

**PENTAIR
HYGIENIC PROCESS VALVES
(FORMERLY KEYSTONE)**

F250 / F251 INSTALLATION AND OPERATING INSTRUCTIONS

PENTAIR HYGIENIC PROCESS VALVES (Formerly Keystone)

F250 / F251 HYGIENIC BUTTERFLY VALVES

Installation and operating instructions for F250/F251 butterfly valves. F250 for imperial tubing. F251 for metric tubing.

INSTALLATION INSTRUCTIONS

Butt weld end connectors

The valve needs to be disassembled prior to welding to avoid heat damage to the seat, and disc stem bearings.

- Disassembly procedure is as follows:
 - Locate handle in the closed position.
 - Remove plug (10) from top of handle (6).
 - Remove handle screw (9), spring washer (8) and flat washer (7).
 - Then remove handle (6) and notch plate (5).
- Remove body screws (11) and nuts (12) and separate body halves.
- Remove disc stem (3) and seat (2) assembly. Take care not to lose the upper and lower bearing strips (4) located on stem on either side of the disc.
- Re-align body halves (1) together, fit body screws (11) and nuts (12) and tighten.
- Weld the assembled body into line, the work welds to required finish.
- Remove body screws (11) and nuts (12), and separate body halves (1). Assemble internals in reverse order as in step 1, taking care that both bearing strips are still in their respective grooves on stem.
- Line up body halves (1), then carefully release pipe ends working the seat into its cavity, so that the body halves properly align.
- Fit body screws (11) and nuts (12), tighten to recommended torque values.
Valve sizes:
DN 25 to 65 = 12 Nm
DN 80 to 100 = 20 Nm
DN 125 to 150 = 28 Nm
- As the valve is now installed in the pipeline, use the position indicator on the valves bottom stem to ensure the valve disc is in the desired position (Flats are in line with disc).

- Fit notch plate (5) over the drive stem and locate lugs on notch plate bottom into the four body holes provided. This can be fitted to give either two or multi position operation. Ensure the desired notch plate quadrant is positioned in the same quadrant the handle is required to operate in.
- Fit handle (6), to the disc drive square (3), so that the handle is in-line with the disc, then fit the flat washer (7), spring washer (8) and handle screw (9), then tighten to the following recommended torque settings.
8mm squ. = 12 Nm
10 & 12mm squ. = 16 Nm
15mm squ. = 20 Nm.
- Fit plug (10) to handle, covering fastening screw.
- Cycle test the valve and inspect for leakage at plant start up.

SAFETY PRECAUTIONS



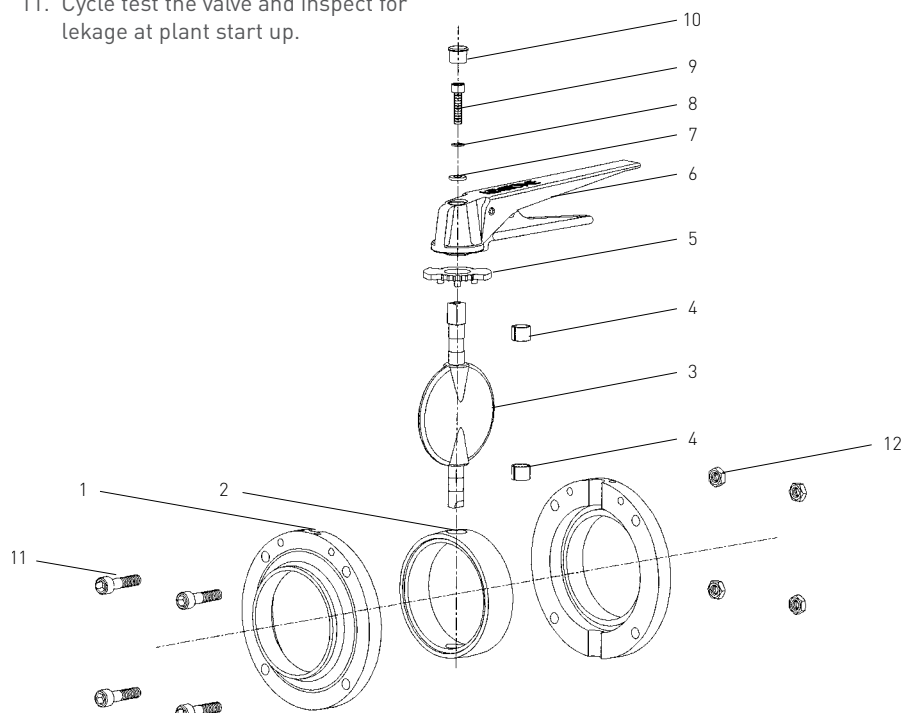
Caution!

This symbol indicates important messages and safety instructions.

For safety reasons, it is important to take the following precautions before working on the valve.

Whenever a valve is being installed or removed from the pipeline, ensure that the pipeline is relieved of all pressure, and media evacuated.

Alternative seat materials are available for various service applications, if unsure of the ideal elastomer selection, contact your nearest Pentair sales office for advise.



