

P4000 Mechanical Dump Valve

The BelGAS^{CP} P4000 series is a mechanically operated dump valve for use with a P8000 trunnion assembly or other float operated lever to which the valve is connected.

Applications

- Separators
- Knockouts
- Treaters
- Other Similar Accumulators

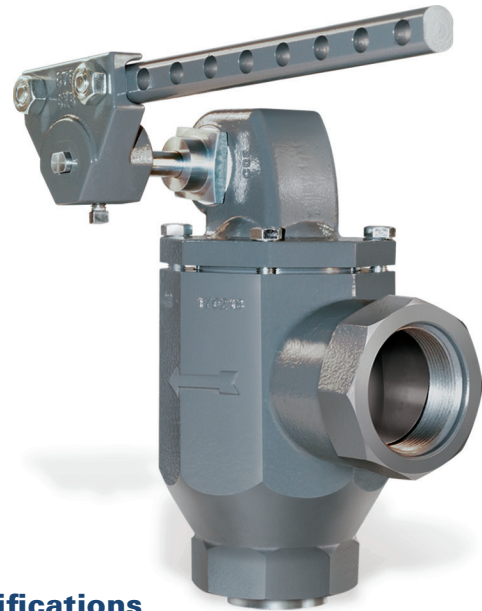
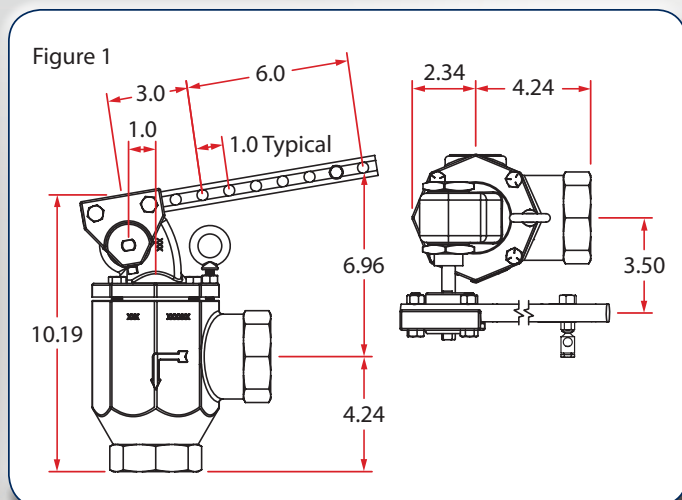
Features

- **Balanced Diaphragm:** The area of the diaphragm is the same as the area of the seat causing upward and downward forces to cancel which allows valve operation to be unaffected by fluid pressure.
- **Simple Maintenance:** Valve trim can be quickly changed without removing the valve from the line by removing bonnet to access entire cage and stem assembly. In addition, eliminating "key" slots from trunnion and lever hubs allows for simpler disassembly and eliminates potential binding of parts.
- **Improved Performance:** Replacing metal to metal contact points with Acetal bushings reduces friction and wear and allows valve to operate more efficiently. Replacing packing with o-ring seals provides longer life and better sealing than packing while also reducing adjustment frequency.

Materials of Construction

Part	Standard Material	Optional Material
Body & Bonnet	Ductile Iron	
Diaphragm	Nitrile	Fluorocarbon
Gaskets	Tealon TF1580	
Cage	Ductile Iron	Acetal
Seat	Nitrile	Polyurethane, Fluorocarbon
Stem & Trunnion Rod	Stainless Steel	
O-ring Box & Bonnet Plug	Stainless Steel	
Bushings	Acetal	
O-rings	Nitrile	Fluorocarbon

Dimensional Data (in.)



Specifications

Operating Temperature	250 PSIG
Working Pressure	300 PSIG (Max)
Temperature Range	-20° to 200°F (-29° to 93°C)
Shutoff Classification	ANSI Class VI per ANSI/FCI 70-2-2013

