

New

α *alpha* series
make sense technology



BD 96

[classic & *alpha*-powered breathing apparatus system]

MSA

BD 96

self-contained breathing apparatus system

As one of the most popular professional breathing apparatus systems used throughout the world, the MSA BD 96 is a proven performer. Emergency service, firefighting and industrial personnel alike appreciate the BD 96 for its rugged reliability, customisable flexibility and outstanding value.

As an extension to the established BD 96 classic pneumatic system, the BD 96 is now also available with integrated *alpha* technology.

alpha SCBA enhancements are focused on increasing safety, efficiency and incident capability, while the *alpha* personal network features electronic personal monitoring and telemetric capabilities.



Standard features

One of the secrets behind the BD 96's continued success is that it doesn't cut corners where it counts. Whether you strap on a new *alpha* or classic BD 96, you can be assured that you are using one of the most reliable air delivery systems available today for your breathing protection.

[Rugged]

The heavy-duty construction of the BD 96 is made for the toughest conditions. The backplate is constructed of heat-resistant plastic and the optimised carrying harness is made of flame-retardant modacrylic aramide. Both the classic and *alpha* versions are approved according to EN 137 and meet the prEN 137 [flame engulfment test].

For all applications that require self-contained breathing protection, equipment reliability is vital. Since it was designed for the unpredictable and extreme operations facing emergency service personnel, with a BD 96 pack on your back you know you have a breathing system you can truly depend on in any circumstance.

The BD 96 is built to last. Durability and simplified maintenance add up to greater safety and dramatically reduced total cost of ownership.

[Universal]

The BD 96 has been designed for flexibility. A wide range of options lets you customise your breathing protection to exactly suit your requirements. The variable cylinder holder can be adjusted for one or two cylinders from 4 to 6.8 litres. Systems are available in 200 or 300 bar with either normal or positive pressure.

The shoulder straps and hip belt have been specially constructed for equal weight distribution and comfort.

From emergency service to industrial applications, the BD 96 is the number one choice worldwide for value-conscious purchasing departments.

your choice: classic- or *alpha*-powered

Proven classic

The BD 96 classic features the proven 500E pressure reducer and individual lines. These serve to supply medium pressure to the demand valve and second connection, to provide high pressure to the gauge and fast cylinder refill [QuickFill], and to feed the warning signal.

You can combine all BD 96 classic options [signal line, second connection, QuickFill, ICU and ICU-S] as required.

[Signal line]



BD 96-S features a retreat signal close to the ear for noisy environments.

[Second connection]



The universal second connection for rescue applications is fitted to the BD 96-Z.

[QuickFill]



The QuickFill connection with the SCBA version BD 96-Q allows the cylinders to be charged while wearing the apparatus. Filling the cylinder takes only 45 seconds.

[Integrated Control Unit]



The ICU displays remaining service time and pressure. A motion sensor and several cylinder pressure alarms are also built in. With the key version ICU-S, the key is deposited at the operations centre for identification. For more information please see our leaflet 01-155.2.

alpha-powered

Using novel technology and advanced material science, MSA has now revolutionised SCBA pneumatics while simplifying the entire system. The *alpha SL* BD 96 can be further expanded to include the *alpha* personal network and telemetry components.

Learn more about *alpha* power on page 8 and 9.

[SCBA enhancement]

The *alpha SL* pneumatic system is based on the revolutionary SingleLine air management system. Current SCBAs typically have up to five separate hoses to supply the demand valve, second connection, gauge, fast cylinder refill and the warning signal. The *alpha SL* provides all of these features with just one single line.

Pressure reducer with QuickFill fast cylinder refill adapter and *alphaCLICK* rapid cylinder exchange adapter are available as options.



All major functions are built directly into the *alpha* SingleLine air management system.

[Personal network development]

At the core of the *alpha* electronic system is a unique personal monitoring and signal device called the *alphaSCOUT*. The portable, wireless and fully disengaged *alphaSCOUT* is the next generation of the ICU [Integrated Control Unit].

The *alphaSCOUT* can be extended to send and receive powerful long-range signals, giving it full telemetric capability. This allows incident personnel data to be continuously monitored by incident command via the *alphaBASE* base station.



