

The BelGAS^{CP} P8400 series is a horizontal liquid level switch primarily used for gas compressor scrubber applications. When the liquid in a tank rises to the point where it lifts the float, the magnet on the end of the counter-weight trips the magnet on the other side of the device, completing the circuit that sends an electrical signal to an alarm or other monitoring device.

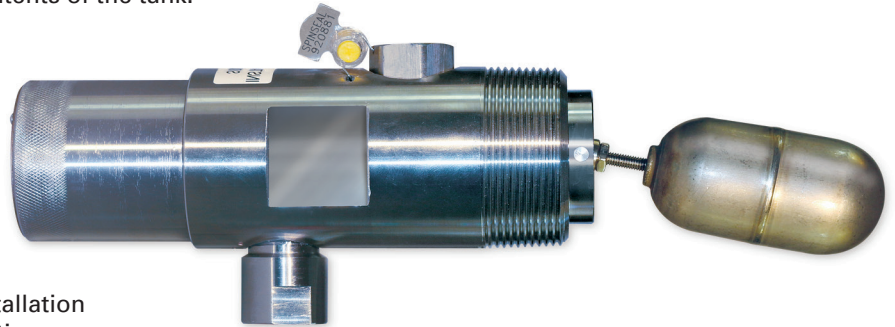
In addition to performing this function, the switch can be ordered with a manual override that will manually depress the counter-weight magnet. Thus, triggering the electrical switch and artificially dumping the contents of the tank.

Applications

- Gas Compressor Scrubbers
- Other Level Control Applications

Features

- NACE MR0175 compliant
- Manual override switch available
- Various electrical switch options
- External cage with 1" NPT ports for bridle installation
- 1.5" and 2" NPT external thread mounting options
- Annulus plug to limit large particulate from entering the body chamber
- Customizable arm lengths depending on the customer's application
- No leak path from process to electric switch housing



Specifications

Maximum Pressure	1500 PSIG
Maximum Temperature	250°F-Standard and High Amp 400°F-High Temperature
Switch Rating	5A @ 120VAC-Std. and High Temp 11A @ 120VAC-High Amp
Adaptor Threads	0.5" NPT
External Cage Threads	1" NPT
Mounting Threads	1.5" NPT or 2" NPT
Wiring for Float in Down Position	Black - Common Blue - Closed Red - Open
Specific Gravity	0.6

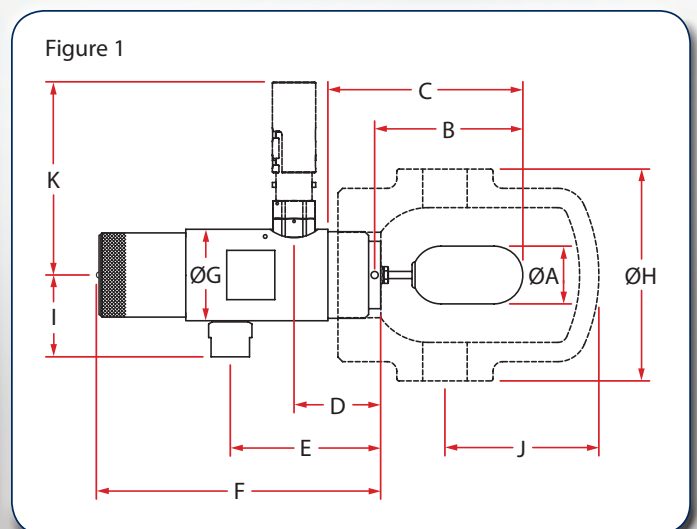
Dimensional Data (in.)

Body (in.)	ØA	B	C	D	E	F
1.5 NPT	1.50	3.85	4.93	2.25	3.91	7.39
2 NPT	1.50	3.85	5.07	2.25	3.91	7.39

Body (in.)	ØG	ØH	I	J	K
1.5 NPT	2.25	5.50	2.13	4.00	1.47 (Plug)
2 NPT	2.38	5.50	2.13	4.00	5.33 (Switch)

