



**Model 80 Flexflo®  
FIELD ASSEMBLY & DISASSEMBLY INSTRUCTIONS**

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**Scope**

This instruction covers field disassembly, tube removal and replacement, and assembly of Model 80 Flexflo Valves.

**General Description**

The Flexflo® valve consists of BODY, slotted metal CORE, and flexible rubber TUBE. The core is divided by a barrier across its midsection, and the flexible tube is stretched over the core. Between tube and body is a sealed annular space called JACKET.

If the jacket is vented, upstream line pressure lifts the tube off the core. Line Fluid flows through the upstream slots, around the barrier, back through the downstream slots, and on through the line. Flexflo is wide open.

If pressure in the jacket is equal to upstream line pressure, the tube is held in sealing contact with the core, covering the slots, and no line fluid passes the barrier in the core. Flexflo is closed.

At intermediate jacket pressure, tube will be partially lifted and flow will be throttled.

Pressure taps are provided in the Flexflo body for pressure connections to control the Flexflo valve.

Flexflo jacket pressure actuators the Flexflo valve. Opening and closing characteristics depend on the auxiliary components inserted in the jacket load and vent lines according to the various hook-up assemblies.

Fluid in line and jacket may be either gas or liquid, except when used with model 888 pilots, in which case fluid in jacket must be gas.

**CAUTION**

**Isolate Flexflo from pipeline pressure, and release all pressure from body and jacket.**

**A. Body Removal from Pipeline**

1. Disconnect inlet, outlet, and sense tubing from pilot and valve. Remove pilot. Disconnect any other piping which will inhibit removal of body from valve.
2. Attach adequate lifting device to valve body using lifting nuts on exterior of valve body.
3. Note that on some tie-rod studs there are jacking nuts provided inside the line flanges. Tighten all jacking nuts against flanges.
4. Remove all studs not equipped with jacking nuts.

**CAUTION**

**Do not loosen flange nuts on jacking nuts.**

5. Back off one flange nut on outlet line flange 1/2 turn, and tighten corresponding jacking nut against it.
6. Proceed to the next adjacent nut and repeat.
7. Continue around the flange, one stud at a time, until outlet flange is jacked about 1/2 inch away from body package.

**CAUTION**

**Make sure both line flanges are securely clamped between the flange nuts and the jacking nuts at all times. This will assure a rigid "cage" to maintain alignment of flanges.**

8. Lift out body package, and inspect tube.

**B. Tube Removal and Replacement**

1. Remove outlet cover plate.
2. Use same procedure for tube removal and replacement as described for cast Flexflo in paragraph C page 2 of this instruction manual.

3. After replacing core and tube into valve body, replace outlet coverplate and tighten capscrews.
4. Replace o-rings on inlet and outlet cover plates if necessary.

**C. Reinstallation of Body in Pipeline**

1. Lower body into position with jacket boss pointing straight up and arrow on body pointing direction of flow. Exercise care so that cover plate o-rings are not dragged.
2. Back off one jacking nut on outlet line flange 1/2 turn, and tighten corresponding flange nut against it.
3. Proceed to the next adjacent jacking nut and repeat.
4. Continue around the flange one stud at a time, until both line flanges are securely bolted to the Flexflo body package.

**Make sure both line flanges are securely clamped between the flange nuts and the jacking nuts at all times to assure alignment.**

