Parker
Instrumentation

Instrumentation Hand Valves

Catalog 4190-HV
September 2002

Printed in England by Toptown Printers Ltd Barnstaple Devon 092 Issue 3.

Contents

Introduction

With years of valve design and development experience Parker Hannifin are able to offer the most comprehensive range of instrument hand valves available to users for a wide variety of markets, industries and applications. Now consolidated into one catalogue Parker is able to offer a simplified system of selection and choice for all Instrument applications and installations.

In addition to producing valves and manifolds Parker also makes twin and single ferrule compression fittings A-LOK® and CPI™ which are used extensively in the oil, gas, petro-chem, power, processing and many other industries. Combining these as an integral part of the valve body users can eliminate pipe threaded connections reducing leak paths and avoiding the use of thread sealant, a frequent menace to instrument and system performance.

For higher pressure ratings up to 15,000 psi Parker can now offer their new MPI™ range of compression fittings.

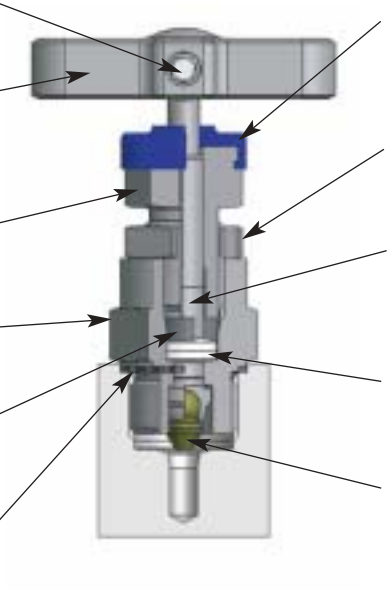
All the valves offered in this catalogue are available with integral compression ends improving system performance, safety factors, size and weight reduction, simplifying installation and ultimately reducing customer costs.

Continuous product development may from time to time necessitate changes in the details contained in this catalogue. Parker Hannifin reserve the right to make such changes at their discretion and without prior notification.

All dimensions shown in this catalogue are approximate and subject to change.

Globe style bonnet design for NV, GV and VG series

For safe reliable and repeatable performance



1. Positive handle retention design featuring broached square engagement positioned by thread locked grub screw.

2. "T" bar
Ergonomically designed for ease of operation. Anti-tamper and lockable devices can be supplied for on site retro-fit.

4. Gland packing adjuster
For maximum packing stability and performance, simple and easily adjustable for gland wear compensation.

6. Valve Bonnet
Standard construction for maximum pressure rating with replaceable bonnet sealing washer arrangement.

8. Thrust Bush
Anti rotational adjustor bush ensures uniform packing compression, maximising pressure tight sealing and limiting cold flow passages.

10. Bonnet/body washer
Annealed sealing washer to ensure complete atmospheric leakage and allowing on site retro-fit of bonnets with 100% re-sealing assurance

3. Dust Cap
This has a dual purpose, preventing air born debris from contaminating the operating spindle thread and providing colour coded functional identification. Isolate (BLUE).

5. Gland adjuster lock nut
A secure anti vibration locking mechanism to prevent inadvertent gland adjuster loosening.

7. Anti blowout spindle
Designed for low torque operation with high quality micro mirror stem finish for positive gland sealing.

9. Gland packing (adjustable)
Chevron effect dual piece gland packing to provide maximum sealing area contact with minimum gland adjustment.

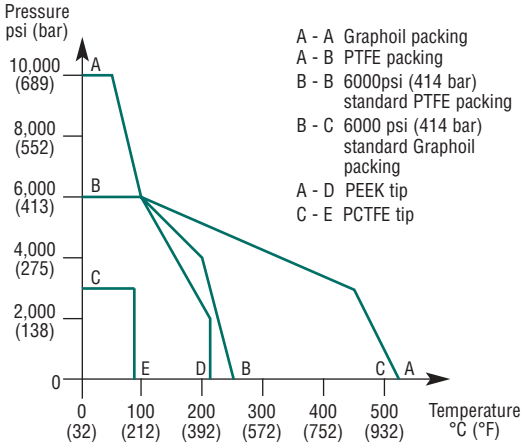
11. Spindle tip
Self centering, non-rotational tip gives successive positive bubble tight shut off assuring the user of leakage free performance and downstream functional safety.

All metallic standard parts are produced in stainless steel, for alternative materials please refer to page 25. Manifolds produced in other specified materials will be provided with non-wetted parts as standard in stainless steel, this applies to items 1, 2, 4, 5 & 8.

Specification

- Height closed (standard and HP) = 47mm (1.85"). Height open (standard and HP) = 50.3mm (2.00").
- Number of turns open/close - 3.5.
- Stainless steel construction.
- Maximum standard pressure up to 6,000 psig (414 barg).
- Maximum optional pressure up to 10,000 psig (689 barg). See page 8/9.
- Temperature rating -54C to +538C (-65F to +1000F).
- PTFE standard gland packing (Graphoil optional).
- Maximum temperature PTFE 260C (500F).
- Maximum temperature Graphoil 538C (1000F).

Pressure vs temperature



Features

- Standard unit throughout hand valve range.
- Operating threads outside washout area.
- Externally adjustable gland.
- Low operating torque.
- Alternative 10,000 psig (689 barg) range available.
- Retro-fit kit for:-
  Anti-tamper spindle.
  Panel mounting.
  Lockable T bar.
  Handwheel with lockable option.
- Bonnet locking pin to prevent accidental removal fitted as standard.
- Alternative graphoil packing for high temperature performance available.
- Alternative self centering tip materials available for gaseous and aggressive fluids.
- Safety back seated spindle prevents stem blowout and provides secondary back up stem seal.
- Packing below threads to prevent lubricant washout.
- All valves 100% factory tested.
- NACE certified wetted parts available.
- Optional cleaned and lubricated suitable for Oxygen service.
- Heat code traceable body and bonnet.

Optional globe style bonnet design for NV, GV and VG series

For on-site assembly

The design options below can be simply retrofit to any NV, GV and VG series standard valves. Retrofit kit part numbers are listed next to the illustrated option and all parts will be supplied in stainless steel regardless of the parent body material.

For factory fitted assembly

To obtain factory assembled options the valve part number must be suffixed with the option and function designator. Options can be combined:-

Example HNV*8FFAT – NV series valve, factory fitted with anti-tamper (AT) operating mechanism.

Example HGV*8THL – GV series valve, factory fitted with "T" bar locking plate (THL).

Note: Padlocks for lockable handwheels and "T" bars are not supplied (hole size 6mm/0.24").

Standard bonnet	T bar handle locking	Anti tamper spindle
	 Retro-fit kit part number **KITTHL** Factory assembled suffix **THL**	  For key only - part no. **ATHKEY/1** Retro-fit kit part number **KITAT** without key **KITATK** with key Factory assembled suffix **AT** without key **ATK** with key
Handwheel	**Lockable handwheel**	***Panel mounting**
 Retro-fit kit part number **KITHW** Factory assembled suffix **HW**	 Retro-fit kit part number **KITLHW** Factory assembled suffix **LHW**	 Retro-fit kit part number **KITPM** Factory assembled suffix **PM**

*Panel mounting hole diameter = 26mm (1.02").
Panel thickness = Max 5mm (0.20") Min 2.3mm (.09").

Globe style bar stock needle valves NV series (6,000 psig/414 barg)

Purpose

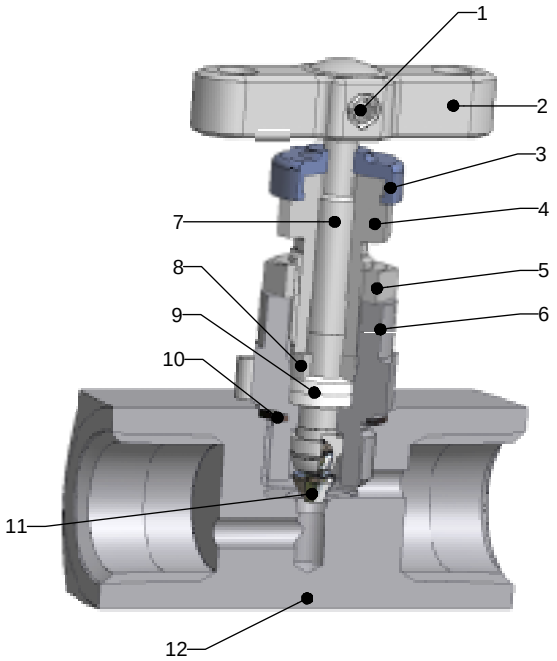
Bar stock needle valves are purpose designed valves for operation with any fluid up to 6,000 psig (414 barg) rating. Complete with standard PTFE gland packing and self centering non rotational plug, gives the user assurance of total in service sealing security. For gaseous application soft tipped optional seating is available. A wide variety of end connectors are offered for all types of installation. NACE compliance and oxygen clean are also available along with an extensive list of materials of construction.

