



Hanley Controls Clonmel Ltd
Gortnaflour, Clonmel, Co. Tipperary
Tel: +353 (0)52 6122722
e-mail: info@hccl.ie
web: www.hccl.ie



Instrumentation Hand Valves

Catalog 4190-HV

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Hand Valves

Globe style bonnet design for HNV, HGV and HVG series

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 21. 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.

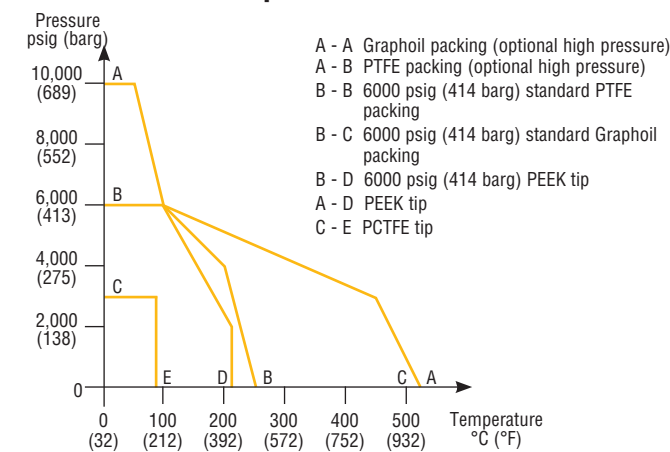
Specification

- 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)

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 compliant wetted parts available
- Optional cleaned and lubricated suitable for Oxygen service
- Heat code traceable body and bonnet

Pressure vs temperature



⚠ When selecting products for specific applications users should refer to our notice at the bottom of page 3.

Hand Valves

Optional globe style bonnet design for HNV, HGV and HVG 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	*Panel mounting	B31.1 compliant
 Retro-fit kit part number KITHW Factory assembled suffix HW	 Retro-fit kit part number KITPM† Factory assembled suffix PM † Panel mount kit for HP: KITPMHP	 See page 19 for details
Lockable handwheel		
 Retro-fit kit part number KITLHW Factory assembled suffix LHW		

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

†Panel mounting hole diameter = 31mm/1.22"

Hand Valves

Multi-port gauge valves (HGV 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 tip 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

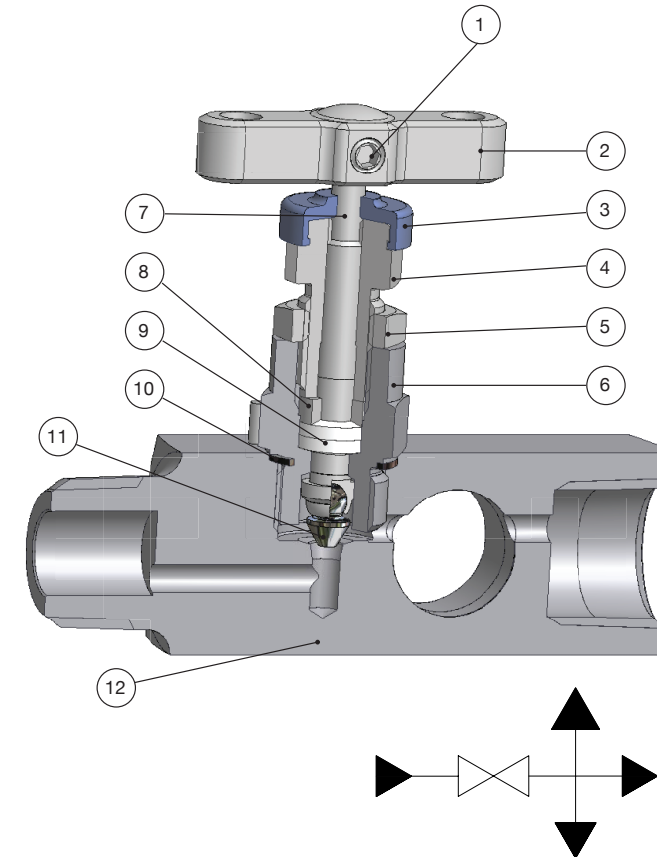
Specification

- 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 tip 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

