

# 2007–2008 FIRE SERVICE CATALOG

Protection and Tools for the Firefighter



**MSA**  
The Safety Company

# FIRE SERVICE PRODUCTS

## Our mission is YOUR safety!

### From us to you: better products & services

As your emergency responder duties expand, and you are exposed to more dangers, MSA continues to provide more emergency response products that exceed your expectations and standard requirements.

MSA supports firefighters in countless ways, and recognizes your role as the front line of homeland security.

We know these standards define what you want in compliant new equipment and upgrades. Over the past few years, both government grants and private funding have increased to make purchasing this much-needed firefighting equipment a reality for thousands of departments of all sizes.

MSA products make your job safer and easier to accomplish. Count on MSA for the most technologically advanced products as well as support and training assistance.

### We are committed to you

After 92 years of serving firefighters and rescue teams, MSA makes the Fire Service our premier focus for product innovations, improvements, and service.

From our Cairns® Fire Helmets, Evolution® Series Thermal Imaging Cameras, and ICM® Tx PASS devices to our FireHawk Air Mask SCBA, we 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. We are prepared to equip firefighters at any level of protection.



### Our people set us apart from the competition

Your MSA SCBA are manufactured inside MSA's Murrysville manufacturing facility, which Industry Week magazine named one of the best manufacturing plants in North America and Europe in 2000. This award is based on performance metrics and practices in categories such as benchmarking, customer and supplier relations, employee involvement, manufacturing operations, and use of technology.

### Assistance is everywhere

Your personalized service starts locally with your trained MSA-authorized distributor and MSA's field service representatives. If you need to locate your nearest MSA Fire Service Distributor, or have an urgent technical question, our award-winning, dedicated team of customer service professionals is ready to help, as they understand the your hazards as well as regulation compliance. Contact them at 1-877-MSA-FIRE





# FireHawk M7 Air Mask



**New!**

MSA's new **FireHawk M7 Air Mask** represents a true technological achievement in critical personal protection. As firefighters determined the safety requirements that would be needed to meet the new NFPA 1981 and 1982–2007-edition standards, MSA's engineering teams began designing the solutions.

The new FireHawk M7 Air Mask emerged with seven **life-safety** design components built on a **modular** Air Mask platform, developed to **exceed the new NFPA 2007** requirements and provide firefighters with the highest-quality SCBA currently available.

*Through the NFPA, firefighters have strived to improve the durability and performance of SCBA and PASS devices.*

*To this end, the new NFPA 2007-edition standards for self-contained breathing apparatus and personal alert safety systems call for a PASS alarm that performs at 500° F, electronics that remain waterproof after six immersion cycles at 1½ meters depth of water and a 350°F heat exposure, and electronics that function after a rigorous 3-hour tumble test. They also raised the bar on voice communication capability, now requiring a minimum score of 85% at a 10-ft distance (allowing an electronic or mechanical system).*

*(Previously this was 72% at 5 feet.)*

# FIRE SERVICE PRODUCTS

## 1. TAKING THE HEAT

Although MSA PASS alarms have performed in extreme temperatures for more than a decade, a top priority was to design an alarm that could **really take the heat!** The new M7 alarm (*patent pending*) was developed in cooperation with prominent university acoustic experts, resulting in an emitter that exceeds 95 decibels with solid performance at the NFPA 500F test! Once again, giving you that lifesaving edge in the face of danger.



## 2. VIRTUALLY "BULLET-PROOF" ELECTRONICS

Like an armor shield, the M7 HUD, Power Module, and Control Module are encased in a proprietary high-temperature impact-grade polymer, providing the highest possible protection against impact and water ingress. Electronics enclosures are permanently sonically **welded** to a hermetic standard and use a high-pressure O-ring to ensure a consistent water-tight seal. The new M7 electronics are virtually "**bullet-proof**" against fire-ground hazards.



## 3. STRAIGHT-TALK COMMUNICATIONS

We've got you covered with communications, starting with a **high-performance mechanical speech diaphragm**, performing so well that it may likely serve as a stand-alone solution to meet the latest NFPA communications requirements! Backing the mechanical diaphragm is an **electronic amplifier** with an internal facepiece microphone for ultimate clarity, a digital signal processor to eliminate feedback even when shouting, three volume levels, and an auto-off feature after 20 minutes of no-use to save batteries. The new Air Mask speaks loud and clear when it comes to communications.

## 4. FIREGROUND MANAGEMENT

Firefighter accountability systems have never before been as practical, complete, and user-friendly as the **MSA M7 Accountability System**. It's based on the ICM TxR Unit introduced in mid-2006, which has thousands of systems deployed in virtually every type of fire department, and they're performing phenomenally! It displays a full array of visual and audible information for up to 100 firefighters within a one-mile-line-of-site – exactly what incident commanders wanted. Record keeping is also made easy by downloading reports. This crown jewel is available only from MSA!



## 5. EXTENDED PROTECTION

The new FireHawk M7 Air Mask is not your typical SCBA. Firefighters need to be prepared for the unexpected, and emergency egress from a 2nd-floor or higher can be impossible without the right safety equipment. That's why the new M7 Air Mask offers an NFPA-compliant integrated rappelling system, called the Rescue Belt, providing firefighters with one more lifesaving option in the face of danger.

"Above and beyond" protection is also provided with the CBRN FireHawk MMR. The CBRN FireHawk includes a positive-protection Tetraplex™ shield, to prevent contact between chemical warfare agents and the most vulnerable component of regulators, their thin elastomeric diaphragm. Other "air-wash" approaches may pass in laboratory conditions. The shield provides positive protection against all potential conditions.

External hazards are bad enough without having concerns of spreading illness among firefighters through shared-use SCBA. The Ultra Elite® facepiece protects you against user cross-contamination with MSA's inhalation check-valve: a "**must have**" in modern safety equipment.



Designed to meet the new NFPA 2007-edition standard.  
Determined to exceed your  
safety equipment expectations!

## 6. LIGHTWEIGHT AND EASY TO USE

Firefighters already have enough weight to carry and gear to maintain, so MSA engineers set out to lighten the load of components, reduce parts counts, **simplify maintenance**, maximize user comfort, and **modularize** the design. The FireHawk M7 Air Mask has a lightweight polymer backplate, with quick-release harness straps, an error-proof cam-lock cylinder attachment, fast change-out electronic components, a large swiveling lumbar pad, and regulators that will fit in the palm of your hand (**less than 30 parts** for the MMR and 14 for the 1st stage). Our time-tested Ultra Elite facepiece has unbeatable comfort, visibility, communications, cross-contamination protection, fit, and seal.

## 7. PLATFORM FOR THE FUTURE

The FireHawk M7 Air Mask is designed to accept **future technology upgrades**. Included in every M7 electronics ensemble is a 2.4GHz **personal wireless network**, a network that transmits and receives encrypted information over a short-range on a firefighter's body.

This new wireless feature provides the capability to add on future technology that can provide additional information back to incident command through the FireHawk M7 Accountability System. Software can also be upgraded wirelessly in the field, through the M7 wireless network. You never have to worry about radio interference either – we have you covered with a thoroughly-tested RFI shield design that protects against all fireground radio signals. The new FireHawk M7 Air Mask provides you with the best technology today and positions you for well into the future.



# FireHAWK M7 Air Mask



# FIRE SERVICE PRODUCTS

## SCBA Key Components

### Facepiece Assemblies for FireHawk M7 Air Masks

#### Ultra Elite Facepiece

The MSA Ultra Elite Facepiece offers an effective combination of comfort and performance.

Designed to provide exceptional peripheral and downward vision, the Ultra Elite Facepiece features a super-soft facepiece texture for a smooth and comfortable fit. It also resists chemical attack and temperature extremes, and withstands rugged day-to-day use without tearing and ripping.

The design of the Ultra Elite Facepiece is based on extensive anthropometric studies of the face-length, temple-width and chin-width data from more than 8,000 individuals. The result is a facepiece that provides improved seals against a wide range of facial contours. To provide a secure, comfortable fit, the facepiece utilizes five adjustable straps with stainless steel, field-replaceable buckles that resist chemical attack. The straps also feature slightly larger adjustment tabs that are easier to manipulate, even with gloves on.

For slip-on convenience, the Ultra Elite Facepiece can be equipped with the Speed-ON® Facepiece Harness. Made of flame- and heat-resistant Kevlar Fabric, the harness features a hair-net type, five-point suspension that can be easily and securely adjusted at each point.

Lenses on MSA full facepieces are molded from polycarbonate, and a special super hardcoating provides a tough, durable facepiece lens to resist scratching.

#### Firehawk® MMR

The Firehawk MMR, MSA's mask-mounted regulator assembly, is available with two different attachment systems, the Firehawk MMR truly redefines ease-of-use and ease-of-maintenance, combined with outstanding performance.

The Firehawk second-stage regulator features a unique **Slide-To-Connect (STC)** attachment system that allows firefighters to hang the regulator on the facepiece in the "ready position," then simply push it into the facepiece when SCBA air is needed. Doffing of the regulator, while wearing gloves, is also easy with two large release buttons that automatically turn-off the flow of air as the regulator is doffed. A dual-swivel feature on the pressure hose provides maximum freedom-of-head movement and the silicone hose material ensures hose flexibility even at very cold temperatures.

In addition to the STC system, MSA also offers a second connection option for the Firehawk Regulator, the **Push-to-Connect (PTC)**. The PTC's



Ultra Elite Facepiece

Adapter self-centers the Firehawk regulator and the loud dual sound of the regulator engaging onto the facepiece provides you with confidence that the Firehawk PTC is securely attached to your facepiece—an action that takes just seconds, when seconds count!

Maintenance is also a breeze, considering the Firehawk design requires no tools, adhesives, or sealants, and has approximately 70% fewer parts as compared to other regulators on the market. Additionally, there are no internal adjustments required. Any adjustments to the regulator may be accomplished at a single adjustment point through the outlet port of the regulator.

Ease of use and maintenance, combined with outstanding performance, makes the Firehawk MMR clearly the product of choice.

#### Heads-Up Display (HUD)

When you open your Air Mask's cylinder valve, the HUD automatically activates, displaying the cylinder pressure reading in 25% increments.



#### ClearCommand® Communications System

MSA's ClearCommand Communications System is designed specifically to meet the modern communications needs of firefighters. It features an internally mounted microphone coupled with a large-diameter (50mm) amplifier speaker for optimal clarity and volume. Using a proprietary circuit design, the system delivers more than twice the volume of a facepiece alone. Mounted in an "out-of-the-way" position, the ClearCommand System doesn't block vision or mechanical communication. The Ultra Elite's mechanical voicemitter is still fully functional, even with the system installed.

### Ultra Elite M7 Facepiece, Speed-ON® Head Harness, Nosecup and M7 HUD Bracket

	Firehawk STC		Firehawk PTC		
	Standard speaking diaphragm	ClearCommand ready		Standard speaking diaphragm	ClearCommand ready
<b>Small</b>	10084689	10084821	<b>Small</b>	10084690	10084822
<b>Medium</b>	10084823	10084825	<b>Medium</b>	10084824	10084826
<b>Large</b>	10084827	10084829	<b>Large</b>	10084828	10084830

Heads-Up Display	
10083132	FireHawk M7 Receiver

## Emergency Egress System

### Rescue Belt

In a continuation of MSA's pursuit of firefighter safety, the Rescue Belt is being introduced to the fire service. This is an NFPA-compliant emergency egress system that is unique to MSA. The belt can be integrated into the carrier and harness assembly of the MSA Vulcan or Airframe Carrier and Harness assemblies. A 50 foot or 75 foot Kevlar line with a descender and carabiner is weaved into the belt to allow a trapped fire fighter to escape to either the ground or to a floor below the fire.

The belt is available in three lengths, standard (56 inches), mid-size (66 inches) and long (76 inches).



Rescue Belt	
10052766	50' Standard Rescue Belt
10071003	50' Mid-Size Rescue Belt
10052767	50' Long Rescue Belt
10052768	75' Standard Rescue Belt
10071004	75' Mid-Size Rescue Belt
10052769	75' Long Rescue Belt

## Carrier & Harness Assembly

### FireHawk M7 Carrier and Harness Assembly

The one component of any SCBA that has the most impact on firefighter comfort is the carrier and harness assembly. MSA is introducing a new carrier and harness assembly that places an emphasis on firefighter comfort while maintaining the robustness and reliability that is expected in the fire service. The carrier and harness comes standard with large side handles and a central attachment point for pulling firefighters to safety in rescue scenarios. The swiveling lumbar pad provides maximum freedom of movement and comfort when crawling or climbing.

The assembly utilizes the proven pieces from previous generations of Air Masks such as the tunneled shoulder straps for hose containment, and tri-bar slides for easy removal/installation of the waist belt and shoulder straps.

All units are equipped with double-pull waist belts and an optional chest strap is available.



FireHawk M7 Carrier and Harness Assemblies				
Part No.	Pressure		Chest Strap	Swiveling Lumbar Pad
	Low	High		
10083128	X			
10083129		X		
10086663	X		Yes	Yes
10086662		X	Yes	Yes
10086664	X		Yes	
10086665		X	Yes	
Accessories				
10083134	Replacement FireHawk M7 Lumbar Pad			
10012167	Chest Strap			

## Cylinders



### Carbon-Wrapped Cylinders

Carbon-wrapped Cylinders are the lightest SCBA air cylinders ever developed by MSA. They feature a unique outerwrap made of lightweight, high-performance carbon fibers, which reduces cylinder weight by two to six pounds when compared to fiberglass-wrapped cylinders and as much as ten pounds when compared to aluminum cylinders. They are available in five models to accommodate a wide range of applications.

Cylinders for SCBA				
Part No.	Cylinder Type (Cylinder & Valve)	NIOSH Service Rating Life	Pressure	Weight* (empty)
807586	L-30	30'	2216 psig	7 lb – 9 oz.
816115	L-30+	30'	3000 psig	9 lb – 14 oz.
469619	Fiberglass Hoop-Wound	30'	2216 psig	13 lb.
809872	Aluminum	30'	2216 psig	18 lb.
807587	H-30	30'	4500 psig	7 lb – 3 oz.
807570	H-45	45'	4500 psig	10 lb – 9 oz.
10035644	H-45 LP	45'	4500 psig	10 lb – 6 oz.
807588	H-60	60'	4500 psig	12 lb – 11 oz.

\*All weights shown are approximate figures.

For more information see Bulletin 0108-11-MC. See Bulletin 0108-13-MC for information on Custom-Logoed cylinders for your MSA Air Mask.

# FIRE SERVICE PRODUCTS

## MSA Accountability System

Accountability is key to every firefighter's safety on a fire scene. MSA's new optional Accountability System revolutionizes fireground safety by combining the latest computer software with a high-performance radio module and the field-proven technology of MSA's ICM TxR Integrated PASS.

### A new way to monitor vital information

- Each MSA base station can monitor up to 50 firefighters, and you can use multiple base stations on a single computer.
- The FireHawk 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.
- An integrated PAR (personnel accountability report) timer helps manage radio calls to each team.
- Incident command can manually add firefighters who are not wearing an SCBA or mutual aid firefighters, so all personnel can be accounted for.

### Intuitive and easy to use

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



### A two-way evacuation feature

- Incident command is assured that firefighters receive all evacuation messages. When incident command transmits the alarm through the FireHawk M7 Air Mask, they'll know the firefighter received it, because the unit automatically sends a confirmation message to the base station.
- By simply pressing a button on his/her own control module, a firefighter can send a manual confirmation to acknowledge that they have received and understand the critically important evacuation message.
- Firefighters will hear the evacuation alarm on their own personal PASS device. Also, visual indications in the HUD and an icon on the control module will alert the firefighter that it is time to evacuate.
- An individual firefighter, a team of firefighters, or all firefighters can be evacuated with the click of a button.
- 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 a 1-mile line-of-sight range.
- Due to the spread-spectrum design, it does not interfere with other high-band radio frequency equipment.
- For additional safety, both base station and firefighter modules have an icon message to inform users if a firefighter falls out of radio signal range, so that alternate accountability measures, such as voice radio contact with teammates, can be taken.

## Accountability System

MSA's new M7 Accountability System revolutionizes fireground safety by combining the latest computer software with a high-performance radio module and the field-proven technology of MSA's ICM TxR Integrated PASS.

10072240	Accountability Base Station Kit (includes software, antenna kit, USB cable and 8-24 volt power cable)
10083876	M7 Control Module Reader / M7 ID tag writer
10083875	M7 ID tags
10075756	Antenna kit
10063880	USB cable
10049410	8-24 volt, power cable
10047342	Wall mount power cable (not included in 10072240 kit)



## Emergency Breathing Systems

### The Quick-Fill® System



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

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

Because performance is not affected, MSA Air Masks retain NIOSH certification during use of the Quick-Fill System.

Air Masks compliant to recent NFPA standard have the Quick-Fill URC fitting located at the Audi-Larm warning device. A Quick-Fill hose with a quick-disconnect connects the air source to the adapter for air transfer. See Bulletin 0105-92-MC for a Question & Answer overview of Quick-Fill Systems.

### The Quick-Fill System

#### Replacement Parts for the Quick-Fill System

485366	EBS hose package, includes 3-foot emergency transfill hose in Kevlar pouch
485331	Emergency transfill hose, less Kevlar pouch
485390	Kevlar pouch
485391	Male stainless steel quick-disconnect with SAE-10 thread, complete with dust cover (also for use as a fitting for customized refilling systems)
485392	Female quick-disconnect with SAE-4 thread, complete with dust cover

#### Quick-Fill Hoses

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

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

### RescueAire™ II Portable Air-Supply System

The RescueAire II Portable Air Supply System is designed to meet the needs of Rapid Intervention Teams (RITs). The system consists of a lightweight Carbon-Wrapped cylinder, Quick-Fill emergency breathing system, ExtendAire™ emergency breathing system, and an MMR regulator, supported by a flame- and heat-resistant harness. The RescueAire is a complete system that can provide emergency breathing air for most any victim.

The RescueAire II System is available in both low-pressure (2216 psig) and high-pressure (4500 psig) versions. An optional-use shoulder strap is also provided for hands-free carrying.



### RescueAire II Portable Air-Supply System

with L-30 cylinder	less cylinder	Low-Pressure (2216 psig)
10025491	10033312	RescueAire II with L-30 Cylinder
10041196	10041198	RescueAire II, Firehawk STC MMR
10041230	10041232	RescueAire II, Firehawk PTC MMR
with L-60 cylinder	less cylinder	High-Pressure (4500 psig)
10025462	10025492	RescueAire II with H-60 Cylinder
10041195	10041197	RescueAire II, Firehawk STC MMR
10041199	10041231	RescueAire II, Firehawk PTC MMR

### The ExtendAire System

The ExtendAire System can be used as both an emergency breathing system and a dual-purpose device for MMR SCBA to allow firefighters to quickly and easily connect to an air-line.



### The ExtendAire System

812958	ExtendAire Air-line Hose with foster plug
812973	40" Rescue Hose
10031798	ExtendAire Upgrade Kit for Threaded Firehawk MMR
10031797	ExtendAire Upgrade Kit for Quick-Connect Firehawk MMR

# FIRE SERVICE PRODUCTS

## How to Order SCBA: Get the Exact Model You Need

### The Assemble-To-Order System

MSA's Assemble-To-Order System (ATO) will make ordering the right mask easier and faster than ever. Instead of choosing from a handful of complete Air Mask assemblies, users can order a custom-made Air Mask with every option exactly as desired. Contact MSA Customer Service Center for details.

### FireHAWK<sup>®</sup> M7 Air Mask

Air Mask Pressure	Carrier/Harness Assembly	Lumbar Pad/Rescue Belt	Cylinder	MMR Type	Emergency Breathing Support	Facepiece	Nosecup	Head Harness	Electronic Communications	Integrated Pass/Telemetry	Case
L 2216	A Single Pull without chest strap	D None	0 None	A CBRN Firehawk STC, threaded,	0 None	A None	0 None	0 None	A None	A PASS with thermal alarm activated	0 None
	B Single Pull with chest strap	1 Swiveling Lumbar Pad	1 3AL Aluminum with air	B CBRN Firehawk STC, QC,	1 Quick-Fill	B Hycar Small	1 Medium	2 Speed-ON less neck strap	B Clear Command Ready with bracket	B PASS without thermal alarm activated	1 Hard Case
	C Double Pull without chest strap	A Rescue Belt - Standard, 50'	2 Hoop Wrapped with air	C CBRN Firehawk PTC, threaded,	2 ExtendAire	C Hycar Medium	2 Large	4 Speed-ON with neck strap	C Clear Command Amp	C PASS, telemetry and thermal alarm	2 Soft Case
	D Double Pull with chest strap	B Rescue Belt - Mid-Size, 50'	3 30' Carbon with air	D CBRN Firehawk PTC, QC,	3 Quick-Fill and ExtendAire	D Hycar Large			D Clear Command Amp/RI	D PASS, telemetry and without thermal alarm	
M 3000		C Rescue Belt - Long, 50'	4 3AL Aluminum less air		M is not compatible with Quick-Fill						
		D Rescue Belt - Standard, 75'	5 Hoop Wrapped less air								
		E Rescue Belt - Mid-Size, 75'	6 30' Carbon less air								
H 4500		F Rescue Belt - Long, 75'	0 None								
			1 30+ Carbon with air								
			2 30+ Carbon less air								
			0 None								
			1 30' Carbon with air								
			2 45' Carbon with air								
			3 45' Carbon low-profile with air								
			4 60' Carbon with air								
			5 30' Carbon less air								
			6 45' Carbon less air								
			7 45' Carbon low-profile less air								
			8 60' Carbon less air								

A-M7



## ClearCommand HCS Helmet Communication System

The Helmet Communication System from MSA is a state-of-the-art radio interface device which significantly improves the user's ability to receive and send messages even in loud ambient-noise environments. It goes wherever you go. The system consists of a helmet-mounted microphone and ear speaker assembly that weighs 5.3 ounces and easily snaps onto the user's fire helmet or industrial-style helmet's ratchet suspension. The helmet mic/ear speaker assembly connects to a lapel microphone or optional stand-alone PTT (push-to-talk) unit. The lapel microphone and PTT are permanently fitted with a connector for attachment to the specific radio of choice.



The Helmet Communication System also offers a plug-in truck communication adapter that can be used by firefighters, along with their helmet microphone assembly, on the way to a fire scene or other incident. Once the firefighter arrives at the scene, the truck system cable is unplugged from the helmet microphone, and the helmet microphone cable end is connected to the user's lapel mic or PTT.

**The user of the Helmet Communication System has uninterrupted communication from the time the alarm sounds until the incident is over.**

For more complete information, see Bulletin 3639-01-MC.



Helmet Mic with Stand-Alone PTT



Helmet Mic with Lapel Mic

### Features & Benefits

- Incorporates a "noise-eliminating" bone-conduction voice transmitter that virtually eliminates high ambient noise levels.
- Custom user-fitted ear speaker brings all incoming communication directly to the user's ear. No need to lift your lapel mic up to your ear to hear transmission.
- Easily snaps onto the ratchet suspension of fire helmets or industrial-style helmets. The unit can be easily transferred to other users, and no tools are required for removal.
- Can be used over the top of facepiece head harnesses, hoods and liners without losing the quality of the transmission.
- The bone-conduction microphone is made of soft silicone material, which makes it comfortable to wear, with no pressure points.
- The helmet microphone assembly can be reversed on the helmet suspension to position the ear speaker on either ear.
- The helmet mic system, when used with the lapel mic or PTT, is powered by the battery from the radio. No need to replace or re-charge dry cells.
- Special connectors suitable for most common radios are available for the lapel microphone and PTT, which allows users to adapt the system to their existing radios.
- The helmet mic is NFPA-certified which allows its use while fighting fires.
- Intrinsic safety approvals allow the use of the Helmet Communication System in hazardous environments.
- The stand-alone PTT unit is designed for use under hazardous material suits. The large button makes it easy for the user to depress and communicate.
- The helmet mic incorporates a cable keeper which allows for storage of the cable when it's not connected to the lapel mic or PTT.

