PRESSURE REDUCING VALVE

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GENERAL PUMP *A member of the Interpump Group*

YVS4500

Pressure Reducing Valve

FEATURES

- Prompt and effective damping action against pressure spikes
- Tamper-proof cap to prevent pressure adjustments
- Solid brass construction
- Stainless Steel internal components
- Easy Maintenance

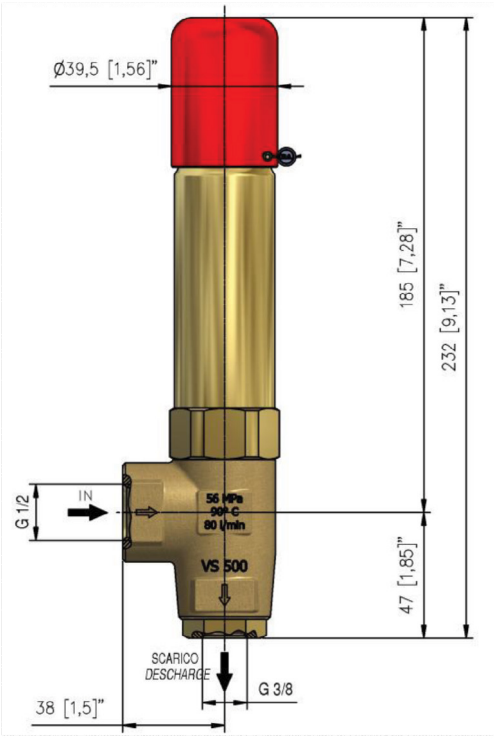
NOTE: Valves are not set. Contact GP Customer Service for per-set valves

SPECIFICATIONS

Part Number		YVS4500
Max. Temperature		195° F[1]
Max. Volume		21.0 GPM
Pressure		5,000 PSI
Min. Adjustable Pressure		450 PSI
Port Size	Inlet:	1/2" G-F
	Bypass:	3/8" G-F
Dimensions		9.13" x 1.56" x 2.1"
Weight		3.35 lbs.
Materials		Brass, Stainless Steel

1. *This unloader has been designed to operate at a continuous water temperature of 140° F. It can be operated for short periods at a maximum temperature of 195° F.*

DIMENSIONS



QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

General Pump is a member of the Interpump Group

Ref 301167 Rev B
11-24

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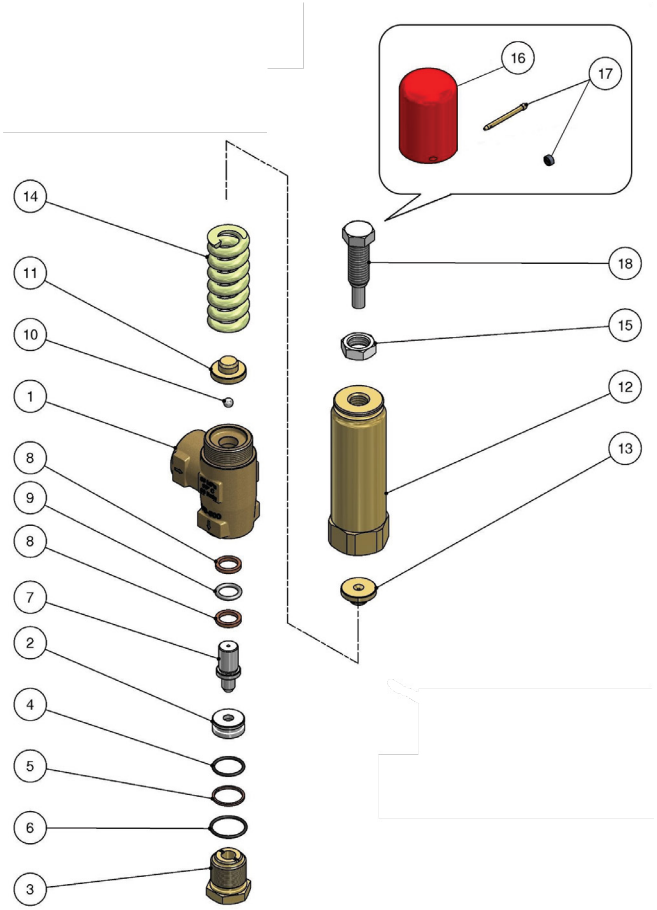
PARTS LIST



