

Portable Gas Detection Instruments



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



Portable Gas Detection with Safety io Software Services



Battery-powered, direct-reading portable instruments are classified into two groups - single-gas instruments or multiple-gas instruments. Depending on the capabilities of the instrument, monitoring can be conducted simultaneously for oxygen and combustible gas, or for oxygen, combustible gas and toxic gases.

No matter which type of portable instrument is used to check environmental gas concentrations, regular monitoring should be performed because a contaminant's level of combustibility or toxicity might increase even if it initially appears to be low or non-existent.

MSA offers a wide variety of portable gas monitoring solutions to detect combustible gases, toxic gases, oxygen deficiency/enrichment.

Our instruments reflect the latest developments in sensor and instrumentation design, using electrochemical, catalytic bead, photoacoustic infrared (IR) and both point and open path infrared sensing technologies, and offer wireless communication capabilities.

We offer a wide range of systems to meet your facility's monitoring needs: from a single sensor in a stand-alone application to a large scale, completely integrated installation consisting of thousands of sensing points. MSA also designs custom systems that are tailored to fit unique monitoring requirements.

Contact your MSA representative for more information and ordering information.

Why is bump testing a matter of safety?

Information Note

Why is bump testing your portable gas detector before each day's use a matter of safety?

Portable gas detection is an important part of a workers' safety equipment. However, only fully functioning gas detectors can reliably warn and protect against gas hazards, thus protecting life and avoiding accidents. All sensors from all detectors on the market will eventually reach the end of their life. Some will reach their end of life suddenly, while some will reach their end of life over a longer period of time. Environmental influences and harsh application conditions can affect the functionality of gas detectors.

Bump testing the gas detector will alert the user of a non-functioning sensor and if a gas inlet has become blocked, even if the blockage is not visible to the human eye.

The traditional bump test consists in checking the instrument's ability to respond to a challenge gas within a given amount time. **With the MSA-exclusive XCell Pulse Technology, this is now possible to perform a bump test, without the need of gas.**

It is possible that dirt or mud blocks the gas entry of an instrument. But no detector on the market can warn you that gas entries are blocked. In these circumstances, a fully functioning sensor simply will not see gas.



The MSA ALTAIR family of gas detectors is the only one on market showing a Bump Test checkmark ✓ on their display for 24 hours after a successful bump test.

Only a bump test quickly confirms that the gas entries are free and your sensors function, or not.

Bump test frequency is often stipulated by national or corporate regulations; Bump testing before each day's use is the accepted best safety practice to verify proper instrument operation. For example, the European standard EN 60079-29-2 and the International Standard IEC 60079-29-2 stipulate for gas detectors a functional check before each day of use. The German BG RCI (Employers' Liability Insurance Association for Raw Materials and Chemical Industry) also requires a functional check before each day of use in their code of practices T021 and T023.

Why is calibrating your gas detector important?

Calibration is the adjustment of the sensor(s) output to match the known traceable calibration gas concentration. It ensures maximum accuracy of the instrument, so should be performed if high accuracy is desired and also if a bump test fails. Calibration is important since all sensors on the market will have some amount of drift over time and are subject to potential uncontrollable effects such as over-exposures, poisoning, physical shocks, extreme environmental changes etc. These types of events can cause sensors to be less accurate.



Why use the GALAXY GX2 Automated Test System for bump testing & calibration of ALTAIR family detectors?

To be safe and save time, gas and money!



The **GALAXY GX2** Automated Test System provides simple, intelligent testing and calibration of MSA ALTAIR®, ALTAIR 2X, ALTAIR PRO, ALTAIR 4X, ALTAIR 4XR and ALTAIR 5X Detectors.

The easy-to-use automated test stand offers high performance as either stand-alone unit or integrated portable detector management system, enabling total data access and control of the MSA ALTAIR family gas detector fleet.

Fleet Manager Software is designed for proactive safety management; gas exposure email alerts, direct data input, live filtering, test and exposure queries, collecting and printing reports allow greater control over the user's MSA ALTAIR Family of gas detectors.

- Colour touch screen for ease of setup and viewing
- Extremely simple to use; testing starts automatically without touching a single button
- Simultaneous testing of up to ten instruments optimised for use with MSA's XCell® Sensors and can provide up to 50% cost of ownership reduction
- At-a-glance indicators include low calibration gas volume, expiration warnings and test stand status.
- **Fleet Manager Software** provides proactive safety management, dashboard overview and total record-keeping
- Simplify usage and reduce training

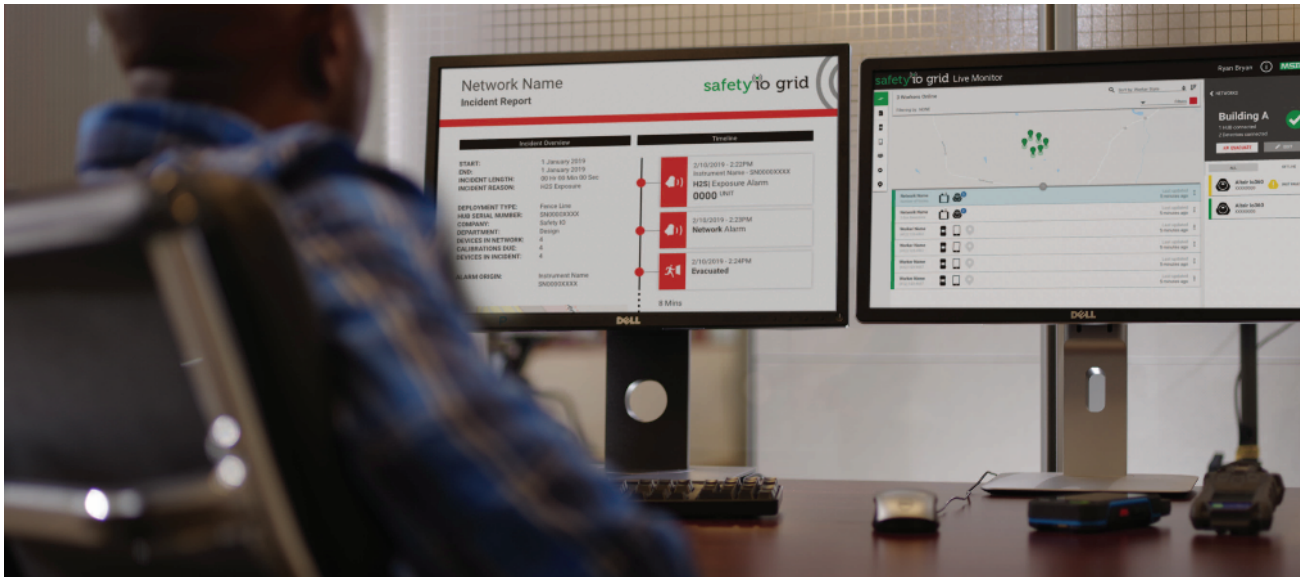


ALTAIR 2XP H₂S with XCell Pulse Technology

Features the first stand-alone bump test, which eliminates the need for bottled gas!

- Bump test anytime, anywhere
- Based on proven science and patented sensor capabilities

Portable Gas Detection Instruments



Cloud Software Service for Managing Your MSA Portable Gas Detection Fleet

As a safety manager or industrial hygienist, you have aggressive safety goals. You need to ensure that your workers and work sites are safe and compliant with government regulations and corporate safety policies.

Gas detection is a big part of your safety program and requires lots of attention, administrative activities and reporting – resulting in distractions that prevent you from accomplishing your larger safety objectives.

Safety io Grid Fleet Manager can help you minimize those interruptions and efficiently and proactively manage your fleet of portable gas detection. With this service you can consolidate and streamline all your gas detection related activities in one place – establishing a single source of truth for all your detection records.



Information Access

- Receive a daily e-mail notification about your fleet's status. Quickly discern what needs your attention and take action.
- Access your fleet information easily– at anytime from anywhere.
- Find, download and share reports as you need them – calibrations, detector records or alarms.



Fleet Compliance

- Ensure your gas detectors are ready for work (bump tested, calibrated and with sensors functioning properly). Reduce downtime.
- Proactively decommission any equipment that requires maintenance.
- Understand which equipment are in use (by whom) and which ones are available.



Risk Assessment

- See the data from your devices and identify hazards your workers are exposed to.
- Understanding the root cause of incidents and initiate preventive measures.
- Translate findings into quality and worksite safety processes and actionable workflows.



Worker Compliance

- Drive accountability for the equipment by assigning your fleet's detectors to a company, department, and worker.
- Understand if the devices are being properly used and operated.
- Identify training opportunities based on equipment usage information.

Features

Key Features	Benefits
User-friendly web-based interface	Intuitive and accessible 24/7 with an Internet connection.
Record keeping and reporting	Quickly search equipment records for in-depth information about device status, test results, and alarms – and generate reports as needed.
Daily fleet status report email	Each morning, you'll receive a concise fleet summary e-mail. If your fleet is healthy, you're done!
Assign equipment labels	Assign your equipment to locations, departments, workers and more – making it easier to search your records and manage Grid permissions later.
Automatic updates	We publish improvements every few weeks, so your Grid experience gets easier and more valuable with each passing month. Updates are automatic and IT-free.
Multiple locations management	Manage as many devices across as many physical locations as you need with one Grid account.
Secure cloud environment	Your data is stored in exclusive secured spaces to ensure and preserve data privacy and integrity.

Specifications

System Compatibility	
Supported by the following browsers	Mozilla Firefox, Google Chrome, Microsoft Edge, Internet Explorer 11
Browser versions	Latest versions as well as latest stable and long-term support versions of all the browsers.
Portable gas detector compatibility	All the MSA ALTAIR® single and multi-gas detectors are supported, including the ALTAIR® io 360 area monitor.
Calibration test stand	MSA GALAXY® GX2
Security and Data Storage	
Secure data transfer protocols	TLSv1.2,1.3 MQTTS via client X.509 Certificates
Database security	Data is kept encrypted in isolated storage.
Data backup	Information immediately backed up upon receipt in long term-storage. Full data backups are run frequently. Double backup guarantees data availability.

Offer

As with other software as a service offering, with Safety io Grid Fleet Manager, you pay based on device usage. No need for enormous capital in advance.

Ordering

Please contact your local MSA sales representative or send an e-mail to connect@safetyio.com to get started with the ordering process.

Note to MSA Link Pro software users

To ensure continuity, if you are an MSA Link Pro user, all that historical data can be uploaded into your Grid account, so you have one gas detection data source of truth moving forward.