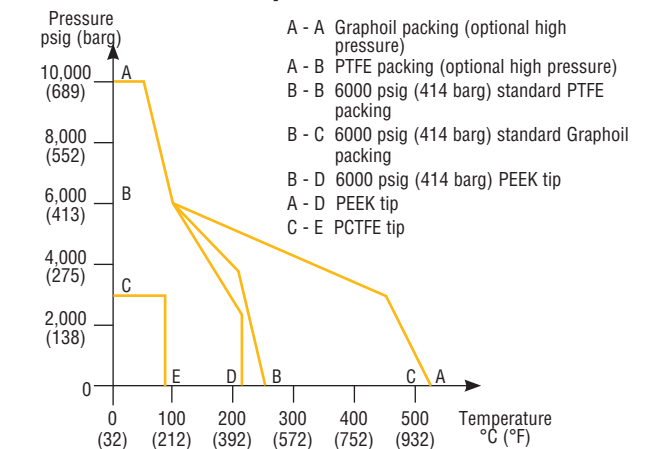
Hand Valves



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



⚠ When selecting products for specific applications users should refer to our notice at the bottom of page 3.

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 20).

Standard range part numbers

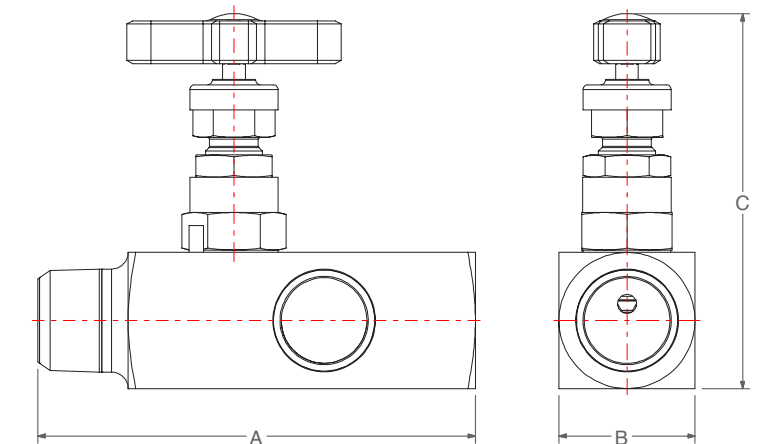
Part no.	Inlet		Outlet		Dimension			Pressure rating
	Male	Female x 3	A mm (inch)	B mm (inch)	C mm (inch)			
HGV*8	1/2 NPT	3 X 1/2" NPT	92.0 (3.62")	28.6 (1.13")	79.4 (3.13")		6,000 psi (414 bar)	
HGV*12	3/4 NPT	3 X 1/2" NPT	95.0 (3.74")	28.6 (1.13")	79.4 (3.13")		6,000 psi (414 bar)	
HGV*8HP	1/2 NPT	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 21
Dimension "C" in open position.

To order individual bleed valves (captive spindle) & plugs

Part no.	Description	Connection
HBV*4M	Bleed valve	1/4" NPT
HBV*8M	Bleed valve	1/2" NPT
4PHSS	Hexagon plug	1/4" NPT
8PHSS	Hexagon plug	1/2" NPT
4PHSS	Hollow hexagon plug	1/4" NPT
8PHSS	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 page 20. For a full list of materials and specifications, see page 21.