Specification

- Standard seat diameter 4mm.
- Optional seat diameter 6mm.
- Cv: 0.35 standard.
- Maximum standard pressure up to 6,000 psig (414 barg).
- Temperature rating -54C to +538C (-65F to +1000F).
- Port sizes up to 1/2" pipe thread and 1/2"/12mm tube compression ends as standard.
  Optional sizes up to 1" pipe, tube and combination ends.

Features

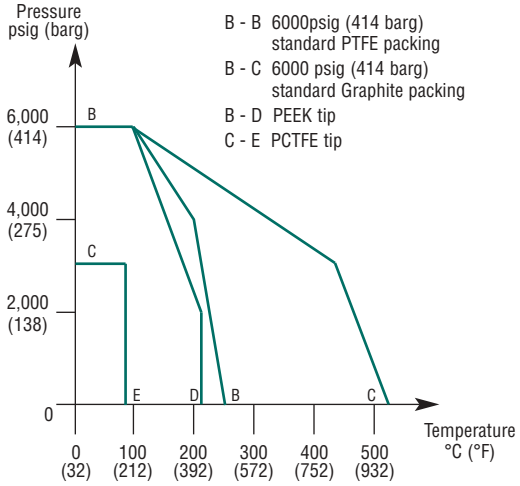
- Rolled spindle operating threads.
- Stainless steel construction as standard.
- PTFE packing standard, optional graphite.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention, and minimal atmospheric leakage.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Panel and base mount option.
- Variety of end connections including integral compression one piece bodies.
- Angled versions available.
- Firesafe option available to API 607 BS 6755 Part 2 (see page 24).
- Dust cap to prevent ingress of contamination to operating thread.
- Bonnet locking pin fitted as standard.



Part description

Item	Description
1	Locked grub screw
2	T bar handle assembly
3	Dust cap/function label
4	Gland adjuster
5	Gland locknut
6	Valve bonnet
7	Anti blowout spindle
8	Thrust bush
9	Gland packing (2)
10	Sealing washer
11	Self centering spindle tip
12	Body

Pressure vs temperature



Standard product specification: metal/metal seated, PTFE packed, stainless steel, T bar operation, globe pattern, 6000 psig (414 barg).

Standard range part numbers

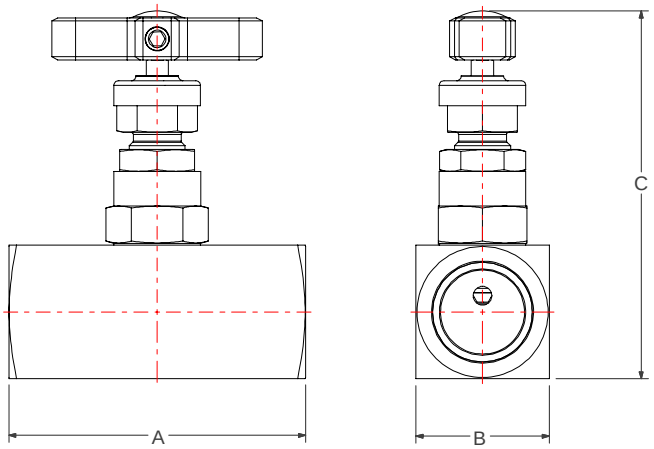
Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
HNV*4FF	1/4 NPT	1/4 NPT	54.0 (2.13")	28.6 (1.13")	79.4 (3.13")
HNV*6FF	3/8 NPT	3/8 NPT	54.0 (2.13")	28.6 (1.13")	79.4 (3.13")
HNV*8FF	1/2 NPT	1/2 NPT	63.5 (2.50")	28.6 (1.13")	79.4 (3.13")
	Male	Female			
HNV*4M4F	1/4 NPT	1/4 NPT	57.8 (2.27")	28.6 (1.13")	79.4 (3.13")
HNV*8M8F	1/2 NPT	1/2 NPT	73.0 (2.87")	28.6 (1.13")	79.4 (3.13")
	A-LOK®	A-LOK®			
HNV*4A	1/4	1/4	67.5 (2.66")	25.4 (1.00")	76.2 (3.00")
HNV*8A	1/2	1/2	76.2 (3.00")	25.4 (1.00")	76.2 (3.00")
HNV*M6A	6mm	6mm	67.5 (2.66")	25.4 (1.00")	76.2 (3.00")
HNV*M12A	12mm	12mm	76.2 (3.00")	25.4 (1.00")	76.2 (3.00")

*Insert material code

Notes for compression ended valves:-

1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Can be offered to comply with latest issue of NACE subject to para. 8.4.1.1.
4. For compression ended valve pressure ratings consult tube ratings table.

Dimension "C" in open position.



Designed to meet pressure/temperature ratings of ANSI Class 2500 where applicable.

For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Globe style bar stock needle valves NV series (10,000 psig/689 barg)

Purpose

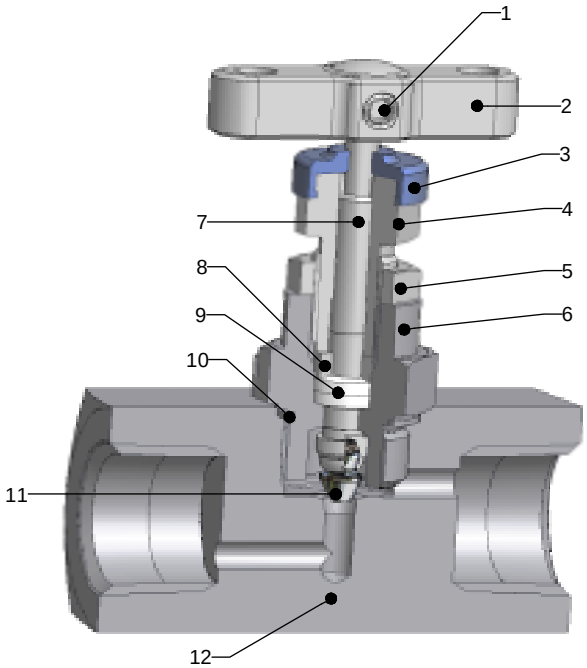
Bar stock needle valves are purpose designed valves for operation with any fluid up to 10,000 psig (689 barg) rating. Complete with standard PTFE gland packing and self centering non rotational plug, gives the user assurance of total in service sealing security. For gaseous application soft tipped optional seating is available. A wide variety of end connectors are offered for all types of installation. NACE compliance and oxygen clean are also available along with an extensive list of materials of construction.

Specification

- Standard seat diameter 4mm.
- Optional seat diameter 6mm.
- Cv: 0.35 standard.
- Maximum standard pressure up to 10,000 psig (689 barg).
- Temperature rating -54C to +538C (-65F to +1000F).
- Port sizes up to 1/2" pipe thread and 1/2" MPI™ tube compression ends as standard.
  Optional sizes up to 1" pipe, tube and combination ends.

Features

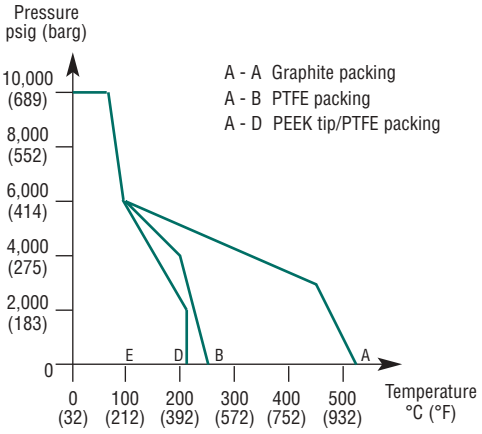
- Rolled spindle operating threads.
- Stainless steel construction as standard.
- PTFE packing standard, optional graphite.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention, and minimal atmospheric leakage.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Panel and base mount option.
- Variety of end connections including integral compression one piece bodies.
- Angled versions available.
- Dust cap to prevent ingress of contamination to operating thread.
- Bonnet locking pin fitted as standard.



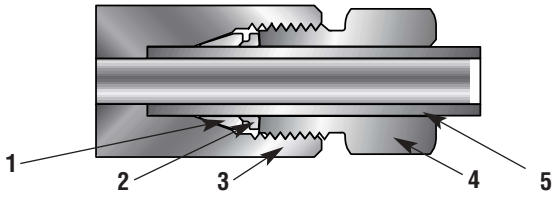
Part description

Item	Description
1	Locked grub screw
2	T bar handle assembly
3	Dust cap/function label
4	Gland adjuster
5	Gland locknut
6	Valve bonnet
7	Anti blowout spindle
8	Thrust bush
9	Gland packing (2)
10	Sealing washer
11	Self centering spindle tip
12	Body

Pressure vs temperature



MPI™ Advanced Features

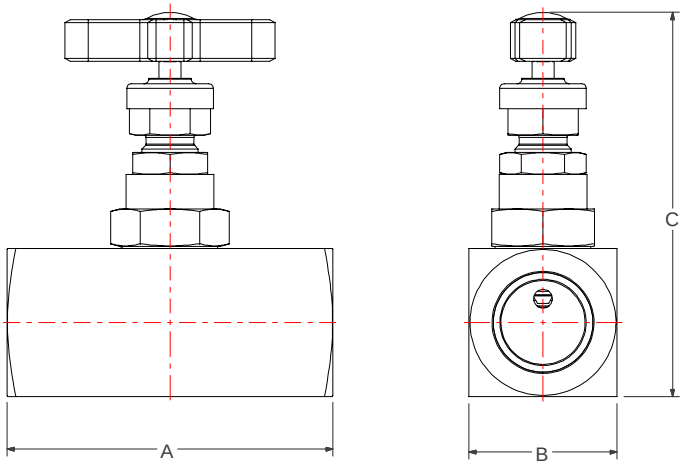


1. Front ferrule with corrosion-resistant Parker SUPARCASE® forms a tight pressure seal between the body and ferrule in a *second* strong mechanical hold on the tube.
2. Rear ferrule with corrosion-resistant Parker SUPARCASE® provides a strong mechanical hold on the tube.
3. Longer thread area for improved resistance to pressure and load on the ferrules.
4. Molybdenum disulfide-coated inverted nut helps prevent galling, provides easier assembly, and permits multiple remakes.
5. Long tube-support area improves resistance to vibration and line loads.

