3.091	0.4	0.0	600.9	23.2	2600
2700	15.8	3.260	0.4	0.0	582.5	25.2	2700
2800	16.7	3.434	0.4	0.0	564.4	27.2	2800
2900	17.7	3.614	0.5	0.0	546.6	29.5	2900
3000	18.8	3.800	0.5	0.0	529.1	31.9	3000
3100	19.8	3.992	0.5	0.0	512.0	34.5	3100
3200	21.0	4.191	0.6	0.0	495.2	37.3	3200
3300	22.2	4.396	0.6	0.0	478.7	40.3	3300
3400	23.4	4.609	0.6	0.0	462.6	43.6	3400
3500	24.7	4.829	0.7	0.0	446.8	47.1	3500
3600	26.1	5.056	0.7	0.0	431.4	50.9	3600
3700	27.6	5.292	0.8	0.0	416.3	55.0	3700
3800	29.1	5.537	0.8	0.0	401.6	59.4	3800
3900	30.7	5.790	0.9	0.0	387.3	64.2	3900
4000	32.4	6.053	0.9	0.0	373.4	69.4	4000
4100	34.2	6.326	1.0	0.0	359.9	75.0	4100
4200	36.0	6.609	1.1	0.0	347.1	81.1	4200
4300	38.0	6.901	1.1	0.0	336.0	87.7	4300
4400	40.1	7.203	1.2	0.0	326.7	94.6	4400
4500	42.3	7.513	1.3	0.0	319.0	102.0	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 100 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.4	0.086	0.0	9.8	1149.5	0.4	100
200	0.7	0.174	0.0	19.6	1124.4	0.8	200
300	1.1	0.264	0.0	29.4	1099.5	1.2	300
400	1.5	0.356	0.0	39.2	1074.9	1.6	400
500	1.9	0.450	0.0	49.0	1050.6	2.1	500
600	2.4	0.546	0.1	58.8	1026.5	2.6	600
700	2.8	0.645	0.1	68.6	1002.8	3.1	700
800	3.3	0.746	0.1	78.4	979.3	3.7	800
900	3.7	0.849	0.1	88.2	956.1	4.3	900
1000	4.2	0.955	0.1	98.0	933.2	4.9	1000
1100	4.7	1.064	0.1	107.8	910.6	5.6	1100
1200	5.2	1.175	0.1	117.6	888.3	6.3	1200
1300	5.8	1.289	0.1	127.4	866.2	7.0	1300
1400	6.3	1.406	0.1	137.2	844.4	7.9	1400
1500	6.9	1.526	0.2	147.0	823.0	8.7	1500
1600	7.5	1.649	0.2	156.8	801.8	9.6	1600
1700	8.1	1.775	0.2	166.6	780.9	10.6	1700
1800	8.7	1.905	0.2	176.4	760.2	11.6	1800
1900	9.4	2.038	0.2	186.2	739.8	12.8	1900
2000	10.1	2.175	0.2	196.0	719.7	13.9	2000
2100	10.8	2.316	0.3	205.8	699.8	15.2	2100
2200	11.5	2.461	0.3	215.6	680.2	16.6	2200
2300	12.3	2.610	0.3	225.4	660.9	18.0	2300
2400	13.1	2.764	0.3	235.2	641.8	19.6	2400
2500	13.9	2.922	0.3	245.0	623.1	21.2	2500
2600	14.8	3.085	0.4	254.8	604.6	23.0	2600
2700	15.7	3.253	0.4	264.6	586.4	24.9	2700
2800	16.6	3.426	0.4	274.4	568.6	26.9	2800
2900	17.6	3.605	0.5	284.2	551.0	29.1	2900
3000	18.6	3.789	0.5	294.1	533.8	31.5	3000
3100	19.7	3.979	0.5	303.9	516.9	34.0	3100
3200	20.8	4.176	0.6	313.7	500.3	36.7	3200
3300	22.0	4.379	0.6	323.5	484.1	39.7	3300
3400	23.2	4.589	0.6	333.3	468.2	42.8	3400
3500	24.5	4.806	0.7	343.1	452.6	46.3	3500
3600	25.8	5.031	0.7	352.9	437.4	49.9	3600
3700	27.2	5.264	0.8	362.7	422.5	53.9	3700
3800	28.7	5.504	0.8	372.5	408.0	58.2	3800
3900	30.3	5.754	0.9	382.3	393.8	62.8	3900
4000	31.9	6.012	0.9	392.1	380.0	67.8	4000
4100	33.7	6.280	1.0	401.9	366.5	73.2	4100
4200	35.5	6.558	1.0	411.7	353.6	79.1	4200
4300	37.4	6.845	1.1	421.5	341.5	85.4	4300
4400	39.5	7.143	1.2	431.3	331.2	92.2	4400
4500	41.6	7.449	1.2	441.1	322.6	99.3	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 200 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.4	0.086	0.0	19.5	1149.5	0.4	100
200	0.7	0.174	0.0	39.0	1124.3	0.8	200
300	1.1	0.264	0.0	58.5	1099.4	1.2	300
400	1.5	0.356	0.0	78.0	1074.7	1.6	400
500	1.9	0.450	0.0	97.5	1050.4	2.1	500
600	2.3	0.546	0.0	117.1	1026.4	2.6	600
700	2.8	0.645	0.1	136.6	1002.7	3.1	700
800	3.2	0.746	0.1	156.1	979.3	3.6	800
900	3.7	0.849	0.1	175.6	956.2	4.2	900
1000	4.1	0.955	0.1	195.1	933.4	4.8	1000
1100	4.6	1.063	0.1	214.6	911.0	5.5	1100
1200	5.1	1.175	0.1	234.1	888.8	6.2	1200
1300	5.7	1.289	0.1	253.6	866.9	6.9	1300
1400	6.2	1.405	0.1	273.1	845.3	7.7	1400
1500	6.8	1.525	0.2	292.6	824.0	8.6	1500
1600	7.4	1.648	0.2	312.1	803.0	9.5	1600
1700	8.0	1.774	0.2	331.7	782.3	10.4	1700
1800	8.6	1.904	0.2	351.2	761.9	11.5	1800
1900	9.2	2.037	0.2	370.7	741.7	12.6	1900
2000	9.9	2.174	0.2	390.2	721.8	13.7	2000
2100	10.6	2.314	0.3	409.7	702.1	14.9	2100
2200	11.3	2.458	0.3	429.2	682.8	16.3	2200
2300	12.1	2.607	0.3	448.7	663.7	17.7	2300
2400	12.9	2.760	0.3	468.2	644.9	19.2	2400
2500	13.7	2.917	0.3	487.7	626.4	20.8	2500
2600	14.5	3.079	0.4	507.2	608.2	22.5	2600
2700	15.4	3.246	0.4	526.7	590.3	24.4	2700
2800	16.3	3.418	0.4	546.3	572.7	26.4	2800
2900	17.3	3.595	0.4	565.8	555.4	28.5	2900
3000	18.3	3.778	0.5	585.3	538.4	30.8	3000
3100	19.3	3.967	0.5	604.8	521.7	33.2	3100
3200	20.4	4.162	0.5	624.3	505.4	35.9	3200
3300	21.6	4.363	0.6	643.8	489.4	38.7	3300
3400	22.7	4.570	0.6	663.3	473.7	41.7	3400
3500	24.0	4.785	0.7	682.8	458.3	45.0	3500
3600	25.3	5.007	0.7	702.3	443.2	48.6	3600
3700	26.7	5.236	0.7	721.8	428.5	52.4	3700
3800	28.1	5.473	0.8	741.3	414.2	56.5	3800
3900	29.6	5.719	0.8	760.9	400.1	60.9	3900
4000	31.2	5.973	0.9	780.4	386.4	65.7	4000
4100	32.9	6.237	0.9	799.9	373.1	70.8	4100
4200	34.7	6.509	1.0	819.4	360.2	76.4	4200
4300	36.5	6.792	1.1	838.9	347.7	82.4	4300
4400	38.5	7.084	1.1	858.4	336.4	88.9	4400
4500	40.5	7.386	1.2	877.9	326.8	95.8	4500



LA: 300 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.4	0.086	0.0	29.0	1149.4	0.4	100
200	0.7	0.174	0.0	58.1	1124.2	0.7	200
300	1.1	0.264	0.0	87.1	1099.2	1.1	300
400	1.5	0.356	0.0	116.1	1074.6	1.6	400
500	1.9	0.450	0.0	145.1	1050.3	2.0	500
600	2.3	0.546	0.0	174.2	1026.4	2.5	600
700	2.7	0.645	0.1	203.2	1002.7	3.0	700
800	3.1	0.746	0.1	232.2	979.4	3.5	800
900	3.6	0.849	0.1	261.3	956.4	4.1	900
1000	4.0	0.955	0.1	290.3	933.7	4.7	1000
1100	4.5	1.063	0.1	319.3	911.3	5.4	1100
1200	5.0	1.175	0.1	348.3	889.3	6.0	1200
1300	5.5	1.288	0.1	377.4	867.5	6.8	1300
1400	6.1	1.405	0.1	406.4	846.1	7.5	1400
1500	6.6	1.525	0.2	435.4	825.0	8.4	1500
1600	7.2	1.648	0.2	464.5	804.2	9.2	1600
1700	7.8	1.774	0.2	493.5	783.7	10.2	1700
1800	8.4	1.903	0.2	522.5	763.4	11.2	1800
1900	9.0	2.036	0.2	551.5	743.5	12.2	1900
2000	9.6	2.172	0.2	580.6	723.8	13.3	2000
2100	10.3	2.312	0.2	609.6	704.4	14.5	2100
2200	11.0	2.456	0.3	638.6	685.3	15.8	2200
2300	11.8	2.604	0.3	667.7	666.4	17.2	2300
2400	12.5	2.756	0.3	696.7	647.9	18.7	2400
2500	13.3	2.913	0.3	725.7	629.6	20.2	2500
2600	14.1	3.074	0.4	754.7	611.6	21.9	2600
2700	15.0	3.240	0.4	783.8	594.0	23.7	2700
2800	15.9	3.411	0.4	812.8	576.6	25.6	2800
2900	16.8	3.587	0.4	841.8	559.6	27.6	2900
3000	17.8	3.768	0.5	870.9	542.8	29.8	3000
3100	18.8	3.955	0.5	899.9	526.4	32.2	3100
3200	19.8	4.148	0.5	928.9	510.2	34.7	3200
3300	20.9	4.347	0.6	957.9	494.4	37.4	3300
3400	22.1	4.553	0.6	987.0	479.0	40.3	3400
3500	23.3	4.765	0.6	1016.0	463.8	43.4	3500
3600	24.6	4.984	0.7	1045.0	448.9	46.8	3600
3700	25.9	5.210	0.7	1074.1	434.4	50.4	3700
3800	27.3	5.444	0.8	1103.1	420.2	54.3	3800
3900	28.7	5.686	0.8	1132.1	406.3	58.5	3900
4000	30.2	5.936	0.9	1161.1	392.7	63.0	4000
4100	31.8	6.195	0.9	1190.2	379.5	67.9	4100
4200	33.5	6.463	1.0	1219.2	366.6	73.1	4200
4300	35.3	6.741	1.0	1248.2	354.1	78.8	4300
4400	37.1	7.028	1.1	1277.3	342.2	84.9	4400
4500	39.1	7.325	1.2	1306.3	331.6	91.5	4500



LA: 400 A 0/00

SD m	SW A 0/00	FZ S	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.3	0.086	0.0	38.3	1149.3	0.3	100
200	0.7	0.174	0.0	76.5	1124.0	0.7	200
300	1.0	0.264	0.0	114.8	1099.1	1.1	300
400	1.4	0.356	0.0	153.1	1074.5	1.5	400
500	1.8	0.450	0.0	191.3	1050.2	1.9	500
600	2.2	0.546	0.0	229.6	1026.3	2.4	600
700	2.6	0.645	0.1	267.9	1002.7	2.9	700
800	3.0	0.746	0.1	306.1	979.4	3.4	800
900	3.5	0.849	0.1	344.4	956.5	4.0	900
1000	3.9	0.955	0.1	382.7	933.9	4.6	1000
1100	4.4	1.063	0.1	421.0	911.7	5.2	1100
1200	4.8	1.175	0.1	459.2	889.8	5.8	1200
1300	5.3	1.288	0.1	497.5	868.2	6.5	1300
1400	5.8	1.405	0.1	535.8	846.9	7.3	1400
1500	6.4	1.524	0.1	574.0	826.0	8.1	1500
1600	6.9	1.647	0.2	612.3	805.3	8.9	1600
1700	7.5	1.773	0.2	650.6	785.0	9.8	1700
1800	8.1	1.902	0.2	688.8	765.0	10.8	1800
1900	8.7	2.034	0.2	727.1	745.2	11.8	1900
2000	9.3	2.170	0.2	765.4	725.7	12.9	2000
2100	10.0	2.310	0.2	803.6	706.5	14.0	2100
2200	10.6	2.453	0.3	841.9	687.6	15.2	2200
2300	11.3	2.601	0.3	880.2	669.0	16.5	2300
2400	12.1	2.752	0.3	918.4	650.7	17.9	2400
2500	12.8	2.908	0.3	956.7	632.7	19.4	2500
2600	13.6	3.069	0.3	995.0	614.9	21.0	2600
2700	14.4	3.234	0.4	1033.2	597.5	22.7	2700
2800	15.3	3.403	0.4	1071.5	580.4	24.5	2800
2900	16.2	3.578	0.4	1109.8	563.6	26.5	2900
3000	17.1	3.758	0.4	1148.1	547.0	28.6	3000
3100	18.1	3.944	0.5	1186.3	530.8	30.8	3100
3200	19.1	4.135	0.5	1224.6	514.9	33.2	3200
3300	20.1	4.332	0.5	1262.9	499.3	35.8	3300
3400	21.2	4.536	0.6	1301.1	484.0	38.5	3400
3500	22.4	4.746	0.6	1339.4	469.0	41.5	3500
3600	23.6	4.962	0.6	1377.7	454.3	44.6	3600
3700	24.8	5.186	0.7	1415.9	440.0	48.0	3700
3800	26.1	5.417	0.7	1454.2	425.9	51.7	3800
3900	27.5	5.655	0.8	1492.5	412.2	55.6	3900
4000	29.0	5.902	0.8	1530.7	398.7	59.9	4000
4100	30.5	6.157	0.9	1569.0	385.6	64.4	4100
4200	32.1	6.421	0.9	1607.3	372.8	69.3	4200
4300	33.7	6.694	1.0	1645.5	360.3	74.7	4300
4400	35.5	6.976	1.0	1683.8	348.3	80.4	4400
4500	37.3	7.268	1.1	1722.1	336.9	86.5	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 500 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.3	0.086	0.0	47.1	1149.3	0.3	100
200	0.7	0.174	0.0	94.3	1123.9	0.7	200
300	1.0	0.264	0.0	141.4	1099.0	1.0	300
400	1.4	0.356	0.0	188.6	1074.3	1.4	400
500	1.7	0.450	0.0	235.7	1050.1	1.9	500
600	2.1	0.547	0.0	282.8	1026.2	2.3	600
700	2.5	0.645	0.1	330.0	1002.7	2.8	700
800	2.9	0.746	0.1	377.1	979.5	3.3	800
900	3.3	0.849	0.1	424.3	956.6	3.8	900
1000	3.7	0.955	0.1	471.4	934.2	4.3	1000
1100	4.2	1.063	0.1	518.5	912.0	4.9	1100
1200	4.6	1.174	0.1	565.7	890.2	5.6	1200
1300	5.1	1.288	0.1	612.8	868.8	6.2	1300
1400	5.6	1.405	0.1	660.0	847.6	7.0	1400
1500	6.1	1.524	0.1	707.1	826.8	7.7	1500
1600	6.6	1.647	0.2	754.2	806.4	8.5	1600
1700	7.1	1.772	0.2	801.4	786.2	9.4	1700
1800	7.7	1.901	0.2	848.5	766.4	10.3	1800
1900	8.3	2.033	0.2	895.7	746.8	11.2	1900
2000	8.9	2.169	0.2	942.8	727.5	12.3	2000
2100	9.5	2.308	0.2	989.9	708.5	13.3	2100
2200	10.1	2.451	0.2	1037.1	689.9	14.5	2200
2300	10.8	2.598	0.3	1084.2	671.5	15.8	2300
2400	11.5	2.749	0.3	1131.4	653.4	17.1	2400
2500	12.2	2.904	0.3	1178.5	635.6	18.5	2500
2600	13.0	3.064	0.3	1225.6	618.0	20.0	2600
2700	13.8	3.228	0.3	1272.8	600.8	21.6	2700
2800	14.6	3.397	0.4	1319.9	583.9	23.3	2800
2900	15.4	3.570	0.4	1367.1	567.3	25.1	2900
3000	16.3	3.749	0.4	1414.2	551.0	27.1	3000
3100	17.2	3.933	0.4	1461.3	535.0	29.2	3100
3200	18.1	4.123	0.5	1508.5	519.3	31.4	3200
3300	19.1	4.319	0.5	1555.6	503.9	33.8	3300
3400	20.2	4.520	0.5	1602.7	488.8	36.4	3400
3500	21.3	4.728	0.6	1649.9	474.0	39.2	3500
3600	22.4	4.942	0.6	1697.0	459.5	42.1	3600
3700	23.6	5.163	0.6	1744.2	445.2	45.3	3700
3800	24.8	5.391	0.7	1791.3	431.3	48.7	3800
3900	26.1	5.627	0.7	1838.4	417.7	52.4	3900
4000	27.5	5.870	0.8	1885.6	404.4	56.3	4000
4100	28.9	6.121	0.8	1932.7	391.4	60.5	4100
4200	30.4	6.381	0.9	1979.9	378.7	65.1	4200
4300	31.9	6.650	0.9	2027.0	366.3	70.0	4300
4400	33.6	6.927	1.0	2074.1	354.2	75.3	4400
4500	35.3	7.214	1.0	2121.3	342.6	81.0	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 600 A 0/00

SD m	SW A 0/00	FZ S	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.3	0.086	0.0	55.6	1149.2	0.3	100
200	0.6	0.174	0.0	111.1	1123.8	0.6	200
300	0.9	0.264	0.0	166.7	1098.8	1.0	300
400	1.3	0.356	0.0	222.2	1074.2	1.4	400
500	1.6	0.450	0.0	277.8	1050.0	1.7	500
600	2.0	0.547	0.0	333.3	1026.1	2.2	600
700	2.3	0.645	0.1	388.9	1002.6	2.6	700
800	2.7	0.746	0.1	444.5	979.5	3.1	800
900	3.1	0.849	0.1	500.0	956.8	3.6	900
1000	3.5	0.955	0.1	555.6	934.4	4.1	1000
1100	3.9	1.063	0.1	611.1	912.3	4.7	1100
1200	4.4	1.174	0.1	666.7	890.7	5.3	1200
1300	4.8	1.288	0.1	722.2	869.3	5.9	1300
1400	5.3	1.404	0.1	777.8	848.3	6.6	1400
1500	5.7	1.524	0.1	833.4	827.7	7.3	1500
1600	6.2	1.646	0.1	888.9	807.4	8.0	1600
1700	6.7	1.772	0.2	944.5	787.4	8.8	1700
1800	7.3	1.900	0.2	1000.0	767.7	9.7	1800
1900	7.8	2.032	0.2	1055.6	748.3	10.6	1900
2000	8.4	2.168	0.2	1111.1	729.2	11.5	2000
2100	8.9	2.306	0.2	1166.7	710.4	12.6	2100
2200	9.6	2.449	0.2	1222.3	692.0	13.6	2200
2300	10.2	2.596	0.2	1277.8	673.8	14.8	2300
2400	10.8	2.746	0.3	1333.4	655.9	16.0	2400
2500	11.5	2.901	0.3	1388.9	638.3	17.4	2500
2600	12.2	3.059	0.3	1444.5	620.9	18.8	2600
2700	12.9	3.223	0.3	1500.0	604.0	20.3	2700
2800	13.7	3.391	0.3	1555.6	587.2	21.9	2800
2900	14.5	3.563	0.4	1611.2	570.8	23.6	2900
3000	15.3	3.741	0.4	1666.7	554.7	25.4	3000
3100	16.2	3.924	0.4	1722.3	538.9	27.3	3100
3200	17.1	4.112	0.4	1777.8	523.4	29.4	3200
3300	18.0	4.306	0.5	1833.4	508.1	31.6	3300
3400	19.0	4.506	0.5	1888.9	493.2	34.0	3400
3500	20.0	4.712	0.5	1944.5	478.6	36.6	3500
3600	21.0	4.924	0.6	2000.1	464.2	39.3	3600
3700	22.1	5.142	0.6	2055.6	450.2	42.2	3700
3800	23.3	5.368	0.6	2111.2	436.4	45.4	3800
3900	24.5	5.601	0.7	2166.7	422.9	48.7	3900
4000	25.7	5.841	0.7	2222.3	409.7	52.4	4000
4100	27.0	6.089	0.8	2277.8	396.8	56.3	4100
4200	28.4	6.345	0.8	2333.4	384.2	60.4	4200
4300	29.9	6.609	0.9	2389.0	371.9	64.9	4300
4400	31.4	6.883	0.9	2444.5	359.8	69.8	4400
4500	33.0	7.165	1.0	2500.1	348.1	75.0	4500

LA: 700 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.3	0.086	0.0	63.4	1149.2	0.3	100
200	0.6	0.174	0.0	126.9	1123.7	0.6	200
300	0.9	0.264	0.0	190.3	1098.7	0.9	300
400	1.2	0.356	0.0	253.8	1074.1	1.3	400
500	1.5	0.450	0.0	317.2	1049.9	1.6	500
600	1.8	0.547	0.0	380.6	1026.1	2.0	600
700	2.2	0.645	0.0	444.1	1002.6	2.4	700
800	2.5	0.746	0.1	507.5	979.6	2.9	800
900	2.9	0.849	0.1	571.0	956.9	3.3	900
1000	3.3	0.955	0.1	634.4	934.5	3.8	1000
1100	3.7	1.063	0.1	697.8	912.6	4.3	1100
1200	4.1	1.174	0.1	761.3	891.0	4.9	1200
1300	4.5	1.288	0.1	824.7	869.8	5.5	1300
1400	4.9	1.404	0.1	888.2	849.0	6.1	1400
1500	5.3	1.524	0.1	951.6	828.4	6.7	1500
1600	5.8	1.646	0.1	1015.0	808.3	7.4	1600
1700	6.3	1.771	0.1	1078.5	788.5	8.2	1700
1800	6.7	1.899	0.2	1141.9	768.9	9.0	1800
1900	7.2	2.031	0.2	1205.3	749.7	9.8	1900
2000	7.8	2.166	0.2	1268.8	730.8	10.7	2000
2100	8.3	2.305	0.2	1332.2	712.2	11.7	2100
2200	8.9	2.447	0.2	1395.7	693.9	12.7	2200
2300	9.5	2.593	0.2	1459.1	675.9	13.7	2300
2400	10.1	2.743	0.2	1522.5	658.2	14.9	2400
2500	10.7	2.897	0.3	1586.0	640.7	16.1	2500
2600	11.3	3.055	0.3	1649.4	623.6	17.4	2600
2700	12.0	3.218	0.3	1712.9	606.8	18.8	2700
2800	12.7	3.385	0.3	1776.3	590.3	20.2	2800
2900	13.4	3.557	0.3	1839.7	574.1	21.8	2900
3000	14.2	3.733	0.4	1903.2	558.1	23.5	3000
3100	15.0	3.915	0.4	1966.6	542.5	25.3	3100
3200	15.8	4.102	0.4	2030.1	527.1	27.2	3200
3300	16.7	4.295	0.4	2093.5	512.1	29.2	3300
3400	17.6	4.493	0.5	2156.9	497.3	31.4	3400
3500	18.5	4.697	0.5	2220.4	482.9	33.7	3500
3600	19.5	4.907	0.5	2283.8	468.7	36.2	3600
3700	20.5	5.124	0.6	2347.3	454.7	38.9	3700
3800	21.5	5.347	0.6	2410.7	441.1	41.7	3800
3900	22.6	5.577	0.6	2474.1	427.7	44.8	3900
4000	23.8	5.814	0.7	2537.6	414.7	48.1	4000
4100	25.0	6.059	0.7	2601.0	401.9	51.6	4100
4200	26.2	6.312	0.7	2664.5	389.3	55.4	4200
4300	27.6	6.573	0.8	2727.9	377.0	59.5	4300
4400	28.9	6.843	0.8	2791.3	365.0	63.9	4400
4500	30.4	7.121	0.9	2854.8	353.3	68.6	4500



LA: 800 A 0/00

SD m	SW A 0/00	FZ S	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.3	0.086	0.0	70.7	1149.1	0.3	100
200	0.5	0.174	0.0	141.4	1123.7	0.5	200
300	0.8	0.264	0.0	212.1	1098.6	0.8	300
400	1.1	0.356	0.0	282.8	1074.0	1.2	400
500	1.4	0.450	0.0	353.6	1049.8	1.5	500
600	1.7	0.547	0.0	424.3	1026.0	1.8	600
700	2.0	0.645	0.0	495.0	1002.6	2.2	700
800	2.3	0.746	0.1	565.7	979.6	2.6	800
900	2.6	0.849	0.1	636.4	957.0	3.0	900
1000	3.0	0.955	0.1	707.1	934.7	3.5	1000
1100	3.3	1.063	0.1	777.8	912.9	4.0	1100
1200	3.7	1.174	0.1	848.5	891.4	4.5	1200
1300	4.1	1.288	0.1	919.2	870.3	5.0	1300
1400	4.5	1.404	0.1	989.9	849.5	5.6	1400
1500	4.9	1.523	0.1	1060.7	829.1	6.2	1500
1600	5.3	1.645	0.1	1131.4	809.1	6.8	1600
1700	5.7	1.771	0.1	1202.1	789.4	7.5	1700
1800	6.2	1.899	0.1	1272.8	770.1	8.2	1800
1900	6.6	2.030	0.2	1343.5	751.0	9.0	1900
2000	7.1	2.165	0.2	1414.2	732.2	9.8	2000
2100	7.6	2.303	0.2	1484.9	713.8	10.6	2100
2200	8.1	2.445	0.2	1555.6	695.6	11.6	2200
2300	8.6	2.591	0.2	1626.3	677.8	12.5	2300
2400	9.2	2.741	0.2	1697.1	660.2	13.6	2400
2500	9.8	2.894	0.2	1767.8	643.0	14.7	2500
2600	10.4	3.052	0.3	1838.5	626.1	15.8	2600
2700	11.0	3.213	0.3	1909.2	609.4	17.1	2700
2800	11.6	3.380	0.3	1979.9	593.1	18.4	2800
2900	12.3	3.551	0.3	2050.6	577.0	19.8	2900
3000	13.0	3.726	0.3	2121.3	561.2	21.4	3000
3100	13.7	3.907	0.4	2192.0	545.8	23.0	3100
3200	14.4	4.093	0.4	2262.7	530.6	24.7	3200
3300	15.2	4.284	0.4	2333.5	515.7	26.5	3300
3400	16.0	4.481	0.4	2404.2	501.1	28.5	3400
3500	16.8	4.683	0.5	2474.9	486.7	30.6	3500
3600	17.7	4.892	0.5	2545.6	472.7	32.8	3600
3700	18.6	5.107	0.5	2616.3	458.9	35.2	3700
3800	19.6	5.328	0.5	2687.0	445.4	37.8	3800
3900	20.6	5.556	0.6	2757.7	432.1	40.6	3900
4000	21.6	5.791	0.6	2828.4	419.1	43.5	4000
4100	22.7	6.033	0.6	2899.1	406.4	46.7	4100
4200	23.9	6.283	0.7	2969.8	394.0	50.1	4200
4300	25.0	6.541	0.7	3040.6	381.8	53.7	4300
4400	26.3	6.807	0.8	3111.3	369.8	57.6	4400
4500	27.6	7.081	0.8	3182.0	358.1	61.8	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 900 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.2	0.086	0.0	77.3	1149.1	0.2	100
200	0.5	0.174	0.0	154.6	1123.6	0.5	200
300	0.7	0.264	0.0	231.9	1098.5	0.8	300
400	1.0	0.356	0.0	309.2	1073.9	1.0	400
500	1.2	0.450	0.0	386.5	1049.7	1.3	500
600	1.5	0.547	0.0	463.8	1025.9	1.7	600
700	1.8	0.645	0.0	541.1	1002.6	2.0	700
800	2.1	0.746	0.0	618.4	979.6	2.3	800
900	2.4	0.849	0.1	695.7	957.0	2.7	900
1000	2.7	0.955	0.1	773.0	934.9	3.1	1000
1100	3.0	1.063	0.1	850.3	913.1	3.6	1100
1200	3.3	1.174	0.1	927.6	891.7	4.0	1200
1300	3.7	1.288	0.1	1004.9	870.7	4.5	1300
1400	4.0	1.404	0.1	1082.2	850.1	5.0	1400
1500	4.4	1.523	0.1	1159.5	829.8	5.5	1500
1600	4.7	1.645	0.1	1236.8	809.9	6.1	1600
1700	5.1	1.770	0.1	1314.1	790.3	6.7	1700
1800	5.5	1.898	0.1	1391.4	771.1	7.4	1800
1900	5.9	2.029	0.1	1468.7	752.1	8.0	1900
2000	6.4	2.164	0.2	1546.0	733.5	8.8	2000
2100	6.8	2.302	0.2	1623.3	715.2	9.5	2100
2200	7.3	2.444	0.2	1700.6	697.2	10.4	2200
2300	7.7	2.589	0.2	1777.9	679.5	11.2	2300
2400	8.2	2.738	0.2	1855.2	662.1	12.1	2400
2500	8.7	2.891	0.2	1932.5	645.0	13.1	2500
2600	9.3	3.048	0.2	2009.8	628.2	14.2	2600
2700	9.8	3.210	0.2	2087.1	611.7	15.3	2700
2800	10.4	3.375	0.3	2164.4	595.5	16.5	2800
2900	11.0	3.545	0.3	2241.7	579.6	17.7	2900
3000	11.6	3.720	0.3	2319.0	564.0	19.1	3000
3100	12.2	3.900	0.3	2396.3	548.7	20.5	3100
3200	12.9	4.085	0.3	2473.6	533.6	22.0	3200
3300	13.6	4.275	0.4	2550.9	518.9	23.7	3300
3400	14.3	4.470	0.4	2628.2	504.4	25.4	3400
3500	15.1	4.672	0.4	2705.5	490.2	27.3	3500
3600	15.8	4.879	0.4	2782.8	476.3	29.2	3600
3700	16.7	5.092	0.5	2860.1	462.6	31.4	3700
3800	17.5	5.311	0.5	2937.4	449.2	33.6	3800
3900	18.4	5.537	0.5	3014.7	436.0	36.0	3900
4000	19.3	5.770	0.5	3092.0	423.1	38.6	4000
4100	20.3	6.010	0.6	3169.3	410.5	41.4	4100
4200	21.3	6.257	0.6	3246.6	398.1	44.4	4200
4300	22.3	6.512	0.6	3323.9	386.0	47.6	4300
4400	23.4	6.775	0.7	3401.2	374.1	51.1	4400
4500	24.6	7.047	0.7	3478.5	362.5	54.8	4500

LA: 1000 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.2	0.086	0.0	83.1	1149.0	0.2	100
200	0.4	0.174	0.0	166.3	1123.5	0.4	200
300	0.6	0.264	0.0	249.4	1098.5	0.7	300
400	0.9	0.356	0.0	332.6	1073.8	0.9	400
500	1.1	0.450	0.0	415.7	1049.6	1.2	500
600	1.3	0.547	0.0	498.9	1025.9	1.4	600
700	1.6	0.645	0.0	582.0	1002.5	1.7	700
800	1.8	0.746	0.0	665.2	979.6	2.1	800
900	2.1	0.850	0.0	748.3	957.1	2.4	900
1000	2.3	0.955	0.1	831.5	935.0	2.7	1000
1100	2.6	1.063	0.1	914.6	913.3	3.1	1100
1200	2.9	1.174	0.1	997.8	892.0	3.5	1200
1300	3.2	1.288	0.1	1080.9	871.1	3.9	1300
1400	3.5	1.404	0.1	1164.1	850.5	4.4	1400
1500	3.8	1.523	0.1	1247.2	830.3	4.8	1500
1600	4.2	1.645	0.1	1330.4	810.5	5.3	1600
1700	4.5	1.770	0.1	1413.5	791.1	5.9	1700
1800	4.8	1.898	0.1	1496.6	771.9	6.4	1800
1900	5.2	2.029	0.1	1579.8	753.1	7.0	1900
2000	5.6	2.163	0.1	1662.9	734.6	7.7	2000
2100	6.0	2.301	0.1	1746.1	716.4	8.3	2100
2200	6.4	2.442	0.2	1829.2	698.6	9.1	2200
2300	6.8	2.587	0.2	1912.4	681.0	9.8	2300
2400	7.2	2.736	0.2	1995.5	663.7	10.6	2400
2500	7.7	2.889	0.2	2078.7	646.8	11.5	2500
2600	8.1	3.045	0.2	2161.8	630.1	12.4	2600
2700	8.6	3.206	0.2	2245.0	613.8	13.3	2700
2800	9.1	3.371	0.2	2328.1	597.7	14.4	2800
2900	9.6	3.541	0.2	2411.3	581.9	15.5	2900
3000	10.1	3.715	0.3	2494.4	566.4	16.6	3000
3100	10.7	3.894	0.3	2577.6	551.2	17.9	3100
3200	11.3	4.078	0.3	2660.7	536.3	19.2	3200
3300	11.9	4.267	0.3	2743.8	521.7	20.6	3300
3400	12.5	4.461	0.3	2827.0	507.3	22.1	3400
3500	13.2	4.661	0.4	2910.1	493.2	23.7	3500
3600	13.8	4.867	0.4	2993.3	479.4	25.4	3600
3700	14.5	5.079	0.4	3076.4	465.8	27.3	3700
3800	15.3	5.296	0.4	3159.6	452.5	29.2	3800
3900	16.0	5.521	0.4	3242.7	439.5	31.3	3900
4000	16.8	5.752	0.5	3325.9	426.7	33.6	4000
4100	17.7	5.989	0.5	3409.0	414.1	36.0	4100
4200	18.6	6.235	0.5	3492.2	401.8	38.5	4200
4300	19.5	6.487	0.6	3575.3	389.7	41.3	4300
4400	20.4	6.748	0.6	3658.5	377.9	44.2	4400
4500	21.4	7.017	0.6	3741.6	366.3	47.4	4500



LA: 1100 A 0/00

SD m	SW A 0/00	FZ S	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.2	0.086	0.0	88.2	1149.0	0.2	100
200	0.4	0.174	0.0	176.4	1123.5	0.4	200
300	0.5	0.264	0.0	264.6	1098.4	0.6	300
400	0.7	0.356	0.0	352.8	1073.8	0.8	400
500	0.9	0.450	0.0	441.0	1049.6	1.0	500
600	1.1	0.547	0.0	529.2	1025.8	1.2	600
700	1.3	0.645	0.0	617.3	1002.5	1.5	700
800	1.5	0.746	0.0	705.5	979.6	1.7	800
900	1.8	0.850	0.0	793.7	957.2	2.0	900
1000	2.0	0.955	0.0	881.9	935.1	2.3	1000
1100	2.2	1.063	0.0	970.1	913.5	2.6	1100
1200	2.5	1.174	0.1	1058.3	892.2	3.0	1200
1300	2.7	1.288	0.1	1146.5	871.4	3.3	1300
1400	3.0	1.404	0.1	1234.7	850.9	3.7	1400
1500	3.2	1.523	0.1	1322.9	830.8	4.1	1500
1600	3.5	1.645	0.1	1411.1	811.1	4.5	1600
1700	3.8	1.769	0.1	1499.3	791.7	5.0	1700
1800	4.1	1.897	0.1	1587.5	772.7	5.5	1800
1900	4.4	2.028	0.1	1675.7	754.0	6.0	1900
2000	4.7	2.162	0.1	1763.8	735.6	6.5	2000
2100	5.1	2.300	0.1	1852.0	717.5	7.1	2100
2200	5.4	2.441	0.1	1940.2	699.7	7.7	2200
2300	5.7	2.586	0.1	2028.4	682.3	8.3	2300
2400	6.1	2.734	0.1	2116.6	665.1	9.0	2400
2500	6.5	2.887	0.2	2204.8	648.3	9.7	2500
2600	6.9	3.043	0.2	2293.0	631.7	10.5	2600
2700	7.3	3.203	0.2	2381.2	615.5	11.3	2700
2800	7.7	3.368	0.2	2469.4	599.5	12.2	2800
2900	8.1	3.537	0.2	2557.6	583.9	13.1	2900
3000	8.6	3.711	0.2	2645.8	568.5	14.1	3000
3100	9.1	3.889	0.2	2734.0	553.4	15.1	3100
3200	9.6	4.072	0.2	2822.1	538.6	16.2	3200
3300	10.1	4.260	0.3	2910.3	524.1	17.4	3300
3400	10.6	4.454	0.3	2998.5	509.8	18.7	3400
3500	11.1	4.653	0.3	3086.7	495.8	20.0	3500
3600	11.7	4.857	0.3	3174.9	482.1	21.5	3600
3700	12.3	5.068	0.3	3263.1	468.6	23.0	3700
3800	12.9	5.284	0.4	3351.3	455.4	24.6	3800
3900	13.6	5.507	0.4	3439.5	442.4	26.4	3900
4000	14.2	5.736	0.4	3527.7	429.7	28.3	4000
4100	15.0	5.972	0.4	3615.9	417.2	30.3	4100
4200	15.7	6.216	0.4	3704.1	404.9	32.4	4200
4300	16.4	6.466	0.5	3792.3	392.9	34.7	4300
4400	17.2	6.725	0.5	3880.5	381.1	37.2	4400
4500	18.1	6.991	0.5	3968.6	369.5	39.8	4500



LA: 1200 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.1	0.086	0.0	92.4	1149.0	0.1	100
200	0.3	0.174	0.0	184.8	1123.4	0.3	200
300	0.4	0.264	0.0	277.2	1098.3	0.5	300
400	0.6	0.356	0.0	369.6	1073.7	0.6	400
500	0.7	0.450	0.0	461.9	1049.5	0.8	500
600	0.9	0.547	0.0	554.3	1025.8	1.0	600
700	1.1	0.645	0.0	646.7	1002.5	1.2	700
800	1.3	0.746	0.0	739.1	979.7	1.4	800
900	1.4	0.850	0.0	831.5	957.2	1.6	900
1000	1.6	0.955	0.0	923.9	935.2	1.9	1000
1100	1.8	1.063	0.0	1016.3	913.6	2.1	1100
1200	2.0	1.174	0.0	1108.7	892.4	2.4	1200
1300	2.2	1.288	0.0	1201.0	871.6	2.7	1300
1400	2.4	1.404	0.1	1293.4	851.2	3.0	1400
1500	2.6	1.523	0.1	1385.8	831.2	3.3	1500
1600	2.9	1.644	0.1	1478.2	811.5	3.7	1600
1700	3.1	1.769	0.1	1570.6	792.2	4.0	1700
1800	3.3	1.897	0.1	1663.0	773.3	4.4	1800
1900	3.6	2.028	0.1	1755.4	754.7	4.8	1900
2000	3.8	2.162	0.1	1847.8	736.3	5.3	2000
2100	4.1	2.299	0.1	1940.1	718.4	5.7	2100
2200	4.4	2.440	0.1	2032.5	700.7	6.2	2200
2300	4.7	2.585	0.1	2124.9	683.3	6.7	2300
2400	5.0	2.733	0.1	2217.3	666.3	7.3	2400
2500	5.3	2.885	0.1	2309.7	649.5	7.9	2500
2600	5.6	3.041	0.1	2402.1	633.1	8.5	2600
2700	5.9	3.201	0.1	2494.5	616.9	9.2	2700
2800	6.2	3.365	0.2	2586.9	601.1	9.9	2800
2900	6.6	3.534	0.2	2679.3	585.5	10.6	2900
3000	7.0	3.707	0.2	2771.6	570.2	11.4	3000
3100	7.3	3.885	0.2	2864.0	555.2	12.2	3100
3200	7.7	4.067	0.2	2956.4	540.5	13.1	3200
3300	8.2	4.255	0.2	3048.8	526.0	14.1	3300
3400	8.6	4.447	0.2	3141.2	511.8	15.1	3400
3500	9.0	4.645	0.2	3233.6	497.9	16.2	3500
3600	9.5	4.849	0.3	3326.0	484.3	17.3	3600
3700	10.0	5.059	0.3	3418.4	470.9	18.6	3700
3800	10.5	5.274	0.3	3510.7	457.7	19.9	3800
3900	11.0	5.496	0.3	3603.1	444.8	21.3	3900
4000	11.5	5.724	0.3	3695.5	432.1	22.8	4000
4100	12.1	5.958	0.3	3787.9	419.7	24.4	4100
4200	12.7	6.200	0.4	3880.3	407.5	26.1	4200
4300	13.3	6.449	0.4	3972.7	395.5	28.0	4300
4400	14.0	6.706	0.4	4065.1	383.7	30.0	4400
4500	14.6	6.971	0.4	4157.5	372.2	32.1	4500

Für dieses Dokument behalten wir uns alle Rechte vor. / We reserve all rights in connection with this document.



LA: 1300 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.1	0.086	0.0	95.7	1148.9	0.1	100
200	0.2	0.174	0.0	191.4	1123.4	0.2	200
300	0.3	0.264	0.0	287.1	1098.3	0.3	300
400	0.4	0.356	0.0	382.8	1073.6	0.5	400
500	0.6	0.450	0.0	478.5	1049.5	0.6	500
600	0.7	0.547	0.0	574.2	1025.8	0.8	600
700	0.8	0.645	0.0	669.9	1002.5	0.9	700
800	1.0	0.746	0.0	765.6	979.7	1.1	800
900	1.1	0.850	0.0	861.2	957.3	1.2	900
1000	1.2	0.955	0.0	956.9	935.3	1.4	1000
1100	1.4	1.063	0.0	1052.6	913.7	1.6	1100
1200	1.5	1.174	0.0	1148.3	892.6	1.8	1200
1300	1.7	1.288	0.0	1244.0	871.8	2.1	1300
1400	1.8	1.404	0.0	1339.7	851.5	2.3	1400
1500	2.0	1.522	0.0	1435.4	831.5	2.5	1500
1600	2.2	1.644	0.0	1531.1	811.9	2.8	1600
1700	2.3	1.769	0.1	1626.8	792.7	3.1	1700
1800	2.5	1.897	0.1	1722.5	773.8	3.4	1800
1900	2.7	2.027	0.1	1818.2	755.2	3.7	1900
2000	2.9	2.161	0.1	1913.9	737.0	4.0	2000
2100	3.1	2.299	0.1	2009.6	719.0	4.3	2100
2200	3.3	2.440	0.1	2105.3	701.4	4.7	2200
2300	3.5	2.584	0.1	2201.0	684.2	5.1	2300
2400	3.8	2.732	0.1	2296.7	667.2	5.5	2400
2500	4.0	2.884	0.1	2392.4	650.5	6.0	2500
2600	4.2	3.039	0.1	2488.0	634.1	6.4	2600
2700	4.5	3.199	0.1	2583.7	618.0	6.9	2700
2800	4.7	3.363	0.1	2679.4	602.3	7.5	2800
2900	5.0	3.531	0.1	2775.1	586.8	8.0	2900
3000	5.3	3.704	0.1	2870.8	571.6	8.6	3000
3100	5.6	3.881	0.1	2966.5	556.6	9.3	3100
3200	5.9	4.063	0.2	3062.2	542.0	9.9	3200
3300	6.2	4.250	0.2	3157.9	527.6	10.7	3300
3400	6.5	4.443	0.2	3253.6	513.4	11.4	3400
3500	6.8	4.640	0.2	3349.3	499.6	12.2	3500
3600	7.2	4.843	0.2	3445.0	486.0	13.1	3600
3700	7.5	5.052	0.2	3540.7	472.6	14.0	3700
3800	7.9	5.266	0.2	3636.4	459.5	15.0	3800
3900	8.3	5.487	0.2	3732.1	446.7	16.1	3900
4000	8.7	5.714	0.2	3827.8	434.1	17.2	4000
4100	9.2	5.948	0.3	3923.5	421.7	18.4	4100
4200	9.6	6.188	0.3	4019.1	409.5	19.7	4200
4300	10.1	6.436	0.3	4114.8	397.5	21.1	4300
4400	10.6	6.692	0.3	4210.5	385.8	22.6	4400
4500	11.1	6.955	0.3	4306.2	374.3	24.2	4500



LA: 1400 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.1	0.086	0.0	98.1	1148.9	0.1	100
200	0.1	0.174	0.0	196.2	1123.3	0.1	200
300	0.2	0.264	0.0	294.2	1098.2	0.2	300
400	0.3	0.356	0.0	392.3	1073.6	0.3	400
500	0.4	0.450	0.0	490.4	1049.4	0.4	500
600	0.5	0.547	0.0	588.5	1025.7	0.5	600
700	0.5	0.645	0.0	686.5	1002.5	0.6	700
800	0.6	0.746	0.0	784.6	979.7	0.7	800
900	0.7	0.850	0.0	882.7	957.3	0.8	900
1000	0.8	0.955	0.0	980.8	935.3	1.0	1000
1100	0.9	1.063	0.0	1078.9	913.8	1.1	1100
1200	1.0	1.174	0.0	1176.9	892.7	1.2	1200
1300	1.1	1.288	0.0	1275.0	872.0	1.4	1300
1400	1.2	1.404	0.0	1373.1	851.6	1.5	1400
1500	1.3	1.522	0.0	1471.2	831.7	1.7	1500
1600	1.5	1.644	0.0	1569.3	812.1	1.9	1600
1700	1.6	1.769	0.0	1667.3	793.0	2.1	1700
1800	1.7	1.896	0.0	1765.4	774.1	2.3	1800
1900	1.8	2.027	0.0	1863.5	755.6	2.5	1900
2000	2.0	2.161	0.0	1961.6	737.4	2.7	2000
2100	2.1	2.298	0.0	2059.6	719.5	2.9	2100
2200	2.2	2.439	0.1	2157.7	702.0	3.2	2200
2300	2.4	2.583	0.1	2255.8	684.8	3.4	2300
2400	2.5	2.731	0.1	2353.9	667.8	3.7	2400
2500	2.7	2.883	0.1	2452.0	651.2	4.0	2500
2600	2.8	3.038	0.1	2550.0	634.9	4.3	2600
2700	3.0	3.198	0.1	2648.1	618.8	4.7	2700
2800	3.2	3.362	0.1	2746.2	603.1	5.0	2800
2900	3.4	3.530	0.1	2844.3	587.7	5.4	2900
3000	3.5	3.702	0.1	2942.4	572.5	5.8	3000
3100	3.7	3.879	0.1	3040.4	557.6	6.2	3100
3200	3.9	4.061	0.1	3138.5	543.0	6.7	3200
3300	4.1	4.247	0.1	3236.6	528.7	7.1	3300
3400	4.4	4.439	0.1	3334.7	514.6	7.7	3400
3500	4.6	4.636	0.1	3432.7	500.8	8.2	3500
3600	4.8	4.838	0.1	3530.8	487.2	8.8	3600
3700	5.1	5.047	0.1	3628.9	473.9	9.4	3700
3800	5.3	5.261	0.1	3727.0	460.9	10.1	3800
3900	5.6	5.481	0.2	3825.1	448.0	10.8	3900
4000	5.9	5.707	0.2	3923.1	435.4	11.5	4000
4100	6.1	5.940	0.2	4021.2	423.1	12.3	4100
4200	6.4	6.180	0.2	4119.3	410.9	13.2	4200
4300	6.8	6.427	0.2	4217.4	399.0	14.1	4300
4400	7.1	6.681	0.2	4315.5	387.3	15.1	4400
4500	7.4	6.943	0.2	4413.5	375.8	16.2	4500



LA: 1500 A 0/00

SD m	SW A 0/00	FZ s	DR A 0/00	ZH m	VE m/s	FW A 0/00	SD m
100	0.0	0.086	0.0	99.5	1148.9	0.0	100
200	0.1	0.174	0.0	199.0	1123.3	0.1	200
300	0.1	0.264	0.0	298.6	1098.2	0.1	300
400	0.2	0.356	0.0	398.1	1073.6	0.2	400
500	0.2	0.450	0.0	497.6	1049.4	0.2	500
600	0.2	0.547	0.0	597.1	1025.7	0.3	600
700	0.3	0.645	0.0	696.6	1002.5	0.3	700
800	0.3	0.746	0.0	796.1	979.7	0.4	800
900	0.4	0.850	0.0	895.7	957.3	0.4	900
1000	0.4	0.955	0.0	995.2	935.4	0.5	1000
1100	0.5	1.063	0.0	1094.7	913.9	0.5	1100
1200	0.5	1.174	0.0	1194.2	892.8	0.6	1200
1300	0.6	1.288	0.0	1293.7	872.1	0.7	1300
1400	0.6	1.404	0.0	1393.3	851.7	0.8	1400
1500	0.7	1.522	0.0	1492.8	831.8	0.9	1500
1600	0.7	1.644	0.0	1592.3	812.3	0.9	1600
1700	0.8	1.769	0.0	1691.8	793.1	1.0	1700
1800	0.9	1.896	0.0	1791.3	774.3	1.1	1800
1900	0.9	2.027	0.0	1890.9	755.8	1.2	1900
2000	1.0	2.161	0.0	1990.4	737.7	1.3	2000
2100	1.1	2.298	0.0	2089.9	719.8	1.5	2100
2200	1.1	2.439	0.0	2189.4	702.3	1.6	2200
2300	1.2	2.583	0.0	2288.9	685.1	1.7	2300
2400	1.3	2.731	0.0	2388.4	668.2	1.9	2400
2500	1.3	2.882	0.0	2488.0	651.6	2.0	2500
2600	1.4	3.038	0.0	2587.5	635.3	2.2	2600
2700	1.5	3.197	0.0	2687.0	619.3	2.3	2700
2800	1.6	3.361	0.0	2786.5	603.6	2.5	2800
2900	1.7	3.528	0.0	2886.0	588.2	2.7	2900
3000	1.8	3.701	0.0	2985.6	573.1	2.9	3000
3100	1.9	3.877	0.0	3085.1	558.2	3.1	3100
3200	2.0	4.059	0.1	3184.6	543.6	3.3	3200
3300	2.1	4.245	0.1	3284.1	529.3	3.6	3300
3400	2.2	4.437	0.1	3383.6	515.3	3.8	3400
3500	2.3	4.634	0.1	3483.1	501.5	4.1	3500
3600	2.4	4.836	0.1	3582.7	488.0	4.4	3600
3700	2.5	5.044	0.1	3682.2	474.7	4.7	3700
3800	2.7	5.257	0.1	3781.7	461.6	5.1	3800
3900	2.8	5.477	0.1	3881.2	448.8	5.4	3900
4000	2.9	5.703	0.1	3980.7	436.3	5.8	4000
4100	3.1	5.935	0.1	4080.3	423.9	6.2	4100
4200	3.2	6.175	0.1	4179.8	411.8	6.6	4200
4300	3.4	6.421	0.1	4279.3	399.9	7.1	4300
4400	3.6	6.675	0.1	4378.8	388.2	7.6	4400
4500	3.7	6.936	0.1	4478.3	376.7	8.1	4500



2.5 KORREKTURTAFEL ZUR FLABSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrektur kann unter gestörten Bedingungen die Distanz **SD** für den entsprechenden Lagewinkel **LA** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel), sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V	Mündungsgeschwindigkeit	-10 m/s
T	ballistische Lufttemperatur	-10° C
P	ballistischer Luftdruck	-100 mbar
WL	ballistischer Mitwind (parallel zur X-Achse)	+10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ	ballistischer Querwind (von links, parallel zur Z-Achse)	+10 m/s
-----------	---	---------

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A‰).

2.5 CORRECTION TABLE TO THE ANTI-AIRCRAFT FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** for the given angle of site **LA** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction (Superelevation), as well as

FZ-Variation (Time-of-Flight),

due to variation of:

V	Muzzle Velocity	-10 m/s
T	ballistic air temperature	-10° C
P	ballistic atmospheric pressure	-100 mbar
WL	ballistic tail wind (parallel to X-axis)	+10 m/s

DQ Lateral-Correction,

due to variation of:

WQ	ballistic cross wind (from the left, parallel to Z-axis)	+10 m/s
-----------	---	---------

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).



LA: 0 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.0	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.0	0.005	0.001	-0.004	0.000	0.6
700	0.1	0.0	0.0	0.0	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.0	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	-0.1	0.0	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.0	0.009	0.003	-0.011	-0.002	1.1
1100	0.1	0.0	-0.1	0.0	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.0	0.011	0.005	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.0	0.012	0.006	-0.021	-0.003	1.4
1400	0.1	0.0	-0.2	0.0	0.013	0.007	-0.025	-0.004	1.6
1500	0.1	0.0	-0.2	0.0	0.014	0.008	-0.029	-0.004	1.7
1600	0.1	0.1	-0.2	0.0	0.016	0.009	-0.034	-0.005	1.8
1700	0.2	0.1	-0.2	0.0	0.017	0.011	-0.039	-0.006	2.0
1800	0.2	0.1	-0.3	0.0	0.018	0.012	-0.045	-0.007	2.1
1900	0.2	0.1	-0.3	0.0	0.020	0.014	-0.051	-0.008	2.3
2000	0.2	0.1	-0.4	0.0	0.021	0.016	-0.059	-0.009	2.4
2100	0.2	0.1	-0.4	-0.1	0.023	0.018	-0.066	-0.010	2.6
2200	0.2	0.1	-0.5	-0.1	0.025	0.021	-0.075	-0.012	2.7
2300	0.2	0.2	-0.5	-0.1	0.026	0.023	-0.084	-0.013	2.9
2400	0.3	0.2	-0.6	-0.1	0.028	0.026	-0.094	-0.015	3.1
2500	0.3	0.2	-0.7	-0.1	0.030	0.029	-0.105	-0.017	3.3
2600	0.3	0.2	-0.8	-0.1	0.032	0.033	-0.117	-0.019	3.4
2700	0.3	0.3	-0.9	-0.1	0.034	0.037	-0.130	-0.022	3.6
2800	0.3	0.3	-1.0	-0.1	0.037	0.041	-0.144	-0.024	3.8
2900	0.4	0.3	-1.1	-0.2	0.039	0.045	-0.160	-0.027	4.0
3000	0.4	0.4	-1.2	-0.2	0.041	0.050	-0.176	-0.031	4.2
3100	0.4	0.4	-1.4	-0.2	0.044	0.055	-0.194	-0.034	4.4
3200	0.4	0.4	-1.5	-0.2	0.046	0.061	-0.213	-0.038	4.7
3300	0.5	0.5	-1.7	-0.3	0.049	0.067	-0.234	-0.042	4.9
3400	0.5	0.5	-1.8	-0.3	0.052	0.073	-0.256	-0.047	5.1
3500	0.5	0.6	-2.0	-0.3	0.055	0.081	-0.280	-0.052	5.4
3600	0.6	0.7	-2.3	-0.4	0.058	0.088	-0.306	-0.058	5.6
3700	0.6	0.7	-2.5	-0.4	0.062	0.097	-0.334	-0.065	5.9
3800	0.6	0.8	-2.7	-0.5	0.065	0.106	-0.364	-0.072	6.2
3900	0.7	0.9	-3.0	-0.5	0.069	0.116	-0.396	-0.079	6.4
4000	0.7	1.0	-3.3	-0.6	0.073	0.126	-0.431	-0.088	6.7
4100	0.8	1.1	-3.7	-0.7	0.077	0.138	-0.468	-0.097	7.0
4200	0.8	1.2	-4.0	-0.7	0.081	0.149	-0.507	-0.107	7.4
4300	0.9	1.4	-4.4	-0.8	0.085	0.161	-0.549	-0.118	7.7
4400	0.9	1.5	-4.9	-0.9	0.088	0.173	-0.591	-0.129	8.0
4500	1.0	1.6	-5.3	-1.0	0.091	0.184	-0.632	-0.141	8.3



LA: 100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.0	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.1	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.1	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.1	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	-0.1	0.1	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.1	0.009	0.003	-0.011	-0.002	1.1
1100	0.1	0.0	-0.1	0.1	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.1	0.011	0.005	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.1	0.012	0.006	-0.021	-0.003	1.4
1400	0.1	0.0	-0.1	0.1	0.013	0.007	-0.024	-0.003	1.6
1500	0.1	0.0	-0.2	0.1	0.014	0.008	-0.029	-0.004	1.7
1600	0.1	0.1	-0.2	0.2	0.016	0.009	-0.034	-0.005	1.8
1700	0.2	0.1	-0.2	0.2	0.017	0.011	-0.039	-0.006	2.0
1800	0.2	0.1	-0.3	0.2	0.019	0.012	-0.045	-0.007	2.1
1900	0.2	0.1	-0.3	0.2	0.020	0.014	-0.051	-0.008	2.2
2000	0.2	0.1	-0.4	0.2	0.021	0.016	-0.058	-0.009	2.4
2100	0.2	0.1	-0.4	0.2	0.023	0.018	-0.066	-0.010	2.6
2200	0.2	0.1	-0.5	0.2	0.025	0.020	-0.074	-0.012	2.7
2300	0.2	0.2	-0.5	0.2	0.026	0.023	-0.083	-0.013	2.9
2400	0.3	0.2	-0.6	0.2	0.028	0.026	-0.093	-0.015	3.0
2500	0.3	0.2	-0.7	0.2	0.030	0.029	-0.104	-0.017	3.2
2600	0.3	0.2	-0.8	0.2	0.032	0.032	-0.116	-0.019	3.4
2700	0.3	0.2	-0.9	0.2	0.034	0.036	-0.129	-0.021	3.6
2800	0.3	0.3	-1.0	0.2	0.036	0.039	-0.143	-0.024	3.8
2900	0.4	0.3	-1.1	0.2	0.039	0.044	-0.157	-0.027	4.0
3000	0.4	0.3	-1.2	0.2	0.041	0.048	-0.174	-0.030	4.2
3100	0.4	0.4	-1.3	0.2	0.044	0.053	-0.191	-0.033	4.4
3200	0.4	0.4	-1.5	0.2	0.046	0.059	-0.210	-0.037	4.6
3300	0.5	0.5	-1.6	0.2	0.049	0.064	-0.230	-0.041	4.8
3400	0.5	0.5	-1.8	0.2	0.052	0.071	-0.252	-0.046	5.1
3500	0.5	0.6	-2.0	0.2	0.055	0.078	-0.275	-0.051	5.3
3600	0.6	0.6	-2.2	0.2	0.058	0.085	-0.300	-0.056	5.5
3700	0.6	0.7	-2.4	0.2	0.061	0.093	-0.327	-0.063	5.8
3800	0.6	0.8	-2.7	0.1	0.065	0.101	-0.357	-0.069	6.1
3900	0.7	0.9	-2.9	0.1	0.069	0.111	-0.388	-0.077	6.3
4000	0.7	1.0	-3.2	0.1	0.072	0.121	-0.421	-0.085	6.6
4100	0.8	1.1	-3.6	0.0	0.076	0.131	-0.457	-0.093	6.9
4200	0.8	1.2	-3.9	0.0	0.081	0.143	-0.495	-0.103	7.2
4300	0.9	1.3	-4.3	-0.1	0.085	0.154	-0.536	-0.113	7.5
4400	0.9	1.4	-4.7	-0.1	0.088	0.166	-0.579	-0.125	7.8
4500	1.0	1.5	-5.1	-0.2	0.092	0.177	-0.621	-0.136	8.1



LA: 200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.1	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.1	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.1	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.2	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	-0.1	0.2	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.2	0.009	0.003	-0.011	-0.002	1.1
1100	0.1	0.0	-0.1	0.2	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.2	0.011	0.005	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.3	0.012	0.006	-0.021	-0.003	1.4
1400	0.1	0.0	-0.1	0.3	0.013	0.007	-0.024	-0.003	1.5
1500	0.1	0.0	-0.2	0.3	0.014	0.008	-0.029	-0.004	1.7
1600	0.1	0.1	-0.2	0.3	0.016	0.009	-0.033	-0.005	1.8
1700	0.1	0.1	-0.2	0.3	0.017	0.010	-0.039	-0.006	1.9
1800	0.2	0.1	-0.3	0.4	0.019	0.012	-0.044	-0.007	2.1
1900	0.2	0.1	-0.3	0.4	0.020	0.014	-0.051	-0.008	2.2
2000	0.2	0.1	-0.4	0.4	0.022	0.016	-0.058	-0.009	2.4
2100	0.2	0.1	-0.4	0.4	0.023	0.018	-0.065	-0.010	2.5
2200	0.2	0.1	-0.5	0.5	0.025	0.020	-0.074	-0.011	2.7
2300	0.2	0.1	-0.5	0.5	0.026	0.022	-0.083	-0.013	2.9
2400	0.3	0.2	-0.6	0.5	0.028	0.025	-0.092	-0.014	3.0
2500	0.3	0.2	-0.7	0.5	0.030	0.028	-0.103	-0.016	3.2
2600	0.3	0.2	-0.8	0.5	0.032	0.031	-0.115	-0.018	3.4
2700	0.3	0.2	-0.8	0.6	0.034	0.035	-0.127	-0.021	3.6
2800	0.3	0.3	-0.9	0.6	0.036	0.038	-0.141	-0.023	3.7
2900	0.4	0.3	-1.0	0.6	0.039	0.042	-0.155	-0.026	3.9
3000	0.4	0.3	-1.2	0.6	0.041	0.047	-0.171	-0.029	4.1
3100	0.4	0.4	-1.3	0.6	0.044	0.052	-0.188	-0.032	4.3
3200	0.4	0.4	-1.4	0.7	0.046	0.057	-0.206	-0.036	4.5
3300	0.5	0.4	-1.6	0.7	0.049	0.062	-0.226	-0.040	4.8
3400	0.5	0.5	-1.7	0.7	0.052	0.068	-0.247	-0.044	5.0
3500	0.5	0.5	-1.9	0.7	0.055	0.075	-0.270	-0.049	5.2
3600	0.5	0.6	-2.1	0.7	0.058	0.082	-0.295	-0.054	5.5
3700	0.6	0.7	-2.3	0.7	0.061	0.089	-0.321	-0.060	5.7
3800	0.6	0.7	-2.6	0.7	0.065	0.097	-0.349	-0.066	6.0
3900	0.7	0.8	-2.8	0.7	0.068	0.106	-0.380	-0.073	6.2
4000	0.7	0.9	-3.1	0.7	0.072	0.115	-0.412	-0.081	6.5
4100	0.7	1.0	-3.4	0.7	0.076	0.125	-0.447	-0.089	6.8
4200	0.8	1.1	-3.7	0.7	0.080	0.136	-0.484	-0.098	7.1
4300	0.8	1.2	-4.1	0.7	0.085	0.148	-0.524	-0.108	7.4
4400	0.9	1.3	-4.5	0.6	0.089	0.159	-0.566	-0.119	7.7
4500	1.0	1.5	-4.9	0.6	0.092	0.170	-0.609	-0.130	8.0



LA: 300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.1	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.2	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.2	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.2	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	-0.1	0.3	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.3	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.3	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.4	0.011	0.005	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.4	0.012	0.005	-0.020	-0.003	1.4
1400	0.1	0.0	-0.1	0.4	0.013	0.006	-0.024	-0.003	1.5
1500	0.1	0.0	-0.2	0.5	0.014	0.008	-0.029	-0.004	1.7
1600	0.1	0.1	-0.2	0.5	0.016	0.009	-0.033	-0.005	1.8
1700	0.1	0.1	-0.2	0.5	0.017	0.010	-0.038	-0.005	1.9
1800	0.2	0.1	-0.3	0.6	0.019	0.012	-0.044	-0.006	2.1
1900	0.2	0.1	-0.3	0.6	0.020	0.013	-0.050	-0.007	2.2
2000	0.2	0.1	-0.4	0.6	0.022	0.015	-0.057	-0.008	2.4
2100	0.2	0.1	-0.4	0.7	0.023	0.017	-0.065	-0.010	2.5
2200	0.2	0.1	-0.5	0.7	0.025	0.020	-0.073	-0.011	2.7
2300	0.2	0.1	-0.5	0.7	0.026	0.022	-0.082	-0.012	2.8
2400	0.2	0.2	-0.6	0.8	0.028	0.025	-0.092	-0.014	3.0
2500	0.3	0.2	-0.6	0.8	0.030	0.027	-0.102	-0.016	3.2
2600	0.3	0.2	-0.7	0.9	0.032	0.030	-0.113	-0.018	3.3
2700	0.3	0.2	-0.8	0.9	0.034	0.034	-0.126	-0.020	3.5
2800	0.3	0.2	-0.9	0.9	0.036	0.037	-0.139	-0.022	3.7
2900	0.3	0.3	-1.0	1.0	0.039	0.041	-0.153	-0.025	3.9
3000	0.4	0.3	-1.1	1.0	0.041	0.045	-0.169	-0.028	4.1
3100	0.4	0.3	-1.2	1.0	0.044	0.050	-0.185	-0.031	4.3
3200	0.4	0.4	-1.4	1.1	0.046	0.055	-0.203	-0.034	4.5
3300	0.4	0.4	-1.5	1.1	0.049	0.060	-0.223	-0.038	4.7
3400	0.5	0.5	-1.7	1.1	0.052	0.066	-0.243	-0.042	4.9
3500	0.5	0.5	-1.8	1.2	0.055	0.072	-0.266	-0.047	5.1
3600	0.5	0.6	-2.0	1.2	0.058	0.079	-0.289	-0.052	5.4
3700	0.6	0.6	-2.2	1.2	0.061	0.086	-0.315	-0.057	5.6
3800	0.6	0.7	-2.5	1.3	0.065	0.093	-0.343	-0.063	5.9
3900	0.6	0.8	-2.7	1.3	0.068	0.102	-0.372	-0.070	6.1
4000	0.7	0.8	-3.0	1.3	0.072	0.110	-0.403	-0.077	6.4
4100	0.7	0.9	-3.3	1.3	0.076	0.120	-0.437	-0.084	6.6
4200	0.8	1.0	-3.6	1.3	0.080	0.130	-0.473	-0.093	6.9
4300	0.8	1.1	-3.9	1.3	0.084	0.141	-0.512	-0.102	7.2
4400	0.9	1.2	-4.3	1.4	0.089	0.152	-0.553	-0.112	7.5
4500	0.9	1.3	-4.7	1.3	0.093	0.164	-0.596	-0.123	7.8