GDPR Note

[Our Privacy Statement](#) provides transparency about the data that may be processed by Safety io when customers use our Safety io Applications.

Technical Data



Cloud Software Service for Real Time Monitoring of Your MSA Portable Gas Detection Fleet

As a safety manager or industrial hygienist, you have lofty safety goals. You need to ensure that your workers and work sites are safe and compliant with government regulations and corporate safety policies.

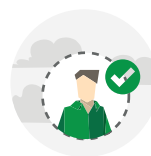
Gas detection is a big part of your safety program and requires lots of attention, administrative activities and reporting – resulting in distractions that prevent you from accomplishing your larger safety objectives.

The Grid Live Monitor is a web-based, real-time alert management system for remote safety managers and control room operators. When every second counts, take informed action with the Grid Live Monitor.



Device Alert Awareness and Control

- Real-time awareness of gas exposures and instrument readings
- Online notifications of device concerns, man-down alarms and panic button presses
- Live monitoring of employee location and movement with street and satellite view



Comprehensive Field Device Manager

- Alarm notifications
- Compliance, battery and sensor life alerts
- Individual or group evacuation
- Current detector readings
- Employee contact details

Features

Key Features	Benefits
User-friendly web-based interface	Intuitive and accessible 24/7 with an Internet connection.
Record keeping and reporting	Quickly search equipment records for in-depth information about device status, test results, and alarms, which generates reports as needed.
Real time alerts	See device readings and alarms as they happen.
Remote evacuation	Evacuate one or several workers without leaving your desk.
Real-time monitoring	Real-time monitoring of employee location, movement, and instrument readings.
GPS location	See employee location and movements based on GPS on employee phones.
Automatic updates	Updates are automatic and IT-free.
Multiple locations management	Manage as many devices across as many physical locations as you need with one Grid account.
Secure cloud environment	Your data is stored in exclusive secure spaces to ensure and preserve data privacy and integrity.

Specifications

System Compatibility	
Supported by the following browsers	Mozilla Firefox, Google Chrome, Microsoft Edge, Internet Explorer 11
Browser versions	Latest versions as well as latest stable and long-term support versions of all the browsers.
Portable gas detector compatibility	Exclusively for ALTAIR 4XR, 5X and io360 Detectors
Security and Data Storage	
Secure data transfer protocols	TLSv1.2,1.3 MQTTS via client X.509 Certificates
Database security	Data is kept encrypted in isolated storage.
Data backup	Information immediately backed up upon receipt in long term-storage. Full data backups are run frequently. Double backup guarantees data availability.

Offer

As with other software as a service offering, the Grid Live Monitor Service is a subscription model. No need for enormous capital in advance.

GDPR Note

[Our Privacy Statement](#) provides transparency about the data that may be processed by Safety io when customers use our Safety io Applications.

Ordering

Please contact your local MSA sales representative or send an e-mail to connect@safetyio.com to get started with the ordering process.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice.

ALTAIR Pro Gas Detector

ALTAIR Pro toxic gas and oxygen detectors combine reliable detection and LED/audible/ flashing/vibrating alarms with clear, backlit LCD displays. Electrochemical sensors measure concentrations of toxic gas (chlorine dioxide, hydrogen cyanide, phosphine) or percent oxygen.



Instrument Type	Part No.	Low Alarm	High Alarm	STEL	TWA
ALTAIR PRO SINGLE-GAS DETECTORS					
OXYGEN (O ₂)	10074137	19.50%	23.00%	N/A	N/A
HYDROGEN CYANIDE (HCN)	10076729	4.5 ppm	10 ppm	10 ppm	4.7 ppm
CHLORINE (CL ₂)	10076716	0.5 ppm	1.0 ppm	1.0 ppm	0.5 ppm
CHLORINE DIOXIDE (ClO ₂)	10076717	0.1 ppm	0.3 ppm	0.3 ppm	0.1 ppm
NITROGEN DIOXIDE (NO ₂)	10076731	2.0 ppm	5.0 ppm	5.0 ppm	2.0 ppm
PHOSPHINE (PH ₃)	10076735	0.3 ppm	1.0 ppm	1.0 ppm	0.3 ppm
<i>Alternate Set Point Model</i>					
OXYGEN (O ₂)	10076732	18.00%	19.50%	N/A	N/A

ALTAIR Maintenance-Free Single-Gas Detector

- Sensor options for CO, H₂S, and O₂
- Patented electrochemical sensors and MSA-built button sensors operate for over two years
- Stainless steel and solid electrolyte construction virtually eliminate sensor leakage
- Automatically records the last 25 alarm/test events and can communicate data by connecting to MSA Link via built-in IR communication port
- No-miss triple alarm system includes bright flashing LEDs, piercing audible alarm, and an internal vibrating alarm
- Rubberized armor housing and one-button operation for maximum durability and simplicity



Instrument Type	Part No.	First Alarm	Second Alarm
ALTAIR PRO SINGLE-GAS DETECTORS			
CARBON MONOXIDE (CO)	10092522	25 ppm	100 ppm
HYDROGEN SULFIDE (H ₂ S)	10092521	10 ppm	15 ppm
OXYGEN (O ₂)	10092523	19.5% Vol	23% Vol
<i>Alternate Set Point Model</i>			
CARBON MONOXIDE (CO)	10071334	30 ppm	60 ppm
CARBON MONOXIDE (CO)	10071335	35 ppm	100 ppm
HYDROGEN SULFIDE (H ₂ S)	10071340	10 ppm	20 ppm
HYDROGEN SULFIDE (H ₂ S)	10071361	5 ppm	10 ppm
HYDROGEN SULFIDE (H ₂ S)	10071363	7 ppm	14 ppm
OXYGEN (O ₂)	10071364	19.5% Vol	18% Vol

ALTAIR and ALTAIR Pro Accessories and Parts

Accessories and Parts	Part No.	Description
ACCESSORIES AND PARTS	467895	Regulator, 0.25 lpm
	10030325	Tubing, 16" (do not use with NH ₃ , Cl ₂ , and ClO ₂)
	10080534	Tubing, 16" Teflon-lined (NH ₃ , Cl ₂ , and ClO ₂)
	10074132	3V CR2 battery – ALTAIR Pro only
	10069894	Clip, stainless steel
	10041105	Cell phone clip
	10041107	Lanyard clip
	10073346	Hardhat clip
	10040002	Clip, suspender (standard)
	10082834	JetEye IR USB adapter
	10088099	MSA Link software CD-ROM

ALTAIR 2X Gas Detector

ALTAIR 2XP Gas Detector – with XCell Pulse Technology
Compliance, Traceability and Simplicity without Compromising Safety



The industry best practice of conducting a bump test prior to each day's use is easily achieved with the ALTAIR 2XP. Bump anywhere, any time, without bottled gas or accessories.

ALTAIR 2XT – Two-Tox Gas Detector

The ALTAIR 2XT Detector eliminates the need for a second detector by utilizing proven XCell Two-Tox Sensors. XCell Two-Tox Sensors detect two gases on distinct sensor channels with digital output that minimizes cross-channel interference.

ALTAIR 2X – Single-Gas Detector



ALTAIR 2X – charcoal

ALTAIR 2XT – glow-in-the-dark

LOW COST OF OWNERSHIP	<ul style="list-style-type: none"> • Fastest sensor response times, lowest calibration gas flow rate on the market • 4-year expected instrument & sensor life • 3-year warranty on instrument & most sensors (2 years on Cl₂, NH₃)
INCREASED SAFETY AWARENESS & REAL-TIME COMPLIANCE	<ul style="list-style-type: none"> • Bump PASS: Green LED flash every 15 seconds, large on-screen checkmark for real-time compliance • Bump FAIL: Red LED flash every 15 seconds, no checkmark • End-of-sensor-life warning and alarm
FULL-TIME TRACEABILITY	<ul style="list-style-type: none"> • Records 75 alarm events and over 100 hours of periodic data, including bump and calibration records • Records can be easily downloaded during periodic gas calibrations using the GALAXY GX2 Automated Test System • Safety io Grid Fleet Manager software provides full networking, traceability, proactive safety, compliance, and testing
RUGGED DURABILITY	<ul style="list-style-type: none"> • Tough over-molded rubber armor • Survives multiple 25-ft drops onto concrete • Agency-certified dust- and water-tight IP67 and intrinsically-safe construction
EASY TO USE	<ul style="list-style-type: none"> • 1-button, gloved hand operation • Large LCD, characters, and status icons

Detector Type (Low, High Alarm in ppm)	Charcoal	Glow-in-the-Dark	Replacement Sensor
ALTAIR 2XP – WITH XCELL PULSE TECHNOLOGY			
H ₂ S-PULSE (10, 15)	10153984	10154188	10121227
ALTAIR 2XT TWO-TOX GAS DETECTOR			
CO/H ₂ S (CO: 25, 100; H ₂ S: 10, 15)	10154040	10154181	10152603
CO-H ₂ /H ₂ S (CO: 25, 100; H ₂ S: 10, 15)	10154071	10154182	10152604
CO/H ₂ S-LC (CO: 25, 100; H ₂ S: 5, 10)	10154072	10154183	10152605
CO/NO ₂ (CO: 25, 100; NO ₂ : 2.5, 5)	10154073	10154184	10152606
SO ₂ /H ₂ S-LC (SO ₂ : 2, 5; H ₂ S: 10, 15)	10153985	10154190	10152607
ALTAIR 2X SINGLE GAS DETECTOR			
CO (25, 100)	10153986	10154185	10152603
CO-H ₂ (25, 100)	10154074	10154186	10152604
CO-HC (25, 100)	10154075	10154187	10152602
H ₂ S-LC (5, 10)	10154076	10154189	10152605
SO ₂ (2, 5)	10154077	10154191	10152607
NO ₂ (2.5, 5)	10154078	10154192	10152606
NH ₃ (25, 50)	10154079	—	10152601
CL ₂ (0.5, 1)	10154080	—	10152600
MSA Replacement Battery Pack Of 8	10155203-SP	10155203-SP	10155203-SP

SAFETY AT THE *SPEED OF NOW*



BE SAFER
With rapid-response sensors.

