

# ALTAIR<sup>®</sup> 2X Gas Detectors

IT'S WHAT'S INSIDE THAT **REALLY** COUNTS



Because every life has a purpose...



## XCell® Pulse Technology

With our patented\* XCell Pulse Technology, we have created a simple and inexpensive approach to bump testing. Years of scientific research, patented sensor interrogation technology and proprietary sensor response methodologies have delivered the world's first gas detector with a stand-alone bump test. Simply put; the use of calibration accessories or bottled calibration gas is not required for bump testing the ALTAIR 2XP Gas Detector.

How does it work? When the detector is turned on, it automatically begins an electronic pulse check that activates the sensor catalyst and electrolyte interaction and makes minor corrections against prior calibration values. Next the user completes a flow check by exhaling toward the sensor inlet. An oxygen detector embedded in the sensor, that is only active during the pulse and flow check, detects the drop in oxygen content of exhaled breath. If both of these checks pass, the detector passes the bump test.

\*US patents # 7,413,645; #7,959,777



UNIQUE PULSE CHECK  
AUTOMATICALLY CHECKS SENSOR  
RESPONSE AND CORRECTS FOR  
SENSOR INTEGRITY.  
(ALTAIR 2XP DETECTOR ONLY)

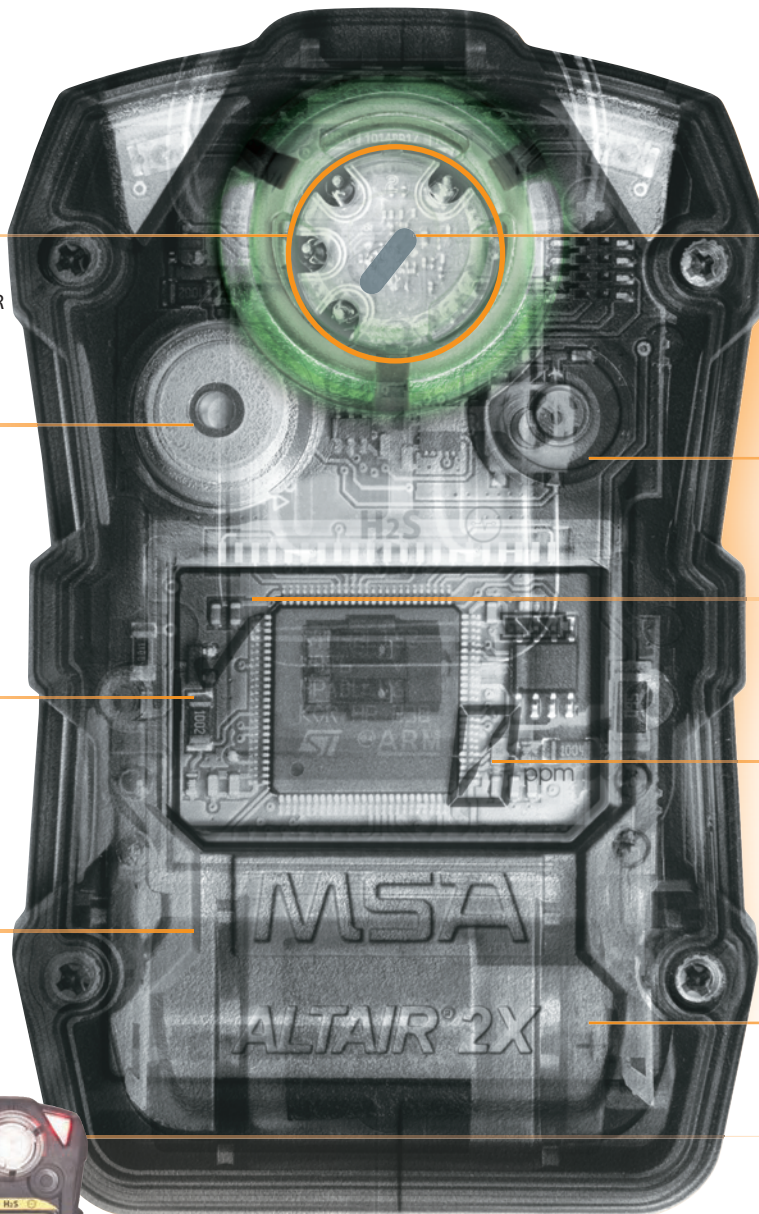
**95 DB ALARM -**  
WITH RED LED INDICATORS  
AND VIBRATING ALARM



A CHECK MARK AND  
GREEN LED INDICATOR  
MEANS YOU ARE BUMPED  
AND READY TO GO

DURABILITY — IP 67 DESIGN  
AND INTRINSICALLY SAFE  
CONSTRUCTION SURVIVES  
25 FT DROP TEST

RED LED INDICATORS  
SHOW THAT THE  
INSTRUMENT HAS NOT  
BEEN BUMP TESTED



A SIMPLE EXHALED  
BREATH VERIFIES THAT  
SENSOR FLOW PATH IS  
CLEAR TO ENSURE THAT  
GAS REACHES THE SENSOR.  
(2XP ONLY)