BD 96 *alpha*-powered

As part of the *alpha* principle of increased simplicity and efficiency, the most popular features have now been integrated directly into the BD 96 *SL* [SingleLine] air management system. Components can easily be upgraded as needed.

LA 96-AS



LA 96-AE



LA 96-N



Coupling for demand valve
AutoMaXX or LA 96

Integrated
gauge

Integrated
warning signal

Integrated
second connection



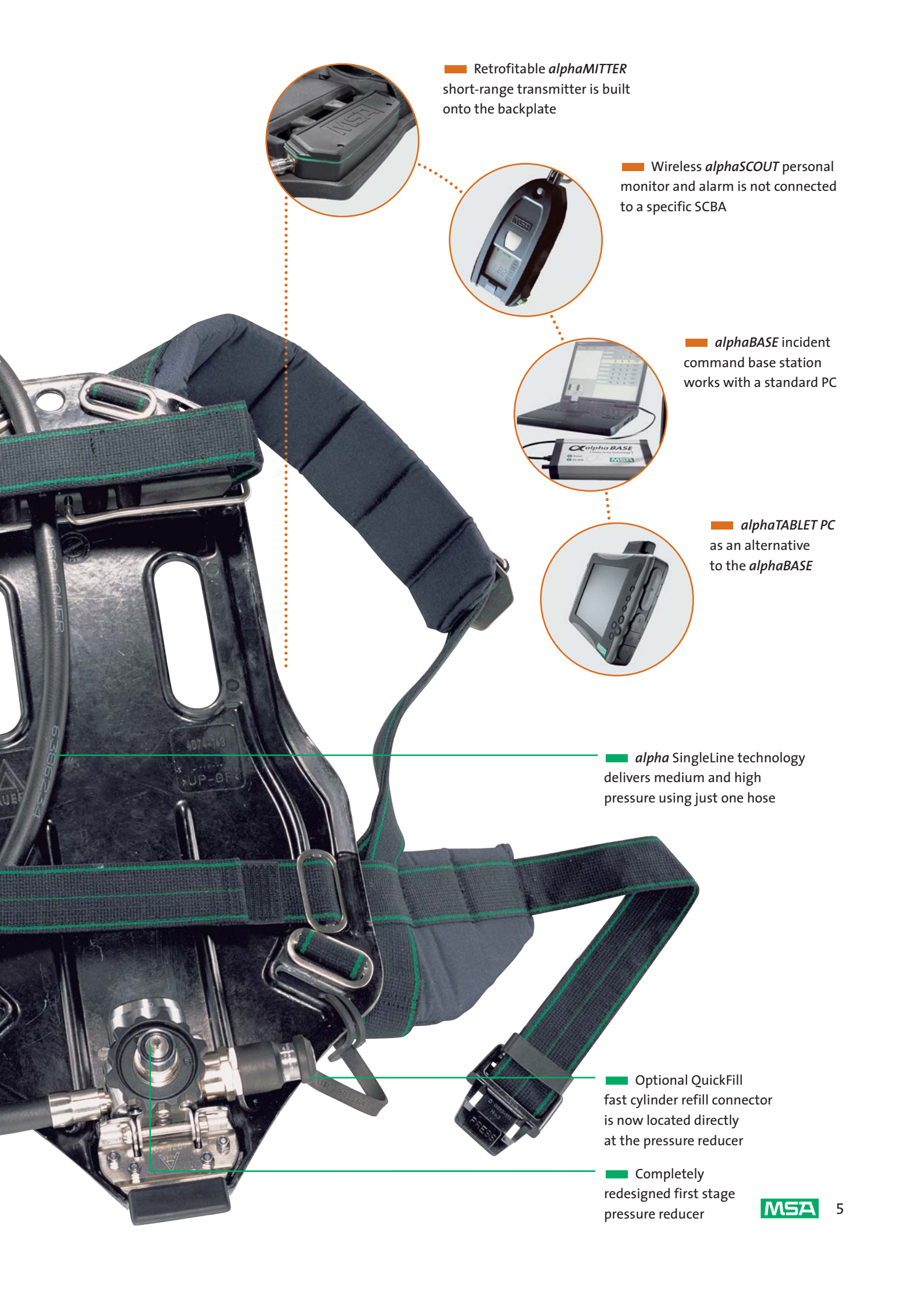
RespIHood



Rescue set

Legend

- = *alpha* SCBA enhancements
- = *alpha* personal network features
- = standards with BD 96 classic & *alpha*
- = basic configuration
- = options