### Helmet Microphone Assembly

10042902	Helmet Microphone Assembly (includes Custom Fitted Flannel Headband Liner)
<b>Lapel Mic Kits for Radio Interface*</b>	
10042908	Maxon SP120, SP130, SP140
10042909	Motorola HT600, MT1000, MTX820, MTX900, Radius P200 & P500
10042903	Motorola HT1000, JEDI, MT2000, MTS2000, MTX838, MT839, MTX8000, MTX9000
10042904	Motorola Astro and Saber
10042905	Motorola Radius GP300, P110, SP50, LTS2000, Spirit-III, GTX, SP21
10042912	Motorola STX, MX800, MX840
10042906	GE Ericsson PCS, PC2005
10042907	GE Ericsson MRK, LPE-200, Prism, PX 126T
<b>Stand-Alone PTT Kits for Radio Interface*</b>	
10045667	Maxon SP120, SP130, SP140
10045668	Motorola HT600, MT1000, MTX820, MTX900, Radius P200 & P500
10045662	Motorola HT1000, JEDI, MT2000, MTS2000, MTX838, MT839, MTX8000, MTX9000
10045663	Motorola Astro and Saber
10045664	Motorola Radius GP300, P110, SP50, LTS2000, Spirit-III, GTX, SP21
10045669	Motorola STX, MX800, MX840
10045665	GE Ericsson PCS, PC2005
10045666	GE Ericsson MRK, LPE-200, Prism, PX 126T
<b>Truck System</b>	
10045732	Nexus Adapter, D. Clarke
10045731	Phonejack Adapter, D. Clarke
<b>Parts and Accessories</b>	
10046087	Dust Cover
10046123	Guard Ring, Tall
10046122	Guard Ring, Short
10046089	Belt Clip Assy, Standard
10046120	Belt Clip Assy, Clothes Pin Type
10046121	O-Ring, Single Pin Connector
10045778	Flannel Head Band Liner

\*If your specific radio is not listed, please contact MSA Customer Service.



# FIRE SERVICE PRODUCTS

## ClearCommand Communications System for Ultra Elite Facepieces

MSA's ClearCommand Communications System is designed specifically to meet the modern communications needs of firefighters. Because it's available in two versions, amplifier and amplifier with radio interface, firefighting teams can be properly fitted for the job at hand. Also, the systems are designed for "shared-use" of the amplifier with a unique "bus-bar" arrangement, so individual issue is not required.

The ClearCommand systems feature an internally mounted microphone coupled with a large-diameter (50mm) amplifier speaker for optimal clarity and volume. Using a proprietary circuit design, the system delivers more than twice the volume of a facepiece alone. Mounted in an "out-of-the-way" position, the ClearCommand System doesn't block vision or mechanical communication. The Ultra Elite's mechanical voicemitter is still fully functional, even with the system installed.

The radio interface version features the same amplifier as the amp-only version, combined with an ear-speaker for incoming radio messages and a lapel mic assembly for interface with over 100 radios. The lapel mic can be used as a component of the ClearCommand system or as a stand-alone hand mic.

Both the amplifier and radio interface models are intrinsically safe, and meet the applicable requirements of NIOSH and NFPA 1981, 2002 edition.



ClearCommand System Kits	
10024074	Amplifier Kit, complete with microphone
10051290	Amplifier Radio Interface Kit, w/ microphone, less PTT
10023055	Microphone Kit, with mounting bracket
Lapel Mic Kits for Radio Interface*	
10042908	Maxon SP120, SP130, SP140
10042909	Motorola HT600, MT1000, MTX820, MTX900, Radius P200 & P500
10042903	Motorola HT1000, JEDI, MT2000, MTS2000, MTX838, MT839, MTX8000, MTX9000
10042904	Motorola Astro and Saber
10042905	Motorola Radius GP300, P110, SP50, LTS2000, Spirit-III, GTX, SP21
10042912	Motorola STX, MX800, MX840
10042906	GE Ericsson PCS, PC2005
10042907	GE Ericsson MRK, LPE-200, Prism, PX 126T
Stand-Alone PTT Kits for Radio Interface*	
10045667	Maxon SP120, SP130, SP140
10045668	Motorola HT600, MT1000, MTX820, MTX900, Radius P200 & P500
10045662	Motorola HT1000, JEDI, MT2000, MTS2000, MTX838, MT839, MTX8000, MTX9000
10045663	Motorola Astro and Saber
10045664	Motorola Radius GP300, P110, SP50, LTS2000, Spirit-III, GTX, SP21
10045669	Motorola STX, MX800, MX840
10045665	GE Ericsson PCS, PC2005
10045666	GE Ericsson MRK, LPE-200, Prism, PX 126T
Truck System	
10045732	Nexus Adapter, D. Clarke
10045731	Phonejack Adapter, D. Clarke
Parts and Accessories	
10046087	Dust Cover
10046123	Guard Ring, Tall
10046122	Guard Ring, Short
10046089	Belt Clip Assy, Standard
10046120	Belt Clip Assy, Clothes Pin Type
10046121	O-Ring, Single Pin Connector
10045778	Flannel Head Band Liner

\*If your specific radio is not listed, please contact MSA Customer Service.

### 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 customers' 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 the 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. Or, individuals can obtain training for C.A.R.E certification from MSA. By having 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.



## SCBA Accessories

### APR Adapter

MSA's APR adapter provides firefighters with the versatility they need to perform all tasks at the fire ground with one common facepiece. From fire-fighting to overhaul to homeland security, firefighters can switch from a positive-pressure facepiece to a negative-pressure air-purifying respirator simply by engaging the APR Adapter. The APR Adapter uses MSA's comprehensive family line of air-purifying cartridges; select from the Advantage cartridges or our CBA/RCA canisters to protect against a multitude of airborne contaminants.

The APR Adapter is designed for use in non-IDLH environments and is NIOSH-approved. Contact MSA for more information.



### Spectacle Kit for Full-Facepiece Respirators

For use by workers who must wear corrective lenses, the Spectacle Kit can be easily inserted into the facepiece. The kit includes a wire support, rubber guide, and pair of metal-frame spectacles. There are two kits for the Ultra Elite facepiece; one uses a side wire support to hold the lenses in the facepiece, while the other uses a center support to position the unit. Desired adjustment is obtained by moving the spectacles in and out of the rubber guide and up and down the wire support. One size of spectacle frame is used (S-7 shape, 48-mm lens size) with Universal Bridge Corrective Lenses that can be obtained from local sources. The Spectacle Kit can be used with a nosecup.



Side-Support Spectacle Kit for Ultra Elite Facepiece



Center-Support Spectacle Kit for Ultra Elite Facepiece

### Nosecups

Molded from a soft rubber compound that is resistant to facial oils, the optional nosecup helps reduce the possibility of lens fogging. The nosecup is particularly effective under conditions of high humidity and/or low temperatures by inhibiting contact of moist exhaled air with the facepiece lens. A nosecup can be easily affixed to the facepiece without tools. Any size nosecup may be installed in any size Ultra Elite Facepiece for a customized, more comfortable fit.

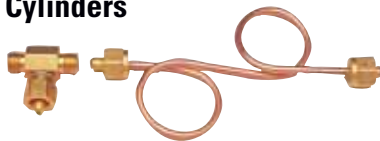


### High-Pressure Filling Hose

Provides a convenient means to connect and charge high-pressure air into a high-pressure 4500 psig cylinder.



### Accessories for Filling Low-Pressure (2216 psig) Cylinders



### APR Adapters

#### Firehawk MMR STC Version

10032511	APR Adapter
10032927	APR Adapter Individual Kit
10032925	APR Adapter Truck Kit

#### Firehawk MMR PTC Version

10040052	APR Adapter
10040055	APR Adapter Individual Kit
10040054	APR Adapter Truck Kit

#### Accessories

10037809	Ultra Elite, Anti-Fog Applique (10/pkg)
10037810	Ultravue, Anti-Fog Applique (10/pkg)
817590	CBA/RCA Canisters (box of 6)
809858	Replacement Baffle
813341	Replacement Bayonet Cover

#### Spectacle Kits

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

#### Nosecups

495188	Medium Black Nosecup
495189	Large Black Nosecup

#### High-Pressure Filling Hose

476105	High-Pressure Filling Hose Assembly
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#### Accessories for Filling Low-Pressure (2216 psig) Cylinders

68846	Air Outlet Connection, complete w/ Gauge
68850	Air Coupler Tee
68851	Air Pigtail
476156	Low-Pressure Air-Filling Hose, 5 feet long

## Shop Online for MSA Gear

MSA FireSlayer and Be Ready promotional items are available to anyone via MSA's Internet site. Sporting appropriate logos are shirts, duffels, caps, golf items, mugs, money clips, lighters and more. The FireSlayer logo helps promote our products to the firefighting market, while the Be Ready logo is aimed at Homeland Security. Look for the "MSA Gear" link in the Resources & Info area after selecting MSA North America; MSA United States from the MSA homepage at MSA.net.com.

After making your selections, complete the shipping information and furnish a credit card number. Your order will be processed, and you should receive it within a week. Express service is also available.



# FIRE SERVICE PRODUCTS

## CBRN Ultra Elite Gas Mask



Firefighters do not always need SCBA protection, especially outside the immediate fire scene. Once the hazard has been assessed, air-purifying respirators (APR) may make the most sense for low concentrations of certain contaminants. With the new Ultra Elite CBRN Gas Mask, your department benefits from using a common platform facepiece for both APR and SCBA applications, allowing standardized training and eliminating redundant fit-testing.

APR and SCBA facepieces should not be used interchangeably. For that reason, MSA is introducing the Ultra Elite CBRN Gas Mask for use in the fire service and to first responders. The facepiece has been trusted in the fire service for more than 10 years. In that time, the Ultra Elite has been field-proven to provide firefighters with exceptional fit, comfort, and value.

The MSA CBRN Canister meets or exceeds all performance requirements of the new NIOSH CBRN Standard by effectively removing harmful gases, vapors, and particulates so that the user can confidently breathe safely. The canister contains chemical sorbents and a P100 filter to attract, retain, and neutralize contaminants.

## Millennium® CBRN Gas Mask

The new NIOSH government CBRN standard for full-facepiece gas masks was issued on March 7, 2003. After extensive testing to that standard, MSA's Millennium CBRN Gas Mask was first to receive NIOSH certification as "compliant against CBRN".

A Hycar version of the reliable military-style gas mask (MCU-2/P Mask, used by U.S. Air Force in Desert Storm) that combines high performance, customized fit, comfort and cost efficiency.

- Flexible, 1-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece.
- Dual-canister mount allows weapon sighting from either shoulder
- Drinking tube provides connection for fluid ingestion in contaminated atmospheres
- Fully elastic, 6-point head harness promotes easy on/off and adjustment, with no hair pulling
- Internal nose cup with 2 check valves, deflects air from the lens, reduces fogging
- CBRN canister containing chemical sorbents and a P100 filter to attract, retain and neutralize contaminants
- Standard mechanical speaking diaphragm included, or add MSA's optional ESP® II Communications System
- Optional butyl-coated nylon hood for total head protection
- NIOSH-approved (No. TC-14G-0270) for protection at a CBRN Cap 1 rating



## CBRN Ultra Elite Gas Mask (Facepiece with Head Harness)

w/Rubber Head Harness	w/Speed-ON Head Harness	Size
10052776	10052780	Small
10052781	10052779	Medium
10052778	10052777	Large

### Canisters & Cartridges

10046570	MSA CBRN Canister
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### Safety

- Super-soft black Hycar rubber exceeds the CBRN permeation requirements
- Large lens with 83% unimpeded vision
- Centrally located inlet port for secure, comfortable fit and feel
- Centrally located mechanical speaking diaphragm for clear communications
- Optional ClearCommand Amplifier for increased communication capabilities

### Simplicity

- Available with a 5-point rubber or Speed-ON head harness
- Identical sealing surfaces for both SCBA and Gas Mask facepieces—eliminating the need for redundant fit testing
- Simplifies respiratory protection training program

### Reliability

- The Ultra Elite facepiece is fire-service proven, with over a decade of trusted use
- Largest supplier of gas masks to the law enforcement market

For more specific information on chemical warfare agents, see Bulletin 5555-160.

## Millennium CBRN Gas Mask

With nose cup, drinking tube, and clear polycarbonate outsert. Order canister separately.

Small	Medium	Large
10051286	10051287	10051288

### Millennium CBRN Canister

10046570	MSA CBRN Canister
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## Accessories

### ESP® II Communications System

A 1-piece, self-contained, electronic speech projection device that allows wearers to speak normally, yet be heard loud and clear.

10026265	ESP Communications System for Millennium (less battery)
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### Lens Outsert

Polycarbonate lens outsert snaps into place over facepiece lens, providing additional impact protection. Tinted outsert helps conceal identity (suitable only when sufficient light exists).

Small	Medium/Large	
10008907	10008906	Clear lens outsert
10008909	10008908	Tinted lens outsert

### Other Accessories

10034184	Gas Mask Pouch, Military Style
817040	Black Nylon Bag
816137	Millennium Spectacle Kit
305022	Butyl-Coated Nylon Hood



## MSA Responder™ CBRN PAPR

A belt-mounted powered air-purifying respirator with choice of 2 proven tight-fitting facepieces in 3 sizes. The motor/blower provides constant air flow of a minimum 115 lpm to the facepiece via the breathing tube. Can be used with CBRN cartridge or with the OptiFilter® XL or PAPR GME Multi-gas HE cartridge for tactical operations.

- Protects first responders in non-IDLH situations for extended periods of time
- Choice of 2 proven positive-pressure facepieces
- Provides much higher safety factor than hood-style PAPR
- Choice of CBRN cartridge or multiple-gas/particulate chemical cartridge for non-CBRN use

MSA's Responder PAPR system is ideal for law enforcement, other first responder, military, and special operations personnel who need non-IDLH respiratory protection for an extended period of time.

The C420 motor/blower works with existing MSA full facepieces, filtering contaminants from ambient air and providing a minimum constant air flow of 115 lpm to the user's facepiece. Constantly filtered air flow provides improved comfort due to the cooling effect, effectively reducing pulmonary stress, and preserving strength and mental acuity. The air flow also prevents fogging in the facepiece, reduces feelings of claustrophobia, and allows for extended use in hot and stressful environments.

Unlike common commercial PAPRs, the MSA Responder PAPR and battery compartment are air-tight and can be effectively cleaned. Also, batteries may be "hot-swapped" during use in a warm environment.

Other components of the Responder PAPR system are:

- Either MSA's Millennium CBRN Facepiece or Ultra Elite CBRN Facepiece (see p.14 for more information).
- The Responder CBRN Cartridge. (The Responder PAPR is also approved for use with MSA's OptiFilter XL or GME Multigas HE cartridges for protection from other chemical particulates, toxic gases, and vapors.)

**Ordering Information: You must choose C420 PAPR Kit, facepiece, and cartridge for a complete system.**

C420 PAPR Kits			
<i>C420 PAPR Kits include C420 PAPR, Belt, Airflow Indicator and Breathing Tube.</i>			
B-60141-030	C420 PAPR Kit with 30" Breathing Tube (less facepiece and cartridge)		
B-60141-036	C420 PAPR Kit with 36" Breathing Tube (less facepiece and cartridge)		
Facepieces			
Small	Medium	Large	Description
10051286	10051287	10051288	Millennium Gas Mask Facepiece (less cartridge)
10052776	10052781	10052778	Ultra Elite Hycar Gas Mask Facepiece with rubber Head Harness (less cartridge)
10052780	10052779	10052777	Ultra Elite Hycar Gas Mask Facepiece with Speed-On Head Harness (less cartridge)
Cartridges			
10046570	PAPR Responder* CBRN cartridge		
495692	OptiFilter XL cartridge		
10072237	PAPR GME Multigas HE cartridge		

Storage Devices	
10034184	Pouch
D2056734	Case

**New!**



### Accessories

#### For C420 PAPR

B-20040-001	NiMH Rechargeable Battery Kit (2 NiMH Batteries, Charger & Cap)
M-20020	LiSO2 Battery
S-20036	NiMH Rechargeable Battery Pack
B-20090-001	NiMH Rapid Battery Charger
B-30060-001	NiMH Rechargeable Battery Cap Assembly
S-30019	Web Belt Assembly
B-10079-001	PAPR Carrying Case

#### For Ultra Elite Facepiece

#### ClearCommand Communication System

10024074	Amp
10051290	Amp / RI
10023055	Bracket Only
305022	Butyl Hood

#### Cover Lens

491500	Clear
805456	Tinted
804638	Spectacle Kit

#### For Millennium Facepiece

10026265	ESPII Communications System
305022	Butyl Coated Nylon Hood
10034184	Gas Mask Pouch
816137	Spectacle Kit

# FIRE SERVICE PRODUCTS

## OptimAir® 6HC PAPER

The OptimAir 6HC PAPER (Health Care Powered Air-Purifying Respirator) from MSA is specifically designed to protect health care professionals from residual Chemical/Biological/Radiological Agents, when they are performing First Responder duties during Homeland Security or terrorist situations.

The system features a lightweight, chemical-resistant Tychem SL Hood and belt-mounted blower with two HC Cartridges. The canisters contain a pleated high-efficiency (P100) filter to remove aerosols, radionuclides, and solid particulates; and an impregnated activated carbon bed to adsorb (filter out) gases and vapors.



OptimAir 6HC PAPER with Tychem Hood

For more information, see Bulletin 1010-13-MC.

- Designed specifically for use by ER and other health care providers during Homeland Security situations.
- Continuous air flow meets or exceeds NIOSH standard
- Entire lightweight PAPER weighs under 6 pounds
- Available with Tychem SL Hood or Advantage 3100 Facepiece.
- Tychem SL hood weighs only 8 ounces.
- Hood is compatibly worn with facial hair and glasses
- No fit testing necessary when using hood
- Design allows freedom of movement plus optimum protection
- Tychem SL hood and Advantage 3100 facepiece are comfortable, easy to don and use
- Lithium battery provides 10-year shelf life, 4 hours of wear time
- Approved for High Efficiency, Chlorine, Sulfur Dioxide, Hydrogen Chloride, Hydrogen Fluoride, Hydrogen Sulfide (escape only)
- NIOSH approval TC-23C-2201 with Tychem Hood
- NIOSH approval TC-23C-2209 with Advantage 3100 Facepiece

## OptimAir 6A PAPER with OptiFilter Cartridges for Homeland Security Applications

A powered air-purifying respirator that filters contaminants from ambient air via CBA/RCA OptiFilter Cartridges. Belt-mounted motor/blower provides constant air flow via breathing tube to facepiece.

- Features Millennium Facepiece
- Used with combination cartridges for protection against particulates, toxic gases and vapors, or a combination of these hazards
- Maintenance-free lithium battery with 10-year shelf life
- Optional rechargeable NiCd battery



## Other OptimAir 6A and/or 6HC Replacement Parts and Accessories

### Breathing Tube Assemblies

486364	For Tight-Fitting Facepieces, 30"
492197	For Tight-Fitting Facepieces, 36"
481980	For Tyvek Hood

### Protective Cover

Protects from water (such as in asbestos decontamination showers) or particulate contamination.

808494	Pkg of 5 for OptimAir 6A
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### Flow-Check Devices

MSA flow-check devices allow users of PAPRs to quickly and conveniently verify that their unit is providing the required air flow.

487995	Flow-Check Meter
489999	Adapter for Flow-Check Meter for use with Tyvek Hood
491046	Adapter for Flow-Check Meter for use with OptimAir MM PAPER

OptimAir 6HC and 6A PAPRs	
10041550	<b>OptimAir 6HC PAPER with Tychem Hood</b> Includes motor/blower module, lithium battery, breathing tube, belt and 2 HC Cartridges
10045100	<b>OptimAir 6HC PAPER with Advantage® 3100 Facepiece</b> Includes motor/blower module, lithium battery, breathing tube, belt and 2 HC Cartridges
10042448	HC Cartridges, Pkg. of 6
10048179	Tychem SL Hood
481980	Breathing Tube for Hood
10048180	Single-use lithium battery
491120	NiCd Battery for training use
463471	Single-Unit Single-Rate Battery Charger for NiCd Battery
10048178	Motor/Blower module
492827	Polyurethane-coated nylon belt
10046394	<b>OptimAir 6A PAPER Kit</b> complete with medium Millennium Facepiece, lithium battery, belt, motor/blower module. (Order OptiFilter cartridges separately.)
10011890	CBA/RCA OptiFilter Cartridges, Box of 6
816912	Lithium Battery Pack for OptimAir 6A PAPER
491102	Motor/Blower Module
808494	Protective Covers, Package of 5
Optional Battery and Charger	
491120	Rechargeable NiCad Battery
463471	Standard Single-Unit Battery Charger
486614	Single-Unit, Dual-Rate Battery Charger

For more information on Homeland Security Specialty Equipment and chemical warfare agents, see Bulletin 5555-160-MC.

## Air-Purifying Respirator Fit-Test Accessories

### Facepiece Fit-Test Kits



Qualitative Test Kit



Replacement Hood & Test Solutions



Banana Oil Test Kit

The Occupational Safety and Health Administration (OSHA) requires fit tests to ensure proper fit for workers who use respirators. Quantitative testing methods rely on objective data to determine a proper fit. Qualitative fit-test methods are subjective in nature and rely on the judgment of the test subject.

### Probed Respirator Facepieces

#### All Models Available

To make it easy for you to perform quantitative fit tests, MSA offers a full line of specially modified facepiece assemblies. Each probed facepiece is equipped with a built-in probe assembly, sampling line, and clothing clip to hold the sampling line. The probes are made of solid brass. In all MSA half-facepiece models, the probe is attached to the body of the respirator. Full-facepiece respirators are probed through the lens and sealed with a neoprene washer and brass fittings.

MSA also offers probed lenses for use with existing Ultravue facepieces. These lenses come completely assembled with the same brass probe, sealing hardware, and sampling line as the probed full-facepieces. All respirators use standard MSA high-efficiency filters for tests.

### QuikChek® Adapters



#### QuikChek III Adapter

The QuikChek III Adapter is specially designed for respirators equipped with Ultra Elite Full Facepieces. The QuikChek III model threads directly into the facepiece inlet. For completion of a quantitative fit test, an OptiFilter XL Cartridge must then be threaded into the QuikChek III Adapter.



#### QuikChek IV Adapter

Adapter allows qualitative fit-testing and is specially designed for Ultra Elite and Ultravue Full-Facepieces with quarter-turn-quick disconnect. Fit-test kit includes a Type H Cartridge.



#### QuikChek Adapter for Advantage 1000 Facepiece

QuikChek Adapter converts a standard Advantage 1000 Facepiece to a probed respirator by replacing the speaking diaphragm.

### Facepiece Fit-Test Kits

#### Bitrex Qualitative Fit-Test Kit

697444	Bitrex QLFT Kit
697446	Replacement Fit-Test Solution
697445	Sensitivity Solution
697448	Replacement Hood
697449	"Using the Qualitative Fit-Test Kit" videotape

#### Saccharin Qualitative Fit-Test Kit

The Saccharin Qualitative Fit-Test Kit eliminates the need for special filters and is especially useful for dust/mist respirators.

697287	Saccharin QLFT Kit
697285	Replacement Sensitivity Test Solution, 55 ml bottle
697286	Replacement Fit-Test Solution, 55 ml bottle
697448	Replacement Hood
697325	"Using the Qualitative Fit Test Kit" videotape

#### Banana Oil Qualitative Fit-Test Kit

MSA's Banana Oil Fit-Test Kit relies on a test subject's ability to detect a 95% pure solution of Isoamyl Acetate (banana oil).