Materials of Construction

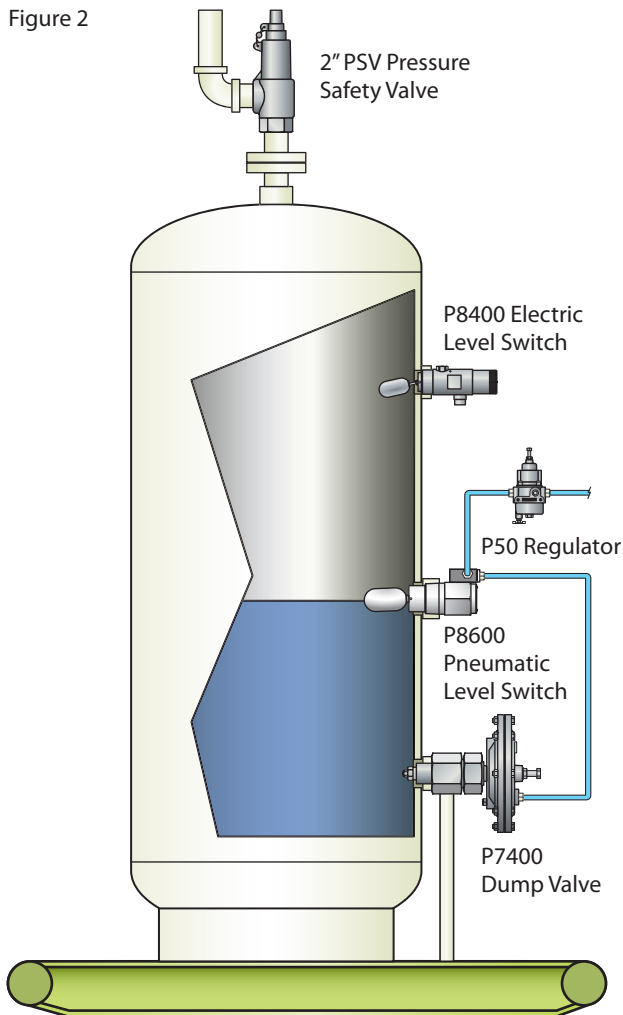
Part	Material
Body	Stainless Steel
Counterweight	Stainless Steel
External Cage	Steel
Float	Stainless Steel
Float Arm	Stainless Steel
Pin	Stainless Steel
Spacer	Stainless Steel



P8400 Part Number Matrix

P840				0			S	0		
Style										
Standard	S									
High Amp	A									
High Temperature	T									
Port Size										
1.5" NPT		14								
2" NPT		16								
External Cage										
None			0							
Cage (Only Available with Standard Float Rod, Larger Rod won't Fit in Cage)			C							
Override Switch										
None				0						
Switch (Only Available with Tank Pressures up to 1500 PSIG)				S						
Annulus Plug										
None					0					
Plug					P					
Float Material										
Stainless Steel						S				
External Arm Length										
Standard									00	
Specified Length in Inches									XX	

