

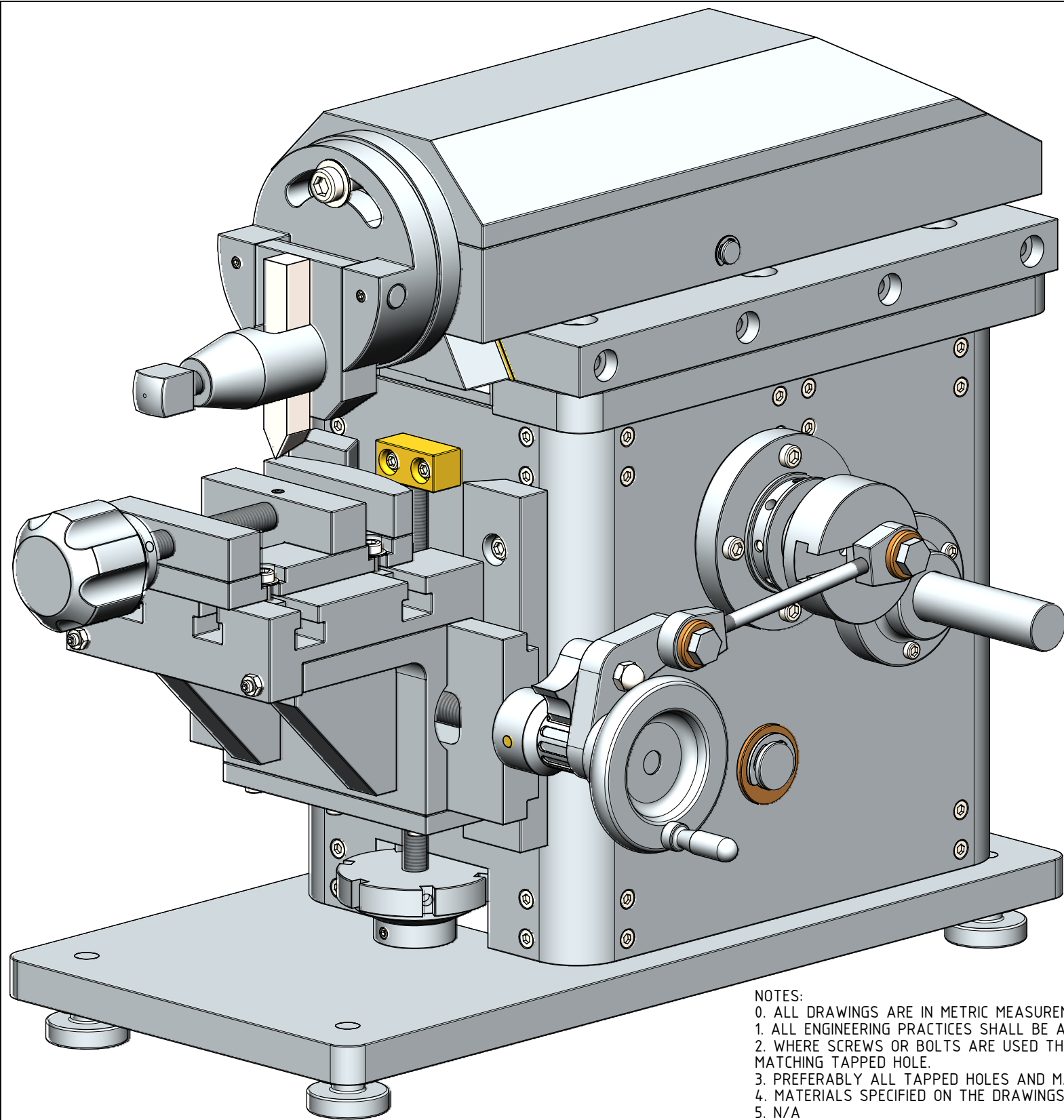
NOTES: FOUND THE ORIGINAL DRAWINGS ON THE INTERNET. THE ORIGINAL DESIGN IS BY BARRY MIDGRLEY OF AUSTRALIA AND DRAFTING WORK BY BRIAN RUPNO OF CANADA. MY DESIGN IS TWICE THE SIZE THAN THE ORIGINAL.

