أزيدك للمقاولات العامة
وأعمال الإلكتروميكانيكال
Azeidk for General Contracting & MEP Solutions

Title

Material Submittal for CO_2 Fire Suppression System

Brand

SYSTEM WBE – CO_2

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المقر الرئيسي - جدة:
برج الصفا، مقابل عزيز مول، أعلى شركة عبداللطيف جميل، مبنى A، الدور الثالث، مكتب رقم ٣٤٠.
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حي الملز، شارع صلاح الدين، بجوار شركة زين، الدور الثاني، مكتب رقم ١٦.

CO2 FIRE SUPPRESSION SYSTEMS

CO2 AGENT SYSTEM

DESCRIPTIN

Carbon Dioxide is an odorless, colorless, electrically non- conductive, non-corrosive, and non-deteriorating.

inert suppression agent. Carbon Dioxide is approximately 50% heavier than air and is normally present in the atmosphere.

at about 0.03% by Volume. Carbon Dioxide is instrumental in

controlling respiration and other vital responses in animals and

humans, but it WILL NOT support life.

Carbon Dioxide is a standard commercial product commonly used for carbonating beverages, fast-freezing food products, purging pipes and tanks, medical purposes, and a multitude of additional tasks. It is also used for firefighting purposes: i.e., hose reels, portable hand extinguishers, and engineered fixed pipe systems. Carbon Dioxide is available in most large cities and seaports throughout the world.

Carbon Dioxide extinguishes fire by reducing the oxygen content of the protected space and/or local flame front toa point where it will not support combustion. Oxygen reduction below 16% by volume will extinguish most fires. Surface or "flash" type fires (oils, paints, etc.) are quickly extinguished. Deep- seated or "smoldering" type fires (paper, baled cotton, clothing, etc.) are extinguished by the prolonged action of a high concentration of Carbon Dioxide. Retaining the agent within the protected space reduces the fire's ability tore-ignite. In addition, Carbon Dioxide has a cooling effect on the surrounding atmosphere that has been found to be a benefit to fire extinguishment.

SPECIFICATION

Chemical Name	: Carbon Dioxide
Chemical Formula	: CO2
Molecular Weight	: 44.01
Critical Temperature	: 31.0OC
Boiling Point	: -109.3OF
Vapor Pressure @ 68OF	: 832 PSIG
Vapor Density @ 68OF	: 1.53
Solubility in Water @ 68OF	: 87.8% by Volume
Appearance and Odor	: Colorless Gas, Slight Pungent Odor

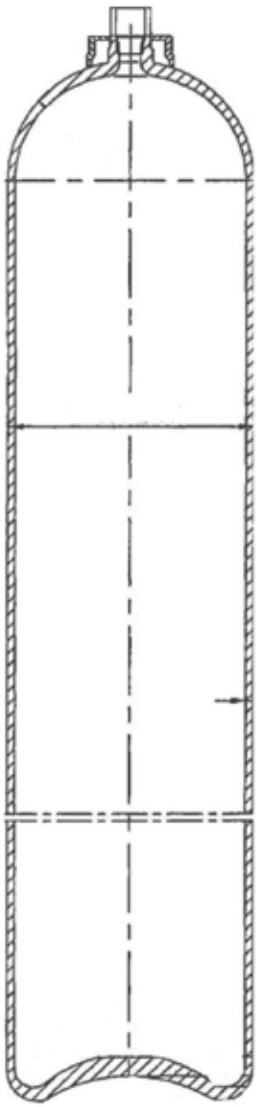
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P/N : WBE.01.24.3241

CO2 FIRE SUPPRESSION SYSTEMS

HIGH PRESSURE CO2 CYLINDERS



Length: 1470 mm
Width: 267 mm
Capacity : 45 KG

DESCRIPTION

CO2 cylinders are factory filled; partial fills are not allowed. The cylinders may be utilized in single or multiple cylinder applications as needed.

Carbon dioxide cylinders must be floor mounted, with the discharge valve in the vertical (up) position. Horizontal mounting of cylinders is not allowed. The cylinders may be used in single or multiple cylinder applications as needed.

Cylinders are shipped from the factory with a protective shipping cap in place. Filled cylinders shall be secured during transport and while in storage in accordance with DOT and OSHA requirements. Upon installation, all cylinders shall be secured by cylinder straps or in a suitable racking arrangement. Once secured by a strap or cylinder rack, the safety/shipping cap is removed. The caps should then best or Edin a suitable and nearby area for future use.

The high-pressure seamless steel CO2 cylinders has concave base and manufactured in accordance with 84/525 EEC.

