

December 1990

630 Series Regulators and Relief Valves

Introduction

Scope of Manual

This instruction manual provides operating, installation, maintenance, and parts information for the 630 Series regulators and relief valves.

Description

The 630 Series consists of self-operated, spring loaded Type 630 **Big Joe**® pressure regulators and Type 630R relief valves, which are designed for maximum inlet pressures to 1500 psig (103 bar) and outlet pressures from 3 to 500 psig (0,21 to 34,5 bar).

Specifications

Table 1 lists the specifications for the 630 Series constructions.

Installation



WARNING

Personal injury, property damage, equipment damage, or leakage due to escaping gas or bursting of pressure-containing parts may result if this regulator is over-pressured or is installed where service conditions could exceed the limits given in tables 1 through 4 or where conditions exceed any ratings of the adjacent piping or piping connections.

To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation, or standard) to prevent service conditions from exceeding those limits.



W1934

Figure 1. Spring-Loaded Type 630 Regulator

Additionally, physical damage to the regulator could cause personal injury or property damage due to escaping gas. To avoid such injury or damage, install the regulator in a safe location.

Before installing, inspect the unit for any damage and any foreign material. The regulator or relief valve may be mounted in any position, however, ensure that the flow direction corresponds with the direction of the arrow on the nameplate. Apply a good grade of pipe compound to the male threads of the pipeline.



630 Series

Table 1. Specifications

<p>Available Configurations Type 630: Spring-loaded reducing regulators Type 630R: Spring-loaded relief valves</p> <p>End Connection Sizes And Style 1 or 2-inch, screwed</p> <p>Maximum Allowable Inlet Pressures⁽¹⁾ Type 630 Regulators: See table 2 Type 630R Relief Valves: See table 4</p> <p>Outlet Pressure Ranges⁽¹⁾ 3 to 500 psig (0,2 to 34,5 bar) with intermediate values shown in table 3</p> <p>Maximum Allowable Outlet Pressures⁽¹⁾ See table 3</p> <p>Maximum Allowable Pressure Drops⁽¹⁾ See table 2</p>	<p>Material Temperature Capabilities⁽¹⁾ Standard: -20 to 150°F (-29 to 66°C) Optional: -20 to 300°F (-29 to 149°C)</p> <p>Orifice Sizes 1/8 (3,2 mm), 3/16 (4,8 mm), 1/4 (6,4 mm), 3/8 (9,5 mm), or 1/2-inch (12,7 mm)</p> <p>Coefficients For Relief Valve Sizing</p> <table border="1"> <thead> <tr> <th>ORIFICE SIZE</th> <th>C_g</th> <th>C_v</th> <th>C₁</th> </tr> </thead> <tbody> <tr> <td>1/8-inch (3,2 mm)</td> <td>13.9</td> <td>0.49</td> <td>28.4</td> </tr> <tr> <td>3/16-inch (4,8 mm)</td> <td>31.3</td> <td>1.11</td> <td>28.2</td> </tr> <tr> <td>1/4-inch (6,4 mm)</td> <td>55.1</td> <td>2.03</td> <td>27.2</td> </tr> <tr> <td>3/8-inch (9,5 mm)</td> <td>122.5</td> <td>4.61</td> <td>26.6</td> </tr> <tr> <td>1/2-inch (12,7 mm)</td> <td>216.0</td> <td>8.18</td> <td>26.4</td> </tr> </tbody> </table> <p>Approximate Weights 1-inch End Connection: 25 lb (11,3 kg) 2-inch End Connection: 30 lb (13,5 kg)</p>	ORIFICE SIZE	C _g	C _v	C ₁	1/8-inch (3,2 mm)	13.9	0.49	28.4	3/16-inch (4,8 mm)	31.3	1.11	28.2	1/4-inch (6,4 mm)	55.1	2.03	27.2	3/8-inch (9,5 mm)	122.5	4.61	26.6	1/2-inch (12,7 mm)	216.0	8.18	26.4
ORIFICE SIZE	C _g	C _v	C ₁																						
1/8-inch (3,2 mm)	13.9	0.49	28.4																						
3/16-inch (4,8 mm)	31.3	1.11	28.2																						
1/4-inch (6,4 mm)	55.1	2.03	27.2																						
3/8-inch (9,5 mm)	122.5	4.61	26.6																						
1/2-inch (12,7 mm)	216.0	8.18	26.4																						

1. The pressure/temperature limits in this instruction manual or any applicable standard limitation should not be exceeded.

Table 2. Maximum Allowable Inlet Pressures and Pressure Drops. Maximum inlet pressure not to exceed 1500 psig (103 bar).

