TRAPPED PRESSURE

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GENERAL PUMP *A member of the Interpump Group*

YVB56KDM

Control Set Unloader

FEATURES

- Direct mount for EZ, 47, 60 and 63 Series Pumps
- Sturdy steel and brass construction
- Adjustable locknut to control max pressure
- Easy maintenance
- Plastic cap with anti-removal system
- Hexagonal check valve avoids jamming

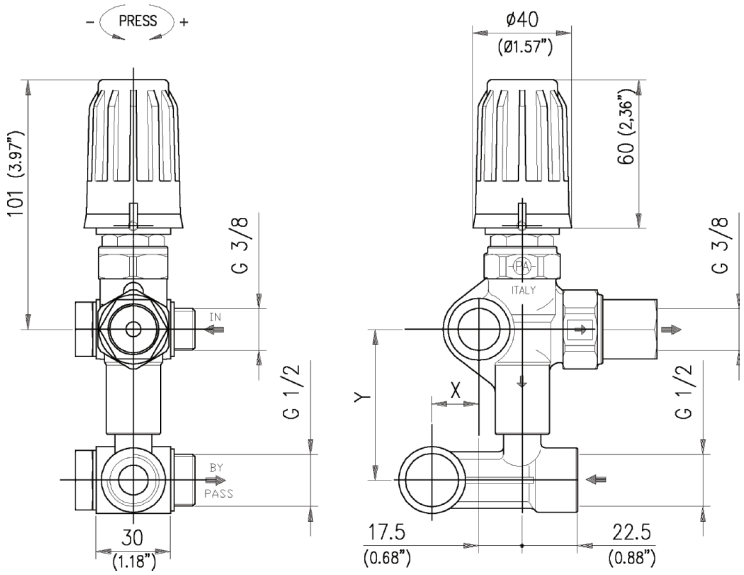
General Pump recommends using a safety relief device in conjunction with this unloader valve when installed on a positive displacement pump. General Pump is not liable and assumes no responsibility when used in a customer's high pressure system.

SPECIFICATIONS

Part Number	YVB56KDM
Maximum Temperature	195^0 F[1]
Max. Volume	8.0 GPM
Rated Pressure	3,200 PSI
Minimum Adjustable Pressure	300 PSI
Maximum Discharge Pressure	3,650 PSI
Trapped Pressure at Circuit Closure	11%[2]
Pressure Drop to Reset Bypass	19%[3]
Port Sizes: Inlet	1/2" BSP-F
Outlet	3/8" BSP-F
Overall Dimensions	5.84" x 3.13" x 2"
Weight	2.5 lbs.
Materials	Brass, Stainless,Plastic, Buna-N

1 *This unloader has been designed to operate at a continuous water temperature of 140^{0}F. It can be operated for short periods at a maximum temperature of 195^{0}F.*
2 *This is the maximum pressure increase implemented in the circuit for the intervention of the valve and to bring all the fluid in bypass.*
3 *This is the pressure reduction necessary in comparison to the set up, in order that the valve brings back pressure in the circuit (% figures of the pressure set up).*

DIMENSIONS



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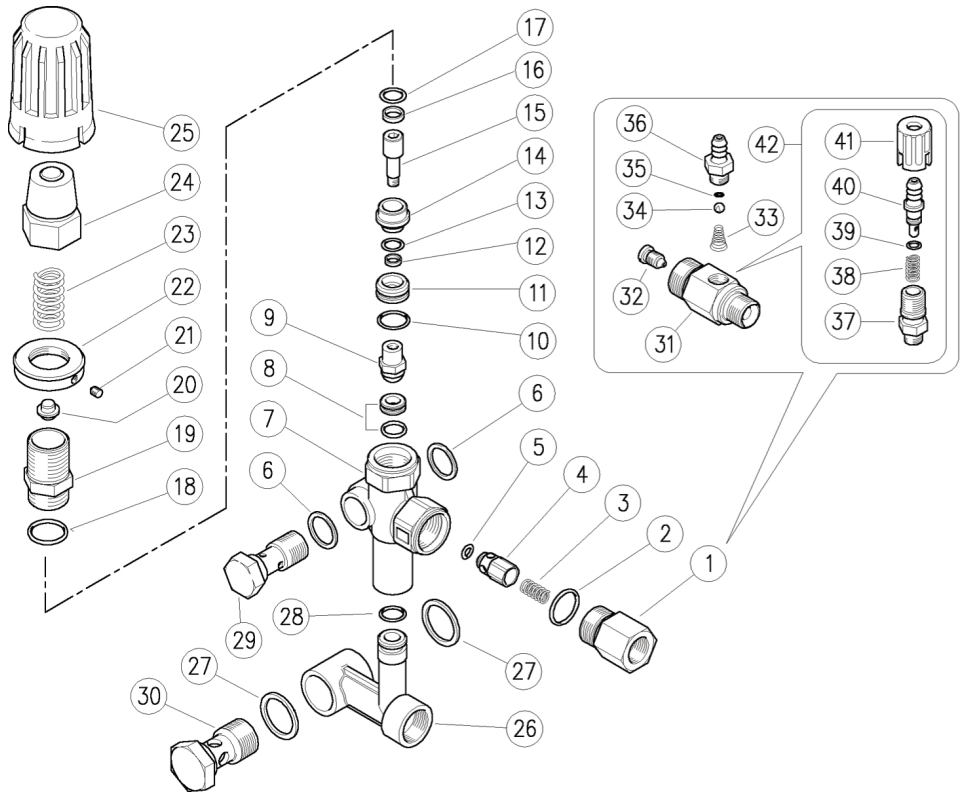
PARTS LIST



