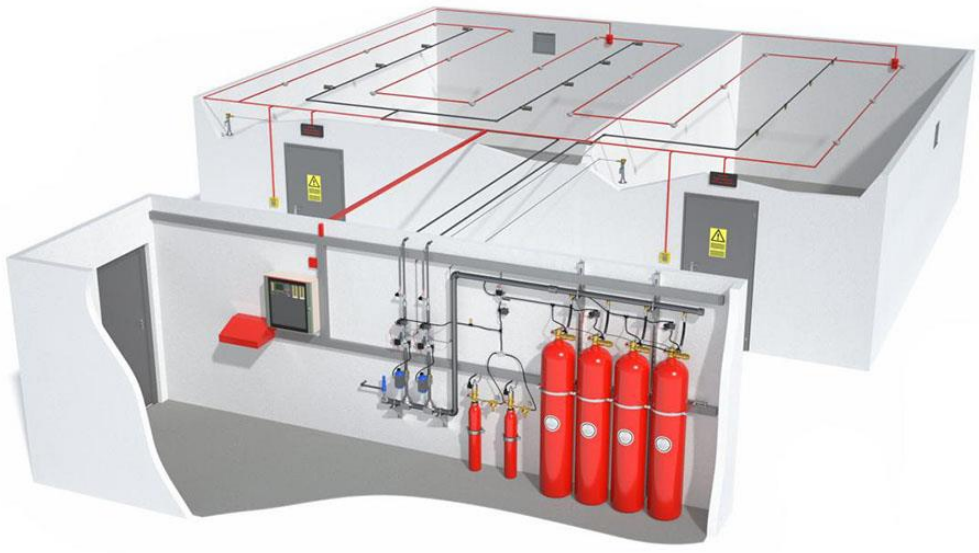
CO2 FIRE SUPPRESSION SYSTEM

CO2 is extremely versatile and effective on flammable and combustible materials of every hazards. CO2 is highly efficient and electrically non-conductive fire suppression agent. When applied to a fire the CO2 released expands instantly, forms a blanket and reduce the level of oxygen to an extreme low range which prevents the combustion of objects.

We use the most reliable, intelligent and quick acting system to detect and suppress the fire without causing any material damage.CO2 system eliminates the oxygen to suppress the fire. When the suppression system detects smoke or fire, it then releases the CO2 agent into the space it is protecting. The CO2 level in the space quickly increases as the oxygen level quickly drops causing the fire to be suppressed or extinguished.



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CO2 STORAGECYLINDER

CO2 is stored in cylinders which are

PESO (Petroleum and Explosives Safety Organization) approved.

CO2 in cylinder is stored in the form

of Liquid, the gas is highly compressed

and liquified to store it easily in the

cylinder under high pressure.

The cylinder is seamless made of chrome moly steel.

Part number	Cylinder volume (l)	CO2 Filling capacity(kg)	Material
01-1001-01	68	45	cs
01-1002-01	34	22.5	cs
01-1001-06	13.5	9	cs
01-1001-10	3	2	cs

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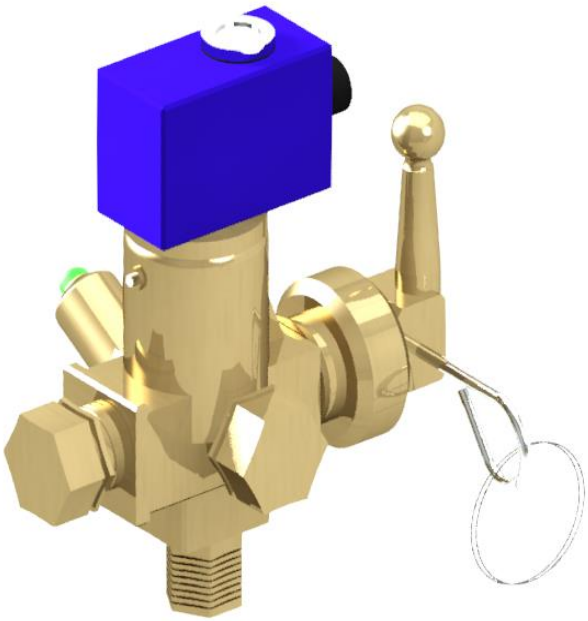
MASTER VALVE

•Part Number: 01-1003-01



•Master valve is fitted with a 24V DC solenoid coil which actuates the valve when the signal arrives from the panel for gas release. This works at a pressure of 250 bar and the agent discharge rate through valve is 45kg/min.

SAFETY OUTLET: An outlet port is provided on the valve to prevent the risk of cylinder explosion in case of any pressure expansion. The disc will break at the point of excess pressure.

•MANUAL RELEASE: A manual release lever is set on the valve for the purpose of instant release if the detection system has any service fault.

