

# Process Instrumentation Valve and Manifold Solutions

H Series Product Range



ENGINEERING YOUR SUCCESS.

# General Technical Information

## Design

All valves and manifolds are designed to meet the pressure and temperature ratings of ANSI B16.34 Class 2500/Class 4500 as applicable, limited only by selection of gland packing materials, Conformity to the recommendations of MSS SP-99 is also assured.

### Relevant codes, standards and specifications

Code/Specification	Description
DIN EN61518 / IEC 61518	Mating dimensions between differential pressure (type) measuring instruments
ASME B31.1	Power Piping Specification for Pipeline Valves
ASME B16.34	Valves - Flanged, Threaded and Welding End
ASME B16.5	Pipe Flanges and Flanged Fittings
NACE MR0175 / ISO 15156	Petroleum and Natural Gas Industries - Materials for use in H2S - containing Environments in Oil and Gas Production
API 598	Valves Inspection and Testing
ISO 5208	Industrial Valves - Pressure Testing of Metallic Valves
API 607 / ISO 10497	Fire Test of Soft-Seated Quarter Turn Valves
MSS SP-25	Fire type-testing requirements
MSS SP-61	Standard Marking Systems for Valves, Fittings, Flange and Unions
MSS SP-99	Pressure Testing of Valves
ISO 15848	Instrument Valves
TA Luft	Industrial valves— Measurement, test and qualification procedures for fugitive emissions
	TA-Luft 2002, Absatz 5.2,6.4 und VDI 2440 (Ausgabe Nov. 2000), Absatz 3.31,3

## Materials of construction

All materials are purchased from long standing reputable sources, conforming not only to recognised national/international standards, but also to additional requirements imposed by Parker to assure suitability/usability across the widest spectrum of user applications.  
A range of techniques and processes including PMI (Positive Material Identification) are used to validate all incoming material supplies, segregation, storage and maintenance of product quality.

### Body material options

Material Group	Material Designator	UNS No.	Werkstoff No.	Euronorm Equivalent	ASTM Material Grade
Carbon Steel*	A105	UNS 1.0482	19Mn5	K03504	A105
Austenitic Stainless Steel	316/316L Dual certified	UNS S31600	1.4401	X5CrNiMo17-12-2	A479 Gr 316
		UNS S31603	1.4404	X2CrNiMo17-12-2	A479 Gr 316L
Super Austenitic Stainless Steel	6Mo	UNS S31254	1.4547	X1CrNiMoCuN20-18-7	A479/A276
	Duplex 22Cr	UNS S31803	1.4462	X2CrNiMoN22 5 3	A479/A276
Austenitic-Ferritic Steel (Duplexes)	Duplex 25Cr	UNS S32750	1.4410	X2CrNiMoN25-7-4	A479/A276
		UNS S32760	1.4501	X2CrNiMoCuWN25-7-4	A479/A276
Copper-Nickel Alloy	Alloy M400	UNS N04400	2.436	NiCu30Fe	ASTM B164
Nickel Alloy	Alloy 825	UNS N08825	2.4858	NiCr21Mo	ASTM B425
Nickel Alloy	Alloy 625	UNS N06625	2.4856	NiCr22Mo9Nb	ASTM B446
Nickel Alloy	Alloy C276	UNS N10276	2.4819	NiMo16Cr15W	ASTM B574
Titanium	Titanium Grade 2	UNS R50400	3.7075	Ti-11	ASTM B348

All materials will meet (as applicable) the requirements of NACE MR0103/MR0175 and ISO 15156. They are further supplied as per NORSOK M650/M630 as required.

\* Carbon Steel may not be universally available, and if offered, may be restricted to body only. Other materials may be considered but any offer may also be restricted to body only. Please consult with your local Parker support.

### General information - materials of construction

Item	Material				
	SLSt.	CRA-NiCu	Duplex	Super Duplex	Titanium
Body	316 SLSt. / ASTM A479	Alloy M400	Duplex UNS S31803	Super Duplex UNS S32750/32760	Titanium GR-2
	17-4PH SLSt.	Alloy K500	Duplex UNS S32750/32760	Alloy 625	Titanium GR-5
Tip	316 SLSt. / ASTM A479	Alloy M400	6MO	Alloy 625	Alloy 825
Joint Seal	PTFE. / Graphite	PTFE. / Graphite	PTFE. / Graphite	PTFE. / Graphite	PTFE. / Graphite
Packing	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.
Thrust Bush	316 SLSt. / ASTM A479	Alloy M400	Duplex UNS 31803	Super Duplex UNS S32750/32760	Alloy C276
Stem	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.
Gland Adjuster	316 SLSt. / ASTM A479	Alloy M400	Duplex UNS 31803	Super Duplex UNS S32750/32760	Alloy C276
Handle	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.
Grub Screw	A4-80 SLSt. / A4-80 SLSt.	A4-80 SLSt.	A4-80 SLSt.	A4-80 SLSt.	A4-80 SLSt.
Dust Cap	LDPE - Coloured	LDPE - Coloured	LDPE - Coloured	LDPE - Coloured	LDPE - Coloured
Lock Nut	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.	316 SLSt.
Bonnet	316 SLSt. / ASTM A479	Alloy M400	Duplex UNS 31803	Super Duplex UNS S32750/32760	Titanium GR-2

Max. Working Pressure

6,000 psig (414 barg)

High Pressure Range

10,000 psig (689 barg)

Temperature Range:

• PTFE Packing: -54°C to 260°C (-65°F to 500°F)  
• Graphite Packing: -54°C to 538°C (-65°F to 1000°F)

Notes:

- CRA-NiCu selection down-rates to 5,000 psig (345 barg)
- Titanium selection down-rates to 3,950 psig (272 barg)
- Other materials and option selections can also affect performance ratings. If in doubt, please consult your local Parker support.

## Standard and optional specification details

Standard Specification Details	Optional Specification Details
Seat orifice diameter: 4mm	Seat orifice diameter: up to 6mm in some configurations/styles. See page 14
Flow co-efficient (Cv): 0.35	6mm - Flow co-efficient (Cv): 0.5
Metal to metal valve seat and stem tip	Alternative soft tip and tip materials. See page 14
100% pressure test. All valves and manifolds are subjected to hydrostatic pressure at 1.1x maximum working pressure for the seat and 1.5x maximum working pressure for the shell	Alternative pressure test regimes applied to oxygen cleaned and/or low emission products. See page 17
All products supplied in a clean bur and grease free condition suitable for most liquid and gaseous applications	Your other pressure test requirements can be considered
Bodies and bonnets are fully traceable to original material source (certification with unique trace code applied to the bar stock material)	Cleaned suitable for oxygen service. Not every product option is suitable for oxygen service
Certification according to BS EN 10204 3.1 for material and pressure test is available	Alternative levels of traceability and certification are available. Your other requirements can be considered
All products are permanently marked. Manifolds include a line diagram describing the flow paths	Certification according to BS EN 10204 3.2 can be available at additional cost, please contact your local Parker support
Complementary to the marking, bonnet assemblies are all functionally colour coded by the dust caps	
Number of turns open to close: 3.5	6mm - Number of turns open to close: 3.3
Gauge valves and manifolds do not include plugs as standard	Various plugs are available to order. See page 61
Direct mount manifolds include applicable flange face seals and high tensile, zinc plated carbon steel mounting bolts	Stainless steel mounting bolts are available. See page 48
All manifolds include mounting holes suitable for brackets or enclosure mounting	A full range of mounting brackets and accessories are available. See pages 40, 48, 60
	Mounting for selected hand valves and gauge valves is available

# Connections

## Introduction

Parker valve and manifold products are available with a wide array of connection types and sizes. These products are manufactured at the highest quality to applicable standards, utilising state of the art machinery and processes backed by decades of expertise.

The following pages detail the standard connections available. Other connection types can be considered. If you can't find the best connection for your application, please contact your local Parker support. Please note – not all connection types and sizes will be universally possible across the entire product range.

## Integral tubing connections – A Parker Superior Advantage

For the ultimate in safety, reliability, speed and ease of installation all valves and manifolds can be specified with solutions offering integral tube connection utilising Parker A-LOK® (Two Ferrule) or CPI™ (Single Ferrule) compression fitting technologies.

For full details of the A-LOK® and CPI™ technologies, please see Catalogue ref. 4190-FMTG.