MATERIAL
Cylinder: Chrome Molybdenum Steel Primed and painted in accordance with BS 4800: 04 E 53
Head Valve: Brass Discharge Valve Assembly (1" NPT)
Test Pressure: 250 Bar HYDRAULIC TEST PRESSURE: 250 Bar

P/N: CS-WBE-1121-CO2

Important Note:

All CO2 System to be provided with efficient detection system to assure that discharge of gas to be in case of fire only.

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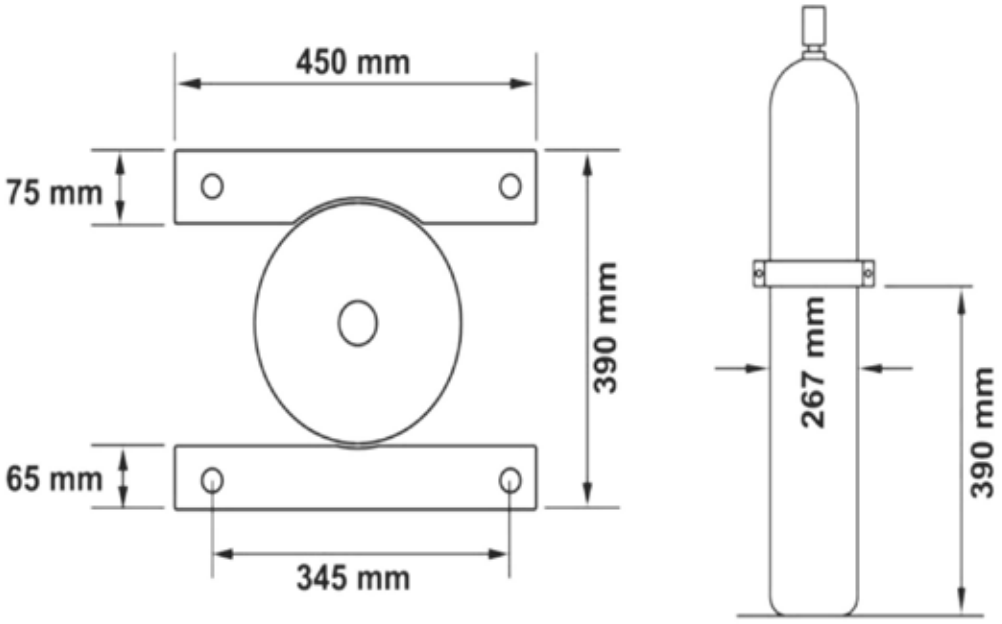
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CYLINDER BRACKET

DESCRIPTION

Cylinder straps are used to secure the cylinder in place, on a single cylinder system, in accordance with NFPA 12 requirements. The straps may be secured to any structurally solid surface. Anchoring into plaster or any other facing material is not acceptable.

Cylinder Straps are made of steel, primed and painted red with a baked enamel finish for corrosion resistance. All mounting hardware is supplied by the system installer.