DISK MATERIAL	ORIFICE SIZE, INCHES (mm)			
	1/8 & 3/16 (3,2 & 4,8)	1/4 (6,4)	3/8 (9,5)	1/2 (12,7)
Nylon (PA) and Teflon (TFE)	1500 (103)	1000 (69)	500 (34,5)	250 (17,2)
Nitrile (NBR)	600 (41,4)	600 (41,4)	500 (34,5)	250 (17,2)
Fluoroelastomer (FKM)	200 (13,8)	200 (13,8)	200 (13,8)	200 (13,8)
MAXIMUM ALLOWABLE INLET PRESSURE, Psig (Bar)	1500 (103.5) ⁽¹⁾	1500 (103.5) ⁽¹⁾	1000 (69) ⁽¹⁾	750 (51.8) ⁽¹⁾

1. Inlet pressure must not exceed the sum of the actual outlet pressure setting and the maximum allowable pressure drop. For example, with an outlet pressure setting of 200 psig (13.7 bar) and a 3/8-inch (9.5 mm) orifice with a maximum allowable pressure drop of 500 psi (34.5 bar, differential), the maximum allowable inlet pressure is 700 psig (48.3 bar).
2. Nitrile valve disks are normally furnished for pressure drops to 200 psi (13.7 bar, differential). For better erosion resistance, nylon valve disks are normally furnished for higher pressure drops. Some erosion of valve disks occurs at all pressure drops due to solid particles in the flow stream. The rate of erosion is higher with large amounts of impurities in the flow stream and with high pressure drops. Valve disks and other regulator parts must be inspected periodically for erosion and damage and must be replaced as necessary.

Table 3. Maximum Outlet Pressures

REGULATOR CONSTRUCTION	OUTLET PRESSURE RANGE, PSIG (bar)	SPRING PART NUMBER	MAXIMUM OPERATING OUTLET PRESSURE, PSIG (BAR)	MAXIMUM OUTLET PRESSURE OVER SETPOINT ⁽¹⁾ , PSIG (bar)	MAXIMUM EMERGENCY OUTLET (CASING) PRESSURE ⁽⁴⁾ , PSIG (bar)
Low-Pressure	3 to 10 (0,21 to 0,69)	0W019227022	10 (0,69)	20 (1,4)	45 (3,1)
	8 to 20 (0,55 to 1,4)	0W019127022	20 (1,4)		
	17 to 30 (1,2 to 2,1)	0W019027022	30 (2,1)	20 ⁽²⁾ (1,4)	
	27 to 40 (1,9 to 2,8)	0Y0664000A2	40 (2,8)	Limited by Maximum Emergency Outlet Pressure	
High-Pressure	27 to 50 (1,9 to 3,5)	0W019227022	50 (3,5)	200 (13,8)	550 (37,9)
	46 to 95 (3,2 to 6,6)	0W019127022	95 (6,6)		
	90 to 150 (6,2 to 10,3)	0W019027022	150 (10,3)		
	150 to 200 (10,3 to 13,8)	0Y0664000A2	200 (13,8)		
	200 to 275 (13,8 to 19)	1J146927142	275 (19)		
	275 to 500 (19 to 34,5)	1K370927082	500 (34,5)	200 ⁽³⁾ (13,8)	

1. Damage to internal parts of the regulator may occur if outlet pressure exceeds the actual pressure setting by amounts greater than those shown in this column.
2. For outlet pressure settings to 25 psig (1.7 bar) only. For pressure settings over 25 psig (1.7 bar), outlet pressure is limited by maximum emergency outlet pressure of 45 psig (3.1 bar).
3. For outlet pressure settings to 350 psig (24.2 bar) only. For pressure settings over 350 psig (24.2 bar), outlet pressure is limited by maximum emergency outlet pressure of 550 psig (37.9 bar).
4. Leakage or bursting of pressure containing parts may occur if outlet pressure exceeds these values.

