Fire Service **Equipment**

2019–2020 Catalog

MSA
The Safety Company

WHEN YOU GO IN, WE GO IN WITH YOU.

Fire Service **Equipment**

Products for today that drive the future

As your emergency responder duties expand, as well as your exposure to hazards, MSA continues to provide more emergency response products to exceed your expectations and requirements. MSA supports firefighters and recognizes your role as the front line of protecting others. We are constantly improving products that you have come to rely upon as the best in the industry, to make your job safer and easier. For your protection, you can count on MSA for the most technologically advanced products, and for the best support and training assistance.

We are committed to you

Working closely with firefighters and rescue teams for over 100 years, MSA's premier focus continues to be the fire service for product innovations, improvements and service. From our Cairns® Fire Helmets, Evolution® Series Thermal Imaging Cameras and breakthrough ALTAIR® Gas Detectors, to the most advanced, safety driven breathing apparatus we've ever produced, the G1 SCBA, you can rely upon MSA to offer the very best in personal protective equipment. Your options in gas detection instruments and fall protection/rescue systems are more numerous and better than ever. Our MSA-U® Training Center online training tool provides in-depth product training with team-tracking capability that allows 24/7 instruction for your entire squad. And now Globe, the world's leading maker of innovative protective clothing for firefighters, is part of MSA. Equipping firefighters with the highest level of protection—head to toe, Cairns helmet to Globe boots—no one is as committed to your health and safety as we are.

Our people set us apart from the competition

MSA's SCBA are manufactured at our award-winning Murrysville, PA facility. Whether your needs include the revolutionary G1 SCBA, an Evolution® TIC from our Cranberry, PA plant or a Cairns® Helmet made in Jacksonville, NC, you can be sure that each of them has been made with the dedicated care and skill of an MSA associate whose average time on the job of 18 years means consistent quality, time after time.

Assistance is everywhere

Your personalized service starts locally with your trained MSA-authorized distributor and MSA's fire service field sales managers. To locate your nearest MSA fire service distributor, or find an answer to an urgent technical question, our award-winning, dedicated team of customer service professionals is ready to help, as they understand your hazards as well as regulatory compliance. Contact them at **1-877-MSA-FIRE** or visit us at **www.MSAFIRE.com**.

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FIND THE HOT SPOTS. AND THE HEARTBEATS.

MSA provides personal thermal imaging to every firefighter—from 360 to rescue; egress to overhaul.

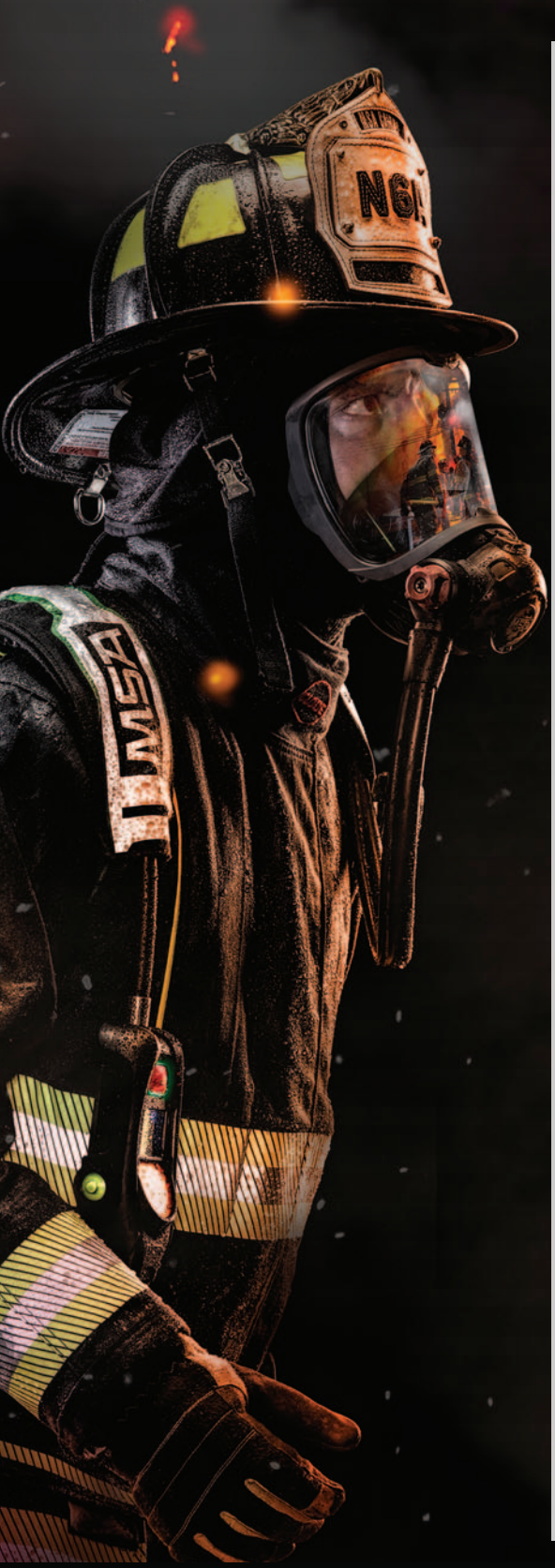
The FIRST and ONLY TIC Integrated Directly into the SCBA

- No additional bulky equipment added to your facepiece or hanging from your gear
- Compatible with all G1 SCBA via simple field upgrade
- Powered by the G1 SCBA's single integrated power source—never check multiple battery locations again
- Single button functionality allows for simple, intuitive use

Take Advantage of the Latest Technology

- Lightweight—only adds 4.2 oz. compared to standard MSA G1 Control Module
- Up to five user-selectable palettes—10+ additional palettes available via MSA A2 Software
- 220 x 176 resolution ensures crystal clear images
- Compliant to the 2018 version of the NFPA 1981 and 1982 standards
- A full five-year warranty on thermal imager—Additional 15 years extended warranties available

The MSA G1 SCBA stands out from the crowd.



1. FACEPIECE

- Open port design with cross-contamination protection
- Comfortable and easy to use, with low breathing resistance on and off air
- Zero electronics, reducing weight, snag hazards and cost

2. CONTROL

- Integrated Thermal Imaging Camera (TIC) allows firefighter to see within dark, smoke-filled environments
- Five user-selectable palettes—10+ additional programmable palettes available via MSA A2 Software
- Compatible with all G1 SCBA via simple field upgrade
- Control module provides both color LCD and analog displays
- Display automatically turns on when control module is lifted into viewing position
- No matter which button is pressed, necessary information displays
- Improved visibility through *buddy lights*

3. SITUATIONAL AWARENESS

- Wide field of view through the G1 Facepiece
- Seven three-stage buddy lights providing 360-degree visibility of pressure status
- Highly reflective material on shoulder straps and cylinder band
- Optional integrated TIC provides visibility when it is needed most

4. INFORMATION

- HUD provides more information than ever before and can be customized to meet your SOP; cylinder pressure, battery status, evacuation (optional), and so much more

5. COMMUNICATIONS

- Loud and clear communications are included with every G1 SCBA
- Intelligently removes background and inhalation noise, helping your commands to be heard

6. COMFORT

- Swiveling, adjustable lumbar pad properly positions SCBA weight
- Improved comfort, balance, fit

7. MSA G1 5500 SCBA

Staying at the forefront of safety means constantly evolving to meet the ever-changing demands you face each day on the job. Helping meet these demands MSA's tried-and-trusted G1 SCBA now comes available in a 5500 psig operating system. The MSA G1 offers our lowest profile, most comfortable, streamlined, balanced and configurable SCBA with the lightest weight 5500 psi cylinders on the market today

8. POWER

- Single power source
- Uses alkaline or rechargeable battery
- Eliminates the need to maintain multiple battery sizes or multiple battery locations
- Low cost of ownership

9. READY FOR THE FUTURE

- Bluetooth connectivity, RFID, Near Field Communication (NFC), long-range radio
- Quickly update the G1 SCBA with the latest advancements through Bluetooth technology, ensuring the SCBA you buy today can easily adapt to meet your needs far into the future

10. BUILT JUST FOR YOU

- Control module and HUD display required information; easily customized to meet your existing standard operating procedure
- Modular designs allows for quick component change

How to Order SCBA: Get the Exact Model You Need

The MSA Assemble-To-Order System (ATO) makes ordering the right mask fast and easy. Instead of choosing from a handful of complete air mask assemblies, you can order a custom-made air mask with every option exactly as desired. Contact MSA Customer Service for details.

Assemble-To-Order System for the MSA G1 SCBA

A	B	C	D	E	F	G	H	J	K	L
System Pressure	**Cylinder Connection**	**Harness**	**Cradle Type**	**Lumbar Type**	**Regulator Type**	**Regulator Hose Type**	**Emergency Breathing Support**	**Speaker Module**	**PASS**	**Battery Type**
2 2216 psig **4** 4500 psig **5** 5500 psig ◆	**2** CGA Threaded Remote Connection **4** CGA Quick Connect Remote Connection	**1** Standard without Chest Strap **2** Standard with Chest Strap **3** Serviceable Tunnel without Chest Strap **4** Serviceable Tunnel with Chest Strap **9** Serviceable Tunnel without Chest Strap No PASS **10** Serviceable Tunnel with Chest Strap No PASS	**M** Metal Band	**A** Adjustable Swiveling Lumbar Pad **B** Basic **C** Basic, Solid buckle **D** Adjustable Swiveling, Solid buckle **E** Adjustable Swiveling, Berry Compliant, Solid buckle **1** Rescue Belt II Hook, 50' **2** Rescue Belt II Carabiner, 50' **3** Rescue Belt II 50' FireTech Rope, Hook **4** Rescue Belt II, 50' FireTech Rope, Carabiner **5** Rescue Belt II, Lightning Hook, 50' FireTech Rope **6** Rescue Belt II, Lightning Hook, 50' Aramid/ Nylon Rope **7** Rescue Belt II, Lightning GT Hook, 50' FireTech Rope **8** Rescue Belt II Lightning GT Hook, 50' Aramid/ Nylon Rope	**1** Purge cover Left Shoulder † **2** Solid cover Left Shoulder †	**C** Continuous **Q** Quick Connect	**0** None **1** Waist Mounted Quick-Fill ◆ **2** ExtendAire II **3** Waist Mounted Quick-Fill and ExtendAire II ◆ **4** Hose and pouch **5** Waist-mounted Quick-Fill w/hose and pouch◆ **6** ExtendAire II w/ hose and pouch **7** Waist-mounted Quick-Fill w/hose and pouch, ExtendAire II ◆ **A** Pouch only	**L** Left Chest †	**A** PASS Right Shoulder † **C** PASS Telemetry Right Shoulder † **E** PASS Right Shoulder w/ Integrated TIC † **G** PASS Telemetry Right Shoulder w/Integrated TIC † **H** No PASS Right Shoulder †# **J** No PASS Telemetry Right Shoulder †# **K** No PASS Right Shoulder w/ Integrated TIC †# **L** No PASS Telemetry Right Shoulder w/ Integrated TIC †#	**A** Alkaline **R** Rechargeable * *If Telemetry is ordered R must be selected.*

◆ *SCBA to SCBA Transfilling is not available with the 5500psig operating system*
† *As Worn*
* *Charger sold separately*
\# *Can only be combined with Harness option 9 or 10*

Column: A B C D E F G H J K L
A-G1FS [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
PART NUMBERS (BOLD LEFT HAND COLUMNS)

[ ]
QUANTITY

MSA G1 SCBA Facepieces

Part No.	Type	Size	Nosecup Size	Head Harness	ATO Configuration
10156458	Fire service	Small	Small	4-pt. adjustable	G1FP-F-S-1-S-4-0-1
10156459	Fire service	Medium	Medium	4-pt. adjustable	G1FP-F-M-1-M-4-0-1
10156460	Fire service	Large	Large	4-pt. adjustable	G1FP-F-L-1-L-4-0-1
10156461	Fire service	Small	Small	Rubber	G1FP-F-S-1-S-R-0-1
10156462	Fire service	Medium	Medium	Rubber	G1FP-F-M-1-M-R-0-1
10156463	Fire service	Large	Large	Rubber	G1FP-F-L-1-L-R-0-1
10161812	Fire service	Small	Small	5-pt. adjustable	G1FP-F-S-1-S-5-0-1
10161813	Fire service	Medium	Medium	5-pt. adjustable	G1FP-F-M-1-M-5-0-1
10161814	Fire service	Large	Large	5-pt. adjustable	G1FP-F-L-1-L-5-0-1

Assemble-To-Order System for MSA G1 Facepieces

A	B	C	D	E	F	G
Application	**Size**	**Material**	**Nosecup**	**Head Harness**	**Neckstrap**	**Regulator Connection**
F Fire	**S** Small **M** Medium **L** Large	**1** Hycar	**0** None **S** Small **M** Medium **L** Large	**0** None **4** 4-pt. adjustable **5** 5-pt. adjustable **R** Rubber	**0** None **C** Cloth **R** Rubber	**1** Fixed push-to-connect

Note: Part numbered facepieces are also available.

Column: A B C D E F G
A-G1FP [F][ ][1][ ][ ][ ][1]
PART NUMBERS (BOLD LEFT HAND COLUMNS)

[ ]
QUANTITY

MSA G1 SCBA Cylinders

Standard Carbon Cylinders (2216, 4500 and 5500 psig)
- Lightest-weight carbon composite SCBA cylinders available in North America

Eclipse Cylinders (4500 and 5500 psig)
- Advanced, high-strength aerospace-grade carbon wrap design provides black look

Locking handwheel (optional)
- Pull and turn motion required to close valve

MSA G1 SCBA Cylinders for Threaded Remote Connection

Cylinder Pressure	Cylinder Duration	Connection Type	Handwheel Type	Air	Less Air
2216 psig	30-minute	Threaded	Standard	10156422-SP	10156431-SP
4500 psig	30-minute	Threaded	Standard	10156423-SP	10156432-SP
4500 psig	45-minute LP*	Threaded	Standard	10156424-SP	10156433-SP
4500 psig	45-minute	Threaded	Standard	10156425-SP	10156434-SP
4500 psig	60-minute	Threaded	Standard	10156426-SP	10156435-SP
5500 psig	30-minute	Threaded	Standard	10185508	10185602
5500 psig	45-minute	Threaded	Standard	10185509	10185603
5500 psig	60-minute	Threaded	Standard	10185510	10185604
5500 psig	75-minute	Threaded	Standard	10185601	10185605

Threaded remote connection

MSA G1 SCBA Cylinders for Quick-Connect Remote Connection

Cylinder Pressure	Cylinder Duration	Connection Type	Handwheel Type	Air	Less Air
2216 psig	30-minute	Quick-connect	Standard	10175706	10175711
4500 psig	30-minute	Quick-connect	Standard	10175707	10175712
4500 psig	45-minute LP*	Quick-connect	Standard	10175708	10175713
4500 psig	45-minute	Quick-connect	Standard	10175709	10175714
4500 psig	60-minute	Quick-connect	Standard	10175710	10175715
5500 psig	30-minute	Quick-connect	Standard	10181628	10181708
5500 psig	45-minute	Quick-connect	Standard	10181629	10181709
5500 psig	60-minute	Quick-connect	Standard	10181630	10181710
5500 psig	75-minute	Quick-connect	Standard	10181631	10181731

Quick-connect remote connection

MSA G1 SCBA Standard Cylinders for Threaded & Quick-Connect Remote Connection with Locking Handwheel

Cylinder Pressure	Cylinder Duration	Connection Type	Handwheel Type	Air	Less Air
4500 psig	30-minute	Threaded	Locking	10191802	10191838
4500 psig	45-minute LP*	Threaded	Locking	10191806	10191842
4500 psig	45-minute	Threaded	Locking	10191804	10191840
4500 psig	60-minute	Threaded	Locking	10191808	10191844
4500 psig	30-minute	Quick-connect	Locking	10191803	10191839
4500 psig	45-minute LP*	Quick-connect	Locking	10191807	10191843
4500 psig	45-minute	Quick-connect	Locking	10191805	10191841
4500 psig	60-minute	Quick-connect	Locking	10191809	10191845

PLEASE NOTE: 2216 psig and 5500 psig locking handwheel cylinders are available upon request.