Standard product specification: metal/metal seated, PTFE packed, stainless steel, T bar operation, globe pattern, 10,000 psig (689 barg).

Standard range part numbers

Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
HNV*4FFHP	1/4 NPT	1/4 NPT	60.5 (2.38")	31.8 (1.25")	82.6 (3.25")
HNV*8FFHP	1/2 NPT	1/2 NPT	69.9 (2.75")	31.8 (1.25")	82.6 (3.25")
	MPI™	MPI™			
HNV*4MPI	1/4	1/4	101.6 (4.00")	31.8 (1.25")	82.6 (3.25")
HNV*6MPI	3/8	3/8	113.6 (4.48")	31.8 (1.25")	82.6 (3.25")



*Insert material code
For MPI™ compression ended valve pressure ratings consult tube catalogue CAT 4234 for wall thickness and assembly instructions.
MPI™ only available in stainless steel.
Dimension "C" in open position.

Designed to meet pressure/temperature ratings of ANSI Class 4500 where applicable.
For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Rising plug valves (RPV series)

Purpose

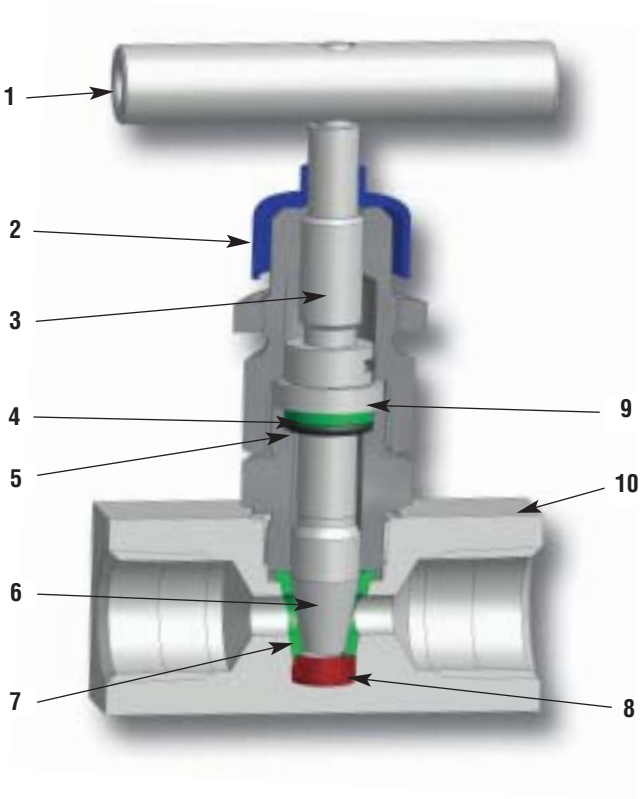
Rising plug soft seat valves have been specifically designed to perform with fluids containing high levels of contamination frequently found in oil and gas processing facilities. With a straight through flow pattern and giving 100% repeatable bubble tight shut off, the valves as a standard will perform up to 10,000 psig (689 barg) with low spindle operating torque's. A wide variety of end connections, material and standards such as NACE are available. A two piece non rotating lower spindle is standard and offers good flow control.

Specification

- Standard Orifice size 1/4" (6.4mm)
- Cv = 1.8.
- Maximum pressure up to 10,000 psig (689 barg).
- Temperature rating acetal seat Max 93C (200F).
- Temperature rating PEEK seat Max 204C (400F).
- Port sizes up to 1/2" pipe thread and 1/2"/12mm tube compression ends as standard.

Features

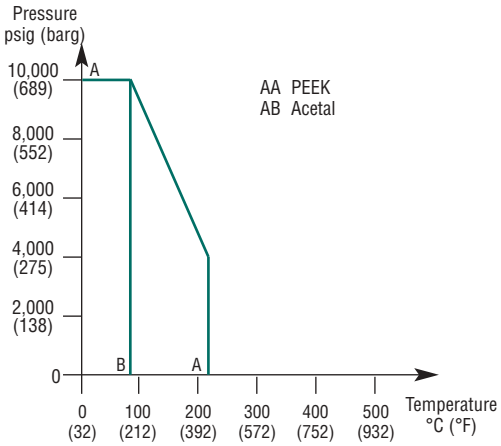
- Straight through flow path.
- Stainless steel construction standard.
- Standard multi port gauge style available.
- Bi directional flow.
- Panel mounting standard.
- Dust cap to prevent ingress of contamination to operating thread.
- Replaceable soft seat.
- Operating threads outside washout area.
- Alternative seat and materials of construction available.
- Colour coded functional identification.
- Variety of end connections including integral compression one piece bodies.
- Low torque operating T bar handle, optional handwheel available.
- Two piece non-rotating lower spindle tip for bubble tight shut off.
- Bonnet locking pin fitted as standard.



Part description

Item	Description
1	T bar handle assembly
2	Dust cap
3	Operating spindle
4	PTFE back up ring
5	Fluorocarbon rubber "O" ring
6	Lower spindle plug
7	Soft seat
8	Seat retainer
9	Packing retainer
10	Body

Pressure vs temperature

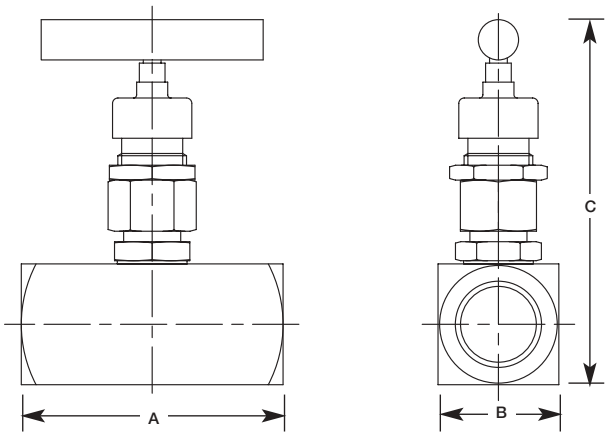


Standard product specification: supplied in 316L stainless steel with acetal soft seat, fluorocarbon rubber 'O' ring seal, 10,000 psig (689 barg) maximum pressure rating, 93C maximum temperature rating, panel mountable.

Standard range part numbers

Part no.	Connections		Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
4FRPV*	1/4 NPTF	1/4 NPTF	57.2 (2.25")	31.8 (1.25")	114.5 (4.5")
6FRPV*	3/8 NPTF	3/8 NPTF	57.2 (2.25")	31.8 (1.25")	114.5 (4.5")
8FRPV*	1/2 NPTF	1/2 NPTF	70.0 (2.75")	31.8 (1.25")	114.5 (4.5")
	Female	Male			
4F4MRPV*	1/4 NPTF	1/4 NPTM	84.1 (3.31")	31.8 (1.25")	114.5 (4.5")
8F8MRPV*	1/2 NPTF	1/2 NPTM	95.3 (3.75")	31.8 (1.25")	114.5 (4.5")
8F8MRPVG*	3x1/2 NPTF	1/2 NPTM	136.7 (5.38")	31.8 (1.25")	114.5 (4.5")
	A-LOK®	A-LOK®			
4ARPV*	1/4	1/4	72.5 (2.85")	31.8 (1.25")	114.5 (4.5")
8ARPV*	1/2	1/2	81.0 (3.20")	31.8 (1.25")	114.5 (4.5")
M6ARPV*	6mm	6mm	72.5 (2.85")	31.8 (1.25")	114.5 (4.5")
M12ARPV*	12mm	12mm	72.5 (2.85")	31.8 (1.25")	114.5 (4.5")

*Insert material code - select from material matrix on page 25
Notes for compression ended valves:-
1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Can be offered to comply with latest issue of NACE subject to para. 8.4.1.1.
4. For compression ended valve pressure ratings consult tube ratings table.
Dimension "C" in open position.



For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Multi-port gauge valves (GV series)

Purpose

Parker's Multi-port gauge valves are purpose designed valves for operation up to 6,000 psig (414 barg) and 10,000 psig (689 barg). Complete with standard PTFE gland packing and self centering none rotational plug gives the user assurance of bubble tight seat shut off. For gaseous application soft tipped optional seating is available. A wide variety of connector ends are offered for all types of installations. NACE compliance and oxygen clean are also available along with an extensive list of materials. Each valve has 3 female outlets giving the user optimum selection for instrument positioning and location.