LA: 400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.2	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.2	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.3	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	0.0	0.3	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.4	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.4	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.5	0.011	0.004	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.5	0.012	0.005	-0.020	-0.003	1.4
1400	0.1	0.0	-0.1	0.6	0.013	0.006	-0.024	-0.003	1.5
1500	0.1	0.0	-0.2	0.6	0.015	0.008	-0.028	-0.004	1.7
1600	0.1	0.1	-0.2	0.7	0.016	0.009	-0.033	-0.004	1.8
1700	0.1	0.1	-0.2	0.7	0.017	0.010	-0.038	-0.005	1.9
1800	0.2	0.1	-0.3	0.8	0.019	0.012	-0.044	-0.006	2.1
1900	0.2	0.1	-0.3	0.8	0.020	0.013	-0.050	-0.007	2.2
2000	0.2	0.1	-0.3	0.8	0.022	0.015	-0.057	-0.008	2.4
2100	0.2	0.1	-0.4	0.9	0.023	0.017	-0.064	-0.009	2.5
2200	0.2	0.1	-0.4	0.9	0.025	0.019	-0.072	-0.010	2.7
2300	0.2	0.1	-0.5	1.0	0.026	0.021	-0.081	-0.012	2.8
2400	0.2	0.1	-0.6	1.1	0.028	0.024	-0.091	-0.013	3.0
2500	0.3	0.2	-0.6	1.1	0.030	0.027	-0.101	-0.015	3.1
2600	0.3	0.2	-0.7	1.2	0.032	0.030	-0.112	-0.017	3.3
2700	0.3	0.2	-0.8	1.2	0.034	0.033	-0.124	-0.019	3.5
2800	0.3	0.2	-0.9	1.3	0.036	0.036	-0.137	-0.021	3.7
2900	0.3	0.3	-1.0	1.3	0.039	0.040	-0.151	-0.024	3.8
3000	0.4	0.3	-1.1	1.4	0.041	0.044	-0.167	-0.026	4.0
3100	0.4	0.3	-1.2	1.4	0.043	0.048	-0.183	-0.029	4.2
3200	0.4	0.4	-1.3	1.5	0.046	0.053	-0.200	-0.032	4.4
3300	0.4	0.4	-1.4	1.5	0.049	0.058	-0.219	-0.036	4.6
3400	0.5	0.4	-1.6	1.6	0.052	0.064	-0.239	-0.040	4.8
3500	0.5	0.5	-1.8	1.6	0.055	0.069	-0.261	-0.044	5.1
3600	0.5	0.5	-1.9	1.7	0.058	0.076	-0.284	-0.049	5.3
3700	0.5	0.6	-2.1	1.7	0.061	0.082	-0.309	-0.054	5.5
3800	0.6	0.6	-2.3	1.8	0.064	0.090	-0.336	-0.059	5.8
3900	0.6	0.7	-2.6	1.8	0.068	0.097	-0.365	-0.065	6.0
4000	0.7	0.8	-2.8	1.9	0.072	0.106	-0.395	-0.072	6.3
4100	0.7	0.9	-3.1	1.9	0.076	0.115	-0.428	-0.079	6.5
4200	0.7	0.9	-3.4	2.0	0.080	0.124	-0.463	-0.087	6.8
4300	0.8	1.0	-3.7	2.0	0.084	0.134	-0.500	-0.096	7.1
4400	0.8	1.1	-4.0	2.0	0.089	0.145	-0.540	-0.105	7.3
4500	0.9	1.2	-4.4	2.1	0.093	0.157	-0.583	-0.115	7.6

LA: 500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.2	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.3	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.3	0.006	0.001	-0.005	-0.001	0.7
800	0.1	0.0	0.0	0.4	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	0.0	0.4	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.5	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.5	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.6	0.011	0.004	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.6	0.012	0.005	-0.020	-0.003	1.4
1400	0.1	0.0	-0.1	0.7	0.013	0.006	-0.024	-0.003	1.5
1500	0.1	0.0	-0.2	0.8	0.015	0.007	-0.028	-0.004	1.7
1600	0.1	0.0	-0.2	0.8	0.016	0.009	-0.033	-0.004	1.8
1700	0.1	0.1	-0.2	0.9	0.017	0.010	-0.038	-0.005	1.9
1800	0.1	0.1	-0.2	0.9	0.019	0.011	-0.044	-0.006	2.1
1900	0.2	0.1	-0.3	1.0	0.020	0.013	-0.050	-0.007	2.2
2000	0.2	0.1	-0.3	1.1	0.022	0.015	-0.056	-0.008	2.3
2100	0.2	0.1	-0.4	1.1	0.023	0.017	-0.064	-0.009	2.5
2200	0.2	0.1	-0.4	1.2	0.025	0.019	-0.072	-0.010	2.6
2300	0.2	0.1	-0.5	1.2	0.026	0.021	-0.080	-0.011	2.8
2400	0.2	0.1	-0.5	1.3	0.028	0.024	-0.090	-0.013	2.9
2500	0.2	0.2	-0.6	1.4	0.030	0.026	-0.100	-0.014	3.1
2600	0.3	0.2	-0.7	1.4	0.032	0.029	-0.111	-0.016	3.3
2700	0.3	0.2	-0.7	1.5	0.034	0.032	-0.123	-0.018	3.4
2800	0.3	0.2	-0.8	1.6	0.036	0.035	-0.136	-0.020	3.6
2900	0.3	0.2	-0.9	1.6	0.039	0.039	-0.150	-0.022	3.8
3000	0.3	0.3	-1.0	1.7	0.041	0.043	-0.164	-0.025	4.0
3100	0.4	0.3	-1.1	1.8	0.043	0.047	-0.180	-0.027	4.2
3200	0.4	0.3	-1.2	1.9	0.046	0.052	-0.198	-0.030	4.4
3300	0.4	0.4	-1.4	1.9	0.049	0.056	-0.216	-0.034	4.6
3400	0.4	0.4	-1.5	2.0	0.052	0.062	-0.236	-0.037	4.8
3500	0.5	0.4	-1.7	2.1	0.054	0.067	-0.257	-0.041	5.0
3600	0.5	0.5	-1.8	2.1	0.058	0.073	-0.280	-0.046	5.2
3700	0.5	0.5	-2.0	2.2	0.061	0.079	-0.304	-0.050	5.4
3800	0.5	0.6	-2.2	2.3	0.064	0.086	-0.330	-0.055	5.7
3900	0.6	0.7	-2.4	2.4	0.068	0.094	-0.358	-0.061	5.9
4000	0.6	0.7	-2.6	2.4	0.072	0.102	-0.388	-0.067	6.1
4100	0.7	0.8	-2.9	2.5	0.075	0.110	-0.420	-0.074	6.4
4200	0.7	0.9	-3.1	2.6	0.080	0.119	-0.454	-0.081	6.7
4300	0.7	0.9	-3.4	2.6	0.084	0.129	-0.490	-0.089	6.9
4400	0.8	1.0	-3.7	2.7	0.088	0.139	-0.529	-0.097	7.2
4500	0.8	1.1	-4.1	2.7	0.093	0.150	-0.570	-0.107	7.5



LA: 600 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.3	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.3	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	-0.001	0.7
800	0.0	0.0	0.0	0.4	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	0.0	0.5	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.6	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.6	0.010	0.004	-0.014	-0.002	1.2
1200	0.1	0.0	-0.1	0.7	0.011	0.004	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.8	0.012	0.005	-0.020	-0.002	1.4
1400	0.1	0.0	-0.1	0.8	0.013	0.006	-0.024	-0.003	1.5
1500	0.1	0.0	-0.1	0.9	0.015	0.007	-0.028	-0.003	1.6
1600	0.1	0.0	-0.2	1.0	0.016	0.009	-0.033	-0.004	1.8
1700	0.1	0.1	-0.2	1.0	0.017	0.010	-0.038	-0.005	1.9
1800	0.1	0.1	-0.2	1.1	0.019	0.011	-0.043	-0.005	2.0
1900	0.1	0.1	-0.3	1.2	0.020	0.013	-0.049	-0.006	2.2
2000	0.2	0.1	-0.3	1.2	0.022	0.015	-0.056	-0.007	2.3
2100	0.2	0.1	-0.3	1.3	0.023	0.016	-0.063	-0.008	2.5
2200	0.2	0.1	-0.4	1.4	0.025	0.018	-0.071	-0.009	2.6
2300	0.2	0.1	-0.4	1.5	0.026	0.021	-0.080	-0.010	2.8
2400	0.2	0.1	-0.5	1.5	0.028	0.023	-0.089	-0.012	2.9
2500	0.2	0.1	-0.6	1.6	0.030	0.026	-0.099	-0.013	3.1
2600	0.2	0.2	-0.6	1.7	0.032	0.028	-0.110	-0.015	3.2
2700	0.3	0.2	-0.7	1.8	0.034	0.031	-0.122	-0.017	3.4
2800	0.3	0.2	-0.8	1.9	0.036	0.035	-0.134	-0.019	3.6
2900	0.3	0.2	-0.8	2.0	0.039	0.038	-0.148	-0.021	3.8
3000	0.3	0.2	-0.9	2.0	0.041	0.042	-0.163	-0.023	3.9
3100	0.3	0.3	-1.0	2.1	0.043	0.046	-0.178	-0.026	4.1
3200	0.4	0.3	-1.1	2.2	0.046	0.050	-0.195	-0.028	4.3
3300	0.4	0.3	-1.3	2.3	0.049	0.055	-0.213	-0.031	4.5
3400	0.4	0.4	-1.4	2.4	0.051	0.060	-0.233	-0.035	4.7
3500	0.4	0.4	-1.5	2.5	0.054	0.065	-0.253	-0.038	4.9
3600	0.5	0.4	-1.7	2.6	0.057	0.071	-0.276	-0.042	5.1
3700	0.5	0.5	-1.8	2.7	0.061	0.077	-0.299	-0.046	5.4
3800	0.5	0.5	-2.0	2.7	0.064	0.083	-0.325	-0.051	5.6
3900	0.5	0.6	-2.2	2.8	0.068	0.090	-0.352	-0.056	5.8
4000	0.6	0.7	-2.4	2.9	0.071	0.098	-0.381	-0.062	6.1
4100	0.6	0.7	-2.7	3.0	0.075	0.106	-0.412	-0.068	6.3
4200	0.7	0.8	-2.9	3.1	0.079	0.114	-0.445	-0.074	6.6
4300	0.7	0.9	-3.2	3.2	0.084	0.123	-0.481	-0.082	6.8
4400	0.7	0.9	-3.5	3.3	0.088	0.133	-0.518	-0.089	7.1
4500	0.8	1.0	-3.8	3.4	0.093	0.143	-0.559	-0.098	7.4



LA: 700 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.3	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.4	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.4	0.006	0.001	-0.005	-0.001	0.7
800	0.0	0.0	0.0	0.5	0.007	0.002	-0.007	-0.001	0.8
900	0.1	0.0	0.0	0.6	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	-0.1	0.6	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.7	0.010	0.004	-0.014	-0.001	1.2
1200	0.1	0.0	-0.1	0.8	0.011	0.004	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	0.9	0.012	0.005	-0.020	-0.002	1.4
1400	0.1	0.0	-0.1	0.9	0.013	0.006	-0.024	-0.003	1.5
1500	0.1	0.0	-0.1	1.0	0.015	0.007	-0.028	-0.003	1.6
1600	0.1	0.0	-0.2	1.1	0.016	0.008	-0.033	-0.004	1.8
1700	0.1	0.0	-0.2	1.2	0.017	0.010	-0.038	-0.004	1.9
1800	0.1	0.1	-0.2	1.3	0.019	0.011	-0.043	-0.005	2.0
1900	0.1	0.1	-0.2	1.3	0.020	0.013	-0.049	-0.006	2.2
2000	0.1	0.1	-0.3	1.4	0.022	0.014	-0.056	-0.007	2.3
2100	0.2	0.1	-0.3	1.5	0.023	0.016	-0.063	-0.007	2.5
2200	0.2	0.1	-0.4	1.6	0.025	0.018	-0.071	-0.008	2.6
2300	0.2	0.1	-0.4	1.7	0.026	0.020	-0.079	-0.010	2.7
2400	0.2	0.1	-0.5	1.8	0.028	0.023	-0.088	-0.011	2.9
2500	0.2	0.1	-0.5	1.9	0.030	0.025	-0.098	-0.012	3.1
2600	0.2	0.1	-0.6	1.9	0.032	0.028	-0.109	-0.014	3.2
2700	0.2	0.2	-0.6	2.0	0.034	0.031	-0.121	-0.015	3.4
2800	0.3	0.2	-0.7	2.1	0.036	0.034	-0.133	-0.017	3.6
2900	0.3	0.2	-0.8	2.2	0.039	0.037	-0.146	-0.019	3.7
3000	0.3	0.2	-0.9	2.3	0.041	0.041	-0.161	-0.021	3.9
3100	0.3	0.3	-1.0	2.4	0.043	0.045	-0.176	-0.023	4.1
3200	0.3	0.3	-1.1	2.5	0.046	0.049	-0.193	-0.026	4.3
3300	0.4	0.3	-1.2	2.6	0.049	0.053	-0.211	-0.029	4.5
3400	0.4	0.3	-1.3	2.7	0.051	0.058	-0.230	-0.032	4.7
3500	0.4	0.4	-1.4	2.8	0.054	0.063	-0.250	-0.035	4.9
3600	0.4	0.4	-1.5	2.9	0.057	0.068	-0.272	-0.038	5.1
3700	0.4	0.4	-1.7	3.1	0.061	0.074	-0.295	-0.042	5.3
3800	0.5	0.5	-1.9	3.2	0.064	0.081	-0.320	-0.047	5.5
3900	0.5	0.5	-2.0	3.3	0.067	0.087	-0.346	-0.051	5.7
4000	0.5	0.6	-2.2	3.4	0.071	0.094	-0.375	-0.056	6.0
4100	0.6	0.6	-2.4	3.5	0.075	0.102	-0.405	-0.062	6.2
4200	0.6	0.7	-2.6	3.6	0.079	0.110	-0.437	-0.068	6.4
4300	0.6	0.8	-2.9	3.7	0.083	0.119	-0.472	-0.074	6.7
4400	0.7	0.8	-3.1	3.8	0.088	0.128	-0.509	-0.081	7.0
4500	0.7	0.9	-3.4	3.9	0.093	0.138	-0.548	-0.089	7.2

LA: 800 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.3	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.4	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.5	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.6	0.007	0.002	-0.007	-0.001	0.8
900	0.0	0.0	0.0	0.6	0.008	0.002	-0.009	-0.001	0.9
1000	0.1	0.0	0.0	0.7	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.8	0.010	0.004	-0.014	-0.001	1.2
1200	0.1	0.0	-0.1	0.9	0.011	0.004	-0.017	-0.002	1.3
1300	0.1	0.0	-0.1	1.0	0.012	0.005	-0.020	-0.002	1.4
1400	0.1	0.0	-0.1	1.0	0.013	0.006	-0.024	-0.002	1.5
1500	0.1	0.0	-0.1	1.1	0.015	0.007	-0.028	-0.003	1.6
1600	0.1	0.0	-0.1	1.2	0.016	0.008	-0.032	-0.003	1.8
1700	0.1	0.0	-0.2	1.3	0.017	0.010	-0.037	-0.004	1.9
1800	0.1	0.1	-0.2	1.4	0.019	0.011	-0.043	-0.005	2.0
1900	0.1	0.1	-0.2	1.5	0.020	0.013	-0.049	-0.005	2.2
2000	0.1	0.1	-0.3	1.6	0.022	0.014	-0.055	-0.006	2.3
2100	0.1	0.1	-0.3	1.7	0.023	0.016	-0.063	-0.007	2.4
2200	0.2	0.1	-0.3	1.8	0.025	0.018	-0.070	-0.008	2.6
2300	0.2	0.1	-0.4	1.9	0.026	0.020	-0.079	-0.009	2.7
2400	0.2	0.1	-0.4	2.0	0.028	0.022	-0.088	-0.010	2.9
2500	0.2	0.1	-0.5	2.1	0.030	0.025	-0.098	-0.011	3.0
2600	0.2	0.1	-0.5	2.2	0.032	0.027	-0.108	-0.012	3.2
2700	0.2	0.1	-0.6	2.3	0.034	0.030	-0.120	-0.014	3.4
2800	0.2	0.2	-0.6	2.4	0.036	0.033	-0.132	-0.015	3.5
2900	0.3	0.2	-0.7	2.5	0.039	0.036	-0.145	-0.017	3.7
3000	0.3	0.2	-0.8	2.6	0.041	0.040	-0.159	-0.019	3.9
3100	0.3	0.2	-0.9	2.7	0.043	0.044	-0.174	-0.021	4.1
3200	0.3	0.2	-1.0	2.8	0.046	0.048	-0.191	-0.023	4.2
3300	0.3	0.3	-1.1	2.9	0.049	0.052	-0.208	-0.026	4.4
3400	0.3	0.3	-1.2	3.1	0.051	0.056	-0.227	-0.029	4.6
3500	0.4	0.3	-1.3	3.2	0.054	0.061	-0.247	-0.031	4.8
3600	0.4	0.4	-1.4	3.3	0.057	0.067	-0.268	-0.035	5.0
3700	0.4	0.4	-1.5	3.4	0.060	0.072	-0.291	-0.038	5.2
3800	0.4	0.4	-1.7	3.5	0.064	0.078	-0.315	-0.042	5.4
3900	0.5	0.5	-1.8	3.7	0.067	0.084	-0.341	-0.046	5.7
4000	0.5	0.5	-2.0	3.8	0.071	0.091	-0.369	-0.050	5.9
4100	0.5	0.6	-2.2	3.9	0.075	0.098	-0.399	-0.055	6.1
4200	0.6	0.6	-2.4	4.0	0.079	0.106	-0.430	-0.060	6.4
4300	0.6	0.7	-2.6	4.2	0.083	0.114	-0.464	-0.066	6.6
4400	0.6	0.7	-2.8	4.3	0.088	0.123	-0.500	-0.072	6.9
4500	0.7	0.8	-3.1	4.4	0.092	0.133	-0.538	-0.079	7.1



LA: 900 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.5	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.6	0.007	0.002	-0.007	-0.001	0.8
900	0.0	0.0	0.0	0.7	0.008	0.002	-0.009	-0.001	0.9
1000	0.0	0.0	0.0	0.8	0.009	0.003	-0.011	-0.001	1.0
1100	0.1	0.0	-0.1	0.9	0.010	0.004	-0.014	-0.001	1.1
1200	0.1	0.0	-0.1	1.0	0.011	0.004	-0.017	-0.001	1.3
1300	0.1	0.0	-0.1	1.1	0.012	0.005	-0.020	-0.002	1.4
1400	0.1	0.0	-0.1	1.1	0.013	0.006	-0.024	-0.002	1.5
1500	0.1	0.0	-0.1	1.2	0.015	0.007	-0.028	-0.003	1.6
1600	0.1	0.0	-0.1	1.3	0.016	0.008	-0.032	-0.003	1.8
1700	0.1	0.0	-0.1	1.4	0.017	0.010	-0.037	-0.003	1.9
1800	0.1	0.0	-0.2	1.5	0.019	0.011	-0.043	-0.004	2.0
1900	0.1	0.1	-0.2	1.6	0.020	0.012	-0.049	-0.005	2.1
2000	0.1	0.1	-0.2	1.7	0.022	0.014	-0.055	-0.005	2.3
2100	0.1	0.1	-0.3	1.8	0.023	0.016	-0.062	-0.006	2.4
2200	0.1	0.1	-0.3	1.9	0.025	0.018	-0.070	-0.007	2.6
2300	0.2	0.1	-0.3	2.0	0.026	0.020	-0.078	-0.008	2.7
2400	0.2	0.1	-0.4	2.1	0.028	0.022	-0.087	-0.009	2.9
2500	0.2	0.1	-0.4	2.3	0.030	0.024	-0.097	-0.010	3.0
2600	0.2	0.1	-0.5	2.4	0.032	0.027	-0.107	-0.011	3.2
2700	0.2	0.1	-0.5	2.5	0.034	0.030	-0.119	-0.012	3.3
2800	0.2	0.1	-0.6	2.6	0.036	0.033	-0.131	-0.014	3.5
2900	0.2	0.2	-0.6	2.7	0.039	0.036	-0.144	-0.015	3.7
3000	0.2	0.2	-0.7	2.8	0.041	0.039	-0.158	-0.017	3.8
3100	0.3	0.2	-0.8	3.0	0.043	0.043	-0.173	-0.019	4.0
3200	0.3	0.2	-0.8	3.1	0.046	0.047	-0.189	-0.021	4.2
3300	0.3	0.2	-0.9	3.2	0.048	0.051	-0.206	-0.023	4.4
3400	0.3	0.3	-1.0	3.3	0.051	0.055	-0.224	-0.025	4.6
3500	0.3	0.3	-1.1	3.5	0.054	0.060	-0.244	-0.028	4.8
3600	0.3	0.3	-1.2	3.6	0.057	0.065	-0.265	-0.031	5.0
3700	0.4	0.3	-1.4	3.7	0.060	0.070	-0.287	-0.034	5.2
3800	0.4	0.4	-1.5	3.9	0.064	0.076	-0.311	-0.037	5.4
3900	0.4	0.4	-1.6	4.0	0.067	0.082	-0.337	-0.041	5.6
4000	0.4	0.5	-1.8	4.2	0.071	0.089	-0.364	-0.044	5.8
4100	0.5	0.5	-1.9	4.3	0.075	0.095	-0.393	-0.049	6.0
4200	0.5	0.5	-2.1	4.4	0.079	0.103	-0.424	-0.053	6.3
4300	0.5	0.6	-2.3	4.6	0.083	0.111	-0.457	-0.058	6.5
4400	0.6	0.6	-2.5	4.7	0.088	0.119	-0.493	-0.064	6.8
4500	0.6	0.7	-2.7	4.9	0.092	0.128	-0.530	-0.070	7.0



LA: 1000 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.7	0.007	0.002	-0.007	-0.001	0.8
900	0.0	0.0	0.0	0.8	0.008	0.002	-0.009	-0.001	0.9
1000	0.0	0.0	0.0	0.8	0.009	0.003	-0.011	-0.001	1.0
1100	0.0	0.0	0.0	0.9	0.010	0.004	-0.014	-0.001	1.1
1200	0.1	0.0	-0.1	1.0	0.011	0.004	-0.017	-0.001	1.3
1300	0.1	0.0	-0.1	1.1	0.012	0.005	-0.020	-0.002	1.4
1400	0.1	0.0	-0.1	1.2	0.013	0.006	-0.024	-0.002	1.5
1500	0.1	0.0	-0.1	1.3	0.015	0.007	-0.028	-0.002	1.6
1600	0.1	0.0	-0.1	1.4	0.016	0.008	-0.032	-0.003	1.7
1700	0.1	0.0	-0.1	1.5	0.017	0.009	-0.037	-0.003	1.9
1800	0.1	0.0	-0.2	1.6	0.019	0.011	-0.043	-0.004	2.0
1900	0.1	0.0	-0.2	1.7	0.020	0.012	-0.049	-0.004	2.1
2000	0.1	0.1	-0.2	1.9	0.022	0.014	-0.055	-0.005	2.3
2100	0.1	0.1	-0.2	2.0	0.023	0.016	-0.062	-0.005	2.4
2200	0.1	0.1	-0.3	2.1	0.025	0.017	-0.070	-0.006	2.6
2300	0.1	0.1	-0.3	2.2	0.027	0.019	-0.078	-0.007	2.7
2400	0.1	0.1	-0.3	2.3	0.028	0.022	-0.087	-0.008	2.9
2500	0.2	0.1	-0.4	2.4	0.030	0.024	-0.096	-0.009	3.0
2600	0.2	0.1	-0.4	2.5	0.032	0.026	-0.107	-0.010	3.2
2700	0.2	0.1	-0.4	2.7	0.034	0.029	-0.118	-0.011	3.3
2800	0.2	0.1	-0.5	2.8	0.036	0.032	-0.130	-0.012	3.5
2900	0.2	0.1	-0.5	2.9	0.038	0.035	-0.143	-0.013	3.6
3000	0.2	0.2	-0.6	3.1	0.041	0.038	-0.157	-0.015	3.8
3100	0.2	0.2	-0.7	3.2	0.043	0.042	-0.171	-0.016	4.0
3200	0.2	0.2	-0.7	3.3	0.046	0.046	-0.187	-0.018	4.2
3300	0.3	0.2	-0.8	3.5	0.048	0.050	-0.204	-0.020	4.3
3400	0.3	0.2	-0.9	3.6	0.051	0.054	-0.222	-0.022	4.5
3500	0.3	0.2	-1.0	3.7	0.054	0.058	-0.242	-0.024	4.7
3600	0.3	0.3	-1.1	3.9	0.057	0.063	-0.262	-0.026	4.9
3700	0.3	0.3	-1.2	4.0	0.060	0.069	-0.284	-0.029	5.1
3800	0.3	0.3	-1.3	4.2	0.064	0.074	-0.308	-0.032	5.3
3900	0.4	0.4	-1.4	4.3	0.067	0.080	-0.333	-0.035	5.5
4000	0.4	0.4	-1.5	4.5	0.071	0.086	-0.360	-0.038	5.8
4100	0.4	0.4	-1.7	4.6	0.075	0.093	-0.389	-0.042	6.0
4200	0.4	0.5	-1.8	4.8	0.079	0.100	-0.419	-0.046	6.2
4300	0.5	0.5	-2.0	5.0	0.083	0.108	-0.451	-0.050	6.4
4400	0.5	0.5	-2.2	5.1	0.087	0.116	-0.486	-0.055	6.7
4500	0.5	0.6	-2.3	5.3	0.092	0.124	-0.523	-0.060	6.9

LA: 1100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.7	0.007	0.002	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.8	0.008	0.002	-0.009	-0.001	0.9
1000	0.0	0.0	0.0	0.9	0.009	0.003	-0.011	-0.001	1.0
1100	0.0	0.0	0.0	1.0	0.010	0.004	-0.014	-0.001	1.1
1200	0.0	0.0	0.0	1.1	0.011	0.004	-0.017	-0.001	1.3
1300	0.0	0.0	-0.1	1.2	0.012	0.005	-0.020	-0.001	1.4
1400	0.1	0.0	-0.1	1.3	0.013	0.006	-0.024	-0.002	1.5
1500	0.1	0.0	-0.1	1.4	0.015	0.007	-0.028	-0.002	1.6
1600	0.1	0.0	-0.1	1.5	0.016	0.008	-0.032	-0.002	1.7
1700	0.1	0.0	-0.1	1.6	0.017	0.009	-0.037	-0.003	1.9
1800	0.1	0.0	-0.1	1.7	0.019	0.011	-0.042	-0.003	2.0
1900	0.1	0.0	-0.1	1.9	0.020	0.012	-0.048	-0.003	2.1
2000	0.1	0.0	-0.2	2.0	0.022	0.014	-0.055	-0.004	2.3
2100	0.1	0.0	-0.2	2.1	0.023	0.015	-0.062	-0.004	2.4
2200	0.1	0.1	-0.2	2.2	0.025	0.017	-0.069	-0.005	2.5
2300	0.1	0.1	-0.2	2.3	0.027	0.019	-0.077	-0.006	2.7
2400	0.1	0.1	-0.3	2.4	0.028	0.021	-0.086	-0.006	2.8
2500	0.1	0.1	-0.3	2.6	0.030	0.024	-0.096	-0.007	3.0
2600	0.1	0.1	-0.3	2.7	0.032	0.026	-0.106	-0.008	3.1
2700	0.1	0.1	-0.4	2.8	0.034	0.029	-0.117	-0.009	3.3
2800	0.2	0.1	-0.4	3.0	0.036	0.032	-0.129	-0.010	3.5
2900	0.2	0.1	-0.5	3.1	0.038	0.035	-0.142	-0.011	3.6
3000	0.2	0.1	-0.5	3.2	0.041	0.038	-0.156	-0.012	3.8
3100	0.2	0.1	-0.6	3.4	0.043	0.041	-0.170	-0.014	4.0
3200	0.2	0.2	-0.6	3.5	0.046	0.045	-0.186	-0.015	4.1
3300	0.2	0.2	-0.7	3.7	0.048	0.049	-0.203	-0.017	4.3
3400	0.2	0.2	-0.8	3.8	0.051	0.053	-0.221	-0.018	4.5
3500	0.2	0.2	-0.8	4.0	0.054	0.057	-0.240	-0.020	4.7
3600	0.3	0.2	-0.9	4.1	0.057	0.062	-0.260	-0.022	4.9
3700	0.3	0.2	-1.0	4.3	0.060	0.067	-0.282	-0.024	5.1
3800	0.3	0.3	-1.1	4.4	0.064	0.073	-0.305	-0.027	5.3
3900	0.3	0.3	-1.2	4.6	0.067	0.078	-0.330	-0.029	5.5
4000	0.3	0.3	-1.3	4.8	0.071	0.084	-0.356	-0.032	5.7
4100	0.3	0.4	-1.4	4.9	0.075	0.091	-0.385	-0.035	5.9
4200	0.4	0.4	-1.5	5.1	0.079	0.098	-0.415	-0.038	6.1
4300	0.4	0.4	-1.7	5.3	0.083	0.105	-0.446	-0.042	6.4
4400	0.4	0.5	-1.8	5.5	0.087	0.113	-0.481	-0.046	6.6
4500	0.4	0.5	-2.0	5.6	0.092	0.121	-0.517	-0.050	6.9

LA: 1200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.7	0.007	0.002	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.8	0.008	0.002	-0.009	0.000	0.9
1000	0.0	0.0	0.0	0.9	0.009	0.003	-0.011	-0.001	1.0
1100	0.0	0.0	0.0	1.0	0.010	0.004	-0.014	-0.001	1.1
1200	0.0	0.0	0.0	1.2	0.011	0.004	-0.017	-0.001	1.3
1300	0.0	0.0	0.0	1.3	0.012	0.005	-0.020	-0.001	1.4
1400	0.0	0.0	-0.1	1.4	0.013	0.006	-0.024	-0.001	1.5
1500	0.0	0.0	-0.1	1.5	0.015	0.007	-0.028	-0.002	1.6
1600	0.1	0.0	-0.1	1.6	0.016	0.008	-0.032	-0.002	1.7
1700	0.1	0.0	-0.1	1.7	0.017	0.009	-0.037	-0.002	1.9
1800	0.1	0.0	-0.1	1.8	0.019	0.011	-0.042	-0.002	2.0
1900	0.1	0.0	-0.1	1.9	0.020	0.012	-0.048	-0.003	2.1
2000	0.1	0.0	-0.1	2.1	0.022	0.014	-0.055	-0.003	2.3
2100	0.1	0.0	-0.2	2.2	0.023	0.015	-0.062	-0.004	2.4
2200	0.1	0.0	-0.2	2.3	0.025	0.017	-0.069	-0.004	2.5
2300	0.1	0.0	-0.2	2.4	0.027	0.019	-0.077	-0.005	2.7
2400	0.1	0.1	-0.2	2.6	0.028	0.021	-0.086	-0.005	2.8
2500	0.1	0.1	-0.2	2.7	0.030	0.023	-0.095	-0.006	3.0
2600	0.1	0.1	-0.3	2.8	0.032	0.026	-0.106	-0.007	3.1
2700	0.1	0.1	-0.3	3.0	0.034	0.028	-0.117	-0.007	3.3
2800	0.1	0.1	-0.3	3.1	0.036	0.031	-0.128	-0.008	3.4
2900	0.1	0.1	-0.4	3.2	0.038	0.034	-0.141	-0.009	3.6
3000	0.1	0.1	-0.4	3.4	0.041	0.037	-0.155	-0.010	3.8
3100	0.2	0.1	-0.5	3.5	0.043	0.041	-0.169	-0.011	3.9
3200	0.2	0.1	-0.5	3.7	0.046	0.044	-0.185	-0.012	4.1
3300	0.2	0.1	-0.6	3.8	0.048	0.048	-0.201	-0.013	4.3
3400	0.2	0.2	-0.6	4.0	0.051	0.052	-0.219	-0.015	4.5
3500	0.2	0.2	-0.7	4.2	0.054	0.056	-0.238	-0.016	4.7
3600	0.2	0.2	-0.7	4.3	0.057	0.061	-0.258	-0.018	4.9
3700	0.2	0.2	-0.8	4.5	0.060	0.066	-0.280	-0.020	5.0
3800	0.2	0.2	-0.9	4.6	0.064	0.071	-0.303	-0.021	5.2
3900	0.2	0.2	-0.9	4.8	0.067	0.077	-0.327	-0.024	5.5
4000	0.3	0.3	-1.0	5.0	0.071	0.083	-0.353	-0.026	5.7
4100	0.3	0.3	-1.1	5.2	0.074	0.089	-0.381	-0.028	5.9
4200	0.3	0.3	-1.2	5.4	0.078	0.096	-0.411	-0.031	6.1
4300	0.3	0.3	-1.3	5.5	0.083	0.103	-0.442	-0.034	6.3
4400	0.3	0.4	-1.5	5.7	0.087	0.110	-0.476	-0.037	6.6
4500	0.4	0.4	-1.6	5.9	0.092	0.118	-0.512	-0.040	6.8

Für dieses Dokument behalten wir uns alle Rechte vor./We reserve all rights in connection with this document.

OERLIKON-CONTRAVES
PYROTEC AGExterior Ballistics 35mm
Aussenballistik 35mm

(Vo=1175m/s)

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
3	41	50	KI B

LA: 1300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
	-10	-10	-100	+10	-10	-10	-100	+10	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.007	0.002	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.008	0.002	-0.009	0.000	0.9
1000	0.0	0.0	0.0	1.0	0.009	0.003	-0.011	0.000	1.0
1100	0.0	0.0	0.0	1.1	0.010	0.004	-0.014	-0.001	1.1
1200	0.0	0.0	0.0	1.2	0.011	0.004	-0.017	-0.001	1.3
1300	0.0	0.0	0.0	1.3	0.012	0.005	-0.020	-0.001	1.4
1400	0.0	0.0	0.0	1.4	0.013	0.006	-0.024	-0.001	1.5
1500	0.0	0.0	0.0	1.5	0.015	0.007	-0.028	-0.001	1.6
1600	0.0	0.0	-0.1	1.6	0.016	0.008	-0.032	-0.001	1.7
1700	0.0	0.0	-0.1	1.8	0.017	0.009	-0.037	-0.002	1.9
1800	0.0	0.0	-0.1	1.9	0.019	0.011	-0.042	-0.002	2.0
1900	0.1	0.0	-0.1	2.0	0.020	0.012	-0.048	-0.002	2.1
2000	0.1	0.0	-0.1	2.1	0.022	0.014	-0.054	-0.002	2.3
2100	0.1	0.0	-0.1	2.3	0.023	0.015	-0.061	-0.003	2.4
2200	0.1	0.0	-0.1	2.4	0.025	0.017	-0.069	-0.003	2.5
2300	0.1	0.0	-0.1	2.5	0.027	0.019	-0.077	-0.003	2.7
2400	0.1	0.0	-0.2	2.7	0.028	0.021	-0.086	-0.004	2.8
2500	0.1	0.0	-0.2	2.8	0.030	0.023	-0.095	-0.004	3.0
2600	0.1	0.1	-0.2	2.9	0.032	0.026	-0.105	-0.005	3.1
2700	0.1	0.1	-0.2	3.1	0.034	0.028	-0.116	-0.005	3.3
2800	0.1	0.1	-0.3	3.2	0.036	0.031	-0.128	-0.006	3.4
2900	0.1	0.1	-0.3	3.4	0.038	0.034	-0.141	-0.007	3.6
3000	0.1	0.1	-0.3	3.5	0.041	0.037	-0.154	-0.007	3.8
3100	0.1	0.1	-0.3	3.7	0.043	0.040	-0.168	-0.008	3.9
3200	0.1	0.1	-0.4	3.8	0.046	0.044	-0.184	-0.009	4.1
3300	0.1	0.1	-0.4	4.0	0.048	0.048	-0.200	-0.010	4.3
3400	0.1	0.1	-0.5	4.1	0.051	0.052	-0.218	-0.011	4.5
3500	0.1	0.1	-0.5	4.3	0.054	0.056	-0.237	-0.012	4.6
3600	0.2	0.1	-0.5	4.5	0.057	0.060	-0.257	-0.013	4.8
3700	0.2	0.1	-0.6	4.6	0.060	0.065	-0.278	-0.015	5.0
3800	0.2	0.2	-0.7	4.8	0.063	0.070	-0.301	-0.016	5.2
3900	0.2	0.2	-0.7	5.0	0.067	0.076	-0.325	-0.018	5.4
4000	0.2	0.2	-0.8	5.2	0.071	0.082	-0.351	-0.019	5.6
4100	0.2	0.2	-0.8	5.4	0.074	0.088	-0.379	-0.021	5.8
4200	0.2	0.2	-0.9	5.5	0.078	0.094	-0.408	-0.023	6.1
4300	0.2	0.2	-1.0	5.7	0.083	0.101	-0.439	-0.025	6.3
4400	0.3	0.3	-1.1	5.9	0.087	0.109	-0.473	-0.027	6.5
4500	0.3	0.3	-1.2	6.1	0.092	0.116	-0.508	-0.030	6.8

LA: 1400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
	-10	-10	-100	+10	-10	-10	-100	+10	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.007	0.002	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.008	0.002	-0.009	0.000	0.9
1000	0.0	0.0	0.0	1.0	0.009	0.003	-0.011	0.000	1.0
1100	0.0	0.0	0.0	1.1	0.010	0.003	-0.014	0.000	1.1
1200	0.0	0.0	0.0	1.2	0.011	0.004	-0.017	0.000	1.3
1300	0.0	0.0	0.0	1.3	0.012	0.005	-0.020	-0.001	1.4
1400	0.0	0.0	0.0	1.4	0.013	0.006	-0.024	-0.001	1.5
1500	0.0	0.0	0.0	1.6	0.015	0.007	-0.028	-0.001	1.6
1600	0.0	0.0	0.0	1.7	0.016	0.008	-0.032	-0.001	1.7
1700	0.0	0.0	0.0	1.8	0.017	0.009	-0.037	-0.001	1.9
1800	0.0	0.0	-0.1	1.9	0.019	0.011	-0.042	-0.001	2.0
1900	0.0	0.0	-0.1	2.1	0.020	0.012	-0.048	-0.001	2.1
2000	0.0	0.0	-0.1	2.2	0.022	0.014	-0.054	-0.002	2.3
2100	0.0	0.0	-0.1	2.3	0.023	0.015	-0.061	-0.002	2.4
2200	0.0	0.0	-0.1	2.4	0.025	0.017	-0.069	-0.002	2.5
2300	0.0	0.0	-0.1	2.6	0.027	0.019	-0.077	-0.002	2.7
2400	0.0	0.0	-0.1	2.7	0.028	0.021	-0.086	-0.003	2.8
2500	0.1	0.0	-0.1	2.9	0.030	0.023	-0.095	-0.003	3.0
2600	0.1	0.0	-0.1	3.0	0.032	0.025	-0.105	-0.003	3.1
2700	0.1	0.0	-0.2	3.1	0.034	0.028	-0.116	-0.004	3.3
2800	0.1	0.0	-0.2	3.3	0.036	0.031	-0.128	-0.004	3.4
2900	0.1	0.0	-0.2	3.4	0.038	0.034	-0.140	-0.005	3.6
3000	0.1	0.1	-0.2	3.6	0.041	0.037	-0.153	-0.005	3.7
3100	0.1	0.1	-0.2	3.8	0.043	0.040	-0.168	-0.006	3.9
3200	0.1	0.1	-0.3	3.9	0.046	0.043	-0.183	-0.006	4.1
3300	0.1	0.1	-0.3	4.1	0.048	0.047	-0.200	-0.007	4.3
3400	0.1	0.1	-0.3	4.2	0.051	0.051	-0.217	-0.007	4.4
3500	0.1	0.1	-0.3	4.4	0.054	0.055	-0.236	-0.008	4.6
3600	0.1	0.1	-0.4	4.6	0.057	0.060	-0.256	-0.009	4.8
3700	0.1	0.1	-0.4	4.8	0.060	0.065	-0.277	-0.010	5.0
3800	0.1	0.1	-0.4	4.9	0.063	0.070	-0.300	-0.011	5.2
3900	0.1	0.1	-0.5	5.1	0.067	0.075	-0.324	-0.012	5.4
4000	0.1	0.1	-0.5	5.3	0.071	0.081	-0.349	-0.013	5.6
4100	0.1	0.1	-0.6	5.5	0.074	0.087	-0.377	-0.014	5.8
4200	0.1	0.2	-0.6	5.7	0.078	0.093	-0.406	-0.015	6.0
4300	0.2	0.2	-0.7	5.9	0.083	0.100	-0.437	-0.017	6.3
4400	0.2	0.2	-0.7	6.1	0.087	0.107	-0.470	-0.018	6.5
4500	0.2	0.2	-0.8	6.3	0.092	0.115	-0.505	-0.020	6.7

LA: 1500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ +10 m/s
	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL +10 m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.003	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.004	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.005	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.006	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.007	0.002	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.008	0.002	-0.009	0.000	0.9
1000	0.0	0.0	0.0	1.0	0.009	0.003	-0.011	0.000	1.0
1100	0.0	0.0	0.0	1.1	0.010	0.003	-0.014	0.000	1.1
1200	0.0	0.0	0.0	1.2	0.011	0.004	-0.017	0.000	1.3
1300	0.0	0.0	0.0	1.4	0.012	0.005	-0.020	0.000	1.4
1400	0.0	0.0	0.0	1.5	0.013	0.006	-0.023	0.000	1.5
1500	0.0	0.0	0.0	1.6	0.015	0.007	-0.028	0.000	1.6
1600	0.0	0.0	0.0	1.7	0.016	0.008	-0.032	0.000	1.7
1700	0.0	0.0	0.0	1.8	0.017	0.009	-0.037	-0.001	1.9
1800	0.0	0.0	0.0	2.0	0.019	0.011	-0.042	-0.001	2.0
1900	0.0	0.0	0.0	2.1	0.020	0.012	-0.048	-0.001	2.1
2000	0.0	0.0	0.0	2.2	0.022	0.013	-0.054	-0.001	2.3
2100	0.0	0.0	0.0	2.3	0.023	0.015	-0.061	-0.001	2.4
2200	0.0	0.0	0.0	2.5	0.025	0.017	-0.069	-0.001	2.5
2300	0.0	0.0	0.0	2.6	0.027	0.019	-0.077	-0.001	2.7
2400	0.0	0.0	-0.1	2.8	0.028	0.021	-0.085	-0.001	2.8
2500	0.0	0.0	-0.1	2.9	0.030	0.023	-0.095	-0.001	3.0
2600	0.0	0.0	-0.1	3.0	0.032	0.025	-0.105	-0.002	3.1
2700	0.0	0.0	-0.1	3.2	0.034	0.028	-0.116	-0.002	3.3
2800	0.0	0.0	-0.1	3.3	0.036	0.031	-0.127	-0.002	3.4
2900	0.0	0.0	-0.1	3.5	0.038	0.033	-0.140	-0.002	3.6
3000	0.0	0.0	-0.1	3.7	0.041	0.036	-0.153	-0.002	3.7
3100	0.0	0.0	-0.1	3.8	0.043	0.040	-0.168	-0.003	3.9
3200	0.0	0.0	-0.1	4.0	0.046	0.043	-0.183	-0.003	4.1
3300	0.0	0.0	-0.1	4.1	0.048	0.047	-0.199	-0.003	4.3
3400	0.0	0.0	-0.2	4.3	0.051	0.051	-0.217	-0.004	4.4
3500	0.0	0.0	-0.2	4.5	0.054	0.055	-0.235	-0.004	4.6
3600	0.1	0.0	-0.2	4.7	0.057	0.059	-0.255	-0.004	4.8
3700	0.1	0.0	-0.2	4.8	0.060	0.064	-0.276	-0.005	5.0
3800	0.1	0.1	-0.2	5.0	0.063	0.069	-0.299	-0.005	5.2
3900	0.1	0.1	-0.2	5.2	0.067	0.074	-0.323	-0.006	5.4
4000	0.1	0.1	-0.3	5.4	0.071	0.080	-0.348	-0.006	5.6
4100	0.1	0.1	-0.3	5.6	0.074	0.086	-0.376	-0.007	5.8
4200	0.1	0.1	-0.3	5.8	0.078	0.093	-0.405	-0.007	6.0
4300	0.1	0.1	-0.3	6.0	0.083	0.099	-0.436	-0.008	6.2
4400	0.1	0.1	-0.4	6.2	0.087	0.107	-0.469	-0.009	6.5
4500	0.1	0.1	-0.4	6.4	0.092	0.114	-0.504	-0.010	6.7

Temperaturkorrektur ΔT_F
für 100% relative Luftfeuchtigkeit r

Correction of Temperature ΔT_F
for 100% relative Humidity r

$$T_{\text{virtuell}} = T_{\text{ball.}} + \frac{r[\%]}{100} \cdot \Delta T_F \quad [\text{C}]$$

Luftdruck Barometric Pressure [mb]	ΔT_F - Tafel										ΔT_F - Table								
	-40	-35	-30	-25	-20	-15	-5	0	+5	+10	+15	+20	+25	+30	+35	+40	+45	+50	
500	0.0	0.1	0.2	0.2	0.4	0.6	0.9	1.3	1.8	2.7	3.8	5.3	7.3	10.1	13.7	18.5	24.9	33.4	
550	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.7	2.4	3.4	4.8	6.6	9.1	12.4	16.8	22.5	30.1
600	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.2	3.1	4.4	6.1	8.3	11.3	15.3	20.5	27.4
650	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.4	2.0	2.9	4.0	5.6	7.7	10.4	14.1	18.8	25.1
700	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.7	3.7	5.2	7.1	9.7	13.0	17.4	23.2
750	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.8	1.2	1.8	2.5	3.5	4.8	6.6	9.0	12.1	16.2	21.5
800	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.2	1.7	2.3	3.3	4.5	6.2	8.4	11.3	15.1	20.1
850	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.5	0.7	1.1	1.6	2.2	3.1	4.3	5.8	7.9	10.6	14.2	18.9
900	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.5	0.7	1.0	1.5	2.1	2.9	4.0	5.5	7.5	10.0	13.4	17.7
950	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.4	2.0	2.8	3.8	5.2	7.1	9.5	12.7	16.8
1000	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.6	3.6	4.9	6.7	9.0	12.0	15.9
1050	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.8	2.5	3.4	4.7	6.4	8.6	11.4	15.1
1100	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.2	1.7	2.4	3.3	4.5	6.1	8.2	10.9	14.4
1150	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.3	3.1	4.3	5.8	7.8	10.4	13.7
1200	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.2	3.0	4.1	5.6	7.5	9.9	13.1
1250	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.9	3.9	5.3	7.2	9.5	12.6	



OERLIKON-CONTRAVES
PYROTEC AG

Exterior Ballistics 35mm
Aussenballistik 35mm

(Vo=1175m/s)

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
	3	45	50
		B	K

WK801103AV

2.7 GEBRAUCH DER TAFEL

Für den Gebrauch der Korrekturtafel sind folgende Abweichungen von den Standardbedingungen (V_0 , T_0 , P_0) zu berechnen:

$$V_0 - \text{Abweichung: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperaturabweichung: } \Delta T_1 = T_1 - T_0$$

$$\text{Druckabweichung: } \Delta P_1 = P_1 - P_0$$

$$\text{Ballistischer Längswind: } WL_1$$

$$\text{Ballistischer Querwind: } WQ_1$$

V_1 = gemessene Mündungsgeschwindigkeit

T_1 = gemessene Lufttemperatur an der Mündung

P_1 = gemessene Luftdruck an der Mündung

Beispiel:

Bestimme den Schusswinkel, die Geschossflugzeit und die Seitenkorrektur für ein Ziel in 3000 m Horizontaldistanz (**SD**):

Mündungsgeschwindigkeit (gem.) $V_1 = 1160 \text{ m/s}$

Für die atmosphärischen Bedingungen auf Mündungshöhe werden (als Beispiel) folgende ballistische Werte gemessen:

Air temperature $T_1 = +22^\circ\text{C}$

Air pressure $P_1 = 943.25 \text{ mbar}$

Head wind $WL_1 = -3 \text{ m/s}$

Cross wind (from right) $WQ_1 = -2 \text{ m/s}$

Bemerkung 1: Der ballistische Wind ist die Basis für die Wind-Korrektur. Er stellt den mittleren konstanten Wind entlang der Flugbahn dar, der die selben Korrekturfaktoren benötigt wie das wirkliche Windprofil.

Bemerkung 2: Die relative Luftfeuchtigkeit wird berücksichtigt, indem anstelle von T_1 (T_{ball}) die Temperatur T_{virtuell} verwendet wird (s. § 2.6).

Transformation der Daten auf Tafelbedingungen

$$\Delta V_1 = V_1 - V_0 = 1160 - 1175 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL_1 (\text{Mitwind (+); Gegenwind (-)}) = -3 \text{ m/s}$$

$$WQ_1 (\text{von links (+); von rechts (-)}) = -2 \text{ m/s}$$

2.7 USE OF THE TABLE

To use the correction table the following deviations from the standard conditions (V_0 , T_0 , P_0) must be calculated:

$$V_0\text{-deviation: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperature deviation: } \Delta T_1 = T_1 - T_0$$

$$\text{Pressure deviation: } \Delta P_1 = P_1 - P_0$$

$$\text{Ballistic down range wind: } WL_1$$

$$\text{Ballistic cross wind: } WQ_1$$

V_1 = measured muzzle velocity

T_1 = measured air temperature at muzzle

P_1 = measured air pressure at muzzle

Example:

Determine the superelevation, the time of flight of the projectile and the lateral correction, for a target at a horizontal range of 3000 m (**SD**):

Muzzle velocity (measured) $V_1 = 1160 \text{ m/s}$

Following ballistic values (for example) are measured for the atmospheric conditions at muzzle altitude :

Air temperature $T_1 = +22^\circ\text{C}$

Air pressure $P_1 = 943.25 \text{ mbar}$

Head wind $WL_1 = -3 \text{ m/s}$

Cross wind (from right) $WQ_1 = -2 \text{ m/s}$

Notice 1: Basis for wind correction is the ballistic wind. This is the mean constant wind along the trajectory, which needs the same correction factors as the actual wind profile.

Notice 2: Because of the relative air humidity r the temperature T_1 (T_{ball}) is replaced by the virtual temperature T_{virtuell} (cf. § 2.6).

Transformation of the data to conform with table conditions

$$\Delta V_1 = V_1 - V_0 = 1160 - 1175 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL_1 (\text{tail wind (+); head wind (-)}) = -3 \text{ m/s}$$

$$WQ_1 (\text{from left (+); from right (-)}) = -2 \text{ m/s}$$



Berechnung der Seitenkorrektur DL auf einer Schussdistanz von 3000 m

Seitenkorrektur DR infolge Derivation:
 $DR = 0.5 \text{ mils}$ (s. Blatt 4)

In Schussrichtung gesehen muss man nach links korrigieren (+), da der Rechtsdrall eine Rechtsabweichung (Derivation) des Geschosses bewirkt.

Seitenkorrektur DQ infolge Querwindes WQ (s. Blatt 8):

$DQ = + 4.2 \text{ mils}$ (nach links),
 für $WQ = + 10 \text{ m/s}$ (von links)

$$DQ \text{ (korrigiert)} = DQ^* = \\ WQ_1 \cdot DQ / WQ = (-2) \cdot 4.2 / 10 = -0.8 \text{ mils}$$

Definition: $DQ (+)$: Korrektur nach links;
 $DQ (-)$: Korrektur nach rechts

Totale Seitenkorrektur DL:

$$DL = DR + DQ^* = 0.5 - 0.8 = \\ = -0.3 \text{ mils} \text{ (nach rechts)}$$

Calculation of the lateral correction DL at a range of 3000 m

Drift correction DR due to projectile spin:
 $DR = 0.5 \text{ mils}$ (see sheet 4)

When viewing in the direction of flight, the correction must be made towards the left (+) because the right-hand spin causes a drift of the projectile to the right.

Lateral correction DQ due to cross wind WQ (see sheet 8):

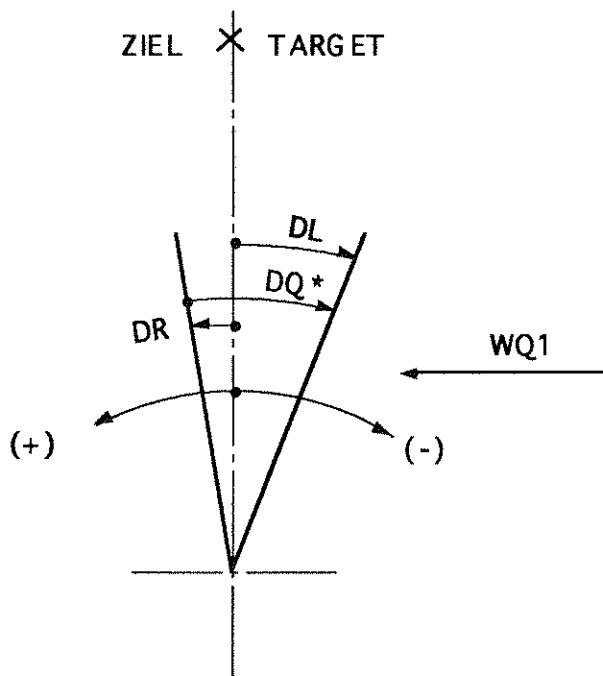
$DQ = + 4.2 \text{ mils}$ (to the left),
 for $WQ = + 10 \text{ m/s}$ (from the left)

$$DQ \text{ (corrected)} = DQ^* = \\ WQ_1 \cdot DQ / WQ = (-2) \cdot 4.2 / 10 = -0.8 \text{ mils}$$

Definition: $DQ(+)$: correction to the left;
 $DQ(-)$: correction to the right

Total lateral correction DL:

$$DL = DR + DQ^* = 0.5 - 0.8 = \\ = -0.3 \text{ mils} \text{ (to the right)}$$



Einschränkung beim Gebrauch der Korrekturtafeln

Der Gebrauch der Korrekturtafeln für die Behandlung kombinierter Störungseinflüsse bei Distanzen grösser als 4500 m sollte nach Möglichkeit vermieden werden, da die Methode der Ueberlagerung von explizierten, linearisierten Störungsbeträgen in diesem Bereich zu merkbaren Schusswinkel- bzw. Distanzfehlern führen kann.

Restriction in the use of the correction tables

The use of the correction tables for the determination of combined perturbation effects should be avoided as far as possible for distances exceeding 4500 m, as beyond this range the method of superposition of explicit, linearized perturbation values may result in appreciable errors in superelevations and in distance.



2.8 FLUGBAHNKARTE

Geschosstyp MSD 020
 Mündungsgeschwindigkeit 1175 m/s
 Geschossmasse 0.550 kg

ICAO-Atmosphäre nach DIN ISO 2533
 Mündungshöhe 0 m ü M.
 Lufttemperatur (an der Mündung) 15 °C
 Luftdichte 1.2250 kg/m³
 Luftdruck 1013.25 mbar

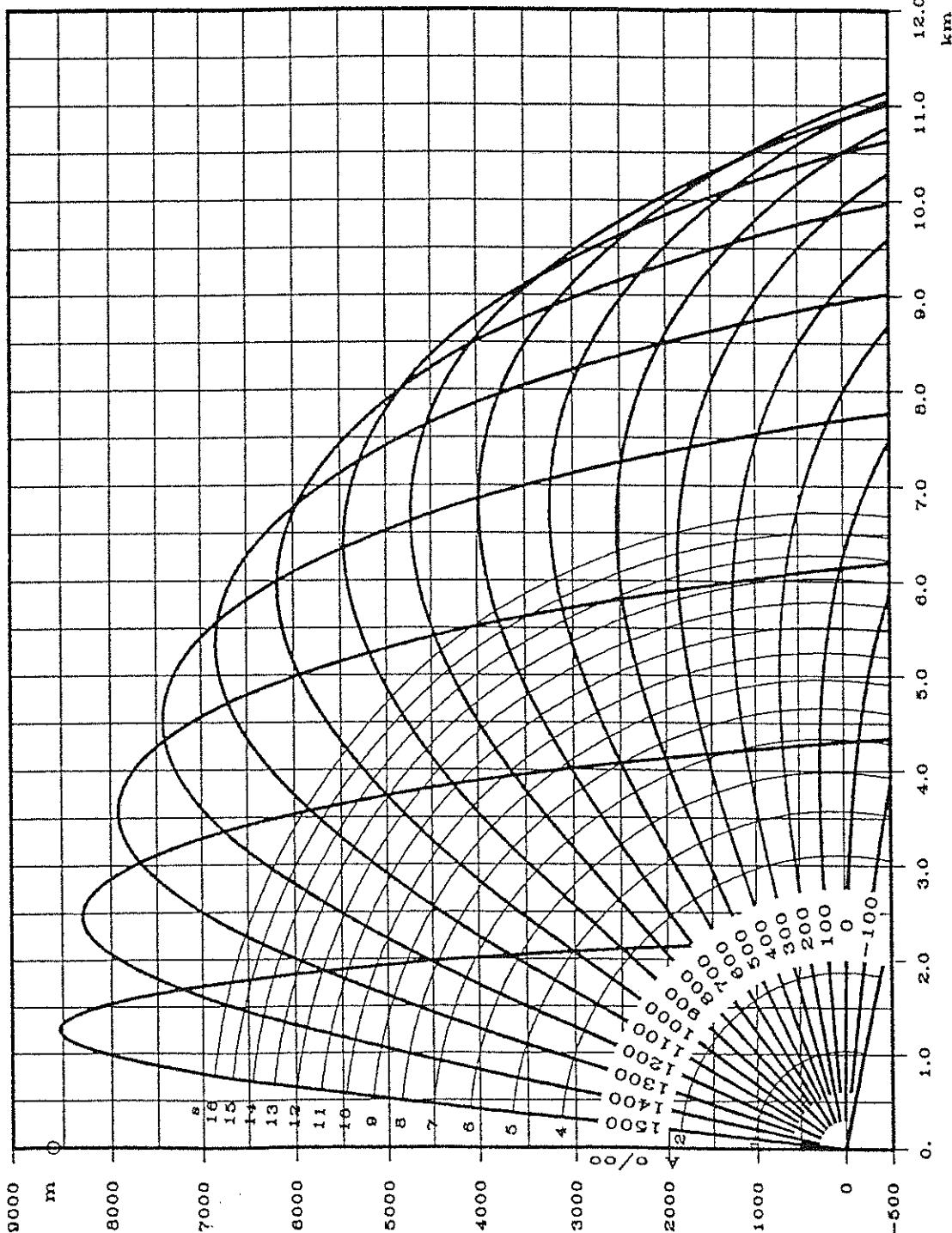
CW-Diagramm WK 801 102AV
 Identisch WW 853 000

2.8 TRAJECTORY CHART

Projectile Type MSD 020
 Muzzle Velocity 1175 m/s
 Projectile Mass 0.550 kg

ICAO-Standard Atmosphere ISO 2533
 Muzzle Altitude 0 m a. S.L.
 Air Temperature (at Muzzle) 15 °C
 Air Density 1.2250 kg/m³
 Air Pressure 1013.25 mbar

C_D-Diagram WK 801 102AV
 Identical WW 853 000



OERLIKON-CONTRAVES
PYROTEC AG

(V₀=1175m/s)
Exterior Ballistics 35mm
Aussenballistik 35mm

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
3	49	50	
WK801103AV			B

3. DOKUMENTENVERZEICHNIS

gültig letzter Index

WK MSD 020

35mm Geschoss MS

WK 801 102 AV
(Identisch WW 853 000)

CW-Diagramm

DIN ISO 2533

ICAO-Normatmosphäre

3. DOCUMENTARY LIST

latest index valid

WK MSD 020

35mm Geschoss MS

WK 801 102 AV
(Identical WW 853 000)

CD-Diagram

ISO 2533

ICAO-Standard Atmosphere



OERLIKON-CONTRAVES
PYROTEC AG

(Vo=1175m/s)
Exterior Ballistics 35mm
Aussenballistik 35mm

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
3	50	50	
WK801103AV			B

SECTION 5A

ABM/KETF 35MM X 228 AMMUNITION/PMD330

AIR BURST MUNITION/KINETIC ENERGY TIME FUZE

FACT SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

ABM/KETF 35 MM X 228 AMMUNITION/PMD 330

AIR BURST MUNITION/KINETIC ENERGY TIME FUZE



- KETF ammunition, based on the NATO qualified Ahead technology, contains an electronic timer module which is programmed inductively at the muzzle with compensation for variations in projectile velocity to ensure precise down-range payload release
- The payload consists of 407 cylindrical tungsten alloy sub-projectiles, each weighing 1.24g, which are released by a small ejection charge (<1g) just ahead of the target
- The individual subprojectiles are spin stabilised and form a lethal cone of "fragments", which significantly increases hit probability, especially at extended ranges

- The lethality of the KETF ammunition can be adjusted by varying the stand-off distance at which the subprojectiles are released in front of the target and the number of rounds fired
- The ability to adjust the stand-off distance ensures that KETF ammunition is able to defeat a wide range of modern battlefield threats including, IFVs, ATGM bunkers, dismounted troops and helicopters
- KETF ammunition based on the Ahead technology is the ideal solution for modern vehicle armament, as well as for terrestrial air defence, and naval applications

Main Features

Performance

Wide range of targets
(lethal to less-than-lethal)

Firing mode Single shot and automatic mode

Safety Insensitive munition (<1g HE)

Environment No toxic elements

Transport/Storage UN Classification 1.2E

Gun/System
incl. Bush III, RH503, KDA, KDC, KDG35/1000

Technical Data

Total length of round 387 mm

Mass of round	1,770 g
Mass of projectile	750 g
Mass of payload	500g (tungsten-alloy)
Propellant	NC type
Muzzle velocity	1,050 m/sec
Cartridge case	Steel
Temperature range (functional)	-30°C to +50°C
Fuze programming at the muzzle	
Muzzle safety	> 60 m
Time resolution	2 msec
Self destruct	8.2 sec (approx. 5 km)
Dispersion	1.0 mil

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 5B

ABM/KETF 35MM X 228 AMMUNITION/PMD330

AIR BURST MUNITION/KINETIC ENERGY TIME FUZE

CERTIFICATE

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



Certificate No 4'205'968

Transport Classification of Dangerous Goods / Transportklassifizierung von Gefahrgut

Customer Auftraggeber	RWM Schweiz AG Fertigungszentrum Altdorf Industriezone Schächenwald CH – 6460 Altdorf UR
Your order / Ihr Auftrag	dated 26.10.2011
Your reference / Ihre Referenz	Kostenstelle 408, Marly Gisler
Our reference / Unsere Referenz	SM 154694 / HOS
Substance / object Stoff / Gegenstand	Cartridges for weapons with bursting charge, type 35 mm x 228 ABM / KETF, according to WK PMD 330 and RS PMD 330
Documents to consider / Mitgelieferte Unterlagen	<ul style="list-style-type: none">• Drawing No WK PMD 330 of the manufacturer• Drawing No RS PMD 330 of the manufacturer• Parts list RS PMD 330 of the manufacturer• Classification of ammunition – bonfire test, test report No ETN 3Q487, Ministry of Defence, GB (Pee Shoe- buryness)

Based on the results of the tests, carried out in accordance with the UN-Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, ST/SG/AC.10/11/Rev. 5, the above mentioned articles are classified as dangerous goods. The classification for all modes of transport according to the transport regulations RID, ADR, IMDG-Code and ICAO-TI reads as follows:

UN 0321 CARTRIDGES FOR WEAPONS with bursting charge

- Classification code: 1.2 E
- Label: No 1

This transport classification refers to the cartridges, packed in:

- Inner packagings:
 1. Plastics foam parts or paper tubes.
 2. Plastics boxes, according to WV 435 350.
- Intermediate packagings: Not necessary.
- Outer packagings:
 1. Steel boxes (4A), type Standard-METALBOX M548, containing not more than 30 linked or unlinked cartridges.

UN-marking of the boxes:

Diese Bescheinigung umfasst 2 Seite(n).
This certificate includes 2 page(s).

UN 4A / Y 80 / S / *year of manufacture* / CH 2338 – OE

1. Steel boxes (code 4A), type KIMU DM 40035 or KIMU DM 87176, containing not more than 16 linked or unlinked cartridges.

UN-marking of the boxes:

UN 4A / Y49 / S / *year of manufacture* / D / BAM 5533 – BW
– DNM

UN 4A / Y65 / S / *year of manufacture* / D / BAM 12268 – BW
– DNM

This certificate was issued by the Swiss competent authority, the Federal Inspectorate of Dangerous Goods (EGI), CH – 8304 Wallisellen.

