

GENERAL PUMP *A member of the Interpump Group*

YVB9KMS2

Trapped Pressure Unloader w/Microswitch



FEATURES

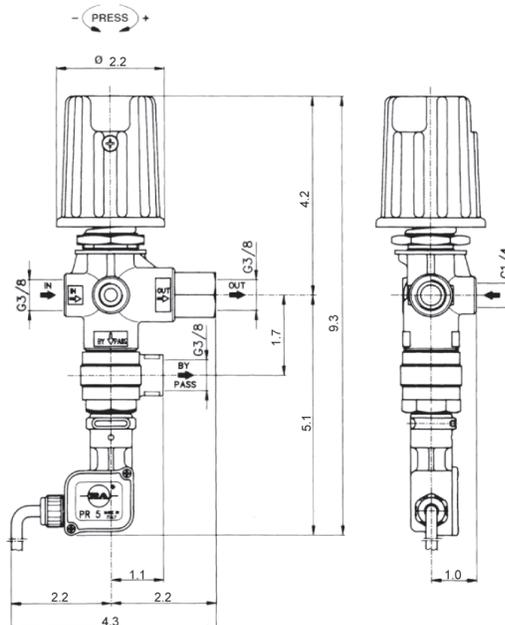
- Extremely durable construction in stainless steel and brass
- Easy start-up due to low re-arm pressure (27% of operating pressure)
- Hexagonal discharge check valve to prevent binding
- Unloader with microswitch
- Waterproof, 5-amp pressure switch, UL Listed

General Pump recommends using a safety relief device in conjunction with this unloader valve when installed on a positive displacement pump. General Pump is not liable and assumes no responsibility when used in a customer's high pressure system.

SPECIFICATIONS

Part Number		YVB9KMS2
Maximum Volume		8.0 GPM
Rated Pressure		3,200 PSI
Maximum Pressure		3,650 PSI
Maximum Temperature		195° F
Maximum Discharge Pressure		3,650 PSI
Port Sizes:	Inlet	3/8" BSP-F
	Outlet	3/8" BSP-F
	Bypass	3/8" BSP-F
	Gauge	1/4" F
Overall Dimensions		5.84" x 3.3" x 2.3"
Shipping Weight		1.6 lbs.
Pressure Switch:	Amperage	1 amp ind., 5 amps res.
	Volts	250 Volts
	Lead Length	40
Materials		Brass, Stainless Steel, Buna-N, Plastic

DIMENSIONS



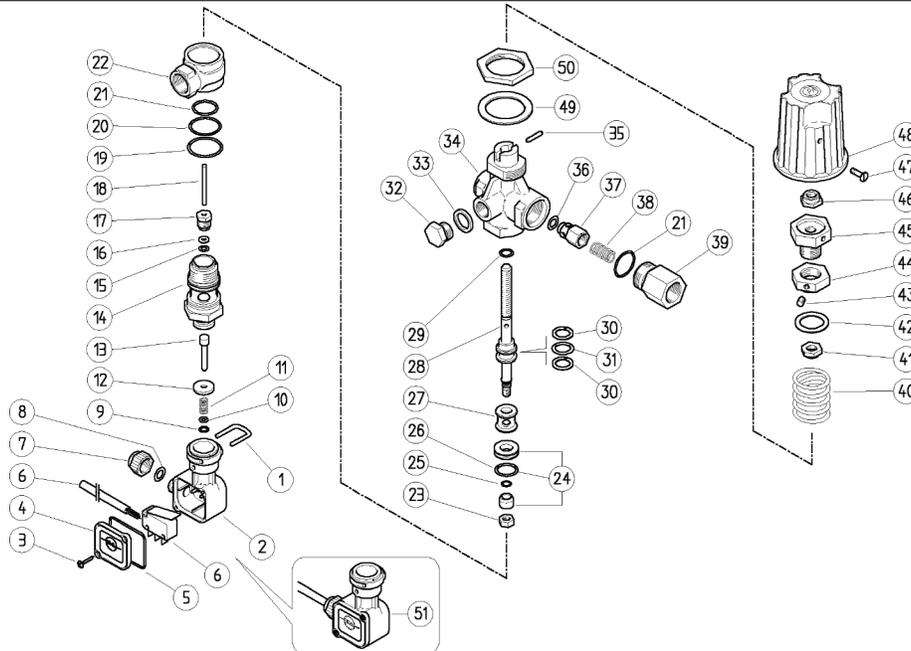
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Ref 300342 Rev. C
02-16



PARTS LIST



ITEM	PART #	DESCRIPTION	QTY
1	Y29008751	SS Clip	1
2	Y29008984	Plastic Housing	1
3	Y16302000	Screw, 2.5 x 12 mm	2
4	Y29008884	Cover	1
5*	Y10320601	O-ring, 2.62 x 28.25	1
6	Y12500600	Elect. Cable & Microswtch	1
7	Y29010984	Nut, Red	1
8*	Y10316900	O-ring, 2.62 x 6.02 mm	1
9*	Y10303800	O-ring, 1.78 x 3.68 mm	1
10	Y14351900	Washer, 4 x 8 mm	1
11	Y60230351	Spring	1
12	Y29008631	Washer, 4 x 16 mm	1
13	Y60235131	Pin	1
14	Y61235331	Seat Fitting	1
15*	Y10316500	O-ring, 2.62 x 2.84 mm	1
16*	Y10401800	Back ring, 3.2 x 7.5 mm	1
17	Y30411531	Plug, M10	1
18	Y60235251	Pin, SST.	1
19*	Y10307300	O-ring, 1.78 x 23.52 mm	1
20*	Y10307250	O-ring, 1.78 x 21.95 mm	1
21*	Y10307002	O-ring, 1.78 x 18.77 mm	2
22	Y60070335	Manifold	1
23	Y11454000	Nut, M6, SST.	1
24*	Y60222120	VB8/9 Seat + Shutter	1
25*	Y10300101	O-ring, 1 x 4 mm	1
26*	Y60220251	O-ring, 1.78 x 15.6 mm	1
27	Y60221031	Spacer	1

