

## Safety Protective Gear

Head Protection  P. 31-1 ~ 7	Eye Protection  P. 31-7 ~ 9
Body Protection  P. 31-9 ~ 18	Foot Protection  P. 31-19
Anti-Piracy Goods  P. 31-20 ~ 23	Hand/Arm Protection  P. 31-24

## Slotted V-Gard Safety Helmets with Staz-On Key Push Suspension

Casco de Seguridad para Protección Vertical con Banda de Suspensión  
スライド式サスペンション付きガードヘルメット V-GARD 型安全帽

Made of polyethylene shell with suspension system working together as a protection system. MSA V-Gard caps meet or exceed all applicable requirements for a Type I (top impact) helmet as outlined in ANSI Z89.1-2014, Class E, and as outlined in CSA Z94.1-2005, Class E with 1-Touch® and Fas-Trac suspensions. For European versions, Push Key suspension fulfills EN 397:1995. MSA V-Gard caps are not specifically designed to protect against lateral blows from the front, side, or rear.

Available in three sizes for cap : small (6-7<sup>1</sup>/<sub>8</sub>), standard (6<sup>1</sup>/<sub>2</sub>-8), and large (7-8<sup>1</sup>/<sub>2</sub>), Hat : medium (6<sup>1</sup>/<sub>2</sub>-8") only and in a wide choice of colours in order to satisfy your requirements.



Cap



Hat

### Cap

Unit Per Pcs.			
CODE	Colour	CODE	Colour
31 01 01	White	31 01 09	Hi-Viz Lime Green
02	Blue	10	Gold
03	Yellow	11	Robin's Egg Blue
04	Orange	12	Brown
05	Red	13	Silver
31 01 06	Green	31 01 14	Tan
07	Grey	15	Black
08	Hi-Viz Orange		
33 11 63	Staz-On Suspension		10087218
33 11 64	Helmet Chin Strap		88128

Name of Mfr.: MSA The Safety Company

### Hat

Size: M only.

Unit Per Pcs.			
CODE	Colour	CODE	Colour
31 01 16	White	31 01 35	Grey
17	Blue	36	Hi-Viz Orange
18	Yellow	37	Bright Lime Green
19	Orange	38	Gold
20	Red	39	Silver
34	Green	40	Black
33 11 63	Staz-On Suspension		10087218
33 11 64	Helmet Chin Strap		88128

Name of Mfr.: MSA The Safety Company

## Slotted V-Gard GREEN Safety Caps and Helmets

with Fas-Trac III Suspension

Gorras y cascos de seguridad ranurados con protector en V ecológicos con suspensión Fas-Trac III

サスペンション付きエコ仕様ガードヘルメット

带悬挂装置的生态规格防护头盔

Shell made of green high-density polyethylene (GHDPE), a plant-derived plastic that has the benefit of cutting carbon emissions and reducing atmospheric CO<sub>2</sub>, with Fas-Trac III suspension system working together as a protection

system. Certified USDA Biobased (>95% biobased shell). MSA V-Gard GREEN caps and helmets meet or exceed all applicable requirements for a Type I (top impact) helmet as outlined in ANSI/ISEA Z89.1-2014, Class E and CSA Z94.1-2005.

MSA V-Gard GREEN caps and helmets are not specifically designed to protect against lateral blows from the front, side, or rear.

Available in size: standard (6<sup>1</sup>/<sub>2</sub>-8).



Cap



Hat

Unit Per Pcs.

Colour	Cap		Helmet	
	CODE	P/N	CODE	P/N
White	31 01 41	10160923	31 01 46	10150199
Blue	42	10160925	47	10150221
Yellow	43	10160924	48	10150220
Red	44	10160927	49	10150223
Green	45	10160926	50	10150222

Name of Mfr.: MSA The Safety Company

## Replacement Suspensions for Slotted MSA V-Gard Safety Helmet

Banda de Suspensión de Recambio para Casco de Seguridad

V ガードヘルメット用替えサスペンション

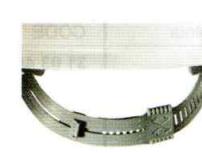
V-GARD 型安全帽内衬

Available 5 types of suspension as replacement for MSA V-Gard safety helmet.

- Fas-Trac : Adjustable head band by dial ratchet knob [US & EU]
- Staz-On : Adjustable head band by sliding [US]
- Push Key : Adjustable head band by sliding and releasing by pushing button [EU]
- 1-Touch : Easy squeeze opening and One-Hand slide adjustment [US]
- Swing Ratchet : The only self-adjusting reversible ratchet suspension [US]



Fas-Trac



Staz-On



Push Key



1-Touch



Swing Ratchet

CODE	Type	Size	Nom Inch	Unit Per Pcs.	
				Part No.	
				US	EU
31 01 21 22 23 24	Fas-Trac	Small	6 to 7-1/8"	492567	-
		Standard	6-1/2 to 8"	10087220	-
		Large	7 to 8-1/2"	492568	-
			52 - 64 cm	-	10109261
31 01 25 26 27	Staz-On	Small	6 to 7-1/8"	467386	-
		Standard	6-1/2 to 8"	10087218	-
		Large	7 to 8-1/2"	492566	-
31 01 29	Push Key	Standard	52 - 64 cm	-	10165207
31 01 31	1-Touch	Standard	6-1/2 to 8"	10061123	-
31 01 33	Swing Ratchet	Standard	6-1/2 to 7-5/8"	816645	-

Name of Mfr.: MSA The Safety Company

## Reduced Peak Safety Helmets Linesman

Casco de Seguridad con Visera Pequeña  
小ひさし型安全ヘルメット 尖頂減厭型安全帽

High safety with low weight. Reassuring strength with feel-good comfort. Manufactured from high quality, strong ABS (Acrylonitrile-Buradiene-Styrene)



material, the concept is 20% lighter than most other helmets. Unique design, provides an extended nape, ensuring increased neck protection. Dry-Tech sweatband for maximum comfort, for extended periods of use. It satisfies all the electric insulation requirements of EN397 and ANSI Z 89 class E. It comes complete with a high security head harness, quick release chinstrap, comfortable terylene cradle and sweatband. Standard size is 51-63 cm. Compliant with EN397-30°C (Low temperature), 440V A.C. (Electric resistance). Available also with wheel ratchet option.

### Helmet Option: Reduced Peak Ratchet Non-Vented Weight 364 grm

Unit Per Pcs.			
CODE	Colour	CODE	Colour
31 03 01	White	31 03 06	Green
02	Blue	07	Black
03	Red	08	Light Blue
04	Yellow	09	Hi-Viz Yellow
05	Orange	10	Hi-Viz Orange

Name of Mfr.: Centurion Safety EU

### Helmet Option: Reduced Peak Slip Non-Vented Weight 345 grm

Unit Per Pcs.			
CODE	Colour	CODE	Colour
31 03 41	White	31 03 46	Green
42	Blue	47	Black
43	Red	48	Light Blue
44	Yellow	49	Hi-Viz Yellow
45	Orange	50	Hi-Viz Orange

Name of Mfr.: Centurion Safety EU

## Replacement Accessories



Cradle, Standard



Cradle with Ratchet



Sweatband

31 03 11	Harness (Chinstrap), 4 point quick release	Pc.
31 03 12	Sweatband, Dry-Tech, for Linesman helmet	"
31 03 13	Cradle, standard, with Dry-Tech sweatband	"
14	Cradle with Ratchet and Dry-Tech sweatband	"

## Safety Helmets

### V-Gard 900 series

#### Integrated Over-spectacle/Visor

Cascos de seguridad integrados con gafas/visor

ゴーグル / バイザー付きヘルメット 带护目镜 / 面罩的头盔

V-Gard® 900 helmet range features a dynamic design and a premium shell for maximized strength. Various customization options (shell colors, stickers, badge holder, full color printing, etc.), ease of use and best in class comfort with Fas-Trac III suspension will optimize wearer acceptance.

The shell is made of ABS (Acrylonitrile Butadiene Styrene) and meet or exceed all applicable standard requirements in EN397, including optional requirements of very low temperature (-30°C), LD (Lateral Deformation), MM (Molten Metal), 440 VAC & EN 50365 1,000 VAC (non-vented version only for V-Gard 930), EN 134631-1, use in explosive atmosphere ATEX (zone 1, 2, 20, 21 and 22).

Size : 52 ... 64 cm.

Weight : V-Gard 930 is 495 grams, V-Gard 950 is 635 grams.

**V-Gard 930 – Integrated over-spectacle** with red micro-prismatic retro-reflective stickers



- Vented and non-vented shell in 6 different colors.
- Balanced, low profile with premium eye protection for Construction, Utilities, Shipping & OGPC.
- Premium anti-fog over-spectacle fits over all corrective glasses.
- Intelligent adjustment and innovative rubber seal to ensure gap free eye protection on the face.
- Grip area with rail system for quick and easy lens stowing.

Colour	Vented		Non-Vented	
	CODE	Part No.	CODE	Part No.
White	31 03 15	GVC1A-00000H0-000	31 03 21	GVD1A-00000H0-000
Blue	16	GVC5A-00000H0-000	22	GVD5A-00000H0-000
Yellow	17	GVC2A-00000H0-000	23	GVD2A-00000H0-000
Red	18	GVC3A-00000H0-000	24	GVD3A-00000H0-000
Orange	19	GVC6A-00000H0-000	25	GVD6A-00000H0-000
Green	31 03 20	GVC4A-00000H0-000	31 03 26	GVD4A-00000H0-000

Name of Mfr. : MSA the Safety Company

**V-Gard 950 – Integrated visor** with red micro-prismatic retro-reflective stickers

- Non-vented shell in 6 different colors.
- Balanced, low profile electrician helmet with full face protection.
- For shipping, Utilities & OGPC.
- Visor protects against impact, chemical splash, Ultra-Violet radiation, molten metal splash and electric arc to GS-ET-29 Class 1 (4kA).

- Fits over corrective glasses.
- Reliable one handed smooth movement, even gloved
- Complete with 4 point chinstrap for better helmet retention.
- Optional arc flash ear-flaps to ensure side protection against arc flash.



Unit Per Pc.

**Non-Vented**

Colour	CODE	Part No.
White	31 03 27	GVF1A-80A00H0-000
Blue	28	GVF5A-80A00H0-000
Yellow	29	GVF2A-80A00H0-000
Red	30	GVF3A-80A00H0-000
Orange	31	GVF6A-80A00H0-000
Green	31 03 32	GVF4A-80A00H0-000

Name of Mfr.: MSA the Safety Company

**Ventilated Safety Helmets**

Cascos de seguridad ventilados

通気式安全ヘルメット 通气型安全帽

Six-point, webbed suspension system conforms to wearer's head for maximum comfort, safety, and stability; chinstrap designed to reduce risk of helmet loss during fall (strength greater than 50 daN); includes foam inserts in two thicknesses for custom fit. Sliding vent covers allow for adjustments to air circulation inside helmet. Slots, clips, and inserts for mounting ear and face protection and headlamps. Weight: 455 g. Circumference: minimum – 53 cm, maximum – 63 cm.



Certifications: CE EN 12492, UIAA, ANSI Z89.1-2009, Type I Class C.

Complies with EN 397 and EN 12492 for protection against impact and EN 397 for protection against lateral deformation and for wear in cold temperatures.

Unit Per Pc.

CODE	Colour	CODE	Colour
31 03 36	White	31 03 39	Orange
37	Blue	40	Red
38	Yellow		

Name of Mfr.: Scandia Gear

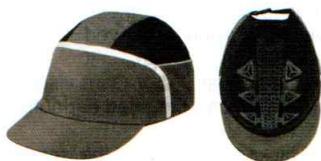
**Bump Cap**

Tapa bombarda

衝撃緩和機能性キャップ

減震功能帽

Designed to protect your head from minor impacts and bumps. The inner shell or cushioning materials inside of the cap absorbs and disperses the force of impact. Suitable for working with lower-ceiling or small spaces, or other similar work conditions.



31 03 52

Bump cap with adjustable back strap, size 54 - 62 cm

Pc.

**V-Gard Headgear and Accessories**

V-Gard Headgear y accesorios

V ガードヘッドギア &amp; 付属品類 V-Gard 的头饰和配件

V-Gard Headgear is a brow guard that in combination with the wide range of V-Gard Visors offers a lightweight, comprehensive face protection system. Featuring a durable and stylish HDPE frame and the choice of over 20 visors it is ideal for many applications. With the unique 3-point visor load system visors are fitted or removed easily and quickly. Adjustable to all head sizes and with two comfort sweatbands all day comfort is for sure.

**Headgear Frames**

- Can be used with earmuffs, half-mask respirators and more ...
- V-shaped alignment guides for easy installation.
- Non-metal construction for use in electrical applications.
- Optional ET frame is made of heat resistant Nylon in grey with extended crown for additional coverage.
- ANSI tested to temperatures of 400°F (204°C).
- Fits head sizes 52 – 64 cm.