801628	Qualitative Fit Test Kit
801629	Qualitative Fit Test Kit, in rugged Pelican case

### QuikChek™ Adapters

805078	QuikChek III Fit Test Adapter
803196	Replacement Kit with 25 ft of sampling tubing, 25 connectors, clip and suction cups
496081	OptiFilter XL Cartridge (box of 6)
817446	QuikChek IV Fit-Test Kit
491010	Type H OptiFilter Cartridge (box of 6)
10006227	QuikChek Adapter for Adv 1000

## S-CAP™ Fire Escape Hood **New!**

Most victims of fire are not injured by heat or flames but rather by smoke and gases, especially carbon monoxide. The S-CAP Fire Escape Hood is simple to don and use and is effective within seconds, using a filter designed for a minimum rated service time of 15 minutes.

- Filters out CO and smoke
- Universal size
- Easily fitted with quick donning
- Minimal training required
- EN 403:2004 approved
- Highly visible yellow hood
- Adjustable head harness on the outside of the hood, with cotton neck seal for easy donning
- Wide field of view lens
- Heat-resistant against brief flame contact and elevated temperatures



Wall Box

### S-CAP Fire Escape Hood

10064644	S-CAP in cardboard box
10064645	S-CAP in wall box



# FIRE SERVICE PRODUCTS

## PremAire® Cadet Respirator

For firefighters entering confined spaces, operating as part of a HAZMAT team, or working in platform aerial operations, MSA offers industry-leading air-line respirators for the fire service.

The PremAire Cadet and PremAire Respirator System offer simple solutions to air-line respirator needs. Featuring the Ultra Elite facepiece and Firehawk MMR (mask-mounted regulator), the PremAire family of air-line respirators allows firefighters to use the same facepiece as their FireHawk Air Mask. MSA also has all the parts, air-line hose, fittings, and accessories you need to build a complete supplied-air system.



### The Assemble-To-Order System

MSA offers more PremAire System Respirator choices than ever before. Thousands of possible combinations let firefighters select just the right PremAire Respirator for the job.

MSA's Assemble-To-Order (ATO) System makes ordering the right unit easier and faster than ever. Instead of choosing from a handful of complete PremAire assemblies, users can order a custom-made unit with every option exactly as desired. The ATO System works by allowing users to create their own part numbers. Each digit of an ATO part number represents a specific component, so that the entire part number represents a finished respirator built exactly to the desired specifications.

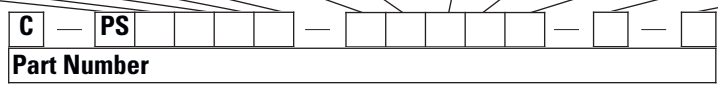
Using the ATO System below is easy. Just select the number or letter that corresponds to the choice of components and fill in the appropriate box. A number or letter from each category must be selected. For example, to order a PremAire System respirator with nylon belt assembly, right-hip 10-minute carbon fiber escape cylinder, dual-supply option with 8-inch hose, Firehawk Slide-To-Connect 30" solid cover regulator, a non-NFPA black Hycar Ultra Elite Facepiece, size medium, with large nosecup and large EZ-Don Head Harness, Foster steel quick-disconnect and a hard side carrying case, the ATO part number would be: C-PS151E-11M24-G-1.

PremAire Cadet Respirators				
Firehawk MMR PTC		Firehawk MMR STC		Case
w/30" IP hose	w/42" IP hose	w/30" IP hose	w/42" IP hose	
10054790	10054791	10054794	10054795	No
10054782	10054783	10054786	10054787	Yes

### PremAire Supplied-Air Respirator System\*

Type	Belt Assembly	Escape	Dual-Supply	MMR Regulator	Facepiece Type	Facepiece	Face-piece Size	Nosecup	Head Harness	Quick-Disconnect	Case
PS Prem-Aire System	1 Nylon	0 None	0 None	E Firehawk STC 30" Solid Cover	0 None	0 None	0 None	0 None (only if you have no FCPC)	0 None	A None	0 None
	2 Urethane	1 5-Min Right Hip Carbon Fiber	1 8" Hose less QD	F Firehawk STC 42" Solid Cover	1 Non-NFPA	1 UE Hycar	S Small	1 UE-Medium	1 Rubber	B Snap-Tite Alum	1 Hard Case
	3 Nomex	2 5-Min Left Hip Carbon Fiber	2 15" Hose less QD	G Firehawk PTC 30" Solid Cover	2 NFPA	2 UE Silicone	M Med	2 UE-Large	2 EZ-DON Small	C Snap-Tite SST	2 Soft Case
		3 5-Min Right Hip Aluminum		H Firehawk PTC 42" Solid Cover		A Duo-Twin, Hycar	L Large	A UV-Small	3 EZ-DON Med	D Snap-Tite Brass	
		4 5-Min Left Hip Aluminum		Z 1/4-Turn, 24" for Duo-Twin Facepiece		B Duo-Twin, Silicone		B UV-Medium	4 EZ-DON Large	E Hansen SST	
		5 10-Min Right Hip Carbon Fiber						C UV-Large	5 Speed-ON	F Hansen Brass	
		6 10-Min Left Hip Carbon Fiber								G Foster Steel	
		7 10-Min Right Hip Aluminum								H Foster SST	
	8 10-Min Left Hip Aluminum								I Foster Brass		
									J Cejn Chrome		
									K Duff-Norton Brass		

Note: If you have selected the Dual-Supply option, you will need two of the same Quick-Disconnects. Just put one letter in the part number to indicate your selection.

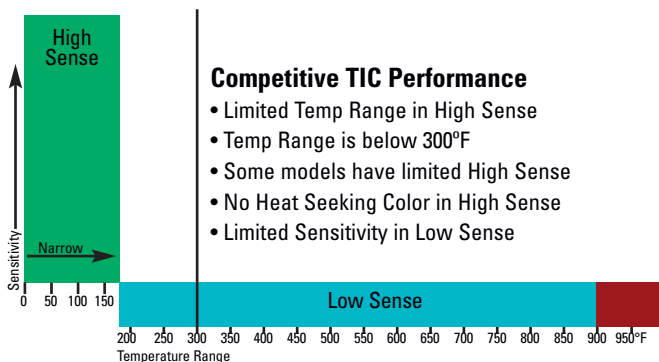
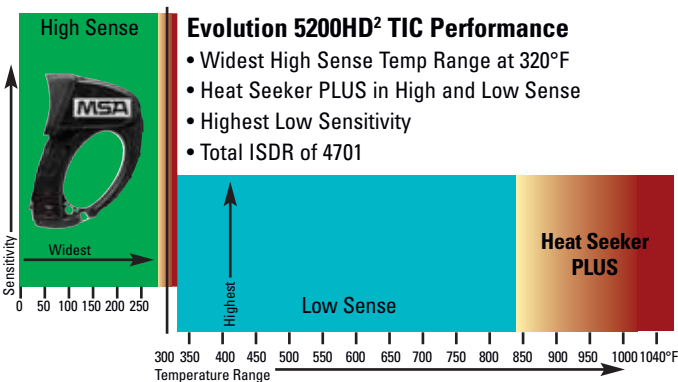
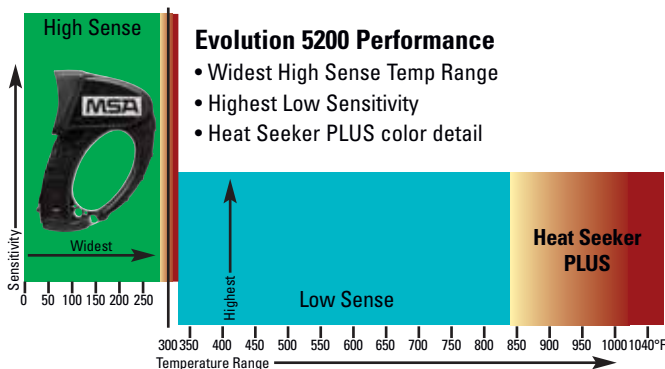


## Evolution Thermal Imaging Cameras (TICs)

### Comparison of Fire Service TIC Performance\*

#### High and Low Sensitivity

Most TICs generate thermal images in either High Sense or Low Sense modes, depending on the temperature of the scene. High Sense mode delivers the best image quality – but has a limited temperature range. Low Sense mode trades image quality for a wider temp range to keep the TIC working in high heat.



### Evolution 5200 TIC Performance

Only MSA delivers High Sense image quality up to 320°F, the range that 80% of the time matches the temperature range in most structural fires. In addition, only MSA delivers increased sensitivity in Low Sense mode with better high temperature image quality. The shaded color in both High and Low Sense indicates the Evolution 5200's Heat Seeker PLUS.

### Evolution 5200HD² TIC Performance

Most TICs sacrifice high-sense imagery to make sure they perform in higher temperatures. With the widest range of high sense mode and the highest sensitivity in low sense mode, the Evolution 5200HD² gives you both high quality imagery and wide temperature ranges—there's no sacrifice, just performance! The Heat Seeker PLUS provides image detail shading.

### Evolution 5600 TIC Performance

The Evolution 5600 TIC offers the widest high sense operating range of any Fire Service TIC in high heat conditions. The Heat Seeker indicator allows the user to easily locate hot spots and the seat of the fire, and is effective in High and Low Sensitivity. In fact, this TIC has the highest SENSITIVITY in Low Sensitivity mode of any fire service TIC, which extends the dynamic range for better image distinction at higher scene temperatures. The Evolution 5600 TIC's indigo 120 x 120 vanadium oxide microbolometer provides excellent image quality in a small format TIC.

### Competitive Performance

The limited High Sense temperature range on competitive TICs means that better image quality is lost sooner. Low Sense then becomes the standard operating mode, using only a fraction of the total available sensitivity. In addition, competitive TICs lack Heat Seeking color in High Sense mode, an important tool to determine the presence and direction of the fire.

### Low Cost – High Value

As Fire Service TICs become more affordable, MSA again takes the lead by adding new features and increasing performance—while lowering both initial and lifetime costs. Only MSA offers a 2-year sensor warranty—twice the coverage of competitive TICs! The increased value of MSA TICs is realized through expanded TIC uses, time saved and SAFETY—every day!

### Also – Only From MSA:

- Instant On
- Warnings on all Shut Downs
- Temp Bar and Digital Temp
- Instant Mode Switching
- Shutter Indicator
- 15% Low Sense Activation

### Durability: MSA designs, manufactures and tests to existing standards that include:

- Water/Dust Ingress ..... International Standard CEI, IEC 529, IP 67 Classification
- Direct Flame/Heat Exposure ..... Simulated NFPA 1981-2002 Edition, NFPA 1982-1998
- Vibration ..... Edition MIL-STD-810E Category 1 Loose Cargo
- Radio Frequency Interference ..... Transport CE/EN 50081-2:1992, EN 50082-2:1992, FCC
- Rollover (Truck Charger) ..... Part 15 Simulated NFPA 1901-12, 1.7

\* For additional information on TIC performance, see MSA's series of *Emergency Responder Thermal Imaging Magazines*, Bulletins 3400-55, 3400-56, 3400-57 and 3400-58.



# FIRE SERVICE PRODUCTS

## Evolution 5200 TIC

**It's an Evolution – and It's All About SAFETY!**

**Introducing the new Evolution 5200 Fire Service Thermal Imaging Camera – with Next Generation Performance and New Exclusive Features available only from MSA!**

### High Performance Safety

- 320°F High Sense Mode Range – gives high image definition over the widest temperature range of any Fire Service TIC
- Twice the Low Sensitivity in the 320° to +1000°F range, compared to all other Fire Service TICs – for great imaging!

It all adds up to the highest **ISDR\*** of any Fire Service TIC – with clearer, sharper, more detailed images over the entire temp range.

\***I**nstantaneous **S**cene **D**ynamic **R**ange is the combined value of a sensor's sensitivity and temperature range to determine the number of temperature differences that can be seen at any given instant.



### Evolution 5200 TIC Configurations

10063768	Evolution 5200 TIC with 110-220V charger and one battery
10063767	Evolution 5200 TIC with 110-220V charger, Quick-Temp, Heat Seeker, 2 batteries, wrist strap, carrying case and reflective trim kit
10063766	Evolution 5200 TIC with truck-mounted charger, Quick-Temp, Heat Seeker, 2 batteries and wrist strap
10063765	Evolution 5200 TIC with 110-220V charger, Quick-Temp, Heat Seeker, 2 batteries, Retractable Lanyard, carrying case and reflective trim kit
10063764	Evolution 5200 TIC with truck-mounted charger, Quick-Temp, Heat Seeker, 2 batteries and Retractable Lanyard
10063763	Evolution 5200 TIC with 110-220V charger, Quick-Temp, Heat Seeker, 2 batteries, shoulder strap, carrying case and reflective trim kit
10063762	Evolution 5200 TIC with 110-220V charger, 2 batteries and carrying case
10063761	Evolution 5200 TIC with truck-mounted charger and 2 batteries

### Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Evolution 5200 TIC, configured exactly the way you want it. See Bulletin 3400-50-MC for more information.

Features	Benefits
Widest High Sense Operating Range on any Fire Service TIC conditions	Provides better performance in high heat.
Highest Low Sensitivity Mode of any Fire Service TIC	Extends the dynamic range for better image distinction at higher scene temperatures.
Quick-Temp Temperature Measurement	Gives users a digital temperature measurement along with a temperature scale measurement to determine advancing heat.
Heat Seeker PLUS Indicator	Allows the user to easily locate hot spots and the seat of the fire. Effective in High and Low Sensitivity.
New Internal Mounting Foam	60% increase in heat tolerance. Protects system electronics from rough handling. Insulates sensor and electronics.
Microbolometer technology (vanadium oxide)	Extremely sharp image.
3-1/2-inch display	Team of users gets full view of the action.
Revolutionary ergonomic design	Easy handling and integration.
Reflective ID label kit	Allows user to personalize the TIC to a specific station/department with a choice of different color labels.
Unique high-impact bumper protection system	Drop protection from any angle—outstanding durability.

### Accessories for all Evolution 5000 Series TICs

10041100	Charger 110-220V AC with cigarette lighter adapter	10040005	Carabiner
		10039603	Sun Shroud
10038412	Lithium Ion Battery	10062184	Reflective Label ID Kit
10067565	Vehicle-Mounted Charger	10038970	Disposable Display Covers - Clear
10039516	Wrist Strap	10067707	Non-Charging Mounting Bracket
10039515	Shoulder Strap	10040229	Tripod Adapter
10040226	Retractable Lanyard	10071750	Video Capture System



View through the Evolution 5200HD² TIC



## Evolution® 5200HD<sup>2</sup> TIC



**New!**

### Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Evolution 5200HD2 TIC, configured exactly the way you want it. See Bulletin 3400-50-MC for more information.

Proven handheld thermal imaging camera with a high ISDR\* for the Fire Service. Best-in-class image quality provides clearer, sharper, larger, more detailed images in all temperatures. With nominal image resolution of 80,000 pixels; 4 times the picture elements of other TICs; 38µ pixel pitch; 3.5” display. Optional 2X digital zoom, Heat Seeker, and Quick Temp features.

- Gives you the best unparalleled image in firefighting
- Shows the highest image definition over the widest temperature range of any Fire Service TIC
- Offers optional highly functional 2X Digital Zoom for enhanced picture imagery in Fire Service applications like search and rescue
- Combines today’s most advanced technology with a comfortable, time-proven, easy-to-use design

### Evolution 5200HD<sup>2</sup> TIC Configurations

10076618	Evolution 5200HD2 TIC complete with Heat Seeker Plus, Quick-Temp, Standard Charger, two batteries, wrist strap, carrying case, and Reflective Label Kit
10076619	Evolution 5200HD2 TIC complete with Heat Seeker Plus, Quick-Temp, Universal Truck Charger, two batteries, wrist strap, carrying case, and Reflective Label Kit
10076620	Evolution 5200HD2 TIC complete with Heat Seeker Plus, Quick-Temp, Standard Charger, two batteries, retractable lanyard, carrying case, and Reflective Label Kit
10076681	Evolution 5200HD2 TIC complete with Heat Seeker Plus, Quick-Temp, Universal Truck Charger, two batteries, and retractable lanyard
10076682	Evolution 5200HD2 TIC complete with Heat Seeker Plus, Quick-Temp, Standard Charger, two batteries, shoulder strap, carrying case, and Reflective Label Kit
10076683	Evolution 5200HD2 TIC complete with 2X Digital Zoom, Heat Seeker Plus, Quick-Temp, Standard Charger, two batteries, wrist strap, carrying case, and Reflective Label Kit
10076684	Evolution 5200HD2 TIC complete with 2X Digital Zoom, Heat Seeker Plus, Quick-Temp, Universal Truck Charger, two batteries, and wrist strap
10076685	Evolution 5200HD2 TIC complete with 2X Digital Zoom, Heat Seeker Plus, Quick-Temp, Standard Charger, two batteries, retractable lanyard, carrying case, and Reflective Label Kit
10076686	Evolution 5200HD2 TIC complete with 2X Digital Zoom, Heat Seeker Plus, Quick-Temp, Universal Truck Charger, two batteries, and retractable lanyard
10076687	Evolution 5200HD2 TIC complete with 2X Digital Zoom, Heat Seeker, Quick-Temp, Standard Charger, two batteries, shoulder strap, carrying case, and Reflective Label Kit

## Evolution 5600 TIC

MSA thermal imaging cameras are used by many of North America’s largest fire departments. For big city performance with value-driven features, choose MSA’s Evolution 5600 Thermal Imaging Camera with high resolution and detailed image quality. This versatile TIC provides detailed images (with a focal plane array of 120 x 120, nominal 15,000 pixels) over a wide temperature range, in addition to safety and other exclusive offerings of MSA’s Evolution Series cameras.

MSA’s highly functional Heat Seeker and Quick Temp functions deliver unmatched performance and superior image quality at all temperatures, employing an easy-to-use, time-tested design. User-friendly features and enhanced TIC performance help to maintain low lifetime costs. Most TICs trade image quality for a wider temperature range to keep the camera operating in high heat environments. However, the Evolution 5600 TIC provides refined image quality over comparable competitive TICs in Low Sensitivity mode.

Only MSA thermal imaging cameras deliver High Sense image quality at up to 320° F, the temperature range that most often matches that of structural fires.

In addition, only MSA offers Heat Seeker color images in both High and Low Sense modes. The affordable Evolution 5600 TIC offers high and low sensitivity, lightweight ergonomic design, Quick-Temp feature, and provides excellent image detail over a wide temperature range.

- Heat Seeker (provides colorization for hot objects)
- Instant on
- Instant mode switching
- Warnings on all shutdowns
- Shutter indicator
- Temperature bar and digital temperature

**New!**



### Evolution 5600 TIC Configurations

Temperature Readout		Description
Fahrenheit	Celsius	
10077996	10085464	Evolution 5600 TIC with Heat Seeker PLUS, Quick-Temp, standard charger, two rechargeable lithium ion batteries and plastic carrying case less NTSC video connector
10077997	10085465	Evolution 5600 TIC with Heat Seeker PLUS, Quick-Temp, universal truck charger and two rechargeable lithium ion batteries less NTSC video connector
10077998	10085466	Evolution 5600 TIC with Heat Seeker PLUS, Quick-Temp, standard charger, two rechargeable lithium ion batteries and plastic carrying case with NTSC video connector
10077999	10085467	Evolution 5600 TIC with Heat Seeker PLUS, Quick-Temp, universal truck charger and two rechargeable lithium ion batteries, with NTSC video connector

# FIRE SERVICE PRODUCTS

## Evolution 5000 Series Video Capture System

### Principles of Operation

MSA's Video Capture is a video recording system for Evolution 5000 Series Thermal Imaging Cameras. It offers fast and simple video recording of the original screen for documentation and training purposes. The small and easy-to-use stand-alone unit can be mounted and removed on any Evolution 5000 Series Thermal Imaging Camera within seconds. A new camera is not required to use this feature.

The system conveniently uses a standard flash memory card [RS-MMC]. With a card reader, the video clips can be downloaded to a computer, stored, viewed and followed up for documentation. The system offers up to 2 hours recording capability, providing a complete overview of the environment and incident in which the camera was used.

The Video Capture System features the same housing as the Evolution Transmitter, offering the same high durability, as well as the same lithium ion rechargeable battery and charger used in the whole Evolution 5000 Series of Thermal Imaging Cameras.

### Product Information

The Video Capture System (VCS) records the complete scene that the TIC sees. The system is capable of recording up to two hours of video, virtually eliminating the risk of a user missing critical information. The VCS is ideal for training and documentation purposes. A standard card reader stores the information and simply connects to a PC/laptop to download the recorded video. Still pictures can be captured from the video footage using available software programs like "Print Screen."



Evolution 5000 Series Video Capture System	
10071750	Video Capture Kit, complete with Video recorder, RS-MMC 512MB Storage Card, Card Reader, Instruction Manual, Battery and Carrying Case
10069792	RS-MMC Memory Card (512MB)

## Remote Wireless Video Transmission

MSA's Remote Wireless Video Transmission Systems are modular high-performance systems which allow transmission of video signals from the Evolution TICs to fully contained receiving stations.

State-of-the-art 2.4 GHz technology and electronic and imaging components ensure that the Remote Wireless Video Transmission System provides optimum performance for the firefighter. The systems operate at one of two user-selectable frequencies and have been integrally designed to allow for maximum user flexibility.

Remote Wireless Video Transmission	
10048135	Deluxe Receiver Kit – Includes receiving station and integrated 12" display, magnetic-mounted omni-directional antenna, wall-type and cigarette lighter power supplies, and BNC to RCA adapters in a hard-sided Pelican case
10048134	Mini Receiver Kit – Includes receiver, magnetic-mounted omni-directional antenna, wall-type and cigarette lighter power supplies, connection cable for external monitor, and BNC to RCA adapters in a soft-sided, easily transported case
10019650	Optional High Gain directional antenna with tripod mount
10020290	10-ft video BNC cable
10047573	Evolution 5000 External Transmitter

Thermal Imaging is a valuable tool for the fire service, but should not be relied upon as a sole means of navigation and should not be used in place of standard firefighting practices. It is recommended that you obtain specialized fireground training prior to using any TIC in an actual fire or emergency situation. Training can be obtained through local or state fire training academies, several private training entities, or fire service distributors.

### Tactical Thermal Imaging Training for Firefighters

Available from:



**SAFE-IR, INC.**  
 P.O. Box 297  
 Montgomery, NY 12549  
 Phone Toll-Free 1-877-472-3347  
 www.SAFE-IR.com



## Cairns Fire Helmets: Quality Craftsmanship Since 1836

Since 1836, Cairns has been the original manufacturer of leather firefighting helmets. Today, Cairns leather helmets retain the same authentic look and quality that generation after generation of firefighters have relied upon. And now, these helmets are also made with the added protection necessary for today's standards of safety in the firefighting industry.

Cairns also applies the same tradition of excellence to its newer lines of firefighting helmets. Both traditional and modern designs feature the very best in contemporary high-tech materials, such as

lightweight but durable fiberglass/Kevlar composites. The versatile Structural Helmet is made of tough high-temperature thermoplastic.

All helmets are available with many options, depending on the specific helmet model, such as a choice of colors, brim size, chinstraps, liner material, etc. Also, a variety of accessories is available to complement Cairns fire helmets. Faceshields, goggles, ear/neck protection, and fronts can all be selected to configure the exact helmet you need.

### Leather Helmets

The original leather helmet, individually hand-crafted to meet today's OSHA and NFPA standards with over 165 years of dependable performance.

