

SELF CONTAINED BREATHING APPARATUS (SCBA)



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QUEST~SCBA

Technical Data Sheet



**POSITIVE PRESSURE SELF CONTAINED
BREATHING APPARATUS**



**CAM
LOCK**

The Centre of Excellence for
Design, Technology and Manufacture

QUEST~SCBA

The QUEST is a positive pressure, open circuit, compressed air, Self Contained Breathing Apparatus (SCBA).

The working airline system can be connected to any airline, cascade air supply hose via the male plug connection on the BA set.

Dependant on the end user application, the QUEST SCBA can be selected with either the FAST-mask or FAST-cowl face mask. For further information refer to the FAST-mask and FAST-cowl face mask technical data sheet.

Certification & Approvals:

CE marked to EN 137:2006



QXR (Industrial)
Type 1 Approval



QFXR (Fire Fighting)
Type 2 Approval



RSM female and airline hose
male connections

Materials:

Harness assembly – Type 1 (QXR)	Flame retardant polyester material
Harness assembly – Type 2 (QFXR)	Kevlar/Nomex flame resistant material
Tubular Backframe	316 - Stainless Steel
Medium pressure hose	Reinforced EPDM
High Pressure Hose	Stainless Steel braiding c/w PTFE liner and polyester outer sleeve

Packing Specification:

Order Codes	QXR	QFXR
Length (cm)	61	61
Width (cm)	26	26
Depth (cm)	29	29
Weight (kg)	3.0	3.2

Technical Specification:

Thermal Operation	-30 °C to +70 °C
Facemask Positive Pressure	1.7 to 5.9 mbar
Demand valve peak flow rate	> 500 Litres.min ⁻¹
1 st stage (balanced) reducing valve	1000 Litres.min ⁻¹

FAST~mask[®] & FAST~cowl[®] face masks

Technical Data Sheet



POSITIVE PRESSURE FACE MASKS AND DEMAND VALVE REGULATOR



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Issue: DRAFT

FAST~mask® & FAST~cowl® face masks

Positive Pressure Face Masks and Demand Valve Regulator.

The FAST-mask and FAST-cowl face masks are activated when the demand valve regulator switch, with safety lock system, is rotated to open the medium pressure air supply and automatically inflates the head harness while at the same time, purging the facemask of any traces of hazardous gas before rapid and simply donning in less than 5 seconds.

Placing the face mask onto the face immediately creates a face seal, which in turn automatically deflates the self-tensioning head harness and switches the demand valve regulator to positive pressure breathing.

Certification & Approvals: CE marked to EN 136:1998 Class 3



FAST-mask style
(FAST-DVX05)



FAST-cowl style
(FASC-DVX05)

Materials:

	FAST-mask style FAST-DVX05	FAST-cowl style FASC-DVX05
Face mask moulding	Black silicone	Grey chloroprene, natural rubber blend
Face mask visor	Polycarbonate	
Face mask head harness	Flame retardant polyester sleeve with internal silicone tube	
Demand Valve assembly	Glass filled nylon	
Medium pressure supply hose	Reinforced EPDM	
Demand valve hose plug connector	Rectus (CEN pattern), 316 stainless steel	

Technical Specification:

Protection Factor			
FAST-mask style			
Assigned Protection Factor (APF) EN 529:2005			
APF	2,000		
FAST-cowl style			
Workplace Protection Factor (WPF) (ProQares - TNO)			
WPF	5th percentile	Mean	95th percentile
Clean shaven	460,000	1,000,000	1,000,000
Facial hair*	170,000	1,000,000	1,000,000
Face mask Speed of Donning	In less than 5 seconds		
Thermal Operation	-30 °C to +70 °C		
Face mask Positive Pressure	1.7 to 5.9 mbar		
Demand valve peak flow rate	>500 Litres.min ⁻¹		
	FAST-mask style	FAST-cowl style	
Order Code	FAST-DVX05	FASC-DVX05	
Weight	0.7 kg	1.0 kg	

