



D10963

1/2" CO2 Cylinder Valve

Description

Developed specifically for the Fire Protection Industry, exclusively use on CO2 fixed extinguishing system cylinders, this valve is servo assisted to provide light operating loads throughout the complete range of CO2 cylinder pressures.

This valve is suitable for both marine and onshore use.

Key Features:

- Servo assisted operation for smooth opening.
- High flow characteristics.
- Quick release head enabling a variety of actuators to be used.
- Safety burst disc to protect valve and cylinder in the event of over-pressure.
- NPT or DIN 477 cylinder threads.
- Standard 1/2" CO2 threaded outlet.
- Robust and compact body design.
- Proven reliability through many years of service.



SPECIFICATION

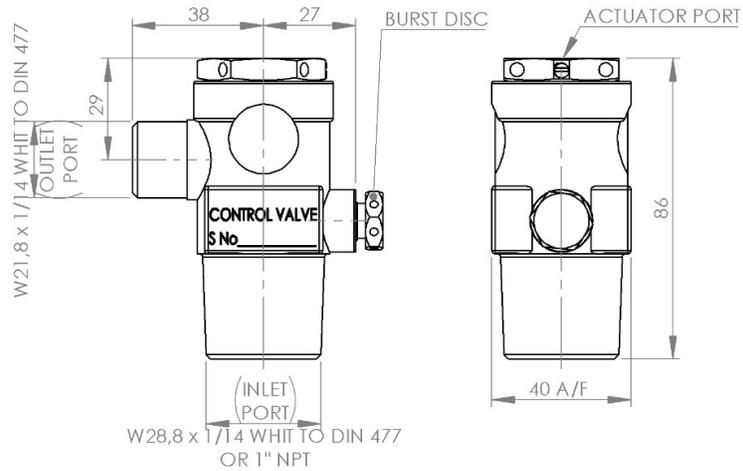
Part number	D10963/D	D10964/N
Cylinder Thread	DIN477	1" NPT
Outlet Thread	1/2" CO2 (W21.8 x 1/14" DIN 477)	
Syphon Tube Thread	M16 x 1	3/4" x 20tpi Whit Form
Burst Disc Pressure	190 Bar	
Flow Area	81.22 mm ²	
Equivalent Length	TBC	
Weight	0.592 kg	0.630 kg
Operating Temperature Range	-20°C to +50°C	
Maximum Allowable Pressure	140 bar	
Media	CO2	
Body material	Brass	

CERTIFICATION AND APPROVALS





DIMENSIONS



INSTALLATION INSTRUCTIONS

Apply a small amount of Loctite 270 or thread sealant to the syphon tube thread on assembly.

Syphon tubes:-

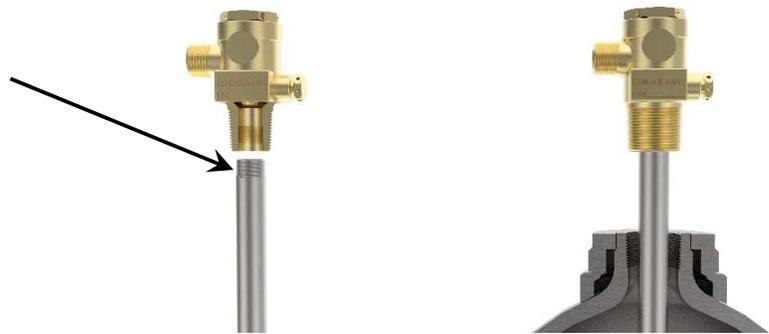
16mm o/d 16swg (DIN477)

Part number D10963/18B

Or

3/4" o/d 16swg (NPT)

Part number D10963/18A



This unit should only be fitted to the cylinder by competent parties, using the procedures specified in BS EN ISO 13341.

To fit the valve to the cylinder, attach the appropriate syphon tube to the cylinder valve as shown above, apply PTFE tape or equivalent sealant to the valve inlet thread, and torque into the cylinder using a setting of 150-200 Nm.

Note

- only use steel syphon tubes with this valve
- ensure that any thread sealing compound used does NOT foul the internal mechanisms.

Once fitted to the cylinder this unit should only be incorporated into a fire protection system by a competent installation engineer in accordance with BS 5306-4, or other applicable local National Standard, e.g. NFPA 12.

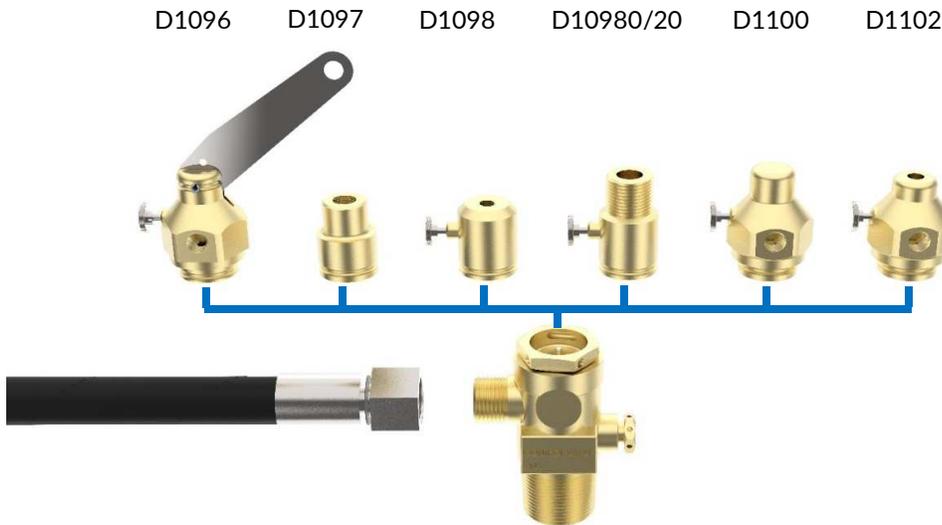


ASSOCIATED PARTS

This valve is intended to be used primarily in conjunction with the DAB parts listed.

