Relief Valve

316 Stainless Steel with FPM seals

Model 39518

Photograph for guidance only—appearance may vary

SPECIFICATIONS

Pump Flow rate - maximum	80	L/min
Pump Flow Rate - minimum	27	L/min
Relief (Set) Pressure* - maximum	280	bar
Relief (Set) Pressure* - minimum	28	Bar
Maximum Liquid Temperature (Intermittent)	90	ºC
Maximum Liquid Temperature (Continuous)	60	ºC
Inlet ports (1) size	1/2”	BSPF
Outlet ports (1) size	1/2”	BSPF
By-Pass Return ports (1) size	1/2”	BSPF
Weight	1.1	kg
Product Dimensions L x W x H	16 x 6 x 4	cm

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.
- By-passes pump flow in the event of a component or system failure, or user error.
- Can also be used as a primary Pressure Regulator Valve

BENEFITS

- Provides additional protection for pump and system against over-pressure damage.
- Can provide required safety protection in accordance with the CE Pressure Equipment Directive (PED) and Safety of Machinery Directive (subject to full Risk Assessment and Certification).
- This is not a Safety Valve according to PED.

APPLICATIONS

- Pressure washing & central wash-down systems
- Vehicle cleaning
- Water Mist Cooling, Odour Control and Dust Suppression
- Hydrostatics and Hydraulics
- Chemical Processing
- Most high-pressure pump systems

SELECTION

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

Select the correct Relief Valve to suit the maximum pump & system flow rate and relief pressure.

INSTALLATION GUIDELINES FOR **PRESSURE RELIEF VALVES**

Cat Pumps high-pressure pumps are designed and manufactured to exceptionally high quality standards and have an unequalled reputation for reliability and long life. The most common cause of pump failure is not the pump itself, it is poor installation. A good pump will not perform well if it is badly installed. If in doubt, always ask for advice. This document does not over-rule specific instructions provided elsewhere.

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 primary Pressure Regulator or 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 design, installation and operation of a customer's high pressure system.

CAUTION – Take care to work safely in accordance with good practice. Ensure all installations meet all relevant safety rules, laws, directives, standards, regulations and codes of practice. All work must be carried out by competent people who are appropriately trained and qualified.

Installation when used as a Relief Valve

This Relief Valve may be mounted in any orientation. 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 equal in diameter to, or larger than, the size of the valve ports.

The bypass from this valve must not be restricted and should discharge safely, but where it can be monitored or observed.

Bypass flow from a Relief Valve indicates a fault condition and must be investigated immediately.

Pressure Adjustment– Relief Valve

Before starting the pump, fully loosen the Relief Valve adjustment nut anti-clockwise.

Start pump to purge the system of air, then close all valves, trigger guns etc. whilst pump is running to divert full pump flow through the Relief valve.

Turn the Relief Valve adjustment nut clockwise only until the required set pressure is shown on the pressure gauge. Typically this should be 15% 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) to secure the setting and/or apply suitable paint to the adjuster thread to provide evidence of tampering.

Installation when used as a Pressure Regulator Valve

This Regulator Valve may be mounted in any orientation.

In multiple pump installations, fit only one Regulator Valve per installation.

Plumbing to and from the Relief Valve should be equal in diameter to, or larger than, the size of the valve ports.

The bypass from this valve should be connected in one of the following ways.

a) **Bypass back to source or to waste:** The bypass line should be unrestricted and taken back to the liquid source (e.g. baffled supply tank) or to a suitable drain point.

b) **Bypass to pump inlet:** This is not recommended as it can result in heat build-up and premature pump seal failure. If this is unavoidable, ideally the bypass line should merge into the pump inlet line no closer to the pump than 20 times the pump inlet port diameter. Alternatively, connect it to the pump inlet port opposite to the inlet feed pipe. A Cat Pumps Thermo-Valve installed in the bypass line will help to prevent excessive heat build-up.

Pressure Adjustment used as a Pressure Regulator Valve

First set the system Secondary Pressure Protection (Relief) valve as above.

Fully loosen the Regulator Valve adjustment nut anti-clockwise.

Start pump to purge the system of air, then close all valves, trigger guns etc. whilst pump is running to divert full pump flow through the Regulator Valve.

Turn the Regulator Valve adjustment nut clockwise only until the required system working pressure is shown on the pressure gauge. Do 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) to secure the setting and/or apply suitable paint to the adjuster thread to provide evidence of tampering.

Pressure Wash-Down installations using trigger guns

Set the Regulator Valve with the guns open.

There must always be a small amount of flow through the bypass port., minimum 5%.

Consult Cat Pumps or your supplier for more information.

World Headquarters
Cat Pumps
1681-94th Lane. N.E. Minneapolis, MN 55449 - 4324
Phone (763) 780-5440—FAX (763) 780-2958
E-mail sales@catpumps.com
www.catpumps.com
International Inquiries
FAX (763) 785-4329
E-mail: intsales@catpumps.com

"The World's Most Dependable Pumps"

Cat Pumps (U.K.) Limited
1 Fleet Business Park, Sandy Lane, Church Crookham
FLEET, Hampshire, GU52 8BF, England
Phone 01252 622031 - Fax 01252 626655
E-mail: sales@catpumps.co.uk www.catpumps.co.uk

N.V. Cat Pumps International S.A.
Heiveldekens 6A, 2550 Kontich, Belgium
Phone +32 3-450.71.50 - Fax +32 3-450.71.51
E-mail: cpi@catpumps.be www.catpumps.be

Cat Pumps Deutschland GmbH
Buchwiese 2, D-65510 Idstein, Germany
Phone +49 6126/9303-0 Fax +49 6126/9303-33
E-mail: catpumps@t-online.de www.catpumps.de

Publication No. 899789 Rev B