* 3 days growth

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Certification & Approvals:

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Materials:

Harness assembly – Type 1 (QX R)	Flame retardant polyester material
Harness assembly – Type 2 (Q FXR)	Kevlar/Nomex flame resistant material
Tubular Backframe	316 - Stainless Steel
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Sekur® Diablo Industrial Breathing Apparatus



DIABLO compressed air self-contained breathing apparatus is available in MM version for industrial applications, complying with EN137

CERTIFICATIONS

- EC Certified according to Form B of 96/98/EC MED Directive
- EC Certified according to Article 10 of 89/686/EEC Directive
- EC Certified according to 97/23/EC PED Directive

DIABLO INDUSTRIAL, C 607 SP/A, without quick coupling, DIN 300. The above units are equipped with the full face mask C 607 SP/A in EPDM.

DIABLO INDUSTRIAL MM is **Type 1/Type 2**

DIABLO INDUSTRIAL 1800/1 - MED approved, C 607 SP/A complete with cylinder



Main Components and features:

Full Face Mask -

Panoramic picture of universal conforming to European standard EN 136. For use with dust filters, gas and Combined with threaded connector to EN 148/1, and in versions SP / overpressure, with equipment supply breathing air (with connection EN 148/3). Available in EPDM and silicone.

Back plate & Harness –

The harness is made of self-extinguishing synthetic woven fabric. The buckles are flame resistant and Quickly adjustable. The shoulder straps are padded and house the medium and high pressure hoses inside, Thus protecting them from fire and abrasion. The light weight and mechanically resistant carrying frame, is made of self-extinguishing fibre glass reinforced synthetic resin and is designed in order to fit ergonomically the shape of the body.

COMPOSITE CYLINDERS - FEATURES AND PROPERTIES



PET LINER

Use of PET liner in SAFER® cylinders has allowed the production of ultralight composite cylinders.

The liner protects the cylinder against reaction with gas, and thus prevents corrosion. The gases stored in cylinders are kept clean and are safe for cylinder users.

PET features high barrier properties that guarantee safe gas storage in SAFER® cylinders.

WARRANTY

The technology and research works allowed the development of products with 15 and 20 years life span. Further tests and research have confirmed possible use of our products for 30 years.

High quality materials used in the production process and a wide range of capacities allow to use the cylinders with various gases.



Advantages of this Composite Cylinder

- *Corrosion Free
- *Light Weight
- *Every 5 yrs Hydro Test
- *Able to fit to any BA from Europe Make
- *No shelf life
- *Excellent strength due to aramid fibre braid
- *Warranty 24 months



THE LATEST CYLINDER DESIGN

The SAFER® cylinders are made of ultralight polymers.

Carbon and aramid fibre braid in an epoxy matrix allows storage of high pressure gases. An external epoxy layer protects SAFER® cylinder against scratches and impacts, and ensures excellent durability.



ULTRALIGHT POLYMER LINER

CARBON FIBER & ARAMID FIBER BRAID IN AN EPOXY MATRIX

EPOXY COATING

The cylinders are manufactured to :
PN-EN 12245:2009

PRODUCT	WEIGHT	DIAMETER	LENGHT	WORKING PRESSURE	SCREW THREAD	SERVICE LIFE	WARRANTY (MONTH)
2.0 L	1.10 kg	116 mm	321 mm	300 bar	M 18 x 1,5	NLL	24
3.0 L	1.60 kg	116 mm	445 mm	300 bar	M 18 x 1,5	NLL	24
4.3 L	2.20 kg	116 mm	586 mm	300 bar	M 18 x 1,5	NLL	24
4.7 L	2.40 kg	158 mm	400 mm	300 bar	M 18 x 1,5	NLL	24
6.8 L	2.80 kg	158 mm	526 mm	300 bar	M 18 x 1,5	NLL	24
6.9 L	2.80 kg	158 mm	526 mm	300 bar	M 18 x 1,5	NLL	24
7.0 L	2.80 kg	158 mm	526 mm	300 bar	M 18 x 1,5	NLL	24
9.0 L	3.80 kg	174 mm	576 mm	300 bar	M 18 x 1,5	NLL	24