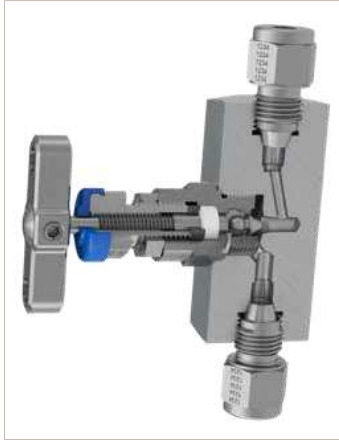
As standard, hand valves and gauge valves are offered with the traditional external thread and nut or inverted (internal thread) design to inlet and outlet connections. Other ports (such as vent) are offered with Parker unique PTFree connect™ solution (see p. 10).



HNV series hand valve with traditional type fully integrated tube fitting connection.



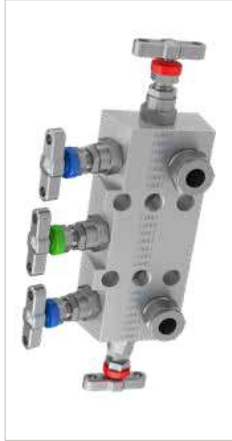
HNV series gauge vent hand valve with inverted tube fitting to inlet and outlet connections with Parker PTFree connect™ tube fitting connection to the vent.



HNV series hand valve with the unique Parker fully integrated inverted tube fitting connection.



5-valve direct mount manifold for differential pressure applications having inlet and vent connections provided through the use of PTFree connect™ tube fittings.



5-valve direct mount manifold having the Parker superior advantage input connections provided through inverted tube fitting connections. Vent can also be specified as threaded or PTFree connect™.

## Why the Superior Advantage of an integrated tube connection?

Consider the following simple example with a typical hand valve.

Example shown is the widely utilised normal specification of a valve and individual tube fittings to achieve the installation.

Component	Cost
Needle valve	1x
Fittings (2)	1.1x
Sealant/Tape	0.01x
Labour	0.15x
<b>TOTAL</b>	<b>2.26x</b>

Example shown is the Parker Superior Advantage fully integrated tube fitting connection.

Component	Cost
Needle valve	1.6x
Fittings (2)	0x
Sealant/Tape	0x
Labour	0.05x
<b>TOTAL</b>	<b>1.65x</b>

## Integrated tube connections deliver:

- Average 25% saving on installed cost
- Average 55% saving on installation time
- Zero rework
- Significantly improved safety and system integrity

# Connections

## Tube end dimensional data

Inches				Millimeters			
Size No.	Tube O.D.	Straight Thread	tC	H Hex	tC	H Hex	tD Tube Depth
1	1/16	10-32	.43	5/16	.052	.34	
2	1/8	5/16-20	.60	7/16	.093	.50	
3	3/8	3/8-20	.64	1 1/2	.125	.54	
4	1/4	7/16-20	.70	9/16	.187	.60	
5	5/16	1/2-20	.73	5/8	.250	.64	
6	3/8	9/16-20	.76	11/16	.281	.67	
8	1/2	3/4-20	.87	7/8	.406	.90	
10	5/8	7/8-20	.87	1	.500	.96	
12	3/4	1-20	.87	1-1/8	.625	.96	
14	7/8	1-1/8-20	.87	1-1/4	.750	1.03	
16	1	1-5/16-20	1.05	1-1/2	.875	1.24	
20	1-1/4	1-5/8-20	1.52	1-7/8	1.09	1.61	
24	1-1/2	1-15/16-20	1.77	2-1/4	1.34	1.96	
32	2	2-5/8-20	2.47	2-3/4	1.81	2.65	

Notes:

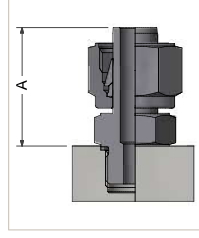
- Dimensions C and D are shown in the finger-tight position.
- † Average value
- Dimensions for reference only, subject to change.

## PTFFree connect™



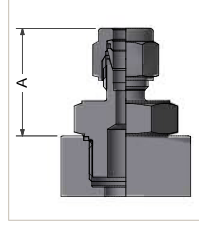
Manifolds can also be supplied with male connectors using the same thread form as the PTFFree connect™. They are provided factory fitted, pin locked and tested.

Some size restrictions may be necessary due to the close proximity of some connections and the across flat hexagon dimensions. As a guide, PTFFree connect™ for inlet and outlet can be up to 1/2" or 12mm o/d, drain/bleed connections should be restricted to 1/4" or 6mm. For PTFFree connect™ male connectors inlet and outlet should be restricted to 3/8" or 10mm and 1/4" or 6mm o/d for drain/bleed.



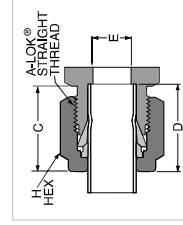
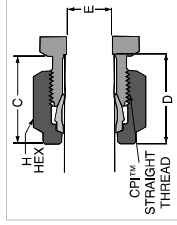
PTFFree connect™ tube stub (Code PF)

Tube size	Dimension (A)
6mm	22.26mm 0.88"
1/4"	24.80mm 0.98"
10mm/3/8"	26.40mm 1.04"
12mm/1/2"	32.10mm 1.26"



PTFFree connect™ male connector (Code PFC)

Tube size	Dimension (A)
6mm	26.90mm 0.95"
1/4"	24.10mm 0.84"
10mm/3/8"	27.70mm 1.09"
12mm/1/2"	30.30mm 1.20"



Size No.	Tube O.D.	Straight Thread	tC	H Hex	tC	H Hex	tD Tube Depth
2	2mm	5/16-20	15.3	12.0	1.7	12.9	
3	3mm	5/16-20	15.3	12.0	2.4	12.9	
4	4mm	3/8-20	16.1	12.0	2.4	13.7	
6	6mm	7/16-20	17.7	14.0	4.8	15.3	
8	8mm	1/2-20	18.6	15.0	6.4	16.2	
10	10mm	5/8-20	19.5	18.0	7.9	17.2	
12	12mm	3/4-20	22.0	22.0	9.5	22.8	
14	14mm	7/8-20	22.0	24.0	11.1	24.4	
15	15mm	7/8-20	22.0	24.0	11.9	24.4	
16	16mm	7/8-20	22.0	24.0	12.7	24.4	
18	18mm	1-20	22.0	27.0	15.1	24.4	
20	20mm	1-1/8-20	22.0	30.0	15.9	26.0	
22	22mm	1-1/8-20	22.0	30.0	18.3	26.0	
25	25mm	1-5/16-20	26.5	35.0	21.8	31.3	

Many users desire the elimination of taper threads and their associated sealant.

The PTFFree connect™ system enables users to assemble tube lines to any of the manifold ports without the need for PTFE tape or liquid sealant.

The PTFFree connect™ connection can be applied to any of the manifolds featured in this catalogue. These will be factory fitted, pin locked and pressure tested.

PTFFree connect™ enables angled tube connections to be swivelled to achieve optimum tube alignment. Assembly to the tube connector is achieved by tightening the standpipe nut one-quarter turn from the finger-tight position.

## Other connections

### Tapered Pipe Threads - Male and Female



**NPT Tapered Thread**  
NPT Tapered Thread conforming to ASME B1.20.1 with enhanced manufacturing tolerance for optimal assembly and inspected by three step gauging with Parker enhanced tolerancing to ANPT requirement per ASTM SAE AS71051.



**BSP Tapered Thread (Code K)**  
BSP Tapered Thread conforming to BS21, ISO7/1 (R 1/2 - Male, Rc 1/2 Female) with enhanced manufacturing tolerance for best optimal assembly and inspected using gauging system to BS21.

### Parallel Pipe Threads - Male and Female



**BSP Parallel Thread - Default standard (Code R)**  
BSP Parallel Thread conforming to BS2779, ISO 228/1+2, DIN 3852. Not available on all product/model types, please consult with your local Parker support.



**BSP Parallel Gauge connection type - Optional (Code RD)**  
According to DIN 16284/16288/ DIN EN 837.  
Thread conforming to BS2779, ISO228/1+2, DIN 3852.  
Not available on all product/model types, please consult with your local Parker support.

### Weld Connections

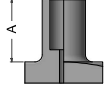


**Socket Weld (Code SW/MSW)**  
Female or male Socket Weld connection suitable for pipe conforming to ASME B16.11, EN12760.

Notes:

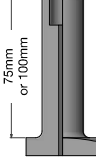
- Valves with female socket weld connections will be of the same length as per the equivalent NPT pipe threaded variants.
- Valves with male socket weld connections will, as standard, have a stub length increase of 1/2" (13mm) when compared to the male pipe threaded equivalent variants.