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CONTROL HEAD VALVE

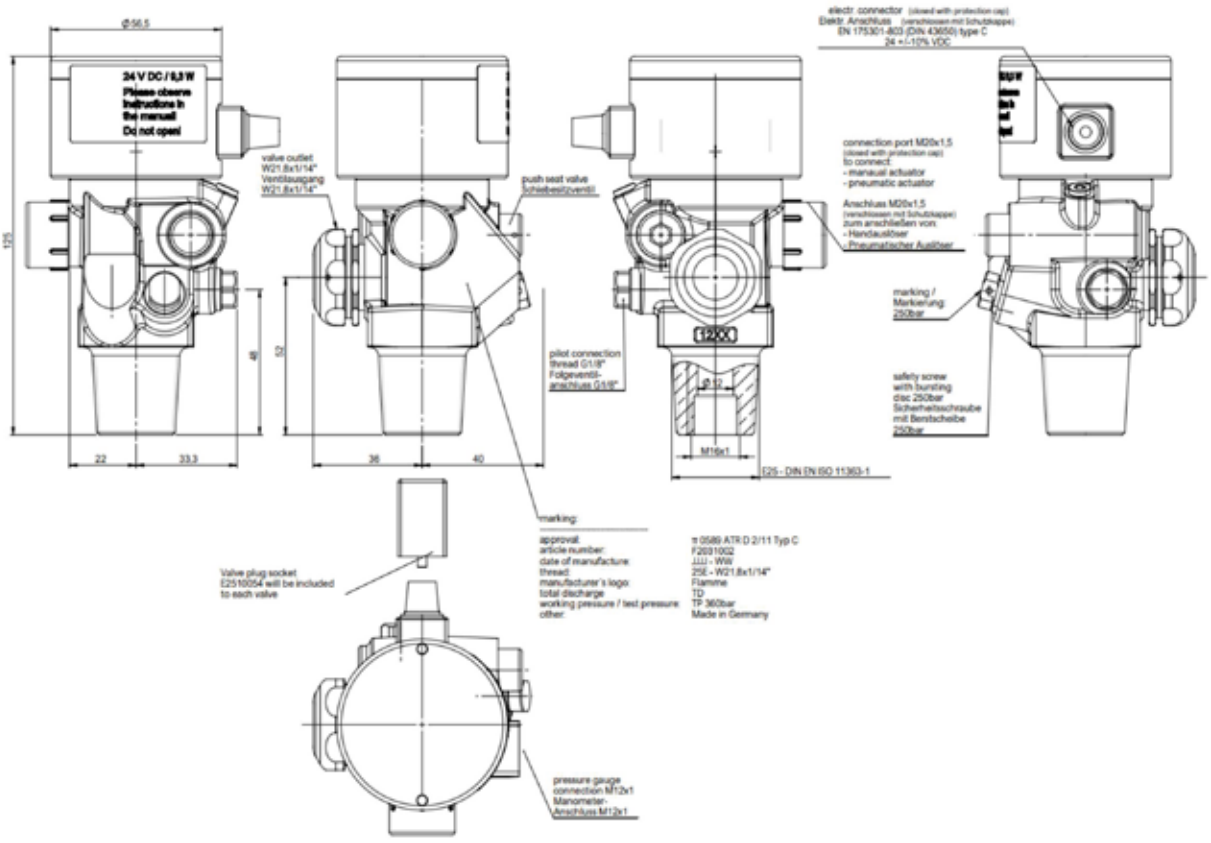
ELECTRICAL AND PRESSURE OPERATED CONTROL HEAD VALVE



DESCRIPTION

This type of control head valve operates the system cylinder electrically through electrical solenoid actuator after receiving am electronic initiating signal from the control panel. Also this type of control head valve operates the system cylinder through electrical principle, which allows the CO2 pressure to open the valve piston in order to discharge the gas in the protected area.

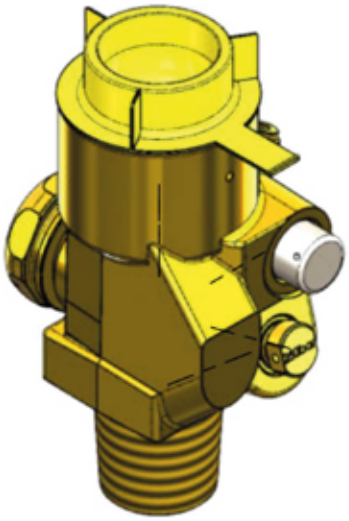
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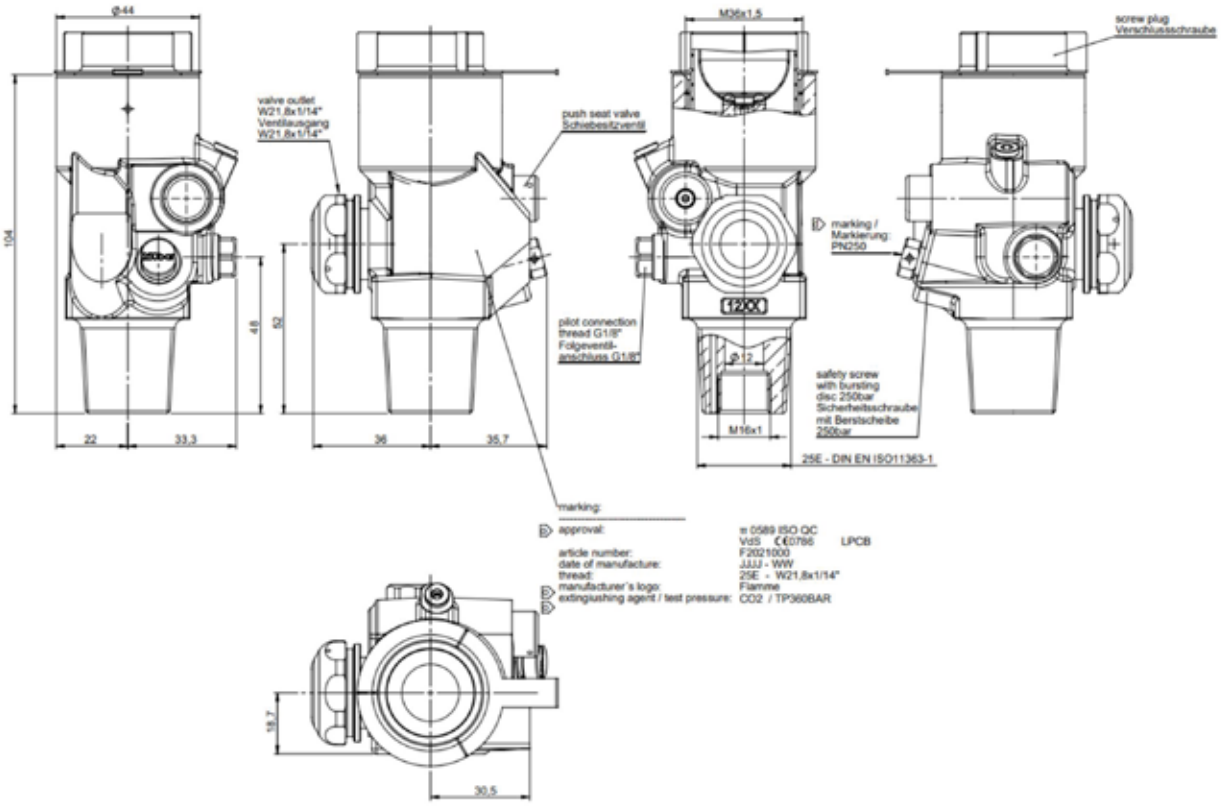
CONTROL HEAD VALVE