#### Leather Helmet Features & Benefits

- Hand-crafted, 100% leather shell.
- Insurance against fireground damage with Cairns' 5-year shell replacement warranty.
- Non-corroding, high-temperature, glass-filled polymer faceshield/goggle hardware.
- Faceshield wing protectors for extra faceshield reinforcement.
- Nomex chinstrap with one-hand quick release buckle and postman slide allows quick and easy adjustment.
- Choice of Nomex or PBI/Kevlar earlap for increased neck/ear coverage and protection.
- High-temperature foam cap increases thermal and impact protection.

- High-temperature impact cap liner resists distortion at high temperatures.
- Comfortable fit for all head sizes between 6-3/8 inches and 8-3/8 inches.
- Large diameter helmehanger fits on larger hooks and racks.



*New Yorker N5A<sup>®</sup>  
(OSHA approved)*

*Houston N6A<sup>™</sup>  
(NFPA approved)*

**For ordering information, replacement parts and accessories, see the 2007 Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.**

### Traditional Helmets

Traditional style combined with high-tech performance.

#### Traditional Helmet Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.
- Exclusive shell release system for an extra margin of safety (except 880).
- Unique tube-lock system absorbs the shock of an impact.



*Classic 1000<sup>™</sup>*

*Cairns<sup>®</sup> 1014*

*Cairns<sup>®</sup> 1010*

*880 Tradition<sup>®</sup>*

**For ordering information, replacement parts and accessories, see the 2007 Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.**



# FIRE SERVICE PRODUCTS

## Defender® Visor for Cairns 1010 and 1044 Helmets

The new Defender Visor for MSA Cairns 1010 and 1044 Traditional Helmets offers eye protection from dust, dirt, and grit. Sleek and attractive construction allows fast, easy raising and lowering of your visor even with gloved hands. This visor's exclusive integral design is retractable for the ultimate in compact convenience. Standard clear and amber Tuffshield visor options are NFPA-compliant.

New Cairns 1010 and 1044 helmet assemblies incorporating the Defender Visor may be ordered through the Traditional Helmets Assemble-To-Order Matrix. A user-installable upgrade kit (includes new impact cap)

lets you install the Defender Visor in existing Cairns 1010 or 1044 Helmets yourself.

If you're in the market for a new Cairns 1010 or 1044 Helmet or if you've thought about replacing your existing impact cap, consider the streamlined advantage of the new NFPA-compliant MSA Defender Visor. Cairns 1010 and 1044 Traditional Helmets offer the perfect combination of durability and performance in a lightweight, high-performance design. Cairns HELMETS once again has incorporated the latest technological advances that firefighters come to expect from the leader.

**New!**



Standard 1010 Defender Configurations	
1010DS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Clear Defender Visor
1010DD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Clear Defender Visor
1010TS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Tuffshield Defender Visor
1010TD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Tuffshield Defender Visor

Standard 1044 Defender Configurations	
1044DS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Clear Defender Visor
1044DD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Clear Defender Visor
1044TS	Includes Standard Flannel Cushion Liner, Yellow Nomex Earlap, Silk-Screened 6" Eagle Front Holder and Tuffshield Defender Visor
1044TD	Includes Leather Cushion Liner, Flannel Crown Pad, PBI/Kevlar Earlap, Carved 6" Eagle Front Holder and Tuffshield Defender Visor

### Features and Benefits

- Available on both the Cairns 1010 and Cairns 1044 Fire Helmets
- Retractable eyewear system that's ready when you need it
- Available with a new helmet or as user-upgrade kit
- Quick-disconnect for fast lens change-out without the use of tools
- Never lose or misplace your goggles again
- Optically correct lens eliminates peripheral distortion

### Modern Helmets

Different models for applications such as structural firefighting, EMS/rescue and wildland firefighting.

#### Modern Helmet Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband (6 3/8 to 8 3/8) fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.
- Exclusive shell release system for an extra margin of safety (except 360S and HP3).
- Unique tube-lock system absorbs the shock of an impact (except 360S).



660C Metro™



Structural 360S®



Invader 664™



Intruder 990®



Phoenix 660™

**For ordering information, replacement parts and accessories, see the 2007 Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.**

## Cairns Rescue Helmets

### Rescue Helmets Features & Benefits

- Market-leading 5-year shell replacement warranty.
- Non-corroding, high-temperature-resistant, faceshield/goggle hardware.
- Rugged, high-temperature edge will not melt or drip.
- Easy front headband adjustment for proper SCBA mask fit.
- Simple rear ratchet height adjustment to fit all head sizes.
- Headband (6 3/8 to 8 3/8) fits a wide variety of head sizes.
- Durable helmet hanger fits on large hooks and resists bending.
- Minimal parts for lower service cost and easier maintenance.

**New!**



Rescue 360R™



Commando HP3®

**New!**



Rescue 360R-13

**For ordering information, replacement parts and accessories, see the 2007 Fire Helmets Catalog (Bulletin 3600-01-MC) or contact your MSA Fire Service Distributor.**

## Standard Fronts

Made with your choice of high-gloss patent leather or dull-finish genuine leather reinforced with a high-temperature, shrink-resistant back layer and sewn with high-temperature, fire-retardant Nomex thread.

### The Choice Is Yours!

Standard fronts offer over 27 million possible configurations! Design your own standard front by choosing from the options and then indicating your preferences by calling 1-877-MSA-FIRE to place your order.



## Crash Fire Rescue (CFR) Proximity System

- Easy to don and doff, this CFR System is compliant with NFPA 1976–2000.
- Designed and approved for use with the Metro 660C, Invader 664, Cairns 1010 and Cairns 1044 Fire Helmets, it will not interfere with the SCBA while in use.
- Components consist of an aluminized PBI/Kevlar layer, vapor barrier and inner layer.



## Wildland® T Firefighters' Helmets

The Wildland T Firefighters' Helmet from MSA provides excellent protection for workers who must fight fires in forest, field and woodland environments.

Both Wildland T hat and cap models can be equipped with a choice of Nomex ear/neck protectors or Nomex ear/neck/throat protectors. The helmets' new **ultra-lightweight** thermoplastic construction ensures optimum comfort during extended periods of firefighting in the outdoors.

They are SEI-certified and meet or exceed all applicable requirements of ANSI Standard Z89.1 (Class E) 2003 and NFPA 1977–2005.

For more details, ask for Bulletin 0606-15-MC.

**Certified NFPA-compliant.**



Wildland T Cap with chinstrap



Wildland T full-brimmed Hat with chinstrap

# FIRE SERVICE PRODUCTS

## Protective Eyewear for Emergency Services

### Pyrenees™ Protective Eyewear



- Dual injection soft tip temples
- Available in several frame and lens colors
- Full side protection
- Meets Z87+ and CSA Z94.3.

#### Pyrenees Eyewear

10033716	Clear lens, black frame
10033717	Gray lens, black frame
10033740	Amber anti-fog lens, black frame
10033718	Clear anti-fog lens, black frame
10033719	Gray anti-fog lens, black frame

### MAG™ Series Protective Eyewear

*Magnification Built Right In*



- Full side protection
- Dual-injected soft tip temples
- A choice of three bifocal powers: 1.5, 2.0 and 2.5
- Polycarbonate lens for high impact and 99.9 UV protection
- Ergonomic temples for better fit and comfort

#### MAG Series Eyewear

10068832	Mag 1.5 Clear lens, black frame and diopter strength of 1.5
10065847	Mag 2.0 Clear lens, black frame and diopter strength of 2.0
10068833	Mag 2.5 Clear lens, black frame and diopter strength of 2.5

### Aurora™ Protective Eyewear



*Back by popular demand!*

- 9-base curved lens
- Spring-comfort adjustable nose bridge
- Soft-end temples
- Vertical temple adjustment

#### Aurora Eyewear

10026005	Clear anti-fog lens, black frame
10026006	Gray anti-fog lens, black frame
10026007	Amber anti-fog lens, black frame
10026008	Blue anti-fog lens, black frame
10034931	Clear lens in deluxe eyewear pouch with spare Gray and Amber lens, cleaning cloth—Fire Service logo on lens and pouch

### Tradewind™ Protective Eyewear



- **Indoor-outdoor** light gold or clear lens
- Tuff-Stuff™ scratch-resistant lens coating
- Adjustable temples and integrated side shields
- Brow protection
- UV-400 protection (mirrored lens only)

#### Tradewind Eyewear

697506	Two-tone temple, light gold lens
10002545	All black temples, clear lens

### Easy-Flex™ Protective Eyewear

*Flex for a Comfortable Fit*



- 99% UV protection
- Polycarbonate lenses for high-impact protection
- Temples and frame flex to fit a wide variety of faces
- Hard-coated lenses
- A choice of clear, gray, amber, "180 blue" mirror and "sky orange" mirror lenses

#### Easy-Flex Eyewear

10070917	Clear lens, blue-gray frame
10070918	Gray lens, blue-gray frame
10070919	Amber lens, blue-gray frame
10070920	"180 blue" mirror lens, blue-gray frame
10070921	"Sky orange" mirror lens, metallic sand frame

### Eyewear Accessories



*Box of 100 pre-moistened towelettes.*



*Belt loop-style pouch to protect your eyewear*

#### Eyewear Accessories

10022087	Pre-Moistened Towelettes (box of 100)
10034943	Deluxe Eyewear Pouch, black



## Hearing Protection

### Reusable Ear Plugs

#### Tri-Seal™ Reusable Silicone Ear Plugs (NRR – 25dB)

Ruggedly designed, made of soft, comfortable silicone, these reusable ear plugs are easy to insert in the ear and economical. They offer protection comparable to many MSA earmuffs. Tri-Seal corded plugs are available in dispenser boxes of 100 individually packaged pairs.



### Disposable Ear Plugs

#### FormFit™ Disposable Foam Ear Plugs (NRR – 28dB)

For users who prefer to dispose of their plugs after each use, the FormFit plug is the answer. Easy to use and affordable, FormFit ear plugs offer very aggressive noise reduction while being very comfortable to wear. Available in corded and uncorded versions, in dispenser boxes of 200 pair.



### HPE Headband Model (NRR – 26dB)

Designed specifically for very high noise levels, the powerful HPE Muff is ideal for areas with intense noise. The HPE Muff provides the highest-rated protection available for low-frequency environments. A padded headband and super-soft ear cushions guarantee all-day comfort while ensuring full-time protection.



HPE Headband Model

### EXC Headband Model (NRR – 24dB)

The ear muff is so comfortable that you always want to wear it. Unique injection molded inserts provide excellent attenuation and maximum space for the ears inside the cap. Headband model offers force adjustment for individual fit.



EXC Headband Model

### CutOff Pro Headband Model (NRR – 24dB)

Built-in level dependent function protects without your feeling isolated

- Lets through speech and other harmless sounds while protecting you from harmful noise
- Battery life of 1000 hours
- Amplification of weak sounds
- Auxilliary input for connection of external devices



CutOff Pro Headband Model

Ear Plugs	
Reusable Ear Plugs (NRR 25dB)	
10005607	Tri-Seal Silicone Ear Plugs (corded) Dispenser box (suitable for wall hanging) of 100 individ. packaged pairs
Disposable Ear Plugs	
Conical-Shaped Ear Plugs (NRR-31dB)	
10051347	FormFit Disposable Molded Urethane Foam Ear Plugs (corded) Dispenser Box (suitable for wall hanging) of 200 individually packaged pairs
10051348	FormFit Disposable Molded Urethane Foam Ear Plugs (non-corded) Dispenser Box (suitable for wall hanging) of 200 individually packaged pairs
Round Ear Plugs (NRR-29dB)	
10009333	FormFit Urethane Foam Ear Plug, (non-corded) Dispenser Box of 200 individually packaged pairs
10009332	FormFit Urethane Foam Ear Plugs (corded) Dispenser Box of 200 individually packaged pairs

Headband Models	
10061271	HPE—headband model
10061291	Hygiene Kit for HPE, complete with cushions and inserts
10061229	EXC—headband model
10061292	Hygiene Kit for EXC, complete with cushions and inserts
10061278	CutOff Pro—headband model
10061293	Hygiene Kit for CutOff Pro, complete with cushions and inserts
Downloads for CutOff Pro Model	
10061538	3.5 mm Stereo Plug
10061539	3.5 mm Mono Plug
10061540	2.5 mm Mono Plug
10062072	Hands Free, 2.5 mm Stereo Plug

# FIRE SERVICE PRODUCTS

## SOLARIS® FIRE Multigas Detector

The Solaris Fire Multigas Detector is an affordable, durable, reliable, easy-to-use portable instrument for detecting the presence of O<sub>2</sub>, H<sub>2</sub>S, CO and combustible gas. It is designed to withstand rough handling in harsh environments. Best of all, it delivers MSA's commitment to quality at the smallest size and, even smaller price!

The Solaris Fire Multigas Detector is ergonomically designed and provides the best value in its class. At a low, competitive cost, it provides state-of-the-art engineering and the high quality you've come to expect from MSA.

- Unobtrusive lightweight design—weighs under 8 oz. and measures 4-1/2"H x 2-1/2"W x 1-1/4"D
- Rugged construction—performs reliably in the harshest environments
- Easily configured by the user to detect up to four gases simultaneously—users can also easily modify most instrument functions
- World-class alarm system—high-intensity LED visual alarms, audible alarm, strong vibrating alarm
- Versatile display—backlighting provides exceptional contrast, alphanumeric message bar
- Simple calibration—intuitive and accomplished with the push of a single button
- Long-life battery—rechargeable lithium ion battery provides 14+ hours of continuous operation, or 3 AA alkaline batteries continuously operate the unit for 12+ hours
- Galaxy® Test System compatibility—automatically calibrate instruments and track calibration records
- Optional sampling pump
- Two-year, all-inclusive warranty



### Solaris Fire Kits

All kits include configured, datalogging, UL/cUL approved SOLARIS FIRE instrument with charger, calibration cap assembly, instruction card and manual on CD-ROM, a convenient to stow, durable red carrying case, and a nylon orange instrument carrying case free of charge!

Solaris Fire Multigas Detectors		
Solaris Fire with Lithium Battery	Solaris Fire with Alkaline Batteries	
<b>Standard Kits (include datalogging options)*</b>		
10071201	10071209	4- Gas Instrument
10071202	10071210	3-Gas Instrument (LEL, O <sub>2</sub> , CO)
<b>Industrial Kits (include Econo-Cal kit and datalogging option)*</b>		
10071203	10071211	4- Gas Instrument
10071204	10071212	3-Gas Instrument (LEL, O <sub>2</sub> , CO)
<b>Deluxe Kits (include sampling pump, Econo-Cal kit and datalogging option)*</b>		
10071205	10071213	4- Gas Instrument
10071206	10071214	3-Gas Instrument (LEL, O <sub>2</sub> , CO)

\* To download the Solaris data, the MSA data docking module (P/N 710946) must also be purchased.



Replacement Parts and Accessories	
10049406	4-Gas (CO, H <sub>2</sub> S, O <sub>2</sub> & Combustible) Sensor replacement kit
10046944	Replacement CO Sensor
10046945	Replacement H <sub>2</sub> S Sensor
10046946	Replacement O <sub>2</sub> Sensor
10046947	Replacement Combustible Sensor
10047967	Pre-Filter for CO sensor
10044927	Protective felt for sensor inlets
10049052	Cover label for empty sensor location

See pages 44–50 for calibration accessories.

## Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Solaris Multigas Detector, configured exactly the way you want it. You can choose from an extensive line of base instrument components and accessories. See the ATO chart below to make your selections.

Solaris Fire Multigas Detector Assemble-to-Order (ATO) Options		
<p><b>A. Datalog Options</b></p> <p>The datalog option enables the Solaris Fire Multigas Detector to store exposure data for easy retrieval at a later time.</p> <p>To download the Fire Solaris data, the MSA datalog kit (p/n 710946) must also be purchased.</p>	<p><b>Datalog Options</b></p> <p>Standard Rechargeable Instrument (includes datalogging)</p> <p>Standard Alkaline Instrument (includes datalogging)</p>	<p><b>Code</b></p> <p>D</p> <p>B</p>
<p><b>B. Combustible Sensor Options</b></p> <p>If a combustible gas sensor is desired, two options are available: 0-100% LEL or 0-5% CH<sub>4</sub>.</p>	<p><b>Combustible Sensor Options</b></p> <p>None</p> <p>0-100% LEL</p> <p>0-5% vol CH<sub>4</sub></p>	<p><b>Code</b></p> <p>0</p> <p>L</p> <p>M</p>
<p><b>C. Oxygen Sensor Options</b></p> <p>To choose to have an oxygen sensor installed in your new Solaris Fire Multigas Detector, choose selection 1. For no oxygen sensor, enter a “0”.</p>	<p><b>Oxygen Sensor Options</b></p> <p>None</p> <p>O<sub>2</sub> Sensor (0-25 vol%)</p>	<p><b>Code</b></p> <p>0</p> <p>1</p>
<p><b>D. Carbon Monoxide Sensor Options</b></p> <p>To choose to have a carbon monoxide sensor installed in your new Solaris Fire Multigas Detector, choose selection 1.</p> <p>For no carbon monoxide sensor, enter a “0”.</p>	<p><b>Carbon Monoxide Sensor Options</b></p> <p>None</p> <p>CO Sensor (0-500 ppm)</p>	<p><b>Code</b></p> <p>0</p> <p>1</p>
<p><b>E. Hydrogen Sulfide Sensor Options</b></p> <p>To choose to have a hydrogen sulfide sensor installed in your new Solaris Fire Multigas Detector, choose selection 1.</p> <p>For no hydrogen sulfide sensor, enter a “0”.</p>	<p><b>Hydrogen Sulfide Sensor Options</b></p> <p>None</p> <p>H<sub>2</sub>S Sensor (0-200 ppm)</p>	<p><b>Code</b></p> <p>0</p> <p>1</p>
<p><b>F. Sampling Pump</b></p> <p>It is now possible to combine the sampling pump and probe for the Solaris Fire unit into one easy-to-use accessory. The pump probe is very versatile and can be attached to the Solaris Fire instrument in seconds.</p> <p>The built-in Water Stop® filter helps to ensure the sampling system is not contaminated with dirt and debris during use.</p>	<p><b>Sampling Pump</b></p> <p>None</p> <p>Universal pump probe</p>	<p><b>Code</b></p> <p>0</p> <p>1</p>
<p><b>G. Calibration Kits</b></p> <p>MSA provides two options for performing instrument calibration. The cost-effective Econo-Cal (34 liter) cylinder and fixed flow regulator provide an economical means to calibrate the Solaris instrument. The Model RP calibration kit also has a fixed flow 0.25 lpm regulator and provides the user with a larger capacity (58 liter) calibration gas cylinder.</p>	<p><b>Calibration Kit Options</b></p> <p>None</p> <p>Econo-Cal Calibration Kit</p> <p>Model RP Calibration Kit</p>	<p><b>Code</b></p> <p>0</p> <p>1</p> <p>2</p>
<p><b>H. Instrument Approvals</b></p> <p>It is now possible to select the specific type of approval that a Solaris Fire instrument possesses. Default approval for North America will be granted by Underwriters Laboratory (UL). The Solaris Fire UL approval label is recommended for the United States and Mexico. The Solaris Fire CSA approval label is recommended for Canada.</p>	<p><b>Instrument Approvals</b></p> <p>Underwriters Laboratory (UL)</p> <p>CSA</p> <p>CSA/US (Solaris alkaline)</p>	<p><b>Code</b></p> <p>U</p> <p>C</p> <p>A</p>

### Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your MSA Fire Service distributor to place your order.

Selection ...

**A-SOLFIRE-**  -    -



# FIRE SERVICE PRODUCTS

## Sirius® PID Multigas Detector for the Fire Service

### One PID, Four Gases...Detects Hundreds of Chemicals

The Sirius Multigas Detector provides the solution you have looked for in one complete package; incredible performance, maximum simplicity, and durable design all with MSA's commitment to quality.

#### Tremendous Flexibility

Users are able to simultaneously monitor for volatile organic compounds with low vapor pressures while measuring for combustible, toxic and oxygen deficient atmospheres within one reliable, easy-to-use, durable unit.

#### Reliable PID performance

Integrating proprietary PID sensor design (patent pending) into our proven reliable multigas detector designs, such as the designs used in the Orion and Solaris 4-gas multigas detectors, make this combination a dependable winner and allows users to get their monitoring done reliably and quickly.

#### User friendly software

Easy-to-use software allows users to focus on their tasks at hand.

#### Superior patent pending PID sensor design

Superior PID sensor design reduces maintenance time and cost.

#### Flexible configurations

This design combines two instruments into one.

#### Loud, attention grabbing alarm system

The Sirius Multigas Detector provides outstanding alarms to clearly warn users of a hazardous situation.

#### Interchangeable lithium-ion and alkaline battery packs

Keep instruments running 24 hours a day, 7 days a week.

#### Easy calibration and compatibility with MSA's Total Instrument Manager

Increase user safety by easily ensuring proper sensor performance.



Sirius Multigas Detector Kits																					
	Part #	10.6 eV	LEL	O2	CO	H2S	Li Chr	Alka Bat	Veh Chr	10' line	10' Tef	1' probe	Retr Clip	Red Boot	Cor Jac	Cal Kit	Dlink Kit	Red Case	StdLp Cap	LTS Case	Clean Kit
Deluxe FS LEL 4-Gas Lithium Ion PID	10051155	•	•	•	•	•	•			•		•	•	•		•		•	•		
Deluxe FS LEL 3-Gas H2S Lithium Ion PID	10051156	•	•	•		•	•			•		•	•	•		•		•	•		
Deluxe FS LEL 3-Gas CO Lithium Ion PID	10051157	•	•	•	•		•			•		•	•	•		•		•	•		
Deluxe FS LEL 4-Gas Lithium Ion PID Datalog	10051158	•	•	•	•	•	•			•		•	•	•		•	•	•	•		
Deluxe FS LEL 4-Gas Alkaline PID	10051159	•	•	•	•	•		•		•		•	•	•		•		•	•		
Deluxe FS LEL 3-Gas H2S Alkaline PID	10051160	•	•	•		•		•		•		•	•	•		•		•	•		
Deluxe FS LEL 3-Gas CO Alkaline PID	10051161	•	•	•	•			•		•		•	•	•		•		•	•		
Deluxe FS LEL 4-Gas Lithium Ion/Alk PID DLog	10051162	•	•	•	•	•	•	•		•		•	•	•		•	•	•	•		
Std FS LEL 4-Gas Lithium Ion PID	10051163	•	•	•	•	•	•			•		•	•	•		•		•	•		
Std FS LEL 3-Gas H2S Lithium Ion PID	10051164	•	•	•		•	•			•		•	•	•		•		•	•		
Std FS LEL 3-Gas CO Lithium Ion PID	10051165	•	•	•	•		•			•		•	•	•		•		•	•		
Std FS LEL 4-Gas Alkaline PID	10051166	•	•	•	•	•		•		•		•	•	•		•		•	•		
Std FS LEL 3-Gas H2S Alkaline PID	10051167	•	•	•		•		•		•		•	•	•		•		•	•		
Std FS LEL 3-Gas CO Alkaline PID	10051168	•	•	•	•			•		•		•	•	•		•		•	•		
Std FS LEL 4-Gas Lithium Ion PID no case	10051169	•	•	•	•	•	•			•		•	•	•		•		•	•		
Std FS LEL 4-Gas Lilon/Alk PID no jackets DLog	10051170	•	•	•	•	•	•	•		•		•				•	•	•	•		
Econo FS LEL 4-Gas Alkaline PID	10051151	•	•	•	•	•		•											•		
Econo FS LEL 3-Gas H2S Alkaline PID	10051152	•	•	•		•		•											•		
Econo FS LEL 3-Gas CO Alkaline PID	10051153	•	•	•	•			•											•		
Econo FS LEL 4-Gas Lithium Ion PID	10051154	•	•	•	•	•	•												•		
First Responder 4-Gas PID	10051176	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
First Responder FS 4-Gas PID	10051175	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

See pages 44–50 for calibration accessories.

## Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Sirius Detector, configured exactly the way you want it. You can choose from an extensive line of base instrument components and accessories. See the ATO chart below to make your selections.

Sirius Multigas Detector Assemble-to-Order (ATO) Options			
<b>A. Photoionization Detector Lamp Option</b> To choose the standard 10.6 eV lamp for most VOCs, choose selection A. For the low energy 9.8 eV lamp with the most VOC discrimination, enter selection B.	<b>Photoionization Detector Lamp</b> PID with 10.6 eV Lamp (0–2000 ppm) A PID with 9.8 eV Lamp (0–2000 ppm) B	<b>Code</b>	
<b>B. Combustible Sensor Option</b> To choose to have your MSA 20L combustible sensor reading set to be displayed as 0–100% LEL, enter selection “L”. For a display of 0–5% methane, enter an “M”.	<b>Combustible Sensor</b> None 0–100% LEL Pentane 0–5% vol Methane	<b>Code</b>	
<b>C. Oxygen Sensor Options</b> To choose to have an oxygen sensor installed in your new Sirius Fire Multigas Detector, choose selection 1. For no oxygen sensor, enter a “0”.	<b>Oxygen Sensor</b> None O <sub>2</sub> (0–25% vol)	<b>Code</b>	
<b>D. Carbon Monoxide Sensor Options</b> To choose to have a carbon monoxide sensor installed in your new Sirius Fire Multigas Detector, choose selection 1. For no carbon monoxide sensor, enter a “0”.	<b>Carbon Monoxide Sensor</b> None CO Sensor (0–500 ppm)	<b>Code</b>	
<b>E. Hydrogen Sulfide Sensor Options</b> To choose to have a hydrogen sulfide sensor installed in your new Sirius Fire Multigas Detector, choose selection 1. For no hydrogen sulfide sensor, enter a “0”.	<b>Hydrogen Sulfide Sensor</b> None H <sub>2</sub> S Sensor (0–100 ppm)	<b>Code</b>	
<b>F. Battery Pack &amp; Charger Option</b> You may choose between MSA’s lithium ion battery pack which includes a standard lithium ion battery charger, or the convenience of an alkaline battery pack. You may also choose to have both battery pack types included with your new Sirius Multigas Detector.	<b>Battery Pack/Charger</b> None Lithium ion, includes charger and cord Replaceable alkaline Both lithium ion and replaceable alkaline battery packs	<b>Code</b>	
<b>G. Vehicle Charger Option</b> If you would like to order the vehicle charger for your new Sirius Multigas Detector, choose selection “1.”	<b>Vehicle Charger</b> None Vehicle Charger	<b>Code</b>	
<b>H. Sampling Lines</b> MSA’s Quick-Connect sampling lines are of the highest quality materials, guaranteed to provide accurate sampling concentrations. Sirius Multigas Detector sampling lines all include a Quick-Connect air-line fitting for easy attachment and tight seal. For sampling jet fuel, enter selection 3 for the 10’ teflon sampling line option, or selection 4 for the 25’ sampling line option.	<b>Sampling Lines</b> None 10-foot polyurethane 25-foot polyurethane 10-foot teflon (for jet fuel sampling) 25-foot teflon (for jet fuel sampling) 3-foot polyurethane coiled	<b>Code</b>	
<b>I. Sampling Probes</b> MSA’s sampling probes are durable and comfortable to use. The built-in Water Stop® filter ensures your sampling system is not contaminated with dirt and debris if the probe tip is dipped in water. You must order a probe if you order a sampling line as we strongly recommend you operate the instrument with this filter in place.	<b>Sampling Probes</b> None 1-foot probe 3-foot probe 8-inch probe	<b>Code</b>	
<b>J. Carrying Attachments</b> While a high-strength stainless steel D-Ring is offered with this instrument at no extra charge, there are three other options for handling the instrument: the retractable carrying line for use with the D-Ring, the shoulder harness and the wrist harness to be used on the user’s arm with a Level A suit.	<b>Carrying Attachments</b> None Retractable carrying line with belt clip Shoulder harness Wrist harness	<b>Code</b>	
<b>K. Instrument Jacket and Boots</b> To offer the highest level of instrument protection, you may choose a protective red rubber boot and harness, or a cordura jacket. You may also order both options by choosing selection C.	<b>Instrument Jacket/Boot</b> None Red boot with harness Cordura jacket with harness	<b>Code</b>	
<b>L. Calibration Kits</b> You may choose one of two calibration options for your Sirius Multigas Detector. The fixed-flow .25 lpm regulator includes a multigas calibration cylinder and also an isobutylene calibration gas cylinder if a PID selection is chosen. You may also order just the isobutylene calibration kit with gas cylinder.	<b>Calibration Accessories</b> None Econo-Cal Fixed-Flow Regulator Calibration Kit (includes multigas and isobutylene cylinders) Model RP Fixed-Flow Regulator Calibration Kit (includes multigas and isobutylene cylinders) Isobutylene Calibration Kit (includes gas cylinder)	<b>Code</b>	
<b>M. Data Communication Kit</b> If you need to track the readings and operation of your Sirius Multigas Detector, consider ordering the instrument with the optional built-in datalogging module. This option also provides STEL and TWA capabilities.	<b>Data Communication</b> None Data link module Data link module and software kit	<b>Code</b>	
<b>N. Packaging</b> Your new Sirius Multigas Detector may be protected by a standard red plastic case, or by a black premium field case. You may also choose the option of a long-term storage kit case for emergency response, large enough to hold the Sirius Multigas Detector, calibration cylinders, spare sensors, spare PID lamp and lithium ion battery pack with charger, spare alkaline battery pack, lamp cleaning kit and simple-to-read and understand refresher instructions.	<b>Packaging</b> Standard shipping carton Standard red PVC case Premium black field case Long-term storage kit case Long-term storage kit basic includes PID lamp	<b>Code</b>	
<b>O. PID Lamp Cap</b> The standard easy-access lamp cap is included with your Sirius Multigas Detector at no extra charge. You may also choose a tamper-proof lamp cap.	<b>PID Cap Lamp</b> None Standard easy-access lamp cap Alternative tamper-proof lamp cap	<b>Code</b>	

### Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your MSA Fire Service distributor to place your order.

Selection ...

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<b>A-SIRIUS -</b>														

# FIRE SERVICE PRODUCTS

## Orion® Multigas Detector for the Fire Service

The Orion Multigas Detector is a low-cost, reliable, and easy-to-use portable instrument for detecting the presence of O<sub>2</sub>, H<sub>2</sub>S, CO and combustible gas. It will stand up to the roughest handling in even the toughest environments.

### Features

- One-button calibration
- Long-life battery
- Carbon-filled nylon case
- Tough, durable construction
- Built-in pump
- TIM® System compatibility
- Large, easy-to-read display
- Durable sensors
- Link™ Software compatibility

### Approvals

The Orion Multigas Detector has been designed to meet intrinsic safety testing requirements in certain hazardous atmospheres. The Orion Multigas Detector has been approved by UL and cUL for use in Class I, Division I, Groups A, B, C, and D.



### Orion Multigas Detector Kits

			LEL	O <sub>2</sub>	CO	H <sub>2</sub> S	NiMH Batt/Charger	Alkaline Batt	Calibration Cap	Internal Pump	10-ft Line	1 ft Probe	Calibration Kit	Red Case	Red Boot
<b>DELUXE</b>	Deluxe FS 4-Gas NiMH	10026367	•	•	•	•	•			•	•	•	•	•	•
	Deluxe FS 4-Gas Alkaline	10026368	•	•	•	•		•		•	•	•	•	•	•
	Deluxe FS 3-Gas H <sub>2</sub> S NiMH	10026369	•	•		•	•			•	•	•	•	•	•
	Deluxe FS 3-Gas H <sub>2</sub> S Alkaline	10026490	•	•		•		•		•	•	•	•	•	•
	Deluxe FS 3-Gas CO NiMH	10026491	•	•	•		•			•	•	•	•	•	•
	Deluxe FS 3-Gas CO Alkaline	10026492	•	•	•			•		•	•	•	•	•	•
	Deluxe FS 4-Gas NiMH, Datalog	10030394	•	•	•	•	•			•	•	•	•	•	•
<b>STANDARD</b>	Standard FS 4-Gas NiMH	10026493	•	•	•	•	•			•	•	•		•	•
	Standard FS 4-Gas Alkaline	10026494	•	•	•	•		•		•	•	•		•	•
	Standard FS 3-Gas H <sub>2</sub> S NiMH	10026495	•	•		•	•			•	•	•		•	•
	Standard FS 3-Gas H <sub>2</sub> S Alkaline	10026496	•	•		•		•		•	•	•		•	•
	Standard FS 4-Gas NiMH, less case	10030421	•	•	•	•	•			•	•	•			•
	Standard FS 3-Gas CO NiMH	10026497	•	•	•		•			•	•	•		•	•
	Standard FS 3-Gas CO Alkaline	10026498	•	•	•			•		•	•	•		•	•
<b>ECONOMY</b>	Economy FS 4-Gas Alkaline	10026499	•	•	•	•		•	•						
	Economy FS 3-Gas H <sub>2</sub> S Alkaline	10026500	•	•		•		•	•						
	Economy FS 3-Gas CO Alkaline	10026501	•	•	•			•	•						
	Economy FS 4-Gas NiMH	10030395	•	•	•	•	•		•						

### Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Orion Multigas Detector, configured exactly the way you want it. You can choose from an extensive line of base instrument components and accessories. See the ATO chart on the following page to make your selections.

See pages 44–50 for calibration accessories.





# FIRE SERVICE PRODUCTS

Orion Multigas Detector for the Fire Service Assemble-to-Order (ATO) Options			
<b>A. Combustible Sensor Option</b> To choose to have MSA's own long-life 20L combustible sensor installed in your new Orion Multigas Detector, choose selection 1. For no combustible sensor, enter a "0."	<b>Combustible Sensor</b> None 0-100% LEL Pentane	<b>Code</b> 0 1	<b>I. Sampling Probes</b> MSA's sampling probes are durable and easy to use. The built-in Water Stop® filter ensures your sampling system is not contaminated with dirt and debris if the probe tip is dipped in water. You must order a probe if you order a sampling line as we strongly recommend you operate the instrument with this filter in place.
<b>B. Oxygen Sensor Option</b> To choose to have an oxygen sensor installed in your new Orion Multigas Detector, choose selection 1. For no oxygen sensor, enter a "0."	<b>Oxygen Sensor</b> None O <sub>2</sub> (0-25%)	<b>Code</b> 0 1	<b>J. Carrying Attachments</b> While a high-strength, nylon clip is offered with the instrument at no charge, a swivel belt loop kit, which allows quick release from your belt with a half turn, is also available.
<b>C. Carbon Monoxide Sensor Option</b> To choose to have a carbon monoxide sensor installed in your new Orion Multigas Detector, choose selection 1. For no carbon monoxide sensor, enter a "0."	<b>Carbon Monoxide Sensor</b> None CO Sensor (0-999 ppm)	<b>Code</b> 0 1	<b>K. Instrument Jacket</b> For the highest levels of environmental and rough handling protection, you can order from a variety of jackets and boots for your Orion Multigas Detector.
<b>D. Hydrogen Sulfide Sensor Option</b> To choose to have a hydrogen sulfide sensor installed in your new Orion Multigas Detector, choose selection 1. For no hydrogen sulfide sensor, enter a "0."	<b>Hydrogen Sulfide Sensor</b> None H <sub>2</sub> S Sensor (0-200 ppm)	<b>Code</b> 0 1	<b>L. Calibration Kits</b> You can choose one of two calibration options for your Orion Multigas Detector. The flexible RP kit provides a constant flow regulator that is reused and provides the greatest accuracy. The squirt gas test kit provides a very economical means to verify instrument calibration.
<b>E. Battery Pack Options</b> You can choose between MSA's NiMH rechargeable batteries which will run your Orion Multigas Detector for up to 16 hours in pump mode and 20 hours in diffusion mode, or you can choose the convenience of alkaline batteries. For ultimate flexibility, choose "both!"	<b>Battery Pack</b> Standard NiMH rechargeable (comes with standard AC charger) Replaceable alkaline Both NiMH and alkaline	<b>Code</b> A B C	<b>M. Data Communications Kit</b> If you need to track the readings and operation of your Orion Multigas Detectors, consider ordering them with the optional built-in datalogging module. This option also provides STEL and TWA capabilities.
<b>F. Battery Charger Options</b> If you order your Orion Multigas Detector with a rechargeable battery pack, the charger is included in the price. If you want the optional vehicular charger adapter, choose selection "1."	<b>Vehicle Charger</b> None/Standard AC charger Vehicular charger	<b>Code</b> 0 1	<b>N. Packaging Options &amp; Carrying Cases</b> You can further protect your Orion Multigas Detector with optional carrying cases. For ease of transport and handling, these cases can be even be ordered to accommodate calibration accessories. With the premium cases, a simple to understand training videotape is included at no extra charge.
<b>G. Sampling Methods</b> The Orion Multigas Detector's patented Pulsecheck™ pump technology leads the industry. If you chose the built-in pump, operating directly off the instrument batteries, you are assured of an audible pump fault alarm and you do not need to maintain a second set of batteries. If you are ordering diffusion instruments, a calibration cap will be included to calibrate your instruments.	<b>Sampling Methods</b> None Integral, Pulsecheck pump	<b>Code</b> D P	<b>Carrying Attachments</b> None 1-foot straight 3-foot straight 3-foot, holes near tip 3-foot, holes near handle Hot-gas sampling probe
<b>H. Sampling Lines</b> MSA's high speed sampling lines are of the highest quality materials guaranteed to not alter sample concentration. Screw fittings with O-Ring couplings at each end ensure there are no leaks when the system is operating.	<b>Sampling Lines</b> None 3-foot coiled 5-foot coiled 10-foot 15-foot 25-foot	<b>Code</b> 0 1 2 3 4 5	<b>Belt Clip</b> Unbreakable nylon Swivel belt loop
			<b>Instrument Jacket</b> None Red Rubber Boot Black Leather Case Orange Cordura Jacket
			<b>Data Communications</b> None Orion link module Module and download software
			<b>Calibration Accessories</b> None Model RP Calibration Kit (includes gas) Squirt Gas Check Kit (includes gas)
			<b>Packaging &amp; Carrying Cases</b> Std shipping container only Red plastic case w/space for cylinder, with video

## Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your MSA Fire Service distributor to place your order.

Selection ...

**A-ORION-**  -    -  -    -

# FIRE SERVICE PRODUCTS

## Orion G Multigas and Leak Detector

The Orion G Multigas and Leak Detector is the only instrument you need for detecting combustible gas leaks on appliances, flues and underground pipes. With its internal O<sub>2</sub>, H<sub>2</sub>S, CO and LEL sensors, it also is great for confined space applications.

### Features

#### Multi-Function Flexibility

- Indoor or outdoor (or both)
- Configure any combination of gases including O<sub>2</sub>, CO and H<sub>2</sub>S
- For low-level leaks, 0-100% LEL or CH<sub>4</sub> 0-100% by volume

#### Bar-Hole Probe Filter Trap

- Bar-hole probe filter trap is designed to keep out water and dirt
- "Quick connect" feature allows user to attach probe or sampling line while minimizing the possibility of air leaks

#### Superior Design

- Sensor is located on the end of a flexible gooseneck probe, allowing sensor to be placed closer to item being tested
- Super-fast response time
- Fits easily and comfortably in the hand
- Intrinsically safe.

#### Long-Life Battery

- Accommodates either a NiMH battery pack or alkaline batteries
- Provides up to 16 hours of continuous instrument operation

#### Durable Sensors

- MSA Series 20L sensor provides up to 50 times the silicone poison tolerance, considerably expanding sensor service life
- Fast-reacting, solid-state 20G sensor in tip of probe
- All sensors are easy to maintain

#### One-Button Calibration

- Calibration is accomplished with push of a single button (with appropriate calibration gas)

#### Tough, Durable Construction

- Excellent resistance to penetration from water and dust
- Weather-resistance rating of IP54

#### Large, Easy-To-Read Display

- One of the largest displays of any multigas detector on the market
- Backlighting provides exceptional contrast

#### Built-In Pump

- Built-in pump for remote sampling of the environment and fast response to leaks.



Orion G Multigas and Leak Detector with Flexible Probe

Orion G Multigas and Leak Detector with Coiled Probe

### Orion G Multigas Leak Detector Kits Flexible Probe

		% LEL	Oxygen	Carbon Monoxide	Hydrogen Sulfide	Alkaline	NiMH Battery Pack	Vehicle Charger	Quick Connect	Threaded Connection	5 ft Sampling Line	1 ft Probe	Red Box	Carriage Case	Calibration Kit	Datalogging	Red Plastic Carry Case
Deluxe 4-gas	10041472	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Deluxe 3-gas (H <sub>2</sub> S)	10041473	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Deluxe 3-gas (CO)	10041474	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 4-gas	10041475	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 3-gas (H <sub>2</sub> S)	10041476	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 3-gas (CO)	10041477	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 4-gas	10041478	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 3-gas (H <sub>2</sub> S)	10041479	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 3-gas (CO)	10041500	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 4-gas	10041501	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 3-gas (H <sub>2</sub> S)	10041502	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 3-gas (CO)	10041503	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

### Orion G Multigas Leak Detector Kits Coiled Probe

		% LEL	Oxygen	Carbon Monoxide	Hydrogen Sulfide	Alkaline	NiMH Battery Pack	Vehicle Charger	Quick Connect	Threaded Connection	5 ft Sampling Line	1 ft Probe	Red Box	Carriage Case	Calibration Kit	Datalogging	Red Plastic Carry Case
Deluxe 4-gas	10048288	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Deluxe 3-gas (H <sub>2</sub> S)	10048289	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Deluxe 3-gas (CO)	10048290	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 4-gas	10048321	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 3-gas (H <sub>2</sub> S)	10048322	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial 3-gas (CO)	10048323	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 4-gas	10048324	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 3-gas (H <sub>2</sub> S)	10048325	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Economy 3-gas (CO)	10048326	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 4-gas	10048327	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 3-gas (H <sub>2</sub> S)	10048328	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Supereconomy 3-gas (CO)	10048329	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

## Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Orion G Multigas and Leak Detector, configured exactly the way you want it. You can choose from an extensive line of base instrument components and accessories. See the ATO chart below to make your selections.

See pages 44–50 for calibration accessories.

Orion G Multigas and Leak Detector Assemble-to-Order (ATO) Options			
<b>A. Combustible Sensor Option</b> You can have your MSA 20L combustible gas sensor reading factory set to be displayed as %LEL or %Volume. Enter a selection for display reading and probe type.	<b>Combustible Sensor</b> % LEL (Methane, 0–100%), Flexible probe % Volume (0–100%), Flexible probe % LEL (Methane, 0–100%), Coiled probe % Volume (0–100%), Coiled probe	<b>Code</b> 0 1 2 3	<b>I. Sampling Probes</b> MSA’s sampling probes are durable and easy to use. The built-in Water Stop® filter ensures your sampling system is not contaminated with dirt and debris if the probe tip is dipped in water. You must order a probe if you order a sampling line as we strongly recommend you operate the instrument with this filter in place. Sampling connection method chosen above determines type of fitting supplied with sampling line.
<b>B. Oxygen Sensor Option</b> To choose to have an oxygen sensor installed in your new Orion G Multigas and Leak Detector, choose selection 1. For no oxygen sensor, enter a “0.”	<b>Oxygen Sensor</b> None Oxygen (0–25% vol)	<b>Code</b> 0 1	<b>J. Carrying Attachments</b> While a high-strength, nylon clip is offered with the instrument at no charge, a swivel belt loop kit, which allows quick release from your belt with a half turn, is also available. For easier one-hand operation, choose the pistol grip option.
<b>C. Carbon Monoxide Sensor Option</b> To choose to have a carbon monoxide sensor installed in your new Orion G Multigas and Leak Detector, choose selection 1. For no carbon monoxide sensor, enter a “0.”	<b>Carbon Monoxide Sensor</b> None Carbon monoxide (0–999 ppm)	<b>Code</b> 0 1	<b>Belt Clip</b> Standard nylon Swivel belt loop Pistol grip
<b>D. Hydrogen Sulfide Sensor Option</b> To choose to have a hydrogen sulfide sensor installed in your new Orion G Multigas and Leak Detector, choose selection 1. For no hydrogen sulfide sensor, enter a “0.”	<b>Hydrogen Sulfide Sensor</b> None Hydrogen sulfide (0–200 ppm)	<b>Code</b> 0 1	<b>Instrument Jacket</b> None Black rubber boot Yellow cordura jacket Both boot and jacket
<b>E. Battery Pack Options</b> You can choose between MSA’s NiMH rechargeable batteries which will run your Orion G Multigas and Leak Detector for up to 16 hours, or you can choose the convenience of alkaline batteries. Also available in easy-to-change alkaline with thumbscrew attachment.	<b>Battery Pack</b> Standard NiMH rechargeable (comes with standard AC charger) Replaceable alkaline Replaceable alkaline with thumbscrew attachment	<b>Code</b> A B C	<b>K. Instrument Jacket</b> For the highest levels of environmental and rough handling protection, you can order a jacket or boot for your Orion G Multigas and Leak Detector.
<b>F. Battery Charger Options</b> If you order your Orion G Multigas and Leak Detector with a rechargeable battery pack, the charger is included in the price. If you want the optional vehicular charger adapter, choose selection “1.”	<b>Vehicle Charger</b> None/Standard AC charger Vehicular charger	<b>Code</b> 0 1	<b>L. Calibration Kits</b> You can choose one of two calibration options for your Orion G Multigas and Leak Detector. The flexible RP kit provides a constant flow regulator that is reused and provides the greatest accuracy. The squirt gas test kit provides a very economical means to verify instrument calibration.
<b>G. Sampling Connection Methods</b> The Orion G Multigas and Leak Detector offers the flexibility of using standard threaded connections or the new Quick-Connect sampling-line fittings.	<b>Sampling Connection Methods</b> Threaded Quick-Connect	<b>Code</b> A B	<b>Calibration Accessories</b> None Model RP Calibration Kit (includes gas cylinder) Squirt Gas Check Kit (includes gas cylinder)
<b>H. Sampling Lines</b> MSA’s high-speed sampling lines are of the highest quality materials guaranteed to not alter sample concentration. Threaded fittings with O-Ring couplings at each end ensure there are no leaks when the system is operating. Also available in a Quick-Connect version for easy attaching and tight seal. Sampling connection method chosen above determines type of fitting supplied with sampling line.	<b>Sampling Lines</b> None 3-foot coiled 5-foot coiled 10-foot 15-foot 25-foot 5-foot	<b>Code</b> 0 1 2 3 4 5 6	<b>M. Data Communications Kit</b> If you need to track the readings and operation of your Orion G Multigas and Leak Detectors, consider ordering them with the optional built-in datalogging module. This option also provides STEL and TWA capabilities.
			<b>Data Communications</b> None Orion link module Module and download software
			<b>N. Packaging Options &amp; Carrying Cases</b> You can further protect your Orion G Multigas and Leak Detector with optional carrying cases. For ease of transport and handling, these cases can even be ordered to accommodate calibration accessories. With the premium cases, a simple to understand training videotape is included at no extra charge.
			<b>Packaging &amp; Carrying Cases</b> Std shipping container only Black plastic case with video and space for 2 cylinders Heavy-duty case with video and space for 2 cylinders

### Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your MSA Fire Service Distributor to place your order.

Selection ...