Pipe size	Dimension (A)
4 (1/4" NB)	29
6 (3/8" NB)	29
8 (1/2" NB)	32
12 (3/4" NB)	35



Optional lengths:

If requested, male socket welds or butt welds can be offered with stub length of 75mm or 100mm.



Notes:  
Valves with butt weld connections will, as standard, be of the same length as per the equivalent male NPT pipe threaded variants.

Other Notes:

- For valves with welded connections, special consideration must be given to the installation/welding process. Care must be taken to ensure that the central valve body and bonnet assembly sections are not harmed by the process itself and to further protect these elements from injurious heat transfer.
- Connection ratings: Certain weld connections can impact published performance ratings of the manifold. Care should be taken in the selection of connections to ensure they meet application expectations for performance. For example: Butt weld or tube fitting connections with a thinner wall section, may result in a reduced pressure performance capability when compared to that of the published. Please consult relevant Parker publications or consult with your local Parker support.

### Flange Connections



**Process Flange**  
Flange connections can be considered if conforming to ANSI B16.5 and executed in various ways. Please consult your local Parker support.



**Instrument Flange (Code HK)**  
DIN/IEC 61518 compliant instrument (kidney/oval) flange connections.



# Connections

## Transmitter flange connections - DIN/IEC 61518

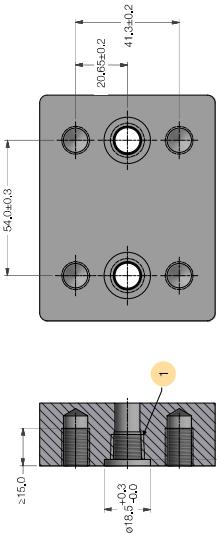
As standard, Parker manifolds have inlet and outlet interface connections in full accordance with DIN/IEC 61518. For the Manifold to Transmitter interface, the type B connection is standard, type A is optionally available.

Within DIN/EN 61518 the manifold-transmitter interface is rated for maximum allowable working pressure of 413 bar (6,000 psi) and maximum allowable temperature of 120°C (248°F) for liquids,

gas or vapours. The maximum allowable temperature of 120°C (248°F) considers the requirement that manifolds and transmitters need to be protected against undue heating by hot media. This requirement should be achieved by using adequate hook-ups or by instrument impulse lines with sufficient length.

However, Parker confirms that H series manifolds can be used for temperatures up to 538°C (1,000°F) with graphite gland packing and up to 260°C (500°F) with PTFE gland packing.

## Process inlet to manifold / transmitter interface DIN EN 61518 / IEC 61518

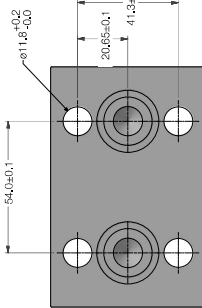


Reference	Description
1	Threaded option for transmitters - plug/vent valve

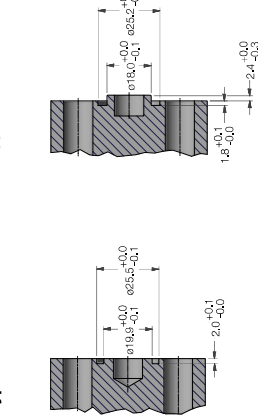
## Parker manifold outlet to transmitter interface DIN EN 61518 / IEC 61518

### Type B and Type A

#### Type B



#### Type A



	Type B (Standard)	Type A (Optional)
Max. Allowable Working Pressure	413 bar (6,000 PSI)	413 bar (6,000 PSI)
Temperature range	PTFE: -10°C to +80°C (14°F to 176°F) Graphite: -40°C to +120°C (-40°F to 248°F)	PTFE: -10°C to +80°C (14°F to 176°F) Graphite: -15°C to +120°C (5°F to 248°F)
Seal ring	Flat Ring 25.4 x 20 x 2.7 Material: PTFE	Flat Ring 25.1 x 18.0 x 2.9 Material: Graphite
Min. Thread Engagement	9mm	9mm
Spare/Replacement Seal part No.	HIEC001-PTFE/1	HIEC002-PTFE/1
	HIEC001-GRAPHITE/1	HIEC002-GRAPHITE/1

Connection at the manifold acc. to DIN/IEC 61518.

**Important Note** - there are some exceptions to the IEC 61518 standard:

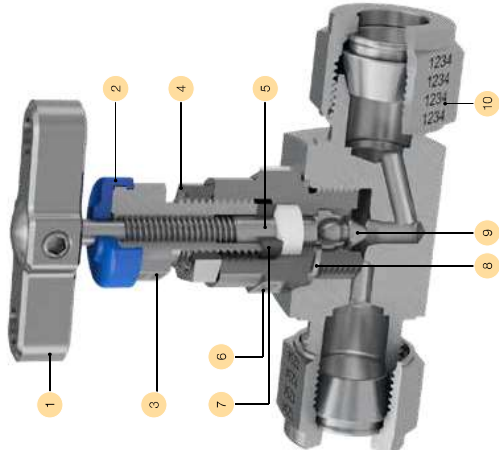
- Emerson Coplanar™ transmitter design, Parker offers a full range of specifically suitable manifolds for this type. See pages 55-60.
- There is a limited range of other higher working pressure transmitters by some manufacturers, where the interface is proprietary by design (Example: Yokogawa EJA 440E). Parker is able to provide manifold designs that are complementary to those products. Please consult your local Parker support.

# Bonnet Assemblies

## Standard bonnet design

## Class 2500 (6,000 PSI) and Class 4500 (10,000 PSI)

For safe, reliable and repeatable performance

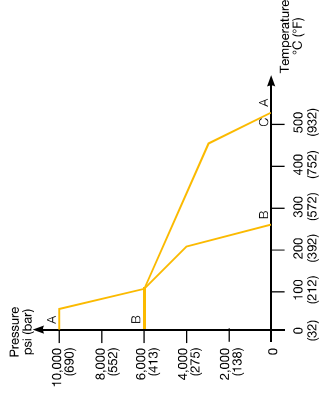


Reference	Description
1	Ergonomic 'T' bar style handle with positive retention
2	Dual purpose dust cap provides functional identification
3	Compensatory adjustable gland
4	Secure anti-vibration gland lock nut
5	Anti-blowout low torque back seating stem
6	All metal body bonnet seal
7	Gland thrust bush ensures uniform packing compression and tight sealing
8	Annealed sealing washer guarantees 100% sealing assurance
9	Self-centering, non-rotating stem tip guarantees bubble tight shut off
10	Material traceability for major pressure containing components

### Notes:

- As standard, all metallic parts are 316 Stainless Steel. Optional materials are available, please see page 6.
- For products specified in optional materials, non-wetted parts will be 316 Stainless Steel as standard.
- 6,000 PSI bonnet thread is M16; 10,000 PSI bonnet thread is M18.

## Pressure vs temperature



Reference	Description
A - A	Graphite packing
A - B	PTFE packing
B - B	6,000 PSI (414 bar) standard PTFE packing
B - C	6,000 PSI (414 bar) standard Graphite packing

### Notes:

- Pressure and temperature ratings shown are maximum possible values. Continuous operation at the maximum ratings will reduce life expectancy.
- Pressure and temperature ratings can be derated by certain connection types or materials of construction.

