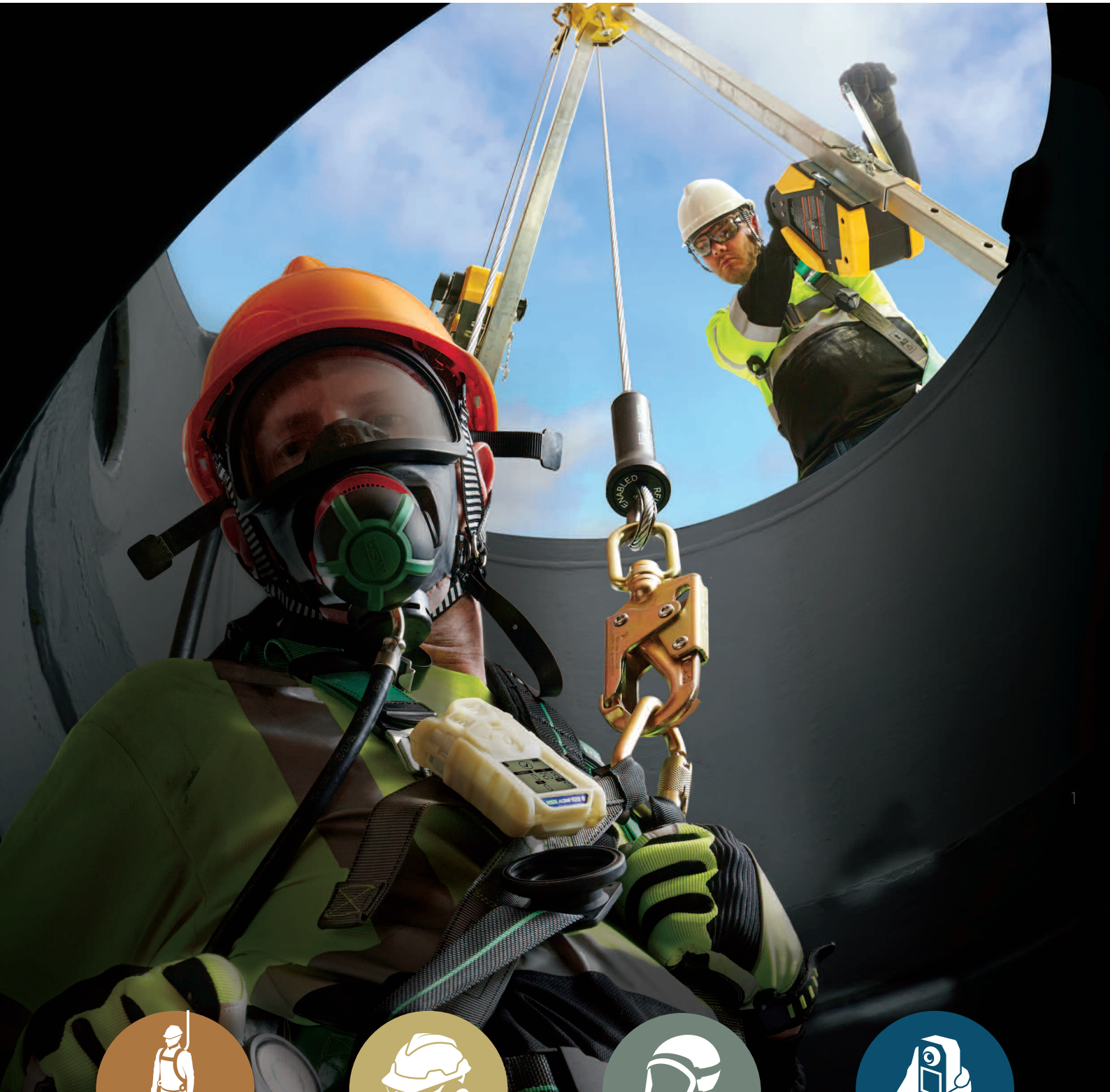


Confined Space Entry

Solutions for Wastewater Workers



*Because every life has a **purpose** ...*



MSA Water & Wastewater Solutions

In the water and wastewater industry, operators are often required to enter confined spaces in order to carry out cleaning, servicing, maintenance or inspections. There is a variety of confined spaces in the water industry, such as manholes, sewers, tanks, tunnels, lift/pump stations, pipelines, wells, sludge digesters, and trenches.