Custom-Logoed Cylinders

For easy-to-read cylinder identification, MSA can place your department logo under the clear coat of any carbon cylinder.

Custom cylinder ordering is easy and efficient at **www.msafire.com**. Or, to place your order, simply contact your local MSA authorized fire service distributor, or contact MSA Fire Customer Service at **1-877-MSA-FIRE**.

MSA G1 SCBA Cylinders

MSA G1 SCBA Eclipse Cylinders

Cylinder Pressure	Cylinder Duration	Connection Type	Handwheel Type	Air	Less Air
4500 psig	30-minute	Threaded	Standard	10204941	10204965
4500 psig	45-minute LP*	Threaded	Standard	10204945	10204969
4500 psig	30-minute	Quick-connect	Standard	10204942	10204966
4500 psig	45-minute LP*	Quick-connect	Standard	10204946	10204970
4500 psig	30-minute	Threaded	Locking	10204943	10204967
4500 psig	45-minute LP*	Threaded	Locking	10204947	10204971
4500 psig	30-minute	Quick-connect	Locking	10204944	10204968
4500 psig	45-minute LP*	Quick-connect	Locking	10204948	10204972

*PLEASE NOTE: 5500 psig Eclipse Cylinders are also available upon request. *Low Profile version of the 45 minute, 4500 psig cylinder*

MSA G1 SCBA Accessories

MSA G1 SCBA Facepiece Accessories

Part No.	Description
496081	PAPR Type H filter cartridge (6-pk.)
10042346	PAPR Type H filter cartridge (20-pk.)
10067469	P100/OV canister (1-pk.)
10094315	P100/OV canister (12-pk.)
10144230	Spectacle Kit for G1 Facepiece
10152979	Riot control P100/CN/CS canister (1-pk.)
10160594	Riot control P100/CN/CS canister (1-pk.)
805078	Multigas GME/CS/CN/P100 cartridge (1-pk.)
10144220-SP	Replacement cloth neck strap
10159699-SP	Replacement rubber neck strap
10144231-SP	APR filter adapter assembly
10189322	G1 CBRN Nosecup, Large
10189323	G1 CBRN Nosecup, Medium/Small
10046570	CBRN Canister
10144230	G1 Spectacle Kit

MSA G1 SCBA Accessories

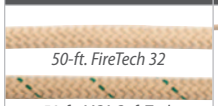
Part No.	Description
10148740-SP	Replacement alkaline battery pack
10148741-SP	Replacement rechargeable battery pack
10158385	Rechargeable battery charging station
10149701-SP	Quick-connect adapter for 2216 psig cylinders
10149702-SP	Quick-connect adapter for 4500/5500 psig cylinders
10158389	Retainer Kit for H-30 carbon (807587) 4500 psig (Type 2 - dovetail)
10158390	Retainer Kit for H-45 LP carbon (10035644) 4500 psig (Type 3 - dovetail)
10158401	Retainer Kit for L-30 carbon (807586) 2216 psig (Type 4 - dovetail)
10162403	Quick-connect adapter for fill station
10158401	Retainer Kit for H-45 carbon (807570) 4500 psig (Type 4 - dovetail)
10158402	Retainer Kit for H-60 carbon (807588) 4500 psig (Type 5 - dovetail)
10164940	G1 Custom Tool Kit
10083875	RFID tag
10158407	RFID reader/writer
10186214	RFID read only (primary use with AIMS)
10175010-SP	G1 Control Module w/ Integrated TIC upgrade kit - 2216 psig
10175021-SP	G1 Control Module w/ Integrated TIC upgrade kit - 4500/5500 psig
10183992	Kit, Protective Cap & Boot for 30 min cylinder
10183993	Kit, Protective Cap & Boot for 45 min LP cylinder

MSA Rescue Belt II System for MSA G1 SCBA

MSA's innovative device for emergency egress, the Rescue Belt II System for the G1 SCBA, is an integrated personal escape system that allows firefighters to rappel to safety should they become trapped in a building's upper level. G1 Rescue Belt II System is NFPA 1983-certified for use as a personal escape system for emergency escape when installed on MSA-approved air masks. Device can also be used as a standalone product when not installed on an air mask. The Rescue Belt II System can be ordered as an MSA G1 SCBA option or as an individually-sold component for upgrade of your existing MSA G1 SCBA.

Ergonomically-contoured Ara-Shield rescue belt pouch stores:

- 50-ft. FireTech 32 rescue rope
- Auto-locking Sterling F4 Descender
- Choice of Crosby, Lightning, Lightning GT hook, or carabiner

Rope	Connectors			
 *50-ft. FireTech 32* *50-ft. MSA SafeTech*	Crosby hook	Carabiner	Lightning hook	Lightning GT hook
50-ft. FireTech 32	**10173088**	**10173089**	**10173090**	**10173101**
50-ft. MSA SafeTech	**10173102**	**10173103**	**10173104**	**10173105**

MSA Accountability System

A new way to monitor vital information

- Each MSA base station can monitor as many as 50 firefighters; multiple accountability system can be used on a single computer.
- MSA G1 SCBA or FireHawk M7XT/M7 Air Mask with telemetry transmits to incident command the firefighter's name, team assignment, cylinder pressure, service-time remaining, PASS alarms (motion or manual), thermal alarms, battery status, radio connectivity, and evacuation acknowledgement.

A fireground management system

- Personalized ID tags for each firefighter tell incident command exactly who is on scene.
- Integrated PAR (personnel accountability report) timer helps manage radio calls to each team.
- Incident command can manually add firefighters who are not wearing SCBA or mutual aid firefighters, so all personnel can be accounted for.

Intuitive and easy to use

- Assign firefighters to teams by clicking on firefighter's icon and dragging to appropriate team.
- Critical information is available at a screen glance due to large number of firefighters that can display, as well as pictorial information format.
- Receive both audible and visual indications of critical events such as PASS alarms or low-pressure alarms.

Two-way evacuation feature

- Individual firefighter, team of firefighters or all firefighters can be evacuated with click of a button.
- When incident command transmits alarm through MSA G1 SCBA or FireHawk M7XT/M7 Air Mask, they'll know that the firefighter received it, as unit automatically sends confirmation message to the base station.
- Firefighters hear evacuation alarm on their personal PASS devices. Visual HUD indications and control module icon alert firefighter that it is time to evacuate.
- By simply pressing control module, firefighters can send manual confirmation to acknowledge that they have received and understand critically important evacuation message.
- Although certain concrete and steel commercial structures can challenge any radio signal, MSA's Accountability System coverage with radio technology provides highly reliable performance for one-mile line-of-sight range.
- Due to spread-spectrum design, system does not interfere with other high-band radio frequency equipment.
- For additional safety, both accountibility system and firefighter modules have icon message to inform users if firefighter leaves radio signal range, so that alternate accountability measures, such as voice contact with teammates, can be taken.

Emergency Breathing Systems

Quick-Fill® System

Quick-Fill System lets MSA air mask users refill and transfill air cylinders while SCBA is worn, without removing air cylinder—even in IDLH atmospheres. Use this MSA option to:

- Fill SCBA cylinder from mobile compressor or cascade system in less than a minute.
- Transfill between two cylinders, providing emergency breathing system.
- Extend air supply over longer durations, using remote compressed-air source.

Air masks compliant to recent NFPA standards locate Quick-Fill URC fitting at Audi-Larm™ Audible Alarm. Quick-Fill System hose with quick-disconnect connects air source to adapter for air transfer. See Bulletin 0105-92-MC for Quick-Fill Systems Q&A.

QUICK-FILL SYSTEM REPLACEMENT PARTS *For MSA G1 SCBA*	10156467	Replacement Quick-Fill pouch **for MSA G1 SCBA**
	10156468	3-ft. Quick-Fill hose in pouch **for MSA G1 SCBA**
	10156465	Waist-mounted Quick-Fill **for MSA G1 SCBA**

Quick-Fill System Hoses

	FQD x FQD	FQD x CGA-347 outlet	FQD x CGA-347 CN	FQD x SAE-4	FQD x CGA-346 outlet	FQD x CGA-346 CN
25 FT.	485332	487907	487909	487906	487908	487910
12 FT.	802690	802677	802685	802704	802678	802686
10 FT.	802689	802675	802683	802703	802676	802684
8 FT.	802688	802673	802681	802702	802674	802682
6 FT.	802687	802671	802679	802701	802672	802680
3 FT.	485331	492796	487427	802705	492797	487428

25-ft. lengths are stocked; custom lengths are available on special material basis. All SAE fittings are for high-pressure service. Female quick-disconnect fittings have dust covers.

MSA G1 ExtendAire™ II System

MSA G1 ExtendAire II System is an Emergency Breathing Supply System (EBSS) accessory that uses intermediate-pressure air to provide firefighters with emergency breathing air by allowing firefighters to quickly and easily interconnect to fellow firefighter's air supply. System integrates into G1 SCBA, providing unrestricted mobility and easy access during emergency situations. Locking quick-connects with integrated check valve prevent contamination of breathing air pathway by ambient atmosphere. G1 ExtendAire II System features integrated rescue hose and manifold assembly that uses both male and female quick-connect fittings, and stows in low-profile pouch that mounts on carrier assembly. The 2018 Edition ExtendAire II System comes with the Universal Emergency Breathing Supply System (UEBSS) manifold and fittings.

G1 ExtendAire II System is NIOSH-approved and NFPA 1981-2018 edition-compliant.

EXTENDAIRE II SYSTEM	10205767	G1 ExtendAire II System Conversion Kit, UEBSS, 2018 Ed.
	10203820	Replacement pouch for G1 ExtendAire II System, UEBSS, 2018 Ed.
	10156464	G1 ExtendAire II System Conversion Kit, 2013 Ed.
	10156466-SP	Replacement pouch for G1 ExtendAire II System, 2013 Ed.

Airline Adapters

Part No.	Description
10188834	Airline Adapter, Snap-Tite Aluminum, ExtendAire II, UEBSS
10188835	Airline Adapter, Snap-Tite Stainless Steel, ExtendAire II, UEBSS
10188836	Airline Adapter, Snap-Tite Brass, ExtendAire II, UEBSS
10188837	Airline Adapter, Hansen Stainless Steel, ExtendAire II, UEBSS
10188838	Airline Adapter, Hansen Brass, ExtendAire II, UEBSS
10188840	Airline Adapter, Foster Steel, ExtendAire II, UEBSS
10188841	Airline Adapter, Foster Stainless Steel, ExtendAire II, UEBSS
10188842	Airline Adapter, Foster Brass, ExtendAire II, UEBSS
10188843	Airline Adapter, Steel, Locking, Aluminum, ExtendAire II, UEBSS
10188844	Airline Adapter, Steel, Locking, Stainless Steel, ExtendAire II, UEBSS
10188845	Airline Adapter, Steel, Locking, Brass, ExtendAire II, UEBSS
10188846	Airline Adapter, Foster, Locking, Stainless Steel, ExtendAire II, UEBSS

G1 RescueAire® II System

The MSA G1 RescueAire II System for Rapid Intervention Teams (RITs) provides firefighters with emergency breathing air, including air supply to trapped firefighters wearing SCBA with compatible system(s). Built for extreme fire service conditions, G1 RescueAire II System offers two operating pressures, 2216 and 4500 psi. Optional-use shoulder strap provides hands-free carrying.

System incorporates G1 Regulator; RIT teams can provide air to downed firefighter wearing G1 Facepiece. G1 Regulator connects directly to G1 Facepiece for maximum rescue capability, supported by flame and heat-resistant carrying harness of Nomex and Kevlar materials.

G1 RescueAire II System includes:

- SuperLite® Cylinder
- 36" Quick-Fill System EBS Connection
- ExtendAire System EBS Connection
- G1 PR-14 Pressure Reducer
- G1 Regulator
- Carrying harness with adjustable shoulder strap
- Audi-Larm™ Audible Alarm low pressure warning device

Part Numbers	Description
10161130	RescueAire II System, 4500, 60-Min Cylinder
10161142	RescueAire II System, 4500, Less Cylinder
10161141	RescueAire II System, 2216, 30-Min Cylinder
10161143	RescueAire II System, 2216, Less Cylinder

MSA G1 RIT Systems

The G1 RIT System has everything needed for RIT response. Internal pneumatics include G1 RIT System quick-connect pressure reducer that mounts directly onto user-supplied SCBA cylinder. Available in 2216, 4500, and 5500 psi operating pressures; cylinders are sold separately.

G1 RIT System includes:

- Six-foot high pressure supply line that terminates with female Quick-Fill System fitting.
- Six-foot intermediate pressure supply line that terminates with ExtendAire II System manifold assembly.
- Quick-connect second-stage G1 MMR.
- Remote external gauge for easy cylinder pressure readings.
- Medium size G1 Facepiece with four-point SpeeD-ON® Head Harness.
- URC fitting on G1 RIT System pressure reducer that allows for interconnection of G1 RIT Systems.

Part Numbers	Operating Pressure	Description
10206310	2216	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (UEBSS, 2018 ed.), remote gauge, URC, Quick-Connect
10169710	2216	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (2013 ed.), remote gauge, URC, Quick-Connect
10206311	4500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (UEBSS, 2018 ed.), remote gauge, URC, Thread Connect
10206313	4500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (UEBSS, 2018 ed.), remote gauge, URC, Quick-Connect
10169711	4500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (2013 ed.), remote gauge, URC, Quick-Connect
10192465	4500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (2013 ed.), remote gauge, URC, Thread Connect
10206312	5500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (UEBSS, 2018 ed.), remote gauge, URC, Quick- Connect
10197179	5500	G1 RIT System, FCPC, Regulator, 6-Ft Quick-Fill & ExtendAire II Systems (2013 ed.), remote gauge, URC, Quick-Connect

Note: This RIT system does NOT include cylinder. Please see cylinder ordering information.

Technical Rescue Cart

Cart Weight and Dimensions

Size: 35" H x 21"W x 15" D

Unit weight: 54.5 lbs. without cylinders

Technical Rescue Cart is of steel construction with color-designated control panel that allows one side of panel to be used for primary respirator breathing-air and one side for tool/secondary air requirements.

Two one-hour cylinders provide air for respirators. High-pressure cascade (fire truck) cylinder air is used to operate pneumatic tools.

Features

Breathing-air segment includes:

- Two-wheeled, poly-coated steel cart, two sets of double-cylinder straps, air-line hose rack, and adjustable pull handle
- Low-pressure cylinder bell alarm
- Four-outlet manifold—available with four outlet fitting options

Tooling-air segment includes:

- CGA-347 fitting to attach to auxiliary remote high-pressure air source
- Low-pressure pneumatic alarm whistle
- Four-outlet manifold with quick-disconnects

Technical Rescue Cart is sold without air cylinders. These MSA cylinders can be used with cart:

- 60-minute, H-60SL carbon-wrapped cylinder, PN 10127946-SP
- 45-minute, H-45SL carbon-wrapped cylinder, PN 10127945-SP
- 30-minute, H-30SL carbon-wrapped cylinder, PN 10127944-SP
- 45-minute, H-45S SL SuperLite Carbon Cylinder, short, PN 10149432-SP

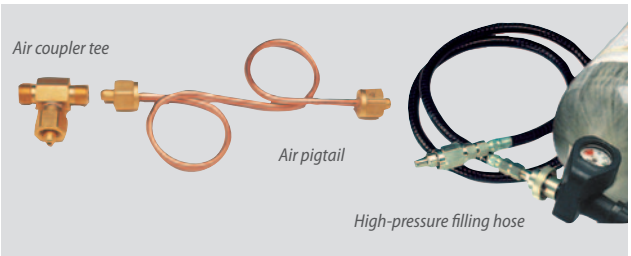
See p. 7 or p.14 for cylinder ordering information. 60-minute cylinders provides maximum air supply.

