Needle Valves

Extreme Temperature

HT, LT and PV Series

Pressures to 60,000 psi (4137 bar)

Parker Autoclave Engineers has two different styles of valves for extreme temperature. Standard valves can be supplied with packing for operation from -100°F (-73°C) to 800°F (427°C), or with the addition of an extended packing housing for operation from -423°F (-252°C) to 1200°F (649°C). The extended packing housing provides the means of removing the packing from the extreme temperature medium. Machined grooves on the housing act as a heatsink to remove heat or cold.
The second, which is economically priced, is a modified standard designed for the power industry. It operates to 1200°F (649°C) with graphite packing and no extended packing housing.



Extreme Temperature Valve Features:

- The extreme temperature option can be ordered on low, medium, high, micro-metering and other valve series.
- Reliable long life operation with extended stuffing box at very high and low temperatures.
- Design available for operation to 1200°F (649°C) without extended packing housing.
- Available with a variety of tubing connections and orifice sizes.
- Non-rotating stem.
- Wide range of material options
- Adjustable packing below threads.
- Metal to metal seating.
- Anti-extrusion back-up rings.

Parker Autoclave Engineers valves are complemented by a complete line of fittings, tubing, and accessories.

Applications:

- Hot well condenser
- Super-heated steam hookup/ measurement
- Supercritical fluid processing
- Boiler ignition system

Parker

Autoclave Engineers

www.autoclave.com

Needle Valves - HT, LT and PV Series

Extreme Temperature

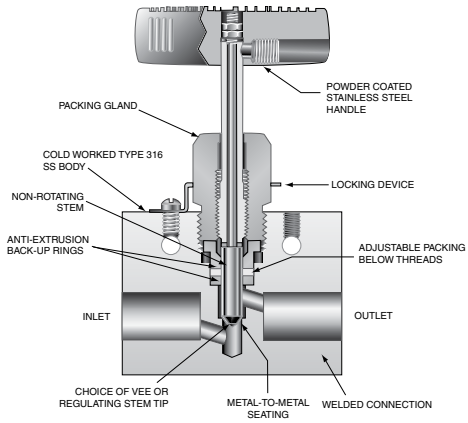
Needle Valve - PV Series

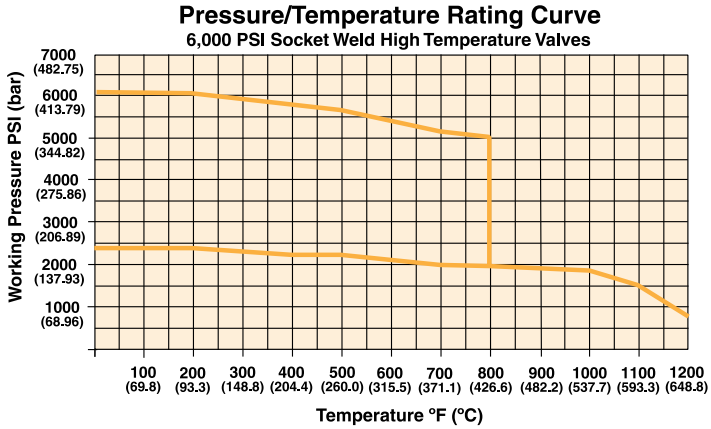
Pressures to 6,000 psi (414 bar)

Tube Outside Diameter	Connection Type	Orifice Size	Pressure Rating psi (bar) @ Room Temperature**
1/4	TW/PW	3/16”	6,000 (414)
3/8	TW/PW	1/4”	6,000 (414)
1/2	TW/PW	1/4”	6,000 (414)
3/4	TW/PW	1/2”	6,000 (414)
10mm	TW	6.50mm	6,000 (414)
12mm	TW	6.50mm	6,000 (414)
14mm	TW	6.50mm or 9.0mm	6,000 (414)
16mm	TW	9.00mm or 11.0mm	6,000 (414)

TW - Tube Weld
PW - Pipe Weld
*Note: ** For temperature ratings see pressure/temperature rating guide chart below..*







See Technical Information section for curve details.

Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative.

Typical catalog number: **PV4TW6MG**

PV — Valve Series

4 — Outside Diameter Tube Size
- **4**-1/4”
- **6**-3/8”
- **8**-1/2”
- **12**- 3/4”
- **A**-10mm
- **B**-12mm
- **C**-14mm
- **D**-16mm

TW — Connection Type
- **TW** - Tube Socket Weld
- **PW** - Pipe Socket Weld

Outlet See Note — Size/Type

6M — Port Size
- **3** -3/16”
- **4** -1/4”
- **8** -1/2”
- **6M** - 6.5mm
- **9M** - 9.0mm
- **11M** - 11.0mm

G — Packing
- **G** - Graphic Yarn
- **GF** -Grafoil

Note: Use if outlet connection is different - *Example: PV4TW**ATW**6M-G*

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Valve Options

For optional connection sizes, connection types,material or other options not listed contact your sales representative.
Consult factory for availability of dissimilar end connections.

Valve Maintenance

Repair Kits: add “R” to the front of valve catalog number for proper repair kit. (Example: **RPV4TWG**)

Valve Bodies: Valve bodies are available. Order using the eight (8) digit part number found on the valve drawing or contact your Sales Representative for information.

Consult your Parker Autoclave Engineers representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

2-Way Straight

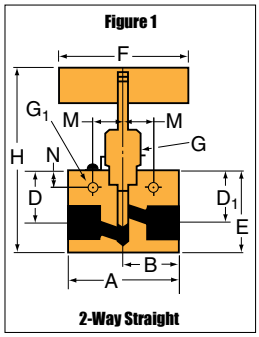
Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm) A	B	C	D	D_1	E	F	G	G_1	H*	M	N	Block Thickness	Valve Pattern
PV4TW3G	VEE	1/4	0.187	2.00	1.00		1.41	1.41	2.00	3.00	0.75	0.22	4.43	0.62	0.38	0.75	See Figure 1
		(6.35)	(4.75)	(50.80)	(25.40)		(35.81)	(35.81)	(50.80)	(76.20)	(19.05)	(5.59)	(112.52)	(15.75)	(9.65)	(19.05)	
PVT6TW4G	VEE	3/8	0.250	2.00	1.00		1.41	1.41	2.00	3.00	0.75	0.22	4.43	0.62	0.38	0.75	
		(9.53)	(6.35)	(50.80)	(25.40)		(35.81)	(35.81)	(50.80)	(76.20)	(19.05)	(5.59)	(112.52)	(15.75)	(9.65)	(19.05)	
Metric (In)																	
PVCTW6MG	VEE	14.00	6.5	50.80	25.40		35.81	35.81	50.80	76.20	19.05	5.59	111.00	15.75	9.65	19.05	
		(0.55)	(0.26)	(2.00)	(1.00)		(1.41)	(1.41)	(2.00)	(3.00)	(0.75)	(0.22)	(4.37)	(0.62)	(0.38)	(0.75)	
PVCTW9MG	VEE	14.00	9.0	63.50	31.75		52.32	52.32	73.15	101.60	22.23	5.59	148.34	17.53	12.70	25.40	
		(0.55)	(0.35)	(2.50)	(1.25)		(2.06)	(2.06)	(2.88)	(4.00)	(0.88)	(0.22)	(5.84)	(0.69)	(0.50)	(1.00)	

G - Packing gland mounting hole drill size
G_1 - Bracket mounting hole size
Panel mounting drill size: 0.22” all valves.

** H Dimension is with stem in closed position.*
All dimensions for reference only and subject to change.

For prompt service, Parker Autoclave Engineers stocks select products. Consult factory.

Figure 1



2-Way Straight

WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
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Caution! Do not mix or interchange parts or tubing with those of other manufacturers. Doing so is unsafe and will void warranty.

Caution! Parker Autoclave Engineers Valves, Fittings and Tools are not designed to work with common commercial instrument tubing and will only work with tubing built to Parker Autoclave Engineers AES Specifications. Failure to do so will void warranty.

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