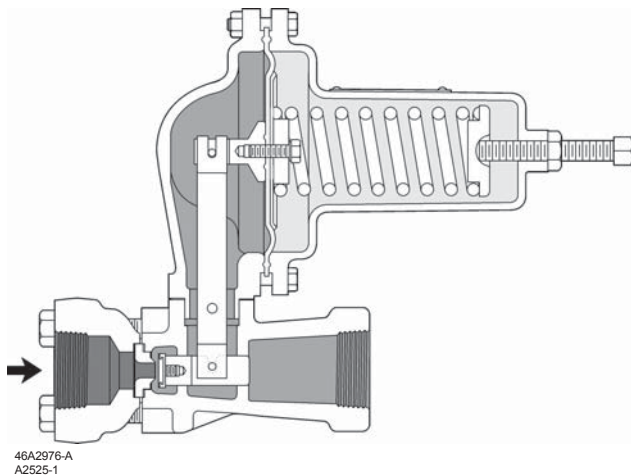


Figure 2. Type 630 Regulator Sectional View

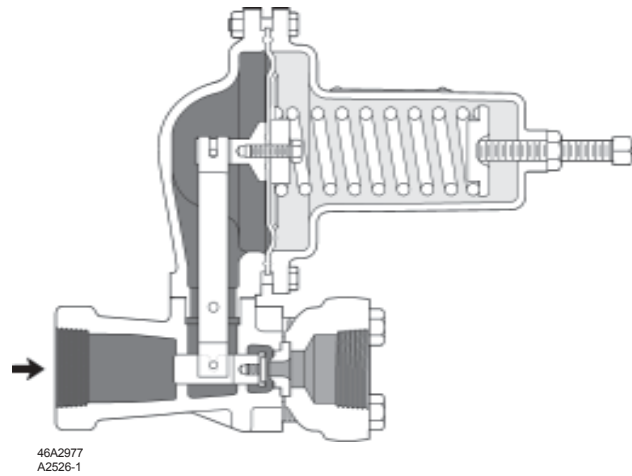


Figure 3. Type 630R Relief Valve Sectional View

Vents



WARNING

When the unit is installed in an enclosed area or indoors, escaping gas may accumulate and be an explosion hazard. Under these conditions the vent should be piped away from the unit to a freely ventilated outdoor location away from air intakes, windows, etc. Protect all vent openings against weather or the entrance of any foreign material that may plug the vent or affect operation of the regulator or relief valve. Inspect all vent openings periodically to be sure they are not plugged. If the vent is in an environment where freezing rain, ice, or snow could clog the vent, it is recommended that a weatherproof vent be used.

Spring-loaded constructions have a screened vent assembly (key 27, figures 5, 6 and 7) installed in the 1/4-inch NPT spring case vent opening. If a remote vent is required, remove the vent assembly and install a remote vent line.

Overpressure Protection

As is the case with most regulators, the Type 630 spring-loaded regulators have outlet pressure ratings that are lower than the inlet pressure ratings. Over-

pressure protection must be provided if the actual inlet pressure can exceed the outlet pressure rating. Overpressure protection is also required for the loading regulator and main regulator spring case of relief valves. Refer to the following tables to determine pressure ratings:

1. Spring-loaded Type 630 regulators.
 - a. Inlet pressure and pressure drop—table 2.
 - b. Outlet pressure—table 3.
2. Spring-loaded Type 630R relief valve pressure table 4.



WARNING

Overpressuring any portion of this equipment may cause damage to regulator parts, leaks in the regulator, or personal injury due to bursting of pressure-containing parts or explosion of accumulated gas.

To avoid overpressure, provide an appropriate overpressure protection device to ensure that none of the limits listed in tables 1 through 4 will be exceeded.

Regulator or relief valve operation below the limits specified in tables 1 through 4 does not preclude the possibility of damage from external sources or from debris in the gas line. Inspect the regulator for damage after any overpressure condition.

Table 4. Outlet Pressure Ranges

REGULATOR CONSTRUCTION	RELIEF (INLET) PRESSURE SETTINGS, PSIG (bar)	Part Number	MAXIMUM ALLOWABLE RELIEF (INLET) PRESSURE, Psig (bar)	MAXIMUM EMERGENCY INLET (CASING) PRESSURE ⁽¹⁾ , Psig (bar)
Low-Pressure	3 to 8 (0,2 to 0,5) 6 to 17 (0,4 to 1,1) 15 to 22 (1,0 to 1,5) 20 to 35 (1,4 to 2,4) 27 to 50 (1,9 to 3,5)	0W019227022 0W019127022 0W019027022 0Y0664000A2 1J146927142	Relief Pressure Setting Plus Maximum Allowable Buildup of 25 psig (1,7 bar)	75 (5,2)
High-Pressure	30 to 70 (2,0 to 4,8) 50 to 95 (3,5 to 6,5) 75 to 175 (5,2 to 12,1) 150 to 250 (10,4 to 17,3)	0W019127022 0W019027022 0Y0664000A2 1J146927142	Relief Pressure Setting Plus Maximum Allowable Buildup of 250 psig (17 bar)	550 (38,0)

1. Leakage or bursting of pressure-containing parts may occur if inlet pressure exceeds these values.

Startup

Starting up the unit consists of opening the upstream block valve, introducing gas pressure. Use gauges to monitor pressures during startup.

The range of allowable pressure settings is marked on the nameplate. If a pressure setting beyond the nameplate range is required, substitute an appropriate spring selected from table 6. Be sure to change the nameplate to indicate the new pressure range.



WARNING

To avoid the consequences of over-tightening the spring in spring-loaded regulators or relief valves, consult table 5 and replace the adjusting screw with one of the correct length when replacing the spring.