# Bonnet Assemblies

Larger bore bonnet design  
Class 2500 (6,000 PSI) and Class 4500 (10,000 PSI)



## Features

- 6mm seat orifice size, allowing the provision of larger 5mm or 6mm flow passages
- Ideal for applications with dirtier/denser service media and/or those prone to blocking in small bore installations
- Can enhance other aspects of performance and measurement accuracy
- Will result in the use of larger body material sizes
- Not possible for all styles and types of product
- All other technical information remains unchanged from standard

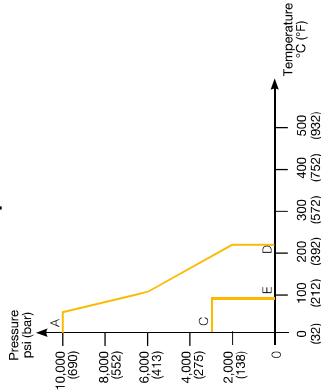
Soft seat tip bonnet design



## Features

- Available in the 4mm orifice size only, this PEEK seat tip option is available for all product styles and types
- Ideal for clean gaseous or other services where bubble-tight shut-off with minimum effort is required
- Suitable for temperatures up to 204°C and pressures up to 10,000 psi at reduced temperature, as per graph
- For larger bore requirements Parker recommends Rising Plug valve

## Pressure vs temperature

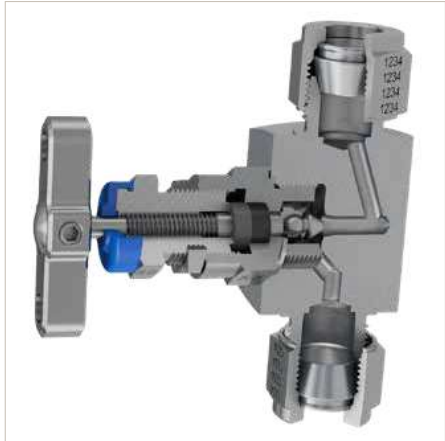


Reference	Description
A - D	PEEK tip
C - E	PCTFE tip - Temperature limit 150°C (302°F) at 3,000 psi (207 bar)

Fire safe bonnet design - Class 2500 (6,000 PSI)

## Features

- Specifically designed and developed to meet exacting industry requirements, products incorporating this Bonnet Design conform to BS 6755 Part 2, API 6FA / API607. For further details contact your local Parker support.
- 100% fire safe design certified, many typical actual third party test certificates are available for review
- Available for most product styles and types
- Some material selections are restricted



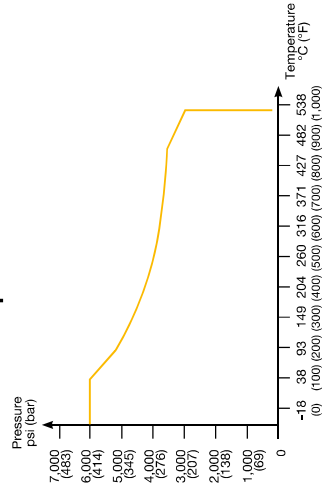
Power plant bonnet design  
Compliant to ANSI B31.1 – Class 2500 (6,000 PSI)



## Features

- Available in a select range of body styles and types. Please consult your local Parker support
- Designed specifically to meet the requirements of ANSI B31.1 (Power Plants) and B31.3 (Petrochemical Plants) including materials of construction, these bonnet assemblies are Graphite packed for higher temperature service
- Suitable for temperatures up to 538°C and pressures up to 6,000 psi at reduced temperature, as per graph
- Unique patented Tru-Loc® safety bonnet lock further enhances security in application

## Pressure vs temperature



To order valves and manifolds with power plant bonnet design, follow the part builder structures as on pages 26-27, 32-33, 46-47 and replace **H** in the series names with **HPP**. Consult your local Parker support for available options.

Examples:

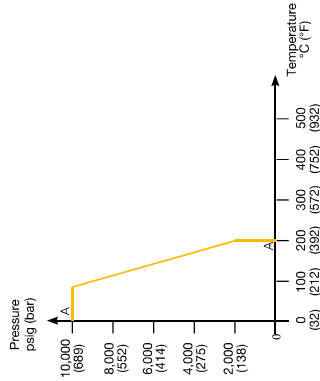
- HPNVS8FF3 - Hand valve
- HPPLSZV3 - 2-valve remote mount flat barstock manifold
- HPPLSM3 - 5-valve remote mount flat barstock manifold
- HPDSSM3 - 5-valve direct mount flat barstock manifold

# Bonnet Assemblies

Rising plug bonnet design



Pressure vs temperature



## Tru-Loc® safety bonnet lock



Available as standard on ANSI/ASME B31.1 manifold versions, the unique Parker Tru-Loc® security locking system is applied to the body to bonnet interface but can also be applied to many other screwed component interfaces. Extensive tests have proven that threaded connection interfaces secured with Tru-Loc® guarantee 100% security in preventing movement between connected components. In the H series manifolds it prevents loosening or removal of the bonnet assembly by any means.

## Features

- HRPV valve is unique to Parker and is patent-protected
- Non-rotating plug/tip
- Dynamic response moulded seat insert with guaranteed alignment
- Standard straight through orifice size: 1/4" (6.4mm)
- Cv: 1.8
- Rolled spindle operating threads
- Straight through flow path
- Multi-port gauge style available as standard. Other styles can be considered - please consult the factory
- Bi-directional flow
- Backstop spindle for blowout prevention and minimal atmospheric leakage
- Low torque operating T bar handle
- Externally adjustable gland
- Full range of head options available
- Dust cap to prevent ingress of contamination to operating thread
- Bonnet locking pin fitted as standard
- Suitable for temperatures up to 204°C and pressures up to 10,000 psi at reduced temperature, as per graph

Reference	Description
A - A	PEEK Seat

## Low emission bonnet design

### TA-Luft compliant

As standard, products fitted with the Parker Instrumentation standard bonnet assembly are bubble tight in service and have been proven to meet the requirements of **TA-Luft 2002, Absatz 5.2.6.4 und VDI 2440 (Ausgabe Nov. 2000), Absatz 3.3.1.3.**

### ISO 15848 compliant

From 2007 EU's IPPC directive 96/61/EC legislates for the minimisation of pollution from industrial sources (Many other regions and countries have similar legislation). An important part of this legislation is reducing Ultra-Low emissions. According to the IPPS, all plants and factories which fail to comply with the standards set by the directive, may face closure.

The legislation introduced a concept of Best Available Technique (BAT), urging plants to find the best available solution for reducing Ultra-Low emissions throughout all processes. With respect to valves, ISO 15848 parts 1 and 2 were developed to aid companies to meet the legislation.

Part 1 covers the classification system and qualification procedure for type testing of valves. The standard specifies three tightness classes of leakage with respect to stem sealing diameter. These classes are class A, B and C; class A having the smallest environmental leakage. Each class level is one hundred fold lower than the class above i.e. a class B product may have a leakage of 100 times that of a class A product. The standard also specifies the duty that the valve has been tested to.

Parker Instrumentation specifically developed an H series Bonnet Assembly design with class A approval to ISO 15848-1. Classed 'FE', products specified with these bonnet assemblies are certified as **ISO FE AH-C01-SSA1-t(RT,180°C)-ANSI2500-ISO 15848-1**. These products are further classified as meeting the ISO 15848-1 standard with the following criteria.

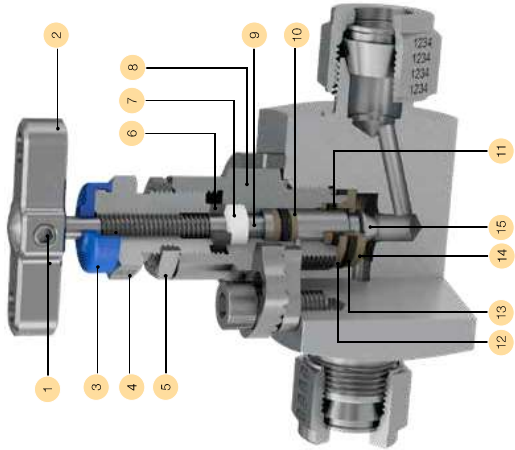
- Class A tested with Helium
- Endurance class C01 – a mechanical valve which has been tested throughout 500 mechanical actuations with two thermal cycles
- Temperature class RT-180°C – fully thermal cycled and tested from -29°C to +180°C pressure class ANSI 2500 – 6000 psi in 316 Stainless Steel.

Part 2 of the standard covers production acceptance testing of valves. This production testing can only be carried out to product which has already been approved to part 1 of the standard. Parker can offer production testing and certification to a sampling percentage specified by the purchaser. A third party witnesses can also be considered.

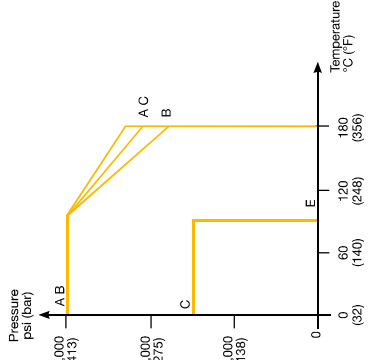


# Bonnet Assemblies

Low emission bonnet design



Pressure vs temperature



Reference	Description
A - A	Graphite packing
A - B	PTFE packing
B - B	6,000 PSI (414 bar) standard PTFE packing
B - C	6,000 PSI (414 bar) standard PTFE packing
A - D	PEEK tip
C - E	PCTFE tip

# Bonnet assembly options

Available as a factory fit or as retrofit, these useful bonnet assembly options are provided in all 316 Stainless Steel material. For locking options padlocks are not provided but the hole size in all cases is 6mm (0.24"). To obtain factory fit options, your specified product part number must be suffixed with the additional option part numbers as below. Some options can be combined.