- LEL
- O₂
- H₂S
- CO
- SO₂
- NO₂



POWERED BY
XCell
SENSORS

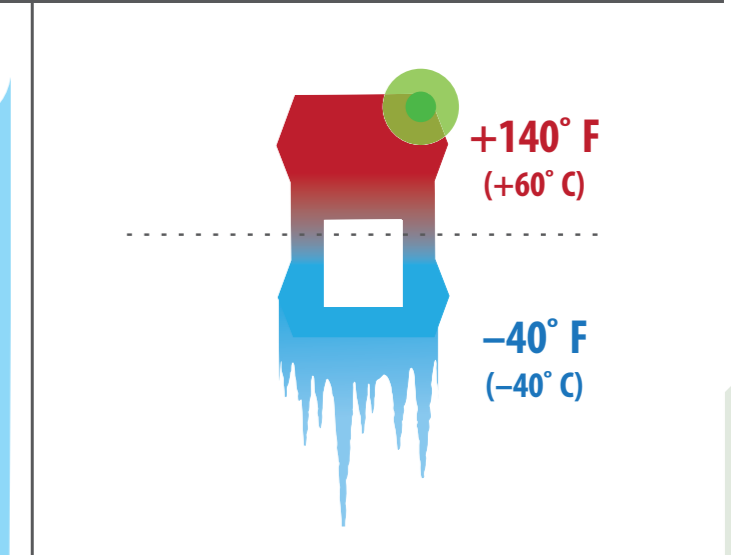
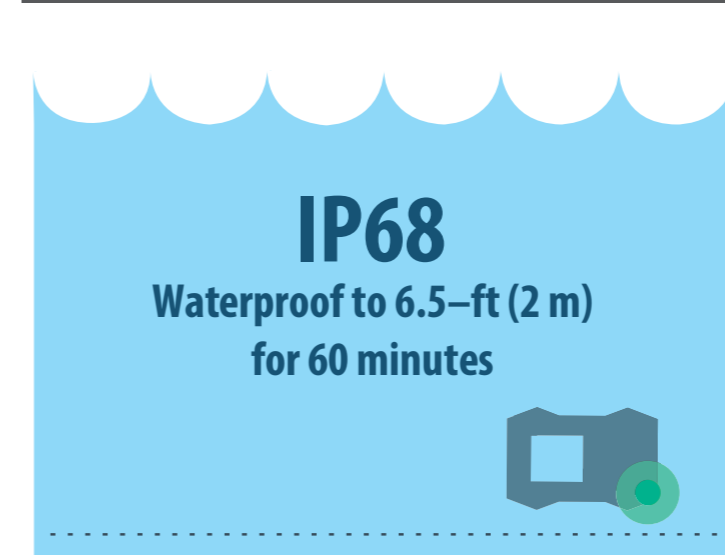
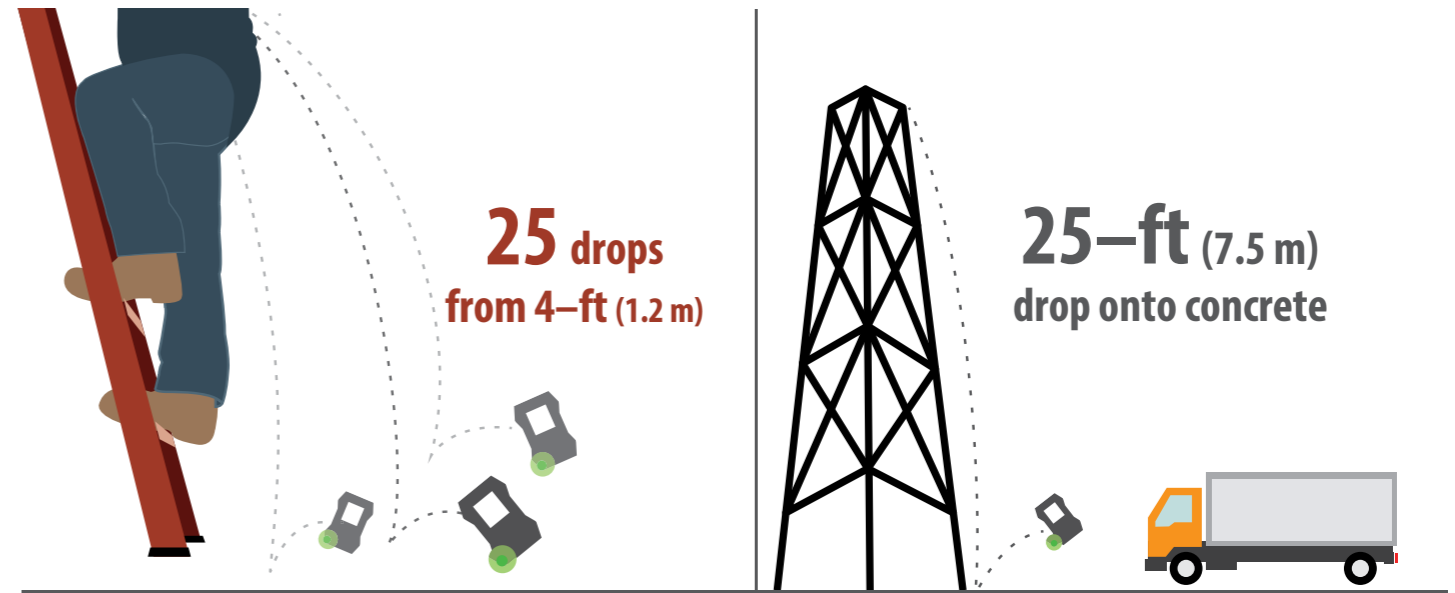
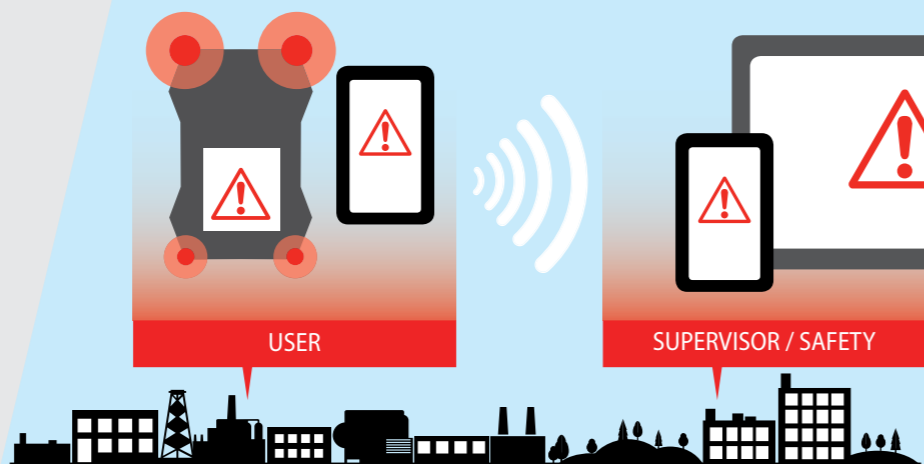
WORK SMARTER
With the ALTAIR Connect app.

- Update detector settings
- Email calibration details
- Create notification groups
- Get compliance reminders



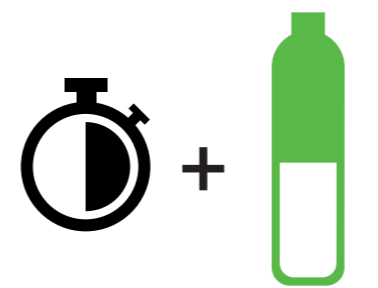
STAY CONNECTED
With alerts from the field.

- Live gas readings
- InstantAlert™ distress calls
- MotionAlert™ man-down alarms
- Non-compliance warnings



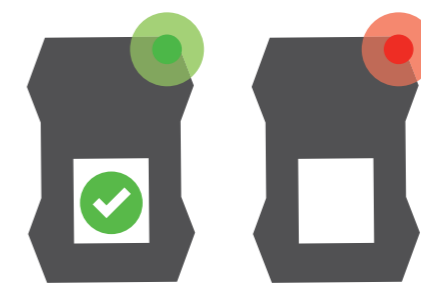
BUILT TO WORK WHEREVER YOU WORK

FAST, EFFICIENT MAINTENANCE



1/2 Time + 1/2 Test Gas

COMPLIANCE AT A GLANCE



Bumped Not Bumped

GUARANTEED PERFORMANCE



Instrument & Sensor Warranty

ALTAIR 4XR Multigas Detector

Reliability

- State-of-the-art MSA XCell Sensors—two times faster than industry average



Real-Time Connectivity using Bluetooth Technology

- Bluetooth Standard
- ALTAIR Connect App available for Android devices
- Live gas readings
- Text alerts from the field for gas alarm or man-down alarm
- Non-compliance warnings

Rugged Durability

- Drop-tested
 - 25 drops from 4 ft (1.2 m)
 - 25-ft (7.5 m) drop onto concrete
- MIL-STD-810g
- IP68: waterproof to 6 ft (2 m) for 1 hr
- Temperature: -40° F (-40° C) to +140° F (+60° C)

Warranty

- Four-year warranty for instrument and sensors

ALTAIR® 4XR MULTIGAS DETECTOR	Wireless-ready ALTAIR 4XR with CSA Approval & Global Charger	PART NO.	
	LEL, O ₂ , CO, H ₂ S (CHARCOAL)	10178560	
	LEL, O ₂ , CO, H ₂ S (GLOW)	10178571	
	LEL, O ₂ , CO, H ₂ S-LC (CHARCOAL)	10188400	
	LEL, O ₂ , CO, NO ₂ (CHARCOAL)	10184792	
	LEL, O ₂ , H ₂ S-LC, SO ₂ (CHARCOAL)	10190600	
	LEL, O ₂ (CHARCOAL)	10191321	
	Wireless-ready ALTAIR 4XR with ATEX Approval & European Charger		
	Methane 0-100% LEL, O ₂ , CO, H ₂ S (CHARCOAL)	10178570	
	*The full list of sensors/instrument configurations with China/Korea/other approvals are available at: http://us.msasafety.com/Portable-Gas-Detection/Multi-Gas/ALTAIR®-4XR-Multigas-Detector/p/000080001600001026		
	CERTIFICATIONS/APPROVALS*		
USA	Class I, Division 1, Groups A, B, C & D Class II, Division 1, Groups E, F & G Class III, Division 1 Ambient temperature: -40°C to +60°C; T4		
CANADA	CAN/CSA C22.2 No. 152 Combustible Gas Detection Instruments Gas Detection Instruments C22.2 No. 152 Performance Ambient Temperature: -20°C to +54°C; T4 C22.2 No. 157 Intrinsic Safety Ambient Temperature: -40°C to +54°C; T4		

MSA ALTAIR Connect App




MSA's integrated Bluetooth connectivity enables scalable solutions that eliminate the need for costly investments in wireless infrastructure.