**Approvals**

ANSI / ISEA Z87-1 : 2010 / CSA Z94 / EN166:2001 389 BT/ EN1731-F / AS/NZS 1337

Unit Per Pc.		
CODE	Description	MSA No.
31 05 10	V-Gard Headgear Standard without visor	10127061
31 05 20	V-Gard Headgear Elevated Temperature without visor	10127062

Name of Mfr.: MSA The Safety Company

**Faceshield Frames**

This frame works with any MSA slotted or non-slotted helmet and features our unique sloped design to help material slide off the frame and out of site. Can be used with earmuffs, half-mask respirators and other personal protective equipment. Stays securely on the cap, thanks to the heavy-duty, flat, rubber strap. The elevated temperature model withstands temps up to 350°F (176°C).

- Sloped design helps material easily slide off the frame.
- Pivot location for use with earmuffs, half-mask respirators and more.
- V-shaped alignment guides for easy installation.
- Replaceable, optional debris control creates tight seal between frame and helmet.
- Heavy-duty, flat, rubber strap for easy and secure placement of frame on cap.
- Non-metal construction for use in electrical applications.
- ET frame is tested to temperatures of 350°F (176.7°C), reducing warping, cracking or crazing.
- Fits MSA slotted or non-slotted helmets.

**Approvals**

ANSI / ISEA Z87-1 : 2010 / CSA Z94 / EN166 : 2001 389 BT/ EN1731-F / AS/NZS 1337



No. 10115730



No. 10121266



No. 10121268

Unit Per Pcs.

CODE	Description	MSA No.
31 05 02	Frame with debris control, for slotted caps V-Gard	10115730
31 05 03	Frame with debris control, elevated temperature, for slotted caps V-Gard	10115821
31 05 04	Frame w/o debris control, for slotted caps V-Gard	10121266
31 05 05	Frame w/o debris control, elevated temperature, for slotted caps V-Gard	10121267
31 05 06	Universal frame with debris control, for caps V-Gard	10115822
31 05 07	Universal frame w/o debris control, for caps V-Gard	10121268
31 05 08	Universal frame with debris control, elevated temperature, for caps V-Gard	10116552
31 05 09	Universal frame w/o debris control, elevated temperature, for caps V-Gard	10124426
31 05 29	Frame, for full brim hats V-Gard	10116627
31 05 30	Frame elevated temperature, for full brim hats V-Gard	10116628

Name of Mfr.: MSA The Safety Company

### Chin Protectors

V-Gard Chin Protectors work as a system with select V-Gard Nitrometer protector Visors to help provide extra protection from impact and splash hazards to face and neck.



Standard



Retractable

### Approvals

ANSI / ISEA Z87-1 : 2010 / CSA Z94 / EN166:2001 389 BT/EN1731-F / AS/NZS 1337

Unit Per Pcs.

CODE	Description	MSA No.
31 05 18	Chin protector V-Gard, standard	10115827
31 05 19	Chin protector V-Gard, retractable	10115828

Name of Mfr.: MSA The Safety Company

### V-Gard Flat Polycarbonate Visors

A durable flat polycarbonate visors offer superior protection from flying debris, splash, or spray. Engineered wider than other visors, these visors provide improved resistance when it matters most. All V-Gard visors for general purpose can be worn with cap-mounted earmuffs.



- Fits MSA slotted or non-slotted helmets.
- 8" (20.32 cm) x 17" (43.2 cm) x .06" (1.52 mm).
- Anti-fog and anti-scratch coatings.

- Sides of visor are contoured towards face for a closer fit and improved resistance to impact and splash hazards.
- Maximum UV protection.
- Slightly thicker for industrial impact applications.
- Nitrometer can only be used with V-Gard Retractable or Standard Chin Protector.

### Approvals

ANSI/ISEA Z87-1:2010 / CSA Z94-3 / EN 166:2001 (2C-1.2 1B, 2C-1.2 1B 389, 2C-1.2 1B 38 KN, 2-2 1B 38 KN) / AS/NZS 1337

### V-Gard Flat Visors for General Purpose Applications

CODE	Description	Size
31 05 27	10115836 Polycarbonate flat, clear, w/side contours	203x432x1.02 mm (8x17x0.04 inch)
31 05 28	10115837 Polycarbonate flat Nitrometer, clear, w/side contours	203x432x1.02 mm (8x17x0.04 inch)
31 05 36	10115840 Polycarbonate flat, clear, w/side contours	203x432x1.52 mm (8x17x0.06 inch)
31 05 37	10115863 Polycarbonate flat Nitrometer, clear, w/side contours	241x432x1.02 mm (9.5x17x0.04 inch)
31 05 38	10117750 Polycarbonate flat, clear, non-CSA version	203x432x1.02 mm (8x17x0.04 inch)
31 05 39	10117781 Polycarbonate flat Nitrometer, clear, non-CSA version	203x432x1.02 mm (8x17x0.04 inch)
31 05 54	10117782 Polycarbonate flat, clear, non-CSA version	203x432x1.52 mm (8x17x0.06 inch)
31 05 55	10117783 Polycarbonate flat Nitrometer, clear, non-CSA version	203x432x1.52 mm (8x17x0.06 inch)
31 05 65	10118094 Polycarbonate flat, clear, non-CSA version	241x432x1.02 mm (9.5x17x0.04 inch)

Name of Mfr.: MSA The Safety Company

### V-Gard Molded Polycarbonate Visors

A durable molded polycarbonate visors offer superior protection from flying debris, splash, or spray. Engineered wider than other visors, these visors provide improved resistance when it matters most. All V-Gard visors for general purpose can be worn with cap-mounted earmuffs.



- Thickest visors on the market; helps prevent warping, cracking and crazing, especially when working in high heat.
- Available in both clear and green tint.
- Maximum UV protection.
- Wide, longer design for improved resistance to impact and splash hazards.
- Molded PC for superior optics.

- Anti-fog and anti-scratch coatings on select models.
- Select models accommodate cap-mounted earmuffs.
- Not for use in radiant heat hazards.

### Approvals

ANSI/ISEA Z87-1:2010 / CSA Z94-3 / EN 166:2001 (2C-1.2 1BT 389 KN, 2-2 1BT 389 KN) / AS/NZS 1337

### V-Gard Molded Visors for General Purpose Applications

Unit Per Pc.		
CODE	Description	Size
31 05 40	10115853 Polycarbonate molded, clear, anti-fog, anti-scratch	263×432×2.49 mm (10.375×17×0.098 inch)
31 05 41	10115854 Polycarbonate molded, green tint [not IR], anti-fog, anti-scratch	263×432×2.49 mm (10.375×17×0.098 inch)

Name of Mfr.: MSA The Safety Company

### V-Gard Molded Visors for Elevated Temperature Purpose Applications

Unit Per Pc.		
CODE	Description	Size
31 05 42	10115844 Polycarbonate molded, clear, anti-fog, anti-scratch	235×432×2.49 mm (9.25×17×0.098 inch)
31 05 43	10115845 Polycarbonate molded, green tint, anti-fog, anti-scratch	235×432×2.49 mm (9.25×17×0.098 inch)
31 05 66	10115846 Polycarbonate molded, clear, anti-fog, anti-scratch	235×457×2.49 mm (9.25×18×0.098 inch)
31 05 67	10115849 Polycarbonate molded, green tint [not IR], anti-fog, anti-scratch	235×457×2.49 mm (9.25×18×0.098 inch)

Name of Mfr.: MSA The Safety Company

### V-Gard Molded Welding, Cutting and Brazing Visors



MSA V-Gard Visors help protect against damage from impact and infrared (IR) radiation. They are thick to prevent warping from heat or weld spatter. Designed for metal pouring, gas soldering, welding, light cutting and brazing, these visors are engineered for heavy duty use.

- Suitable for most applications where welding, cutting and brazing hazards exist.
- Molded PC for superior optics.
- Wider design for improved resistance to impact and infrared (IR) radiation hazards, up to Shade 3 or Shade 5, depending on model.
- Thickness helps prevent warping, cracking and crazing. Shape accommodates cap-mounted earmuffs.

- Nitrometer version should be worn with V-Gard Chin Protector (sold separately).

### Approvals

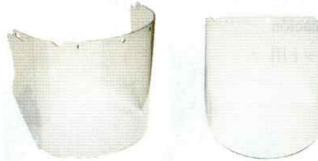
ANSI/ISEA Z87-1:2010 / CSA Z94-3 / EN 166:2001 [3 1BT 389 and 5 1BT 389] / AS/NZS 1337

### V-Gard Visors for Welding, Cutting and Brazing Purpose Applications

Unit Per Pc.		
CODE	Description	Size
31 05 44	10115859 Polycarbonate molded, shade 3 IR	203×438×1.78 mm (8×17.25×0.07 inch)
31 05 45	10115860 Polycarbonate molded, shade 3 IR, Nitrometer	235×432×2.49 mm (9.25×17×0.098 inch)
31 05 46	10115861 Polycarbonate molded, shade 5 IR	235×457×2.49 mm (9.25×18×0.098 inch)
31 05 47	10115862 Polycarbonate molded, shade 5 IR, Nitrometer	235×457×2.49 mm (9.25×18×0.098 inch)

Name of Mfr.: MSA The Safety Company

### V-Gard Molded Propionate Visors



These visors are for chemical and splash applications, and are ideal for use in manufacturing plants, laboratories, and other industrial applications that demand face protection against abrasive particles, splash and spray. Molded V-Gard Visors are manufactured with hand-polished molds for unsurpassed, distortion-free optical clarity and impact resistance.

- Green tint helps alleviate eye strain and fatigue by reducing excessive glare and light transmittance. Great for outdoor use in bright-light conditions.
- These visors provide maximum UV protection.

### Approvals

ANSI/ISEA Z87-1:2010 / CSA Z94-3 / EN 166:2001 [1B 38] / AS/NZS 1337

### V-Gard Visors for Splash/Chemical Purpose Applications

Unit Per Pc.		
CODE	Description	Size
31 05 48	10115855 Propionate molded, clear	203×432×2.49 mm (8×17×0.098 inch)
31 05 49	10115856 Propionate molded, Nitrometer, clear	203×432×2.49 mm (8×17×0.098 inch)
31 05 50	10115851 Propionate molded, clear	235×457×2.49 mm (9.25×18×0.098 inch)

Name of Mfr.: MSA The Safety Company

## Fire Fighter Helmets

Cascos de bombero

消防作業用ヘルメット 消防员头盔

The perfect head protection solution for Fire & Rescue Services and Emergency Services demanding high performance as well as being cost effective without compromise.



Thanks to the helmet's easy maintenance and adjustment procedures due to extremely simple product design, this allows the end user to confidently maintain, adjust and secure the helmet safely prior to use. EN 443: 2008 and EN 14458 certified, using high quality materials for all of its elements, providing a very high level of protection against the main risks encountered in structural fire-fighting operations: heat, flame, shock and electrical hazards.

Sizes M (52 - 62 cm) and L (58 - 65 cm).

CODE	Description	Size	Unit Per Pcs.
31 05 31	Fire Fighter Helmet F1XF, Colour: White, Blue, Yellow, Green, Grey, Hi-Viz Yellow, Hi-Viz Orange, Photo Luminescent, Black	M	
31 05 68		L	

Name of Mfr.: MSA The Safety Company

## Communication System

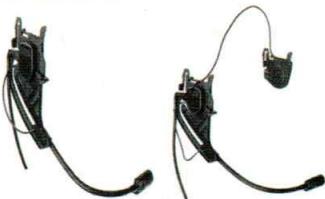
### Integrated in Fire Fighter Helmet

Sistema de comunicación

消防作業用ヘルメット用

ヘッドセット

通信系统



### Single Ear Headset

Communication headset for integration in MSA Gallet F1XF fire helmet.

- One or two loudspeakers, in plastic housing with mounting clips.
- Flexible microphone, adjustable in length (80 mm) to optimize position in front of the mouth or the speech diaphragm (BA face piece).
- Download Cable with anti-tearing, LEMO connecting plug (green cover).

Operates with an MSA Push-to-Talk (PTT) module enabling connection to the PMR radio. Connection through an anti-tearing LEMO plug with color codification.

- PTT module with Yellow connector: non ATEX system.
- PTT module with Green connector: ATEX system (for use with approved ATEX radios only)

### Microphone:

- Noise cancelling Electret, 100 Hz-10 kHz, distortion < 3%
- Loudspeaker: 32 Ω, 20 Hz – 3 kHz, max power 100 mW
- Amplifier: adjustable gain (0 to 26 dB), 300 Hz-3 kHz Nominal output 50 mV RMS, Harmonic distortion 5%
- Down lead Cable: Fire retardant, shielded cable
- Housing: Polyamide (PA6), Fire resistant (V0)
- Operation Temperature: -20°C to +65°C, humidity < 98%

### Approvals:

- EMC performance: ESD/EMI: 10 V/m
- Ingress Protection testing: IP56 (tested inside the helmet)
- ATEX (when used with an ATEX certified PTT module)
- ATEX level: II 2G Ex ia IIC T4

Connection with a wide range of brand and types of radios is possible.