Bleed valve

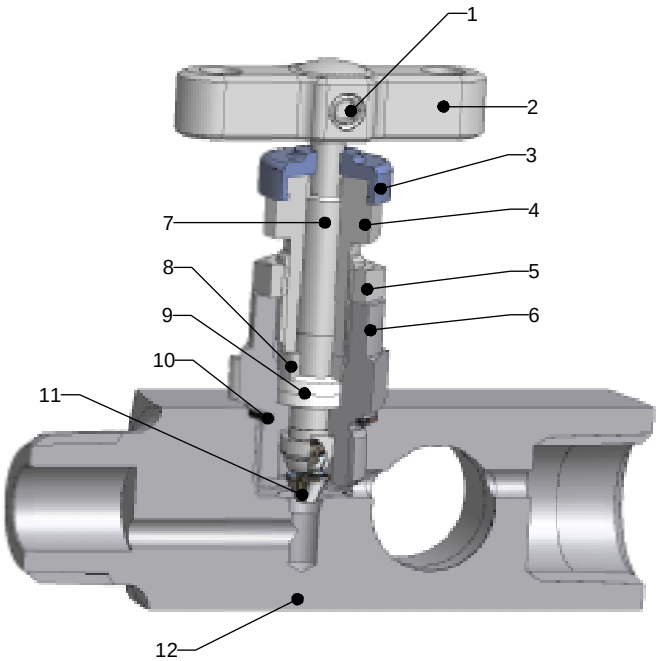
Plug

Specification

- Standard seat diameter 4mm (0.16").
- Cv: 0.35 standard.
- Maximum standard pressure up to 6,000 psig (414 barg).
- Maximum optional (HP) up to 10,000 psig (689 barg).
- Temperature rating -54C to +538C (-65F to +1000F).
- Port sizes up to 3/4" pipe thread as standard.

Features

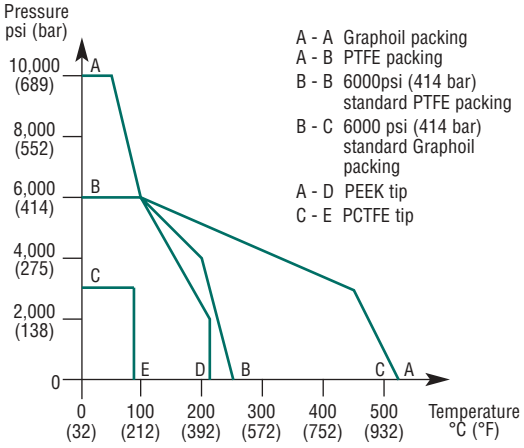
- Rolled spindle operating threads.
- Stainless steel construction as standard.
- PTFE packing standard, optional graphite.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention and minimal atmospheric leakage.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Base mount option.
- Variety of end connections including integral compression one piece bodies.
- Dust cap to prevent ingress of contamination to operating thread.
- Bonnet locking pin fitted as standard.



Part description

Item	Description
1	Locked grub screw
2	T bar handle assembly
3	Dust cap/function label
4	Gland adjuster
5	Gland locknut
6	Valve bonnet
7	Anti blowout spindle
8	Thrust bush
9	Gland packing (2)
10	Sealing washer
11	Self centering spindle tip
12	Body

Pressure vs temperature



Standard product specification: metal/metal seated, PTFE packed, stainless steel, T bar operation, globe pattern, 6000 psig (414 barg).
For complete supply of bleed valve and plug with the valve, add suffix's (see page 26/27).

Standard range part numbers

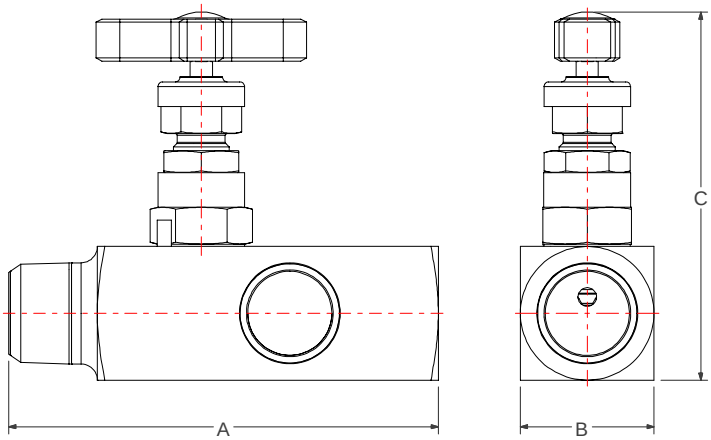
Part no.	Inlet	Outlet	Dimension			Pressure rating
	Male	Female x 3	A mm (inch)	B mm (inch)	C mm (inch)	
HGV*8	1/2 NPT	3 X 1/2" NPT	92.0 (3.62")	28.6 (1.13")	79.4 (3.13")	6,000 psi (414 bar)
HGV*12	3/4 NPT	3 X 1/2" NPT	95.0 (3.74")	28.6 (1.13")	79.4 (3.13")	6,000 psi (414 bar)
HGV*8HP	1/2 NPT	3 X 1/2" NPT	92.0 (3.62")	31.8 (1.25")	82.6 (3.25")	10,000 psi (689 bar)

*Insert material code - select from material matrix on page 25
Dimension "C" in open position.

To order individual bleed valves (captive spindle) & plugs

Part no.	Description	Connection
		Male
BC*4N	Bleed valve	1/4" NPT
BC*8N	Bleed valve	1/2" NPT
4PHSS	Hexagon plug	1/4" NPT
8PHSS	Hexagon plug	1/2" NPT
4PHHSS	Hollow hexagon plug	1/4" NPT
8PHHSS	Hollow hexagon plug	1/2" NPT

Plug part numbers are from IPD's pipe fitting range.



Designed to meet pressure/temperature ratings of ANSI Class 2500/4500 where applicable.
For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Single port gauge valves with vent (VG series)

Purpose

Parker's Single port gauge valves with vent are purpose designed valves for operation with any fluid up to 6,000 psig (414 barg) rating. Valves are provided with a single 1/4" NPT port for the optional fitting of captive bleed/vent valve or blank plug. Complete with standard PTFE gland packing and self centering none rotational plug gives the user assurance of total in service sealing security. For gaseous application soft tipped optional seating is available. A wide variety of end connectors are offered for all types of installations. NACE compliance and oxygen clean are also available along with an extensive list of materials of construction.

Bleed valve

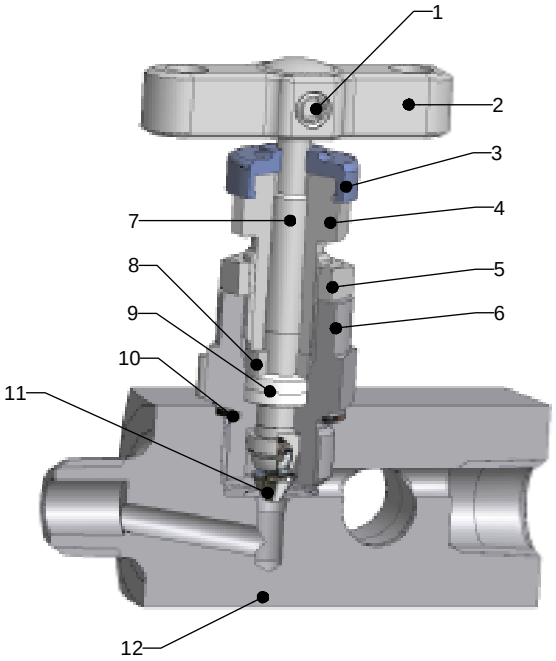
Plug

Specification

- Standard seat diameter 4mm (0.16").
- Cv: 0.35 standard.
- Maximum std. pressure up to 6,000 psig (414 barg).
- Temperature rating -54C to +538C (-65F to +1000F).
- Port sizes up to 1/2" pipe thread and 1/2"/12mm tube compression ends.

Features

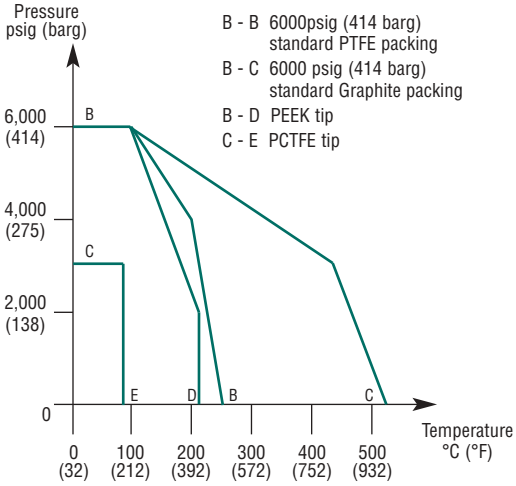
- Rolled spindle operating threads.
- Stainless steel construction standard.
- PTFE packing standard, optional graphite.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention and minimal atmospheric leakage.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Base mount option.
- Variety of end connections including integral compression one piece bodies.
- Firesafe option available to API 607 BS 6755 Part 2 (see page 24).
- Dust cap to prevent ingress of contamination to operating thread.
- Bonnet locking pin fitted as standard.



