



MSA Safety Solutions for the Construction Industry





The changing face of the Construction Industry

Construction work is extensive and includes most building, civil engineering or engineering work, from general building to specific refurbishment, repair, maintenance or civil engineering works. The construction industry differs from other industries, as many dangers are often unidentified. As a result, it can be very difficult to educate end users about the potential hazards:

- Falls from height account for around half of all fatal accidents
- Struck by flying/falling objects
- Struck by moving vehicle, contact with overhead live cables
- Exposure to loud noise
- Presence of chemical contaminants, e.g. asbestos...

Data from a number of industrialised countries shows that construction workers are 3 to 4 times more likely than other workers to die from accidents at work*. Many more workers suffer from occupational diseases arising from past exposure to dangerous substances, such as asbestos. Although the injury rate has decreased over several years thanks to the work done by regulatory bodies, insurance companies and government laws, Health & Safety awareness is still low in this market segment. Construction remains a high risk Industry across Europe.

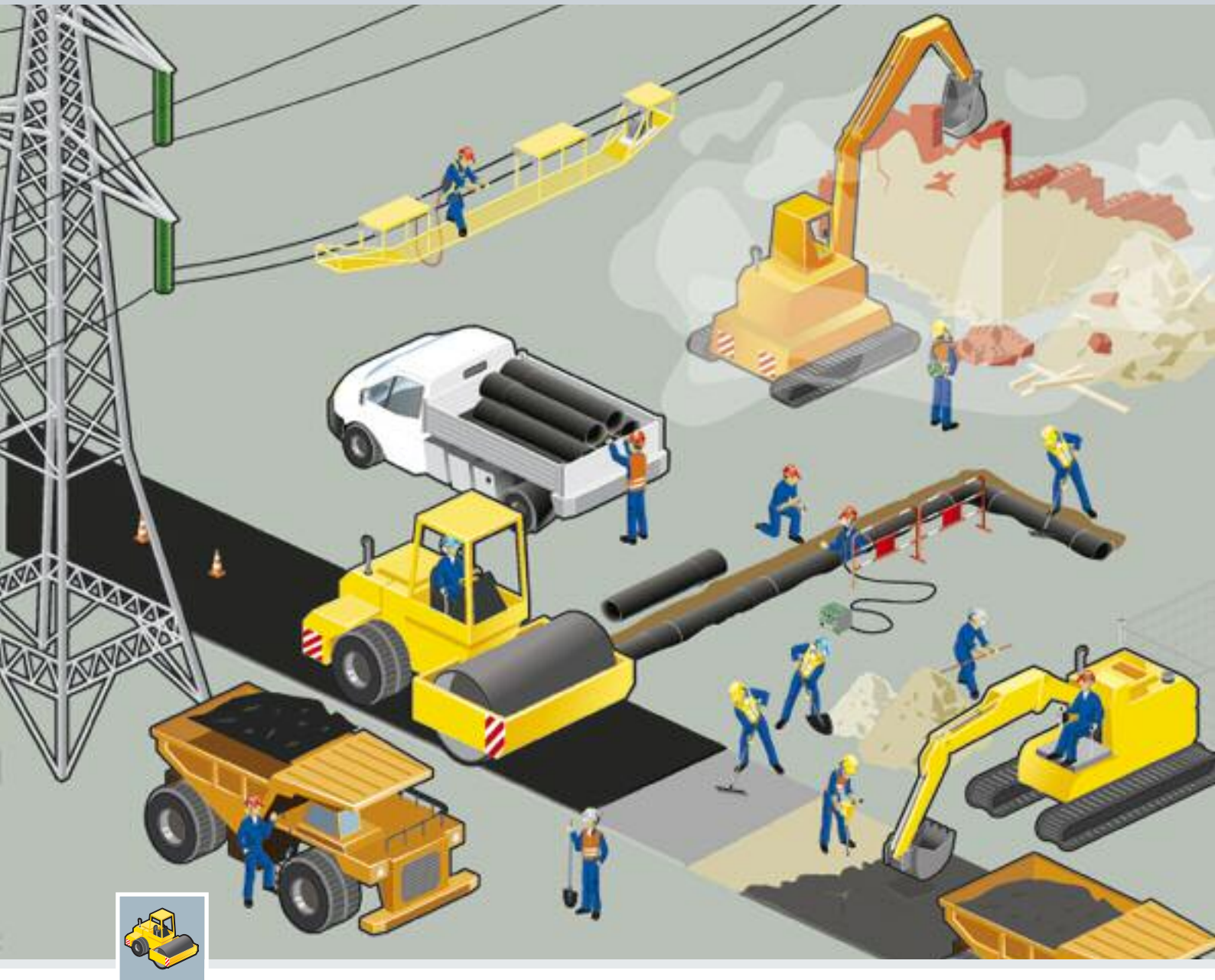
Construction companies have taken measures to ensure the health and safety of their employees; this has resulted in a slight increase in the demand for PPE. The end users' need for safety, comfort, and style, requirements MSA is trying to promote thanks to intensive voice of customer surveys. The challenge for the coming years will be to capture interest of some of the smaller companies. MSA is looking for ways to make the PPE selection of individual companies through their construction distributor trade counters even more straightforward.