Hand Valves

Instrumentation hand valves

Available options			Valve types							
Suffix adding sequence	Function	Option Detail	Part no. suffix	Needle (HNV series) page 6 & 7	Needle (HNV series) page 8 & 9	Rising plug (HRPV series) page 10 & 11	Multi-port (HGV series) page 12 & 13	Single port (HVG series) page 14 & 15	Outside Screw & yoke (HYNV series) page 14 & 15	B31.1 compliant Power Plant
1	Gland packing	Graphite	3	✓	✓	✓	✓	✓		STD
2	Seating	PCTFE (207 bar/3000 psi)	9	✓	✓	✓	✓	✓	✓	
		PEEK	PK	✓	✓	✓	✓	✓	✓	
		Stellite Tip	ST	✓	✓		✓	✓	✓	✓
		Regulating tip (4mm seat only)	RT	✓	✓					
		6mm seat	6S	✓	✓					
3	Plug/Bleed valve (supplied loose in box)	Blank plug	P			✓	✓			
		Bleed valve	BV			✓	✓			
		Plug & bleed valve	PBV			✓	✓			
4	Connection style	Socket weld (* insert pipe size)	SW*NB	✓	✓		✓	✓	✓	✓
		Male socket weld (*insert pipe size)	MSW*NB	✓	✓		✓	✓	✓	✓
		Butt weld (* insert pipe size) (# insert schedule)	BW*NBSCH#	✓	✓		✓	✓	✓	✓
		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 Operating mechanism	Angled	ANG	✓	✓			✓	✓	✓
		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 compliant materials**	NC	✓	✓	✓	✓	✓	✓	✓
		Cleaned and lubricated for oxygen use	OXY	✓	✓	✓	✓	✓	✓	✓
		Firesafe	FS	✓			✓	✓	✓	✓
		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.

Note: Heat code traceable certificates for body and bonnet stud available on application.

**Does not apply for A-LOK®/CPI™ ended valves in 316 stainless steel.

Hand Valves

Instrumentation hand valves

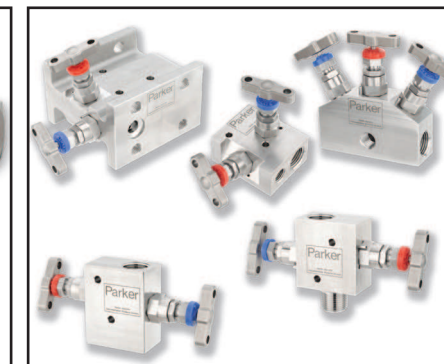
Available options		Valve types							
Material	*Insert code for selected material in part number	Needle (HNV series) page 6 & 7	Needle (HNV series) page 8 & 9	Rising plug (HRPV series) page 10 & 11	Multi-port (HGV series) page 12 & 13	Single port (HVG series) page 14 & 15	Outside Screw & yoke (HYNV series) page 14 & 15	B31.1 compliant Power Plant	
Stainless steel std.	S	✓	✓	*✓	✓	✓	✓	✓	
Monel	M	✓	✓	✓	✓	✓	✓		
Duplex	D1	✓	✓	✓	✓	✓	✓		
Super Duplex	D2	✓	✓	✓	✓	✓	✓		
Hasteloy	HC	✓	✓	✓	✓	✓	✓	✓	
Carbon Steel	C	✓	✓		✓	✓	✓	✓	
6Mo	6MO	✓	✓	✓	✓	✓	✓		
Titanium	T	✓	✓	✓	✓	✓	✓		
Incoloy 825	825	✓	✓	✓	✓	✓	✓		
Incoloy 825	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.

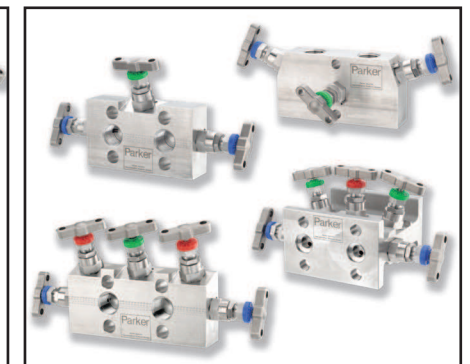
The widest range of precision Instrumentation products



Cat 4190-FP
Flanged products



Cat 4190-PM
Two valve manifolds



Cat 4190-FM
Three and five valve manifolds



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