

GENERAL PUMP *A member of the Interpump Group***YVB16****Unloader Valve****SPECIFICATIONS**

Part Number	YVB16
Maximum Volume	21.0 GPM
Rated Discharge Pressure	7250 PSI
Maximum Discharge Pressure	8120 PSI
Minimum Discharge Pressure	1450 PSI
Maximum Temperature	195 °F
Port Sizes: Inlet	1/2" BSPP-F
Outlet	1/2" BSPP-F
Dimensions	5.84" x 3.3" x 2.3"
Shipping Weight	7.6 lbs.
Materials	Brass, Stainless, Plastic, Buna-N

FEATURES

- Sturdy construction in stainless steel and brass
- Bypass control actuates at very low pressure values, with reduced pressure in the delivery line when gun is closed
- Quick-start gun opening assures gradual pressure reset, an essential condition when using combustion engines.
- Specially designed checkvalve prevents jamming and vibrations, even in presence of sand and scales
- Safety valve built into the delivery side
- Patented design

INSTRUCTIONS

SELECTION This product is designed for use with clean soft water, even mixed with various normal detergent substances added in small quantities. Before using other corrosive liquids or aggressive chemicals consult our technical department. When using impure liquids, appropriate filtration must be installed. Choose the valve according to nominal operation data (system rated pressure, maximum flow and maximum temperature). In any case, the pressure of the machine shall not exceed more than 10% of the rated pressure and must not exceed the permissible pressure.

INSTALLATION When used in hot water cleaners/systems, this valve must be installed before the boiler. In a system producing hot water, provide for devices and fixtures limiting accidental increase of fluid temperature. Always install a safety valve to protect the pressurized inlet duct. Choose a correct sized nozzle to regularly discharge at least 5% of the system total flow to bypass in order to achieve a constant pressure value and avoid troublesome pressure spikes when closing. If the nozzle wears out, pressure drops. When installing a new nozzle, readjust the system to the original pressure setting.

OPERATION This valve regulates the maximum pressure of the system through a piston acting on a seat. A check valve cuts out the delivery section, whose pressure controls the piston drive. The pressure value is regulated by the main piston opening a discharge port. Every regulation must be made when the system is on and the nozzle open. Turn nut (36) to regulate the maximum pressure and fix it with split pin and plumb wire. Compensated configuration in this valve provides pressure reset at very low values, thus allowing extended operation in bypass mode and smooth start-up, without pressure spikes, ideal for gas engines.

SYSTEM (Technical Notes) Due to the high pressure and low values used, always install an adequate pressure dampener in order to balance delivery flows. Connection between pump and valve must be made through a flexible hose, at least 4 ft. long in order to avoid transmission of vibrations to the valve. Valve must be properly installed by using the threaded holes on the valve body.

WATER PIPING With high or variable feeding pressures, it is necessary to install an inlet pressure reducer to obtain uniform feeding flow and protect the system inlet components. In case of prolonged and direct bypass into the pump, it is advisable to install a thermo protector valve in order to avoid dangerous temperature build-up of recycled water.