MSA has extensive experience in Construction Segment all over the world which has let to the development of a wide range of PPE designed specifically to meet the needs of this Industry:

- **Head, Eye, Face, Hearing Protection** pages 6/13
- **Respiratory Devices** pages 14/15
- **Fall Protection**..... pages 16/19
- **Gas Detection**..... pages 20/21

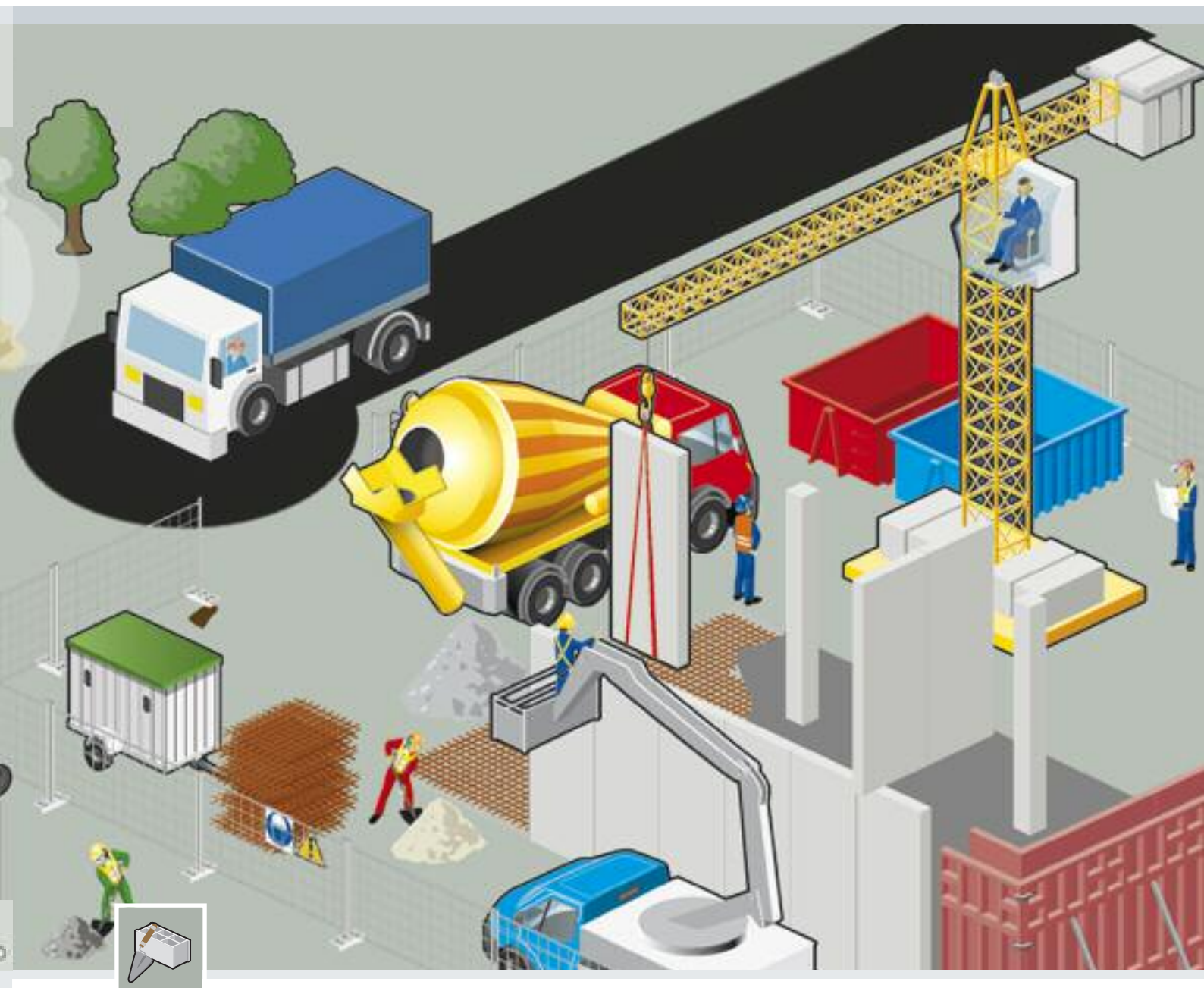
*International Labour Organisation

Public Works



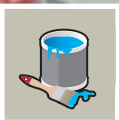
Applications	Risks	MSA Solutions
<ul style="list-style-type: none"> ■ Demolition of buildings and structures, tree-felling 	<i>Asbestos, dust, noise, projectiles, falling objects and shocks, falls</i>	▶ HEFHC*, Respirators, Fall Protection
<ul style="list-style-type: none"> ■ Earth-moving on site, excavation, tunnelling and boring 	<i>Noise, falls, dust, confined space</i>	▶ HEFHC*, Respirators, Fall Protection, Portable Gas Detection
<ul style="list-style-type: none"> ■ Preparation and laying of foundations and piling 	<i>Falling objects and shocks, falls, projectiles</i>	▶ HEFHC*, Fall Protection
<ul style="list-style-type: none"> ■ Installation of power lines, pipelines, gas mains, sewers, drainage, cable television and telecommunications 	<i>Falls, projectiles, airborne particles, noise, toxic and chemical hazards, dust</i>	▶ HEFHC*, Fall Protection, Respirators, Portable Gas Detection
<ul style="list-style-type: none"> ■ Construction, repair and resurfacing of roads and bridges 	<i>Falls, explosions, fire risks, fumes, noise, toxic gases</i>	▶ HEFHC*, Respirators, Fall Protection

Building Shell Construction



Applications	Risks	MSA Solutions
■ Erection or dismantling of scaffolding formwork	<i>Falling objects, falls from height</i>	▶ Head Protection, Fall Protection
■ Slings, operating a hoisting crane	<i>Falling objects and shocks, falls from height</i>	▶ HEFHC*, Fall Protection
■ Masonry	<i>Falling objects, falls from height, dust, noise</i>	▶ HEFHC*, Fall Protection, Respirators
■ Coating	<i>Falling objects, falls from height, airborne particles, toxic gases, noise</i>	▶ HEFHC*, Fall Protection, Respirators
■ Materials handling	<i>Falling objects, falls from height, dust, noise</i>	▶ Head Protection, Respirators, Fall Protection

Finishing work



Applications	Risks	MSA Solutions
■ Painting and decorating of buildings	<i>Chemical hazards, toxic gases, projectiles, falls from height</i>	▶ Respirators, Face Protection, Fall Protection
■ Roofing, siding, watertightness	<i>Falls from height, slides, projectiles, dust</i>	▶ Fall Protection, Respirators, Head Protection