TITLE  
**A SIMPLE SMALL METALWORKING SHAPER**

DRAWING CONTENTS  
**GENERAL ARRANGEMENT**

PROJECT No 01-29-00  
JDW DRAUGHTING SERVICES  
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPURA 2110.  
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000  
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PROJECTION DATE MAY 2018	JDWDS Copyright © J.A.M. DE WAAL PAKAPURA NZ	MODEL SCALE: 1:1 DWG SCALE: 1:1 @A3 OR AS SHOWN SHEET: 01 OF 07 A3 No: 01-29-00-SHT01
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MATERIAL ABBREVIATIONS:  
ALU = ALUMINIUM  
BRS = BRASS  
BRZ = BRONZE OR GUNMETAL (BRZ/GM)  
CI = CAST IRON  
CU = COPPER  
GRA = GRAPHITE  
MS = MILD STEEL/BRIGHT MILD STEEL  
S/S = SILVER STEEL OR STAINLESS STEEL  
SPS = SPRING STEEL  
PEEK= POLYETHER ETHER KETONE  
SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLON OR RUBBER  
IN GENERAL SYNTHETIC MATERIALS SOULD BE ABLE TO WITHSTAND  
THE HEAT AND PRESSURE(S) APPLIED TO THEM.  
nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

OTHER ABBREVIATIONS  
DP = DEEP  
DAA= DRILL AFTER ASSEMBLY  
D&TAA= DRILL AND TAP AFTER ASSEMBLY  
CB = COUNTER BORE  
CF = CLOSE FIT (SIZE FOR SIZE)  
PF = PRESS FIT  
PFAA= PRESS FIT AFTER ASSEMBLY  
PCD = PITCH CIRCLE DIAMETER  
RM = REAM  
HEX = HEXACON, 6SIDED  
CP = COMPRESSED  
KNL = KNURLED  
CSK = COUNTERSINK  
PL = PLACES  
DWL= DOWEL  
(T)HESOP=(TAPPED)HOLES EQUALLY SPACED ON PCD  
(T)HESOC=(TAPPED)HOLES EQUALLY SPACED ON CIRCUMFERENCE  
[SA-xxx]= SUB ASSEMBLY-xxx

NOTES:  
0. ALL DRAWINGS ARE IN METRIC MEASUREMENTS  
1. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.  
2. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.  
3. PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS AND/OR BOLTS TO BE METRIC FINE (MF)  
4. MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.  
5. N/A  
6. COMPRESSION SPRINGS ARE DRAWN IN COMPRESSED STATE (CP), UNCOMPRESSED STATE IS APPROX 40% TO 60% LONGER THEN COMPRESSED STATE.  
7. WHERE PREFERRED SCREW OR RIVETED CONNECTIONS CAN BE OMITTED AND PARTS CAN BE BONDED TOGETHER BY USING EITHER HIGH STRENGTH GLUE, EPOXY RESIN, OR SOLDER.  
8. N/A  
9. THE ORDER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED AND THE MODEL IS ASSEMBLED IS ENTIRELY LEFT TO THE BUILDER/MODEL MAKER.  
10. A COLOUR SCHEME FOR THIS PROJECT IS ENTIRELY LEFT UP TO THE MODEL MAKER.  
11. THE MANNER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED IS ENTIRELY LEFT UP TO THE BUILDER.  
12. USE LOCTITE, ON SCREW OR PRESS FIT CONNECTIONS OR SURFACES, WERE DEEMED NECESSARY TO PREVENT PARTS FROM LOOSENING.  
13. WASHER AND/OR SPRINGWASHER SHALL BE USED WHERE DEEMED NECESSARY.  
XX. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.

