DATA SHEET
PRESSURE RELIEF VALVE

The Pumps with Nine Lives

Brass Models: **39430, 39440, 39580**



SPECIFICATIONS	U.S. Measure	Metric Measure
Model 39430		
Adjustable Pressure min.	1450 psi	100 bar
Rated Pressure max.	2031 psi	140 bar
Permissible Pressure max.	2611 psi	180 bar
Inlet (1)	3/8″ NPT (M)	3/8″ NPT (M)
Model 39440		
Adjustable Pressure min.	1886 psi	130 bar
Rated Pressure max.	3481 psi	240 bar
Permissible Pressure max.	4206 psi	290 bar
Inlet (1)	3/8″ NPT (M)	3/8″ NPT (M)
Model 39580		
Adjustable Pressure min.	1886 psi	130 bar
Rated Pressure max.	3481 psi	240 bar
Permissible Pressure max.	4206 psi	290 bar
Inlet (1)	G 3/8″ (M)	G 3/8″ (M)

FEATURES

- Pressure relief valve for use with Cat Pumps high-pressure positive displacement pumps.
- Commonly used as a secondary pressure protection device in conjunction with a pressure regulator valve or regulating unloader valve.
- This is **not** a safety valve according to PED.

COMMON SPECIFICATIONS	U.S.	Metric
Flow Rate max.	6.34 gpm	24 lpm
Max. Liquid Temperature*	104° F	40° C
Can withstand for short periods at a maximum temperature of 60°C (140°F).		
Weight	0.31 lbs.	0.14 kg
Dimensions	0.99 x 3.67″	25.3 x 93 mm

*The valve is designed for continuous use at 40°C (104°F).
Can withstand for short periods at a maximum temperature of 60°C (140°F).

SELECTION

Typically the valve will need to be set 15% above the desired system working pressure.

The pressure relief valve must be selected to match the maximum flow and working pressure of the pump and system.

APPLICATIONS

- High pressure cleaning
- Vehicle cleaning
- Central cleaning systems
- Air humidification systems

INSTALLATION GUIDELINES FOR UNLOADER VALVES

⚠ **It is the user's responsibility to carry out the necessary risk assessment and ensure that a suitable secondary protective device is fitted, such as a Pressure Relief Valve, to assure pump protection e.g. should the Unloader Valve malfunction.**

Failure to install such relief devices could result in personal injury or damage to the pump or to system components. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

INSTALLATION

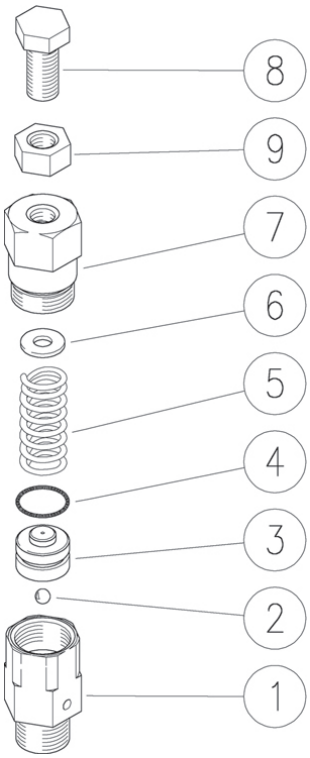
This relief valve can be installed in any position.

It must be fitted as close as possible to the pump, with no other valves or components e.g. isolator valve in line.

In multiple pump installations, fit one relief valve on each pump. Plumbing to and from the relief valve should be the same size or larger than the size of the valve ports.

Bypass flow from a relief valve indicates a fault condition and must be investigated immediately

EXPLODED VIEW



PRESSURE ADJUSTMENT

Before starting the pump, fully loosen the adjustment screw anti-clockwise.

Open all guns to permit full flow and start the pump to purge the system of air.

Close all guns whilst pump is running.

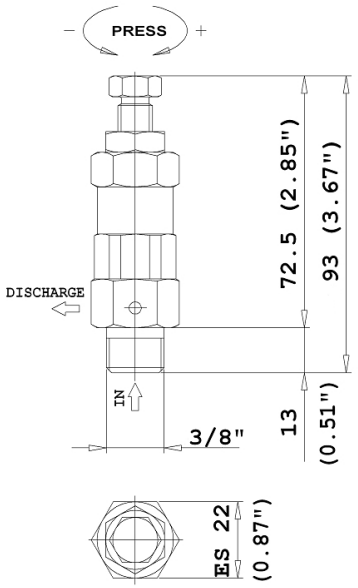
Turn the adjustment screw clockwise only until the required working pressure is shown on the pressure gauge.

Typically this should be 10% above the system intended working pressure but must not exceed the safe pressure of any of the system components.

Do not exceed the maximum working pressure of the pump as this may damage the pump, drive motor or engine.

Tighten the locking nut (if provided) on the adjustment screw to secure the adjustments made to the valve.

DIMENSIONAL DRAWING



PARTS LIST

ITEM	DESCRIPTION	QTY
1	Housing, brass	1
2	Ball, 3/16", plast.	1
3	Piston, 17mm, brass	1
4	O-Ring, 1,78 x 14 mm, Ni 85	1
5	Spring, 2,3 x 14 x 34 mm, SS (140 bar)	1
5	Spring, 2,6 x 14 x 34 mm, SS (240 bar)	1
6	Washer, 6,2 x 14 x 1,5 mm, SS	1
7	Spring holder, M10 - M20 x 1,5 brass	1
8	Valve regulating screw, M10 x 25, SS	1
9	Hex. nut, M10, SS	1

TROUBLESHOOTING

If the operating pressure falls over a period of time, do not re-adjust the valve to compensate.
Check the following:

- Too many guns in use at one time
- Incorrect nozzle size fitted
- Nozzle(s) worn
- Motor speed too low
- Slipping drive belts
- Pump seals or valves worn

⚠ CAUTIONS AND WARNINGS

All 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 could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.de or can be requested directly from CAT PUMPS.

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