■ Electrical wiring of buildings	<i>Falls from height, projectiles, explosions, confined spaces</i>	▶ Face Protection, Head Protection
■ Installing and maintaining systems used for plumbing, heating, drainage, drinking water	<i>Confined spaces, asbestos, projectiles, toxic gases, falls from height</i>	▶ Portable Gas Detection, Respirators, Face Protection, Fall Protection
■ Facade rendering	<i>Falling objects, airborne particles, falls from height, noise</i>	▶ Face Protection, Fall Protection, Hearing Protection, Head Protection

Head, Eye, Face, Hearing Protection



Head Protection

A falling load during lifting operations, hitting a head against building machine, falling tools, getting hit by overhead objects, contact with live parts are some example of foreseeable risks of head injury encountered on Construction Sites. To optimise the safety in such environments and to make the working conditions better, MSA offers sophisticated solutions for Head protection: helmets and accessories.



V-Gard Helmets

V-Gard is the best compromise between high protection and budget, with an unmatched durability and performance - Best seller within the World: 100 million sold since 1964 !

- Economical solutions for Construction Sites Visitors or Temporary workers
- Moulded from UV stabilised High Density Polyethylene
- Textile suspensions: higher comfort during summer
- 2 options of suspensions adjustments: "Staz-On" with slide and "Fas-Trac" with larger wheel ratchet for quick adjustment when wearing gloves
- Range of 8 colours, including Yellow Hi-viz & Orange Hi-Viz
- Antistatic approved, ideal for construction work in chemical plants
- Suitable for electrical applications: electrical insulation requirement of 440 V AC from EN 397 & certified according to EN 50365 (reliable protection against electric shock up to AC 1000 V or DC 1500 V)



V-Gard 200 Helmets

Lightweight, with a high profile shell and a short peak for better upwards vision

- Vented shell (ventilation holes on the upper part)
- Stylish UV stabilised ABS shell which offers good resistance to scratches
- Textile suspensions: higher comfort during summer
- 2 options of suspensions adjustments: "Staz-On" with slide and "Fas-Trac" with larger wheel ratchet for quick adjustment when wearing gloves
- Range of 10 colours, including Yellow Hi-viz
- Unvented shells: electrical insulation requirement of 440 V AC from EN 397 & certified according to EN 50365 (AC 1000 V, DC 1500 V or molten metal resistance)
- Antistatic approved, ideal for Construction works in Chemical plants



