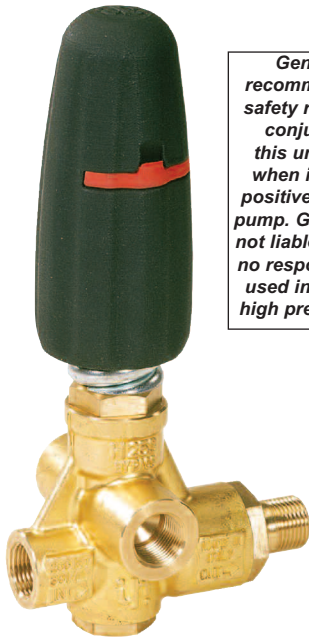


GENERAL PUMP *A member of the Interpump Group*

ZK4010

Trapped Pressure Unloader

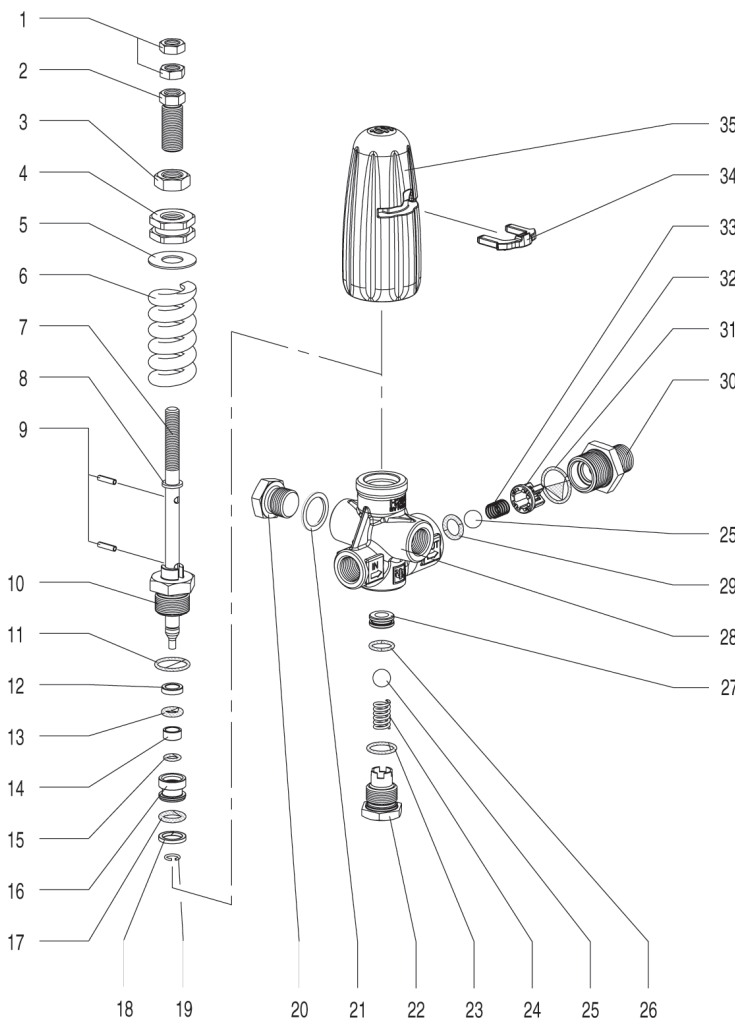


General Pump recommends using a safety relief device in conjunction with this unloader valve when installed on a positive displacement pump. General Pump is not liable and assumes no responsibility when used in a customer's high pressure system.

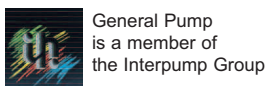
SPECIFICATIONS

Part Number	ZK4010		
Maximum Pressure	4000 PSI		
Maximum Flow	2.11 to 10.5 GPM		
Port Sizes:	Inlet	3/8" BSP-F	
	Outlet	3/8" BSP-M	
	Bypass	(2) 3/8" BSP-F	
Temperature	185° F		
Dimensions	7.7" x 3.6"		
Shipping Weight	2.3 lbs		
Materials	Brass, Stainless, Buna-N; NBR, Nitrile		