A confined space can be defined as an area that:

- *Is large enough for an employee to bodily enter and perform work.*
- *Has limited or restricted means of entry or exit.*
- *Is not designed for continuous human occupancy.*

However, in these areas, the risk of anoxia, asphyxiation, poisoning or explosion is real. In addition, there are other risks, such as drop height or electric shock.

Every year people die after entering these environments by underestimating the risks, and others also put themselves at risk trying to rescue them.

In Europe, hundreds and thousands of workers from private companies and public authorities are involved in the operation, servicing, maintenance and development of water and sanitation facilities, through which millions of cubic metres of water pass every day.

Did you know ... ?

Accident data indicates that **victims of confined space accidents have a wide variety of occupations**. While most of them are employees and contractors, victims also include engineering and technical staff, supervisors and managers, and emergency response personnel. Sadly, the human tragedy and high fatality rate for incidents involving confined spaces is in part a price that is often paid twice: once by those who initially enter and again by those who subsequently attempt rescue.

The ILO and OSHA estimate that worldwide, these **confined space accidents claim about 200 victims per year**. About two-thirds of the accidents resulted from hazardous atmospheric conditions in the confined space. In about 70 % of these, the hazardous condition existed prior to entry and the start of work.

Source: Health and Safety International
ILO: International Labour Office; OSHA: Occupational Safety and Health Administration

Confined Space Entry Solutions

Single Anchorage Points

MSA Workman Tripod

Weighing just 19.5 kg with a maximum extension length of 245 cm, this aluminium tripod is an ideal anchorage point for work assignments with limited staff.



MSA Workman Winch

The winch with built-in energy absorber offers safe entry when no aids such as rungs or conductors are available. The integrated bracket can easily be mounted on the tripod. A double braking system provides secondary protection. In addition, loads of up to 225 kg can be transported.

MSA Workman Rescuer

The appropriate fall arrester with integrated rescue lift and bracket makes mounting on the tripod a simple and very flexible security system. With a 15 m long steel cable, this fall arrester can also be used for work assignments independent of the tripod, on steel beams or fixed single anchorage points.

Harness

With lightweight and durable components, the MSA V-FORM™ range of safety harnesses provides full comfort to the users. The integrated load indicator facilitates rapid visual inspection by the user prior to use. Harness versions with rescue loops allow rescue operations through narrow manholes. Certified according to EN 361, EN 1497 (depending on model).



Spreader Bar

When connected to the shoulder loops of the MSA V-FORM™ harness, the MSA Workman spreader bar can be used for rescuing people from confined spaces. The attached web loops can be used to secure an incapacitated victim's arms when lifting or lowering. Certified according to EN 354.



Self-Retracting Lanyards

Latchways Standard SRL

The completely field serviceable device with frictionless Constant Force braking system and 100% full contact locking mechanism is available in a wide range of lengths with both webbing and cable lifelines. The Latchways SRL range is suitable for use in explosive atmospheres. Certified according to EN 360.



V-TEC™ 6m SRL

With premium components and innovative engineering, the V-TEC SRL offers controlled cable retraction preventing excessive speed and protecting internal parts from damage. The swivel snap-hook avoids twisting of the cable during use. Certified according to EN 360.



Lanyard

MSA lanyards protect the supervisory leader at the manhole. Using the length-adjustable lanyard with integrated shock absorber, it is possible to rapidly secure persons in direct proximity to the manhole. Certified according to EN 354, EN 355.