Android-based Bluetooth connectivity is the basis for these solutions. By incorporating Bluetooth as a standard feature in select portable gas detectors, MSA offers wireless safety benefits to everyone.

By downloading the MSA ALTAIR Connect App from Google Play and pairing with any compatible Android device, your gas detector can be turned into an enhanced safety and productivity tool.



			
SAFETY AWARENESS	<ul style="list-style-type: none"> • Receive gas detection readings, alarms and man-down alerts • Send emergency SMS text notifications with GPS location# to single or group recipients • Short-range replication of live instrument readings 	<ul style="list-style-type: none"> • Configure instruments remotely, without the need for a PC • View and email# event record 	<ul style="list-style-type: none"> • View and email calibration certifications • Awareness of lone worker or remote instrument events • Platform allows for integration of third-party engineered systems or subscription safety services

ALTAIR 4XR Multigas Detector

ALTAIR 4XR Assemble-To-Order (ATO) Options

	PART	CODE	OPTION DESCRIPTION	Selection
A	COMBUSTIBLE SENSOR	0 L M	None 1-100% LEL Pentane 0-5% Vol Methane	<input type="checkbox"/>
B	OXYGEN SENSOR	0 1	None 0-30% Vol	<input type="checkbox"/>
C	TOXIC SENSOR	0 A B C G H J K L	None 0-1999 ppm CO and 0-200 ppm H ₂ S 0-1999 ppm CO 0-200 ppm H ₂ S 0-1999 ppm CO and 0-99.9 ppm H ₂ S-LC 0-99.9 ppm H ₂ S-LC 0-1999 ppm CO and 0-50 ppm NO ₂ 0-99.9 ppm H ₂ S-LC and 0-20 ppm SO ₂ 0-1999 ppm CO H ₂ -Res and 0-200 ppm H ₂ S	<input type="checkbox"/>
D	POWER SUPPLY	0 N M E A G	None North American North American with cradle European with cradle Australian with cradle Global	<input type="checkbox"/>
E	APPROVAL LABEL*	C E A	CSA/UL Europe ATEX Australia	<input type="checkbox"/>
F	WARRANTY	0 1	4-year standard warranty 1-year extended warranty (5-years total)	<input type="checkbox"/>
G	PACKAGING	0 1	Single carton 10-unit bulk package	<input type="checkbox"/>
H	COLOR CASE	0 G	Standard Charcoal Glow-in-the-Dark	<input type="checkbox"/>

Your Model Part Number — Please write in selected codes from above in appropriate boxes and contact your safety products distributor to place your order.

Selection A B C D E F G H

A-ALT4XR-


*The full list of sensors/instrument configurations with China/Korea/other new approvals are available at: <http://us.msasafety.com/Portable-Gas-Detection/Multi-Gas/ALTAIR®-4XR-Multigas-Detector/p/000080001600001026>

ALTAIR 4X/4XR Multigas Detector Accessories

ACCESSORIES	PART NO.
STAINLESS STEEL SUSPENDER CLIP	10069894
ALTAIR PUMP PROBE NA W/ CHARGER	10152668
MSA LINK™ SOFTWARE CD-ROM	10088099
JETEYE IR ADAPTER WITH USB CONNECTOR	10082834
ALTAIR 4X HOLSTER, LEATHER	10113308
SENSORS / SPARE PARTS	
SENSORS / SPARE PARTS	PART NO.
KIT, XCELL EX COMBUSTIBLE SENSOR	10106722
KIT, XCELL O ₂ SENSOR	10106729
KIT, XCELL CO/H ₂ S TWO-TOX SENSOR	10106725
KIT, XCELL CO/H ₂ S-LC TWO-TOX SENSOR	10121213
KIT, XCELL CO H ₂ -RES/H ₂ S TWO-TOX SENSOR	10121214
KIT, XCELL SO ₂ /H ₂ S-LC TWO-TOX SENSOR	10121215
KIT, XCELL NO ₂ /CO TWO-TOX SENSOR	10121217
FRONT HOUSING WITH INTEGRATED DUST FILTERS (CHARCOAL)	10110030
FRONT HOUSING WITH INTEGRATED DUST FILTERS (PHOSPHORESCENT)	10110029
MAIN BOARD, ALTAIR 4XR	10178362
LCD FRAME ASSEMBLY, ALTAIR 4XR	10179265
LCD FRAME ASSEMBLY, ALTAIR 4X	10110061
SENSORS GASKET, PHILLIPS SCREWS (4X), SELF-TAPPING (2X)	10110062
CALIBRATION ACCESSORIES	
CALIBRATION ACCESSORIES	PART NO.
REGULATOR 0.25 LPM MODEL RP	467895
CALIBRATION ASSEMBLY (CAP, TUBE, CONNECTOR)	10089321
34L QUAD GAS MIX (1.45% CH ₄ , 15% O ₂ , 60 PPM CO, 20 PPM H ₂ S)	10048280
58L QUAD GAS MIX (1.45% CH ₄ , 15% O ₂ , 60 PPM CO, 20 PPM H ₂ S)	10045035
POWER SUPPLY	
POWER SUPPLY	PART NO.
CHARGING CRADLE ASSEMBLY	10089487
VEHICLE CHARGER	10095774
4-UNIT MULTI-UNIT CHARGER UK PLUG	10127424

ALTAIR Pump Probe

- Rugged unibody housing provides unsurpassed durability, including ability to survive a 10-foot drop
- Large, glove-friendly button for single handed use
- Universal design allows ALTAIR Pump Probe to be utilized with a number of MSA diffusion-type portable gas detectors
- Translucent cap for easy filter inspection
- Tool-free quick change components for simplified maintenance
- Compatibility with MSA ALTAIR chargers

ALTAIR PUMP PROBE	ALTAIR PUMP PROBE	PART NO.
	Comes with 3-year warranty, wand, calibration cap and coupling hose	
	ALTAIR PUMP PROBE (International) WITH CHARGER	10152668
	ALTAIR PUMP PROBE (International) WITHOUT CHARGER	10153040
	PUMP PROBE ADAPTER ALTAIR 2X	10161948-SP
	SAMPLING LINES	PART NO.
3M POLYURETHANE	10151096	
8M POLYURETHANE	10151104	
15M POLYURETHANE	10151097	
30M POLYURETHANE	10160208	

ALTAIR 4X Detector (MSHA)

- 3-year instrument warranty
- Lower maintenance cost
- Reduced required calibration gas
- GALAXY GX2 System compatibility for powerful calibration and fleet management
- MotionAlert feature activation when no movement is detected for 30 seconds, indicating "man down"
- InstantAlert feature manually-activated alarm to alert others of hazardous situations
- 30+ hour run time for continuous operation over three shifts

ALTAIR 4X Multigas Detector with North American approval, quick-start card, data logging, charger, calibration cap, tubing, and CD manual. MotionAlert feature comes standard on all detectors.

ALTAIR® 4X MSHA MULTIGAS DETECTOR	DESCRIPTION	PART NO.
	ALTAIR 4X MULTIGAS DETECTOR (CH ₄ , O ₂ , CO) Charcoal	10125912
	ALTAIR 4X MULTIGAS DETECTOR (CH ₄ , O ₂ , CO) Phosphorescent	10125913
	ALTAIR 4X MULTIGAS DETECTOR (CH ₄ , O ₂ , CO, NO ₂) Charcoal	10125914
	ALTAIR 4X MULTIGAS DETECTOR (CH ₄ , O ₂ , CO, NO ₂) Phosphorescent	10125915
REPLACEMENT SENSORS		PART NO.
KIT, XCell EX-M COMBUSTIBLE SENSOR		10121212
KIT, XCell O ₂ SENSOR		10106729
KIT, XCell CO/H ₂ S TWO-TOX SENSOR		10106725
KIT, XCell CO/NO ₂ TWO-TOX SENSOR		10121217
POWER SUPPLY		Part No.
4-UNIT MULTI-UNIT CHARGER NA PLUG		10127422
12-UNIT MULTI-UNIT CHARGER NA PLUG		10143372



Other MSA Products for Mining Applications

- ALTAIR SX MSHA
- Miner's cap lamp and support system
- Self-rescuer respirator

30 CFR Part 22, Methane Detector
 30 CFR Part 75 Determination testing for methane and oxygen deficiency

ALTAIR 4X Detector (MSHA)

ALTAIR 4X (MSHA) Assemble-To-Order (ATO) Options

To select your configuration, select instrument options and mark the code in the selection boxes below.

A	INSTRUMENT TYPE	The ALTAIR 4X Multigas Detector now comes standard with MSA's new XCell Sensors and MotionAlert feature to indicate "man down". Please select your instrument's case color; select option C for charcoal and option G for phosphorescent (glow-in-the-dark).	Instrument Type Charcoal Phosphorescent (glow-in-the-dark)	Code C G	Selection <input type="checkbox"/>
B	COMBUSTIBLE SENSOR	To have a combustible sensor installed in your new ALTAIR 4X Multigas Detector, please select C . For no combustible sensor, please select 0 .	Combustible Sensor Options None 0-5% Vol methane	Code 0 C	Selection <input type="checkbox"/>
C	OXYGEN SENSOR	To have an oxygen sensor installed in your new ALTAIR 4X Multigas Detector, please select 1 . For no sensor, enter 0 .	Oxygen Sensor Options None 0-30% Vol	Code 0 1	Selection <input type="checkbox"/>
D	TOXIC SENSOR	To configure your new ALTAIR 4X Multigas Detector, choose 0 for no toxic sensor. Choose A for both CO and H ₂ S sensors, choose B for CO, C for H ₂ S, D for CO and NO _x , and E for NO _x .	Toxic Sensor Options None 0-1999 ppm CO and 0-200 ppm H ₂ S 0-1999 ppm CO 0-200 ppm H ₂ S 0-1999 ppm CO and 0-50 ppm NO _x 0-50 ppm NO _x	Code 0 A B C D E	Selection <input type="checkbox"/>
E	POWER SUPPLY	Select the correct power supply for your region. Add an instrument cradle to firmly secure your instrument while charging on the shelf or in a vehicle.	Power Supply Options None North American North American with cradle	Code 0 N M	Selection <input type="checkbox"/>
F	APPROVAL LABEL	The ALTAIR 4X Multigas Detector is fully approved by MSHA.	Approval Label Options MSHA	Code M	Selection <input checked="" type="checkbox"/>
G	EXTENDED WARRANTY	MSA includes a full 3-year warranty on the ALTAIR 4X Multigas Detector, including sensors, battery and electronics. Choose 1 for an additional year (4 years total).	Extended Warranty Options 3 years standard warranty Extended warranty (4 years total)	Code 0 1	Selection <input type="checkbox"/>

Your Model Part Number — Please write in selected codes from above in appropriate boxes and contact your safety products distributor to place your order.