P/N: F2021000

DESCRIPTION

VALVE FOR FIXED INSTALLATION WBE Carbon Dioxide cylinders are equipped with a cylinder valve designed to hold the Carbon Dioxide agent in the cylinder until actuated, either automatically or manually. The conversion is completed by installing an emergency manual lever actuator. The cylinder valve assembly has a forged brass body. The pressure necessary to open the valve is 100-110 psig (689- 758 kPa) at 70°F. (21.1°C.). All cylinder valves are equipped with a Safety Relief Disc that will rupture to relieve excess pressure should it reach a level in excess of 2,650 psi (18,248 kPa) in accordance with NFPA 12, Section 1-8.5.2.

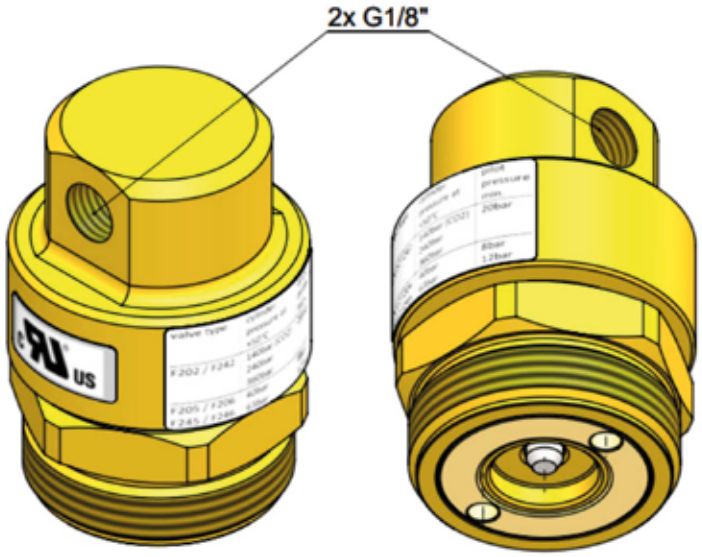


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CO2 FIRE SUPPRESSION SYSTEMS