PRODUCT FEATURES

Use of the highest quality materials (e.g. Kevlar® fibres and PET liners) provides the following SAFER® cylinder properties:

- **Comfort** – significant reduction of cylinder weight for easy use in rescue operations for fast and comfortable movement in hazardous areas.
- **Lightweight** – SAFER® cylinders are more than three times lighter than the steel cylinders which is a major advantage for storage of industrial gases. It allows gas cylinder handling without the use of heavy lifting equipment.
- **High resistance to gas temperature changes** inside the cylinder (gas does not heat since the materials used are non-conductive).
- **Gas purity inside the cylinder** – no hazard to user health
- **Electrical insulation ensures** the fire fighters' safety.
- **Resistance to impact and abrasion** (transport, storage and delivery).
- **Good gas barrier properties** (e.g. oxygen)
- **Smooth and easy to maintain surfaces.**



Lightweight SAFER® gas cylinders can be used in rescue operations where reduced equipment weight is of an advantage. Verified effective back and neck protection.



PET liner is an excellent thermal insulator. The gas inside the cylinder does not heat and the rescuers do not breathe warm air.



PET liner protects the cylinder against reaction with gas thus preventing corrosion. The gases stored in the cylinders are kept clean and user safe.



Made with the highest quality materials, SAFER® gas cylinders provide excellent electrical insulation and protection against electric shock.

KEVLAR® INNOVATION AWARD

DuPont™ oraz Kevlar® są zastrzeżonymi znakami handlowymi lub znakami handlowymi firmy DuPont bądź jej spółek

The company has been awarded the Kevlar® Innovation Award 2012 by DuPont™ for its high quality and innovative products.

LEADING TECHNOLOGY

SAFER® are manufactured and tested using automated, computer controlled processes. Continuous reinvestment in the plant and the equipment ensures that our cylinders are manufactured and tested in accordance with the most technologically advanced processes available. Automatic data acquisition allows full traceability of materials used and the effective monitoring of critical process parameters.

All products are TÜV certified. The cylinders are manufactured to PN-EN 12245:2009 and meet all the requirements and specifications for use in breathing apparatus, storage of different gases: air, oxygen, nitrogen and carbon dioxide.

WIDE RANGE OF PRODUCTS

Techplast offers full range of 300 bar composite gas cylinders. The cylinders are available in 1.2L to 9L sizes. The technology and the research works allowed the development of products with the service life of 15, 20 and 30 years. 6.8L and 9.0L size cylinders are also available in NLL version.

PRODUCT	WEIGHT	DIAMETER	LENGTH	WORKING PRESSURE	SCREW THREAD	SERVICE LIFE (Years)			WARRANTY (months)
						20	30	NLL	
2.0 L	1.10 kg	116 mm	321 mm	300 bar	M18 x 1,5	x			24
3.0 L	1.60 kg	116 mm	445 mm	300 bar	M18 x 1,5	x			24
4.3 L	2.20 kg	116 mm	586 mm	300 bar	M18 x 1,5	x			24
4.7 L	2.40 kg	158 mm	400 mm	300 bar	M18 x 1,5	x	x	x	24
6.8 L	2.80 kg	158 mm	526 mm	300 bar	M18 x 1,5	x	x	x	24
6.9 L	2.80 kg	158 mm	526 mm	300 bar	M18 x 1,5	x	x	x	24
7.0 L	2.80 kg	158 mm	526 mm	300 bar	M18 x 1,5	x	x	x	24
9.0 L	3.80 kg	174 mm	576 mm	300 bar	M18 x 1,5	x	x	x	24