T bar handle locking	
Retrofit Kit Part Number	KITTHL
Factory Fitted Suffix	HL



Handwheel	
Retrofit Kit Part Number	KITTHW
Factory Fitted Suffix	HW



Anti-tamper spindle	
Retrofit Kit Part Number	KITAT
Factory Fitted Suffix	AT



Lockable handwheel	
Retrofit Kit Part Number	KITLHW
Factory Fitted Suffix	LHW



Key	
Key only Part Number	ATHKEY



Anti-tamper handwheel	
Key only Part Number	ATHWKEY



Panel mounting	
Retrofit Kit Part Number	KITPM
Factory Fitted Suffix	PM





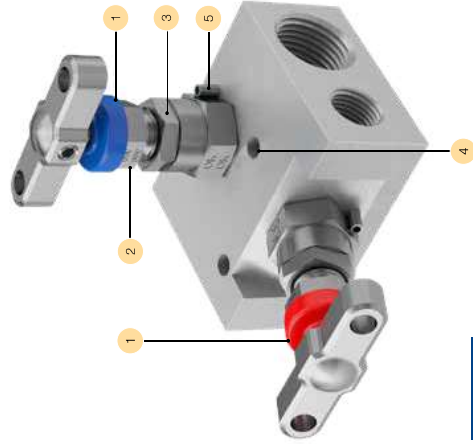
# 2-Valve Manifolds - H Series

## Introduction

Combining two needle valves into one unitised block, the Parker 2-valve manifolds range is also referred to as Block and Bleed, Isolate and Calibrate or even Isolate and Vent/Drain. These manifolds are used primarily in applications requiring a pressure switch, pressure transmitter or gauge for Static Pressure Measurement. Other forms of sensing technology can be applied, and, in some circumstances, they can also be employed in the measurement of temperature or other process attribute.

In combination with Parker A-LOK® or CPI™ compression tube fitting technologies, a superior advantage is gained allowing users to eliminate threaded connections and reduce leak paths, whilst offering superior installation and operational performance.

Reference	Description
1	Functional colour coded dust cap
2	Adjustable gland
3	Gland locknut
4	Bracket mounting holes
5	Bonnet locking pin



**BLUE** Isolate/block  
**RED** Drain/vent/test

These 2-valve manifolds are widely used in situations where a static pressure measurement device requires maintenance, offering safe isolation to allow venting/drawing and calibration of the device. They also provide the means for removal and re-installation of an instrument in a live process situation. They are used in every industry in a wide range of applications - everywhere where accurate and secure pressure measurement of steam, air, gas, oil, water or other non-viscous liquids is required.

These manifolds are available in a remote (or line) mount and in a direct mount style for bolting to the face of static pressure transmitters with an array of input connection styles and types. The unique Parker superior advantage in this regard is being the ability to create a threadless leak-free hook up. Where additional operational security is required, a second isolate valve can be specified, thereby providing an enhanced Double Block and Bleed (DBB) solution.

Example shown: 2-valve remote/line mount gauge valve, block and bleed (isolate and vent/drain) with Parker Superior Advantage fully integrated inverted A-LOK® tube fitting connections to inlet/outlet and Parker unique PTFree connect™ tube fitting connection to vent/drain.

We are confident you will find a manifold style, type and connection option to suit your applications, but should you require something different or need assistance to make your selection, please contact your local Parker support.



Example shown is application is use, HAL\*WG 2-valve remote/line mount gauge valve manifold assembled to a Gauge Pressure Transmitter through the integral Swivel Adaptor described on page 31. A Parker Superior Advantage for flexibility of application in use.

# 2-Valve Manifolds - HNL Series

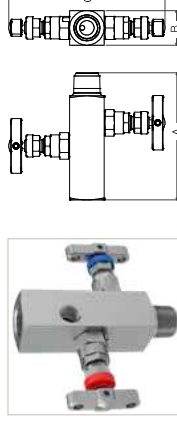
## Remote/line mount - long pattern

Combining two needle valves into one unitised block, these slimline long pattern Parker 2-valve manifolds are also referred to as Block and Bleed, Isolate and Calibrate or Isolate and Vent/Drain. These manifolds are ideal for standalone line mounting.

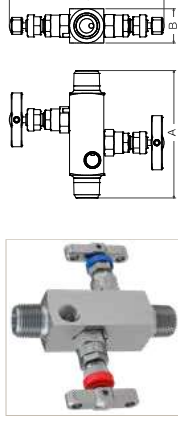


Example shown: 2-valve integral block and bleed manifold with integral A-LOK® connections.

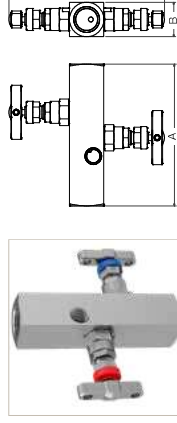
Pressure (PSI)	Inlet NPT	Outlet NPT	Vent NPT	Dimension A (inch)	Dimension B (inch)	Dimension C (inch)
6,000	1/2" M 1/2" F 1/4" F	1/2" M 1/2" F 1/4" F	1/4" F	105.0 (4.13)	28.6 (1.13)	130.2 (5.13)
10,000	1/2" M 1/2" F 1/4" F	1/2" M 1/2" F 1/4" F	1/4" F	136.7 (5.38)	31.8 (1.25)	133.4 (5.25)



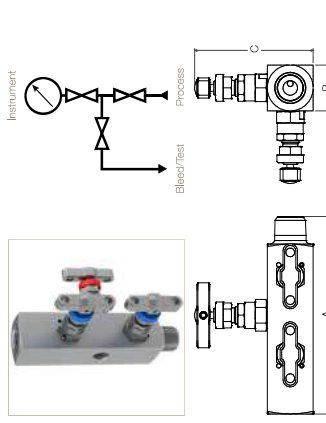
HNL\*2V - Male x Male threaded - NPT



HNL\*2V - Female x Female threaded - NPT



HNL\*3DBB - Optional Double Block & Bleed threaded - NPT



Pressure (PSI)	Inlet NPT	Outlet NPT	Vent NPT	Dimension A (inch)	Dimension B (inch)	Dimension C (inch)
6,000	1/2" M 1/2" M 1/4" F	1/2" M 1/2" M 1/4" F	1/4" F	108.5 (4.27)	28.6 (1.13)	130.2 (5.13)
10,000	1/2" M 1/2" M 1/4" F	1/2" M 1/2" M 1/4" F	1/4" F	136.7 (5.38)	31.8 (1.25)	133.4 (5.25)

Pressure (PSI)	Inlet NPT	Outlet NPT	Vent NPT	Dimension A (inch)	Dimension B (inch)	Dimension C (inch)
6,000	1/2" F 1/2" F 1/4" F	1/2" F 1/2" F 1/4" F	1/4" F	117.6 (4.63)	28.6 (1.13)	130.2 (5.13)
10,000	1/2" F 1/2" F 1/4" F	1/2" F 1/2" F 1/4" F	1/4" F	117.6 (4.63)	31.8 (1.25)	133.4 (5.25)

Pressure (PSI)	Inlet NPT	Outlet NPT	Vent NPT	Dimension A (inch)	Dimension B (inch)	Dimension C (inch)
6,000	1/2" M 1/2" F 1/4" F	1/2" M 1/2" F 1/4" F	1/4" F	136.5 (5.37)	31.8 (1.25)	82.6 (3.25)
10,000	1/2" M 1/2" F 1/4" F	1/2" M 1/2" F 1/4" F	1/4" F	136.5 (5.37)	31.8 (1.25)	82.6 (3.25)
6,000	1/2" M 1/2" M 1/4" F	1/2" M 1/2" M 1/4" F	1/4" F	136.5 (5.37)	31.8 (1.25)	82.6 (3.25)
10,000	1/2" M 1/2" M 1/4" F	1/2" M 1/2" M 1/4" F	1/4" F	136.5 (5.37)	31.8 (1.25)	82.6 (3.25)

Products shown here can be supplied with integral swivel gauge adaptor as shown on page 31.

