

Ultralight™ Cap Lamp System

MineSpot Cap Lamp System (shown with new battery top and new clip system)



Remote Adapter



Remote Adapter Cover

The state-of-the-art Ultralight Cap Lamp System has the brightest prefocused spotlight available (tungsten halogen) and provides exceptionally brilliant illumination of the work site. It has a long-life Luminator battery and a variety of battery charging equipment available.

The two-inch diameter, state-of-the-art Ultralight Cap Lamp headpiece is made of high-impact polycarbonate and consists of only five major parts:

- A one-piece polycarbonate bezel/lens (glass-laminated lens optional).
- A computer-designed, prefocused bulb/reflector assembly, featuring a high output, tungsten-halogen bulb, accurately positioned in the focal point of the reflector to assure a good spot.
- A plug-in tungsten-halogen bulb emergency escape light.
- A main housing with a printed circuit board for bulb and battery cable connections.
- A three-position switch.

A wire spring keeps the bulb/ reflector assembly properly resting against the lens to reduce vibration and mechanical shock.

The prefocused bulb/reflector assembly eliminates the need for a focusing mechanism. Both the on/off switch and the charging contact are located in the headpiece housing. With only four major parts, inventory, replacement stocks and downtime are minimized.

The tungsten-halogen bulb provides a white, bright light, achieved with little battery power consumption, because tungsten-halogen bulbs

are extremely efficient. In fact, more light output is achieved without reduction in bulb life. The light is also softer to miner's eyes.

In addition, the light output is more consistent, providing 85 to 95% of its initial light output, even at 70% of life expectancy. The bulb has a 1.0 amp rating at 4 volts. This lower amperage allows for longer cap lamp use between charges.

The prefocused bulb/reflector assembly efficiently concentrates over 90% of the light into a highly concentrated beam for exceptionally bright illumination of the work site.

Ultralight Specifications

Operating voltage: 4.2 to 3.8

Operating Time: Up to 14 hours (Luminator Plus)

Battery Dimensions: 7 1/4" x 5 1/4" x 1 1/2"

Weight: 4 lb 12 oz

Light Intensity: @ 10 feet (using standard bulb with fully charged battery) = 1450 LUX

Bulb Amperage: 1.0 (nominal)

MineSpot® Luminator® Battery

The MineSpot Luminator Battery is assembled as a complete sealed unit that requires nothing more than routine charging and periodic watering. The battery case is impact-resistant polycarbonate with reinforced bottom corners and molded-in belt loops. The Luminator Battery was designed for low maintenance and long life. Watering is required only every 4–6 weeks. The MineSpot Luminator Battery must be charged after each use.

Approvals and Standards

All MSA Cap Lamps have Mine Safety and Health Administration Certifications (MSHA certification) for use in an atmosphere of methane and air only.

Ultralight Cap Lamp System

Ultralight Cap Lamp, with acid-filled Luminator Plus battery (16 AH)	817172
Ultralight Cap Lamp, with acid-filled Luminator Plus battery (16 AH) and remote power takeoff adapter	817170
Ultralight Headpiece, cable and cover assembly (no battery)	484820
Ultralight Headpiece, cable and cover assembly (no battery), with remote power takeoff adapter	813230

MineSpot Luminator Battery

MineSpot Luminator Plus battery (16 AH), with acid	817178
Battery Clip, pack of 10 (for new, taller battery top)	10078291
Screw for Battery Clip (P/N 10078291), pack of 10	10078292
Clips (2 required) for Luminator battery (with old battery top)	817182

Power Builder Charger Stations

Power Builder single-unit, AC	10002436
Power Builder 10-unit	10002439
Circuit Board Module, replacement	10002462
Transformer, replacement	10002464
Leg Assembly Kit (up to 60-station) - includes right and left leg	10002465

Cap Lamp Spare Parts and Accessories

Bulb/Reflector	480374
Bezel/Lens	476705
Cable Assembly	484688
Secondary Bulb	637035
Bezel with glass laminated lens	491869
Swivel Adapter	491870
Comfo-Cap (white), with lamp bracket and cord holder	91522
Battery Pouch, nylon (fits MSA and Koehler)	803100
Remote Adapter with battery top	801581

Adapters for Koehler (Wheat) Cap Lamps and Charging Equipment

Using these adapters will permit you to charge an MSA Ultralight Cap Lamp on Koehler (Wheat) equipment.

1 Single-unit adapter for use with Wheat single unit slide-on (Mark II) or turnkey (Mark V) chargers	491116
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CAUTION: Do not mix cap lamp components from different manufacturer for use in applications where MSHA approval is required.

Service and Repairs

For service on all MSA lighting equipment, call 1-800-MSA-2222 or your local MSA distributor.

Ultralight Cap Lamp System



Power Builder 10-Unit Charging Stations are stackable. Front only or back-to-back. Leg kit shown.