PARTS LIST



Item	Part Number	Description	KIT	Qty
1	92220000	Nut, M8 x 1 x 5 x 13		2
2	36326264	Pressure Screw		1
3	92240000	Nut, M12 x 1.25 x 7 x 19		1
4	36326164	Pressure Regulator Nut		1
5	96778000	Washer, Ø 28 x 12.5 x 1		1
6	94750900	Spring, Ø 21 x 60	*	1
7	36326373	Valve Rod		1
8	96703700	Washer, Ø 8.5 x 12 x 1.5		1
9	97665800	Pin, Ø 3 x 12		2
10	36335670	Bushing		1
11	90359500	O-ring, Ø 17.17 x 1.78	*	1
12	90503600	Anti-extrusion Ring	*	1
13	90381800	O-ring, Ø 7.59 x 2.62	*	1
14	36335770	Spacer		1
15	90357600	O-ring, Ø 6.75 x 1.78	*	1
16	36326466	Piston Control		1
17	90382500	O-ring, Ø 10.78 x 2.62	*	1
18	90507000	Anti-extrusion Ring	*	1
19	90006300	Stop Ring	*	1
20	98210000	Plug, G3/8" x 13		1
21	96738000	Seal		1
22	36326870	Plug, M18 x 1.5		1
23	90359200	O-ring, Ø 14 x 2.62	*	1
24	94736000	Spring, Ø 8.6 x 16.5	*	1
25	97483800	Ball, Ø 13/32"	*	2
26	90358500	O-ring, Ø 10.82 x 1.78	*	1
27	36326566	Valve Seat	*	1
28	36325941	Valve Body		1
29	90382300	O-ring, Ø 9.92 x 2.62	*	1
30	36326770	Nipple, G3/8		1
31	90359700	O-ring, Ø 18.77 x 1.78	*	1
32	36310451	Valve Guide	*	1
33	94735500	Spring, Ø 8.5 x 12	*	1
34	36329751	Yoke		1
35	36326051	Knob		1
* KIT245		Repair Kit		

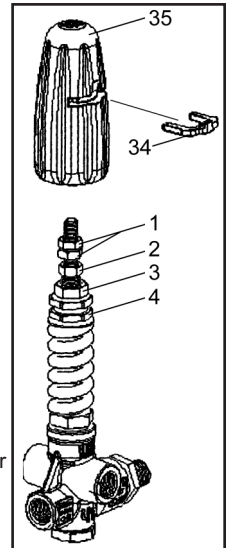


Trapped Pressure Unloader

INSTRUCTIONS

In order to obtain a correct pressure adjustment and a long life of the trapped pressure unloader, the bypass keeps releasing 5% of the total flow rate. The positions mentioned in the following instructions refer to those shown on Page 1.

1. Remove yoke (#34) with a screwdriver.
2. Take off knob (#35).
3. Unscrew the ring nut (#4) and the nut (#3) up to the upper stop position of the screw for adjustment of maximum pressure (#2).
4. Tighten the regulation screw (2) to the stroke stopper (#7), taking care not to force it.
5. Open the gun, start the system and make sure that all air is expelled.
6. With gun opened, begin adjusting the pressure by tightening the adjustment ring nut (#4). Alternate the adjusting operations with a few openings and closings of the gun (at least twice), until the desired pressure has been reached. In order to stabilize the various components (seals, springs, etc.), open and close the gun a few times. Check the pressure again and correct if needed.
7. Hold the ring nut (#4) with a pliers and tighten the nut (#3) to torque value between 30 and 35 Nm.
8. ADJUSTMENT OF MINIMUM PRESSURE: Unscrew the ring nut (#4) until the required minimum pressure is obtained. Tighten the lower nut (#1) all the way down on the pressure regulation screw (#2); tighten the upper nut (#1) onto the lower nut with a torque between 15 and 20 Nm.
9. Replace knob (#35) and yoke (#34).



After performing the operations described above, the valve is adjusted. Moving the knob (#35) you can obtain all intermediate pressures within the adjustment range, in addition to the minimum and maximum pressure.

DO NOT FORCE THE KNOB WHEN IT HAS REACHED THE END OF STROKE.

SAFETY AND OPERATING INSTRUCTIONS

1. Installation must be done in compliance with the local regulations in the country where the pressure regulator is installed and used.
2. Use clean water only; in the case of water containing solid particle of a size exceeding 15µm, the internal components of pressure regulator will be subject to quick wear. Furthermore, this might cause situations of danger. Should it be necessary to add detergents to the water, use only neutral, non-aggressive, biodegradable products.
3. Installation and pressure adjustment must be made by qualified and authorized staff only, who must be informed of the operating and safety instructions contained in this document.
4. Never exceed the maximum values of pressure and flow rates stated by the manufacturer.
5. The maximum water temperature must not exceed 185°F.
6. Use only guns and/or other control devices ensuring a perfect seal. Water leakage will affect the correct functioning of the automatic pressure regulator.
7. If the flow-rate at the bypass is close to zero or exceeds the maximum flow-rate by 15% during operation, this could cause failure, early wear and result in situations of danger.
8. In the event that the pressure regulator is installed in a system for hot water generation, it must be placed before the boiler, at such a distance to prevent backflow of steam or very hot water from reaching it.
9. This type of regulator cannot replace the safety valve by any means. If requested by the applicable Regulations, a safety valve must be added to the system.
10. After working and before performing any operation on the system, release the residual pressure by opening the gun for a few seconds. Direct the lance in a way that the jet created by the residual pressure cannot be harmful or dangerous.
11. For the bypass use a tube of limited length and of the same size as the bypass port of the regulator taking care not to form siphons which could include harmful air bubbles.
12. Maintenance and repair must be carried out by qualified and authorized staff only. Use original spare parts only.
13. In case of disposal, do not discard the material into the environment; instead, take it to an authorized disposal center.