



SCOTT
Fire & Safety

3M™ Scott™ EN Cylinders

For use with 3M™ Scott™
Breathing Apparatus





3M™ Scott™ Fire & Safety Cylinders

Over the years, breathing air cylinders have been providing BA users with a supply of breathable air. The original cylinders were made of steel and quite heavy. But today, advances in technology have enabled cylinders to become much lighter and less burdensome to the BA wearer. 3M™ Scott™ offers a complete assortment of cylinders to meet the needs and demands of all BA users – steel cylinders for infrequently used BA to carbon-wrapped cylinders for daily use. In addition, 3M™ Scott™ offers cylinders up to 75 minutes in duration (a 3M™ Scott™ exclusive).

379 Bar Cylinders: lighter and smaller cylinders used on breathing apparatus

The best way to understand the needs of BA users is to simply listen. 3M™ Scott™ did just that by visiting BA users from across the world. Participants included fire chiefs, BA technicians, safety officers and firefighters. It was not exclusive to the fire service as representatives from the civil defence, general industry and law enforcement were also included. The overwhelming attribute that users requested was a reduction in weight followed closely by a reduction in profile.



The engineers of 3M™ Scott™ determined the best manner to accomplish this was to increase the pressure of the cylinders to 379 bar, which created the new 379 bar cylinders, an “industry first.” The result is a cylinder that has more than a 10% reduction in weight and profile in a traditional form familiar to BA users.

The construction continues to be an aluminium liner wrapped with layers of carbon fibres and fibreglass all sealed with a protective epoxy resin coating which makes the cylinder easier to clean. At 25% higher pressure than the current 300 bar cylinders, these cylinders will offer significantly increased duration with a choice of 5.7 litre, 7.6 litre or 9.5 litre capacity (45, 60, or 75 minutes). The overall result is a lighter BA that reduces fatigue of the wearer, increases productivity and decreases injuries.

200 and 300 Bar Cylinders

- ▶ 3M™ Scott™ cylinders are built to applicable CE, PED, and ISO specifications
- ▶ Lightweight, composite cylinder consisting of an aluminium alloy inner shell with a total overwrap of carbon fibre, fibreglass and an epoxy resin
- ▶ Available in variety of sizes for BA and escape set use

NLL Cylinders

- ▶ New, nonlimited-life cylinders allow for extended lifetime use provided cylinders continue to pass hydrostatic testing
- ▶ Longer life for a lower overall cost of ownership

Valve Specifications

All valves are nickel plated brass with a brass spindle and utilise nitrile O-rings and a polychloroprene rubber buffer. Valves meet EN 144-2 with a DIN cylinder connection, and EN 144-1 with M18 × 1.5 valve neck threads. A safety locking handwheel utilising a spring loaded ratchet mechanism is standard allowing the cylinder to be opened with one hand but will prevent the cylinder valve from being inadvertently closed. Valves are tested to one and a half times maximum operating pressure. The hand-wheel is spring-loaded and rotates freely when the valve is opened, but must be pulled to disengage the ratchet prior to closing the valve.

CV-4 and CV-5 valves are intended for use with 200 or 300 bar cylinders containing an M18 × 1.5mm parallel-thread. Both 200 and 300 bar valve outlets have the same female thread form, with the 300 bar version having a longer outlet, and a pilot vent hole in the side to prevent the inadvertent connection and pressurisation of 200 bar equipment. Additionally, the valve outlet is engraved with either '200' or '300' to denote the correct application. CV-8 valves are intended for use only with 379 bar cylinders.

