

GENERAL PUMP *A member of the Interpump Group*

YU7221
Trapped Pressure Unloader Valve



FEATURES

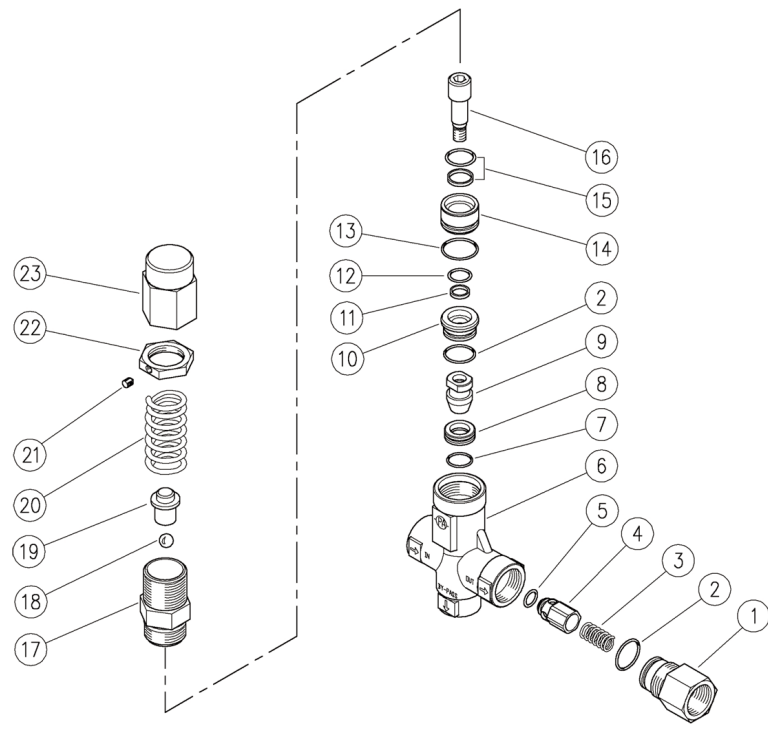
- Sturdy 303 stainless steel and brass construction
- Hexagonal shaped check valve to avoid jamming
- Max pressure adjustment by screw and locknut
- Easy maintenance

SPECIFICATIONS

PART NUMBER	YU7221	
Maximum Volume	21.0 GPM	
Rated Pressure	7,250 PSI	
Maximum Pressure	8,000 PSI	
Maximum Temperature	190°	
Port Sizes	Inlet	1/2" BSP-F
	Outlet	1/2" BSP-F
	Bypass	1/2" BSP-F
Overall Dimensions	5.62" x 4.09" x 1.18"	
Weight	2.3 Lbs.	
Materials	Brass, 303 Stainless Steel	

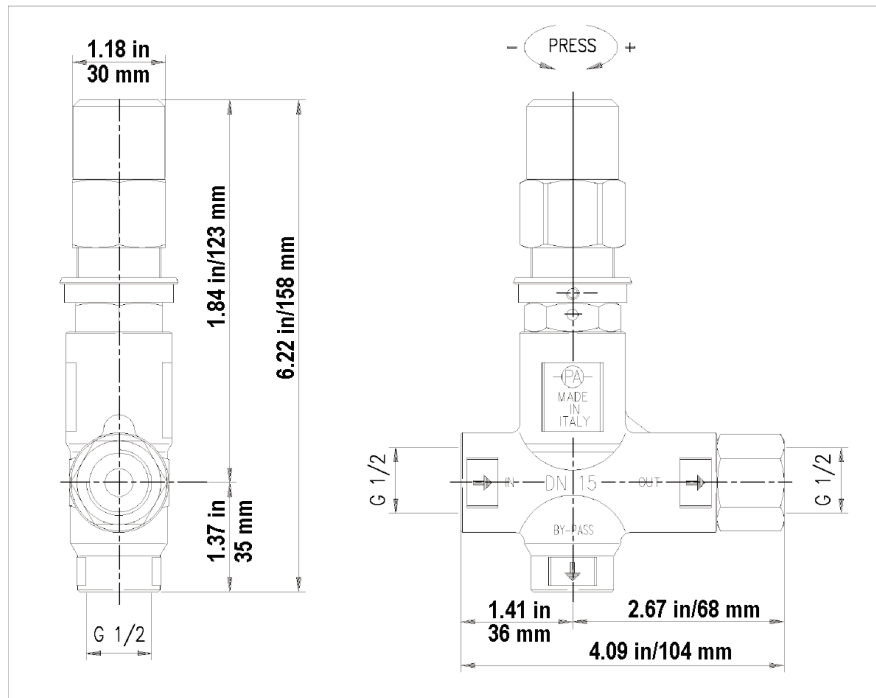
General Pump recommends using a safety relief device in conjunction with this unloader valve when installed on a positive displacement pump. General Pump is not liable and assumes no responsibility when used in a customer's high pressure system.