ITEM	PART #	DESCRIPTION	QTY
1	Y60005831	Outlet Fitting, 3/8 BSP-F, Brass	1
2*	700023	O-ring, 1.78x18.77mm	1
3	Y60005351	Spring, 0.7x9x20mm, Steel	1
4	Y60005299	Shutter Pin, Brass + O-ring, 3x6mm	1
5*	Y10321300	O-ring, 3x6mm	1
6	Y14410000	Sealing Washer, 3/8 BSP	2
7	Y60135135	Valve Housing, Brass	1
8*	Y60130620	Seat, 8mm + O-ring, 1.78mm	1
9*	Y60131121	Shutter Pin, M6, Brass + Ball, 13/32, SST	1
10*	Y10306401	O-ring, 1.78x14mm	1
11	Y60130131	Spacer Ring, 7x18x7.5mm, Brass	1
12*	Y10400792	Back-up Ring, 7x9x2mm	1
13*	Y10305600	O-ring, 1.78x8.74mm	1
14	Y60130331	Spacer Ring, 7.3x18.5x12.7mm, Brass	1
15	Y60130751	Piston, M6, SST	1
16*	Y10401113	Back-up Ring, 11x13x2mm	1
17*	701014	O-ring, 1.78x12.42mm	1
18*	Y10306801	O-ring, 1.78x17.17mm	1
20	Y60131331	Spring Guide Pin	1
21	Y16210000	Set Screw, DIN914, M4x4mm	1
22	Y60131231	Ring Nut, M20x1	1

ITEM	PART #	DESCRIPTION	QTY
23	Y60131561	Spring, 3.4x13.8x45mm	1
24	Y60130431	Valve Regulating Insert, Brass	1
25	Y60120284	Valve Regulating Knob	1
26	Y60135235	Manifold, 1/2 BSP-F, Brass	1
27	Y14410100	Sealing Washer, 1/2 BSP	2
28	Y10317510	O-ring, 2.62x10.77mm, Viton	1
29	Y60100731	Banjo Bolt, 3/8 BSP-M, 41.5mm	1
30	Y60100831	Banjo Bolt, 1/2 BSP-M, 41.5mm	1
31	Y21026131	Injector Housing, M22x1.5M-3/8 BSP-M	1
32	Y21021351	Nozzle, M8x1-2.1, SST	1
33	Y21016051	Tapered Spring, SST	1
34	Y14742001	Ball, 7/32", SST	1
35	701501	O-ring, 1.78x5.28mm, Viton	1
36	Y21000331	Hose Barb	1
37	Y21017331	Nipple, M12x1-1/4 BSP-M	1
38	Y21015851	Spring, 0.8x8x15mm, SST	1
39	701008V	O-ring, 1.78x4.48mm, Viton	1
40	Y21015599	Hose Barb, d.8mm, Brass + O-ring	1
41	Y21017184	Injector Knob, 1/4 BSP-F	1
42	Y21010000	Regulator + hose Barb	1
*	Y60131624	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.

INSTRUCTIONS (cont.)

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.

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 ration nozzle/flow rate - pressure and, if necessary, fit a nozzle with a smaller size.

TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent Unloader Cycles	Damaged check valve o-ring Leaking connections Restricted bypass	Replace Check and renew Clean or adapt
Unloader does not come up to pressure	Unloader not properly sized Piston O-rings worn out Debris between seat and shutter Worn nozzle	Change spring or type of valve Replace Clean the seat Replace
Excessive pressure spikes	There is not a minimum of 5% flow in bypass Excessive flow in bypass Spring totally compressed	Reset Change type of valve ar adjust passages Loosen knob and change nozzle
Unloader does not bypass at low pressure	Jammed check valve Check valve O-ring worn Debris in check valve	Clean or replace Replace Clean

MAINTENANCE

Maintenance must be carried out by Qualified Technicians.

STANDARD: Every 400 working hours (10,000 cycles), check and lubricate the seals with water resistant grease.

SPECIAL: Every 800 working hours (20,000 cycles), check the wear of the seals and internal parts and, if necessary, replace with original General Pump parts taking care during installation and to lubricate with water resistant grease.

The manufacturer is not responsible for damage as a result of incorrect fitting and maintenance.

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