Pos.	Part #	Description	Qty.
1	Y60520135	Housing	1
2*	Y60520351	Seat, 7 x 22 x 10 mm	1
3	Y60520431	Coupler, M24 x 1M-3/8F	1
4*	Y10307002	O-ring, Ø 1.78 x 18.77 mm	1
5*	Y10403000	Back-up Ring, 13 x 17.5 x 2.5 mm	1
6*	Y10307260	O-ring, Ø 1.78 x 21.95 mm	1
7*	Y60520251	Piston, 16.5 x 37 mm	1
8*	Y10403100	Back-up Ring, 13 x 17.5 x 2.5	2
9*	Y10317801	O-ring, Ø 2.62 x 13.1 mm	1
10	Y14742150	Ball, 1/4”	1
11	Y60520531	Spring Pin	1
12	Y60520831	Spring Holder	1
13	Y60520731	Spring Guide Spacer	1
14	Y60521161	Spring, 6.2 x 20.5 x 70 mm	1
15	Y11476000	Hex, Nut, M14	1
16	Y60059841	Knob	1
17	Y60511431	Pin, 4 mm	1
18	Y60520951	Screw, M14 x 58	1
*	Y60521024	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. The feed through the lower fitting is possible with a reduced flow rate (see point 1). When in use as pressure regulator, use a nozzle that allows a bypass of at least 5% of the total flow, bearing in mind that a worn out nozzle causes pressure loss. The valve assembled in line with these indications avoids pressure spikes while the machine is in operation.

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. As a **Pressure Reducing Valve:** in the case when frequently combined with unloader valve and low pressure in the pump, it has to be fitted in the section that remains pressurized when the gun is shut off. As a **Pressure Regulator:** maintains the pressure in the system steady during flow changes. **Always** install in combination with a suitable pressure reducing valve. In case of discharge in the tank or directly into the pump, it is necessary to install a device that is capable of preventing damaging turbulence to liquid flow.

OPERATIONS

The valve inlet is on the side, the discharge is opposite the adjustment knob (pos 16).The discharge should be returned to a baffled tank. If, on the contrary, the pump is fed directly from the water mains, it is advisable to install a pressure reducing valve, before the pump, to avoid dangerous pressure spikes which could badly damage manifolds and inlet valves. In case of extended conditions of bypass directed to the inlet side of the pump, it is recommended to install a thermal valve (VT3 or VT6) to avoid dangerous water temperature build-up.

GENERAL PUMP

INSTRUCTIONS (cont.)

PRESSURE ADJUSTMENT/SETTING

As a SAFETY VALVE: the adjustment has to be made in such a way that is pressure setting is not higher to the system working pressure and its accessories; this prevents numerous pressure increases in hot water systems and static pressure (gun shut off).

As a PRESSURE REGULATOR: adjust the valve when the system is pressurized and the gun open. The operation will be easy and smooth if the proper nozzle is chosen. When rotating the adjustment knob, it has to correspond to a consequent pressure increase; should the pressure stop increasing before reaching the desired value, do not force, but check the correct nozzle size in relation to flow and pressure. On reaching the desired pressure, tighten the nut (pos. 15) against the knob (12) with a drop of paint in order to prevent any tampering.

TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent Unloader Cycles	Damaged check valve o-ring Leaking connections Restricted bypass	Replace Check and renew Clean or adapt
Valve 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 spike	There is not a minimum of 5% flow in bypass Excessive flow in bypass Spring totally compressed	Reset Change type of valve or adjust passages Loosen knob and change nozzle
Water Leaking for Bypass	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.

WARNING: High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices properly could result in personal injury or damage to pump or property. GP does not assume any liability or responsibility for the operation of the user's high pressure system.

WARNING: This product can expose you to chemicals including lead, which is know to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

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