5. Replace remaining tie-rod studs and tighten nuts. Torque per Table I.
6. Reinstall pilot and its associated pipings.

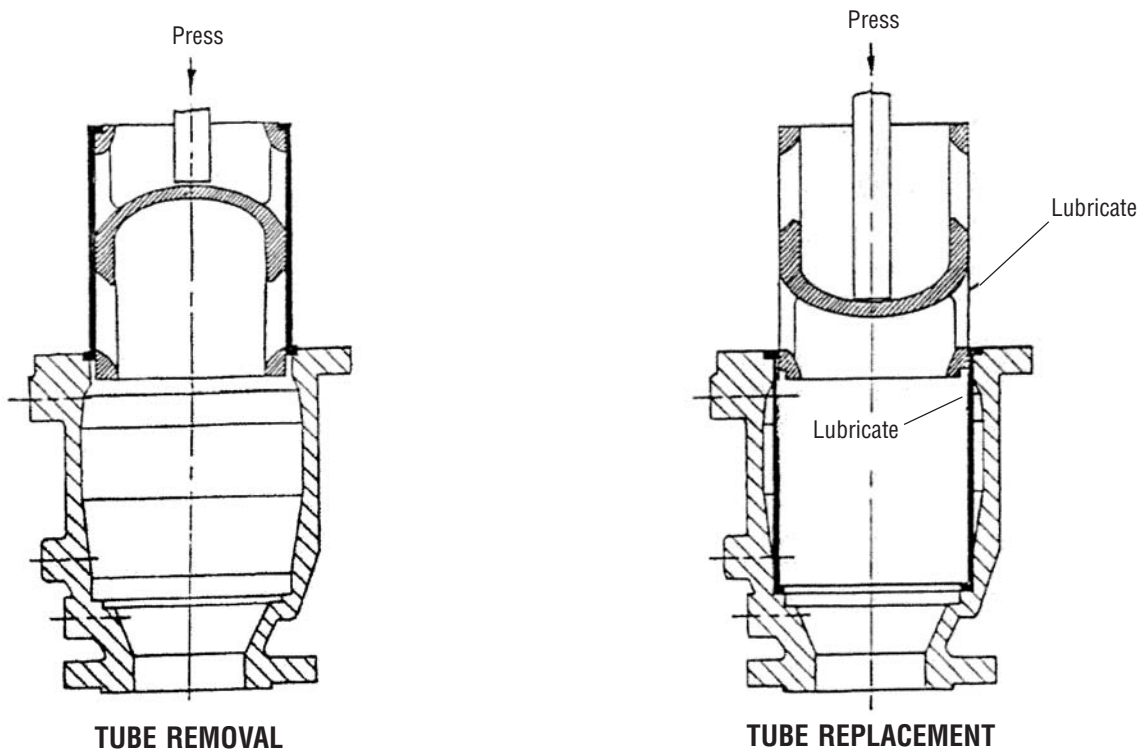
**Return of Regulator to Service**

1. Check to insure all boltings and pipings are properly tightened.
2. Slowly admit line pressure to pressurize the pipeline and the regulator. Check for leaks and repair if necessary.
3. Adjust the regulator if necessary
4. The Flexflo regulator is ready for service.

**Table 1 - Long Stud Torque**

Valve Size	ANSI CL	Torque (ft-lb) Range Dry	Stud Size
4	150	20 – 15	1/2" – 10UNC
4	300	55 – 45	1/2" – 10UNC
4	600	125 – 110	7/8" – 9UNC
6	150	40 – 30	1/2" – 10UNC
6	300	75 – 65	1/2" – 10UNC
6	600	185 – 170	1" – 8UNC
8	150	65 – 55	1/2" – 10UNC
8	300	135 – 120	7/8" – 9UNC
8	600	330 – 305	1-1/8" – 9UNC
10	150	65 – 55	7/8" – 9UNC
10	300	160 – 145	1" – 8UNC
10	600	380 – 355	1-1/4" – 8UNC
12	150	90 – 80	7/8" – 9UNC
12	300	250 – 230	1-1/8" – 8UNC
12	600	600 – 565	1-3/8" – 8UNC