Wallisellen, 01.11.2011

SVTI / ASIT
Federal Inspectorate of Dangerous Goods (EGI)



Dr. Silke Holzinger

4205968e_UN0321_1-2E_RWM.doc

SECTION 5C

ABM/KETF 35MM X 228 AMMUNITION/PMD330

AIR BURST MUNITION/KINETIC ENERGY TIME FUZE

MATERIAL SAFETY DATA SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

		AB			M.K-0119		10.01.2006	G.Diewald		
Erstverwendung First Use	Position Item	Index Index	Änderung Modification		Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name		
	Gewicht/Weight kg		Aehnlich wie/Similar to		Ersatz für/Replaces	Abt./Dept. MS-OC	Freigabe Expert/Release Expert Datum Date 10.01.06 Name Name G.Diewald			
Datum Date	© 22.06.05		Name Name G.Diewald		Abt. Dept. MS-OC	Datum Date 10.01.06 Name Name Et.Rochat	Freigabe/Release Name Name			
RWM Schweiz AG Zürich / Switzerland		ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF				Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 1 14		
						WU425570AV				

1. STOFFBEZEICHNUNG, FIRMENBEZEICHNUNG

Produkt Name	PATRONE 35mm x 228 KETF (Kinetische Energie, Zeitzünder)		
Produkt Nr.	WKPM330		
Verwendung	35mm Waffensysteme		
Firma	RWM Schweiz AG Birchstrasse 155 Postfach, CH-8050 Zürich		
Allgemeine Telefonnummer	+41 44 316 22 11		
Telefax	+41 44 316 24 79		

2. ZUSAMMENSETZUNG/ANGABEN ZU BESTANDTEILEN

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
			pro Patrone	
Treibladung WUPGD750AB			Total [340 g]	[18.99%]
Nitrocellulose (NC)	9004-70-0	keine Daten	300 g	16.94
Campher	464-48-2	13 mg/m ³	20 g	1.30
Akardit II	13114-72-2	keine Daten	3.4 g	0.19
Kaliumsulfat	7778-80-5	keine Daten	3.4 g	0.19
Calciumcarbonat	1317-65-3	keine Daten	0.68 g	0.03
Graphit	7440-44-0	15 mg/m ³	3.7 g	0.20
Ethanol	64-17-5	960 mg/m ³	1.36 g	0.07
Ether	60-29-7	1200 mg/m ³	1.36 g	0.07
Anzündsatz zu WK402902A			Total[0.044 g]	[0.0025%]
Anzündhütchen 5346, RUAG				
(DM 1034A1)				
Bleistyphnat	15245-44-0	0.1 mg/m ³ (als Blei)	0.0192 g	0.0011
Bariumnitrat	10022-31-8	0.5 mg/m ³ (als Ba)	0.0192 g	0.0011
Bleidioxid (PbO ₂)	1309-60-0	0.1 mg/m ³ (als Blei)	0.0025 g	0.0001
Tetrazen	109-27-3	keine Daten	0.0005 g	0.00003
Antimontrisulfid	1345-04-06	0.5 mg/m ³ (als Sb)	0.0012 g	0.0001
Calciumsilizid	12013-55-7	keine Daten	0.0018 g	0.0001
Anzündsatz YIP613/1 zu			Total[0.65 g]	[0.0360%]
Zündschraube WKZSD304				
Titan	7440-32-6	1.5 mg/m ³	0.19 g	0.010
Kaliumperchlorat	7778-74-7	keine Daten	0.44 g	0.025
Siliziumdioxid	7631-86-9	4 mg/m ³	0.02 g	0.001

RWM Schweiz AG
Zürich / Switzerland

ROUND PMD330, 35MM x 228, KETF

PATRONE PMD330, 35MM x 228, KETF

Masstab
ScaleEntw.-Stufe
Design StageBlatt
Sheet

2 14

WU425570AV

DB
B

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
Anzündsatz zu elektrischen Anzündhütchen EL 166, WK801158			Total [0.03 g]	[0.0017%]
Bleistypnat	15245-44-0	0.1 mg/m ³ (als Blei)	0.015 g	0.0008
Bariumnitrat	10022-31-8	0.5 mg/m ³ (als Ba)	0.007 g	0.0004
Calciumsilizid	12013-55-7	keine Daten	0.005 g	0.0003
Kupfer (II) oxid	1317-38-0	1 mg/m ³ (als Cu)	0.003 g	0.0002
Sprengstoff zu Sprengkapsel WKSXK159			Total [0.132 g]	[0.0074%]
Bleiazid	13424-46-9	0.1 mg/m ³ (als Blei)	0.100 g	0.0056
Tetrazen	109-27-3	keine Daten	0.002 g	0.0001
Oktogen (HMX)	2691-41-0	keine Daten	0.030 g	0.0017
Sprengstoff zu Ausstossladung WKVKX465 (PBXN-5)			Total [1.0 g]	[0.056%]
Oktogen (HMX)	2691-41-0	keine Daten	0.95 g	0.053
Fluorelastomer (Viton A®)	---	keine Daten	0.05 g	0.003
Patronenhülse WK700153 mit Zündschraube			Total [680 g]	[38.52%]
Legierungsbestandteile				
Eisen	7439-89-6	1.5 mg/m ³	624 g	35.34
Kupfer	7440-50-8	1 mg/m ³	40 g	2.25
Zink	7440-66-6	keine Daten	15 g	0.84
Chrom	7440-47-3	1.5 mg/m ³	0.6 g	0.03
Blei	7439-92-1	0.1 mg/m ³)	0.6 g	0.03
Nickel	7440-02-0	keine Daten	0.6 g	0.03
Projektil WKMTD330			Total [750 g]	[42.57%]
Legierungsbestandteile				
Eisen	7439-89-6	5 mg/m ³	10 g	0.56
Aluminium	7429-90-5	1.5 mg/m ³	221 g	12.57
Zink	7440-66-6	keine Daten	11.5 g	0.65
Kupfer	7440-50-8	1 mg/m ³	5 g	0.28
Chrom	7440-47-3	1.5 mg/m ³	1.5 g	0.08
Nickel	7440-02-0	keine Daten	10 g	0.56
Wolfram	7440-33-7	keine Daten	485 g	27.40
Chemisch technische Produkte				
Kunststoffe, EP, GFK, POM, PPO	--	keine Daten	5.4 g	0.30
Farbe, EP, EEA, PTFE	---	keine Daten	3 g	0.17

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				3	14

WU425570AV

DB
B

3. GEFAHREN-HINWEISE, MÖGLICHE GEFAHREN

Augen	Gase können die Augen reizen
Haut	Reizung intakter Haut ist nicht zu erwarten
Verschlucken	Ereignis unwahrscheinlich
Einatmen	Enthält einen kleinen Anteil Blei, Antimon, Kupfer, und Barium. Längere Exposition (Einatmen von Staub oder Dämpfen) kann den Blut-Schwermetall-Pegel erhöhen und folgende Störungen verursachen: Schädigung des Zentralnervensystems; Schädigung der Nieren; Anämie durch nachteilige Beeinflussung des Blutbildungsprozesses, nachteilige Beeinflussung des männlichen und weiblichen Fortpflanzungs-Systems und des Fötus.
Krebs-Information	Keine Informationen
	* Die Chemikalien sind in der Munition versiegelt; Gefahren würden nach Verpuffung oder Zerlegung auftreten

4. ERSTE HILFE-MASSNAHMEN

Augen	Augen während 15 Minuten mit fliessendem Wasser ausspülen
Haut	Mit milder Seife und Wasser abwaschen
Verschlucken	Kein Erbrechen einleiten, Arzt konsultieren.
Einatmen	An die frische Luft bringen
Anmerkungen für den Arzt	Keine spezifischen Anweisungen

5. MASSNAHMEN ZUR BRANDBEKÄMPFUNG

Brand-Eigenschaften	
Zünd-Temperatur	ca. 170°C (Treibladungspulver)
Feuergefährliche Grenzen	
untere Explosionsgrenze:	%
obere Explosionsgrenze:	%
N / A	N / A
Gefährliche Zersetzungsprodukte	Stickoxide, Kohlenmonoxid, verschiedene Stäube und Dämpfe (Blei, Kupfer, Antimon, und Barium)
Feuerlöschmittel	Metall-Löschrückmittel, Sand, Talk

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			4	14	D B

6. MASSNAHMEN BEI UNBEABSICHTIGTER FREISETZUNG

Freisetzung oder Verschütten	Verschüttetes Material wird mit einer weichen Bürste und einer leitenden Gummischaufel aufgenommen. Es sind leitende Behälter zu benutzen. Keine klemmenden oder metallischen Werkzeuge verwenden. Vermeiden Sie scharfe Gegenstände, Sand, Glas, körniges oder anderes Material, das Explosivstoffe sensibilisiert. Zum desensibilisieren mit Wasser anfeuchten. Wasser und Dampf kann für die Reinigung verwendet werden.
Hinweise zur Entsorgung	Explosivstoffe sollten durch Verbrennen in einem Verbrennungsofen mit Gasreinigung zerstört werden. Der Aufstellungsort des Verbrennungsofens sollte so gewählt werden, dass ein ausreichender Schutzabstand für Service und Personal zur Verfügung steht. Das Personal sollte flammhemmende Anzüge und Splitterschutz tragen.

7. INFORMATIONEN ZUR REAKTIVITÄT

Stabilität	Stabil
Unverträglichkeit	Oxidationsmittel, korrosive Materialien
zu vermeidende Bedingungen	Hitze, Schlag, statische Elektrizität, offene Flammen

8. MASSNAHMEN ZUR EXPOSITIONSBEGRENZUNG

Atemschutz	Die Patrone ist verschlossen und wirft kein Expositions-Problem auf, es sei denn bei Demontage, Deflagration oder Detonation. Es liegt in der Verantwortlichkeit des Anwenders, festzustellen, unter welchen Umständen Atemschutz erforderlich ist.
Handhabungsschutz	Nach Prüfungen: Handschuhe
Ventilation	Bei zerstörenden Prüfungen ist es nötig, die Verbrennungsgase abzusaugen.
Augenschutz	Mindestens Schutzbrille mit Seitenschutz tragen.

9. PHYSIKALISCHE UND CHEMISCHE EIGENSCHAFTEN

Siedepunkt	N / A	Löslichkeit	N / A
Schmelzpunkt	N / A	Dichte	N / A
Dampfdruck	N / A	pH	N / A
Dampfdichte	N / A	Geruch	N / A
Aussehen	Geschoss : Schwarz		
	Hülse: Grauschwarz		

10. SARA 313 CHEMIKALIEN, UMWELT-INFORMATIONEN

Chemikalien	CAS-Nr.
Blei und Bleiverbindungen	7439-92-1
Barium und Bariumverbindungen	7440-39-3
Kupfer und Kupferverbindungen	7440-50-8
Antimon und Antimonverbindungen	7440-36-0

11. TOXIKOLOGISCHE INFORMATIONEN

Keine zusätzlichen Informationen

12. TRANSPORTINFORMATIONEN

Transport-Klassifikation UN Nr. **0321**, Klasse **1.2E**,
PATRONE FÜR WAFFEN, mit Sprengladung

13. INFORMATIONSQUELLEN

Dieses Sicherheitsdatenblatt wurde erstellt mit Hilfe von Informationen von folgenden Stellen:
Hersteller der Komponenten.

Recommendations of the Transport of Dangerous Goods, United Nations ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Eidgenössisches Bundesamt für Gesundheitswesen (BAG).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Missbrauch oder unvorhergesehene Umstände sind nicht berücksichtigt.

Änderungen des Sicherheitsdatenblattes können durch weitere Informationen von Zeit zu Zeit nötig werden.

RWM Schweiz AG gibt an Vertreter, Angestellte oder Fremdfirmen keine Garantie hinsichtlich der Anwendbarkeit dieser Informationen zum beabsichtigten Zweck des Benutzers oder für Konsequenzen für seinen Gebrauch oder Fehlanwendung.

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 6	Blätter Sheets 14
			WU425570AV		DB B

Dok. Art:	MATERIAL SAFETY DATA SHEET				Doc. Type:	FICHE DE DONNEES DE SECURITE				50					
Blatt Sheet	Deutsch/German 1 bis to 6		Blatt Sheet	Englisch/English 7 bis to 12		Blatt Sheet	Französisch/French 13 bis to 14		Blatt Sheet	Italienisch/Italian bis to		49			
												48			
												47			
												46			
												45			
												44			
												43			
												42			
												41			
												40			
												39			
												38			
												37			
												36			
												35			
												34			
												33			
												32			
												31			
												30			
												29			
												28			
												27			
												26			
												25			
												24			
												23			
												22			
												21			
												20			
												19			
												18			
												17			
												16			
												15			
												14			
												13			
												12			
												11			
												10			
												9			
												8			
												7			
												6			
												5			
												4			
												3			
												2			
												Bl./ Sh.	DI		
			AB				M.K-0119	10.01.2006		G.Diewald					
Erstverwendung <i>First Use</i>		Position <i>Item</i>	Index <i>Index</i>	Änderung <i>Modification</i>			Ae-Nr. <i>Rev.-No.</i>	Feld <i>Zone</i>	Datum <i>Date</i>	Name <i>Name</i>					
							MS-OC	Datum <i>Date</i>	Freigabe Expert/ <i>Release Expert</i>	Name <i>Name</i>	G.Diewald				
Datum <i>Date</i>	© 22.06.05	Name <i>Name</i>	G.Diewald			Abt. <i>Dept.</i>	MS-OC	Datum <i>Date</i>	Freigabe/ <i>Release</i>	Name <i>Name</i>	Et.Rochat				
RWM Schweiz AG Zürich / Switzerland		ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF						Massstab <i>Scale</i>	Entw.-Stufe <i>Design Stage</i>	Blatt <i>Sheet</i>	Blätter <i>Sheets</i>				
								7		14					
								WU425570AV				DL B			

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name	ROUND 35mm x 228, KETF (Kinetic energy, time fuzed)
Product No.	WKPM330
Application	35 mm Gun Systems
Company	RWM Schweiz AG Birchstrasse 155 P.O.Box, CH-8050 Zürich
General Phone Number	+41 44 316 22 11
Telefax	+41 44 316 24 79

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS-No.	EXPOSURE LIMIT	WEIGHT	%
per Round				
Propellant WUPGD750AB			Total [340 g]	[18.99%]
Nitrocellulose (NC)	9004-70-0	None Established	300 g	16.94
Camphor	464-48-2	13 mg/m ³	20 g	1.30
Akardit II	13114-72-2	None Established	3.4 g	0.19
Potassium sulfate	7778-80-5	None Established	3.4 g	0.19
Calcium carbonate	1317-65-3	None Established	0.68 g	0.03
Graphite	7440-44-0	15 mg/m ³	3.7 g	0.20
Ethanol	64-17-5	960 mg/m ³	1.36 g	0.07
Ether	60-29-7	1200 mg/m ³	1.36 g	0.07
Primer composition to WK402902A			Total[0.044 g]	[0.0025%]
Primer 5346 RUAG, (DM1034A1)				
Lead styphnate	15245-44-0	0.1 mg/m ³ (as Lead)	0.0192 g	0.0011
Barium nitrate	10022-31-8	0.5 mg/m ³ (as Ba)	0.0192 g	0.0011
Lead dioxide (PbO ₂)	1309-60-0	0.1 mg/m ³ (as Lead)	0.0025 g	0.0001
Tetracene	109-27-3	None Established	0.0005 g	0.00003
Antimony sulfide	1345-04-06	0.5 mg/m ³ (as Sb)	0.0012 g	0.0001
Calcium silicide	12013-55-7	None Established	0.0018 g	0.0001
Primer charge YIP613/1 to			Total[0.65g]	[0.0360%]
Primer screw WKZSD304				
Titanium	7440-32-6	1.5 mg/m ³	0.19 g	0.010
Potassium perchlorate	7778-74-7	None Established	0.44 g	0.025
Silicon dioxide	7631-86-9	4 mg/m ³	0.02 g	0.001

RWM Schweiz AG
Zürich / Switzerland

ROUND PMD330, 35MM x 228, KETF

PATRONE PMD330, 35MM x 228, KETF

Masstab
ScaleEntw.-Stufe
Design StageBlatt
SheetBlätter
Sheets

8 14

WU425570AV

DB
B

Component	CAS-No.	Exposure-Limit	Weight	%		
Primer composition to electrical			Total[0.03g]	[0.0360%]		
Primer EL 166, WK801158						
Lead styphnate	15245-44-0	0.1 mg/m ³ (as Lead)	0.015 g	0.0008		
Barium nitrate	10022-31-8	0.5 mg/m ³ (as Ba)	0.007 g	0.0004		
Calcium silicide	12013-55-7	None Established	0.005 g	0.0003		
Copper (II) oxide	1317-38-0	1 mg/m ³ (as Cu)	0.003 g	0.0002		
High explosive to Detonator			Total[0.132 g]	[0.0074%]		
WKSXK159						
Lead azide	13424-46-9	0.1 mg/m ³ (as Lead)	0.100 g	0.0056		
Tetracene	109-27-3	None Established	0.002 g	0.0001		
Octogen (HMX)	2691-41-0	None Established	0.030 g	0.0017		
High explosive to ejecton charge			Total[1.0 g]	[0.056%]		
WKVKX465, (PBXN-5)						
Octogen (HMX)	2691-41-0	None Established	0.95 g	0.053		
Fluoro elastomere (Viton A [®])	---	None Established	0.05 g	0.003		
Cartridge case WK700153,			Total [680 g]	[38.52%]		
with primer screw						
Alloying constituents						
Iron	7439-89-6	1.5 mg/m ³	624 g	35.34		
Copper	7440-50-8	1 mg/m ³	40 g	2.25		
Zinc	7440-66-6	None Established	15 g	0.84		
Chromium	7440-47-3	1.5 mg/m ³	0.6 g	0.03		
Lead	7439-92-1	0.1 mg/m ³	0.6 g	0.03		
Nickel	7440-02-0	None Established	0.6 g	0.03		
Projectile WKMTD330			Total [750 g]	[42.57%]		
Alloying constituents						
Iron	7439-89-6	5 mg/m ³	10 g	0.56		
Aluminium	7429-90-5	1.5 mg/m ³	221 g	12.57		
Zinc	7440-66-6	None Established	11.5 g	0.65		
Copper	7440-50-8	1 mg/m ³	5 g	0.28		
Chromium	7440-47-3	1.5 mg/m ³	1.5 g	0.08		
Nickel	7440-02-0	None Established	10 g	0.56		
Tungsten	7440-33-7	None Established	485 g	27.40		
Chemico-technical products						
Plastics, EP, GFK, POM, PPO,	--	None Established	5.4 g	0.30		
Varnish, EP, EEA, PTFE	---	None Established	3 g	0.17		
RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF		Masstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				9	14	
			WU425570AV		D B	

3. HAZARD IDENTIFICATION *

EYE	Gases may irritate the eyes
SKIN	Should not irritate the intact skin
INGESTION	Unlikely to occur
INHALATION	Contains a small amount of lead, antimony, copper, and barium per unit, however prolonged exposure (breathing dust or fumes) will increase the blood-heavy-metals- levels causing the following: Central nervous system damage; cause kidney damage; adversely affect the blood-forming process causing anemia; affect male and female reproductive system and the developing fetus.
CANCER INFORMATION	N / A

- * The chemicals are sealed within the munitions; hazards would occur upon detonation, deflagration or disassembly

4. FIRST AID MEASURES

EYES	Flush eyes with water for 15 minutes
SKIN	Remove with a mild soap and water
INGESTION	Do not induce vomiting until consultation with doctor
INHALATION	Remove to fresh air
NOTE TO PHYSICIAN	No specific instructions

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

IGNITION TEMPERATURE approx. 170°C (propellant)

FLAMMABLE LIMITS

LOWER EXPLOSIVE LIMIT: % N / A UPPER EXPLOSIVE LIMIT: % N / A

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of nitrogen, carbon monoxide, various dusts and fumes (lead, antimony, copper, and barium).

EXTINGUISHING MEDIA Metal extinguisher, Sand, Talc

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONEN PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		10	14	D	B
				WU425570AV	

6. SPILLS \ LEAKS \ AND DISPOSAL PROCEDURES

SPILLS AND LEAKS

Cleanup spills with a soft bristle brush and conductive rubber-pan or rubber shovel. Use conductive containers. Avoid pinching material or metal to contact. Avoid sharp objects, sand, glass, grit or other material that sensitizes explosives. Wet with water to desensitize. Water and steam may be used for decontaminating.

WASTE DISPOSAL PROCEDURES

Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.

7. REACTIVITY INFORMATION

STABILITY

Stable

INCOMPATIBILITIES

Oxidizers, corrosive agents

CONDITIONS TO AVOID

Heat, shock, static electric discharge, open flame

8. EXPOSURE CONTROL MEASURES

RESPIRATORY PROTECTION

This item is enclosed and does not pose an exposure problem unless disassembled, deflagrated or detonated. It is the responsibility of the employer to determine under what circumstances require respiratory protection

HAND PROTECTION

Following testing: Gloves

VENTILATION

Following testing allow products of combustion to clear before entering test range.

EYE PROTECTION

Wear as a minimum safety glasses with side shields.

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point	N / A	Solubility	N / A
Melting Point	N / A	Specific Gravity	N / A
Vapor Pressure	N / A	pH	N / A
Vapor Density	N / A	Odor	N / A
Appearance	Projectile : Black		
	Case: Grayish black		

10. SARA 313 CHEMICALS

Chemicals	CAS-No.
Lead and Compounds	7439-92-1
Barium and Compounds	7440-39-3
Copper and Compounds	7440-50-8
Antimony and Compounds	7440-36-0

11. TOXICOLOGICAL INFORMATION

No additional information

12. TRANSPORTATION INFORMATION

U.S. DOT Proper Shipping Name: CARTRIDGES FOR WEAPONS, with bursting charge
 UN ID No.: UN No. 0321
 Class & Division: 1.2E

13. INFORMATION SOURCES

This MSDS has been prepared from information obtained from one or more of the following:

The manufacturer of the components.

Recommendations of the Transport of Dangerous Goods, United Nations, ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Swiss-Office Federal of Sanitation (care of health).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Abuse or unforeseen circumstances are not addressed here.

Information may be developed from time to time which may render the conclusions of the MSDS obsolete. RWM Schweiz AG makes no warranties to its agents, employees, or contractors as to the applicability of this information to the user's intended purpose or for consequences for its use or misuse.

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				12	14

WU425570AV

D
B

Dok. Art:	MATERIAL SAFETY DATA SHEET			Doc. Type:	FICHE DE DONNEES DE SECURITE			50				
	Deutsch/German Blatt Sheet	1 bis to	6	Englisch/English Blatt Sheet	7 bis to	12	Französisch/French Blatt Sheet	13 bis to	14	Italienisch/Italian Blatt Sheet	bis to	49
												48
												47
												46
												45
												44
												43
												42
												41
												40
												39
												38
												37
												36
												35
												34
												33
												32
												31
												30
												29
												28
												27
												26
												25
												24
												23
												22
												21
												20
												19
												18
												17
												16
												15
												14
												13
												12
												11
												10
												9
												8
												7
												6
												5
												4
												3
												2
												BI./ Sh.
												DI
			AB				M.K-0119			10.01.2006		G.Diewald
Erstverwendung First Use	Position Item	Index Index		Aenderung Modification		Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name			
	Gewicht/Weight kg		Aehnlich wie/Similar to		Ersatz für/Replaces	Abt./Dept.	Freigabe Expert/Release Expert					
						MS-OC	Datum Date	10.01.06	Name Name			
Datum Date	© 22.06.05	Name Name	G.Diewald	Abt. Dept.	MS-OC	Datum Date	10.01.06	Name Name				
RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF						Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets	13	14
							WU425570AV				DL B	

SENSIBILITE LA PLUS ELEVEE	PRECAUTIONS APPRENDRE EN CAS D'INCENDIE
<p>Des matières logées dans le produit : Conditions to avoid: Heat, shock, static electric discharge, open flame</p> <p>Ignition temperature of propellant : approx. 170°C</p> <p>Primer cap of cartridge case</p> <p>Du produit emballé : Fire of storage building Drop of original packed munitions from height ≥2m</p>	<p>Extinguishing media : Metal extinguisher, Sand, Talc</p> <p>On fire of storage building: no intervention recommended.</p> <p>Try to dislocate ammo stacks stored outside and in the immediate proximity of burning storage building.</p> <p>As the chemical are sealed within the munitions, hazards would occurs upon deflagration as oxides of nitrogen, carbon monoxide, various dusts and fumes (very small quantity of lead, copper, antimony, and barium).</p>

RWM Schweiz AG Zürich / Switzerland	ROUND PMD330, 35MM x 228, KETF PATRONE PMD330, 35MM x 228, KETF	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets 14 14
WU425570AV					DB B

SECTION 5D

ABM/KETF 35MM X 228 AMMUNITION/PMD330

AIR BURST MUNITION/KINETIC ENERGY TIME FUZE

EXTERIOR BALLISTICS DATA

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

Dok. Art:	Spezifikation	Doc. Type:	Specification		
Blatt Sheet	Deutsch/German 1 bis 50	Englisch/English Blatt Sheet 1 bis 50	Französisch/French Blatt Sheet bis 50	Italienisch/Italian Blatt Sheet bis 50	50
					49
					48
					47
					46
					45
					44
					43
					42
					41
					40
					39
					38
					37
					36
					35
					34
					33
					32
					31
					30
					29
					28
					27
					26
					25
					24
					23
					22
					21
					20
					19
					18
					17
					16
					15
					14
					13
					12
					11
					10
					9
					8
					7
					6
					5
					4
					3
					2
					Bl./Sh.

Anschlussdokumente:

WK802154AV CW-GESETZ-DATEN
CD-LAW-DATA

2. AUSSENBALLISTISCHE DATEN

2.1 ALLGEMEINE DATEN

Diese Spezifikation enthält Schusstafeln, sowohl für den Erd- als auch für den Flabeinsatz. Die zugehörigen Korrekturtafeln erlauben die Berücksichtigung von Abweichungen gegenüber den Standardbedingungen.
Die Standardbedingungen in den Tafeln sind durch folgende Größen charakterisiert:

STANDARDBEDINGUNGEN

a) Kanone und Geschoss

Kanonentyp(en)	Bushmaster III / KDC / KDB
Rohr:	Kaliber 35 mm Länge (in Kaliber) 90 Anzahl Züge 24 Drallwinkel 0° bis 6.5°, rechts
Mündungsgeschwindigkeit (Vo)	1050 m/s
Treibladungstemperatur	+21°C
Geschossmasse	0.7457 kg
Geschossdurchmesser	35 mm
Geschosstyp(en)	Geschoss MT
Widerstandsbeiwert (C_w)	WK802154AV
Patronentyp(en)	Patrone MT
Einsatzdistanz	Max. 4.5 km

b) Atmosphäre an der Mündung

ICAO-Normatmosphäre	DIN ISO 2533
Mündungshöhe	0 m ü.M.
Luftdichte (ρ_0)	1.2250 kg/m³
Temperatur (T_0)	15° C
Druck (P_0)	1013.25 mbar
Wind-Geschwindigkeit	0 m/s
Relative Feuchtigkeit	0 %

Bemerkung:

Diese ballistischen Tafeln basieren auf genauen ballistischen Messungen (Doppler Radar), in einem Bereich, der die maximale Einsatzdistanz der entsprechenden Munition abdeckt und sind auf Normatmosphäre umgerechnet. Für grössere Distanzen haben die Angaben lediglich informativen Charakter.

2. EXTERIOR BALLISTICS DATA

2.1 GENERAL DATA

This specification contains firing tables for use in ground firing as well as for anti-aircraft firing. The influence of deviations from standard conditions may be taken into account by using the corresponding correction tables.
The standard conditions in the tables are characterized by the following values:

STANDARD CONDITIONS

a) Gun and Projectile

Gun Type(s)	Bushmaster III / KDC / KDB
Barrel:	Caliber 35 mm Length (in Caliber) 90 Number of Rifling Grooves 24 Twist Angle: 0° to 6.5°, right hand
Muzzle Velocity (Vo)	1050 m/s
Propellant Temperature	+21°C
Projectile Mass	0.7457 kg
Projectile Diameter	35 mm
Projectile Type(s)	Projectile KETF
Drag Coefficient (C_D)	WK802154AV
Ammunition Type(s)	Round KETF
Practical Range	Max. 4.5 km

b) Atmosphere at Muzzle

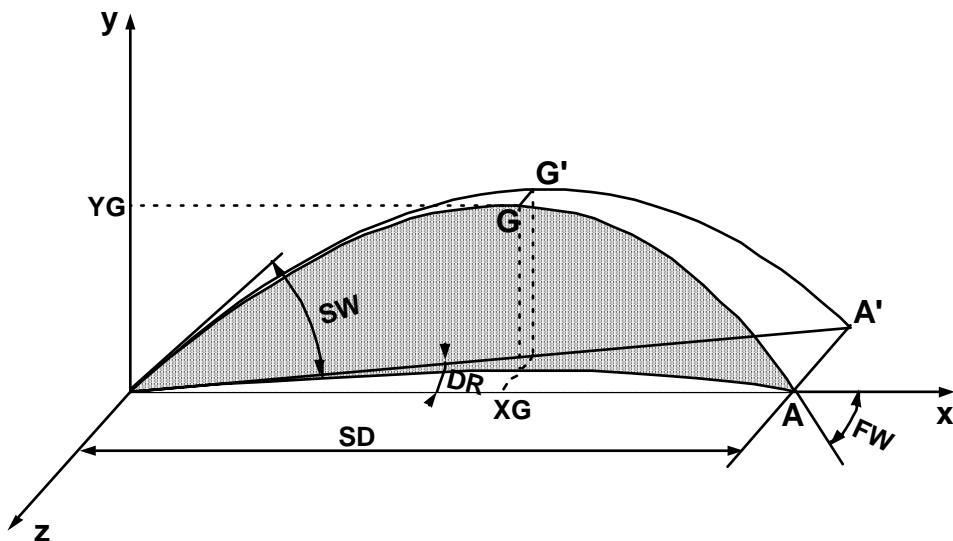
ICAO-Standard Atmosphere	ISO 2533
Muzzle Altitude	0 m above Sea Level
Density (ρ_0)	1.2250 kg/m³
Temperature (T_0)	15° C
Pressure (P_0)	1013.25 mbar
Wind Speed	0 m/s
Relative Humidity	0 %

Note:

The present tables are based on accurate ballistic measurements (Doppler Radar) taken over the maximum practical range and reduced to standard atmospheric conditions. Data given for greater ranges are for information only.

2.2 ERDSCHUSSTAFEL

2.2 GROUND FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- SD** Schussdistanz von Mündung bis Ziel (**A**)
- SW** Schusswinkel: Winkel, der eingestellt werden muss, um das Ziel (**A**) auf der gegebenen Distanz (**SD**) zu treffen
- FZ** Flugzeit des Geschosses von der Mündung bis zum Ziel (**A**)
- DR** Derivation: nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Derivationswinkel **DR** liegt in der Ebene (**X,Z**)
- XG** Gipfelentfernung (horizontal) der Geschossflugbahn
- YG** Gipfelhöhe der Geschossflugbahn über Mündungshöhe
- VE** Geschossgeschwindigkeit bei Distanz **SD**
- FW** Fallwinkel des Geschosses bei Distanz **SD**

DEFINITION of TABLE SYMBOLS

- SD** Range from muzzle to target (**A**)
- SW** Superelevation: angle to be set, in order to hit the target (**A**) at a range (**SD**)
- FZ** Time-of-Flight of the projectile from muzzle to target (**A**)
- DR** Drift: the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle lies in the plane (**X,Z**)
- XG** Vertex Abscissa: horizontal distance to the vertex
- YG** Vertex Height: vertical distance to the vertex above the muzzle
- VE** Remaining Velocity of the Projectile at range **SD**
- FW** Angle of Fall of the projectile at range **SD**

Alle Winkel sind in **mils** ($360^{\circ} = 6400$ mils) angegeben (mils = A $\%$).

All angles are given in **mils** ($360^{\circ} = 6400$ mils).

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 3	Blätter Sheets 50
WK802156AV					DI B

SD m	SW A o/oo	FZ s	DR A o/oo	XG m	YG m	VE m/s	FW A o/oo	SD m
100	0.5	0.096	0.0	50.0	0.0	1032.4	0.5	100
200	0.9	0.194	0.0	101.0	0.0	1014.8	0.9	200
300	1.4	0.293	0.0	151.0	0.1	997.3	1.5	300
400	1.9	0.394	0.0	202.0	0.2	979.8	2.0	400
500	2.4	0.497	0.1	254.0	0.3	962.3	2.5	500
600	2.9	0.602	0.1	305.0	0.4	944.9	3.1	600
700	3.4	0.709	0.1	357.0	0.6	927.5	3.7	700
800	4.0	0.818	0.1	410.0	0.8	910.2	4.4	800
900	4.5	0.929	0.1	462.0	1.1	893.0	5.1	900
1000	5.1	1.042	0.1	515.0	1.3	875.8	5.8	1000
1100	5.7	1.157	0.1	568.0	1.7	858.7	6.5	1100
1200	6.3	1.275	0.1	622.0	2.0	841.8	7.3	1200
1300	6.9	1.395	0.2	676.0	2.4	824.9	8.1	1300
1400	7.5	1.517	0.2	731.0	2.8	808.1	9.0	1400
1500	8.2	1.642	0.2	785.0	3.3	791.5	9.9	1500
1600	8.9	1.770	0.2	841.0	3.9	775.0	10.9	1600
1700	9.5	1.900	0.2	896.0	4.4	758.6	11.9	1700
1800	10.3	2.034	0.2	952.0	5.1	742.3	12.9	1800
1900	11.0	2.170	0.3	1009.0	5.8	726.1	14.1	1900
2000	11.7	2.309	0.3	1065.0	6.6	710.1	15.2	2000
2100	12.5	2.452	0.3	1123.0	7.4	694.2	16.5	2100
2200	13.3	2.597	0.3	1180.0	8.3	678.4	17.8	2200
2300	14.1	2.747	0.3	1238.0	9.3	662.7	19.2	2300
2400	15.0	2.899	0.4	1297.0	10.3	647.2	20.7	2400
2500	15.9	3.056	0.4	1356.0	11.5	631.8	22.3	2500
2600	16.8	3.216	0.4	1416.0	12.7	616.6	23.9	2600
2700	17.7	3.380	0.4	1476.0	14.1	601.5	25.7	2700
2800	18.7	3.548	0.5	1536.0	15.5	586.6	27.5	2800
2900	19.7	3.721	0.5	1597.0	17.0	571.9	29.5	2900
3000	20.7	3.898	0.5	1659.0	18.7	557.3	31.6	3000
3100	21.8	4.080	0.5	1721.0	20.5	542.9	33.8	3100
3200	22.9	4.267	0.6	1783.0	22.4	528.6	36.2	3200
3300	24.0	4.459	0.6	1846.0	24.5	514.6	38.7	3300
3400	25.2	4.656	0.6	1910.0	26.7	500.7	41.4	3400
3500	26.5	4.858	0.7	1974.0	29.0	487.1	44.3	3500
3600	27.8	5.066	0.7	2039.0	31.6	473.6	47.3	3600
3700	29.1	5.280	0.8	2105.0	34.3	460.4	50.5	3700
3800	30.5	5.501	0.8	2171.0	37.2	447.3	54.0	3800
3900	31.9	5.728	0.9	2237.0	40.4	434.4	57.7	3900
4000	33.4	5.961	0.9	2305.0	43.8	421.7	61.6	4000
4100	35.0	6.202	1.0	2372.0	47.4	409.3	65.8	4100
4200	36.7	6.450	1.0	2441.0	51.3	397.0	70.3	4200
4300	38.4	6.706	1.1	2510.0	55.4	385.0	75.1	4300
4400	40.1	6.970	1.1	2580.0	59.9	373.4	80.2	4400
4500	42.0	7.242	1.2	2650.0	64.7	362.2	85.7	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

SD	SW	FZ	DR	XG	YG	VE	FW	SD
m	A o/oo	s	A o/oo	m	m	m/s	A o/oo	m
4600	44.0	7.522	1.3	2722.0	69.8	351.7	91.6	4600
4700	46.0	7.811	1.3	2793.0	75.3	342.5	97.8	4700
4800	48.1	8.107	1.4	2866.0	81.2	334.7	104.4	4800
4900	50.3	8.409	1.5	2938.0	87.6	327.8	111.2	4900
5000	52.6	8.717	1.5	3012.0	94.3	321.5	118.3	5000
5100	55.1	9.032	1.6	3085.0	101.6	315.6	125.7	5100
5200	57.6	9.353	1.7	3158.0	109.3	309.8	133.3	5200
5300	60.2	9.680	1.8	3232.0	117.5	304.2	141.2	5300
5400	62.9	10.013	1.9	3306.0	126.2	298.7	149.4	5400
5500	65.7	10.352	2.0	3379.0	135.4	293.3	157.9	5500
5600	68.6	10.698	2.1	3452.0	145.3	288.1	166.7	5600
5700	71.7	11.051	2.2	3525.0	155.7	282.9	175.9	5700
5800	74.8	11.411	2.3	3598.0	166.7	278.0	185.3	5800
5900	78.1	11.777	2.4	3670.0	178.3	273.1	195.1	5900
6000	81.4	12.151	2.5	3742.0	190.6	268.3	205.3	6000
6100	84.9	12.531	2.6	3814.0	203.5	263.7	215.8	6100
6200	88.5	12.920	2.7	3885.0	217.2	259.2	226.7	6200
6300	92.3	13.315	2.9	3955.0	231.6	254.9	237.9	6300
6400	96.1	13.718	3.0	4025.0	246.7	250.6	249.6	6400
6500	100.1	14.129	3.1	4094.0	262.7	246.5	261.6	6500
6600	104.2	14.548	3.3	4163.0	279.5	242.5	274.1	6600
6700	108.5	14.975	3.4	4232.0	297.2	238.7	286.9	6700
6800	112.9	15.411	3.6	4299.0	315.8	234.9	300.2	6800
6900	117.4	15.854	3.7	4367.0	335.2	231.3	313.9	6900
7000	122.1	16.307	3.9	4433.0	355.7	227.8	328.1	7000
7100	127.0	16.768	4.0	4499.0	377.1	224.5	342.6	7100
7200	132.0	17.238	4.2	4565.0	399.5	221.3	357.6	7200
7300	137.1	17.718	4.4	4630.0	423.0	218.2	373.1	7300
7400	142.5	18.207	4.6	4695.0	447.6	215.2	389.0	7400
7500	148.0	18.705	4.8	4759.0	473.3	212.4	405.3	7500
7600	153.7	19.214	4.9	4824.0	500.3	209.7	422.0	7600
7700	159.5	19.733	5.2	4888.0	528.5	207.1	439.2	7700
7800	165.6	20.262	5.4	4953.0	558.0	204.7	456.8	7800
7900	171.8	20.802	5.6	5018.0	588.9	202.3	474.9	7900
8000	178.2	21.353	5.8	5083.0	621.1	200.2	493.3	8000
8100	184.9	21.915	6.0	5149.0	654.9	198.1	512.1	8100
8200	191.8	22.489	6.3	5214.0	690.3	196.2	531.3	8200
8300	198.9	23.075	6.5	5281.0	727.3	194.4	550.9	8300
8400	206.2	23.674	6.8	5347.0	766.2	192.8	570.8	8400
8500	213.7	24.286	7.1	5413.0	806.9	191.3	591.1	8500
8600	221.5	24.911	7.3	5480.0	849.4	189.9	611.7	8600
8700	229.6	25.550	7.6	5547.0	894.0	188.6	632.6	8700
8800	238.0	26.204	7.9	5614.0	940.7	187.5	653.8	8800
8900	246.6	26.873	8.3	5681.0	989.6	186.5	675.2	8900
9000	255.5	27.558	8.6	5749.0	1040.8	185.7	696.9	9000

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

SD	SW	FZ	DR	XG	YG	VE	FW	SD
m	A o/oo	s	A o/oo	m	m	m/s	A o/oo	m
9100	264.8	28.260	8.9	5816.0	1094.5	185.0	718.8	9100
9200	274.4	28.980	9.3	5884.0	1150.8	184.4	740.9	9200
9300	284.3	29.718	9.7	5951.0	1210.0	183.9	763.2	9300
9400	294.6	30.477	10.1	6019.0	1272.2	183.6	785.6	9400
9500	305.3	31.257	10.5	6086.0	1337.7	183.4	808.1	9500
9600	316.4	32.061	10.9	6154.0	1406.9	183.4	830.8	9600
9700	328.0	32.889	11.4	6221.0	1479.9	183.4	853.6	9700
9800	340.1	33.744	11.8	6289.0	1556.8	183.6	876.5	9800
9900	352.8	34.628	12.3	6356.0	1638.2	184.0	899.5	9900
10000	366.0	35.545	12.9	6423.0	1724.5	184.4	922.5	10000
10100	379.9	36.499	13.4	6490.0	1816.3	185.0	945.7	10100
10200	394.5	37.493	14.0	6557.0	1914.1	185.7	969.0	10200
10300	410.0	38.535	14.7	6623.0	2019.3	186.6	992.5	10300
10400	426.5	39.630	15.4	6688.0	2132.7	187.6	1016.1	10400
10500	444.1	40.790	16.1	6754.0	2255.4	188.8	1040.0	10500
10600	463.1	42.027	17.0	6818.0	2389.4	190.1	1064.3	10600
10700	483.9	43.360	17.9	6882.0	2537.3	191.7	1089.2	10700
10800	506.9	44.822	18.9	6944.0	2703.9	193.4	1115.0	10800
10900	533.1	46.466	20.2	7005.0	2896.8	195.4	1142.1	10900
11000	564.1	48.384	21.7	7063.0	3128.3	197.8	1171.6	11000
11100	604.6	50.836	23.7	7116.0	3434.4	201.0	1206.1	11100

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
6

Blätter
Sheets
50

WK802156AV

DI
B

2.3 KORREKTURTAFEL ZUR ERDSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrekturen kann unter gestörten Bedingungen die Distanz **SD** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel),
sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind
(parallel zur **X**-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind
(von links, parallel zur **Z**-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils)
angegeben (mils = A%).

2.3 CORRECTION TABLE TO THE GROUNG FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction(Superelevation),
as well as

FZ-Variation (Time-of-Flight)

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind
(parallel to **X**-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind
(from the left, parallel to **Z**-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.0	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.0	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.0	0.007	0.001	-0.004	-0.001	0.6
800	0.1	0.0	0.0	0.0	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	-0.1	0.0	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.0	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.0	0.012	0.003	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.0	0.013	0.003	-0.015	-0.002	1.1
1300	0.1	0.0	-0.1	0.0	0.015	0.004	-0.018	-0.002	1.2
1400	0.2	0.0	-0.1	0.0	0.016	0.005	-0.021	-0.003	1.3
1500	0.2	0.0	-0.2	0.0	0.018	0.005	-0.025	-0.003	1.5
1600	0.2	0.0	-0.2	0.0	0.019	0.006	-0.029	-0.004	1.6
1700	0.2	0.0	-0.2	0.0	0.021	0.007	-0.033	-0.004	1.7
1800	0.2	0.1	-0.3	0.0	0.023	0.008	-0.038	-0.005	1.8
1900	0.2	0.1	-0.3	0.0	0.024	0.010	-0.043	-0.006	1.9
2000	0.3	0.1	-0.3	0.0	0.026	0.011	-0.049	-0.007	2.1
2100	0.3	0.1	-0.4	0.0	0.028	0.013	-0.055	-0.008	2.2
2200	0.3	0.1	-0.4	0.0	0.030	0.014	-0.062	-0.009	2.3
2300	0.3	0.1	-0.5	-0.1	0.032	0.016	-0.069	-0.010	2.5
2400	0.3	0.1	-0.5	-0.1	0.034	0.018	-0.078	-0.011	2.6
2500	0.4	0.1	-0.6	-0.1	0.036	0.020	-0.086	-0.013	2.7
2600	0.4	0.2	-0.7	-0.1	0.038	0.022	-0.096	-0.014	2.9
2700	0.4	0.2	-0.8	-0.1	0.041	0.025	-0.106	-0.016	3.0
2800	0.4	0.2	-0.8	-0.1	0.043	0.027	-0.117	-0.018	3.2
2900	0.5	0.2	-0.9	-0.1	0.046	0.030	-0.128	-0.020	3.4
3000	0.5	0.2	-1.0	-0.1	0.048	0.033	-0.141	-0.022	3.5
3100	0.5	0.3	-1.1	-0.1	0.051	0.037	-0.154	-0.024	3.7
3200	0.5	0.3	-1.2	-0.2	0.054	0.041	-0.169	-0.027	3.9
3300	0.6	0.3	-1.4	-0.2	0.057	0.045	-0.185	-0.030	4.1
3400	0.6	0.4	-1.5	-0.2	0.060	0.049	-0.201	-0.033	4.2
3500	0.6	0.4	-1.6	-0.2	0.063	0.053	-0.219	-0.037	4.4
3600	0.7	0.4	-1.8	-0.3	0.067	0.058	-0.238	-0.041	4.6
3700	0.7	0.5	-2.0	-0.3	0.070	0.064	-0.259	-0.045	4.8
3800	0.8	0.5	-2.2	-0.3	0.074	0.070	-0.281	-0.049	5.0
3900	0.8	0.6	-2.4	-0.4	0.078	0.076	-0.304	-0.054	5.3
4000	0.8	0.6	-2.6	-0.4	0.082	0.082	-0.329	-0.060	5.5
4100	0.9	0.7	-2.8	-0.4	0.086	0.090	-0.356	-0.065	5.7
4200	0.9	0.8	-3.1	-0.5	0.090	0.097	-0.384	-0.072	5.9
4300	1.0	0.9	-3.3	-0.5	0.095	0.105	-0.414	-0.079	6.2
4400	1.1	0.9	-3.6	-0.6	0.099	0.114	-0.447	-0.086	6.4
4500	1.1	1.0	-3.9	-0.7	0.104	0.124	-0.481	-0.095	6.7

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
8

Blätter
Sheets
50

WK802156AV

DI
B

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	
4600	1.2	1.1	-4.3	-0.7	0.109	0.133	-0.517	-0.103	6.9
4700	1.2	1.2	-4.7	-0.8	0.113	0.143	-0.555	-0.113	7.2
4800	1.3	1.3	-5.1	-0.9	0.117	0.152	-0.593	-0.123	7.5
4900	1.4	1.5	-5.5	-1.0	0.121	0.162	-0.630	-0.133	7.8
5000	1.5	1.6	-5.9	-1.1	0.124	0.172	-0.666	-0.144	8.0
5100	1.5	1.7	-6.4	-1.2	0.128	0.182	-0.700	-0.155	8.3
5200	1.6	1.8	-6.9	-1.3	0.132	0.192	-0.734	-0.167	8.6
5300	1.7	2.0	-7.4	-1.4	0.135	0.203	-0.767	-0.179	8.9
5400	1.8	2.1	-7.9	-1.6	0.139	0.214	-0.800	-0.192	9.2
5500	1.8	2.3	-8.5	-1.7	0.143	0.226	-0.834	-0.206	9.5
5600	1.9	2.5	-9.0	-1.9	0.147	0.238	-0.868	-0.220	9.7
5700	2.0	2.7	-9.6	-2.0	0.151	0.251	-0.904	-0.235	10.0
5800	2.1	2.8	-10.2	-2.2	0.155	0.264	-0.942	-0.251	10.3
5900	2.2	3.0	-10.9	-2.4	0.159	0.278	-0.981	-0.267	10.6
6000	2.3	3.3	-11.5	-2.6	0.163	0.292	-1.021	-0.285	10.9
6100	2.4	3.5	-12.2	-2.8	0.168	0.306	-1.063	-0.303	11.2
6200	2.5	3.7	-12.9	-3.0	0.172	0.321	-1.106	-0.322	11.5
6300	2.5	3.9	-13.6	-3.3	0.177	0.337	-1.151	-0.341	11.8
6400	2.6	4.2	-14.4	-3.5	0.182	0.353	-1.198	-0.362	12.1
6500	2.8	4.5	-15.2	-3.8	0.186	0.370	-1.246	-0.384	12.4
6600	2.9	4.7	-16.0	-4.1	0.191	0.388	-1.296	-0.407	12.7
6700	3.0	5.0	-16.9	-4.4	0.197	0.406	-1.347	-0.430	13.0
6800	3.1	5.3	-17.8	-4.7	0.202	0.424	-1.401	-0.455	13.3
6900	3.2	5.6	-18.7	-5.0	0.207	0.444	-1.456	-0.481	13.6
7000	3.3	6.0	-19.7	-5.4	0.213	0.464	-1.514	-0.508	14.0
7100	3.4	6.3	-20.7	-5.7	0.218	0.484	-1.574	-0.537	14.3
7200	3.6	6.7	-21.7	-6.1	0.224	0.506	-1.635	-0.566	14.6
7300	3.7	7.1	-22.8	-6.6	0.230	0.528	-1.699	-0.597	14.9
7400	3.8	7.5	-24.0	-7.0	0.236	0.551	-1.765	-0.630	15.3
7500	4.0	7.9	-25.2	-7.5	0.243	0.575	-1.834	-0.663	15.6
7600	4.1	8.3	-26.4	-8.0	0.249	0.599	-1.905	-0.699	15.9
7700	4.3	8.8	-27.7	-8.5	0.256	0.625	-1.979	-0.736	16.3
7800	4.4	9.3	-29.0	-9.0	0.263	0.651	-2.055	-0.775	16.6
7900	4.6	9.8	-30.5	-9.6	0.271	0.678	-2.135	-0.816	17.0
8000	4.7	10.3	-31.9	-10.2	0.278	0.707	-2.217	-0.858	17.3
8100	4.9	10.8	-33.5	-10.9	0.286	0.736	-2.303	-0.903	17.7
8200	5.1	11.4	-35.1	-11.6	0.294	0.767	-2.392	-0.949	18.1
8300	5.3	12.0	-36.8	-12.3	0.303	0.799	-2.484	-0.998	18.4
8400	5.5	12.6	-38.5	-13.1	0.312	0.832	-2.581	-1.050	18.8
8500	5.7	13.3	-40.4	-13.9	0.321	0.867	-2.681	-1.104	19.2
8600	5.9	14.0	-42.3	-14.8	0.331	0.903	-2.786	-1.161	19.6
8700	6.1	14.7	-44.3	-15.7	0.341	0.942	-2.895	-1.221	20.0
8800	6.4	15.5	-46.5	-16.7	0.352	0.982	-3.010	-1.284	20.4
8900	6.6	16.3	-48.7	-17.8	0.364	1.024	-3.130	-1.351	20.8
9000	6.9	17.1	-51.1	-18.9	0.376	1.068	-3.256	-1.421	21.2

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
9

Blätter
Sheets
50

WK802156AV

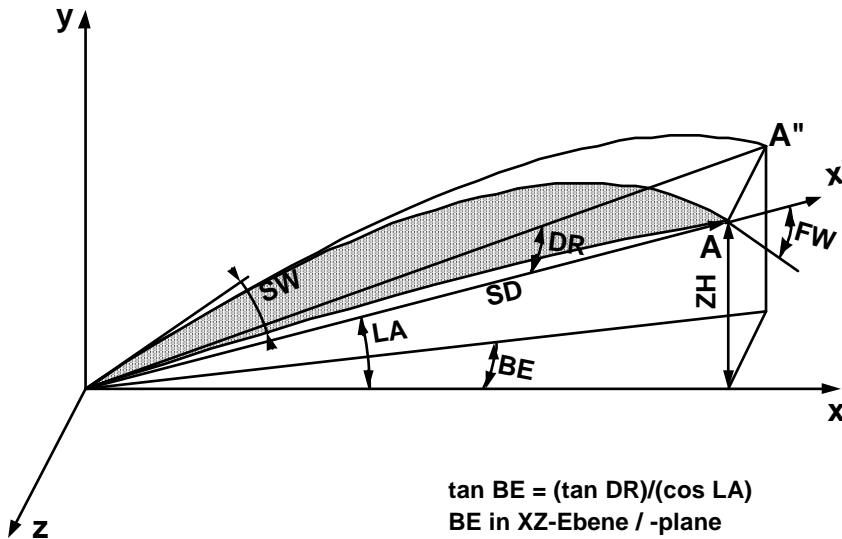
DI
B

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
9100	7.2	18.1	-53.5	-20.1	0.389	1.115	-3.388	-1.496	21.6
9200	7.5	19.0	-56.2	-21.4	0.403	1.165	-3.527	-1.575	22.0
9300	7.8	20.1	-58.9	-22.8	0.418	1.218	-3.674	-1.660	22.5
9400	8.2	21.2	-61.9	-24.2	0.434	1.274	-3.830	-1.750	22.9
9500	8.5	22.3	-65.0	-25.8	0.452	1.335	-3.995	-1.846	23.4
9600	8.9	23.6	-68.3	-27.5	0.471	1.401	-4.171	-1.950	23.8
9700	9.4	25.0	-71.9	-29.4	0.492	1.473	-4.359	-2.061	24.3
9800	9.8	26.5	-75.7	-31.4	0.515	1.551	-4.561	-2.182	24.8
9900	10.4	28.2	-79.8	-33.6	0.541	1.637	-4.778	-2.313	25.3
10000	11.0	30.0	-84.2	-36.0	0.570	1.734	-5.013	-2.456	25.8
10100	11.6	32.1	-89.0	-38.6	0.603	1.844	-5.268	-2.613	26.4
10200	12.4	34.5	-94.3	-41.6	0.642	1.970	-5.549	-2.788	27.0
10300	13.2	37.3	-100.1	-45.0	0.686	2.116	-5.859	-2.985	27.6
10400	14.3	40.5	-106.6	-48.8	0.739	2.290	-6.206	-3.207	28.2
10500	15.5	44.5	-113.8	-53.1	0.804	2.504	-6.597	-3.463	28.9
10600	17.0	49.6	-122.1	-58.3	0.885	2.782	-7.044	-3.760	29.6
10700	19.1	56.5	-131.7	-64.4	0.993	3.163	-7.566	-4.115	30.4
10800	21.9	66.9	-143.1	-72.0	1.147	3.736	-8.192	-4.553	31.2
10900	26.2	86.5	-157.3	-81.8	1.380	4.830	-8.973	-5.121	32.2

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 10	Blätter Sheets 50
		DI B	WK802156AV		

2.4 FLABSCHUSSTAFEL

2.4 ANTI-AIRCRAFT FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- LA** **Lagewinkel:** Winkel unter welchem das Ziel (A) von der Mündung aus sichtbar ist
- SD** **Schussdistanz:** Schrägdistanz von Mündung bis Ziel (A)
- SW** **Schusswinkel:** Winkel, der eingestellt werden muss, um das Ziel (A) auf gegebener Distanz (**SD**) zu treffen
- FZ** **Flugzeit** des Geschosses von Mündung bis Ziel (A)
- DR** **Derivation:** nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Winkel **DR** liegt in der Ebene (**X'**,**Z**)
- ZH** **Zielhöhe** über Mündungshorizont
- VE** **Geschossgeschwindigkeit** bei Distanz **SD**
- FW** **Fallwinkel** des Geschosses bei Distanz **SD**

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A%).

DEFINITION of TABLE SYMBOLS

- LA** **Angle of Site:** angle between muzzle-target (A) vector and horizontal axis
- SD** **Range:** slant distance from muzzle to target (A)
- SW** **Superelevation:** angle to be set, in order to hit the target (A) at a range (**SD**)
- FZ** **Time-of-Flight** of the projectile from muzzle to target (A)
- DR** **Drift:** the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle **DR** lies in the plane (**X'**,**Z**)
- ZH** **Altitude of Target** above muzzle level
- VE** **Remaining Velocity of the Projectile** at range **SD**
- FW** **Angle of Fall** of the projectile at range **SD**

All angles are given in **mils** ($360^\circ = 6400$ mils).

LA: 0 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.5	0.096	0.0	0.0	1032.4	0.5	100
200	0.9	0.194	0.0	0.0	1014.8	0.9	200
300	1.4	0.293	0.0	0.0	997.3	1.5	300
400	1.9	0.394	0.0	0.0	979.8	2.0	400
500	2.4	0.497	0.1	0.0	962.3	2.5	500
600	2.9	0.602	0.1	0.0	944.9	3.1	600
700	3.4	0.709	0.1	0.0	927.5	3.7	700
800	4.0	0.818	0.1	0.0	910.2	4.4	800
900	4.5	0.929	0.1	0.0	893.0	5.1	900
1000	5.1	1.042	0.1	0.0	875.8	5.8	1000
1100	5.7	1.157	0.1	0.0	858.7	6.5	1100
1200	6.3	1.275	0.1	0.0	841.8	7.3	1200
1300	6.9	1.395	0.2	0.0	824.9	8.1	1300
1400	7.5	1.517	0.2	0.0	808.1	9.0	1400
1500	8.2	1.642	0.2	0.0	791.5	9.9	1500
1600	8.9	1.770	0.2	0.0	775.0	10.9	1600
1700	9.5	1.900	0.2	0.0	758.6	11.9	1700
1800	10.3	2.034	0.2	0.0	742.3	12.9	1800
1900	11.0	2.170	0.3	0.0	726.1	14.1	1900
2000	11.7	2.309	0.3	0.0	710.1	15.2	2000
2100	12.5	2.452	0.3	0.0	694.2	16.5	2100
2200	13.3	2.597	0.3	0.0	678.4	17.8	2200
2300	14.1	2.747	0.3	0.0	662.7	19.2	2300
2400	15.0	2.899	0.4	0.0	647.2	20.7	2400
2500	15.9	3.056	0.4	0.0	631.8	22.3	2500
2600	16.8	3.216	0.4	0.0	616.6	23.9	2600
2700	17.7	3.380	0.4	0.0	601.5	25.7	2700
2800	18.7	3.548	0.5	0.0	586.6	27.5	2800
2900	19.7	3.721	0.5	0.0	571.9	29.5	2900
3000	20.7	3.898	0.5	0.0	557.3	31.6	3000
3100	21.8	4.080	0.5	0.0	542.9	33.8	3100
3200	22.9	4.267	0.6	0.0	528.7	36.2	3200
3300	24.0	4.458	0.6	0.0	514.6	38.7	3300
3400	25.2	4.655	0.6	0.0	500.7	41.4	3400
3500	26.5	4.858	0.7	0.0	487.1	44.2	3500
3600	27.8	5.066	0.7	0.0	473.7	47.3	3600
3700	29.1	5.280	0.8	0.0	460.4	50.5	3700
3800	30.5	5.501	0.8	0.0	447.3	54.0	3800
3900	31.9	5.728	0.9	0.0	434.4	57.7	3900
4000	33.4	5.961	0.9	0.0	421.7	61.6	4000
4100	35.0	6.202	1.0	0.0	409.3	65.8	4100
4200	36.7	6.450	1.0	0.0	397.0	70.3	4200
4300	38.4	6.706	1.1	0.0	385.0	75.1	4300
4400	40.1	6.970	1.1	0.0	373.4	80.2	4400
4500	42.0	7.242	1.2	0.0	362.2	85.7	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

12

Blätter
Sheets

50

WK802156AV

**DI
B**

LA: 100 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.5	0.096	0.0	9.8	1032.3	0.5	100
200	0.9	0.194	0.0	19.6	1014.6	0.9	200
300	1.4	0.293	0.0	29.4	997.1	1.4	300
400	1.9	0.394	0.0	39.2	979.5	2.0	400
500	2.4	0.497	0.1	49.0	962.1	2.5	500
600	2.9	0.602	0.1	58.8	944.6	3.1	600
700	3.4	0.709	0.1	68.6	927.3	3.7	700
800	4.0	0.818	0.1	78.4	910.0	4.4	800
900	4.5	0.929	0.1	88.2	892.8	5.0	900
1000	5.1	1.042	0.1	98.0	875.7	5.7	1000
1100	5.7	1.157	0.1	107.8	858.7	6.5	1100
1200	6.3	1.275	0.1	117.6	841.8	7.3	1200
1300	6.9	1.395	0.2	127.4	825.1	8.1	1300
1400	7.5	1.517	0.2	137.2	808.4	8.9	1400
1500	8.2	1.642	0.2	147.0	791.9	9.8	1500
1600	8.8	1.770	0.2	156.8	775.5	10.8	1600
1700	9.5	1.900	0.2	166.6	759.2	11.8	1700
1800	10.2	2.033	0.2	176.4	743.1	12.9	1800
1900	10.9	2.170	0.3	186.2	727.1	14.0	1900
2000	11.7	2.309	0.3	196.0	711.2	15.2	2000
2100	12.4	2.451	0.3	205.8	695.5	16.4	2100
2200	13.2	2.596	0.3	215.6	679.9	17.7	2200
2300	14.1	2.745	0.3	225.4	664.4	19.1	2300
2400	14.9	2.897	0.4	235.2	649.1	20.6	2400
2500	15.8	3.053	0.4	245.0	634.0	22.1	2500
2600	16.7	3.213	0.4	254.8	619.0	23.7	2600
2700	17.6	3.376	0.4	264.6	604.1	25.5	2700
2800	18.5	3.544	0.5	274.4	589.4	27.3	2800
2900	19.5	3.716	0.5	284.2	574.9	29.3	2900
3000	20.6	3.892	0.5	294.1	560.5	31.3	3000
3100	21.6	4.073	0.5	303.9	546.3	33.5	3100
3200	22.7	4.258	0.6	313.7	532.3	35.8	3200
3300	23.9	4.449	0.6	323.5	518.5	38.3	3300
3400	25.0	4.644	0.6	333.3	504.9	40.9	3400
3500	26.3	4.845	0.7	343.1	491.4	43.7	3500
3600	27.5	5.051	0.7	352.9	478.2	46.7	3600
3700	28.8	5.263	0.8	362.7	465.2	49.8	3700
3800	30.2	5.481	0.8	372.5	452.3	53.2	3800
3900	31.6	5.706	0.8	382.3	439.6	56.8	3900
4000	33.1	5.936	0.9	392.1	427.1	60.6	4000
4100	34.7	6.174	0.9	401.9	414.8	64.7	4100
4200	36.3	6.419	1.0	411.7	402.8	69.0	4200
4300	37.9	6.671	1.0	421.5	390.9	73.7	4300
4400	39.7	6.931	1.1	431.3	379.3	78.6	4400
4500	41.5	7.198	1.2	441.1	368.1	84.0	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

13

Blätter
Sheets

50

WK802156AV

DIB

LA: 200 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	19.5	1032.2	0.5	100
200	0.9	0.194	0.0	39.0	1014.5	0.9	200
300	1.4	0.293	0.0	58.5	996.9	1.4	300
400	1.9	0.394	0.0	78.0	979.3	2.0	400
500	2.4	0.497	0.0	97.5	961.8	2.5	500
600	2.9	0.602	0.1	117.1	944.4	3.1	600
700	3.4	0.709	0.1	136.6	927.1	3.7	700
800	3.9	0.818	0.1	156.1	909.8	4.3	800
900	4.5	0.929	0.1	175.6	892.6	5.0	900
1000	5.0	1.042	0.1	195.1	875.6	5.7	1000
1100	5.6	1.158	0.1	214.6	858.7	6.4	1100
1200	6.2	1.275	0.1	234.1	841.9	7.2	1200
1300	6.8	1.395	0.1	253.6	825.2	8.0	1300
1400	7.4	1.518	0.2	273.1	808.6	8.8	1400
1500	8.0	1.643	0.2	292.6	792.3	9.7	1500
1600	8.7	1.770	0.2	312.1	776.0	10.6	1600
1700	9.4	1.900	0.2	331.7	759.9	11.6	1700
1800	10.1	2.033	0.2	351.2	743.9	12.7	1800
1900	10.8	2.169	0.2	370.7	728.0	13.8	1900
2000	11.5	2.308	0.3	390.2	712.3	14.9	2000
2100	12.3	2.450	0.3	409.7	696.8	16.1	2100
2200	13.0	2.595	0.3	429.2	681.4	17.4	2200
2300	13.8	2.744	0.3	448.7	666.1	18.8	2300
2400	14.7	2.896	0.3	468.2	651.0	20.2	2400
2500	15.5	3.051	0.4	487.7	636.0	21.7	2500
2600	16.4	3.210	0.4	507.2	621.2	23.3	2600
2700	17.3	3.373	0.4	526.7	606.6	25.0	2700
2800	18.3	3.540	0.4	546.3	592.1	26.8	2800
2900	19.2	3.711	0.5	565.8	577.8	28.7	2900
3000	20.2	3.886	0.5	585.3	563.6	30.7	3000
3100	21.3	4.066	0.5	604.8	549.7	32.9	3100
3200	22.3	4.250	0.6	624.3	535.9	35.1	3200
3300	23.5	4.439	0.6	643.8	522.3	37.5	3300
3400	24.6	4.633	0.6	663.3	508.8	40.1	3400
3500	25.8	4.832	0.7	682.8	495.6	42.8	3500
3600	27.0	5.037	0.7	702.3	482.6	45.7	3600
3700	28.3	5.247	0.7	721.8	469.7	48.7	3700
3800	29.7	5.463	0.8	741.3	457.1	52.0	3800
3900	31.0	5.685	0.8	760.9	444.6	55.4	3900
4000	32.5	5.913	0.9	780.4	432.3	59.1	4000
4100	34.0	6.147	0.9	799.9	420.2	63.0	4100
4200	35.5	6.389	1.0	819.4	408.3	67.2	4200
4300	37.2	6.638	1.0	838.9	396.6	71.7	4300
4400	38.8	6.894	1.1	858.4	385.1	76.4	4400
4500	40.6	7.157	1.1	877.9	373.9	81.5	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

14
50

DIB

LA: 300 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	29.0	1032.1	0.4	100
200	0.9	0.194	0.0	58.1	1014.3	0.9	200
300	1.3	0.293	0.0	87.1	996.7	1.4	300
400	1.8	0.394	0.0	116.1	979.1	1.9	400
500	2.3	0.498	0.0	145.1	961.6	2.4	500
600	2.8	0.602	0.1	174.2	944.1	3.0	600
700	3.3	0.709	0.1	203.2	926.8	3.6	700
800	3.8	0.818	0.1	232.2	909.6	4.2	800
900	4.3	0.929	0.1	261.3	892.5	4.8	900
1000	4.9	1.042	0.1	290.3	875.5	5.5	1000
1100	5.4	1.158	0.1	319.3	858.6	6.2	1100
1200	6.0	1.275	0.1	348.3	841.9	7.0	1200
1300	6.6	1.395	0.1	377.4	825.3	7.8	1300
1400	7.2	1.518	0.2	406.4	808.9	8.6	1400
1500	7.8	1.643	0.2	435.4	792.6	9.5	1500
1600	8.5	1.770	0.2	464.5	776.4	10.4	1600
1700	9.1	1.900	0.2	493.5	760.5	11.4	1700
1800	9.8	2.033	0.2	522.5	744.6	12.4	1800
1900	10.5	2.169	0.2	551.5	728.9	13.4	1900
2000	11.2	2.308	0.3	580.6	713.4	14.6	2000
2100	12.0	2.449	0.3	609.6	698.0	15.7	2100
2200	12.7	2.594	0.3	638.6	682.8	17.0	2200
2300	13.5	2.742	0.3	667.7	667.7	18.3	2300
2400	14.3	2.894	0.3	696.7	652.7	19.7	2400
2500	15.1	3.049	0.4	725.7	638.0	21.2	2500
2600	16.0	3.207	0.4	754.7	623.4	22.7	2600
2700	16.9	3.370	0.4	783.8	608.9	24.4	2700
2800	17.8	3.536	0.4	812.8	594.6	26.1	2800
2900	18.7	3.706	0.5	841.8	580.5	27.9	2900
3000	19.7	3.881	0.5	870.9	566.6	29.9	3000
3100	20.7	4.059	0.5	899.9	552.8	31.9	3100
3200	21.8	4.242	0.5	928.9	539.2	34.1	3200
3300	22.8	4.430	0.6	957.9	525.8	36.4	3300
3400	23.9	4.623	0.6	987.0	512.6	38.9	3400
3500	25.1	4.821	0.6	1016.0	499.6	41.5	3500
3600	26.3	5.023	0.7	1045.0	486.7	44.2	3600
3700	27.5	5.232	0.7	1074.1	474.1	47.2	3700
3800	28.8	5.445	0.8	1103.1	461.6	50.3	3800
3900	30.2	5.665	0.8	1132.1	449.4	53.6	3900
4000	31.5	5.891	0.8	1161.1	437.2	57.1	4000
4100	33.0	6.123	0.9	1190.2	425.3	60.8	4100
4200	34.5	6.361	0.9	1219.2	413.6	64.8	4200
4300	36.0	6.606	1.0	1248.2	402.0	69.0	4300
4400	37.7	6.859	1.0	1277.3	390.7	73.6	4400
4500	39.3	7.119	1.1	1306.3	379.5	78.4	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
15