Cf and Cv Values

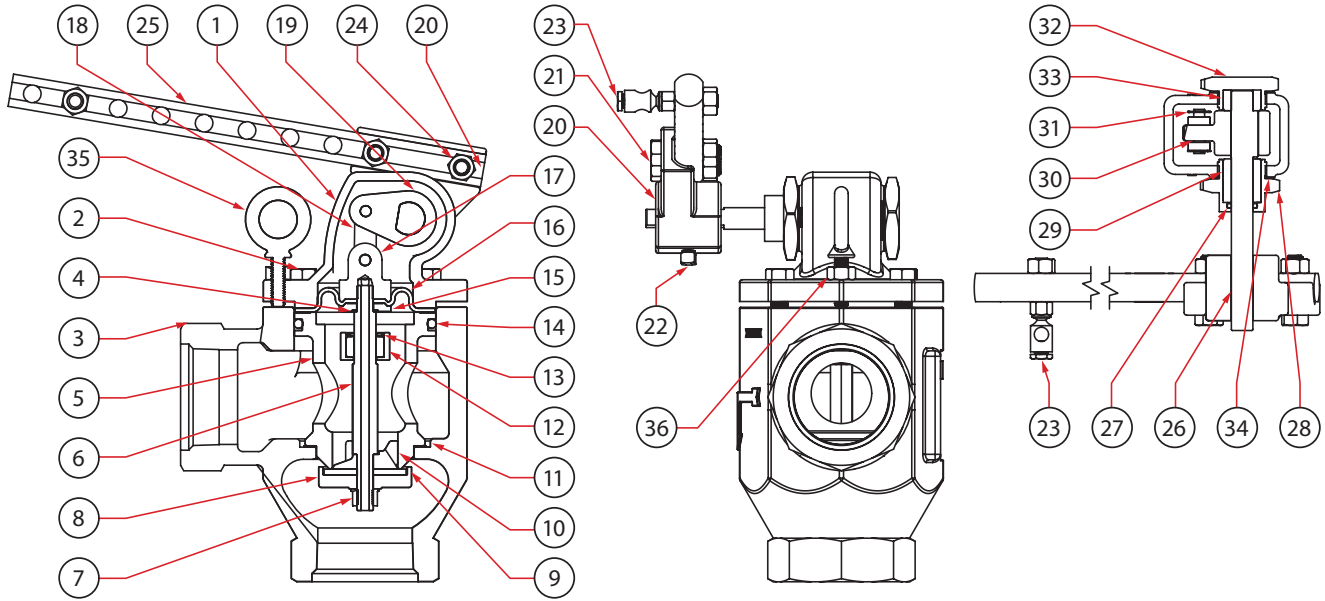
Line Size	Trim Size	Cf	Cv
2"	1.50"	0.79	23.3

P4000 Part Number Matrix

	P40	16	S	0	A	0		0	0
Style									
Diaphragm Balanced	00								
Piston Balanced	10								
Body Size									
2" x 2"		16							
End Connection									
Female NPT			S						
Body Material									
Ductile Iron				0					
Body Style									
Angled					A				
Seat-Elastomer Material									
Polyurethane-Buna-N								P	
Polyurethane-Viton®								V	
Buna-N - Buna-N								0	
Viton®-Viton®								2	
Trim Material									
Ductile Iron Cage									D
Acetal Cage									A

P4000 Parts List & Repair Kits

Figure 2



Item	Description	Qty.	Part Number
1	Bonnet	1	604-279-000
2	Body Bolts (3/8-24)	4	648-580-000
3	Body	1	664-592-000
4*	Plate Gasket	1	624-114-000
5	Cage	Ductile Iron	704-020-000
		Acetal	704-020-001
6	Stem	1	651-111-000
7*	Lock Nut (3/8-24)	1	634-218-000
8	Seat Holder	1	650-205-000
9*	Seat	Buna-N	619-075-000
		Polyurethane	619-075-001
		Fluorocarbon	619-075-002
10	Ratio Plug	1	639-146-000
11*	Cage Gasket	1	624-113-000
12	Short Bushing	Ductile Iron	608-089-000
13*	Retaining Ring	Cage Only	643-000-124
14*	Cage O-ring (2-336)	Buna-N	649-345-000
		Fluorocarbon	649-345-001
15	Diaphragm Plate	1	638-093-000
16*	Diaphragm	Buna-N	600-519-000
		Fluorocarbon	600-519-001
17	Diaphragm Nut	1	634-217-000
18	Link	2	696-002-000
19	Trunnion Hub	1	712-007-000
20	Lever Hub	1	712-006-000
21	Lever Bolts (3/8-16)	2	648-580-001

Item	Description	Qty.	Part Number
22	Set Screw	1	648-582-000
23	Inline Joint Linkage Assembly	1	803-076-000
24	Lever Hex Nut (3/8-16)	3	634-216-000
25	Lever	1	703-013-000
26	Trunnion Rod	1	651-112-000
27*	Trunnion O-ring (2-112)	Buna-N	649-000-150
		Fluorocarbon	649-000-338
28*	O-ring Box	1	643-228-000
29*	Long Bushing	1	608-090-000
30	Pin	2	635-087-000
31	Snap Ring	4	644-049-000
32	Bonnet Plug	1	639-147-000
33*	Short Bushing	1	608-089-000
34*	Plug/Bonnet Gasket	2	624-104-000
35	Eyebolt	1	603-013-000
36	Heavy Hex Nut	1	634-490-000
37	Nameplate	1	632-592-000

*Parts Included in Repair Kit

Repair Kits		
Seat/O-ring & Diaphragm Material	Qty.	Part Number
Polyurethane/Buna-N	1	971-P40-000
Polyurethane/Fluorocarbon		971-P40-001
Nitrile/Buna-N		971-P40-002
Fluorocarbon/Fluorocarbon		971-P40-003



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