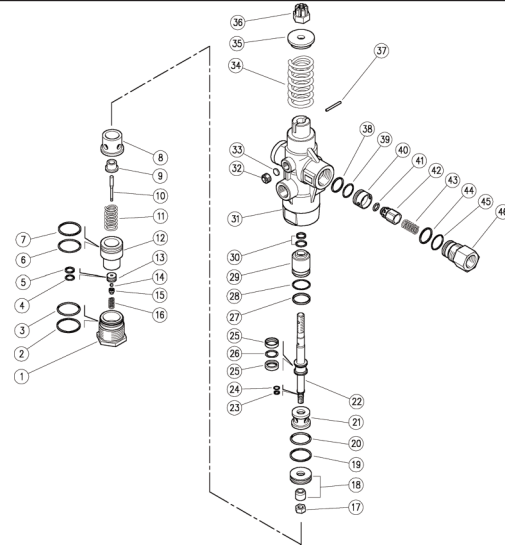


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PARTS LIST

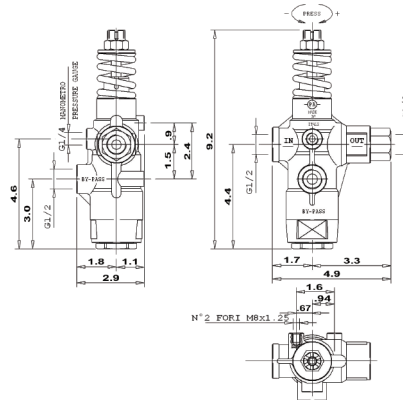
Item	Part Number	Description	Kit	Qty
1	Y60800331	Plug, M38 x 1		1
2	Y10408900	Back-up Ring, 32.7 x 35.5 x 1.5	*	1
3	Y10307808	O-ring, 1.78 x 31.45	*	1
4	Y10305802	O-ring, 1.78 x 10.82	*	1
5	Y10409000	Back-up Ring, 11.2 x 14 x 1.5	*	1
6	Y10307728	O-ring, 1.78 x 29.87	*	1
7	Y10408800	Back-up Ring, 31.2 x 34 x 1.5	*	1
8	Y60801251	Spacer Ring, 14.5 x 34 x 27.5, SST		1
9	Y60801631	Spacer Ring, 5.2 x 19 x 12.5		1
10	Y60802251	Piston, 5 x 43.8, SST		1
11	Y60800451	Spring, 3.5 x 17.5 x 29, SST		1
12	Y60801331	Seat Holding Spacer, Brass		1
13	Y60801551	Seat, 3 x 14 x 7.5, SST	*	1
14	Y14741871	Ball, 5/32	*	1
15	Y60801451	Ball Holding Piston, SST		1
16	Y60800651	Spring, 1 x 7.2 x 14, SST		1
17	Y11457411	Nut, Hex, N8, SST		1
18	Y60802324	Seat, 14mm + Shutter Pin	*	1
19	Y107408500	Back-up Ring, 29.2 x 32	*	1
20	Y10307708	O-ring, 1.78 x 28.3	*	1
21	Y60801131	Spacer Ring		1
22	Y60800251	Piston, M8-M10, SST		1
23	Y10408600	Back-up Ring, 6.3 x 8.5 x 1.5	*	1
24	Y10301808	O-ring, 1.5 x 6	*	1
25	Y10409400	Back-up Ring, 15.5 x 20 x 5	*	2
26	Y10318008	O-ring, 2.62 x 15.08	*	1
27	Y10408700	Back-up Ring, 23.5 x 26.5 x 2.5	*	1
28	Y10307308	O-ring, 1.78 x 23.52	*	1
29	Y60801051	Spacer Ring, 12.2 x 26.5 x 33.5, SST		1
30	Y10201200	Stem Seal, 12 x 19 x 2.8 + O-ring *		1
31	Y60800135	Housing, YVB16		1
32	Y60002231	Grub Screw, Brass, 1/4 BSP		1
33	Y11650009	Plate, 10.9 x 1.5		1
34	Y60800561	Spring, 7 X 42.5 X 48		1
35	Y60801731	Spring Guiding Washer		1
36	Y60801861	Valve Regulating Nut, M10		1



Item	Part Number	Description	Kit	Qty
37	Y15104200	Roll Pin, 3 x 26, SST		1
38	Y10409100	Back-up Ring, 21.2 x 2 x 1.5	*	1
39	Y10307201	O-ring, 1.78 x 10.35	*	1
40	Y60801951	Shutter Seat, SST		1
41	Y10329208	O-ring, 4 x 8	*	1
42	Y60802051	Pin, Hex		1
43	Y60800751	Spring, 0.8 x 12.2 x 27		1
44	Y10307260	O-ring, 1.78 x 21.95	*	1
45	Y10409200	Back-up Ring, 22.7 x 25.5 x 1.5	*	1
46	Y60802131	Shutter Coupling		1
*	Y60802524	Repair Kit		

DIMENSIONAL DRAWING

Pressure regulating valve with discharge control pressure.
When gun closes, this valve unloads at low pressure.



TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Unloader cycles	<ul style="list-style-type: none"> • Seat or shutter is damaged • Fitting leaking • Restricted bypass 	<ul style="list-style-type: none"> • Replace • Check and recondition • Clean or recondition
Unloader does not come up to pressure	<ul style="list-style-type: none"> • Foreign materials between seat and shutter • Worn out or damaged nozzles • Safety valve is damaged • Piston seals are damaged 	<ul style="list-style-type: none"> • Clean seat • Replace nozzle • Replace • Repair
Pressure spikes	<ul style="list-style-type: none"> • Spring totally compressed • Excessive flow in bypass • There is not a min. 5% of total flow in bypass 	<ul style="list-style-type: none"> • Loosen nut and change nozzle • Select another unloader • Adjust again
Unloader does not bypass at low pressure	<ul style="list-style-type: none"> • Check valve jammed • Check valve o-ring worn out • Foreign materials on check valve 	<ul style="list-style-type: none"> • Clean or replace • Replace • Clean

Ref 300180 Rev. B
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