Selection A B C D E F G

A-ALT4XM-

ALTAIR® 5X, ALTAIR 5X PID, and ALTAIR 5X IR Multigas Detectors

- Built upon durability
- Powered by performance
- Flexibility & connectivity
- Industry-first man-down alarm
- Bluetooth wireless connectivity



- Altair Connect App available on Google Play
- Industry-leading warranty
- Online product simulation and training



FULLY COMPATIBLE WITH MSA LINK™ AND FLEET MANAGER SOFTWARE & MSA GALAXY™ GX2 TEST SYSTEM

VARIETY OF OPTIONAL MSA INFRARED SENSORS

ROBUST INTEGRAL PUMP FOR CONSISTENT FLOW AND IMPROVED DURABILITY

HIGH CONTRAST COLOR OR MONOCHROME DISPLAY

ADVANCED OPTIONAL VOC DETECTION

18 LANGUAGE OPTIONS

LARGE BUTTONS FOR EASY OPERATION



ADVANCED MOTIONALERT AND INSTANTALERT FEATURES

HIGH PERFORMANCE MSA XCELL SENSORS

BLUETOOTH WIRELESS CONNECTIVITY

24-HOUR BUMP CHECKMARK

XCELL SENSOR END-OF-LIFE INDICATOR

DURABLE, RUBBERIZED HOUSING FOR SECURE GRIP

MSA-exclusive feature

ALTAIR® 5X, ALTAIR 5X PID, and ALTAIR 5X IR Multigas Detectors

- Built upon durability
- Powered by performance
- Flexibility & connectivity
- Industry-first man-down alarm



- Bluetooth wireless connectivity
- Altair Connect App available on Google Play
- Industry-leading warranty
- Online product simulation and training



ALTAIR 5X PID MULTIGAS DETECTOR



DESCRIPTION	Monochrome	Color
Wireless-ready ALTAIR 5X with Global Charger, UL Approval		
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S), sampling kit	10116926	10116928
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, SO ₂), sampling kit	10116927	10116929
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, NH ₃), reactive sampling kit	10187274	10144819
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, CL ₂), reactive sampling kit	10198611	10187966
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, IR CO ₂), sampling kit	Available	10196770
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, IR Methane), sampling kit	Available	10196791
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, IR Propane), sampling kit	Available	10206199
ALTAIR 5X DETECTOR (LEL, O ₂ , CO, H ₂ S, PID), sampling kit	Not Available	10172738

The full list of sensor options, instrument configurations and other approvals are available at: <http://us.msasafety.com/Portable-Gas-Detection/Multi-Gas/ALTAIR-5X-Multigas-Detector/p/000080001600001023>

USA CERTIFICATIONS/APPROVALS

USA	Class I, Division 1, Groups A, B, C & D Class II, Division 1, Groups E, F & G Class III, Division 1 Ambient temperature: -40°C to +50°C; T4 ALTAIR 5X Multigas Detector with alkaline battery pack T3/T4 ALTAIR 5X or ALTAIR 5X iR Multigas Detector with rechargeable battery pack T4
CANADA	Class I, Division 1, Groups A, B, C & D CAN/CSA C22.2 No. 152 Combustible Gas Detection Instruments C22.2 No. 152 Performance Ambient Temperature: -20°C to +50°C C22.2 No. 157 Intrinsic Safety Ambient Temperature: -40°C to +50°C ALTAIR 5X Multigas Detector with alkaline battery pack T3/T4 ALTAIR 5X or ALTAIR 5X iR Multigas Detector with rechargeable battery pack T4

ALTAIR 5X MULTIGAS DETECTOR



GAS TYPE	RANGE	RESOLUTION
COMBUSTIBLE	0-100% LEL	1% LEL
COMBUSTIBLE	0-5% Vol, CH ₄	0.05% Vol CH ₄
OXYGEN	0-30%Vol	0.1%Vol
CARBON MONOXIDE	0-2000 ppm	1 ppm
CARBON MONOXIDE	0-10,000 ppm	5 ppm
HYDROGEN SULFIDE	0-200 ppm	1 ppm
HYDROGEN SULFIDE - LC	0-100 ppm	0.1 ppm
SULFUR DIOXIDE	0-20 ppm	0.1 ppm
CHLORINE	0-10 ppm	0.05 ppm
AMMONIA	0-100 ppm	1 ppm
NITROGEN DIOXIDE	0-20 ppm	0.1 ppm
NITROGEN DIOXIDE (XCELL)	0-50 ppm	0.1 ppm
CHLORINE DIOXIDE	0-1 ppm	0.01 ppm
PHOSPHINE	0-5 ppm	0.05 ppm
HYDROGEN CYANIDE	0-30 ppm	0.5 ppm
CARBON DIOXIDE, CO ₂	0-10%Vol	0.01%Vol
BUTANE, C ₄ H ₁₀	0-25%Vol	0.1%Vol
METHANE, CH ₄	0-100%Vol	1%Vol
PROPANE, C ₃ H ₈	0-100%Vol	1%Vol
PROPANE, C ₃ H ₈	0-100% LEL	1% LEL
PID - 10.6EV	0-2000 ppm	0.1 ppm
PID - 10.6EV	0-10,000 ppm	1 ppm

ALTAIR 5X Multigas Detector with PID option

ALTAIR 5X Assemble-To-Order (ATO) Options

To select your configuration, select instrument options and mark the code in the selection boxes to the right. Check MSA24 for additional options.

A	INSTRUMENT TYPE	All ALTAIR 5X Multigas Detectors come standard with data logging and MotionAlert and InstantAlert features. Choose your instrument type, equipped with internal pump. The monochrome full-graphic display is standard; a high-resolution crystal-clear color display with logo customization is optional.	<table border="1"> <thead> <tr> <th>Instrument Type</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Pumped with monochrome display</td> <td>A</td> </tr> <tr> <td>Pumped with color display</td> <td>B</td> </tr> <tr> <td>Pumped with color display for PID (unit must be configured with PID sensor)</td> <td>D</td> </tr> </tbody> </table>	Instrument Type	Code	Pumped with monochrome display	A	Pumped with color display	B	Pumped with color display for PID (unit must be configured with PID sensor)	D	Selection																				
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B	COMBUSTIBLE SENSOR	Choose your combustible sensor calibration. To select 0-100% LEL pentane, please choose L ; for 0-5% Vol methane choose M . For no combustible sensor, select 0 for none.	<table border="1"> <thead> <tr> <th>Combustible Sensor Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>LEL 1- 100% pentane</td> <td>L</td> </tr> <tr> <td>0-5% Vol methane</td> <td>M</td> </tr> </tbody> </table>	Combustible Sensor Options	Code	None	0	LEL 1- 100% pentane	L	0-5% Vol methane	M	Selection																				
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C	SENSOR #1	To have an oxygen sensor installed in your new ALTAIR 5X Multigas Detector, please select K ; if you plan on configuring the ALTAIR 5X Detector with two exotic sensors with CO/H ₂ S, please select 1 for both CO and H ₂ S sensors; for no sensor enter 0 .	<table border="1"> <thead> <tr> <th>Sensor #2 Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>Oxygen 0-30%</td> <td>K</td> </tr> <tr> <td>CO/H₂S 0-1999 ppm & 0-200 ppm</td> <td>1</td> </tr> <tr> <td>CO 0-1999 ppm</td> <td>2</td> </tr> <tr> <td>H₂S 0-200 ppm</td> <td>3</td> </tr> <tr> <td>CO/H₂S-LC 0-1999 ppm & 0-99.9 ppm</td> <td>4</td> </tr> <tr> <td>CO-HC 0-10,000 ppm</td> <td>5</td> </tr> <tr> <td>CO/NO₂ 0-1999 ppm & 50 ppm</td> <td>6</td> </tr> <tr> <td>CO H₂-ResH₂S 0-1999 ppm & 0-200 ppm</td> <td>7</td> </tr> </tbody> </table>	Sensor #2 Options	Code	None	0	Oxygen 0-30%	K	CO/H ₂ S 0-1999 ppm & 0-200 ppm	1	CO 0-1999 ppm	2	H ₂ S 0-200 ppm	3	CO/H ₂ S-LC 0-1999 ppm & 0-99.9 ppm	4	CO-HC 0-10,000 ppm	5	CO/NO ₂ 0-1999 ppm & 50 ppm	6	CO H ₂ -ResH ₂ S 0-1999 ppm & 0-200 ppm	7	Selection								
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D	SENSOR #2	Choose your toxic gas sensor.	<table border="1"> <thead> <tr> <th>Sensor #3 Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>SO₂ 0-20 ppm</td> <td>A</td> </tr> <tr> <td>Cl₂ 0-10 ppm</td> <td>B</td> </tr> <tr> <td>NO₂ 0-20 ppm</td> <td>C</td> </tr> <tr> <td>NH₃ 0-100 ppm</td> <td>D</td> </tr> <tr> <td>PH₃ 0-5 ppm</td> <td>E</td> </tr> <tr> <td>HCN 0-30 ppm</td> <td>F</td> </tr> <tr> <td>ClO₂ 0-1 ppm</td> <td>G</td> </tr> <tr> <td>NO 0-200 ppm</td> <td>H</td> </tr> </tbody> </table>	Sensor #3 Options	Code	None	0	SO ₂ 0-20 ppm	A	Cl ₂ 0-10 ppm	B	NO ₂ 0-20 ppm	C	NH ₃ 0-100 ppm	D	PH ₃ 0-5 ppm	E	HCN 0-30 ppm	F	ClO ₂ 0-1 ppm	G	NO 0-200 ppm	H	Selection								
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E	SENSOR #3	Choose your additional toxic gas sensors.	<table border="1"> <thead> <tr> <th>Sensor #4 Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>CO/H₂S 0-1999 ppm & 0-200 ppm</td> <td>1</td> </tr> <tr> <td>CO 0-1999 ppm</td> <td>2</td> </tr> <tr> <td>H₂S 0-200 ppm</td> <td>3</td> </tr> <tr> <td>CO/H₂S-LC 0-1999 ppm & 0-99.9 ppm</td> <td>4</td> </tr> <tr> <td>CO-HC 0-10,000 ppm</td> <td>5</td> </tr> <tr> <td>CO/NO₂ 0-1999 ppm & 50 ppm</td> <td>6</td> </tr> <tr> <td>CO H₂-ResH₂S 0-1999 ppm & 0-200 ppm</td> <td>7</td> </tr> <tr> <td>SO₂ 0-20 ppm</td> <td>A</td> </tr> <tr> <td>Cl₂ 0-10 ppm</td> <td>B</td> </tr> <tr> <td>NH₃ 0-100 ppm</td> <td>D</td> </tr> <tr> <td>H₂S 0-200ppm</td> <td>3</td> </tr> <tr> <td>H₂S-LC 0-100ppm</td> <td>4</td> </tr> </tbody> </table>	Sensor #4 Options	Code	None	0	CO/H ₂ S 0-1999 ppm & 0-200 ppm	1	CO 0-1999 ppm	2	H ₂ S 0-200 ppm	3	CO/H ₂ S-LC 0-1999 ppm & 0-99.9 ppm	4	CO-HC 0-10,000 ppm	5	CO/NO ₂ 0-1999 ppm & 50 ppm	6	CO H ₂ -ResH ₂ S 0-1999 ppm & 0-200 ppm	7	SO ₂ 0-20 ppm	A	Cl ₂ 0-10 ppm	B	NH ₃ 0-100 ppm	D	H ₂ S 0-200ppm	3	H ₂ S-LC 0-100ppm	4	Selection
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F	ADVANCED SENSOR	Add your advanced IR or PID sensor to complete your sensor suite in the ALTAIR 5X Multigas Detector. Combustible sensors are not available with CSA performance approvals.	<table border="1"> <thead> <tr> <th>Advanced Sensor Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>10.6eV 0-2000 ppm</td> <td>1</td> </tr> <tr> <td>10.6eV 0-10,000ppm</td> <td>2</td> </tr> <tr> <td>CO₂ 0-10% Vol</td> <td>B</td> </tr> <tr> <td>Methane 0-100% Vol</td> <td>L</td> </tr> <tr> <td>Methane 0-100% LEL</td> <td>M</td> </tr> <tr> <td>Propane 0-100% Vol</td> <td>F</td> </tr> <tr> <td>Propane 0-100% LEL</td> <td>P</td> </tr> </tbody> </table>	Advanced Sensor Options	Code	None	0	10.6eV 0-2000 ppm	1	10.6eV 0-10,000ppm	2	CO ₂ 0-10% Vol	B	Methane 0-100% Vol	L	Methane 0-100% LEL	M	Propane 0-100% Vol	F	Propane 0-100% LEL	P	Selection										
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ALTAIR 5X Multigas Detector with PID option