Fall Protection Vehicle

The fall protection training vehicle has been designed to demonstrate our full range of Fall Protection products, from harnesses to lanyards, engineered horizontal and vertical systems and our industry-leading Self-Retracting Lifelines. Contact your MSA representative to benefit from a demonstration.





Lightweight Industry Helmet for Confined Spaces

The V-Gard 520 is a lightweight and comfortable industry helmet with a short visor and rain gutter. The innovative suspension FasTrac III with ratchet handwheel, interchangeable premium sweatband and resilient neck strap enables stable helmet wear, even if the wearer leans over. A variety of certified options is available, such as chinstraps, lamp bracket, reflective stickers, high viz shell colors, logo printing, visors, hearing protection, winter liners, and cooling pads.

Other helmet models with ventilation system and many other options are available. Please ask for the complete V-Gard System brochure 06-104.2.

Hearing Protection

left/RIGHT ear muffs have dedicated right and left ear cups that are designed to fit ears of all shapes and sizes which offers increased comfort and protection. The headband's breakthrough design simulates the head's curves to provide a comfortable and stable fit, balancing muffs with ear cup angle.

The precise fit provides maximum loud noise protection using a minimal cup size. The headband adjusts up and down to provide custom fit for different head sizes. left/RIGHT ear muffs are available in low, medium, and high attenuation, three sizes, and different colors. The yellow version is ideal for working in low light environments.

A complete range of ear plugs with high noise attenuation and excellent comfort complete the range.



Short-Duration SCBA, Combination & Escape Devices

The PremAire devices offer sufficient breathing air for about 15 minutes for short revisions, inspection work, or, in case of emergency, to bring oneself or a colleague out of the danger zone. In combination with an airline system or simply as a self-rescue device, PremAire is ideal for working independently of the ambient air in all applications with short distances, where a short-duration SCBA is applicable.

For applications requiring an extended source of compressed air, MSA offers the MASS Trolley System. This Mobile Air Supply System provides the user with a mobile air source wherever needed. It can be ordered in several configurations to fulfill any unique requirements for working in hazardous and dangerous situations.



PremAire Combination



PremAire Escape



MASS Trolley

Portable Multigas Detectors



Bluetooth now as standard feature

- Visualize key information on your Android smartphone display: ALTAIR 4XR / ALTAIR 5X live gas readings, sensor health information, various alarms including gas and MotionAlert
- Configure ALTAIR 4XR / ALTAIR 5X remotely with your Android smartphone
- Send automated SMS with GPS location to single or group recipients: gas alarms, man-down alarms, calibration due and cleared alarms
- Sampling mode feature calculates duration time of your sampling task



ALTAIR 5X

ALTAIR 5X

The ALTAIR 5X detector with integrated pump and PID option is especially designed for confined space entry in wastewater environments. With more than 20 sensors available, it measures up to 6 gases. Clearance measurements can be performed remotely using sampling line and floating probe.



Dangerous gases such as Methane, O₂, CO, H₂S and CO₂ are continuously monitored and readings recorded in the device memory. The integrated XCell sensors offer fast response times that help save lives. The ALTAIR 5X withstands a drop of 3 m and comes in standard charcoal housing or glow-in-the-dark housing, perfect for low visibility applications.

For additional safety, ALTAIR 5X features the exclusive MotionAlert man-down alarm and InstantAlert manual alarm.

ALTAIR 4XR

IP68 rated and designed to withstand drops of up to 7.5 m, the ALTAIR 4XR is the perfect match for wastewater industry workers.

It's equipped with MSA's rapid-response XCell sensors which are 2x faster than the industry average – which means the workers are notified of a hazardous environment sooner – ultimately saving lives. The ALTAIR 4XR, which is ATEX Zone 0 approved, surpasses industry standards in additional crucial areas: it features a 24-hour run time as well as MSA exclusive MotionAlert man-down and InstantAlert manual alarms. This is all back by a 4 year full warranty.