| Description | | Article number | Valve type | Length (mm) | Handwheel | Options |
|---------------|---|--|---------------------------|-------------|----------------------------|--------------------|
| Valves | | | | | | |
| CV-4 | Standard T-Valve for 200 or 300 bar cylinders with a protective, replaceable, rubber buffer fitted to the bottom of the valve. Optional burst discs (BD), combination burst disc and pressure gauges (BD-PG) and excess flow valves (EFV) can be fitted to these valves. | 065.261.99: 200 bar 065.261.98: 300 bar | T-Valve | 85 | 30% Glass filled polyamide | BD, EFV, BD-PG, PG |
| CV-5 | Right angle valve for 200 or 300 bar cylinders where the hand-wheel is located at ninety degrees to the cylinder valve outlet allowing for easier access. Optional burst discs (BD), combination burst disc and pressure gauges (BD-PG) and excess flow valves (EFV) can be fitted to these valves. | 2018646 Cylinder Valve 200 bar 2018648 Cylinder Valve 300 bar | Right Angle Valve | 72 | 30% Glass filled polyamide | BD, EFV, PG |
| CV-8 | Right angle cylinder valves for use with 379 bar cylinders where the hand-wheel is located at ninety degrees to the cylinder valve outlet allowing for easier access. Burst disc (BD) and excess flow valve (EFV) are standard, pressure gauge is optional. | 379 bar | Right Angle Valve-379 Bar | 72 | TPU | PG |

| Description | | Valve type |
|---------------------------------------|--|----------------------|
| Options | | |
| Burst Disc (BD) | Optional replaceable burst-disc within the valve body so that if the internal air pressure within the cylinder exceeds approximately 1.35 times (270 bar/405 bar/512 bar) the working pressure, a small metal diaphragm will rupture, harmlessly releasing the contents to atmosphere. | CV-4 CV-5 CV-8 |
| Spare Excess Flow Valve (EFV) | Optional safety device that prevents uncontrolled release of high-pressure air in case of cylinder valve damage or misuse by reducing the rate of escaping air. The EFV does not affect performance during normal use. | CV-4 CV-5 CV-8 |
| Burst Disc and Pressure Gauge (BD-PG) | Combination burst disc and pressure gauge. | CV-4 CV-5 CV-8 |
| Pressure Gauge (PG) | Pressure gauge integrated into the valve allowing user to view cylinder pressure without test gauge. | CV-4 CV-5 CV-8 |

| Description | Article numbers | Water capacity (litres) | Air capacity (litres) | Life (years) | Colour | Regulatory | Shell dimensions (diameter x length) | Shell weight (kg) | Charged weight (kg) | Duration at 40 lpm (minutes)* | Valve | Options | Included as standard |
|---|--|-------------------------|-----------------------|--------------|--------------------|-----------------------------------|--------------------------------------|-------------------|---------------------|-------------------------------|--------------------|-----------------------------|-----------------------|
| Steel Cylinders | | | | | | | | | | | | | |
| 200 bar | | | | | | | | | | | | | |
| CYL-600 | 1045898: FULL 2006633: EMPTY | 3.0 | 600 | NLL | Painted grey | CE: PED EN1964-1 ISO9809-1 | 114 x 400 | 3.5 | 5.0 | 15 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |
| CYL-1200 | 1045790: FULL 2006635: EMPTY 2018923: RA-FULL 2018922: RA-EMPTY | 6.0 | 1200 | NLL | Painted grey | CE: PED EN1964-1 ISO9809-1 | 140 x 520 | 6.2 | 8.5 | 30 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |
| 300 bar | | | | | | | | | | | | | |
| CYL-820 | 1045920: FULL 2006634: EMPTY | 3.0 | 820 | NLL | Painted grey | CE: PED EN1964-1/ ISO9809-1 | 115 x 415 | 5.1 | 6.9 | 20 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |
| Carbon Fibre Wrapped Aluminium Liner | | | | | | | | | | | | | |
| 200 bar | | | | | | | | | | | | | |
| CYL-FWC-1800 | 1046000: FULL 2006641: EMPTY 2018939: RA-FULL 2018938: RA-EMPTY | 9.0 | 1800 | 15 | Unpainted gel-coat | CE: PED EN12245 | 173 x 546 | 4.3 | 7.4 | 45 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |
| 300 bar | | | | | | | | | | | | | |
| CYL-FWC-540 | 1046044: FULL 1046049: EMPTY 2024187: BD-PG-FULL | 2.0 | 540 | 15 | Unpainted gel-coat | | 105 x 460 | 1.47 | 2.6 | 13.5 | CV-4 or CV-5 | BD, BD-PG, EFV | |
| CYL-FWC-820 | 2018723: FULL 2018724: EMPTY | 3.0 | 820 | 15 | Unpainted gel-coat | CE: PED EN12245 | 114 x 443 | 1.9 | 3.7 | 20 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |
| CYL-FWC-1860 | 1046013: FULL 2006640: EMPTY 2018943: RA-FULL 2018942: RA-EMPTY | 6.8 | 1860 | 15 | Unpainted gel-coat | CE: PED ISO11119-2 | 157 x 530 | 4.2 | 7.3 | 46 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | Cap and boot standard |
| CYL-FWC-1860 NLL | 2033221: BD-NLL-EMPTY 2033222: BD-PG-EFV-NLL-EMPTY 2033220: EFV-NLL-EMPTY 2033219: NLL-EMPTY 2033225: RA-BD-NLL-EMPTY 2033226: RA-BD-PG-EFV-NLL-EMPTY 2033224: RA-EFV-NLL-EMPTY 2033223: RA-NLL-EMPTY | 6.8 | 1860 | NLL | Unpainted gel-coat | CE: PED ISO11119-2 | 159 x 515 | 3.9 | 7.0 | 46 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | Cap and boot standard |
| CYL-FWC-2460 | 1046030: FULL 2010162: EMPTY 2018947: RA-FULL 2018946: RA-EMPTY | 9.0 | 2460 | 15 | Unpainted gel-coat | CE: PED ISO11119-2 | 174 x 556 | 4.8 | 8.7 | 61 | CV-4 or CV-5 | BD, BD-PG, EFV, RA | |