V-Gard 500/520 Helmets

V-Gard 500 with peak & V-Gard 520 without peak for working at height

- Stylish UV stabilized ABS shell which offers good resistance to scratches
- Vented shell (ventilation holes on the upper part) or unvented
- Provides lateral crushing protection
- Rain gutter for outdoor work
- Textile suspensions: higher comfort during summer
- 2 options of suspension adjustments: "Staz-On" with slide and "Fas-Trac" with larger wheel ratchet for quick adjustment when wearing gloves
- Range of 10 colours, including Yellow Hi-viz, Orange Hi-Viz (except V-Gard 520, 6 colours options)
- Unvented shells: electrical insulation requirement of 440 V AC from EN 397 & certified according to EN 50365 (AC 1000 V, DC 1500 V or molten metal resistance)
- Antistatic approved, ideal for Construction works in Chemical plants
- Badge holder option ideal for major projects with subcontractors or works in Industrial sites, allowing a business card or a magnetic access control badge to be inserted



Helmet Customisation

A professional pad printing service for all V-Gard range

- Promote your company brand image on construction sites where they are several subcontractors
- Print logo or Safety Messages such "Emergency Phone Number..."
- Top-quality printing, durable and weather-proof
- Up to 4 logos per helmet (front, rear, left and right)
- Large printable area up to 6 x 9 cm per position/logo
- All possible colours can be used for printing
- Easy to use MSA Logo Express process



Options & Accessories

V-Gard, more than helmets, Accessory System

- Side lamp bracket to light working area or to look at a plan
- High-Visibility stickers: Reflective stickers provide an optimal visibility, even when working at night in unsecured area (like road construction)
- Winter liners: provide extra protection in cold weather, for example V-Gard Knit Cap to be worn under V-Gard helmets
- Clip to attach Goggles to the shell: allowing them to be on hand when needed
- Visors & Frames: See face protection section; MSA provides an Electrician Kit with frame, electrical arc visor & V-Gard 500
- Ear-muffs: See Hearing protection section
- Construction kit available which is a combination of ear-muffs & helmet; see Hearing protection section for other solutions
- Various options of chinstraps for better retention : 2 point, 3 point (Fas-trac suspensions only) or 4 points (V-Gard 520 only)



Head, Eye, Face, Hearing Protection



Face Protection

Face shields are required to be worn anytime work operations can cause foreign objects to strike the face, such as during welding, cutting, grinding or when working with concrete or harmful chemicals. Face shields are also requested when a worker can be exposed to any electrical hazards. To optimise worker safety MSA offers a wide range of frames, visors and chinguards for use with V-Gard helmets.



V-Gard Frames

Easily assembled adjustable visor holders

- Available as standard helmet mount, ear muff mount or a universal version
- Replaceable/optional debris control ensuring a tight seal between the helmet and frame for excavation & demolition operations
- Non-metal construction for use in electrical applications
- Unique V-shaped channels help clear debris from frame
- Built-in gutters that guide liquids, chips and other materials off and away from the line of sight



V-Gard visors: General points

A wide range of visors for all applications

- Easy to mount patented 3 touch point visor loading
- Unique attachment to chin protectors
- Specific shaping of sheet visors to integrate with hearing protection
- Various versions available: three thicknesses, two widths, three lengths, flat & precurved, made from polycarbonate or propionate
- Clear or green tinted visors for better sun glare protection on construction sites
- Higher thickness of moulded visors provide increased heat and molten metal protection
- Individually injection moulded visors ensure superior optical quality & receive reduced mounting stresses
- Protection against short circuit electrical arc
- Anti-fog, anti-scratch & heat reflective coated polycarbonate & propionate visors for higher durability and better comfort
- Mesh visors for tree-felling applications



V-Gard Visors with increased impact properties

Solid particle impact resistance up to 120m/s

- All the advantages mentioned in the V-Gard Visors section
- Made from polycarbonate or propionate – impact protection level B (120 m/s)
- Compatible with other accessories & PPE



V-Gard Visors enhanced chemical protection

Chemical protection for all kinds of onsite application

- All the advantages mentioned in the V-Gard Visors section
- Good resistance against chemicals - polycarbonate visors
- Superb chemical protection against solvents - propionate visors
- Precurved visors provide greatest possible resistance to chemical attacks, increasing its lifespan and resistance in all applications
- Compatible with other accessories & PPE



V-Gard Welding visors

Polycarbonate visors designed for welding applications

- Applicable for gas welding, brazing, and oxygen cutting due to Ultra Violet and Infra-Red (up to Shade 3 or 5) spectra defence
- Excellent impact resistance up to 120m/s (level B) and scratch resistance
- Increased heat and molten metal protection
- Chin protector version available
- Protection against droplets & splashes of liquids
- Compatible with other accessories & PPE



V-Gard Chin Protectors

Extra protection from impact and splash hazards to face and neck

- Comes in 2 versions; standard and unique patented retractable chin protector
- Standard solution has compact & lightweight design to provide additional protection between the chin and neck area
- Unique retractable plates allow greater flexibility of head movement both up and down, as well as side-to-side

Head, Eye, Face, Hearing Protection



Eye Protection

The risk of particle projectiles, liquid splash or airborne particles is ever-present while working on a construction site. MSA has designed stylish and comfortable safety spectacles and goggles to ensure wearer acceptance and reliable protection against the most common hazards.