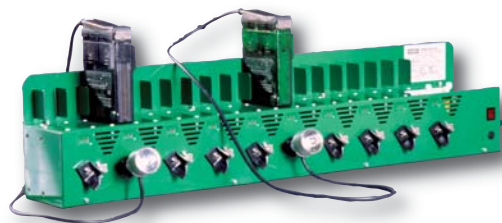
Single-unit Power Builder charger

Power Builder® Charger Stations

MSA offers a variety of charging stations, including an AC single-unit and a 10-unit station. The 10-unit charger can be tabletop mounted, wall mounted, or stacked to convert into a multi-station charger for up to 60 stations.

The Power Builder Charger uses a microprocessor control that is efficient and never needs recalibration. It uses constant current and constant potential charging. No adjustments are required. LED colored lights let you know the condition of the battery at all times. No rectifier is required. The charger is self-contained. All AC chargers can run on 110 or 220 current.

See Bulletin 02-00-01-MC for details on all MSA Cap Lamp Systems and Accessories.



Power Builder 10-Unit Charging Station

Power Builder Charger Stations

Power Builder single-unit, AC	10002436
Power Builder 10-unit	10002439
Circuit Board Module, replacement	10002462
Transformer, replacement	10002464
Leg Assembly Kit (up to 60-station) (includes right and left leg)	10002465

Note: Up to 6 ten-unit chargers can fit on one leg kit. The chargers would be set up back-to-back.

Miscellaneous Mining Equipment



Miner's Support System and Multipurpose Pouch

The Miner's Support System from MSA is a lightweight but sturdy miner's belt that offers comfort, lumbar support, versatility and durability. It enables the miner to carry the cap lamp battery pack, filter self-rescuer, SCSR, tools, etc., on the job. A one-inch reflective strip sewn over a two-inch nylon strap makes the support system highly visible.

For more complete information, see Bulletin 0115-03.

Miscellaneous Mining Equipment

Miner's Support System, small (28–34)	696757
Miner's Support System, medium (34–44)	696758
Miner's Support System, large (44–52)	696759
Multipurpose Miner's Pouch	803100
Multipurpose Miner's Pouch with Velcro closure	804655



Multipurpose Miner's Pouch

W65 Self-Rescuer Respirator

Provides emergency protection against carbon monoxide

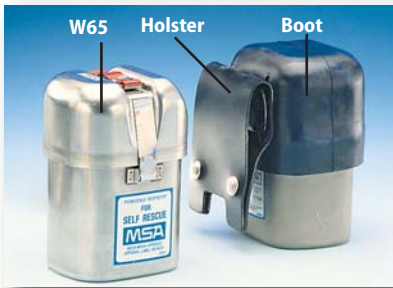


The W65 Self-Rescuer Respirator provides emergency respiratory protection against carbon monoxide gas resulting from underground fires or explosions. A one-time-use device for escape purposes only, it provides respiratory protection against carbon monoxide in otherwise respirable air; it should not be used in atmospheres containing less than 19.5 percent oxygen or in atmospheres containing other toxic gases and vapors. Protected by a rugged stainless steel case, it weighs only 2.2 pounds.

Approvals

The W65 Self-Rescuer Respirator is approved by the Mine Safety and Health Administration (MSHA) and the National Institute of Occupational Safety and Health (NIOSH) (Approval No. TC-14G-82) for self-rescue from carbon monoxide. Previously assigned Bureau of Mines Approval No. 14F-76.)

For more complete information, see Data Sheet 10-00-10.



W65 Self-Rescuer with Boot and Holster

W65 Self-Rescuer Respirator Compete Assemblies

W65 Self-Rescuer Respirator, complete in carton	455299
W65 Self-Rescuer Respirator, w/protective boot & neoprene holster	461100

Holster

Adapts Self-Rescuer to belts up to 2-1/2 inches in width.

Leather Holster	455535
Neoprene Holster	460027

Protective Boot

Protective black rubber boot for Self-Rescuer.

Protective Boot	449428
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Self-Rescuer Training Model

A special training model, which does not contain chemicals, simplifies training in the use of the W65 Self-Rescuer. After use, it can be cleaned, reassembled, and used again.

Training Model, in red case	455696
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Solaris® Multigas Detector with Nitrogen Dioxide Detection



The economical Solaris Multigas Detector provides simultaneous detection of up to 4 of the following gases: CH₄, CO, O₂, and NO₂ or H₂S.