•DIP TUBE: A syphon pipe is fitted in the valve which will reach till the bottom of the cylinder. The gas rushes through this tube during the time of release.

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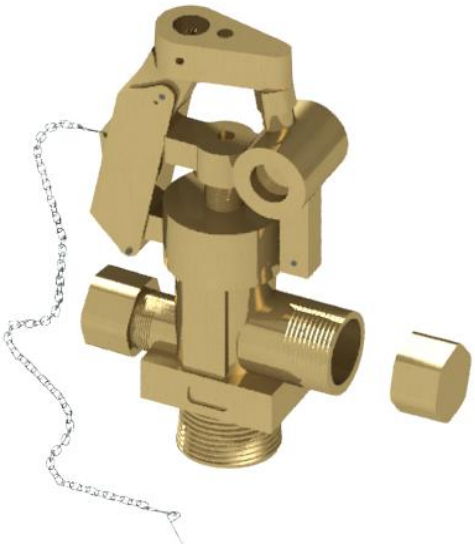
SLAVE VALVE / PNEUMATIC VALVE

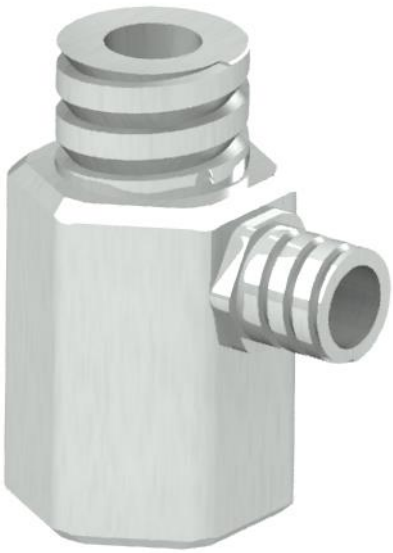
Part Number: 01-1003-01



These valves are pneumatically operated. There will be an interconnection hose which will carry the gas from master cylinder for the activation of these slave valves at the time of gas release. This valve also has every other feature as that of the master valve.

MASTER ADAPTOR

Part Number: 01-1053-01



Master adaptor enables the connection between the master cylinder and the slave cylinder. It is attached on the master valve to provide the activation pressure for the pneumatic valve.

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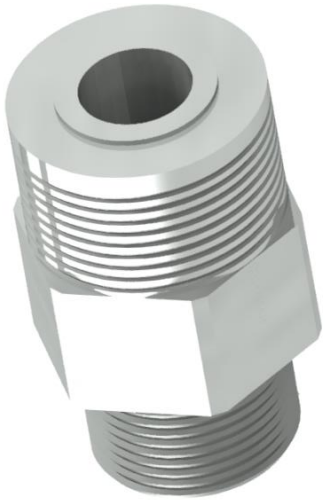
NON-RETURNABLE VALVE

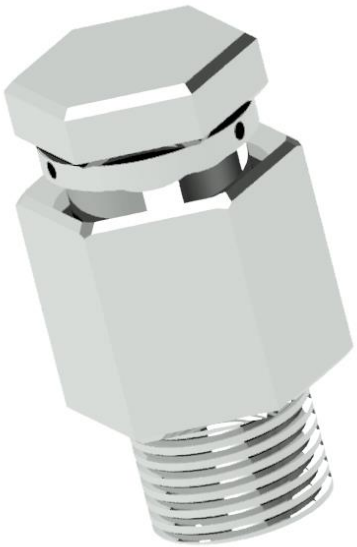
Part Number: 01-1011-01



Non-returnable valve is used in connecting the discharge hose from the cylinder to the manifold. The NRV controls the gas flow, allows the flow in a single direction thus by preventing any external pressurized flow to the cylinder line. NRV will be fixed on the manifold at the inlet port from cylinder.

SAFETY OUTLET

Part Number: 01-1023-01



Safety outlet is attached to the manifold to prevent occurrence of any issues in the manifold or in pipeline due to excess pressure build-up at the time of gas release. The burst plate inside the outlet will rupture at pressure over 100kg/cm2.

