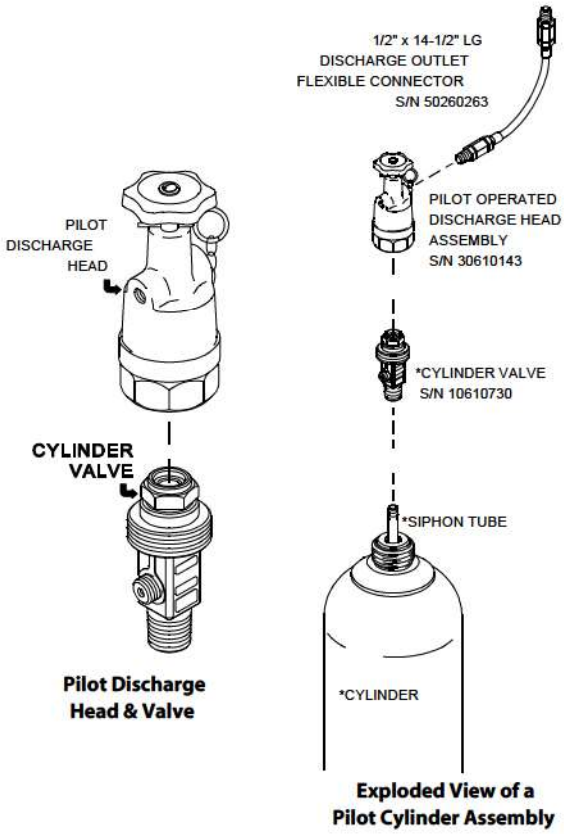
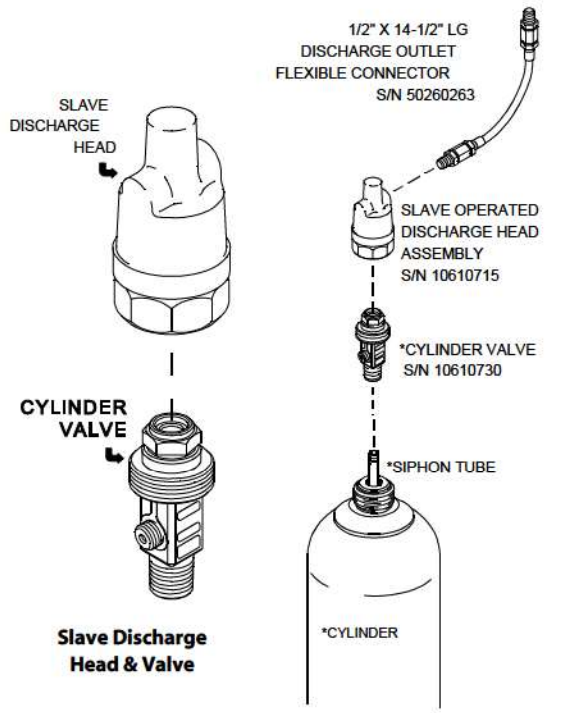
CHEMETRON Fire Systems™

High Pressure Carbon Dioxide



Pilot Discharge Head & Valve

Exploded View of a Pilot Cylinder Assembly



Slave Discharge Head & Valve

Exploded View of a Slave Cylinder Assembly

*** Part of Cylinder Assembly**

A **Cylinder**: The steel cylinders are manufactured to the requirements of the U.S. Department of Transportation (DOT) for compressed gas storage, specification 3AA-1800 or 3AAA-1800 or higher.

B **Siphon Tube**: A 3/4" (19 mm) threaded stainless steel tube with a wall thickness of .035" (.89 mm) extends from the cylinder valve down to the bottom of the cylinder.

C **Cylinder Valve**: A pressure operated cylinder valve consisting of a forged brass body with an external disc carrier and seat disc held in the normally closed position by a spring and cylinder pressure. The valve has been designed to take advantage of a 7 to 1 seat to piston ratio, which assures consistent operation. The body is designed with multiple threaded connections which accommodate the discharge head and cylinder. In addition, the following connections are provided:

1 **Safety Disc** (S/N 50610624): A frangible safety disc is required for connection to the valve body and serves as a pressure relief device to protect the cylinder and personnel in case of excessive internal pressure. The disc is designed to rupture when it is exposed to pressures between 2850 and 3000 psi (16,203 to 20,685 kPa) created by high temperatures.

2 **Fill Check** (S/N 30610033): The filling port contains a check valve type device that also serves as a connection for the attachment of a solenoid pilot valve, as well as a port to fill the cylinders. The threads for attachments are .825-14NGO-RH-EXT (CGA No. 320).

D **Discharge Head**: Each cylinder requires the addition of a discharge head to open its valve. The discharge head is attached to the cylinder by means of a swivel nut that engages the threads of the valve. Three different types of discharge heads can be used:

a) pilot operated type with handwheel for manual operation
b) pilot operated type without handwheel
c) pressure operated type

Each of the three types includes an internal operating piston connected to a hollow stem that is used to upset the cylinder seat disc when operated, which allows the agent to exit. A stainless steel ball check at the top of the stem provides a safety feature to prevent excessive loss of carbon dioxide from the manifold if the system is discharged during servicing.