Part description

Item	Description
1	Locked grub screw
2	T bar handle assembly
3	Dust cap/function label
4	Gland adjuster
5	Gland locknut
6	Valve bonnet
7	Anti blowout spindle
8	Thrust bush
9	Gland packing (2)
10	Sealing washer
11	Self centering spindle tip
12	Body

Pressure vs temperature



Standard product specification: metal/metal seated, PTFE packed, stainless steel, T bar operation, globe pattern, 1/4" NPT vent/bleed port, 6,000 psig (414 barg).
Add suffix's to obtain bleed valve or plug.

Standard range part numbers

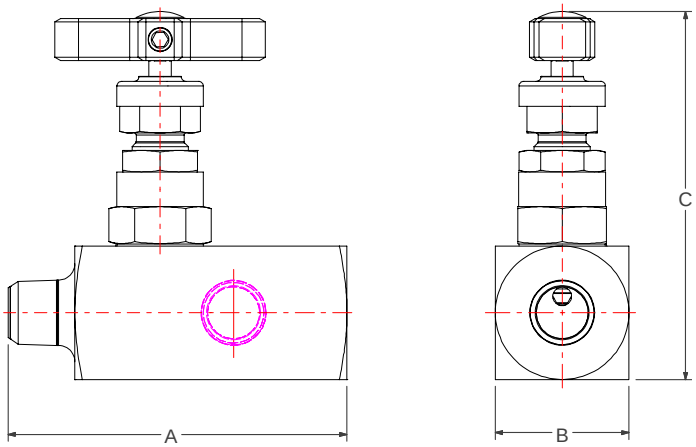
Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
HNV*4FFV	1/4 NPT	1/4 NPT	63.5 (2.50")	28.6 (1.13")	79.4 (3.13")
HNV*6FFV	3/8 NPT	3/8 NPT	67.0 (2.64")	28.6 (1.13")	79.4 (3.13")
HNV*8FFV	1/2 NPT	1/2 NPT	75.0 (3.00")	28.6 (1.13")	79.4 (3.13")
	Male	Female			
HNV*4M4FV	1/4 NPT	1/4 NPT	72.5 (2.85")	28.6 (1.13")	79.4 (3.13")
HNV*8M8FV	1/2 NPT	1/2 NPT	85.8 (3.38")	28.6 (1.13")	79.4 (3.13")

*Insert material code - select from material matrix on page 25.
Dimension "C" in open position.

To order individual bleed valves (captive spindle) & plugs

Part no.	Description	Connection
		Male
BC*4N	Bleed valve	1/4" NPT
4PHSS	Hexagon plug	1/4" NPT
4PHHSS	Hollow hexagon plug	1/4" NPT

Plug part numbers are from IPD's pipe fitting range.



Designed to meet pressure/temperature ratings of ANSI Class 2500 where applicable.
For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Outside screw and yoke globe pattern needle valves (YV series)

Purpose

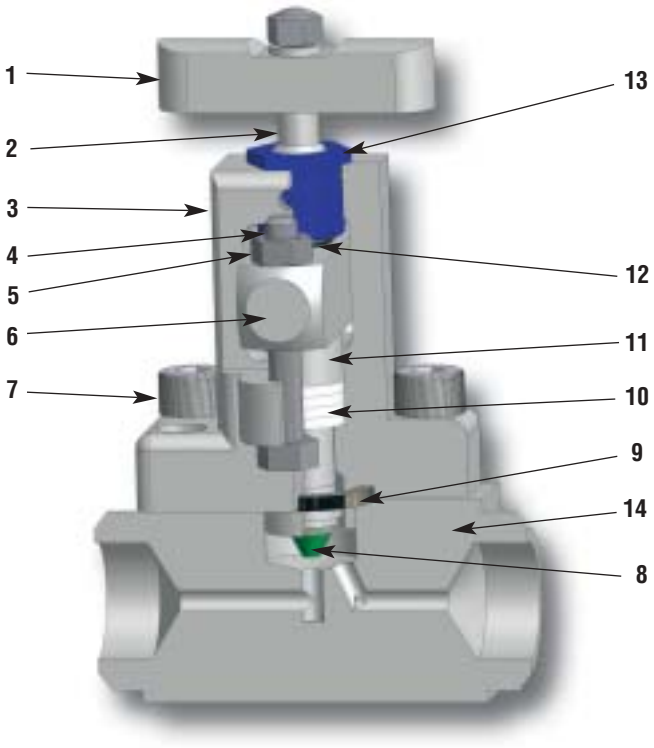
Outside screw and yoke valves are designed for primary isolating applications operating up to 6,000 psig (414 barg) with optional 10,000 psig (689 barg) rating. The valve is supplied complete with standard graphite gland packing and the self centering none rotational plug gives bubble tight sealing. For gaseous application soft tipped optional seating is available. A wide variety of connector ends are offered for all types of installations including multi-ported root/primary isolate service. NACE compliance and oxygen clean are also available along with an extensive list of materials. Firesafe to API 607 and BS 6755 Part 2 can be certified standard with graphite packing.

Specification

- Standard seat diameter 4mm (0.16").
- Cv: 0.35 standard.
- Maximum standard pressure up to 6,000 psig (414 barg).
- Maximum optional pressure up to 10,000 psig (689 barg).
- Temperature rating -54C to +538C (-65F to +1000F).
- Port sizes up to 1/2" pipe thread and 1/2"/12mm tube compression ends as standard.

Features

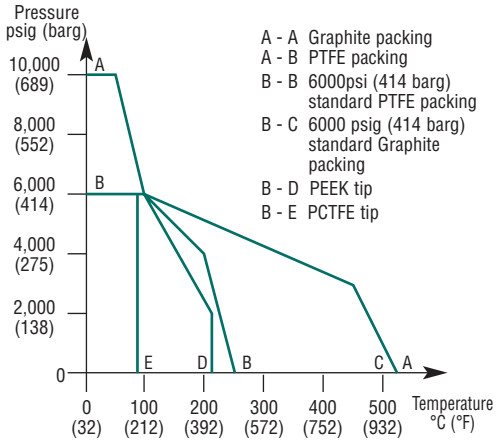
- Rolled spindle operating threads.
- Stainless steel construction standard.
- Graphite packing standard, PTFE optional.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention.
- Externally adjustable gland independent of spindle thread.
- Base mount option.
- Variety of end connections including integral compression one piece bodies.
- Angled versions available.
- Firesafe certified to API 607 BS 6755 Part 2.



Part description

Item	Description
1	Handle assembly
2	Spindle
3	Yoke
4	Gland adjustment bolts
5	Gland adjustment nuts
6	Gland adjustment bar
7	Yoke retention bolts
8	Self centering spindle tip
9	Body to bonnet sealing gasket
10	Gland packing rings
11	Gland follower
12	Thread protection 'O' ring
13	Operating spindle bush
14	Body

Pressure vs temperature

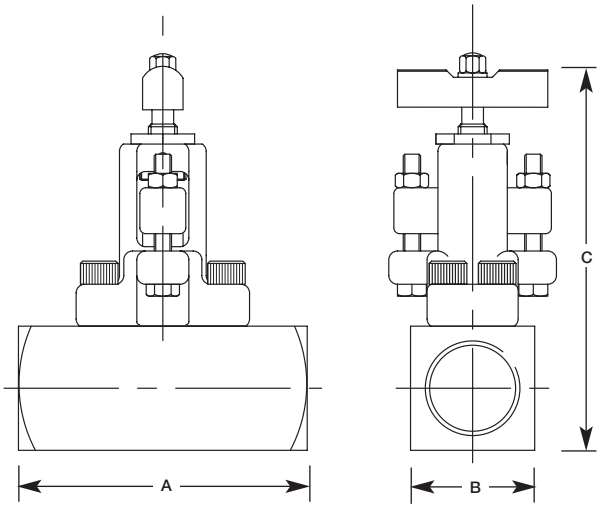


Standard product specification: metal/metal seated, Graphite packed, stainless steel, T bar operation, inline pattern, 6000psig (414 barg).