Alternator

Spectacles, prepared for all applications

- Impact resistant exchangeable lenses in different tintings ensure a maximum of safety, functionality and flexibility
- Stylish two colour frame providing gap-free enclosure
- Vented temples with good lateral protection offer high level of protection and wearer comfort
- Vented and non-vented dust inserts (available as accessory) reduce intrusion of dust and upgrade impact protection
- Combines well with Affinity filtering face pieces and left/RIGHT hearing protectors
- Sightgard anti-fog coating with good anti-scratch properties
- Option: OptiRock 4x durable high performance anti-fog coating with outstanding anti-scratch properties according to EN 166



Altimeter

Spectacles with headband, attachable to the helmet

- Can be used with temples or a comfortable headband, length adjustable to adapt to the head size
- Impact resistant clear lens with adjustable inclination ensures good protection
- Stylish two colour design with soft rubber frame providing gap-free enclosure
- 18 indirect air vents ensure a good wearing climate
- Combines well with V-Gard helmets, Affinity filtering face pieces and left/RIGHT hearing protectors
- Sightgard anti-fog coating with good anti-scratch properties
- Option: brackets for goggles attachment on V-Gard 500/520 helmets





PERSPECTA 1320

Spectacles, multi-adjustable for a universal fit

- Impact resistant lenses with adjustable inclination ensure perfect protection with a gap-free enclosure
- Lightweight frame with soft nose cushion provides comfort, as well as a safe and stable fit
- Temple length adjustable in 3 positions, with soft temple ends for high wearer comfort
- Combines well with Affinity filtering face pieces and left/RIGHT hearing protectors
- Sightgard anti-fog coating with good anti-scratch properties



PERSPECTA 9000

Spectacles, very lightweight and comfortable

- Impact resistant lenses with a gap-free enclosure
- Lightweight frame with soft nose cushion providing comfort, as well as a safe and stable fit
- Temples with soft ends for high wearer comfort
- Suitable also for smaller faces/heads
- Combines well with Affinity filtering face pieces and left/RIGHT hearing protectors
- Sightgard anti-fog coating with good anti-scratch properties



ChemPro

Goggles with a soft, tight fit for comfort and protection

- Provides protection against hazards from high speed particles (120m/s, even at extreme temperatures), liquid droplets, large dust particles and resistance against molten metal splash
- "Soft touch" body that adapts perfectly to the face provides comfort and gap-free protection
- Comfortable headband with length adjustment adapts to individual head size for a perfect fit
- The indirect ventilation allows air movement whilst offering reliable protection
- Clear lens with anti-fog coating (EN 166) and excellent anti-scratch properties
- Easily changeable lenses available as spare parts
- Wide frame fits over most prescription glasses, combines well with V-Gard helmets, Advantage and Affinity respiratory protection
- Option: OptiRock 4x durable high performance anti-fog coating with outstanding anti-scratch properties according to EN 166
- Option: brackets for goggles attachment on V-Gard 500 helmets



Head, Eye, Face, Hearing Protection



Hearing Protection

From the intermittent but intense noise of a jack hammer during demolition to the potentially permanently damaging background noise from a badly muffled building site compressor, noise is always with us in construction. MSA has created a wide range of comfortable hearing protectors, designed to prevent you from feeling isolated, thereby encouraging you to use them and so protecting your hearing for the rest of your life.



left/RIGHT passive ear muffs

Unique muffs designed to account for the anatomical individuality of the user

- Individual ear cups, left and right. The most comfortable protection on the market - remember, if it's not comfortable it just ends up discarded where it protects no one!
- Helmet mounted and headband muff models
- 3 distinct wearing positions of helmet mounted models
- Wide range of accessories



left/RIGHT electronic ear muffs

Muffs enabling protection and listening at the same time

- Headband and helmet mounted muff styles to match most helmets
- All the advantages mentioned for passive ear muffs
- Easy to use - operated by three distinct push buttons
- Battery-saving function
- Low battery warning function
- FM radio versions for lone workers
- CutOff and Dual (CutOff + FM) versions protect whilst still allowing normal conversation, thereby preventing any isolation effects and allowing effective gang work interactions