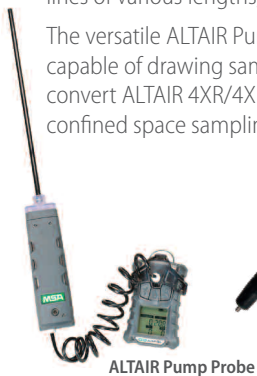
ALTAIR 4XR



Sampling Accessories

A full range of sampling accessories is available, such as sampling lines of various lengths, floating probe and sampling probes.

The versatile ALTAIR Pump Probe is a rugged sampling accessory, capable of drawing samples from up to 30 m away, quickly convert ALTAIR 4XR/4X into a pumped detector for remote confined space sampling applications.



ALTAIR Pump Probe



Sampling Probe



Sampling Line with Floating Probe

Testing & Calibration

For your bump test and/or calibration needs, you can either opt for our GALAXY GX2 Automated Test Stand or manual testing using a pressure reducer.



GALAXY GX2 Automated Test Stand



Manual Testing with Test Gas

Ordering Information

Fall Protection	
10116521	MSA Workman tripod
10158192	MSA Workman Rescuer fall arrester, 15 m
10147567	MSA Workman winch, 15 m
10129888	Steel carabiner
10169369	Carrying bag for MSA Workman tripod
506222	Pulley
10180196	V-FORM harness with bayonet buckles
10115550	MSA Workman spreader bar
62215-00UK	Latchways Standard SRL, 15 m, stainless-steel cable
63306-00AEU	V-TEC 6m SRL, stainless-steel cable
10115731	MSA Workman lanyard with energy absorber
Head Protection	
GVD1A-00002G0-000	V-Gard 930, non-vented, white, front metal lamp bracket, silver stickers
GV969-6000840	V-Gard 520 helmet orange, FasTrac III Premium, 4-point chinstrap pre-fitted, metal front lamp bracket, yellow reflection sticker curved
Hearing Protection	
10087425	left/RIGHT ear muffs, headband, yellow, medium attenuation
10087428	left/RIGHT ear muffs, helmet mounted, yellow, medium attenuation

Short-Duration SCBA, Combination & Escape Devices	
10152572	PremAire Combination Mini, with 3S full face mask, 3 l composite cylinder (empty)
10152778	PremAire Combination Airline /SCBA, with 3S full face mask, 2 l composite cylinder (charged)
10152728	PremAire Combination Escape, with 3S full face mask, 2 l composite cylinder (charged)
10152752	PremAire Escape, with 3S full face mask, 2 l composite cylinder (charged)
Trolley System	
M0018642	MASS trolley system, with 40 m hose, w/o cylinder
Portable Gas Detectors & Accessories	
10119614	ALTAIR 5X Wireless LEL, O ₂ , CO, H ₂ S
10166730	ALTAIR 5X Wireless LEL, O ₂ , CO, H ₂ S, PID
10082307	5 m sampling line with floating probe
10178573	ALTAIR 4XR LEL, O ₂ , CO, H ₂ S
10178569	ALTAIR 4XR LEL, O ₂ , CO, H ₂ S Phosphorescent
10152668	ALTAIR Pump Probe

If you have any questions related to wastewater applications, please contact your local channel partner or email us at Water.UK@MSAsafety.com

MSA Service

In addition to the extensive range of top quality personal protective equipment and gas detection systems, MSA provides a high level of customised service solutions. MSA's comprehensive and versatile range of services ensures that your equipment and systems will always be reliable, economical and ready for use. MSA is always at your service to provide you with the support you need, when you need it.

Please also visit us at MSAsafety.com to get additional product information, pictures, videos, documents for download and further tools, such as simulators and configurators.

Make sure to subscribe to our MSA eNews and connect with us on LinkedIn for the latest news on MSA and subscribe to our YouTube channel for information about new videos.



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