■ Retrofittable *alphaMITTER* short-range transmitter is built onto the backplate

■ Wireless *alphaSCOUT* personal monitor and alarm is not connected to a specific SCBA

■ *alphaBASE* incident command base station works with a standard PC

■ *alphaTABLET PC* as an alternative to the *alphaBASE*

■ *alpha* SingleLine technology delivers medium and high pressure using just one hose

■ Optional QuickFill fast cylinder refill connector is now located directly at the pressure reducer

■ Completely redesigned first stage pressure reducer

AutoMaXX® & LA 96 demand valves

handy and robust

AutoMaXX®

Sensitive response to individual user's breathing while withstanding toughest conditions: the AutoMaXX defines the state-of-the-art in demand valves. Plus the virtually maintenance-free valve core results in low cost-of-ownership.

The unique housing form of the AutoMaXX ensures that it cannot get entangled and provides extra protection against blows.

[Easy wear]

The AutoMaXX's swivel action on the facepiece and the medium pressure line provide maximum freedom of movement and comfort. You simply turn the hose connector until it is out of your way.

The lung governed demand valve is easily activated with the first breath and operates very quietly. The AS and AS-C versions automatically shut down positive pressure when removed from the mask.

[Easy care]

The AutoMaXX protective cap is easily removed to permit inspection of the diaphragm. The valve assembly does not require repeated lubrication. No significant maintenance beyond a general overhaul is ever needed.

[Options]

The AutoMaXX is available in the following versions:

- N:** normal pressure with standard round thread,
- AE:** positive pressure with M 45 x 3 thread,
- AS:** positive pressure with MaXX plug connector,
- AS-C:** combination of the AE and the AS.

Moreover you have the choice of the following options:

- G:** rubber medium pressure line for industrial applications,
- B:** by-pass valve provides an adjustable, constant air stream,
- Short:** shorter medium pressure line.



AutoMaXX-N



AutoMaXX-AE



AutoMaXX-AS



AutoMaXX-AS-C



AutoMaXX-AS-B

LA 96

Composed of special materials, the LA 96 series of lung governed demand valves are especially remarkable for their small profile and light weight. Servo-controlled air delivery is supplied through a pivoting and extremely flexible medium pressure line, providing increased safety and comfort.

[Options]

The LA 96 is available in the following versions:

- N:** normal pressure with standard round thread,
- AE:** positive pressure with M 45 x 3 thread,
- AS:** plug-in connection.

For even more versatility you can choose:

- LA 88:** with rubber medium pressure line for industrial applications,
- LA 83:** with robust metal housing.



LA 96-N



LA 96-AE



LA 96-AS

Full-face masks

the choice among professionals

[Ultra Elite]

The Ultra Elite full-face mask was developed with the future in mind. Its ergonomic design, state-of-the-art technology and attention to detail make it the perfect compliment to the new *alpha*-powered SCBAs from MSA.

The Ultra Elite is available in over 40 different versions in two sizes with either a silicone or rubber face blank. The harness is available in rubber, silicone or Nomex [easy-don]. The polycarbonate lens is silicate coated.

The ergonomic Ultra Elite is distinguished by its undistorted field of vision, exemplary wearing comfort and excellent speech transmission. For more information please see our leaflet ID 05-418.2 GB.

[3S]

With over 5 million units sold, the 3S is one of the most successful full-face mask designs the world over. Offering high comfort, and proven safety, the 3S is a partner you've come to depend on.

The 3S is available in over 50 versions for virtually all applications. For more information please see our leaflet ID 05-405.2 GB.



