

K1, K3 & K5 Series Unloaders

— Flow Sensitive —



Standard Features: Stainless Steel and Brass internal parts. • No external moving parts or springs. • Unique balance nozzle principle eliminates pressure peaks normally generated by conventionally designed unloaders as well as eliminating high pressure in all lines while unit is in by-pass mode. • Pressure in system during unloading cycle is determined by the inlet pressure to the system. • Motors draw less amps, engines run with less load during unloading cycle. • Piston design permits precise pressure adjustment. **Ports:** Inlet: 3/8" FPT, Outlet: 3/8" MPT, By-pass: 3/4" MPT on **K3** and **K5**. Inlet: 3/8" FPT, Outlet: 1/2" MPT, By-pass: 1/2" on **ZK1**. **Maximum temperature** is 165° F. **Best for Single Non Weep Guns.**

ZK1

Part No.	Maximum PSI	GPM Flow	Maximum Temperature
IP ZK1	3600	2.3 to 10.8	165° F.
IP K3.1	1500	3.0 to 4.2	165° F.
IP K3.2	1500	4.3 to 5.6	165° F.
IP K5.1	3000	3.0 to 4.2	165° F.
IP K5.2	3000	4.3 to 6.6	165° F.
IP K5.3	3000	6.6 to 10.8	165° F.
IP 53129	Repair Kit for K3 Unloader.....		
IP 53158	Repair Kit for K5 Unloader.....		

INTERPUMP K7 Series Unloaders

— Flow Sensitive —

Standard Features: All Stainless steel and brass internal parts. No external moving parts or springs. • Unique barb and flow balancer design provides gradual pressure build-up when system is closed. • Eliminates high pressure in all lines while unit is in by-pass mode. • By-pass restrictor eliminates pressure peaks during by-pass. • Balanced piston design permits precise pressure adjustment. • Simple design offers easy maintenance and service. **Ports:** Inlet and by-pass ports are 3/8" FPT. Outlet port is 3/8" MPT. **Maximum Temperature:** 160° F. **Note:** These valves require a minimum of 5% by-pass at all times. **Best for Single Pump or Non Weep Guns.**

Part No.	PSI Range	Maximum Flow
IP K7.1	100 to 3000	3.0 to 4.0 GPM
IP K7.2	100 to 3000	4.0 to 6.6 GPM
IP K7.3	100 to 3000	6.6 to 10.6 GPM
IP 53420	Repair Kit for K7 Unloader.....	



Pop-Off Relief Valves



Reduce system pressure upon even a partial obstruction. Used in conjunction with an unloader valve, your pumping system actually has two safety relief valves. Brass construction. Inlet ports are 1/4" or 3/8" MPT. Valves can be reset in the field if necessary. 160° F. Maximum temperature. Outlet is 3/4" FPT.

Part No.	MPT Size	Max. Flow	Mfg.	Max. PSI
NP 9069	3/8"	6 GPM	Suttner	4000
GU 22568	1/4"	10 GPM	Giant	5000
GU 22531A	3/8"	10 GPM	Giant	2400
GU 22533A	3/8"	10 GPM	Giant	5000



Safety Pop-Off Valves

Safety Pop-Off Valves are designed to protect the pump in the event unloader or regulator valves fail. Should be used in conjunction with a regulator or unloader valve. Brass Body, hardened stainless steel seat and needle design eliminates weeping. Lightweight, compact design. Internal stainless steel parts provide long life. Assures complete pressure relief. Inlet port is 1/4" MPT. Outlet is 3/4" hose barb.

Part No.	Maximum Flow	Pressure Adjustment Range
CC 33960	6-GPM	300 to 1500 PSI
CC 30961	6-GPM	1000 to 3000 PSI
CC 33961	6-GPM	1000 to 4000 PSI

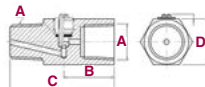


Adjustable Pressure Snubber

The adjustable pressure pulsation dampener from *Pic Gauges* protects your system from sudden pressure spikes & fluctuations. Additionally, flow can be regulated via adjustment knob. You can easily isolate gauge for service or replacement.

Connection: 1/4" or 1/2" NPT **Pressure Rating:** 6000 PSI maximum
Materials: 316 Stainless Steel **Est. Unit Wt.:** 0.50lbs./0.22kg

Part No.	Units	A	B	C	D
AH APS316-1/4	Inches	1/4" NPT	1.00"	2.05"	1.06"
AH APS316-1/2	Inches	1/2" NPT	1.18"	2.44"	1.06"



Hydra-Cell Bypass Relief Valves

Designed to handle the same rigorous demands as the Hydra-Cell pumps. These valves will bypass total system flow when required and will also balance system pressure for multiple gun operations.