# 2-Valve Manifolds - H Series

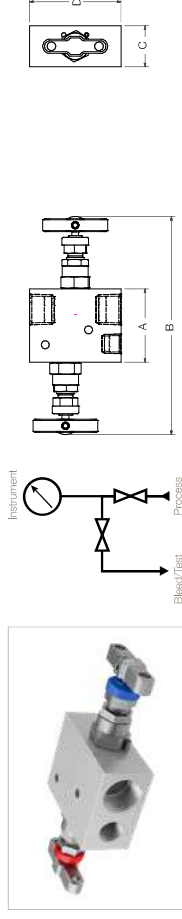
## Remote/line mount - short pattern

Combining two needle valves into one unitised flat block, this Parker 2-valve manifolds range is also referred to as a Block and Bleed, Isolate and Calibrate or even Isolate and Vent/Drain. These manifolds are ideal for robust mounting to bracket work or other structure.



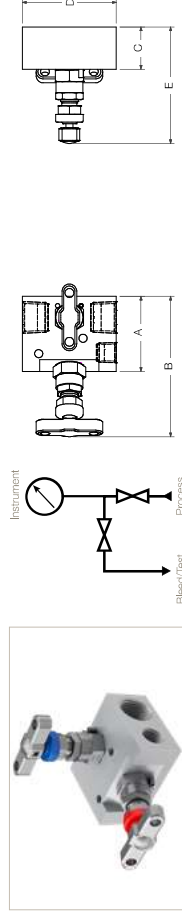
Example shown: 2-valve manifold with integral A-LOK® connections.

### HL\*2V - Female x Female threaded - NPT



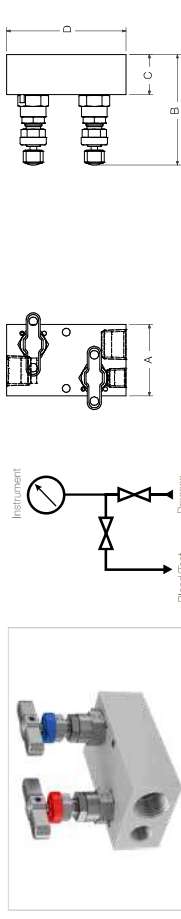
Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	152.4 (6.00)	28.6 (1.13)	63.5 (2.50)
10,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	152.4 (6.00)	31.8 (1.25)	69.8 (2.75)

### HAL\*2V - Female x Female threaded - NPT



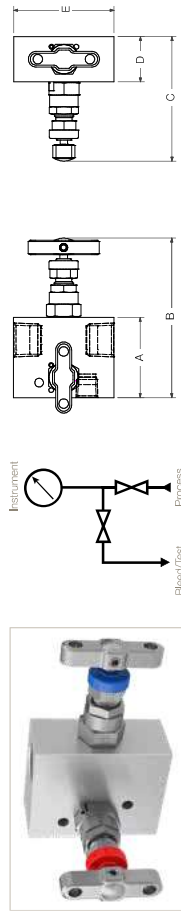
Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	100.5 (3.96)	28.6 (1.13)	63.5 (2.50)
10,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		63.5 (2.50)	114.3 (4.50)	31.8 (1.25)	69.8 (2.75)

### HL TF\*2V - Female x Female threaded - NPT



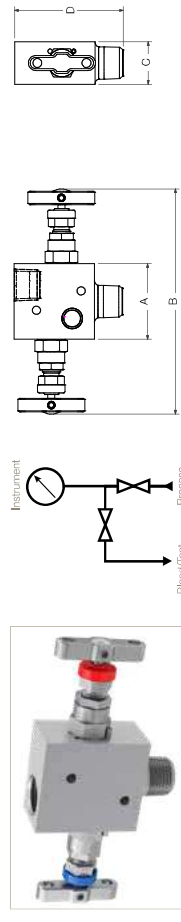
Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	79.4 (3.13)	28.6 (1.13)	85.0 (3.35)
10,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		55.7 (2.19)	82.6 (3.25)	31.8 (1.25)	88.9 (3.50)

### HLLHV\*2V - Female x Female threaded - NPT



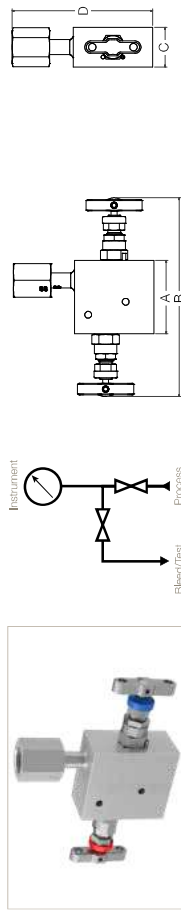
Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	101.6 (4.00)	79.4 (3.13)	28.6 (1.13)

### HL\*2V8M8F4F - Male x Female threaded - NPT



Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" M	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	152.4 (6.00)	28.6 (1.13)	73.0 (2.88)
10,000	1/2" M	1/2" F	1/2" F	1/4" F	1/4" F		50.8 (2.00)	152.4 (6.00)	31.8 (1.25)	76.2 (3.00)

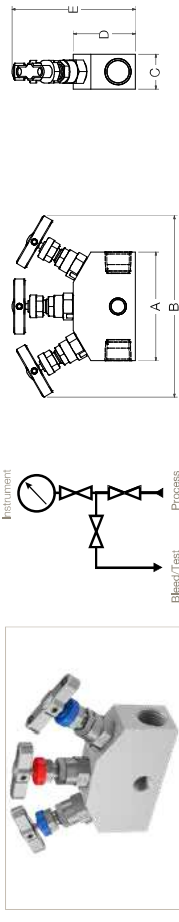
### HLWG\*2V - Female threaded - NPT with integral swivel gauge adaptor



Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/4" F	1/4" F	1/4" F		50.8 (2.00)	152.4 (6.00)	28.6 (1.13)	112.0 (4.40)

\*In accordance with DIN 16284 - Swivel BSP x 1/2" Female  
 • The gauge connection is provided through a socket weld, generally conforming to ANSI B16.11.  
 • Weld connection is a "commercial weld", completed by a qualified welder.  
 • The gauge connection is not intended for use in high pressure applications. It will require to be engineered and quoted extra - please consult your local Parker support.  
 • The gauge connection generally conform to DIN 16284 as it applies to the union of nipple and nut themselves.  
 • The gauge connection generally to DIN EN 837 for the gauge connection itself, as it applies to the union of nipple and nut themselves.

### HL\*3DBB - Female threaded - NPT



Pressure (PSI)	Inlet		Outlet		Bleed/Test		Dimension			
	NPT		NPT		NPT		A mm (inch)	B mm (inch)	C mm (inch)	D mm (inch)
6,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		88.9 (3.50)	148.3 (5.84)	28.6 (1.13)	50.8 (2.00)
10,000	1/2" F	1/2" F	1/2" F	1/4" F	1/4" F		88.9 (3.50)	148.6 (5.85)	31.8 (1.25)	57.2 (2.75)

# 2-Valve Manifolds - Remote/Line Mount

## Ordering information

Example 1 (Default): HLS2V

Example 2: HLS2V4RM8RF4F3P

Example 3: HNLWGSD3DBB8MBR4FPOXNC

Example 4: HALS2VIVAM126ATK

Example 5: HNL6MO2VM12ATHLNC

Example 6: HLS3DBBINVB2B4FPOX

Example 7: HL6MO3DBBINVAM12PFCAM6NC

Series	Options			
HNL	Straight barstock gauge valves, long pattern			
HNLWG	Straight barstock gauge valves, long pattern with Integral Swivel Gauge connection <sup>1</sup>			
HL	Flat barstock gauge valves, short pattern			
HLWG	Flat barstock gauge valves, short pattern with Integral Swivel Gauge connection <sup>1</sup>			
HAL	Angled barstock gauge valves, short pattern			
HALWG	Angled barstock gauge valves, short pattern with Integral Swivel Gauge connection <sup>1</sup>			
HLTF	Flat barstock gauge valves with valves on top face			
HLHW	Flat barstock gauge valves, short pattern with valves at 90 degree and left hand orientation			

Materials	Options			
S	316/316L Stainless Steel	HC	Alloy C276	
6MO	6MO Sup. Aust. St. Steel	T	Titanium Gr. 2 <sup>a</sup>	
M	Alloy M400 <sup>2</sup>	825	Alloy 825	
D1	Duplex 22 Cr. Steel	625	Alloy 625	
D2	Super Duplex 25 Cr. Steel	C	Carbon Steel <sup>3</sup>	
Application Configuration				
2V	2-valve, block and bleed/vent/drain, isolate and calibrate			
3DBB	3-valve, double isolate and bleed/vent/drain, block-bleed-block <sup>4</sup>			
3DBB1	3-valve, double isolate and bleed/vent/drain, block-block-bleed <sup>4</sup>			