CODE	Description	Unit
31 05 69	Communication headset for F1XF helmet, single ear type (specify brand and type of radio in use)	Set

Name of Mfr.: MSA The Safety Company

## Helmet Mounted Headset



Active Hearing Protection headset with built-in communication capabilities,

including:

- Two earmuffs with padding and noise attenuation foam.
- Ear cup height adjustment system for optimal wearing position.
- Flexible microphone attached to the left muff.
- Down Lead Cable with anti-tearing, LEMO connecting plug (green).

Operates with an MSA Push-to-Talk (PTT) module enabling connection to the PMR radio.

Connection through an anti-tearing LEMO plug with color codification.

- PTT module with Yellow connector: non ATEX system.
- PTT module with Green connector: ATEX system (for use with approved ATEX radios only).

### Microphone:

- Noise cancelling electret, 100 Hz-10 kHz, sensitivity -61 dB (nominal) at 50% humidity.
- Loudspeaker: 32 Ω, 100 Hz-20 kHz, max power 100 mW.
- Material: Cup: PC/ABS, Cushion: Synthetic leather.
- Down lead Cable: Fire retardant, shielded cable.
- Battery: 2 x AAA batteries, Duracell, Varta, Energizer (ATEX versions).
- Surrounding sound amplifiers: Omnidirectional, sensitivity -38±2 dB, Max input 110 dB S.P.L.
- Operation Temperature: -20°C to +65°C, humidity < 98%.

### Approvals:

- EMC performance: ESD/EMI: 10 V/m.
- Fully watertight – equivalent to IP67.
- ATEX (when used with an ATEX certified PTT module).
- ATEX level: II 2G Ex ia IIC T4.
- SNR value: 26 dB / H=26 / M=23 / L=18.

Connection with a wide range of brand and types of radios is possible.

CODE	Description	Unit
31 05 70	Communication headset for F1XF helmet, helmet mounted type (specify brand and type of radio in use)	Set

Name of Mfr.: MSA The Safety Company

## Winter Liners

### for MSA Helmet

Forros de Invierno para el Caso MSA

MSA ヘルメット用防寒用ライナー

MSA V-Gard 安全帽用防護面具及面罩

Get superior under-the-helmet warmth and protection with these winter liners. Choose Supreme, Select or Value in any of 8 different styles, including flame-retardant and flame-resistant models, for protecting the head and neck from outside cold wind, or refrigerator work. To be fitted under the helmet.

- Delivers extra warmth and protection under safety helmets.
- Supreme liners offer three layers of true flame resistance (FR) and superior resistance to arc exposure (ATPV of 8 cal/cm<sup>2</sup>) ATPV denotes Arc Thermal Protective Value.
- Select liners can be laundered up to 50 times without affecting flame retardancy.
- Many models offer quilted earflaps so earmuffs can be used without compromising hearing protection levels.
- Adjustable chinstrap or extended neck closure helps ensure comfortable fit.

**Supreme:** Offers multiple layers of warm flame resistant fabric, tested to withstand arc exposure to an ATPV of 8 cal/cm<sup>2</sup>. Water repellent.



31 05 56



31 05 57



31 05 58

CODE	Type	Part No.	Unit Per Pcs.
31 05 56	Flame resistant V-Gard Supreme liner	10118421	
31 05 57	Flame resistant V-Gard Supreme 1-piece liner, extended and quilted flaps for earmuffs	10118425	
31 05 58	Flame resistant V-Gard Supreme 2-piece liner, extended with zipper	10118427	

Name of Mfr.: MSA The Safety Company

### Select:

Offers two layers of flame retardant fabric for extra warmth. Water repellent.



31 05 59



31 05 61

CODE	Type	Part No.	Unit Per Pcs.
31 05 59	Flame retardant V-Gard Select liner and quilted flaps for earmuffs	10118420	
31 05 61	Flame retardant V-Gard Select liner, extended, quilted flaps for earmuffs and bright with reflective striping for high visibility	10118424	

Name of Mfr.: MSA The Safety Company

### Value:

Provides excellent protection against cold with maximum economy.



31 05 62



31 05 63

Unit Per Pcs.

CODE	Type	Part No.
31 05 62	V-Gard Value liner, stylish skullie cap	10118417
31 05 63	V-Gard Value liner, Knit Hat-Cap Cover, extended and bright for high visibility	10118418

Name of Mfr.: MSA The Safety Company

## Softframe Single Lens Goggles

Gafas Protectoras con Montura Blanda

单レンズ防塵眼鏡 防塵單眼鏡

### MSA SightGard® Safety Goggle

For maximum visibility and all-around wear ability, this popular line of economical safety goggles offers impact protection. Choose anti-fog or anti-scratch coatings for improved visibility and lens life.



- Splash and impact resistant.
- Great fitting body provides all day comfort.
- Anti-fog coating protects against mist.
- Indirect vent allows air to circulate and reduce fogging.
- Meets ANSI/ISEA Z87.1-2010 and complies with CSA Z94.3.

Unit Per Pr.

CODE	Frame Colour	Lens Style	Head-band	Part No.
31 10 11	Clear	Sightgard NV, clear, Tuff-Stuff anti-scratch coated,anti-fog lens, non-vent	Elastic	10106268
31 10 13	Clear	Sightgard iV, Tuff-Stuff anti-scratch coated anti-fog, splash and impact resistant lens, indirect vent	Elastic	10106270

Name of Mfr.: MSA The Safety Company

### MSA Flexi-Chem™ iV Safety Goggle

These clear, flexible safety goggles protect against significant eye impact hazards such as flying debris and splashes. Acetate lenses resist splashes while the pliable frame enhances comfort and fit. Features a wide, comfort-fit adjustable band.



- Chemical resistant acetate lens for maximum protection.
- Anti-fog coating for improved visibility.
- Indirect venting for comfortable, lasting wear.
- Adjustable band for a close-fitting seal.
- Meets ANSI/ISEA Z87.1-2010, including droplet and splash requirements. Certified to CSA Z94.3 by CSA International.

CODE	Frame Colour	Lens Style	Head-band	Part No.	Unit Per Pr.
31 10 15	Clear	Flexi-Chem iV, anti-fog acetate lens, indirect-vent	Elastic textile	10106281	

Name of Mfr. : MSA The Safety Company

### MSA Vault Safety Goggle

These high quality chemical goggles protect against all types of chemical, liquid and metal splash as well as coarse dust. Ideal for laboratory work, chemical handling, and stone dressing. Can be worn comfortably with prescription glasses or alone. Indirect venting permits proper air circulation while protecting against chemical or dust entry.



- Grade A polycarbonate lens resists impact at extreme temperatures, including molten metal splash.
- Indirect ventilation provides air movement as well as splash and dust protection.
- Clear, anti-fog lens offers high visibility.
- Medium impact rated lens (according to EN 166 (B)).
- Soft touch frame and adjustable strap provide extreme comfort and a custom fit.

Unit Per Pr.

CODE	Frame Colour	Lens Style	Head-band	Part No.	Unit Per Pr.
31 10 16	Black, grey	Vault Safety Goggle, clear, anti-fog lens, splash and impact resistant, Indirect-vent	Elastic textile	10106282	

Name of Mfr. : MSA The Safety Company

### UV-Resistant Goggles

Gafas Protectoras Contra Rayos UV  
紫外線防止ゴーグル 紫外線防護眼鏡



Perspecta GIV 2300 a special UV-resistant soft frame goggle. The lens transmits less than 0.0012% below 400 nanometers. Above 400 nanometers (visible range), it transmits approximately 90% of the available light.

Approval according EN166 34 BT.

#### Specification

Frame colour : Light Green      Frame Style : 11-vent  
Lens Type : Anti-Fog      Part No. : 10076384

31 10 31	Goggles, UV-resistant	Pr.
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Name of Mfr. : MSA The Safety Company

### Protective Eyewear

Protector de Ojos

保護眼鏡 防护眼镜



Offers complete wrap around eye protection and the durability, compliance and comfort you'd expect from Sightgard® Protective Eyewear. It provides excellent side-and front-impact protection while still being comfortable to wear. All models comply with all applicable high-impact test requirements to ANSI Z87.1-2010 and certified by CSA International.

- Constructed of polycarbonate lens that stand up against impacts (Z87+).
- Temples flex for a custom fit.
- Easy-Fit nose bridge offers comfortable, non-slip support.
- Tuff Stuff™ Anti-scratch Coating provides excellent scratch resistance, extending lens life - a "must have" in abrasive work environments.
- Wraparound style offers maximum protection and unobstructed vision.
  - Clear lens.
  - Grey tint lens offer glare reduction with least amount of color distortion.
  - Amber lens increases contrast in low light.
  - Rich-orange mirrored lens reflects light and reduces glare without color degradation.

Unit Per Pr.

CODE	Frame Colour	Lens Colour	Part No.
31 10 51		Clear	10070917
52		Grey	10070918
53		Amber	10070919
59		Orange Mirror	10070921

Name of Mfr. : MSA The Safety Company

### Rx Overglasses

For users who wear prescription glasses, Rx Overglasses offer high protection while still providing excellent vision. The glasses fit over most prescription eyewear and feature horizontal and vertical adjustable temples, anti-fog lens and Tuff-Stuff™ anti-scratch lens coating. The limited lens curvature offers the best optics and distortion-free wide-angle viewing.



Meets general protector and impact requirements for ANSI/ ISEA Z87.1-2010.

- Glasses fit over most prescription eyewear.
- Panto/retrosopic tilt and sliding horizontal length adjustment offers a custom and secure fit.

Unit Per Pr.

CODE	Frame Colour	Lens Colour	Part No.
31 10 61	Clear - Black	Clear	10008175
62	Grey - Black	Grey	10012855

Name of Mfr. : MSA The Safety Company

### Ultrasonic Goggles

Uvex 9302

Gafas Protectoras Ultrasónicos, Uvex 9302

ウルトラソニックゴーグル 防護眼鏡



Ultrasonic goggle shaped ergonomically design with a super panoramic lens, soft face and nose pads, a clever ventilation system and an infinitely adjustable, extra-wide headband. The lens, made of polycarbonate, is easily replaceable and is available with

the supervision HC-AF (Hard Coated Anti-Fog) coating. This unique technology guarantees a scratch-resistant surface as well as permanent anti-fog properties on the inside of the lens.

#### Recommendations for use:

Grinding work, acid work and galvanization, dusty environments

Compliant with requirement of DIN EN 166.

Unit Per Pr.

CODE	Frame Colour	Model
31 11 01	Orange	9302-210
02	Grey	9302-211

Name of Mfr.: Uvex Arbeitsschutz GmbH

## Safety Glasses

### Omnifit 3-way Adjustable

Gafas de seguridad ajustables en 3 direcciones

三段調整式安全メガネ 三级可调式防护眼镜

Ultra anti-fog and super anti-scratch. Polycarbonate lens with UV 400 protection (UV 400 which blocks all light rays with wavelengths up to 400 nanometers.) 3-way adjustable for various face types. Grey lens. Colours: Black & Orange.



Norms: CE Certified, EN 166-KN, EN 172, ANSI-Z87.1-2010, AS/NZS 1337.1-2010.

31 11 03	Glass, adjustable safety, omnifit 3-way, grey	Pr.
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Name of Mfr.: Scandia

## Harnesses

### Fall Protection Range

Cinturón de Seguridad 作業用安全帯 工業用安全帶

Designed and used to prevent accidents at work or to protect against consequences of accidents at work.

Statistics prove, year after year, that lack of fall protection is a leading factor in job fatalities and injuries. The Fall Protection product lines enables your company to provide optimum quality, comfortable fall arrest systems for your workers. It combines quality, comfort, and value.

Approval: Most harnesses have compliance for each region depending on the delivery location, such as OSHA, ANSI, JP industrial standard, etc.

- Excellent value / Optimum quality / Reliable protection / Practical operation / User-friendly design / Comfortable

### 3M Full Body Harnesses for General Fall Arresting

A full body harness is personal protective equipment worn to prevent falls when working at heights and provide both high safety and comfort to support on-site work. The back D-ring is for fall arrest attached on the most harnesses. The chest-D ring enables connection to a ladder climbing safety system. Please specify if any additional attachment points or specifications are required.



- Durable polyester web construction.
- light and compact Pass-Thru buckle.
- Quick Connect buckles enhance adjustability.

CODE	Size	Attachment Point	Part No. EU/US/JP
		Back, Chest	

#### Buckle Type: Pass-Thru

31 15 11	S	1B	1161600/1161570/1161648
12	M/L		1161601/1161571/1161649
13	XL		1161602/1161572/1161650

#### Buckle Type: Quick-Connect

31 15 26	S	1B	- /1161524/1114080
27	M/L		- /1161525/1114081
28	XL		- /1161526/1114101

31 15 20	S	1B, 1C	1161615/1161556/1114102
21	M/L		1161616/1161557/1114103
22	XL		1161617/1161558/1114104

Name of Mfr.\* 3M Company

## 3M Work Positioning Products

Positioning D-rings located on the hips are used with positioning devices and allow workers to use both hands. While work positioning belts may be used in conjunction with a harness you already have, they must never be used for personal fall arrest.



- Durable polyester web construction.
- Adjustable work positioning rope is ideal for work positioning while pole climbing.

Unit Per Pcs.