Blätter
Sheets
50

WK802156AV

DIB

LA: 400 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	38.3	1032.0	0.4	100
200	0.9	0.194	0.0	76.5	1014.2	0.9	200
300	1.3	0.293	0.0	114.8	996.5	1.3	300
400	1.8	0.395	0.0	153.1	978.9	1.8	400
500	2.2	0.498	0.0	191.3	961.3	2.4	500
600	2.7	0.603	0.1	229.6	943.9	2.9	600
700	3.2	0.710	0.1	267.9	926.6	3.5	700
800	3.7	0.818	0.1	306.1	909.4	4.1	800
900	4.2	0.929	0.1	344.4	892.3	4.7	900
1000	4.7	1.043	0.1	382.7	875.4	5.3	1000
1100	5.3	1.158	0.1	421.0	858.6	6.0	1100
1200	5.8	1.276	0.1	459.2	841.9	6.8	1200
1300	6.4	1.396	0.1	497.5	825.4	7.5	1300
1400	7.0	1.518	0.2	535.8	809.1	8.3	1400
1500	7.6	1.643	0.2	574.0	792.9	9.1	1500
1600	8.2	1.770	0.2	612.3	776.9	10.0	1600
1700	8.8	1.900	0.2	650.6	761.0	11.0	1700
1800	9.5	2.033	0.2	688.8	745.3	11.9	1800
1900	10.1	2.169	0.2	727.1	729.8	13.0	1900
2000	10.8	2.307	0.3	765.4	714.4	14.1	2000
2100	11.5	2.449	0.3	803.6	699.1	15.2	2100
2200	12.3	2.593	0.3	841.9	684.1	16.4	2200
2300	13.0	2.741	0.3	880.2	669.2	17.7	2300
2400	13.8	2.892	0.3	918.4	654.4	19.0	2400
2500	14.6	3.047	0.3	956.7	639.8	20.4	2500
2600	15.4	3.205	0.4	995.0	625.4	21.9	2600
2700	16.3	3.367	0.4	1033.2	611.1	23.5	2700
2800	17.2	3.532	0.4	1071.5	597.0	25.1	2800
2900	18.1	3.702	0.4	1109.8	583.1	26.9	2900
3000	19.0	3.875	0.5	1148.1	569.4	28.7	3000
3100	20.0	4.053	0.5	1186.3	555.8	30.7	3100
3200	21.0	4.235	0.5	1224.6	542.4	32.8	3200
3300	22.0	4.422	0.6	1262.9	529.2	35.0	3300
3400	23.1	4.613	0.6	1301.1	516.2	37.3	3400
3500	24.2	4.810	0.6	1339.4	503.3	39.8	3500
3600	25.3	5.011	0.7	1377.7	490.7	42.4	3600
3700	26.5	5.217	0.7	1415.9	478.2	45.2	3700
3800	27.7	5.429	0.7	1454.2	465.9	48.1	3800
3900	29.0	5.647	0.8	1492.5	453.8	51.3	3900
4000	30.3	5.870	0.8	1530.7	441.9	54.6	4000
4100	31.7	6.099	0.9	1569.0	430.1	58.1	4100
4200	33.1	6.335	0.9	1607.3	418.5	61.9	4200
4300	34.6	6.578	0.9	1645.5	407.1	65.9	4300
4400	36.1	6.827	1.0	1683.8	395.9	70.2	4400
4500	37.7	7.083	1.0	1722.1	384.9	74.7	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

LA: 500 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	47.1	1032.0	0.4	100
200	0.8	0.194	0.0	94.3	1014.0	0.8	200
300	1.2	0.293	0.0	141.4	996.3	1.3	300
400	1.7	0.395	0.0	188.6	978.7	1.8	400
500	2.1	0.498	0.0	235.7	961.1	2.2	500
600	2.6	0.603	0.1	282.8	943.7	2.8	600
700	3.0	0.710	0.1	330.0	926.4	3.3	700
800	3.5	0.819	0.1	377.1	909.2	3.9	800
900	4.0	0.930	0.1	424.3	892.2	4.5	900
1000	4.5	1.043	0.1	471.4	875.3	5.1	1000
1100	5.0	1.158	0.1	518.5	858.5	5.8	1100
1200	5.6	1.276	0.1	565.7	841.9	6.4	1200
1300	6.1	1.396	0.1	612.8	825.5	7.2	1300
1400	6.7	1.518	0.1	660.0	809.3	7.9	1400
1500	7.2	1.643	0.2	707.1	793.2	8.7	1500
1600	7.8	1.770	0.2	754.2	777.3	9.6	1600
1700	8.4	1.900	0.2	801.4	761.5	10.5	1700
1800	9.0	2.033	0.2	848.5	745.9	11.4	1800
1900	9.7	2.168	0.2	895.7	730.5	12.4	1900
2000	10.3	2.307	0.2	942.8	715.3	13.4	2000
2100	11.0	2.448	0.3	989.9	700.2	14.5	2100
2200	11.7	2.592	0.3	1037.1	685.3	15.6	2200
2300	12.4	2.740	0.3	1084.2	670.5	16.8	2300
2400	13.2	2.891	0.3	1131.4	655.9	18.1	2400
2500	13.9	3.045	0.3	1178.5	641.5	19.5	2500
2600	14.7	3.203	0.4	1225.6	627.3	20.9	2600
2700	15.5	3.364	0.4	1272.8	613.2	22.4	2700
2800	16.4	3.529	0.4	1319.9	599.3	23.9	2800
2900	17.2	3.698	0.4	1367.1	585.5	25.6	2900
3000	18.1	3.871	0.4	1414.2	572.0	27.4	3000
3100	19.0	4.047	0.5	1461.3	558.6	29.2	3100
3200	20.0	4.229	0.5	1508.5	545.4	31.2	3200
3300	20.9	4.414	0.5	1555.6	532.4	33.2	3300
3400	22.0	4.604	0.6	1602.7	519.5	35.4	3400
3500	23.0	4.799	0.6	1649.9	506.8	37.8	3500
3600	24.1	4.999	0.6	1697.0	494.3	40.2	3600
3700	25.2	5.204	0.7	1744.2	482.0	42.8	3700
3800	26.4	5.414	0.7	1791.3	469.9	45.6	3800
3900	27.6	5.630	0.7	1838.4	458.0	48.6	3900
4000	28.8	5.851	0.8	1885.6	446.2	51.7	4000
4100	30.1	6.078	0.8	1932.7	434.6	55.0	4100
4200	31.5	6.311	0.9	1979.9	423.2	58.5	4200
4300	32.9	6.551	0.9	2027.0	411.9	62.2	4300
4400	34.3	6.797	0.9	2074.1	400.8	66.2	4400
4500	35.8	7.050	1.0	2121.3	389.9	70.4	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

17

Blätter
Sheets

50

WK802156AV

LA: 600 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	55.6	1031.9	0.4	100
200	0.8	0.194	0.0	111.1	1013.9	0.8	200
300	1.2	0.293	0.0	166.7	996.1	1.2	300
400	1.6	0.395	0.0	222.2	978.5	1.7	400
500	2.0	0.498	0.0	277.8	960.9	2.1	500
600	2.4	0.603	0.1	333.3	943.5	2.6	600
700	2.9	0.710	0.1	388.9	926.2	3.1	700
800	3.3	0.819	0.1	444.5	909.0	3.7	800
900	3.8	0.930	0.1	500.0	892.0	4.2	900
1000	4.3	1.043	0.1	555.6	875.1	4.8	1000
1100	4.7	1.158	0.1	611.1	858.5	5.4	1100
1200	5.2	1.276	0.1	666.7	841.9	6.1	1200
1300	5.7	1.396	0.1	722.2	825.6	6.8	1300
1400	6.3	1.518	0.1	777.8	809.4	7.5	1400
1500	6.8	1.643	0.2	833.4	793.4	8.2	1500
1600	7.4	1.770	0.2	888.9	777.6	9.0	1600
1700	7.9	1.900	0.2	944.5	762.0	9.9	1700
1800	8.5	2.033	0.2	1000.0	746.5	10.7	1800
1900	9.1	2.168	0.2	1055.6	731.2	11.7	1900
2000	9.7	2.306	0.2	1111.1	716.1	12.6	2000
2100	10.4	2.448	0.2	1166.7	701.2	13.7	2100
2200	11.0	2.592	0.3	1222.3	686.4	14.7	2200
2300	11.7	2.739	0.3	1277.8	671.8	15.9	2300
2400	12.4	2.889	0.3	1333.4	657.4	17.1	2400
2500	13.1	3.043	0.3	1388.9	643.1	18.3	2500
2600	13.9	3.201	0.3	1444.5	629.0	19.6	2600
2700	14.6	3.361	0.4	1500.0	615.1	21.0	2700
2800	15.4	3.526	0.4	1555.6	601.4	22.5	2800
2900	16.2	3.694	0.4	1611.2	587.8	24.1	2900
3000	17.0	3.866	0.4	1666.7	574.4	25.7	3000
3100	17.9	4.042	0.4	1722.3	561.2	27.4	3100
3200	18.8	4.223	0.5	1777.8	548.1	29.3	3200
3300	19.7	4.407	0.5	1833.4	535.3	31.2	3300
3400	20.7	4.596	0.5	1888.9	522.6	33.3	3400
3500	21.6	4.790	0.6	1944.5	510.1	35.4	3500
3600	22.7	4.989	0.6	2000.1	497.7	37.7	3600
3700	23.7	5.192	0.6	2055.6	485.6	40.2	3700
3800	24.8	5.401	0.7	2111.2	473.6	42.7	3800
3900	25.9	5.614	0.7	2166.7	461.8	45.4	3900
4000	27.1	5.834	0.7	2222.3	450.2	48.3	4000
4100	28.3	6.059	0.8	2277.8	438.8	51.4	4100
4200	29.5	6.290	0.8	2333.4	427.5	54.7	4200
4300	30.8	6.527	0.8	2389.0	416.3	58.1	4300
4400	32.2	6.770	0.9	2444.5	405.4	61.8	4400
4500	33.6	7.021	0.9	2500.1	394.6	65.7	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DIB

LA: 700 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.4	0.096	0.0	63.4	1031.8	0.4	100
200	0.7	0.194	0.0	126.9	1013.8	0.7	200
300	1.1	0.293	0.0	190.3	996.0	1.1	300
400	1.5	0.395	0.0	253.8	978.3	1.5	400
500	1.9	0.498	0.0	317.2	960.7	2.0	500
600	2.3	0.603	0.0	380.6	943.2	2.4	600
700	2.7	0.710	0.1	444.1	926.0	2.9	700
800	3.1	0.819	0.1	507.5	908.8	3.4	800
900	3.5	0.930	0.1	571.0	891.8	3.9	900
1000	4.0	1.043	0.1	634.4	875.0	4.5	1000
1100	4.4	1.159	0.1	697.8	858.4	5.1	1100
1200	4.9	1.276	0.1	761.3	841.9	5.7	1200
1300	5.3	1.396	0.1	824.7	825.7	6.3	1300
1400	5.8	1.518	0.1	888.2	809.6	7.0	1400
1500	6.3	1.643	0.1	951.6	793.7	7.7	1500
1600	6.8	1.770	0.2	1015.0	778.0	8.4	1600
1700	7.4	1.900	0.2	1078.5	762.4	9.2	1700
1800	7.9	2.033	0.2	1141.9	747.1	10.0	1800
1900	8.5	2.168	0.2	1205.3	731.9	10.8	1900
2000	9.1	2.306	0.2	1268.8	716.9	11.7	2000
2100	9.6	2.447	0.2	1332.2	702.1	12.7	2100
2200	10.3	2.591	0.2	1395.7	687.4	13.7	2200
2300	10.9	2.738	0.3	1459.1	673.0	14.7	2300
2400	11.5	2.888	0.3	1522.5	658.7	15.8	2400
2500	12.2	3.042	0.3	1586.0	644.5	17.0	2500
2600	12.9	3.199	0.3	1649.4	630.6	18.2	2600
2700	13.6	3.359	0.3	1712.9	616.8	19.5	2700
2800	14.3	3.523	0.3	1776.3	603.2	20.9	2800
2900	15.1	3.691	0.4	1839.7	589.8	22.3	2900
3000	15.8	3.862	0.4	1903.2	576.6	23.8	3000
3100	16.6	4.038	0.4	1966.6	563.5	25.4	3100
3200	17.4	4.217	0.4	2030.1	550.6	27.1	3200
3300	18.3	4.401	0.5	2093.5	537.9	28.9	3300
3400	19.2	4.589	0.5	2156.9	525.4	30.8	3400
3500	20.1	4.782	0.5	2220.4	513.0	32.8	3500
3600	21.0	4.979	0.5	2283.8	500.8	34.9	3600
3700	22.0	5.181	0.6	2347.3	488.8	37.1	3700
3800	23.0	5.388	0.6	2410.7	477.0	39.5	3800
3900	24.0	5.601	0.6	2474.1	465.3	42.0	3900
4000	25.1	5.818	0.7	2537.6	453.9	44.6	4000
4100	26.2	6.041	0.7	2601.0	442.5	47.4	4100
4200	27.4	6.270	0.7	2664.5	431.4	50.4	4200
4300	28.6	6.505	0.8	2727.9	420.3	53.6	4300
4400	29.8	6.746	0.8	2791.3	409.5	56.9	4400
4500	31.1	6.994	0.9	2854.8	398.8	60.5	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

19

50

WK802156AV

DI

B

LA: 800 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.096	0.0	70.7	1031.8	0.3	100
200	0.7	0.194	0.0	141.4	1013.7	0.7	200
300	1.0	0.293	0.0	212.1	995.8	1.0	300
400	1.3	0.395	0.0	282.8	978.1	1.4	400
500	1.7	0.498	0.0	353.6	960.5	1.8	500
600	2.1	0.603	0.0	424.3	943.1	2.2	600
700	2.4	0.710	0.1	495.0	925.8	2.7	700
800	2.8	0.819	0.1	565.7	908.7	3.1	800
900	3.2	0.930	0.1	636.4	891.7	3.6	900
1000	3.6	1.043	0.1	707.1	874.9	4.1	1000
1100	4.0	1.159	0.1	777.8	858.3	4.6	1100
1200	4.5	1.276	0.1	848.5	841.9	5.2	1200
1300	4.9	1.396	0.1	919.2	825.7	5.8	1300
1400	5.3	1.519	0.1	989.9	809.7	6.4	1400
1500	5.8	1.643	0.1	1060.7	793.9	7.0	1500
1600	6.3	1.771	0.1	1131.4	778.3	7.7	1600
1700	6.7	1.900	0.2	1202.1	762.8	8.4	1700
1800	7.2	2.033	0.2	1272.8	747.5	9.1	1800
1900	7.8	2.168	0.2	1343.5	732.5	9.9	1900
2000	8.3	2.306	0.2	1414.2	717.6	10.7	2000
2100	8.8	2.447	0.2	1484.9	702.9	11.6	2100
2200	9.4	2.590	0.2	1555.6	688.4	12.5	2200
2300	10.0	2.737	0.2	1626.3	674.0	13.5	2300
2400	10.5	2.887	0.3	1697.1	659.8	14.5	2400
2500	11.1	3.040	0.3	1767.8	645.8	15.5	2500
2600	11.8	3.197	0.3	1838.5	632.0	16.7	2600
2700	12.4	3.357	0.3	1909.2	618.4	17.8	2700
2800	13.1	3.520	0.3	1979.9	604.9	19.1	2800
2900	13.8	3.688	0.3	2050.6	591.7	20.4	2900
3000	14.5	3.859	0.4	2121.3	578.6	21.8	3000
3100	15.2	4.033	0.4	2192.0	565.6	23.2	3100
3200	15.9	4.212	0.4	2262.7	552.9	24.7	3200
3300	16.7	4.395	0.4	2333.5	540.3	26.4	3300
3400	17.5	4.582	0.4	2404.2	527.9	28.1	3400
3500	18.3	4.774	0.5	2474.9	515.7	29.9	3500
3600	19.2	4.970	0.5	2545.6	503.6	31.8	3600
3700	20.1	5.171	0.5	2616.3	491.7	33.8	3700
3800	21.0	5.377	0.5	2687.0	480.0	35.9	3800
3900	21.9	5.588	0.6	2757.7	468.5	38.2	3900
4000	22.9	5.804	0.6	2828.4	457.1	40.6	4000
4100	23.9	6.026	0.6	2899.1	445.9	43.1	4100
4200	24.9	6.253	0.7	2969.8	434.9	45.8	4200
4300	26.0	6.486	0.7	3040.6	423.9	48.6	4300
4400	27.1	6.725	0.7	3111.3	413.2	51.6	4400
4500	28.3	6.970	0.8	3182.0	402.6	54.8	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI

B

LA: 900 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.096	0.0	77.3	1031.7	0.3	100
200	0.6	0.194	0.0	154.6	1013.6	0.6	200
300	0.9	0.293	0.0	231.9	995.7	0.9	300
400	1.2	0.395	0.0	309.2	977.9	1.3	400
500	1.5	0.498	0.0	386.5	960.3	1.6	500
600	1.9	0.603	0.0	463.8	942.9	2.0	600
700	2.2	0.710	0.0	541.1	925.6	2.4	700
800	2.5	0.819	0.1	618.4	908.5	2.8	800
900	2.9	0.930	0.1	695.7	891.6	3.2	900
1000	3.2	1.043	0.1	773.0	874.8	3.7	1000
1100	3.6	1.159	0.1	850.3	858.3	4.1	1100
1200	4.0	1.277	0.1	927.6	841.9	4.6	1200
1300	4.4	1.396	0.1	1004.9	825.8	5.2	1300
1400	4.8	1.519	0.1	1082.2	809.8	5.7	1400
1500	5.2	1.643	0.1	1159.5	794.1	6.3	1500
1600	5.6	1.771	0.1	1236.8	778.5	6.9	1600
1700	6.1	1.900	0.1	1314.1	763.1	7.5	1700
1800	6.5	2.033	0.1	1391.4	748.0	8.2	1800
1900	7.0	2.168	0.2	1468.7	733.0	8.9	1900
2000	7.4	2.306	0.2	1546.0	718.2	9.6	2000
2100	7.9	2.446	0.2	1623.3	703.6	10.4	2100
2200	8.4	2.590	0.2	1700.6	689.2	11.2	2200
2300	8.9	2.737	0.2	1777.9	674.9	12.1	2300
2400	9.5	2.886	0.2	1855.2	660.9	13.0	2400
2500	10.0	3.039	0.2	1932.5	647.0	13.9	2500
2600	10.6	3.195	0.3	2009.8	633.3	14.9	2600
2700	11.1	3.355	0.3	2087.1	619.8	16.0	2700
2800	11.7	3.518	0.3	2164.4	606.4	17.1	2800
2900	12.3	3.685	0.3	2241.7	593.3	18.3	2900
3000	13.0	3.855	0.3	2319.0	580.3	19.5	3000
3100	13.6	4.030	0.3	2396.3	567.5	20.8	3100
3200	14.3	4.208	0.4	2473.6	554.9	22.1	3200
3300	15.0	4.390	0.4	2550.9	542.4	23.6	3300
3400	15.7	4.577	0.4	2628.2	530.1	25.1	3400
3500	16.4	4.768	0.4	2705.5	518.0	26.7	3500
3600	17.2	4.963	0.4	2782.8	506.1	28.4	3600
3700	18.0	5.163	0.5	2860.1	494.3	30.2	3700
3800	18.8	5.368	0.5	2937.4	482.7	32.1	3800
3900	19.6	5.577	0.5	3014.7	471.2	34.1	3900
4000	20.5	5.792	0.5	3092.0	460.0	36.2	4000
4100	21.4	6.012	0.6	3169.3	448.9	38.4	4100
4200	22.3	6.238	0.6	3246.6	437.9	40.8	4200
4300	23.3	6.469	0.6	3323.9	427.1	43.3	4300
4400	24.3	6.706	0.7	3401.2	416.5	46.0	4400
4500	25.3	6.950	0.7	3478.5	405.9	48.8	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

21

Blätter
Sheets

50

WK802156AV

**DI
B**

LA: 1000 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.096	0.0	83.1	1031.6	0.3	100
200	0.5	0.194	0.0	166.3	1013.5	0.5	200
300	0.8	0.293	0.0	249.4	995.6	0.8	300
400	1.1	0.395	0.0	332.6	977.8	1.1	400
500	1.3	0.498	0.0	415.7	960.2	1.4	500
600	1.6	0.603	0.0	498.9	942.7	1.7	600
700	1.9	0.710	0.0	582.0	925.5	2.1	700
800	2.2	0.819	0.0	665.2	908.4	2.4	800
900	2.5	0.930	0.1	748.3	891.5	2.8	900
1000	2.8	1.044	0.1	831.5	874.8	3.2	1000
1100	3.2	1.159	0.1	914.6	858.2	3.6	1100
1200	3.5	1.277	0.1	997.8	841.9	4.1	1200
1300	3.8	1.397	0.1	1080.9	825.8	4.5	1300
1400	4.2	1.519	0.1	1164.1	809.9	5.0	1400
1500	4.6	1.644	0.1	1247.2	794.2	5.5	1500
1600	4.9	1.771	0.1	1330.4	778.7	6.0	1600
1700	5.3	1.900	0.1	1413.5	763.4	6.6	1700
1800	5.7	2.033	0.1	1496.6	748.3	7.2	1800
1900	6.1	2.168	0.1	1579.8	733.4	7.8	1900
2000	6.5	2.305	0.2	1662.9	718.7	8.4	2000
2100	6.9	2.446	0.2	1746.1	704.2	9.1	2100
2200	7.4	2.589	0.2	1829.2	689.9	9.8	2200
2300	7.8	2.736	0.2	1912.4	675.7	10.6	2300
2400	8.3	2.886	0.2	1995.5	661.8	11.4	2400
2500	8.7	3.038	0.2	2078.7	648.0	12.2	2500
2600	9.2	3.194	0.2	2161.8	634.4	13.1	2600
2700	9.7	3.354	0.2	2245.0	621.0	14.0	2700
2800	10.3	3.516	0.2	2328.1	607.7	14.9	2800
2900	10.8	3.683	0.3	2411.3	594.7	16.0	2900
3000	11.3	3.853	0.3	2494.4	581.8	17.0	3000
3100	11.9	4.026	0.3	2577.6	569.1	18.2	3100
3200	12.5	4.204	0.3	2660.7	556.6	19.3	3200
3300	13.1	4.386	0.3	2743.8	544.2	20.6	3300
3400	13.7	4.572	0.3	2827.0	532.0	21.9	3400
3500	14.4	4.762	0.4	2910.1	520.0	23.3	3500
3600	15.0	4.956	0.4	2993.3	508.2	24.8	3600
3700	15.7	5.156	0.4	3076.4	496.5	26.3	3700
3800	16.4	5.359	0.4	3159.6	485.0	28.0	3800
3900	17.1	5.568	0.4	3242.7	473.7	29.7	3900
4000	17.9	5.782	0.5	3325.9	462.5	31.6	4000
4100	18.7	6.001	0.5	3409.0	451.5	33.5	4100
4200	19.5	6.225	0.5	3492.2	440.6	35.6	4200
4300	20.3	6.455	0.5	3575.3	429.9	37.7	4300
4400	21.2	6.690	0.6	3658.5	419.3	40.0	4400
4500	22.1	6.932	0.6	3741.6	408.8	42.5	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

22

50

WK802156AV

DI
B

LA: 1100 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.096	0.0	88.2	1031.6	0.2	100
200	0.4	0.194	0.0	176.4	1013.4	0.4	200
300	0.7	0.293	0.0	264.6	995.5	0.7	300
400	0.9	0.395	0.0	352.8	977.7	0.9	400
500	1.1	0.498	0.0	441.0	960.0	1.2	500
600	1.4	0.603	0.0	529.2	942.6	1.5	600
700	1.6	0.710	0.0	617.3	925.3	1.8	700
800	1.9	0.819	0.0	705.5	908.2	2.1	800
900	2.1	0.930	0.0	793.7	891.4	2.4	900
1000	2.4	1.044	0.1	881.9	874.7	2.7	1000
1100	2.7	1.159	0.1	970.1	858.2	3.1	1100
1200	3.0	1.277	0.1	1058.3	841.9	3.5	1200
1300	3.3	1.397	0.1	1146.5	825.8	3.8	1300
1400	3.6	1.519	0.1	1234.7	810.0	4.3	1400
1500	3.9	1.644	0.1	1322.9	794.3	4.7	1500
1600	4.2	1.771	0.1	1411.1	778.9	5.1	1600
1700	4.5	1.900	0.1	1499.3	763.7	5.6	1700
1800	4.8	2.033	0.1	1587.5	748.6	6.1	1800
1900	5.2	2.168	0.1	1675.7	733.8	6.6	1900
2000	5.5	2.305	0.1	1763.8	719.2	7.2	2000
2100	5.9	2.446	0.1	1852.0	704.7	7.7	2100
2200	6.2	2.589	0.1	1940.2	690.5	8.3	2200
2300	6.6	2.735	0.2	2028.4	676.4	9.0	2300
2400	7.0	2.885	0.2	2116.6	662.5	9.6	2400
2500	7.4	3.037	0.2	2204.8	648.8	10.3	2500
2600	7.8	3.193	0.2	2293.0	635.3	11.1	2600
2700	8.3	3.352	0.2	2381.2	622.0	11.8	2700
2800	8.7	3.515	0.2	2469.4	608.8	12.7	2800
2900	9.2	3.681	0.2	2557.6	595.9	13.5	2900
3000	9.6	3.850	0.2	2645.8	583.1	14.4	3000
3100	10.1	4.024	0.3	2734.0	570.5	15.4	3100
3200	10.6	4.201	0.3	2822.1	558.0	16.4	3200
3300	11.1	4.382	0.3	2910.3	545.8	17.4	3300
3400	11.6	4.568	0.3	2998.5	533.7	18.6	3400
3500	12.2	4.757	0.3	3086.7	521.7	19.7	3500
3600	12.7	4.951	0.3	3174.9	510.0	21.0	3600
3700	13.3	5.149	0.3	3263.1	498.4	22.3	3700
3800	13.9	5.352	0.4	3351.3	487.0	23.7	3800
3900	14.5	5.560	0.4	3439.5	475.7	25.1	3900
4000	15.2	5.773	0.4	3527.7	464.6	26.7	4000
4100	15.8	5.991	0.4	3615.9	453.7	28.3	4100
4200	16.5	6.214	0.4	3704.1	442.9	30.0	4200
4300	17.2	6.442	0.5	3792.3	432.2	31.9	4300
4400	17.9	6.677	0.5	3880.5	421.7	33.8	4400
4500	18.7	6.917	0.5	3968.6	411.3	35.9	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

**DI
B**

LA: 1200 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.096	0.0	92.4	1031.6	0.2	100
200	0.4	0.194	0.0	184.8	1013.4	0.4	200
300	0.5	0.293	0.0	277.2	995.4	0.6	300
400	0.7	0.395	0.0	369.6	977.6	0.8	400
500	0.9	0.498	0.0	461.9	959.9	1.0	500
600	1.1	0.603	0.0	554.3	942.5	1.2	600
700	1.3	0.710	0.0	646.7	925.2	1.4	700
800	1.5	0.819	0.0	739.1	908.1	1.7	800
900	1.7	0.931	0.0	831.5	891.3	1.9	900
1000	2.0	1.044	0.0	923.9	874.6	2.2	1000
1100	2.2	1.159	0.0	1016.3	858.2	2.5	1100
1200	2.4	1.277	0.1	1108.7	841.9	2.8	1200
1300	2.6	1.397	0.1	1201.0	825.9	3.1	1300
1400	2.9	1.519	0.1	1293.4	810.1	3.5	1400
1500	3.1	1.644	0.1	1385.8	794.4	3.8	1500
1600	3.4	1.771	0.1	1478.2	779.1	4.2	1600
1700	3.7	1.900	0.1	1570.6	763.9	4.5	1700
1800	3.9	2.033	0.1	1663.0	748.9	4.9	1800
1900	4.2	2.168	0.1	1755.4	734.1	5.4	1900
2000	4.5	2.305	0.1	1847.8	719.5	5.8	2000
2100	4.8	2.446	0.1	1940.1	705.1	6.3	2100
2200	5.1	2.589	0.1	2032.5	691.0	6.8	2200
2300	5.4	2.735	0.1	2124.9	677.0	7.3	2300
2400	5.7	2.884	0.1	2217.3	663.1	7.8	2400
2500	6.0	3.037	0.1	2309.7	649.5	8.4	2500
2600	6.4	3.192	0.2	2402.1	636.1	9.0	2600
2700	6.7	3.351	0.2	2494.5	622.8	9.6	2700
2800	7.1	3.513	0.2	2586.9	609.7	10.3	2800
2900	7.4	3.679	0.2	2679.3	596.8	11.0	2900
3000	7.8	3.849	0.2	2771.6	584.1	11.7	3000
3100	8.2	4.022	0.2	2864.0	571.6	12.5	3100
3200	8.6	4.199	0.2	2956.4	559.2	13.3	3200
3300	9.0	4.379	0.2	3048.8	547.0	14.1	3300
3400	9.4	4.564	0.2	3141.2	535.0	15.0	3400
3500	9.9	4.753	0.3	3233.6	523.1	16.0	3500
3600	10.3	4.947	0.3	3326.0	511.5	17.0	3600
3700	10.8	5.144	0.3	3418.4	499.9	18.0	3700
3800	11.3	5.347	0.3	3510.7	488.6	19.2	3800
3900	11.8	5.554	0.3	3603.1	477.4	20.3	3900
4000	12.3	5.766	0.3	3695.5	466.3	21.6	4000
4100	12.8	5.983	0.3	3787.9	455.4	22.9	4100
4200	13.4	6.205	0.4	3880.3	444.7	24.3	4200
4300	13.9	6.433	0.4	3972.7	434.1	25.8	4300
4400	14.5	6.666	0.4	4065.1	423.6	27.3	4400
4500	15.1	6.905	0.4	4157.5	413.3	29.0	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

LA: 1300 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.096	0.0	95.7	1031.5	0.1	100
200	0.3	0.194	0.0	191.4	1013.3	0.3	200
300	0.4	0.293	0.0	287.1	995.3	0.4	300
400	0.6	0.395	0.0	382.8	977.5	0.6	400
500	0.7	0.498	0.0	478.5	959.8	0.7	500
600	0.8	0.603	0.0	574.2	942.4	0.9	600
700	1.0	0.710	0.0	669.9	925.1	1.1	700
800	1.2	0.819	0.0	765.6	908.1	1.3	800
900	1.3	0.931	0.0	861.2	891.2	1.5	900
1000	1.5	1.044	0.0	956.9	874.6	1.7	1000
1100	1.7	1.159	0.0	1052.6	858.1	1.9	1100
1200	1.8	1.277	0.0	1148.3	841.9	2.1	1200
1300	2.0	1.397	0.0	1244.0	825.9	2.4	1300
1400	2.2	1.519	0.0	1339.7	810.1	2.6	1400
1500	2.4	1.644	0.1	1435.4	794.5	2.9	1500
1600	2.6	1.771	0.1	1531.1	779.2	3.2	1600
1700	2.8	1.901	0.1	1626.8	764.0	3.4	1700
1800	3.0	2.033	0.1	1722.5	749.1	3.8	1800
1900	3.2	2.168	0.1	1818.2	734.3	4.1	1900
2000	3.4	2.305	0.1	1913.9	719.8	4.4	2000
2100	3.6	2.445	0.1	2009.6	705.5	4.8	2100
2200	3.8	2.589	0.1	2105.3	691.3	5.1	2200
2300	4.1	2.735	0.1	2201.0	677.4	5.5	2300
2400	4.3	2.884	0.1	2296.7	663.6	5.9	2400
2500	4.6	3.036	0.1	2392.4	650.1	6.4	2500
2600	4.8	3.192	0.1	2488.0	636.7	6.8	2600
2700	5.1	3.350	0.1	2583.7	623.5	7.3	2700
2800	5.4	3.512	0.1	2679.4	610.4	7.8	2800
2900	5.6	3.678	0.1	2775.1	597.6	8.3	2900
3000	5.9	3.847	0.1	2870.8	584.9	8.9	3000
3100	6.2	4.020	0.2	2966.5	572.5	9.4	3100
3200	6.5	4.197	0.2	3062.2	560.1	10.1	3200
3300	6.8	4.377	0.2	3157.9	548.0	10.7	3300
3400	7.1	4.562	0.2	3253.6	536.0	11.4	3400
3500	7.5	4.750	0.2	3349.3	524.2	12.1	3500
3600	7.8	4.943	0.2	3445.0	512.6	12.9	3600
3700	8.2	5.140	0.2	3540.7	501.1	13.7	3700
3800	8.5	5.342	0.2	3636.4	489.8	14.5	3800
3900	8.9	5.549	0.2	3732.1	478.6	15.4	3900
4000	9.3	5.760	0.2	3827.8	467.7	16.3	4000
4100	9.7	5.977	0.3	3923.5	456.8	17.3	4100
4200	10.1	6.198	0.3	4019.1	446.1	18.4	4200
4300	10.6	6.425	0.3	4114.8	435.6	19.5	4300
4400	11.0	6.657	0.3	4210.5	425.1	20.7	4400
4500	11.5	6.895	0.3	4306.2	414.8	21.9	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

DI
B

WK802156AV

LA: 1400 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.096	0.0	98.1	1031.5	0.1	100
200	0.2	0.194	0.0	196.2	1013.3	0.2	200
300	0.3	0.293	0.0	294.2	995.3	0.3	300
400	0.4	0.395	0.0	392.3	977.4	0.4	400
500	0.5	0.498	0.0	490.4	959.8	0.5	500
600	0.6	0.603	0.0	588.5	942.3	0.6	600
700	0.7	0.710	0.0	686.5	925.1	0.7	700
800	0.8	0.819	0.0	784.6	908.0	0.9	800
900	0.9	0.931	0.0	882.7	891.2	1.0	900
1000	1.0	1.044	0.0	980.8	874.5	1.1	1000
1100	1.1	1.159	0.0	1078.9	858.1	1.3	1100
1200	1.2	1.277	0.0	1176.9	841.9	1.4	1200
1300	1.3	1.397	0.0	1275.0	825.9	1.6	1300
1400	1.5	1.519	0.0	1373.1	810.1	1.8	1400
1500	1.6	1.644	0.0	1471.2	794.6	1.9	1500
1600	1.7	1.771	0.0	1569.3	779.2	2.1	1600
1700	1.9	1.901	0.0	1667.3	764.1	2.3	1700
1800	2.0	2.033	0.0	1765.4	749.2	2.5	1800
1900	2.1	2.167	0.0	1863.5	734.5	2.7	1900
2000	2.3	2.305	0.1	1961.6	720.0	3.0	2000
2100	2.4	2.445	0.1	2059.6	705.7	3.2	2100
2200	2.6	2.588	0.1	2157.7	691.6	3.4	2200
2300	2.7	2.735	0.1	2255.8	677.7	3.7	2300
2400	2.9	2.884	0.1	2353.9	664.0	4.0	2400
2500	3.1	3.036	0.1	2452.0	650.4	4.3	2500
2600	3.2	3.191	0.1	2550.0	637.1	4.6	2600
2700	3.4	3.350	0.1	2648.1	623.9	4.9	2700
2800	3.6	3.512	0.1	2746.2	610.9	5.2	2800
2900	3.8	3.677	0.1	2844.3	598.1	5.6	2900
3000	4.0	3.846	0.1	2942.4	585.5	6.0	3000
3100	4.2	4.019	0.1	3040.4	573.1	6.3	3100
3200	4.4	4.195	0.1	3138.5	560.8	6.8	3200
3300	4.6	4.375	0.1	3236.6	548.7	7.2	3300
3400	4.8	4.560	0.1	3334.7	536.8	7.6	3400
3500	5.0	4.748	0.1	3432.7	525.0	8.1	3500
3600	5.3	4.941	0.1	3530.8	513.4	8.6	3600
3700	5.5	5.138	0.1	3628.9	502.0	9.2	3700
3800	5.7	5.339	0.1	3727.0	490.7	9.7	3800
3900	6.0	5.545	0.2	3825.1	479.6	10.3	3900
4000	6.3	5.756	0.2	3923.1	468.6	11.0	4000
4100	6.5	5.972	0.2	4021.2	457.8	11.6	4100
4200	6.8	6.193	0.2	4119.3	447.1	12.3	4200
4300	7.1	6.420	0.2	4217.4	436.6	13.1	4300
4400	7.4	6.651	0.2	4315.5	426.2	13.9	4400
4500	7.7	6.889	0.2	4413.5	415.9	14.7	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

LA: 1500 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.0	0.096	0.0	99.5	1031.5	0.0	100
200	0.1	0.194	0.0	199.0	1013.2	0.1	200
300	0.1	0.293	0.0	298.6	995.2	0.1	300
400	0.2	0.395	0.0	398.1	977.4	0.2	400
500	0.2	0.498	0.0	497.6	959.7	0.3	500
600	0.3	0.603	0.0	597.1	942.3	0.3	600
700	0.3	0.710	0.0	696.6	925.0	0.4	700
800	0.4	0.820	0.0	796.1	908.0	0.4	800
900	0.4	0.931	0.0	895.7	891.1	0.5	900
1000	0.5	1.044	0.0	995.2	874.5	0.6	1000
1100	0.6	1.159	0.0	1094.7	858.1	0.6	1100
1200	0.6	1.277	0.0	1194.2	841.9	0.7	1200
1300	0.7	1.397	0.0	1293.7	825.9	0.8	1300
1400	0.7	1.519	0.0	1393.3	810.1	0.9	1400
1500	0.8	1.644	0.0	1492.8	794.6	1.0	1500
1600	0.9	1.771	0.0	1592.3	779.3	1.1	1600
1700	0.9	1.901	0.0	1691.8	764.2	1.2	1700
1800	1.0	2.033	0.0	1791.3	749.3	1.3	1800
1900	1.1	2.167	0.0	1890.9	734.6	1.4	1900
2000	1.1	2.305	0.0	1990.4	720.1	1.5	2000
2100	1.2	2.445	0.0	2089.9	705.8	1.6	2100
2200	1.3	2.588	0.0	2189.4	691.8	1.7	2200
2300	1.4	2.734	0.0	2288.9	677.9	1.9	2300
2400	1.5	2.883	0.0	2388.4	664.2	2.0	2400
2500	1.5	3.036	0.0	2488.0	650.7	2.1	2500
2600	1.6	3.191	0.0	2587.5	637.3	2.3	2600
2700	1.7	3.349	0.0	2687.0	624.2	2.5	2700
2800	1.8	3.511	0.0	2786.5	611.2	2.6	2800
2900	1.9	3.677	0.0	2886.0	598.5	2.8	2900
3000	2.0	3.845	0.0	2985.6	585.9	3.0	3000
3100	2.1	4.018	0.1	3085.1	573.4	3.2	3100
3200	2.2	4.194	0.1	3184.6	561.2	3.4	3200
3300	2.3	4.374	0.1	3284.1	549.1	3.6	3300
3400	2.4	4.559	0.1	3383.6	537.2	3.8	3400
3500	2.5	4.747	0.1	3483.1	525.5	4.1	3500
3600	2.6	4.939	0.1	3582.7	513.9	4.3	3600
3700	2.8	5.136	0.1	3682.2	502.5	4.6	3700
3800	2.9	5.337	0.1	3781.7	491.2	4.9	3800
3900	3.0	5.543	0.1	3881.2	480.1	5.2	3900
4000	3.1	5.754	0.1	3980.7	469.2	5.5	4000
4100	3.3	5.970	0.1	4080.3	458.4	5.8	4100
4200	3.4	6.190	0.1	4179.8	447.8	6.2	4200
4300	3.6	6.416	0.1	4279.3	437.2	6.6	4300
4400	3.7	6.648	0.1	4378.8	426.9	7.0	4400
4500	3.9	6.885	0.1	4478.3	416.6	7.4	4500

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

27

50

WK802156AV

DI
B

2.5 KORREKTURTAFEL ZUR FLABSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrektur kann unter gestörten Bedingungen die Distanz **SD** für den entsprechenden Lagewinkel **LA** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel),
sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind
(parallel zur X-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind
(von links, parallel zur Z-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A%).

2.5 CORRECTION TABLE TO THE ANTI-AIRCRAFT FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** for the given angle of site **LA** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction (Superelevation),
as well as

FZ-Variation (Time-of-Flight),

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind
(parallel to X-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind
(from the left, parallel to Z-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).

LA: 0 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.0	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.0	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.0	0.007	0.001	-0.004	-0.001	0.6
800	0.1	0.0	0.0	0.0	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	-0.1	0.0	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.0	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.0	0.012	0.003	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.0	0.013	0.003	-0.015	-0.002	1.1
1300	0.1	0.0	-0.1	0.0	0.015	0.004	-0.018	-0.002	1.2
1400	0.2	0.0	-0.1	0.0	0.016	0.005	-0.021	-0.003	1.3
1500	0.2	0.0	-0.2	0.0	0.018	0.005	-0.025	-0.003	1.5
1600	0.2	0.0	-0.2	0.0	0.019	0.006	-0.029	-0.004	1.6
1700	0.2	0.0	-0.2	0.0	0.021	0.007	-0.033	-0.004	1.7
1800	0.2	0.1	-0.3	0.0	0.023	0.008	-0.038	-0.005	1.8
1900	0.2	0.1	-0.3	0.0	0.024	0.010	-0.043	-0.006	1.9
2000	0.3	0.1	-0.3	0.0	0.026	0.011	-0.049	-0.007	2.1
2100	0.3	0.1	-0.4	0.0	0.028	0.013	-0.055	-0.008	2.2
2200	0.3	0.1	-0.4	0.0	0.030	0.014	-0.062	-0.009	2.3
2300	0.3	0.1	-0.5	-0.1	0.032	0.016	-0.069	-0.010	2.5
2400	0.3	0.1	-0.5	-0.1	0.034	0.018	-0.078	-0.011	2.6
2500	0.4	0.1	-0.6	-0.1	0.036	0.020	-0.086	-0.013	2.7
2600	0.4	0.2	-0.7	-0.1	0.038	0.022	-0.096	-0.014	2.9
2700	0.4	0.2	-0.8	-0.1	0.041	0.025	-0.106	-0.016	3.0
2800	0.4	0.2	-0.8	-0.1	0.043	0.027	-0.117	-0.018	3.2
2900	0.5	0.2	-0.9	-0.1	0.046	0.030	-0.128	-0.020	3.4
3000	0.5	0.2	-1.0	-0.1	0.048	0.033	-0.141	-0.022	3.5
3100	0.5	0.3	-1.1	-0.1	0.051	0.037	-0.154	-0.024	3.7
3200	0.5	0.3	-1.2	-0.2	0.054	0.041	-0.169	-0.027	3.9
3300	0.6	0.3	-1.4	-0.2	0.057	0.045	-0.185	-0.030	4.1
3400	0.6	0.4	-1.5	-0.2	0.060	0.049	-0.201	-0.033	4.2
3500	0.6	0.4	-1.6	-0.2	0.063	0.053	-0.219	-0.037	4.4
3600	0.7	0.4	-1.8	-0.3	0.067	0.058	-0.238	-0.041	4.6
3700	0.7	0.5	-2.0	-0.3	0.070	0.064	-0.259	-0.045	4.8
3800	0.8	0.5	-2.2	-0.3	0.074	0.069	-0.280	-0.049	5.0
3900	0.8	0.6	-2.4	-0.4	0.078	0.076	-0.304	-0.054	5.3
4000	0.8	0.6	-2.6	-0.4	0.082	0.082	-0.329	-0.060	5.5
4100	0.9	0.7	-2.8	-0.4	0.086	0.089	-0.355	-0.065	5.7
4200	0.9	0.8	-3.1	-0.5	0.090	0.097	-0.384	-0.072	5.9
4300	1.0	0.9	-3.3	-0.5	0.095	0.105	-0.414	-0.079	6.2
4400	1.1	0.9	-3.6	-0.6	0.099	0.114	-0.447	-0.086	6.4
4500	1.1	1.0	-3.9	-0.7	0.104	0.123	-0.481	-0.095	6.7

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

DI
B

LA: 100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.0	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.0	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.1	0.007	0.001	-0.004	-0.001	0.6
800	0.1	0.0	0.0	0.1	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	-0.1	0.1	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.1	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.1	0.012	0.003	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.1	0.013	0.003	-0.015	-0.002	1.1
1300	0.1	0.0	-0.1	0.1	0.015	0.004	-0.018	-0.002	1.2
1400	0.2	0.0	-0.1	0.1	0.016	0.004	-0.021	-0.003	1.3
1500	0.2	0.0	-0.2	0.1	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.1	0.019	0.006	-0.028	-0.004	1.6
1700	0.2	0.0	-0.2	0.1	0.021	0.007	-0.033	-0.004	1.7
1800	0.2	0.1	-0.3	0.1	0.023	0.008	-0.038	-0.005	1.8
1900	0.2	0.1	-0.3	0.2	0.024	0.009	-0.043	-0.006	1.9
2000	0.3	0.1	-0.3	0.2	0.026	0.011	-0.049	-0.007	2.0
2100	0.3	0.1	-0.4	0.2	0.028	0.012	-0.055	-0.008	2.2
2200	0.3	0.1	-0.4	0.2	0.030	0.014	-0.062	-0.009	2.3
2300	0.3	0.1	-0.5	0.2	0.032	0.016	-0.069	-0.010	2.4
2400	0.3	0.1	-0.5	0.2	0.034	0.017	-0.077	-0.011	2.6
2500	0.4	0.1	-0.6	0.2	0.036	0.019	-0.085	-0.012	2.7
2600	0.4	0.2	-0.7	0.2	0.038	0.022	-0.095	-0.014	2.9
2700	0.4	0.2	-0.7	0.2	0.041	0.024	-0.105	-0.016	3.0
2800	0.4	0.2	-0.8	0.2	0.043	0.027	-0.115	-0.017	3.2
2900	0.5	0.2	-0.9	0.2	0.046	0.029	-0.127	-0.019	3.3
3000	0.5	0.2	-1.0	0.2	0.048	0.032	-0.139	-0.022	3.5
3100	0.5	0.3	-1.1	0.2	0.051	0.036	-0.152	-0.024	3.7
3200	0.5	0.3	-1.2	0.2	0.054	0.039	-0.167	-0.027	3.8
3300	0.6	0.3	-1.3	0.2	0.057	0.043	-0.182	-0.029	4.0
3400	0.6	0.4	-1.5	0.2	0.060	0.047	-0.198	-0.032	4.2
3500	0.6	0.4	-1.6	0.2	0.063	0.051	-0.216	-0.036	4.4
3600	0.7	0.4	-1.8	0.2	0.067	0.056	-0.234	-0.039	4.6
3700	0.7	0.5	-1.9	0.2	0.070	0.061	-0.254	-0.043	4.8
3800	0.8	0.5	-2.1	0.2	0.074	0.067	-0.276	-0.048	5.0
3900	0.8	0.6	-2.3	0.2	0.078	0.072	-0.298	-0.053	5.2
4000	0.8	0.6	-2.5	0.1	0.082	0.079	-0.322	-0.058	5.4
4100	0.9	0.7	-2.7	0.1	0.086	0.085	-0.348	-0.063	5.6
4200	0.9	0.7	-3.0	0.1	0.090	0.092	-0.376	-0.069	5.8
4300	1.0	0.8	-3.2	0.1	0.095	0.100	-0.405	-0.076	6.1
4400	1.0	0.9	-3.5	0.0	0.099	0.108	-0.437	-0.083	6.3
4500	1.1	1.0	-3.8	0.0	0.104	0.117	-0.470	-0.091	6.5

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		30	30	50	50
		WK802156AV		DI	B

LA: 200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.1	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.1	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.1	0.007	0.001	-0.004	-0.001	0.6
800	0.1	0.0	0.0	0.1	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.2	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.2	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.2	0.012	0.003	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.2	0.013	0.003	-0.015	-0.002	1.1
1300	0.1	0.0	-0.1	0.2	0.015	0.004	-0.017	-0.002	1.2
1400	0.2	0.0	-0.1	0.2	0.016	0.004	-0.021	-0.003	1.3
1500	0.2	0.0	-0.2	0.3	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.3	0.019	0.006	-0.028	-0.004	1.6
1700	0.2	0.0	-0.2	0.3	0.021	0.007	-0.033	-0.004	1.7
1800	0.2	0.1	-0.2	0.3	0.023	0.008	-0.037	-0.005	1.8
1900	0.2	0.1	-0.3	0.3	0.024	0.009	-0.043	-0.006	1.9
2000	0.2	0.1	-0.3	0.4	0.026	0.011	-0.048	-0.006	2.0
2100	0.3	0.1	-0.4	0.4	0.028	0.012	-0.054	-0.007	2.2
2200	0.3	0.1	-0.4	0.4	0.030	0.014	-0.061	-0.008	2.3
2300	0.3	0.1	-0.5	0.4	0.032	0.015	-0.068	-0.009	2.4
2400	0.3	0.1	-0.5	0.4	0.034	0.017	-0.076	-0.011	2.6
2500	0.3	0.1	-0.6	0.5	0.036	0.019	-0.085	-0.012	2.7
2600	0.4	0.1	-0.7	0.5	0.038	0.021	-0.094	-0.014	2.8
2700	0.4	0.2	-0.7	0.5	0.041	0.023	-0.104	-0.015	3.0
2800	0.4	0.2	-0.8	0.5	0.043	0.026	-0.114	-0.017	3.1
2900	0.4	0.2	-0.9	0.5	0.046	0.029	-0.125	-0.019	3.3
3000	0.5	0.2	-1.0	0.5	0.048	0.031	-0.138	-0.021	3.5
3100	0.5	0.2	-1.1	0.6	0.051	0.034	-0.151	-0.023	3.6
3200	0.5	0.3	-1.2	0.6	0.054	0.038	-0.165	-0.026	3.8
3300	0.6	0.3	-1.3	0.6	0.057	0.041	-0.179	-0.028	4.0
3400	0.6	0.3	-1.4	0.6	0.060	0.045	-0.195	-0.031	4.1
3500	0.6	0.4	-1.6	0.6	0.063	0.049	-0.212	-0.035	4.3
3600	0.7	0.4	-1.7	0.6	0.067	0.054	-0.231	-0.038	4.5
3700	0.7	0.4	-1.9	0.6	0.070	0.059	-0.250	-0.042	4.7
3800	0.7	0.5	-2.1	0.6	0.074	0.064	-0.271	-0.046	4.9
3900	0.8	0.5	-2.2	0.7	0.077	0.069	-0.293	-0.051	5.1
4000	0.8	0.6	-2.4	0.7	0.081	0.075	-0.316	-0.055	5.3
4100	0.9	0.6	-2.7	0.7	0.086	0.081	-0.342	-0.061	5.5
4200	0.9	0.7	-2.9	0.7	0.090	0.088	-0.368	-0.067	5.7
4300	1.0	0.8	-3.1	0.6	0.094	0.095	-0.397	-0.073	5.9
4400	1.0	0.8	-3.4	0.6	0.099	0.103	-0.427	-0.080	6.2
4500	1.1	0.9	-3.7	0.6	0.104	0.111	-0.460	-0.087	6.4

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		31		50	
		WK802156AV		DI B	

LA: 300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.1	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.1	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.2	0.007	0.001	-0.004	-0.001	0.6
800	0.1	0.0	0.0	0.2	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.2	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.3	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.3	0.012	0.003	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.3	0.014	0.003	-0.015	-0.002	1.1
1300	0.1	0.0	-0.1	0.3	0.015	0.004	-0.017	-0.002	1.2
1400	0.2	0.0	-0.1	0.4	0.016	0.004	-0.021	-0.002	1.3
1500	0.2	0.0	-0.2	0.4	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.4	0.019	0.006	-0.028	-0.003	1.5
1700	0.2	0.0	-0.2	0.5	0.021	0.007	-0.032	-0.004	1.7
1800	0.2	0.1	-0.2	0.5	0.023	0.008	-0.037	-0.005	1.8
1900	0.2	0.1	-0.3	0.5	0.024	0.009	-0.042	-0.005	1.9
2000	0.2	0.1	-0.3	0.5	0.026	0.010	-0.048	-0.006	2.0
2100	0.3	0.1	-0.4	0.6	0.028	0.012	-0.054	-0.007	2.1
2200	0.3	0.1	-0.4	0.6	0.030	0.013	-0.061	-0.008	2.3
2300	0.3	0.1	-0.5	0.6	0.032	0.015	-0.068	-0.009	2.4
2400	0.3	0.1	-0.5	0.7	0.034	0.017	-0.076	-0.010	2.5
2500	0.3	0.1	-0.6	0.7	0.036	0.018	-0.084	-0.012	2.7
2600	0.4	0.1	-0.6	0.7	0.038	0.021	-0.093	-0.013	2.8
2700	0.4	0.2	-0.7	0.8	0.041	0.023	-0.103	-0.015	3.0
2800	0.4	0.2	-0.8	0.8	0.043	0.025	-0.113	-0.016	3.1
2900	0.4	0.2	-0.9	0.8	0.046	0.028	-0.124	-0.018	3.3
3000	0.5	0.2	-1.0	0.9	0.048	0.030	-0.136	-0.020	3.4
3100	0.5	0.2	-1.0	0.9	0.051	0.033	-0.149	-0.022	3.6
3200	0.5	0.3	-1.1	0.9	0.054	0.037	-0.162	-0.025	3.7
3300	0.5	0.3	-1.3	1.0	0.057	0.040	-0.177	-0.027	3.9
3400	0.6	0.3	-1.4	1.0	0.060	0.044	-0.193	-0.030	4.1
3500	0.6	0.3	-1.5	1.0	0.063	0.048	-0.209	-0.033	4.3
3600	0.6	0.4	-1.7	1.0	0.067	0.052	-0.227	-0.036	4.4
3700	0.7	0.4	-1.8	1.1	0.070	0.056	-0.246	-0.040	4.6
3800	0.7	0.5	-2.0	1.1	0.074	0.061	-0.266	-0.044	4.8
3900	0.8	0.5	-2.1	1.1	0.077	0.066	-0.288	-0.048	5.0
4000	0.8	0.5	-2.3	1.1	0.081	0.072	-0.311	-0.053	5.2
4100	0.8	0.6	-2.5	1.2	0.086	0.078	-0.335	-0.058	5.4
4200	0.9	0.7	-2.8	1.2	0.090	0.084	-0.361	-0.063	5.6
4300	0.9	0.7	-3.0	1.2	0.094	0.091	-0.389	-0.069	5.8
4400	1.0	0.8	-3.3	1.2	0.099	0.098	-0.419	-0.075	6.1
4500	1.1	0.8	-3.5	1.2	0.104	0.105	-0.450	-0.082	6.3

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		32	32	50	50
		WK802156AV		DI	B

LA: 400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.2	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.2	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.2	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.3	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.3	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.3	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.4	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.4	0.014	0.003	-0.014	-0.002	1.1
1300	0.1	0.0	-0.1	0.5	0.015	0.004	-0.017	-0.002	1.2
1400	0.1	0.0	-0.1	0.5	0.016	0.004	-0.021	-0.002	1.3
1500	0.2	0.0	-0.1	0.5	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.6	0.019	0.006	-0.028	-0.003	1.5
1700	0.2	0.0	-0.2	0.6	0.021	0.007	-0.032	-0.004	1.6
1800	0.2	0.0	-0.2	0.6	0.023	0.008	-0.037	-0.005	1.8
1900	0.2	0.1	-0.3	0.7	0.024	0.009	-0.042	-0.005	1.9
2000	0.2	0.1	-0.3	0.7	0.026	0.010	-0.048	-0.006	2.0
2100	0.3	0.1	-0.3	0.8	0.028	0.012	-0.054	-0.007	2.1
2200	0.3	0.1	-0.4	0.8	0.030	0.013	-0.060	-0.008	2.3
2300	0.3	0.1	-0.4	0.9	0.032	0.015	-0.067	-0.009	2.4
2400	0.3	0.1	-0.5	0.9	0.034	0.016	-0.075	-0.010	2.5
2500	0.3	0.1	-0.5	0.9	0.036	0.018	-0.083	-0.011	2.7
2600	0.4	0.1	-0.6	1.0	0.038	0.020	-0.092	-0.012	2.8
2700	0.4	0.1	-0.7	1.0	0.041	0.022	-0.102	-0.014	2.9
2800	0.4	0.2	-0.7	1.1	0.043	0.024	-0.112	-0.015	3.1
2900	0.4	0.2	-0.8	1.1	0.046	0.027	-0.123	-0.017	3.2
3000	0.4	0.2	-0.9	1.2	0.048	0.029	-0.134	-0.019	3.4
3100	0.5	0.2	-1.0	1.2	0.051	0.032	-0.147	-0.021	3.5
3200	0.5	0.2	-1.1	1.3	0.054	0.035	-0.160	-0.023	3.7
3300	0.5	0.3	-1.2	1.3	0.057	0.039	-0.175	-0.026	3.9
3400	0.6	0.3	-1.3	1.3	0.060	0.042	-0.190	-0.028	4.0
3500	0.6	0.3	-1.4	1.4	0.063	0.046	-0.206	-0.031	4.2
3600	0.6	0.4	-1.6	1.4	0.067	0.050	-0.224	-0.034	4.4
3700	0.7	0.4	-1.7	1.5	0.070	0.054	-0.242	-0.038	4.6
3800	0.7	0.4	-1.9	1.5	0.074	0.059	-0.262	-0.041	4.7
3900	0.7	0.5	-2.0	1.6	0.077	0.063	-0.283	-0.045	4.9
4000	0.8	0.5	-2.2	1.6	0.081	0.069	-0.306	-0.050	5.1
4100	0.8	0.6	-2.4	1.7	0.085	0.074	-0.329	-0.054	5.3
4200	0.9	0.6	-2.6	1.7	0.090	0.080	-0.355	-0.059	5.5
4300	0.9	0.7	-2.8	1.7	0.094	0.086	-0.382	-0.065	5.7
4400	1.0	0.7	-3.1	1.8	0.099	0.093	-0.410	-0.071	6.0
4500	1.0	0.8	-3.3	1.8	0.104	0.100	-0.441	-0.077	6.2

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		33		50	
		WK802156AV		DI	B

LA: 500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.2	0.005	0.000	-0.002	0.000	0.4
600	0.1	0.0	0.0	0.2	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.3	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.3	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.4	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.4	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.5	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.5	0.014	0.003	-0.014	-0.002	1.1
1300	0.1	0.0	-0.1	0.6	0.015	0.004	-0.017	-0.002	1.2
1400	0.1	0.0	-0.1	0.6	0.016	0.004	-0.020	-0.002	1.3
1500	0.2	0.0	-0.1	0.7	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.7	0.019	0.006	-0.028	-0.003	1.5
1700	0.2	0.0	-0.2	0.7	0.021	0.007	-0.032	-0.004	1.6
1800	0.2	0.0	-0.2	0.8	0.023	0.008	-0.037	-0.004	1.8
1900	0.2	0.1	-0.3	0.9	0.024	0.009	-0.042	-0.005	1.9
2000	0.2	0.1	-0.3	0.9	0.026	0.010	-0.047	-0.006	2.0
2100	0.2	0.1	-0.3	1.0	0.028	0.011	-0.053	-0.006	2.1
2200	0.3	0.1	-0.4	1.0	0.030	0.013	-0.060	-0.007	2.2
2300	0.3	0.1	-0.4	1.1	0.032	0.014	-0.067	-0.008	2.4
2400	0.3	0.1	-0.5	1.1	0.034	0.016	-0.074	-0.009	2.5
2500	0.3	0.1	-0.5	1.2	0.036	0.018	-0.083	-0.010	2.6
2600	0.3	0.1	-0.6	1.2	0.039	0.020	-0.091	-0.012	2.8
2700	0.4	0.1	-0.6	1.3	0.041	0.022	-0.101	-0.013	2.9
2800	0.4	0.2	-0.7	1.3	0.043	0.024	-0.111	-0.015	3.1
2900	0.4	0.2	-0.8	1.4	0.046	0.026	-0.122	-0.016	3.2
3000	0.4	0.2	-0.9	1.5	0.048	0.029	-0.133	-0.018	3.3
3100	0.4	0.2	-0.9	1.5	0.051	0.031	-0.145	-0.020	3.5
3200	0.5	0.2	-1.0	1.6	0.054	0.034	-0.159	-0.022	3.7
3300	0.5	0.2	-1.1	1.6	0.057	0.037	-0.173	-0.024	3.8
3400	0.5	0.3	-1.2	1.7	0.060	0.041	-0.188	-0.027	4.0
3500	0.6	0.3	-1.4	1.8	0.063	0.044	-0.204	-0.029	4.1
3600	0.6	0.3	-1.5	1.8	0.067	0.048	-0.221	-0.032	4.3
3700	0.6	0.4	-1.6	1.9	0.070	0.052	-0.239	-0.035	4.5
3800	0.7	0.4	-1.8	1.9	0.074	0.056	-0.258	-0.039	4.7
3900	0.7	0.4	-1.9	2.0	0.077	0.061	-0.279	-0.042	4.9
4000	0.7	0.5	-2.1	2.0	0.081	0.066	-0.301	-0.046	5.0
4100	0.8	0.5	-2.3	2.1	0.085	0.071	-0.324	-0.051	5.2
4200	0.8	0.6	-2.5	2.2	0.090	0.076	-0.349	-0.055	5.4
4300	0.9	0.6	-2.7	2.2	0.094	0.082	-0.375	-0.060	5.6
4400	0.9	0.7	-2.9	2.3	0.099	0.089	-0.403	-0.066	5.9
4500	1.0	0.7	-3.1	2.3	0.104	0.095	-0.432	-0.072	6.1

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

DI
B

WK802156AV

LA: 600 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.2	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.3	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.3	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.4	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.4	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	-0.1	0.5	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.5	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.6	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	0.7	0.015	0.004	-0.017	-0.002	1.2
1400	0.1	0.0	-0.1	0.7	0.016	0.004	-0.020	-0.002	1.3
1500	0.1	0.0	-0.1	0.8	0.018	0.005	-0.024	-0.003	1.4
1600	0.2	0.0	-0.2	0.8	0.019	0.006	-0.028	-0.003	1.5
1700	0.2	0.0	-0.2	0.9	0.021	0.007	-0.032	-0.003	1.6
1800	0.2	0.0	-0.2	0.9	0.023	0.008	-0.037	-0.004	1.7
1900	0.2	0.1	-0.2	1.0	0.024	0.009	-0.042	-0.005	1.9
2000	0.2	0.1	-0.3	1.1	0.026	0.010	-0.047	-0.005	2.0
2100	0.2	0.1	-0.3	1.1	0.028	0.011	-0.053	-0.006	2.1
2200	0.2	0.1	-0.3	1.2	0.030	0.012	-0.059	-0.007	2.2
2300	0.3	0.1	-0.4	1.3	0.032	0.014	-0.066	-0.008	2.4
2400	0.3	0.1	-0.4	1.3	0.034	0.016	-0.074	-0.009	2.5
2500	0.3	0.1	-0.5	1.4	0.036	0.017	-0.082	-0.010	2.6
2600	0.3	0.1	-0.5	1.5	0.039	0.019	-0.091	-0.011	2.7
2700	0.3	0.1	-0.6	1.5	0.041	0.021	-0.100	-0.012	2.9
2800	0.4	0.1	-0.7	1.6	0.043	0.023	-0.110	-0.014	3.0
2900	0.4	0.2	-0.7	1.7	0.046	0.025	-0.120	-0.015	3.2
3000	0.4	0.2	-0.8	1.7	0.048	0.028	-0.132	-0.017	3.3
3100	0.4	0.2	-0.9	1.8	0.051	0.030	-0.144	-0.019	3.5
3200	0.4	0.2	-1.0	1.9	0.054	0.033	-0.157	-0.020	3.6
3300	0.5	0.2	-1.1	1.9	0.057	0.036	-0.171	-0.023	3.8
3400	0.5	0.3	-1.2	2.0	0.060	0.039	-0.185	-0.025	3.9
3500	0.5	0.3	-1.3	2.1	0.063	0.043	-0.201	-0.027	4.1
3600	0.6	0.3	-1.4	2.2	0.067	0.046	-0.218	-0.030	4.3
3700	0.6	0.3	-1.5	2.2	0.070	0.050	-0.236	-0.033	4.4
3800	0.6	0.4	-1.6	2.3	0.074	0.054	-0.255	-0.036	4.6
3900	0.7	0.4	-1.8	2.4	0.077	0.059	-0.275	-0.039	4.8
4000	0.7	0.4	-1.9	2.5	0.081	0.063	-0.296	-0.043	5.0
4100	0.7	0.5	-2.1	2.5	0.085	0.068	-0.319	-0.047	5.2
4200	0.8	0.5	-2.3	2.6	0.090	0.073	-0.343	-0.051	5.4
4300	0.8	0.5	-2.5	2.7	0.094	0.079	-0.369	-0.056	5.6
4400	0.9	0.6	-2.7	2.8	0.099	0.085	-0.396	-0.061	5.8
4500	0.9	0.6	-2.9	2.8	0.104	0.091	-0.425	-0.066	6.0

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		35	35	50	50
		WK802156AV		DI	B

LA: 700 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.3	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.3	0.006	0.001	-0.003	0.000	0.5
700	0.1	0.0	0.0	0.4	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.4	0.008	0.001	-0.006	-0.001	0.7
900	0.1	0.0	0.0	0.5	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	0.0	0.6	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.6	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.7	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	0.7	0.015	0.004	-0.017	-0.002	1.2
1400	0.1	0.0	-0.1	0.8	0.016	0.004	-0.020	-0.002	1.3
1500	0.1	0.0	-0.1	0.9	0.018	0.005	-0.024	-0.002	1.4
1600	0.1	0.0	-0.1	0.9	0.019	0.006	-0.028	-0.003	1.5
1700	0.2	0.0	-0.2	1.0	0.021	0.007	-0.032	-0.003	1.6
1800	0.2	0.0	-0.2	1.1	0.023	0.008	-0.036	-0.004	1.7
1900	0.2	0.0	-0.2	1.1	0.025	0.009	-0.041	-0.004	1.9
2000	0.2	0.1	-0.3	1.2	0.026	0.010	-0.047	-0.005	2.0
2100	0.2	0.1	-0.3	1.3	0.028	0.011	-0.053	-0.006	2.1
2200	0.2	0.1	-0.3	1.4	0.030	0.012	-0.059	-0.006	2.2
2300	0.2	0.1	-0.4	1.4	0.032	0.014	-0.066	-0.007	2.3
2400	0.3	0.1	-0.4	1.5	0.034	0.015	-0.073	-0.008	2.5
2500	0.3	0.1	-0.4	1.6	0.036	0.017	-0.081	-0.009	2.6
2600	0.3	0.1	-0.5	1.7	0.039	0.019	-0.090	-0.010	2.7
2700	0.3	0.1	-0.6	1.7	0.041	0.021	-0.099	-0.011	2.9
2800	0.3	0.1	-0.6	1.8	0.043	0.023	-0.109	-0.013	3.0
2900	0.4	0.1	-0.7	1.9	0.046	0.025	-0.119	-0.014	3.1
3000	0.4	0.2	-0.7	2.0	0.048	0.027	-0.131	-0.015	3.3
3100	0.4	0.2	-0.8	2.1	0.051	0.030	-0.143	-0.017	3.4
3200	0.4	0.2	-0.9	2.1	0.054	0.032	-0.155	-0.019	3.6
3300	0.4	0.2	-1.0	2.2	0.057	0.035	-0.169	-0.021	3.7
3400	0.5	0.2	-1.1	2.3	0.060	0.038	-0.183	-0.023	3.9
3500	0.5	0.2	-1.2	2.4	0.063	0.041	-0.199	-0.025	4.1
3600	0.5	0.3	-1.3	2.5	0.067	0.045	-0.215	-0.027	4.2
3700	0.5	0.3	-1.4	2.6	0.070	0.048	-0.233	-0.030	4.4
3800	0.6	0.3	-1.5	2.7	0.074	0.052	-0.251	-0.033	4.6
3900	0.6	0.4	-1.6	2.7	0.077	0.056	-0.271	-0.036	4.7
4000	0.6	0.4	-1.8	2.8	0.081	0.061	-0.292	-0.039	4.9
4100	0.7	0.4	-1.9	2.9	0.085	0.065	-0.314	-0.043	5.1
4200	0.7	0.4	-2.1	3.0	0.090	0.070	-0.338	-0.047	5.3
4300	0.8	0.5	-2.3	3.1	0.094	0.076	-0.363	-0.051	5.5
4400	0.8	0.5	-2.4	3.2	0.099	0.081	-0.390	-0.055	5.7
4500	0.8	0.6	-2.6	3.3	0.104	0.087	-0.418	-0.060	5.9