**Figure 1 - Tube Removal & Replacement**



**TUBE REMOVAL**  
Reverse core and tube assembly, Press core into body to remove tube

**TUBE REPLACEMENT**  
Install tube, Center & press in core

**Dimensions Maximum Pressure 275**

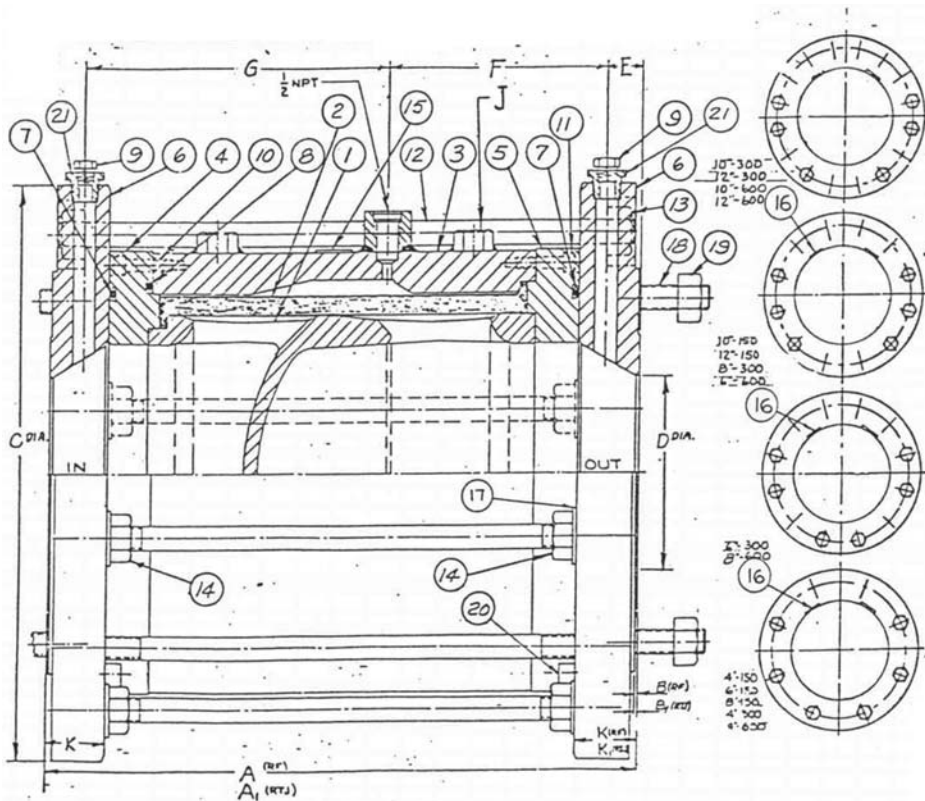
Size	A	B	C	D	E	F	G	K	J
4	13-7/8	1/16	13-3/4	4	15/16	5	7	1-5/8	5/8-11
6	17-3/4	1/16	17-5/8	6	1-1/16	5-3/4	9-7/8	1-7/8	5/8-11
8	21-3/8	1/16	20-3/4	8	1	7-11/16	11-11/16	1-7/8	5/8-11
10	26-1/8	1/16	22-7/8	10	1-1/16	9-13/16	14-7/8	1-7/8	7/8-9
12	29	1/16	26-3/8	12	1-1/16	10-5/8	16-9/16	1-7/8	7/8-9

**Dimensions Maximum Pressure 720**

Size	A	B	C	D	E	F	G	K	J
4	14-1/2	1/16	14-7/8	4	1-1/16	5-1/8	7-1/4	1-7/8	5/8-11
6	18-5/8	1/16	17-7/8	6	1-1/16	6-15/16	9-9/16	1-7/8	5/8-11
8	22-3/8	1/16	20-3/4	8	1-3/16	8	12	2-1/8	5/8-11
10	27-7/8	1/16	24-1/8	10	1-7/16	9-13/16	15-3/16	2-5/8	7/8-9
12	30-1/2	1/16	28-1/8	12	1-1/2	11-1/16	16-7/16	2-5/8	7/8-9

**Dimensions Maximum Pressure 1440**

Size	A	B	C	D	E	F	G	K	A <sub>1</sub>	B <sub>1</sub>	K <sub>1</sub>	J
4	15-1/2	1/4	16-1/8	4	1-1/4	5-1/2	7-1/2	2-1/16	15-5/8	5/16	2-1/8	5/8-11
6	20	1/4	19-5/8	6	1-9/16	7	9-7/8	2-9/16	20-1/8	5/16	2-5/8	5/8-11
8	24	1/4	23	8	1-9/16	8-1/8	12-1/4	3-1/16	24-1/8	5/16	3-1/8	5/8-11
10	29-5/8	1/4	27	10	2-1/16	9-13/16	15-3/16	3-13/16	29-3/4	5/16	3-7/8	7/8-9
12	32-1/4	1/4	29-3/8	12	2-1/16	11-1/16	16-5/16	3-13/16	32-3/8	5/16	3-7/8	7/8-9



Item No.	Part Name
1	Core
2	Tube
3	Body
4	Cover Plate (Inlet)
5	Cover Plate (Outlet)
6	Line Flange
7	O-Ring
8	O-Ring (Inlet Cover Plate)
9	Pipe Plug (3.8 NPT)
10	Capscrew (Inlet Cover Plate)
11	Capscrew (Outlet Cover Plate)
12	Stud
13	Nut
14	Jacking Nut
15	Nameplate
16	Emblem (With Flow Arrow)
17	Washer (Jacking Nut)
18	Stud (Line Flange Bolting)
19	Nut (Line Flange Bolting)
20	Pin
21	Pipe Bushing

**RedQ**  
**Dresser, Inc.**  
 2822 S. 1030 W.  
 Salt Lake City, Utah 84119  
 Phone: 801.487.2225 Fax: 801.487.2587  
 www.mooneycontrols.com



[www.dresser.com](http://www.dresser.com)