*These are a calculation only and increased air consumption can shorten duration.

| Description | Article numbers | Water capacity (litres) | Air capacity (litres) | Life (years) | Colour | Regulatory | Shell dimensions (diameter x length) | Shell weight (kg) | Charged weight (kg) | Duration at 40 lpm (minutes)* | Valve | Options | Included as standard |
|---|--|-------------------------|-----------------------|--------------|--------------------|---------------------------------|--------------------------------------|-------------------|---------------------|-------------------------------|-------|---------|-------------------------|
| Carbon Fibre Wrapped Aluminium Liner | | | | | | | | | | | | | |
| 379 bar | | | | | | | | | | | | | |
| CYL-FWC-45M 379 Bar | 8000053: FULL 8000033: EMPTY 8000056: PG-FULL 8000059: PG-EMPTY | 5.7 | 1804 | 15 | Unpainted gel-coat | CE: PED 97/23/EC ISO 11119-2 | 154 x 490 | 3.7 | 6.7 | 45/36 | CV-8 | PG | RA, BD and EFV included |
| CYL-FWC-60M 379 Bar | 8000054: FULL 8000034: EMPTY 8000057: PG-FULL 8000060: PG-EMPTY | 7.6 | 2405 | 15 | Unpainted gel-coat | CE: PED 97/23/EC ISO 11119-2 | 167 x 548 | 4.6 | 8.4 | 60/48 | CV-8 | PG | RA, BD and EFV included |
| CYL-FWC-75M 379 Bar | 8000055: FULL 8000035: EMPTY 8000058: PG-FULL 8000061: PG-EMPTY | 9.5 | 3006 | 15 | Unpainted gel-coat | CE: PED 97/23/EC ISO 11119-2 | 189 x 573 | 5.7 | 10.3 | 75/60 | CV-8 | PG | RA, BD and EFV included |

*These are a calculation only and increased air consumption can shorten duration.

Specifications and ordering information

- ▶ Cylinders manufactured in accordance with listed specifications
- ▶ Cylinder weights are approximate and may vary by .3kg
- ▶ Shell dimensions are approximate
- ▶ Optional Burst Disc (-BD), Combined Burst Disc and Pressure Gauge (-BD-PG) or Excess Flow Valve (-EFV) available on most cylinders

Right Angle Valve (-RA) required for ProPak & ACS

CV-4 is T-Valve; CV-5 is RA Valve

All cylinders come standard with black and white quarters on neck

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