TECHNICAL RESCUE CART	10107535	Technical Rescue Cart equipped with **union** adapters
	10107818	Technical Rescue Cart equipped with **Snap-Tite aluminum** quick-disconnects
	10107820	Technical Rescue Cart equipped with **Foster steel** quick-disconnects
	10107819	Technical Rescue Cart equipped with **Hansen brass** quick-disconnects

Cleaning Accessories

CLEANING ACCESSORIES	10009971	MSA Confidence® Plus 2 Germicidal Cleaner, 32 oz. bottle
	697383	Box of 100 individually wrapped towelettes, 7-1/4" x 5"
	697382	Canister with 220 towelettes, 4-1/4" x 6"
	10022871	The Big Ones box of 50 individually wrapped towelettes, 8" x 11"

Other SCBA Accessories



ACCESSORIES FOR FILLING LOW-PRESSURE CYLINDERS	68846	Air outlet connection, complete w/ gauge
	68850	Air coupler tee
	68851	Air pigtail
	476156	Low-pressure air-filling hose, 5-ft.
HIGH-PRESSURE FILLING HOSE	476105	High-pressure filling hose assembly (provides convenient means to connect and charge high-pressure air into high-pressure 4500 psig cylinder)

M7XT Communications: Facepiece Assemblies for FireHawk M7XT Air Masks

Ultra Elite® XT Facepiece

- Super-soft facepiece texture for smooth and comfortable fit
- Resists chemical attack and temperature extremes
- Withstands rugged day-to-day use without tearing and ripping
- Secure, comfortable fit
- Facepiece's Tufflens is molded from specially blended plastic and withstands high thermal environments; special super hardcoating resists scratches

Firehawk® MMR

Attachment Option #1—Unique Slide-To-Connect (STC) System

- Allows firefighters to hang regulator on facepiece in "ready position," then simply push it into facepiece when SCBA air is needed
- Two large release buttons automatically turn off air flow as the regulator is doffed
- Dual-swivel feature on pressure hose provides maximum head movement
- Silicone hose material ensures hose flexibility even at very cold temperatures

Attachment Option #2—Push-To-Connect (PTC) System

- PTC's adapter self-centers Firehawk Regulator
- Loud dual sound of regulator engaging onto facepiece provides confidence that Firehawk PTC is securely attached; action takes just seconds

Ultra Elite XT Facepieces

	Small	Medium	Large	
FOR FIREHAWK STC MMR REGULATOR	10149305	10149283	10149327	External HUD receiver-ready
	10149307	10149285	10149329	External HUD and communication-ready
FOR FIREHAWK PTC MMR REGULATOR	10149306	10149284	10149328	External HUD receiver-ready
	10149309	10149286	10149330	External HUD and communication-ready

SCBA Key Components: Facepiece Assemblies for FireHawk M7XT Air Masks

MSA I-HUD Receiver for FireHawk M7XT Air Mask

- Wireless I-HUD Receiver contoured shape fits securely inside Ultra Elite XT Facepiece, eliminating snag points
- Nearly 40% lighter than external M7 HUD Receiver
- Unit automatically awakens and sleeps based upon pairing with SCBA
- Wireless magnetic radio transfers actual SCBA data via IEEE 802.11network
- Enhanced light pattern for safety and security differentiation
- Powered by single, disposable CR2 lithium battery
- IP67-rated to withstand extreme hot and cold environments

Note: I-HUD Receiver is not compatible for use with FireHawk M7 Less PASS SCBA.

I-Hud Receiver

I-HUD RECEIVER	10114190	For use with Ultra Elite XT Facepieces equipped w/Hycar rubber nosecups

I-Hud Receiver-Ready Ultra Elite XT Facepiece Assemblies

	Small	Medium	Large	
FOR FIREHAWK STC MMR REGULATOR	10149309	10149287	10149331	Standard I-HUD receiver-ready
	10149311	10149289	10149310	Communication system-ready
FOR FIREHAWK PTC MMR REGULATOR	10149310	10149288	10149332	Standard I-HUD receiver-ready
	10149312	10149290	10149334	Communication system-ready

SCBA Accessories

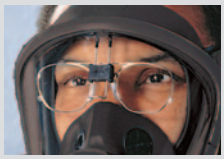
Ultra Elite APR Adapter

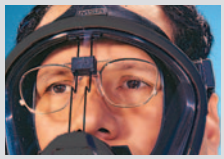
- Switch from positive-pressure facepiece to negative-pressure air-purifying respirator
- Uses MSA's comprehensive line of air-purifying cartridges to protect against many airborne contaminants
- For use in non-IDLH environments and is NIOSH-approved
- Contact MSA for more information

	Firehawk MMR STC Version	Firehawk MMR PTC Version	
APR ADAPTERS	10032511	10040052	APR Adapter
	10032927	10040055	APR Adapter Individual Kit
	10032925	10040054	APR Adapter Truck Kit

ACCESSORIES	10037809	Ultra Elite Facepiece, anti-fog applique (10/pkg)
	817590	CBA/RCA canisters (box of 6)
	809858	Replacement baffle
	813341	Replacement bayonet cover
FIT TEST ADAPTER KITS	10107229	APR Fit Test Adapter Kit, slide-to-connect
	10107256	APR Fit Test Adapter Kit, push-to-connect

Spectacle Kits





SPECTACLE KITS	804638	Ultra Elite Spectacle Kit (side wire support)
	493581	Ultra Elite Spectacle Kit (center support)

NOSECUPS *for Ultra Elite Facepieces*	495188	Nosecup, medium, silicone
	495189	Nosecup, large, silicone
	10126378	Nosecup, medium, Hycar
	10126379	Nosecup, large, Hycar

SCBA Key Components: Cylinders for FireHawk M7XT Air Masks

SuperLite Carbon Cylinders (4500 psig)

- As much as 12% lighter compared to traditional carbon cylinders, significantly decreasing SCBA weight burden
- Double-drawn, super lightweight cylinder liner combined with optimized carbon-based composite materials reduces cylinder weight while maintaining high strength-to-weight ratio

Carbon-Wrapped Cylinders (2216 / 3000 psig)

- Unique outer-wrap made of lightweight, high-performance carbon fibers
- Carbon fibers reduce cylinder weight by two to six pounds when compared to fiberglass-wrapped cylinders and by as much as 10 pounds when compared to aluminum cylinders

Part No.	Cylinder Type	NIOSH Service Life	Pressure
10127944-SP	H-30 SL, SuperLite Carbon	30-minute	4500 psig
10127945-SP	H-45 SL, SuperLite Carbon	45-minute	4500 psig
10149432-SP	H-45S SL, SuperLite Carbon, short	45-minute	4500 psig
10127946-SP	H-60 SL, SuperLite Carbon	60-minute	4500 psig
807586-SP	L-30* carbon-wrapped	30-minute	2216 psig
816115-SP	L-30+* carbon-wrapped	30-minute	3000 psig
809872-SP	Aluminum	30-minute	2216 psig

Aluminum Cylinders

- 30-minute low-pressure all-aluminum cylinder
- Cost less than carbon or hoop-wound cylinders
- Weigh approximately 18 pounds
- Well-suited to users who do not use SCBA frequently
- Offer indefinite service life

Custom-Logoed Cylinders

For easy-to-read cylinder identification, MSA can place your department logo under the clear coat of any carbon cylinder.

Custom cylinder ordering is easy and efficient at **www.msafire.com**.

Or, to place your order, simply contact your local MSA authorized fire service distributor, or contact MSA Fire Customer Service at 1-877-MSA-FIRE.

*These cylinders allow for custom options.

SCBA Key Components: Facepiece Communications for FireHawk M7XT Air Masks

MSA Ultra Elite XT Communication System for MSA Facepieces

- Internally-mounted microphone coupled with large diameter (50.8mm) amplified speaker produces optimal voice clarity and volume
- Patented circuit design delivers STI scores (Speech Transmission Index) that exceed minimums of NFPA 1981-2013 Edition Standard requirements
- Profile-mounted system does not block vision or impede facepiece's fully functional mechanical voice communications

ULTRA ELITE XT COMMUNICATIONS	10144673	Ultra Elite XT Amp w/ facepiece bracket and microphone
	10144676	Ultra Elite XT Amp / Radio Interface w/ facepiece bracket and microphone
	10144672	Ultra Elite XT Amp only
	10144675	Ultra Elite XT Amp / Radio Interface only
	10023055	Microphone Kit, with mounting bracket

ClearCommand® Communications System

MSA's ClearCommand Communications System features internally mounted microphone coupled with large-diameter (50mm) amplified speaker for optimal clarity and volume. Using proprietary circuit design, system delivers more than twice the volume of facepiece alone, and doesn't block vision or mechanical communication.

CLEARCOMMAND SYSTEM KITS	10024074	Amplifier Kit, complete with microphone
	10051290	Amplifier Radio Interface Kit, w/ microphone, less PTT
	10023055	Microphone Kit, with mounting bracket

Radio Interface Kits for XT Amp and ClearCommand Communications

Brand	Radio Model	LM	PTT
BENDIX-KING	DPH-5102X, EPH, EPI, EPU, EPV, GPH, LPH, LPI, LPU, LPX, MPH	10042938	10045707
E.F. JOHNSON	5850, 5855, 5860, 5861, 5862, FM-5852, LX-2442/2443, ZX-2452/2453	10042942	10045711
	5100 series (511x, 5133, 514x, 518x)	10091194	10055501
	VIKING CL-500/5870/5876/5877/8560/8561/8565/8566/8570/8571/8587/8591, CH-HM91	10042943	10045712
GE ERICSSON	Jaguar 700P/700PI, P700IP/7150/7170, HT-7150S/7170T, HA8VSX	10068237	10070362
	500P, KPC	10042933	10045702
	Monogram	10042934	10045703
	GF (PACUDX), MPA, MPD, MTL, PAPST5, TPX	10042932	10045701
ICOM	IC-F14	10093301	
	IC-2A/2AT/2AE, ICH-2/6/12/16, ICU-2/6/12/16, IC-F11/F11S/F21/F21BR/F21S/F3033S	10042944	10045713
	IC-F30/30LT/40/40LT	10042946	10045715
	IC-F30GS/F30GT/F40GS/40GT	10058090	10067523
	IC-F50/F60/F70, M88, 4161	10072223	10064623
	Side connector IC-F3GS/F3GT/F4G-2/F4GT/F12/F12S/F22/F22S		10045714
	Top load IC-F3S/F4S/F10/F20	10042945	10045714
KENWOOD	TK-190/280/290/290K/380/390/480/481/2140/2180/3140/3180/5210/5220, NX200/300/300K	10042941	10045710
	TK-208/220/240/248/250/260/270/270G/272/308/320/340/350/353/360/370/372/373G/ 430/2100-2/2160/ 2170/2200/2202/2302/2312/3101K/3160/3170/3173/3200/3202/3212/ 3360, TH-21/25A/41/45/75/ 91A/2102/ 3102, DEMITOSS 9 (JAPAN), FREETALK LINE	10042939	10045708
KYODOD	KG-209	10093729	10093730
MACOM/HARRIS	P5100/5130/7100/7150/7200	10068237	10070362
	P5300/5400/7300, XG-25/75	10126347	10128997
MAXON	PL-1145/2245/5161/5164		10061404
	SP-2000 Series, SP-2550/2850, SL-70W	10042947	10045716
	SP-5000 Series, CP-0500 Series	10042948	10045717
MIDLAND	70-145/148/154/245/254	10042951	10045720
	70-153	10042949	10045718
	70-165/166/265/266	10042950	10045719
	70-195/295	10042952	10045721

Continued on next page

Radio Interface Kits for XT Amp and Clear Command Communications

Continued from previous page

Brand	Radio Model	LM	PTT
MOTOROLA	GP-900, HT-1000, JEDI, JT-1000, MT-1500/2000, MTS-2000, MTX, MTX-838/839/2000/8000/ 9000 Transcrypt Stealth, PR1500, PTX-1200/3600, XTS-1500/2250/2500/3000/3500/5000/ 5000R	10042903	10045662
	APX-5000/6000/7000, DGP-6150+, XPR-6500/6550/6580/7350/7380/7550/7580	10092733	10108643
	270, 280, FR-50/60, 289/5100/5200/5300/5320/5400/5410/5420/5600/5620/ 5700/5720/5800/5820/6200/6210/6220/6250/6300/6310/6320/6400/7200, Talk About	10061629	10061630
	AXU-4100, CP-100, SP-10/21		10059441
	EX-500/560/600	10053716	10057505
	EXPO, HT-10, RADIUS P10/50	10042924	10045693
	GP-350	10042930	10045699
	GP-350 (QD)	10042931	10045700
	HT-50/90/440, RADIUS P100	10042925	10045694
	GP-328/329/338/339/340/360/680, HT-750/1250/1550/1550-XLS, MTX-850/ 850-LS/950/ 4550/8250/8250-LS/ 9250, PR-860, PRO 5150/7150/7350/7550/9150, PTX-700/760/780	10042922	10045691
	GP-328 (QD), HT-750 (QD)/1250 (QD), PRO 5150 (QD)	10042923	10045692
	MT-500	10042928	10045697
	MX-300/310/320/340/350/360	10042927	10045696
	AP-73, CLS Series, CP-150/200/300, CT-150/185/250/250LS/450/450LS, EP-450, GP-63/68/88/ 300/308/2000, GTX, GTX-8250, LTS-2000, MAG ONE A-8, MTX-638, P110/1225, MU-21CV/21CZ, PR-400, PRO 2150/3150, SP-10/ 21/50, SPIRIT-111, SPIRIT-Pro, SU-21C, XTN Series, XTV-2100, XU-2100, XV-1100, XZ-1100	10042905	10045664
	VISAR	10042926	10045695
RELM/SMARTCOM	Minicom 3200, MPS, MPU-08B/32, MPV-08/32, WHS150	10042953	10045722
RITRON/JOBCOM	JBX-151, JMX-100/400 Series, RTX-150/450, SST Series	10042954	10045723
STANDARD	HX-240U/V	10042935	10045704
	HX-320	10042936	10045705
	HX-381/482/580T/581T/582T/585T/587T	10042937	10045706
TEKK	T-20/40/50/60	10042955	10045724
UNIDEN	SPH Series, SPU Series	10042956	10045725
	SPS-310T/320TS	10042957	10045726
VERTEX	VX-2R/160/180/210/417/420/424/427/454	10058088	10073293
YAESU-VERTEX	FT-11R/41R/416/816, FTH-2005/2008/2009/7005/7008/7009	10042958	10045727
	FT-76	10042962	10045779
	FTH-2070	10042960	10045729
	F-10/40/50, FT-50R, VX-10/300, VX-400, VXF Series	10042959	10045728
	VX-500/510	10042961	10045730
	VX-600/600U/600UB/600V/600VB/800/900	10058089	10061244

ClearCommand Helmet Communication System

- Virtually eliminates high ambient noise levels via bone-conduction voice transmitter
- Maintains transmission quality through facepiece head harness, hood and liner
- Intrinsically safe for use in hazardous environments
- Easily snaps onto fire helmet ratchet
- Quickly transfers from one helmet to another without tools
- Configures for use over either ear
- Connects to MSA lapel microphone and PTT
- Includes flannel pad for cushioning

Helmet Microphone Assembly

HELMET MICROPHONE ASSEMBLY	10042902	Helmet Microphone Assembly (includes custom-fitted flannel headband liner)

See pp. 15–17 for lapel mics, PTTs and accessories.

Parts and Accessories for ClearCommand Communication Systems

PARTS AND ACCESSORIES	10046087	Dust cover
	10046123	Guard ring, tall
	10046122	Guard ring, short
	10046120	Belt clip assembly
	10046121	O-ring, single-pin connector
	10045778	Flannel headband liner

Field Maintenance and Repair

MSA offers a complete program for maintenance and repair of MSA air masks. The program is supported with personalized training tailored to customer needs and taught in the field by MSA-authorized personnel.

User maintenance covers procedures necessary to conduct general cleaning, inspection and limited maintenance in accordance with the Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA) and American National Standards Institute (ANSI) standards.