Connected by Cable ear-muffs

Muffs enabling protection and listening at the same time, noise-cancelling as standard, permitting two-way communication with minimal interference from background noise and a down lead for connection to a two-way radio

- Headband and helmet mounted muff styles to match most helmets
- All the advantages mentioned for passive ear muffs
- Easy to use - operated by distinct push buttons
- Battery-saving function
- Low battery warning function
- Level dependent CutOff feature
- Allows effective communication between crane operators/slingers and a multitude of other construction site workers where hands free communication is a must



Classic Line passive ear muffs

Range of muffs designed to provide economic solutions in all practical situations

- Quality, comfort and value with specific frequency targeting on some models
- Headband and helmet mounted muff styles to match most helmets
- 3 distinct models EXC, HPE and XLS
- Wide range of accessories



RIGHT ear plugs

A complete range of ear plugs for all requirements

- Soft and comfortable due to low pressure on the ear canal
- Long recovery time
- Hexagonal cavity for easy grip
- Flat attenuation
- Corded & non-corded, 2 sizes

Some typical sound levels and exposure times are listed below. At anything above 80 dB[A] hearing protection must be supplied and worn. Apart from continuous noise, short, loud bangs are particularly dangerous. Since this noise is heard only briefly, the actual energy is not appreciated. But a single, over-loud bang can damage the hearing for a whole lifetime. Without hearing protection, acoustic trauma results from impulse noise and as you can see in the table below at just above the limit at 86 dB[A] exposure time is reduced by 75%.

Acoustic pressure Source of sound/result

120 dB[A] ▶ Pain threshold Hearing damage already possible from brief exposure	70 dB[A] ▶ Continuous noise level at a busy main road during the day
116 dB[A] ▶ 0.6 minutes exposure time per week	65 dB[A] ▶ Increased risk of cardiovascular diseases from long-term exposure Continuous noise level at a busy main road at night
110 dB[A] ▶ Siren from 10 metres distant, typical noise level at a disco 2.3 minutes exposure time per week	40 dB[A] ▶ Learning and concentration problems possible Low traffic levels through double-glazing at 1 metre distance
100 dB[A] ▶ Pneumatic hammer 10 metres distant, typical earphone music level	35 dB[A] ▶ A very quiet room fan at slow speed
86 dB[A] ▶ 10 hours exposure time per week	25 dB[A] ▶ Sound of breathing at 1 metre distance
85 dB[A] ▶ Hearing damage possible from exposure of 40 hours per week	0 dB[A] ▶ Auditory threshold
80 dB[A] ▶ Passing truck 7.5 metres distant, Busy motorway ear protection recommended	

Respiratory Devices



In the course of their work, construction personnel are often exposed to respiratory hazards in the form of dangerous dusts, gases, fumes, mists, and vapours. MSA offers a complete line of respiratory protection equipment to meet the highest safety standards with unparalleled comfort and ease of use.



Affinity Series

High-performance, high-comfort filtering facepieces

- Extremely thin and light material for maximum comfort
- Perfectly adapts to different face/head sizes
- Low profile for use in combination with other PPE
- Exhalation valve (optional) that prevents heat build-up and reduces breathing resistance
- Dolomite tested ensuring a long service life in high dust environments
- Colour coding according to filter class for quick identification



Advantage 200 LS

Comfortable, efficient and economic half mask respirator

- Low weight, well-balanced design for high wearing comfort
- Multi-ethnic face seal for precise fit and maximum safety
- Easy to clean, low-maintenance design
- Wide range of light weight, high-performance bayonet filters for various applications



Advantage 3000

High-quality full face mask series available in different versions and sizes

- Soft, durable silicone face seal
- Patented, pre-adjustable head harness for consistent fit
- Wide, optically corrected lens to avoid distortions in the field of vision
- Deep chin cup for better stability and more comfort
- Easy fitting and maintenance
- Choice of single EN 148 standard thread or twin Advantage bayonet filters
- Available in 3 sizes (S,M,L)



OptimAir 3000

Stunningly compact, low profile powered air purifying respirator for protection against hazardous particles, gases and vapours

- Exclusive stackable filter system
- One-button easy-to-use blower unit
- Intuitive one-click battery change
- Automatic head top detection
- Automatic calibration procedure
- High airflow version available that meets the Asbestos removal regulations
- Wide range of headpieces



Turbo-Flo

Extremely reliable fresh air breathing apparatus designed to provide isolating respiratory protection where conditions permit the drawing of air from a hazard-free atmosphere

- Practically unlimited air supply allows the user to work without time restrictions
- Robust, reliable, low maintenance design
- Simple operation with hoses available in lengths of 9 m and 18 m that can be attached together
- Easy to carry with an available storage container
- Blower available for assisted breathing up to 54 m
- Great freedom of movement through positioning of breathing hoses over shoulders



AirGo compact

Reliable self-contained breathing protection, even in the toughest applications.