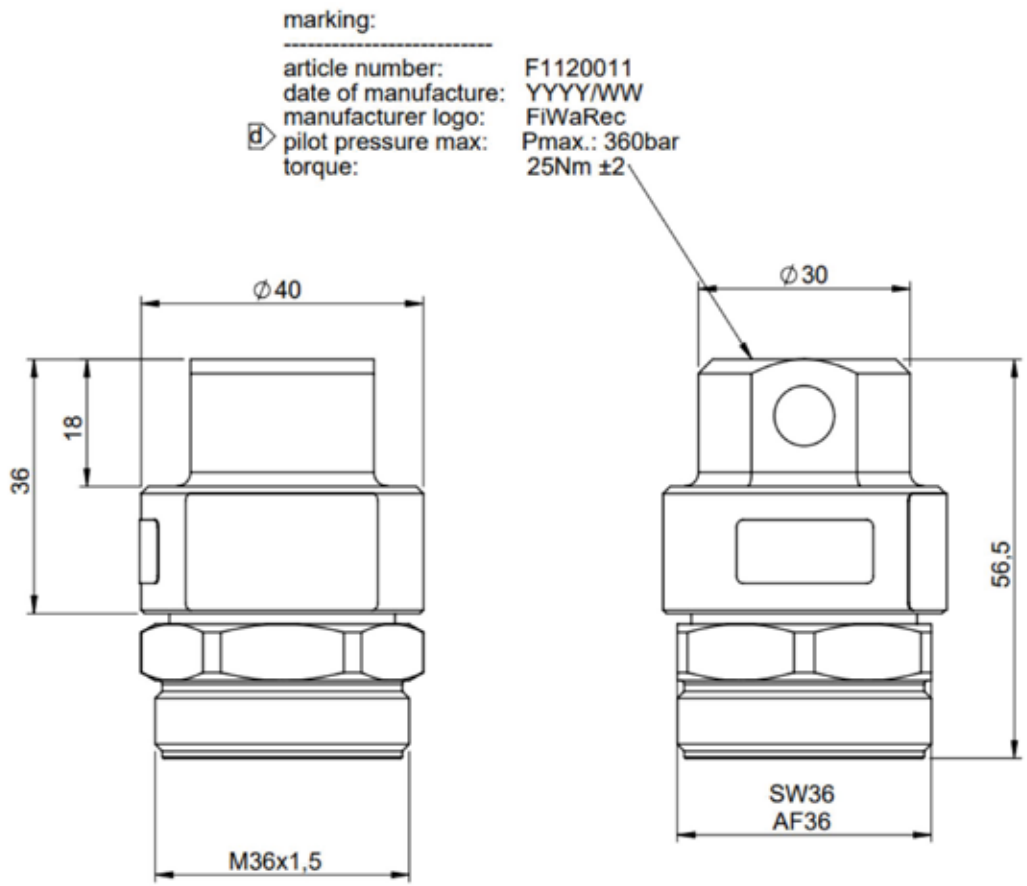
PNEUMATIC RELEASE DEVICE



P/N: F1120011

DESCRIPTION

This type of control head valve operates the system cylinder through pneumatic principle, which allows the CO2 pressure to open the valve piston in order to discharge the gas in the protected area.



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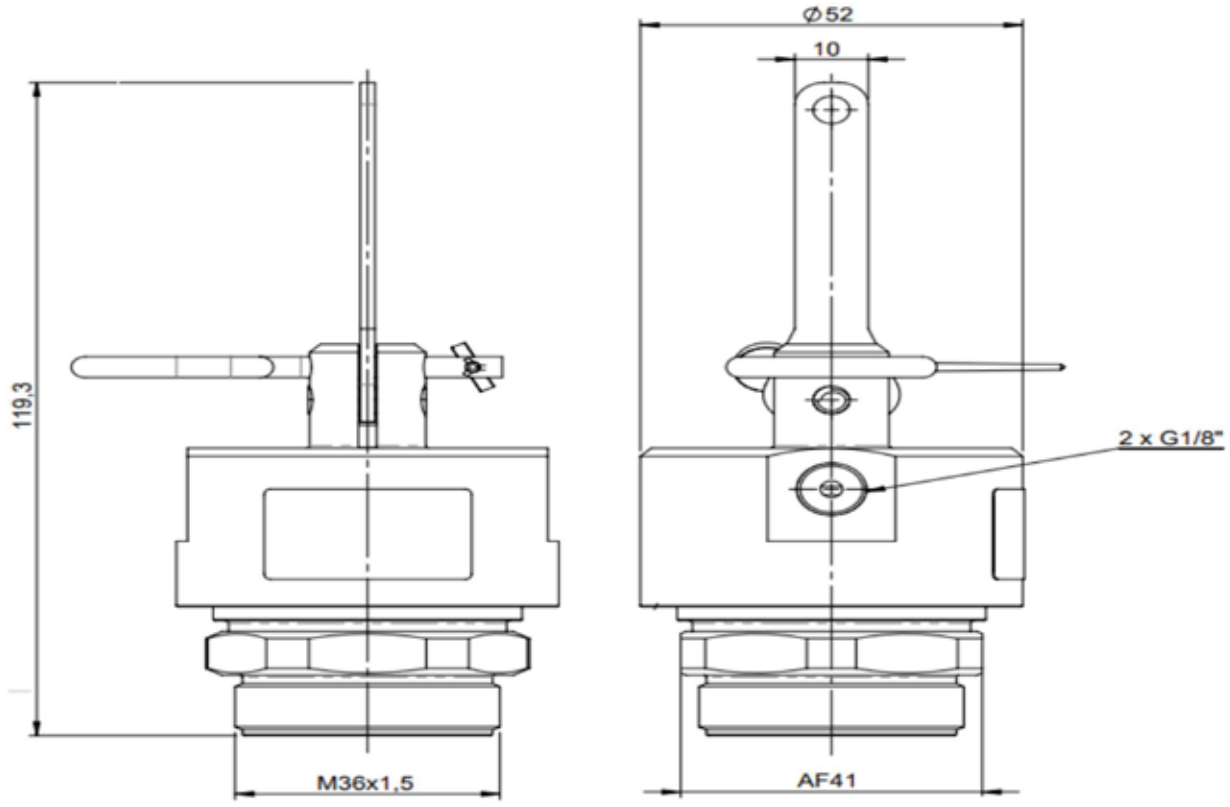
CO2 FIRE SUPPRESSION SYSTEMS