Ultra Elite-H-PS-MaXX with AutoMaXX-AS



3S-PF with AutoMaXX-AE

Mask-helmet-combinations



Ultra Elite H-PF-F1
[with MSA GALLET helmet]



3S-H-PS-MaXX F1
[with MSA GALLET helmet]

Both the Ultra Elite and the 3S are available as mask-helmet-combinations. Special adjustable rubber straps secure the mask directly to the outside of the helmet quickly and securely, eliminating the need to remove the helmet.

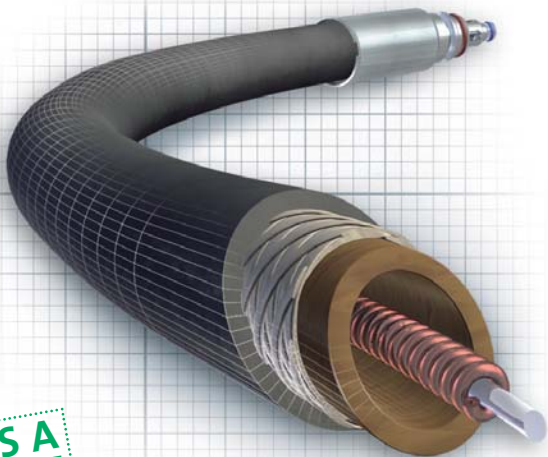
The mask can just as easily be removed from the helmet when respiratory protection is no longer needed. For more information, please refer to our leaflet ID 05-432.2 GB.

alpha SCBA enhancements

simple, safe, sensible

[alpha SL pneumatics]

Probably the question everyone asks when they first see an *alpha*-powered BD 96 is 'Where are all the hoses?' The MSA patented SingleLine pneumatics uses amazing 'hose-in-hose' technology to combine the main and secondary connection, gauge and signal line into one single delivery channel.



**MSA
PATENT**

At the heart of *alpha* pneumatics is the revolutionary hose-in-hose technology.

An integrated manifold at the head of the SingleLine delivery hose keeps the connections and features within easy reach. The first stage pressure reducer has also been completely re-designed. Its simplified construction reduces maintenance requirements. In comparison to conventional SCBAs, the weight of *alpha* pneumatics has been reduced by up to 35%.



The optional QuickFill fast cylinder refill connector is now located directly on the pressure reducer, eliminating the need for extra hosing and reducing the weight even further.

The *alpha* SingleLine technology advantages:

- increased durability
- less weight
- less maintenance
- greater safety
- lower cost-of-ownership.

Please see the separate *alpha* series brochure for more details.

[alphaCLICK rapid cylinder exchange]

The new *alphaCLICK* rapid cylinder exchange adapter does away with time-consuming threading. You simply snap the cylinder onto the coupling on the pressure reducer and you're done.



**COMING
SOON**

Several systems are in place to ensure absolute safety and reliability. Disconnection is only possible if there is no pressure. A two-phase disconnection sequence is then required. A spring-loaded release ring must first be turned 20 degrees before the cylinder can be disengaged by pushing the ring back. Should the valve accidentally be opened, a flow restrictor prevents the cylinder from getting dangerously out of control.

But the best part of the *alphaCLICK* is that it fits on all standard threaded cylinders [EN 144], protecting your long-term investment.

The *alphaCLICK* lets you connect and disconnect cylinders in a fraction of the time you would need for threading.

alpha personal network

modular monitoring and telemetry

[*alphaSCOUT* at your side]

The *alphaSCOUT* personal monitor and alarm is the central element of the optional *alpha* personal network. Since it is wireless and completely detached from the SCBA, the *alphaSCOUT* remains conveniently at hand.

The *alphaSCOUT* is always looking after your safety. A built-in motion sensor emits a visible and audible warning signal after 20 seconds of non-activity, giving you a chance to reset it. After 30 seconds a full-scale alarm lets your mates know where you are.

Since the wireless *alphaSCOUT* is independent of the backplate, the number of units needed by a brigade can be reduced by up to 75%.