**A-ORION G-**  -    -  -   -  -



# FIRE SERVICE PRODUCTS

## Orion<sup>plus</sup> Multigas Detectors

Compact. Durable. Ingenious. Versatile and rugged, the updated ORION plus IR Detector offers five gases with infrared and a wide range of sensor options. Our newly developed array of IR sensors will detect CO<sub>2</sub> or hydrocarbons in LEL range or up to 100% by volume. MSA's 20L catalytic combustion sensors are "best in class" silicon-resistant and will reliably detect up to 100% LEL. Available toxic sensors include ammonia, chlorine and many other choices. Simply choose your IR sensor, add two toxic sensors and finish your unit with an oxygen and an LEL sensor.

### Features

- Large, fully-graphic back-lit display
- Data-logging standard using ORIONLINK<sup>®</sup> software
- Carbon-filled nylon case protects against RFI and corrosive gases
- Long-life battery with three-hour recharge
- Built-in pump with electrical PermaCheck<sup>™</sup> function standard
- Two-year warranty on case, sensors, electronics and mechanical components

**Updated!**



### Orion<sup>plus</sup> Multigas Detector Kits

All kits are standard equipped with datalog, internal pump and comes with rechargeable battery pack, charger, protective rubber boot, PTFE sampling probe with 5ft line and software (p/n 655505 is needed to read data).

Part #	O <sub>2</sub>	LEL	CO	H <sub>2</sub> S	NH <sub>3</sub>	Cl <sub>2</sub>	PH <sub>3</sub>	SO <sub>2</sub>
10074944	•	•	•		•			
10074943	•	•	•			•		
10074949	•	•		•	•			
10074946	•	•		•		•		
10074951	•	•			•		•	
10074950	•	•		•				•
10074945	•	•	•					•

### Infra Red Versions

Part #	IR	O <sub>2</sub>	LEL	CO	H <sub>2</sub> S
10074947	IR CO <sub>2</sub> (0-10% Vol)	•	•	•	•
10074941	IR CH <sub>4</sub> (0-100% Vol)	•	•	•	•
10074942	IR HC butane (0-25% Vol)	•	•	•	•

### Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to custom order the Orion Plus Multigas Detector configured exactly the way you want it. See the ATO chart on the following page to make your selections.



# FIRE SERVICE PRODUCTS

Orionplus Multigas Detector for the Fire Service Assemble-to-Order (ATO) Options									
<b>A. Combustible Sensor Option</b> Choose your sensor calibration with MSA's long-life 20L combustible sensor. Choose selection "L" for a pentane calibration or "M" for a methane calibration. For no combustible sensor, enter a "0".	<b>Combustible Sensor</b> without combustible sensor	<b>Code</b> 0	<b>G. Battery Charger Options</b> If you order your Orion Multigas Detector with a rechargeable battery pack, the charger is included in the price. If you want the optional vehicular charger adapter, choose selection "1."	<b>Vehicle Charger</b> None/Standard AC charger	<b>Code</b> 0				
	0-100% LEL Pentane (1.4 vol%)	L			Vehicular charger	1			
<b>B. Oxygen Sensor Option</b> To choose to have an oxygen sensor installed in your new Orionplus IR Detector, choose selection 1. For no oxygen sensor, enter a "0".	<b>Oxygen Sensor</b> without oxygen sensor	<b>Code</b> 0	<b>H. Sample Line</b> MSA does not recommend sampling reactive gases; however if necessary, MSA's high-speed PTFE sampling line is of the highest quality material, guaranteed to minimize altering of the sample concentration.	<b>Sample Line</b> None		<b>Code</b> 0			
	0-25% Vol. O <sub>2</sub>	1			Customized 5' PTFE line for Orionplus	1			
<b>C. Toxic 1 Sensor Option</b> Choose your first toxic gas sensor from this extensive list to configure your new Orionplus IR Detector for your application; for no toxic sensor, enter an "0".	<b>Toxic 1 Sensor</b> None	<b>Code</b> 0	<b>I. Sample Probe</b> A 1' PTFE sampling probe with built-in water-stop filter ensures that your sampling system is not contaminated with dirt and debris if the probe tip is dipped in water. You must order a probe if ordering a sampling line. We strongly recommend operating the instrument with this filter in place.	<b>Carrying Attachments</b> None		<b>Code</b> 0			
	0-999 ppm carbon monoxide (CO)	B			Sampling PTFE probe	1			
	0-200 ppm hydrogen sulfide (H <sub>2</sub> S)	C							
	0-30 ppm hydrogen cyanide (HCN)	E							
	0-10 ppm chlorine (Cl <sub>2</sub> )	F							
	0-100 ppm ammonia (NH <sub>3</sub> )	G							
	0-20 ppm sulfur dioxide (SO <sub>2</sub> )	H							
	0-20 ppm nitrogen dioxide (NO <sub>2</sub> )	I							
	0-1 ppm chlorine dioxide (ClO <sub>2</sub> )	J							
	0-5 ppm phosphine (PH <sub>3</sub> )	K							
0-1 ppm ozone (O <sub>3</sub> )	L								
0-1 ppm phosgene (COCl <sub>2</sub> )	M								
<b>D. Toxic 2 Sensor Option</b> Choose your second toxic gas sensor from this list to configure your new Orionplus IR Detector for your application; for no toxic sensor, enter an "0".	<b>Toxic 2 Sensor</b> None	<b>Code</b> 0	<b>J. Carrying Attachments</b> While a high-strength, nylon clip is offered with the instrument at no charge, a swivel belt loop kit allowing quick release with a half turn, is also available.	<b>Belt Clip</b> Unbreakable nylon	<b>Code</b> 0				
	0-999 ppm carbon monoxide (CO)	B			Swivel belt loop	1			
	0-200 ppm hydrogen sulfide (H <sub>2</sub> S)	C							
	0-30 ppm hydrogen cyanide (HCN)	E							
	0-10 ppm chlorine (Cl <sub>2</sub> )	F							
	0-100 ppm ammonia (NH <sub>3</sub> )	G							
	0-20 ppm sulfur dioxide (SO <sub>2</sub> )	H							
	0-20 ppm nitrogen dioxide (NO <sub>2</sub> )	I							
	0-1 ppm chlorine dioxide (ClO <sub>2</sub> )	J							
	0-5 ppm phosphine (PH <sub>3</sub> )	K							
	0-1 ppm ozone (O <sub>3</sub> )	L							
	0-1 ppm phosgene (COCl <sub>2</sub> )	M							
	<b>E. Advanced IR Sensor Options</b> MSA offers a range of advanced IR options which will operate in the absence of background oxygen for inert applications. If your application require an IR sensor for %CO <sub>2</sub> or inert %LEL, choose "H" for 0-100% vol methane. For general hydrocarbon monitoring (0-25% vol), choose "J". When no IR sensor is required, enter an "0". Contact MSA for other IR sensors options.	<b>IR Sensor</b> None				<b>Code</b> 0	<b>K. Instrument Jacket</b> For environmental and rough handling protection, a variety of jackets and boots is available for your Orionplus IR Detector.	<b>Instrument Jacket</b> None	<b>Code</b> 0
0-10 vol % carbon dioxide (CO <sub>2</sub> )		C	Black rubber boot	B					
0-50 vol % carbon dioxide (CO <sub>2</sub> )		D		Leather case	L				
0-100 % LEL propane (C <sub>3</sub> H <sub>8</sub> )		E			Orange cordura jacket	C			
0-100 % vol propane (C <sub>3</sub> H <sub>8</sub> )		F				Red rubber boot			R
0-100 % vol methane (CH <sub>4</sub> )		H							
0-25 % vol hydrocarbon (butane)		J							
<b>F. Battery Pack Options</b> You can choose between MSA's NiMH rechargeable batteries, or you can choose the convenience of alkaline batteries. For ultimate flexibility, choose both!	<b>Battery Pack</b> NiMH battery with PCBA & charger with cradle	<b>Code</b> A					<b>L. Calibration</b> Use a minimal length (1-2") of the PU tubing to connect to your designated regulators for reactive gases to your instrument.	<b>Calibration</b> 2-ft PU tubing	<b>Code</b> 0
	Alkaline battery pack	B	<b>M. Data Communications Kit</b> To track readings and operation of your Orionplus IR Detector, this unit is standard-equipped with datalogging and STEL/TWA capabilities. To conveniently track stored records, order the IR Receiver, as software comes standard with each unit.						<b>Data Communications</b> None
	NiMH & alkaline pack (A & B)	C		IR receiver (JetEye)					
					<b>N. Packaging Options &amp; Carrying Cases</b> You can further protect your Orionplus IR Detector with optional carrying cases. For ease of transport and handling, these cases can be ordered to accommodate calibration accessories.				
		Economy plastic case				1			
			Hard plastic with space for 2 cylinders			2			
				Red economy plastic		3			

## Your Model Part Number

Please write in numbers from selections above in appropriate boxes and contact your MSA Fire Service distributor to place your order.

Selection ...

A-ORIONplus-  -    -     -

# FIRE SERVICE PRODUCTS

## Altair® Pro CO Fire Single-Gas Detector

### Ease of Use

The ALTAIR Pro CO Fire Detector combines user flexibility and functional simplicity. True single-button operation provides the user with a clear path to any function, including alarm check, bump test, fresh air setup, and calibration. The unit uses an easily replaceable, commercially available battery and has a built-in gas-delivery adapter.

### Distinctive Alarm System

A triple alarm system leaves no doubt for the user in an alarm situation. The piercing audible alarm is an average of 95 dB @ 1 foot and is designed to not be confused with other sounds. The visual alarm features dual bright LED displays located on top of the instrument which can be seen from all angles. An internal vibrating alarm also comes standard with all units. Low, high, TWA, and STEL alarm points are adjustable.

### Sensors

The ALTAIR Pro CO Fire Detector uses the fast-responding 20 Series CO sensor and meets UL, cUL, ATEX, and Australian standards. The sensor simply plugs into the internal circuit board, making replacement a snap.

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

Data-logging is a standard feature on the ALTAIR Pro CO Fire Detector. It will automatically record the 50 latest events in the session log, while simultaneously recording the peak reading every 3 minutes in a periodic data log. Combined, these two tools provide a great way to assess alarm conditions, confirm bump tests or calibration, and verify firefighter exposure. MSA FiveStar Link Software allows you to view these logs, adjust alarm set points, give the unit a specific name, and disable or activate particular features and options. It is a one-stop, easy-to-follow control center for the unit.

### Durability

The thick rubberized housing is designed to withstand accidental drops and other impacts. Metal screw inserts offer stability throughout the unit's lifetime. A durable suspension clip completes this tough outer shell. The ALTAIR Pro CO Fire Detector is highly water-and-dust-resistant and is rated to IP67. This rating means that the unit is dust-tight and can survive water immersion based on given test protocols. The simple yet effective design innovatively seals the unit, exceeding the industry-average rating.



### Accessories

710882	Cylinder, 60 ppm CO
10041107	Lanyard clip
467895	Regulator, 0.25 lpm
10073346	Hardhat clip
10030325	Tubing, 16"
10040002	Clip, suspender (standard)
710946	FiveStar Link with IR (data-logging)
100741323V	CR2 battery
10069894	Clip, stainless steel
711306	Replacement CO Sensor (CO Fire)
10041105	Cellphone clip

### Altair Pro CO Fire Single-Gas Detector

Instrument Type	Part No.	Low Alarm	High Alarm	STEL	TWA
Carbon Monoxide (CO) Fire	10076723	25 ppm	100 ppm	100 ppm	25 ppm
Hydrogen Cyanide (HCN)	10076719	4.7 ppm	10 ppm	10 ppm	4.7 ppm

## Altair Single-Gas Detector

The Altair Single-Gas Detector features sensor options for carbon monoxide, hydrogen sulfide and oxygen and will operate for over two years maintenance free. This long lifespan, coupled with the unit's high performance, results in one of the most cost-effective single-gas detectors on the market. Advanced design offers superior dust and water protection and high resistance to RFI. Rubberized housing and one-button operation provide the durability and ease of use users expect from MSA instruments.

### Alarm System

The triple-alarm system featuring two bright flashing LEDs, a piercing audible alarm, and a vibrating alarm ensures that no alarm condition goes unnoticed.

- 95 dB audible alarm (distinct sounds for High and Low alarms)
- Dual LEDs positioned to be seen from all angles
- Standard vibrating alarm and standard event logging

### Durability Features

- Hard polycarbonate case, encapsulated in a thick rubberized shell
- Extremely resistant to drops and impacts
- Rated to IP67 protection levels for dust/water ingress

### Warranty

Two years or 18 hours of alarm (1080 minutes)



### Altair Single-Gas Detector (Standard Models)

Part No.	Gas	1st Alarm	2nd Alarm
10070750	Carbon Monoxide (CO)	25 ppm	100 ppm
10070749	Hydrogen Sulfide (H <sub>2</sub> S)	10 ppm	15 ppm
10070791	Oxygen (O <sub>2</sub> )	23% Vol	19.5% Vol

Alternate set point models available. Call MSA Customer Service for more information.



## PULSAR®+ Single-Gas Detector

### Features

- Easy-to-Read Display
- One-Button Autocalibration
- Distinctive Alarm System
- Clip Options
- Adjustable Alarm Set-Points
- Replaceable Battery
- Replaceable Sensor
- Durability
- Large Rubber Buttons

The PULSAR+ Single-Gas Detector is reliable, easy-to-use, and durable, standing up to the roughest handling in the toughest environments.

PULSAR+ Fire Service Kit is designed specifically for firefighters who must respond quickly to CO calls. The kit contains a CO PULSAR+ Single-Gas Detector with a protective jacket and neck strap, a Squirt® Gas Bump Test Cylinder, and 10 MiniCO® Carbon Monoxide Detector Tube Cards, all packaged for convenience in a durable, compact carrying case. The Squirt Gas Bump Test Cylinder provides a quick and certain means of calibrating the PULSAR+ Single-Gas Detector in the field; the Detector Tube Cards offer homeowners an easy and affordable means of checking their exposure to CO levels after the firefighter has left the home.



Gas Type	CO
Range	0-500 ppm
Resolution	1 ppm
Response Time	T90<60 sec

Factory Set Alarm Points	
Low Alarm	35 ppm
High Alarm	100 ppm
STEL	400 ppm
TWA	35 ppm

Pulsar+ Single-Gas Detector	
Part No.	Instrument Type
10040334	CO
10040335	CO with vibrating alarm
10041735	CO Fire Service Kit
10041736	CO Fire Service Kit, vibrating



## Titan® Combustible Gas Detector

The TITAN Combustible Gas Detector, for the detection of flammable gases or vapors, features one-button operation, a compact size and a 24-month service life. Reliable, easy to use and durable, the detector stands up to the roughest handling in the harshest environments. Suitable applications include:

- home calls
- overhaul
- perimeter monitoring

### Features & Benefits

#### Reliability

- 85 dB, piercing audible alarm
- More-than-320° angle, highly visible visual alarm
- Optional NiMH battery pack with vibrating alarm
- Triple alarms ensure reliable warning

#### Ease of Use

- Simple, intuitive one-button operation—simply switch it on.
- Easy-to-read display is one of the largest of any pocket-sized instrument.
- Back-lighting provides exceptional contrast for high visibility from a variety of angles in low-light.
- Alkaline batteries provide a minimum of 13 hrs. of continuous operation; NiMH battery pack provides a minimum of 11 hrs.
- Full battery charge (under 4 hrs.) with MSA Fast Charger means less instrument downtime.
- Contoured rubber grips allow unit to fit comfortably and securely in gloved hands.

#### Durability

- IP54 rating for excellent resistance to water and dust penetration and performance in the harshest conditions and toughest environments.
- Strong construction enables it to survive accidental drops.
- Features the MSA Series 20L Sensor, which provides up to 50x the silicone poison tolerance, and features a considerably expanded sensor life. Sensor is very easy to replace.



Titan Combustible Gas Detector	
<i>Pentane calibrated.</i>	
10033144	TITAN with alkaline battery pack
10033387	TITAN with NiMH battery pack
10033388	TITAN with vibrating NiMH battery pack
10040783	Charger



# FIRE SERVICE PRODUCTS

## Detector Tube Pumps

### Toximeter™ II Automatic Detector Tube Pump

The Toximeter II Automatic Detector Tube Pump makes the sampling process easier, allowing the user to preset the number of pump strokes from 1 to 250. Intrinsically safe, the automatic pump works with all MSA detector tubes. It can also be used as a sampling pump.



For more complete information on all Detector Tube Pumps, see Data Sheet 08-01-02.

### Toximeter™ II Automatic Detector Tube Pump

655585	Toximeter II Automatic Detector Tube Pump
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### Kwik-Draw® Detector Tube Pumps

MSA's Kwik-Draw and Kwik-Draw Deluxe Pumps can be used with an assortment of MSA's detector tubes to spot-test atmospheres for a wide variety of toxic substances. They are designed for one-hand operation and consistent delivery of a sample draw volume of 100 milliliters (ml).

### Kwik-Draw Detector Tube Pumps

488543	Kwik-Draw Basic Pump, with remote sampling adapter and carrying pouch
487500	Kwik-Draw Deluxe Pump, with remote sampling adapter, carrying pouch and end-of-stroke indicator

#### Accessories

73067	Sampling line, 10 ft
73068	Sampling line, 25 ft
73069	Sampling line, 50 ft
87970	Remote Sampling Adapter, required for above sampling line
488780	Solvent-Resistant Sampling Line, 25 ft, with reel
488872	Tube Holder, required for 488780 line above
470321	Flue Gas Kit



### Gas-Tester™ II H Detector Tube Pump

The Gas-Tester II H Pump is set for action by compressing the bellows. A pump stroke is started by pressing the release button. When the sample (100ml) is drawn through the tube, the end-of-stroke indicator changes color. An accurate measurement is obtained because the sample draw procedure itself is controlled only by the specifications of the pump and the flow resistance of the detector tube.



### Gas-Tester II H Detector Tube Pump

696944	Gas Tester II H Detector Tube Pump
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### Detector Tube Handbook

### Detector Tube Handbook

813929	Detector Tube Handbook
--------	------------------------

## Chemical Warfare Agent Detector Tubes

Detect a wide range of nerve, blister, blood, and choking agents.

- Quick, simple to use, easy to interpret results
- "Go/No Go" style
- Can be used with MSA's full line of pumps
- All sold in boxes of 10 tubes
- Important: Sold only in the U.S.

### Chemical Warfare Agent Detector Tubes

10007654	Nerve (Sarin, VX, GA, GD, etc.)
10007653	Blister (Mustard Gas)
10007650	Blister (Lewisite)
10007652	Blister (variety, including Mustard Gas)
10007651	Blood and Choking (CG, DP, AC, CK)



## Chemical Warfare Agent Detector Tube Kits

Chemical Warfare Kits are available in a Single CWA Tube Sampler and a Multi CWA Tube Sampler. The Single CWA Tube Sampler will only sample one CWA tube at a time. The Multi CWA Tube Sampler allows the user to simultaneously sample up to four CWA tubes at the same time without making adjustments. The kit is supplied with an MSA Escort ELF® pump, which maintains constant flow with a built-in "Run/Hold" feature that allows the user to start/stop the pump and still maintain an accurate sampling timer. The four-port manifold tube holder is pre-set for the proper flow rate for CWA tube sampling.

### Chemical Warfare Agent Detector Tube Kits

10049765	Multi CWA Tube Sampler with Escort ELF Pump
10044998	Single CWA Tube Sampler with Kwik-Draw Pump



Multi CWA Tube Sampler



Single CWA Tube Sampler



# FIRE SERVICE PRODUCTS

## HAZMATCAD™ and HAZMATCAD Plus Hazardous Material Chemical Agent Detectors

### HAZMATCAD Detector

The HAZMATCAD Hazardous Material Chemical Agent Detector is a handheld instrument that detects and classifies Chemical Warfare Agents (CWA). When compared to other technologies, the HAZMATCAD Detector offers more capabilities and greater reliability at a lower cost.

#### Features

- Compact, light-weight and portable
- Self-diagnostic check during rapid warm-up
- Alphanumeric display with LED alarms
- Dual-Mode SAW Operation—Fast or High Sensitivity
- Operates between 8 and 12 hours on rechargeable Li-Ion batteries
- Vapor-diffusion check source verifies system performance
- Unit can be hand-carried or worn on belt
- RS-232 and IrDA communication ports; stores up to 8 hours of data
- Inlet design protects against dust and particulates

### HAZMATCAD Plus Detector

The HAZMATCAD Plus Detector detects for Chemical Warfare Agents (CWA) and selected Toxic Industrial Chemicals (TICs). It is a portable instrument designed for one-hand operation. It is very easy to operate and requires limited training for effective use.

#### Features

- Self-diagnostic check during rapid warm-up
- Alphanumeric display with LED alarms
- Dual-Mode SAW Operation – Fast or High Sensitivity
- Electrochemical Cells – Real time analysis
- Operates between 8 and 12 hours on rechargeable Li-Ion batteries
- Vapor-diffusion check source verifies system performance
- RS-232 and IrDA communication ports; stores up to 8 hours of data
- Inlet design protects against dust and particulates



### HAZMATCAD Detector Kits

*Kits include: HAZMATCAD Detector; battery charger; belt clip; two Sony rechargeable batteries; hard, water-resistant carrying case; operating manual; vapor check source*

Part No.	Instrument	Chemical Agents Detected
10055094	HAZMATCAD Detector	Nerve and Blister
10055095	HAZMATCAD Detector	Nerve, Blister and Hydrogen Cyanide
10055096	HAZMATCAD Detector	Nerve, Blister and Phosgene
10055097	HAZMATCAD Plus Detector	Nerve and Blister agents and TICs (phosgene, hydrogen cyanide, halogen and hydride gas)

## HazMat Response Kit

The HazMat Response Detector Tube Kit can be used by firefighters, HazMat Response Teams and other workers to help classify unknown chemical gases and vapors at accident or spill sites. A Quad-Port Sampler allows four chemical classes to be tested simultaneously. The portable kit contains 12 types of Detector Tubes (each with sufficient tubes for 10 complete tests), a Kwik-Draw Pump to draw the sample through the tubes, the multiple tube holder and a convenient, easy-to-follow interpretation guide.

#### Features & Benefits

- Quickly classifies unknown chemical gases and vapors
- Quad-Port™ Sampler allows simultaneous testing with four detector tubes, meaning less time in IDLH atmosphere
- Flow-limiting orifices ensure even sample flow
- Portable and easy to handle
- Includes simple interpretation guide



### HazMat Response Kit

807472	Includes 12 types of detector tubes, multiple tube holder, Kwik-Draw Pump and interpretation guide
485233	Extra Quad-Port Sampler

## SafeSite Multi-Threat Detection System

The SAFESITE Multi-Threat Detection System simultaneously monitors and wirelessly communicates six potential threats: CWAs, VOCs, TICs, gamma radiation, combustible gas and oxygen deficiency.

The SAFESITE System combines state-of-the-art detection technology with advanced wireless communication capabilities to provide superior preventative and counter-measure solutions for:

- Homeland Security
- Emergency Response
- Public Events
- Building Protection
- Mass Transportation Centers
- Perimeter Monitoring
- Hazardous Response
- Port Surveillance
- Confined Space Monitoring

SAFESITE System components consist of the SAFEMTX™ Multi-Threat Detector, the SAFECOM™ Command Center and the SAFECONNECT™ Belt-Bridge with Sirius wireless interface. The system can be installed permanently (wired or wireless) for continual monitoring or deployed as a portable system.

The SAFEMTX Multi-Threat Detector utilizes multi-sensing technologies to detect up to six potential threats; helping first responders, law enforcement and government agents reduce the risk of exposure and facilitate consequence management.

