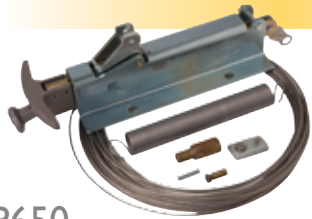


# Internal Valve Accessories



P650

## Cable Controls

Fisher® brand cable controls and accessories can be furnished to remotely open and close all internal valves except the 4" flanged size. This equipment can be used to comply with NFPA 58 and DOT requirements for MC331 cargo tanks.

Cable systems can also be used on stationary storage tanks at bulk plants and on in-line applications to increase safety during transfer operations. All fusible elements and links used in the cable control system comply with NFPA 58 and MC331 requirements.

**P650 or P651** Primary Cable Control – Capable of actuating all Fisher brand internal valves except the 4 inch type C404-32. The P650 or P651 opens and closes the valve from a remote point, usually the rear of the bobtail or transport. Pulling the handle of the primary control opens the internal valve; pushing the handle closes the valve. There are three notches on the primary control that give a travel of 4, 5, or 6 inches depending on the travel required by the valve's operating lever.

Included with each Type P650 primary control is a 20 foot cable, P134 fusible links, a return spring and mounting hardware. If just the primary cable control is needed order P651 which is available without any of the other accessories.

**P163A or P164A** Auxiliary Remote Release – These units allow the internal valve to be closed from a location other than the primary control point (P651 or P651). Pulling the auxiliary release handle trips the release mechanism on the primary control to close the internal valve.

The two assemblies are identical except for length. P163A has an untrimmed length of 25 feet and P164A has an untrimmed length of 50 feet. Both cables can be trimmed to any length. Both releases can be installed through mounting brackets up to 3/8 inch thick.

**P164B** - a release assembly that uses 50 feet of cable housing which does not require elaborate guiding like uncovered cables

**P164C** – an auxiliary remote release without cable is also available

## Latch/Remote Release Mechanisms

With the exception of the 3 inch flanged size all Fisher brand internal valves can be fitted with a manual latch/remote release mechanism. When the internal valve's operating lever is manually moved to the open position, the lever can be latched in the open position. The lever can be released from a remote location by pulling on the cable attached to a pull ring, thus closing the internal valve. A built-in fusible element in the latch/release melts if exposed to fire allowing the operating lever to return to the closed position.

**P340** – fits all 2 and 3-inch threaded NPT internal valves. The P340 is easily installed in the field by removing two of the three gland cap screws.

**P341** – fits 1 1/4 inch threaded NPT C407 series internal valves. Also available factory installed (C407M10)

**P342** - Bi-directional latch/remote release for the 1 1/4 inch threaded NPT C407-10 which allows operation from two directions.

**P313** – fits 4 inch type C404-32 internal valves, also available factory installed (C404M32). The P315 remote release should be used with this release.

## 4 Inch Valve Accessories

**P314** – This cable assembly is used as an attachment from the C404-32 operating lever to the primary cable control. The assembly includes a 40 foot cable, a special bushing with a fusible element and clamp. The bushing fits in the valve operating lever and has a built in fusible element that will melt if exposed to fire allowing the C404-32 to close. The cable connects to the bushing and the clamp permits the other end of the cable to be attached to the fusible link (not furnished) at the primary cable control.

**P315** – on manually actuated 4 inch valves (C404M-32), the P315 remote handle release can be used to close the internal valve from a remote location. Cable (30 feet), linkage and mounting hardware are included.

## Pneumatic Actuator Accessories

All Fisher brand internal valves can be ordered with a pneumatic actuator that permits the valve to be opened and closed from a remote location. When air pressure is applied to the actuator, it moves the actuator's rod and internal valve operating lever to the open position. Upon loss of air pressure, the valve's operating lever returns to the closed position. Besides air nitrogen or carbon dioxide can be used to pressure the actuators.

Use of a pneumatic actuator permits the opening and closing of the internal valve to be tied into the air brake of the transport or bobtail. Pneumatic actuators can also provide a convenient way to remotely operate a number of internal valves on stationary storage tanks at bulk plants.

**P389** – this actuator can only be used with the C407-10 series valve. All necessary hardware for installing the actuator is included. Minimum pressure is 60 psig, maximum pressure is 250 psig.

**P613, P623, P639 and P614** - These actuators attach directly to the valve after removal of the cable operating lever. Included in each assembly is an operating lever and mounting hardware. These actuators can only be used with the internal valves specified in the table below.

**P631** – this actuator is for the C407-10 series valve and features a stainless steel enclosure for durability in harsh environments. All necessary hardware for installing the actuator is included. Minimum pressure is 20 psig and maximum pressure is 40 psig.