PNEUMATIC-MANUAL RELEASE DEVICE



DESCRIPTION

This type of control head valve operates the system cylinder through pneumatic principle, which allows the CO2 pressure to open the valve piston in order to discharge the gas in the protected area. The provision of the lever allows the manual operation too.

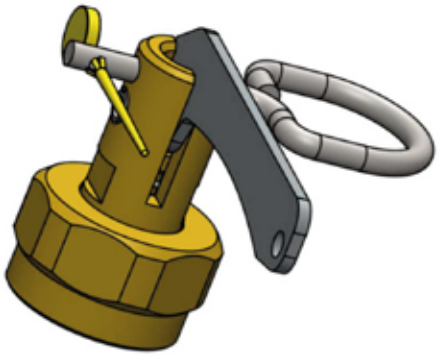


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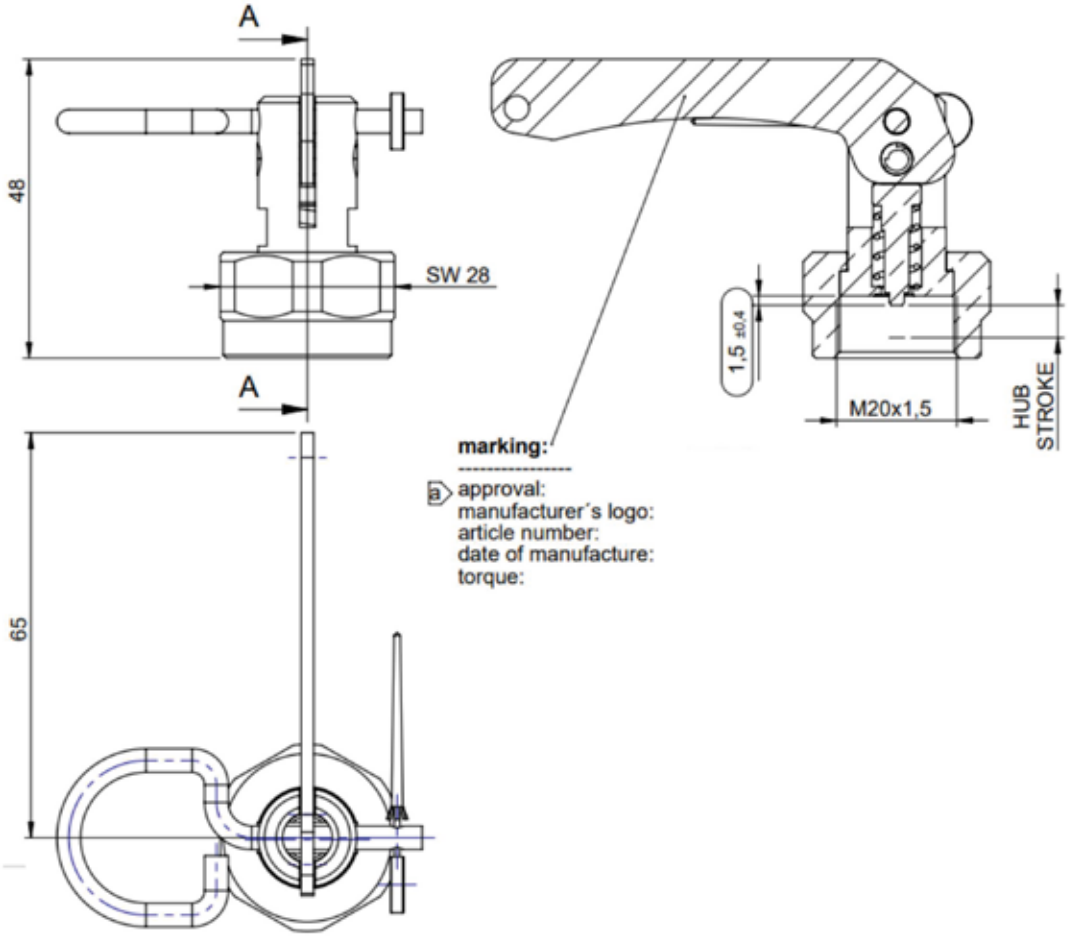
MANUAL ACTUATOR
MANUAL ACTUATOR FOR F203 VALVES



DESCRIPTION

This type of control head valve operates the system cylinder through pneumatic principle, which allows the CO2 pressure to open the valve piston in order to discharge the gas in the protected area.