CODE	Size	Attachment Point	Part No. EU/US/JP
		Back, Hip	

#### Harness integral with WP belt

31 15 29	S	1B, 2H	1161624/1161304/1161651
30	M/L		1161625/1161305/1161652
31	XL		1161626/1161306/1161653

#### WP belt\*

31 15 32	S	2H	- /1091014/1112988
33	M		- /1091015/1112989

#### WP rope\*

31 15 34	2.0~3.0 m	-	1200317/1234083/1112992
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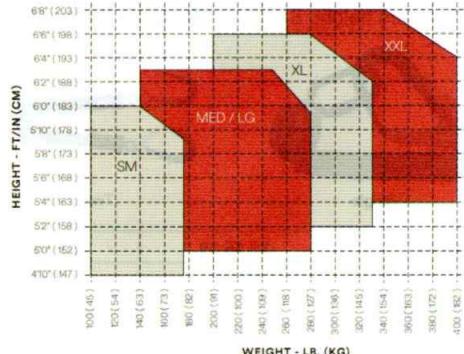
Name of Mfr.\* 3M Company

\*For right-handed

#### Harness Size Information

Here is the example of right fitting harness charts provided by 3M company, based on the height and weight. Sizes may be different by models and manufacturers, so please make sure to check the right size through your local supplier.

#### 3M™ Protecta® Harness Sizing Guidance



## Lanyards

Lanyards ランヤード 挂绳

A rope or strap made of synthetic fiber with hooks, carabiners, shock absorbers to connect with safety harnesses as lifeline. Single leg or twin leg are available. Twin-lanyards provide 100% tie-off, allowing users to stay protected when changing locations.

### Elastic Type Lanyards

Elastic type fall protection lanyard with shock absorber, elastic leg stretches in reaction to users movements. It is compact and foldable when not in use. Furthermore, it extends and effectively absorbs the impact during a fall event.



Single



Twin

	Unit Per Pc.	
CODE	31 15 35	31 15 36
Type	Single	Twin
Working length	1.7 m or longer	
Weight Capacity	130 kg or more	

### Rope/Strap Lanyards

Rope lanyard type of fall protection equipment with pack-style shock absorber. It is compact and foldable when not in use. It dissipates energy, limiting the forces on the body by absorbing component in a fall event.



Single



Twin

	Unit Per Pc.	
CODE	31 15 37	31 15 38
Type	Single	Twin
Working length	1.8 m or more	
Weight Capacity	100 kg or more	

### Self-Retracting Lanyard

It is designed to activate self-lock system when it detects the fall event to minimize the falling distance. It is very lightweight and easy to use. It is ideal fall protection equipment for workers under 5 meters height. Single or twin types are available.



Single



Twin

Unit Per Pc.

CODE	31 15 39	31 15 40
Type	Single	Twin
Working length	1.8 m or longer	
Weight Capacity	128 kg or more	

## Guide to European Norms and Selection Guide of Protective Workwear

To assist you with the selection of chemical protective clothing the EU has developed six "types" of chemical protective clothing.

EN Types	Definition	Alpha Tech® Products
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### European "Types" of Chemical Protective Clothing

Type 1 EN943-1 EN943-2	<b>Gas Tight Chemical Protective Clothing</b> Protective clothing against liquid and gaseous chemicals, aerosols and solid particulates.	
Type 3 EN14605	<b>Liquid Tight Suits</b> Suits which can protect against strong and directional jets of liquid chemical.	2500 PLUS 3000 4000 5000
Type 4 EN14605	<b>Spray Tight Suits</b> Suits which offer protection against a spray of liquid chemicals.	2000 Ts PLUS 2500 PLUS 3000 4000 5000 CFR
Type 5 EN ISO 13982-1	<b>Dry Particulate Protection</b> Suits which provide protection to the full body against airborne solid particulates.	1500 STANDARD 1500 PLUS 1800 STANDARD 1800 TS PLUS 1800 COMFORT 2000 STANDARD 2000 COMFORT 2000 Ts PLUS 2300 STANDARD 2300 COMFORT 2300 PLUS 2500 PLUS 3000 4000 5000 FR
Type 6 EN13034	<b>Reduced Spray Suits</b> Suits which offer limited protection against a light spray of liquid chemicals.	1500 STANDARD 1500 PLUS 1800 STANDARD 1800 TS PLUS 1800 COMFORT 2000 STANDARD 2000 COMFORT 2000 Ts PLUS 2300 STANDARD 2300 COMFORT 2500 PLUS FR

### Other European Standards relevant to the AlphaTec® Product Range

EN1073-2	Non-ventilated Protective clothing against radioactive particulate contamination.	1500 PLUS 1800 TS PLUS 1800 COMFORT 2000 STANDARD 2000 COMFORT 2000 Ts PLUS 2300 STANDARD 2300 COMFORT 2300 PLUS 2500 PLUS 3000 4000 5000 FR
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(to be continued)

EN Types	Definition	Alpha Tech® Products
EN14126	Protective clothing against infective agents. [ "Type" prefixed with "-B" (i.e. Type 3-B) indicates approval to this European Norm].	2000 STANDARD 2000 Ts PLUS 2300 STANDARD 2300 PLUS 2500 PLUS 3000 4000 5000
EN1149-5	Protective clothing with electrostatic properties.	1500 PLUS 2000 COMFORT 2000 STANDARD 2000 Ts PLUS 2300 STANDARD 2300 COMFORT 2300 PLUS 2500 PLUS 3000 4000 5000 FR CFR
DIN32781	Protective clothing. Protective suits against pesticides.	2000 STANDARD 2000 Ts PLUS
EN ISO 14116	Protective clothing. Limited flame spread materials, material assemblies and clothing.	FR CFR

Remark: This guide is an indication of your suits protection against a particular hazard (gas, liquid or dust). Please be aware that conformance to these types standards does not mean that your suit is 100% impervious to your hazard.

### Application Table for AlphaTec® Protective Workwear

Type	For	From
AlphaTec® 1500 STANDARD	Dust protection.	Asbestos, powder.
AlphaTec® 1500 PLUS	Splash and particle protection.	Asbestos, brick, dust, cement dust.
AlphaTec® 2000 COMFORT	Working in warm environment, and spray protection.	Low hazard liquid, particles.
AlphaTec® 2000 STANDARD	Chemical & pharmaceutical industries, paint spraying and crime scene investigation.	Infective agents, pesticides, particulates, fibres & low hazard liquid chemical spray.
AlphaTec® 2000 Ts PLUS	Paint spraying.	Low hazard liquid and fine particulates.
AlphaTec® 2500 PLUS	Biological protection.	Heavy low hazard liquid spray and particulates.
AlphaTec® 3000	Chemicals, oil and petrochemicals.	Inorganic chemicals and biological hazards.
AlphaTec® 4000	Hazardous area.	Concentrated chemicals and biological agent.
AlphaTec® FR	Working in potential explosive / flammable environments. (Wear over a thermal protective garment.)	Low hazard liquid spray and particulates, such as oils and petrochemicals, petroleum distribution and processing and utilities.
AlphaTec® CFR	Working in potential explosive / flammable environments. (Wear over a thermal protective garment.)	Oil and petrochemicals, tank, pressure cleaning, delete, petroleum, processing and utilities.

### AlphaTec® Coverall Size Chart Guide

#### Body measurements

(The measurements shown below relate to the wearer's body measurements and not the garment measurements.)

Height (cm)	Chest (cm)	Recommended Garment Size
164 - 170	84 - 92	S
170 - 176	92 - 100	M
176 - 182	100 - 108	L
182 - 188	108 - 116	XL
188 - 194	116 - 124	2XL (XXL)
194 - 200	124 - 132	3XL (XXXL)

### Protective Workwear

Ropa de trabajo protectora 防護着 防护服

Protective workwear under an ISO 9001 approved quality control system, and meets the European Norms specified in Category III of the PPE (Personal Protective Equipment) directive for chemical protective workwear.

#### Designed for operatives who require particle (dust) and low hazard liquid splash protection.

Made from highly breathable SMS (Spunbond + Meltblown + Spunbond Nonwovens) fabric, and designed for workers involved in the stripping, clear up or handling of asbestos, general maintenance, construction and contract cleaning.



#### Applications:

Where the need for dust (particle) protection is greatest, such as; asbestos related work, handling powders, general maintenance and construction.

Meets the following European Norms:

Type 5 : EN ISO 13982-1 Dry particle suit

Type 6 : EN 13034 Reduced spray suit

Note: Respirator is sold separately.

AlphaTec®  
1500 STANDARD

Unit Per Pcs.

CODE	Size	CODE	Size	Unit Per Pcs.	
				White	
31 20 01	S	31 20 07	S	31 20 13	S
02	M	08	M	14	M
03	L	09	L	15	L
04	XL	10	XL	16	XL
05	XXL	11	XXL	17	XXL
06	XXXL	12	XXXL	18	XXXL

Name of Mfr.: Ansell Limited

#### Designed for operatives who require particle (dust) and low hazard liquid splash protection.

High quality 3-layer anti-static SMS fabric for splash and particle protection. The SMS fabric is highly breathable, making it ideal for operatives working in warmer environments.

SMS fabrics are a particularly good barrier against particulates such as, asbestos, brick, dust and cement dust and will provide protection from light aerosol mists as found in some paint spray environments.

**Applications:**

Asbestos related work, handling powders, general maintenance, construction, pharmaceutical industries, wood & metal processing, Touch-up paint spraying, fibreglass/resin applications/ceramic fibres.

Meets the following European Norms:

- Type 5 : EN ISO 13982-1 Dry particle suit
- Type 6 : EN 13034 Reduced spray suit
- EN1073-2 : Barrier to radioactive particulates - Class 1
- EN1149-5 : Anti-static

Note: Mask and goggles are sold separately.



AlphaTec®  
1500 PLUS

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size
White		Light Blue		Navy Blue	
31 20 21	S	31 20 27	S	31 20 33	S
22	M	28	M	34	M
23	L	29	L	35	L
24	XL	30	XL	36	XL
25	XXL	31	XXL	37	XXL
26	XXXL	32	XXXL	38	XXXL

Name of Mfr.: Ansell Limited

### Ideal for operatives working in warmer climates or environments.

Specially designed for those working in warmer climates or warm working environments to help reduce heat stress. The critical areas to the front of the garment, including the hood, arms and legs, are AlphaTec® 2000 microporous PE laminate fabric which offers a high level of liquid and particle protection with a low level of water vapour resistance according to EN 31092 of Ret<15\*.

\*Ret is a measurement of a materials resistance to moisture vapour transfer.



AlphaTec®  
2000 COMFORT

**Applications:**

Critical production environments where dust and low level spray protection are required, such as: paint spraying, pharmaceutical industries, fibreglass product manufacturing, Windmill manufacturing, boat and ship building and mining.

Meets the following European Norms:

- Type 5 : EN ISO 13982-1 Dry particle suit
- Type 6 : EN 13034 Reduced spray suit
- EN1073-2 : Barrier to radioactive particulates - Class 1
- EN1149-5 : Anti-static

Unit Per Pcs.

CODE	Size	CODE	Size
White			
31 20 41	S	31 20 44	XL
42	M	45	XXL
43	L	46	XXXL

Name of Mfr.: Ansell Limited

### Ideal for a wide range of industrial applications such as; Pharmaceutical industries and Agriculture.

Designed to allow water vapour (perspiration) to escape from the suit yet will withstand saturation of liquid chemicals and filter 100% of particulates down to 0.01 micron in size, and provides protection from infective agents, pesticides, particulates, fibres & liquid chemical spray.

**Garment feature:**

- Microporous PE laminate fabric.
- Optimised body fit.
- Bound seams ensure spray tight protection.



AlphaTec®  
2000 SATANDARD

**Applications:**

Chemical & pharmaceutical industries, Cleanrooms, Paint spraying, Crime scene investigation.

Meet the following European Norms:

- Type 5 : EN ISO 13982-1 Dry particle suit
- Type 6 : EN 13034 Low level spray tight suit
- EN 14126: Barrier to infective agents
- EN1073-2: Barrier to radioactive particulates – Class 2
- EN1149-5: Anti-static
- DIN 32781: - Protection against pesticides

Unit Per Pcs.

CODE	Size	CODE	Size
White			
31 20 51	S	31 20 54	XL
52	M	55	XXL
53	L	56	XXXL

Name of Mfr.: Ansell Limited

### Ideal for a wide range of industrial applications such as; Pharmaceutical industries and Fibreglass product manufacturing.

Designed to allow water vapour (perspiration) to escape from the suit yet will withstand saturation of liquid chemicals and filter 100% of particulates down to 0.01 microns in size. (EMSL test method) With stitched and taped seams, it provides an exceptional overall barrier to low hazard liquid spray and fine particulates.



AlphaTec®  
2000 Ts PLUS

**Features and benefits:****Protection -**

Proven barrier to low concentration liquid chemicals, diluted pesticides, liquid & particulate biological hazards.

**Silicone Free –**

Critical in spray painting applications.

**Low Linting –**

Reduced risk of contamination in critical areas.

**Anti-static –**

Tested according to EN 1149-5.

**Applications:**

Agriculture, paint spraying, pharmaceutical industries, fibreglass product manufacturing, boat and ship building and Mining.

