

DATA SHEET

HIGH-FLOW RELIEF VALVE



Standard Model: **7595**



FEATURES

- Provides system pressure setting and protection for single or multiple gun and pump systems.
- Heavy duty, high flow design quickly and conveniently mounts directly into discharge line.
- Functions as a secondary pressure relief to assure system and pump protection from deadhead or excessive pressure.
- Standard NBR o-rings with alternative options for temperature and chemical compatibility
 - FPM – .0110 (7595.0110)
 - EPDM – .0220 (7595.0220)

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow Range	1-53 gpm	3.8-200 lpm
Pressure Range	260-2600 psi	18-180 bar
Maximum Relief Setting	2860 psi	197 bar
Maximum Operating Temperatures:		
Standard Buna o-rings	140° F	60° C
Standard Buna o-rings (intermittent)	195° F	90° C
Optional FPM o-rings	240° F	115° C
Inlet Port	3/4" NPT(F)	3/4" NPT(F)
By-Pass Port	1/2" NPT(F)	1/2" NPT(F)
Weight	29.0 oz.	0.82 kg
Dimensions	6.25 x 2.05 x 1.46"	159 x 52 x 37 mm

SELECTION

Select a relief valve to meet or exceed the flow and pressure requirements of the system.

INSTALLATION

The relief valve should be mounted in the discharge line **before any other accessories in the system** to provide optimum protection to the pump. The by-pass port 1/2" NPT(F) is at the bottom. Relief valve by-pass liquid may be returned to the reservoir or drain to the floor. By-pass returned to the inlet of the pump should be done with caution to avoid pressure spikes or excessive heat build-up from recirculating liquids. The inlet port 3/4" NPT(F) is located at the side.

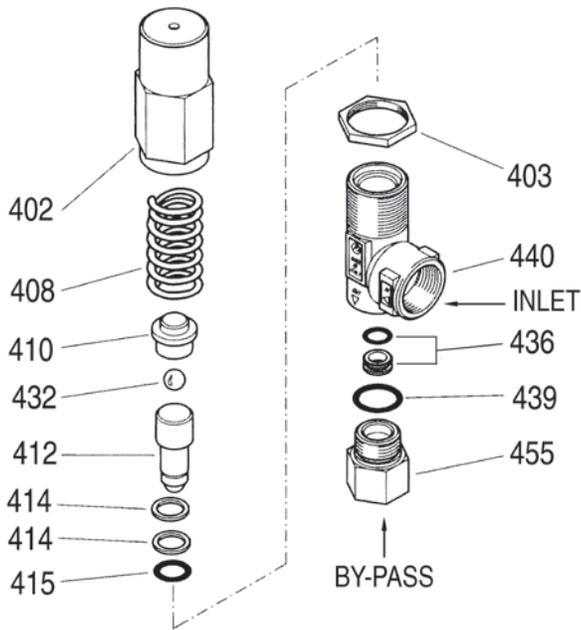
OPERATION

The adjusting cap is located at the top of the relief valve. Using a wrench, the pressure setting may be increased by turning clockwise or decreased by the turning counterclockwise.

The relief valve should be set in small increments. Check your pressure gauge following each adjustment. It may be convenient to set your unloader or regulating device for the system working pressure in small increments, as you are setting the relief valve. The final adjustment for the relief valve should be set to relieve at approximately 200 psi above the system working pressure.

NOTE: THE RELIEF VALVE IS A SECONDARY SAFETY DEVICE. IT DOES NOT REPLACE A PRESSURE REGULATOR OR UNLOADER.

EXPLODED VIEW



PARTS LIST

ITEM DESCRIPTION	P/N	MATL	QTY
402 Cap, Adjusting	—	BB	1
403 Nut, Locking	—	BB	1
408 Spring	—	STL	1
410 Retainer, Spring	—	BB	1
412 Piston	701601	S	1
414 Back-up-Ring, Piston	—	PTFE	2
415 O-Ring, Piston - 70D	—	NBR	1
O-Ring, Piston	—	FPM	1
O-Ring, Piston	—	EPDM	1
432 Ball, Seat, 13/32"	31075	SSSS	1
436 Seat, w/O-Ring	33806	NBR	1
439 O-Ring, By-Pass Fitting - 85D	—	NBR	1
O-Ring, By-Pass Fitting	—	FPM	1
O-Ring, By-Pass Fitting	—	EPDM	1
440 Body w/3/4"NPTF Port	—	BB	1
455 Fitting, By-Pass [1/2" NPT(F)]	39634	BB	1
468 <i>Kit, Repair (Standard)</i> (Incls: 412,414,415,432,436,439)	39078	NBR	1
<i>Kit, Repair (.0110)</i> (Incls: 412,414,415,432,436,439)	76078	FPM	1
<i>Kit, Repair (.0220)</i> (Incls: 412,414,415,432,436,439)	76178	EPDM	1

Italics are optional items.

MATERIAL CODES (Not Part of Part Number):

BB=Brass EPDM=Ethylene Propylene Diene Monomer FPM=Fluorocarbon
NBR=Medium Nitrile (Buna-N) PTFE=Pure Polytetrafluoroethylene
S=304SS SSSS=440SS STL=Steel

TROUBLESHOOTING

Valve chatters	<ul style="list-style-type: none"> Valve is improperly set. Repeat adjustment procedure.
Valve continually by-passes	<ul style="list-style-type: none"> Seat, ball or retainer is worn. Replace as needed.
Leaking out the top of valve	<ul style="list-style-type: none"> O-Rings on piston are worn or cut. Replace as needed.

⚠ 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.com/cautions-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

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