Figure 2

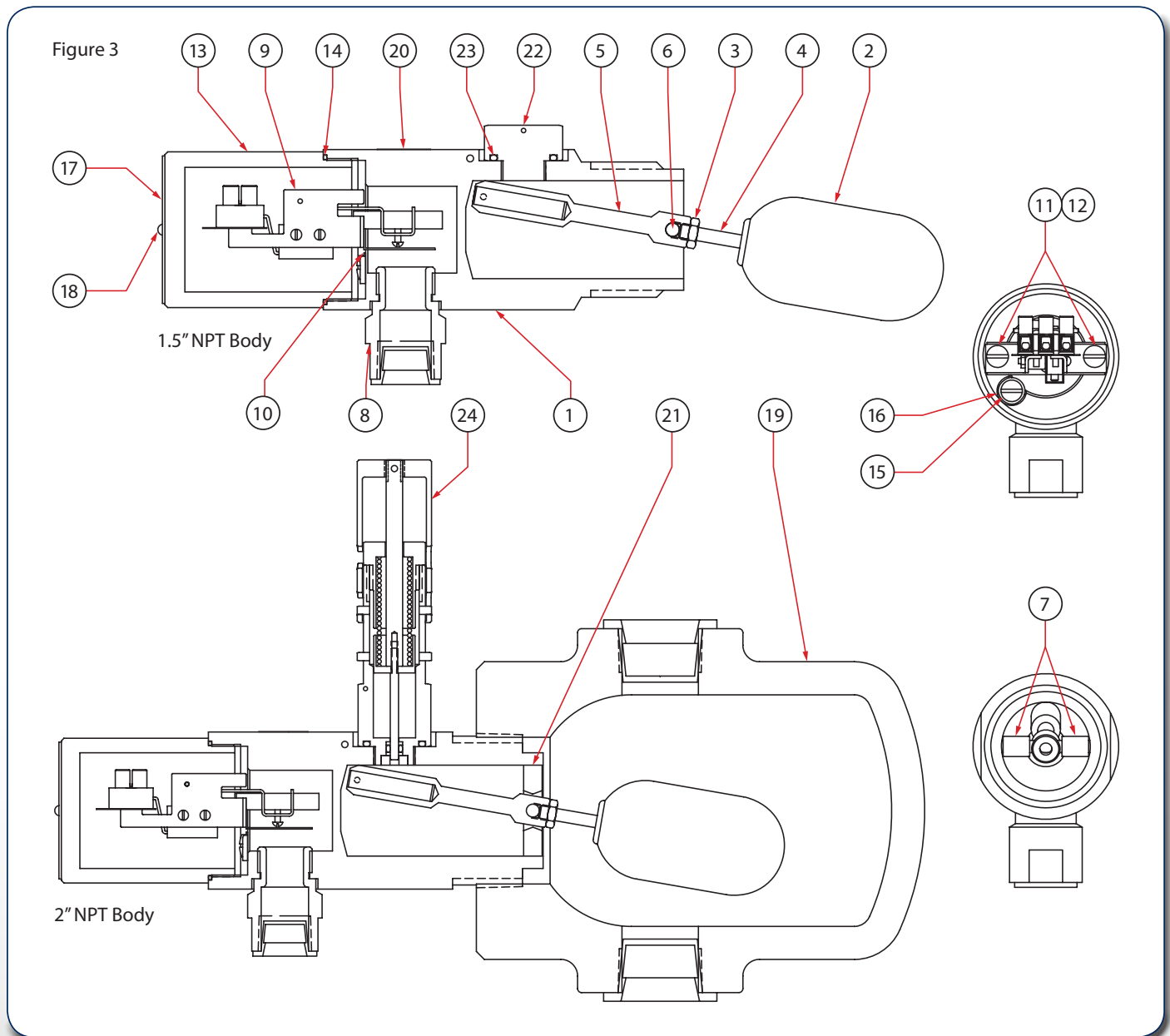


The BelGAS^{CP} Scrubber System Package

Our gas compressor scrubber system is designed with BelGAS^{CP} series products that provide complete control of liquid with a high level switch to trigger an alarm or shutdown and a pneumatic switch that controls operation of a dump valve which protects the compressor by removing excess liquid.

- **P8400 Electric Level Switch:** The Stainless Steel float actuated high level switch engages alarm or shutdown.
- **P8600 Pneumatic Level Switch:** The pneumatic pressure that opens and closes the dump valve is controlled by this float actuated snap-acting level switch.
- **P7400 Pneumatic Dump Valves:** Dumps fluid from the compressor scrubber after receiving a pneumatic signal from the P8600 Pneumatic Level Switch.