- Lightweight:** under 8 oz., compact size makes it easy to wear
- Durable:** case with rubberized armor provides superior protection against liquid and dust ingress
- Long-life battery:** rechargeable lithium ion battery provides 14+ hours of continuous run time and delivers best-in-class performance in extreme conditions
- Galaxy Compatible:** compatibility for Galaxy automated test system
- Sampling Pump Option:** optional powered sampling pump with extensive contaminant filtering system
- Warranty:** outstanding 2-year, all-inclusive warranty
- Ergonomic design:** for maximum comfort
- Alarm System:** world-class triple alarm system with 100+ decibel audible alarm, multiple high-intensity visual alarm and strong vibrating alarm
- Display features:** superior display features simultaneous gas concentration display, backlighting for easy reading and alphanumeric message bar for easy use

Calibration Cylinders	Methane Standard 2.5%	15% Oxygen	60 ppm CO	20 ppm H ₂ S	10 ppm NO ₂
RP (58 Liter)					
10048890	•	•	•	•	
10048889	•	•		•	
813718 (100L)	•	•	•		
10058171	•	•	•		•
Econo-Cal (34 Liter)					
10048981	•	•	•	•	
10048888	•	•		•	
10058172	•	•	•		•
10049056	•	•	•		

* To download the Solaris data the MSA data docking module (P/N 10082834) must also be purchased.

MSHA-Approved Solaris Multigas Detector Kits

All kits include a MSHA Approved Solaris with datalogging option* included, calibration cap assembly and instruction manual on CD-rom.

4-Gas (CH ₄ , O ₂ , CO, NO ₂)	10070963
4-Gas (CH ₄ , O ₂ , CO, H ₂ S)	10070857
3-Gas (CH ₄ , O ₂ , CO)	10070859
2-Gas (CH ₄ , O ₂)	10070962

Personal and Area Sampling Equipment



Escort ELF® Sampling Pump

The Escort ELF Sampling Pump can be used for personal and area sampling. The state-of-the-art electronic laminar flow sensor, consisting of a laminar flow element and pressure sensor, provides constant flow (volume) control, with $\pm 2.5\%$ regulation of flow rate (from 1 to 3 lpm) and automatic compensation for changes in battery voltage, temperature, altitude, and sample load.

An internal secondary standard calibrates the pump continuously and needs to be checked against a primary standard only once a month (or every 200 hours for coal mine dust sampling). U.S. Patent No. 5,295,790.

Approvals

Escort ELF Sampling Pumps are NIOSH-certified for coal mine dust sampling (TC-74-030). They are MSHA-certified as intrinsically safe for underground use (Approval No. 2G-3924-1). The Escort ELF pump has been approved for intrinsic safety by UL for use in Class 1, Groups A, B, C, D; Class II, Groups E, F, and G; and Class III, Division I locations.

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

The ATO System makes it easy to custom order Escort ELF pumps, configured exactly the way you want them. Choose from an extensive line of base instrument components and accessories. See pages 94–95 or Bulletin 0810-33 ATO System and Price Information for the Escort ELF Sampling Pumps for more information.



Coal Dust Sampling Cassette

Coal-Dust Sampling

MSA's preweighed filter cassettes consist of a sealed outer plastic capsule and an inner preweighed filter capsule. Each cassette is supplied with a mine data card for the weight of the filter capsule to be recorded and sent in a mailing carton addressed to MSHA.

General-Purpose Cassette

The general-purpose cassette is a sample cassette that can be used for silica sampling. This cassette can also be used for all airborne particulate collection not limited to quartz or silica.

This cassette is individually packaged in a sealed plastic bag. Each cassette is weighed by a robot to .01 mg at 70°F \pm 5° and 45% RH \pm 10%. Each cassette is attached to a Dust Data Card which includes the cassette serial number and actual weight. The cassette inlet contains a tamper-proof deflector plate, and the outlet contains an anti-blow-back check valve. Both the inlet and outlet openings are capped to ensure cleanliness. The perimeter of the cassette housing is sealed with tamper-proof sealing tape.

Because of the extreme accuracy of the MSA weighing process, users of this cassette can sample the atmosphere for dust particulate and have the analytical analysis performed with complete confidence in its accuracy.



General Purpose Cassette



Cyclone Assembly

Cyclone Assembly

For mine atmosphere sampling, the MSA preweighed filter cassettes must be used with a Cyclone Assembly to collect the respirable dust fraction. The 10mm diameter assembly is used to separate respirable dust particles from non-respirable dust particles.

Mining Detector Tube Set

The Mining Detector Tube Set is a variety pack of various detector tubes, designed specifically for the mining industry. The set, conveniently packaged in boxes of 12 tubes, contains:



- 3 Carbon monoxide tubes
- 2 Nitrogen dioxide tubes
- 3 Nitrous fumes tubes
- 4 Natural gas/methane tubes

MSA Cassettes

Prewighed filter cassette with 5- μ pore size PVC filter and Mine Data Card—Coal Dust Sampling	803462
General-Purpose Cassette	711361

Cyclone Assembly

Cyclone Assembly	456243
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Mining Detector Tube Set

Mining Detector Tube Set	65586
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