**EASY ONE-BUTTON,  
GLOVED-HAND  
OPERATION**

END OF SENSOR LIFE  
INDICATOR



LARGE, HIGH CONTRAST  
DISPLAY SHOWS PPM AND  
VISUAL SENSOR STATUS

DURABLE, RUBBERIZED  
HOUSING FOR SECURE GRIP





# The ALTAIR 2X Gas Detector

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Introducing the ALTAIR 2X Gas Detector from MSA; the first one or two gas detector that incorporates industry-leading XCell Sensor Technology to deliver unparalleled performance while drastically minimizing total cost of ownership, increasing durability and delivering enhanced worker safety, compliance and traceability.

The ALTAIR 2X is also the first portable gas detector to introduce revolutionary XCell Pulse Technology. Based on proven science and advanced patented sensor capabilities, the ALTAIR 2XP Detector delivers the world's first stand-alone bump test. This allows a daily bump test to be performed without the need for calibration accessories or specific calibration gas.

It's what's inside that counts!

## ALTAIR 2XP Gas Detector – with XCell Pulse Technology

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First stand-alone bump test!

The ALTAIR 2XP Gas Detector provides a bump test that is so easy to follow, anyone can do it, from anywhere! The science behind this first-of-its-kind technology will change the face of portable gas detection as we know it. By combining pulse sensor interrogation with a simple flow check, we've created the first successful stand-alone bump test. PULSE sensor interrogation begins, exhale into the unit. And the result? You're BUMPED!



MSA XCELL SENSORS HAVE A TYPICAL LIFE OF MORE THAN FOUR YEARS, — THAT'S DOUBLE THE INDUSTRY AVERAGE — AND PROVIDE SUPERIOR STABILITY, ACCURACY AND RESPONSE.

## ALTAIR2XT – Two-Tox Gas Detector

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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.

## ALTAIR2X – Single Gas Detector

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MSA revolutionized gas detection with XCell Sensor Technology. By miniaturizing the sensors' controlling electronics and placing them inside the sensor itself using MSA's proprietary application-specific integrated circuit (ASIC) design, MSA XCell Sensors offer superior stability, accuracy, and sensor life.

# Compliance, Traceability and Simplicity without Compromising Safety!

Don't Leave Safety to Chance!

- 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.
- Visual indicators on the detector make verification of bump test easy
  - Highly visible green light and check mark when bumped
  - Flashes red when not bumped
- The ALTAIR 2X family of detectors have full instrument traceability of bump and calibration records, peak readings, event logs and data logs.

**Increase your safety compliance and promote worker confidence!**



INSTRUMENT RECORDS ARE STORED and can be easily downloaded during periodic gas calibrations using the Galaxy GX2 test stand. MSA Link Pro Software provides full networking, traceability, proactive safety, compliance, and reporting.



**GLOW-IN-THE-DARK VERSION**  
FOR LOW LIGHT APPLICATIONS  
AND EASIER FLEET MANAGEMENT  
OF MULTIPLE DETECTOR SETTINGS.



## Lower Total Cost of Ownership

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MSA's industry leading technology combined with product durability means that the ALTAIR 2X Gas Detector provides a lower total cost of ownership than competitive instruments and will pay for itself quickly.

## Built Tough

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Like all MSA detectors, ALTAIR 2X is built for durability and designed for the work that is being completed.

- Withstands extreme impacts with rugged polycarbonate housing and passes 25-foot drop test
- IP 67-rated ALTAIR 2X is both dust tight and water tight
- Minimal rF interference
- Full three-year warranty supports the entire instrument, including the sensors.

## Reduced Costs and Expense

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- XCell Sensor response and recovery time reduces the gas consumption for calibration and gas bump tests (where applicable).
- The ALTAIR 2XP with XCell Pulse Technology reduces the need for specific calibration gas and bump test accessories providing significant savings!
- The ALTAIR 2XT Two-Tox eliminates the need for a second instrument in several applications.