Some pressure ratings are dependent upon the actual outlet pressure settings being used. For example, with a Type 630 regulator, outlet pressure must not exceed the setting by more than 20 psig (1,4 bar) for low pressure constructions or 200 psig (14 bar) for high pressure constructions, or damage to internal regulator parts may occur. However, with some higher pressure ranges, the setting plus 20 psig (1,4 bar) or 200 psig (14 bar) exceeds the maximum emergency outlet (casing) pressure. Before increasing the setting, refer to tables 3 and 4 (as appropriate). Review the pressure limits for the spring range being used, and be certain that the new pressure setting will not result in an overpressure condition. Always use a pressure gauge to monitor pressure when making adjustments.

Adjusting Spring-Loaded Regulators and Relief Valves

Loosen the locknut (key 2, figures 4, 5 and 6) atop the spring case. While monitoring the pressure, rotate the adjusting screw (key 1, figures 4, 5 and 6) clockwise to increase set pressure or counterclockwise to decrease it. When the unit is regulating or relieving pressure at the desired value, tighten the locknut.

Shutdown

Slowly close the upstream block valve.

Principle Of Operation

This section describes the operation of the Type 630 regulator and the Type 630R relief valve with spring loading. Set pressure is changed with the adjusting screw on the regulator or relief valve. The Type 630R relief valve uses a light spring for added stability.

Type 630 Regulators

Refer to figure 2. In the regulator construction, outlet pressure registers beneath the diaphragm. As long as the outlet pressure is less than the set pressure, spring force on the diaphragm causes the lever to hold the valve open. When the outlet pressure exceeds the set pressure, the diaphragm moves to compress the spring and the lever closes the valve until the outlet pressure returns to set pressure.

Type 630R Relief Valves

Refer to figure 3. In the relief valve construction, inlet pressure registers beneath the diaphragm. As long as the inlet pressure is less than the set pressure, spring force causes the lever to hold the valve closed. When the inlet pressure exceeds the set pressure, the diaphragm moves to compress the spring and the lever opens the valve allowing inlet pressure to bleed into the downstream line or to atmosphere until the inlet pressure returns to set pressure.

Maintenance

Parts are subject to normal wear and must be inspected and replaced as necessary. Frequency of inspection depends upon severity of service conditions.



WARNING

To avoid personal injury or equipment damage, isolate the regulator or relief valve from 5 the pressure system and release all pressure from the regulator or relief valve before performing maintenance.

Except where indicated, key numbers in the following procedures are shown in figures 4 and 5 for the Type 630 regulator, in figure 6 for the Type 630R relief valve.

Replacing Orifice, Valve Disk, and Lever

Note

With some piping systems it may be possible to omit step 1 below by removing four cap screws (key 17) and spreading the body (key 23) and inlet adaptor (key 18) far enough apart to allow removal of the orifice (key 20) and Type 630 valve disk (key 21, figures 4 and 5) or the orifice (key 20) and the Type 630R valve seat O-ring (key 37, figure 6).



CAUTION

If step 1 is omitted and the body and inlet adaptor are separated, take care to

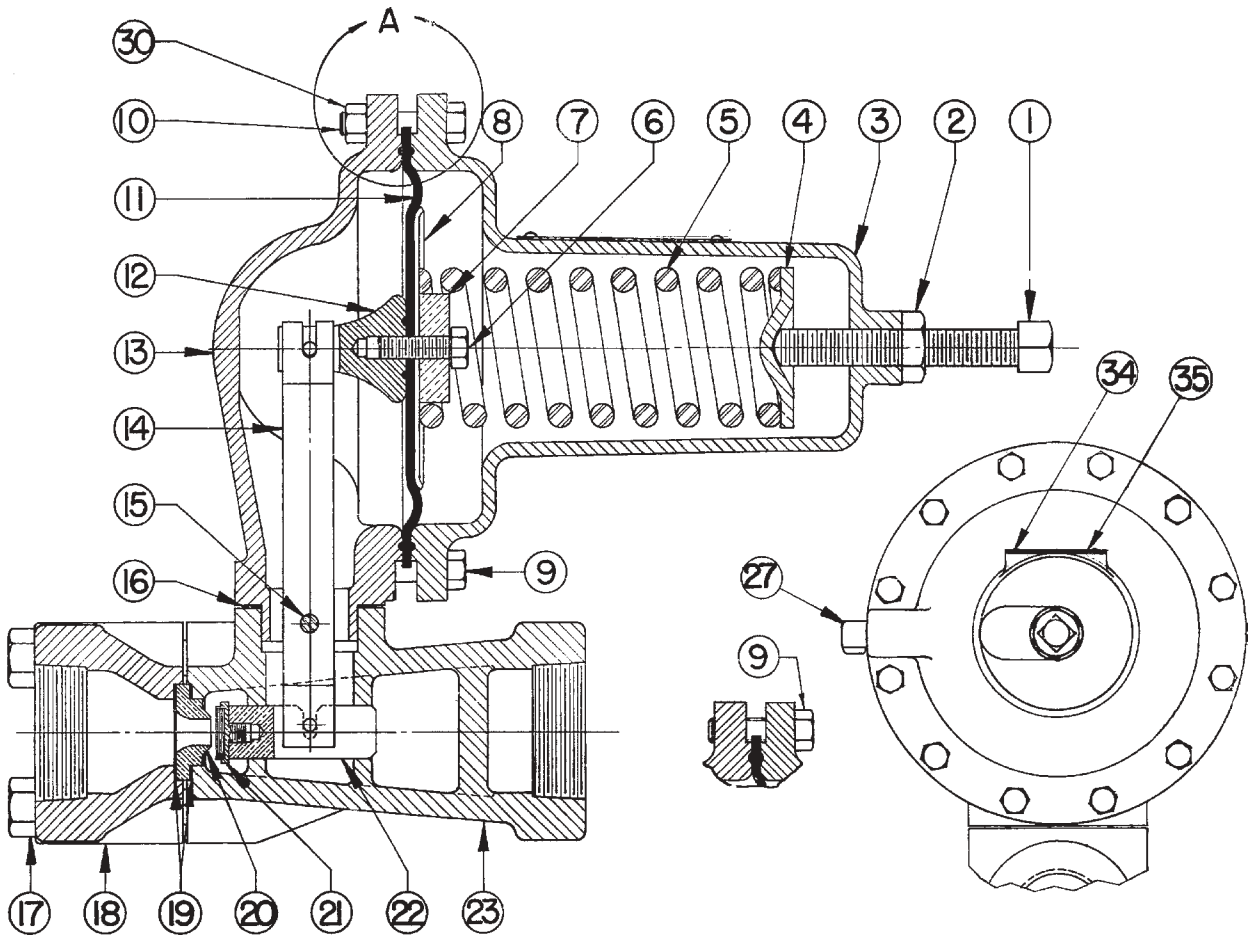
avoid pinching fingers between the body and the inlet adaptor.