**Protection Levels & Additional Properties:**

Type 4-B : Spray tight suits (Suits which offer protection

against saturation of liquid chemicals).

Type 5-B : Dry particulate protection (Suits which provide protection to the full body against airborne solid particulates).

Type 6-B : Reduced spray suits (Suits which offer limited protection against a light spray of liquid chemicals).

EN 14126 : Protective clothing against infective agents ["Type" suffix with "-B" [i.e. Type 3-B] indicates approval to this European Norm].

EN 1073-2 : Protective clothing against radioactive particulate contamination.

DIN 32781 : Protective clothing. Protective suits against pesticides.

EN 1149-5 : Protective clothing with electrostatic properties.

Unit Per Pc.

CODE	Size	CODE	Size
<b>White</b>		<b>Green</b>	
31 20 61	S	31 20 73	S
62	M	74	M
63	L	75	L
64	XL	76	XL
65	XXL	77	XXL
66	XXXL	78	XXXXL

Name of Mfr.: Ansell Limited



AlhaTec® 2500 SATANDARD

#### Applications:

Made from breathable microporous films, and designed to protect you from heavy liquid spray and particulates. The fabrics physical strength and flexibility ensures you are protected and comfortable in even the harshest environments.

Meets the following European Norms:

Type 4-B : EN 14605 Spray tight suit

Type 5-B : EN ISO 13982-1 Dry particle suit

Type 6-B : EN 13034 Reduced spray suit

EN14126 : Barrier to infective agents

EN1073-2 : Barrier to radioactive particulates - Class 1

EN1149-5 : Anti-static

Note: Respirator is sold separately.

Unit Per Pc.

CODE	Size	CODE	Size
<b>White</b>			
31 20 81	S	31 20 84	XL
82	M	85	XXL
83	L	86	XXXXL

Name of Mfr.: Ansell Limited

#### Effective barrier against both inorganic chemicals and biological agents.

A soft and flexible 3 layer fabric with strong ultrasonically welded seams and an extremely effective barrier against both inorganic chemicals and biological hazards.



AlhaTec® 3000

#### Applications:

Protection against many concentrated inorganic chemicals, biological hazards and particles smaller than 1 µm, in industries such as; Chemicals, oil and petrochemicals, pharmaceutical, food industry, sewage purification installations, industrial & tank cleaning and mining.

Meets the following European Norms:

Type 3-B : EN 14605 Liquid tight suit

Type 4-B : EN 14605 Spray tight suit

Type 5-B : EN ISO 13982-1 Dry particle suit

EN14126 : Barrier to infective agents

EN1073-2 : Barrier to radioactive particulates - Class 1

EN1149-1 : Anti-static

Note: Respirator is sold separately.

Unit Per Pc.

CODE	Size	CODE	Size
<b>Yellow</b>			
31 20 91	S	31 20 94	XL
92	M	95	XXL
93	L	96	XXXXL

Name of Mfr.: Ansell Limited

#### Effective barrier against both organic and inorganic chemicals and biological agents

A unique multi-layer barrier fabric which is renowned for its lightweight textile feel and exceptional barrier to organic and inorganic chemicals and biological agents.



AlhaTec® 4000

#### Features and benefits:

- Double zip system, ultrasonically welded and taped seams to ensure liquid tight protection.
- Double cuff design for improved protection.
- Knitted internal sleeve cuff for wearer comfort.

#### Applications:

For hazardous areas where protection against concentrated chemicals and biological agents is required, such as: chemicals, oil and petrochemicals, pharmaceutical, mining, agriculture, industrial & tank cleaning, sewage purification installations and emergency services (HAZMAT, CBRN).

Note:

HAZMAT – Hazardous Materials.

CBRN – Chemical, Biological, Radiological, Nuclear, and Explosive.

Meets the following European Norms:

Type 3-B : EN 14605 Liquid tight suit

Type 4-B : EN 14605 Spray tight suit

Type 5-B : EN ISO 13982-1 Dry particle suit

EN14126 : Barrier to infective agents

EN1073-2 : Barrier to radioactive particulates - Class 1

EN1149-5 : Anti-static

Note: Respirator is sold separately.

Unit Per Pcs.

CODE	Size	CODE	Size
<b>Green</b>			
31 21 01	S	31 21 04	XL
02	M	05	XXL
03	L	06	XXXL

Name of Mfr.: Ansell Limited

### Designed for operatives in potentially explosive/flammable environments.

Made from flame retardant material, and offers wearers protection from liquid chemicals to EN Type 6 and particulates to EN Type 5, and peace of mind to workers in potential explosive/flammable environments. To decrease the risk of burn injury, wear over thermal protective workwear. The fabric is designed to allow water vapour to escape from the suit helping to reduce the risk of heat stress.



AlhaTec® FR

#### Applications:

Wear over a thermal protective garment [EN ISO 14116 Index 2 or above] in areas with a risk of flash fire and where protection from low level liquid spray and particulates is required, such as: oil and petrochemicals, petroleum distribution and processing and Utilities.

Meets the following European Norms:

Type 5 : EN ISO 13982-1 Dry particle suit

Type 6 : EN 13034 Reduced spray suit

EN1073-2 : Barrier to radioactive particulates - Class 1

EN ISO 14116 : Limited flame spread materials and assemblies

EN1149-5 : Anti-static

Note: Respirator is sold separately.

Unit Per Pcs.

CODE	Size	CODE	Size
<b>Blue</b>			
31 21 11	S	31 21 14	XXL
12	M	15	XXXL
13	L		

Name of Mfr.: Ansell Limited

### Designed for operatives in potentially explosive/flammable environments



AlhaTec® CFR

Made from a flame retardant treated non-woven material with PVC barrier film it offers wearers protection from liquid chemicals to EN Type 3, 4 & 5, and peace of mind to workers in potential, explosive/flammable environments. This protective suit has been proven to decrease the risk of burn injury when worn over thermal protective workwear.

#### Applications:

Always wear over a thermal protective garment [EN ISO 14116 Index 2 or above] to provide chemical spray protection according to Type 3 & 4, in industries such as: Oil and petrochemicals, tank, pressure cleaning involving flammable liquids, petroleum distribution and processing and utilities.

Meets the following European Norms:

Type 3 : EN 14605 Liquid tight suit

Type 4 : EN 14605 Spray tight suit

Type 5 : EN ISO 13982-1 Dry particulate suit

EN ISO 14116 : Limited flame spread materials and assemblies

EN 1073-2 : Barrier to radioactive particulate

EN1149-5 : Anti-static

Note: Respirator is sold separately.

Unit Per Pcs.

CODE	Size	CODE	Size
<b>Red</b>			
31 21 21	S	31 21 24	XL
22	M	25	XXL
23	L	26	XXXL

Name of Mfr.: Ansell Limited

### Boilersuits, UV protection

Traje de calderas con protección UV

紫外線防護ボイラースーツ

防紫外线连衫裤工作服



Made of 100% fine cotton twill with UV protection finish with storage pockets for mobile phone/walkie-talkie, flashlight, and pen at chest, sleeve, side (x 2, open access), and seat (x 2). Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders

#### Standards

CE Certified / EN340 (general requirements)/

EN13758-2, 40+ (UV protection) / OEKO-

TEX® Standard 100 Class II AS/NZS 4399 UPF rating 50+

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
<b>White</b>							
31 22 01	S	31 22 07	S	31 22 13	S	31 22 19	S
02	M	08	M	14	M	20	M
03	L	09	L	15	L	21	L
04	XL	10	XL	16	XL	22	XL
05	2XL	11	2XL	17	2XL	23	2XL
06	3XL	12	3XL	18	3XL	24	3XL

Name of Mfr.: Scandia Gear

### Boilersuits, UV protection Short Sleeves

Traje de calderas con protección UV de mangas cortas

紫外線防護半袖ボイラースーツ

防紫外线短袖连衫裤工作服



Made of 100% fine cotton twill with UV protection finish with storage pockets for mobile phone/walkie-talkie, flashlight, and pen at chest, sleeve, side (x 2, open access), and seat (x 2). Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders

## Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
White		Navy		Orange		Royal Aqua	
31 22 25	S	31 22 31	S	31 22 37	S	31 22 43	S
26	M	32	M	38	M	44	M
27	L	33	L	39	L	45	L
28	XL	34	XL	40	XL	46	XL
29	2XL	35	2XL	41	2XL	47	2XL
30	3XL	36	3XL	42	3XL	48	3XL

Name of Mfr.: Scandia Gear

## Boilersuits, UV protection

### Reflect Type

Traje de calderas con protección UV de tipo reflectante  
反射テープ付き紫外線防護ボイラースーツ

带反光条防紫外线连衫裤工作服

Made of 100% fine cotton twill with UV protection finish, and with storage pockets for mobile phone/walkie-talkie, flashlight, and pen at chest, sleeve, side ( $\times 2$ , open access), and seat ( $\times 2$ ). Striped with 3M reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.



## Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
White		Navy		Sky Blue		Royal Aqua	
31 22 49	S	31 22 55	S	31 22 61	S	31 22 67	S
50	M	56	M	62	M	68	M
51	L	57	L	63	L	69	L
52	XL	58	XL	64	XL	70	XL
53	2XL	59	2XL	65	2XL	71	2XL
54	3XL	60	3XL	66	3XL	72	3XL

CODE	Size	CODE	Size	CODE	Size	CODE	Size
Eco Green		Grey		Orange		Red	
31 22 73	S	31 22 79	S	31 22 85	S	31 22 91	S
74	M	80	M	86	M	92	M
75	L	81	L	87	L	93	L
76	XL	82	XL	88	XL	94	XL
77	2XL	83	2XL	89	2XL	95	2XL
78	3XL	84	3XL	90	3XL	96	3XL

Name of Mfr.: Scandia Gear

## Boilersuits, UV protection

### Reflect Type Short Sleeves

Traje de calderas con protección UV de tipo reflectante con mangas cortas

反射テープ付き紫外線防護半袖ボイラースーツ

带反光条防紫外线短袖连衫裤工作服



Made of 100% fine cotton twill with UV protection finish, and with storage pockets for mobile phone/walkie-talkie, flashlight, and pen at chest, sleeve, side ( $\times 2$ , open access), and seat ( $\times 2$ ). Striped with 3M reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.

shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.

## Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
White		Navy		Sky Blue		Royal Aqua	
31 22 97	S	31 23 03	S	31 23 09	S	31 23 15	S
98	M	04	M	10	M	16	M
99	L	05	L	11	L	17	L
31 23 00	XL	06	XL	12	XL	18	XL
01	2XL	07	2XL	13	2XL	19	2XL
02	3XL	08	3XL	14	3XL	20	3XL

CODE	Size	CODE	Size	CODE	Size	CODE	Size
Eco Green		Grey		Orange		Red	
31 23 21	S	31 23 27	S	31 23 33	S	31 23 39	S
22	M	28	M	34	M	40	M
23	L	29	L	35	L	41	L
24	XL	30	XL	36	XL	42	XL
25	2XL	31	2XL	37	2XL	43	2XL
26	3XL	32	3XL	38	3XL	44	3XL

Name of Mfr.: Scandia Gear

## Boilersuits, UV protection

### Reflect Type for Women

Traje de calderas con protección UV de tipo reflectante para mujeres

女性用反射テープ付き紫外線防護ボイラースーツ  
女用带反光条防紫外线连衫裤工作服



A boilersuit for women, made of 100% fine cotton twill with UV protection finish, and with storage pockets for mobile phone/walkie-talkie, flashlight, and pen at chest, sleeve, side ( $\times 2$ , open access), and seat ( $\times 2$ ). Striped with 3M reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.

## Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
White		Navy		Orange			
31 23 45	XS	31 23 51	XS	31 23 57	XS		
46	S	52	S	58	S		
47	M	53	M	59	M		
48	L	54	L	60	L		
49	XL	55	XL	61	XL		
50	2XL	56	2XL	62	2XL		

Name of Mfr.: Scandia Gear

## Boilersuits, UV protection

### UV Protection, Reflect Type

Traje de calderas con regulación de temperatura con protección UV, de tipo reflectante

高温環境用反射テープ付き紫外線防護ボイラースーツ

高温环境用带反光条防紫外线连衫裤工作服



## Boilersuits, Heat-regulating UV Protection, Reflect Type

Traje de calderas de regulación de temperatura con protección UV, de tipo reflectante

高温環境用反射テープ付き紫外線防護ボイラースーツ

高温环境用带反光条防紫外线连衫裤工作服

Designed for hot climates and engine rooms thanks to mesh moisture management at back pleats. Made of lightweight 100% fine cotton with UV protection finish, and with storage pockets for flashlight, and pen at chest, sleeve, side ( $\times 2$ , open access), and seat ( $\times 2$ ). Striped with 3M reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.

#### Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+



						Unit Per Pcs.
CODE	Size	CODE	Size	CODE	Size	
<b>White</b>		<b>Navy</b>		<b>Grey</b>		
31 23 63	S	31 23 69	S	31 23 75	S	
64	M	70	M	76	M	
65	L	71	L	77	L	
66	XL	72	XL	78	XL	
67	2XL	73	2XL	79	2XL	
68	3XL	74	3XL	80	3XL	
<b>Orange</b>		<b>Red</b>				
31 23 81	S	31 23 87	S			
82	M	88	M			
83	L	89	L			
84	XL	90	XL			
85	2XL	91	2XL			
86	3XL	92	3XL			

Name of Mfr.: Scandia Gear

## Boilersuits, Heat-regulating UV Protection, Reflect Type Short Sleeves

Traje de calderas de regulación de temperatura con protección UV, de tipo reflectante de mangas cortas

高温環境用反射テープ付き紫外線防護半袖ボイラースーツ

高温环境用带反光条防紫外线短袖连衫裤工作服



Designed for hot climates and engine rooms thanks to mesh moisture management at back pleats. Made of lightweight 100% fine cotton with UV protection finish, and with storage pockets for flashlight, and pen at chest, sleeve, side ( $\times 2$ , open access), and seat ( $\times 2$ ). Striped with 3M reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges, and epaulets can be affixed to shoulders.

#### Standards

CE Certified / EN 340 (general requirements) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+

						Unit Per Pcs.
CODE	Size	CODE	Size	CODE	Size	
<b>White</b>		<b>Navy</b>		<b>Grey</b>		
31 23 93	S	31 23 99	S	31 24 05	S	
94	M	31 24 00	M	06	M	
95	L	01	L	07	L	
96	XL	02	XL	08	XL	
97	2XL	03	2XL	09	2XL	
98	3XL	04	3XL	10	3XL	

(to be continued)

Orange		Red	
31 24 11	S	31 24 17	S
12	M	18	M
13	L	19	L
14	XL	20	XL
15	2XL	21	2XL
16	3XL	22	3XL

Name of Mfr.: Scandia Gear

## Boilersuits, Flame-resistant Offshore, Multi-Hazard

Traje de calderas, ignífugo, para múltiples riesgos de uso en alta mar  
反射テープ付き耐炎性ボイラースーツ  
带反光条阻燃性连衫裤工作服



Flame-resistant offshore boilersuit. Made of 99% mercerized cotton, 1% carbon fiber. Equipped pockets at chest ( $\times 2$ , slanted, concealed, zipped), sleeve, side ( $\times 2$ , open access), cargo, seat ( $\times 2$ ), and inner. 2 walkie-talkie loops on upper chest. Striped with flame-resistant reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges.

#### Standards

CE Certified / EN 340 (general requirements) / EN 11611, Class 1 A1 (welding) / EN 11612, A1 B1 C1 F1 (flame-resistant) / EN 1149-5 (anti-static) / IEC 61482-2, Class 1 (electric arc) / EN 13758-2, 40+ (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+ / AS/NZS 1906.4 : 2010 / AS/NZS 4399: 1996

						Unit Per Pcs.
CODE	Size	CODE	Size	CODE	Size	
<b>White</b>		<b>Orange</b>		<b>Red</b>		
31 24 23	S	31 24 29	S	31 24 35	S	
24	M	30	M	36	M	
25	L	31	L	37	L	
26	XL	32	XL	38	XL	
27	2XL	33	2XL	39	2XL	
28	3XL	34	3XL	40	3XL	

Name of Mfr.: Scandia Gear, Product Code: 1035.12

## Boilersuits, Heat-regulating Flame-resistant, Anti-static

Traje de calderas de regulación de temperatura, ignífugo y antiestático  
反射テープ付き高温環境用耐炎性静電防止ボイラースーツ  
带反光条高温环境用阻燃性防静电连衫裤工作服



Offshore boilersuit designed for hot climates and engine rooms. Made of 99% long staple cotton, 1% carbon fiber with mesh moisture management at back pleats. Equipped pockets at chest ( $\times 2$ , slanted, concealed, zipped), sleeve, side ( $\times 2$ , open access), seat ( $\times 2$ ), and inner. 2 walkie-talkie loops on upper chest. Striped with flame-resistant reflective 50 mm (2.0 in) width belts at shoulders, arms, legs, and back to provide high visibility for day and night. Attached with Velcro strips for rank and name badges.

## Standards

CE Certified / EN 13688 (general requirements) / EN 11612, A1 B1 C1 (flame-resistant) / EN 1149-5 (anti-static) / EN 13758-2 (UV protection) / OEKO-TEX® Standard 100 Class II / AS/NZS 4399 UPF rating 50+ / AS/NZS 1906.4 : 2010 / AS/NZS 4399 : 1996

Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	CODE	Size
<b>White</b>		<b>Navy</b>		<b>Orange</b>		<b>Red</b>	
31 24 41	S	31 24 47	S	31 24 53	S	31 24 59	S
42	M	48	M	54	M	60	M
43	L	49	L	55	L	61	L
44	XL	50	XL	56	XL	62	XL
45	2XL	51	2XL	57	2XL	63	2XL
46	3XL	52	3XL	58	3XL	64	3XL

Name of Mfr.: Scandia Gear

## UV Protection High Visibility Boiler Suits

Traje de calderas con protección UV de alta visibilidad

紫外線防護高視覚ボイラースーツ

防紫外线高能见度连衫裤工作服

Designed for high-visibility class 3, and UV protection finish. Mesh Moisture Management at back pleats. Reflective striping 50 mm (2.0 in): shoulders, arms, legs, and back. Storage: mobile phone/walkie-talkie, flashlight, and pen. Pockets: chest, sleeve, side (x 2, open access), and seat x 2). Velcro strips for rank and name badges. Two-way zipper closure. Colours: High viz yellow & navy.



## Norms

CE-certified, EN13688:2013 (general requirements), EN13758-2, 40+ (UV protection), EN20471, class 3 (high visibility), AS/NZS 1906.4, Class R+F (high visibility), AS/NZS 4399 UPF Rating 50+ (UV protection), OEKO-TEX® Standard 100 Class II.

Unit Per Pcs.

CODE	Size	CODE	Size
31 24 65	XS	31 24 69	XL
66	S	70	2XL
67	M	71	3XL
68	L		

Name of Mfr.: Scandia Gear

## Multi-Hazard Offshore Boiler Suits

Traje de calderas, para múltiples riesgos de uso en alta mar

複合的危機対応オフショアボイラースーツ

可对应多项危机的海上作业连衫裤工作服

Flame-resistant fluo reflective perforated striping 2.0 inches (50 mm): shoulders, arms, legs, and back. Storage: mobile phone/walkie-talkie, flashlight, and pen. Pockets: chest, sleeve, side (x 2, open access), seat (x 2) and inner. Velcro strips for rank and name badges. 99% long staple cotton, 1% carbon fiber, and chemical, oil, and stain-resistant.



## Norms

NFPA 2112 - ASTM F1930 Bodyburn rate 7%, NFPA 70E - ASTM F1959, HRC 2 /

ATPV 9.4 cal/cm², ASTMF1506, AS/NZS 4399 UPF rating 50+, AS/NZS 1906.4 : 2010, AS/NZS 4399 : 1996, CE Certified, EN 340 (general requirements), EN 11611, Class 1 A1 (welding), EN 11612, A1 B1 C1 F1 (flame-resistant), EN 13034:2005 (chemical protection), IEC 61482-2, Class 1 (electric arc), EN 13758-2, 40+ (UV protection).

Unit Per Pcs.

CODE	Size	CODE	Size
<b>Navy</b>		<b>Orange</b>	
31 24 72	XS	31 24 79	XS
73	S	80	S
74	M	81	M
75	L	82	L
76	XL	83	XL
31 24 77	2XL	31 24 84	2XL
78	3XL	85	3XL

Name of Mfr.: Scandia Gear

## Offshore Jackets & Trousers, Multi-Hazard

Chaqueta y pantalones para múltiples riesgos de uso en alta mar

オフショア作業用上着・ズボン

海上作业用上装、裤子



Jacket

Trousers

Made of 99% cotton, 1% carbon fiber with storage pockets [Jacket: at chest (x 2, slanted, concealed, zipped), and sleeve and Trouser: at side (x 2), seat (x 2) and cargo]. Striped with flame-resistant reflective 50 mm (2.0 in) width belts at shoulders, arms, and back on jacket, and at legs on trousers to provide high visibility for day and night. Attached with Velcro strips on jacket for rank and name badges. Colour: Orange & Navy.

## Standards

CE Certified / EN 340 (general requirements) / EN 11611, Class 1 A1 (welding) / EN 11612, A1 B1 C1 F1 (flame-resistant)/EN 1149-5 (anti-static)/IEC 61482-2, Class 1 (electric arc)/EN 13758-2, 40+ (UV protection)/OEKO-TEX® Standard 100 Class II/AS/NZS 4399 UPF rating 50+/AS/NZS 1906.4: 2010/AS/NZS 4399: 1996

Unit Per Pcs.

Unit Per Pcs.

CODE	Size	CODE	Size
<b>Jacket</b>		<b>Trousers</b>	
31 24 86	S	31 24 92	S
87	M	93	M
88	L	94	L
89	XL	95	XL
90	2XL	96	2XL
91	3XL	97	3XL

Name of Mfr.: Scandia Gear

## Multi Hazard Winter Offshore Boiler Suits

Trajes para calderas de invierno para múltiples riesgos de uso en alta mar

複合的危機対応オフショアボイラースーツ

可对应多项危机的防寒海上作业连衫裤工作服

Thermal insulation to -20°C (-4°F), and lined and padded body, sleeves, and legs. Ultra soft down feel padding for optimal comfort. Flame-resistant reflective striping 50 mm (2.0 in): shoulders, arms, legs, and back. Storage: flashlight. Pockets: chest (x 2, slanted, concealed, zipped), side,

sleeve, seat (x 2), and cargo. Velcro strips for rank and name badges. Shell: 99% cotton, 1% carbon fiber, Lining: 55% modacrylic, 45% cotton. Colours : Orange & Navy.

#### Norms

CE Certified, EN 340 (general requirements), EN 11611, Class 1 A1 (welding), EN 11612, A1 B1 C1 F1 (flame-resistant), EN 1149-5 (anti-static), IEC 61482-2, Class 1 (electric arc), EN 13758-2, 50+ (UV protection), OEKO-TEX® Standard 100 Class II, AS/NZS 4399 UPF rating 50+, AS/NZS 1906.4 : 2010, AS/NZS 4399: 1996.



Unit Per Pc.

CODE	Size	CODE	Size
31 24 98	S	31 25 01	XL
99	M	02	2XL
31 25 00	L	03	3XL

Name of Mfr.: Scandia Gear

## High Visibility Waterproof Winter Boiler Suits

Trajes para calderas de invierno impermeables de alta visibilidad

高視覚防水防寒ボイラースーツ

高能见度防水防寒连衫裤工作服



Suitable for thermal insulation to -50°C (-58°F), and waterproof breathable polyester oxford with fur lining in body. Reflective striping 50 mm (2.0 in): chest, waist, shoulders, arms, legs, and back. Storage: flashlight. Pockets: chest (x 2), side (x 2), slanted and covered), sleeve (x 1), seat (x 2 covered), hammer pocket (x 1) and inner (x 2). Velcro strips for rank and name badges. Two-way zipper closure on front. Shell: 100% polyester Oxford / PU-coated (breathable), Lining body: 100% acrylic fur and Lining arms and legs: 100% polyester.

#### Norms

CE Certified, EN ISO 13688 (general requirements), EN 342 Icler 0.431 X-2-2 (cold weather), EN 343 Class 3-1 (foul weather), EN 20471 Class 3 (high-visibility).

Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
High Viz Orange & Navy		High Viz Yellow & Navy		High Viz Orange & Grey	
31 25 04	S	31 25 10	S	31 25 16	S
05	M	11	M	17	M
06	L	12	L	18	L
07	XL	13	XL	19	XL
08	2XL	14	2XL	20	2XL
31 25 09	3XL	31 25 15	3XL	31 25 21	3XL

Name of Mfr.: Scandia Gear

## High Visibility Waterproof Winter Parkas & Trousers

Parkas y pantalones de invierno de alta visibilidad, impermeables

高視覚防水防寒パーカ & ズボン 高能见度防水防寒连帽衫和裤子

Thermal insulation to -45°C (-49°F) in combination with Scan Polar HV 002 trousers. Waterproof breathable polyester twill

with teddy lining in body. Pockets: chest (x 2), waist (x 2), inner (x 2) for parka, and side (x 2, slanted and covered), seat (x 2, covered) and hammer pocket (x 1) for trousers. Reflective striping 50 mm (2.0 in): chest, shoulders, arms, back and legs. Velcro strips for rank and name badges, and double zipper closure. Shell: 100% polyester twill / PU-coated (breathable), and Lining body: 100% acrylic teddy for parka, and shell: 100% polyester twill / PU-coated (breathable), and Lining: 100% polyester for trousers. Wearing Bib & Brace Trousers in combination with Winter Parka together conforms to class 3 protection.



#### Norms

CE Certified, EN 13688 (general requirements), EN 342, Icler 0.359 X-2-2 (cold weather), EN 343, Class 3-1 (foul weather), EN 20471, Class 2 (high-visibility) for parka and Class 1 (high-visibility) for trousers.

Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
High Viz Yellow & Navy		High Viz Orange & Navy		High Viz Orange & Grey	
31 25 22	S	31 25 28	S	31 25 34	S
23	M	29	M	35	M
24	L	30	L	36	L
25	XL	31	XL	37	XL
26	2XL	32	2XL	38	2XL
27	3XL	33	3XL	39	3XL

Parks					
CODE	Size	CODE	Size	CODE	Size
31 25 40	S	31 25 46	S	31 25 52	S
41	M	47	M	53	M
42	L	48	L	54	L
43	XL	49	XL	55	XL
44	2XL	50	2XL	56	2XL
45	3XL	51	3XL	57	3XL

Trousers					
CODE	Size	CODE	Size	CODE	Size
31 25 40	S	31 25 46	S	31 25 52	S
41	M	47	M	53	M
42	L	48	L	54	L
43	XL	49	XL	55	XL
44	2XL	50	2XL	56	2XL
45	3XL	51	3XL	57	3XL

Name of Mfr.: Scandia Gear

## Work Shirts, Flame-resistant Multi-Risk

Camisas de trabajo, ignífugas, para múltiples riesgos

耐炎性作業用シャツ 阻燃性作业用衬衫



A flame-resistant workwear shirt made of 99% cotton, 1% carbon with pockets at chest (x 2), pen pocket opening, and sleeve. Colour : Navy.

#### Standards

CE Certified/EN 13688 (general requirements)/EN 11612 (flame-resistant)/EN 1149-5 (anti-static) / EN 13758-2 (UV protection)/OEKO-TEX® Standard 100 Class II/AS/NZS 4399 UPF rating 50+ /AS/NZS 1906.4: 2010 / AS/NZS 4399: 1996

Unit Per Pc.

CODE	Size	CODE	Size
31 25 61	S	31 25 64	XL
62	M	65	2XL
63	L	66	3XL

Name of Mfr.: Scandia Gear

## High Visibility Waterproof Winter Parkas & Trousers

Parkas y pantalones de invierno de alta visibilidad, impermeables

高視覚防水防寒パーカ & ズボン 高能见度防水防寒连帽衫和裤子

Thermal insulation to -45°C (-49°F) in combination with Scan Polar HV 002 trousers. Waterproof breathable polyester twill

## Antistatic Safety Shoes

Conformed to BS EN 345-1

Zapato de Seguridad Anti-Electroestático, según la Norma BS EN 345-1

BS 規格適合静電防止安全靴

防静电安全鞋



Made of black smooth leather with double density polyurethane sole. Extra wide fit with the following safety features.

- 200 joules toe protection to EN 345-1 and oil resistant outsole.
- Antistatic (dissipates static electricity between 100 kilohms - 1,000 megohms).
- Energy absorbing and shock absorbing heel.
- Heat resistant up to 200°C.

Unit Per Pr.

CODE	Size		CODE	Size	
	U.K.	cm		U.K.	cm
31 35 01	3	22	31 35 09	8.5	27
02	4	23	10	9	27.5
03	5	23.5	11	9.5	28
04	6	24.5	12	10	28.5
05	6.5	25	13	10.5	29
31 35 06	7	25.5	31 35 14	11	29.5
07	7.5	26	15	12	30.5
08	8	26.5	16	13	31.5

## Leather Safety Hi Shoes

European Safety Footwear Protection Type: S3

Calzado alto de seguridad de cuero

耐油・酸・アルカリ静電防止安全ハイヒューズ

耐油耐酸碱防静电高帮安全靴



Made of upper in black printed leather and water repellent lining in full leather. Fiberplast® toecap and Kevlar midsole, and dual density TPU (Thermoplastic Polyurethane) sole. Acid-, oil-, and alkali-resistant sole. Anti-static sole and shock absorbing heel. Colour: Black.

### Standards

EN ISO 20345:2012 compliant / ASTM F2413-11 compliant

Unit Per Pr.

CODE	Size			CODE	Size		
	EU	UK	USA		EU	UK	USA
31 35 61	37	4	5	31 35 67	43	9	10
62	38	5	6	68	44	10	11
63	39	6	7	69	45	10.5	11.5
64	40	6.5	7.5	70	46	11	12
65	41	7	8	71	47	12	13
31 35 66	42	8	9	31 35 72	48	13	14

Name of Mfr: Scandia Gear

S3: 200 joule toecap protection.

Closed seat region (fully enclosed heel).

Antistatic properties. Energy absorption of seat region.

Water penetration and water absorption resistance.

Sole penetration resistance. Cleated outsole.

## Antistatic Rigger Boots

Conformed to BS EN 345-1

Botas de Seguridad Anti-Electroestático, según la Norma BS EN 345-1

BS 規格適合静電防止リガーブーツ

防静电安全鞋



Made of rustic tan smooth leather, and with double density polyurethane sole. Extra wide fit with the following safety features.

- 200 joules toe protection to EN 345-1 and oil resistant outsole.
- Antistatic (dissipates static electricity between 100 kilohms - 1,000 megohms).
- Energy absorbing and shock absorbing heel.
- Heat resistant up to 200°C.

Unit Per Pr.

CODE	Size		CODE	Size	
	U.K.	cm		U.K.	cm
31 35 21	6	24.5	31 35 25	10	28.5
22	7	25.5	26	11	29.5
23	8	26.5	27	12	30.5
24	9	27.5			

## Antistatic Ski Boots

Conformed to BS EN 345-1

Botas para Esquiar Anti-Electroestático, según la Norma BS EN 345-1

BS 規格適合静電防止スキーブーツ

防静电滑雪鞋



Made of black grain leather, and with double density polyurethane sole. Wide fit with the following safety features.

- 200 joules toe protection to EN 345-1 and oil resistant outsole.
- Antistatic (dissipates static electricity between 100 kilohms - 1,000 megohms).
- Energy absorbing and shock absorbing heel.
- Heat resistant up to 200°C.

Unit Per Pr.

CODE	Size		CODE	Size	
	U.K.	cm		U.K.	cm
31 35 31	3	22	31 35 38	9	27.5
32	4	23	39	10	28.5
33	5	23.5	40	10.5	29
34	6	24.5	41	11	29.5
35	6.5	25	42	12	30.5
31 35 36	7	25.5	31 35 43	13	31.5
37	8	26.5			

## Industrial Wellington Boots

Botas Wellington ウエリンントンブーツ

Wellington 工業用長靴



PVC / Nitrile knee length Wellington. Green with crepe coloured sole, and steel midsole. Resistance to most oils, fats, grease, acids and alkalis. Sole tread designed to give maximum grip.

200 joules toe protection to EN 345-1.

Unit Per Pr.

CODE	Size		CODE	Size	
	U.K.	cm		U.K.	cm
31 35 51	6	24.5	31 35 55	10	28.5
52	7	25.5	56	11	29.5
53	8	26.5	57	12	30.5
54	9	27.5			

## Antistatic Rigger Boots

Conformed to BS EN 345-1

Botas de Seguridad Anti-Electroestático, según la Norma BS EN 345-1

BS 規格適合静電防止リガーブーツ

防静电安全鞋

## Anti-shatter Films

### (Blast Mitigation)

Láminas de seguridad para cristales (antiexplosiones)

窓硝子用粉碎防止フィルム



Anti-shatter film provides protection from flying glass in the event of a natural disaster or demolition by pirates. It forms an almost invisible protective coating on the glass surface. This window film should only be applied to flat glass. It should never be applied to polycarbonate (plastic). Adhesive window films are constructed from a multi-lamination of micro-thin polyester. They also have a scratch resistant coating to protect the film surface and enhance durability (except films for external application). The film should be cut 10 mm over size in both dimensions, and trim around the oversized edges using a sharp trimming knife after squeezed the film.

15 08 21	Film, anti-shatter (Blast mitigation), 200 micron, Width 152 cm x Length 15 mtr	Rls.
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## Anti-Piracy Goods

### Bulletproof Accessories

Productos antibalas antipiratería

海賊対策用防弾装具

反海盗用防弹装备

Bulletproof Combat Helmet	DC4-4NIJ IIIA level 9 mm colour Black, included cotton protection cover.
Bulletproof Body Armer (Vest)	DC2-3NIJ IIIA level 44 mm colour Black Due to the layer of fibers in a vest, the protection level (resistance level) was determined. This model has the NIJ level IIIA protection, which against the heaviest bullets from a handgun, such as the 44 and 9 mm.
Bulletproof Plate	Vests with level III and IV require hard plates in the vest for protection against machine gun fire.

Remark: These products are dual use items, and may therefore be restricted in supply by some authorities.



Bulletproof Helmet



Bulletproof Helmet Visor



Bulletproof Body Armor



Bulletproof Plate



Plate Carrier

CODE	Description	Weight gram
31 03 51	Combat helmet, NIJ IIIA 9 mm DC4-4	1,500
31 05 71	Helmet visor NIJ level IIIA	1,500
31 41 11	Body armor (vest) DC2 NIJ Standard IIIA -.44	2,600

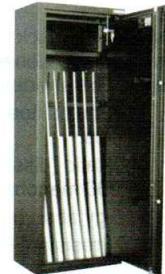
Unit Per Pcs.

31 41 12	Plate DC3-5 Alumina ceramic	3,000
13	Plate DC3-7 Silicone carbide ceramic	2,550
14	Plate carrier, black (Universal size)	-

## Gunsafes

Caja fuerte para armas 純保管庫 枪支保管库

For quantity of weapons maximum 8 and 125 cm. 4 points lock system and mechanical or electronic lock possible. Thickness of steel 3 mm, door 45 mm with anthracite green colour. One separate ammunition safe inside. Safetyclass A/VDMA and Safe II-NCP, and Securitylevel I.



Unit Per Pcs.

CODE	No. of Weapons	Dimensions L × W × D mm	Weight kg
31 41 15	8	150 × 55 × 35	97

## Anti-Piracy Dummies

Muñecos antipiratería

海賊対策用マネキン人形

反海盗用人体模型

A false security patrol man to assist deterring pirates from boarding ships. Any equipment dummy wearing are separate order.



31 41 16	Dummy, anti-piracy, bare	Pcs.
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## Anti-Piracy Water Jet Cannons

Cañones de agua antipiratería 海賊対策水射出器

反海盗水枪

A water jet cannon is based on the use of high quality oscillating water cannons, which are installed on several points on the ship and prevent any boarding attempt when activated. The system is sent to the ship as a modular package that is installed by the crew without any required external help. Training will be given to operate the system and a user manual will enable smooth operation of the system.



The installation of the system is divided into 2 main categories.

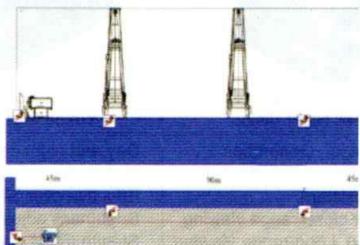
A – Engine room related installation

- Ensure existing pump has enough capacity.
- Else, in case the capacity is not available, connect engine room pumps to on deck diesel powered booster pump.
- Connection of hoses from pump (via engine room or deck).

(to be continued)

### B – Deck related installation

- Install water cannons on deck or railing, using supplied connection kit.
- Run 6" feeder hoses from main pump outlet / manifold.
- Run 4" hoses from feeder to water cannon.



### System Components

- Storage container.
- High quality oscillating water cannons, (a modified type of the systems used by fire fighting departments).
- Special fittings to temporarily attach the cannons to deck or railing.
- Hoses, supplying water from pump to water cannons.
- Ballistic shields to protect water cannons from direct small caliber fire arms.

### Typical Installation Pattern per Ship's Overall Length

Overall Length	No. of Cannon	Water Supply	
		ltr/min.	m³/hr
200 mtr	5 cannons	10,000	600
280 mtr	7 cannons	14,000	840
360 mtr	9 cannons	18,000	1,080

### Performance of Water Jet Cannon

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>Ultra compact</li> <li>Weight : just 11.4 kg</li> <li>Totally adjustable</li> <li>Capacity 2,000 ltr/min at 5.5 bar</li> <li>Range 50 – 55 meters</li> <li>High quality aluminium</li> <li>Includes manometer</li> </ul> | <ul style="list-style-type: none"> <li>Left right radius between -180 degrees to +180 degrees</li> <li>Up down radius between -45 degrees to +90 degrees</li> <li>12/24V electro motor</li> <li>Remote control option with joystick</li> <li>10 year warranty</li> </ul> |
|---|--|

### Water Supply Hose:

Made from thick woven synthetic thread with a bac PVC/Nitril protection coating. The internal and external tubes are seamlessly interwoven to long levity. Consequently the internal tube cannot disconnect from the external tube. Totally oil and chemical resistant as well as extreme UV and Ozon protected.



Long levity, remains flexible, no maintenance, no rotting, temperature range -35°C to +100°C, sea water proof, high resistance to tearing and bending, and special textile cuff protect connector areas.