PARTS LIST



ITEM	PART #	DESCRIPTION	QTY
1	Y60140451	Shutter coupling	1
2*	Y10306801	O-ring, 1.78x17.17	2
3	Y60140360	Spring, 0.8x10.7x23, SS	1
4	Y60140251	Check Valve	1
5*	Y10323001	O-ring, 3.53x7.52	1
6	Y60140155	Body	1
7*	Y10306601	O-ring, 1.78x15.6	1
8*	Y60180951	Seat, 111.6x19x6, SST	1
9*	Y60180851	Valve, M8, SST	1
10	Y60141051	Spacer Ring, 10x23.4x10.5, SST	1
11*	Y10402200	Back-up Ring, 10x12x2	1
12*	Y10305910	O-ring, 1.78x11.11	1
13*	Y10307201	O-ring, 1.78x20.35	1
14	Y60140951	Spacer Ring, 10.3x23.5x17.5 SST	1
15*	Y10202900	Stem Seal, 14x19x2.2 + O-ring	1
16	Y60141151	Piston, M8, SST	1
17	Y60140651	Piston Holder, SST	1
18	Y14744310	Ball, 11/32, SST	1
19	Y60140531	Spring Rest Pin, Brass	1
20	Y60540261	Spring, 5.4x22x64.5	1
21	Y16210000	Set Screw	1
22	Y60172831	Ring Nut, M27x1, Brass	1
23	Y60540531	Regulating Valve Ring Nut, M27x1, Brass	1
*	Y60145224	Repair Kit	1

DIMENSIONS



SELECTION AND OPERATION

SELECTION

This product is intended to be incorporated on a finished machine. This product is to be used with clean fresh water, for use involving different or corrosive liquids, contact the GP Customer Service Department. Appropriate filtration should be installed when using impure liquids. Choose the valve appropriate to the working data of the pump (permissible pressure, flow and rated temperature of the system). The pressure of the pump must not exceed the maximum pressure of the valve.

OPERATION

The valve regulates the maximum pressure of the system by varying the flow discharged by the bypass. The adjustment is made by altering, by means of a piston, the position of a sphere which partially closes the bypass opening. The valve is sensitive to water flow. At gun opening, the water flows through the valve which maintains the system in pressure until the gun closes, the interruption of the flow provokes the complete aperture of the bypass which allows to discharge the flow at low pressure. At gun closure, the special mechanism of zero setting, which does not include a check valve, keeps in connection the delivery line and the bypass line, in that way permitting to lower the pressure all around the system and not only in the source line of the valve.

INSTALLATION

This valve, on a system that produces hot water, must be fitted upstream from the source of heat. On a system that generates hot water, it is advisable to use accessories that limit the accidental increase of fluid temperature. **Always install a safety valve.** We recommend the use of a nozzle with flow rate which allows a regular discharge from the valve bypass of at least 5% of the flow supplied by the pump. In order to achieve a constant pressure and easy adjustment. If the nozzle wears out, the pressure decreases. To reset pressure back to working level, it is necessary to replace the worn nozzle. When a new nozzle is fitted, resetting of the system to its original working pressure is required.

DISCHARGE SYSTEM AND WATER ADDUCTION

The bypass discharge can be sent back to the pump intake or returned into a tank; in such cases it is advisable that the tank be fitted with baffles to reduce eventual turbulence and air bubbles which could be harmful to the pump.

MAINTENANCE

STANDARD: every 400 working hours, check and lubricate the seals with water resistant grease.

SPECIAL: every 800 working hours, check the wear of the seals and internal parts and, if necessary, replace with original GP parts taking care, during installation, to lubricate with water resistant grease.

The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance.

TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent valve recycles	Damaged check valve O-ring Leaking connections Restricted bypass or too small diameter of the bypass hose	Replace Check or renew Clean or adapt passage diameter
Valve does not reach pressure	Piston O-rings worn out Debris between seat and shutter Seat worn out Nozzle worn out Incorrect choice of nozzle	Replace Clean the seat Replace Replace Fit with smaller nozzle
High pressure peaks at gun closure	There is not a minimum of 5% of total flow discharged in bypass Excessive flow in bypass Adjustment with spring totally compressed	Reset Correctly Change type of valve or adjust passages Loosen adjustment screw and eventually fit with smaller nozzle
Valve does not discharge at low pressure at gun closure	Jammed check valve Debris on check valve	Clean or replace Clean