ADDITIONAL NOTES:  
GREASE NIPPLES AND/OR OILS HOLES CAN BE ADDED AT  
THE APPROPRIATE PLACES CHOSEN BY THE BUILDER

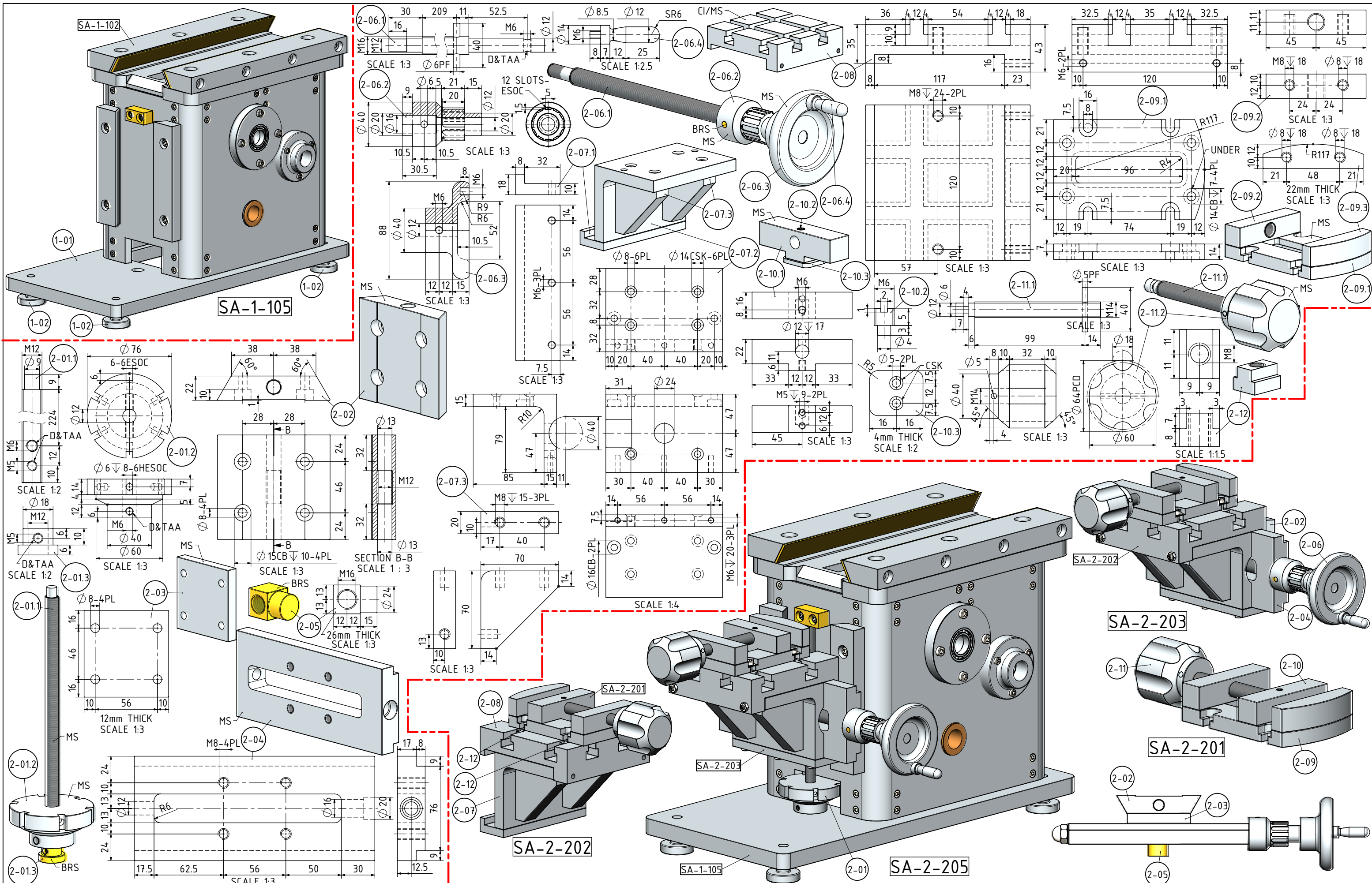
QTY.	PART NUMBER
1	SHAPER-1-01-BASE PLATE
4	SHAPER-1-02-BASE PLATE FOOT
1	SHAPER-1-03-COLUMN BODY
1	SHAPER-1-04-TOP MOUNTING PLATE
1	SHAPER-1-05-RAM GUIDE PLATE
1	SHAPER-1-05-RAM GUIDE PLATE
1	SHAPER-1-06-RAM GUIDE GIB STRIP
1	SHAPER-1-06-RAM GUIDE GIB STRIP
2	SHAPER-1-07-WORKTABLE GUIDE PLATE
1	SHAPER-1-08-JACK SCREW TOP BEARING
2	SHAPER-1-09-OSCILLATING LEVER BEARING BUSH
2	SHAPER-1-10-MOTOR SHAFT BEARING BUSH
1	SHAPER-1-11-MOTOR SHAFT BALL BEARING HOUSING
1	SHAPER-1-12-RED. GEAR BALL BEARING HOUSING
1	SHAPER-2-01-VERTICAL JACK SCREW
1	SHAPER-2-02-MOVABLE DOVE TAIL MOUNTING PLATE
1	SHAPER-2-03-SPACER BLOCK
1	SHAPER-2-04-CROSS SLIDE GUIDE PLATE
1	SHAPER-2-05-CROSS SLIDE BLOCK
1	SHAPER-2-06-CROSS SLIDE SPINDLE
1	SHAPER-2-07-WORK PLATFORM SUPPORT
1	SHAPER-2-08-WORK PLATFORM PLATE