C.A.R.E. Certified Air Mask Repair Education covers all maintenance for both low- and high-pressure SCBA. Air mask inspection and maintenance can be performed by MSA or a factory-authorized service center. Individuals can also obtain training for C.A.R.E. certification from MSA. With a C.A.R.E-certified technician on staff, fire departments and other facilities with a large number of air masks can perform all inspection and maintenance in-house.

- All repairs and maintenance can be done in the field.
- A selection of overhaul kits, spare parts and tool kits is available.
- Users may conduct periodic performance testing using an authorized MSA regulator tester.

MSA G1 PremAire® Cadet Escape Respirator

This combination supplied-air respirator with escape cylinder is used for entry into or escape from hazardous, confined space or immediately dangerous to life or health atmospheres. Streamlined, lightweight design incorporates a technologically advanced, light, low profile, open-port facepiece that provides cross-contamination protection.

- One-piece cylinder valve and first-stage regulator incorporates downstream design to reduce moisture buildup and dual springs for maximum reliability.
- Low-profile escape cylinder is worn on either right or left hip for easier movement within tight spaces.
- Shoulder support strap incorporates hose keeper; regulator hose stays close to body to reduce snagging.
- Escape cylinders rated at 5-, 10- and 15-minutes.
- Pressure gauge recessed into valve housing protects gauge and reduces size and profile.
- Two harness materials: standard nylon for chemical resistance and Kevlar for high heat environments or those with spark potential.
- Regulator offers bypass and purge cover.
- NIOSH-approved as combination supplied-air respirator and self-contained breathing apparatus.

Assemble-To-Order System for **MSA G1 PremAire Cadet Escape Respirator**

A	B	C	D	E	F	G	H
Type	**Carrier & Harness Type**	**Pad Option**	**Escape Cylinder**	**MMR Regulator**	**G1 Facepiece**	**Quick-Disconnect**	**Case**
PCG PremAire Cadet Escape G1	**1** Nylon, strap carrier, standard **2** Kevlar, strap carrier, standard **3** Nylon, bag carrier, standard **4** Kevlar, bag carrier, standard *Aluminum escape cylinders are not compatible with bag carriers.*	**0** None **1** Shoulder	**A** 5-minute aluminum **B** 10-minute aluminum **C** 5-minute carbon **D** 10-minute carbon **E** 15-minute carbon **F** 5-minute aluminum, less air **G** 10-minute aluminum, less air **H** 5-minute carbon, less air **J** 10-minute carbon, less air **K** 15-minute carbon, less air	**A** G1 Regulator, purge cover	**1** None **2** G1 Facepiece with 4-pt. adjustable head harness, medium* **3** G1 Facepiece with 5-pt. adjustable head harness, medium* **4** G1 Facepiece with rubber head harness, medium* *If desired facepiece is not available here, choose **None** and select from the G1 Facepiece ATO.*	**0** None **A** Snap-Tite, aluminum **B** Snap-Tite, stainless steel **C** Snap-Tite, brass **D** Hansen, stainless steel **E** Hansen, brass **F** Foster, steel **G** Foster, stainless steel **H** Foster, brass **J** Snap-Tite, locking, aluminum **K** Snap-Tite, locking, stainless steel **M** Snap-Tite, locking, brass **N** Foster, locking, stainless steel **P** Cejn, locking	**0** None **1** Hard plastic case

** Facepiece includes nosecup, but does not include neckstrap.*

Column:	A	B	C	D	E	F	G	H		
A	PCG									
				PART NUMBER						QUANTITY

Riot Control and CBRN Gas Masks

- Provides respiratory protection against military warfare, civil unrest and CBRN threats
- High-performance, custom-fit comfort in a variety of military- and riot-style masks
- Attracts, regains and neutralizes contaminants
- Flexible lens with a wider field of view for superior visibility (Millennium® & Advantage® 1000 Facepieces)
- Permeation-resistant construction
- Built-in speaking diaphragm

Millennium Gas Mask (for use with CBRN or Riot Control canisters)

Advantage 1000 Riot Control Gas Mask

Ultra Elite CBRN Gas Mask

G1 CBRN APR

	Small	Medium	Large	
MILLENNIUM CBRN/ RIOT CONTROL GAS MASK	10051286	10051287	10051288	Millennium Gas Mask, with nosecup, drinking tube, and clear polycarbonate outsert *Order either Riot Control or CBRN canisters separately.*
ADVANTAGE 1000 RIOT CONTROL GAS MASK	813860	813859	813861	Advantage 1000 Riot Control Mask, complete with canister, nosecup, and identification tag (*NOTE: the Advantage 1000 Riot Control Mask is* **NOT** *CBRN approved and uses Riot Control canisters only.)*
ULTRA ELITE CBRN GAS MASK	10052776	10052781	10052778	Ultra Elite CBRN Gas Mask, with rubber head harness
	10052780	10052779	10052777	Ultra Elite CBRN Gas Mask, with SpeeD-ON Head Harness *Order CBRN canisters separately.*

RIOT CONTROL CANISTERS	818264	Millennium riot control canisters, box of 6
	817590	Advantage 1000 riot control canisters, box of 6
CBRN CANISTER	10046570	CBRN canister, for Millennium and Ultra Elite Facepieces
GME CANISTER	10160594	GME P100 canister
LENS OUTSERT *For Millennium Facepiece*	10008907	Polycarbonate lens outsert, **clear**, small
	10008906	Polycarbonate lens outsert, **clear**, medium/large
	10008909	Polycarbonate lens outsert, **tinted**, small
	10008908	Polycarbonate lens outsert, **tinted**, medium/large
LENS OUTSERT *For Advantage 1000 Facepiece*	806463	Polycarbonate lens outsert, **clear**, small
	806462	Polycarbonate lens outsert, **clear**, medium/large
	806465	Polycarbonate lens outsert, **tinted**, small
	806464	Polycarbonate lens outsert, **tinted**, medium/large
ESP® II COMMUNICATION SYSTEM *For Millennium and Advantage 1000 Facepieces*	10026265	1-piece, self-contained, electronic speech projection device less battery
OTHER ACCESSORIES *For Millennium and Advantage 1000 Facepieces*	10034184	Gas Mask Pouch, Military Style
	817040	Black Nylon Bag
	816137	Advantage 1000/Millennium Spectacle Kit

MSA G1 CBRN APR

MSA's innovative G1 Facepiece can be easily adapted into a compliant CBRN Air-Purifying Respirator with the installation of an APR Adapter, CBRN Canister, and CBRN Nosecup for use in atmospheres potentially contaminated with chemical, biological, radioactive and/or nuclear (CBRN) warfare.

Notes:

- *G1 APR Facepiece Assembly does not include the CBRN Canister or APR Adapter, must be ordered separately.*
- *The G1 CBRN APR is approved for the 4 point harness, 5 point harness, and rubber harness.*
- *The neckstrap is also approved in both cloth and rubber.*
- *The standard G1 facepiece nosecup is not approved for CBRN applications and the CBRN nosecup is not approved for use in a traditional firefighting situation.*
- *If using the standard G1 facepiece in a traditional firefighting situation and CBRN environment, use the CBRN nosecup for the Fit Test.*

FACEPIECE ASSEMBLIES	10194379	Facepiece Assembly, G1 APR, SMALL
	10194380	Facepiece Assembly, G1 APR, MEDIUM
	10194381	Facepiece Assembly, G1 APR, LARGE
NOSECUP KITS	10189322	KIT, REPL, CBRN Nosecup, G1 Facepiece, LG
	10189323	KIT, REPL, CBRN Nosecup, G1 Facepiece, MD/SM
AIRGUIDES	10191617	AIRGUIDE CBRN, G1 Facepiece, left
	10191618	AIRGUIDE CBRN, G1 Facepiece, right
MISCELLANEOUS	10194547	Cover, G1 Filter Adapter
	10194548	Washer, RD40, green
	10194549	Button, G1 Filter Adapter
	10046570	Canister, CBRN, PKG, Threaded
	10144231-SP	Kit, Filter Adapter Assy, G1 Facepiece

G1 Powered Air-Purifying Respirator (PAPR)

With its industry-leading motor-blower and constantly filtered air flow, belt-mounted G1 CBRN PAPR is ideal for first responders, military and special ops personnel who require non-IDLH respiratory protection for as many as eight hours. Unit offers three proprietary cartridges designed for CBRN, particulate and poisonous gases or vapors. Constant air flow helps users stay physically alert and focused, while also preventing fogging inside the facepiece. Batteries can be "hot-swapped," and blower's EMI shield ensures that there is no interference with radio communications.

- Respirator provides constant filtered air flow, reducing fatigue and preventing facepiece fogging
- Long-life unit provides non-IDLH respiratory protection for up to eight hours
- Compatible with existing fleet of PAPRs, just add a G1 facepiece, breathing tube, and adapter.

MSA G1 PAPR KITS	10204811	G1 PAPR Kit, 30-inch breathing tube, $LiSO_2$ battery, adapter
	10204812	G1 PAPR Kit, 36-inch breathing tube, $LiSO_2$ battery, adapter
	10204813	G1 PAPR Kit, 30-inch breathing tube, NiMH battery, adapter
	10204814	G1 PAPR Kit, 36-inch breathing tube, NiMH battery, adapter
	10204815	G1 PAPR Kit, 30-inch breathing tube, $LiSO_2$ battery
	10204816	G1 PAPR Kit, 36-inch breathing tube, $LiSO_2$ battery
	10204817	G1 PAPR Kit, 30-inch breathing tube, NiMH battery
	10204818	G1 PAPR Kit, 36-inch breathing tube, NiMH battery
	10193956	Breathing tube, 30-inch, G1 PAPR
	10193957	Breathing tube, 36-inch, G1 PAPR
	10144231-SP	G1 APR filter adapter assembly

G1 Facepiece part numbers on page 7.

Responder® PAPR

The Responder Powered Air-Purifying Respirator (PAPR) is compatible with MSA Millennium and Ultra Elite Facepieces. You must choose Responder PAPR Kit, facepiece and cartridge for complete system.

RESPONDER PAPR KITS *less facepiece and cartridge*	B-60141-030	Responder CBRN PAPR Kit with 30" Breathing Tube, $LiSO_2$ Battery
	B-60141-036	Responder CBRN PAPR Kit with 36" Breathing Tube, $LiSO_2$ Battery
	B-60170-030	Responder CBRN PAPR Kit with 30" Breathing Tube, NiMH Battery
	B-60170-036	Responder CBRN PAPR Kit with 36" Breathing Tube, NiMH Battery

Accessories/Cartridges for G1 and Responder PAPRs

ACCESSORIES FOR G1 AND RESPONDER PAPR	B-20040-001	NiMH Rechargeable Kit (2 NiMH Batteries, Charger & Cap)
	S-20036	NiMH Rechargeable Battery Pack
	B-20090-001	NiMH Rapid Battery Charger
	M-20020	$LiSO_2$ Mission Battery
	B-30060-001	NiMH Rechargeable Battery Cap Assembly
	S-30019	Web Belt Assembly
	B-10079-001	PAPR Carrying Case

CARTRIDGES	10046570	CBRN Canister, each
	496081	OptiFilter XL cartridge, 6 pack
	10072237	PAPR GME Multigas HE cartridge, each

MSA Respirator Fit Test Compliance

29 CFR Part 1910.134

Advantage 1000 Respirator/ Millennium Respirator

Ultra Elite Respirator

G1 Facepiece

MSA RESPIRATOR FIT TEST KITS	**697287**	Saccharin Qualitative Fit Test Kit
	697444	Bitrex Qualitative Fit Test Kit
	801628	Banana Oil Qualitative Fit Test Kit
	697285	Replacement (Saccharin) Sensitivity Test
	697445	Solution, 55 ml bottle (Bitrex)
	697286	Replacement Fit-Test (Saccharin) Solution, 55 ml bottle
	697446	Replacement Fit-Test (Bitrex) Solution, 55 ml bottle
	697447	#1 Sensitivity Nebulizer
	697459	#2 Fit-Test Nebulizer
	697448	Test Hood (Same for Both)
	697325	"Using the Qualitative (Saccharin) Fit Test Kit" DVD
	697449	"Using the Qualitative (Bitrex) Fit-Test Kit" DVD

Fit Test Compliance Reference Guide

Respirator Description	Class	APF	OSHA Acceptable Fit Test Methods	Required Fit Factor Quantitative	MSA Fit Test Adapter Required	Cartridge Type	Probed Facepiece P/N (if applicable)	Controlled Negative Pressure (OHD) Quan Fit Test Adapter
Ultra-Elite	Full-Face Negative Pressure	50	Qualitative or Quantitative*	500	Quik Chek III Adapter #**805078**	N/A	S (813211), M (813209), L (813213)	OHD P/N 9513-0210
G1 Pressure Demand	Full-Face Positive Pressure	10,000 SCBA 1000 Air-Line	Qualitative or Quantitative	500	Quik Chek III Adapter #**805078** Use with Single Port APR adapter #**10144231-SP**	N/A	N/A	OHD P/N 9513-0130
Millennium Facepiece	Full-Face Negative Pressure	50	Qualitative or Quantitative*	500 2000±	Quik Chek III Adapter #**805078**	Threaded	Probe Assembly (10006227)	OHD P/N 9513-0130
Ultra Elite Pressure-Demand	Full-Face Positive Pressure	10,000 SCBA 1000 Air-Line	Qualitative or Quantitative	500†	APR Fit Test Adapter Kit, #**10044576** APR Fit Test Adapter Kit, Slide Version #**10107229** (10032511 APR adapter only) APR Fit Test Adapter Kit, Push-to-Connect #**10107256** (10040052 APR adapter only) Quik Chek Adapter Kit, Firehawk #**10044576**‡	Bayonet	Negative Pressure S (813211), M (813209), L (813213)	OHD P/N 9513-0380
Ultra Elite Respirator	Full-Face Positive/ Negative Pressure	10,000 SCBA 50 APR	Qualitative or Quantitative	500† SCBA 2000± APR	Responder Fit Test Kit #**10082555**	Threaded	N/A	N/A

** If only qualitative fit test is performed on a full-face negative pressure respirator, then an APF of only 10 can be assigned. If a quantitative fit test is performed, the APF is 50.*
± MSA recommends a fit factor of 2000 if the application is a CBRN environment.
† For quantitative fit testing of pressure-demand facepiece, the facepiece must be tested in a negative pressure mode which requires a minimum fit factor of 500.
‡ The Quik-Chek Adapter allows quantitative fit tests to be performed on a pressure demand Ultra Elite Firehawk facepiece by only trained and qualified personnel. Special probed facepiece is not required.

Great Reasons to Choose MSA Cairns Fire & Rescue Helmets

We've proudly manufactured fire helmets since 1836. And to this day for head protection, more first responders trust MSA Cairns Fire Helmets than any other. Here are just a few reasons why:

1 Shell Release System (SRS)

The MSA Cairns Shell Release System (SRS), offered in our most popular fire helmets, protects from impact and heat—even when your helmet is dislodged from your head.

With the SRS, if your helmet falls off due to a fall through a floor or roof, the impact cap separates from the helmet shell, ***but remains on your head***, leaving your head better protected from additional impact, projectiles and heat. Without SRS, all you've got is a Nomex hood.

2 Retractable MSA Cairns Defender® Visor

North America's first (and still best) NFPA 1971 and ANSI/ISEA Z87.1 impact-rated, integral visor. The Defender Visor was designed with firefighters in mind. Entire visor stows when not in use, and can be deployed the instant it's needed—even with a gloved hand. Visor replacement does not require special tools or helmet disassembly. These benefits make the Defender Visor the best-selling firefighting eye protection on the market.

3 Best In Class

In a survey of firefighters across the nation[1], the majority listed MSA Cairns Helmets brand as *best in class*.[1] When you consider the combined effectiveness of our SRS, crumple-zone front holder, impact cap, and suspension—our fire helmets offer the most complete package available.

