

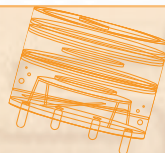
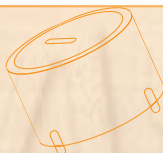


Sarab Khane Atash



ALTAIR[®] 2X Gas Detectors

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



Sarab Khane Atash

WE KNOW WHAT'S AT STAKE.



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)

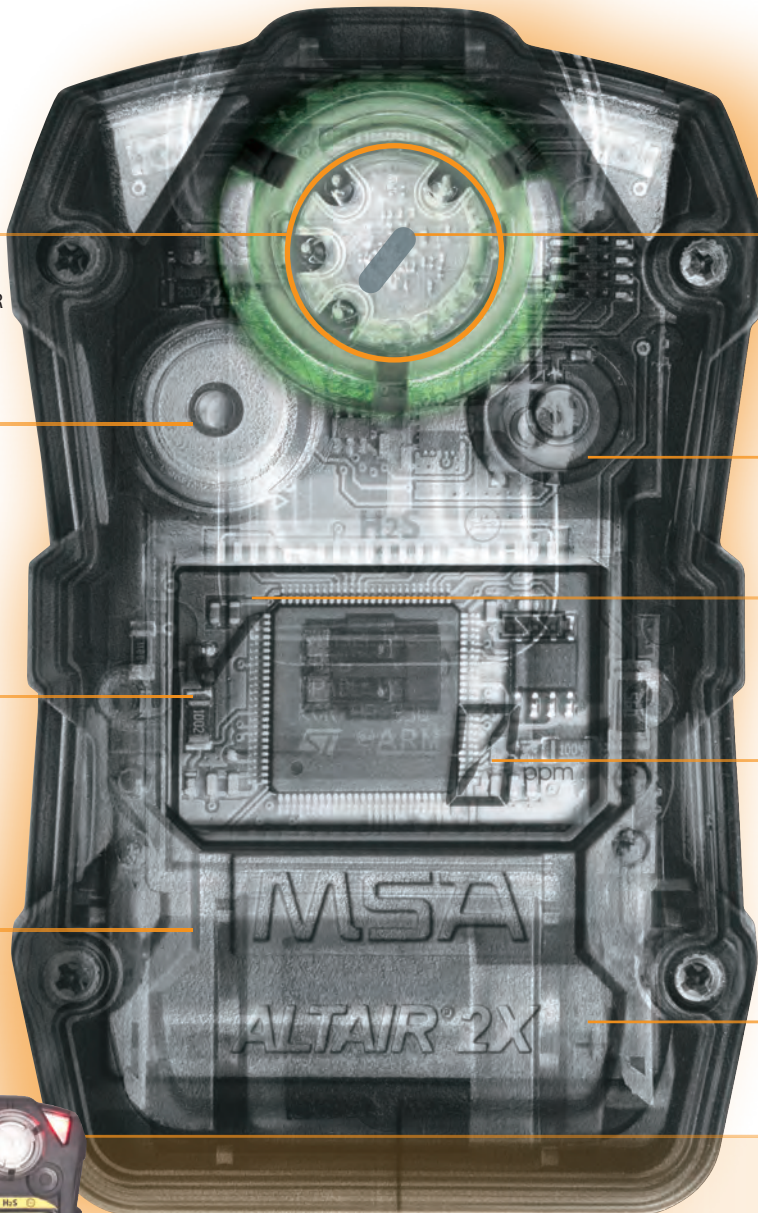
95 DB ALARM -
WITH RED LED INDICATORS AND VIBRATING ALARM



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)

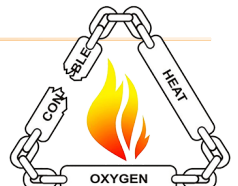
EASY ONE-BUTTON, GLOVED-HAND OPERATION

END OF SENSOR LIFE INDICATOR



LARGE, HIGH CONTRAST DISPLAY SHOWS PPM AND VISUAL SENSOR STATUS

DURABLE, RUBBERIZED HOUSING FOR SECURE GRIP



S.K.A

The ALTAIR 2X Gas Detector

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

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.