Standard valves feature Brass bodies with Buna O-rings and stainless valve seats and plunger ball. Rated to 160° F. (200° available on special request).

C62B features Viton®/Teflon o-rings and diaphragm and is rated to 200° F.



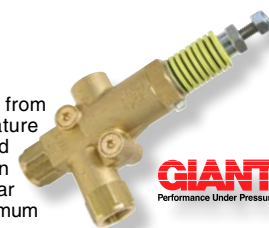
WANNER ENGINEERING INC

Part No.	Flow Rate	Pressure Range	Ports
WN C22A	3-10 GPM	500-1000 PSI	3/4" FPT
WN C23A	10-20 GPM	500-1000 PSI	1" FPT
WN C24A	20-40 GPM	500-1000 PSI	1-1/4" FPT
WN C62B	1-14 GPM	500-2500 PSI	3/4" FPT

Note: Valves with other pressure ranges are available on request.

Pressure Actuated Unloader Valves

Pressure Actuated Unloader Valves from *Giant Industries*. All valves shown feature brass housings and stainless steel wetted parts. Can be used in single or multiple gun applications. Designed to bypass at near zero pressure and operate up to the maximum pressures and flow rates shown.



GIANT
Performance Under Pressure

Part No.	Max. PSI	Max. GPM	Ports	Spring Color
GU 22911A	1400	13	1/2" FPT	Yellow
GU 22971B	1750	35	3/4" FPT	Yellow
GU 22083	2200	21	1/2" FPT	White
GU 22090	2200	52	1" FPT	-
GU 22912A	2400	13	1/2" FPT	Red
GU 22913A	3000	13	1/2" FPT	Orange
GU 22973B	4000	26	3/4" FPT	Orange
GU 22082	4100	21	1/2" FPT	Blue
GU 22095-5	5200	21	1/2" FPT	Black

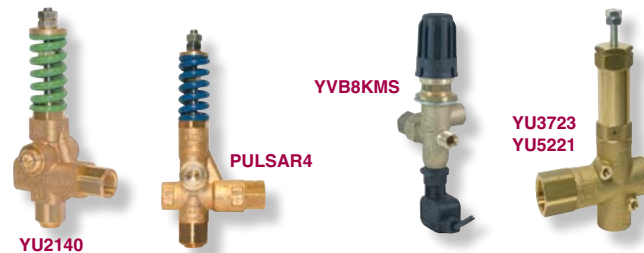


High Pressure Unloader Valves

Pressure Sensitive Unloader Valves are designed to "trap" pressure when gun is closed and drop bypass pressure to zero. When gun is opened, immediate pressure is available. Designed for single gun applications but can be adapted for multiple guns if required. Standard with brass bodies and buna seals, except for **YU2158** which has a stainless body. **YVB4021HT** is for single or multiple guns.

PULSAR4KHP, **YU5075K** and **YVB4021HT** include Knob. **PULSAR4KHPEZ** includes Knob and Ez Start Valve. **PULSAR4KHPMS** includes Knob, Ez Start Valve and 16 A / 250V Micro Switch.

YVB8KMS and **YU5075KMS** include Knob, Ez Start Valve and 5 A / 250V Micro Switch.



Part No.	Ports	Max. GPM	Max. PSI	Max. Temp.
IP PULSAR4	3/8" FPT	10	4000	195° F.
IP PULSAR4KHP	3/8" FPT	10	4000	195° F.
IP PULSAR4KHPEZ	3/8" FPT	10	4000	195° F.
IP PULSAR4KHPMS	3/8" FPT	10	4000	195° F.
IP YVB8KMS	3/8" FPT	8	3200	195° F.
IP YU5075K	3/8" FPT	10	5100	195° F.
IP YU5075KMS	3/8" FPT	10	5100	195° F.
IP YU2121	1/2" FPT	21	2300	200° F.
IP YU2140	1/2" FPT	21	4000	200° F.
IP YVB4021HT	1/2" FPT	21	4000	195° F.
IP ZH288	1/2" FPT	21	4000	185° F.
IP YU2158	* 1/2" FPT	21	5800	200° F.
IP YU3723	3/4" FPT	37	2300	195° F.
IP YU5221	1" FPT	53	2200	200° F.
IP ZH1520	1" FPT	53	2465	185° F.
AR VHP31	** 1" FPT	66	4000	195° F.

* Stainless Steel Body. ** AR Brand.

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