4 With MSA Cairns Helmets, You Get *More* than You Pay For: 10-Year Warranty

We know, as do firefighters, that MSA Cairns Helmets are the most durable offered. We back up that claim with a 10-year lifetime warranty that the product will be be free from defects in materials and/or faulty workmanship[2]. When you factor in quality, ease of maintenance and unique safety features found in **ONLY** MSA Cairns Helmets, it's easy to see why firefighters are loyal to the MSA Cairns Helmets brand.

5 Same Day Shipping on Our Most Popular Items

When you can't afford to wait another day, MSA offers our most popular Cairns Helmets products in our Stock-Order-Ship (SOS) program. For these products, if your order is entered by 2:30 PM (EST), the product ships the same day from our warehouse in Pittsburgh, PA. Look for the SOS symbol (SOS) beside products in the program. Remember, too, you can always order customized Cairns Fire Helmets through Assemble-to-Order (ATO). ATO forms are located on every fire helmet page on www.MSASafety.com

For complete information about Cairns Fire and Rescue Helmets, see Bulletin 3600-01-MC.

[1]*Fire helmet brand assessment study conducted by outside research firm for MSA.*
[2]*10-year warranty applies to MSA Cairns Helmets manufactured on or after January 1, 2015. For MSA Cairns Fire Helmet warranty details, please see www.MSAsafety.com.*

MSA Cairns XF1 Jet-Style Fire Helmet

For Structural Firefighting & USAR

- Available in matte or glossy finish
- Hat sizes: Medium (6½ to 7¾) and Large (7⅛ to 8⅛)
- Approvals:
  NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting (current edition) and NFPA 1951, Standard on Protective Ensembles for Technical Rescue Incidents (current edition)

MSA Cairns XF1 (shown with black matte finish)

MSA Cairns XF1 (shown with glossy yellow finish)

WEIGHT ***Medium*** ***Large***	Base helmet (with full face shield), compliant to NFPA-1971 and NFPA 1951 55-57 oz. (159 +/- 30 g) 60–62 oz. (170 +/- 30 g)
SHELL	High temperature thermoplastic (injection molded)
IMPACT LINER	Shock-absorbing polyurethane foam with aramide reinforcement
CHINSTRAP	Kevlar®/Nomex blend
SOFT GOODS & EAR COVERS	Nomex
FULL FACE SHIELD	High temperature thermoplastic with AF/AS coatings

MSA Cairns XF1 Helmets Ordering Information

MATERIAL NO.	SIZE		FINISH		COLOR				OCULAR VISOR
	MED	LARGE	MATTE	GLOSSY	BLACK	RED	WHITE	YELLOW	
GYM1018500000-NE16	■		■		■				
GYM1018500000-RD16	■		■			■			
GYM1018500000-BU16	■		■				■		
GYM1018500000-JC16	■		■					■	
GYL1018500000-NE16		■	■		■				
GYL1018500000-RD16		■	■			■			
GYL1018500000-BU16		■	■				■		
GYL1018500000-JC16		■	■					■	
GYM1018500000-NA16	■			■	■				
GYM1018500000-RE16	■			■		■			
GYM1018500000-BA16	■			■			■		
GYM1018500000-JD16	■			■				■	
GYL1018500000-NA16		■		■	■				
GYL1018500000-RE16		■		■		■			
GYL1018500000-BA16		■		■			■		
GYL1018500000-JD16		■		■				■	
GYM1118500000-NE16	■		■		■				■
GYM1118500000-RD16	■		■			■			■
GYM1118500000-JD16	■			■				■	■
GYL1118500000-NE16		■	■		■				■
GYL1118500000-RD16		■	■			■			■
GYL1118500000-JD16		■		■				■	■

MATERIAL NO.	DESCRIPTION
GA1484	XF1 Lighting module
GA1087C	XF1 Ocular visor assembly
GA010002H3	XF1 Boom microphone headset
GA010002H3A	XF1 Boom microphone headset (2 speakers)
10163388	PTT for APX6000/7000
10163389	PTT for XTS5000
GA1162	XF1 Headband liner & ratchet cover kit
GA1160	XF1 Chinstrap assembly
GA1153	XF1 Reflective trim kit, lime yellow
GA1159	XF1 Ear cover

GA1484

GA1087C

N5A New Yorker & N6A Houston

For Structural Firefighting

- The Original Handcrafted Leather Firefighting Helmets
- Hat sizes: Medium (6⅜ to 7½) and Large (7⅝ to 8⅜)

N5A New Yorker
• Meets US-OSHA 1910.156 • Brass "nameplates" where North, East, South and West ribs meet the brim • No Lexan dome
N6A Houston
• Meets NFPA 1971 (Current Edition) • No brass "nameplates" • Lexan dome for additional penetration protection

N5A New Yorker (shown with Traditional Bourkes & Goggles)

N6A Houston (shown with NFPA Bourkes and Boston Bend)

FEATURES	BENEFITS
Leather Shell	100% top-grain high-quality steer hide impregnated with a natural resin system
Crumple-zone Front Holder	Absorbs impact forces to help protect your head, neck and spine from injury
Impact Cap	Provides thermal and impact protection when you need it most
Comfort Pad Kit	Creates a customized fit unlike any other helmet
Aluminum-core Edge Trim	Helps the brim retain its shape
Brim Styles	Traditional or Bronx Bend with historical oak vine pattern
Soft Goods	Nomex (Black or Yellow) or PBI/Kevlar Earlap options; removable/washable
D-ring Helmet Hanger	Fits on large hooks and resists bending
Removable/Washable Nomex Chinstrap	Available in 2 pt. or 4 pt. options with quick-release buckles, postman's slide, and Velcro stowage system

Cairns Leather Helmets Ordering Selection Matrix

A	B	C	D	E	F	G	H	I
Model	**Color**	**Size**	**Eye/Face Protection**	**Removable/Washable Earlaps**	**Front Holder**	**Removable/Washable Nomex Chinstrap**	**Trim Type**	**Trim Color**
1 N6A Houston, Standard Bend	**1** Black	**1** Medium	**0** None *	**4** Liner Cushion (G5A, G64 only)	**1** 6" Carved Brass Eagle	**0** None (Presentation Helmets only)	**0** None *	**1** Lime/Yellow (standard)
3 N5A New Yorker, Standard Bend*	**2** Red	**2** Large	**1** 4" Tuffshield	**5** Sateen liner w/Jumbo Nomex Yellow earlap	**4** 6" Carved Brass Beaver	**2** 2-pt w/Quick Release & Postman's Slide	**2** Reflexite (Standard)	**2** White * (Reflexite Only)
5 G5A Presentation*	**3** Blue		**4** ESS Innerzone 3 Goggle System	**6** Sateen liner w/Jumbo PBI/Kevlar earlap	**5** 6" Carved Brass Dragon	**4** 4-pt w/Quick Release & Postman's Slide	**3** Scotchlite	**3** Red/Orange *
6 G64 Presentation*	**4** White		**5** ESS Innerzone 2 Goggle System with low-profile snap on/snap off hardware*	**7** Sateen liner w/Jumbo Nomex Black earlap	**7** 8" Bronze Carved High Eagle (G5A, G64 only)	**5** 2-pt w/Quick Release & Postman's Slide, 7.5" longer		**4** Red/Orange Triple Trim (Scotchlite Only)
7 N6A Houston, Bronx Bend	**5** Yellow		**9** ESS Innerzone 2 Goggle System with side-mounting snap on/ snap off hardware					**5** Lime/Yellow Triple Trim (Scotchlite Only)
8 N5A New Yorker, Bronx Bend*	**7** Natural *		**M** NFPA Compliant Bourkes					
			A NFPA Compliant Bourkes & Innerzone 3 Goggle					
			B NFPA Compliant Bourkes & Innerzone 2 with side-mounting hardware					
			C Traditional Bourkes*^					
			D Traditional Bourkes & Innerzone 3 Goggle*^					
			E Traditional Bourkes & Innerzone 2 with side-mounting hardware*^					

** Not NFPA 1971 compliant*
^ Traditional Bourkes are available for NSA New Yorker fire helmets ONLY.

Column: A B C D E F G H I

B-LTH- ☐☐☐☐☐☐☐☐☐ ☐

PART NUMBER QUANTITY

1010 & 1044 Helmets

For Structural & Proximity Firefighting

Most popular Cairns Helmet models:

- 1010: painted high-luster finish
- 1044: unpainted matte finish

Hat sizes: 6⅜ to 8¾

Certified to NFPA 1971

- Certified for proximity firefighting (with bonnet, shroud and gold-coated faceshield)

MSA Cairns 1010 (shown with NFPA-Compliant Bourkes Lenses)

MSA Cairns 1044 (shown with Defender Visor)

FEATURES	BENEFITS
New Impact/Thermal Cap	Provides superior thermal and impact protection through an impact-resistant polymer liner covered by a high-temperature, energy-absorbing urethane foam
Warranty	10 years[1]
Made in the U.S.A	Yes
Through-color Fiberglass Composite Shell[2] *(1044–unpainted/1010–painted)*	Maintains color even after taking a beating on the fireground
Available Colors	1044 – black, yellow, red, white, blue 1010 – black, yellow, red, white, orange, blue, pink, green
Retractable Defender Visor *(installed or enabled)*	Deploys easily when you need it, stores securely inside your helmet shell when you don't. Impact cap comes with upgrade hardware built right in!
Shell Release System (SRS)	Retain your impact cap, suspension system and earlaps if your helmet shell is torn away during a fall or structural collapse
Crumple-Zone Front Holder[3]	Absorbs impact forces to help protect your head, neck and spine from injury
Adjustable NAPE Height	Three ratchet height positions easily adjusted with the nape arm/speedy button mechanism
Adjustable Headband Height	Ensures a perfect fit between your helmet and SCBA mask
Head Size Accommodated	6⅜ to 8¾!
Embossed Helmet Brim	Oak vine pattern ties the helmet to 180+ years of MSA Cairns helmet design tradition
D-Ring Helmet Hanger	Fits on large hooks and resists bending
Removable/Washable Nomex Chinstrap Options	Enhances safety, performance and fit through hi-viz quick-release buckles, postman's slide, and hook and loop stowage system. Available in 2-point or 4-point configurations
ARFF Proximity System Available	Yes

[1]Helmets manufactured before January 1, 2015 have a limited five year warranty. For details on both warranty policies, please see www.MSAFire.com
[2] Through color is present on blue, red, white and yellow. All others are painted over a white shell.
[3]Crumple zone front holders are designed to absorb energy from an impact.

880 Tradition™ Helmets

For Structural Firefighting

- Lightest, lowest profile traditional helmet
- Fits smallest head sizes of any Cairns Helmet
- Certified to NFPA 1971 (Structural)
- Hat sizes: 5⅝ to 7⅞

MSA Cairns 880 with NFPA-Compliant Bourkes Eye Shield

FEATURES	BENEFITS
Through-color Thermoplastic Shell	Maintains its color even after taking a beating on the fireground
Impact Cap	Provides superior thermal and impact protection when you need it most
Tube Lock System	Helps protect you from injury by transmitting energy from the suspension to its support and the surrounding foam
Crumple-zone Front Holder	Absorbs impact forces to help protect your head, neck and spine from injury
Adjustable NAPE Height	Three ratchet height positions to maximize comfort
Adjustable Headband Height	Ensures a perfect fit between your helmet and SCBA mask
Embossed Helmet Brim	Oak vine pattern ties the helmet to over 180 years of MSA Cairns helmet design tradition
D-ring Helmet Hanger	Fits on large hooks and resists bending
Removable/Washable Nomex Chinstrap	Enhances safety, performance and fit thanks to quick release buckles, postman's slide, and Velcro stowage system

Cairns Traditional Helmets Ordering Selection Matrix

A	B	C	D	E	F	G	H	I	K	L
Model	**Color**	**Eye/Face Protection**	**Headband Liners**	**Earlaps**	**Front Holder**	**Removable/ Washable Nomex Chinstrap**	**Trim Type**	**Trim Color**	**Additional Eye/Face Protection**	**Accessory Type**
1 1010 **5** 880 Tradition **7** 1044	**1** Black **2** Red **3** Blue **4** White **5** Yellow **6** Orange ◆ **7** Green ◆ **8** Pink ◆	**1** 4" Tuffshield **2** Cairns 550 Goggles **4** ESS Innerzone 3 Goggles **5** ESS Innerzone 2 Goggles w/ low profile hardware **8** 6" Gold-Coated Faceshield **‡ **B** Defender Visor, Clear ‡ **C** Defender Visor, Amber Tuffshield ‡ **E** ESS Innerzone 2 w/side-mount hardware **M** NFPA compliant Bourkes	**1** Economy Flannel † **2** Standard Flannel **3** Deluxe Leather w/Crown Pad, 880 **4** Deluxe Leather, 1010/ 1044	**1** Yellow Nomex **2** Yellow Nomex w/Underchin Extension **3** PBI/Kevlar **9** CFR Aluminized Bonnet w/PBI/Kevlar Shroud & Nomex Earlap ‡§ **A** Black Nomex **B** Black Nomex w/Underchin Extension	**1** 6" Carved Brass Eagle **2** 6" Silk Screened Eagle **3** 6" Silk Screened Maltese Cross **6** 6" Carved Brass Beaver ‡ **7** 6" Carved Brass Dragon ‡	**2** 2-Pt w/Quick Release & Postman's Slide **4** 4-Pt w/Quick Release & Postman's Slide ‡ **5** 2-Pt w/Quick Release & Postman's Slide, 7.5" longer	**0** None * **2** Reflexite (standard) **3** Scotchlite	**1** Lime/Yellow (standard) **2** White * (Reflexite only) **3** Red/ Orange * **4** Blue * (Reflexite only) **5** Red/Orange Triple Trim * (Scotchlite only) **6** Lime/Yellow Triple Trim (Scotchlite only)	**0** None **1** 4" Tuffshield **2** Cairns 550 Goggles **4** ESS Innerzone 3 Goggles **5** ESS Innerzone 2 Goggles w/ low profile hardware **8** 6" Gold-Coated Faceshield ‡ **B** Defender Visor, Clear ‡ **C** Defender Visor, Amber Tuffshield ‡ **E** ESS Innerzone 2 w/side mount hardware **M** NFPA compliant Bourkes **N** Low-Profile Hardware Only	**0** None **A** LCP Crown Pad w/ standard liner(880) **B** LCP Crown Pad w/ economy liner(880) **D** Goggle Sleeve

◆ *Not available on 1044*
‡ *Not available with 880 Tradition*
† *Available with 880 Tradition only*
* *Not NFPA 1971 compliant*
** *Compliant to NFPA 1971 Proximity Firefighting ONLY.*
§ *Not NFPA-1971 compliant when used with a Front Holder*

Column:	A	B	C	D	E	F	G	H	I	J	K	L	
C-TRD-										A			
	PART NUMBER												QUANTITY

660C Metro™ & Invader 664™ Helmets

For Structural & Proximity Firefighting

- Most popular modern helmet models
- Sleek, low-profile design
- Only difference
  - 660C: painted high-luster finish
  - 664: unpainted matte finish
- Certified to NFPA 1971 (Structural and Proximity)
- Certified for proximity firefighting (with bonnet, shroud, and gold-coated face shield)
- Hat sizes: 6⅜ to 8⅜

MSA Cairns 660C Metro (shown with Tuffshield visor)

MSA Cairns Invader 664 (shown with Defender visor)

Commando HP3® Helmets

For Structural Firefighting & USAR

- Sleek, low profile design
- Same shell as 660C with back watershed trimmed off
- Lightest fiberglass helmet
- Painted high-luster finish
- Certified to NFPA 1971 & 1951
- Hat sizes: 6⅜ to 8⅜

MSA Cairns Commando HP3 (shown with Defender visor)

FEATURES	BENEFITS
Through-color Fiberglass Composite Shell	Maintains its color even after taking a beating on the fireground
Impact Cap	Provides superior thermal and impact protection when you need it most
Shell Release System *(660C Metro and Invader 664 Helmets only)*	Retain your impact cap and earlaps if your helmet shell is torn away during a fall or structural collapse
Defender Visor Retractable Eye Protection	Deploys easily when you need it, stores securely inside your helmet shell when you don't
Adjustable NAPE Height	Three ratchet height positions to maximize comfort
Adjustable Headband Height	Ensures a perfect fit between your helmet and SCBA mask
D-ring Helmet Hanger	Fits on large hooks and resists bending
Removable/Washable Nomex Chinstrap	Enhances safety, performance and fit thanks to quick-release buckles, postman's slide, and Velcro stowage system