1	SHAPER-2-09-VICE BASE PLATE
1	SHAPER-2-10-VICE MOVABLE JAW
1	SHAPER-2-11-VICE SCREW SPINDLE
4	SHAPER-2-12-VICE T-NUT
1	SHAPER-3-01-RAM
1	SHAPER-3-02-OSCILLATING LEVER TOP SHAFT
1	SHAPER-3-03-CLAPPER BOX HOLDER
1	SHAPER-3-04-CLAPPERBOX
1	SHAPER-3-05-TOOL HOLDER
1	SHAPER-3-06-CUTTING TOOL
1	SHAPER-4-01-OSCILLATING LEVER LOWER SHAFT
1	SHAPER-4-02-OSCILLATING LEVER
1	SHAPER-4-03-DRIVE SHAFT
1	SHAPER-4-04-DRIVE SHAFT GEAR WHEEL
1	SHAPER-4-05-IDLING SHAFT
1	SHAPER-4-06-LOCKING RING
1	SHAPER-4-07-CROSS CUT ADJUSTER DISC
1	SHAPER-4-08-SPACER RING
1	SHAPER-4-09-IDLER SHAFT GEAR WHEEL
1	SHAPER-4-10-IDLER SHAFT GEAR WHEEL COVER
1	SHAPER-4-11-RAM LENGTH ADJUSTER BLOCK
1	SHAPER-4-12-ADJUSTER BLOCK SCREW
1	SHAPER-4-13-ADJUSTER PIVOT AXLE NUT
1	SHAPER-4-14-OSCILLATING SLIDE BLOCK COVER
1	SHAPER-4-15-OSCILLATING SLIDE BLOCK
1	SHAPER-4-16-CROSS CUT ADJUSTER T-NUT
1	SHAPER-4-17-CROSS CUT ADJUSTER ROCKING PLATE
1	SHAPER-4-18-CROSS CUT ADJUSTER PAWL
