

Kidde ECS Advanced Delivery Fire Suppression System

Component Description

Actuation Assembly Kit for 225 lb. and 395 lb. Cylinders
and Nitrogen Driver Manifolds, P/N 06-129882-001



Effective: June 2014

K-90-103

FEATURES

- *Reduces the Number of Control Heads*
- *Allows Cylinders to Actuate Simultaneously*
- *Safe and Easy to Install*
- *Pressure Relief Device Included for Safe Disassembly*
- *UL Listed*
- *FM Approved*
- *RoHS Compliant*

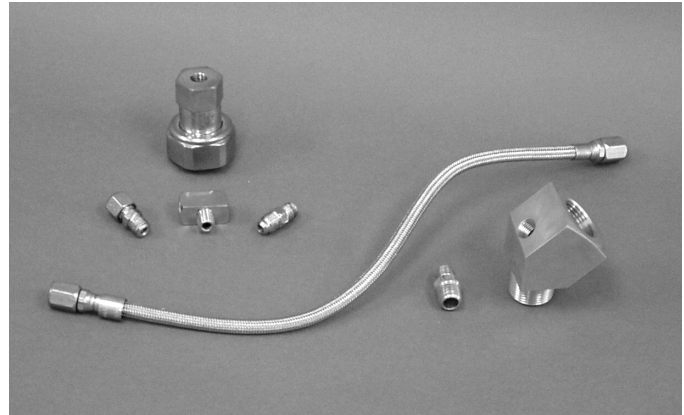
DESCRIPTION

Each Kidde ECS ADS Fire Suppression System with FM-200® Agent must be equipped with the actuation assembly in order for the nitrogen driver to pneumatically actuate the agent cylinder. The nitrogen driver is set up to act as the master cylinder. Actuation of the nitrogen driver is initiated by use of a control head; it initiates the nitrogen system discharge by opening the pilot check on the cylinder valves. This allows the nitrogen to pressurize the discharge head piston, which opens the main check in the valve and discharges the contents of nitrogen through the transfer hose. From the transfer hose, the nitrogen splits in two directions. The first path the nitrogen takes is through the orifice fitting where the nitrogen pressure is regulated into the agent cylinder. At the same time, the nitrogen travels through the actuation assembly to the pressure operated control head. The pressure operated control head actuates the agent cylinder valve by releasing the pressure off the top of the piston, thereby allowing the agent to be driven out by the nitrogen.

The actuation assembly kit for the 225 lb. and 395 lb. Kidde ECS ADS System (P/N 06-129882-001) consists of seven parts (see Table 1). The nitrogen fitting threads into the orifice fitting. The 1/8-in. flare allows for the connection of the actuation hose, which is then fitted into the 1/8-in. branch tee for operation of the pressure operated control head. A Schrader valve and cap is then added to the 1/8-in. tee as a safety for venting off residual pressure after discharge and before decommissioning of the system.

INSTALLATION

Once the nitrogen driver cylinder and the agent storage cylinder are safely secured and attached to system piping, the actuation assembly can be connected using the following procedure. Inspect and assemble the kit components separately, prior to attaching to the agent storage cylinder.



The agent storage cylinder must be permanently connected into the system piping. Never attach the control head to the cylinder valve until the cylinders are secured in brackets or racking and the hose is attached to the agent cylinder. Under no circumstances should the control head remain attached to the cylinder valve after removal from service or during shipment, handling, storage or filling. In the event of inadvertent discharge, failure to follow these instructions could result in death, serious bodily injury and/or property damage.



ASSEMBLY:

Assembly of Kit Components

1. Apply thread tape to male thread of nitrogen transfer fitting.
2. Apply thread tape to the NPT male thread of the first 1/8-in. x 1/4-in. flared fitting, thread NPT male into the nitrogen transfer fitting and tighten.
3. Take the two assembled components and thread into orifice fitting already attached to the nitrogen diffuser assembly, then tighten.
4. Apply thread tape to the male end of 1/8-in. branch tee and thread into the pressure operated control head (P/N 82-878737-000). Tighten the branch tee.

