Installation Instructions

Bypass Eductor

- Eductor is available with the following inlet and outlet connections:
  - 2” NPT, 2” Victaulic and 2 1/2” NPT.
- Eductor may be installed in the horizontal or vertical position.
- Eductor inlet should be plumbed rigidly with 2" or 2-1/2" piping.
- Eductor outlet shall be plumbed with 2" minimum piping or flex hose assemblies to discharge connection.
- Foam lines from foam tank to metering head shall be a minimum of 3/4” I.D. (1” I.D. recommended).
- Foam line from metering head to Eductor shall be a minimum of 1/2” I.D.

**Hard Piping** – With 2” piping, use no more than two (2) 90° elbows between eductor and discharge connection (use of an Akron 635 Crosslay Elbow not included). Allow at least 6” straight pipe on outlet before any 90° elbow.

**Flex Hose Assemblies** – These assemblies are ideal for eductor discharge lines, since friction loss is insignificant. In addition, the Akron 635 Crosslay Elbow is designed with a full 2” waterway and cast turning vane to minimize friction loss. It is a good selection for eductor lines.

- Eductor handle positions can be easily and quickly changed like those of the Swing-Out Valve. Remove handle bolt and select eight (8) positions clockwise. Place stop plate on opposite side of stops and you get eight (8) positions counterclockwise. Remote handle has two (2) 17/32” holes on 2-3/8” and 3-1/2” centers. Choose one for remote rod attachment. Handle must be connected to remote rod so that when pulled out, the water bypass is closed. This allows only Eductor to be opened for foam use. See Figures 4 and 5 for typical installation and layout.

**Metering panel Assembly**

A. PANEL CUTOUT (FIGURE 1)

1. Cut opening in panel (as shown in Figure 1) to allow metering head to pass through panel.
2. Drill two (2) 5/16” holes on 2-1/2” center horizontally on the center line of metering head cutout as shown.

B. Metering head placement and instruction plate (Figure 2)

1. Unscrew the dial knob screw and large spring if necessary to make the metering head fit into cut out hole.
2. Fit metering head into cutout and turn 90° left or right so angled inlet is directed towards foam supply.
3. Align metering head to 5/16” holes and place instruction plate in alignment with same holes.
4. Use Loctite 222 or Permabond HH113 on 1/4-20 screw threads provided.
5. Insert provided stainless steel screws through instruction plate, panel, and into tapped holes in metering head.
6. Secure screws to a point where plate can be visually straightened. Tighten screws.

C. Dial Knob Placement

1. Place large spring in recess where square spool nests.
2. Align “off” text of the dial label to the reading indicator of the panel (▼), (See Figure 2).
3. Push spring-loaded dial down to fit square. Use 1/4 - 20 screw and flat washer to tighten the dial onto the panel. (use loctite 222 or equal).
4. Rotate dial counter clockwise until it stops and verify that the 6% reading of the dial is aligned with the indicator. (▼)
FIGURE 1

ALLOW 4"
CLEARANCE

1\(\frac{3}{32}\)"

1\(\frac{3}{4}\)"

(2) 5/16" HOLES

2\(\frac{1}{2}\)"

1\(\frac{1}{4}\)"

1\(\frac{1}{4}\)"

ALLOW 6\(\frac{1}{2}\)"
CLEARANCE

4\(\frac{1}{2}\)"

1\(\frac{15}{16}\)"

---

PLATE POSITION
FIGURE 2

**VALVE POSITION FOR**

<table>
<thead>
<tr>
<th>VALVE</th>
<th>FOAM</th>
<th>WATER ONLY</th>
<th>FLUSH (3 MIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>OPEN</td>
<td>OPEN</td>
<td>OPEN</td>
</tr>
<tr>
<td>EDUCTOR</td>
<td>OPEN</td>
<td>CLOSE</td>
<td>OPEN</td>
</tr>
<tr>
<td>FOAM</td>
<td>OPEN</td>
<td>CLOSE</td>
<td>OPEN</td>
</tr>
<tr>
<td>FLUSH</td>
<td>CLOSE</td>
<td>CLOSE</td>
<td>OPEN</td>
</tr>
</tbody>
</table>