1. Disconnect piping from inlet adaptor (key 18). Remove four cap screws (key 17) and adaptor.
2. Remove orifice (key 20) and gaskets (key 19).
3. To remove Type 630 valve disk (key 21, figures 4 and 5) or Type 630R valve seat O-ring (key 37, figure 6), first disconnect remote vent pipe (if one is used).
4. Unscrew the two cap screws (key 31, not shown) that secure diaphragm adaptor (key 13) to body (key 23); remove diaphragm adaptor and attached spring case (key 3).
5. If it is necessary to replace the lever (key 14), drive out the pin (key 15) and slide the lever out of the diaphragm adaptor. When replacing the lever, make sure the slot engages the connector assembly (key 12) and replace the pin.
6. Remove valve carrier assembly (key 22) from body.
7. To replace seating surface:
 - a. For Type 630, use a 3/4-inch socket wrench to remove and re-install valve disk and holder assembly (key 21, figures 4 and 5).
 - b. For Type 630R, unscrew machine screw (key 36, figure 6) and remove O-ring washer and O-ring (keys 32 and 37, figure 6) from O-ring holder (key 21, figure 6). When reassembling, apply a good-quality gasket shellac to the machine screw thread.
8. Use new orifice gaskets (key 19) and body gasket (key 16) when reassembling. Insert valve carrier assembly (key 22) into the body before re-installing the diaphragm adaptor.

Note

The spring case (key 3) must point away from the inlet adaptor (key 18) on Type 630 regulators as shown in figures 4 and 5. On Type 630R relief valves, the spring case must face the same direction as the inlet adaptor (key 18) as shown in figure 6.

9. Be certain the lever (key 14) engages the valve carrier.
10. Secure the diaphragm adaptor (key 13) to the body (key 23). Fit the inlet adaptor (key 18) to the body and install and tighten the four cap screws (key 17).



0X00119-F

Figure 4. Spring-Loaded Type 630 Regulator - Low Pressure Construction

Replacing the Diaphragm

1. To relieve spring compression, loosen locknut (key 2, figures 5, 6, and 7). Turn the adjusting screw (key 1, figures 5, 6, and 7) counterclockwise until spring compression is relieved.