Structural 360S, Rescue 360R, & Rescue 360R-13

For Structural Firefighting (Structural 360S and Rescue 360R) & USAR (Rescue 360R and Rescue 360R-13)

- Light-weight, low-profile design
- Rescue 360R and Rescue 360S feature same shell as 360S without the back watershed
- Structural 360S certified to NFPA 1971
- Rescue 360R certified to NFPA 1971 & 1951
- Rescue 360R-13 certified to NFPA 1951 for USAR
- Hat sizes: 6⅜ to 7¾

FEATURES	BENEFITS
Through-color Thermoplastic Shell	Maintains its color even after taking a beating on the fireground
Impact Cap	Provides superior thermal and impact protection when you need it most (not available on Rescue 360R-13)
Adjustable NAPE Height	Three ratchet height positions to maximize comfort
Adjustable Headband Height	Ensures a perfect fit between your helmet and SCBA mask
D-ring Helmet Hanger	Fits on large hooks and resists bending
Removable/Washable Nomex Chinstrap	Enhances safety, performance and fit thanks to quick-release buckles, postman's slide, and Velcro stowage system

Cairns Modern Helmets Ordering Selection Matrix

A	B	C	D	E	F	G	H	I	J
Model	**Color**	**Eye/Face Protection**	**Headband Liners**	**Earlap**	**Removable/Washable Nomex Chinstrap**	**Trim Type**	**Trim Color**	**Trim Shape**	**Accessory Bracket**
2 660C Metro	**1** Black	**0** None *	**1** Economy Flannel	**0** None *	**2** 2-pt w/Quick Release & Postman's Slide	**0** None *	**1** Lime/Yellow (standard)	**1** Tetrabar ✣	**0** None
6 Structural 360S	**2** Red	**1** 4" Tuffshield ▲	**2** Standard Flannel	**1** Yellow Nomex	**6** 2-pt w/Quick Release & Postman's Slide, 7.5" longer **	**2** Reflexite (Standard)	**2** Red/Orange ✱	**2** Bar ✚	**9** Frontpiece Bracket
A Invader 664	**3** Blue ‡	**2** Cairns 550 Goggles	**3** Deluxe Leather w/Crown Pad	**2** Yellow Nomex w/Underchin Extension	**7** 3-pt w/Quick Release & Postman's Slide, ◆	**3** Scotchlite	**3** Blue * (Reflexite only)	**4** Triple Trim (Scotchlite only)	**C** Frontpiece Bracket and Frontpiece Installed
B Rescue 360R ✪	**4** White	**4** ESS Innerzone 3 Goggles		**3** PBI/Kevlar			**4** White *		**D** Goggle Sleeve
C Rescue 360R-13 ★	**5** Yellow	**5** ESS Innerzone 2 Goggles w/side-mount hardware		**8** Black Nomex w/Underchin Extension **					
D 660C Metro Defender	**6** Orange ‡	**7** 4" Standard Faceshield ▲		**9** CFR Aluminized Bonnet w/PBI/Kevlar Shroud & Nomex Earlap ●					
E Invader 664 Defender	**7** Green † ‡	**A** 6" Gold-Coated Faceshield ●		**A** Black Nomex					
G Commando HP3 ■	**8** Pink † ‡	**C** Defender Visor, Clear							
		D Defender Visor, Amber Tuffshield							
		G ESS Innerzone 2 Goggle w/low profile clip							

✪ *Compliant to NFPA 1971 and 1951*
★ *NFPA 1951 compliant only*
■ *Available with eye protection options 4, C or D.*
‡ *Not available on Invader 664*
† *Not available on 360S/R/R-13*
* *Not NFPA 1971 compliant*
▲ *Not available on 360R/R-13*
● *Non-Defender 660C/664 only*
◆ *360R/R-13 and HP3 only*
** *Not available on 664/660C Non-Defender and HP3.*
✱ *NFPA compliant as Triple Trim only*
✣ *NFPA compliant in lime/yellow only on all modern helmets*
✚ *NFPA compliant in lime/yellow and on 660C/664 only*

Column: A B C D E F G H I J

C-MOD- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ — ☐

PART NUMBER — QUANTITY

Stocked Cairns Traditional and Modern Helmets Ordering Information

All of the items listed below are stocked on the SOS (SOS) program. You can also order customized Cairns Fire Helmets through Assemble-to-Order (ATO). ATO forms are on every fire helmet page on MSASafety.com.

Model	Part No.	Color	Features
CAIRNS 1010	1010FSB	Black	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	1010DSB	Black	With Clear Defender Visor, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
CAIRNS 1044	1044FSB	Black	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	1044DSR	Red	With Clear Defender Visor, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	1044DDB	Black	With Clear Defender Visor, PBI/Kevlar earlap, deluxe leather liner, carved brass eagle
	1044DSB	Black	With Clear Defender Visor, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	10205805	Black	With Clear Defender Visor, black earlap, deluxe leather liner, carved brass eagle
660C METRO	660DSR	Red	With clear Defender Visor, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	660CFSY	Yellow	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	660CFSB	Black	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
INVADER 664	664FSY	Yellow	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim
	664FSB	Black	With 4" Tuffshield, yellow Nomex earlap, chinstrap with Postman's Slide and lime/yellow Reflexite trim

Fire Helmet Fronts

Design your own MSA Cairns Fire Helmet Front at http://webapps.msanet.com/fronts, and call 1-877-MSA-FIRE to order! Or, use an order form: Bulletin ID 3600-85-MC, available at MSAFire.com. Give the completed form(s) to your sales representative or fax them to 800-967-0398.

- Reinforced with high-temperature, shrink-resistant backing
- Sewn with high-temperature, fire-retardant Nomex thread
- Configure your own front piece at http://webapps.msanet.com/fronts. Part of a tested/compliant configuration according to NFPA 1971.
- For MSA Cairns standard front or passport front order forms, see Bulletin ID 3600-85-MC available at MSAFire.com

Select Replacement Parts

Part No.	Description	Cairns 1010 & 1044 Helmets	660C Metro & Invader 664 Helmets	Commando HP3 Helmets
DEFENDER VISOR				
10077117	Clear lens w/hardware	■	■	■
10077118	Amber Tuffshield lens w/hardware	■	■	■
BOURKE'S LENSES				
10186311	NFPA-compliant Bourke's lens and hardware kit*	■		
10189241	Hole plug kit (10 helmets)**	■		
SOFT GOODS KITS				
10160548	**Soft Goods Kit:** Standard liner, yellow Nomex ear lap, Velcro tabs, mesh laundering bag	▲	■	■
10160549	**Soft Goods Kit:** Standard liner, black Nomex ear lap, Velcro tabs, mesh laundering bag	▲	■	■
10172739	**Soft Goods Kit:** Standard liner, yellow Nomex ear lap, Velcro tabs, mesh laundering bag	●		
10172740	**Soft Goods Kit:** Standard liner, black Nomex ear lap, Velcro tabs, mesh laundering bag	●		
EARLAPS				
L655XP	Yellow Nomex earlap	■	■	■
L655AP	Yellow Nomex earlap w/under-chin extension	■	■	■
L655GP	Black Nomex earlap	■	■	■
10124742	Black Nomex earlap w/under-chin extension	■	■	■
L955P	PBI/Kevlar earlap	■	■	■
L955AP	PBI/Kevlar earlap w/under-chin extension	■	■	■

▲ For MSA Cairns 1010/44 fire helmets manufactured before November 2015 ONLY.
● For MSA Cairns 1010/44 fire helmets manufactured on or after November 2015 ONLY.
** Addition of an NFPA-compliant Bourke's lens does not affect the compliance as indicated on the original fire helmet ensemble as shipped from MSA.*
*** To cover holes created by faceshield hardware when an MSA faceshield is replaced by an NFPA-compliant Bourke.*

PERFORMANCE AND PROTECTION IN PERFECT BALANCE.

Globe gear is designed to meet the new challenges you face every day to help keep you safe and healthy throughout your career and beyond.

ATHLETIX™

- New material technology enables all-new athletic design with unique stretch fabrics that allow closer, body-contoured fit to provide unprecedented range of motion with less bulk, more flexibility, and lighter weight.
- New PBI® STRETCH fabric with KEVLAR® allows less bulky fit with unprecedented range of motion and more flexibility, while providing premium thermal break open protection.
- New NOMEX® NANO thermal barrier material is thinner, lighter, more flexible, more breathable, and quicker drying.
- New 3M™ SCOTCHLITE™ COMFORT TRIM reflective material is segmented and heat sealed to be lighter, more flexible, and breathable without sacrificing visibility.
- GORE® CROSSTECH® BLACK moisture barrier provides the highest breathability in the widest range of environmental conditions, to reduce heat stress.

Get the full story on ATHLETIX™ and the full line of Globe turnout gear at MSAfire.com/Globe

MSA
The Safety Company

GLOBE®

MSA
The Safety Company

ATHLETIC FOOTWEAR FOR FIREFIGHTERS.

With a unique cushioned and contoured sole and athletic footwear construction, Globe boots are flexible like your feet, grip like no other, and feel broken in right out of the box.

SUPRAFLEX™

- Scientific studies have proven that lighter weight and more flexible footwear isn't just about comfort – it's about safety.
- Continuous segmented flex panels make these boots feel like your favorite pair of athletic shoes.
- Recessed pull-on handles are inset on the sides and hidden when not needed.
- Flexible NOMEX® webbing carry loops allow easy carrying when installed in turnout pants.
- Composite safety toe cap, puncture protection, and shank are lighter and far more flexible than steel and don't transmit heat or cold.

Get the full story on SUPRAFLEX ™ and the full line of Globe boots at MSAfire.com/Globe

MSA
The Safety Company

GLOBE®

Sightgard® Safety Glasses

Material: Polycarbonate
Rating: Impact (Z87+)
Standards: ANSI/ISEA Z87.1-2010
CSA Z94.3 (as noted)
NFPA-1500: 2013
Certification: Third-party by Intertek

SIGHTGARD SAFETY GLASSES		Model	Part No.	Product Specifics
		Arctic™ Eyewear TRY IT!	697514	• Frameless and lightweight • Among our most popular models! • Tuff Stuff™ Anti-scratch Coating • Full side coverage
		Arctic Eyewear TRY IT!	697515	• Popular, lightweight model • Full side coverage • Anti-scratch coating
		Arctic Elite Eyewear	10059671	• Indoor/outdoor mirror allows workers to go from bright to low light conditions • Rubber tipped temples and nosebridge for comfortable, yet secure fit • Anti-fog coating
		OvrG™ II Eyewear	10118475	• Clear lenses • For use over small-to-medium Rx glasses • Squared-off, stylish look • Maximum UV protection • 30% lighter weight than standard visitor specs

The "Try It" sample program offers some of the most popular MSA head, eye, face, and hearing protection products—including Sightgard Eyewear—completely FREE of charge! The TRY IT! tells you which products are in the program.

For more information on our complete line of eye protection, please visit MSAsafety.com.

Applications

Size Up

Ideal for locating the seat of any fire and for pinpointing and isolating hidden fires, as well as for location of heat accumulation areas and possible ventilation points.

Optional real time video broadcast directly from operations scene to incident command control assists firefighters in making strategic decisions and increasing fireground safety.

Search/Rescue

Search for victims and downed firefighters, locate missing/injured persons, search for suspects, or quickly scan areas for heat signatures using available six color palettes.

Operations

Monitor building conditions to help avoid collapse, aid in decision-making process of placing firefighters on scene to find fire extensions.

Overhaul

Search for remaining hot spots and areas of building instability. User-selectable color palettes support code inspections and maintenance.

Fire Extension Location

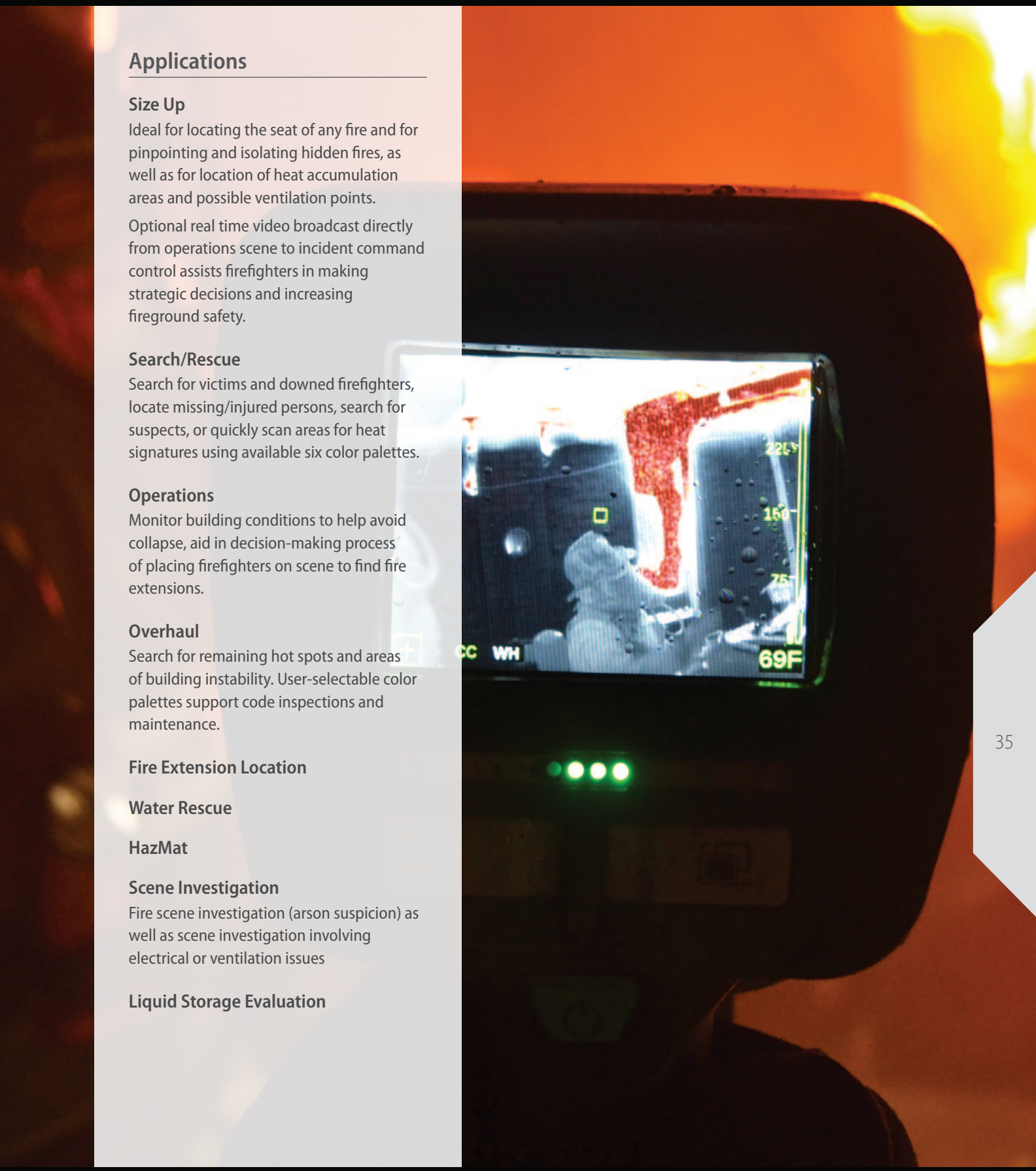
Water Rescue

HazMat

Scene Investigation

Fire scene investigation (arson suspicion) as well as scene investigation involving electrical or ventilation issues

Liquid Storage Evaluation



Evolution® 6000 Basic TIC

Provides easy to use TIC performance—a simplified fireground tool.