ALTAIR 5X Assemble-To-Order (ATO) Options (continued)

G	PACKAGING	For an economy plastic carrying case, choose E ; for red, choose R ; for standard carton packaging, choose 0 .	Packaging Options Standard carton: 0 Economy plastic: E Red economy: R	Code	Selection
H	APPROVAL LABEL*	Choose the applicable approval label for your area. For North America, choose C , for Europe choose E , for Australia, choose A .	Approval Label Options NORTH AMERICA: C UL only (catalytic combustible sensor not required): T Europe ATEX: E Australia: A	Code	Selection
I	LOGO EXPRESS® SERVICE	Upon startup, the ALTAIR 5X Multigas Detector can display your company logo or other information. Be sure to select color display for this option. To add your company logo, choose L and upload your logo to the web address which will be sent automatically to you via email. Your order with customized logo cannot be processed without uploading your logo.	Logo Express® Service Options None: 0 Logo Express Service: L	Code	Selection
J	SAMPLING LINE AND PROBE KIT	MSA's quality sampling lines and probes are durable, easy to use and offer high speed and convenience using our quick-connect fittings. If you are sampling Cl ₂ , ClO, and/or NH ₃ , please select option 2 ; for all other gases select options A or 1 . Options 1 and 2 come with quick disconnect sampling lines and probes. For no sampling line or probe, select 0 .	Sampling Line and Probe Kit Options None: 0 1-ft clear probe and 10-ft PU Line: S 1-ft probe and 10-ft PU line w/ QD: 1 1-ft probe and 10-ft teflon line w/ QD (reactive gases): 2	Code	Selection

Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your safety products distributor to place your order.

Selection A B C D E F G H I J

A-ALT5X-

*The full list of sensors/instrument configurations with China/Korea/other new approvals are available at: <http://us.msafety.com/Portable-Gas-Detection/Multi-Gas/ALTAIR®-5X-Multigas-Detector/p/000080001600001023>



ALTAIR 5XM Detector (MSHA)

- Industry-first O₂, CO, H₂S, and SO₂ 60-second span calibration and 10-second bump test time
- Thick rubberized housing provides a non-slip profile for secure grip, easily surviving a 10-ft drop
- MotionAlert feature activates when unit does not detect movement for 30 seconds, indicating "man down"
- InstantAlert feature offers manual activation of all alarms to alert others to potentially hazardous situations
- Minimum IP65 rating for dust and water ingress
- Monochrome display provides easy-to-read sensor readings with adjustable contrast
- Multi-language capability to serve your needs virtually anywhere in the world, using one of many built-in languages
- GALAXY GX2 System-compatible for automatic testing, calibration and record keeping
- Lithium-ion battery pack provides over 18 hours of run time with virtually no memory effects and fast battery recharge
- Safety io Grid Fleet Manager and MSA Link Software allows all stored records to be easily accessed for printed calibration reports and alarm set-point changes
- Visual, vibrating and audible alarms grab user's attention, indicating a potentially hazardous situation
- Large, ergonomically-designed buttons ensure easy reach and operation, even with gloved hands

ALTAIR 5X MSHA Multigas Detector, with quick-start card, data logging, charger, calibration tubing. CD manual.

ALTAIR 5X MSHA MULTIGAS DETECTOR	DESCRIPTION	PART NO.
INSTRUMENT ONLY		
	ALTAIR 5X DETECTOR MONO, (CH ₄ , O ₂ , CO)	10189797
	ALTAIR 5X DETECTOR MONO, (CH ₄ , O ₂ , CO, NO ₂)	10189546
INSTRUMENT KITS - MONOCHROME DISPLAY, 10-FT SAMPLING LINE, 1-FT PROBE		
	ALTAIR 5X DETECTOR MONO, (CH ₄ , O ₂ , CO, CO ₂)	10190085
	ALTAIR 5X DETECTOR MONO, (CH ₄ , O ₂ , CO, CH ₄ IR)	10190086

30 CFR Part 22, Methane Detector
30 CFR Part 75 Determination testing for methane and oxygen deficiency

Other MSA Products for Mining Applications

- ALTAIR 4X MSHA
- Self-rescuer respirator
- Miner's cap lamp and support system

ALTAIR 5XM Assemble-To-Order (ATO) Options

To select your configuration, select instrument options and mark the code in the selection boxes to the right. Check MSA24 for additional options.

A	INSTRUMENT TYPE	All ALTAIR 5X MSHA Multigas Detectors come standard with data logging and MotionAlert and InstantAlert features.	Instrument Type Pumped with monochrome display: A	Code	Selection
B	COMBUSTIBLE SENSOR	To have a combustible sensor installed in your new ALTAIR 5XM Multigas Detector, please select C . For no combustible sensor, please select 0 .	Combustible Sensor Options None: 0 0-5% Vol methane: C	Code	Selection
C	SENSOR #1	To have an oxygen sensor installed in your new ALTAIR 5X Multigas Detector, please select K ; if you plan on configuring the ALTAIR 5X Detector with two exotic sensors with CO/H ₂ S, please select 1 for both CO and H ₂ S sensors; for no sensor enter 0 .	Sensor #2 Options None: 0 Oxygen 0-30%: K CO/H ₂ S 0-1999 ppm & 0-200 ppm: 1 CO 0-1999 ppm: 2 H ₂ S 0-200 ppm: 3 CO/H ₂ S-LC 0-1999 ppm & 0-99.9 ppm: 4 CO-HC 0-10,000 ppm: 5 CO/NO ₂ 0-1999 ppm & 50 ppm: 6 CO H ₂ -ResH ₂ S 0-1999 ppm & 0-200 ppm: 7	Code	Selection

ALTAIR 5XM Detector (MSHA)

ALTAIR 5XM Assemble-To-Order (ATO) Options (continued)

D	SENSOR #2	Choose your toxic gas sensor.	Sensor #3 Options None 0 SO ₂ 0-20 ppm A Cl ₂ 0-10 ppm B NO ₂ 0-20 ppm C NH ₃ 0-100 ppm D PH ₃ 0-5 ppm E HCN 0-30 ppm F ClO ₂ 0-1 ppm G NO 0-200 ppm H H ₂ S 0-200 ppm 3 H ₂ S-LC 0-100 ppm 4	Code	Selection
E	SENSOR #3	Choose your additional toxic gas sensors.	Sensor #4 Options None 0 CO/H ₂ S 0-1999 ppm & 0-200 ppm 1 CO 0-1999 ppm 2 H ₂ S 0-200 ppm 3 CO/H ₂ S-LC 0-1999 ppm & 0-99.9 ppm 4 CO-HC 0-10,000 ppm 5 CO/NO ₂ 0-1999 ppm & 50 ppm 6 CO H ₂ -ResH ₂ S 0-1999 ppm & 0-200 ppm 7 SO ₂ 0-20 ppm A Cl ₂ 0-10 ppm B NH ₃ 0-100 ppm D	Code	Selection
F	ADVANCED SENSOR	Add your advanced IR sensor to complete your sensor suite in the ALTAIR 5XM Multigas Detector.	Advanced Sensor Options None 0 CO ₂ 0-5% Vol B Methane 0-100% Vol L	Code	Selection
G	PACKAGING	For an economy plastic carrying case, choose E ; for standard carton packaging, choose 0 .	Packaging Options Standard carton 0 Economy plastic E	Code	Selection
H	APPROVAL LABEL	Choose the applicable approval label for your area. For MSHA choose M .	Approval Label Options MSHA M	Code	Selection
I	SAMPLING LINE AND PROBE KIT	MSA's quality sampling lines and probes are durable, easy to use and offer high speed and convenience using our quick-connect fittings. If you are sampling Cl ₂ , ClO ₂ , and/or NH ₃ , please select option 2 ; for all other gases select options S or 1 . Options 1 and 2 come with quick disconnect sampling lines and probes. For no sampling line or probe, select 0 .	Sampling Line and Probe Kit Options None 0 1-ft clear probe and 10-ft PU Line S 1-ft probe and 10-ft PU line w/ QD 1 1-ft probe and 10-ft teflon line w/ QD (reactive gases) 2	Code	Selection

Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your safety products distributor to place your order.