1	SHAPER-4-19-ADJUSTER CON-ROD
2	SHAPER-M4x30 A-K C-SINK SCREW
2	SHAPER-M5x12 A-K C-SINK SCREW
4	SHAPER-M5x16 A-K CYL HEAD SCREW
1	SHAPER-M5x16 A-K GRUB SCREW
2	SHAPER-M6 NUT
1	SHAPER-M6x10 A-K GRUB SCREW
2	SHAPER-M6x16 A-K GRUB SCREW
4	SHAPER-M6x20 A-K C-SINK SCREW
8	SHAPER-M6x24 A-K CYL HEAD SCREW
4	SHAPER-M6x24 A-K GRUB SCREW
50	SHAPER-M6x26 A-K C-SINK SCREW
2	SHAPER-M6x30 A-K GRUB SCREW
3	SHAPER-M6x40 A-K GRUB SCREW
1	SHAPER-M6x54 A-K GRUB SCREW
1	SHAPER-M8 DOME NUT
4	SHAPER-M8 WASHER
2	SHAPER-M8x10 A-K CYL HEAD SCREW
4	SHAPER-M8x20 A-K CYL HEAD SCREW
8	SHAPER-M8x24 A-K CYL HEAD SCREW
10	SHAPER-M8x26 A-K CYL HEAD SCREW
8	SHAPER-M8x40 A-K GRUB SCREW
1	SHAPER-M10x20 A-K C-SINK SCREW
1	SHAPER-M10x30 A-K CYL HEAD SCREW
4	SHAPER-M10x40 A-K CYL HEAD SCREW
1	SHAPER-M10x46 A-K CYL HEAD SCREW
4	SHAPER-M10x56 A-K CYL HEAD SCREW
6	SHAPER-M10x70 A-K CYL HEAD SCREW
1	SHAPER-M12 DOME NUT
2	SHAPER-M12 WASHER
3	SHAPER-M12x44 A-K CYL HEAD SCREW