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

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.



Sarab Khane Atash

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.



Test Type: Calibration
Test Result: Calibration
S/N: 123456789
Company: MSA
Sensor Set Points: Low

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



Sarab Khane Atash

Lower Total Cost of Ownership

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

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

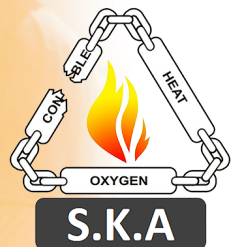
- Withstands extreme impacts with rugged polycarbonate housing and passes 25-foot drop test
- IP 67-rated ALTAIR 2X is both dust tight and water tight
- Minimal rF interference
- Full three-year warranty supports the entire instrument, including the sensors.

Reduced Costs and Expense

- 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

- 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 ₂ & NH ₃ 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 Tamb = -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.



ID 0802-96-MC / Apr 2018

© MSA 2018. Printed in U.S.A.

MSA – The Safety Company
1000 Cranberry Woods Drive
Cranberry Township, PA 16066 USA
Phone 724-776-8600
www.MSAsafety.com

U.S. Customer Service Center
Phone 1-800-MSA-2222
Fax 1-800-967-0398

MSA Canada
Phone 1-800-672-2222
Fax 1-800-967-0398

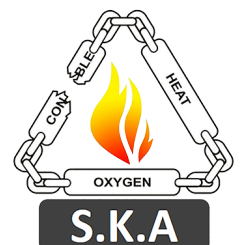
MSA Mexico
Phone 01 800 672 7222
Fax 52 - 44 2227 3943

Ordering Information

| DETECTOR TYPE (LOW, HIGH ALARM IN PPM) | CHARCOAL | GLOW-IN-THE-DARK | REPLACEMENT SENSOR |
|---|----------|------------------|--------------------|
| ALTAIR 2XP – WITH XCELL PULSE TECHNOLOGY | | | |
| H2S-Pulse (10, 15) | 10153984 | 10154188 | 10121227 |
| ALTAIR 2XT TWO-TOX GAS DETECTOR | | | |
| CO/H2S (CO: 25, 100; H2S: 10, 15) | 10154040 | 10154181 | 10152603 |
| CO-H2/H2S (CO: 25, 100; H2S: 10, 15) | 10154071 | 10154182 | 10152604 |
| CO/H2S-LC (CO: 25, 100; H2S: 5, 10) | 10154072 | 10154183 | 10152605 |
| CO/NO2 (CO: 25, 100; NO2: 2.5, 5) | 10154073 | 10154184 | 10152606 |
| SO2/H2S-LC (SO2: 2, 5; H2S: 10, 15) | 10153985 | 10154190 | 10152607 |
| ALTAIR 2X SINGLE GAS DETECTOR | | | |
| CO (25, 100) | 10153986 | 10154185 | 10152603 |
| CO-H2 (25, 100) | 10154074 | 10154186 | 10152604 |
| CO-HC (25, 100) | 10154075 | 10154187 | 10152602 |
| H2S-LC (5, 10) | 10154076 | 10154189 | 10152605 |
| SO2 (2, 5) | 10154077 | 10154191 | 10152607 |
| NO2 (2.5, 5) | 10154078 | 10154192 | 10152606 |
| NH3 (25, 50) | 10154079 | - | 10152601 |
| Cl ₂ (0.5, 1) | 10154080 | - | 10152600 |

CALIBRATION GAS

| DESCRIPTION | PART NUMBER | | |
|----------------------------|-------------|----------|----------|
| | 34 L | 58 L | 116L |
| 60PPM CO, 20PPM H2S | 10153800 | 10153801 | 10153802 |
| 60PPM CO, 10 PPM NO2 | 10153803 | 10153804 | 10153805 |
| 20 PPM H2S, 10 PPM SO2 | 10153806 | 10153807 | 10153808 |
| 20 PPM H2S | 10153844 | 10153845 | 10153846 |
| ACCESSORIES | | | |
| Galaxy GX2 for ALTAIR | | | 10128644 |
| Electronic Cylinder Holder | | | 10105756 |



Sarab Khane Atash

MSAsafety.com