- Maximum safety and durability with the highest quality materials
- Demand valve directly attached to the pressure reducer, allowing quick donning
- Ergonomically designed backplate to keep weight close to the body's centre of gravity
- Basic harness with adjustable shoulder and hip straps
- State-of-the-art pressure reducer, requiring only minimal maintenance
- The integrated warning signal provides a high level of safety

Fall Protection



Falls cause a large number of occupational injuries in the building and construction industry and sometimes result in permanent disabling injuries or death. With major manufacturing plants located across the globe, MSA can meet requirements anywhere in the world. Our extensive product range includes the innovative TechnaCurv and the MSA Workman line of products. Please contact MSA for further information on our full range of textile, mechanical and rescue products.



MSA Workman Light

Single D-ring harness, provides comfortable protection, due to its lightweight components and durable webbing

- The vest-style harness fits a wide range of body types and sizes
- Colour contrasting thigh and torso straps simplify donning
- Yellow polyester webbing increases visibility
- Integral load indicator alerts you when the harness has been involved in a fall event
- The Quick-fit leg straps offer easy adjustment



MSA Workman Harness Kits

An easy cost effective solution in one unit for basic fall protection needs

- All fall protection kits include the MSA Workman Light Harness and lanyard



MSA Workman Premier

Comfortable vest-style harness with back D-ring and an additional attachment point at the front, with extra adjusters on the torso for even greater ease of adjustment

- Lightweight components and durable webbing
- Shoulder loops for use with the MSA Spreader Bar
- Available with Quick-fit or bayonet style leg straps



MSA Workman Utility

Multi-purpose fall protection harness, that offers front and rear fall arrest attachment points, positioning belt and back-pad

- With removable belt for easy fitting of tool pouches
- Attachment loops on the shoulders for confined space entry and retrieval applications with spreader bar use
- Yellow/Black webbing for increased visibility



TechnaCurv Full Body Harness

The most comfortable, versatile, unique, and safe harness available today

- Curvilinear Comfort System
- Visco-elastic shoulder padding
- Innovative web design offers a sporty style
- Secure-Fit buckles
- Sorbtek fabric on shoulder and sub-pelvic pads
- Designed with downward adjusting torso straps to ease adjustment
- Integral load indicator



MSA Workman Energy-Absorbing Lanyards

The MSA Workman energy-absorbing lanyards are available in web or kernmantel rope configurations with a variety of connectors

- The energy absorber includes a clear, durable protective cover over the labels to increase service life and allow for easy inspection
- Rope lanyards available in 1.5 or 2m lengths
- Web lanyards adjustable from 1.4 to 2m length
- Tear-tape design to keep fall arrest forces below 6 kN
- Choice of single or twin-leg configurations



MSA Workman Restraint Lanyards

Primarily used for travel restriction and work positioning

- Available in adjustable lengths



Workman PFL

Personal Fall Limiter

- Ideal for any application where vertical mobility is needed
- Integral load indicator
- Integral swivel at PFL/SRL connector
- Durable, engineered thermoplastic housing
- Available in 3.6m length



Workman SRL

Self-Retracting Lanyard limits free fall distance, deceleration distance and free fall forces while allowing the user freedom of movement

- Integral, ergonomic carrying handle for easier transport and installation
- Swivel snaphook with load indicator at lifeline end greatly limits twisting of cable; also alerts users that the Workman SRL has been involved in a fall
- Available in 9 and 15 m length to provide optimum mobility
- Available with galvanized or stainless steel lifeline to suit many varied applications



Aptura SRL

The most versatile and unique Self-Retracting Lanyard available today

- Durable, engineered thermoplastic housing with rugged, impact-absorbing bumpers
- Field-replaceable lifeline option eliminates costly returns to the manufacturer
- No annual factory recertification required due to high-quality construction
- Constant lock-up rate to prevent erratic, "jerky" lock-up
- SRL connector with integral swivel
- An integral load indicator lets you know when it is time to remove the product from service
- Available in 9m length



Workman Tripod

Designed for versatility and easy to use

- EN795 Anchorage
- Legs automatically lock in the open position for added safety
- A maximum height indicator provides quick and easy identification of the maximum leg extension length
- No need for a separate pulley/bracket assembly, which makes hoist attachment easier and faster
- Simple setup procedure makes the process quick and promotes correct use
- The leg base support strap also serves as a convenient carrying strap
- Aluminium leg and head design reduces weight

How to put on a Harness



1



2



3



4



5

1. Hold harness from back D-ring locator pad and gently shake it to remove any twists in straps.
2. Slip straps over shoulders so to position back D-ring in the middle of your back between your shoulder blades.
3. Pull each thigh strap between legs and fasten to buckle.
4. Pull leg straps to adjust the harness for a snug and comfortable fit. If harness has a belt, connect after leg straps.
5. Connect chest strap and position in midchest area. Tighten to keep shoulder straps taut and pass excess webbing through keepers.