Connections - Standard Options	Inlet	Outlet	Vent
*	1/2" NPT Fem.	1/2" NPT Fem.	1/4" NPT Fem.
4N	1/4" NPT Fem.	1/4" NPT Fem.	1/4" NPT Fem.
4K	1/4" BSPT Fem.	1/4" BSPT Fem.	1/4" BSPT Fem.
4R	1/4" BSPP Fem.	1/4" BSPP Fem.	1/4" BSPP Fem.
8K	1/2" BSPT Fem.	1/2" BSPT Fem.	1/4" BSPT Fem.
8R	1/2" BSPP Fem.	1/2" BSPP Fem.	1/4" BSPP Fem.
8M4F4F	1/4" NPT Male	1/4" NPT Fem.	1/4" NPT Fem.
8MB4F4F	1/2" NPT Male	1/2" NPT Fem.	1/4" NPT Fem.
12MB4F4F	3/4" NPT Male	1/2" NPT Fem.	1/4" NPT Fem.
4A	1/4" A-LOK <sup>5</sup>	1/4" A-LOK <sup>5</sup>	1/4" NPT Fem.
6A	3/8" A-LOK <sup>5</sup>	3/8" A-LOK <sup>5</sup>	1/4" A-LOK <sup>5</sup>
8A	1/2" A-LOK <sup>5</sup>	1/2" A-LOK <sup>5</sup>	1/4" NPT Fem.
M6A	6mm A-LOK <sup>5</sup>	6mm A-LOK <sup>5</sup>	1/4" NPT Fem.
M10A	10mm A-LOK <sup>5</sup>	10mm A-LOK <sup>5</sup>	1/4" NPT Fem.
M12A	12mm A-LOK <sup>5</sup>	12mm A-LOK <sup>5</sup>	1/4" NPT Fem.

Other Connection Options <sup>6</sup>	Options			
*F	Fem. NPT connection. Utilise for non-default selections			
*M	Male NPT connection. Utilise for non-default selections			
*FM	Fem. connection. Utilise when connections and specifications vary			
*FM	Male connection. Utilise when connections and specifications vary			
K	BSPT BS21, ISO7/1 - British Standard Taper Pipe thread			
R	BSPP BS2779 - British Standard Parallel Pipe thread			
RD	DN 16284/16288/EN837 BSPP gauge connection type			
SW <sup>7</sup>	ASME B16.11, EN12760 Female Socket Weld <sup>7</sup>			
*M2X	ISO Metric M20x1.5 Parallel Pipe thread - outlet option with Swivel Gauge connection (WG type)			

Butt Weld and Male Socket Weld - Pipe <sup>8</sup>	Type	Size	Schedule (Thickness)	Extension
BW	Butt Weld <sup>8</sup>	4 1/4" NB	* Sch. 40	* Default
MSW	Male Socket Weld <sup>8</sup>	6 3/8" NB	A Sch. 160	C 75mm
		12 3/4" NB	B Sch. XXXS	D 100mm

Inverted Connection and PTFE Free connect <sup>10</sup>	Type	Fitting	Unit	Inlet/Outlet	Bleed/Vent/Drain
IV	Inverted Connection Tube OD <sup>11</sup>	A A-LOK	M Metric	6 8mm	10 10mm
PF	PTFE Free connect tube sub <sup>12</sup>	Z OPI	I Imperial	4 1/4"	12 12mm
PFC	PTFE Free connect male union <sup>12</sup>			4 1/4"	4F 1/4" NPT <sup>13</sup>

HL	S	2V			
HL	S	2V	4RM8RF4F		3P
HNLWG	S	3DBB	8M8R4F		POXNC
HAL	S	2V	IVM126		ATK
HNL	6MO	2V	M12A		THLNC
HL	S	3DBB	IVZB4F		POX
HL	6MO	3DBB	IVAM12PFCAM6		NC

<sup>1</sup> Available as standard with 1/2" BSPP (BR); 1/2" BSPP (BR); 1/2" BSPP (BR) by special request. Available only in 316SS. Consult your local Parker support for other material options.

<sup>2</sup> This material selection is for standard use only.

<sup>3</sup> For Carbon Steel, consult your local Parker representation.

<sup>4</sup> Available on HL and HNL series only.

<sup>5</sup> Default connection, no designator required.

<sup>6</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>7</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>8</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>9</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>10</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>11</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>12</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>13</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>14</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>15</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>16</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>17</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>18</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>19</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>20</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>21</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>22</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>23</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>24</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

<sup>25</sup> As standard, valves with Female Socket Weld connections will be of the same length as inlet & 1/2" NPT Fem. outlet & 1/4" NPT Fem. vent = **HL-2V** (as example above).

<sup>26</sup> As connection choices vary, all connections must be designated. **Examples:**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" NPT Fem. vent **4F** = **BRPBR4F**

• 1/2" BSPP Fem. (BRP) inlet & 1/2" BSPP Fem. (BRP) outlet & 1/4" BSPT Fem. (4KF) vent = **8RBR4F4F**

• Insert size designator.

2-valve block & bleed/isolate & calibrate/vent/drain, short pattern flat barstock manifold, manufactured from 316 Austenitic Stainless Steel material, having 1/2" NPT Fem. connection to both inlet & outlet and a 1/4" NPT fem. bleed/vent/drain connection. Gland packing is PTFE. 316 Austenitic Stainless Steel material, having 1/4" BSPP Male connection to inlet & 1/2" BSPP Fem. outlet with 1/4" NPT Fem. vent/drain connection. Gland packing is Graphite and a 1/4" NPT blanking plug is supplied.

3-valve block-bleed-block-double isolate & bleed/vent/drain, long pattern barstock manifold, manufactured from 316 Aust.St.St., with 1/2" NPT male inlet connection, 1/2" BSPP fem. outlet connection via integral welded swivel and 1/4" NPT fem. vent/drain/bleed, A 1/4" NPT blanking plug is supplied. Suitable for oxygen service and complies to NACE.

2-valve angle head block & bleed/isolate & calibrate/vent/drain, short pattern flat barstock manifold, 316 Aust.St.St. material with Parker Superior Advantage 12mm inverted tube connection to inlet & outlet and a 1/4" NPT fem. vent/drain/bleed, A 1/4" NPT blanking plug is supplied. Suitable for oxygen service and complies to NACE.

2-valve block & bleed, long pattern manifold, manufactured from 6MO super austenitic stainless steel material with Parker A4-OK 12mm integral tube connections to inlet and outlet and 1/4" NPT fem. vent/drain/bleed. Manifold is also fitted with locking T bar handle operation and is compliant to NACE.

3-valve block-bleed-block-double isolate & calibrate vent/drain, flat barstock manifold manufactured from 316 Austenitic Stainless Steel material having Parker Superior 1/2" inverted integral OHT tube connections and a 1/4" NPT fem. vent/drain/bleed. Gland packing is PTFE. A 1/4" NPT blanking plug is supplied. Suitable for oxygen service.

Advantage 12mm inverted integral A4-OK tube connections to inlet and outlet with 6mm integral PTFE male union A4-OK tube connection to vent/drain/bleed. Gland packing is PTFE and the manifold complies to NACE.

OPTIONS	
HP	High Pressure
3	Gland Packing Options
FS	Firesafe design <sup>15</sup>
6S	6mm bore seat <sup>16</sup>
RT	Regulating/Meiering Tip
ST	Satellite Tip
9	PCITFE Soft Tip <sup>17</sup>
PK	PEEK Sort Tip
Plug/Bleed Valve Options <sup>18</sup>	
P	Blank Plug
BV	Bleed Valve/Plug
Operator Options <sup>19</sup>	
HW	Handwheel for all valves
LHW	Handwheel Locking for all valves
THL	T Bar Locking for all valves
AT	Anti-Tamper for all valves <sup>20</sup>
ATK	Anti-Tamper for all valves with Key <sup>21</sup>
ATHKE	Anti-Tamper Key <sup>22</sup>
Mounting Options	
BKS	Assembled with Carbon Steel bracketry & bolts
BKS	Assembled with Stainless Steel bracketry & bolts
Other Options	
OX	Cleaned & Lubricated for Oxygen use
NC	NACE MR-01-75 Compliant
M*	Assembly and Test of Free Issue Instrument

<sup>15</sup> Not required when Firesafe design option (FS) selected.