Standard range part numbers

Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
YNV*4FF	1/4 NPT	1/4 NPT	80.0 (3.15")	31.8 (1.25")	128.0 (5.00")
YNV*6FF	3/8 NPT	3/8 NPT	80.0 (3.15")	31.8 (1.25")	128.0 (5.00")
YNV*8FF	1/2 NPT	1/2 NPT	95.0 (3.75")	31.8 (1.25")	128.0 (5.00")
	Male	Female			
YNV*4M4F	1/4 NPT	1/4 NPT	95.0 (3.75")	31.8 (1.25")	128.0 (5.00")
YNV*8M8F	1/2 NPT	1/2 NPT	100.0 (3.95")	31.8 (1.25")	128.0 (5.00")
YNV*8MG8F	1/2 NPT	3 x 1/2 NPT	140.0 (5.50")	31.8 (1.25")	128.0 (5.00")
	Socket weld	Socket weld			
YNV*SW8NB	1/2 pipe	1/2 pipe	100.0 (3.95")	31.8 (1.25")	128.0 (5.00")
	Butt weld	Butt weld			
YNV*BW8NB	1/2 pipe	1/2 pipe	120.0 (4.75")	31.8 (1.25")	128.0 (5.00")
	A-LOK®	A-LOK®			
YNV*4A	1/4	1/4	115.0 (4.50")	31.8 (1.25")	128.0 (5.00")
YNV*8A	1/2	1/2	120.0 (4.70")	31.8 (1.25")	128.0 (5.00")
YNV*M6A	6mm	6mm	115.0 (4.50")	31.8 (1.25")	128.0 (5.00")
YNV*M12A	12mm	12mm	120.0 (4.70")	31.8 (1.25")	128.0 (5.00")

*Insert material code - select from material matrix on page 25.
Notes for compression ended valves:-
1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Cannot be offered for NACE.
4. For compression ended valve pressure ratings consult tube ratings table.
Dimension "C" in open position.



For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Forged high pressure needle valves (FN series)

Purpose

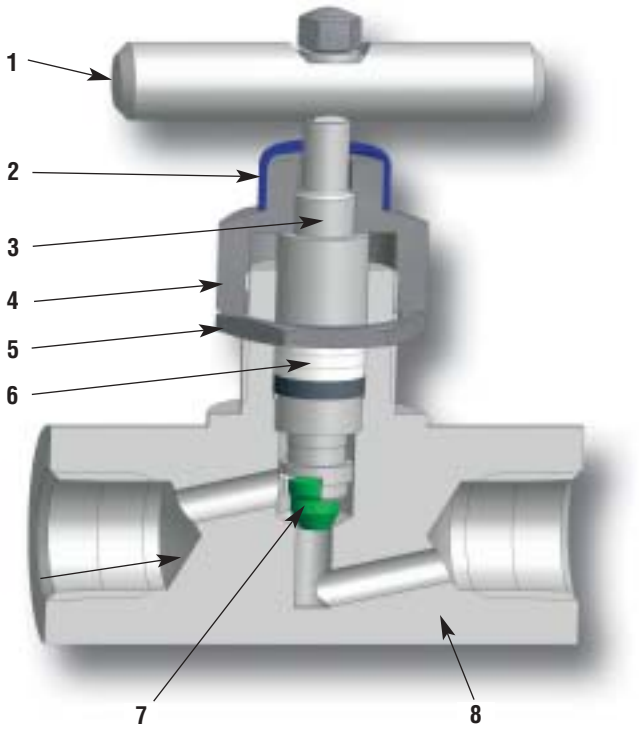
Parker's Forged needle valve is a rugged metal seated straight or angled pattern design for operation up to 10,000 psig (689 barg).
Provided with a self centering non rotating tip this valve provides positive bubble tight seat shut off for any fluid.
The valve complies with the sour gas requirements for NACE and can also be cleaned and lubricated for oxygen use.

Specification

- Standard seat diameter 6mm (0.24").
- Cv: 0.85.
- Maximum pressure up to 10,000 psig (689 barg).
- Temperature rating -54C to +538C (-65F to +1000F).

Features

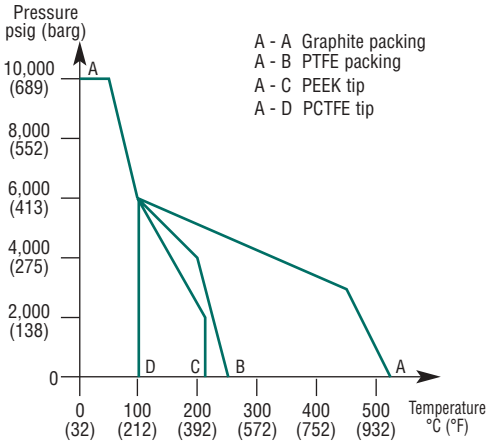
- Rolled spindle operating threads.
- Stainless steel construction standard.
- PTFE packing standard, optional graphite.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Integral bonnet style design.
- Back stop spindle for blowout prevention.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Variety of end connections including integral compression one piece bodies.
- Angled versions available.
- Dust cap to prevent ingress of contamination to operating thread.



Part description

Item	Description
1	T-bar handle assembly
2	Dust cap
3	Operating spindle
4	Bonnet assembly nut
5	Bonnet lock nut
6	Gland packing
7	Self centering non rotational plug
8	Body

Pressure vs temperature

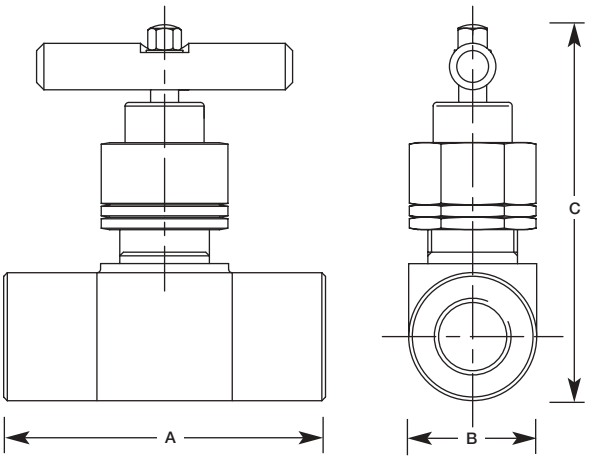


Standard product specification: metal/metal seated, PTFE packed, Stainless steel, T bar operation, globe pattern.

Standard range part numbers

Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
FNV*4FF	1/4 NPT	1/4 NPT	86.0 (3.40")	65.5 (2.55")	102.0 (4.00")
FNV*6FF	3/8 NPT	3/8 NPT	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")
FNV*8FF	1/2 NPT	1/2 NPT	86.0 (3.40")	65.5 (2.55")	102.0 (4.00")
	Male	Female			
FNV*4M4F	1/4 NPT	1/4 NPT	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")
FNV*8M8F	1/2 NPT	1/2 NPT	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")
	A-LOK®	A-LOK®			
FNV*4A	1/4	1/4	95.0 (3.75")	65.5 (2.55")	102.0 (4.00")
FNV*8A	1/2	1/2	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")
FNV*M6A	6mm	6mm	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")
FNV*M12A	12mm	12mm	88.0 (3.45")	65.5 (2.55")	102.0 (4.00")

*Insert material code - select from material matrix on page 25.
Notes for compression ended valves:-
1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Cannot be offered to comply with latest issue of NACE subject to para. 8.4.1.1.
4. For compression ended valve pressure ratings consult tube ratings table.



For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Cryogenic needle valves (CN series)

Purpose

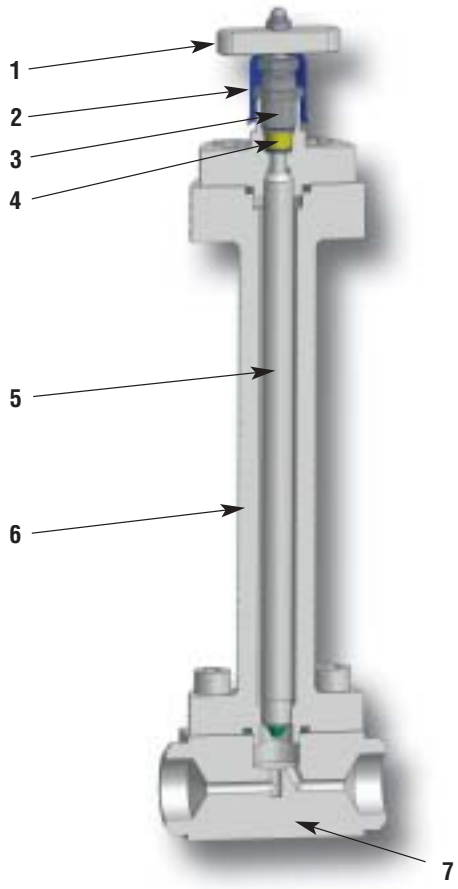
Parker's Cryogenic needle valves are purpose designed valves for operation up to 6,000 psig (414 barg) and temperature range of -196C to +260C.
Complete with standard PTFE gland packing and self centering none rotational plug gives assurance of total in service sealing security. A wide variety of end connections are available including pipe and tubing, customised extended weldable stub ends are also available.
The cryogenic valve is a conventional globe pattern needle design that can be used in most demanding conditions including cryogenic trailers, pumping stations, cold boxes, and tanks.

Specification

- Standard seat diameter 4mm (0.16")
- Cv: 0.35 standard.
- Maximum std. pressure up to 6,000 psig (414 barg).
- Temperature rating -196C to +260C (-320F to +500F).
- Tested and certified to -196C @ 290psig.
- Port sizes up to 1/2" pipe thread and 1/2"/12mm tube compression ends as standard.

Features

- Rolled spindle operating threads.
- Stainless steel construction standard.
- PTFE packing standard.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Colour coded functional identification.
- Back stop spindle for blowout prevention.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Variety of end connections including. integral compression one piece bodies.
- Dust cap to prevent ingress of contamination to operating thread.
- Indepedant test certificate for cryogenic service.