P/N: F1120013



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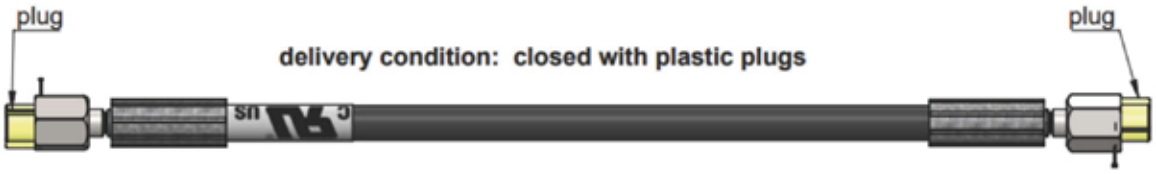
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CO2 FIRE SUPPRESSION SYSTEMS

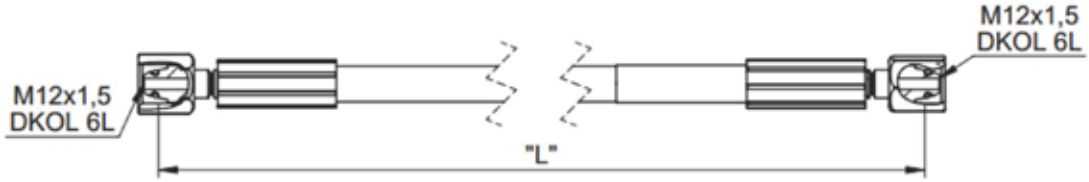
PILOT HOSES

DESCRIPTION

Our flexible pilot hoses connect multiple slave cylinders to a master or pilot cylinder. They are used to connect pressure operated devices where a flexible connection is required. They are available in 150 mm and 900 mm lengths.



P/N: F1040000



article-number	nominal dimension "L"
F1040001	150 mm
F1040002	200 mm
F1040003	250 mm
F1040004	300 mm
F1040005	350 mm
F1040006	400 mm
F1040007	450 mm
F1040008	500 mm

article-number	nominal dimension "L"
F1040009	550 mm
F1040010	600 mm
F1040011	650 mm
F1040012	700 mm
F1040013	750 mm
F1040014	800 mm
F1040015	850 mm
F1040016	900 mm

article-number	nominal dimension "L"
F1040017	950 mm
F1040018	1000 mm
F1040019	1100 mm
F1040020	1200 mm
F1040021	1300 mm
F1040022	1400 mm
F1040023	1500 mm

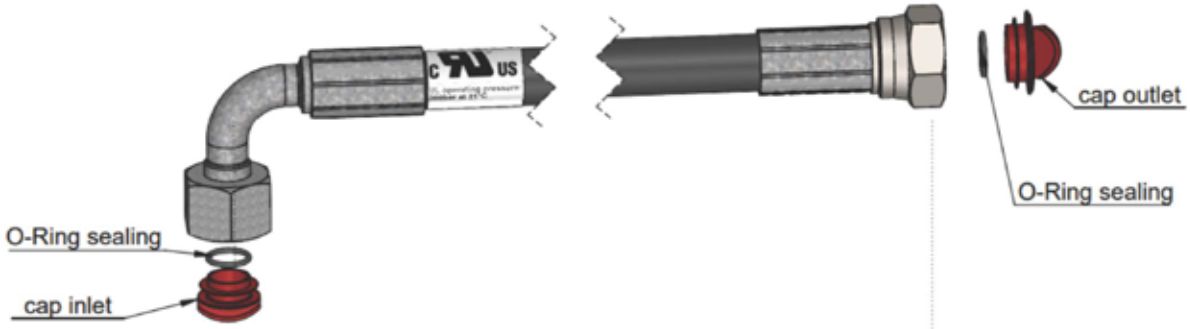
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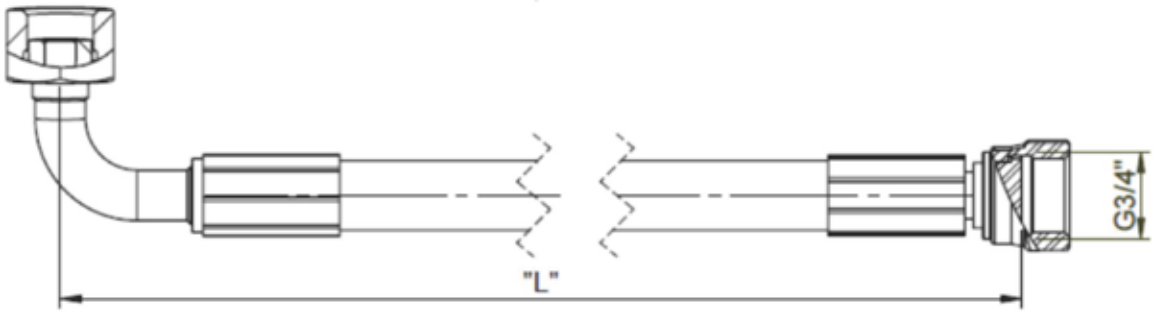
DISCHARGE HOSE