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		36	36	50	50
		WK802156AV		DI	B

LA: 800 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.3	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.4	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.4	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.5	0.008	0.001	-0.006	0.000	0.7
900	0.1	0.0	0.0	0.6	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	0.0	0.6	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	-0.1	0.7	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.8	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	0.8	0.015	0.003	-0.017	-0.002	1.2
1400	0.1	0.0	-0.1	0.9	0.016	0.004	-0.020	-0.002	1.3
1500	0.1	0.0	-0.1	1.0	0.018	0.005	-0.024	-0.002	1.4
1600	0.1	0.0	-0.1	1.0	0.020	0.006	-0.028	-0.003	1.5
1700	0.1	0.0	-0.2	1.1	0.021	0.006	-0.032	-0.003	1.6
1800	0.2	0.0	-0.2	1.2	0.023	0.007	-0.036	-0.003	1.7
1900	0.2	0.0	-0.2	1.3	0.025	0.008	-0.041	-0.004	1.8
2000	0.2	0.0	-0.2	1.4	0.026	0.010	-0.047	-0.004	2.0
2100	0.2	0.1	-0.3	1.4	0.028	0.011	-0.052	-0.005	2.1
2200	0.2	0.1	-0.3	1.5	0.030	0.012	-0.059	-0.006	2.2
2300	0.2	0.1	-0.3	1.6	0.032	0.013	-0.066	-0.006	2.3
2400	0.2	0.1	-0.4	1.7	0.034	0.015	-0.073	-0.007	2.5
2500	0.3	0.1	-0.4	1.8	0.036	0.017	-0.081	-0.008	2.6
2600	0.3	0.1	-0.5	1.8	0.039	0.018	-0.089	-0.009	2.7
2700	0.3	0.1	-0.5	1.9	0.041	0.020	-0.098	-0.010	2.8
2800	0.3	0.1	-0.6	2.0	0.043	0.022	-0.108	-0.011	3.0
2900	0.3	0.1	-0.6	2.1	0.046	0.024	-0.118	-0.013	3.1
3000	0.3	0.1	-0.7	2.2	0.049	0.026	-0.129	-0.014	3.3
3100	0.4	0.2	-0.7	2.3	0.051	0.029	-0.141	-0.015	3.4
3200	0.4	0.2	-0.8	2.4	0.054	0.031	-0.154	-0.017	3.6
3300	0.4	0.2	-0.9	2.5	0.057	0.034	-0.167	-0.019	3.7
3400	0.4	0.2	-1.0	2.6	0.060	0.037	-0.182	-0.021	3.9
3500	0.4	0.2	-1.1	2.7	0.063	0.040	-0.197	-0.023	4.0
3600	0.5	0.2	-1.2	2.8	0.067	0.043	-0.213	-0.025	4.2
3700	0.5	0.3	-1.3	2.9	0.070	0.047	-0.230	-0.027	4.3
3800	0.5	0.3	-1.4	3.0	0.074	0.051	-0.249	-0.030	4.5
3900	0.6	0.3	-1.5	3.1	0.077	0.055	-0.268	-0.032	4.7
4000	0.6	0.3	-1.6	3.2	0.081	0.059	-0.288	-0.035	4.9
4100	0.6	0.4	-1.7	3.3	0.085	0.063	-0.310	-0.038	5.0
4200	0.7	0.4	-1.9	3.4	0.090	0.068	-0.333	-0.042	5.2
4300	0.7	0.4	-2.0	3.5	0.094	0.073	-0.358	-0.045	5.4
4400	0.7	0.5	-2.2	3.6	0.099	0.078	-0.384	-0.049	5.6
4500	0.8	0.5	-2.4	3.7	0.104	0.084	-0.412	-0.054	5.8

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		37	37	50	50
		WK802156AV		DI B	

LA: 900 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.3	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.4	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.5	0.007	0.001	-0.004	0.000	0.6
800	0.1	0.0	0.0	0.5	0.008	0.001	-0.006	0.000	0.7
900	0.1	0.0	0.0	0.6	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	0.0	0.7	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	0.0	0.8	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.8	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	0.9	0.015	0.003	-0.017	-0.001	1.2
1400	0.1	0.0	-0.1	1.0	0.016	0.004	-0.020	-0.002	1.3
1500	0.1	0.0	-0.1	1.1	0.018	0.005	-0.024	-0.002	1.4
1600	0.1	0.0	-0.1	1.1	0.020	0.006	-0.027	-0.002	1.5
1700	0.1	0.0	-0.1	1.2	0.021	0.006	-0.032	-0.003	1.6
1800	0.1	0.0	-0.2	1.3	0.023	0.007	-0.036	-0.003	1.7
1900	0.2	0.0	-0.2	1.4	0.025	0.008	-0.041	-0.003	1.8
2000	0.2	0.0	-0.2	1.5	0.026	0.009	-0.046	-0.004	2.0
2100	0.2	0.0	-0.2	1.6	0.028	0.011	-0.052	-0.005	2.1
2200	0.2	0.1	-0.3	1.7	0.030	0.012	-0.059	-0.005	2.2
2300	0.2	0.1	-0.3	1.7	0.032	0.013	-0.065	-0.006	2.3
2400	0.2	0.1	-0.3	1.8	0.034	0.015	-0.073	-0.007	2.4
2500	0.2	0.1	-0.4	1.9	0.036	0.016	-0.080	-0.007	2.6
2600	0.2	0.1	-0.4	2.0	0.039	0.018	-0.089	-0.008	2.7
2700	0.3	0.1	-0.4	2.1	0.041	0.020	-0.098	-0.009	2.8
2800	0.3	0.1	-0.5	2.2	0.043	0.022	-0.107	-0.010	3.0
2900	0.3	0.1	-0.5	2.3	0.046	0.024	-0.118	-0.011	3.1
3000	0.3	0.1	-0.6	2.4	0.049	0.026	-0.129	-0.012	3.2
3100	0.3	0.1	-0.7	2.5	0.051	0.028	-0.140	-0.014	3.4
3200	0.3	0.1	-0.7	2.6	0.054	0.031	-0.153	-0.015	3.5
3300	0.4	0.2	-0.8	2.7	0.057	0.033	-0.166	-0.017	3.7
3400	0.4	0.2	-0.9	2.8	0.060	0.036	-0.180	-0.018	3.8
3500	0.4	0.2	-0.9	2.9	0.063	0.039	-0.195	-0.020	4.0
3600	0.4	0.2	-1.0	3.0	0.067	0.042	-0.211	-0.022	4.1
3700	0.4	0.2	-1.1	3.1	0.070	0.046	-0.228	-0.024	4.3
3800	0.5	0.3	-1.2	3.2	0.074	0.049	-0.246	-0.026	4.5
3900	0.5	0.3	-1.3	3.4	0.077	0.053	-0.265	-0.029	4.6
4000	0.5	0.3	-1.4	3.5	0.081	0.057	-0.285	-0.031	4.8
4100	0.6	0.3	-1.5	3.6	0.085	0.061	-0.307	-0.034	5.0
4200	0.6	0.3	-1.7	3.7	0.090	0.066	-0.330	-0.037	5.2
4300	0.6	0.4	-1.8	3.8	0.094	0.070	-0.354	-0.040	5.3
4400	0.6	0.4	-2.0	3.9	0.099	0.075	-0.379	-0.044	5.5
4500	0.7	0.4	-2.1	4.0	0.104	0.081	-0.406	-0.047	5.7

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		38		50	
		WK802156AV		DI	B

LA: 1000 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.4	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.5	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.6	0.008	0.001	-0.006	0.000	0.7
900	0.1	0.0	0.0	0.7	0.010	0.002	-0.008	-0.001	0.8
1000	0.1	0.0	0.0	0.7	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	0.0	0.8	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	-0.1	0.9	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	1.0	0.015	0.003	-0.017	-0.001	1.2
1400	0.1	0.0	-0.1	1.1	0.016	0.004	-0.020	-0.001	1.3
1500	0.1	0.0	-0.1	1.1	0.018	0.005	-0.024	-0.002	1.4
1600	0.1	0.0	-0.1	1.2	0.020	0.006	-0.027	-0.002	1.5
1700	0.1	0.0	-0.1	1.3	0.021	0.006	-0.032	-0.002	1.6
1800	0.1	0.0	-0.1	1.4	0.023	0.007	-0.036	-0.003	1.7
1900	0.1	0.0	-0.2	1.5	0.025	0.008	-0.041	-0.003	1.8
2000	0.1	0.0	-0.2	1.6	0.026	0.009	-0.046	-0.003	1.9
2100	0.2	0.0	-0.2	1.7	0.028	0.010	-0.052	-0.004	2.1
2200	0.2	0.0	-0.2	1.8	0.030	0.012	-0.058	-0.004	2.2
2300	0.2	0.1	-0.3	1.9	0.032	0.013	-0.065	-0.005	2.3
2400	0.2	0.1	-0.3	2.0	0.034	0.014	-0.072	-0.006	2.4
2500	0.2	0.1	-0.3	2.1	0.036	0.016	-0.080	-0.006	2.6
2600	0.2	0.1	-0.4	2.2	0.039	0.018	-0.088	-0.007	2.7
2700	0.2	0.1	-0.4	2.3	0.041	0.019	-0.097	-0.008	2.8
2800	0.2	0.1	-0.4	2.4	0.043	0.021	-0.107	-0.009	2.9
2900	0.3	0.1	-0.5	2.5	0.046	0.023	-0.117	-0.010	3.1
3000	0.3	0.1	-0.5	2.6	0.049	0.025	-0.128	-0.011	3.2
3100	0.3	0.1	-0.6	2.7	0.051	0.028	-0.139	-0.012	3.4
3200	0.3	0.1	-0.6	2.8	0.054	0.030	-0.152	-0.013	3.5
3300	0.3	0.1	-0.7	2.9	0.057	0.033	-0.165	-0.014	3.6
3400	0.3	0.2	-0.7	3.0	0.060	0.035	-0.179	-0.016	3.8
3500	0.4	0.2	-0.8	3.1	0.063	0.038	-0.193	-0.017	3.9
3600	0.4	0.2	-0.9	3.3	0.067	0.041	-0.209	-0.019	4.1
3700	0.4	0.2	-1.0	3.4	0.070	0.044	-0.226	-0.021	4.3
3800	0.4	0.2	-1.1	3.5	0.074	0.048	-0.244	-0.023	4.4
3900	0.4	0.2	-1.1	3.6	0.077	0.052	-0.263	-0.025	4.6
4000	0.5	0.3	-1.2	3.7	0.081	0.055	-0.283	-0.027	4.8
4100	0.5	0.3	-1.3	3.9	0.085	0.059	-0.304	-0.029	4.9
4200	0.5	0.3	-1.4	4.0	0.090	0.064	-0.326	-0.032	5.1
4300	0.5	0.3	-1.6	4.1	0.094	0.068	-0.350	-0.035	5.3
4400	0.6	0.3	-1.7	4.2	0.099	0.073	-0.375	-0.038	5.5
4500	0.6	0.4	-1.8	4.4	0.104	0.078	-0.402	-0.041	5.7

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802156AV

39

50

DI
B

LA: 1100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.5	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.5	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.6	0.008	0.001	-0.006	0.000	0.7
900	0.0	0.0	0.0	0.7	0.010	0.002	-0.008	0.000	0.8
1000	0.0	0.0	0.0	0.8	0.011	0.002	-0.010	-0.001	0.9
1100	0.1	0.0	0.0	0.9	0.012	0.002	-0.012	-0.001	1.0
1200	0.1	0.0	0.0	0.9	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	-0.1	1.0	0.015	0.003	-0.017	-0.001	1.2
1400	0.1	0.0	-0.1	1.1	0.016	0.004	-0.020	-0.001	1.3
1500	0.1	0.0	-0.1	1.2	0.018	0.005	-0.024	-0.001	1.4
1600	0.1	0.0	-0.1	1.3	0.020	0.005	-0.027	-0.002	1.5
1700	0.1	0.0	-0.1	1.4	0.021	0.006	-0.031	-0.002	1.6
1800	0.1	0.0	-0.1	1.5	0.023	0.007	-0.036	-0.002	1.7
1900	0.1	0.0	-0.1	1.6	0.025	0.008	-0.041	-0.003	1.8
2000	0.1	0.0	-0.2	1.7	0.026	0.009	-0.046	-0.003	1.9
2100	0.1	0.0	-0.2	1.8	0.028	0.010	-0.052	-0.003	2.1
2200	0.1	0.0	-0.2	1.9	0.030	0.012	-0.058	-0.004	2.2
2300	0.1	0.0	-0.2	2.0	0.032	0.013	-0.065	-0.004	2.3
2400	0.2	0.0	-0.2	2.1	0.034	0.014	-0.072	-0.005	2.4
2500	0.2	0.1	-0.3	2.2	0.036	0.016	-0.080	-0.005	2.5
2600	0.2	0.1	-0.3	2.3	0.039	0.017	-0.088	-0.006	2.7
2700	0.2	0.1	-0.3	2.4	0.041	0.019	-0.097	-0.007	2.8
2800	0.2	0.1	-0.4	2.5	0.043	0.021	-0.106	-0.007	2.9
2900	0.2	0.1	-0.4	2.6	0.046	0.023	-0.116	-0.008	3.1
3000	0.2	0.1	-0.4	2.7	0.049	0.025	-0.127	-0.009	3.2
3100	0.2	0.1	-0.5	2.8	0.051	0.027	-0.138	-0.010	3.3
3200	0.3	0.1	-0.5	3.0	0.054	0.029	-0.151	-0.011	3.5
3300	0.3	0.1	-0.6	3.1	0.057	0.032	-0.164	-0.012	3.6
3400	0.3	0.1	-0.6	3.2	0.060	0.035	-0.177	-0.013	3.8
3500	0.3	0.1	-0.7	3.3	0.063	0.037	-0.192	-0.015	3.9
3600	0.3	0.2	-0.7	3.4	0.067	0.040	-0.208	-0.016	4.1
3700	0.3	0.2	-0.8	3.6	0.070	0.044	-0.224	-0.017	4.2
3800	0.4	0.2	-0.9	3.7	0.074	0.047	-0.242	-0.019	4.4
3900	0.4	0.2	-1.0	3.8	0.077	0.050	-0.260	-0.021	4.6
4000	0.4	0.2	-1.0	4.0	0.081	0.054	-0.280	-0.023	4.7
4100	0.4	0.2	-1.1	4.1	0.085	0.058	-0.301	-0.025	4.9
4200	0.4	0.2	-1.2	4.2	0.090	0.062	-0.323	-0.027	5.1
4300	0.5	0.3	-1.3	4.4	0.094	0.067	-0.347	-0.029	5.2
4400	0.5	0.3	-1.4	4.5	0.099	0.071	-0.371	-0.031	5.4
4500	0.5	0.3	-1.5	4.6	0.104	0.076	-0.398	-0.034	5.6

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets	
		40	40	50		
			WK802156AV			
			DI	B		

LA: 1200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.5	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.6	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.6	0.008	0.001	-0.006	0.000	0.7
900	0.0	0.0	0.0	0.7	0.010	0.002	-0.008	0.000	0.8
1000	0.0	0.0	0.0	0.8	0.011	0.002	-0.010	0.000	0.9
1100	0.0	0.0	0.0	0.9	0.012	0.002	-0.012	-0.001	1.0
1200	0.0	0.0	0.0	1.0	0.014	0.003	-0.014	-0.001	1.1
1300	0.1	0.0	0.0	1.1	0.015	0.003	-0.017	-0.001	1.2
1400	0.1	0.0	-0.1	1.2	0.016	0.004	-0.020	-0.001	1.3
1500	0.1	0.0	-0.1	1.3	0.018	0.005	-0.024	-0.001	1.4
1600	0.1	0.0	-0.1	1.4	0.020	0.005	-0.027	-0.001	1.5
1700	0.1	0.0	-0.1	1.5	0.021	0.006	-0.031	-0.002	1.6
1800	0.1	0.0	-0.1	1.6	0.023	0.007	-0.036	-0.002	1.7
1900	0.1	0.0	-0.1	1.7	0.025	0.008	-0.041	-0.002	1.8
2000	0.1	0.0	-0.1	1.8	0.026	0.009	-0.046	-0.002	1.9
2100	0.1	0.0	-0.1	1.9	0.028	0.010	-0.052	-0.003	2.1
2200	0.1	0.0	-0.2	2.0	0.030	0.011	-0.058	-0.003	2.2
2300	0.1	0.0	-0.2	2.1	0.032	0.013	-0.065	-0.003	2.3
2400	0.1	0.0	-0.2	2.2	0.034	0.014	-0.072	-0.004	2.4
2500	0.1	0.0	-0.2	2.3	0.036	0.016	-0.079	-0.004	2.5
2600	0.1	0.0	-0.2	2.4	0.039	0.017	-0.087	-0.005	2.7
2700	0.2	0.1	-0.3	2.5	0.041	0.019	-0.096	-0.005	2.8
2800	0.2	0.1	-0.3	2.6	0.044	0.021	-0.106	-0.006	2.9
2900	0.2	0.1	-0.3	2.7	0.046	0.023	-0.116	-0.007	3.0
3000	0.2	0.1	-0.4	2.9	0.049	0.025	-0.126	-0.007	3.2
3100	0.2	0.1	-0.4	3.0	0.051	0.027	-0.138	-0.008	3.3
3200	0.2	0.1	-0.4	3.1	0.054	0.029	-0.150	-0.009	3.5
3300	0.2	0.1	-0.5	3.2	0.057	0.031	-0.163	-0.010	3.6
3400	0.2	0.1	-0.5	3.4	0.060	0.034	-0.176	-0.011	3.8
3500	0.2	0.1	-0.6	3.5	0.063	0.037	-0.191	-0.012	3.9
3600	0.3	0.1	-0.6	3.6	0.067	0.040	-0.206	-0.013	4.1
3700	0.3	0.1	-0.7	3.7	0.070	0.043	-0.223	-0.014	4.2
3800	0.3	0.1	-0.7	3.9	0.074	0.046	-0.240	-0.015	4.4
3900	0.3	0.2	-0.8	4.0	0.077	0.049	-0.259	-0.017	4.5
4000	0.3	0.2	-0.8	4.1	0.081	0.053	-0.278	-0.018	4.7
4100	0.3	0.2	-0.9	4.3	0.085	0.057	-0.299	-0.020	4.9
4200	0.4	0.2	-1.0	4.4	0.090	0.061	-0.321	-0.021	5.0
4300	0.4	0.2	-1.1	4.6	0.094	0.065	-0.344	-0.023	5.2
4400	0.4	0.2	-1.1	4.7	0.099	0.070	-0.369	-0.025	5.4
4500	0.4	0.2	-1.2	4.9	0.104	0.074	-0.395	-0.027	5.6

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

41

Blätter
Sheets

50

WK802156AV

DI
B

LA: 1300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.5	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.6	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.7	0.008	0.001	-0.006	0.000	0.7
900	0.0	0.0	0.0	0.8	0.010	0.002	-0.008	0.000	0.8
1000	0.0	0.0	0.0	0.8	0.011	0.002	-0.010	0.000	0.9
1100	0.0	0.0	0.0	0.9	0.012	0.002	-0.012	0.000	1.0
1200	0.0	0.0	0.0	1.0	0.014	0.003	-0.014	-0.001	1.1
1300	0.0	0.0	0.0	1.1	0.015	0.003	-0.017	-0.001	1.2
1400	0.0	0.0	0.0	1.2	0.016	0.004	-0.020	-0.001	1.3
1500	0.1	0.0	0.0	1.3	0.018	0.005	-0.024	-0.001	1.4
1600	0.1	0.0	-0.1	1.4	0.020	0.005	-0.027	-0.001	1.5
1700	0.1	0.0	-0.1	1.5	0.021	0.006	-0.031	-0.001	1.6
1800	0.1	0.0	-0.1	1.6	0.023	0.007	-0.036	-0.001	1.7
1900	0.1	0.0	-0.1	1.7	0.025	0.008	-0.041	-0.002	1.8
2000	0.1	0.0	-0.1	1.8	0.026	0.009	-0.046	-0.002	1.9
2100	0.1	0.0	-0.1	1.9	0.028	0.010	-0.052	-0.002	2.0
2200	0.1	0.0	-0.1	2.0	0.030	0.011	-0.058	-0.002	2.2
2300	0.1	0.0	-0.1	2.1	0.032	0.013	-0.064	-0.003	2.3
2400	0.1	0.0	-0.1	2.3	0.034	0.014	-0.071	-0.003	2.4
2500	0.1	0.0	-0.2	2.4	0.037	0.015	-0.079	-0.003	2.5
2600	0.1	0.0	-0.2	2.5	0.039	0.017	-0.087	-0.004	2.6
2700	0.1	0.0	-0.2	2.6	0.041	0.019	-0.096	-0.004	2.8
2800	0.1	0.0	-0.2	2.7	0.044	0.020	-0.105	-0.004	2.9
2900	0.1	0.0	-0.2	2.8	0.046	0.022	-0.115	-0.005	3.0
3000	0.1	0.1	-0.3	3.0	0.049	0.024	-0.126	-0.005	3.2
3100	0.1	0.1	-0.3	3.1	0.051	0.026	-0.137	-0.006	3.3
3200	0.2	0.1	-0.3	3.2	0.054	0.029	-0.149	-0.007	3.4
3300	0.2	0.1	-0.4	3.3	0.057	0.031	-0.162	-0.007	3.6
3400	0.2	0.1	-0.4	3.5	0.060	0.034	-0.176	-0.008	3.7
3500	0.2	0.1	-0.4	3.6	0.063	0.036	-0.190	-0.009	3.9
3600	0.2	0.1	-0.5	3.7	0.067	0.039	-0.206	-0.010	4.0
3700	0.2	0.1	-0.5	3.9	0.070	0.042	-0.222	-0.011	4.2
3800	0.2	0.1	-0.5	4.0	0.074	0.045	-0.239	-0.011	4.3
3900	0.2	0.1	-0.6	4.1	0.077	0.049	-0.257	-0.012	4.5
4000	0.2	0.1	-0.6	4.3	0.081	0.052	-0.277	-0.014	4.7
4100	0.3	0.1	-0.7	4.4	0.085	0.056	-0.297	-0.015	4.8
4200	0.3	0.1	-0.7	4.6	0.090	0.060	-0.319	-0.016	5.0
4300	0.3	0.2	-0.8	4.7	0.094	0.064	-0.342	-0.017	5.2
4400	0.3	0.2	-0.9	4.9	0.099	0.068	-0.366	-0.019	5.4
4500	0.3	0.2	-0.9	5.0	0.104	0.073	-0.392	-0.021	5.5

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		42		50	
		WK802156AV		DI B	

LA: 1400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.5	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.6	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.7	0.008	0.001	-0.006	0.000	0.7
900	0.0	0.0	0.0	0.8	0.010	0.002	-0.008	0.000	0.8
1000	0.0	0.0	0.0	0.9	0.011	0.002	-0.010	0.000	0.9
1100	0.0	0.0	0.0	1.0	0.012	0.002	-0.012	0.000	1.0
1200	0.0	0.0	0.0	1.1	0.014	0.003	-0.014	0.000	1.1
1300	0.0	0.0	0.0	1.1	0.015	0.003	-0.017	0.000	1.2
1400	0.0	0.0	0.0	1.2	0.017	0.004	-0.020	0.000	1.3
1500	0.0	0.0	0.0	1.3	0.018	0.005	-0.023	-0.001	1.4
1600	0.0	0.0	0.0	1.4	0.020	0.005	-0.027	-0.001	1.5
1700	0.0	0.0	0.0	1.5	0.021	0.006	-0.031	-0.001	1.6
1800	0.0	0.0	0.0	1.7	0.023	0.007	-0.036	-0.001	1.7
1900	0.0	0.0	-0.1	1.8	0.025	0.008	-0.041	-0.001	1.8
2000	0.0	0.0	-0.1	1.9	0.026	0.009	-0.046	-0.001	1.9
2100	0.1	0.0	-0.1	2.0	0.028	0.010	-0.052	-0.001	2.0
2200	0.1	0.0	-0.1	2.1	0.030	0.011	-0.058	-0.002	2.2
2300	0.1	0.0	-0.1	2.2	0.032	0.013	-0.064	-0.002	2.3
2400	0.1	0.0	-0.1	2.3	0.034	0.014	-0.071	-0.002	2.4
2500	0.1	0.0	-0.1	2.4	0.037	0.015	-0.079	-0.002	2.5
2600	0.1	0.0	-0.1	2.5	0.039	0.017	-0.087	-0.002	2.6
2700	0.1	0.0	-0.1	2.7	0.041	0.019	-0.096	-0.003	2.8
2800	0.1	0.0	-0.1	2.8	0.044	0.020	-0.105	-0.003	2.9
2900	0.1	0.0	-0.2	2.9	0.046	0.022	-0.115	-0.003	3.0
3000	0.1	0.0	-0.2	3.0	0.049	0.024	-0.126	-0.004	3.2
3100	0.1	0.0	-0.2	3.2	0.051	0.026	-0.137	-0.004	3.3
3200	0.1	0.0	-0.2	3.3	0.054	0.028	-0.149	-0.004	3.4
3300	0.1	0.0	-0.2	3.4	0.057	0.031	-0.162	-0.005	3.6
3400	0.1	0.1	-0.3	3.6	0.060	0.033	-0.175	-0.005	3.7
3500	0.1	0.1	-0.3	3.7	0.063	0.036	-0.190	-0.006	3.9
3600	0.1	0.1	-0.3	3.8	0.067	0.039	-0.205	-0.006	4.0
3700	0.1	0.1	-0.3	4.0	0.070	0.042	-0.221	-0.007	4.2
3800	0.1	0.1	-0.4	4.1	0.074	0.045	-0.238	-0.008	4.3
3900	0.2	0.1	-0.4	4.3	0.077	0.048	-0.256	-0.008	4.5
4000	0.2	0.1	-0.4	4.4	0.081	0.052	-0.276	-0.009	4.6
4100	0.2	0.1	-0.5	4.5	0.085	0.055	-0.296	-0.010	4.8
4200	0.2	0.1	-0.5	4.7	0.090	0.059	-0.318	-0.011	5.0
4300	0.2	0.1	-0.5	4.9	0.094	0.063	-0.341	-0.012	5.2
4400	0.2	0.1	-0.6	5.0	0.099	0.068	-0.365	-0.013	5.3
4500	0.2	0.1	-0.6	5.2	0.104	0.072	-0.390	-0.014	5.5

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

43

Blätter
Sheets

50

WK802156AV

DI
B

LA: 1500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.002	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.003	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.004	0.000	-0.001	0.000	0.3
500	0.0	0.0	0.0	0.4	0.005	0.000	-0.002	0.000	0.4
600	0.0	0.0	0.0	0.5	0.006	0.001	-0.003	0.000	0.5
700	0.0	0.0	0.0	0.6	0.007	0.001	-0.004	0.000	0.6
800	0.0	0.0	0.0	0.7	0.008	0.001	-0.006	0.000	0.7
900	0.0	0.0	0.0	0.8	0.010	0.002	-0.008	0.000	0.8
1000	0.0	0.0	0.0	0.9	0.011	0.002	-0.009	0.000	0.9
1100	0.0	0.0	0.0	1.0	0.012	0.002	-0.012	0.000	1.0
1200	0.0	0.0	0.0	1.1	0.014	0.003	-0.014	0.000	1.1
1300	0.0	0.0	0.0	1.2	0.015	0.003	-0.017	0.000	1.2
1400	0.0	0.0	0.0	1.3	0.017	0.004	-0.020	0.000	1.3
1500	0.0	0.0	0.0	1.4	0.018	0.005	-0.023	0.000	1.4
1600	0.0	0.0	0.0	1.5	0.020	0.005	-0.027	0.000	1.5
1700	0.0	0.0	0.0	1.6	0.021	0.006	-0.031	0.000	1.6
1800	0.0	0.0	0.0	1.7	0.023	0.007	-0.036	0.000	1.7
1900	0.0	0.0	0.0	1.8	0.025	0.008	-0.041	-0.001	1.8
2000	0.0	0.0	0.0	1.9	0.026	0.009	-0.046	-0.001	1.9
2100	0.0	0.0	0.0	2.0	0.028	0.010	-0.051	-0.001	2.0
2200	0.0	0.0	0.0	2.1	0.030	0.011	-0.058	-0.001	2.2
2300	0.0	0.0	0.0	2.2	0.032	0.013	-0.064	-0.001	2.3
2400	0.0	0.0	0.0	2.3	0.034	0.014	-0.071	-0.001	2.4
2500	0.0	0.0	-0.1	2.5	0.037	0.015	-0.079	-0.001	2.5
2600	0.0	0.0	-0.1	2.6	0.039	0.017	-0.087	-0.001	2.6
2700	0.0	0.0	-0.1	2.7	0.041	0.018	-0.096	-0.001	2.8
2800	0.0	0.0	-0.1	2.8	0.044	0.020	-0.105	-0.001	2.9
2900	0.0	0.0	-0.1	3.0	0.046	0.022	-0.115	-0.002	3.0
3000	0.0	0.0	-0.1	3.1	0.049	0.024	-0.125	-0.002	3.2
3100	0.0	0.0	-0.1	3.2	0.051	0.026	-0.137	-0.002	3.3
3200	0.1	0.0	-0.1	3.3	0.054	0.028	-0.149	-0.002	3.4
3300	0.1	0.0	-0.1	3.5	0.057	0.031	-0.161	-0.002	3.6
3400	0.1	0.0	-0.1	3.6	0.060	0.033	-0.175	-0.003	3.7
3500	0.1	0.0	-0.1	3.7	0.063	0.036	-0.189	-0.003	3.9
3600	0.1	0.0	-0.2	3.9	0.067	0.038	-0.204	-0.003	4.0
3700	0.1	0.0	-0.2	4.0	0.070	0.041	-0.221	-0.003	4.2
3800	0.1	0.0	-0.2	4.2	0.074	0.045	-0.238	-0.004	4.3
3900	0.1	0.0	-0.2	4.3	0.077	0.048	-0.256	-0.004	4.5
4000	0.1	0.0	-0.2	4.5	0.081	0.051	-0.275	-0.004	4.6
4100	0.1	0.0	-0.2	4.6	0.085	0.055	-0.295	-0.005	4.8
4200	0.1	0.0	-0.2	4.8	0.090	0.059	-0.317	-0.005	5.0
4300	0.1	0.1	-0.3	4.9	0.094	0.063	-0.340	-0.006	5.1
4400	0.1	0.1	-0.3	5.1	0.099	0.067	-0.364	-0.006	5.3
4500	0.1	0.1	-0.3	5.2	0.104	0.071	-0.389	-0.007	5.5

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		44	44	50	50
		WK802156AV		DI B	

2.6 TEMPERATURKORREKTUR

2.6 CORRECTION OF TEMPERATURE

Temperaturkorrektur ΔT_F für 100% relative Luftfeuchtigkeit r

Correction of Temperature ΔT_F
for 100% relative Humidity r

$$T_{\text{virtuell}} = T_{\text{ball.}} + \frac{r[\%]}{100} \cdot \Delta T_F [\text{°C}]$$

Luftdruck Barometric Pressure [mb]	ΔT_F - Tafel										ΔT_F - Table									
	-40	-35	-30	-25	-20	-15	-10	-5	0	+5	+10	+15	+20	+25	+30	+35	+40	+45	+50	
500	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.9	1.3	1.8	2.7	3.8	5.3	7.3	10.1	13.7	18.5	24.9	33.4	
550	0.0	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.7	2.4	3.4	4.8	6.6	9.1	12.4	16.8	22.5	30.1		
600	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.2	3.1	4.4	6.1	8.3	11.3	15.3	20.5	27.4		
650	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.4	2.0	2.9	4.0	5.6	7.7	10.4	14.1	18.8	25.1	
700	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.7	3.7	5.2	7.1	9.7	13.0	17.4	23.2	
750	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.8	1.2	1.8	2.5	3.5	4.8	6.6	9.0	12.1	16.2	21.5	
800	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.8	1.2	1.7	2.3	3.3	4.5	6.2	8.4	11.3	15.1	20.1	
850	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.6	2.2	3.1	4.3	5.8	7.9	10.6	14.2	18.9	
900	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.5	2.1	2.9	4.0	5.5	7.5	10.0	13.4	17.7	
950	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.4	2.0	2.8	3.8	5.2	7.1	9.5	12.7	16.8	
1000	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.6	3.6	4.9	6.7	9.0	12.0	15.9	
1050	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.8	2.5	3.4	4.7	6.4	8.6	11.4	15.1
1100	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.2	1.7	2.4	3.3	4.5	6.1	8.2	10.9	14.4
1150	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.3	3.1	4.3	5.8	7.8	10.4	13.7	
1200	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.2	3.0	4.1	5.6	7.5	9.9	13.1	
1250	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.9	3.9	5.3	7.2	9.5	12.6		

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 45	Blätter Sheets 50
WK802156AV			DI B

2.7 GEBRAUCH DER TAFEL

Für den Gebrauch der Korrekturtafel sind folgende Abweichungen von den Standardbedingungen (V_0 , T_0 , P_0) zu berechnen:

$$V_0 - \text{Abweichung: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperaturabweichung: } \Delta T_1 = T_1 - T_0$$

$$\text{Druckabweichung: } \Delta P_1 = P_1 - P_0$$

Ballistischer Längswind: WL1

Ballistischer Querwind: WQ1

V_1 = gemessene Mündungsgeschwindigkeit

T_1 = gemessene Lufttemperatur an der Mündung

P_1 = gemessene Luftdruck an der Mündung

Beispiel:

Bestimme den Schusswinkel, die Geschossflugzeit und die Seitenkorrektur für ein Ziel in 3000 m Horizontaldistanz (**SD**):

Mündungsgeschwindigkeit (gem.) $V_1 = 1035 \text{ m/s}$

Für die atmosphärischen Bedingungen auf Mündungshöhe werden (als Beispiel) folgende ballistische Werte gemessen:

Air temperature $T_1 = +22^\circ\text{C}$

Air pressure $P_1 = 943.25 \text{ mbar}$

Head wind $WL1 = -3 \text{ m/s}$

Cross wind (from right) $WQ1 = -2 \text{ m/s}$

Bemerkung 1: Der ballistische Wind ist die Basis für die Wind-Korrektur. Er stellt den mittleren konstanten Wind entlang der Flugbahn dar, der die selben Korrekturfaktoren benötigt wie das wirkliche Windprofil.

Bemerkung 2: Die relative Luftfeuchtigkeit r wird berücksichtigt, indem anstelle von T_1 ($T_{\text{ball.}}$) die Temperatur T_{virtuell} verwendet wird (s. § 2.6).

Transformation der Daten auf Tafelbedingungen

$$\Delta V_1 = V_1 - V_0 = 1035 - 1050 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 (\text{Mitwind (+); Gegenwind (-)}) = -3 \text{ m/s}$$

$$WQ1 (\text{von links (+); von rechts (-)}) = -2 \text{ m/s}$$

2.7 USE OF THE TABLE

To use the correction table the following deviations from the standard conditions (V_0 , T_0 , P_0) must be calculated:

$$V_0\text{-deviation: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperature deviation: } \Delta T_1 = T_1 - T_0$$

$$\text{Pressure deviation: } \Delta P_1 = P_1 - P_0$$

Ballistic down range wind: WL1

Ballistic cross wind: WQ1

V_1 = measured muzzle velocity

T_1 = measured air temperature at muzzle

P_1 = measured air pressure at muzzle

Example:

Determine the superelevation, the time of flight of the projectile and the lateral correction, for a target at a horizontal range of 3000 m (**SD**):

Muzzle velocity (measured) $V_1 = 1035 \text{ m/s}$

Following ballistic values (for example) are measured for the atmospheric conditions at muzzle altitude :

Air temperature $T_1 = +22^\circ\text{C}$

Air pressure $P_1 = 943.25 \text{ mbar}$

Head wind $WL1 = -3 \text{ m/s}$

Cross wind (from right) $WQ1 = -2 \text{ m/s}$

Notice 1: Basis for wind correction is the ballistic wind. This is the mean constant wind along the trajectory, which needs the same correction factors as the actual wind profile.

Notice 2: Because of the relative air humidity r the temperature T_1 ($T_{\text{ball.}}$) is replaced by the virtual temperature T_{virtuell} (cf. § 2.6).

Transformation of the data to conform with table conditions

$$\Delta V_1 = V_1 - V_0 = 1035 - 1050 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7^\circ\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 (\text{tail wind (+); head wind (-)}) = -3 \text{ m/s}$$

$$WQ1 (\text{from left (+); from right (-)}) = -2 \text{ m/s}$$

Berechnung des Schusswinkels SW auf eine Distanz von 3000 m

Schusswinkel für Standardbedingungen:
SW = 20.7 mils (s. Blatt 4)

Schusswinkel-Korrekturen für eine Distanz **SD** von 3000 m (s. Blatt 8):

$$\Delta SW(V) = 0.5 \text{ mils} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.2 \text{ mils} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -1.0 \text{ mils} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.1 \text{ mils} \quad \text{für } WL = +10 \text{ m/s}$$

SW(korrigiert) =

$$SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL =$$

$$20.7 + (-15) * 0.5 / (-10) + 7 * 0.2 / (-10) + (-70) * (-1.0) / (-100) + (-3) * (-0.1) / 10$$

$$= 20.64 \text{ mils}$$

Calculation of the superelevation SW at a range of 3000 m

Superelevation for standard conditions:
SW = 20.7 mils (see sheet 4)

Superelevation correction for a range **SD** of 3000 m (see sheet 8):

$$\Delta SW(V) = 0.5 \text{ mils} \quad \text{for } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.2 \text{ mils} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -1.0 \text{ mils} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.1 \text{ mils} \quad \text{for } WL = +10 \text{ m/s}$$

SW(corrected) =

$$SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL =$$

$$20.7 + (-15) * 0.5 / (-10) + 7 * 0.2 / (-10) + (-70) * (-1.0) / (-100) + (-3) * (-0.1) / 10$$

$$= 20.64 \text{ mils}$$

Berechnung der Geschossflugzeit auf einer Schussdistanz von 3000 m

Flugzeit für Standardbedingungen:
FZ = 3.898 s (s. Blatt 4)

Flugzeitänderungen für eine Schussdistanz **SD** von 3000 m (s. Blatt 8):

$$\Delta FZ(V) = 0.048 \text{ s} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.033 \text{ s} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.141 \text{ s} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.022 \text{ s} \quad \text{für } WL = +10 \text{ m/s}$$

FZ(korrigiert) =

$$FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL =$$

$$3.898 + (-15) * 0.048 / (-10) + 7 * 0.033 / (-10) + (-70) * (-0.141) / (-100) + (-3) * (-0.022) / 10$$

$$= 3.8548 \text{ s}$$

Calculations of the time-of flight of the projectile at a range of 3000 m.

Time-of flight for standard conditions:
FZ = 3.898 s (see sheet 4)

Changes in time-of-flight for a range **SD** of 3000 m (see sheet 8):

$$\Delta FZ(V) = 0.048 \text{ s} \quad \text{for } \Delta V = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.033 \text{ s} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.141 \text{ s} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.022 \text{ s} \quad \text{for } WL = +10 \text{ m/s}$$

FZ(corrected) =

$$FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL =$$

$$3.898 + (-15) * 0.048 / (-10) + 7 * 0.033 / (-10) + (-70) * (-0.141) / (-100) + (-3) * (-0.022) / 10$$

$$= 3.8548 \text{ s}$$

Berechnung der Seitenkorrektur DL auf einer Schussdistanz von 3000 m

Seitenkorrektur DR infolge Derivation:
DR = 0.5 mils (s. Blatt 4)

In Schussrichtung gesehen muss man nach links korrigieren (+), da der Rechtsdrall eine Rechtsabweichung (Derivation) des Geschosses bewirkt.

Seitenkorrektur DQ infolge Querwindes WQ (s. Blatt 8):

$DQ = + 3.5 \text{ mils}$ (nach links),
 für $WQ = + 10 \text{ m/s}$ (von links)

DQ (korrigiert) =
 $WQ_1 * DQ / WQ = (-2) * 3.5 / 10 = -0.70 \text{ mils}$

Definition: DQ (+): Korrektur nach links;
 DQ (-): Korrektur nach rechts

Totale Seitenkorrektur DL:

$$DL = DR + DQ = 0.5 + (-0.70) = -0.20 \text{ mils} \text{ (nach rechts)}$$

Calculation of the lateral correction DL at a range of 3000 m

Drift correction DR due to projectile spin:
DR = 0.5 mils (see sheet 4):

When viewing in the direction of flight, the correction must be made towards the left (+) because the right-hand spin causes a drift of the projectile to the right.

Lateral correction DQ due to cross wind WQ (see sheet 8):

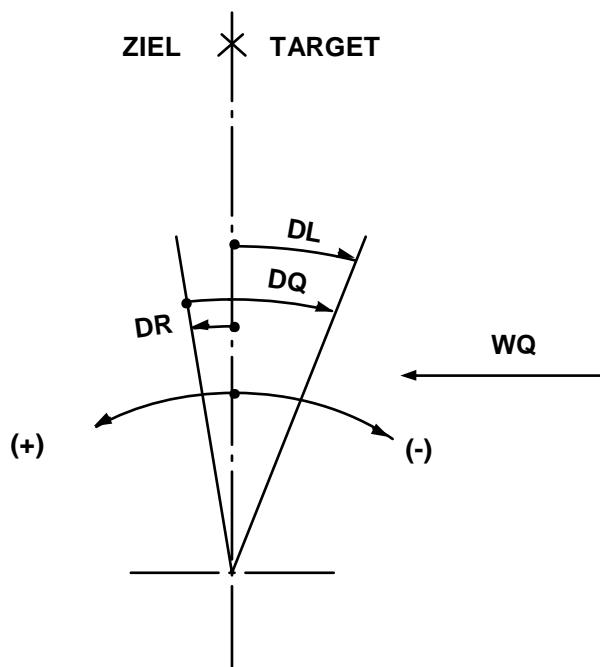
$DQ = + 3.5 \text{ mils}$ (to the left),
 for $WQ = + 10 \text{ m/s}$ (from the left)

DQ (corrected) =
 $WQ_1 * DQ / WQ = (-2) * 3.5 / 10 = -0.70 \text{ mils}$

Definition: DQ(+): correction to the left;
 DQ(-): correction to the right

Total lateral correction DL:

$$DL = DR + DQ = 0.5 + (-0.70) = -0.20 \text{ mils} \text{ (to the right)}$$



Einschränkung beim Gebrauch der Korrekturtafeln

Der Gebrauch der Korrekturtafeln für die Behandlung kombinierter Störungseinflüsse bei Distanzen grösser als 4500 m sollte nach Möglichkeit vermieden werden, da die Methode der Ueberlagerung von explizierten, linearisierten Störungsbeträgen in diesem Bereich zu merkbaren Schusswinkel- bzw. Distanzfehlern führen kann.

Restriction in the use of the correction tables

The use of the correction tables for the determination of combined perturbation effects should be avoided as far as possible for distances exceeding 4500 m, as beyond this range the method of superposition of explicit, linearized perturbation values may result in appreciable errors in superelevations and in distance.

RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 48	Blätter Sheets 50
				WK802156AV	DI B

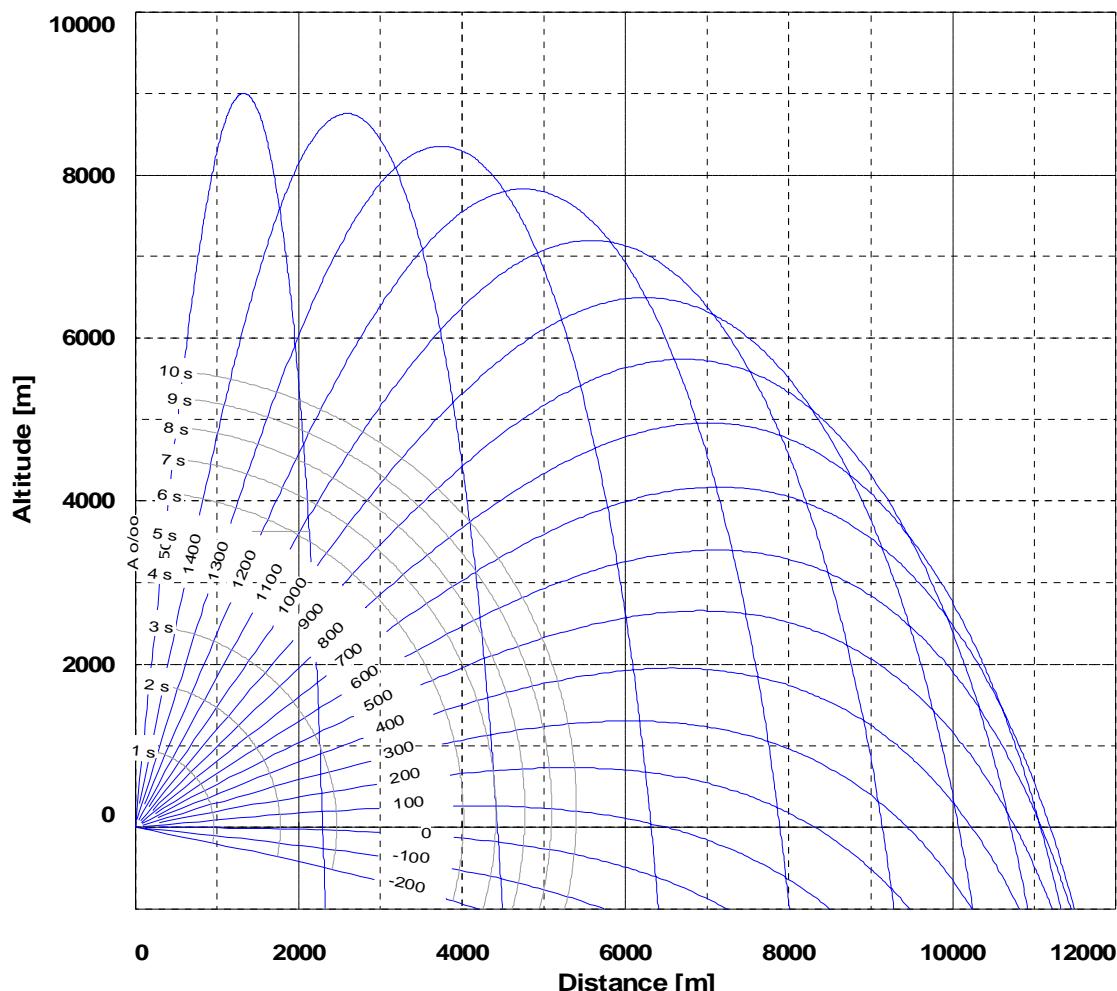
2.8 FLUGBAHNKARTE

Geschosstyp	MTD330
Mündungsgeschwindigkeit	1050 m/s
Geschossmasse	0.7457 kg
ICAO-Atmosphäre nach DIN ISO 2533	
Mündungshöhe	0 m ü M.
Lufttemperatur (an der Mündung)	15 °C
Luftdichte	1.2250 kg/m ³
Luftdruck	1013.25 mbar
C _W -Diagramm	WK802031AV

2.8 TRAJECTORY CHART

Projectile Type	MTD330
Muzzle Velocity	1050 m/s
Projectile Mass	0.7457 kg
ICAO-Standard Atmosphere	
Muzzle Altitude	0 m a. S.L.
Air Temperature (at Muzzle)	15 °C
Air Density	1.2250 kg/m ³
Air Pressure	1013.25 mbar
C _D -Diagram	WK802031AV

External Ballistic (Trajectory Chart)



RWM Schweiz AG Zürich / Switzerland	(MTD330 / Bush III / KDC / KDB) SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 49	Blätter Sheets 50
WK802156AV					DI B

3. DOKUMENTENVERZEICHNIS

gültig letzter Index

WKMTD330AA

GESCHOSS MT

3. DOCUMENTARY LIST

latest index valid

PROJECTILE KETF

WK802154AV

CW-GESETZ-DATEN

WK802154AV

CD-LAW-DATA

DIN ISO 2533

ICAO-Normatmosphäre

ISO 2533

ICAO-Standard Atmosphere

RWM Schweiz AG
Zürich / Switzerland

(MTD330 / Bush III / KDC / KDB)
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 50	Blätter Sheets 50
-------------------	-----------------------------	----------------------	-------------------------

WK802156AV

DI
B

SECTION 6A

TP-T 35MM X 228 AMMUNITION/PMD064

TARGET PRACTICE WITH TRACER

FACT SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

TP-T 35 MM X 228 AMMUNITION / PMD 064

TARGET PRACTICE WITH TRACER



- Ballistically matched to High Explosive combat ammunition
- Handling, loading and gun function as per combat ammunition ensures realistic training
- Long tracer burn for enhanced visual observation during training
- A Target Practice TP version without tracer is also available

Main Features

Performance	Matches combat ammunition trajectory
Firing mode	Single shot and automatic mode
Safety	Insensitive munition (no HE)
Environment	No toxic elements
Transport/Storage	UN Classification 1.2C
Gun/System	Bush III

Technical Data

Total length of round	387 mm
Mass of round	1,572 g
Mass of projectile	550 g
Propellant	NC type
Muzzle velocity	1,175 m/s
Cartridge case	Steel
Temperature range (functional)	-30°C to +50°C
Dispersion	1.0 mil

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 6B

TP-T 35MM X 228 AMMUNITION/PMD064

TARGET PRACTICE WITH TRACER

CERTIFICATE

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



Certificate No. 4'206'272

Transport Classification of Dangerous Goods / Transportklassifizierung von Gefahrgut

Customer RWM Schweiz AG
Auftraggeber Fertigungszentrum Altdorf
Industriezone Schächenwald
CH – 6460 Altdorf UR

Your order / Ihr Auftrag dated 09.04.2013
Your reference / Ihre Referenz Kostenstelle 408, Marly Gisler
Our reference / Unsere Referenz SM 181983 / HOS

Substance / object Cartridges for weapons with inert projectile, with tracer, type 35 mm x 228 TP-T, according to WKPM064
Stoff / Gegenstand

**Documents to consider /
Mitgeltende Unterlagen**

- Parts list WKPM064
- Parts lists and drawings WV209826 and WV209330

Based on the results of the tests, carried out in accordance with the UN-Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, ST/SG/AC.10/11/Rev. 5, the above mentioned articles are classified as dangerous goods. The classification for all modes of transport according to the transport regulations RID, ADR, IMDG-Code and ICAO-TI reads as follows:

UN 0328 CARTRIDGES FOR WEAPONS, INERT PROJECTILE

- Classification code: 1.2 C
 - Label: No 1

This transport classification refers to cartridges, packed in:

- Inner packagings:
 1. Linked cartridges: EPP foam inserts according to WV209824 and WV209825 and packing tubes according to WV421639.
 2. Unlinked cartridges: polystyrene inserts according to WV102722 and packing tubes according to WV421639.

- Intermediate packagings:

Not necessary

- Outer packagings:

2. Unlinked cartridges: polystyrene inserts according to WV102722 and packing tubes according to WV421639.

2. Unlinked cartridges: polystyrene inserts according to WV102722 and packing tubes according to WV421639.

- Intermediate packagings:

Not necessary.

- Outer packagings:

Steel boxes (code 4A), type Standard-METALBOX M548, containing not more than 7 linked or 18 unlinked cartridges in above-named inner packagings.

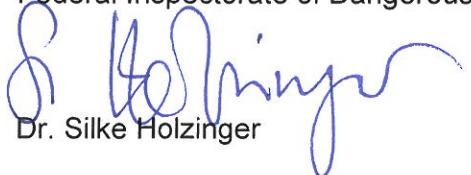
UN-marking of the boxes:

UN 4A / Y 80 / S / year of manufacture / CH 2338 – OE

This certificate was issued by the Swiss competent authority, the Federal Inspectorate of Dangerous Goods (EGI), CH – 8304 Wallisellen.

Wallisellen, 12.04.2013

SVTI / ASIT
Federal Inspectorate of Dangerous Goods (EGI)



Dr. Silke Holzinger

4206272e_UN0328_1-2C_RWM.doc

SECTION 6C

TP-T 35MM X 228 AMMUNITION/PMD064

TARGET PRACTICE WITH TRACER

MATERIAL SAFETY DATA SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

		AC		M.K-0134		14.12.2006	G.Diewald
Erstverwendung First Use	Position Item	Index Index	Aenderung Modification	Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name
	Gewicht/Weight kg	Aehnlich wie/Similar to	Ersatz für/Replaces	Abt./Dept. MS-OC	Datum Date 22.12.06	Freigabe Experte/Release Expert Name Name G.Diewald	i-L
Datum Date © 12.05.99	Name Name	G.Diewald	Abt. Dept. MS-OC	Datum Date 22.12.06	Freigabe/Release Name Name Et.Rochat	P	
RWM Schweiz AG Zürich / Switzerland	ROUND PMD064 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 1	Blätter Sheets 14	WU425564AV	DL C

1. STOFFBEZEICHNUNG, FIRMENBEZEICHNUNG

Produkt Name	PATRONE 35mm x 228 TP-T(Übungsgeschoss mit Leuchtspur, Vollkaliber)		
Produkt Nr.	WKPMD064		
Verwendung	35mm Waffensysteme		
Firma	RWM Schweiz AG Birchstrasse 155 Postfach, CH-8050 Zürich		
Allgemeine Telefonnummer	+41 44 316 22 11		
Telefax	+41 44 316 24 79		

2. ZUSAMMENSETZUNG/ANGABEN ZU BESTANDTEILEN

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
			pro Patrone	
Treibladung WUPGD550AA			Total [334 g]	[21.22%]
Nitrocellulose (NC)	9004-70-0	keine Daten	303 g	19.25
Campher	464-48-2	13 mg/m ³	18 g	1.14
Centralit I	85-98-3	keine Daten	7 g	0.44
Kaliumsulfat	7778-80-5	keine Daten	3.4 g	0.22
Graphit	7440-44-0	15 mg/m ³	0.7 g	0.04
Ethanol	64-17-5	960 mg/m ³	1.8 g	0.11
Ether	60-29-7	1200 mg/m ³	0.1 g	0.006
Anzündsatz zu WK402902A			Total[0.044 g]	[0.003%]
Anzündhütchen 5346, RUAG				
(DM 1034A1)				
Bleistyphnat	15245-44-0	0.1 mg/m ³ (als Blei)	0.0192 g	0.0012
Bariumnitrat	10022-31-8	0.5 mg/m ³ (als Ba)	0.0192 g	0.0012
Bleidioxid (PbO ₂)	1309-60-0	0.1 mg/m ³ (als Blei)	0.0025 g	0.0001
Tetrazen	109-27-3	keine Daten	0.0005 g	0.00003
Antimontrisulfid	1345-04-06	0.5 mg/m ³ (als Sb)	0.0012 g	0.0001
Calciumsilizid	12013-55-7	keine Daten	0.0018 g	0.0001
Anzündsatz YIP613/1 zu			Total[0.65 g]	[0.041%]
Zündschraube WKZSD304				
Titan	7440-32-6	1.5 mg/m ³	0.19 g	0.012
Kaliumperchlorat	7778-74-7	keine Daten	0.44 g	0.028
Siliziumdioxid	7631-86-9	4 mg/m ³	0.02 g	0.001

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
Anzündsatz zu Leuchtspur			Total [1.5 g]	[0.096%]
A 11, WU359107AU				
Magnesium	7439-95-4	keine Daten	0.150 g	0.0095
Barumperoxid	1304-29-6	0.5 mg/m ³ (als Ba)	1.125 g	0.0715
Silizium	7440-21-3	keine Daten	0.150 g	0.0095
Graphit	7782-42-5	keine Daten	0.015 g	0.0001
Binder (EC)	---	keine Daten	0.060 g	0.0038
Leuchtspursatz			Total [7 g]	[0.444%]
WUYLT562				
Magnesium	7439-95-4	keine Daten	1.960 g	0.124
Strontiumnitrat	10042-76-9	6 mg/m ³	3.640 g	0.231
Chlorträger (PVCC)	---	10 mg/m ³	0.770 g	0.048
Bleistearat	1072-35-1	0.1 mg/m ³ (als Blei)	0.070 g	0.004
Binder Phenolharz (Bakelite)	---	19 mg/m ³	0.420 g	0.026
Graphit	7782-42-5	keine Daten	0.140 g	0.009
Patronenhülse WK302521AU			Total [685.3]	[43.54%]
mit Zündschraube				
Legierungsbestandteile				
Eisen	7439-89-6	1.5 mg/m ³	620 g	39.39
Kupfer	7440-50-8	1 mg/m ³	49 g	3.11
Zink	7440-66-6	keine Daten	14.5 g	0.92
Chrom	7440-47-3	1.5 mg/m ³	0.6 g	0.04
Blei	7439-92-1	0.1 mg/m ³ (als Blei)	0.6 g	0.04
Nickel	7440-02-0	keine Daten	0.6 g	0.04
Projektil WKULD064			Total [541.5 g]	[34.40%]
Legierungsbestandteile				
Eisen	7439-89-6	5 mg/m ³	450 g	28.58
Zink	7440-66-6	keine Daten	0.32 g	0.02
Kupfer	7440-50-8	1 mg/m ³	0.48 g	0.03
Blei	7439-92-1	0.1 mg/m ³ (als Blei)	0.70 g	0.04
Aluminium	7429-90-5	1.5 mg/m ³	90 g	5.71
Chemisch technische Produkte				
Dichtungen, POM, SI	--	keine Daten	1 g	0.06
Farbe, EP, EEA	---	keine Daten	3 g	0.19

3. GEFAHREN-HINWEISE, MÖGLICHE GEFAHREN

Augen	Gase können die Augen reizen
Haut	Reizung intakter Haut ist nicht zu erwarten
Verschlucken	Ereignis unwahrscheinlich
Einatmen	Enthält einen kleinen Anteil Blei, Antimon, Kupfer, und Barium. Längere Exposition (Einatmen von Staub oder Dämpfen) kann den Blut-Schwermetall-Pegel erhöhen und folgende Störungen verursachen: Schädigung des Zentralnervensystems; Schädigung der Nieren; Anämie durch nachteilige Beeinflussung des Blutbildungsprozesses, nachteilige Beeinflussung des männlichen und weiblichen Fortpflanzungs-Systems und des Fötus.
Krebs-Information	Keine Informationen
	* Die Chemikalien sind in der Munition versiegelt; Gefahren würden nach Verpuffung oder Zerlegung auftreten

4. ERSTE HILFE-MASSNAHMEN

Augen	Augen während 15 Minuten mit fliessendem Wasser ausspülen
Haut	Mit milder Seife und Wasser abwaschen
Verschlucken	Kein Erbrechen einleiten, Arzt konsultieren.
Einatmen	An die frische Luft bringen
Anmerkungen für den Arzt	Keine spezifischen Anweisungen

5. MASSNAHMEN ZUR BRANDBEKÄMPFUNG

Brand-Eigenschaften	
Zünd-Temperatur	ca. 170°C (Treibladungspulver)
Feuergefährliche Grenzen	
untere Explosionsgrenze:	%
obere Explosionsgrenze:	%
N / A	N / A
Gefährliche Zersetzungsprodukte	Stickoxide, Kohlenmonoxid, verschiedene Stäube und Dämpfe (Blei, Kupfer, Antimon, Strontium und Barium)
Feuerlöschmittel	Metall-Löschrückmittel, Sand, Talk

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			4	14	D/C
			WU425564AV		

6. MASSNAHMEN BEI UNBEABSICHTIGTER FREISETZUNG

Freisetzung oder Verschütten	Verschüttetes Material wird mit einer weichen Bürste und einer leitenden Gummischaufel aufgenommen. Es sind leitende Behälter zu benutzen. Keine klemmenden oder metallischen Werkzeuge verwenden. Vermeiden Sie scharfe Gegenstände, Sand, Glas, körniges oder anderes Material, das Explosivstoffe sensibilisiert. Zum desensibilisieren mit Wasser anfeuchten. Wasser und Dampf kann für die Reinigung verwendet werden.
Hinweise zur Entsorgung	Explosivstoffe sollten durch Verbrennen in einem Verbrennungsofen mit Gasreinigung zerstört werden. Der Aufstellungsort des Verbrennungsofens sollte so gewählt werden, dass ein ausreichender Schutzabstand für Service und Personal zur Verfügung steht. Das Personal sollte flammhemmende Anzüge und Splitterschutz tragen.

7. INFORMATIONEN ZUR REAKTIVITÄT

Stabilität	Stabil
Unverträglichkeit	Oxidationsmittel, korrosive Materialien
zu vermeidende Bedingungen	Hitze, Schlag, statische Elektrizität, offene Flammen

8. MASSNAHMEN ZUR EXPOSITIONSBEGRENZUNG

Atemschutz	Die Patrone ist verschlossen und wirft kein Expositions-Problem auf, es sei denn bei Demontage, Deflagration oder Detonation. Es liegt in der Verantwortlichkeit des Anwenders, festzustellen, unter welchen Umständen Atemschutz erforderlich ist.
Handhabungsschutz	Nach Prüfungen: Handschuhe
Ventilation	Bei zerstörenden Prüfungen ist es nötig, die Verbrennungsgase abzusaugen.
Augenschutz	Mindestens Schutzbrille mit Seitenschutz tragen.

9. PHYSIKALISCHE UND CHEMISCHE EIGENSCHAFTEN

Siedepunkt	N / A	Löslichkeit	N / A
Schmelzpunkt	N / A	Dichte	N / A
Dampfdruck	N / A	pH	N / A
Dampfdichte	N / A	Geruch	N / A
Aussehen	Geschoss : Hellblau		
	Hülse: Grün		

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				5	14

WU425564AV

D/C

10. SARA 313 CHEMIKALIEN, UMWELT-INFORMATIONEN

Chemikalien	CAS-Nr.
Blei und Bleiverbindungen	7439-92-1
Barium und Bariumverbindungen	7440-39-3
Kupfer und Kupferverbindungen	7440-50-8
Antimon und Antimonverbindungen	7440-36-0

11. TOXIKOLOGISCHE INFORMATIONEN

Keine zusätzlichen Informationen

12. TRANSPORTINFORMATIONEN

Transport-Klassifikation UN Nr. **0328**, Klasse **1.2C**,
PATRONE FÜR WAFFEN, MIT INERTEM GESCHOSS

13. INFORMATIONSQUELLEN

Dieses Sicherheitsdatenblatt wurde erstellt mit Hilfe von Informationen von folgenden Stellen:
Hersteller der Komponenten.

Recommendations of the Transport of Dangerous Goods, United Nations ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Eidgenössisches Bundesamt für Gesundheitswesen (BAG).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Missbrauch oder unvorhergesehene Umstände sind nicht berücksichtigt.

Änderungen des Sicherheitsdatenblattes können durch weitere Informationen von Zeit zu Zeit nötig werden.

RWM Schweiz AG gibt an Vertreter, Angestellte oder Fremdfirmen keine Garantie hinsichtlich der Anwendbarkeit dieser Informationen zum beabsichtigten Zweck des Benutzers oder für Konsequenzen für seinen Gebrauch oder Fehlanwendung.

Dok. Art:	MATERIAL SAFETY DATA SHEET			Doc. Type:	FICHE DE DONNEES DE SECURITE			50
Blatt Sheet	Deutsch/German 1 bis to 6	Blatt Sheet	Englisch/English 7 bis to 12	Blatt Sheet	Französisch/French 13 bis to 14	Blatt Sheet	Italienisch/Italian bis to	49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 Bl./ Sh.

1. Scope

This document includes the Material Safety Data Sheet of 35mm x 228 complete round TP-T according to WKPM064

2. Restrictions

The declarations in this safety data sheet are based on the actual knowledge of RWM Schweiz AG. These declarations have reference to the described product in its original condition.

The safety data sheet does not lay claim to completeness.

RWM Schweiz AG is not responsible for false conclusions, either regarding the data or the recommendations for handling.

The data and recommendations may not be directly applicable or sufficient, depending on the application.

The user has to interpret the data and recommendations, to analyse the safety measures for the application, and to complete for the specific requirements, if necessary.

The declarations are not guarantees of characteristics.

This MSDS was composed to comply with the Swiss Government (BUWAL) Hazard Communication Standard. The MSDS is not an explosive component data sheet or intended to provide detailed information concerning the explosive.

3. Personnel safety

The usual safety measures on handling of ammunition and explosives must be observed.