Selection A B C D E F G H I

A-ALT5XM-

ALTAIR 5X Multigas Detector Accessories

SPARE PARTS/REPLACEMENTS	PART NO.
BATTERY PACK ASSEMBLY, RECHARGEABLE	10114835
BATTERY PACK, ALKALINE (INCLUDES BELT CLIP)	10114837
BATTERY PACK, RECHARGEABLE, PID/IR	10114839
BELT CLIP REPLACEMENT KIT	10094830
FILTER COVER ASSEMBLY	10083591
FILTER COVER ASSEMBLY, PID/IR	10165275
MAINTENANCE KIT	10114949
MAINTENANCE KIT, PID/IR	10165285
MAINTENANCE KIT (Cl ₂ , ClO ₂ , NH ₃)	10114950
MAINTENANCE KIT PID/IR (Cl ₂ , ClO ₂ , NH ₃)	10165284
SHOULDER STRAP	474555
RETRACTABLE LINE WITH BELT CLIP	10050976
CARRYING CASE, CORDURA, UL ONLY	10040586
ALTAIR 5X HOLSTER, LEATHER	10099648
VEHICLE CHARGER	10099397
FRONT HOUSING WITH INTEGRATED FILTERS	10114853
FRONT HOUSING WITH INTEGRATED FILTERS (PID)	10165249
MULTI-UNIT CHARGER, ALTAIR 5X, 4-UNIT, UK PLUG	10127429

CALIBRATION ACCESSORIES	PART NO.
DEMAND REGULATOR KIT	710288
Cl ₂ /NH ₃ /ClO ₂ DEMAND REGULATOR KIT	10034391
CASE WITH GAS MISO® REGULATOR, DEMAND FLOW RP KIT (includes tubing and fitting, less gas)	10050985
CALIBRATION TUBING WITH QUICK-DISCONNECT FITTING	10041225
58L RP, 60 PPM CO, 20 PPM H ₂ S, 15% O ₂ , 1.45% CH ₄	10045035
58L RP, 60 PPM CO, 20 PPM H ₂ S, 15% O ₂ , 1.45% CH ₄ , 2.5% CO ₂	10103262
58L RP, 60 PPM CO, 20 PPM H ₂ S, 15% O ₂ , 1.45% CH ₄ , 10 PPM SO ₂	10117738
34L ECONO-CAL® CYLINDER, 60 PPM CO, 20 PPM H ₂ S, 15% O ₂ , 1.45% CH ₄	10048280
34L ECONO-CAL CYLINDER, 60 PPM CO, 15% O ₂ , 1.45% CH ₄	10048789
34L ECONO-CAL 100PPM ISOBUTYLENE	10048279
100L 100PPM ISOBUTYLENE	494450

ID STICKERS	PART NO.
ID STICKERS – LIGHT BLUE	10177767
ID STICKERS – RED	10177768
ID STICKERS – GREEN	10177769
ID STICKERS – ORANGE	10177770
ID STICKERS – YELLOW	10177771

SAMPLING ACCESSORIES	PART NO.
SAMPLING LINE, GENERAL PURPOSE, 10-FT PU	10153218
SAMPLING LINE, GENERAL PURPOSE, 15-FT PU	10153219
SAMPLING LINE WITH QUICK-DISCONNECT, 10-FT PU	10040665
SAMPLING LINE WITH QUICK-DISCONNECT, 25-FT PU	10040664
SAMPLING LINE WITH QUICK-DISCONNECT, 10-FT TEFLON	10049058
SAMPLING LINE WITH QUICK-DISCONNECT, 25-FT TEFLON	10049057
SAMPLING LINE WITH QUICK-DISCONNECT, 3-FT PU COILED	10040667
SAMPLING LINE WITH QUICK-DISCONNECT FOR REACTIVE GASES, 10-FT TEFLON STRAIGHT	10105839
GENERAL PURPOSE PROBE, CLEAR, 1-FT	10153041
PROBE, 1-FT	10042621
PROBE, 3-FT	10042622
QUICK-DISCONNECT ADAPTER	10161755
FILTER, WATER STOP, PACK OF 10	801582
FILTER, GENERAL PURPOSE PROBE	10177856

SENSOR SPARE PARTS/REPLACEMENTS	PART NO.
KIT, XCell® Ex SENSOR, COMBUSTIBLE	10106722
KIT, XCell O ₂ SENSOR	10106729
KIT, XCell CO/H ₂ S TWO-TOX SENSOR	10106725
KIT, XCell CO/H ₂ S-LC TWO-TOX SENSOR	10121213
KIT, XCell CO H ₂ -RES/H ₂ S TWO-TOX SENSOR	10121214
KIT, XCell CO-HC SENSOR	10121216
KIT, XCell NO ₂ /CO TWO-TOX SENSOR	10121217
KIT, REPLACEMENT, HCN	10106375
KIT, XCell Cl ₂ SENSOR REPLACEMENT	10106728
KIT, REPLACEMENT, ClO ₂	10080222
KIT, XCell SO ₂ SENSOR REPLACEMENT	10106727
KIT, REPLACEMENT, NO ₂	10080224
KIT, XCell NH ₃ SENSOR REPLACEMENT	10106726
KIT, REPLACEMENT, PH ₃	10116638
KIT, REPLACEMENT, NO	10114750
KIT, REPLACEMENT, PID 10.6EV 0-2000 PPM SENSOR	10165271
KIT, REPLACEMENT, PID 10.6EV 0-2000 PPM LAMP	10165272
KIT, REPLACEMENT, PID 10.6EV 0-10K PPM SENSOR	10165287
KIT, REPLACEMENT PID 10.6EV 0-10K PPM LAMP	10176653
KIT, PID LAMP CLEANING	10165248
KIT, PID MAINTENANCE	10165247
XCell SENSOR PLUG	10105650
SENSOR PLUG, OXYGEN AND TOXICS (20 MM)	10088192

GALAXY® GX2 Automated Test System

- Simple and intelligent testing and calibration of MSA ALTAIR and ALTAIR PRO Single-Gas Detectors, as well as ALTAIR 4X/4XR and ALTAIR 5X/5X PID Multigas Detectors
- Performs as either stand-alone unit or integrated portable detector management system
- Color touchscreen for ease of setup and viewing; no touch operation is needed for calibration or bump test
- RFID automated calibration gas setup, status alerts and traceability
- Global platform—many language options
- Significant cost of ownership reduction when used with MSA XCell Sensors
- Simultaneous testing of up to 10 gas detectors
- Securely configure gas detectors at the touch of a button
- MSA ALTAIR Multigas Detectors are always ready for use




GALAXY GX2 SYSTEM TEST STAND/ 1 VALVE, UK PLUG <i>for use with 1 calibration gas cylinder</i>	10128663	ALTAIR / ALTAIR PRO / ALTAIR 2X Detectors, no-charging
	10128659	ALTAIR 4/4X Multigas Detector, charging
	10128661	ALTAIR 4/4X Multigas Detector, no-charging
	10128655	ALTAIR 5/5X Multigas Detector, charging
	10128657	ALTAIR 5/5X Multigas Detector, no-charging
GALAXY GX2 SYSTEM TEST STAND/ 4 VALVE, UK PLUG <i>for use with 1-4 calibration gas cylinders</i>	10128662	ALTAIR / ALTAIR PRO / ALTAIR 2X Detectors, no-charging
	10128658	ALTAIR 4/4X Multigas Detector, charging
	10128660	ALTAIR 4/4X Multigas Detector, no-charging
	10128654	ALTAIR 5/5X Multigas Detector, charging
	10128656	ALTAIR 5/5X Multigas Detector, no-charging
CALIBRATION GAS	10048280	Calibration gas cylinder (34L) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S
	10045035	Calibration gas cylinder (58L) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S
	10117738	Calibration gas cylinder (58L) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S, 10 ppm SO ₂
	10098855	Calibration gas cylinder (34L) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S, 10 ppm SO ₂
	10103262	Calibration gas cylinder (58L) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S, 2.5% CO ₂
ACCESSORIES	10105756	Electronic cylinder holder
	10125135	Non-electronic cylinder holder
	10127111	4 GB SD card
	10123938	MSA Link Pro Software key (hard key) - DISCONTINUED
	10123937	Digital secure USB key
	10125907	End cap
	10127424	ALTAIR 4/4X/4XR Detector Multi-unit Charger, UK PLUG
	10127429	ALTAIR 5/5X Detector Multi-unit Charger, UK PLUG
	10127112	Laminated quick start guide
	10127518	12" (TBR) Ethernet cable for test stand to test stand connection
	10126657	DIN rail clip kit (2 clips & screws per kit)
	10062364	Type Omega DIN Rail 0.5m, perforated, steel, zinc-plated
	10062365	Type Omega DIN Rail 1m, perforated, steel, zinc-plated
	10062366	Type Omega DIN Rail 2m, perforated, steel, zinc-plated
	10082834	USB IR dongle (for use with MSA Link Software)
	10034391	Demand flow regulator (universal)
	710289	Large capacity (<3000 psi) demand regulator
	10127808	Printer - detector or receipt sticker
	10126437	Detector sticker label roll
	10126138	Receipt & sticker label roll
	10145138	Printer ribbon

MSA Calibration Cylinders

100L 	34L, 58L and 116L 	875L 
Model RP and Model R Calibration Cylinders—Non-Reactive Gases Model RP Cylinder • Contents: Pressure 1000 psig; approximately 100 liters at atmospheric pressure • Material: Steel	Model RP and Econo-Cal Calibration Cylinders—Reactive Gases Model RP & Econo-Cal Cylinders • Contents: Pressure 500 psig–1000psig • Material: Aluminum	BD-20 Calibration Cylinder—Reactive or Non-Reactive Gases Cylinder • Contents: Pressure 2216 psig • Material: Aluminum • Part No. 10152629 (standard quad gas)

Call for availability of other gas mixtures

MODEL RP CALIBRATION CHECK KIT	
• Includes regulator with cylinder pressure gauge, adapter hose, sensor adapter (where applicable), instructions, and two-cylinder case • Model RP Kit steel calibration gas cylinders measure approximately 14-1/4" high, 3-1/2" in diameter • Aluminum container 13-1/4" high, 3" in diameter • Depending upon individual pressure requirements, cylinders contain 58 to 100 liters of specified gas mixture	
P/N	Description
477149	Model RP Calibration Check Kit, with 0.25 lpm regulator, includes:
467895	Regulator (0.25 lpm)
24194	Tubing, 30" (without sampling line connection)
10089321	Calibration cap: ALTAIR 4/4X
635833	Quick disconnect fitting
628474	Zero plug for MSA electrochemical sensors
465898	Quick disconnect fitting, internal, 3/16 barb



Calibration Cylinders Are Recyclable in the USA

MSA has affiliated with the Association of Retarded Citizens, Butler County—a nonprofit organization that employs mentally retarded citizens—and established a Cylinder Recycling Center. The calibration cylinders are not refilled, but salvaged for scrap. All money generated from selling the scrap cylinders is placed in the ARC operating fund for salaries and operating costs.