**CLASS A/B XXX GPM**

SELECT ▼ PERCENT

SOLUTION → EDUCTOR → FOAM → METERING PANEL → FLUSH

WATER → EDUCTOR → FOAM → FLUSH

**SYSTEM**

* USE AKRON MATCHING GALLONAGE NOZZLE
* MAXIMUM HOSE LAYS USING 100 PSI RATED NOZZLE:
  - 1 1/2" HOSE: 150 FT (3% & 6%)
  - 200 FT (UP TO 1%)
  - 1 3/4" HOSE: 250 FT (3% & 6%)
  - 300 FT (UP TO 1%)

BASED ON ZERO NOZZLE ELEVATION
CAUTION: SEE OPERATION INSTRUCTIONS BEFORE USE

FIGURE 3

OFF

PERCENTAGE

6 4 2

FOAM
FIGURE 4

TYPICAL EDUCTOR TO CROS S LAY
WITH OFF TRUCK FOAM ACCESS
(ONE TANK SYSTEM)

COMPONENTS FOR AKRON EDUCTOR FOAM SYSTEM

A: 1477 remote with FLUSH tag.
B: 1477 Remote with EDUCTOR tag.
C: 1477 Remote with WATER tag.
D: 1477 Remote with FOAM tag.
D: 1477 Remote with FOAM tag (for two tank system).
E: 3061, 3096 or 3126 Foam Metering Dial.
F: 3061, 3096 or 3126 Bypass Eductor.
G: 8820 - P1-S X P30-SCV (Check Valve) x R-1 Swingout Valve.
H: 8810 - P1-S x P1-S x R-1 - 1" Foam Valve.
I: 1" Check Valve.
J: 8810 - P1-S x P1-S x R-1 - 1" Flush Valve.
K: Style 635 - 2" NPT x 1 1/2" Crosslay Elbow.
L: Style 57 - 3/4" Off Truck Foam Valve - In 3128 Kit.
M: 25mm Storz x 3/4" NPT Panel Fitting - In 3128 Kit.
N: Dust Plug with chain - In 3128 Kit.
O: 25mm Storz x 5 ft. Pick-up hose assembly - In 3128 Kit.
P: 1" Check Valve.
FIGURE 5

TYPICAL EDUCTOR TO CROSSLAY
WITH OFF TRUCK FOAM ACCESS
(TWO TANK SYSTEM)

COMPONENTS FOR AKRON EDUCTOR FOAM SYSTEM

A: 1477 remote with FLUSH tag.
B: 1477 Remote with EDUCTOR tag.
C: 1477 Remote with WATER tag.
D: 1477 Remote with FOAM tag.
D: 1477 Remote with FOAM tag (for two tank system).
E: 3061, 3096 or 3126 Foam Metering Dial.
F: 3061, 3096 or 3126 Bypass Eductor.
G: 8820 - P1-S x P30-SCV (Check Valve) x R-1 Swingout Valve.
H: 8810 - P1-S x P1-S x R-1 - 1" Foam Valve. (Two Valves for Two Tank Systems)
I: 1" Check Valve. (Two Valves for Two Tank Systems)
J: 8810 - P1-S x P1-S x R-1 - 1" Flush Valve.
K: Style 635 - 2" NPT x 1 1/2" Crosslay Elbow.
L: Style 57 - 3/4" Off Truck Foam Valve - In 3128 Kit.
M: 25mm Storz x 3/4" NPT Panel Fitting - In 3128 Kit.
N: Dust Plug with chain - In 3128 Kit.
O: 25mm Storz x 5 ft. Pick-up hose assembly - In 3128 Kit.
P: 1" Check Valve.
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