2. Disconnect remote vent line (if one is present).

3. Remove spring case (key 3) by unscrewing cap screws and nuts (keys 9, 10 and 30).

4. Remove diaphragm (key 11) and attached parts from the lever (key 14).

5. Unscrew cap screw (key 6) from connector head assembly (key 12) and disassemble the diaphragm assembly.

6. Install new diaphragm being certain that the diaphragm is centered. Note that low-pressure con-

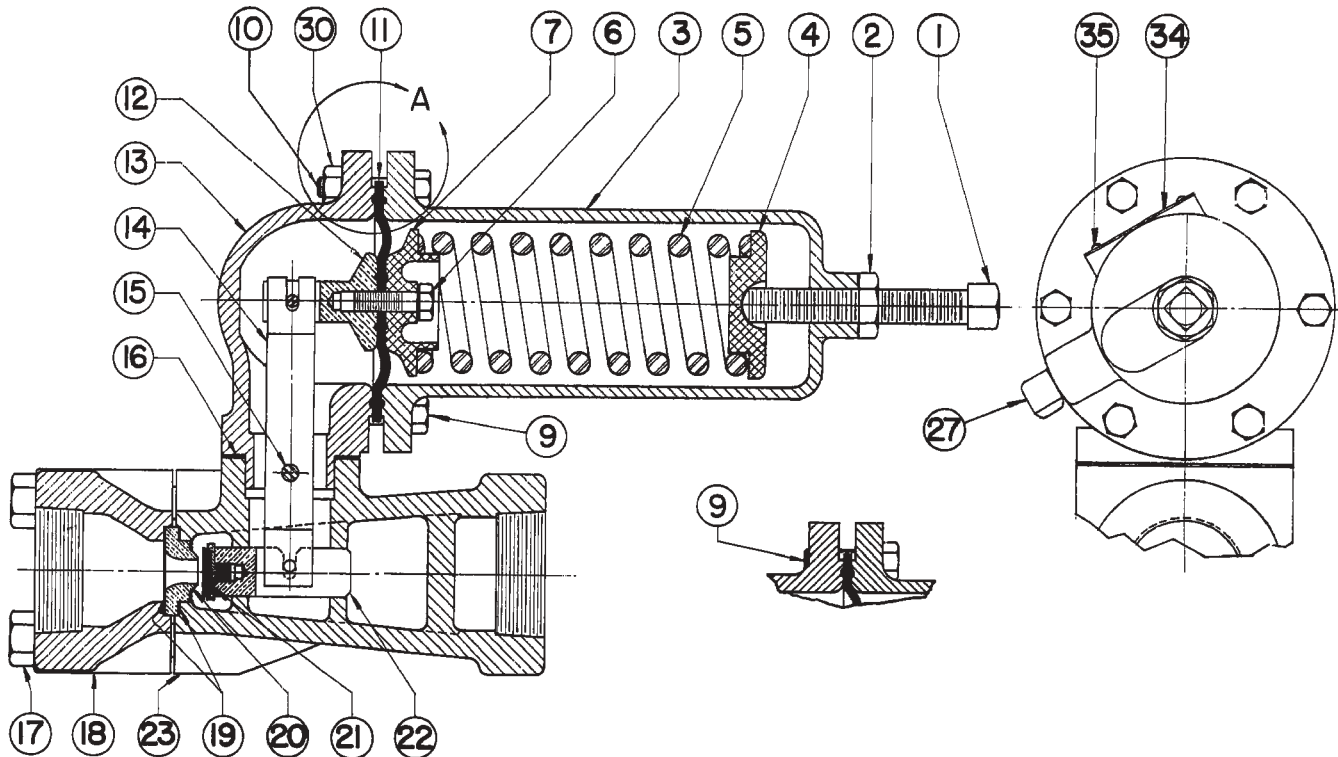
structions use a diaphragm plate (key 8, figure 5) on the spring case side of the diaphragm. Install new gaskets when replacing diaphragm.

7. When reassembling, be certain that the diaphragm connector is engaged in the lever.

Note

Be careful not to twist the diaphragm to lever attachment during assembly. Twisting will cause sufficient friction to interfere with the proper operation of the regulator.

8. To ensure proper slack in the diaphragm, tighten the spring case cap screws finger-tight only. Compress the spring slightly with the adjusting screw then complete the tightening of the spring case cap screws and nuts.



CB2197-E

Figure 5. Spring Loaded Type 630 Regulator - High Pressure Construction

Parts Ordering

When corresponding with your Fisher sales office or sales representative concerning this unit, state the type number and all other pertinent information on the nameplate (key 34, figures 5, 6 and 7).

When ordering replacement parts, reference the key number and the eleven character part number as found in the following parts list.

Parts List

Note

In this parts list, parts marked NACE are intended for corrosion-resistant service as detailed in the National Association of Corrosion Engineers (NACE) standard MR-01-75.