P8400 Parts List

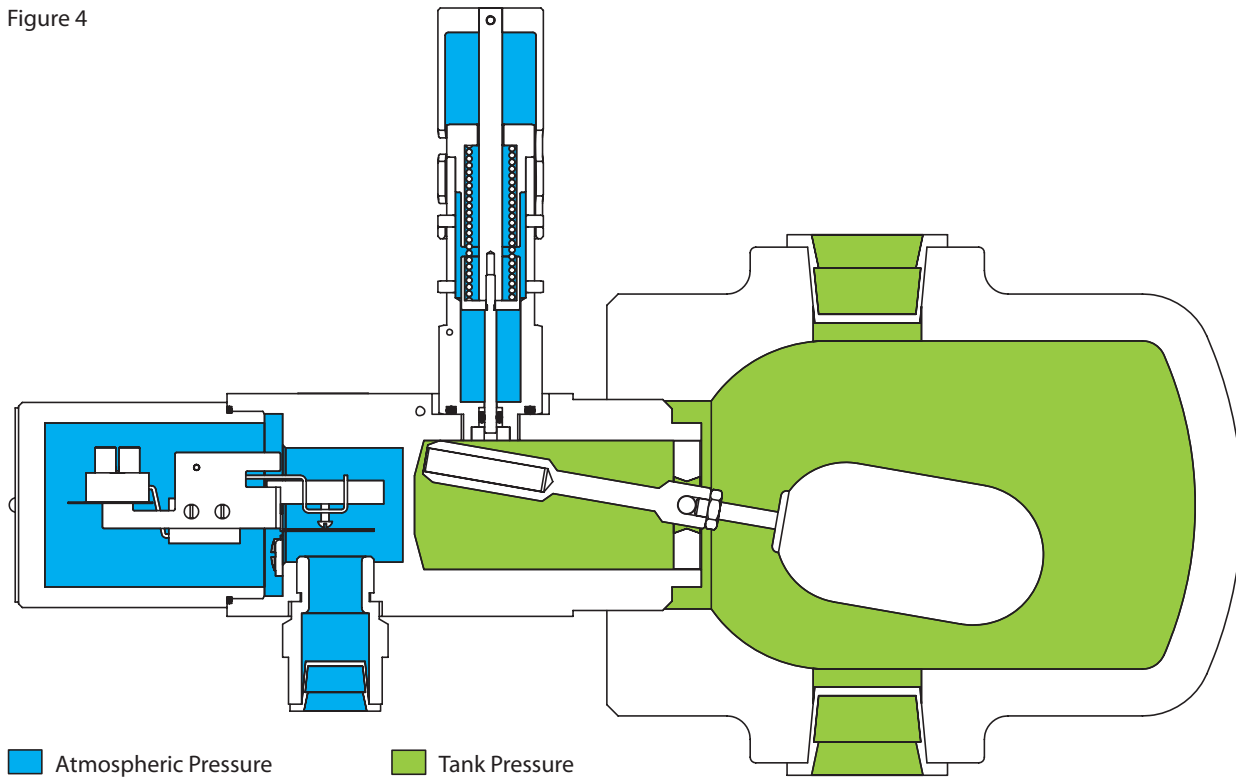


Item	Description	Qty.	Part Number
1	Body	1	1.5"NPT
			2"NPT
2	Float	1	715-002-000
3	Hex Nut	1	634-146-005
4	Float Rod (Standard)	1	646-550-000
5	Counterweight Assembly	1	834-004-000
6	Pivot Pin	1	635-094-000
7	Spacer (Not Available with Annulus Plug Option)	2	654-200-000
8	Adaptor	1	673-031-000
9	Switch Assembly	1	Standard
			High Amp
			High Temp
10	Switch Protector	1	641-015-000
11	Lock Washer	2	662-248-000
12	Screw	2	648-429-012

Item	Description	Qty.	Part Number
13	Cap	1	610-106-000
14	O-ring	1	649-309-014
15	Ground Screw	1	648-594-000
16	Ground Cup	1	616-010-000
17	Nameplate	1	632-595-000
18	Drive Screw	2	648-464-000
			648-464-000
19	External Cage*	1	1.5" NPT
			2" NPT
20	Sticker (Install This Side Up)	1	632-594-000
21	Annulus Plug	1	639-151-000
22	Plug (Not Available with Manual Override Switch Option)	1	639-175-000
23	O-ring	1	010-380-000
24	Manual Override Switch	1	843-002-000
25	Locking Wire	1	649-348-000

* Only Available with the Standard Float Rod (Item #3)

Figure 4



Operational Principle

When the tank liquid level rises and lifts the float to the same level as the counter-weight, the magnet inside the counter-weight trips the magnet on the other side of the liquid level switch wall. Tripping the magnet on the other side of the liquid level switch wall causes the switch assembly to depress the button on the switch, completing the electrical circuit. When the liquid has returned to a safe level, the float will drop and the counter-weight with the magnet on the other side of the wall. At that time, the magnet on the electronics side of the unit will move back to neutral position and the button on the switch will be released. The electrical signal will break and stop the device the P8400 is controlling.

If it appears that the liquid level switch isn't functioning properly, it is possible to check its performance by artificially firing the electrical circuit. If the unit has a manual override switch, twist the knob until the spring snaps down (relaxes) into the extended position. This will physically move the counter-weight magnet and trigger the electrical signal regardless of the liquid level inside the tank. To disengage the switch and return the unit to normal operation, it is necessary to pull up on the spring (compressing) and twisting it until it is once again in the extended, locked position.

Contact your BelGAS^{CP} representative or go to www.BelGASCP.com to learn more about our products.



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