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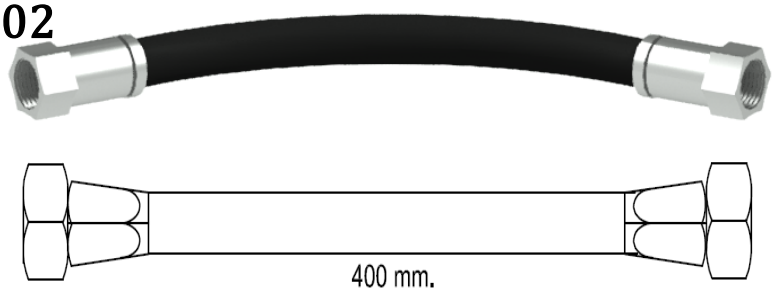
DISCHARGE HOSE

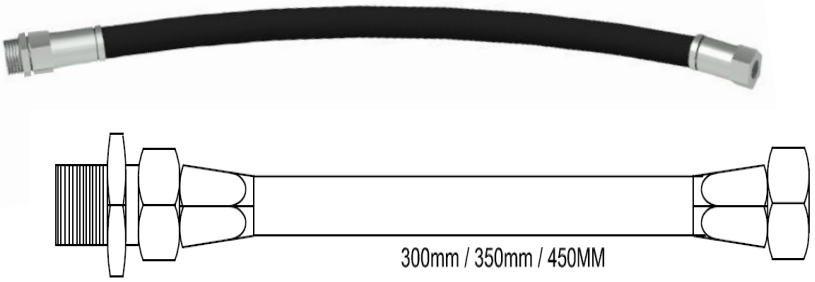
Part Number: 01-1012-02



Discharge hose is used to connect the cylinder valve to the cylinder manifold or directly to the discharge piping. This is ½" high pressure hose with end couplings of W 21.8 14 TPI at both the ends. One side of the H P hose is connected to the non-returnable valve fixed on the manifold and other end to the outlet of the cylinder valve.

CYLINDER INTERCONNECTION HOSE

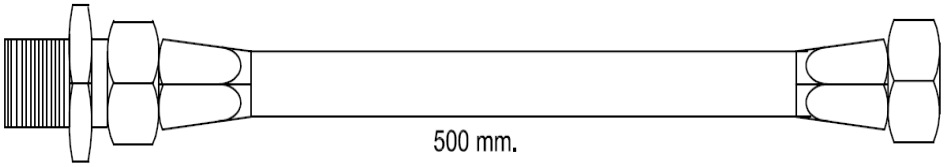
Part Number: 01-1013-02



Cylinder interconnection hose is used to connect the master cylinder and the slave cylinder. The gas from the master cylinder will flow through this H P hose at the time of gas release to give the activation pressure for the pneumatic valve of the slave cylinder. One end of the hose has male thread to connect the pneumatic valve and other end with female thread is connected to the master adaptor connected on the master valve.

NOZZLE CONNECTING HOSE

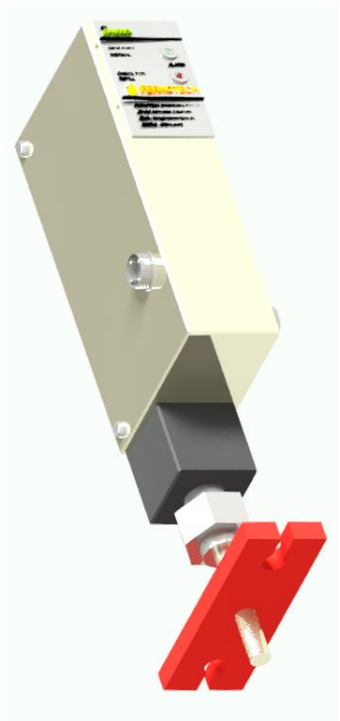
Part Number: 01-1012-04



High pressure hose is used to connect the nozzle to the pipe line. The connecting hose will be about 500 mm length with a female threaded end which will be connected to the nozzle and the other end is male threaded which will be connected to the pipeline through a threaded coupling or to an elbow.

ONLINE WEIGHT LOSS DEVICE WITH CYLINDER HANGING ARRANGEMENT

Part Number: 01-1008-03



The weight loss device monitors the cylinder weight all the time and will produce the alert if there is a 5%–10% gas loss after installation. Works with a 24V supply.

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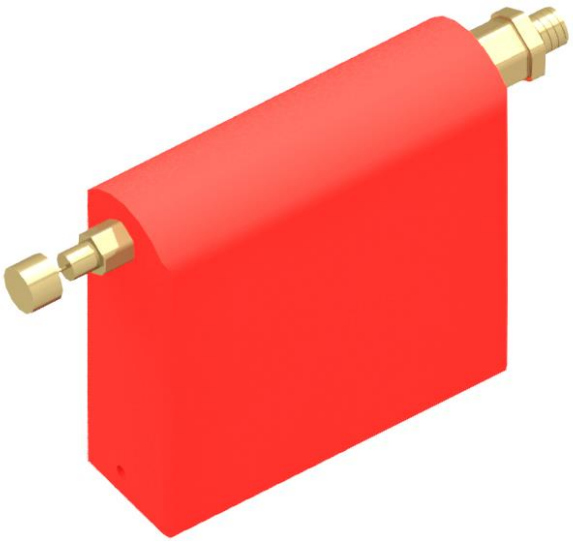
PRESSURE SWITCH

Part Number: 01-1003-01



Pressure switch is connected in the line which helps in providing feedback to the panel at the time of gas release. Apart from the electrical signal given to the panel for indication the piston will also be pushed out during the gas release, giving a visual indication.