- Economical, durable value to fit your station's budget
- Save on repair costs with rugged, waterproof and shock-resistant product design
- 320X240 high definition image quality offers excellent resolution
- Standard flashlight provides extra visibility for firefighter proximity to enhance safety and situational awareness
- Laser pointer precisely indicates hot spots and other areas of interest to allow others to take fast, specific action
- Patented dual-handle design for easy handoff on the fireground
- Three carabiner attachment points offer flexibility in attaching camera to firefighter

Colorized basic image

Three carabiner attachment points

Patented dual-handle design

Field-replaceable germanium lens

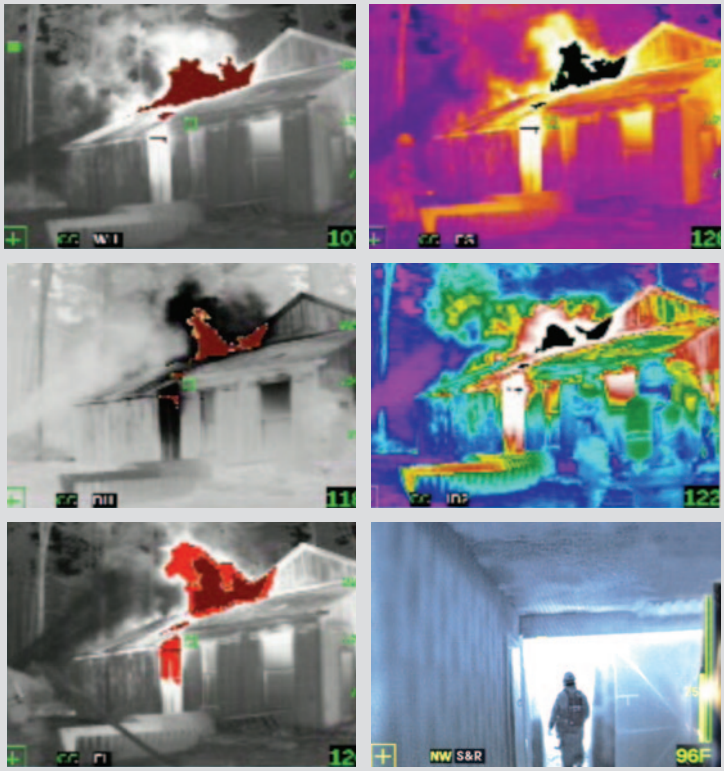
Flashlight

Laser pointer

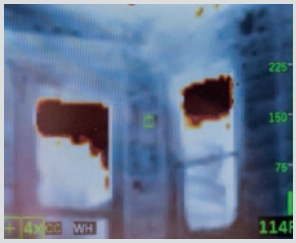
Evolution 6000 Plus TIC

Adds additional tools to aid and improve fireground safety and decision making.

- 2X/4X zoom provides a closer look at areas of interest
- Six user-selectable color palettes provide flexibility to view thermal images
- Compass allows for faster rescues and improved situational awareness by displaying letters or icon for directional information
- Optional integrated range finder offers more usable information to enable faster, more precise action from 16 to 210 feet away (replaces flashlight option)



Six color palettes



2X/4X zoom

Compass

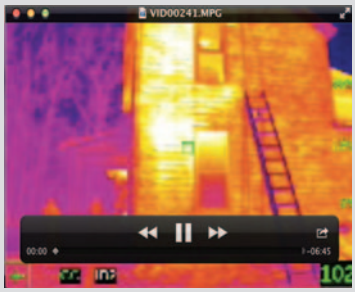
Laser range finder

Evolution 6000 Xtreme TIC

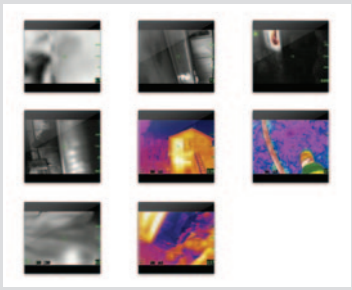
Provides same standard and optional features as EVOLUTION 6000 Plus TIC. Xtreme model adds:

- Integrated picture and video capture save action to camera's internal hard drive
- Capability to download pictures and video to your desktop
- Use of pictures and video for training, after-action review and documentation

Camera configuration application



Video capture



Picture capture

Evolution 6000 TIC Model Comparison

	EVOLUTION 6000 TIC	EVOLUTION 6000 Plus TIC	EVOLUTION 6000 Xtreme TIC
HIGH DEFINITION 320X240 THERMAL IMAGING CORE	•	•	•
LASER POINTER	•	•	•
LED FLASHLIGHT *	•	•	•
THREE CARABINER ATTACHMENT POINTS	•	•	•
FIELD-REPLACEABLE GERMANIUM LENS	•	•	•
PATENTED DUAL-HANDLE DESIGN	•	•	•
SIX COLOR PALETTES		•	•
2X/4X ZOOM		•	•
COMPASS		•	•
OPTIONAL RANGE FINDER		•	•
INTEGRATED PICTURE CAPTURE			•
INTEGRATED VIDEO CAPTURE			•

** Not available with range finder option*

Evolution 6000 TIC Technical Specifications

CONSTRUCTION	Flame-retardant (material passes NFPA direct flame exposure test) IP67 [withstands immersion to 3 ft. (1 meter)]
APPROXIMATE DIMENSIONS	7.3" x 4.8" x 11.6" (LxWxH) (185 mm x 122 mm x 295 mm)
SENSOR	Uncooled VOX microbolometer
ARRAY SIZE	320X240
WEIGHT	2.65 lbs (1.2 kg)
POWER SOURCE	Rechargeable lithium-ion battery
OPERATING TIME	3.5 hours at nominal 72°F (22°C)
FIELD OF VIEW	48° H; 37° V
RANGE FINDER	Maximum range 210 ft. (70 m)
INTRINSICALLY SAFE	Nonincendive equipment (UL Class 1, Div 2)

APPROVALS	NFPA 1801
NET EQUIVALENT TEMPERATURE DIFFERENCE	High sensitivity 40 mK (0.040°C) (typical), 78 mK (0.078°C) (max) Low sensitivity 234 mK (0.234°C)
TEMPERATURE MEASUREMENT	± 18 °F (10 °C) or ±10 %, whichever is greater
IMAGE STORAGE (6000X ONLY)	Number of images stored, 1000 minimum Format – JPG
VIDEO STORAGE (6000X ONLY)	Length – 4-hour minimum Format – MPEG 4
ENVIRONMENTAL AMBIENT TEMPERATURE AND OPERATING TIME	176° F (80°C) > 30 minutes 248° F (120°C) > 20 minutes 500° F (260°C) > 6 minutes -22° F (-30°C) > 40 minutes -40° F (-40°C) > 25 minutes

Ordering Information

Model	Temperature units	Part number	With range finder option
EVOLUTION 6000 Basic TIC	Fahrenheit	10145938	
	Celsius	10145939	
EVOLUTION 6000 Plus TIC	Fahrenheit	10145940	10145951
	Celsius	10145954	1014595
EVOLUTION 6000 Xtreme TIC	Fahrenheit	10145958	10145959
	Celsius	10145962	10145963

EVOLUTION 6000 CHARGING KITS	
10145750	EVOLUTION 6000 TIC Station Kit (includes carrying case, 2 rechargeable batteries, multi-use charger (North America), retractable lanyard, carabiner)
10145771	EVOLUTION 6000 TIC Vehicle Kit (includes 2 rechargeable batteries, vehicle charger, retractable lanyard, carabiner)

ACCESSORIES	
10145859	Multi-use charger (12V) kit
10148136	Vehicle-mounted charger system
10147390	Vehicle mounting bracket
10145749	Reflective label ID kit (includes 3 sets of reflective ID labels)
10120606-SP	Lithium-ion battery
10145748	Tripod adapter
10040005	Carabiner
10127441-SP	Plastic carrying case
10040226	Retractable lanyard
10039515	Shoulder strap
10039516	Wrist strap
10148391-SP	Protective display covers (3 per package)

MSA Gas Detectors for YOUR Fire Service Applications

Emergency response crews face two basic challenges when entering potentially hazardous environments:

- Is the air acceptable for normal, unprotected breathing?
- Is the air safe from potential explosions?

Portable gas detection equipment can help emergency response crews to meet these challenges. Gas detection needs are expanding. Increasingly, fire departments respond to situations where hazardous substances may be present and proper detection equipment is necessary. MSA provides equipment to meet almost any gas detection need.

Confined Space Entry
Emergency response teams may be called upon to perform services or rescues in confined spaces. While often industrial in nature, a confined space is typically defined as any enclosed area not meant for human habitation, such as sewers or storm drains. MSA's multigas detectors can help to ensure that confined space atmospheres are safe for worker entry.

Overhaul
During overhaul operations, you can never be certain of conditions within damaged structures. MSA Single-Gas and Multigas Detectors can indicate the need to use respiratory protection.

Hydrogen Cyanide (HCN) Risks
Hydrogen cyanide (HCN) detection has increasingly become a key part of firefighting respiratory programs and SOPs as awareness of HCN exposures increases. Materials such as insulation, furniture, carpets, appliances, and plastics can generate HCN when burned, as can many items made of natural materials.

In addition to smoke generated during active fires, continued presence of heat and smoldering materials during overhaul can generate potentially hazardous HCN levels, prompting many departments to adjust their respiratory SOPs to minimize firefighter HCN exposure. Use of HCN monitors during overhaul can provide critical information needed to support those decisions and further protect firefighters.

HCN is colorless gas with a bitter, almond-like odor. Per NIOSH, HCN reaches IDLH at 50 ppm, and can enter the body through absorption, inhalation and ingestion. HCN exposure symptoms can include nausea, dizziness, vomiting, and breathing difficulty, and can appear immediately. Long-term effects of repeated exposure continue to be studied. MSA ALTAIR® Pro and ALTAIR 5X Gas Detectors can help firefighters to detect potential HCN threats.

Carbon Monoxide (CO) Risks
CO is colorless, odorless gas that is toxic at 35 ppm, with NIOSH IDLH at 1200 ppm. Exposure symptoms can include headache, nausea, dizziness, confusion, and shortness of breath. As CO is often the by-product of incomplete combustion, it can be a threat during overhaul or residential calls.

Home Calls
Fire departments often respond to calls concerning CO home alarms. MSA ALTAIR 2X, ALTAIR 4XR and ALTAIR 5X Detectors can idenitfy the presence of CO upon arrival at call sites and determine if premises are safe for habitation. These units can even be used to locate the gas source (often garages or leaky furnace vents). Fire departments may also respond to natural gas leaks or suspicious odors and must be able to measure concentrations of several gases simultaneously.

HazMat
Fire departments and HazMat teams at times must detect and identify hazardous compounds and other VOCs at spills and other emergency situations. With the ability to detect hundreds of volatile organic compounds, the ALTAIR 5X Multigas Detector with PID is the ideal instrument for HazMat applications.

ALTAIR® 2X Gas Detector

ALTAIR 2X Gas Detectors incorporate XCell® Sensor Technology to deliver unparalleled performance while minimizing total cost of ownership, increasing durability and delivering enhanced worker safety, compliance and traceability. ALTAIR 2X Detectors use revolutionary XCell Pulse Technology for gas-less bump testing.

Built Tough

ALTAIR 2X Detectors are built for durability.

DETECTOR TYPE (LOW, HIGH ALARM IN PPM)	CHARCOAL	GLOW-IN-THE-DARK
ALTAIR 2X Single-Gas Detector		
CO (25, 100)	10153986	10154185
CO-H_2 (25, 100)	10154074	10154186
CO-HC (25, 100)	10154075	10154187
ALTAIR 2XT Two-Tox Gas Detector		
CO/H_2S (CO: 25, 100; H_2S: 10, 15)	10154040	10154181
CO-H_2/H_2S (CO: 25, 100; H_2S: 10, 15)	10154071	10154182
CO/H_2S-LC (CO: 25, 100; H_2S: 5, 10)	10154072	10154183
CO/NO_2 (CO: 25, 100; NO_2: 2.5, 5)	10154073	10154184
ALTAIR 2XP – with XCell Pulse Technology		
H_2S-Pulse (10, 15)	10153984	10154188

- Withstands extreme impact with rugged polycarbonate housing; passes 25-ft. drop test
- IP67-rated unit is both dust- and watertight
- Minimal RF interference
- Full three-year warranty supports entire instrument, including sensors

ALTAIR Pro HCN Single-Gas Detectors

Ease of Use

ALTAIR Pro HCN Gas Detectors combine flexibility and functional simplicity. Units use replaceable, commercially available battery and one-button operation.

Distinctive Alarm System

Triple alarm system's piercing audible alarm averages 95 dB @ 1 ft. and is unlikely to be confused with other sounds. Visual alarm features dual bright top LED to be seen from all angles. Internal vibrating alarm is standard.

ALTAIR PRO HCN SINGLE-GAS DETECTOR					
Instrument Type	**P/N**	**Low Alarm**	**High Alarm**	**STEL**	**TWA**
HYDROGEN CYANIDE (HCN)	10076729	4.7 PPM	10 PPM	10 PPM	4.7 PPM

ACCESSORIES	
	Description
711072	Calibration gas - 10 ppm HCN - 34 liter
655051	Replacement HCN sensor
467895	Flow control regulator
602294	Tubing
10150609	Calibration gas - 60 ppm CO - 116 liter

ALTAIR PRO HCN Fire Single-Gas Detector

Built-In IR Communication (Event and Data-Logging)

ALTAIR Pro HCN Gas Detectors provide standard data logging, automatically recording 50 latest events while simultaneously recording peak readings every three minutes.

Durability

Thick rubberized housing withstands accidental drops and other impacts. 10-ft. drop test and IP67-rated for water-and-dust resistance.

ALTAIR 5X Multigas Detector
ALTAIR 5X Detector with PID for Volatile Organic Compound (VOC) Detection

ALTAIR 5X Multigas Detector

ALTAIR 5X Multigas Detector with MSA XCell Sensors has typical life of more than double the industry average. MSA's proprietary Application-Specific Integrated Circuit (ASIC) design miniaturizes sensor controlling electronics, offering superior stability, accuracy and repeatability. Faster sensor response and span calibration times save on calibration gas and maintenance costs. ALTAIR 5X Multigas Detectors can also be equipped with MSA infrared (IR) sensors for many gases and ranges, including CO_2.

ALTAIR 5X Detector with PID for Volatile Organic Compound (VOC) Detection

VOC detection is critical for HazMat, arson investigations and fire service applications. Unmatched durability with advanced XCell Sensor technology combines with PID to provide a complete platform that seamlessly integrates into MSA's fleet management infrastructure.

ALTAIR 5X Detectors Features

- Built upon durability
- Powered by performance
- Flexibility & connectivity
- Industry-first man-down alarm
- Bluetooth wirelesss connectivity
- Altair Connect App available on Google Play
- Industry-leading warranty
- Online product simulation and training

Google Play

ALTAIR 5X PID Multigas Detector

ALTAIR 5X MULTIGAS DETECTOR KITS	UL P/N	CSA P/N
Instrument-only kits		
ALTAIR 5X DETECTOR MONO, (LEL, O_2, CO, H_2S)	10116924	10115118
ALTAIR 5X DETECTOR MONO, (LEL, O_2, CO, H_2S, SO_2)	10116925	10115119
ALTAIR 5X DETECTOR COLOR, (LEL, O_2, CO, H_2S, PID)	10165445	
Standard kits—monochrome display, 10-ft. sampling line, 1-ft. probe		
ALTAIR 5X DETECTOR MONO, (LEL, O_2, CO, H_2S)	10116926	10115120
ALTAIR 5X DETECTOR MONO, (LEL, O_2, CO, H_2S, SO_2)	10116927	10115141
Deluxe kits—color display, 10-ft. sampling line, 1-ft. probe		
ALTAIR 5X DETECTOR COLOR, (LEL, O_2, CO, H_2S)	10116928	10115142
ALTAIR 5X DETECTOR COLOR, (LEL, O_2, CO, H_2S, SO_2)	10116929	10115143
ALTAIR 5X DETECTOR COLOR, (LEL, O_2, CO, H_2S, PID)	10165446	

ACCESSORIES	
USB IR RECEIVER	10082834
BATTERY PACK, ALKALINE	10114837

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_4H_{10}	0-25%Vol	0.1%Vol
METHANE, CH_4	0-100%Vol	1%Vol
PROPANE, C_3H_8	0-100%Vol	1%Vol
PROPANE, C_3H_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 4XR Multigas Detectors

ALTAIR 4XR Gas Detectors are tough, reliable four-gas monitors. Proven MSA XCell Sensors are among the fastest in the world, and when paired with MSA ALTAIR Connect app, detector can text alarm notifications to supervisors and team members.