DESCRIPTION

The discharge hose attaches to the discharge head on a WBE High Pressure Carbon Dioxide (CO2) cylinder assembly secured at the project site. The discharge hose connects each discharge head to the system manifold. The hose's flexibility mitigates any misalignment when connecting multiple cylinders onto a common manifold. A discharge hose needs to be ordered for each cylinder assembly.



P/N: F1052000



Article no.	Length "L"		Article no.	Length "L"
F1052001	250mm		F1052010	700mm
F1052002	300mm		F1052011	750mm
F1052003	350mm		F1052012	800mm
F1052004	400mm		F1052013	850mm
F1052005	450mm		F1052014	900mm
F1052006	500mm		F1052015	950mm
F1052007	550mm		F1052016	1000mm
F1052008	600mm		F1052017	1100mm
F1052009	650mm		F1052018	1200mm

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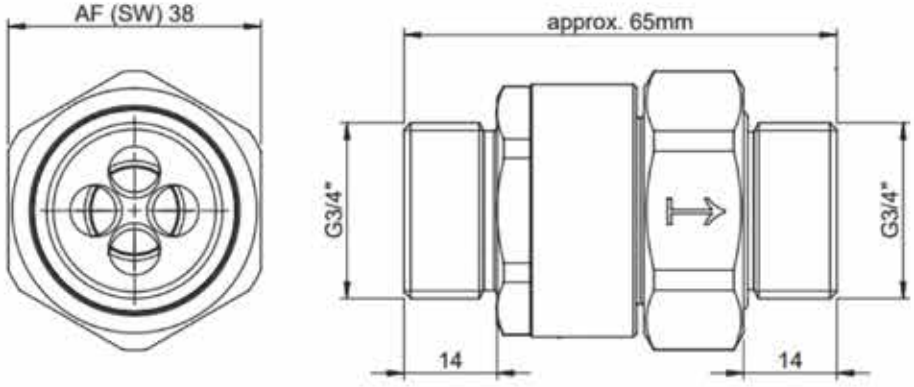
CHECK VALVES



P/N: F0170000

DESCRIPTION

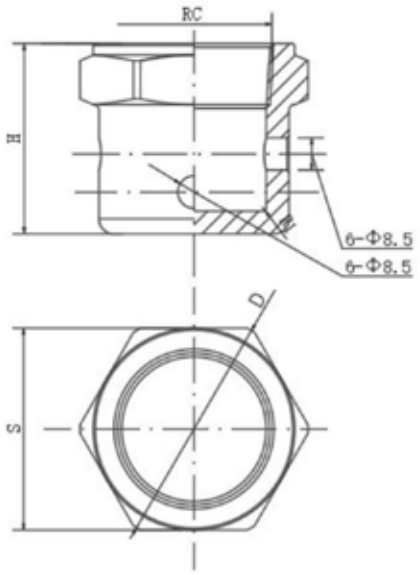
A CO2 check valve is a component of your system that enables carbon dioxide gas to flow in a single direction. When the carbon dioxide (CO2) gas flows in the intended direction, the valve permits the gas to pass through.



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DISCHARGE NOZZLES



DESCRIPTION

The nozzle is one of the important parts of the system The specifications shall be allocated according to the specific situation of the protected area. 4.15.1 Structure: the nozzle is mainly composed of the nozzle body. The external figure is as following picture Working principle: the nozzle is installed in the protection zone, which is used to spray atomized extinguishing agent to make it evenly fill the protection zone.

Mode	D*S(mm)	RC	H(mm)
P/N WBCO10	60*55	RC11/4"	50

Explanation: 1. Nozzle is internal thread, if the connection of external thread is needed, please specify when ordering. 2. WBCO10 nozzle ejects 360 degrees. 3. Different types of nozzles can also be designed according to the site needs.

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