DISCHARGE NOZZLE

Part Number: 01-1009-01

The nozzle is surrounded by a horn type body to focus the discharging gas to a certain area by assuring proper diffusion for maximum coverage.

The nozzle is connected to the pipeline through a hex nipple. The nozzle has a ½" BSP female thread at the connecting side.

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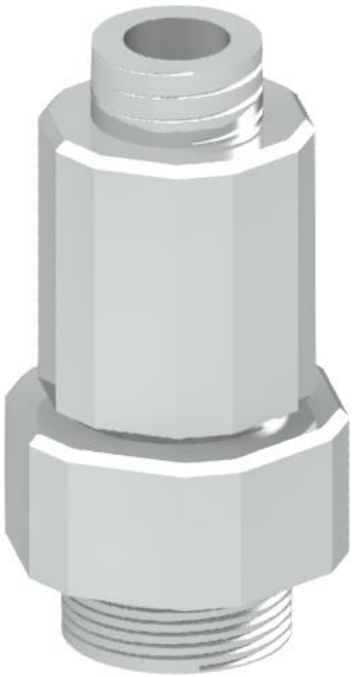
SELF-RESETTING NOZZLE

Part Number: 01-1010-05



Self-resetting nozzle is specially designed for a perfect gas discharge. It is mostly used in the suppression , . system in ducts or machines where there will be chances of pressurised air or dust entering the line through the nozzle which may cause blockade of the line or the nozzle orifice.

In the self-resetting nozzle, cover at the discharge side of the nozzle will be pushed outward at the time of release due to the gas pressure giving way for the gas to flow through and after the complete release of gas it will reset automatically.

One end of the nozzle has a ½" BSP male thread which is connected a high-pressure hose and at the other end is 1" male thread where a female threaded flange for support to mount the nozzle on the surface.

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GAS RELEASE PANEL

We provide 2 zone and 4 zone dedicated microprocessor-based conventional Fire Alarm Gas Release Panel.

Part number	Panel
01-1015-05	2 Zone Gas Release Panel
01-1015-03	4 Zone Gas Release Panel
01-1015-06	2 Zone Gas Release Panel with Dual Scanner

- Modular construction.
- Operates 220V, A.C supply. On
- Battery backup with built in charging.
- Keypad Enable, disable and evacuate facility.
- Remote fire indication with Audible Tone.
- Programmable remote input.
- Programmable Solenoid Output with On and Off timer count down.
- Programmable NAC's.
- Programmable IDC's.
- Manual Gas Release & Inhibit.

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ONLINE WEIGHT LOSS PANEL

Part Number: 01-1008-02

Online Weight Loss Panel provides 24V DC supply for the weight loss monitoring devices and also receives the feedback from the monitoring devices. In case of weight loss, panel will produce audio warning alarm.

HEAT DETECTORS

Part Number: 01-1043-02

The detectors provided are photo/thermal smoke detectors that contain thermal sensor and are tested according to NFPA 72 standards. The operating temperature is from 32^0F to 100^0F. When the sensor is utilized, an alarm condition will trigger when the temperature reaches 135°F.

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PROBE TYPE HEAT DETECTOR

Part Number: 01-1016-05

Probe type detectors are sealed for dust proof and moisture proof installations. Have ¾" threaded end to connect to the base and are mostly weatherproof. Commonly used in ducts or places where temperature will be higher than normal. These are available for certain fixed temperatures as per requirements.

RESISTANCE TEMPERATURE DETECTOR (RTD)

Part Number: 01-1030-01

RTD is used in high temperature areas for temperature detection instead of heat or smoke detectors. Mainly these are used in a duct system or for any machines.

A thermowell is attached with the RTD as a protective covering for the sensing material. The thermowell is also heat sensitive so it would not affect the temperature detection. The sensing element used in the RTD is PT-100.

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FIRE ALARM HOOTER

Part Number: 01-1020-01

The strobes and hooters are of 24V range and we have the provision of connecting two hooters in our panel with a stable 24V supply.

MANUAL GAS RELEASE SWITCH

Part Number: 01-1017-01

Manual gas release switch gives the provision for instant gas release without any delay in case of emergency. In case of fire in a protected zone if the detection system fails to initiate the gas release, then with the help of the release switch anyone can release the gas at that moment. Commonly these switches will be installed outside the protected area where there will be immediate access.

MANUAL ABORT SWITCH

Part Number: 01-1018-01

After the detection of fire by the detection system there will be a delay time for the gas release which will be programmed according to the user requirement. In case of false alarm, we can stop the gas release using the abort switch but only before the release is initiated.

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