		AC				M.K-0134		14.12.2006	G.Diewald
Erstverwendung <i>First Use</i>	Position <i>Item</i>	Index <i>Index</i>	Aenderung <i>Modification</i>			Ae-Nr. <i>Rev.-No.</i>	Feld <i>Zone</i>	Datum <i>Date</i>	Name <i>Name</i>
	Gewicht/Weight kg	Aehnlich wie/Similar to	Ersatz für/Replaces			Abt./Dept.	Freigabe Expert/Release Expert		
Datum <i>Date</i>	© 12.05.99	Name <i>Name</i>	G.Diewald			MS-OC	Datum <i>Date</i>	Name <i>Name</i>	G.Diewald
RWM Schweiz AG Zürich / Switzerland			ROUND PMD064, 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T			MS-OC	Datum <i>Date</i>	Name <i>Name</i>	Et.Rochat
						Massstab <i>Scale</i>	Entw.-Stufe <i>Design Stage</i>	Blatt <i>Sheet</i>	Blätter <i>Sheets</i>
						7	14		

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name	ROUND 35mm x 228, TP-T (Target Practice with Tracer, Fullcalibre)
Product No.	WKPMDO64
Application	35 mm Gun Systems
Company	RWM Schweiz AG Birchstrasse 155 P.O.Box, CH-8050 Zürich
General Phone Number	+41 44 316 22 11
Telefax	+41 44 316 24 79

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS-No.	EXPOSURE LIMIT	WEIGHT	%
				per Round
Propellant WUPGD550AA			Total [334 g]	[21.22%]
Nitrocellulose (NC)	9004-70-0	None Established	303 g	19.25
Camphor	464-48-2	13 mg/m ³	18 g	1.14
Centralit I	85-98-3	None Established	7 g	0.44
Potassium sulfate	7778-80-5	None Established	3.4 g	0.22
Graphite	7440-44-0	15 mg/m ³	0.7 g	0.04
Ethanol	64-17-5	960 mg/m ³	1.8 g	0.11
Ether	60-29-7	1200 mg/m ³	0.1 g	0.006
Primer composition to WK402902A			Total[0.044 g]	[0.003%]
Primer 5346 RUAG, (DM1034A1)				
Lead styphnate	15245-44-0	0.1 mg/m ³ (as Lead)	0.0192 g	0.0012
Barium nitrate	10022-31-8	0.5 mg/m ³ (as Ba)	0.0192 g	0.0012
Lead dioxide (PbO ₂)	1309-60-0	0.1 mg/m ³ (as Lead)	0.0025 g	0.0001
Tetracene	109-27-3	None Established	0.0005 g	0.00003
Antimony sulfide	1345-04-06	0.5 mg/m ³ (as Sb)	0.0012 g	0.0001
Calcium silicide	12013-55-7	None Established	0.0018 g	0.0001
Primer charge YIP613/1 to			Total[0.65g]	[0.041%]
Primer screw WKZSD304				
Titanium	7440-32-6	1.5 mg/m ³	0.19 g	0.012
Potassium perchlorate	7778-74-7	None Established	0.44 g	0.028
Silicon dioxide	7631-86-9	4 mg/m ³	0.02 g	0.001

RWM Schweiz AG
Zürich / Switzerland

ROUND PMD064, 35MM x 228, TP-T

PATRONE PMD064, 35MM x 228, TP-T

Masstab
ScaleEntw.-Stufe
Design StageBlatt
SheetBlätter
Sheets

8 14

WU425564AV

D C

Component	CAS-No.	Exposure-Limit	Weight	%
Ligthing composition (Tracer)			Total [1.5 g]	[0.096%]
A 11, WU359107AU				
Magnesium	7439-95-4	None Established	0.150 g	0.0095
Barium peroxide	1304-29-6	0.5 mg/m ³ (as Ba)	1.125 g	0.0715
Silicon	7440-21-3	None Established	0.150 g	0.0095
Graphite	7782-42-5	None Established	0.015 g	0.0001
Binder (EC)	---	None Established	0.060 g	0.0038
Trace composition			Total [7 g]	[0.444%]
WUYLT562				
Magnesium	7439-95-4	None Established	1.960 g	0.124
Strontium nitrate	10042-76-9	6 mg/m ³	3.640 g	0.231
Chlorine carrier (PVCC)	---	10 mg/m ³	0.770 g	0.048
Lead stearate	1072-35-1	0.1 mg/m ³ (as Lead)	0.070 g	0.004
Binder (Bakelite)	---	19 mg/m ³	0.420 g	0.026
Graphite	7782-42-5	None Established	0.140 g	0.009
Cartridge case WK302521AU			Total [685.3]	[43.54%]
with primer screw				
Alloying constituents				
Iron	7439-89-6	1.5 mg/m ³	620 g	39.39
Copper	7440-50-8	1 mg/m ³	49 g	3.11
Zinc	7440-66-6	None Established	14.5g	0.92
Chromium	7440-47-3	1.5 mg/m ³	0.6 g	0.04
Lead	7439-92-1	0.1 mg/m ³ (as Lead)	0.6 g	0.04
Nickel	7440-02-0	None Established	0.6 g	0.04
Projectile WKULD064			Total [541.5g]	[34.40%]
Alloying constituents				
Iron	7439-89-6	5 mg/m ³	450 g	28,58
Zinc	7440-66-6	None Established	0.32 g	0.02
Copper	7440-50-8	1 mg/m ³	0.48 g	0.03
Lead	7439-92-1	0.1 mg/m ³ (as Lead)	0.70 g	0.04
Aluminium	7429-90-5	1.5 mg/m ³	90 g	5.71
Chemo-technical products				
Plastics, Sealing comp. POM, SI	--	None Established	1 g	0.06
Varnish, EP, EEA	---	None Established	3 g	0.19

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064, 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				9	14
		WU425564AV			D C

3. HAZARD IDENTIFICATION *

EYE	Gases may irritate the eyes
SKIN	Should not irritate the intact skin
INGESTION	Unlikely to occur
INHALATION	Contains a small amount of lead, antimony, copper, and barium per unit, however prolonged exposure (breathing dust or fumes) will increase the blood-heavy-metals- levels causing the following: Central nervous system damage; cause kidney damage; adversely affect the blood-forming process causing anemia; affect male and female reproductive system and the developing fetus.
CANCER INFORMATION	N / A

- * The chemicals are sealed within the munitions; hazards would occur upon detonation, deflagration or disassembly

4. FIRST AID MEASURES

EYES	Flush eyes with water for 15 minutes
SKIN	Remove with a mild soap and water
INGESTION	Do not induce vomiting until consultation with doctor
INHALATION	Remove to fresh air
NOTE TO PHYSICIAN	No specific instructions

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

IGNITION TEMPERATURE approx. 170°C (propellant)

FLAMMABLE LIMITS

LOWER EXPLOSIVE LIMIT: % N / A UPPER EXPLOSIVE LIMIT: % N / A

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of nitrogen, carbon monoxide, various dusts and fumes (lead, antimony, copper, strontium and barium).

EXTINGUISHING MEDIA Metal extinguisher, Sand, Talc

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064, 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			10		14
WU425564AV					D C

6. SPILLS \ LEAKS \ AND DISPOSAL PROCEDURES

SPILLS AND LEAKS

Cleanup spills with a soft bristle brush and conductive rubber-pan or rubber shovel. Use conductive containers. Avoid pinching material or metal to contact. Avoid sharp objects, sand, glass, grit or other material that sensitizes explosives. Wet with water to desensitize. Water and steam may be used for decontaminating.

WASTE DISPOSAL PROCEDURES

Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.

7. REACTIVITY INFORMATION

STABILITY

Stable

INCOMPATIBILITIES

Oxidizers, corrosive agents

CONDITIONS TO AVOID

Heat, shock, static electric discharge, open flame

8. EXPOSURE CONTROL MEASURES

RESPIRATORY PROTECTION

This item is enclosed and does not pose an exposure problem unless disassembled, deflagrated or detonated. It is the responsibility of the employer to determine under what circumstances require respiratory protection

HAND PROTECTION

Following testing: Gloves

VENTILATION

Following testing allow products of combustion to clear before entering test range.

EYE PROTECTION

Wear as a minimum safety glasses with side shields.

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point	N / A	Solubility	N / A
Melting Point	N / A	Specific Gravity	N / A
Vapor Pressure	N / A	pH	N / A
Vapor Density	N / A	Odor	N / A
Appearance	Projectile : Light blue		
	Case: Green		

10. SARA 313 CHEMICALS

Chemicals	CAS-No.
Lead and Compounds	7439-92-1
Barium and Compounds	7440-39-3
Copper and Compounds	7440-50-8
Antimony and Compounds	7440-36-0

11. TOXICOLOGICAL INFORMATION

No additional information

12. TRANSPORTATION INFORMATION

U.S. DOT Proper Shipping Name: CARTRIDGES FOR WEAPONS, INERT PROJECTILE
 UN ID No.: UN No. 0328
 Class & Division: 1.2C

13. INFORMATION SOURCES

This MSDS has been prepared from information obtained from one or more of the following:

The manufacturer of the components.

Recommendations of the Transport of Dangerous Goods, United Nations, ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Swiss-Office Federal of Sanitation (care of health).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Abuse or unforeseen circumstances are not addressed here.

Information may be developed from time to time which may render the conclusions of the MSDS obsolete. RWM Schweiz AG makes no warranties to its agents, employees, or contractors as to the applicability of this information to the user's intended purpose or for consequences for its use or misuse.

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064, 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			12		14
WU425564AV					D C

Dok. Art:	MATERIAL SAFETY DATA SHEET			Doc. Type:	FICHE DE DONNEES DE SECURITE			50	
Blatt Sheet	Deutsch/German 1 bis to 6	Blatt Sheet	Englisch/English 7 bis to 12	Blatt Sheet	Französisch/French 13 bis to 14	Blatt Sheet	Italienisch/Italian bis to		
								49	
								48	
								47	
								46	
								45	
								44	
								43	
								42	
								41	
								40	
								39	
								38	
								37	
								36	
								35	
								34	
								33	
								32	
								31	
								30	
								29	
								28	
								27	
								26	
								25	
								24	
								23	
								22	
								21	
								20	
								19	
								18	
								17	
								16	
								15	
								14	
								13	
								12	
								11	
								10	
								9	
								8	
								7	
								6	
								5	
								4	
								3	
								2	
								Bl./ Sh.	
								DI	
		AC			M.K-0134		14.12.2006	G.Diewald	
Erstverwendung <i>First Use</i>		Position <i>Item</i>	Index <i>Index</i>	Aenderung <i>Modification</i>	Ae-Nr. <i>Rev.-No.</i>	Feld <i>Zone</i>	Datum <i>Date</i>	Name <i>Name</i>	
	Gewicht/Weight kg	Aehnlich wie/Similar to		Ersatz für/Replaces	Abt./Dept.	Freigabe Expert/Release Expert			
					MS-OC	Datum <i>Date</i>	Name <i>Name</i>	G.Diewald	
Datum <i>Date</i>	© 12.05.99	Name <i>Name</i>	G.Diewald		Abt. <i>Dept.</i>	MS-OC	Datum <i>Date</i>	Name <i>Name</i>	Et.Rochat
RWM Schweiz AG Zürich / Switzerland		ROUND PMD064, 35MM x 228, TP-T				Massstab <i>Scale</i>	Entw.-Stufe <i>Design Stage</i>	Blatt <i>Sheet</i>	Blätter <i>Sheets</i>
		PATRONE PMD064, 35MM x 228, TP-T				WU425564AV			13 14
									DL C

SENSIBILITE LA PLUS ELEVEE	PRECAUTIONS APPRENDRE EN CAS D'INCENDIE
<p>Des matières logées dans le produit : Conditions to avoid: Heat, shock, static electric discharge, open flame</p> <p>Ignition temperature of propellant : approx. 170°C</p> <p>Primer cap of cartridge case</p> <p>Du produit emballé : Fire of storage building Drop of original packed munitions from height ≥2m</p>	<p>Extinguishing media : Metal extinguisher, Sand, Talc</p> <p>On fire of storage building: no intervention recommended.</p> <p>Try to dislocate ammo stacks stored outside and in the immediate proximity of burning storage building.</p> <p>As the chemical are sealed within the munitions, hazards would occurs upon deflagration as oxides of nitrogen, carbon monoxide, various dusts and fumes (very small quantity of lead, copper, antimony, strontium and barium).</p>

RWM Schweiz AG Zürich / Switzerland	ROUND PMD064, 35MM x 228, TP-T PATRONE PMD064, 35MM x 228, TP-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets 14
			WU425564AV		

D
C

PLACEHOLDER FOR TP-T EXTERIOR BALLISTICS DATA SHEET

TP-T PMD064 IS BALLISTICALLY MATCHED WITH HEI-T PMD040.
PLEASE REFER TO SECTION 4d FOR DETAILS.

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 7A

TPFDS-T 35MM X 228 AMMUNITION/PMD346

TARGET PRACTICE FRANGIBLE DISCARDING SABOT WITH TRACER

FACT SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

TPFDS-T 35 MM X 228 AMMUNITION/PMD346

TARGET PRACTICE FRANGIBLE DISCARDING SABOT WITH TRACER



- Ballistically matched with subcalibre combat ammunition to tactical ranges
- Reduced ricochet risk operation due to pre-fragmented core
- Tracer for enhanced observation
- Handling, loading and gun function as per combat ammunition ensures realistic training
- Hazard class as per TP-T

Main Features

Performance	Match to tactical ranges of combat trajectory
Firing mode	Single shot and automatic mode
Safety	Inert munition (no HE)
	Reduced ricochet risk
Environment	No toxic elements
Transport/Storage	UN Classification 1.2C
Gun/System	Bush III

Technical Data

Total length of round	365 mm
Mass of round	1,440 g
Mass of projectile	376 g
Propellant	NC type
Muzzle velocity	1,400 m/sec
Cartridge case	Steel
Temperature range (functional)	-30°C to +50°C
Dispersion	0.5 mil

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 7B

TPFDS-T 35MM X 228 AMMUNITION/PMD346

TARGET PRACTICE FRANGIBLE DISCARDING SABOT WITH TRACER

CERTIFICATE

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK



Bescheinigung Nr. 4'204'034/1

Certificate

Transportklassifizierung von Gefahrgut / Transport classification of dangerous goods

Auftraggeber Customer	Oerlikon-Contraves Pyrotec AG Birchstrasse 155 CH – 8050 Zürich
Ihr Auftrag / your order Ihre Referenz / reference	Order No. 002/19270 dated January 06, 1999 Mr. G. Diewald
Stoff / Gegenstand Substance / object	Cartridges with inert projectile, type 35 mm x 228 TPFDS-T according to WK PMD 346
Mitgel tende Unterlagen Documents to consider	- Drawing No. WK PMD 346 - Classification of 35 mm HE ammunition – bonfire test, Test report No. ETN 3Q487, issued by Ministry of Defence, GB (Pee Shoeburyness)

Based on the results of the tests, carried out in accordance with the UN-Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, ST/SG/AC.10/11/Rev. 4, the above mentioned articles shall be classified as dangerous goods of class 1 as follows:

UN 0328 CARTRIDGES FOR WEAPONS, INERT PROJECTILE

- | | | | |
|------------------------|-------|---------------------|-------|
| • classification code: | 1.2 C | label: | No. 1 |
| • packing instruction: | P 130 | Special provisions: | none. |

This classification refers to the cartridges packed in:

- inner packagings : plastics foam parts or paper tubes;
- intermediate packagings : not necessary;
- outer packagings : steel boxes (4A), type Standard-METALBOX M 548, containing not more than 30 linked or unlinked cartridges; UN-marking of the steel box: UN 4A/Y80/S/year of manufacture/CH 2338/OE.

This certificate was issued by the Swiss competent authority, the Federal Inspectorate of Dangerous Goods (EGI) at CH-8304 Wallisellen. It is valid for the carriage according to the transport regulations RID, ADR and IMDG-Code.

Wallisellen, December 09, 2004

SVTI/ASIT
Federal Inspectorate of Dangerous Goods (EGI)

Dr. Alexander Filip

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

SECTION 7C

TPFDS-T 35MM X 228 AMMUNITION/PMD346

TARGET PRACTICE FRANGIBLE DISCARDING SABOT WITH TRACER

MATERIAL SAFETY DATA SHEET

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

1. STOFFBEZEICHNUNG, FIRMENBEZEICHNUNG

Produkt Name	PATRONE 35mm x 228 TPFDS-T(Zerschellgeschoss mit Leuchtspur)		
Produkt Nr.	WKPMD346		
Verwendung	35mm Waffensysteme		
Firma	RWM Schweiz AG Birchstrasse 155 Postfach, CH-8050 Zürich		
Allgemeine Telefonnummer	+41 44 316 22 11		
Telefax	+41 44 316 24 79		

2. ZUSAMMENSETZUNG/ANGABEN ZU BESTANDTEILEN

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
			pro Patrone	
Treibladung WUPGD385AA			Total [368 g]	[25.65%]
Nitrocellulose (NC)	9004-70-0	keine Daten	334 g	23.28
Campher	464-48-2	13 mg/m ³	20 g	1.39
Akardit II	13114-72-2	keine Daten	3.4 g	0.01
Kaliumsulfat	7778-80-5	keine Daten	3.4 g	0.01
Calciumcarbonat	1317-65-3	keine Daten	0.73 g	0.05
Graphit	7440-44-0	15 mg/m ³	3.7 g	0.26
Ethanol	64-17-5	960 mg/m ³	1.36 g	0.09
Ether	60-29-7	1200 mg/m ³	1.36 g	0.09
Anzündsatz zu WK402902A			Total[0.044 g]	[0.003%]
Anzündhütchen 5346, RUAG				
(DM 1034A1)				
Bleistyphnat	15245-44-0	0.1 mg/m ³ (als Blei)	0.0192 g	0.0013
Bariumnitrat	10022-31-8	0.5 mg/m ³ (als Ba)	0.0192 g	0.0013
Bleidioxid (PbO ₂)	1309-60-0	0.1 mg/m ³ (als Blei)	0.0025 g	0.0001
Tetrazen	109-27-3	keine Daten	0.0005 g	0.00003
Antimontrisulfid	1345-04-06	0.5 mg/m ³ (als Sb)	0.0012 g	0.0001
Calciumsilizid	12013-55-7	keine Daten	0.0018 g	0.0001
Anzündsatz YIP613/1 zu			Total[0.65 g]	[0.045%]
Zündschraube WKZSD304				
Titan	7440-32-6	1.5 mg/m ³	0.19 g	0.013
Kaliumperchlorat	7778-74-7	keine Daten	0.44 g	0.030
Siliziumdioxid	7631-86-9	4 mg/m ³	0.02 g	0.001

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			2	14	D/C

Komponente Bezeichnung	CAS-Nr.	Expositions-Limite	Masse	%
Anzündsatz zu Leuchtspur			Total [0.20 g]	[0.014%]
WUYIS507				
Magnesium	7439-95-4	keine Daten	0.028 g	0.0020
Barumperoxid	1304-29-6	0.5 mg/m ³ (als Ba)	0.140 g	0.0100
Silizium	7440-21-3	keine Daten	0.022 g	0.0015
Graphit	7782-42-5	keine Daten	0.002 g	0.0001
Binder (EC)	---	keine Daten	0.008 g	0.0006
Leuchtspursatz			Total [1.41 g]	[0.099%]
WUYLT565				
Magnesium	7439-95-4	keine Daten	0.560 g	0.039
Strontiumnitrat	10042-76-9	6 mg/m ³	0.606 g	0.042
Strontiumperoxid	1314-18-7	keine Daten	0.060 g	0.004
Chlorträger (PVCC)	---	10 mg/m ³	0.080 g	0.056
Bleistearat	1072-35-1	0.1 mg/m ³ (als Blei)	0.014 g	0.001
Binder Phenolharz (Bakelite)	---	19 mg/m ³	0.080 g	0.056
Graphit	7782-42-5	keine Daten	0.014 g	0.001
Patronenhülse WK700153			Total [684 g]	[47.69%]
mit Zündschraube				
Legierungsbestandteile				
Eisen	7439-89-6	1.5 mg/m ³	628 g	43.78
Kupfer	7440-50-8	1 mg/m ³	40 g	2.78
Zink	7440-66-6	keine Daten	15 g	1.05
Chrom	7440-47-3	1.5 mg/m ³	0.6 g	0.04
Blei	7439-92-1	0.1 mg/m ³ (als Blei)	0.6 g	0.04
Nickel	7440-02-0	keine Daten	0.6 g	0.04
Projektil WKTZD346			Total [376 g]	[26.21%]
Legierungsbestandteile				
Eisen	7439-89-6	5 mg/m ³	285 g	19.87
Zink	7440-66-6	keine Daten	0.32 g	0.02
Kupfer	7440-50-8	1 mg/m ³	0.48 g	0.03
Blei	7439-92-1	0.1 mg/m ³ (als Blei)	0.86 g	0.06
Kunststoff PEI	---	keine Daten	82 g	5.71
Kunststoff HDPE	---	keine Daten	7 g	0.49
Chemisch technische Produkte				
Dichtungen, POM, SI	--	keine Daten	1 g	0.07
Farbe, EP, EEA, PTFE,	---	keine Daten	3 g	0.22

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			3 14		
			WU425571AV		
			D C		

3. GEFAHREN-HINWEISE, MÖGLICHE GEFAHREN

Augen	Gase können die Augen reizen
Haut	Reizung intakter Haut ist nicht zu erwarten
Verschlucken	Ereignis unwahrscheinlich
Einatmen	Enthält einen kleinen Anteil Blei, Antimon, Kupfer, und Barium. Längere Exposition (Einatmen von Staub oder Dämpfen) kann den Blut-Schwermetall-Pegel erhöhen und folgende Störungen verursachen: Schädigung des Zentralnervensystems; Schädigung der Nieren; Anämie durch nachteilige Beeinflussung des Blutbildungsprozesses, nachteilige Beeinflussung des männlichen und weiblichen Fortpflanzungs-Systems und des Fötus.
Krebs-Information	Keine Informationen * Die Chemikalien sind in der Munition versiegelt; Gefahren würden nach Verpuffung oder Zerlegung auftreten

4. ERSTE HILFE-MASSNAHMEN

Augen	Augen während 15 Minuten mit fliessendem Wasser ausspülen
Haut	Mit milder Seife und Wasser abwaschen
Verschlucken	Kein Erbrechen einleiten, Arzt konsultieren.
Einatmen	An die frische Luft bringen
Anmerkungen für den Arzt	Keine spezifischen Anweisungen

5. MASSNAHMEN ZUR BRANDBEKÄMPFUNG

Brand-Eigenschaften	
Zünd-Temperatur	ca. 170°C (Treibladungspulver)
Feuergefährliche Grenzen	
untere Explosionsgrenze:	%
obere Explosionsgrenze:	%
N / A	N / A
Gefährliche Zersetzungsprodukte	Stickoxide, Kohlenmonoxid, verschiedene Stäube und Dämpfe (Blei, Kupfer, Antimon, Strontium und Barium)
Feuerlöschmittel	Metall-Löschrückmittel, Sand, Talk

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
			4	14	D C
			WU425571AV		

6. MASSNAHMEN BEI UNBEABSICHTIGTER FREISETZUNG

Freisetzung oder Verschütten	Verschüttetes Material wird mit einer weichen Bürste und einer leitenden Gummischaufel aufgenommen. Es sind leitende Behälter zu benutzen. Keine klemmenden oder metallischen Werkzeuge verwenden. Vermeiden Sie scharfe Gegenstände, Sand, Glas, körniges oder anderes Material, das Explosivstoffe sensibilisiert. Zum desensibilisieren mit Wasser anfeuchten. Wasser und Dampf kann für die Reinigung verwendet werden.
Hinweise zur Entsorgung	Explosivstoffe sollten durch Verbrennen in einem Verbrennungsofen mit Gasreinigung zerstört werden. Der Aufstellungsort des Verbrennungsofens sollte so gewählt werden, dass ein ausreichender Schutzabstand für Service und Personal zur Verfügung steht. Das Personal sollte flammhemmende Anzüge und Splitterschutz tragen.

7. INFORMATIONEN ZUR REAKTIVITÄT

Stabilität	Stabil
Unverträglichkeit	Oxidationsmittel, korrosive Materialien
zu vermeidende Bedingungen	Hitze, Schlag, statische Elektrizität, offene Flammen

8. MASSNAHMEN ZUR EXPOSITIONSBEGRENZUNG

Atemschutz	Die Patrone ist verschlossen und wirft kein Expositions-Problem auf, es sei denn bei Demontage, Deflagration oder Detonation. Es liegt in der Verantwortlichkeit des Anwenders, festzustellen, unter welchen Umständen Atemschutz erforderlich ist.
Handhabungsschutz	Nach Prüfungen: Handschuhe
Ventilation	Bei zerstörenden Prüfungen ist es nötig, die Verbrennungsgase abzusaugen.
Augenschutz	Mindestens Schutzbrille mit Seitenschutz tragen.

9. PHYSIKALISCHE UND CHEMISCHE EIGENSCHAFTEN

Siedepunkt	N / A	Löslichkeit	N / A
Schmelzpunkt	N / A	Dichte	N / A
Dampfdruck	N / A	pH	N / A
Dampfdichte	N / A	Geruch	N / A
Aussehen	Geschoss : Schwarz		
	Hülse: Grauschwarz		

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				5	14

WU425571AV

D/C

10. SARA 313 CHEMIKALIEN, UMWELT-INFORMATIONEN

Chemikalien	CAS-Nr.
Blei und Bleiverbindungen	7439-92-1
Barium und Bariumverbindungen	7440-39-3
Kupfer und Kupferverbindungen	7440-50-8
Antimon und Antimonverbindungen	7440-36-0

11. TOXIKOLOGISCHE INFORMATIONEN

Keine zusätzlichen Informationen

12. TRANSPORTINFORMATIONEN

Transport-Klassifikation UN Nr. **0328**, Klasse **1.2C**,
PATRONE FÜR WAFFEN, MIT INERTEM GESCHOSS

13. INFORMATIONSQUELLEN

Dieses Sicherheitsdatenblatt wurde erstellt mit Hilfe von Informationen von folgenden Stellen:
Hersteller der Komponenten.

Recommendations of the Transport of Dangerous Goods, United Nations ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Eidgenössisches Bundesamt für Gesundheitswesen (BAG).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Missbrauch oder unvorhergesehene Umstände sind nicht berücksichtigt.

Änderungen des Sicherheitsdatenblattes können durch weitere Informationen von Zeit zu Zeit nötig werden.

RWM Schweiz AG gibt an Vertreter, Angestellte oder Fremdfirmen keine Garantie hinsichtlich der Anwendbarkeit dieser Informationen zum beabsichtigten Zweck des Benutzers oder für Konsequenzen für seinen Gebrauch oder Fehlanwendung.

Dok. Art:	MATERIAL SAFETY DATA SHEET			Doc. Type:	FICHE DE DONNEES DE SECURITE			50				
	Deutsch/German Blatt Sheet		Blatt Sheet	Englisch/English 7 bis to	12	Französisch/French Blatt Sheet	13 bis to	14	Italienisch/Italian Blatt Sheet	bis to	49	
	1	bis	6								48	
1.	Scope											47
	This document includes the Material Safety Data Sheet of 35mm x 228 complete round TPFDS-T according to WKMD346.											46
2.	Restrictions											45
	The declarations in this safety data sheet are based on the actual knowledge of RWM Schweiz AG. These declarations have reference to the described product in its original condition.											44
	The safety data sheet does not lay claim to completeness.											43
	RWM Schweiz AG is not responsible for false conclusions, either regarding the data or the recommendations for handling.											42
	The data and recommendations may not be directly applicable or sufficient, depending on the application.											41
	The user has to interpret the data and recommendations, to analyse the safety measures for the application, and to complete for the specific requirements, if necessary.											40
	The declarations are not guarantees of characteristics.											39
	This MSDS was composed to comply with the Swiss Government (BUWAL) Hazard Communication Standard. The MSDS is not an explosive component data sheet or intended to provide detailed information concerning the explosive.											38
3.	Personnel safety											37
	The usual safety measures on handling of ammunition and explosives must be observed.											36
											35	
											34	
											33	
											32	
											31	
											30	
											29	
											28	
											27	
											26	
											25	
											24	
											23	
											22	
											21	
											20	
											19	
											18	
											17	
											16	
											15	
											14	
											13	
											12	
											11	
											10	
											9	
											8	
											7	
											6	
											5	
											4	
											3	
											2	
											Bl/ Sh.	
											Di	
		AC				M.K-0143		25.07.2007	G.Diewald			
Erstverwendung First Use	Position Item	Index Index	Änderung Modification			Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name			
	Gewicht/Weight kg	Aehnlich wie/Similar to	Ersatz für/Replaces			Abt./Dept. MS-OC	Datum Date	Freigabe Expert/Release Expert Name Name	J.Lagler			<i>Lag</i>
Datum Date	© 27.06.05	Name Name	G.Diewald			Abt. Dept. MS-OC	Datum Date	Freigabe/Release Name Name	Et.Rochat			<i>E.R.</i>
RWM Schweiz AG Zürich / Switzerland			ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T						Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
											7	14
									WU425571AV			D/C

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name	ROUND 35mm x 228, TPFDS-T (Target Practice Frangible Discarding Sabot with Tracer [Subcalibre])
Product No.	WKPM346
Application	35 mm Gun Systems
Company	RWM Schweiz AG Birchstrasse 155 P.O.Box, CH-8050 Zürich
General Phone Number	+41 44 316 22 11
Telefax	+41 44 316 24 79

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS-No.	EXPOSURE LIMIT	WEIGHT	%
per Round				
Propellant WUPGD385AA			Total [368 g]	[25.65%]
Nitrocellulose (NC)	9004-70-0	None Established	334 g	23.28
Camphor	464-48-2	13 mg/m ³	20 g	1.39
Akardit II	13114-72-2	None Etablished	3.4 g	0.01
Potassium sulfate	7778-80-5	None Established	3.4 g	0.01
Calcium carbonate	1317-65-3	None Established	0.73 g	0.05
Graphite	7440-44-0	15 mg/m ³	3.7 g	0.26
Ethanol	64-17-5	960 mg/m ³	1.36 g	0.09
Ether	60-29-7	1200 mg/m ³	1.36 g	0.09
Primer composition to WK402902A			Total[0.044 g]	[0.003%]
Primer 5346 RUAG, (DM1034A1)				
Lead styphnate	15245-44-0	0.1 mg/m ³ (as Lead)	0.0192 g	0.0013
Barium nitrate	10022-31-8	0.5 mg/m ³ (as Ba)	0.0192 g	0.0013
Lead dioxide (PbO ₂)	1309-60-0	0.1 mg/m ³ (as Lead)	0.0025 g	0.0001
Tetracene	109-27-3	None Established	0.0005 g	0.00003
Antimony sulfide	1345-04-06	0.5 mg/m ³ (as Sb)	0.0012 g	0.0001
Calcium silicide	12013-55-7	None Established	0.0018 g	0.0001
Primer charge YIP613/1 to			Total[0.65g]	[0.045%]
Primer screw WKZSD304				
Titanium	7440-32-6	1.5 mg/m ³	0.19 g	0.013
Potassium perchlorate	7778-74-7	None Established	0.44 g	0.030
Silicon dioxide	7631-86-9	4 mg/m ³	0.02 g	0.001

RWM Schweiz AG
Zürich / SwitzerlandROUND PMD346, 35MM x 228, TPFDS-T
PATRONE PMD346, 35MM x 228, TPFDS-TMassstab
Scale
8
Entw.-Stufe
Design Stage
Blatt
Sheet
14
Blätter
Sheets

WU425571AV

D
C

Component	CAS-No.	Exposure-Limit	Weight	%
Ligthing composition (Tracer)			Total [0.20 g]	[0.014%]
WUYIS507				
Magnesium	7439-95-4	None Established	0.028 g	0.0020
Barium peroxide	1304-29-6	0.5 mg/m ³ (as Ba)	0.140 g	0.0100
Silicon	7440-21-3	None Established	0.022 g	0.0015
Graphite	7782-42-5	None Established	0.002 g	0.0001
Binder (EC)	---	None Established	0.008 g	0.0006
Trace composition			Total [1.41 g]	[0.099%]
WUYLT565				
Magnesium	7439-95-4	None Established	0.560 g	0.039
Strontium nitrate	10042-76-9	6 mg/m ³	0.606 g	0.042
Strontium peroxide	1314-18-7	None Established	0.060 g	0.004
Chlorine carrier (PVCC)	---	10 mg/m ³	0.080 g	0.056
Lead stearate	1072-35-1	0.1 mg/m ³ (as Lead)	0.014 g	0.001
Binder (Bakelite)	---	19 mg/m ³	0.080 g	0.056
Graphite	7782-42-5	None Established	0.014 g	0.001
Cartridge case WK700153,			Total [684 g]	[47.69%]
with primer screw				
Alloying constituents				
Iron	7439-89-6	1.5 mg/m ³	628 g	43.78
Copper	7440-50-8	1 mg/m ³	40 g	2.78
Zinc	7440-66-6	None Established	15 g	1.05
Chromium	7440-47-3	1.5 mg/m ³	0.6 g	0.04
Lead	7439-92-1	0.1 mg/m ³ (as Lead)	0.6 g	0.04
Nickel	7440-02-0	None Established	0.6 g	0.04
Projectile WKTZD346			Total [376 g]	[26.21%]
Alloying constituents				
Iron	7439-89-6	5 mg/m ³	285 g	19.87
Zinc	7440-66-6	None Established	0.32 g	0.02
Copper	7440-50-8	1 mg/m ³	0.48 g	0.03
Lead	7439-92-1	0.1 mg/m ³ (as Lead)	0.86 g	0.06
Plastic PEI	---	None Established	82 g	5.71
Plastic HDPE	---	None Established	7 g	0.49
Chemo-technical products				
Plastics, Sealing comp. POM, SI	--	None Established	1 g	0.07
Varnish, EP, EEA, PTFE	---	None Established	3 g	0.22

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				9	14
				WU425571AV	D/C

3. HAZARD IDENTIFICATION *

EYE	Gases may irritate the eyes
SKIN	Should not irritate the intact skin
INGESTION	Unlikely to occur
INHALATION	Contains a small amount of lead, antimony, copper, and barium per unit, however prolonged exposure (breathing dust or fumes) will increase the blood-heavy-metals- levels causing the following: Central nervous system damage; cause kidney damage; adversely affect the blood-forming process causing anemia; affect male and female reproductive system and the developing fetus.
CANCER INFORMATION	N / A

- * The chemicals are sealed within the munitions; hazards would occur upon detonation, deflagration or disassembly

4. FIRST AID MEASURES

EYES	Flush eyes with water for 15 minutes
SKIN	Remove with a mild soap and water
INGESTION	Do not induce vomiting until consultation with doctor
INHALATION	Remove to fresh air
NOTE TO PHYSICIAN	No specific instructions

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

IGNITION TEMPERATURE approx. 170°C (propellant)

FLAMMABLE LIMITS

LOWER EXPLOSIVE LIMIT: % N / A UPPER EXPLOSIVE LIMIT: % N / A

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of nitrogen, carbon monoxide, various dusts and fumes (lead, antimony, copper, strontium and barium).

EXTINGUISHING MEDIA Metal extinguisher, Sand, Talc

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				10	14

WU425571AV

D
C

6. SPILLS \ LEAKS \ AND DISPOSAL PROCEDURES

SPILLS AND LEAKS

Cleanup spills with a soft bristle brush and conductive rubber-pan or rubber shovel. Use conductive containers. Avoid pinching material or metal to contact. Avoid sharp objects, sand, glass, grit or other material that sensitizes explosives. Wet with water to desensitize. Water and steam may be used for decontaminating.

WASTE DISPOSAL PROCEDURES

Explosive should be destroyed by burning in an approved incinerator with gas purifying. The disposal site should be located to provide adequate quantity-distance protection for adjacent facilities and personnel. Personnel should wear flame-resistant suits.

7. REACTIVITY INFORMATION

STABILITY

Stable

INCOMPATIBILITIES

Oxidizers, corrosive agents

CONDITIONS TO AVOID

Heat, shock, static electric discharge, open flame

8. EXPOSURE CONTROL MEASURES

RESPIRATORY PROTECTION

This item is enclosed and does not pose an exposure problem unless disassembled, deflagrated or detonated. It is the responsibility of the employer to determine under what circumstances require respiratory protection

HAND PROTECTION

Following testing: Gloves

VENTILATION

Following testing allow products of combustion to clear before entering test range.

EYE PROTECTION

Wear as a minimum safety glasses with side shields.

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point	N / A	Solubility	N / A
Melting Point	N / A	Specific Gravity	N / A
Vapor Pressure	N / A	pH	N / A
Vapor Density	N / A	Odor	N / A
Appearance	Projectile : Black		
	Case: Grayish black		

10. SARA 313 CHEMICALS

Chemicals	CAS-No.
Lead and Compounds	7439-92-1
Barium and Compounds	7440-39-3
Copper and Compounds	7440-50-8
Antimony and Compounds	7440-36-0

11. TOXICOLOGICAL INFORMATION

No additional information

12. TRANSPORTATION INFORMATION

U.S. DOT Proper Shipping Name: CARTRIDGES FOR WEAPONS, INERT PROJECTILE
UN ID No.: UN No. 0328
Class & Division: 1.2C

13. INFORMATION SOURCES

This MSDS has been prepared from information obtained from one or more of the following:

The manufacturer of the components.

Recommendations of the Transport of Dangerous Goods, United Nations, ST/SG/AC.10/1/Rev.10, Health Guidelines for Chemical Hazards.

Swiss-Office Federal of Sanitation (care of health).

USA Department of Defense Explosive Hazard Classification Procedure Army TB 700-2, Assistant Secretary of Defense DOD 6055.9-STD (USA) based upon current available scientific information and component manufacturer's data.

Abuse or unforeseen circumstances are not addressed here.

Information may be developed from time to time which may render the conclusions of the MSDS obsolete. RWM Schweiz AG makes no warranties to its agents, employees, or contractors as to the applicability of this information to the user's intended purpose or for consequences for its use or misuse.

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
				12	14
				WU425571AV	D/C

Dok. Art:	MATERIAL SAFETY DATA SHEET			Doc. Type:	FICHE DE DONNEES DE SECURITE									
	Deutsch/German Blatt Sheet	1 bis to	6	Englisch/English Blatt Sheet	7 bis to	12	Französisch/French Blatt Sheet	13 bis to	14	Italienisch/Italian Blatt Sheet	bis to			
												50		
												49		
												48		
												47		
												46		
												45		
												44		
												43		
												42		
												41		
												40		
												39		
												38		
												37		
												36		
												35		
												34		
												33		
												32		
												31		
												30		
												29		
												28		
												27		
												26		
												25		
												24		
												23		
												22		
												21		
												20		
												19		
												18		
												17		
												16		
												15		
												14		
												13		
												12		
												11		
												10		
												9		
												8		
												7		
												6		
												5		
												4		
												3		
												2		
												BI/ Sh.		
												DI		
		AC				M.K-0143		25.07.2007	G.Diewald					
Erstverwendung <i>First Use</i>		Position Item	Index Index	Aenderung <i>Modification</i>			Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name				
	Gewicht/Weight kg	Aehnlich wie/Similar to		Ersatz für/Replaces		Abt./Dept.	Freigabe Expert/Release Expert							
						MS-OC	Datum Date	25.07.07	Name	J.Lagler		<i>L</i>		
Datum Date © 27.06.05		Name Name		G.Diewald		Abt. Dept.	MS-OC	Datum Date	25.07.07	Name	Et.Rochat		<i>J.L</i>	
RWM Schweiz AG Zürich / Switzerland		ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T						Massstab Scale		Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets		
										13	14		D C	
										WU425571AV				

SENSIBILITE LA PLUS ELEVEE	PRECAUTIONS APPRENDRE EN CAS D'INCENDIE
<p>Des matières logées dans le produit : Conditions to avoid: Heat, shock, static electric discharge, open flame</p> <p>Ignition temperature of propellant : approx. 170°C</p> <p>Primer cap of cartridge case</p> <p>Du produit emballé : Fire of storage building Drop of original packed munitions from height ≥2m</p>	<p>Extinguishing media : Metal extinguisher, Sand, Talc</p> <p>On fire of storage building: no intervention recommended.</p> <p>Try to dislocate ammo stacks stored outside and in the immediate proximity of burning storage building.</p> <p>As the chemical are sealed within the munitions, hazards would occurs upon deflagration as oxides of nitrogen, carbon monoxide, various dusts and fumes (very small quantity of lead, copper, antimony, strontium and barium).</p>

RWM Schweiz AG Zürich / Switzerland	ROUND PMD346, 35MM x 228, TPFDS-T PATRONE PMD346, 35MM x 228, TPFDS-T	Masstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets 14 14
WU425571AV					D C

SECTION 7D

TPFDS-T 35MM X 228 AMMUNITION/PMD346

TARGET PRACTICE FRANGIBLE DISCARDING SABOT WITH TRACER

EXTERIOR BALLISTICS DATA

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK

Dok. Art: Spezifikation	Deutsch/German Blatt Sheet 1 bis to 48	Englisch/English Blatt Sheet 1 bis to 48	Französisch/French Blatt Sheet bis to	Italienisch/Italian Blatt Sheet bis to	50
INHALT					49
					48
					47
					46
					45
					44
					43
					42
					41
					40
					39
1. ANWENDUNG	Für 35mm Oerlikon Munition mit Geschoss TZ zu 35mm Waffe Bushmaster III.		For 35mm Oerlikon Ammunition with Projectile TPFSDS-T for 35mm weapon Bushmaster III.		38
2. AUSSENBALLISTISCHE DATEN			2. EXTERIOR BALLISTICS DATA		37
2.1 Allgemeine Daten	2	2.1 General Data	2		36
2.2 Erdschusstafel	3	2.2 Ground Firing Table	3		35
2.3 Korrekturtafel zur Erdschusstafel	6	2.3 Correction Table for Ground Firing Table	6		34
2.4 Flabschusstafel	9	2.4 Anti-Aircraft Firing Table	9		33
2.5 Korrekturtafel zur Flabschusstafel	26	2.5 Correction Table for Anti-Aircraft Firing Table	26		32
2.6 Temperaturkorrektur für 100% relative Luftfeuchtigkeit	43	2.6 Correction of Temperature for 100% relative Humidity	43		31
2.7 Gebrauch der Tafel (Beispiel)	44	2.7 Use of the Table (Example)	44		30
2.8 Flugbahnhkarte	47	2.8 Trajectory Chart	47		29
3. DOKUMENTENVERZEICHNIS	48	3. DOCUMENTARY LIST	48		28
					27
					26
					25
					24
					23
					22
					21
					20
					19
					18
					17
					16
					15
					14
					13
					12
					11
					10
					9
					8
					7
					6
					5
					4
					3
					2
					Bl./Sh.
					DI

Erstverwendung First Use	Position Item	Index Index	Aenderung Modification	Ae-Nr. Rev.-No.	Feld Zone	Datum Date	Name Name
	Gewicht/Weight kg	Aehnlich wie/Similar to	Ersatz für/Replaces	Abt./Dept. M-EA	Freigabe Datum 20.09.07 Date	Experte/Release Expert Name M. Engler	
Datum Date ©	19.09.07	Name Name	M. Engler	Abt. Dept. M-EA	Datum Date 21.09.07	Freigabe/Release Name J. Burri	
RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 1	Blätter Sheets 48		
						DI	A
						WK802157AV	A

2. AUSSENBALLISTISCHE DATEN

2.1 ALLGEMEINE DATEN

Diese Spezifikation enthält Schusstafeln, sowohl für den Erd- als auch für den Flabeinsatz. Die zugehörigen Korrekturtafeln erlauben die Berücksichtigung von Abweichungen gegenüber den Standardbedingungen. Die Standardbedingungen in den Tafeln sind durch folgende Größen charakterisiert:

STANDARDBEDINGUNGEN

a) Kanone und Geschoss

Kanonentyp(en)	Bushmaster III
Rohr:	Kaliber 35 mm
	Länge (in Kaliber) 90
	Anzahl Züge 24
	Drallwinkel 0° bis 6.5°, rechts
Mündungsgeschwindigkeit (Vo)	1400 m/s
Treibladungstemperatur	+21°C
Geschossmasse	0.2925 kg
Geschossdurchmesser	26.5 mm
Geschosstyp(en)	Geschoss TZ
Widerstandsbeiwert (C_w)	WK802155AV
Patronentyp(en)	Patrone TZ
Einsatzdistanz	Max. 4.5 km

b) Atmosphäre an der Mündung

ICAO-Normatmosphäre	DIN ISO 2533
Mündungshöhe	0 m ü.M.
Luftdichte (ρ_0)	1.2250 kg/m³
Temperatur (T_0)	15°C
Druck (P_0)	1013.25 mbar
Wind-Geschwindigkeit	0 m/s
Relative Feuchtigkeit	0 %

Bemerkung:

Diese ballistischen Tafeln basieren auf genauen ballistischen Messungen (Doppler Radar), in einem Bereich, der die maximale Einsatzdistanz der entsprechenden Munition abdeckt und sind auf Normatmosphäre umgerechnet. Für grössere Distanzen haben die Angaben lediglich informativen Charakter.

2. EXTERIOR BALLISTICS DATA

2.1 GENERAL DATA

This specification contains firing tables for use in ground firing as well as for anti-aircraft firing. The influence of deviations from standard conditions may be taken into account by using the corresponding correction tables.

The standard conditions in the tables are characterized by the following values:

STANDARD CONDITIONS

a) Gun an Projectile

Gun Type(s)	Bushmaster III
Barrel:	Caliber 35 mm
	Length (in Caliber) 90
	Number of Rifling Grooves 24
	Twist Angle: 0° to 6.5°, right hand
Muzzle Velocity (Vo)	1400 m/s
Propellant Temperature	+21°C
Projectile Mass	0.2925 kg
Projectile Diameter	26.5 mm
Projectile Type(s)	TPFSDS-T
Drag Coefficient (C_D)	WK802155AV
Ammunition Type(s)	Round TPFSDS-T
Practical Range	Max. 4.5 km

b) Atmosphere at Muzzle

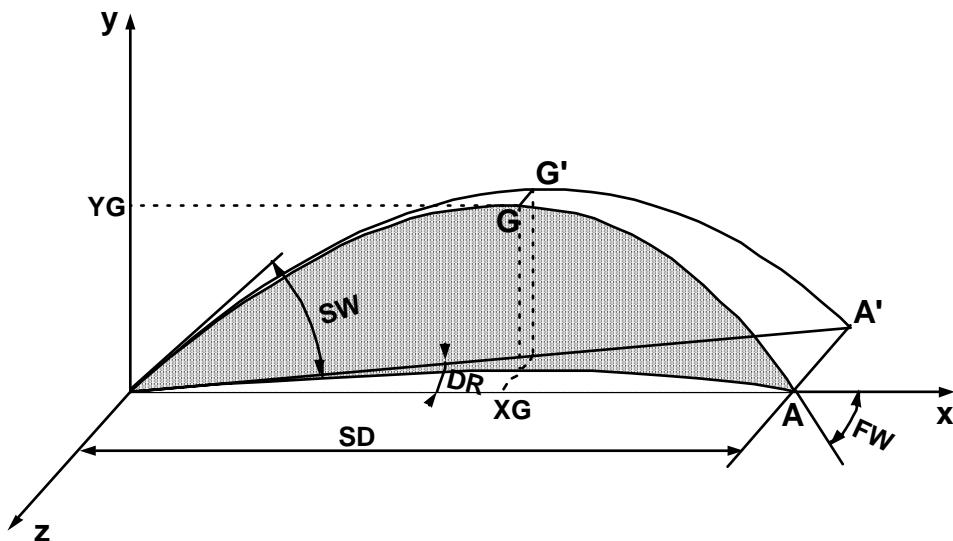
ICAO-Standard Atmosphere	ISO 2533
Muzzle Altitude	0 m above Sea Level
Density (ρ_0)	1.2250 kg/m³
Temperature (T_0)	15°C
Pressure (P_0)	1013.25 mbar
Wind Speed	0 m/s
Relative Humidity	0 %

Note:

The present tables are based on accurate ballistic measurements (Doppler Radar) taken over the maximum practical range and reduced to standard atmospheric conditions. Data given for greater ranges are for information only.

2.2 ERDSCHUSSTAFEL

2.2 GROUND FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- SD** Schussdistanz von Mündung bis Ziel (**A**)
- SW** Schusswinkel: Winkel, der eingestellt werden muss, um das Ziel (**A**) auf der gegebenen Distanz (**SD**) zu treffen
- FZ** Flugzeit des Geschosses von der Mündung bis zum Ziel (**A**)
- DR** Derivation: nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Derivationswinkel **DR** liegt in der Ebene (**X,Z**)
- XG** Gipfelentfernung (horizontal) der Geschossflugbahn
- YG** Gipfelhöhe der Geschossflugbahn über Mündungshöhe
- VE** Geschossgeschwindigkeit bei Distanz **SD**
- FW** Fallwinkel des Geschosses bei Distanz **SD**

Alle Winkel sind in **mils** ($360^{\circ} = 6400$ mils) angegeben (mils = A $\%$).

DEFINITION of TABLE SYMBOLS

- SD** Range from muzzle to target (**A**)
- SW** Superelevation: angle to be set, in order to hit the target (**A**) at a range (**SD**)
- FZ** Time-of-Flight of the projectile from muzzle to target (**A**)
- DR** Drift: the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle lies in the plane (**X,Z**)
- XG** Vertex Abscissa: horizontal distance to the vertex
- YG** Vertex Height: vertical distance to the vertex above the muzzle
- VE** Remaining Velocity of the Projectile at range **SD**
- FW** Angle of Fall of the projectile at range **SD**

All angles are given in **mils** ($360^{\circ} = 6400$ mils).

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 3	Blätter Sheets 48
WK802157AV					DI A

SD m	SW A o/oo	FZ s	DR A o/oo	XG m	YG m	VE m/s	FW A o/oo	SD m
100	0.3	0.072	0.0	50	0.0	1364.1	0.3	100
200	0.5	0.147	0.0	101	0.0	1328.3	0.5	200
300	0.8	0.223	0.0	152	0.1	1292.5	0.9	300
400	1.1	0.301	0.0	204	0.1	1256.8	1.2	400
500	1.4	0.382	0.0	256	0.2	1221.2	1.5	500
600	1.7	0.465	0.0	308	0.3	1185.7	1.9	600
700	2.0	0.551	0.0	361	0.4	1150.3	2.3	700
800	2.4	0.639	0.1	415	0.5	1115.0	2.8	800
900	2.7	0.730	0.1	469	0.7	1080.0	3.2	900
1000	3.1	0.824	0.1	524	0.8	1045.3	3.8	1000
1100	3.5	0.922	0.1	580	1.0	1010.9	4.3	1100
1200	3.9	1.022	0.1	636	1.3	976.9	4.9	1200
1300	4.3	1.126	0.1	693	1.6	943.1	5.6	1300
1400	4.7	1.234	0.1	750	1.9	909.8	6.3	1400
1500	5.2	1.346	0.1	809	2.2	876.8	7.1	1500
1600	5.7	1.463	0.1	868	2.6	844.4	8.0	1600
1700	6.2	1.583	0.2	927	3.1	812.5	8.9	1700
1800	6.7	1.709	0.2	988	3.6	781.2	9.9	1800
1900	7.3	1.839	0.2	1049	4.2	750.5	11.1	1900
2000	7.9	1.975	0.2	1111	4.8	720.3	12.3	2000
2100	8.5	2.117	0.2	1174	5.5	690.7	13.7	2100
2200	9.2	2.265	0.2	1238	6.3	661.8	15.2	2200
2300	9.9	2.419	0.3	1303	7.2	633.6	16.9	2300
2400	10.7	2.581	0.3	1369	8.2	605.9	18.7	2400
2500	11.5	2.750	0.3	1435	9.3	578.6	20.8	2500
2600	12.3	2.927	0.3	1503	10.6	551.8	23.0	2600
2700	13.2	3.112	0.4	1572	12.0	525.6	25.6	2700
2800	14.2	3.307	0.4	1641	13.5	500.0	28.4	2800
2900	15.3	3.512	0.4	1712	15.2	474.3	31.5	2900
3000	16.4	3.729	0.5	1784	17.2	448.8	35.1	3000
3100	17.6	3.958	0.5	1857	19.4	423.7	39.1	3100
3200	18.9	4.201	0.6	1931	21.8	399.1	43.7	3200
3300	20.3	4.459	0.6	2007	24.6	375.3	48.9	3300
3400	21.9	4.734	0.7	2084	27.7	352.9	54.9	3400
3500	23.6	5.025	0.7	2163	31.2	333.9	61.7	3500
3600	25.4	5.331	0.8	2244	35.2	319.7	69.2	3600
3700	27.4	5.649	0.9	2326	39.7	307.6	77.3	3700
3800	29.6	5.980	1.0	2408	44.7	296.6	86.0	3800
3900	31.9	6.323	1.0	2491	50.4	286.6	95.3	3900
4000	34.5	6.677	1.1	2574	56.7	277.4	105.3	4000
4100	37.2	7.043	1.2	2656	63.7	268.8	115.9	4100
4200	40.1	7.421	1.3	2738	71.4	260.7	127.1	4200
4300	43.2	7.811	1.4	2818	79.9	253.2	139.0	4300
4400	46.5	8.212	1.6	2898	89.3	246.0	151.5	4400
4500	50.1	8.626	1.7	2975	99.5	239.1	164.8	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802157AV

DI
A

SD	SW	FZ	DR	XG	YG	VE	FW	SD
m	A o/oo	s	A o/oo	m	m	m/s	A o/oo	m
4600	53.8	9.052	1.8	3051	110.7	232.3	178.9	4600
4700	57.8	9.492	2.0	3125	122.8	225.7	193.7	4700
4800	62.1	9.945	2.1	3198	136.0	219.3	209.4	4800
4900	66.6	10.413	2.3	3268	150.3	213.0	226.1	4900
5000	71.3	10.896	2.4	3337	165.7	206.9	243.8	5000
5100	76.3	11.396	2.6	3404	182.4	201.0	262.5	5100
5200	81.7	11.911	2.8	3469	200.4	195.3	282.3	5200
5300	87.3	12.445	3.0	3534	219.8	189.9	303.3	5300
5400	93.2	12.996	3.2	3598	240.7	184.6	325.6	5400
5500	99.5	13.567	3.4	3663	263.2	179.6	349.1	5500
5600	106.2	14.158	3.6	3727	287.5	174.8	374.0	5600
5700	113.2	14.771	3.9	3792	313.7	170.3	400.2	5700
5800	120.6	15.406	4.2	3858	341.8	166.1	427.9	5800
5900	128.5	16.065	4.5	3925	372.2	162.1	457.0	5900
6000	136.8	16.748	4.8	3992	404.9	158.4	487.5	6000
6100	145.6	17.459	5.1	4059	440.2	155.0	519.5	6100
6200	155.0	18.198	5.4	4128	478.2	151.8	552.9	6200
6300	164.9	18.967	5.8	4197	519.3	149.0	587.6	6300
6400	175.5	19.768	6.2	4268	563.7	146.5	623.7	6400
6500	186.7	20.605	6.7	4339	611.7	144.3	661.0	6500
6600	198.6	21.480	7.1	4411	663.9	142.4	699.5	6600
6700	211.4	22.396	7.6	4484	720.8	140.8	739.0	6700
6800	225.1	23.357	8.2	4557	782.8	139.6	779.5	6800
6900	239.7	24.370	8.8	4632	850.5	138.7	820.8	6900
7000	255.5	25.441	9.4	4708	924.7	138.1	862.8	7000
7100	272.6	26.577	10.1	4784	1006.4	137.8	905.4	7100
7200	291.2	27.791	10.9	4861	1096.9	137.9	948.5	7200
7300	311.6	29.097	11.8	4938	1198.4	138.3	992.2	7300
7400	334.3	30.518	12.8	5016	1313.2	139.0	1036.4	7400
7500	359.8	32.085	14.0	5095	1444.8	140.2	1081.3	7500
7600	389.2	33.854	15.4	5174	1599.4	141.7	1127.6	7600
7700	424.5	35.931	17.1	5253	1789.5	143.7	1176.1	7700
7800	470.6	38.573	19.4	5332	2043.1	146.5	1229.9	7800
7900	556.5	43.302	24.2	5411	2528.8	151.6	1307.8	7900

2.3 KORREKTURTAFEL ZUR ERDSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrekturen kann unter gestörten Bedingungen die Distanz **SD** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel),
sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind
(parallel zur **X**-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind
(von links, parallel zur **Z**-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils)
angegeben (mils = A%).

2.3 CORRECTION TABLE TO THE GROUNG FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction(Superelevation),
as well as

FZ-Variation (Time-of-Flight)

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind
(parallel to **X**-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind
(from the left, parallel to **Z**-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.0	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.0	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.0	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.0	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.0	0.007	0.003	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.0	0.008	0.003	-0.016	-0.001	1.3
1200	0.1	0.0	-0.1	0.0	0.009	0.004	-0.020	-0.002	1.4
1300	0.1	0.0	-0.1	0.0	0.010	0.005	-0.024	-0.002	1.6
1400	0.1	0.0	-0.2	0.0	0.011	0.006	-0.029	-0.003	1.7
1500	0.1	0.0	-0.2	0.0	0.012	0.007	-0.035	-0.003	1.9
1600	0.1	0.0	-0.2	0.0	0.013	0.009	-0.041	-0.004	2.0
1700	0.1	0.1	-0.3	0.0	0.015	0.011	-0.048	-0.005	2.2
1800	0.1	0.1	-0.3	0.0	0.016	0.012	-0.057	-0.006	2.4
1900	0.1	0.1	-0.4	0.0	0.017	0.015	-0.066	-0.007	2.6
2000	0.1	0.1	-0.4	0.0	0.019	0.017	-0.076	-0.009	2.8
2100	0.2	0.1	-0.5	0.0	0.021	0.020	-0.087	-0.010	3.0
2200	0.2	0.1	-0.6	-0.1	0.022	0.023	-0.100	-0.012	3.2
2300	0.2	0.1	-0.6	-0.1	0.024	0.026	-0.114	-0.014	3.4
2400	0.2	0.2	-0.7	-0.1	0.026	0.030	-0.129	-0.016	3.7
2500	0.2	0.2	-0.9	-0.1	0.029	0.035	-0.146	-0.019	3.9
2600	0.2	0.2	-1.0	-0.1	0.031	0.040	-0.166	-0.022	4.2
2700	0.3	0.3	-1.1	-0.1	0.033	0.046	-0.187	-0.026	4.5
2800	0.3	0.3	-1.3	-0.2	0.036	0.052	-0.211	-0.030	4.8
2900	0.3	0.4	-1.5	-0.2	0.039	0.059	-0.238	-0.034	5.1
3000	0.3	0.4	-1.7	-0.2	0.043	0.068	-0.268	-0.040	5.4
3100	0.4	0.5	-1.9	-0.3	0.046	0.077	-0.302	-0.046	5.7
3200	0.4	0.6	-2.2	-0.3	0.050	0.088	-0.341	-0.054	6.1
3300	0.5	0.7	-2.5	-0.4	0.055	0.100	-0.386	-0.063	6.5
3400	0.5	0.8	-2.8	-0.4	0.060	0.114	-0.435	-0.073	6.9
3500	0.5	0.9	-3.3	-0.5	0.064	0.128	-0.489	-0.084	7.3
3600	0.6	1.0	-3.7	-0.6	0.068	0.141	-0.545	-0.096	7.8
3700	0.7	1.2	-4.3	-0.7	0.071	0.154	-0.599	-0.109	8.3
3800	0.7	1.3	-4.9	-0.8	0.075	0.168	-0.651	-0.123	8.8
3900	0.8	1.5	-5.5	-1.0	0.078	0.182	-0.700	-0.137	9.2
4000	0.8	1.7	-6.2	-1.1	0.081	0.197	-0.747	-0.153	9.7
4100	0.9	1.9	-6.9	-1.3	0.085	0.212	-0.795	-0.171	10.2
4200	1.0	2.2	-7.7	-1.5	0.088	0.228	-0.844	-0.189	10.7
4300	1.1	2.4	-8.5	-1.7	0.091	0.245	-0.894	-0.209	11.2
4400	1.1	2.7	-9.3	-1.9	0.095	0.262	-0.945	-0.230	11.7
4500	1.2	3.0	-10.2	-2.2	0.098	0.281	-0.998	-0.252	12.2

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

7

Blätter
Sheets

48

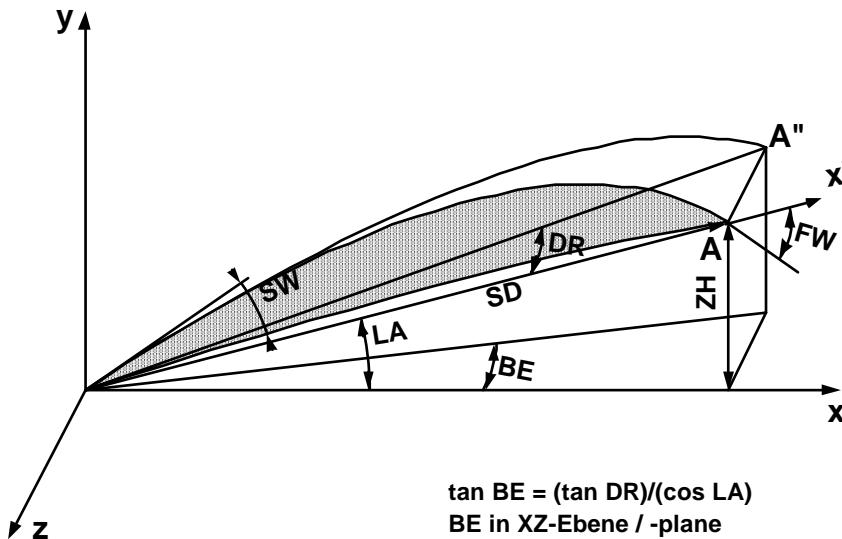
WK802157AV

DI
A

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	V -10 m/s	T -10 C	P -100 mbar	WL 10 m/s	
4600	1.3	3.3	-11.2	-2.5	0.102	0.301	-1.053	-0.276	12.8
4700	1.4	3.6	-12.2	-2.8	0.106	0.322	-1.111	-0.302	13.3
4800	1.5	4.0	-13.3	-3.1	0.110	0.345	-1.172	-0.330	13.8
4900	1.6	4.4	-14.4	-3.5	0.115	0.369	-1.237	-0.360	14.4
5000	1.7	4.8	-15.6	-3.9	0.119	0.395	-1.306	-0.393	14.9
5100	1.8	5.3	-16.9	-4.4	0.124	0.422	-1.380	-0.428	15.5
5200	1.9	5.8	-18.3	-4.9	0.129	0.451	-1.459	-0.466	16.0
5300	2.0	6.3	-19.7	-5.4	0.134	0.482	-1.543	-0.507	16.6
5400	2.1	6.9	-21.3	-6.0	0.140	0.515	-1.633	-0.551	17.2
5500	2.2	7.5	-22.9	-6.7	0.146	0.550	-1.729	-0.599	17.8
5600	2.4	8.1	-24.7	-7.4	0.152	0.588	-1.832	-0.651	18.4
5700	2.5	8.9	-26.7	-8.2	0.159	0.628	-1.941	-0.706	19.1
5800	2.7	9.7	-28.7	-9.1	0.166	0.671	-2.058	-0.767	19.7
5900	2.8	10.5	-31.0	-10.1	0.174	0.717	-2.183	-0.833	20.4
6000	3.0	11.5	-33.4	-11.2	0.182	0.766	-2.317	-0.904	21.1
6100	3.2	12.5	-36.0	-12.4	0.190	0.820	-2.460	-0.981	21.8
6200	3.4	13.6	-38.8	-13.7	0.200	0.877	-2.614	-1.066	22.5
6300	3.6	14.8	-41.9	-15.1	0.210	0.939	-2.780	-1.158	23.3
6400	3.9	16.1	-45.2	-16.8	0.221	1.007	-2.959	-1.259	24.1
6500	4.1	17.6	-48.8	-18.6	0.233	1.081	-3.152	-1.370	24.9
6600	4.4	19.3	-52.8	-20.6	0.246	1.163	-3.361	-1.493	25.7
6700	4.8	21.1	-57.2	-22.9	0.260	1.254	-3.589	-1.628	26.6
6800	5.1	23.2	-62.0	-25.5	0.277	1.356	-3.840	-1.780	27.5
6900	5.5	25.5	-67.4	-28.4	0.296	1.472	-4.115	-1.949	28.5
7000	6.0	28.3	-73.4	-31.8	0.317	1.607	-4.422	-2.141	29.5
7100	6.6	31.5	-80.1	-35.7	0.343	1.765	-4.766	-2.361	30.6
7200	7.2	35.4	-87.8	-40.2	0.373	1.956	-5.155	-2.616	31.7
7300	8.0	40.2	-96.7	-45.7	0.411	2.197	-5.604	-2.916	33.0
7400	9.0	46.6	-107.1	-52.2	0.459	2.513	-6.131	-3.277	34.3
7500	10.4	55.6	-119.6	-60.5	0.525	2.966	-6.766	-3.725	35.8
7600	12.3	70.3	-135.1	-71.2	0.621	3.715	-7.558	-4.303	37.5
7700	15.6	106.2	-155.7	-86.2	0.788	5.561	-8.609	-5.107	39.6

2.4 FLABSCHUSSTAFEL

2.4 ANTI-AIRCRAFT FIRING TABLE



DEFINITION der TAFEL-SYMBOLE

- LA** **Lagewinkel:** Winkel unter welchem das Ziel (**A**) von der Mündung aus sichtbar ist
- SD** **Schussdistanz:** Schrägdistanz von Mündung bis Ziel (**A**)
- SW** **Schusswinkel:** Winkel, der eingestellt werden muss, um das Ziel (**A**) auf gegebener Distanz (**SD**) zu treffen
- FZ** **Flugzeit** des Geschosses von Mündung bis Ziel (**A**)
- DR** **Derivation:** nach rechts (bez. Schussrichtung) erfolgte Abweichung durch Dralleinfluss; die Korrektur muss deshalb nach links erfolgen. Der Winkel **DR** liegt in der Ebene (**X',Z**)
- ZH** **Zielhöhe** über Mündungshorizont
- VE** **Geschossgeschwindigkeit** bei Distanz **SD**
- FW** **Fallwinkel** des Geschosses bei Distanz **SD**

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils) angegeben (mils = A%).

DEFINITION of TABLE SYMBOLS

- LA** **Angle of Site:** angle between muzzle-target (**A**) vector and horizontal axis
- SD** **Range:** slant distance from muzzle to target (**A**)
- SW** **Superelevation:** angle to be set, in order to hit the target (**A**) at a range (**SD**)
- FZ** **Time-of-Flight** of the projectile from muzzle to target (**A**)
- DR** **Drift:** the spin of the projectile causes it to drift to the right (relative to the direction of flight); the correction is therefore made to the left. The drift angle **DR** lies in the plane (**X',Z**)
- ZH** **Altitude of Target** above muzzle level
- VE** **Remaining Velocity of the Projectile** at range **SD**
- FW** **Angle of Fall** of the projectile at range **SD**

All angles are given in **mils** ($360^\circ = 6400$ mils).