5. Apply thread tape to the NPT male thread of the second 1/8-in. x 1/4-in. flared fitting and thread into one side of the 1/8-in. branch tee. Tighten the flared fitting.
6. Apply thread tape to the male end of the Schrader valve. Securely threading the male end into the open end of the 1/8-in. branch tee. Apply Schrader cap to Schrader fitting.
7. Connect 1/4-in. actuation hose to flare fitting that was applied to the 1/8-in. branch tee.
8. Connect the other end of the 1/4-in. actuation hose into the flare fitting that was connected in the busing in Step 3.
9. Remove the protection cap from the cylinder valve.
10. Using a suitable wrench, assemble control head to cylinder valve and tighten swivel nut securely.

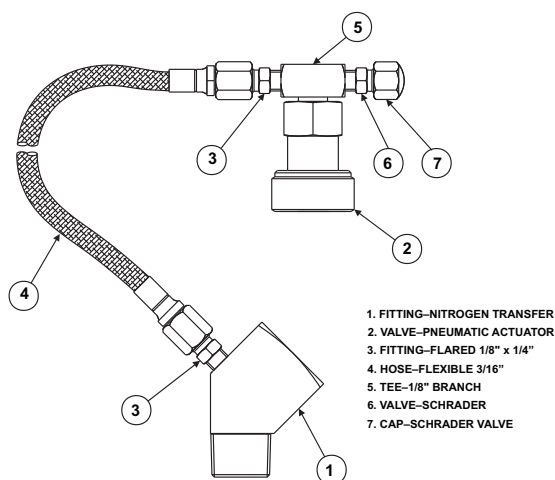


Figure 1. Actuation Kit Assembly

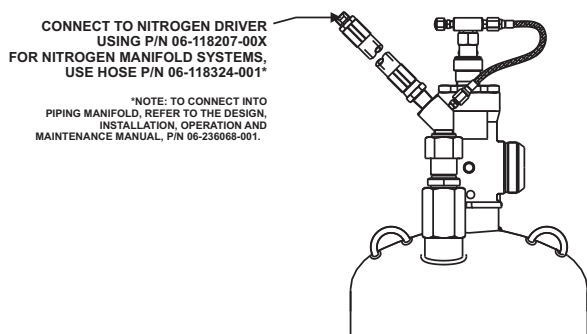


Figure 2. Cylinder and Valve Assembly with Assembled Actuation Components

MAINTENANCE

MONTHLY:

Inspect components for cracks, corrosion, grime, etc. Ensure that the assembled fittings are tightly secured at each of their respective connections and to the agent cylinder. If any defects are found during the monthly inspection, immediately contact a Kidde Distributor to service the systems. Please refer to the Design, Installation, Operation and Maintenance Manual for more details (06-236068-001).

ORDERING INFORMATION

Table 1: Actuation Assembly Kit Part Numbers

Item No.	Qty.	Part Number	Description
1	1	06-236124-001	Nitrogen Transfer Fitting
2	1	82-878737-000	Pressure Operated Control Head
3	2	06-118191-001	Fitting flared 1/8-in. x 1/4-in.
4	1	06-118193-001	3/16-in. Flexible Actuation Hose, 16-in. length
5	1	06-118192-001	1/8-in. Branch Tee
6	1	WK-263303-000	1/8-in. Schrader Valve
7	1	WK-263304-000	1/8-in. Schrader Valve Cap

SPECIFICATIONS

Table 2: Materials Specifications

Part Number	Description	Material
06-236124-001	Nitrogen Transfer Fitting	Brass
06-118191-001	1/8-in. x 1/4-in. Flared Fittings	Brass
06-118193-001	3/16-in. Flexible Actuation Hose	Stainless Steel Braiding, Brass Fittings
06-118192-001	1/8-in. Branch Tee	Brass
WK-263303-000	1/8-in. Schrader Valve	Brass
WK-263304-000	1/8-in. Schrader Valve Cap	Brass
82-878737-000	Pressure Operated Control Head	Brass

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