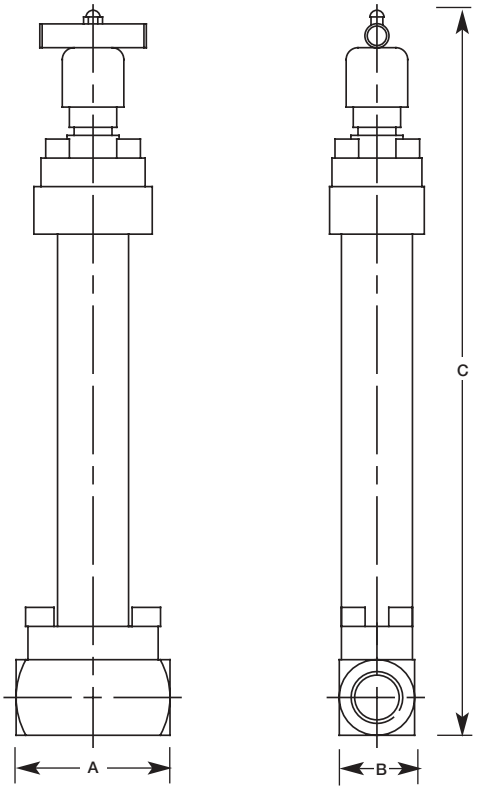
Part description

Item	Description
1	T bar handle assembly
2	Dust cap
3	Gland adjuster
4	Gland packing
5	Operating spindle
6	Cryogenic extension
7	Valve body

Standard product specification: metal/metal seated, PTFE packed, 200mm bonnet extension, stainless steel, T bar operation, inline pattern, 6,000psig (414 barg).

Standard range part numbers

Part no.	Connections		Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
CNV*4FF	1/4 NPT	1/4 NPT	80.0 (3.15")	31.8 (1.25")	305.8 (12.00")
CNV*6FF	3/8 NPT	3/8 NPT	80.8 (3.20")	31.8 (1.25")	305.8 (12.00")
CNV*8FF	1/2 NPT	1/2 NPT	95.0 (3.75")	31.8 (1.25")	305.8 (12.00")
	Male	Female			
CNV*4M4F	1/4 NPT	1/4 NPT	95.0 (3.75")	31.8 (1.25")	305.8 (12.00")
CNV*8M8F	1/2 NPT	1/2 NPT	100.0 (3.95")	31.8 (1.25")	305.8 (12.00")
	Socket weld	Socket weld			
CNV*SW8NB	1/2 pipe	3 x 1/2 pipe	100.0 (3.95")	31.8 (1.25")	305.8 (12.00")
	Butt weld	Butt weld			
CNV*BW8NB	1/2 pipe	1/2 pipe	120.0 (4.75")	31.8 (1.25")	305.8 (12.00")
	A-LOK®	A-LOK®			
CNV*4A	1/4	1/4	115.0 (4.50")	31.8 (1.25")	305.8 (12.00")
CNV*8A	1/2	1/2	120.0 (4.70")	31.8 (1.25")	305.8 (12.00")
CNV*M6A	6mm	6mm	115.0 (4.50")	31.8 (1.25")	305.8 (12.00")
CNV*M12A	12mm	12mm	120.0 (4.70")	31.8 (1.25")	305.8 (12.00")



*Insert material code - select from material matrix on page 25.
Notes for compression ended valves:-
1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Cannot be offered for NACE.

For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Miniature bar stock needle valves (MN series)

Purpose

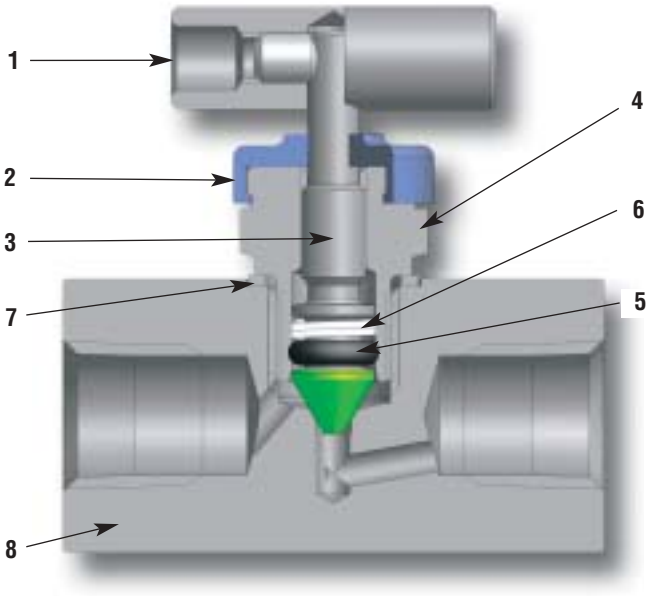
Miniature needle valves are ideal for installation inside control panels and other size limited installations where space and weight are primary considerations.
For additional space and weight saving, single valves can be supplied with integral bodies which incorporate tube fitting end connections. This means that the body of the valve and the end connection are a one-piece machined item.

Specification

- Standard seat diameter 3.3mm (0.13").
- Cv inline: 0.29 angled: 0.34.
- Maximum std. pressure up to 6,000 psig (414 barg).
- Temperature rating -26C to +204C (-15F to +400F).

Features

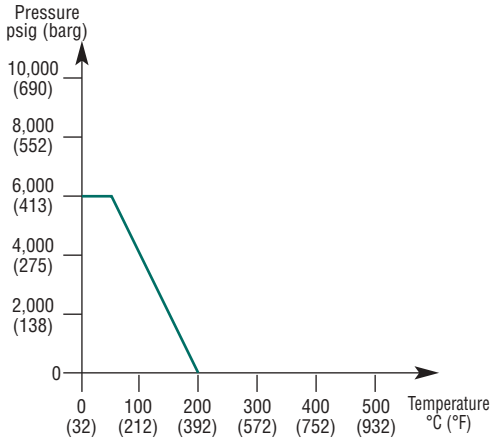
- Bubble tight seat and gland shut off.
- Colour coded dust cap.
- Back stop spindle for blow out prevention and minimal atmospheric leakage.
- Low torque operating T bar handle.
- Base mount option.
- Variety of end connections including integral compression one piece bodies.
- Angled versions available.
- Bonnet locking pin fitted as standard.



Part description

Item	Description
1	Handle
2	Dust cap
3	Spindle
4	Bonnet
5	'O' Ring
6	PTFE back up ring
7	Sealing washer
8	Body

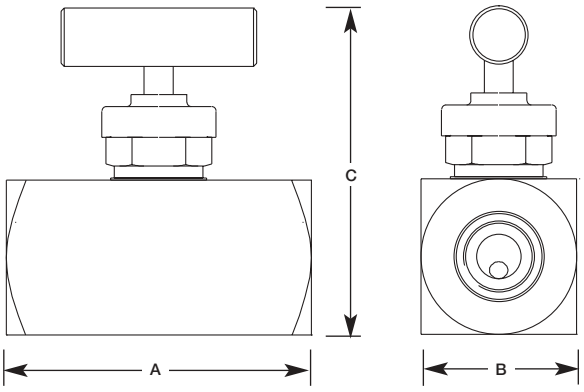
Pressure vs temperature



Standard product specification: metal/metal seated, Fluorocarbon rubber seal, 316L stainless steel construction, T bar operation, inline and angled pattern.

Standard range part numbers

Part no.	Inlet	Outlet	Dimension		
	Female	Female	A mm (inch)	B mm (inch)	C mm (inch)
MNV*4FF	1/4 NPT	1/4 NPT	51.0 (2.0")	25.4 (1.0")	54 (2.1")
	Male	Female			
MNV*4M4F	1/4 NPT	1/4 NPT	51.0 (2.0")	25.4 (1.0")	54 (2.1")
MANV*4MF	1/4 NPT	1/4 NPT	31.8 (1.25")	31.8 (1.25")	76.2 (3.0")**
	A-LOK®	A-LOK®			
MNV*4A	1/4	1/4	68 (2.7")	25.4 (1.0")	54 (2.1")
MNV*M6A	6mm	6mm	68 (2.7")	25.4 (1.0")	54 (2.1")



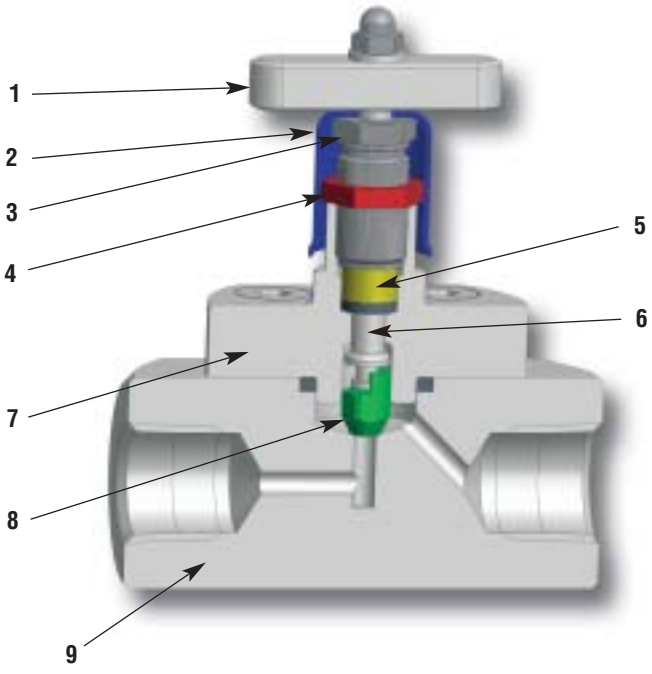
*Insert materials
Notes for compression ended valves:-
1. For CPI™ change A to Z.
2. "A" dimension given for finger tight nuts and ferrules.
3. Can be offered to comply with latest issue of NACE subject to para. 8.4.1.1
**Angle pattern.
Dimension "C" in open position

For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Firesafe needle valve

Purpose

This design is suitable for mounting into a variety of single valves shown in this catalogue, in particular the certified firesafe version is available in globe style bar stock needle (page 6 & 7) multi-port gauge valve (page 12 & 13) and single port vented gauge valves (page 14 & 15).
NACE compliance and oxygen clean are also available along with an extensive list of materials of construction.