Calibration cylinders are considered hazardous unless the cylinders are empty. MSA has developed special devalving tools that will ensure the cylinder is empty and render the cylinder non-fillable. For your convenience, MSA also offers a specially pre-addressed shipping box (also recyclable) which helps you pay the lowest shipping costs available.

The MSA Recycling Center limits the return of calibration cylinders to MSA-logoed cylinders only. Non-MSA cylinders will be rejected. Contact the Customer Service Center for additional details at 1-800-MSA-2222.

DEVALVING TOOLS		
Model RP	Model R	Return Box
711228	711229	711227

MSA Calibration Cylinders by Instruments

MULTIGAS ("COCKTAIL MIXES") TABLE										
REACTIVE GASES										
	COMB Gas	CO	O ₂	H ₂ S	NO ₂	SO ₂	CO ₂	34L	58L	116L
1.45% METHANE AS PENTANE SIMULANT	60 ppm	15%	20 ppm	-	-	-	-	10048280	10045035	10150595
1.45% METHANE AS PENTANE SIMULANT	60 ppm	15%	20 ppm	-	10 ppm	-	-	10098855	10117737	10150622
1.45% METHANE AS PENTANE SIMULANT	60 ppm	15%	-	10 ppm	-	-	-	10058036	10058034	10150597
1.45% METHANE AS PENTANE SIMULANT	60 ppm	15%	20 ppm	-	-	-	2.50%	10104621	10103262	10150606
1.45% METHANE AS PENTANE SIMULANT	300 ppm	15%	10 ppm	-	-	-	-	711058	804770	-
2.5% METHANE	60 ppm	15%	20 ppm	-	-	-	-	10048981	10048890	10150596
2.5% METHANE	60 ppm	15%	-	10 ppm	-	-	-	10058172	10058171	10150598
2.5% METHANE	300 ppm	15%	10 ppm	-	-	-	-	711076	813720	-
NON-REACTIVE GASES										
	COMB Gas	CO	O ₂	34L	58L	116L	100L			
1.45% METHANE AS PENTANE SIMULANT	60 ppm	15%	15%	10048789	478191	-	-			
2.5% METHANE	60 ppm	15%	15%	10049056	813718	-	-			
1.45% METHANE AS PENTANE SIMULANT	300 ppm	15%	15%	-	-	-	10010162			
1.45% METHANE AS PENTANE SIMULANT	-	15%	15%	-	-	-	478192			
ALTAIR 2X DETECTOR										
	H ₂ S	SO ₂	CO	NO ₂	34L	58L	116L			
20 ppm	-	-	-	-	10153844	10153845	10153846			
20 ppm	10 ppm	-	-	-	10153808	10153807	10153808			
20 ppm	-	60 ppm	-	-	10153800	10153801	10153802			
-	-	60 ppm	10 ppm	-	10153803	10153804	10153805			

REGULATORS							
GAS MISER® DEMAND REGULATOR			FIXED FLOW REGULATORS				COMBINATION REGULATOR
Model RP	BD-20	BD-20	Model RP		Model R		Model RP
	CGA 330	CGA 590	0.25 lpm	1.5 lpm	0.25 lpm	0.5 lpm	0.25 lpm
10034391	10148159	710289	467895	467896	459949	459948	711175
	Up to 3000 psi cylinders	Up to 3000 psi cylinders	-	-	-	-	-
Can be used with all reactive gases (replaces 710288)	CGA 330 is standard fitting for H ₂ S containing mixtures	CGA 590 is standard fitting for non-H ₂ S mixtures	-	-	-	-	Easily converts 34, 58, 116, or 100L into "squirt" bottle; provides stable gas concentration

Model RP – Regulator threads onto into 34, 58 and 116L aluminum bottles and 100L steel bottles; limited to 1000 psi
Model BD – Regulator attaches directly onto cylinder containing up to 3000 psi gas pressure
Model R – Regulator fits 19L steel cylinder (red or blue); often contains combustible gas mixture



Gas Miser® Model RP



Gas Miser® Model BD-20



Model RP Regulator



Gas Miser® Model BD-20

MSA Calibration Cylinders by Gases

# Gases	Gas Mix	Part No. Econocal (34L)	Part No. Econocal (58L)	Part No. Econocal (116L)	Part No. Econocal (103L)	Recommended Cal Gas for:
1	100 PPM ISOBUTYLENE	10048279	10028038	-	494450	PID
1	8% BUTANE IN N ₂ (6L)	*10075802	-	-	-	25% VOL BUTANE IR
1	50% VOL METHANE IN N ₂	-	10075804	-	-	100% VOL METHANE IR
1	0.6% VOL PROPANE (100L)	-	*10028034	-	-	LEL PROPANE IR SENSOR
1	50% VOL PROPANE N ₂	*10029475	-	-	-	100% VOL PROPANE IR
1	10 PPM NO ₂ IN AIR	711068	808977	10150599	-	NO ₂ SENSOR
1	10 PPM SO ₂ IN AIR	711070	808978	10150600	-	SO ₂ SENSOR
1	25 PPM NH ₃ IN N ₂	711078	814866	10150611	-	NH ₃ SENSOR
1	10 PPM Cl ₂ IN N ₂	711066	806740	10150612	-	Cl ₂ SENSOR
1	2 PPM Cl ₂ IN N ₂	*711082	710331	10150613	-	ClO ₂
1	10 PPM HCN IN N ₂	711072	809351	10150614	-	HCN SENSOR
1	0.5 PPM PH ₃ IN N ₂	711088	710533	10150615	-	PH ₃ SENSOR
1	20.8% O ₂ THC < 1 PPM	-	-	10150608	801050	CO ₂ IR
1	2.5% CO ₂	-	-	-	479265	-
1	50 PPM NO	711074	812144	10150617	-	NO SENSOR
3	1.45% CH ₄ , 15.0% O ₂ , 20 PPM H ₂ S	*10048790	*10048788	-	-	-
3	2.50% CH ₄ , 15.0% O ₂ , 20 PPM H ₂ S	10048888	10048889	-	-	-
3	1.45% CH ₄ , 15.0% O ₂ , 60 PPM CO	10048789	478191	-	-	-
3	2.50% CH ₄ , 15.0% O ₂ , 60 PPM CO	*10049056	813718	-	-	-
4	1.45% CH ₄ , 15.0% O ₂ , 60 PPM CO, 10 PPM NO ₂	10058036	10058034	10150597	-	-
4	1.45% CH ₄ , 15.0% O ₂ , 60 PPM CO, 20 PPM H ₂ S	10048280	10045035	10150595	-	STANDARD QUAD GAS
4	2.50% CH ₄ , 15.0% O ₂ , 60 PPM CO, 20 PPM H ₂ S	10048981	10048890	10150596	-	-
4	2.50% CH ₄ , 15.0% O ₂ , 60 PPM CO, 10 PPM NO ₂	10058172	10058171	10150598	-	-
5	1.45% CH ₄ , 15.0% O ₂ , 60 PPM CO, 20 PPM H ₂ S, 2.5% CO ₂	10104621	10103262	10150606	-	STANDARD QUAD GAS + 5% OR 10% CO ₂ IR
5	1.45% CH ₄ , 15.0% O ₂ , 60 PPM CO, 20 PPM H ₂ S, 10 PPM SO ₂	10098855	10117738	766941	-	SO ₂ SENSOR

Calibration Gases are now RFID enabled to suit Galaxy GX2.

*Not RFID enabled.

MSA Regulators

Model RP Regulators

- Fixed flow rate standard regulators with or without taps
- Used with Model RP and R type cylinders

FIXED FLOW REGULATORS			
Model RP		Model R	
0.25lpm	1.5lpm	0.25lpm	0.5lpm
467895	467896	459949	459948



Model RP Regulator



Manual Testing with Test Gas

467895 - STD FOR ALTAIR 2X & 4X

Gas Miser® Demand Regulator: The intelligent Regulator

- Nickel-plated brass and polished aluminium.
- Gas flow from 0.1 lpm to 3.0 lpm.
- Designed for use with any MSA Model RP Calibration Cylinder except chlorine and ammonia*
- Automatic ON/OFF valve that releases gas only on demand.
- Shuts off automatically.
- Can stay connected to the cylinder where it remains in a ready state.
- Cost-efficient.
- Supplied with calibration tubing and special fitting.

GAS MISER® DEMAND REGULATOR		
Model RP	BD-20	BD-20
	CGA 330	CGA 590
10034391	10148159	710289
	Up to 3000 psi cylinders	Up to 3000 psi cylinders
Can be used with all reactive gases (replaces 710288)	CGA 330 is standard fitting for H ₂ S containing mixtures	CGA 590 is standard fitting for non-H ₂ S mixtures



Gas Miser® Model RP



Gas Miser® Model BD-20

10034391 - STD FOR ALTAIR 5X

Model RP - Regulator threads onto into 34, 58 and 116L aluminum bottles and 100L steel bottles; limited to 1000 psi

Model BD - Regulator attaches directly onto cylinder containing up to 3000 psi gas pressure

Model R - Regulator fits 19L steel cylinder (red or blue); often contains combustible gas mixture

MSA - The Safety Company

Our business is safety. We've been the world's leading manufacturer of high-quality safety products since 1914. MSA products may be simple to use and maintain, but they're also highly-sophisticated devices and protective gear - the result of countless R&D hours, relentless testing and an unwavering commitment to quality that saves lives and protects thousands of men and women each and every day. Many of our most popular products integrate multiple combinations of electronics, mechanical systems and advanced materials to help ensure that users around the world remain protected in even the most hazardous of situations.

NOTE: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warning or cautions provided have been thoroughly read and understood. Only they contain the complete and detail information concerning proper use and care of these products.

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