The SAFECOM Command Center receives mission-critical information from the SAFEMTX Detectors and permits this crucial and wide-ranging data to be converted quickly into practical information for rapid decision-making through an uncomplicated graphical user interface. The SAFECOM Command Center can manage up to four systems with 16 SAFEMTX Detectors per system, integrating SAFEMTX data, including:

- Gas readings
- Relative CWA threat level
- Radiation dose rate
- Alarm status
- GPS location
- Battery run time
- RF signal strength
- Fault conditions
- SAFEMTX min, max, and average values

Through the SAFECOM Command Center, alarms are identified with both visual and audible alarms. Alarms can then be acknowledged and silenced, detectors can be enabled and disabled, event logs and event log history can be viewed, plus units can be customized to suit the specific deployment scenario.

### Wireless Technology

The SAFESITE System provides up to two miles of wireless communication between any SAFEMTX Detector, SAFECONNECT Belt-Bridge and SAFECOM Command Center. SAFECONFIG™ Software works with the SAFECOM Command Center or SAFECONNECT Belt-Bridge, enabling configuration of any SAFEMTX Detector as a repeater. This added capability maximizes deployment range and ensures maximum signal strength and reliable deployment without the need to move units.

### SAFEPAC™ Perimeter Area Command Kit

SAFESITE® SAFEPAC™ Perimeter Area Command Kit provides a basic kit for quick deployment and monitoring of an event or a location. The kit includes two Pelican cases with an internal battery charger, 4 SAFEMTX Multi-Threat Detectors, 1 SAFECOM Command Center, all necessary PC interface software, and 4 extra batteries. A laptop PC is also available as an option, or an existing PC can be used.

**The SAFESITE Multi-Threat Detection System can be ordered using MSA's Assemble-To-Order System. Please refer to Bulletins 07-2114-MC and 07-2115-MC.**



- 1 Threat Readings** – scrolling readings of up to 16 MTX Detectors per channel. Unit is identified by large icon to the left of the readings. In alarm condition, display snaps to unit in alarm.
- 2 MTX Icons** – identify number of units enabled in current network. Users may view specific unit reading by double-clicking on icon.
- 3 Map** – option for map view or uploaded image view.
- 4 Signal Strength** – communication status from SAFEMTX Detector to SAFECOM Command Center.
- 5 Power** – status of battery life of SAFEMTX Detectors.
- 6 System Status** – alerts user to alarm, warning or fault within a particular system.
- 7 Action Buttons** – allow user to select address, cycle units, acknowledge alarms and enable or disable units from the system.

Threat	Technology	Benefit
Chemical warfare agents	Surface acoustic wave (SAW)	Low false positives and false alarms, differentiates nerve & blister agents
Gamma radiation	Cadmium zinc telluride (CZT)	Sensitive with adjustable threshold and 2 ranges. (0-100 mR/hr, 0.1 mR/hr resolution & 0-1000 mR/hr, 1 mR/hr resolution)
Volatile organic compounds	Photo-ionization (PID)	10.6 eV lamp provides ppm readings for broadband toxics and VOC detection
Toxic industrial chemicals	Electrochemical	Detects many specific toxic gases such as chlorine, ammonia, hydrogen cyanide and hydrogen chloride
Oxygen deficiency/enrichment	Electrochemical	Oxygen monitoring for confined space
Combustible gas	Catalytic bead	Wide range detection for hydrocarbons

# FIRE SERVICE PRODUCTS

## BIOSENSOR™ 2200R Biological Agent Detector

The new BIOSENSOR 2200R Biological Agent Detector from MSA is a handheld, portable, on-site instrument for rapid detection, analysis, and identification of biological agents. Unique bioassay technology offers excellent sensitivity and low false positives while offering ease of use during white powder response calls. This highly accurate detection method provides rapid measurement of biohazards such as anthrax, ricin, botulism, SEB, and plague.

Exclusive five minute time-to-answer allows first responders to make informed critical decisions more rapidly than any other biological agent detector. The BIOSENSOR 2200R employs dynamic surface generation, a patent pending type of immunoassay detection technology. This technology offers significant advantages over other field-based assay methods by combining the benefits of both the free solution and lateral flow types. The result is more rapid analysis, a user-friendly format, and detector stability within a wide range of climates.

Both wet and dry samples may be tested and results are displayed with a simple red (target present) or green (no target present) indication. As tests are nondestructive, samples may be retained as evidence. Single-test, disposable cartridges with on-board reagents have a 12-month shelf life. This instrument is permanently housed in a sturdy, lightweight Pelican case.



### Instrument Features and Benefits

- 5 minute time-to-answer
- Uses positive and negative control cartridges
- Battery-operated with ability to run 50 tests on a single charge
- Fully deconable housing; IP67 rated
- Visual and audible alarms provide clear indication of status
- Extremely easy to use with a training time of one hour
- Integrated RFID (radio frequency identification) for automatic cartridge recognition

### Targets

- Anthrax/ricin duplex—one test, two agents
- Anthrax
- Ricin
- SEB (staphylococcal enterotoxin B)
- Botulism\*
- Plague\*
- Smallpox\*
- Tularemia\*
- Cholera\*
- West Nile virus\*

\*additional agents in development

BIOSENSOR 2200R Biological Agent Detector	
10084834	MSA BIOSENSOR 2200R Biological Agent Detector Kit*, includes carry case, charger, cartridge starter kit (10084758), instruction manual, and quick start guide.
BIOSENSOR Cartridge Plans	
10084758	MSA BIOSENSOR cartridge starter kit includes 3 Anthrax/Ricin dual kits**, 1 Anthrax, 1 Ricin, 3 positive control, 2 negative control cartridges, and 2 wet sample kits
10084753	MSA BIOSENSOR Low volume cartridge plan includes 6 Anthrax/Ricin dual kits**, 2 Anthrax, 2 Ricin, 6 positive control, 2 negative control cartridges, and 2 wet sample kits
10084754	MSA BIOSENSOR Medium volume cartridge plan includes 24 Anthrax/Ricin dual kits**, 6 Anthrax, 6 Ricin, 24 positive control, 6 negative control cartridges, and 4 wet sample kits
10084755	MSA BIOSENSOR High volume cartridge plan includes 60 Anthrax/Ricin dual kits**, 8 Anthrax, 8 Ricin, 60 positive control, 8 negative control cartridges, and 6 wet sample kits.

\* Extended warranties available.

\*\* Each biohazard cartridge test kit includes a dry sample kit. Please contact your local MSA rep for more information.





## Calibration

### Galaxy Automated Test System

#### Extremely Easy to Use

- Standard web browser accessibility for data retrieval and reporting
- Industry-standard memory card available for simple data retention
- System does not require a computer or network interface
- Works without the touch of a single button
- Minimal training needed

#### Versatile and Expandable

- Up to 10 systems can be interconnected
- Instrument charging option available
- Optional battery pack available for remote use

#### Durable, Innovative Design

- Wireless- or wired-network interface available
- Inventive system door also functions as dust cover
- Guaranteed to work in the harshest environments
- In-line gas cylinder holster available; keeps the work area clean and orderly

#### Value-Driven Performance

- All-inclusive, 2-year warranty
- High quality, cost-effective solution
- Very low total cost of ownership

For Assemble-to-Order information, see the Galaxy ATO Chart on p. 46.



Galaxy System Kits				
	Solaris Galaxy Kits	Sirius Galaxy Kits	Orion Galaxy Kits	Altair Galaxy Kits
<b>Basic Standalone Kit</b>				
Basic System	10061051	10061050	10061824	10078252
<b>Standard Standalone Kit (Includes Regulator)</b>				
Standard System	10061783	10061810	10061825	10078253
Standard System + Charging	10061784	10061811	10061826	—
Standard System + Cylinder Holder	10061785	10061812	10061827	10078259
Standard System + Charging, Cylinder Holder	10061786	10061813	10061828	—
<b>Smart Standalone Kit (Includes Regulator, Memory Card)</b>				
Smart System	10061787	10061814	10061829	10078255
Smart System + Charging	10061788	10061815	10061830	—
Smart System + Cylinder Holder	10061789	10061816	10061841	10078256
Smart System + Charging, Cylinder Holder	10061790	10061817	10061842	—
<b>Portable Kits** (Includes Regulator, Battery Pack)</b>				
Portable System	10061802	10061818	10061843	10078257
Portable System + Memory Card, Cylinder Holder	10061801	10061819	10061844	10078258
<b>Network Kits (Includes Regulator, Wired Ethernet Access)</b>				
Wired Network System	10061803	10061820	10061845	10078259
Wired Network System + Charging, Cylinder Holder	10061804	10061821	10061847	—

Accessories	
710288	Demand Flow Regulator
10047342	North American Power Supply
10047343	Global Power Supply

# FIRE SERVICE PRODUCTS

## Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to “custom order” the Galaxy Automated Test System, configured exactly the way you want it. You can choose from an extensive line of base components and accessories. See the ATO chart below to make your selections.

Galaxy Automated Test System Assemble-to-Order (ATO) Options		
<p><b>A. Test Stand Instrument Type</b></p> <p>Each Galaxy test stand has a dedicated instrument type. Up to 10 specific systems can be mixed and matched; however, different instruments types will not work in the same test stand. The Solaris and Orion Instruments must have datalogging installed to operate with the Galaxy test stand.</p>	<p><b>Test Stand Options</b></p> <p>Solaris Sirius Orion</p>	<p><b>Code</b></p> <p>A B C</p>
<p><b>B. Calibration Cylinders</b></p> <p>The Solaris and Orion Galaxy test stand, by default will operate with 1 calibration gas cylinder. The Sirius Galaxy test stand, by default, will operate with 2 calibration gas cylinders. If your system configuration requires 3 cylinders for calibration, select option "1".</p>	<p><b>Calibration Cylinder Options</b></p> <p>No Yes</p>	<p><b>Code</b></p> <p>0 1</p>
<p><b>C. Regulator</b></p> <p>At least 1 demand flow regulator is required for either the Solaris or Orion Galaxy Test Stands. At least 2 demand flow regulators are required for the Sirius Galaxy Test Stand. The number of regulators you need equals the number of gas cylinders required for an instruments calibration.</p>	<p><b>Regulator Options</b></p> <p>1 Regulator 2 Regulators 3 Regulators None</p>	<p><b>Code</b></p> <p>1 2 3 0</p>
<p><b>D. Cylinder Holder</b></p> <p>The number of cylinder holders should match the number of gas cylinders required for an instruments calibration. Included in this option is the ability to order either 1, 2, or 3 cylinder holders.</p>	<p><b>Cylinder Holder Options</b></p> <p>1 Cylinder Holder 2 Cylinder Holders 3 Cylinder Holders None</p>	<p><b>Code</b></p> <p>1 2 3 0</p>
<p><b>E. Instrument Charging</b></p> <p>If you'd like to have your new Galaxy system installed with the ability to charge your instrument, select "1" for this option. (Requires instrument with rechargeable batteries).</p>	<p><b>Charging Options</b></p> <p>No Yes</p>	<p><b>Code</b></p> <p>0 1</p>
<p><b>F. Power Supply</b></p> <p>A power supply is required to power each Galaxy test stand. The global power supply comes with several international plug outlet configurations for countries outside of North America, for this option select "G". Select the battery pack option "B" for locations (includes North American supply) where AC power may not be easily accessible. If you choose the instrument charging option, the battery pack option is not available..</p>	<p><b>Power Supply Options</b></p> <p>North American Supply Global Supply Battery Pack Battery Pack &amp; Global Supply</p>	<p><b>Code</b></p> <p>N G B X</p>
<p><b>G. Memory Card</b></p> <p>If you'd like to have a removable memory card installed in your new Galaxy System, select option "1". A memory card reading device is required to read the memory card, this must be entered as a different line item on your order. Only 1 memory card is needed per Galaxy System.</p>	<p><b>Memory Card Options</b></p> <p>No Yes</p>	<p><b>Code</b></p> <p>0 1</p>
<p><b>H. Network Interface Module</b></p> <p>For wired (ethernet) connectivity to your internal network, select option "A". The location where the Galaxy will be installed must have the capability for this option to operate properly. Only 1 network interface module is needed per Galaxy system.</p>	<p><b>Network Interface Module Options</b></p> <p>None Wired Web Interface</p>	<p><b>Code</b></p> <p>0 A</p>

## Your Model Part Number

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

Selection ...

A-GALAXY-  -      -

## Regulators

### Model RP

.25/1.5 LPM Flow Control	
467895	Model RP Cylinder .25 lpm*
467896	Model RP Cylinder 1.5 lpm

\* Can be used with chlorine and ammonia; replaces P/N 809945.



Model RP

### Gas Miser® Demand Regulator: The Intelligent Regulator

The Gas Miser Regulator is the most advanced, yet simple-to-use calibration gas delivery system available. Made of nickel-plated brass and polished aluminum (especially important for reactive gases), the Gas Miser Regulator can supply gas flow from 0.1 lpm to 3.0 lpm, but that's only the beginning. Designed for use with any MSA Model RP Calibration Cylinder except chlorine and ammonia\*, the Gas Miser Regulator features an automatic ON/OFF valve that releases gas only on demand. Only the amount of gas needed to calibrate your MSA instrument is delivered accurately. When the calibration is complete, the Gas Miser Regulator shuts off automatically. And, for user convenience, the regulator can stay connected to the cylinder where it remains in a ready state—making it ideal for such fixed installations as work benches and calibration stations.

The Gas Miser Regulator also eliminates the need to change regulators to accommodate different instruments or flow rates. It's not only intelligent, it's cost-efficient. Supplied with calibration tubing and special fitting.

\* A Gas Miser Regulator for chlorine and ammonia is available for Model RP cylinders — P/N 10034391



Gas Miser®  
Model RP



Gas Miser®  
Model BD-20

### Natural Gas Demand Regulator

This low-pressure Demand Regulator is designed to be used with MSA Instrument Calibration Systems to automatically supply 100% natural gas to the calibrator as required. No adjustments are necessary or provided. Like the Gas Miser Regulator, the Natural Gas Regulator features an automatic ON/OFF valve that releases gas only on demand. Comes complete with barb-type outlet fitting and easily connects to natural gas supply with 1/4" NPT thread. Recommended for use with pressure of 0.3 to 5.0 psig.



### Natural Gas Demand Regulator

710545	Natural Gas Demand Regulator
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### Model RP Combination Regulators

Two regulators in one. Trigger activation allows a bump test or calibration check in the "SQUEEZE" mode or fixed-flow calibration in the up or "LOCKED" position. Designed for use with all Model RP and Econo-Cal calibration cylinders. Supplied with calibration tubing and special fitting.



### Model RP Combination Regulator

711175	Model RP Combination Regulator, .25 lpm
711174	Model RP Combination Regulator, 1.5 lpm

### Gas Miser® Manifold

The Gas Miser Manifold is not only a cylinder holder but it also incorporates a 4-station "bump test" or calibration manifold. It works with Model RP and Econo-Cal® cylinders and Gas Miser regulator on any pumped or aspirated instrument. The manifold will supply the correct amount of gas required and will bump test or calibrate up to four instruments simultaneously. Gas Miser regulator sold separately.



### Gas Miser Manifold

710274	4-Station Manifold
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### Gas Miser Regulators

710288	Model RP
10034391	Model RP, Chlorine and Ammonia
710289	Model BD-20, with CGA 590 fitting

### Model RP Calibration Check Kits

Model RP Check Kits consist of a regulator which includes a gauge to measure container pressure, an adapter hose, sensor adapter (where applicable), instructions, and a case with room for two Model RP cylinders of calibration check gas.

### Model RP Calibration Check Kits

477150	Check Kit, Model RP, with 1.5 lpm regulator (less gas cylinders)
477149	Check Kit, Model RP, with 0.25 lpm regulator (less gas cylinders)



## Calibration Gas

Each MSA Calibration Gas Cylinder is shipped with an individual copy of a material safety data sheet (MSDS) and an individual copy of a certificate of analysis.

MSA certifies that the gas mixture in calibration gas cylinders was prepared gravimetrically, using NIST traceable weights. The lot number and nominal value of the gas constituents in percent

by volume, percent by mass, PPM, or volume are specified on the cylinder. The uncertainty statement of the specified nominal value is also listed.



# FIRE SERVICE PRODUCTS

Model RP and Model R Calibration Cylinders—Non-Reactive Gases, Steel Cylinder, 100 Liters					
			100 liters, 1000 psi	19 liters, 300 psi	34 liters, 500 psi
Gas Fill	Gas Mixture	Background	Model RP	Model R	Econo-Cal
Air	air zero (THC < 1 ppm)	—	801050	—	—
Carbon Monoxide	400 ppm carbon monoxide	air	806255	—	—
	300 ppm carbon monoxide	air	473180	461769	—
	200 ppm carbon monoxide	air	809243	—	—
	100 ppm carbon monoxide	air	809242	—	—
	50 ppm carbon monoxide	air	809241	—	—
	100 ppm carbon monoxide	nitrogen	806734	—	—
Hydrogen	0.8% hydrogen	air	803102	—	—
Isobutylene	100 ppm isobutylene	air	494450	—	10048279
Methane	2.5% methane	air	491041	459942	—
	6.6% methane	nitrogen	801049	—	—
Oxygen	20.8% oxygen	nitrogen	479857	468248	—
	5.0% oxygen	nitrogen	493580	476302	—
Nitrogen	100% nitrogen	—	481317	—	—
Nitrous Oxide	10 ppm nitrous oxide	nitrogen	806736	—	—
Pentane	0.75% pentane (50% LEL)	air	804532	—	—
Propane	0.6% propane	air	493579	—	—
Combination	0.35% pentane, 19.0% oxygen, 100 ppm carbon monoxide	nitrogen	10007047	—	—
	0.6% propane, 15% oxygen, 60 ppm carbon monoxide	nitrogen	801051	—	—
	1.45% methane, 300 ppm carbon monoxide, 15% oxygen	nitrogen	10010162	—	—
	2.5% methane, 60 ppm carbon monoxide, 15% oxygen	nitrogen	813718	—	—
	2.5% methane, 300 ppm carbon monoxide, 15% oxygen	nitrogen	10040291	—	—
	1.45% methane, 15% oxygen	nitrogen	478192	—	—
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide	nitrogen	478191	—	—



Model RP

## Model RP Cylinder

**Contents:** Pressure 1000 psig; approximately 100 liters at atmospheric pressure

**Size:** 13-3/4" x 3"

**Weight:** 2 lb 13 oz

**Material:** Steel

Model RP and Model Econo-Cal Calibration Cylinders—Reactive Gases, Aluminum Cylinder, 58 & 34 Liters					
			58 liters, 500 psi		
Gas Fill	Gas Mixture	Background	Model RP	Econo-Cal	
Ammonia	25 ppm ammonia	nitrogen	814866	711078	
Chlorine	10 ppm chlorine	nitrogen	806740	711066	
Hydrogen Sulfide	40 ppm hydrogen sulfide	nitrogen	467897	711062	
	15 ppm hydrogen sulfide	nitrogen	806253	711064	
	10 ppm hydrogen sulfide	nitrogen	467898	711060	
Nitric Oxide	50 ppm nitric oxide	air	812144	711074	
Nitrogen Dioxide	10 ppm nitrogen dioxide	air	808977	711068	
Phosphine	0.5 ppm phosphine	nitrogen	710533	711088	
Hydrogen Chloride	40 ppm hydrogen chloride	nitrogen	710210	711080	
Hydrogen Cyanide	10 ppm hydrogen cyanide	nitrogen	809351	711072	
Sulfur Dioxide	10 ppm sulfur dioxide	air	808978	711070	
Combination Gas Cylinders	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 10 ppm hydrogen sulfide	nitrogen	804770	711058	
	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10048788	10048790	
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10045035	10048280	
	1.45% methane, 15% oxygen, 10 ppm hydrogen sulfide	nitrogen	804769	711056	
	1.45% methane, 15% oxygen, 300 ppm carbon monoxide, 10 ppm hydrogen sulfide	nitrogen	813720	711076	
	1.45% methane, 15% oxygen, 60 ppm carbon monoxide, 20 ppm hydrogen sulfide	nitrogen	10048890	10048981	
	2.5% methane, 15% oxygen, 20 ppm hydrogen sulfide	nitrogen	10048889	10048888	
	0.35% pentane, 19% oxygen, 100 ppm carbon monoxide, 35 ppm hydrogen sulfide	nitrogen	10007049	—	



Model RP

Econo-Cal

## Model RP Cylinder

**Contents:** Pressure 500 psig; approximately 58 liters at atmospheric pressure

**Size:** 13-3/4" x 3"

**Weight:** 1 lb 11 oz

**Material:** Aluminum

## Econo-Cal Cylinder

**Contents:** Pressure 500 psig; approximately 34 liters at atmospheric pressure

**Size:** 13-3/4" x 3"

**Weight:** 1 lb 1 oz

**Material:** Aluminum

**Note:** Reactive gases have an expiration date listed on each cylinder. This is to ensure the highest quality and accuracy for instrument calibration. Most cylinders have an expiration date of 12 months. Check with MSA Customer Service for the exact shelf life of a particular calibration cylinder.

## Model RP Calibration Cylinder—Steel, 100% Methane

**Contents:** Pressure 1000 psig; approximately 58 liters of pure methane with odorant added to smell like natural gas in all commercial gas lines

**Size:** 8-1/2" x 3"    **Weight:** 1 lb 13 oz

**Material:** Steel

### Model RP Cylinder—Steel, 100% Methane

Gas Fill	Gas Mixture	Part No.
Methane	100% Methane	711014

## Model BD-20 Calibration Cylinders

**Contents:** Pressure 2200 psig; approximately 552 liters (20 cu ft) of gas at atmospheric pressure

**Size:** 25" x 4W"    **Weight:** 10 lb 9 oz    **Material:** Steel

### Model BD-20 Calibration Cylinders

Gas Fill	Gas Mixture	Background	Part No.
Methane	2.5% Methane, 15% Oxygen, 60 ppm Carbon Monoxide	Nitrogen	710566
	1.45% Methane, 15% Oxygen, 60 ppm Carbon Monoxide	Nitrogen	710565
Air, zero	Air, zero, THC<1 ppm	—	710776



## Squirt® Gas Bump Tester

### Squirt Gas Bump Test Kit

813411    Kit, less cylinder, but with required fittings and adapters, complete with instructions

### Cylinders for Squirt Gas

Instrument	Squirt Gas Cylinder	Combustible						Balance
		Methane	Pentane Simulant	Oxygen	Carbon Monoxide	Hydrogen Sulfide	Isobutylene	
Explosimeter	815307	2.5%	See cylinder	—	—	—	—	Air
Gasport	814350	2.5%	—	15% O <sub>2</sub>	60 ppm CO	—	—	Nitrogen
Gasport	814349	2.5%	—	15% O <sub>2</sub>	300 ppm CO	35 ppm H <sub>2</sub> S	—	Nitrogen
Passport, FiveStar, Solaris	814497	1.3%	50% LEL	15% O <sub>2</sub>	60 ppm CO	—	—	Nitrogen
Passport, FiveStar, Orion	814559	1.3%	50% LEL	15% O <sub>2</sub>	300 ppm CO	35 ppm H <sub>2</sub> S	—	Nitrogen
MiniCO** Responder, Pulsar+	814978	—	—	—	60 ppm CO	—	—	Air
MiniH <sub>2</sub> S* Responder	814979	—	—	—	—	35 ppm H <sub>2</sub> S	—	Nitrogen
MicroGard**	815308	1.3%	50% LEL	15% O <sub>2</sub>	—	—	—	Nitrogen
Passport PID II	815704	—	—	—	—	—	100 ppm	Air

\* Reactive gases have an expiration date listed on each cylinder. This is to ensure the highest quality and accuracy for instrument calibration. Most cylinders have an expiration date of 12 months. Check with MSA Customer Service for the exact shelf life of a particular calibration cylinder

\*\* Requires calibration adapter.