## Increased Productivity

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- Skip the gas line! – The stand-alone bump test on the ALTAIR 2XP means that you will be spending more time doing the job and less time waiting in line or conducting bump tests. Spending less time at the bump station means less down time and more time producing!
- Faster bump tests, easy compliance and product reliability means you can get to work faster and safer!



## Technical Specifications

SIZE	3.5" L x 2.125" W x 1.25" D (no clip)
WEIGHT	4 oz (113 g) w/ clip
HOUSING	Rugged rubberized armor
INGRESS PROTECTION	IP67
DROP TEST	25 feet
HANDLING	One-handed, one-button operation
BUMP TEST INDICATORS	Pass: Green LED flash & checkmark Fail or expiration: Red LED flash only
AUDIBLE ALARM	95 dB @ 1 foot
VISUAL ALARM	Ultra-bright LEDs
VIBRATING ALARM	Standard
DISPLAY	Large-character monochrome LCD
BACKLIGHT	10s backlight w/ adjustable timeout
BATTERY	Replaceable lithium battery
EXTENDED TEMP RANGE	-20° C to +50° C
EXTREME RANGE	-40° C to +60° C
DATA LOG	2X/2XP: > 950 hrs @ default interval 2XT: > 850 hrs @ default interval
EVENT LOG	300+ events
STANDARD WARRANTY	Chassis & electronics: 3 years Cl <sub>2</sub> & NH <sub>3</sub> sensors: 2 years All other sensors: 3 years Does not cover consumable parts.

### CERTIFICATIONS/APPROVALS

USA	cCSAus Class I Div 1 Groups A, B, C, D Class II Div 1 Groups E, F, G Class III T <sub>amb</sub> = -40C to +60C T4 USA: UL 913 7th Edition Canada: CSA 22.2 No. 157
ATEX	FTZU II 2G Ex ia IIC T4 Gb -40C to +60C
IEC/AUSTRALIA/ NEW ZEALAND	FTZU Ex ia IIC T4 Gb -40C to +60C

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 warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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## Ordering Information

DETECTOR TYPE (LOW, HIGH ALARM IN PPM)	CHARCOAL	GLOW-IN-THE- DARK	REPLACEMENT SENSOR
<b>ALTAIR 2XP – WITH XCELL PULSE TECHNOLOGY</b>			
H <sub>2</sub> S-Pulse (10, 15)	10153984	10154188	10121227
<b>ALTAIR 2XT TWO-TOX GAS DETECTOR</b>			
CO/H <sub>2</sub> S (CO: 25, 100; H <sub>2</sub> S: 10, 15)	10154040	10154181	10152603
CO-H <sub>2</sub> /H <sub>2</sub> S (CO: 25, 100; H <sub>2</sub> S: 10, 15)	10154071	10154182	10152604
CO/H <sub>2</sub> S-LC (CO: 25, 100; H <sub>2</sub> S: 5, 10)	10154072	10154183	10152605
CO/NO <sub>2</sub> (CO: 25, 100; NO <sub>2</sub> : 2.5, 5)	10154073	10154184	10152606
SO <sub>2</sub> /H <sub>2</sub> S-LC (SO <sub>2</sub> : 2, 5; H <sub>2</sub> S: 10, 15)	10153985	10154190	10152607
<b>ALTAIR 2X SINGLE GAS DETECTOR</b>			
CO (25, 100)	10153986	10154185	10152603
CO-H <sub>2</sub> (25, 100)	10154074	10154186	10152604
CO-HC (25, 100)	10154075	10154187	10152602
H <sub>2</sub> S-LC (5, 10)	10154076	10154189	10152605
SO <sub>2</sub> (2, 5)	10154077	10154191	10152607
NO <sub>2</sub> (2.5, 5)	10154078	10154192	10152606
NH <sub>3</sub> (25, 50)	10154079	-	10152601
Cl <sub>2</sub> (0.5, 1)	10154080	-	10152600

### CALIBRATION GAS

DESCRIPTION	PART NUMBER		
	34 L	58 L	116L
60PPM CO, 20PPM H <sub>2</sub> S	10153800	10153801	10153802
60PPM CO, 10 PPM NO <sub>2</sub>	10153803	10153804	10153805
20 PPM H <sub>2</sub> S, 10 PPM SO <sub>2</sub>	10153806	10153807	10153808
20 PPM H <sub>2</sub> S	10153844	10153845	10153846

### ACCESSORIES

Galaxy GX2 for ALTAIR	10128644
Electronic Cylinder Holder	10105756
Alcohol-Free Instrument Wipes	10154893-SP