LA: 0 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.072	0.0	0.0	1364.1	0.3	100
200	0.5	0.147	0.0	0.0	1328.3	0.5	200
300	0.8	0.223	0.0	0.0	1292.5	0.9	300
400	1.1	0.301	0.0	0.0	1256.8	1.2	400
500	1.4	0.382	0.0	0.0	1221.2	1.5	500
600	1.7	0.465	0.0	0.0	1185.7	1.9	600
700	2.0	0.551	0.0	0.0	1150.3	2.3	700
800	2.4	0.639	0.1	0.0	1115.0	2.8	800
900	2.7	0.730	0.1	0.0	1080.0	3.2	900
1000	3.1	0.824	0.1	0.0	1045.3	3.8	1000
1100	3.5	0.922	0.1	0.0	1010.9	4.3	1100
1200	3.9	1.022	0.1	0.0	976.9	4.9	1200
1300	4.3	1.126	0.1	0.0	943.1	5.6	1300
1400	4.7	1.234	0.1	0.0	909.8	6.3	1400
1500	5.2	1.346	0.1	0.0	876.9	7.1	1500
1600	5.7	1.463	0.1	0.0	844.4	8.0	1600
1700	6.2	1.583	0.2	0.0	812.5	8.9	1700
1800	6.7	1.709	0.2	0.0	781.2	9.9	1800
1900	7.3	1.839	0.2	0.0	750.5	11.1	1900
2000	7.9	1.975	0.2	0.0	720.3	12.3	2000
2100	8.5	2.117	0.2	0.0	690.7	13.7	2100
2200	9.2	2.265	0.2	0.0	661.8	15.2	2200
2300	9.9	2.419	0.3	0.0	633.6	16.9	2300
2400	10.7	2.581	0.3	0.0	605.9	18.7	2400
2500	11.5	2.750	0.3	0.0	578.6	20.8	2500
2600	12.3	2.927	0.3	0.0	551.9	23.0	2600
2700	13.2	3.112	0.4	0.0	525.6	25.6	2700
2800	14.2	3.307	0.4	0.0	500.0	28.4	2800
2900	15.3	3.512	0.4	0.0	474.4	31.5	2900
3000	16.4	3.729	0.5	0.0	448.8	35.1	3000
3100	17.6	3.958	0.5	0.0	423.7	39.1	3100
3200	18.9	4.201	0.6	0.0	399.1	43.7	3200
3300	20.3	4.459	0.6	0.0	375.3	48.9	3300
3400	21.9	4.734	0.7	0.0	352.9	54.9	3400
3500	23.6	5.025	0.7	0.0	333.9	61.7	3500
3600	25.4	5.331	0.8	0.0	319.7	69.2	3600
3700	27.4	5.649	0.9	0.0	307.6	77.3	3700
3800	29.6	5.980	1.0	0.0	296.6	86.0	3800
3900	31.9	6.323	1.0	0.0	286.6	95.3	3900
4000	34.5	6.677	1.1	0.0	277.4	105.3	4000
4100	37.2	7.043	1.2	0.0	268.8	115.9	4100
4200	40.1	7.421	1.3	0.0	260.7	127.1	4200
4300	43.2	7.811	1.4	0.0	253.2	139.0	4300
4400	46.5	8.212	1.6	0.0	246.0	151.5	4400
4500	50.1	8.626	1.7	0.0	239.1	164.8	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802157AV

DI
A

LA: 100 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.072	0.0	9.8	1364.1	0.3	100
200	0.5	0.147	0.0	19.6	1328.2	0.5	200
300	0.8	0.223	0.0	29.4	1292.5	0.8	300
400	1.1	0.301	0.0	39.2	1256.8	1.2	400
500	1.4	0.382	0.0	49.0	1221.3	1.5	500
600	1.7	0.465	0.0	58.8	1185.9	1.9	600
700	2.0	0.551	0.0	68.6	1150.6	2.3	700
800	2.4	0.639	0.1	78.4	1115.6	2.7	800
900	2.7	0.730	0.1	88.2	1080.8	3.2	900
1000	3.1	0.824	0.1	98.0	1046.3	3.7	1000
1100	3.5	0.921	0.1	107.8	1012.2	4.3	1100
1200	3.9	1.022	0.1	117.6	978.4	4.9	1200
1300	4.3	1.126	0.1	127.4	945.0	5.6	1300
1400	4.7	1.234	0.1	137.2	912.0	6.3	1400
1500	5.2	1.345	0.1	147.0	879.4	7.0	1500
1600	5.6	1.461	0.1	156.8	847.3	7.9	1600
1700	6.2	1.581	0.1	166.6	815.8	8.8	1700
1800	6.7	1.706	0.2	176.4	784.8	9.9	1800
1900	7.2	1.836	0.2	186.2	754.4	11.0	1900
2000	7.8	1.972	0.2	196.0	724.6	12.2	2000
2100	8.5	2.112	0.2	205.8	695.5	13.5	2100
2200	9.1	2.259	0.2	215.6	666.9	15.0	2200
2300	9.8	2.412	0.3	225.4	639.1	16.7	2300
2400	10.6	2.572	0.3	235.2	611.7	18.5	2400
2500	11.4	2.739	0.3	245.0	584.9	20.4	2500
2600	12.2	2.914	0.3	254.8	558.5	22.6	2600
2700	13.1	3.098	0.4	264.6	532.7	25.1	2700
2800	14.1	3.290	0.4	274.4	507.4	27.8	2800
2900	15.1	3.492	0.4	284.2	482.4	30.8	2900
3000	16.2	3.705	0.5	294.1	457.4	34.3	3000
3100	17.4	3.929	0.5	303.9	432.6	38.1	3100
3200	18.6	4.167	0.6	313.7	408.4	42.5	3200
3300	20.0	4.419	0.6	323.5	384.8	47.4	3300
3400	21.5	4.687	0.7	333.3	362.1	53.1	3400
3500	23.1	4.971	0.7	343.1	341.6	59.5	3500
3600	24.9	5.270	0.8	352.9	325.4	66.7	3600
3700	26.8	5.584	0.9	362.7	312.7	74.5	3700
3800	28.9	5.909	0.9	372.5	301.3	83.0	3800
3900	31.2	6.247	1.0	382.3	290.9	92.1	3900
4000	33.6	6.596	1.1	392.1	281.3	101.8	4000
4100	36.2	6.957	1.2	401.9	272.4	112.2	4100
4200	39.0	7.330	1.3	411.7	264.1	123.2	4200
4300	42.1	7.714	1.4	421.5	256.3	134.8	4300
4400	45.3	8.111	1.5	431.3	248.9	147.2	4400
4500	48.7	8.520	1.6	441.1	241.8	160.3	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

11

Blätter
Sheets

48

WK802157AV

DI
A

LA: 200 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.3	0.072	0.0	19.5	1364.0	0.3	100
200	0.5	0.147	0.0	39.0	1328.2	0.5	200
300	0.8	0.223	0.0	58.5	1292.4	0.8	300
400	1.1	0.301	0.0	78.0	1256.8	1.2	400
500	1.4	0.382	0.0	97.5	1221.4	1.5	500
600	1.7	0.465	0.0	117.1	1186.1	1.9	600
700	2.0	0.551	0.0	136.6	1151.0	2.3	700
800	2.3	0.639	0.1	156.1	1116.1	2.7	800
900	2.7	0.730	0.1	175.6	1081.5	3.2	900
1000	3.0	0.824	0.1	195.1	1047.3	3.7	1000
1100	3.4	0.921	0.1	214.6	1013.4	4.2	1100
1200	3.8	1.021	0.1	234.1	980.0	4.8	1200
1300	4.2	1.125	0.1	253.6	946.8	5.5	1300
1400	4.6	1.233	0.1	273.1	914.1	6.2	1400
1500	5.1	1.344	0.1	292.6	881.9	6.9	1500
1600	5.6	1.460	0.1	312.1	850.1	7.8	1600
1700	6.1	1.579	0.1	331.7	819.0	8.7	1700
1800	6.6	1.704	0.2	351.2	788.4	9.7	1800
1900	7.1	1.833	0.2	370.7	758.3	10.8	1900
2000	7.7	1.968	0.2	390.2	728.9	12.0	2000
2100	8.3	2.108	0.2	409.7	700.1	13.3	2100
2200	9.0	2.253	0.2	429.2	671.9	14.7	2200
2300	9.7	2.405	0.3	448.7	644.4	16.3	2300
2400	10.4	2.564	0.3	468.2	617.5	18.0	2400
2500	11.2	2.729	0.3	487.7	591.0	19.9	2500
2600	12.0	2.902	0.3	507.2	565.0	22.1	2600
2700	12.8	3.083	0.4	526.7	539.6	24.4	2700
2800	13.8	3.273	0.4	546.3	514.6	27.0	2800
2900	14.8	3.472	0.4	565.8	490.2	29.9	2900
3000	15.8	3.681	0.5	585.3	465.7	33.1	3000
3100	17.0	3.902	0.5	604.8	441.4	36.8	3100
3200	18.2	4.134	0.5	624.3	417.5	40.9	3200
3300	19.5	4.381	0.6	643.8	394.1	45.5	3300
3400	21.0	4.642	0.6	663.3	371.6	50.8	3400
3500	22.5	4.919	0.7	682.8	350.3	56.8	3500
3600	24.2	5.212	0.8	702.3	332.0	63.6	3600
3700	26.0	5.519	0.8	721.8	318.1	71.1	3700
3800	28.0	5.839	0.9	741.3	306.2	79.3	3800
3900	30.2	6.172	1.0	760.9	295.3	88.0	3900
4000	32.5	6.516	1.1	780.4	285.4	97.4	4000
4100	35.0	6.872	1.2	799.9	276.2	107.4	4100
4200	37.7	7.239	1.2	819.4	267.6	118.1	4200
4300	40.5	7.619	1.3	838.9	259.5	129.4	4300
4400	43.6	8.011	1.5	858.4	251.9	141.5	4400
4500	46.9	8.414	1.6	877.9	244.6	154.3	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

12

48

WK802157AV

DI
A

LA: 300 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	29.0	1364.0	0.3	100
200	0.5	0.147	0.0	58.1	1328.1	0.5	200
300	0.8	0.223	0.0	87.1	1292.4	0.8	300
400	1.0	0.301	0.0	116.1	1256.8	1.1	400
500	1.3	0.382	0.0	145.1	1221.5	1.5	500
600	1.6	0.465	0.0	174.2	1186.3	1.8	600
700	1.9	0.551	0.0	203.2	1151.4	2.2	700
800	2.3	0.639	0.0	232.2	1116.7	2.6	800
900	2.6	0.730	0.1	261.3	1082.3	3.1	900
1000	3.0	0.824	0.1	290.3	1048.3	3.6	1000
1100	3.3	0.921	0.1	319.3	1014.6	4.1	1100
1200	3.7	1.021	0.1	348.3	981.4	4.7	1200
1300	4.1	1.125	0.1	377.4	948.6	5.3	1300
1400	4.5	1.232	0.1	406.4	916.2	6.0	1400
1500	5.0	1.343	0.1	435.4	884.3	6.7	1500
1600	5.4	1.458	0.1	464.5	852.9	7.6	1600
1700	5.9	1.578	0.1	493.5	822.0	8.4	1700
1800	6.4	1.702	0.2	522.5	791.8	9.4	1800
1900	6.9	1.830	0.2	551.5	762.1	10.4	1900
2000	7.5	1.964	0.2	580.6	733.1	11.6	2000
2100	8.1	2.103	0.2	609.6	704.6	12.9	2100
2200	8.7	2.248	0.2	638.6	676.8	14.2	2200
2300	9.4	2.399	0.2	667.7	649.6	15.8	2300
2400	10.1	2.556	0.3	696.7	623.0	17.4	2400
2500	10.8	2.720	0.3	725.7	596.9	19.2	2500
2600	11.6	2.891	0.3	754.7	571.4	21.3	2600
2700	12.5	3.070	0.3	783.8	546.3	23.5	2700
2800	13.4	3.257	0.4	812.8	521.7	26.0	2800
2900	14.3	3.453	0.4	841.8	497.6	28.7	2900
3000	15.3	3.659	0.4	870.9	473.7	31.8	3000
3100	16.4	3.876	0.5	899.9	449.9	35.2	3100
3200	17.6	4.104	0.5	928.9	426.4	39.0	3200
3300	18.9	4.345	0.6	957.9	403.3	43.4	3300
3400	20.2	4.600	0.6	987.0	380.9	48.3	3400
3500	21.7	4.870	0.7	1016.0	359.4	53.8	3500
3600	23.3	5.156	0.7	1045.0	339.6	60.2	3600
3700	25.0	5.457	0.8	1074.1	323.9	67.2	3700
3800	26.9	5.772	0.9	1103.1	311.3	74.9	3800
3900	28.9	6.098	0.9	1132.1	300.1	83.2	3900
4000	31.1	6.437	1.0	1161.1	289.7	92.2	4000
4100	33.5	6.788	1.1	1190.2	280.2	101.8	4100
4200	36.0	7.151	1.2	1219.2	271.3	112.0	4200
4300	38.7	7.525	1.3	1248.2	262.9	122.9	4300
4400	41.6	7.912	1.4	1277.3	255.0	134.5	4400
4500	44.7	8.310	1.5	1306.3	247.4	146.9	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

13

Blätter
Sheets

48

WK802157AV

DI
A

LA: 400 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	38.3	1363.9	0.2	100
200	0.5	0.147	0.0	76.5	1328.0	0.5	200
300	0.7	0.223	0.0	114.8	1292.3	0.8	300
400	1.0	0.301	0.0	153.1	1256.8	1.1	400
500	1.3	0.382	0.0	191.3	1221.6	1.4	500
600	1.6	0.465	0.0	229.6	1186.5	1.8	600
700	1.9	0.551	0.0	267.9	1151.7	2.1	700
800	2.2	0.639	0.0	306.1	1117.2	2.5	800
900	2.5	0.730	0.1	344.4	1083.0	3.0	900
1000	2.8	0.824	0.1	382.7	1049.2	3.5	1000
1100	3.2	0.921	0.1	421.0	1015.8	4.0	1100
1200	3.6	1.021	0.1	459.2	982.9	4.5	1200
1300	4.0	1.124	0.1	497.5	950.3	5.1	1300
1400	4.4	1.231	0.1	535.8	918.2	5.8	1400
1500	4.8	1.342	0.1	574.0	886.6	6.5	1500
1600	5.2	1.457	0.1	612.3	855.5	7.3	1600
1700	5.7	1.576	0.1	650.6	825.0	8.1	1700
1800	6.2	1.699	0.2	688.8	795.1	9.0	1800
1900	6.7	1.827	0.2	727.1	765.8	10.0	1900
2000	7.2	1.960	0.2	765.4	737.0	11.1	2000
2100	7.8	2.099	0.2	803.6	708.9	12.3	2100
2200	8.4	2.243	0.2	841.9	681.4	13.7	2200
2300	9.0	2.392	0.2	880.2	654.6	15.1	2300
2400	9.7	2.548	0.3	918.4	628.4	16.7	2400
2500	10.4	2.711	0.3	956.7	602.7	18.4	2500
2600	11.2	2.880	0.3	995.0	577.4	20.3	2600
2700	12.0	3.057	0.3	1033.2	552.7	22.4	2700
2800	12.8	3.242	0.4	1071.5	528.5	24.7	2800
2900	13.7	3.436	0.4	1109.8	504.8	27.3	2900
3000	14.7	3.638	0.4	1148.1	481.4	30.2	3000
3100	15.7	3.851	0.5	1186.3	458.0	33.3	3100
3200	16.8	4.075	0.5	1224.6	434.9	36.9	3200
3300	18.0	4.311	0.5	1262.9	412.2	40.9	3300
3400	19.3	4.560	0.6	1301.1	389.9	45.4	3400
3500	20.7	4.824	0.6	1339.4	368.5	50.5	3500
3600	22.2	5.103	0.7	1377.7	348.1	56.3	3600
3700	23.8	5.398	0.7	1415.9	330.4	62.9	3700
3800	25.5	5.707	0.8	1454.2	316.7	70.1	3800
3900	27.4	6.028	0.9	1492.5	304.9	77.9	3900
4000	29.5	6.362	1.0	1530.7	294.2	86.3	4000
4100	31.7	6.707	1.0	1569.0	284.3	95.4	4100
4200	34.1	7.064	1.1	1607.3	275.1	105.1	4200
4300	36.6	7.434	1.2	1645.5	266.4	115.5	4300
4400	39.3	7.815	1.3	1683.8	258.2	126.5	4400
4500	42.2	8.209	1.4	1722.1	250.4	138.3	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802157AV
DI
A

LA: 500 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	47.1	1363.9	0.2	100
200	0.5	0.147	0.0	94.3	1328.0	0.5	200
300	0.7	0.223	0.0	141.4	1292.3	0.8	300
400	1.0	0.301	0.0	188.6	1256.9	1.0	400
500	1.2	0.382	0.0	235.7	1221.7	1.3	500
600	1.5	0.465	0.0	282.8	1186.7	1.7	600
700	1.8	0.551	0.0	330.0	1152.0	2.0	700
800	2.1	0.639	0.0	377.1	1117.7	2.4	800
900	2.4	0.730	0.1	424.3	1083.7	2.8	900
1000	2.7	0.823	0.1	471.4	1050.1	3.3	1000
1100	3.1	0.920	0.1	518.5	1016.9	3.8	1100
1200	3.4	1.020	0.1	565.7	984.2	4.3	1200
1300	3.8	1.124	0.1	612.8	952.0	4.9	1300
1400	4.2	1.230	0.1	660.0	920.2	5.5	1400
1500	4.6	1.341	0.1	707.1	888.8	6.2	1500
1600	5.0	1.455	0.1	754.2	858.0	6.9	1600
1700	5.4	1.574	0.1	801.4	827.8	7.7	1700
1800	5.9	1.697	0.1	848.5	798.2	8.6	1800
1900	6.4	1.825	0.2	895.7	769.2	9.5	1900
2000	6.9	1.957	0.2	942.8	740.8	10.6	2000
2100	7.4	2.095	0.2	989.9	713.0	11.7	2100
2200	8.0	2.238	0.2	1037.1	685.8	12.9	2200
2300	8.6	2.386	0.2	1084.2	659.3	14.3	2300
2400	9.2	2.541	0.2	1131.4	633.4	15.8	2400
2500	9.9	2.702	0.3	1178.5	608.1	17.4	2500
2600	10.6	2.870	0.3	1225.6	583.2	19.2	2600
2700	11.4	3.045	0.3	1272.8	558.8	21.2	2700
2800	12.2	3.228	0.3	1319.9	534.9	23.3	2800
2900	13.0	3.419	0.4	1367.1	511.5	25.7	2900
3000	13.9	3.619	0.4	1414.2	488.6	28.3	3000
3100	14.9	3.829	0.4	1461.3	465.7	31.3	3100
3200	15.9	4.049	0.5	1508.5	443.0	34.6	3200
3300	17.1	4.280	0.5	1555.6	420.6	38.2	3300
3400	18.2	4.524	0.5	1602.7	398.6	42.4	3400
3500	19.5	4.782	0.6	1649.9	377.3	47.0	3500
3600	20.9	5.054	0.6	1697.0	356.8	52.3	3600
3700	22.4	5.342	0.7	1744.2	337.8	58.2	3700
3800	24.0	5.645	0.8	1791.3	322.3	64.9	3800
3900	25.8	5.961	0.8	1838.4	310.0	72.1	3900
4000	27.7	6.289	0.9	1885.6	298.8	80.0	4000
4100	29.7	6.630	1.0	1932.7	288.5	88.4	4100
4200	31.9	6.982	1.0	1979.9	279.0	97.5	4200
4300	34.2	7.346	1.1	2027.0	270.0	107.2	4300
4400	36.8	7.723	1.2	2074.1	261.5	117.6	4400
4500	39.5	8.112	1.3	2121.3	253.4	128.7	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

15
48

WK802157AV

DI
A

LA: 600 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	55.6	1363.8	0.2	100
200	0.4	0.147	0.0	111.1	1327.9	0.5	200
300	0.7	0.223	0.0	166.7	1292.2	0.7	300
400	0.9	0.301	0.0	222.2	1256.9	1.0	400
500	1.2	0.382	0.0	277.8	1221.7	1.3	500
600	1.4	0.465	0.0	333.3	1186.9	1.6	600
700	1.7	0.551	0.0	388.9	1152.3	1.9	700
800	2.0	0.639	0.0	444.5	1118.1	2.3	800
900	2.3	0.730	0.1	500.0	1084.3	2.7	900
1000	2.6	0.823	0.1	555.6	1050.9	3.1	1000
1100	2.9	0.920	0.1	611.1	1018.0	3.6	1100
1200	3.2	1.020	0.1	666.7	985.5	4.1	1200
1300	3.6	1.123	0.1	722.2	953.5	4.6	1300
1400	3.9	1.230	0.1	777.8	922.0	5.2	1400
1500	4.3	1.340	0.1	833.4	890.9	5.8	1500
1600	4.7	1.454	0.1	888.9	860.4	6.5	1600
1700	5.1	1.573	0.1	944.5	830.5	7.3	1700
1800	5.5	1.695	0.1	1000.0	801.2	8.1	1800
1900	6.0	1.822	0.1	1055.6	772.5	9.0	1900
2000	6.5	1.954	0.2	1111.1	744.4	9.9	2000
2100	7.0	2.091	0.2	1166.7	716.9	11.0	2100
2200	7.5	2.233	0.2	1222.3	690.0	12.1	2200
2300	8.1	2.381	0.2	1277.8	663.8	13.4	2300
2400	8.7	2.535	0.2	1333.4	638.2	14.8	2400
2500	9.3	2.694	0.2	1388.9	613.2	16.3	2500
2600	10.0	2.861	0.3	1444.5	588.6	17.9	2600
2700	10.7	3.034	0.3	1500.0	564.5	19.7	2700
2800	11.4	3.215	0.3	1555.6	540.9	21.7	2800
2900	12.2	3.404	0.3	1611.2	517.9	23.9	2900
3000	13.1	3.601	0.4	1666.7	495.3	26.3	3000
3100	14.0	3.808	0.4	1722.3	472.9	29.0	3100
3200	14.9	4.024	0.4	1777.8	450.5	32.0	3200
3300	15.9	4.252	0.5	1833.4	428.5	35.3	3300
3400	17.0	4.491	0.5	1888.9	406.8	39.1	3400
3500	18.2	4.743	0.5	1944.5	385.7	43.3	3500
3600	19.5	5.010	0.6	2000.1	365.2	48.0	3600
3700	20.9	5.291	0.6	2055.6	345.7	53.4	3700
3800	22.3	5.588	0.7	2111.2	328.6	59.4	3800
3900	23.9	5.898	0.8	2166.7	315.0	66.0	3900
4000	25.7	6.221	0.8	2222.3	303.4	73.2	4000
4100	27.5	6.557	0.9	2277.8	292.8	81.0	4100
4200	29.5	6.904	1.0	2333.4	282.9	89.4	4200
4300	31.7	7.263	1.0	2389.0	273.6	98.4	4300
4400	34.0	7.635	1.1	2444.5	264.8	108.0	4400
4500	36.5	8.019	1.2	2500.1	256.4	118.4	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
16

Blätter
Sheets
48

WK802157AV

**DI
A**

LA: 700 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	63.4	1363.8	0.2	100
200	0.4	0.147	0.0	126.9	1327.9	0.4	200
300	0.6	0.223	0.0	190.3	1292.2	0.7	300
400	0.8	0.301	0.0	253.8	1256.9	0.9	400
500	1.1	0.382	0.0	317.2	1221.8	1.2	500
600	1.3	0.465	0.0	380.6	1187.1	1.5	600
700	1.6	0.551	0.0	444.1	1152.6	1.8	700
800	1.8	0.639	0.0	507.5	1118.6	2.1	800
900	2.1	0.730	0.0	571.0	1084.9	2.5	900
1000	2.4	0.823	0.1	634.4	1051.7	2.9	1000
1100	2.7	0.920	0.1	697.8	1018.9	3.3	1100
1200	3.0	1.020	0.1	761.3	986.7	3.8	1200
1300	3.3	1.123	0.1	824.7	954.9	4.3	1300
1400	3.6	1.229	0.1	888.2	923.6	4.8	1400
1500	4.0	1.339	0.1	951.6	892.8	5.4	1500
1600	4.4	1.453	0.1	1015.0	862.6	6.0	1600
1700	4.7	1.571	0.1	1078.5	833.0	6.7	1700
1800	5.1	1.693	0.1	1141.9	803.9	7.5	1800
1900	5.6	1.820	0.1	1205.3	775.5	8.3	1900
2000	6.0	1.951	0.1	1268.8	747.7	9.2	2000
2100	6.5	2.087	0.2	1332.2	720.5	10.2	2100
2200	7.0	2.229	0.2	1395.7	693.9	11.2	2200
2300	7.5	2.376	0.2	1459.1	667.9	12.4	2300
2400	8.1	2.528	0.2	1522.5	642.6	13.6	2400
2500	8.6	2.687	0.2	1586.0	617.9	15.0	2500
2600	9.2	2.852	0.2	1649.4	593.6	16.5	2600
2700	9.9	3.024	0.3	1712.9	569.9	18.2	2700
2800	10.6	3.203	0.3	1776.3	546.6	20.0	2800
2900	11.3	3.390	0.3	1839.7	523.7	22.0	2900
3000	12.1	3.585	0.3	1903.2	501.4	24.2	3000
3100	12.9	3.789	0.4	1966.6	479.5	26.6	3100
3200	13.8	4.002	0.4	2030.1	457.5	29.3	3200
3300	14.7	4.226	0.4	2093.5	435.8	32.3	3300
3400	15.7	4.461	0.5	2156.9	414.4	35.6	3400
3500	16.8	4.709	0.5	2220.4	393.5	39.4	3500
3600	17.9	4.970	0.5	2283.8	373.1	43.6	3600
3700	19.2	5.245	0.6	2347.3	353.5	48.3	3700
3800	20.5	5.535	0.6	2410.7	335.3	53.7	3800
3900	21.9	5.840	0.7	2474.1	320.2	59.7	3900
4000	23.5	6.158	0.7	2537.6	308.1	66.2	4000
4100	25.2	6.489	0.8	2601.0	297.0	73.3	4100
4200	27.0	6.831	0.9	2664.5	286.7	80.9	4200
4300	29.0	7.186	0.9	2727.9	277.2	89.1	4300
4400	31.0	7.553	1.0	2791.3	268.1	97.9	4400
4500	33.3	7.932	1.1	2854.8	259.5	107.4	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

17

48

WK802157AV

DI
A

LA: 800 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	70.7	1363.8	0.2	100
200	0.4	0.147	0.0	141.4	1327.8	0.4	200
300	0.6	0.223	0.0	212.1	1292.2	0.6	300
400	0.8	0.301	0.0	282.8	1256.9	0.8	400
500	1.0	0.382	0.0	353.6	1221.9	1.1	500
600	1.2	0.465	0.0	424.3	1187.2	1.3	600
700	1.4	0.551	0.0	495.0	1152.9	1.6	700
800	1.7	0.639	0.0	565.7	1118.9	1.9	800
900	1.9	0.729	0.0	636.4	1085.4	2.3	900
1000	2.2	0.823	0.0	707.1	1052.4	2.6	1000
1100	2.4	0.920	0.1	777.8	1019.8	3.0	1100
1200	2.7	1.019	0.1	848.5	987.8	3.5	1200
1300	3.0	1.122	0.1	919.2	956.2	3.9	1300
1400	3.3	1.228	0.1	989.9	925.2	4.4	1400
1500	3.6	1.338	0.1	1060.7	894.6	4.9	1500
1600	4.0	1.452	0.1	1131.4	864.6	5.5	1600
1700	4.3	1.570	0.1	1202.1	835.2	6.1	1700
1800	4.7	1.692	0.1	1272.8	806.4	6.8	1800
1900	5.1	1.818	0.1	1343.5	778.3	7.6	1900
2000	5.5	1.949	0.1	1414.2	750.7	8.4	2000
2100	5.9	2.084	0.1	1484.9	723.8	9.3	2100
2200	6.4	2.225	0.2	1555.6	697.4	10.2	2200
2300	6.8	2.371	0.2	1626.3	671.7	11.3	2300
2400	7.3	2.523	0.2	1697.1	646.6	12.4	2400
2500	7.9	2.680	0.2	1767.8	622.2	13.6	2500
2600	8.4	2.844	0.2	1838.5	598.2	15.0	2600
2700	9.0	3.015	0.2	1909.2	574.7	16.5	2700
2800	9.6	3.192	0.3	1979.9	551.7	18.1	2800
2900	10.3	3.377	0.3	2050.6	529.1	19.9	2900
3000	11.0	3.570	0.3	2121.3	507.1	21.8	3000
3100	11.7	3.772	0.3	2192.0	485.4	24.0	3100
3200	12.5	3.983	0.4	2262.7	463.9	26.4	3200
3300	13.4	4.203	0.4	2333.5	442.5	29.1	3300
3400	14.3	4.435	0.4	2404.2	421.4	32.0	3400
3500	15.2	4.678	0.5	2474.9	400.7	35.3	3500
3600	16.3	4.934	0.5	2545.6	380.4	39.0	3600
3700	17.4	5.204	0.5	2616.3	360.8	43.2	3700
3800	18.5	5.488	0.6	2687.0	342.2	47.9	3800
3900	19.8	5.788	0.6	2757.7	325.7	53.2	3900
4000	21.2	6.101	0.7	2828.4	312.5	59.0	4000
4100	22.7	6.427	0.7	2899.1	301.1	65.3	4100
4200	24.3	6.765	0.8	2969.8	290.6	72.1	4200
4300	26.1	7.115	0.8	3040.6	280.7	79.5	4300
4400	27.9	7.477	0.9	3111.3	271.4	87.4	4400
4500	29.9	7.852	1.0	3182.0	262.5	95.9	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

18

Blätter
Sheets

48

DI

A

WK802157AV

LA: 900 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.2	0.072	0.0	77.3	1363.7	0.2	100
200	0.3	0.147	0.0	154.6	1327.8	0.3	200
300	0.5	0.223	0.0	231.9	1292.1	0.5	300
400	0.7	0.302	0.0	309.2	1256.9	0.7	400
500	0.9	0.382	0.0	386.5	1221.9	1.0	500
600	1.1	0.465	0.0	463.8	1187.4	1.2	600
700	1.3	0.551	0.0	541.1	1153.1	1.5	700
800	1.5	0.639	0.0	618.4	1119.3	1.7	800
900	1.7	0.729	0.0	695.7	1085.9	2.0	900
1000	2.0	0.823	0.0	773.0	1053.0	2.4	1000
1100	2.2	0.919	0.0	850.3	1020.6	2.7	1100
1200	2.4	1.019	0.1	927.6	988.7	3.1	1200
1300	2.7	1.122	0.1	1004.9	957.4	3.5	1300
1400	3.0	1.228	0.1	1082.2	926.5	3.9	1400
1500	3.3	1.338	0.1	1159.5	896.2	4.4	1500
1600	3.6	1.451	0.1	1236.8	866.4	4.9	1600
1700	3.9	1.569	0.1	1314.1	837.2	5.5	1700
1800	4.2	1.690	0.1	1391.4	808.7	6.1	1800
1900	4.6	1.816	0.1	1468.7	780.8	6.8	1900
2000	4.9	1.946	0.1	1546.0	753.4	7.5	2000
2100	5.3	2.081	0.1	1623.3	726.7	8.3	2100
2200	5.7	2.222	0.1	1700.6	700.6	9.1	2200
2300	6.1	2.367	0.2	1777.9	675.1	10.0	2300
2400	6.6	2.518	0.2	1855.2	650.3	11.0	2400
2500	7.0	2.675	0.2	1932.5	626.1	12.1	2500
2600	7.5	2.837	0.2	2009.8	602.3	13.3	2600
2700	8.1	3.007	0.2	2087.1	579.1	14.7	2700
2800	8.6	3.183	0.2	2164.4	556.3	16.1	2800
2900	9.2	3.366	0.3	2241.7	534.0	17.7	2900
3000	9.8	3.557	0.3	2319.0	512.1	19.4	3000
3100	10.5	3.757	0.3	2396.3	490.8	21.3	3100
3200	11.2	3.965	0.3	2473.6	469.6	23.4	3200
3300	11.9	4.183	0.3	2550.9	448.5	25.7	3300
3400	12.7	4.411	0.4	2628.2	427.6	28.3	3400
3500	13.6	4.651	0.4	2705.5	407.1	31.2	3500
3600	14.5	4.903	0.4	2782.8	387.0	34.4	3600
3700	15.4	5.168	0.5	2860.1	367.5	38.0	3700
3800	16.5	5.447	0.5	2937.4	348.7	42.0	3800
3900	17.6	5.741	0.5	3014.7	331.4	46.6	3900
4000	18.8	6.049	0.6	3092.0	317.0	51.7	4000
4100	20.1	6.371	0.6	3169.3	305.1	57.2	4100
4200	21.5	6.705	0.7	3246.6	294.2	63.2	4200
4300	23.1	7.050	0.7	3323.9	284.0	69.7	4300
4400	24.7	7.408	0.8	3401.2	274.5	76.7	4400
4500	26.4	7.779	0.9	3478.5	265.4	84.2	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

19

48

WK802157AV

DI
A

LA: 1000 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.072	0.0	83.1	1363.7	0.1	100
200	0.3	0.147	0.0	166.3	1327.7	0.3	200
300	0.4	0.223	0.0	249.4	1292.1	0.5	300
400	0.6	0.302	0.0	332.6	1256.9	0.7	400
500	0.8	0.382	0.0	415.7	1222.0	0.8	500
600	0.9	0.465	0.0	498.9	1187.5	1.1	600
700	1.1	0.551	0.0	582.0	1153.3	1.3	700
800	1.3	0.639	0.0	665.2	1119.6	1.5	800
900	1.5	0.729	0.0	748.3	1086.3	1.8	900
1000	1.7	0.823	0.0	831.5	1053.6	2.1	1000
1100	1.9	0.919	0.0	914.6	1021.3	2.4	1100
1200	2.1	1.019	0.0	997.8	989.6	2.7	1200
1300	2.4	1.121	0.1	1080.9	958.4	3.1	1300
1400	2.6	1.227	0.1	1164.1	927.7	3.4	1400
1500	2.9	1.337	0.1	1247.2	897.6	3.9	1500
1600	3.1	1.450	0.1	1330.4	868.0	4.3	1600
1700	3.4	1.567	0.1	1413.5	839.0	4.8	1700
1800	3.7	1.689	0.1	1496.6	810.7	5.3	1800
1900	4.0	1.814	0.1	1579.8	782.9	5.9	1900
2000	4.3	1.944	0.1	1662.9	755.8	6.5	2000
2100	4.6	2.079	0.1	1746.1	729.3	7.2	2100
2200	5.0	2.219	0.1	1829.2	703.4	8.0	2200
2300	5.4	2.363	0.1	1912.4	678.1	8.8	2300
2400	5.7	2.514	0.1	1995.5	653.5	9.6	2400
2500	6.2	2.669	0.2	2078.7	629.5	10.6	2500
2600	6.6	2.831	0.2	2161.8	606.0	11.6	2600
2700	7.0	3.000	0.2	2245.0	582.9	12.7	2700
2800	7.5	3.175	0.2	2328.1	560.4	14.0	2800
2900	8.0	3.357	0.2	2411.3	538.2	15.3	2900
3000	8.6	3.546	0.2	2494.4	516.6	16.8	3000
3100	9.1	3.744	0.3	2577.6	495.4	18.5	3100
3200	9.7	3.950	0.3	2660.7	474.5	20.2	3200
3300	10.4	4.165	0.3	2743.8	453.7	22.2	3300
3400	11.1	4.391	0.3	2827.0	433.1	24.4	3400
3500	11.8	4.627	0.3	2910.1	412.8	26.9	3500
3600	12.6	4.876	0.4	2993.3	392.9	29.6	3600
3700	13.4	5.137	0.4	3076.4	373.5	32.7	3700
3800	14.3	5.411	0.4	3159.6	354.6	36.1	3800
3900	15.3	5.700	0.5	3242.7	336.9	40.0	3900
4000	16.3	6.004	0.5	3325.9	321.4	44.3	4000
4100	17.4	6.322	0.6	3409.0	308.8	49.0	4100
4200	18.6	6.652	0.6	3492.2	297.6	54.2	4200
4300	19.9	6.994	0.6	3575.3	287.2	59.7	4300
4400	21.3	7.348	0.7	3658.5	277.3	65.8	4400
4500	22.8	7.715	0.7	3741.6	268.0	72.3	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

20

Blätter
Sheets

48

WK802157AV

DI
A

LA: 1100 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.072	0.0	88.2	1363.7	0.1	100
200	0.2	0.147	0.0	176.4	1327.7	0.3	200
300	0.4	0.223	0.0	264.6	1292.1	0.4	300
400	0.5	0.302	0.0	352.8	1256.9	0.6	400
500	0.7	0.382	0.0	441.0	1222.0	0.7	500
600	0.8	0.465	0.0	529.2	1187.6	0.9	600
700	1.0	0.551	0.0	617.3	1153.5	1.1	700
800	1.1	0.639	0.0	705.5	1119.9	1.3	800
900	1.3	0.729	0.0	793.7	1086.7	1.5	900
1000	1.5	0.823	0.0	881.9	1054.1	1.8	1000
1100	1.6	0.919	0.0	970.1	1021.9	2.0	1100
1200	1.8	1.018	0.0	1058.3	990.4	2.3	1200
1300	2.0	1.121	0.0	1146.5	959.3	2.6	1300
1400	2.2	1.227	0.1	1234.7	928.8	2.9	1400
1500	2.4	1.336	0.1	1322.9	898.8	3.3	1500
1600	2.7	1.450	0.1	1411.1	869.4	3.7	1600
1700	2.9	1.567	0.1	1499.3	840.6	4.1	1700
1800	3.1	1.688	0.1	1587.5	812.4	4.5	1800
1900	3.4	1.813	0.1	1675.7	784.8	5.0	1900
2000	3.7	1.942	0.1	1763.8	757.9	5.5	2000
2100	3.9	2.077	0.1	1852.0	731.6	6.1	2100
2200	4.2	2.216	0.1	1940.2	705.8	6.7	2200
2300	4.5	2.360	0.1	2028.4	680.7	7.4	2300
2400	4.9	2.510	0.1	2116.6	656.2	8.1	2400
2500	5.2	2.665	0.1	2204.8	632.4	8.9	2500
2600	5.6	2.826	0.1	2293.0	609.1	9.8	2600
2700	6.0	2.994	0.2	2381.2	586.2	10.8	2700
2800	6.4	3.167	0.2	2469.4	563.8	11.8	2800
2900	6.8	3.348	0.2	2557.6	541.9	12.9	2900
3000	7.2	3.537	0.2	2645.8	520.4	14.2	3000
3100	7.7	3.733	0.2	2734.0	499.4	15.5	3100
3200	8.2	3.937	0.2	2822.1	478.8	17.0	3200
3300	8.8	4.151	0.3	2910.3	458.2	18.7	3300
3400	9.3	4.374	0.3	2998.5	437.8	20.5	3400
3500	10.0	4.608	0.3	3086.7	417.7	22.5	3500
3600	10.6	4.853	0.3	3174.9	397.9	24.8	3600
3700	11.3	5.110	0.3	3263.1	378.6	27.3	3700
3800	12.1	5.381	0.4	3351.3	359.8	30.1	3800
3900	12.9	5.666	0.4	3439.5	341.8	33.3	3900
4000	13.7	5.966	0.4	3527.7	325.5	36.9	4000
4100	14.7	6.280	0.5	3615.9	312.1	40.8	4100
4200	15.7	6.606	0.5	3704.1	300.7	45.1	4200
4300	16.7	6.945	0.5	3792.3	290.0	49.8	4300
4400	17.9	7.296	0.6	3880.5	279.9	54.8	4400
4500	19.2	7.659	0.6	3968.6	270.4	60.2	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

21

48

WK802157AV

DI
A

LA: 1200 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.072	0.0	92.4	1363.6	0.1	100
200	0.2	0.147	0.0	184.8	1327.7	0.2	200
300	0.3	0.223	0.0	277.2	1292.1	0.3	300
400	0.4	0.302	0.0	369.6	1256.9	0.5	400
500	0.5	0.382	0.0	461.9	1222.1	0.6	500
600	0.7	0.465	0.0	554.3	1187.7	0.7	600
700	0.8	0.551	0.0	646.7	1153.7	0.9	700
800	0.9	0.639	0.0	739.1	1120.1	1.1	800
900	1.0	0.729	0.0	831.5	1087.0	1.2	900
1000	1.2	0.823	0.0	923.9	1054.5	1.4	1000
1100	1.3	0.919	0.0	1016.3	1022.4	1.6	1100
1200	1.5	1.018	0.0	1108.7	991.0	1.9	1200
1300	1.6	1.121	0.0	1201.0	960.0	2.1	1300
1400	1.8	1.227	0.0	1293.4	929.6	2.4	1400
1500	2.0	1.336	0.0	1385.8	899.8	2.7	1500
1600	2.2	1.449	0.1	1478.2	870.5	3.0	1600
1700	2.3	1.566	0.1	1570.6	841.8	3.3	1700
1800	2.5	1.687	0.1	1663.0	813.8	3.7	1800
1900	2.7	1.812	0.1	1755.4	786.4	4.1	1900
2000	3.0	1.941	0.1	1847.8	759.6	4.5	2000
2100	3.2	2.075	0.1	1940.1	733.4	4.9	2100
2200	3.4	2.214	0.1	2032.5	707.8	5.4	2200
2300	3.7	2.358	0.1	2124.9	682.9	6.0	2300
2400	3.9	2.507	0.1	2217.3	658.5	6.6	2400
2500	4.2	2.661	0.1	2309.7	634.8	7.2	2500
2600	4.5	2.822	0.1	2402.1	611.6	7.9	2600
2700	4.8	2.989	0.1	2494.5	588.9	8.7	2700
2800	5.2	3.162	0.1	2586.9	566.7	9.5	2800
2900	5.5	3.342	0.2	2679.3	544.9	10.4	2900
3000	5.9	3.529	0.2	2771.6	523.6	11.4	3000
3100	6.3	3.724	0.2	2864.0	502.7	12.5	3100
3200	6.7	3.927	0.2	2956.4	482.3	13.7	3200
3300	7.1	4.139	0.2	3048.8	461.9	15.0	3300
3400	7.6	4.360	0.2	3141.2	441.7	16.5	3400
3500	8.0	4.592	0.2	3233.6	421.7	18.1	3500
3600	8.6	4.834	0.3	3326.0	402.1	19.9	3600
3700	9.1	5.089	0.3	3418.4	382.9	21.9	3700
3800	9.7	5.357	0.3	3510.7	364.1	24.1	3800
3900	10.4	5.639	0.3	3603.1	346.1	26.7	3900
4000	11.1	5.935	0.3	3695.5	329.3	29.5	4000
4100	11.8	6.245	0.4	3787.9	315.1	32.6	4100
4200	12.6	6.569	0.4	3880.3	303.3	36.0	4200
4300	13.5	6.905	0.4	3972.7	292.4	39.8	4300
4400	14.4	7.253	0.5	4065.1	282.2	43.8	4400
4500	15.4	7.613	0.5	4157.5	272.5	48.2	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

22

48

WK802157AV

DI
A

LA: 1300 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.072	0.0	95.7	1363.6	0.1	100
200	0.2	0.147	0.0	191.4	1327.6	0.2	200
300	0.2	0.223	0.0	287.1	1292.0	0.2	300
400	0.3	0.302	0.0	382.8	1256.9	0.3	400
500	0.4	0.382	0.0	478.5	1222.1	0.4	500
600	0.5	0.465	0.0	574.2	1187.7	0.6	600
700	0.6	0.551	0.0	669.9	1153.8	0.7	700
800	0.7	0.639	0.0	765.6	1120.3	0.8	800
900	0.8	0.729	0.0	861.2	1087.3	0.9	900
1000	0.9	0.823	0.0	956.9	1054.8	1.1	1000
1100	1.0	0.919	0.0	1052.6	1022.8	1.2	1100
1200	1.1	1.018	0.0	1148.3	991.4	1.4	1200
1300	1.2	1.121	0.0	1244.0	960.6	1.6	1300
1400	1.4	1.226	0.0	1339.7	930.3	1.8	1400
1500	1.5	1.336	0.0	1435.4	900.6	2.0	1500
1600	1.6	1.449	0.0	1531.1	871.4	2.2	1600
1700	1.8	1.565	0.0	1626.8	842.8	2.5	1700
1800	1.9	1.686	0.0	1722.5	814.9	2.8	1800
1900	2.1	1.811	0.1	1818.2	787.6	3.1	1900
2000	2.2	1.940	0.1	1913.9	760.9	3.4	2000
2100	2.4	2.074	0.1	2009.6	734.9	3.7	2100
2200	2.6	2.212	0.1	2105.3	709.4	4.1	2200
2300	2.8	2.356	0.1	2201.0	684.5	4.5	2300
2400	3.0	2.504	0.1	2296.7	660.3	5.0	2400
2500	3.2	2.659	0.1	2392.4	636.7	5.5	2500
2600	3.4	2.819	0.1	2488.0	613.6	6.0	2600
2700	3.7	2.985	0.1	2583.7	591.1	6.6	2700
2800	3.9	3.157	0.1	2679.4	569.0	7.2	2800
2900	4.2	3.336	0.1	2775.1	547.3	7.9	2900
3000	4.4	3.523	0.1	2870.8	526.1	8.6	3000
3100	4.7	3.717	0.1	2966.5	505.3	9.4	3100
3200	5.0	3.919	0.1	3062.2	485.0	10.3	3200
3300	5.4	4.129	0.2	3157.9	464.8	11.3	3300
3400	5.7	4.349	0.2	3253.6	444.7	12.4	3400
3500	6.1	4.579	0.2	3349.3	424.9	13.6	3500
3600	6.5	4.820	0.2	3445.0	405.4	15.0	3600
3700	6.9	5.073	0.2	3540.7	386.2	16.5	3700
3800	7.3	5.338	0.2	3636.4	367.5	18.1	3800
3900	7.8	5.617	0.2	3732.1	349.4	20.0	3900
4000	8.3	5.911	0.3	3827.8	332.4	22.1	4000
4100	8.9	6.218	0.3	3923.5	317.6	24.4	4100
4200	9.5	6.540	0.3	4019.1	305.4	27.0	4200
4300	10.2	6.873	0.3	4114.8	294.4	29.8	4300
4400	10.8	7.219	0.4	4210.5	284.0	32.8	4400
4500	11.6	7.577	0.4	4306.2	274.2	36.1	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

23

48

WK802157AV

DI
A

LA: 1400 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.1	0.072	0.0	98.1	1363.6	0.1	100
200	0.1	0.147	0.0	196.2	1327.6	0.1	200
300	0.2	0.223	0.0	294.2	1292.0	0.2	300
400	0.2	0.302	0.0	392.3	1256.9	0.2	400
500	0.3	0.382	0.0	490.4	1222.1	0.3	500
600	0.3	0.465	0.0	588.5	1187.8	0.4	600
700	0.4	0.551	0.0	686.5	1153.9	0.5	700
800	0.5	0.639	0.0	784.6	1120.4	0.5	800
900	0.5	0.729	0.0	882.7	1087.4	0.6	900
1000	0.6	0.823	0.0	980.8	1055.0	0.7	1000
1100	0.7	0.919	0.0	1078.9	1023.1	0.8	1100
1200	0.8	1.018	0.0	1176.9	991.8	0.9	1200
1300	0.8	1.120	0.0	1275.0	961.0	1.1	1300
1400	0.9	1.226	0.0	1373.1	930.8	1.2	1400
1500	1.0	1.335	0.0	1471.2	901.1	1.4	1500
1600	1.1	1.448	0.0	1569.3	872.0	1.5	1600
1700	1.2	1.565	0.0	1667.3	843.5	1.7	1700
1800	1.3	1.685	0.0	1765.4	815.7	1.9	1800
1900	1.4	1.810	0.0	1863.5	788.5	2.1	1900
2000	1.5	1.939	0.0	1961.6	761.9	2.3	2000
2100	1.6	2.073	0.0	2059.6	735.9	2.5	2100
2200	1.7	2.211	0.0	2157.7	710.5	2.8	2200
2300	1.9	2.354	0.0	2255.8	685.7	3.0	2300
2400	2.0	2.503	0.1	2353.9	661.6	3.3	2400
2500	2.1	2.657	0.1	2452.0	638.1	3.7	2500
2600	2.3	2.816	0.1	2550.0	615.1	4.0	2600
2700	2.5	2.982	0.1	2648.1	592.6	4.4	2700
2800	2.6	3.154	0.1	2746.2	570.6	4.8	2800
2900	2.8	3.332	0.1	2844.3	549.0	5.3	2900
3000	3.0	3.518	0.1	2942.4	527.9	5.8	3000
3100	3.2	3.712	0.1	3040.4	507.2	6.3	3100
3200	3.4	3.913	0.1	3138.5	486.9	6.9	3200
3300	3.6	4.122	0.1	3236.6	466.9	7.6	3300
3400	3.8	4.341	0.1	3334.7	446.9	8.3	3400
3500	4.1	4.570	0.1	3432.7	427.2	9.1	3500
3600	4.3	4.810	0.1	3530.8	407.7	10.0	3600
3700	4.6	5.061	0.1	3628.9	388.6	11.0	3700
3800	4.9	5.325	0.1	3727.0	370.0	12.1	3800
3900	5.2	5.602	0.2	3825.1	351.9	13.3	3900
4000	5.6	5.893	0.2	3923.1	334.7	14.7	4000
4100	6.0	6.199	0.2	4021.2	319.5	16.3	4100
4200	6.4	6.519	0.2	4119.3	307.0	18.0	4200
4300	6.8	6.850	0.2	4217.4	295.8	19.8	4300
4400	7.3	7.195	0.2	4315.5	285.3	21.9	4400
4500	7.7	7.551	0.3	4413.5	275.4	24.0	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802157AV

DI
A

LA: 1500 A 0/00

SD m	SW A o/oo	FZ s	DR A o/oo	ZH m	VE m/s	FW A o/oo	SD m
100	0.0	0.072	0.0	99.5	1363.6	0.0	100
200	0.1	0.147	0.0	199.0	1327.6	0.1	200
300	0.1	0.223	0.0	298.6	1292.0	0.1	300
400	0.1	0.302	0.0	398.1	1256.9	0.1	400
500	0.1	0.382	0.0	497.6	1222.1	0.1	500
600	0.2	0.465	0.0	597.1	1187.8	0.2	600
700	0.2	0.551	0.0	696.6	1153.9	0.2	700
800	0.2	0.639	0.0	796.1	1120.5	0.3	800
900	0.3	0.729	0.0	895.7	1087.5	0.3	900
1000	0.3	0.823	0.0	995.2	1055.1	0.4	1000
1100	0.3	0.919	0.0	1094.7	1023.3	0.4	1100
1200	0.4	1.018	0.0	1194.2	992.0	0.5	1200
1300	0.4	1.120	0.0	1293.7	961.3	0.5	1300
1400	0.5	1.226	0.0	1393.3	931.1	0.6	1400
1500	0.5	1.335	0.0	1492.8	901.5	0.7	1500
1600	0.6	1.448	0.0	1592.3	872.4	0.8	1600
1700	0.6	1.565	0.0	1691.8	844.0	0.8	1700
1800	0.6	1.685	0.0	1791.3	816.2	0.9	1800
1900	0.7	1.810	0.0	1890.9	789.0	1.0	1900
2000	0.8	1.939	0.0	1990.4	762.5	1.1	2000
2100	0.8	2.072	0.0	2089.9	736.5	1.3	2100
2200	0.9	2.210	0.0	2189.4	711.2	1.4	2200
2300	0.9	2.353	0.0	2288.9	686.5	1.5	2300
2400	1.0	2.502	0.0	2388.4	662.4	1.7	2400
2500	1.1	2.655	0.0	2488.0	638.9	1.8	2500
2600	1.2	2.815	0.0	2587.5	616.0	2.0	2600
2700	1.2	2.980	0.0	2687.0	593.5	2.2	2700
2800	1.3	3.152	0.0	2786.5	571.6	2.4	2800
2900	1.4	3.330	0.0	2886.0	550.0	2.6	2900
3000	1.5	3.516	0.0	2985.6	528.9	2.9	3000
3100	1.6	3.708	0.0	3085.1	508.3	3.2	3100
3200	1.7	3.909	0.0	3184.6	488.1	3.5	3200
3300	1.8	4.118	0.1	3284.1	468.1	3.8	3300
3400	1.9	4.337	0.1	3383.6	448.2	4.2	3400
3500	2.0	4.565	0.1	3483.1	428.5	4.6	3500
3600	2.2	4.804	0.1	3582.7	409.1	5.0	3600
3700	2.3	5.054	0.1	3682.2	390.1	5.5	3700
3800	2.5	5.317	0.1	3781.7	371.5	6.0	3800
3900	2.6	5.593	0.1	3881.2	353.4	6.7	3900
4000	2.8	5.883	0.1	3980.7	336.2	7.4	4000
4100	3.0	6.188	0.1	4080.3	320.7	8.1	4100
4200	3.2	6.506	0.1	4179.8	308.0	9.0	4200
4300	3.4	6.837	0.1	4279.3	296.7	9.9	4300
4400	3.6	7.180	0.1	4378.8	286.2	10.9	4400
4500	3.9	7.536	0.1	4478.3	276.2	12.0	4500

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

25

48

WK802157AV

DI
A

2.5 KORREKTURTAFEL ZUR FLABSCHUSSTAFEL

DEFINITION der TAFEL-SYMBOLE

SD Schussdistanz von Mündung bis Ziel

Mit Hilfe der Schusswinkelkorrektur kann unter gestörten Bedingungen die Distanz **SD** für den entsprechenden Lagewinkel **LA** wieder erreicht werden.

Gleichzeitig ändern sich aber die Flugzeiten **FZ** dementsprechend.

SW-Korrektur (Schusswinkel),
sowie

FZ-Variation (Flugzeit)

infolge Änderung von:

V Mündungsgeschwindigkeit -10 m/s

T ballistische Lufttemperatur -10° C

P ballistischer Luftdruck -100 mbar

WL ballistischer Mitwind
(parallel zur X-Achse) +10 m/s

DQ Seitenkorrektur,

infolge Änderung von:

WQ ballistischer Querwind
(von links, parallel zur Z-Achse) +10 m/s

Die Seitenkorrektur **DQ** erfolgt immer in die Richtung (hier: nach links) aus welcher der Wind kommt.

Alle Winkel sind in **mils** ($360^\circ = 6400$ mils)
angegeben (mils = A‰).

2.5 CORRECTION TABLE TO THE ANTI-AIRCRAFT FIRING TABLE

DEFINITION of TABLE SYMBOLS

SD Range from muzzle to target.

Under conditions deviating from the standard, the range **SD** for the given angle of site **LA** may still be reached by applying the corrections for the superelevation.

The time-of flight **FZ** then changes accordingly.

SW-Correction (Superelevation),
as well as

FZ-Variation (Time-of-Flight),

due to variation of:

V Muzzle Velocity -10 m/s

T ballistic air temperature -10° C

P ballistic atmospheric pressure -100 mbar

WL ballistic tail wind
(parallel to X-axis) +10 m/s

DQ Lateral-Correction,

due to variation of:

WQ ballistic cross wind
(from the left, parallel to Z-axis) +10 m/s

The lateral correction **DQ** is made in the direction (here: to the left) from which the wind is blowing.

All angles are given in **mils** ($360^\circ = 6400$ mils).

LA: 0 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.0	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.0	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.0	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.0	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.0	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.0	0.007	0.003	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.0	0.008	0.003	-0.016	-0.001	1.3
1200	0.1	0.0	-0.1	0.0	0.009	0.004	-0.020	-0.002	1.4
1300	0.1	0.0	-0.1	0.0	0.010	0.005	-0.024	-0.002	1.6
1400	0.1	0.0	-0.2	0.0	0.011	0.006	-0.029	-0.003	1.7
1500	0.1	0.0	-0.2	0.0	0.012	0.007	-0.035	-0.003	1.9
1600	0.1	0.0	-0.2	0.0	0.013	0.009	-0.041	-0.004	2.0
1700	0.1	0.1	-0.3	0.0	0.015	0.011	-0.048	-0.005	2.2
1800	0.1	0.1	-0.3	0.0	0.016	0.012	-0.057	-0.006	2.4
1900	0.1	0.1	-0.4	0.0	0.017	0.015	-0.066	-0.007	2.6
2000	0.1	0.1	-0.4	0.0	0.019	0.017	-0.076	-0.009	2.8
2100	0.2	0.1	-0.5	0.0	0.021	0.020	-0.087	-0.010	3.0
2200	0.2	0.1	-0.6	-0.1	0.022	0.023	-0.100	-0.012	3.2
2300	0.2	0.1	-0.6	-0.1	0.024	0.026	-0.114	-0.014	3.4
2400	0.2	0.2	-0.7	-0.1	0.026	0.030	-0.129	-0.016	3.7
2500	0.2	0.2	-0.9	-0.1	0.029	0.035	-0.146	-0.019	3.9
2600	0.2	0.2	-1.0	-0.1	0.031	0.040	-0.166	-0.022	4.2
2700	0.3	0.3	-1.1	-0.1	0.033	0.046	-0.187	-0.026	4.5
2800	0.3	0.3	-1.3	-0.2	0.036	0.052	-0.211	-0.030	4.8
2900	0.3	0.4	-1.5	-0.2	0.039	0.059	-0.238	-0.034	5.1
3000	0.3	0.4	-1.7	-0.2	0.043	0.068	-0.268	-0.040	5.4
3100	0.4	0.5	-1.9	-0.3	0.046	0.077	-0.302	-0.046	5.7
3200	0.4	0.6	-2.2	-0.3	0.050	0.088	-0.341	-0.054	6.1
3300	0.5	0.7	-2.5	-0.4	0.055	0.100	-0.386	-0.063	6.5
3400	0.5	0.8	-2.8	-0.4	0.060	0.114	-0.435	-0.073	6.9
3500	0.5	0.9	-3.3	-0.5	0.064	0.128	-0.489	-0.084	7.3
3600	0.6	1.0	-3.7	-0.6	0.068	0.141	-0.545	-0.096	7.8
3700	0.7	1.2	-4.3	-0.7	0.071	0.154	-0.599	-0.109	8.3
3800	0.7	1.3	-4.9	-0.8	0.075	0.168	-0.651	-0.123	8.8
3900	0.8	1.5	-5.5	-1.0	0.078	0.182	-0.700	-0.137	9.2
4000	0.8	1.7	-6.2	-1.1	0.081	0.197	-0.747	-0.153	9.7
4100	0.9	1.9	-6.9	-1.3	0.085	0.212	-0.795	-0.171	10.2
4200	1.0	2.2	-7.7	-1.5	0.088	0.228	-0.844	-0.189	10.7
4300	1.1	2.4	-8.5	-1.7	0.091	0.245	-0.894	-0.209	11.2
4400	1.1	2.7	-9.3	-1.9	0.095	0.262	-0.945	-0.230	11.7
4500	1.2	3.0	-10.2	-2.2	0.098	0.281	-0.998	-0.252	12.2

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 27	Blätter Sheets 48
WK802157AV					DI A

LA: 100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.0	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.0	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.0	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.1	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.1	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.1	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.1	0.007	0.003	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.1	0.008	0.003	-0.016	-0.001	1.3
1200	0.1	0.0	-0.1	0.1	0.009	0.004	-0.020	-0.002	1.4
1300	0.1	0.0	-0.1	0.1	0.010	0.005	-0.024	-0.002	1.5
1400	0.1	0.0	-0.1	0.2	0.011	0.006	-0.029	-0.003	1.7
1500	0.1	0.0	-0.2	0.2	0.012	0.007	-0.035	-0.003	1.9
1600	0.1	0.0	-0.2	0.2	0.013	0.009	-0.041	-0.004	2.0
1700	0.1	0.1	-0.3	0.2	0.014	0.010	-0.048	-0.005	2.2
1800	0.1	0.1	-0.3	0.2	0.016	0.012	-0.056	-0.006	2.4
1900	0.1	0.1	-0.4	0.2	0.017	0.014	-0.065	-0.007	2.6
2000	0.1	0.1	-0.4	0.2	0.019	0.017	-0.075	-0.008	2.8
2100	0.2	0.1	-0.5	0.2	0.021	0.019	-0.086	-0.010	3.0
2200	0.2	0.1	-0.5	0.3	0.022	0.022	-0.098	-0.012	3.2
2300	0.2	0.1	-0.6	0.3	0.024	0.026	-0.112	-0.014	3.4
2400	0.2	0.2	-0.7	0.3	0.026	0.029	-0.127	-0.016	3.6
2500	0.2	0.2	-0.8	0.3	0.028	0.034	-0.144	-0.019	3.9
2600	0.2	0.2	-1.0	0.3	0.031	0.039	-0.163	-0.021	4.1
2700	0.3	0.3	-1.1	0.3	0.033	0.044	-0.184	-0.025	4.4
2800	0.3	0.3	-1.2	0.3	0.036	0.050	-0.207	-0.029	4.7
2900	0.3	0.3	-1.4	0.3	0.039	0.057	-0.233	-0.033	5.0
3000	0.3	0.4	-1.6	0.3	0.042	0.065	-0.262	-0.039	5.3
3100	0.4	0.5	-1.8	0.3	0.046	0.073	-0.295	-0.045	5.6
3200	0.4	0.5	-2.1	0.3	0.050	0.084	-0.332	-0.052	6.0
3300	0.4	0.6	-2.4	0.3	0.054	0.095	-0.374	-0.060	6.3
3400	0.5	0.7	-2.7	0.3	0.059	0.108	-0.421	-0.069	6.7
3500	0.5	0.8	-3.1	0.2	0.064	0.121	-0.474	-0.080	7.2
3600	0.6	1.0	-3.6	0.2	0.068	0.134	-0.530	-0.092	7.6
3700	0.6	1.1	-4.1	0.1	0.071	0.147	-0.586	-0.104	8.1
3800	0.7	1.3	-4.7	0.0	0.075	0.161	-0.640	-0.118	8.5
3900	0.8	1.4	-5.3	0.0	0.078	0.175	-0.691	-0.132	9.0
4000	0.8	1.6	-5.9	-0.1	0.082	0.189	-0.740	-0.148	9.5
4100	0.9	1.8	-6.6	-0.3	0.085	0.204	-0.789	-0.164	10.0
4200	1.0	2.0	-7.4	-0.4	0.089	0.220	-0.839	-0.182	10.5
4300	1.0	2.3	-8.2	-0.6	0.092	0.236	-0.890	-0.201	11.0
4400	1.1	2.5	-9.0	-0.7	0.096	0.253	-0.942	-0.222	11.5
4500	1.2	2.8	-9.9	-0.9	0.100	0.271	-0.995	-0.244	12.0

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
28

Blätter
Sheets
48

WK802157AV

DI
A

LA: 200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.1	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.1	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.1	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.2	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.2	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.2	0.007	0.003	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.2	0.008	0.003	-0.016	-0.001	1.2
1200	0.1	0.0	-0.1	0.3	0.009	0.004	-0.020	-0.002	1.4
1300	0.1	0.0	-0.1	0.3	0.010	0.005	-0.024	-0.002	1.5
1400	0.1	0.0	-0.1	0.3	0.011	0.006	-0.029	-0.003	1.7
1500	0.1	0.0	-0.2	0.3	0.012	0.007	-0.034	-0.003	1.8
1600	0.1	0.0	-0.2	0.4	0.013	0.009	-0.041	-0.004	2.0
1700	0.1	0.1	-0.2	0.4	0.014	0.010	-0.048	-0.005	2.2
1800	0.1	0.1	-0.3	0.4	0.016	0.012	-0.056	-0.006	2.4
1900	0.1	0.1	-0.3	0.5	0.017	0.014	-0.064	-0.007	2.5
2000	0.1	0.1	-0.4	0.5	0.019	0.016	-0.074	-0.008	2.7
2100	0.2	0.1	-0.5	0.5	0.021	0.019	-0.085	-0.010	2.9
2200	0.2	0.1	-0.5	0.6	0.022	0.022	-0.097	-0.011	3.1
2300	0.2	0.1	-0.6	0.6	0.024	0.025	-0.111	-0.013	3.4
2400	0.2	0.2	-0.7	0.6	0.026	0.029	-0.125	-0.015	3.6
2500	0.2	0.2	-0.8	0.7	0.028	0.033	-0.142	-0.018	3.8
2600	0.2	0.2	-0.9	0.7	0.031	0.037	-0.160	-0.021	4.1
2700	0.3	0.2	-1.1	0.7	0.033	0.042	-0.180	-0.024	4.3
2800	0.3	0.3	-1.2	0.8	0.036	0.048	-0.203	-0.028	4.6
2900	0.3	0.3	-1.4	0.8	0.039	0.054	-0.228	-0.032	4.9
3000	0.3	0.4	-1.6	0.8	0.042	0.062	-0.256	-0.037	5.2
3100	0.4	0.4	-1.8	0.8	0.045	0.070	-0.287	-0.042	5.5
3200	0.4	0.5	-2.0	0.9	0.049	0.079	-0.323	-0.049	5.9
3300	0.4	0.6	-2.3	0.9	0.054	0.090	-0.363	-0.057	6.2
3400	0.5	0.7	-2.6	0.9	0.058	0.102	-0.408	-0.065	6.6
3500	0.5	0.8	-3.0	0.9	0.063	0.115	-0.459	-0.076	7.0
3600	0.6	0.9	-3.4	0.9	0.068	0.128	-0.514	-0.087	7.4
3700	0.6	1.0	-3.9	0.9	0.072	0.141	-0.571	-0.099	7.9
3800	0.7	1.2	-4.4	0.9	0.075	0.154	-0.627	-0.112	8.3
3900	0.7	1.3	-5.0	0.8	0.079	0.167	-0.681	-0.126	8.8
4000	0.8	1.5	-5.6	0.8	0.082	0.182	-0.732	-0.141	9.3
4100	0.9	1.7	-6.3	0.7	0.086	0.196	-0.783	-0.157	9.7
4200	0.9	1.9	-7.1	0.6	0.090	0.212	-0.833	-0.174	10.2
4300	1.0	2.1	-7.8	0.5	0.093	0.228	-0.885	-0.193	10.7
4400	1.1	2.4	-8.7	0.4	0.097	0.244	-0.937	-0.212	11.2
4500	1.2	2.6	-9.6	0.3	0.101	0.262	-0.992	-0.234	11.7

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 29	Blätter Sheets 48
WK802157AV					DI A

LA: 300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.1	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.1	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.2	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.2	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.2	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.3	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.3	0.007	0.002	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.4	0.008	0.003	-0.016	-0.001	1.2
1200	0.1	0.0	-0.1	0.4	0.009	0.004	-0.020	-0.002	1.4
1300	0.1	0.0	-0.1	0.4	0.010	0.005	-0.024	-0.002	1.5
1400	0.1	0.0	-0.1	0.5	0.011	0.006	-0.029	-0.003	1.7
1500	0.1	0.0	-0.2	0.5	0.012	0.007	-0.034	-0.003	1.8
1600	0.1	0.0	-0.2	0.6	0.013	0.008	-0.040	-0.004	2.0
1700	0.1	0.0	-0.2	0.6	0.014	0.010	-0.047	-0.005	2.2
1800	0.1	0.1	-0.3	0.7	0.016	0.012	-0.055	-0.006	2.3
1900	0.1	0.1	-0.3	0.7	0.017	0.014	-0.064	-0.007	2.5
2000	0.1	0.1	-0.4	0.7	0.019	0.016	-0.073	-0.008	2.7
2100	0.1	0.1	-0.4	0.8	0.020	0.018	-0.084	-0.009	2.9
2200	0.2	0.1	-0.5	0.8	0.022	0.021	-0.096	-0.011	3.1
2300	0.2	0.1	-0.6	0.9	0.024	0.024	-0.109	-0.013	3.3
2400	0.2	0.2	-0.7	1.0	0.026	0.028	-0.124	-0.015	3.5
2500	0.2	0.2	-0.8	1.0	0.028	0.032	-0.140	-0.017	3.8
2600	0.2	0.2	-0.9	1.1	0.030	0.036	-0.158	-0.020	4.0
2700	0.2	0.2	-1.0	1.1	0.033	0.041	-0.177	-0.023	4.3
2800	0.3	0.3	-1.2	1.2	0.035	0.046	-0.199	-0.026	4.5
2900	0.3	0.3	-1.3	1.2	0.038	0.052	-0.223	-0.030	4.8
3000	0.3	0.4	-1.5	1.3	0.041	0.059	-0.250	-0.035	5.1
3100	0.3	0.4	-1.7	1.3	0.045	0.067	-0.281	-0.040	5.4
3200	0.4	0.5	-1.9	1.4	0.049	0.075	-0.314	-0.046	5.7
3300	0.4	0.5	-2.2	1.4	0.053	0.085	-0.353	-0.053	6.1
3400	0.5	0.6	-2.5	1.5	0.057	0.096	-0.396	-0.061	6.5
3500	0.5	0.7	-2.8	1.5	0.062	0.109	-0.444	-0.071	6.8
3600	0.5	0.8	-3.2	1.6	0.067	0.122	-0.498	-0.081	7.3
3700	0.6	0.9	-3.6	1.6	0.072	0.135	-0.555	-0.093	7.7
3800	0.7	1.1	-4.1	1.7	0.075	0.147	-0.613	-0.105	8.1
3900	0.7	1.2	-4.7	1.7	0.079	0.160	-0.669	-0.119	8.6
4000	0.8	1.4	-5.3	1.7	0.083	0.174	-0.723	-0.133	9.0
4100	0.8	1.6	-6.0	1.7	0.087	0.188	-0.775	-0.148	9.5
4200	0.9	1.8	-6.7	1.6	0.091	0.203	-0.826	-0.165	10.0
4300	1.0	2.0	-7.4	1.6	0.094	0.219	-0.879	-0.182	10.5
4400	1.1	2.2	-8.2	1.5	0.098	0.235	-0.933	-0.201	10.9
4500	1.1	2.4	-9.1	1.4	0.102	0.252	-0.988	-0.221	11.4