The *alphaMITTER* transmitter on the BD 96 backplate transmits pressure data every two seconds. The *alphaSCOUT* then calculates remaining service time based on your breathing rate. Pressure and remaining time are shown on an easy-to-read backlit display.



The *alphaMITTER* sends SCBA pressure data to the wireless *alphaSCOUT TM* every two seconds.



The *alphaSCOUT TM* in turn communicates with incident command using either the *alphaBASE* or the *alphaTABLET*.

[Constant contact]

The *alpha* telemetry option adds an additional long-range signal capability to provide communication between the *alphaSCOUT TM* [Telemetry Module] and incident command. Signals are received from and sent to the *alphaSCOUT TM* through the *alphaBASE* receiver. The *alphaBASE* can be used with any standard PC, or choose the specially designed *alphaTABLET* with built-in receiver for a portable and rugged alternative.

The *alphaBASE* software automatically monitors, logs and analyses data from all *alphaSCOUT TMs* in the field without operator intervention. A written incident report can also be generated from log data saving hours of tedious manual labour.

When a motion sensor alarm is received, the *alphaBASE* notifies command personnel so that help can be immediately sent. In addition, an evacuation signal can be sent from the *alphaBASE* to operation teams or the whole crew.

The powerful digital radio signal is extremely reliable even in shielded environments. Each *alphaSCOUT TM* also functions as a repeater to extend the signal further.

[User identification]

Personal data is registered with the *alphaSCOUT TM* through the *alphaTAG* identification tag. The *alphaTAGs* are programmed by the *TAGwriter*.



BD 96 *alpha*-powered options

BD 96 SL

+ QuickFill

[fast cylinder refill]

+ alphaCLICK

[rapid cylinder exchange]

+ alphaMITTER

[pressure transmitter]

10060821
BD 96 SL



10060822
BD 96 SL-Q

10069714
BD 96 SL-CLICK

COMING
SOON

10060823
BD 96 SL-M

10069715
BD 96 SL-Q-CLICK

COMING
SOON

10060824
BD 96 SL-Q-M

10069716
BD 96 SL-CLICK-M

COMING
SOON

10069717
BD 96 SL-Q-CLICK-M

COMING
SOON

Upgrades

10065798
alpha SL upgrade kit
[pressure reducer, manifold and
SingleLine in exchange with your
old SCBA pneumatics]

10065799
alpha SL-Q upgrade kit
[pressure reducer with QuickFill,
manifold and SingleLine in
exchange with your old SCBA
pneumatics]

10032072
AutoMaXX-AS Adapter
[to upgrade a PF mask to a
MaXX mask]

+ Personal Network

10058213
alphaSCOUT [complete set – including
batteries, alphaTAG and support bracket]



10065873
alphaTAG [set of 5]



10058214
alphaBASE
[including power supply,
USB-cable & software]



10058212
alphaSCOUT TM [Telemetry Module]
[complete set – including long-distance radio,
batteries, alphaTAG and support bracket]



10065875
TAGwriter [including USB-
cable & software]



10058215
alphaTABLET
[including receiver
& software]



on request
alphaMITTER to retrofit onto BD 96-SL [Q]

10065874
support bracket to attach alphaSCOUT [set of 10]

Full-face masks & demand valves

[An extract from our complete offering]