**Contents:** Pressure 155 psig; approximately 11 liters at 70°F

## Cylinder-Holders

### Single Portable Cylinder-Holder

The Single Portable Cylinder-Holder is designed for use with all MSA Model R and Model RP cylinders. It fits neatly on a workbench or shelf, and its unique design ensures that the calibration cylinder (with the regulator attached) always stays where you put it.



### Single Portable Cylinder Holder

710386    Single Cylinder-Holder, 6" wide x 13" long x 4" high

### Double Cylinder-Holder, Wall-Mounted

The Wall-Mounted Double Cylinder-Holder holds all MSA Model R and Model RP cylinders. A molded base and holding straps keep the cylinders securely in position, yet both cylinders and/or regulators can be easily changed. The holder is ideal for field station calibrations and can be easily mounted for workbench applications.



### Double Portable Cylinder Holder

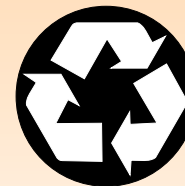
710483    Double Cylinder-Holder, 17" high, 10" wide, 3-1/2" deep at base

## Calibration Cylinders Are Recyclable!

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

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

The MSA Recycling Center limits the return of calibration cylinders to MSA-logoed cylinders only. Non-MSA cylinders will be rejected. Contact MSA Customer Service for additional details at 1-877-MSA-FIRE.



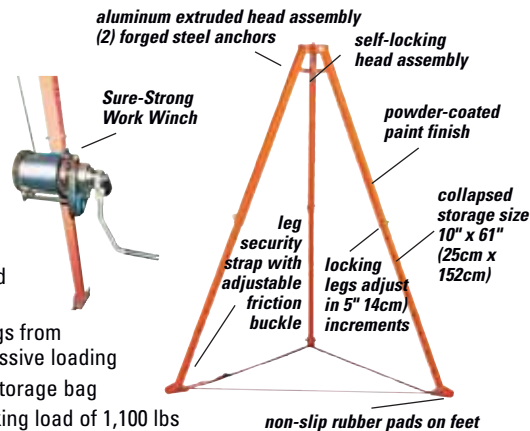
711228	Devalving Tool, Model "RP" & Econo-Cal Cylinders
711229	Devalving Tool, Model "R" cylinders
711227	Shipping Box, Special, Pre-addressed

# FIRE SERVICE PRODUCTS

## Fall Arrest, Rescue and Confined Space Equipment

### Sure-Strong™ Tripods

- Adjustable aluminum legs
- Two forged steel anchor eyes in head assembly
- Head assembly prevents unintentional collapse of tripod
- Legs adjust and lock individually to accommodate variable anchor heights, uneven ground and compact storage
- Leg security strap prevents legs from spreading in the event of excessive loading
- Available with cordura nylon storage bag
- Rated for 2 people with a working load of 1,100 lbs



### Bosun Chair

Designed to be used in conjunction with our Full Body Harnesses, the Bosun Chair is the best method to sit suspended for long durations. The Bosun Chair attached to the chest D-ring will keep the user in the upright position.



### Bosun Chair

SSH3505017	Bosun Chair, 5" x 16-1/2" padded aluminum seat, black nylon straps, 2 carabiners
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### SureGrab™ Positioning Lanyard



### SureGrab Positioning Lanyard

SNYL5370H306	SureGrab positioning lanyard, manual, closed body, c/w 5/8" x 6' yellow Static Kernmantle, chrome locking swivel snaphook, left-handed version
SNYR5370H306	SureGrab positioning lanyard, manual, closed body, c/w 5/8" x 6' blue Static Kernmantle chrome locking swivel snaphook, right-handed version

### Sure-Strong Tripods

SCE107007	Sure-Strong 7-ft (2m) Tripod, aluminum, 10,752 lb (48kN)
SCE107007BG	Storage Bag for 7-ft Tripod, cordura nylon
SCE107010HD	Sure-Strong 10-ft (2m) Tripod, aluminum, 10,752 lb (48kN)
SCE107010BGHD	Storage Bag for 10-ft Tripod, cordura nylon
SCE107060	Tripod center-mounted Bracket, aluminum
SCE1074021050	Sure-Strong Work Winch, 50 ft (15m), galvanized wire rope, w/bracket
SCE1074411200	Sure-Strong Work Winch, 200 ft (61m), galvanized wire rope, w/bracket

### Gravity™ Rigger/Rescue Harness



The harness incorporates a sit harness design which allows the user a much higher degree of comfort while in the sitting position. The Gravity Rigger/Rescue Harness is suitable for rappelling/control descent, positioning, ladder climbing, rescue, and fall arrest. Meets ANSI Z 359.1 and applicable OSHA standards, and is CSA certified.

Additional sizes available.

### Gravity Rigger/Rescue Harness

SSH60930001	Gravity Riggers Harness, black polyester webbing, cross-over design, integral belt
-------------	--

### Carabiners

#### MSA Rescue Carabiners

- Certified to meet NFPA 199301995, Class "G"
- The SRCC642 auto-locking model meets ANSI Z359.1-1992
- Weight: approx. 11 oz
- Strength: 12,364 lb



#### Fireman Hook Carabiner

- Unique side swing gate offers a greater gate opening compared to similar sized carabiners
- Meets ANSI Z 359.1-1992
- Includes stainless steel captive bar (not installed)
- Weight: approximately 13.7 oz
- Strength: 6,750 lb



### Anchorage Connectors

#### Thermatek® Anchorage Connector Strap

- Kevlar webbing and stitching
- Contrasting colors of webbing and stitching allows for easier inspection
- Heat- and burn-resistant



#### Boom Belt



- Attaches to boom arm
- Adjustable
- Allows for quick & easy inspection

### Anchorage Connectors

10023487	Thermatek anchorage connector strap
SSB22040	Boom belt, 1-1/4" nylon webbing, adjustable, one size fits all

### Carabiners

SRCC641	Carabiner, 1.2" (32mm) gate, carbon steel, zinc-plated
SRCC642	Carabiner, 1.2" (32mm) gate, carbon steel, zinc-plated, auto-locking
SRCC307	Carabiner, 2" (50mm) gate, carbon steel, zinc-plated, auto-locking



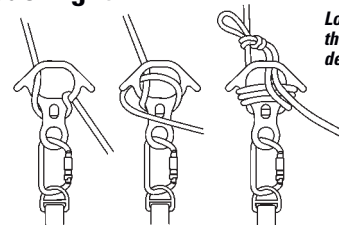
## Anthron Descender

The Anthron Descent Controller is a manually operated controlled descent device. It is most commonly used for suspended work positioning, self-evacuation, or rescue operations. The device utilizes a cam assembly that provides friction on the rope to hold a load, or allow the load to descend at a controlled rate. To begin descent, the user depresses the control lever on the Anthron. If the control lever is fully depressed in a panic situation, the descent will stop. Other features include:

- Proper roping/rigging diagrams on side of Descender
- Device can be installed/removed at any point on the rope
- Working load of 300 lbs (136 kg)



## SuretyMan Rescue Eight



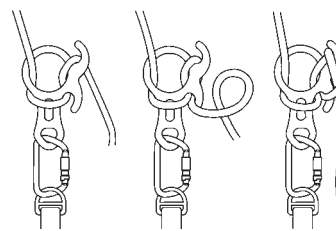
Locking off the Figure 8 descender

- Designed for fire service, rescue, and police tactical operations
- Designed for rope diameters from H/bg" (11 mm) to F/i" (16 mm)
- Available in aluminum or steel
- Weight: 1.5 lb (675 g)
- Strength: 6,720 lb (30 kN)

### SuretyMan Rescue Eight

SRSF5045	Suretyman Rescue Eight, steel
SRSF5077	Suretyman Rescue Eight, aluminum

## Suretyman RQ3 Q-Eight



Locking off the Q-8

- Ears/cleat are positioned to make tie off very easy and safe
- Ears/cleat still prevent larks footing (girth hitch)
- Designed for 7/16" (11 mm) diameter rope—will work with 1/2" (12 mm) diameter rope
- Aluminum, anodized gold
- Weight: 8 oz (.24 kg)
- Strength: 13,000 lbs (58 kN)

### SuretyMan RQ3 Q-Eight

SRSF FE2120	Suretyman RQ3 Q-8
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## Pulleys and Rigging Plates

### Suretyman™ RQ3 Pulley

Designed to meet the rigorous standards of the professional rescuer. Pulley features high grade aluminum side plates and sheaves, oilite bearings, stainless steel bolts, washers and lock nuts. Aluminum side plates swivel and rotate to allow pulley to be attached anywhere along rope. Top holes of side plates are large enough to accept three carabiners. Prusik hitch provides rope security. Accepts 3/8" (1cm) to 1/2" (1.3cm) static kernmantle ropes. Side plates are powder coated. Strength: 8, 100 lb (36kN).



### Suretyman Mini Knot Passing Pulley

- Ample room for the passing of knots
- Aluminum sheave (that will not score like some plastic sheaves)
- Locking pin
- Half the size and weight of some of the larger, bulkier knot passing pulleys
- Size: 9-1/2" (24cm) tall, 4" (10cm) wide, 3" (7.6cm) deep



### Suretyman Stealth Rigging Plate

The RQ3 Stealth Rigging Plate's unique design is by an RQ3 Master Instructor. Anchor on the point and the wings will rotate toward the load for a straighter line of pull. Material: aluminum. Weight: .46 lb (250g). Strength: 11,000 lbs (48kN).



## Rescue Cradles

The Rescue Cradle is available in two model types. The SRH30701 model is designed to allow easy placement on a person. Equipped with 4" (10 cm) polyester webbing and 4-3" (7.6 cm) D-rings. One size fits all.

The Rescue Cradle model SRH30703 is similar to the SRH30701 model, except it is constructed with 1-3/4" (4.4 cm) nylon webbing, 2" (5 cm) attachment ring, and an elastic shoulder strap.



Left: Model SRH30701

### Rescue Cradles

SRH30701	Rescue Cradle, 4" (10 cm) polyester webbing and 4-3" (7.6 cm) D-rings
SRH30703	Rescue Cradle, 1-3/4" (4.4 cm) nylon webbing, 2" (5 cm) attachment ring, and an elastic shoulder strap

### Anthron Descender

#### Anthron Systems

Includes Anthron Descender, 2 Carabiners, 7/16" (11mm) Rope

with 50' rope	with 100' rope	with 150' rope
SDC726050	SDC726100	SDC726150

#### Replacement Parts

SDSD-25	Anthron descender
SRB431101	Rope/equipment bag, holds 300' (90m) rope
SRB430305	Rope/equipment bag, #3 Cordura, orange, holds 300' (90m) rope

#### Replacement Rope — 7/16" (11mm) Static Kernmantle synthetic

50' length	100' length	150' length
SDC716050	SDC716100	SDC716150

### Pulleys and Rigging Plates

SPPPU8708	Suretyman RQ3 Pulley, 2" (5cm) double, Std/Prusik, orange, aluminum, weight: .83 lb (375g)
SPPPU8720	Suretyman Mini Knot Passing Pulley, yellow, weight: 1.9 lb (.89kg)
SRSR 5990	Suretyman/RQ3 Stealth Rigging Plate, aluminum, teal

# FIRE SERVICE PRODUCTS

## Ropes and Accessories

### Static Kernmantle Ropes

These ropes are 100% permanent solution dyed color with contrasting marker stripe. Superior flexibility and knotability, provided by a unique double-twist cable core construction, gives superior resistance to abrasion that is up to four times greater than other static kernmantle ropes. These ropes are designed with load absorbing capabilities to provide additional safety in the event a dynamic force is applied.



### Static Kernmantle Ropes

SRP508760	7/16" (11mm), nylon, 6,500 lb (2,948kg), black
SRP504860SL	1/2" (12mm), nylon, 9,100 lb (4,128kg), orange/yellow tracer
SRP530961	1/2" (12mm), polyester, 9,100 lb (4,128kg), red
SRP544000	7/16" (11mm), nylon, 6,000 lb (2,722kg), olive
SRP504866SL	1/2" (12mm), nylon, 9,000 lb (4,083kg), blue/white tracer
SRP504863SL	1/2" (12mm), nylon, 9,000 lb (4,083kg), red/white tracer

### Prusik & Accessory Cords

Prusik cords have the same high quality and long wear design as rescue ropes. Size selection should be based upon diameter of the main line. The flexible cord is both strong and highly resistant to abrasion. Prusik cords and accessory cords are identical.

### Prusik & Accessory Cords

SRP500860	8mm Accessory Cord, nylon. Use with 1/2"-5/8" (1.3cm-1.6cm) main line, black, 3,100 lb (1,406kg)
SRP500900	9mm Accessory Cord, nylon. Use with 1/2"-5/8" (1.3cm-1.6cm) main line, 3,600 lb (1,632kg)

### Rope Identification System

7/16" & 1/2" Static Kernmantle Ropes listed above will meet NFPA standards with the addition of the Rope Identification System. This system consists of a special label that carries all necessary NFPA information and a serial number. The serial number is attached to the rope by a shrink wrap. The shrink-wrapped serial number provides traceability if the label is ever lost, so a new label can be issued. The Rope Identification System must be ordered with the rope. Please specify these part numbers with your rope order if you require a rope that meets the NFPA standard.

### Rope Identification System

SRS598016	7/16" (11mm) NFPA Life Safety Rope Tag, with serial number, shrink tub
SRS598012	1/2" (12mm) NFPA Life Safety Rope Tag, with serial number, shrink tube

Only 1 required per rope.

### Rope Bag

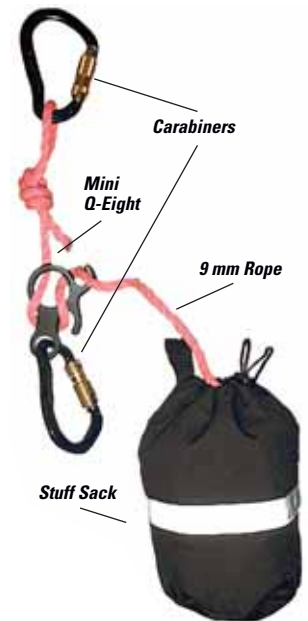
#### Rope Bag

SRB430201	Rope Bag #2, orange, holds 200 ft/ 1/2" (60.1m/12mm) rope
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## Firefighter's Escape Kit

The Firefighters Escape Kit was created as a tool for emergency egress for a fire fighter trapped in an upper floor of a building. This kit is lightweight and easy to use. Firefighter's Escape Kit includes:

- 2 Suretyman aluminum auto-locking carabiners (P/N - SRCA853)
- 60 ft (18.3 m) 9mm rope (P/N - SRP500900)
- Mini Q-Eight
- Small stuff sack



### Firefighter's Escape Kit

10030026	Firefighter's Escape Kit
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## Fall Protection Rescue Kit

The Fall Protection Rescue Kit is designed to be an "out of the bag" rescue system. This kit combines a remote hook and extension pole with a rescue utility system. The remote hook and extension pole allows for remote attachment of a rescue line to a victim. The Rescue Utility System allows a rescuer to raise or lower the victim to safety. This kit should be used with a back-up system (not included).

Fall Protection Rescue Kit includes:

- Adjustable Pole, 6 ft (1.8m) to 12 ft (3.6m) (P/N SFP675009)
- Pole Adapter (P/N SCE109001) converts pole to hold remote hook
- Remote Hook (P/N SRCA401) for remote attachment
- Storage Bag (P/N SRB675009) for pole and remote hook
- Rescue Utility System (P/N SRS15200)—raising and lowering system with a 4:1 mechanical advantage



### Fall Protection Rescue Kit

10030025	Fall Protection Rescue Kit
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Note: Due to a 4:1 mechanical advantage, the user should order the Rescue Utility System with 4 times the length of rope necessary for their application. For example, the 200' system provides a 50' working length. A 600' system provides a 150' working length.

## Basic High Angle Rescue Kits

The Basic High Angle Rescue Kits were designed for the Fire Department planning to assemble a high angle rescue team. A complete high angle rescue system consists of two kits: a Belay System Kit, and a Raising/Lowering System Kit.

### The Belay system kit includes:

- 3 large "D" shaped rescue carabiners (P/N SRCC641) - NFPA approved Class G
- 200 ft (61m) 1/2" rope, orange and white (P/N SRP504860SL) - NFPA approved
- 33 ft (10m) 9mm accessory cord (P/N SRP500900) for making load-release hitch
- 65" (1.65m) 8mm accessory cord & 53" (1.35m) accessory cord (P/N SRP500860) make-up the tandem Prusiks
- 6 ft (1.8m) Suretyman anchorage sling (P/N SFP2267406)
- #3 rope bag, orange (P/N SRB430301)

### The Raising/Lowering System includes:

- 6 large "D" shaped rescue carabiners (P/N SRCA641) - NFPA approved Class G
- Stealth rigging plate (P/N SRSPR5990)
- 200 ft (61m) 1/2" rope, red (P/N SRP504863SL) - NFPA approved
- 33 ft (10m) 9mm accessory cord (P/N SRP500900) for making load-release hitch
- 65" (1.65m) 8mm accessory cord & 53" (1.35m) accessory cord (P/N SRP500860) make-up the tandem Prusiks
- 53" (1.35m) 8mm accessory cord (P/N SRP500860) for creating the Prusik for connecting the raising system
- 2 Single Pulleys, 4" (100mm) (P/N SPPPU8710) —Prusik minding pulleys
- Brake Bar Rack (P/N SRS14001) - lowering device is NFPA approved
- 6ft (1.8m) Suretyman anchorage sling (P/N SFP2267406)
- #3 rope bag, black (P/N SRB430305)



## Basic High Angle Rescue Kits

10030023	Belay System Kit
10030024	Raising/Lowering System Kit

## Suretyman Rescue Utility System

The Suretyman Rescue Utility System incorporates all the features professionals have come to expect from a first class rescue system. The system is primarily used for raising and lowering people or equipment in rescue and industrial work access and is ideal for confined space applications.

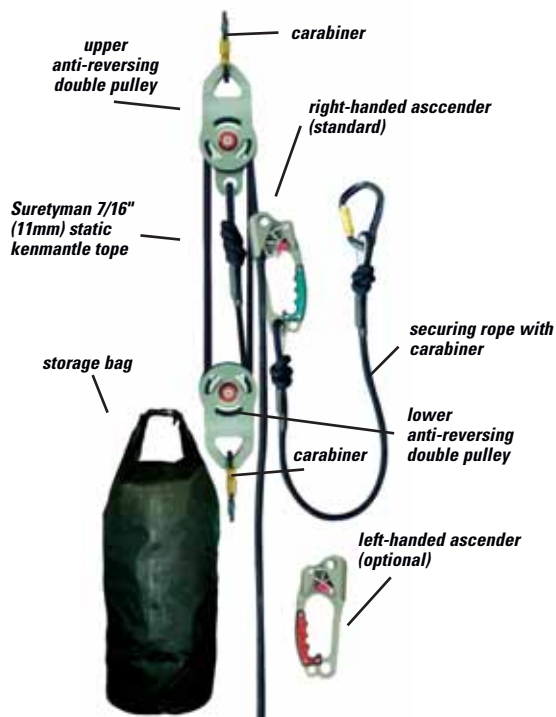
The Suretyman Rescue Utility System features:

- Pulleys equipped with a built-in anti-reversing lock
- Only a 10 lb force is all that is required to hold a 220 lb (90kg) load
- Suretyman ascender attached to both the operating rope and the user via a securing rope—if the operating rope accidentally releases, the ascender automatically stops the descent
- Rapid deployment
- Virtually maintenance free
- Rated for 2-person load
- Compact and light weight with a standard system weight of 17 lb (7.7kg)
- Versatile for rescue & access
- Multi-purpose ascent or descent
- Rated capacity of 600 lbs (272kg) for personnel and materials
- Standard rope length of 200 ft (66m) with a maximum rope length of 600 ft (200m)

## Suretyman Rescue Utility System

SRS15200	Suretyman Rescue Utility System (200' length)
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Please Note: Due to a 4:1 mechanical advantage, the user should order the Rescue Utility System with 4 times the length of rope necessary for their application. For example, the 200' system listed above provides a 50' working length. A 600' system provides a 150' working length.





# FIRE SERVICE PRODUCTS

## Confined Space/Head First Extraction System

The Confined Space/Head First Extraction System (HFES) is a specialized rescue product designed for those extreme cases where the rescuer has no other option, but to be lowered head first into a confined space to perform a rescue. These cases are rare, but can happen when someone has fallen into a restrictive confined space such as a well or drain system. The system allows the rescuer to be lowered comfortably into a confined space head first, harness the victim, and raise both victim and rescuer out of the confined space. This small, compact system can be used with any confined space retrieval equipment such as tripods and davits.



*Top: pair of ankle harnesses  
Middle: 2 carabiners  
Bottom: storage bag (lifting strap and victim strap not pictured)*

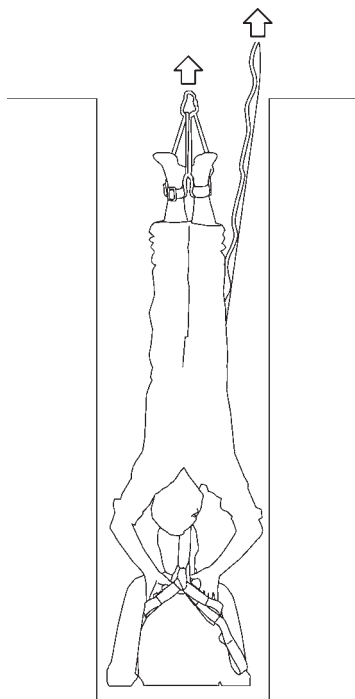
The HFES consists of:

- Adjustable Lifting Strap
- Adjustable Victim Strap
- 1 Pair of Ankle Harnesses
- 2 Carabiners
- Storage Bag

### Extraction System

SRS3100

Confined space/head first extraction system



## Confined Space Equipment

The Lynx® Boom Mount Hoist is designed for lifting, lowering, and positioning of personnel and materials.

The Lynx Rescuer—a self-retracting lanyard with emergency retrieval capabilities—facilitates non-entry retrieval. It is the easiest, quickest field-reset table mechanism on the market.



*Lynx Boom Mount Hoist*



*Lynx Rescuer, Field Resettable Model with Lockout*

### Confined Space Equipment

10022050	Lynx 8' Tripod
10022051	Lynx 10' Tripod
10016683	Lynx Boom Mount Hoist with 50' Galvanized Wire Rope, Emergency Drive, & Air Drive Adapter (also available with Stainless Steel Wire Rope)
10016682	Lynx Boom Mount Hoist with 105' Galvanized Wire Rope, Emergency Drive, & Air Drive Adapter (also available with Stainless Steel Wire Rope)
10011744	Lynx Rescuer Self-Retracting Lanyard
506622	Bracket for mounting Self-Retracting Lanyard to Tripod
506222	Pulley

## Safety-at-Heights Training

The most active, hands-on, solutions-based training available.

### Course Offerings

- Fundamentals of Safety-at-Heights
- Competent Person for Equipment Inspection
- Safety-at-Heights Program Management & Rescue Planning
- Tower Climbing Safety & Rescue
- Competent Person for Safety-at-Heights
- Competent Person Refresher
- Industrial High Angle Rescue
- Fall Protection & Rescue in Confined Spaces
- Fall Protection for Wood Pole Climbing
- Fall Protection & Rescue for Railway Bridges
- Competent Person Train-the-Trainer
- Custom courses for a wide range of industries, including the mining industry, utilities industry, automotive industry, telecommunications industry, and railroad industry.



### Course Locations

- Courses are offered in our training facilities located in Denver, Colorado and Edmonton, Alberta.
- Hands-on training available on-site at your facility.
- Custom courses can be conducted to fit your specific applications and needs.

### Registration Information

- Call us at 1-888-672-2222 or fax us at 1-800-976-0398.





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



**ID 5555-83-MC / Jul 2007**  
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