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

30

Blätter
Sheets

48

WK802157AV

DI
A

LA: 400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.2	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.2	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.3	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.3	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.4	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.4	0.007	0.002	-0.013	-0.001	1.1
1100	0.1	0.0	-0.1	0.5	0.008	0.003	-0.016	-0.001	1.2
1200	0.1	0.0	-0.1	0.5	0.009	0.004	-0.019	-0.002	1.4
1300	0.1	0.0	-0.1	0.6	0.010	0.005	-0.024	-0.002	1.5
1400	0.1	0.0	-0.1	0.6	0.011	0.006	-0.028	-0.003	1.7
1500	0.1	0.0	-0.2	0.7	0.012	0.007	-0.034	-0.003	1.8
1600	0.1	0.0	-0.2	0.7	0.013	0.008	-0.040	-0.004	2.0
1700	0.1	0.0	-0.2	0.8	0.014	0.010	-0.047	-0.004	2.1
1800	0.1	0.1	-0.3	0.9	0.016	0.011	-0.055	-0.005	2.3
1900	0.1	0.1	-0.3	0.9	0.017	0.013	-0.063	-0.006	2.5
2000	0.1	0.1	-0.4	1.0	0.019	0.015	-0.073	-0.007	2.7
2100	0.1	0.1	-0.4	1.1	0.020	0.018	-0.083	-0.009	2.9
2200	0.2	0.1	-0.5	1.1	0.022	0.020	-0.095	-0.010	3.1
2300	0.2	0.1	-0.6	1.2	0.024	0.023	-0.108	-0.012	3.3
2400	0.2	0.1	-0.6	1.3	0.026	0.027	-0.122	-0.014	3.5
2500	0.2	0.2	-0.7	1.3	0.028	0.030	-0.138	-0.016	3.7
2600	0.2	0.2	-0.8	1.4	0.030	0.035	-0.155	-0.019	4.0
2700	0.2	0.2	-1.0	1.5	0.033	0.039	-0.174	-0.022	4.2
2800	0.3	0.2	-1.1	1.6	0.035	0.044	-0.196	-0.025	4.5
2900	0.3	0.3	-1.2	1.7	0.038	0.050	-0.219	-0.029	4.8
3000	0.3	0.3	-1.4	1.7	0.041	0.056	-0.245	-0.033	5.0
3100	0.3	0.4	-1.6	1.8	0.044	0.064	-0.274	-0.038	5.3
3200	0.4	0.4	-1.8	1.9	0.048	0.072	-0.307	-0.043	5.6
3300	0.4	0.5	-2.0	2.0	0.052	0.081	-0.343	-0.050	6.0
3400	0.4	0.6	-2.3	2.1	0.057	0.091	-0.385	-0.057	6.3
3500	0.5	0.6	-2.6	2.2	0.061	0.103	-0.431	-0.066	6.7
3600	0.5	0.7	-3.0	2.2	0.067	0.115	-0.482	-0.075	7.1
3700	0.6	0.8	-3.4	2.3	0.071	0.128	-0.538	-0.086	7.5
3800	0.6	1.0	-3.9	2.4	0.076	0.141	-0.597	-0.098	7.9
3900	0.7	1.1	-4.4	2.4	0.079	0.153	-0.655	-0.111	8.4
4000	0.7	1.3	-4.9	2.5	0.083	0.167	-0.712	-0.124	8.8
4100	0.8	1.4	-5.6	2.5	0.087	0.181	-0.766	-0.138	9.3
4200	0.9	1.6	-6.2	2.6	0.091	0.195	-0.819	-0.154	9.8
4300	0.9	1.8	-7.0	2.6	0.095	0.210	-0.872	-0.171	10.2
4400	1.0	2.0	-7.7	2.6	0.099	0.226	-0.927	-0.189	10.7
4500	1.1	2.2	-8.5	2.5	0.103	0.243	-0.983	-0.208	11.2

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet

Blätter
Sheets

WK802157AV

31

48

DI
A

LA: 500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.0	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.1	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.2	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.3	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.3	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.4	0.005	0.001	-0.008	-0.001	0.9
900	0.0	0.0	0.0	0.5	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.5	0.007	0.002	-0.013	-0.001	1.1
1100	0.0	0.0	-0.1	0.6	0.008	0.003	-0.016	-0.001	1.2
1200	0.1	0.0	-0.1	0.6	0.009	0.004	-0.019	-0.002	1.4
1300	0.1	0.0	-0.1	0.7	0.010	0.005	-0.024	-0.002	1.5
1400	0.1	0.0	-0.1	0.8	0.011	0.006	-0.028	-0.002	1.7
1500	0.1	0.0	-0.2	0.8	0.012	0.007	-0.034	-0.003	1.8
1600	0.1	0.0	-0.2	0.9	0.013	0.008	-0.040	-0.004	2.0
1700	0.1	0.0	-0.2	1.0	0.014	0.009	-0.047	-0.004	2.1
1800	0.1	0.1	-0.3	1.1	0.016	0.011	-0.054	-0.005	2.3
1900	0.1	0.1	-0.3	1.1	0.017	0.013	-0.063	-0.006	2.5
2000	0.1	0.1	-0.3	1.2	0.019	0.015	-0.072	-0.007	2.7
2100	0.1	0.1	-0.4	1.3	0.020	0.017	-0.082	-0.008	2.9
2200	0.1	0.1	-0.5	1.4	0.022	0.020	-0.094	-0.010	3.1
2300	0.2	0.1	-0.5	1.5	0.024	0.023	-0.107	-0.011	3.3
2400	0.2	0.1	-0.6	1.6	0.026	0.026	-0.121	-0.013	3.5
2500	0.2	0.2	-0.7	1.7	0.028	0.030	-0.136	-0.015	3.7
2600	0.2	0.2	-0.8	1.8	0.030	0.033	-0.153	-0.017	3.9
2700	0.2	0.2	-0.9	1.8	0.033	0.038	-0.172	-0.020	4.2
2800	0.2	0.2	-1.0	1.9	0.035	0.043	-0.192	-0.023	4.4
2900	0.3	0.3	-1.2	2.1	0.038	0.048	-0.215	-0.027	4.7
3000	0.3	0.3	-1.3	2.2	0.041	0.054	-0.241	-0.030	5.0
3100	0.3	0.3	-1.5	2.3	0.044	0.061	-0.269	-0.035	5.2
3200	0.3	0.4	-1.7	2.4	0.048	0.069	-0.300	-0.040	5.5
3300	0.4	0.4	-1.9	2.5	0.052	0.077	-0.335	-0.046	5.9
3400	0.4	0.5	-2.2	2.6	0.056	0.087	-0.374	-0.053	6.2
3500	0.4	0.6	-2.4	2.7	0.061	0.097	-0.419	-0.060	6.6
3600	0.5	0.7	-2.8	2.8	0.066	0.109	-0.468	-0.069	6.9
3700	0.5	0.8	-3.1	2.9	0.071	0.122	-0.522	-0.079	7.3
3800	0.6	0.9	-3.6	3.1	0.076	0.134	-0.580	-0.090	7.8
3900	0.6	1.0	-4.0	3.2	0.080	0.147	-0.640	-0.102	8.2
4000	0.7	1.1	-4.6	3.3	0.084	0.160	-0.698	-0.114	8.6
4100	0.8	1.3	-5.1	3.3	0.088	0.173	-0.755	-0.128	9.1
4200	0.8	1.4	-5.8	3.4	0.092	0.187	-0.810	-0.142	9.5
4300	0.9	1.6	-6.4	3.5	0.096	0.202	-0.865	-0.158	10.0
4400	1.0	1.8	-7.1	3.5	0.100	0.218	-0.920	-0.175	10.5
4500	1.0	2.0	-7.9	3.6	0.104	0.234	-0.977	-0.193	10.9

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet	Blätter Sheets
		32	32	48	
		WK802157AV		DI	A

LA: 600 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.2	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.3	0.003	0.001	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.3	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.4	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.5	0.005	0.001	-0.007	-0.001	0.8
900	0.0	0.0	0.0	0.5	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	-0.1	0.6	0.007	0.002	-0.013	-0.001	1.1
1100	0.0	0.0	-0.1	0.7	0.008	0.003	-0.016	-0.001	1.2
1200	0.1	0.0	-0.1	0.8	0.009	0.004	-0.019	-0.001	1.4
1300	0.1	0.0	-0.1	0.8	0.010	0.005	-0.023	-0.002	1.5
1400	0.1	0.0	-0.1	0.9	0.011	0.006	-0.028	-0.002	1.7
1500	0.1	0.0	-0.1	1.0	0.012	0.007	-0.034	-0.003	1.8
1600	0.1	0.0	-0.2	1.1	0.013	0.008	-0.040	-0.003	2.0
1700	0.1	0.0	-0.2	1.2	0.014	0.009	-0.046	-0.004	2.1
1800	0.1	0.0	-0.2	1.2	0.016	0.011	-0.054	-0.005	2.3
1900	0.1	0.1	-0.3	1.3	0.017	0.013	-0.062	-0.006	2.5
2000	0.1	0.1	-0.3	1.4	0.019	0.015	-0.071	-0.007	2.6
2100	0.1	0.1	-0.4	1.5	0.020	0.017	-0.082	-0.008	2.8
2200	0.1	0.1	-0.4	1.6	0.022	0.019	-0.093	-0.009	3.0
2300	0.2	0.1	-0.5	1.7	0.024	0.022	-0.105	-0.010	3.2
2400	0.2	0.1	-0.6	1.8	0.026	0.025	-0.119	-0.012	3.4
2500	0.2	0.1	-0.7	1.9	0.028	0.029	-0.134	-0.014	3.7
2600	0.2	0.2	-0.7	2.1	0.030	0.032	-0.151	-0.016	3.9
2700	0.2	0.2	-0.8	2.2	0.032	0.037	-0.169	-0.019	4.1
2800	0.2	0.2	-1.0	2.3	0.035	0.041	-0.189	-0.021	4.4
2900	0.2	0.2	-1.1	2.4	0.038	0.046	-0.212	-0.024	4.6
3000	0.3	0.3	-1.2	2.5	0.041	0.052	-0.236	-0.028	4.9
3100	0.3	0.3	-1.4	2.7	0.044	0.058	-0.263	-0.032	5.2
3200	0.3	0.4	-1.6	2.8	0.047	0.066	-0.294	-0.037	5.5
3300	0.3	0.4	-1.8	2.9	0.051	0.074	-0.327	-0.042	5.8
3400	0.4	0.5	-2.0	3.1	0.055	0.082	-0.365	-0.048	6.1
3500	0.4	0.5	-2.2	3.2	0.060	0.092	-0.407	-0.055	6.4
3600	0.5	0.6	-2.5	3.4	0.065	0.104	-0.455	-0.063	6.8
3700	0.5	0.7	-2.9	3.5	0.070	0.116	-0.507	-0.072	7.2
3800	0.5	0.8	-3.2	3.7	0.075	0.128	-0.564	-0.082	7.6
3900	0.6	0.9	-3.7	3.8	0.080	0.140	-0.624	-0.093	8.0
4000	0.6	1.0	-4.1	4.0	0.084	0.153	-0.684	-0.104	8.4
4100	0.7	1.1	-4.7	4.1	0.088	0.166	-0.743	-0.117	8.9
4200	0.8	1.3	-5.3	4.2	0.092	0.180	-0.801	-0.130	9.3
4300	0.8	1.4	-5.9	4.3	0.097	0.194	-0.857	-0.145	9.8
4400	0.9	1.6	-6.5	4.4	0.101	0.209	-0.913	-0.160	10.2
4500	1.0	1.8	-7.3	4.5	0.105	0.225	-0.971	-0.177	10.7

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 33	Blätter Sheets 48
		WK802157AV			DI A

LA: 700 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.3	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.4	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.5	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.5	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.6	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	0.0	0.7	0.007	0.002	-0.012	-0.001	1.1
1100	0.0	0.0	-0.1	0.8	0.008	0.003	-0.016	-0.001	1.2
1200	0.0	0.0	-0.1	0.9	0.009	0.004	-0.019	-0.001	1.4
1300	0.1	0.0	-0.1	0.9	0.010	0.005	-0.023	-0.002	1.5
1400	0.1	0.0	-0.1	1.0	0.011	0.005	-0.028	-0.002	1.6
1500	0.1	0.0	-0.1	1.1	0.012	0.007	-0.033	-0.003	1.8
1600	0.1	0.0	-0.2	1.2	0.013	0.008	-0.039	-0.003	1.9
1700	0.1	0.0	-0.2	1.3	0.014	0.009	-0.046	-0.004	2.1
1800	0.1	0.0	-0.2	1.4	0.016	0.011	-0.053	-0.004	2.3
1900	0.1	0.1	-0.3	1.5	0.017	0.012	-0.062	-0.005	2.4
2000	0.1	0.1	-0.3	1.6	0.019	0.014	-0.071	-0.006	2.6
2100	0.1	0.1	-0.3	1.7	0.020	0.017	-0.081	-0.007	2.8
2200	0.1	0.1	-0.4	1.9	0.022	0.019	-0.092	-0.008	3.0
2300	0.1	0.1	-0.5	2.0	0.024	0.022	-0.104	-0.010	3.2
2400	0.2	0.1	-0.5	2.1	0.026	0.025	-0.118	-0.011	3.4
2500	0.2	0.1	-0.6	2.2	0.028	0.028	-0.133	-0.013	3.6
2600	0.2	0.1	-0.7	2.3	0.030	0.031	-0.149	-0.015	3.8
2700	0.2	0.2	-0.8	2.5	0.032	0.036	-0.167	-0.017	4.1
2800	0.2	0.2	-0.9	2.6	0.035	0.040	-0.187	-0.019	4.3
2900	0.2	0.2	-1.0	2.8	0.037	0.045	-0.208	-0.022	4.6
3000	0.2	0.2	-1.1	2.9	0.040	0.050	-0.232	-0.025	4.8
3100	0.3	0.3	-1.3	3.1	0.043	0.056	-0.259	-0.029	5.1
3200	0.3	0.3	-1.4	3.2	0.047	0.063	-0.288	-0.033	5.4
3300	0.3	0.4	-1.6	3.4	0.051	0.070	-0.320	-0.038	5.7
3400	0.3	0.4	-1.8	3.5	0.055	0.079	-0.357	-0.043	6.0
3500	0.4	0.5	-2.0	3.7	0.059	0.088	-0.397	-0.049	6.3
3600	0.4	0.5	-2.3	3.9	0.064	0.099	-0.443	-0.057	6.7
3700	0.5	0.6	-2.6	4.0	0.069	0.110	-0.493	-0.065	7.0
3800	0.5	0.7	-2.9	4.2	0.075	0.122	-0.549	-0.074	7.4
3900	0.5	0.8	-3.3	4.4	0.080	0.135	-0.608	-0.084	7.8
4000	0.6	0.9	-3.7	4.6	0.084	0.147	-0.669	-0.094	8.3
4100	0.6	1.0	-4.2	4.8	0.088	0.159	-0.730	-0.105	8.7
4200	0.7	1.1	-4.7	4.9	0.093	0.173	-0.790	-0.118	9.1
4300	0.8	1.3	-5.3	5.1	0.097	0.187	-0.848	-0.131	9.6
4400	0.8	1.4	-5.9	5.2	0.102	0.201	-0.906	-0.145	10.0
4500	0.9	1.6	-6.6	5.4	0.106	0.217	-0.964	-0.160	10.5

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 34	Blätter Sheets 48
WK802157AV					DI A

LA: 800 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.4	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.5	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.6	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.7	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	0.0	0.8	0.007	0.002	-0.012	-0.001	1.1
1100	0.0	0.0	-0.1	0.9	0.008	0.003	-0.016	-0.001	1.2
1200	0.0	0.0	-0.1	1.0	0.009	0.004	-0.019	-0.001	1.4
1300	0.0	0.0	-0.1	1.0	0.010	0.004	-0.023	-0.002	1.5
1400	0.1	0.0	-0.1	1.1	0.011	0.005	-0.028	-0.002	1.6
1500	0.1	0.0	-0.1	1.2	0.012	0.006	-0.033	-0.002	1.8
1600	0.1	0.0	-0.1	1.4	0.013	0.008	-0.039	-0.003	1.9
1700	0.1	0.0	-0.2	1.5	0.014	0.009	-0.046	-0.003	2.1
1800	0.1	0.0	-0.2	1.6	0.016	0.011	-0.053	-0.004	2.3
1900	0.1	0.0	-0.2	1.7	0.017	0.012	-0.061	-0.005	2.4
2000	0.1	0.1	-0.3	1.8	0.019	0.014	-0.070	-0.005	2.6
2100	0.1	0.1	-0.3	1.9	0.020	0.016	-0.080	-0.006	2.8
2200	0.1	0.1	-0.4	2.1	0.022	0.019	-0.091	-0.007	3.0
2300	0.1	0.1	-0.4	2.2	0.024	0.021	-0.103	-0.009	3.2
2400	0.1	0.1	-0.5	2.3	0.026	0.024	-0.117	-0.010	3.4
2500	0.2	0.1	-0.5	2.5	0.028	0.027	-0.131	-0.012	3.6
2600	0.2	0.1	-0.6	2.6	0.030	0.031	-0.147	-0.013	3.8
2700	0.2	0.1	-0.7	2.8	0.032	0.034	-0.165	-0.015	4.0
2800	0.2	0.2	-0.8	2.9	0.035	0.039	-0.184	-0.018	4.3
2900	0.2	0.2	-0.9	3.1	0.037	0.043	-0.205	-0.020	4.5
3000	0.2	0.2	-1.0	3.2	0.040	0.049	-0.229	-0.023	4.8
3100	0.2	0.2	-1.1	3.4	0.043	0.054	-0.255	-0.026	5.0
3200	0.3	0.3	-1.3	3.6	0.047	0.061	-0.283	-0.030	5.3
3300	0.3	0.3	-1.4	3.7	0.050	0.068	-0.314	-0.034	5.6
3400	0.3	0.4	-1.6	3.9	0.054	0.076	-0.349	-0.039	5.9
3500	0.3	0.4	-1.8	4.1	0.059	0.084	-0.389	-0.044	6.2
3600	0.4	0.5	-2.0	4.3	0.063	0.094	-0.432	-0.050	6.6
3700	0.4	0.5	-2.3	4.5	0.069	0.105	-0.481	-0.057	6.9
3800	0.4	0.6	-2.6	4.7	0.074	0.117	-0.535	-0.065	7.3
3900	0.5	0.7	-2.9	4.9	0.079	0.129	-0.593	-0.074	7.7
4000	0.5	0.8	-3.3	5.1	0.084	0.141	-0.654	-0.084	8.1
4100	0.6	0.9	-3.7	5.4	0.089	0.153	-0.716	-0.094	8.5
4200	0.6	1.0	-4.2	5.6	0.093	0.166	-0.778	-0.105	8.9
4300	0.7	1.1	-4.7	5.8	0.098	0.180	-0.838	-0.116	9.4
4400	0.7	1.2	-5.2	6.0	0.102	0.194	-0.898	-0.129	9.8
4500	0.8	1.4	-5.8	6.1	0.107	0.209	-0.957	-0.143	10.3

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
35

Blätter
Sheets
48

WK802157AV

DI
A

LA: 900 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.6	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.7	0.006	0.002	-0.010	-0.001	1.0
1000	0.0	0.0	0.0	0.8	0.007	0.002	-0.012	-0.001	1.1
1100	0.0	0.0	0.0	0.9	0.008	0.003	-0.016	-0.001	1.2
1200	0.0	0.0	-0.1	1.0	0.009	0.004	-0.019	-0.001	1.4
1300	0.0	0.0	-0.1	1.1	0.010	0.004	-0.023	-0.001	1.5
1400	0.0	0.0	-0.1	1.3	0.011	0.005	-0.028	-0.002	1.6
1500	0.1	0.0	-0.1	1.4	0.012	0.006	-0.033	-0.002	1.8
1600	0.1	0.0	-0.1	1.5	0.013	0.008	-0.039	-0.002	1.9
1700	0.1	0.0	-0.2	1.6	0.014	0.009	-0.045	-0.003	2.1
1800	0.1	0.0	-0.2	1.7	0.016	0.010	-0.053	-0.004	2.3
1900	0.1	0.0	-0.2	1.8	0.017	0.012	-0.061	-0.004	2.4
2000	0.1	0.0	-0.2	2.0	0.019	0.014	-0.070	-0.005	2.6
2100	0.1	0.1	-0.3	2.1	0.020	0.016	-0.080	-0.006	2.8
2200	0.1	0.1	-0.3	2.2	0.022	0.018	-0.091	-0.007	3.0
2300	0.1	0.1	-0.4	2.4	0.024	0.021	-0.102	-0.008	3.2
2400	0.1	0.1	-0.4	2.5	0.026	0.023	-0.116	-0.009	3.4
2500	0.1	0.1	-0.5	2.7	0.028	0.027	-0.130	-0.010	3.6
2600	0.1	0.1	-0.5	2.8	0.030	0.030	-0.146	-0.012	3.8
2700	0.2	0.1	-0.6	3.0	0.032	0.034	-0.163	-0.014	4.0
2800	0.2	0.1	-0.7	3.2	0.034	0.038	-0.182	-0.015	4.2
2900	0.2	0.2	-0.8	3.3	0.037	0.042	-0.203	-0.018	4.5
3000	0.2	0.2	-0.9	3.5	0.040	0.047	-0.226	-0.020	4.7
3100	0.2	0.2	-1.0	3.7	0.043	0.053	-0.251	-0.023	5.0
3200	0.2	0.2	-1.1	3.9	0.046	0.059	-0.279	-0.026	5.2
3300	0.3	0.3	-1.3	4.1	0.050	0.065	-0.309	-0.030	5.5
3400	0.3	0.3	-1.4	4.3	0.054	0.073	-0.343	-0.034	5.8
3500	0.3	0.4	-1.6	4.5	0.058	0.081	-0.381	-0.038	6.1
3600	0.3	0.4	-1.8	4.7	0.063	0.090	-0.423	-0.044	6.5
3700	0.4	0.5	-2.0	4.9	0.068	0.100	-0.470	-0.050	6.8
3800	0.4	0.5	-2.3	5.2	0.073	0.112	-0.522	-0.057	7.2
3900	0.4	0.6	-2.6	5.4	0.079	0.124	-0.579	-0.065	7.6
4000	0.5	0.7	-2.9	5.6	0.084	0.136	-0.640	-0.073	8.0
4100	0.5	0.7	-3.3	5.9	0.089	0.148	-0.703	-0.082	8.4
4200	0.6	0.8	-3.7	6.1	0.093	0.160	-0.766	-0.092	8.8
4300	0.6	0.9	-4.1	6.4	0.098	0.174	-0.828	-0.102	9.2
4400	0.7	1.1	-4.6	6.6	0.103	0.188	-0.889	-0.113	9.7
4500	0.7	1.2	-5.1	6.8	0.108	0.202	-0.950	-0.125	10.1

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
36

Blätter
Sheets
48

WK802157AV

DI
A

LA: 1000 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.2	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.004	0.001	-0.006	0.000	0.7
800	0.0	0.0	0.0	0.7	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.8	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	0.9	0.007	0.002	-0.012	-0.001	1.1
1100	0.0	0.0	0.0	1.0	0.008	0.003	-0.015	-0.001	1.2
1200	0.0	0.0	-0.1	1.1	0.009	0.004	-0.019	-0.001	1.3
1300	0.0	0.0	-0.1	1.2	0.010	0.004	-0.023	-0.001	1.5
1400	0.0	0.0	-0.1	1.3	0.011	0.005	-0.028	-0.001	1.6
1500	0.0	0.0	-0.1	1.5	0.012	0.006	-0.033	-0.002	1.8
1600	0.1	0.0	-0.1	1.6	0.013	0.007	-0.039	-0.002	1.9
1700	0.1	0.0	-0.1	1.7	0.014	0.009	-0.045	-0.003	2.1
1800	0.1	0.0	-0.2	1.8	0.016	0.010	-0.052	-0.003	2.2
1900	0.1	0.0	-0.2	2.0	0.017	0.012	-0.060	-0.004	2.4
2000	0.1	0.0	-0.2	2.1	0.019	0.014	-0.069	-0.004	2.6
2100	0.1	0.0	-0.2	2.3	0.020	0.016	-0.079	-0.005	2.8
2200	0.1	0.1	-0.3	2.4	0.022	0.018	-0.090	-0.006	2.9
2300	0.1	0.1	-0.3	2.6	0.024	0.020	-0.102	-0.007	3.1
2400	0.1	0.1	-0.4	2.7	0.026	0.023	-0.115	-0.008	3.3
2500	0.1	0.1	-0.4	2.9	0.028	0.026	-0.129	-0.009	3.5
2600	0.1	0.1	-0.5	3.0	0.030	0.029	-0.144	-0.010	3.7
2700	0.1	0.1	-0.5	3.2	0.032	0.033	-0.161	-0.012	4.0
2800	0.1	0.1	-0.6	3.4	0.034	0.037	-0.180	-0.013	4.2
2900	0.2	0.1	-0.7	3.6	0.037	0.041	-0.201	-0.015	4.4
3000	0.2	0.2	-0.8	3.8	0.040	0.046	-0.223	-0.017	4.7
3100	0.2	0.2	-0.9	4.0	0.043	0.051	-0.248	-0.020	4.9
3200	0.2	0.2	-1.0	4.2	0.046	0.057	-0.275	-0.022	5.2
3300	0.2	0.2	-1.1	4.4	0.050	0.063	-0.305	-0.025	5.5
3400	0.2	0.3	-1.2	4.6	0.053	0.070	-0.338	-0.029	5.8
3500	0.3	0.3	-1.4	4.8	0.058	0.078	-0.374	-0.033	6.1
3600	0.3	0.3	-1.5	5.0	0.062	0.087	-0.415	-0.037	6.4
3700	0.3	0.4	-1.7	5.3	0.067	0.097	-0.461	-0.043	6.7
3800	0.3	0.4	-1.9	5.5	0.073	0.107	-0.512	-0.048	7.1
3900	0.4	0.5	-2.2	5.8	0.079	0.119	-0.567	-0.055	7.4
4000	0.4	0.6	-2.5	6.1	0.084	0.131	-0.627	-0.062	7.8
4100	0.4	0.6	-2.8	6.3	0.089	0.143	-0.690	-0.070	8.2
4200	0.5	0.7	-3.1	6.6	0.093	0.155	-0.754	-0.078	8.6
4300	0.5	0.8	-3.5	6.9	0.098	0.168	-0.817	-0.087	9.1
4400	0.6	0.9	-3.9	7.2	0.103	0.182	-0.880	-0.097	9.5
4500	0.6	1.0	-4.4	7.4	0.108	0.196	-0.942	-0.107	9.9

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
37

Blätter
Sheets
48

WK802157AV

DI
A

LA: 1100 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.3	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.4	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.5	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.6	0.004	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.7	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.8	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	1.0	0.007	0.002	-0.012	-0.001	1.1
1100	0.0	0.0	0.0	1.1	0.008	0.003	-0.015	-0.001	1.2
1200	0.0	0.0	0.0	1.2	0.009	0.004	-0.019	-0.001	1.3
1300	0.0	0.0	-0.1	1.3	0.010	0.004	-0.023	-0.001	1.5
1400	0.0	0.0	-0.1	1.4	0.011	0.005	-0.028	-0.001	1.6
1500	0.0	0.0	-0.1	1.5	0.012	0.006	-0.033	-0.002	1.8
1600	0.0	0.0	-0.1	1.7	0.013	0.007	-0.039	-0.002	1.9
1700	0.0	0.0	-0.1	1.8	0.014	0.009	-0.045	-0.002	2.1
1800	0.1	0.0	-0.1	1.9	0.016	0.010	-0.052	-0.003	2.2
1900	0.1	0.0	-0.2	2.1	0.017	0.012	-0.060	-0.003	2.4
2000	0.1	0.0	-0.2	2.2	0.019	0.013	-0.069	-0.004	2.6
2100	0.1	0.0	-0.2	2.4	0.020	0.015	-0.079	-0.004	2.7
2200	0.1	0.0	-0.2	2.5	0.022	0.018	-0.089	-0.005	2.9
2300	0.1	0.1	-0.3	2.7	0.024	0.020	-0.101	-0.006	3.1
2400	0.1	0.1	-0.3	2.9	0.026	0.023	-0.114	-0.006	3.3
2500	0.1	0.1	-0.4	3.0	0.028	0.025	-0.128	-0.007	3.5
2600	0.1	0.1	-0.4	3.2	0.030	0.029	-0.143	-0.009	3.7
2700	0.1	0.1	-0.5	3.4	0.032	0.032	-0.160	-0.010	3.9
2800	0.1	0.1	-0.5	3.6	0.034	0.036	-0.179	-0.011	4.2
2900	0.1	0.1	-0.6	3.8	0.037	0.040	-0.199	-0.013	4.4
3000	0.1	0.1	-0.6	4.0	0.040	0.045	-0.221	-0.015	4.6
3100	0.2	0.2	-0.7	4.2	0.043	0.050	-0.245	-0.016	4.9
3200	0.2	0.2	-0.8	4.4	0.046	0.055	-0.272	-0.019	5.1
3300	0.2	0.2	-0.9	4.6	0.049	0.062	-0.301	-0.021	5.4
3400	0.2	0.2	-1.0	4.8	0.053	0.068	-0.333	-0.024	5.7
3500	0.2	0.2	-1.2	5.1	0.057	0.076	-0.369	-0.027	6.0
3600	0.2	0.3	-1.3	5.3	0.062	0.084	-0.409	-0.031	6.3
3700	0.3	0.3	-1.4	5.6	0.067	0.094	-0.453	-0.035	6.6
3800	0.3	0.4	-1.6	5.9	0.072	0.104	-0.503	-0.040	7.0
3900	0.3	0.4	-1.8	6.1	0.078	0.115	-0.557	-0.046	7.3
4000	0.3	0.5	-2.1	6.4	0.084	0.127	-0.616	-0.052	7.7
4100	0.4	0.5	-2.3	6.7	0.089	0.138	-0.679	-0.058	8.1
4200	0.4	0.6	-2.6	7.0	0.093	0.150	-0.743	-0.065	8.5
4300	0.4	0.6	-2.9	7.3	0.098	0.163	-0.808	-0.073	8.9
4400	0.5	0.7	-3.3	7.6	0.103	0.177	-0.872	-0.081	9.4
4500	0.5	0.8	-3.6	7.9	0.108	0.191	-0.935	-0.089	9.8

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
38

Blätter
Sheets
48

WK802157AV

DI
A

LA: 1200 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.004	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	1.0	0.007	0.002	-0.012	0.000	1.1
1100	0.0	0.0	0.0	1.1	0.008	0.003	-0.015	-0.001	1.2
1200	0.0	0.0	0.0	1.2	0.009	0.004	-0.019	-0.001	1.3
1300	0.0	0.0	0.0	1.4	0.010	0.004	-0.023	-0.001	1.5
1400	0.0	0.0	-0.1	1.5	0.011	0.005	-0.028	-0.001	1.6
1500	0.0	0.0	-0.1	1.6	0.012	0.006	-0.033	-0.001	1.8
1600	0.0	0.0	-0.1	1.8	0.013	0.007	-0.038	-0.001	1.9
1700	0.0	0.0	-0.1	1.9	0.014	0.009	-0.045	-0.002	2.1
1800	0.0	0.0	-0.1	2.0	0.016	0.010	-0.052	-0.002	2.2
1900	0.0	0.0	-0.1	2.2	0.017	0.012	-0.060	-0.002	2.4
2000	0.1	0.0	-0.1	2.3	0.019	0.013	-0.069	-0.003	2.6
2100	0.1	0.0	-0.2	2.5	0.020	0.015	-0.078	-0.003	2.7
2200	0.1	0.0	-0.2	2.7	0.022	0.017	-0.089	-0.004	2.9
2300	0.1	0.0	-0.2	2.8	0.024	0.020	-0.101	-0.005	3.1
2400	0.1	0.0	-0.2	3.0	0.025	0.022	-0.113	-0.005	3.3
2500	0.1	0.1	-0.3	3.2	0.027	0.025	-0.127	-0.006	3.5
2600	0.1	0.1	-0.3	3.4	0.030	0.028	-0.142	-0.007	3.7
2700	0.1	0.1	-0.4	3.5	0.032	0.032	-0.159	-0.008	3.9
2800	0.1	0.1	-0.4	3.7	0.034	0.035	-0.177	-0.009	4.1
2900	0.1	0.1	-0.5	3.9	0.037	0.039	-0.197	-0.010	4.4
3000	0.1	0.1	-0.5	4.2	0.040	0.044	-0.219	-0.012	4.6
3100	0.1	0.1	-0.6	4.4	0.042	0.049	-0.243	-0.013	4.8
3200	0.1	0.1	-0.7	4.6	0.046	0.054	-0.269	-0.015	5.1
3300	0.2	0.2	-0.7	4.8	0.049	0.060	-0.298	-0.017	5.4
3400	0.2	0.2	-0.8	5.1	0.053	0.067	-0.330	-0.019	5.7
3500	0.2	0.2	-0.9	5.3	0.057	0.074	-0.365	-0.022	5.9
3600	0.2	0.2	-1.0	5.6	0.062	0.082	-0.404	-0.025	6.3
3700	0.2	0.2	-1.2	5.8	0.066	0.091	-0.447	-0.028	6.6
3800	0.2	0.3	-1.3	6.1	0.072	0.101	-0.495	-0.032	6.9
3900	0.3	0.3	-1.5	6.4	0.077	0.112	-0.548	-0.036	7.3
4000	0.3	0.4	-1.6	6.7	0.083	0.123	-0.607	-0.041	7.6
4100	0.3	0.4	-1.8	7.0	0.089	0.135	-0.669	-0.046	8.0
4200	0.3	0.5	-2.1	7.4	0.094	0.147	-0.734	-0.052	8.4
4300	0.4	0.5	-2.3	7.7	0.098	0.159	-0.799	-0.058	8.8
4400	0.4	0.6	-2.6	8.0	0.104	0.172	-0.864	-0.064	9.3
4500	0.4	0.6	-2.9	8.3	0.109	0.186	-0.929	-0.071	9.7

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
39

Blätter
Sheets
48

WK802157AV

DI
A

LA: 1300 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.004	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	1.0	0.007	0.002	-0.012	0.000	1.1
1100	0.0	0.0	0.0	1.2	0.008	0.003	-0.015	0.000	1.2
1200	0.0	0.0	0.0	1.3	0.009	0.004	-0.019	-0.001	1.3
1300	0.0	0.0	0.0	1.4	0.010	0.004	-0.023	-0.001	1.5
1400	0.0	0.0	0.0	1.5	0.011	0.005	-0.027	-0.001	1.6
1500	0.0	0.0	0.0	1.7	0.012	0.006	-0.033	-0.001	1.8
1600	0.0	0.0	-0.1	1.8	0.013	0.007	-0.038	-0.001	1.9
1700	0.0	0.0	-0.1	2.0	0.014	0.009	-0.045	-0.001	2.1
1800	0.0	0.0	-0.1	2.1	0.016	0.010	-0.052	-0.002	2.2
1900	0.0	0.0	-0.1	2.3	0.017	0.011	-0.060	-0.002	2.4
2000	0.0	0.0	-0.1	2.4	0.019	0.013	-0.068	-0.002	2.6
2100	0.0	0.0	-0.1	2.6	0.020	0.015	-0.078	-0.003	2.7
2200	0.0	0.0	-0.1	2.7	0.022	0.017	-0.089	-0.003	2.9
2300	0.1	0.0	-0.2	2.9	0.024	0.019	-0.100	-0.003	3.1
2400	0.1	0.0	-0.2	3.1	0.025	0.022	-0.113	-0.004	3.3
2500	0.1	0.0	-0.2	3.3	0.027	0.025	-0.127	-0.005	3.5
2600	0.1	0.0	-0.2	3.5	0.030	0.028	-0.142	-0.005	3.7
2700	0.1	0.1	-0.3	3.7	0.032	0.031	-0.158	-0.006	3.9
2800	0.1	0.1	-0.3	3.9	0.034	0.035	-0.176	-0.007	4.1
2900	0.1	0.1	-0.3	4.1	0.037	0.039	-0.196	-0.008	4.3
3000	0.1	0.1	-0.4	4.3	0.039	0.043	-0.218	-0.009	4.6
3100	0.1	0.1	-0.4	4.5	0.042	0.048	-0.241	-0.010	4.8
3200	0.1	0.1	-0.5	4.7	0.045	0.053	-0.267	-0.011	5.1
3300	0.1	0.1	-0.6	5.0	0.049	0.059	-0.295	-0.013	5.3
3400	0.1	0.1	-0.6	5.2	0.053	0.066	-0.327	-0.014	5.6
3500	0.1	0.1	-0.7	5.5	0.057	0.073	-0.361	-0.016	5.9
3600	0.1	0.2	-0.8	5.8	0.061	0.080	-0.400	-0.019	6.2
3700	0.2	0.2	-0.9	6.0	0.066	0.089	-0.442	-0.021	6.5
3800	0.2	0.2	-1.0	6.3	0.071	0.099	-0.490	-0.024	6.9
3900	0.2	0.2	-1.1	6.6	0.077	0.109	-0.542	-0.027	7.2
4000	0.2	0.3	-1.2	7.0	0.083	0.120	-0.599	-0.031	7.6
4100	0.2	0.3	-1.4	7.3	0.089	0.132	-0.661	-0.035	8.0
4200	0.2	0.3	-1.5	7.6	0.094	0.144	-0.726	-0.039	8.4
4300	0.3	0.4	-1.7	8.0	0.099	0.156	-0.791	-0.043	8.8
4400	0.3	0.4	-1.9	8.3	0.104	0.169	-0.857	-0.048	9.2
4500	0.3	0.5	-2.2	8.7	0.109	0.183	-0.923	-0.053	9.6

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 40	Blätter Sheets 48
		WK802157AV		DI A	

LA: 1400 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ m/s
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.004	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	0.9	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	1.1	0.007	0.002	-0.012	0.000	1.1
1100	0.0	0.0	0.0	1.2	0.008	0.003	-0.015	0.000	1.2
1200	0.0	0.0	0.0	1.3	0.009	0.004	-0.019	0.000	1.3
1300	0.0	0.0	0.0	1.4	0.010	0.004	-0.023	0.000	1.5
1400	0.0	0.0	0.0	1.6	0.011	0.005	-0.027	-0.001	1.6
1500	0.0	0.0	0.0	1.7	0.012	0.006	-0.033	-0.001	1.8
1600	0.0	0.0	0.0	1.9	0.013	0.007	-0.038	-0.001	1.9
1700	0.0	0.0	0.0	2.0	0.014	0.008	-0.045	-0.001	2.1
1800	0.0	0.0	-0.1	2.2	0.016	0.010	-0.052	-0.001	2.2
1900	0.0	0.0	-0.1	2.3	0.017	0.011	-0.060	-0.001	2.4
2000	0.0	0.0	-0.1	2.5	0.019	0.013	-0.068	-0.001	2.5
2100	0.0	0.0	-0.1	2.6	0.020	0.015	-0.078	-0.002	2.7
2200	0.0	0.0	-0.1	2.8	0.022	0.017	-0.088	-0.002	2.9
2300	0.0	0.0	-0.1	3.0	0.024	0.019	-0.100	-0.002	3.1
2400	0.0	0.0	-0.1	3.2	0.025	0.022	-0.112	-0.003	3.3
2500	0.0	0.0	-0.1	3.4	0.027	0.025	-0.126	-0.003	3.5
2600	0.0	0.0	-0.2	3.6	0.030	0.028	-0.141	-0.003	3.7
2700	0.0	0.0	-0.2	3.8	0.032	0.031	-0.158	-0.004	3.9
2800	0.1	0.0	-0.2	4.0	0.034	0.035	-0.176	-0.004	4.1
2900	0.1	0.0	-0.2	4.2	0.037	0.039	-0.195	-0.005	4.3
3000	0.1	0.1	-0.3	4.4	0.039	0.043	-0.217	-0.006	4.6
3100	0.1	0.1	-0.3	4.6	0.042	0.048	-0.240	-0.007	4.8
3200	0.1	0.1	-0.3	4.9	0.045	0.053	-0.266	-0.007	5.1
3300	0.1	0.1	-0.4	5.1	0.049	0.058	-0.294	-0.008	5.3
3400	0.1	0.1	-0.4	5.4	0.053	0.065	-0.325	-0.010	5.6
3500	0.1	0.1	-0.5	5.6	0.057	0.072	-0.359	-0.011	5.9
3600	0.1	0.1	-0.5	5.9	0.061	0.079	-0.397	-0.012	6.2
3700	0.1	0.1	-0.6	6.2	0.066	0.088	-0.439	-0.014	6.5
3800	0.1	0.1	-0.6	6.5	0.071	0.097	-0.486	-0.016	6.8
3900	0.1	0.2	-0.7	6.8	0.077	0.107	-0.537	-0.018	7.2
4000	0.1	0.2	-0.8	7.1	0.083	0.118	-0.594	-0.020	7.5
4100	0.2	0.2	-0.9	7.5	0.088	0.130	-0.656	-0.023	7.9
4200	0.2	0.2	-1.0	7.8	0.094	0.142	-0.720	-0.026	8.3
4300	0.2	0.2	-1.2	8.2	0.099	0.154	-0.786	-0.029	8.7
4400	0.2	0.3	-1.3	8.5	0.104	0.166	-0.852	-0.032	9.1
4500	0.2	0.3	-1.4	8.9	0.109	0.180	-0.919	-0.035	9.5

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
41

Blätter
Sheets
48

WK802157AV

DI
A

LA: 1500 A 0/00

SD m	SW-Correction (A 0/00) due to Variation of:				FZ-Variation (s) due to Variation of:				DQ
	V m/s	T C	P mbar	WL m/s	V m/s	T C	P mbar	WL m/s	
100	0.0	0.0	0.0	0.1	0.001	0.000	0.000	0.000	0.1
200	0.0	0.0	0.0	0.2	0.001	0.000	0.000	0.000	0.2
300	0.0	0.0	0.0	0.3	0.002	0.000	-0.001	0.000	0.3
400	0.0	0.0	0.0	0.4	0.002	0.000	-0.002	0.000	0.4
500	0.0	0.0	0.0	0.5	0.003	0.000	-0.003	0.000	0.5
600	0.0	0.0	0.0	0.6	0.004	0.001	-0.004	0.000	0.6
700	0.0	0.0	0.0	0.7	0.004	0.001	-0.005	0.000	0.7
800	0.0	0.0	0.0	0.8	0.005	0.001	-0.007	0.000	0.8
900	0.0	0.0	0.0	1.0	0.006	0.002	-0.010	0.000	1.0
1000	0.0	0.0	0.0	1.1	0.007	0.002	-0.012	0.000	1.1
1100	0.0	0.0	0.0	1.2	0.008	0.003	-0.015	0.000	1.2
1200	0.0	0.0	0.0	1.3	0.009	0.004	-0.019	0.000	1.3
1300	0.0	0.0	0.0	1.5	0.010	0.004	-0.023	0.000	1.5
1400	0.0	0.0	0.0	1.6	0.011	0.005	-0.027	0.000	1.6
1500	0.0	0.0	0.0	1.7	0.012	0.006	-0.033	0.000	1.8
1600	0.0	0.0	0.0	1.9	0.013	0.007	-0.038	0.000	1.9
1700	0.0	0.0	0.0	2.0	0.014	0.008	-0.045	0.000	2.1
1800	0.0	0.0	0.0	2.2	0.016	0.010	-0.052	-0.001	2.2
1900	0.0	0.0	0.0	2.3	0.017	0.011	-0.060	-0.001	2.4
2000	0.0	0.0	0.0	2.5	0.019	0.013	-0.068	-0.001	2.5
2100	0.0	0.0	0.0	2.7	0.020	0.015	-0.078	-0.001	2.7
2200	0.0	0.0	0.0	2.9	0.022	0.017	-0.088	-0.001	2.9
2300	0.0	0.0	-0.1	3.0	0.024	0.019	-0.100	-0.001	3.1
2400	0.0	0.0	-0.1	3.2	0.025	0.022	-0.112	-0.001	3.3
2500	0.0	0.0	-0.1	3.4	0.027	0.024	-0.126	-0.001	3.5
2600	0.0	0.0	-0.1	3.6	0.029	0.027	-0.141	-0.002	3.7
2700	0.0	0.0	-0.1	3.8	0.032	0.031	-0.157	-0.002	3.9
2800	0.0	0.0	-0.1	4.0	0.034	0.034	-0.175	-0.002	4.1
2900	0.0	0.0	-0.1	4.2	0.037	0.038	-0.195	-0.003	4.3
3000	0.0	0.0	-0.1	4.5	0.039	0.043	-0.216	-0.003	4.6
3100	0.0	0.0	-0.1	4.7	0.042	0.047	-0.239	-0.003	4.8
3200	0.0	0.0	-0.2	4.9	0.045	0.052	-0.265	-0.004	5.0
3300	0.0	0.0	-0.2	5.2	0.049	0.058	-0.293	-0.004	5.3
3400	0.0	0.0	-0.2	5.4	0.052	0.064	-0.324	-0.005	5.6
3500	0.0	0.0	-0.2	5.7	0.057	0.071	-0.357	-0.005	5.9
3600	0.0	0.1	-0.3	6.0	0.061	0.079	-0.395	-0.006	6.2
3700	0.1	0.1	-0.3	6.3	0.066	0.087	-0.437	-0.007	6.5
3800	0.1	0.1	-0.3	6.6	0.071	0.096	-0.483	-0.008	6.8
3900	0.1	0.1	-0.4	6.9	0.077	0.106	-0.534	-0.009	7.1
4000	0.1	0.1	-0.4	7.2	0.083	0.117	-0.591	-0.010	7.5
4100	0.1	0.1	-0.5	7.6	0.088	0.129	-0.652	-0.011	7.9
4200	0.1	0.1	-0.5	7.9	0.094	0.140	-0.717	-0.013	8.3
4300	0.1	0.1	-0.6	8.3	0.099	0.152	-0.783	-0.014	8.7
4400	0.1	0.1	-0.6	8.7	0.104	0.165	-0.849	-0.015	9.1
4500	0.1	0.2	-0.7	9.0	0.109	0.178	-0.916	-0.017	9.5

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 42	Blätter Sheets 48
		WK802157AV			DI A

2.6 TEMPERATURKORREKTUR

2.6 CORRECTION OF TEMPERATURE

Temperaturkorrektur ΔT_F
für 100% relative Luftfeuchtigkeit r

Correction of Temperature ΔT_F
for 100% relative Humidity r

$$T_{\text{virtuell}} = T_{\text{ball.}} + \frac{r[\%]}{100} \cdot \Delta T_F [\text{°C}]$$

Luftdruck Barometric Pressure [mb]	ΔT_F - Tafel										ΔT_F - Table								
	-40	-35	-30	-25	-20	-15	-10	-5	0	+5	+10	+15	+20	+25	+30	+35	+40	+45	+50
500	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.9	1.3	1.8	2.7	3.8	5.3	7.3	10.1	13.7	18.5	24.9	33.4
550	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.7	2.4	3.4	4.8	6.6	9.1	12.4	16.8	22.5	30.1
600	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.2	3.1	4.4	6.1	8.3	11.3	15.3	20.5	27.4
650	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.4	2.0	2.9	4.0	5.6	7.7	10.4	14.1	18.8	25.1
700	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.7	3.7	5.2	7.1	9.7	13.0	17.4	23.2
750	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.8	1.2	1.8	2.5	3.5	4.8	6.6	9.0	12.1	16.2	21.5
800	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.8	1.2	1.7	2.3	3.3	4.5	6.2	8.4	11.3	15.1	20.1
850	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.6	2.2	3.1	4.3	5.8	7.9	10.6	14.2	18.9	
900	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.5	2.1	2.9	4.0	5.5	7.5	10.0	13.4	17.7
950	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.4	2.0	2.8	3.8	5.2	7.1	9.5	12.7	16.8
1000	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.9	2.6	3.6	4.9	6.7	9.0	12.0	15.9
1050	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.8	2.5	3.4	4.7	6.4	8.6	11.4	15.1
1100	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.2	1.7	2.4	3.3	4.5	6.1	8.2	10.9	14.4
1150	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.3	3.1	4.3	5.8	7.8	10.4	13.7
1200	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.8	1.1	1.6	2.2	3.0	4.1	5.6	7.5	9.9	13.1
1250	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.1	1.5	2.1	2.9	3.9	5.3	7.2	9.5	12.6	

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
43

Blätter
Sheets
48

WK802157AV

DI
A

2.7 GEBRAUCH DER TAFEL

Für den Gebrauch der Korrekturtafel sind folgende Abweichungen von den Standardbedingungen (V_0 , T_0 , P_0) zu berechnen:

$$V_0 - \text{Abweichung: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperaturabweichung: } \Delta T_1 = T_1 - T_0$$

$$\text{Druckabweichung: } \Delta P_1 = P_1 - P_0$$

Ballistischer Längswind: WL1

Ballistischer Querwind: WQ1

V_1 = gemessene Mündungsgeschwindigkeit

T_1 = gemessene Lufttemperatur an der Mündung

P_1 = gemessene Luftdruck an der Mündung

Beispiel:

Bestimme den Schusswinkel, die Geschossflugzeit und die Seitenkorrektur für ein Ziel in 3000 m Horizontaldistanz (**SD**):

Mündungsgeschwindigkeit (gem.) $V_1 = 1385$ m/s

Für die atmosphärischen Bedingungen auf Mündungshöhe werden (als Beispiel) folgende ballistische Werte gemessen:

Lufttemperatur $T_1 = +22$ °C

Luftdruck $P_1 = 943.25$ mbar

Längswind (Gegenwind) $WL1 = -3$ m/s

Querwind (von rechts) $WQ1 = -2$ m/s

Bemerkung 1: Der ballistische Wind ist die Basis für die Wind-Korrektur. Er stellt den mittleren konstanten Wind entlang der Flugbahn dar, der die selben Korrekturfaktoren benötigt wie das wirkliche Windprofil.

Bemerkung 2: Die relative Luftfeuchtigkeit r wird berücksichtigt, indem anstelle von T_1 (T_{ball}) die Temperatur T_{virtuell} verwendet wird (s. § 2.6).

Transformation der Daten auf Tafelbedingungen

$$\Delta V_1 = V_1 - V_0 = 1385 - 1140 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7 \text{ }^{\circ}\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 (\text{Mitwind (+)}; \text{Gegenwind (-)}) = -3 \text{ m/s}$$

$$WQ1 (\text{von links (+)}; \text{von rechts (-)}) = -2 \text{ m/s}$$

2.7 USE OF THE TABLE

To use the correction table the following deviations from the standard conditions (V_0 , T_0 , P_0) must be calculated:

$$V_0\text{-deviation: } \Delta V_1 = V_1 - V_0$$

$$\text{Temperature deviation: } \Delta T_1 = T_1 - T_0$$

$$\text{Pressure deviation: } \Delta P_1 = P_1 - P_0$$

Ballistic down range wind: WL1

Ballistic cross wind: WQ1

V_1 = measured muzzle velocity

T_1 = measured air temperature at muzzle

P_1 = measured air pressure at muzzle

Example:

Determine the superelevation, the time of flight of the projectile and the lateral correction, for a target at a horizontal range of 3000 m (**SD**):

Muzzle velocity (measured) $V_1 = 1385$ m/s

Following ballistic values (for example) are measured for the atmospheric conditions at muzzle altitude :

Air temperature $T_1 = +22$ °C

Air pressure $P_1 = 943.25$ mbar

Head wind $WL1 = -3$ m/s

Cross wind (from right) $WQ1 = -2$ m/s

Notice 1: Basis for wind correction is the ballistic wind. This is the mean constant wind along the trajectory, which needs the same correction factors as the actual wind profile.

Notice 2: Because of the relative air humidity r the temperature T_1 (T_{ball}) is replaced by the virtual temperature T_{virtuell} (cf. § 2.6).

Transformation of the data to conform with table conditions

$$\Delta V_1 = V_1 - V_0 = 1385 - 1400 = -15 \text{ m/s}$$

$$\Delta T_1 = T_1 - T_0 = 22 - 15 = +7 \text{ }^{\circ}\text{C}$$

$$\Delta P_1 = P_1 - P_0 = 943.25 - 1013.25 = -70 \text{ mbar}$$

$$WL1 (\text{tail wind (+)}; \text{head wind (-)}) = -3 \text{ m/s}$$

$$WQ1 (\text{from left (+)}; \text{from right (-)}) = -2 \text{ m/s}$$

Berechnung des Schusswinkels SW auf eine Distanz von 3000 m

Schusswinkel für Standardbedingungen:
SW = 16.4 mils (s. Blatt 4)

Schusswinkel-Korrekturen für eine Distanz **SD** von 3000 m (s. Blatt 8):

$$\Delta SW(V) = 0.3 \text{ mils} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.4 \text{ mils} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -1.7 \text{ mils} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.2 \text{ mils} \quad \text{für } WL = +10 \text{ m/s}$$

SW(korrigiert) =

$$SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL =$$

$$16.4 + (-15) * 0.3 / (-10) + 7 * 0.4 / (-10) + (-70) * (-1.7) / (-100) + (-3) * (-0.2) / 10$$

$$= 15.44 \text{ mils}$$

Calculation of the superelevation SW at a range of 3000 m

Superelevation for standard conditions:
SW = 16.4 mils (see sheet 4)

Superelevation correction for a range **SD** of 3000 m (see sheet 8):

$$\Delta SW(V) = 0.3 \text{ mils} \quad \text{for } \Delta V = -10 \text{ m/s}$$

$$\Delta SW(T) = 0.4 \text{ mils} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta SW(P) = -1.7 \text{ mils} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta SW(WL) = -0.2 \text{ mils} \quad \text{for } WL = +10 \text{ m/s}$$

SW(corrected) =

$$SW + \Delta V_1 * \Delta SW(V) / \Delta V + \Delta T_1 * \Delta SW(T) / \Delta T + \Delta P_1 * \Delta SW(P) / \Delta P + WL_1 * \Delta SW(WL) / WL =$$

$$16.4 + (-15) * 0.3 / (-10) + 7 * 0.4 / (-10) + (-70) * (-1.7) / (-100) + (-3) * (-0.2) / 10$$

$$= 15.44 \text{ mils}$$

Berechnung der Geschossflugzeit auf einer Schussdistanz von 3000 m

Flugzeit für Standardbedingungen:
FZ = 3.729 s (s. Blatt 4)

Flugzeitänderungen für eine Schussdistanz **SD** von 3000 m (s. Blatt 8):

$$\Delta FZ(V) = 0.043 \text{ s} \quad \text{für } \Delta V = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.068 \text{ s} \quad \text{für } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.268 \text{ s} \quad \text{für } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.040 \text{ s} \quad \text{für } WL = +10 \text{ m/s}$$

FZ(korrigiert) =

$$FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL =$$

$$3.729 + (-15) * 0.043 / (-10) + 7 * 0.068 / (-10) + (-70) * (-0.268) / (-100) + (-3) * (-0.040) / 10$$

$$= 3.570 \text{ s}$$

Calculations of the time-of flight of the projectile at a range of 3000 m.

Time-of flight for standard conditions:
FZ = 3.729 s (see sheet 4)

Changes in time-of-flight for a range **SD** of 3000 m (see sheet 8):

$$\Delta FZ(V) = 0.043 \text{ s} \quad \text{for } \Delta V = -10 \text{ m/s}$$

$$\Delta FZ(T) = 0.068 \text{ s} \quad \text{for } \Delta T = -10^{\circ}\text{C}$$

$$\Delta FZ(P) = -0.268 \text{ s} \quad \text{for } \Delta P = -100 \text{ mbar}$$

$$\Delta FZ(WL) = -0.040 \text{ s} \quad \text{for } WL = +10 \text{ m/s}$$

FZ(corrected) =

$$FZ + \Delta V_1 * \Delta FZ(V) / \Delta V - \Delta T_1 * \Delta FZ(T) / \Delta T + \Delta P_1 * \Delta FZ(P) / \Delta P + WL_1 * \Delta FZ(WL) / WL =$$

$$3.729 + (-15) * 0.043 / (-10) + 7 * 0.068 / (-10) + (-70) * (-0.268) / (-100) + (-3) * (-0.040) / 10$$

$$= 3.570 \text{ s}$$

Berechnung der Seitenkorrektur DL auf einer Schussdistanz von 3000 m

Seitenkorrektur DR infolge Derivation:
DR = 0.5 mils (s. Blatt 4)

In Schussrichtung gesehen muss man nach links korrigieren (+), da der Rechtsdrall eine Rechtsabweichung (Derivation) des Geschosses bewirkt.

Seitenkorrektur DQ infolge Querwindes WQ (s. Blatt 8):

$DQ = + 5.4 \text{ mils}$ (nach links),
 für $WQ = + 10 \text{ m/s}$ (von links)

DQ (korrigiert) =
 $WQ_1 * DQ / WQ = (-2) * 5.4 / 10 = -1.08 \text{ mils}$

Definition: DQ (+): Korrektur nach links;
 DQ (-): Korrektur nach rechts

Totale Seitenkorrektur DL:

$DL = DR + DQ = 0.5 + (-1.08)$
 $= -0.58 \text{ mils}$ (nach rechts)

Calculation of the lateral correction DL at a range of 3000 m

Drift correction DR due to projectile spin:
DR = 0.5 mils (see sheet 4):

When viewing in the direction of flight, the correction must be made towards the left (+) because the right-hand spin causes a drift of the projectile to the right.

Lateral correction DQ due to cross wind WQ (see sheet 8):

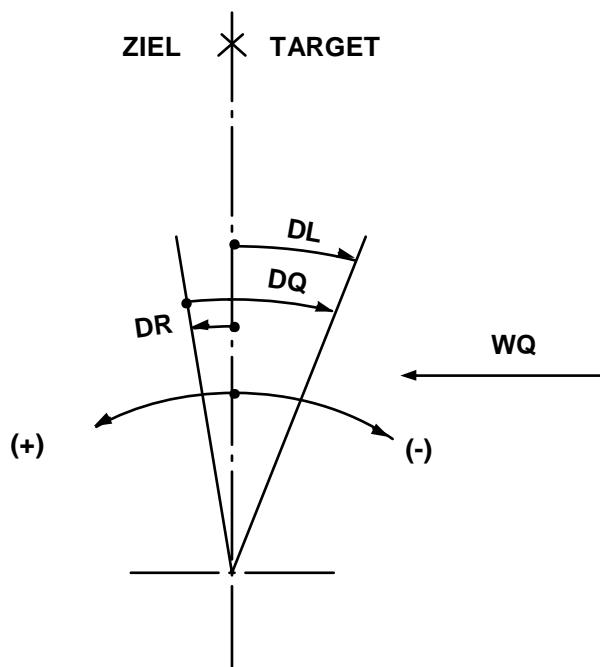
$DQ = + 5.4 \text{ mils}$ (to the left),
 for $WQ = + 10 \text{ m/s}$ (from the left)

DQ (corrected) =
 $WQ_1 * DQ / WQ = (-2) * 5.4 / 10 = -1.08 \text{ mils}$

Definition: DQ(+): correction to the left;
 DQ(-): correction to the right

Total lateral correction DL:

$DL = DR + DQ = 0.5 + (-1.08)$
 $= -0.58 \text{ mils}$ (to the right)



Einschränkung beim Gebrauch der Korrekturtafeln

Der Gebrauch der Korrekturtafeln für die Behandlung kombinierter Störungseinflüsse bei Distanzen grösser als 4500 m sollte nach Möglichkeit vermieden werden, da die Methode der Ueberlagerung von explizierten, linearisierten Störungsbeträgen in diesem Bereich zu merkbaren Schusswinkel- bzw. Distanzfehlern führen kann.

Restriction in the use of the correction tables

The use of the correction tables for the determination of combined perturbation effects should be avoided as far as possible for distances exceeding 4500 m, as beyond this range the method of superposition of explicit, linearized perturbation values may result in appreciable errors in superelevations and in distance.

RWM Schweiz AG Zürich / Switzerland	TZD346 / Bushmaster III SPEC. EXTERIOR BALLISTIC SPEZ. AUSSENBALLISTIK	Massstab Scale	Entw.-Stufe Design Stage	Blatt Sheet 46	Blätter Sheets 48
WK802157AV					DI A

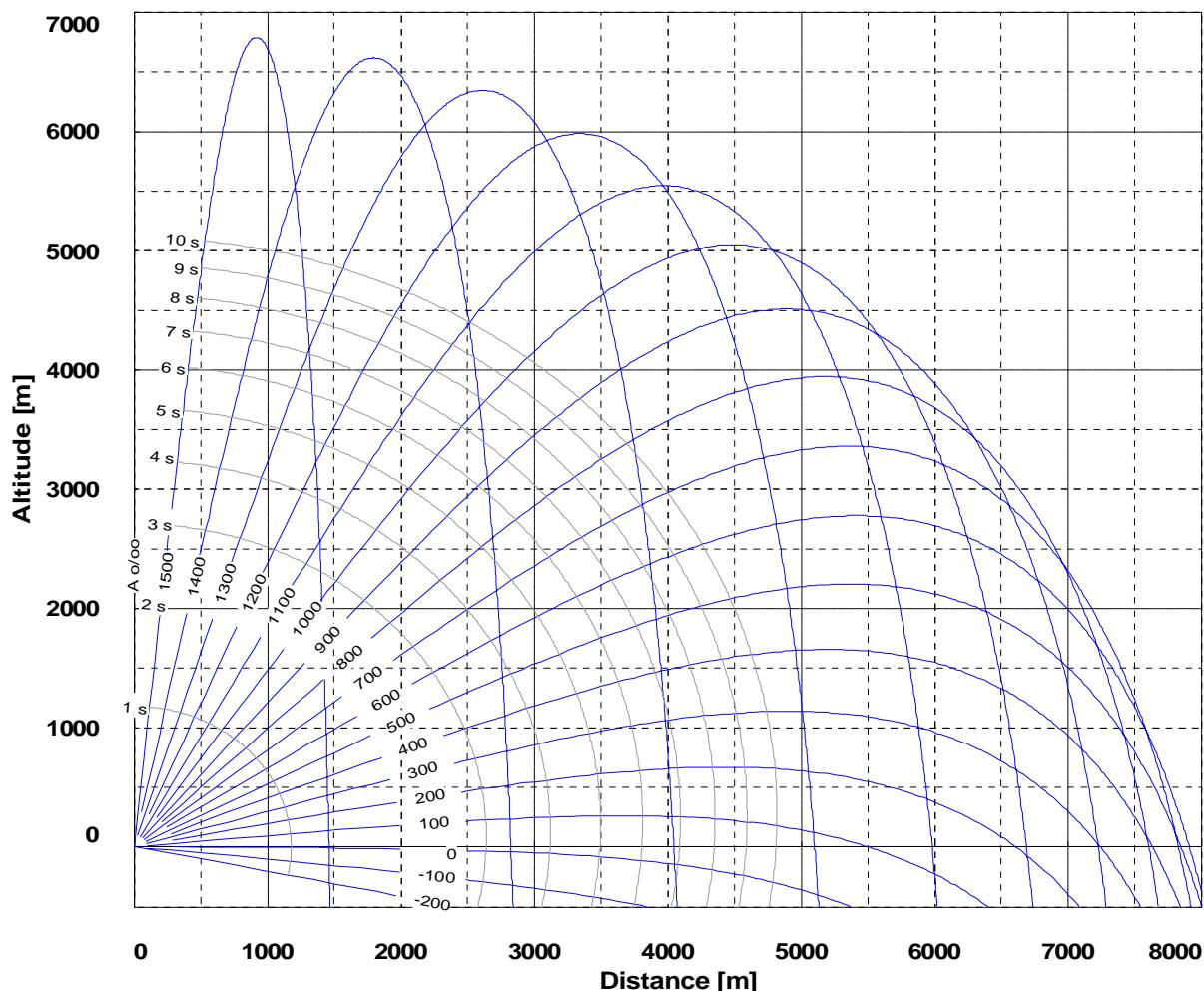
2.8 FLUGBAHNKARTE

Geschosstyp	TZD346
Mündungsgeschwindigkeit	1400 m/s
Geschossmasse	0.2925 kg
Geschossdurchmesser	26.5 mm
ICAO-Atmosphäre nach Mündungshöhe	DIN ISO 2533 0 m ü. M.
Lufttemperatur (an der Mündung)	15 °C
Luftdichte	1.2250 kg/m ³
Luftdruck	1013.25 mbar
CW-Diagramm	WK802155AV

2.8 TRAJECTORY CHART

Projectile Type	TZD346
Muzzle Velocity	1400m/s
Projectile Mass	0.2925 kg
Projectile Diameter	26.5 mm
ICAO-Standard Atmosphere	ISO 2533
Muzzle Altitude	0 m a. S.L.
Air Temperature (at Muzzle)	15 °C
Air Density	1.2250 kg/m ³
Air Pressure	1013.25 mbar
CD-Diagram	WK802155AV

External Ballistic (Trajectory Chart)



RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage
Blatt
Sheet
47

Blätter
Sheets
48

WK802157AV

DI
A

3. DOKUMENTENVERZEICHNIS

gültig letzter Index

WKTZD346AA

GESCHOSS TZ

3. DOCUMENTARY LIST

latest index valid

TPFSDS-T

WK802155AV

CW-GESETZ-DATEN

WK802155AV

CD-LAW-DATA

DIN ISO 2533

ICAO-Normatmosphäre

ISO 2533

ICAO-Standard Atmosphere

RWM Schweiz AG
Zürich / Switzerland

TZD346 / Bushmaster III
SPEC. EXTERIOR BALLISTIC
SPEZ. AUSSENBALLISTIK

Massstab
Scale

Entw.-Stufe
Design Stage

Blatt
Sheet
48

Blätter
Sheets
48

WK802157AV

DI
A