Positive Pressure			
	MSA Plug	AutoMaXX Plug	M 45 x 3
Masks	<p>Ultra Elite</p> <p>D2056751 Ultra Elite-PS</p> <p>D2056772 Ultra Elite-PS-EZ</p> <p>D2056789 Ultra Elite-PS small</p> <p>D2056782 Ultra Elite-PS-EZ small</p> <p>10026552 Ultra Elite-PS + Transponder</p>	<p>Ultra Elite</p> <p>10031385 Ultra Elite-PS-MaXX</p> <p>10031381 Ultra Elite-PS-MaXX-EZ small</p> <p>10031383 Ultra Elite-PS-MaXX small</p> <p>10031382 Ultra Elite-PS-MaXX-EZ</p> 	<p>Ultra Elite</p> <p>D2056741 Ultra Elite-PF</p> <p>D2056781 Ultra Elite-PF-EZ small</p> <p>D2056785 Ultra Elite-PF small</p> <p>D2056771 Ultra Elite-PF-EZ</p> 
	<p>3S</p> <p>D2055751 3S-PS</p> <p>D2055785 3S-PS-Vg</p>	<p>3S</p> <p>10031422 3S-PS-MaXX</p> <p>10031420 3S-PS-MaXX-EZ</p> 	<p>3S</p> <p>D2055741 3S-PF</p> <p>D2055791 3S-PF-EZ</p> <p>D2055783 3S-PF-Vg</p> 
	<p>Ultra Elite</p> <p>10045897 Ultra Elite-H-PS-F1</p> <p>10045898 Ultra Elite-H-PS-F1 small</p> 	<p>Ultra Elite</p> <p>10045899 Ultra Elite-H-PS-MaXX-F1</p> <p>10045910 Ultra Elite-H-PS-MaXX-F1 small</p> 	<p>Ultra Elite</p> <p>10045893 Ultra Elite-H-PF-F1</p> <p>10045894 Ultra Elite-H-PF-F1 small</p> 
	<p>3S</p> <p>10042637 3S-H-PS-F1</p> <p>10044439 3S-H-PS-F1 small</p> <p>10044132 3S-H-PS-VG-F1</p> 	<p>3S</p> <p>10042638 3S-H-PS-MaXX-F1</p> <p>10044441 3S-H-PS-MaXX-F1 small</p> 	<p>3S</p> <p>10042636 3S-H-PF-F1</p> <p>10044437 3S-H-PF-F1 small</p> <p>10044131 3S-H-PF-Vg-F1</p> 
	<p>D4075850 LA 96-AS</p> <p>D4075906 LA 88-AS</p> 	<p>10023688 AutoMaXX-AS</p> <p>10043133 AutoMaXX-AS-short</p> <p>10038296 AutoMaXX-AS-B</p> <p>10036272 AutoMaXX-AS-G</p> <p>10038410 AutoMaXX-AS-B-G</p> <p>10062981 AutoMaXX-AS-B-short</p> 	<p>10023689 AutoMaXX-AS-C</p> <p>10036273 AutoMaXX-AS-C-G</p> <p>10023687 AutoMaXX-AE</p> <p>10036271 AutoMaXX-AE-G</p> <p>D4075851 LA 96-AE</p> <p>D4075909 LA 88-AE</p>  

Accessories

[suitable for classic- & *alpha*-powered BD 96]

Normal Pressure

Standard Rd 40

Ultra Elite

D2056700 Ultra Elite
D2056780 Ultra Elite-EZ small

D2056779 Ultra Elite small
10013876 Ultra Elite + Transponder



D2056770 Ultra Elite-EZ

3S

D2055000 3S
D2055774 3S-Vg

D2055779 3S small
D2055767 3S-EZ



D2055772 3S-V
10013877 3S + Transponder

Ultra Elite

10045891 Ultra Elite-H-F1



3S

10042635 3S-H-F1

10044109 3S-H-V-F1



10044130 3S-H-Vg-F1

10023686 AutoMaXX-N



10036274 AutoMaXX-N-G

D4075852 LA 96-N

D4075960 LA 88-N



D4074808 LA 83

Cylinders

Composite Cylinders

10055168 6.9 l/300 bar, empty

D5103976 6 l/300 bar, empty

D5103962 6.8 l/300 bar, charged

10055167 6.9 l/300 bar, charged

D5103947 6 l/300 bar, charged

D5103980 6.8 l/300 bar, empty, with lockable valve

10055170 6.9 l/300 bar, empty, with lockable valve

D5103979 6.8 l/300 bar, empty

D5103973 6.8 l/300 bar, charged, with lockable valve

10055169 6.9 l/300 bar, charged, with lockable valve



Steel Cylinders

10024010 6 l/300 bar, charged, superlight, with lockable valve

D5103968 6 l/300 bar, charged, superlight

10031812 6 l/300 bar, charged, superlight, with airflow restrictor

D5103986 6 l/300 bar, empty

D5103967 6 l/300 bar, charged

D5103987 6 l/300 bar, empty, superlight



Accessories

D4075818 T-piece for two 6.8l/300bar cylinders

D4085817 T-piece for two 4l/200bar cylinders

D4075877 Protective cover black

D4075878 Protective cover yellow



10040152 Rescue set in pouch [incl. a 3S-EZ mask and the AutoMaXX-N demand valve with a 1.50 m medium pressure line.]

10040153 Rescue set in carrier [incl. a 3S-EZ mask and the AutoMaXX-N demand valve with a 1.50 m medium pressure line.]

10069802 alphaCLICK adapter for cylinder [set of 5]