### Couplings & Connectors:

High quality aluminium connectors with fast connect and release system, as used by fire fighting department worldwide

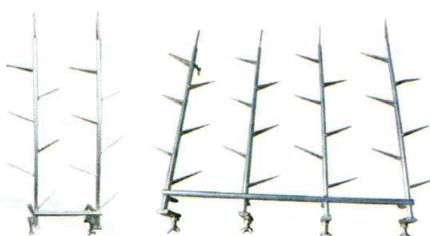
### How to order: 31 - 41 - 21

Water jet cannon system, With further details

### Anti Piracy Spike Fence (APSF)

Valla de púas contra piratería 海賊対策用フェンス 防海盗用栅栏

Specially designed to safeguard ships sailing across high-risk sea area. The fence is steel welded with galvanized surface treatment, effective to prevent pirates or stealers to climb onboard. It can work for much longer time with effective anti-corrosive function, and easily installed firmly one by one along deck fishplate, gunnels with wing bolts. 2-spikes type fence and 4-spikes type fence are available, and can be designed other type as per requirement.



Unit Per Pcs.

CODE	Model	Dimension L x B mm	Weight (kg/pcs)	Typical qty as per Ship's LOA
31 41 25	4-spikes	850 x 680	4.9	Quantity required =LOA×2/0.95
26	2-spikes	425 x 680	2.45	Quantity required =LOA×2/0.5

### Anti Piracy Barrier

Barrera contra la pirateria 海賊対策用バリア 反海盗屏障



An innovative defensive solution to prevent unwanted personnel (using ladders, poles, and ropes) from boarding a vessel. Sustainable and cost-effective denial of access maritime security solution used to protect commercial sea vessels passing through high-risk areas.

Unique patented design that allows for each unit to be self-installed with speed and strapped to vessel guardrail by using mounting panels and straps. Fend plate design along with innovative ribbed surface will repel hooked ladders and climbing poles to defeat rope based climbing systems.

Available in orange and black colour.

CODE	Model	Material	Dimensions (mm)	Weight (Kg/pcs)
31 41 27	ABaC Barrier	Virgin Grade Polyethylene Powder with 5% UV Stabilizer	H1,365 x W700 x D775	16.5
28	ABaC Mounting Panel		H1,180 x W495 x D25	6.5
29	ABaC Mounting Strap	316 SUS Grade Ratchet, 100% Polyester strapping	H4 x W25 x L4,000	0.12

## Ballistic Protection Plate System

Sistema de placas de protección balística  
彈道保護プレートシステム 防弹保护板系统

Ballistic Protection Plate System (BPP) is a robust, ballistic and permanent non-lethal defensive solution that protects vessels from high velocity. It's a ballistic steel modular system comes in two materials, a Kevlar composite and an alloyed ballistic steel, and straps to the guard rail of any existing ship, offering complete protection by preventing ballistic rounds, high velocity, and blast impacts.



Plate size: W595 x H1,163 x T12 mm

**How to order: 31 - 41 - 30**

Ballistic Protection Plate System (BPP), specify the total meterage for use

## Anti-Piracy Security Booms

Auge de la seguridad contra la piratería

海賊対策用安全フェンス

反海盗安全围栏

Designed to be used in conjunction with unmanned maritime assets to fortify onboard defences against piracy. The tubular backbone makes the booms immensely strong, designed to take loads in excess of 50 tons.



The design of the Security Booms is available with rotating steel spikes to discourage boats from trying to get over the booms by jumping through one of the gaps between the oats. They are available with patented latching system that allows the booms to be opened and closed automatically.

**How to order: 31 - 41 - 31**

Anti-Piracy Security Booms, specify the total meterage for use

## Night Vision Binoculars for Anti-piracy

Binoculares de visión nocturna antipiratería

海賊対策用暗視双眼鏡 反海盗用夜视望远镜

An optical instrument that you can see a night view even in a moonless, cloudy night.

Remark: The products are dual use items, and may therefore be restricted in supply by some authorities.



Bushell Night Vision



Yukon Night Vision

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>Night vision: Generation 1</li> <li>Infrared illuminator: Built-in</li> <li>Water resistant</li> <li>Great for close-range viewing (Security). Long-range viewing (Wildlife observation)</li> <li>Magnification x objective lens: 2.5 x 42</li> </ul> | <ul style="list-style-type: none"> <li>Day and night operation</li> <li>Higher resolution than Gen. 1</li> <li>Effective over 300 yards</li> <li>Brightness adjustment control</li> <li>Stealth IRTM operation with invisible, powerful dual IR illuminators</li> <li>Direct video output capability</li> <li>Magnification x objective lens: 5 x 42</li> </ul> |
|--|---|

Unit Per Pr.

CODE	Model	Capacity Magnification x Objective Lens
37 03 55	Bushell night vision	2.5 x 42
56	Yukon night vision	5 x 42

## Camera Monitoring System with Infrared Illuminators

Sistema de observación con cámara con iluminación infrarroja

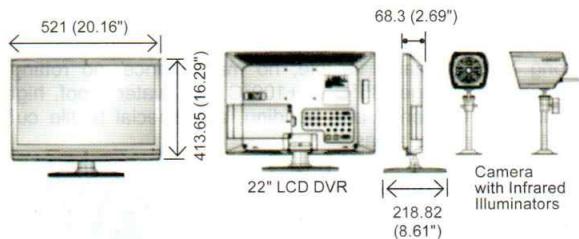
赤外線発光式監視カメラシステム

红外灯监控摄像系统



Camera monitoring system provides maximum protection for any spot 24 hours a day, 7 days a week. Simple to set up, you can monitor any time from anywhere around the world. All four cameras are waterproof to IP66, compact and highly durable to achieve clear stable video, even in harsh outdoor conditions. Single cable to each camera cover all wiring needs including power so you have the freedom to place them anywhere, even if there is no electrical outlet in the area. The four night vision cameras are equipped with 30 infrared LEDs which allow them to detect and show objects as far as 50 feet, even in the darkest conditions. The built in 500 GB hard drive allows for extended recording time and is expandable to 1 TB for maximum data capacity. Please contact your local supplier about more details.

### Dimensions



### Main Feature:

- Smartphone ready
- 4 x infra red night vision cameras – 600 TV lines of high super resolution

- H.264 high performance compression
- 8 channel digital video recorder
- Vivid 22" LCD display
- 500 GB of storage USB 2.0

#### Accessories:

4 pcs	Camera & bracket	1 pc	Power cable
4 pcs	60ft. extension cable	1 pc	Remote control
1 pc	User manual	1 pc	Quick guide
1 pc	VGA cable	1 pc	Mouse
1 pc	Network setup guide	1 pc	Ethernet cable
2 pcs	Battery		

37 05 43	Camera monitoring system with infrared illuminators Samsun model SME-4220	Set
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## Razor Wire

Alambre de púas 蛇腹式レーザーワイヤー 蛇腹式铁丝

A concertina configured galvanized steel wire used for outer boundary fencing on ship's deck to defend ships from the vandals, like pirates. The razor wire prevents any intruders from penetrating by piercing or gripping them.

Two patterns of loop are available; Single Loop or Crossed Loop, and also standard diameter are available from 400 mm to 900 mm. Standard coil length when extended is 15 mtr, and they can be lengthened by connecting clips.



Single Loop



Crossed Loop

Single Loop			Crossed Loop		
CODE	Diameter	Standard Extended Length	CODE	Diameter	Standard Extended Length
67 12 01	400 mm		67 12 11	400 mm	
02	500 mm		12	500 mm	
03	600 mm	15 mtr	13	600 mm	15 mtr
04	700 mm		14	700 mm	
05	800 mm		15	800 mm	
67 12 06	900 mm	15 mtr	67 12 16	900 mm	15 mtr

#### Connecting Clips and Ties for Razor Wire



Connecting Clip



Connecting Tie

CODE	Unit	CODE	Unit
Connecting Clip		Connecting Tie	
67 12 18	Per Piece	67 12 20	Per Piece
19	100's / Packet	21	100's / Packet

## Stainless Steel Razor Wire

Unit Per Mtr.

CODE	Circle Diam.	CODE	Circle Diam.
67 12 25	900 mm	67 12 26	1,000 mm

Remark: Standard length is 15 mtr per coil

## Flat Wrap Razor Wire

Alambre de afilar plano

平面式レーザーワイヤー

扁平缠绕剃刀线

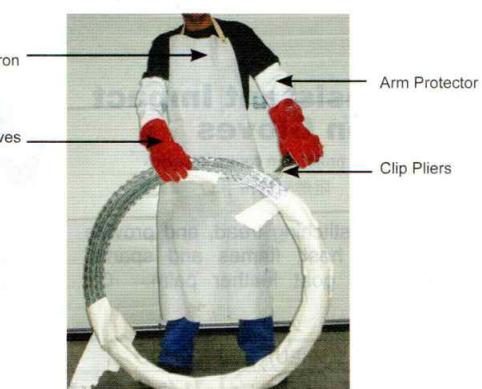


A flat wrap razor wire is suitable for installations where a neat appearance is required. Due to its flat construction, it does not overhanging into neighboring property and will therefore not harm innocent bystanders. The flat wrap razor wire can be used to upgrade any existing fence or wall, by adding directly to a wire mesh fence, or adding it on top of a brick or pre-cast wall to instantly upgrade your security.

Unit Per Lgh.

CODE	Diam.	Length
67 12 31	500 mm	10 mtr
32	700 mm	"

## Tools for Razor Wire Installation



19 01 41	Gloves for razor wire installation	Pr.
43	Arm Protector for razor wire installation	Pr.
45	Apron for installation razor wire	Pc.

61 17 65	Razor wire clip pliers	Pr.
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## Barbed Wire

Alambre de espino

有刺鉄線 有刺铁丝

A galvanized wire with sharp edges to protect your property from invaders by fencing around.



67 12 41	Barbed wire, 250 mtr (App.28 kg)	Rls.
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**Reference Table of EU Glove Size**

EU	EU	Palm circumference
7	S	< 17.8 - 20.2
8	M	20.3 - 22.8
9	L	22.9 - 25.3
10	XL	25.4 - 27.8
11	2XL	27.9 - 30.4
12	3XL	30.5 >

**Anti-Vibration Gloves**

Guantes antivibración 耐振手袋 防震手套

To protect the worker from impact and vibration, reducing the vibration and absorbing the shock from handheld power tools, according to the recommendation of "Maritime Labour Convention 2006" – Guideline B4.3.3 – Exposure to vibration".



Leather



Oil Resistant

Unit Per Pcs

CODE	Description	Material
31 45 01	Leather	Palm: leather/Back: canvas
31 45 02	Oil resistant	Palm and back: Nitril-latex

31

**Flame Resistant Impact Protection Gloves**Guantes ignífugos de protección contra impactos  
耐炎性耐衝擊手袋 阻燃耐冲击手套

Flame resistant stitching tread, and provide protection from heat, flames and sparks. Made of digital goat leather palm. CE Category III.



Unit Per Pcs

CODE	Size (EU)	CODE	Size (EU)		
31 45 05 06	M L	8 9	31 45 07	XL	10

Name of Mfr.: Scandia Gear

**Impact Protection Waterproof Winter Working Gloves**

Guantes de trabajo de invierno, impermeables de protección contra impactos

耐衝擊防水防寒手套 耐冲击防水防寒手套

Impact TPR (Thermo Plastic Rubber) protection, and waterproof palm and back. Silicone palm for improved grip. Cold resistance up to -30°C (-22°F), and washable at 30°C (86°F). CE category II.

**Norms:**

CE Certified, EN 420, EN 388 (4543), EN 511 (X13), ANSI 105:2011 cut level 4, ANSI 105:2011 puncture level 4, ANSI 105:2011 abrasion level 6.

CODE		Size (EU)		CODE		Size (EU)		Unit Per Pcs
31 45 08 09	S M	8	9	31 45 10 11	XL 2XL	10	11	

Name of Mfr.: Scandia Gear

**Abrasion-Resistance Working Gloves**

Guantes de trabajo resistentes a la abrasión

耐摩耗性グローブ 耐磨工作手套



Nitrile palm foam-coated gloves to provide excellent grip in oily condition with excellent abrasion-resistance. Seamless nylon liner gives an excellent fit and maximum dexterity.

CODE		Size (EU)		CODE		Size (EU)		Unit Per Pcs
31 45 16 17 18	S M L	7	8	31 45 19 20	XL 2XL	10	11	

**Cut Resistant Working Gloves**

Guantes de trabajo resistentes a los cortes

耐切創性グローブ 防割工作手套



Made of High-Performance Polyethylene (HPPE) featuring great cut resistance and other protection for common types of force.

Available for ANSI/ISEA Cut Level A1 - A9 with below specification and please specify the cut level when ordering.

Level	Weight (grams) needed to cut through material with 20 mm of blade travel
A1	≥ 200
A2	≥ 500
A3	≥ 1,000
A4	≥ 1,500
A5	≥ 2,200
A6	≥ 3,000
A7	≥ 4,000
A8	≥ 5,000
A9	≥ 6,000

CODE		Size (EU)		CODE		Size (EU)		Unit Per Pcs
31 45 21 22 23	S M L	7	8	31 45 24 25	XL 2XL	10	11	

**Cut Resistant Sleeves**

Manguitos resistentes a los cortes

耐切創用スリーブ 防割套管



Designed to protect your arms from sharp objects such as knives or blades.

31 45 26	Cut resistant sleeve	Prs
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