Part number	Description	Data sheet number*
D10964	Manual/Pneumatic Actuator with Detent	DM-D10964-##
D10978	Single Slave Actuator	DM-D10978-##
D10980	Metron Actuator	DM-D10980-##
D10980/20	Metron Actuator with Conduit Thread	DM-D10980/20-##
D11003	Double Slave Actuator with Detent	DM-D11003-##
D11023	Double Slave Metron Actuator	DM-D11023-##
D20030/90D	Discharge Hose	DM-D20030-##

* where ## is the data sheet revision number



OPERATING INSTRUCTIONS

This valve should only be operated using a DAB actuator head. Refer to the appropriate actuator data sheet.

This valve must only be used as part of a CO2 fixed fire extinguishing system.



MAINTENANCE INSTRUCTIONS

All maintenance and inspections carried out should comply with the procedures specified in BS 5306-4, or other applicable local National Standard, e.g. NFPA 12.

The valve should be visually inspected every 6 months for any abnormal corrosion or damage; any defective valve must be replaced.

Apart from the replacement of the burst disc, which must only be undertaken by DAB Fire Engineering, or authorised representative, no repairing or overhauling the valve is possible, nor recommended.

Once a valve has been fitted and tightened into a cylinder at the specified torque, upon removal, the valve must be disposed of and not re-used.

If a valve is suspected as leaking, check for leaks using a leak detection fluid at the points, and in the order, listed below:-

1. cylinder to valve interface.
2. around the bursting disc retaining plug and its interface with the valve body.
3. around the valve bonnet, both around the circumferential joint between the hexagonal bonnet nut and the valve body stamping and also around the spindle on top of the valve (with actuator removed).
4. with the discharge hose detached and a recoil cap fitted, around the recoil cap thread and over the cap bleed hole. Warning – never leave a cylinder valve with the outlet port open without either a recoil cap fitted, or the valve connected into the distribution pipework.

If any leaks are found, the valve must be replaced; the cylinder must be removed from the installation and returned to DAB Fire Engineering or authorised representative for valve replacement and refilling.

Replace the valve upon periodic inspection of the cylinder.

ENVIRONMENTAL LIMITATIONS

The CO2 valve is generally corrosion resistant, some tarnishing of the brass material and light oxidation of the zinc plated steel parts can be expected over time, this is not detrimental to the longevity or performance of the valve.

Do not install the valve where adverse environmental conditions are expected, particularly acidic atmospheres.

Ensure the valve is used within the operating temperature range stated.

Ensure the cylinder, filling process and CO2 are free from moisture; the presence of such can adversely affect the service life of the valve and lead to failure.



SAFETY WARNINGS

All actions pertaining to the installation, filling, use, maintenance and decommissioning of the CO2 valve must only be undertaken by those who are competent to do so, through appropriate training and experience.

Installation, service and maintenance should be undertaken by a certified distributor of DAB Fire Engineering.

Do not attempt to use the CO2 Cylinder Valve for any other purpose, other than as part of a DAB fixed fire extinguishing system. The use of the CO2 Cylinder Valve on other fixed extinguishing systems is possible, but is at the sole responsibility of the party doing so.

Protect the valve from the ingress of foreign materials at all times.

Only fit this valve to cylinders which have been fitted with caps to ensure that the cylinder interior has remained clean and dry prior to valve fitment.

Note – the presence of moisture in the cylinder can adversely affect the life of the valve and cylinder.

Do not fit an actuator to the valve until the cylinder assembly has been installed as part of a fixed fire extinguishing system, with the cylinder securely installed in its rack and the valve outlet port connected to the pipework (the pipework installation having been completed, including all nozzles fitted).

The actuator should not be fitted to the CO2 valve until it is confirmed that the actuator is locked in the closed position. Failure to do so will result in the discharge of CO2 from the cylinder.

The CO2 valve must not be removed from the cylinder whilst the cylinder is under pressure, attempting to do so could result in personal injury or death. Since there will always be residual pressure present once the cylinder has been filled, ensure the cylinder is vented by competent persons in a safe manner before removing the valve.

Do not attempt to remove the bursting disc unless the cylinder has been vented and/or verified as being devoid of residual pressure by competent persons.

Do not use this valve for intermittent use applications where the valve would be opened and closed more than once during a discharge.

Replace the valve on cylinder periodic inspection – do not re-use old valves.

Do not modify this valve.

Do not attempt to repair, overhaul, or replace any part of the valve, other than the bursting disc.

Only use replacement bursting discs and associated parts supplied by DAB Fire Engineering, or authorised representative.