COMING SOON

10045764 RespiHood



D4075971 Filling connector Q [for QuickFill, with pressure gauge, connects to supply cylinder]

D4075929 Filling line Q [1 m, connects BD 96 to filling connector, in carrying pouch]

D4080801 Wall box type A [for SCBA with one cylinder. SCBA suspended on cylinder. ready for use]

D4074877 Wall box type D [for SCBA with all available cylinders. SCBA suspended on carrying plate]

D4074341 Carrying case [accommodates any BA set with one cylinder]

10049021 Carrying case [accommodates any BA set with up to two cylinders]



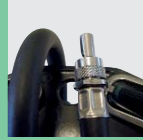
Still available...

BD 96 classic options

BD 96

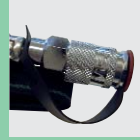
D4075700
BD 96

+ Signal Line



D4075701
BD 96-S

+ 2nd Connection



D4075702
BD 96-Z

D4075703
BD 96-S-Z

+ QuickFill



D4075705
BD 96-Q

D4075706
BD 96-S-Q

D4075707
BD 96-Z-Q

D4075708
BD 96-S-Z-Q

+ ICU

10014440
BD 96 with ICU

10016235
BD 96 with ICU-S

10014429
BD 96-S with ICU

10016236
BD 96-S with ICU-S

10014427
BD 96-S-Z with ICU

10016238
BD 96-S-Z with ICU-S

10014428
BD 96-Z with ICU

10016237
BD 96-Z with ICU-S

10014426
BD 96-Q with ICU

10016239
BD 96-Q with ICU-S

10014425
BD 96-S-Q with ICU

10016240
BD 96-S-Q with ICU-S

10014424
BD 96-Z-Q with ICU

10016241
BD 96-Z-Q with ICU-S

10014423
BD 96-S-Z-Q with ICU

10016242
BD 96-S-Z-Q with ICU-S



Legend: ICU = integrated control unit • ICU-S = integrated control unit with key • Q = QuickFill • S = signal line • Z = second connection

Cylinders

MSA offers both steel and composite compressed-air cylinders to meet your requirements. All cylinders come with an impact-protected valve according to EN 144. Steel cylinders are available in both 4 litre/200 bar and 6 litre/300 bar sizes. The 6 litre also comes in a super-light version. Composite cylinders are 50% lighter than traditional steel construction. They are available in either 6, 6.8 or 6.9 litre sizes with 300 bar maximum pressure. The 6.8 and 6.9 litre also come with an optional lockable valve.



Composite cylinder



Steel cylinder



RespiHoods large anti-fog coated visor provides a large field of vision and therefore helps to prevent panic.

RespiHood

The RespiHood is designed for rescuing people from hazardous areas. It is placed over the head and the neck-band is then tightened slightly. Air is supplied through the emergency service personnel's second connection. A constant airflow of approximately 50 l/min is maintained through the medium pressure line. The RespiHood folds up and is stored in a compact, watertight pouch for easy carrying.

Carrying cases

For easy transportation of your BD 96 breathing system, MSA offers a choice of two distinct carrying cases. One is designed especially for BD 96 systems with one cylinder, a demand valve and a mask. Alternatively you can select our universal carrying case which will accommodate any SCBA set with up to two cylinders, a demand valve and a mask. With two rugged wheels and convenient handles, the carrying cases are an ideal way to transport equipment for servicing or when traveling on special missions abroad.



The universal carrying case above can be used for any SCBA set. The specially designed case on the right is made specifically for the BD 96 with one cylinder.

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