Gas Detection



Construction workers can frequently be exposed to hazards such as combustible gases, toxic gases or oxygen deficiency. Such hazards can be presented by working in confined spaces or in the presence of gas pipes, sewage, running combustion engines or solvent vapours. From single gas disposable detectors to state-of-the-art multigas detectors, MSA's range of portable gas detectors provide class-leading protection against the hazards encountered in the construction industry.



ALTAIR® 5X

Multigas detector, up to 6 gases

- Built-in sampling pump, electronically controlled
- Powered by MSA XCell® sensors, including NH₃, Cl₂, SO₂, providing industry-leading accuracy, repeatability and response times
- 4-year expected sensor life on LEL, O₂, CO, H₂S, SO₂, IR and 3-year on NH₃, Cl₂
- End-of-sensor-life-warning feature reduces instrument downtime and sensor inventory
- Interchangeable sensor slots
- IP 65 ingress protection and 3m drop test
- Visual, audible and vibrating alarm system
- 3-year instrument warranty with LEL, O₂, CO, H₂S, SO₂ and IR sensors; 2-year warranty on NH₃ and Cl₂; minimum 12-month warranty on other sensors
- Rechargeable Li-Ion battery pack, up to 20h run time



ALTAIR® 4X

4 gas detector

- Powered by MSA XCell® LEL, O₂, CO, H₂S sensors, providing industry-leading accuracy, repeatability and response times
- Lasting durability proven by full 3-year warranty including sensors and battery
- Withstand 6 m drop, IP 67 rating. ALTAIR® 4X offers high performance without the worry of breaking the instrument
- Rechargeable Li-Ion battery giving a 24h runtime
- Triple alarm system: 4 bright red LEDs, 95db @ 30cm sounder and vibrating
- MotionAlert™ and InstantAlert™ features: "man-down" and manual alarms, ideal for confined space applications when there is no direct line of sight
- Extended temperature range: -40°C to +60°C. Great signal stability and repeatability under extreme environmental conditions



ALTAIR®/ALTAIR® PRO

Single gas instruments for oxygen and toxics

- ALTAIR is a Maintenance-Free instrument with at least 2 years service life, available with either O₂, CO or H₂S sensors
- ALTAIR PRO features replaceable battery and a choice of a wide range of sensors, including O₂, CO, H₂S and NO₂
- IP67 rated and designed to pass 3m drop test
- Small and lightweight, so can be comfortably worn
- High performance triple audio, visual and vibrating alarm provides an excellent indication of alarm status
- As for all ALTAIR family detectors, Bump Check confirmation stays displayed for 24 Hrs. The user knows the instrument has been correctly tested
- Event logging records including alarm events



GALAXY GX2

Advanced Calibration & Test System for Multigas Detectors

- GALAXY GX2 provides simple but intelligent automatic testing and calibration of MSA portable gas detectors
- Calibration without pressing a single button, complete detectors' data access via the integrated colour touch screen
- Once the gas detector is placed in the GALAXY GX2, it can be tested, calibrated and charged
- Extremely easy to use, offers up to 75% reduction in cost of ownership of the gas detectors
- Automatic calibration cylinder recognition by RFID, with visual indicator of the cylinder status
- It can be used with a PC or as standalone, providing the perfect solution for large or small instruments fleets
- Prints calibration/bump test reports and calibration stickers to provide complete information for the user



Because every life has a purpose...

For nearly 100 years our passionate mission of safety empowers us, “The Safety Company”, to protect lives.

We are committed to providing the latest in innovative, best-in-class safety solutions that feature integrated systems capability and allow our customers to return safely to their families and friends. Every day our customers place their lives in our hands. In response, we provide them with protection they can trust, and their stories become our stories. Hand in hand we partner with our customers to earn that trust.

Your direct contact



MSA (Britain) Limited
Lochard House
Linnet Way
Strathclyde Business Park
BELLSHILL
ML4 3RA
Scotland
Phone +44 (0)16 98 573357
Fax +44 (0)16 98 74 0141
E-mail info.gb@MSAsafety.com

MSA Europe
Thiemannstraße 1
12059 Berlin
Germany
Phone +49 (0)30 68 86-0
Fax +49 (0)30 68 86-15 58
E-mail info.de@MSAsafety.com

MSA International
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
USA
Phone +1-724-776-8626
Fax +1-724-741-1559
E-mail msa.international@MSAsafety.com



www.MSAsafety.com