PENTAIR HYGIENIC BUTTERFLY VALVES

F250 / F251 INSTALLATION AND OPERATING INSTRUCTIONS

INSTALLATION INSTRUCTIONS CONTINUED

Clamp ends

If installing a valve complete with clamp unions, use the following procedure.

If clamp weld ferrules are already installed, start from step 5.

1. Fit clamps, ferrules and gaskets to both ends of the clamp end valve.
2. Using the complete valve assembly to ensure correct fit up, align ferrules with pipe ends and tack weld.
3. Remove valve assembly along with clamps and gaskets, the complete final purge welding of ferrules. Work welds to required finish.
4. Place one gasket on one end of the valve assembly and fit to the pipe ferrule with clamp, align and tighten.
5. Separate the valve and pipe ferrules and fit the remaining gasket between them, align, bring ferrules together and clamp to secure in place.
6. Check and tighten clamps to ensure correct pressure is obtained to effect seal.
7. Cycle test valve and inspect for leakage at plant start up.

Union ends

If installing valve complete with union fittings, use the following procedure.

If union fittings are already installed, start from step 4.

1. Disassemble union fittings (13,14 and 15), from valve.
2. Slide union nuts (15) over pipe ends.
3. Align tack weld then fully purge weld, plain liners (14) onto pipe ends, and work weld to required finish.
4. Place union seals (13) in the valve end grooves.
5. Separate pipe ends sufficiently to align valve in pipeline taking care not to damage seals or fitting spigots.
6. Release pipe ends onto union seal.
7. Tighten up union nuts to recommended torques.
8. Cycle test valve and inspect for leakage at plant start up.

MAINTENANCE/SERVICE

Pentair hygienic butterfly valves are designed and manufactured to provide a long trouble free service life, with minimum maintenance.

Only routine checks to ensure all fasteners are tight and that valve is leak free are required.

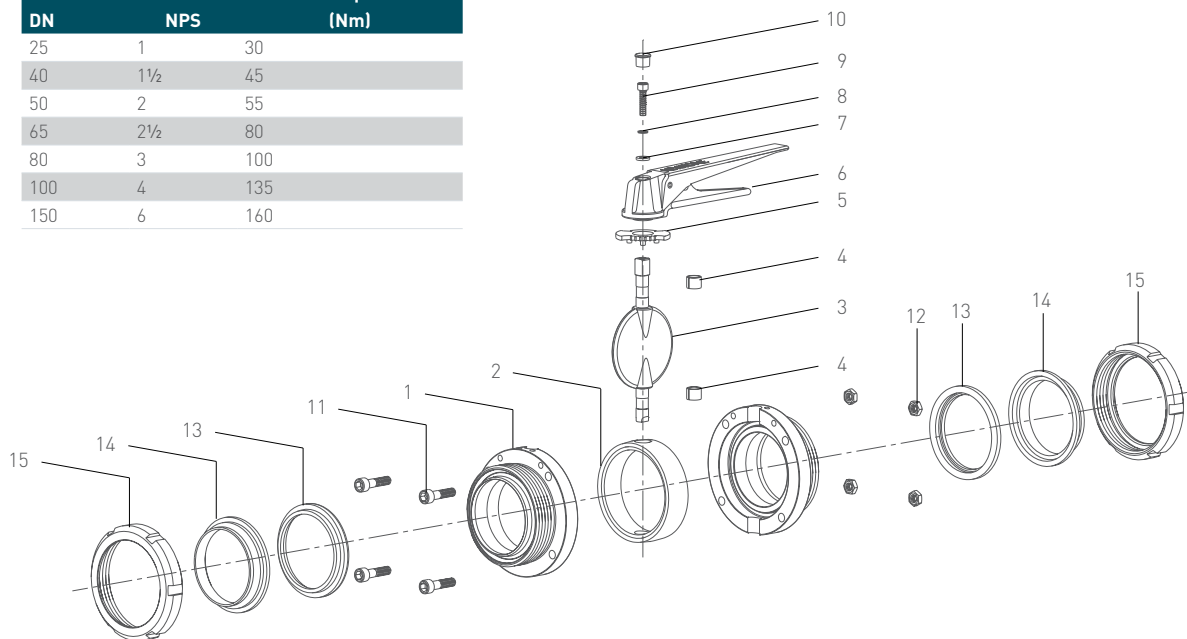
If repairs are necessary, spare parts are available by contacting your nearest Pentair sales office.

OPERATION

F250/F251 is a quarter turn butterfly valve. Handle operated valves have a limit stop notch plate, with either dual or multi-position option available. The valve provides visual indication of the valves position by either the handle being inline with the disc or for actuated versions by the flats on the bottom of the disc stem, where the flats are inline with the valve disc.

Pneumatic actuators are available in both double acting and spring return, vertical or horizontal configurations. Consult Pentair technical literature sheets for models and sizing.

DN	Valve size		Torque (Nm)
	NPS		
25	1		30
40	1½		45
50	2		55
65	2½		80
80	3		100
100	4		135
150	6		160





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