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TITLE	DRAWING CONTENTS	PROJECT No	PROJECTION	DATE	MODEL SCALE: 1:1
A SIMPLE SMALL METALWORKING SHAPER	ISOMETRIC VIEW, NOTES, BILL OF MATERIALS	01-29-00		MAY 2018	DWG SCALE: 1:1 @A3 OR AS SHOWN
		JDW DRAUGHTING SERVICES			Copyright © J.A.M. DE WAAL PAPAKURA NZ
		J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAKURA 2110. NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000 E-MAIL: dewaal@xfra.co.nz.			
				SHEET: 02 OF 07	A3 No: 01-29-00-SHT02



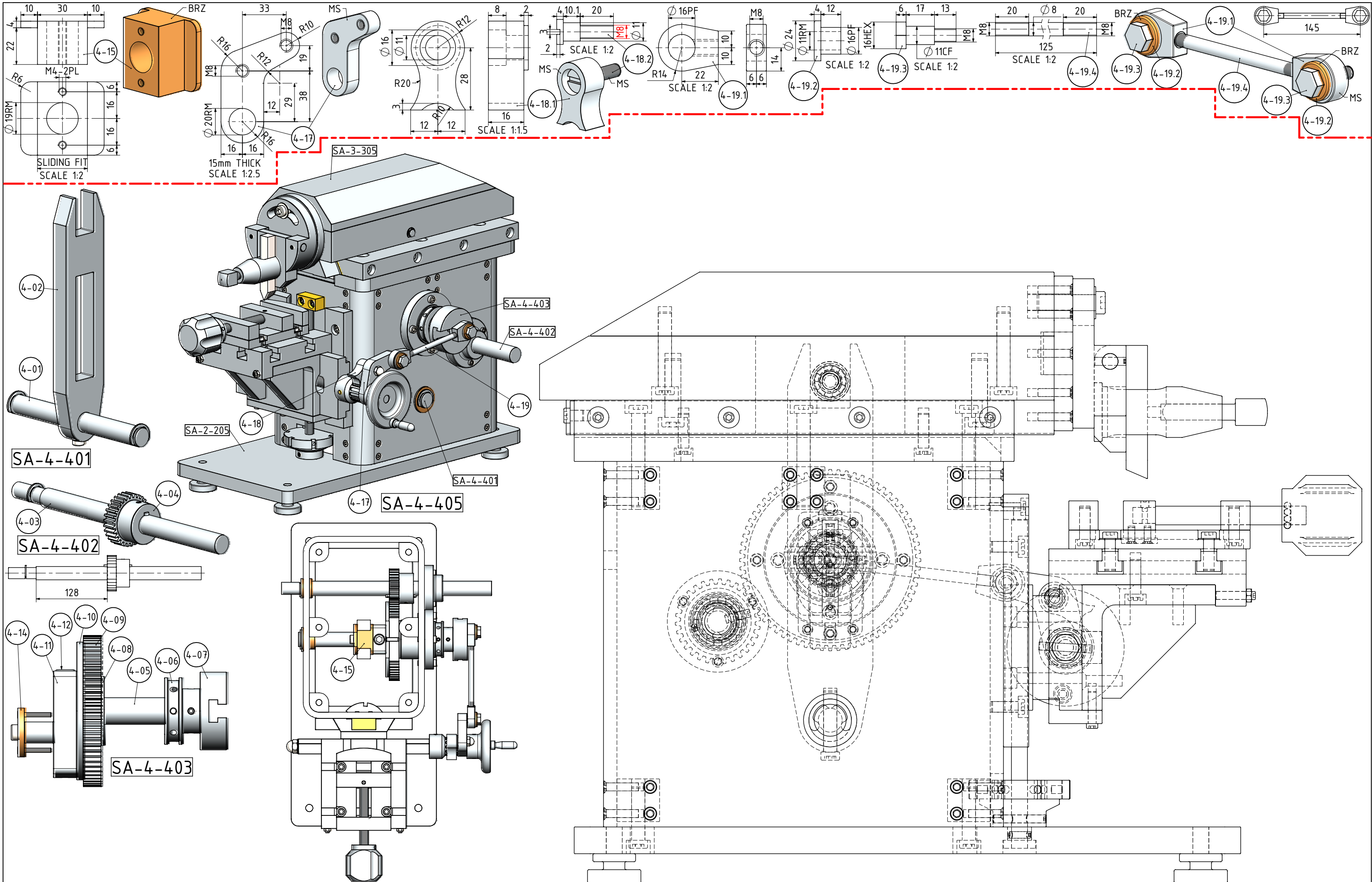





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TITLE A SIMPLE SMALL METALWORKING SHAPER			DRAWING CONTENTS PARTS AND ASSEMBLIES			PROJECT No 01-29-00 JDW DRAUGHTING SERVICES J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPURA 2110. NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000 E-MAIL: dewaal@xtra.co.nz.		PROJECTION  JDWDS	MODEL SCALE: 1:1 DWG SCALE: 1:1 @A3 OR AS SHOWN Copyright © J.A.M. DE WAAL PAKAPURA NZ	
						DATE MAY 2018		SHEET: 04 OF 07	A3	No: 01-29-00-SHT04