Parts Kits

Type 630 regulator kits are for low or high pressure spring-loaded construction. Kits include neoprene diaphragm, copper inlet gasket material (for brass trim) or composition material (for stainless trim), and valve disk assembly material as noted. Orifice included only where indicated. If separate orifice is required, must be ordered separately by appropriate part number based on orifice size and material. (Included are keys 11, 16, 19, 21 and 20)

Key	Description	Part Number	Key	Description	Part Number
1	Adjusting Screw, steel	See table 5	15	Pin Stainless steel	0W018835172
2	Hex Nut, plated steel	1A352424122		Stainless steel (NACE)	0W0188X0022
3	Spring Case Low-pressure Cast iron	3C780919042	16*	Gasket, composition	0W018704022
	Steel	3N698122012	17	Cap Screw, steel (4 required) 1-inch body	1A935924052
	High-pressure Cast iron	3C780819042		2-inch body	1A353524052
	Steel	3N698322012	18	Inlet Adaptor, steel 1-inch NPT	1F479823022
4	Upper Spring Seat, zinc Pressure range to 275 psig (19 bar)	16A9812X012		1-inch NPT (NACE)	1F4798X0022
	Pressure range over 275 psig (19 bar)	16A9813X012		2-inch NPT	1F479923022
				2-inch NPT (NACE)	1F4799X0022
5	Spring, steel	See table 6	19*	Inlet Body Gasket (2 required) Copper, for brass trim	0W018415042
6	Cap Screw, plated steel	1R817699012		Composition, for stainless steel trim	0W018404022
7	Lower Spring Seat Low-pressure, steel	0W020324102	20*	Orifice Type 630	
	High-pressure, zinc Pressure range to 275 psig (19 bar)	0W020144022		Brass	
	Pressure range over 275 psig (19 bar)	1K371044022		1/8-inch (3,2 mm)	0Z040014012
8	Diaphragm Plate, zinc plated steel Low-Pressure only, (1 required)	0W020225072		3/16-inch (4,8 mm)	1B219514012
				1/4-inch (6,4 mm)	0W018314012
9	Cap Screw, zinc plated steel For use with steel diaphragm adaptor For low-pressure regulator (10 required)	1C379124052		3/8-inch (9,5 mm)	0W018214012
	For high-pressure regulator (4 required)	T1120828982		1/2-inch (12,7 mm)	0W018114012
10	Cap Screw, plated steel (for use with cast iron diaphragm adaptor) Low-pressure (10 required)	1A352524052		Stainless steel	
	High-pressure (4 required)	1A352524052		1/8-inch (3,2 mm)	1K416635032
				3/16-inch (4,8 mm)	1K416535032
11*	Diaphragm Neoprene For low-pressure regulator	0W020002192		1/4-inch (6,4 mm)	1K416435032
	For high-pressure regulator	0W019902192		3/8-inch (9,5 mm)	1K416335032
	Fluoroelastomer For low-pressure regulator	0W0200X0022		1/2-inch (12,7 mm)	1K416235032
	For high-pressure regulator	0W019902402		Type 630R	
12	Connector Head Assembly Aluminum trim	16A9811X012		Brass	
	Aluminum trim (NACE)	16A9811X032		1/2-inch (12,7 mm)	1B735014012
	Stainless steel trim	1P8465000B2		Stainless steel	
	Stainless steel trim (NACE)	1P8465X0012		1/2-inch (12,7 mm)	1B735035032
13	Diaphragm Adaptor Low-pressure Cast iron	0W019719012		Stainless steel (NACE)	
	Steel	2N698522012		1/8-inch (3,2 mm)	1K4166X0012
	Steel (NACE)	2N6985X0072		3/16-inch (4,8 mm)	1K4165X0012
	High-pressure Cast iron	0W019819012		1/4-inch (6,4 mm)	1K4164X0012
	Steel	2N698722012		3/8-inch (9,5 mm)	1K4163X0012
	Steel (NACE)	2N6987X0042		1/2-inch (12,7 mm)	1K4162X0012
14	Lever Assembly, stainless steel Low-pressure	1B2891000A2	21*	Valve Disk Assembly Type 630 only For pressure ranges to 200 psig (13,8 bar)	
	Low-pressure (NACE)	1B2891X0032		Brass holder, nitrile disk	1B4500000A2
	High-pressure	1B2890000A2		Stainless steel holder, nitrile disk	1B4500000B2
	High-pressure (NACE)	1B2890X0022		Brass holder, polyurethane disk	1P7351X0012
				Stainless steel holder, polyurethane disk	1P7351000A2
				Brass holder, fluoroelastomer disk	1B4500X0042
				Stainless steel holder, fluoroelastomer disk	1B4500X0012
				For pressure ranges over 200 psig (13,8 bar)	
				Brass holder, nylon disk	1C1860000A2
				Stainless steel holder, nylon disk	1C1860000B2
				Brass holder, TFE disk	1C1860000C2
				Stainless steel holder, TFE disk	1C1860000D2
				NACE construction	
				For pressure ranges to 200 psig (13,8 bar)	
				Stainless steel holder, nitrile disk	1B4500X0072
				Stainless steel holder, fluoroelastomer disk	1B4500X0082
				For pressure ranges above 200 psig (13,8 bar)	
				Stainless steel holder, nylon disk	1C1860000B2
				Stainless steel holder, TFE disk	1C1860000D2