ITEM	PART #	DESCRIPTION	QTY
28	Y60220251	VB9 Piston	1
29*	Y10317008	O-ring, 2.62 x 7.6 mm	1
30*	Y10402100	Back Ring, 11.4 x 15.9 mm	2
31*	Y10317500	O-ring, 2.62 x 10.77 mm	1
32	Y28001331	Plug, 1/4" BSP	1
33	Y14391100	Washer, 1/4"	1
34	Y60220135	VB9 Body, Brass	1
35	Y15102100	Pin, 3 x 14 mm	1
36*	Y10321300	O-ring, 3 x 6 mm	1
37	Y60005231	Check Valve	1
38	Y60005351	Spring	1
39	Y60005931	Outlet Fitting, 3/8" BSP	1
40	Y60220361	Spring, 4.2 mm	1
41	Y60220731	Nut, M8	1
42	Y60220864	Spring Washer	1
43	Y16210500	Dowel, M5 x 6 mm	1
44	Y60225231	Spring Nut	1
45	Y60225331	Adjustment Nipple	1
46	Y11458910	Nut, M8	1
47	Y16183800	Screw, M4	1
48	Y60225184	Plastic Knob	1
49	Y14358200	Washer, Dia, 30 mm	1
50	Y60225431	Nut, M30	1
51	Y29C09624	PR5 Plastic Housing Kit	1
*	Y60235524	Repair Kit	

INSTRUCTIONS

SELECTION

This product is to be used with clean water which can contain the addition of normal detergents. For use involving different or corrosive liquids, contact the General Pump Customer Service Department. Appropriate filtration should be installed when using water that may contain any sort of debris. Choose the valve appropriate for the system rated pressure, maximum flow rate and maximum temperature. In any case, the pressure of the machine should not exceed the permissible pressure rate imprinted on the valve.

INSTALLATION

On a system that produces hot water, this accessory must be fitted upstream of the heat generator. On a system that generates hot water, it is advisable to fit in accessories that limit the accidental increase of fluid temperature.

ALWAYS INSTALL A SAFETY VALVE

It is recommended to use a nozzle with a size that, at gun opened, allows to discharge from the valve bypass at least 5% of the flow supplied by the pump in order to obtain a constant pressure value, and an easy adjustment and to avoid troublesome pressure spikes at gun closure.

If the nozzle wears out, the working pressure decreases. To reset the pressure back to work level, it is necessary to replace the worn nozzle. When a new nozzle is fitted, re-setting of the system to its original working pressure is necessary.

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INSTRUCTIONS (cont.)

DISCHARGE SYSTEM AND WATER ADDUCTION

We recommend to fit the valve with the bypass discharge returned to a tank. It is advisable that the tank be fitted with baffles to reduce eventual turbulence and air bubbles generated by the emission of the bypass flow which could be harmful for the pump. With elevated flow or near to the maximum flow of the valve, the installation with a recirculation of bypass direct to the pump could cause potential pressure spikes harmful to the pump.

PRESSURE ADJUSTMENT/CALIBRATION

The desired working pressure must be adjusted with the system running and the gun opened. Adjust the pressure by screwing or unscrewing the adjustment screw/knob. The operation is easier if the correct nozzle has been chosen (see paragraph "installation"). When screwing the screw/knob a consequent pressure increase must be matched. If, before reaching the desired pressure, there is no pressure increase when screwing the screw/knob, do not force but check the correct riation nozzle/flow rate - pressure and, if necessary, fit a nozzle with a smaller size.

TECHNICAL SPECIFICATIONS - PRESSURE SWITCH

Max rated voltage . . . . .	.250V	Electrical Insulation	Class IP 55
Breaking Switch . . . . .	.5 amp-resistive load/1 amp-inductive load		
Electrical Wire . . . . .	.3 x .75mm ² (3 wire-19 gauge)	Length of Cable	1000mm (40")
Room Temp . . . . .	.165°F (75°C)	Type of action	1C
Electrical Component Life . . . . .	.50,000 cycles, Temp 85°C @ 250VAC		

TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Unloader cycles	<ul style="list-style-type: none"> Damaged seat or cone Fitting leaking Restricted bypass 	<ul style="list-style-type: none"> Replace Check and renew Clean or adapt
Unloader does not come up to pressure	<ul style="list-style-type: none"> Unloader not properly sized Foreign materials between seat and shutter Piston o-ring worn out Nozzle worn out 	<ul style="list-style-type: none"> Select a proper spring or a new unloader Clean the seat Replace Replace
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 and change nozzle size Select another unloader Adjust size of piping Adjust
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

WIRING DIAGRAM

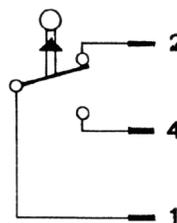
Wiring diagram

1) Red wire - 2) Blue wire - Brown wire

ELECTRICAL CONNECTION

N.O. Red + brown - Normally Open

N.C. Red + blue - Normally Closed



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