Specification

- Standard seat diameter 6mm (0.25").
- Fully compliant and certified firesafe to API 607.
- BS 6755 Part 2.
- Cv: 0.35 standard.
- Normal operating maximum standard pressure up to 6,000 psig (414 barg).
- Normal operating temperature rating -54C to +538C (-65F to +1000F).
- Height from top of valve body = 120mm (4.75").

Features

- Rolled spindle operating threads.
- 316L stainless steel construction standard.
- Alternative seat and materials of construction available.
- Self centering non rotating spindle tip for bubble tight shut off.
- Back stop spindle for blowout prevention.
- Low torque operating T bar handle.
- Externally adjustable gland.
- Base mount option.
- Dust cap to prevent ingress of contamination to operating thread.

Part description

Item	Description
1	T bar handle assembly
2	Dust cap
3	Gland adjuster
4	Gland locknut
5	Gland packing
6	Operating spindle
7	Bolted bonnet
8	Non rotating tip
9	Body

For a full list of options and suffix's, see pages 26-27. For a full list of materials and specifications, see page 25.

Instrumentation hand valves

		Valve types				
						
Material	***Insert code for selected material in part number**	**Needle (NV series) page 6 & 7**	**Needle (NV series) page 8 & 9**	**Rising plug (RPV series) page 10 & 11**	**Multi-port (GV series) page 12 & 13**	**Single port (VG series) page 14 & 15**
Stainless steel std.	S	✓	✓	*✓	✓	✓
Monel	M	✓	✓	✓	✓	✓
Duplex	D1	✓	✓	✓	✓	✓
Super Duplex	D2	✓	✓	✓	✓	✓
Hasteloy	HC	✓	✓	✓	✓	✓
Carbon Steel	C	✓	✓		✓	✓
6Mo	6MO	✓	✓	✓	✓	✓
Titanium	T	✓	✓	✓	✓	✓
Incoloy 825	825	✓	✓	✓	✓	✓
Inconel 625	625	✓	✓	✓	✓	✓

All non-wetted parts ie those not in contact with the process medium will be supplied in stainless steel for all materials shown above.
* For rising plug valve only in stainless steel use SS as material indicator.

		Valve types			
					
Material	***Insert code for selected material in part number**	**Outside screw and yoke (YV series) page 16 & 17**	**Forged valves (FN series) page 18 & 19**	**Cryogenic (CV series) page 20 & 21**	**Miniature (MN series) page 22 & 23**
Stainless steel std.	S	✓	✓	✓	✓
Monel	M	✓		✓	✓
Duplex	D1	✓		✓	✓
Super Duplex	D2	✓		✓	✓
Hasteloy	HC	✓		✓	✓
Carbon Steel	C	✓	✓		
6Mo	6MO	✓		✓	✓
Titanium	T	✓		✓	✓
Incoloy 825	825	✓		✓	✓
Inconel 625	625	✓		✓	✓

All non-wetted parts ie those not in contact with the process medium will be supplied in stainless steel for all materials shown above.
* For rising plug valve only in stainless steel use SS as material indicator.

Instrumentation hand valves

Available options				Valve types		
						
Suffix adding sequence	Function	Option Detail	Part no. suffix	Needle (NV series) page 6 & 7	Needle (NV series) page 8 & 9	Rising plug (RPV series) page 10 & 11
1	**Gland packing**	Graphite	3	✓	✓	✓
		PTFE	T			✓
		H. F. Fluorocarbon	F			✓
		EPR	E			✓
		Nitrile	B			✓
		Silicone	S			✓
2	**Seating**	PCTFE	9	✓		✓
		PEEK	PK	✓	✓	✓
		Stellite tip	ST	✓	✓	
		6mm seat	6S	✓		
3	**Plug/Bleed valve**	Blank plug	P			✓
	(supplied loose in box)	Bleed valve	BV			✓
		Plug & bleed valve	PBV			✓
4	**Connection style**	Socket weld (* insert pipe size)	SW*NB	✓	✓	
		Butt weld (* insert pipe size)	BW*NB	✓	✓	
		Stub pipe extension (insert length in *mm)	SP*MM	✓	✓	
		Male inlet extension (* insert length in mm)	EX*MM	✓	✓	✓
		BSPT (* insert pipe size (e.g. 8K = 1/2")	*K	✓	✓	✓
		BSPP (* insert pipe size (e.g. 4R = 1/4")	*R	✓	✓	✓
		Flange (specify separately)	FL	✓	✓	
5	**Connection sizing**	See below†		✓	✓	✓
6	**Flow pattern**	Angled	ANG	✓		
	Operating mechanism	Lockable T bar	THL	✓	✓	✓
		Anti tamper T bar	AT	✓	✓	
		Anti tamper + key	ATK	✓	✓	
		Handwheel	HW	✓	✓	✓
		Lockable handwheel	LHW	✓	✓	✓
7	**Mounting**	Panel mount	PM	✓		
		Base mount	BM	✓	✓	✓
8	**Condition**	NACE (latest issue)	NACE	✓	✓	✓
		Cleaned and lubricated for oxygen use	OXY	✓	✓	✓
		Firesafe	FS	✓		
		**Heat code trace certificates	HCT	✓	✓	✓
		Test certificates	TC	✓	✓	✓
		Air testing	PT	✓	✓	✓

†For tube socket or tube butt weld use 1/16 inch denominations and change NB to TB.
†For metric tube size use actual metric (mm) dimensions e.g. SW12MMTB.
**Heat code traceable certificates for body and bonnet stud available on application.

Valve types						
						
Multi-port (GV series) page 12 & 13	Single port (VG series) page 14 & 15	Outside screw and yoke (YV series) page 16 & 17	Forged valves (FN series) page 18 & 19	Cryogenic (CV series) page 20 & 21	Miniature (MN series) page 22 & 23	Option Detail
✓	✓		✓			Graphite
		✓				PTFE
						H. F. Fluorocarbon
						EPR
						Nitrile
						Silicone
✓	✓	✓	✓			PCTFE
✓	✓	✓	✓			PEEK
✓	✓	✓	✓	✓		Stellite tip
						6mm seat
✓						Blank plug 1/2 NPT
✓						Bleed valve
✓						Plug & bleed valve
✓	✓	✓	✓	✓		Socket weld *insert pipe size
✓	✓	✓	✓	✓		Butt weld * insert pipe size
✓	✓	✓	✓	✓		Stub pipe extension insert length in *mm
✓	✓	✓	✓	✓		Male inlet extension* insert length in mm
✓	✓	✓	✓	✓	✓	BSPT * pipe size (e.g. 8K = 1/2")
✓	✓	✓	✓	✓	✓	BSPP * pipe size (e.g. 4R = 1/4")
✓	✓	✓	✓	✓		Flange (specify separately)
✓	✓			✓	✓	See below†
		✓	✓		✓	Angled
✓	✓	✓	✓	✓		Lockable T bar
✓	✓					Anti tamper T bar
✓	✓					Anti tamper + key
✓	✓	✓	✓	✓		Handwheel
✓	✓	✓	✓	✓		Lockable handwheel
	✓					Panel mount
✓	✓	✓				Base mount
✓	✓	✓	✓		✓	NACE (latest issue)
✓	✓	✓	✓	✓	✓	Cleaned and lubricated for oxygen use
✓	✓					Firesafe
✓	✓	✓	✓	✓	✓	*Heat code trace certificates
✓	✓	✓	✓	✓	✓	Test certificates
✓	✓	✓	✓	✓	✓	Air testing

Optional connection size part numbering

†For optional pipe or compression ends up to 1" use 1/16 denominations as shown in part numbers e.g. 3/4 NPT F/F = NV*12FF

†For optional compression end sizes up to 25mm use actual mm size denominations as shown in part numbers e.g. 16mm A-LOK = NV*M16A