630 Series

Key	Description	Part Number	Key	Description	Part Number
21	O-Ring Holder Type 630R		32	O-Ring Washer (For 630R only)	
	Brass	1D336014012		Brass	1D335914012
	Stainless steel	1D336035032		Stainless steel	1D335935072
22	Valve Carrier		33	Plug, plated steel (not shown)	
	Brass	0W018614022		For 2-inch NPT bodies only	1D829328982
	Stainless steel	0W018635032			
	Stainless steel (NACE)	0W0186X0022	34	Nameplate, aluminum	
23	Body			Type 630	1F749611032
	1-inch NPT, cast iron	0W0209000A2		Type 630R	21A5495X012
	1-inch NPT, steel	2N6990000A2	35	Drive Screw, stainless steel (4 required)	1A368228982
	1-inch steel (NACE)	2N6990X0092			
	2-inch NPT, cast iron	0W021519012	36	Machine Screw	
	2-inch NPT, steel	2N699122012		Type 630R only	
2-inch steel (NACE)	2N6991X0032	Brass		1A682618992	
			Stainless steel	1D336435042	
27	Vent Assembly, Y602-12	27A5516X012	37*	O-Ring	
30	Hex Nut, zinc plated steel, (used only			Type 630R only	
	with cast iron diaphragm adaptor, key 13)			Nitrile	1D288806992
	Low-pressure (10 required)	1A352724122	TFE	1F581906522	
	High-pressure (4 required)	1A352724122			
31	Cap Screw, plated steel (2 required)		52	NACE Tag (not shown), 18-8 stainless steel	19A6034X012
	(not shown)	1A341824052	53	Tag Wire (not shown), 303 stainless steel	1U7581X0022

Table 5. Key 1, Adjusting Screw, Steel

TYPE	SPRING PART NUMBER	ADJUSTING SCREW PART NUMBER	ADJUSTING SCREW PART NUMBER (WIRE SEAL)	LENGTH OF THREADED PORTION, Inches (mm)
630	0W019227022	1A279128982	1R829928992	4 (102)
	0W019127022	1B212028982	1R830028992	3-1/2 (89)
	0W019027022	1A500528982	1R808528992	3 (76)
	0Y066427022	1A500528982	1R808528992	3 (76)
	1J146927142	1A500528982	1R808528992	3 (76)
	1K370927082	1A500528982	1R808528992	3 (76)
630R	0W019227022	1A279128982	1R829928992	4 (102)
	0W019127022	1B212028982	1R830028992	3-1/2 (89)
	0W019027022	1A500528982	1R808528992	3 (76)
	0Y066427022	1D336628982	1R830128992	3-1/4 (83)
	1J146927142	1D336628982	1R830128992	3-1/4 (83)

Table 6. Key 5, Regulator Spring, Steel

Type		Outlet (or Relief) Pressure Setting, Psig (bar)	Spring Part Number	Spring Color Code
Spring-Loaded Type 630	Low-Pressure	3 to 10 (0,2 to 0,7) 8 to 20 (0,8 to 1,4) 17 to 30 (1,2 to 2,0) 27 to 40 (1,9 to 2,8)	0W019227022 0W019127022 0W019027022 0Y066427022	Red Stripe Olive Drab Silver Green Stripe
	High Pressure	27 to 50 (1,9 to 3,5) 46 to 95 (3,2 to 6,6) 90 to 150 (6,2 to 10,3) 150 to 200 (10,3 to 13,8) 200 to 275 (13,8 to 18,9) 275 to 500 (18,9 to 34,5)	0W019227022 0W019127022 0W019027022 0Y066427022 1J146927142 1K370927082	Red Stripe Olive Drab Silver Green Stripe Blue Stripe Yellow Stripe
Spring-Loaded Type 630R	Low-Pressure	3 to 8 (0,2 to 0,5) 6 to 17 (0,4 to 1,1) 15 to 22 (1,0 to 1,5) 20 to 35 (1,4 to 2,4) 35 to 50 (2,4 to 3,5)	0W019227022 0W019127022 0W019027022 0Y066427022 1J146927142	Red Stripe Olive Drab Silver Green Stripe Blue Stripe
	High-Pressure	30 to 70 (2,0 to 4,8) 50 to 95 (3,5 to 6,5) 75 to 175 (5,2 to 12,1) 150 to 250 (10,4 to 17,3)	0W019127022 0W019027022 0Y066427022 1J146927142	Olive Drab Silver Green Stripe Blue Stripe

630 Series

Fisher is a mark owned by Fisher Controls International, Inc., a business of Emerson Process Management. The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Fisher does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Fisher product remains solely with the purchaser.

For information, contact Fisher:
Marshalltown, Iowa 50158 USA
McKinney, Texas 75070 USA
28320 Gallardon, France
40013 Castel Maggiore (BO), Italy
Sao Paulo 05424 Brazil
Singapore 128461