Fuse plugs – when installed in the actuator piping at the valve will allow the pneumatic pressure to vent closing the valve if the plug is exposed to temperature above 208° to 220°F. Fuse plugs are available in 1/8 inch NPT (**T1140399982**) or 1/4 inch NPT (**T1033699982**)

## Retrofit of Old Style Internal Valves

All of the old style internal valves (type numbers C401, C402, C421, C427 and C403) may be converted to the new style Jet-Bleed internal valve. The 2", 3" and 3" double flanged valves all use a different kit. The retrofit kit does not contain an excess flow spring which must be ordered separately to properly complete the retrofitting of the valve.



P315



P389



P613



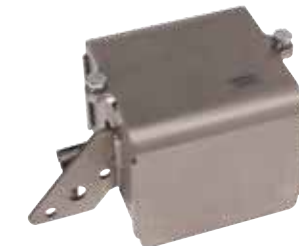
P614



P623



P639



P631



P163A/P164A



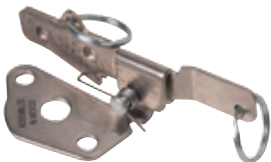
P313



P340



P341



P342

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# Internal Valve Accessories, Repair Kits

## Internal Valve Accessories

Internal Valve Size (inches)	Primary Cable Control	Auxiliary Remote Release	Cable Assembly	Latch/Release Mechanism
1 1/4, 2 and 3" (NPT or Flanged)	<b>P650</b> or <b>P651</b> <sup>(1)</sup>	<b>P163A</b> or <b>P164A</b>	With <b>P651</b>	<b>P341, P342</b> (C407-10 series) <b>P340</b> (C4xx series)
4" Flanged	Use Allegheny or Wheaton Control	<b>P315</b>	<b>P314</b>	<b>P313</b> <sup>(2)</sup>

1. P651 is a primary control only, no accessories  
2. Use with P315 remote release mechanism

## Pneumatic Actuators Ordering Information

Internal Valve Type Number	Pneumatic Actuator Number	Maximum Inlet Pressure to Actuator (psig)	Minimum Operating Pressure to Activate Internal Valve (psig)
C407-10	<b>P389</b>	250	60
C407-10	<b>P631</b>	40	20
C404-24, C484-24	<b>P613</b>	125	20
C403-24, C483-24	<b>P623</b>	125	20
C421, C427, C471, C477 (2 and 3 inch NPT sizes)	<b>P639</b>	125	20
C404-32	<b>P614</b>	125	20

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## Internal Valve Repair Kits

Kit Part No.	Fits Valve No	Comment
<b>RC40016T012</b>	For 2" C401, C402, C421, C427	Repair kits include a nitrile main disc, a bleed disc and TFE shaft packing. These kits are for valves used in propane or anhydrous ammonia service. Contact Bergquist for additional information on special trims for other applications and parts not included in the kits.
<b>RC40024T012</b>	For 3" C401, C402, C421, C427	
<b>RC40324T012</b>	For C403-24	
<b>RC40424T012</b>	For C404-24	
<b>RC40710T012</b>	For C407-10	
<b>RC47016T012</b>	For 2" C471, C477	
<b>RC47024T012</b>	For 3" C471, C477	
<b>RC48324T012</b>	For C483	
<b>RC48424T012</b>	For C484	
<b>RFC4716T012</b> <sup>(1)</sup>	2" NPT Retro fit kit	Kits to retrofit old style internal valve to the new Jet-Bleed style
<b>RFC4724T012</b> <sup>(1)</sup>	3" NPT Retro fit kit	
<b>RFC4824T012</b> <sup>(1)</sup>	3" double flanged retro fit kit	
<b>GE42498X012</b>	Excess Flow Spring 105 GPM	For retrofit of 2" internal valve
<b>TI153537022</b>	Excess Flow Spring 150 GPM	
<b>TI200537022</b>	Excess Flow Spring 250 GPM	
<b>GE42499X012</b>	Excess Flow Spring 160 GPM	For retrofit of 3" internal valve
<b>GE42500X012</b>	Excess Flow Spring 265 GPM	
<b>GE42851X012</b>	Excess Flow Spring 375 GPM	
<b>GE42501X012</b>	Excess Flow Spring 460 GPM	
<b>GE42499X012</b>	Excess Flow Spring 160 GPM	For retrofit of 3" double flanged internal valve
<b>GE42500X012</b>	Excess Flow Spring 260 GPM	
<b>GE42851X012</b>	Excess Flow Spring 400 GPM	

Note 1 - The retrofit kit does not contain a new excess flow spring. This must be ordered separately to match the desired rate of the valve being rebuilt