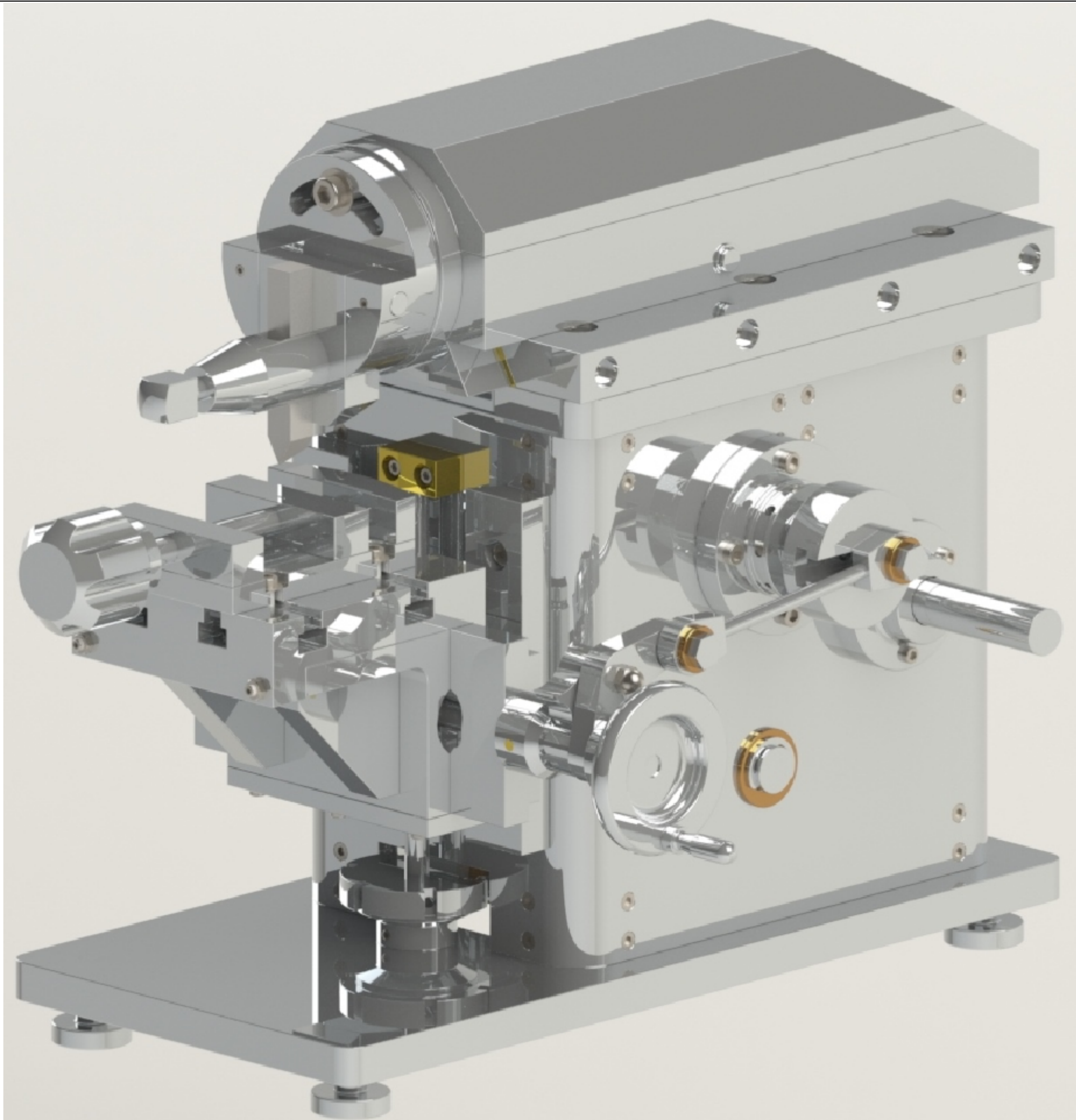






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						JDW DRAUGHTING SERVICES			DWG SCALE: 1:1 @A3 OR AS SHOWN	
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPURA 2110. NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000 E-MAIL: dewaal@xtra.co.nz.						DATE MAY 2018		Copyright © J.A.M. DE WAAL PAKAPURA NZ		
						SHEET: 06 OF 07		A3 No: 01-29-00-SHT06		





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TITLE  
A SIMPLE SMALL METALWORKING SHAPER

DRAWING CONTENTS  
RENDERED PICTURE

PROJECT No 01-29-00  
JDW DRAUGHTING SERVICES  
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PROJECTION  
DATE  
MAY 2018  
SHEET: 07 OF 07

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