- ***Reliable:*** <15-second sensor response time, four-year warranty, five-year expected life, 24-hour run-time
- ***Rugged:*** IP68 rating, survives incidental 25-ft. drops, exceeds MIL-STD-810 drop test requirements
- ***Real-time monitoring:*** Bluetooth connectivity and event notification, instrument compliance

Google Play

ALTAIR 4XR Multigas Detector

ALTAIR 4XR MULTIGAS DETECTOR		
USA/CAN	ATEX	Description
10178557	10178573	ALTAIR 4XR Multigas Detector (LEL, O_2, CO, H_2S), charcoal
10178558	10178569	ALTAIR 4XR Multigas Detector (LEL, O_2, CO, H_2S), phosphorescent
ALTAIR 4XR MULTIGAS DETECTOR KITS		
USA/CAN		Description
101788356		ALTAIR 4XR Multigas Detector (LEL, O_2, CO, H_2S), charcoal, with 34-liter gas cylinder (1.45% CH_4, 15% O_2, 60 ppm CO, 20 ppm H_2S) regulator (0.25 l/min)
10178357		ALTAIR 4XR Multigas Detector (LEL, O_2, CO, H_2S), charcoal, with 34-liter gas cylinder (1.45% CH_4, 15% O_2, 60 ppm CO, 20 ppm H_2S) regulator (0.25 l/min), and ALTAIR Pump Probe

ACCESSORIES	
	Description
10152669	ALTAIR Pump Probe with charger (USA/Canada)
10052668	ALTAIR Pump Probe with charger (ATEX/IEC)
10048280	34 liter quad gas - LEL-O_2-CO-H_2S
10045035	58 liter quad gas - LEL-O_2-CO-H_2S

SENSOR SPECIFICATIONS		
Gas Type	Range	Resolution
LEL	0-100%	1%
O_2	0-30% VOL	0.1% VOL
CO	0-1999 PPM	1 PPM
H_2S	0-200 PPM	1 PPM

MSA XCell Technology

MSA sensor technology provides design breakthroughs for superior performance that saves you money.

- Sensor response and clear times in fewer than 15 seconds
- Bump test in fewer than 15 seconds
- Span calibration time of 60 seconds
- Greater signal stability and repeatability within changing or extreme environmental conditions
- Two-tox CO/H_2S sensor with virtually no cross-channel interference
- Sensor digital output reduces susceptibility to RF interference
- Reliable, extended-life XCell Sensors offer typical life greater than four years
- Laser-welded sensor housings eliminate opportunities for leaks
- Combustible sensor proprietary operating mode improves poison resistance
- End-of-sensor-life warning gives advanced notice to user, reducing service outages

XCell® SENSORS

The Importance of Calibration and Bump Testing

It is vital to firefighter safety that portable gas detectors are maintained and calibrated properly. All sensors can eventually expire due to loss of sensitivity, slowed response time or both. Because of this, performance of a daily bump test is best practice because it is the only method by which the entire system: instrument, sensors, flow path, power source, alarms, and all electronics can be checked to ensure that it is functioning properly. That's why most manufacturer instructions recommend a daily bump test each day, prior to operation of gas detectors.

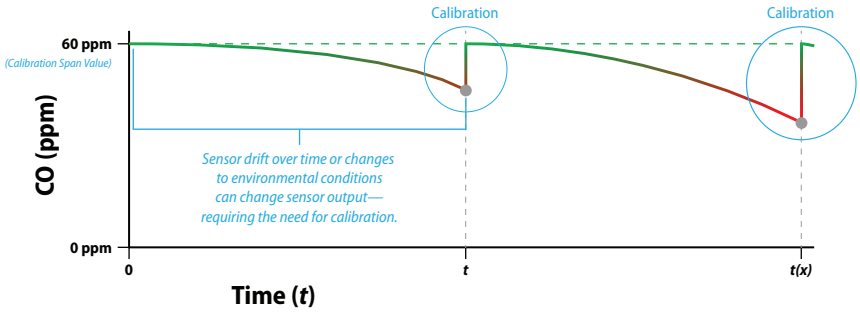
Sensor drift

All electrochemical sensors will eventually lose sensitivity over time with exposure to work conditions. Calibration is used to compensate for the loss of sensitivity and adjust the readings to the new sensitivity output level.

Drift is the amount that sensor output changes over time. All sensors experience drift. Once the sensitivity becomes too low, it becomes more difficult to assess exact differences in gas concentrations. Sensors typically have a fixed sensitivity limit assigned by the detector; once that limit is reached, they will not pass calibration.

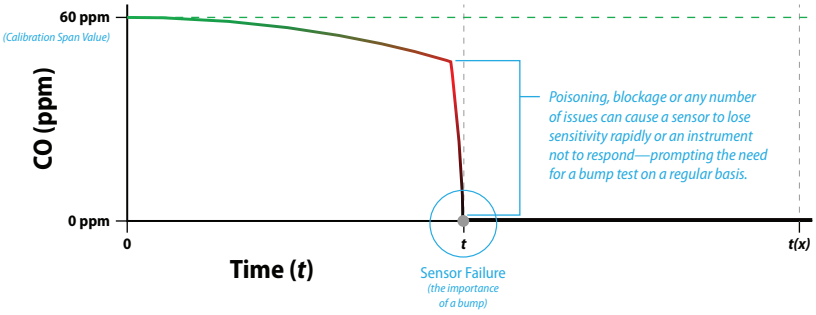
What is a Calibration?

Calibration is an adjustment of the sensor(s) output to match the known traceable calibration gas concentration. Full calibration ensures maximum accuracy of the instrument. Environmental conditions such as over-exposures, introduction of poisons, heavy impacts, or other extreme environmental changes can cause sensors to become less accurate. Calibration allows the instrument to manage these changes in sensitivity.



What is a Bump Test?

Bump tests are meant to verify that the sensors and the alarms function properly and that the sensors respond within acceptable margins. Gases or vapors must be able to reach the sensor. Bump tests confirm that gas flow paths to the sensor on the detector are clear and the sensor(s) are functioning from a qualitative standpoint. Bump testing will alert users if a gas inlet has become blocked, even if the blockage is not visible. The bump test, however, is not meant to adjust the device's accuracy.



GALAXY® GX2 Automated Test System

Simplicity counts with the MSA GALAXY GX2 Automated Test System for advanced safety management and effortless operation, by providing simple, intelligent testing and calibration of MSA ALTAIR, ALTAIR PRO, and ALTAIR 2X Single-Gas Detectors and ALTAIR 4XR and ALTAIR 5X/5X PID Multigas Detectors. 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. New Safety io Grid Fleet Manager for proactive safety management; gas exposure email alerts, direct data input, live filtering, test and exposure queries, collecting and printing reports.

- Color 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
- GALAXY GX2 System is optimized for use with MSA's XCell Sensors; provides up to 50% cost of ownership reduction
- At-a-glance indicators include low calibration gas volume, expiration warnings and test stand status

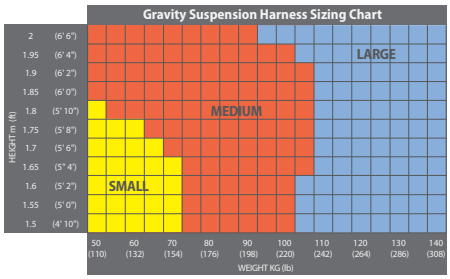
GALAXY GX2 SYSTEM TEST STAND				
	1 valve (for use with 1 calibration gas cylinder)		4 valve (for use with 1-4 calibration gas cylinders)	
	*Charging**	*No-charging*	*Charging**	*No-charging*
ALTAIR / ALTAIR PRO SINGLE-GAS DETECTOR	—	10128644	—	10128643
ALTAIR 4/4X MULTIGAS DETECTOR	10128630	10128642	10128629	10128641
ALTAIR 5/5X MULTIGAS DETECTOR	10128626	10128628	10128625	10128627

CALIBRATION CYLINDERS AND ACCESSORIES	
10034391	Demand Flow Regulator (universal)
10050985	Kit, case with Gas Miser® Regulator, demand flow RP (includes tubing and fitting, less gas)
10041225	Calibration tubing with quick-disconnect fitting
10045035	58L Quad Gas Cylinder, 60 ppm C0, 20 ppm H_2S, 15% O_2, 1.45% CH_4
10048280	34l Quad Gas Cylinder, 60 ppm C0, 20 ppm H_2S, 15% O_2, 1.45% CH_4
10048789	34l Cylinder, 60 ppm CO,15% O_2, 1.45% CH_4
711068	34l Econo-Cal® Cylinder, 10 ppm NO_2,air balance

ACCESSORIES	
10127422	ALTAIR 4/4X Detector Multi-unit Charger
10127427	ALTAIR 5/5X Detector Multi-unit Charger
10161803	ALTAIR 4/4XR & 5X (2:2) Multi-unit Charger
10105756	Electronic Cylinder Holder
10125135	Standard Cylinder Holder
10034391	Demand Flow Regulator (universal)
10127111	Memory Card

Gravity® Suspension Harness

- Unparalleled comfort for all applications that require wearing a fall protection harness for extended periods of time
- Easy donning
- Eight adjustment points for perfect sizing and fit
- Quick-adjusting buckles allow one-hand tightening/loosening
- Aluminum D-ring hardware
- Tool loops with internal rigid supports allow for easier tool connection
- Tool loops on leg straps provide more tool-holding options, and may be cut off if not needed
- Modern styling
- Standards: ANSI Z359.11 and CSA Z259.10



PART NO.	D-Ring Configuration	Size		Leg Buckle Type	Padding	Web Color	
	Back, Hips, Sternal & Ventral	M	L	Quick-Connect	Shoulder, Leg & Lumbar	Green	Black
10150454	■	■		■	■	■	
10150455	■		■	■	■	■	
10150457	■	■		■	■		■
10150458	■		■	■	■		■

Rescue Equipment

Confined Space Entry Kit
with Workman Rescuer and Winch
(Part No. 10163033)

Workman® Tripod

- No tools needed to set up and dismantle
- Automatic hinge lock legs with incremental adjustment
- Skid-resistant feet

Workman Confined Space Entry Kits

- Allow for non-entry rescue of confined space entrant
- Great portability of entire tripod kit
- Lift and lower materials and personnel via hoist while retaining ability to use SRL

PART NO.	Stainless Steel Kit Components					Standards	
	8' Tripod	50' Workman Rescuer	65' Workman Winch	Pulleys	Carabiners	ANSI Z359.14	OSHA
10163033	■	■	■	2	2	■	■
10163034	■	■		1	1	■	■

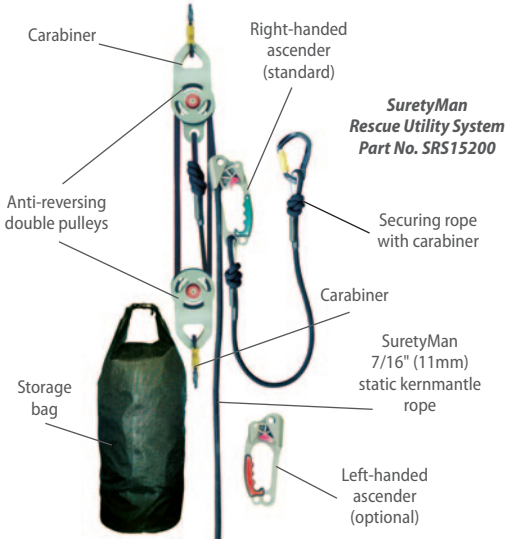
Replacement Parts and Accessories

10105612	Leg base support strap
10089207	Carabiner
506222	Pulley
10105656	Tripod duffel bag

Includes carry bags for tripod, Workman Winch and Workman Rescuer

Rescue Equipment

SuretyMan™ Rescue Utility System



The SuretyMan Rescue Utility System is primarily used for raising and lowering people or equipment in rescue and confined space applications. Pulleys are equipped with built-in anti-reversing lock. Offers rapid deployment, is virtually maintenance free and is rated for two-person load.

- Compact and lightweight with standard system weight of 17 lbs. (7.7 kg)
- Rated capacity of 600 lbs. (272 kg) for personnel and materials

NOTE: Due to 4:1 mechanical advantage, user should order system with 4X rope necessary for application. For example, 50 ft. application requires 200 ft. of rope.

SURETYMAN RESCUE UTILITY SYSTEM	SRS15200	SuretyMan Rescue Utility System, 200 ft. (61m) length
	SRS15300	SuretyMan Rescue Utility System, 300 ft. (91.4m) length
	SRS15400	SuretyMan Rescue Utility System, 400 ft. (122m) length
	10093608	SuretyMan Rescue Utility System, 500 ft. (152.4m) length
	10033360	SuretyMan Rescue Utility System, 600 ft. (182.9m) length
	10101135	SuretyMan Rescue Utility System, 800 ft. (272m) length
	10037101	Left-hand ascender with securing rope
	10035698	Right-hand ascender with securing rope

Confined Space/Head First Extraction System

Strength: 5,000 lbs. (22 kN) Weight approx: 2 lbs. (0.9 kg)

Specialized rescue product allows rescuer to be lowered comfortably into confined space head first, harness victim, and raise both victim and rescuer out of confined space. Consists of adjustable lifting strap (A), adjustable victim strap (B), one pair of ankle harnesses (C), two carabiners (D), and storage bag (E). This compact system can be used with any confined space retrieval equipment such as tripods and davits.

- Leaves both hands free for rescuer to assist in retrieval of another person
- Small, lightweight system

Pair of rescue wristlets Part No. 507002

CONFINED SPACE/HEAD FIRST EXTRACTION SYSTEM	SRS3100	Confined Space/ Head First Extraction System
ACCESSORIES	SRS3103	Rescue anklets
	507002	Rescue wristlets

Components

SuretyMan Rescue Eight Part No. SRF5077

Stealth Rigging Plate Part No. SRSPR5990

Stretcher Rigging Plate Part No. SRSPR5980

Carabiner Part No. SRCC641

RESCUE COMPONENTS	SRSF5077	SuretyMan Rescue Eight, aluminum, weight: 1.5 lbs. (675 g), strength: 6,720 lbs. (30 kN)
	SRSPR5990	SuretyMan Stealth Rigging Plate, aluminum, teal, weight: .46 lbs. (250g), strength: 11,000 lbs. (48 kN)
	SRSPR5980	SuretyMan Stretcher Rigging Plate, aluminum, teal, weight: .74 lbs. (330g), strength: 12,200 lbs. (54 kN)
	SRCC641	Carabiner, 1.2" (32mm) gate, steel, NFPA, weight: 11 oz. (311 g), strength: 12,364 lbs. (55 kN)

MSA
The Safety Company

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. Our product focus emphasizes Self-Contained Breathing Apparatus (SCBA), including the revolutionary MSA G1 SCBA and respiratory protective equipment; MSA Cairns® head, eye, face, hearing and communications protection; Globe® turnout gear and boots; fall protection and rescue products; ALTAIR® Portable Gas Detection instruments and GALAXY® Test Systems; and Evolution® Thermal Imaging Cameras (TIC). When You Go In, We Go In With You. For more information, visit ***www.MSAfire.com*** *or call* ***1-877-MSA-FIRE****.*

Our Mission

MSA's mission is to see to it that men and women may work in safety and that they, their families and their communities may live in health throughout the world.

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.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit ***MSAsafety.com/offices***.

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