<sup>16</sup> Not available for PCITFE Soft Tip (9) or Oxygen use (OX).

<sup>17</sup> 6mm bore seat and other flow passages not available on all selections. Please consult your local Parker support.

<sup>18</sup> 3,000 PSI/207 BAR only. See catalogue page 14.

<sup>19</sup> Plugs supplied loose in a packing box. See page 61.

<sup>20</sup> These options can be specified to independent valves: Add **I** to specify specify assembly to Isolate valves, Add **V** to specify specify assembly to Vents/Drains/Bleeds.

• **AT** = Anti-Tamper to Isolate valve.

• **HW** = Handwheel to Vents/Drains/Bleeds.

<sup>21</sup> Anti-Tamper operation and no Key.

<sup>22</sup> Anti-Tamper operation and one Key supplied per manifold.

<sup>23</sup> Specify quantity required as separate line item.

\* Specify assembly and test option - see page 71.

## IMPORTANT NOTES:

- For optimum results in integral tube connections on manifolds, the use of Parker pre-assembly tooling is highly recommended. For inverted style integral tube connections the use of Parker pre-assembly tooling is mandatory.
- Not all options/combinations are available in each single product model type.
- We reserve the right to review/revise this part number structure at any time. If necessary, we can refuse and/or recommend the most suitable alternative part number(s). We may also apply MOQ rules.
- Should your part number selection exceed 25 characters in length when completed, then it is likely to be incorrect, please consult your local Parker representation for assistance.
- If in any doubt, please consult your local Parker representation.

# Mounting Brackets

Brackets for direct mount manifolds

## Brackets for 2, 3 and 5-valve direct mount manifolds - BKT3

- Universal manifold mounting bracket, suitable for all direct mount manifolds
- This bracket design enables horizontal or vertical instrument positioning.



Image shown: Part No.: HDS2MBK



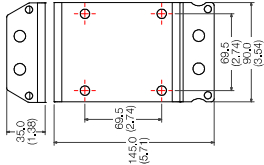
Image shown: Part No.: HDS3MBK



Image shown: Part No.: HDS5MBK



Image shown: Part No.: BKT3CSB2



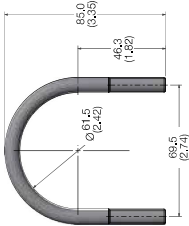
### How to order:

Item	Part Number		Suitable for Manifold Type
	Bracket material: Carbon Steel	Bracket material: Stainless Steel	
Bracket with M8 'U' Bolts and manifold Bolt Kit (Nuts and washers: M10 x 12 Bolt (2-OFF))	BKT3CSB2	BKT3SSB2	HD'3M HD'3MDTP HD'3MFF HD'3 HD'3M HD'3MFF
Bracket with M8 'U' Bolts and manifold Bolt Kit (Nuts and washers: M10 x 12 Bolt (1-OFF))	BKT3CSB3	BKT3SSB3	HD'2M HD'2MFF

### 'U' bolt with nuts and washers for 2" NB standpipe



Bracket kits include U bolts with nuts and washers.



## Brackets for 5-valve direct mount HD\*5 style manifolds with increased process centres - BKT5

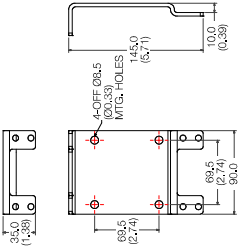
- Universal manifold mounting bracket, suitable for all direct mount manifolds
- This bracket design enables horizontal or vertical instrument positioning



Image shown: Part No.: HDS5BK



Image shown: Part No.: BKT5CSB6



### How to order:

Item	Part Number		Suitable for Manifold Type
	Bracket material: Carbon Steel	Bracket material: Stainless Steel	
Bracket with M8 'U' Bolts and manifold Bolt Kit (Nuts and washers: M6 x 12 Bolt (4-OFF))	BKT5CSB6	BKT5SSB6	HD'5CT HD'5

## Brackets for 2, 3 and 5-valve direct mount extruded manifolds - BKT4

- Universal manifold mounting bracket, suitable for all direct mount extruded manifolds
- This bracket design enables horizontal or vertical instrument positioning.



Image shown: Part No.: HEHS2BK

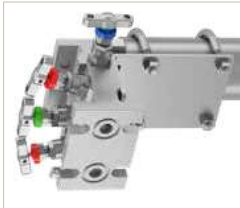
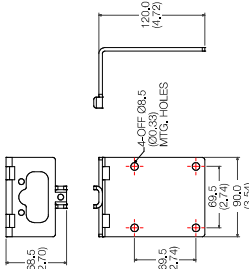


Image shown: Part No.: HEHS5BK



Image shown: Part No.: BKT4CSB4



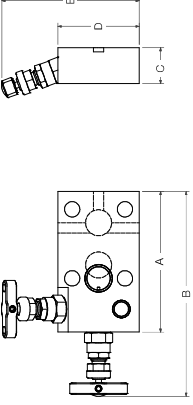
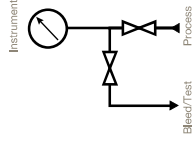
### How to order:

Item	Part Number		Suitable for Manifold Type
	Bracket material: Carbon Steel	Bracket material: Stainless Steel	
Bracket with M8 'U' Bolt and manifold Bolt Kit (Nuts and washers: M6 x 45 Bolt (3-OFF))	BKT4CSB4	BKT4SSB4	HEH'2 HEH'3 HEH'5 HEH'5CT HEH'5 HEH'5CT



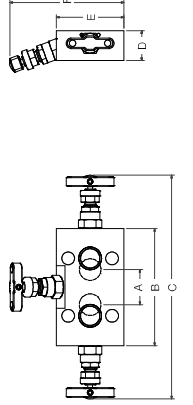
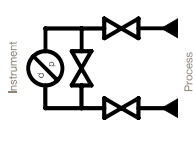
# Manifolds for 2051/3051 Coplanar™ Transmitters

HD\*2MCP - Female threaded - NPT x Flanged



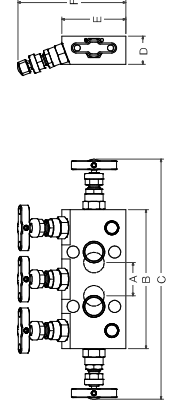
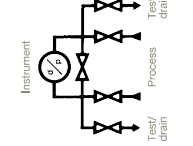
Inlet	Outlet	Bleed/Test	Dimension				
			A	B	C	D	E
1/2"NPT	Flanged	1/4" NPT	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			110.0 (4.33)	160.8 (6.33)	28.6 (1.13)	63.5 (2.50)	107.6 (4.24)

HD\*3MCP - Female threaded - NPT x Flanged



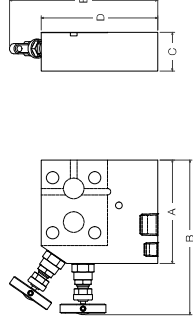
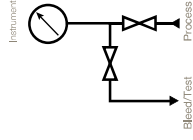
Inlet	Outlet	Bleed/Test	Dimension					
			A	B	C	D	E	F
1/2" NPT	For 3051	Optional	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			33.0 (1.30)	110.0 (4.33)	211.6 (8.33)	28.6 (1.13)	63.5 (2.50)	107.6 (4.24)

HD\*5MCP - Female threaded - NPT x Flanged



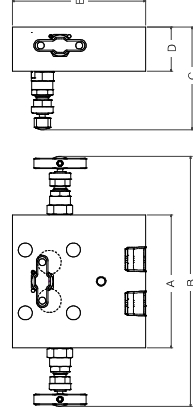
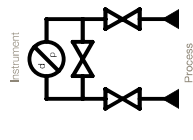
Inlet	Outlet	Bleed/Test	Dimension					
			A	B	C	D	E	F
1/2" NPT	Flanged	1/4" NPT	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			33.0 (1.30)	138.0 (5.43)	239.6 (9.43)	28.6 (1.13)	63.5 (2.50)	107.6 (4.24)

HD\*2MCPEXT - Female threaded - NPT x Flanged



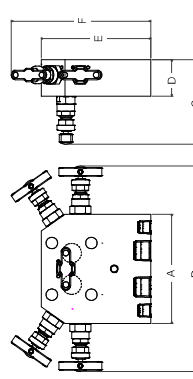
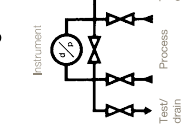
Inlet	Outlet	Bleed/Test	Dimension				
			A	B	C	D	E
1/2"NPT	Flanged	1/4" NPT	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			101.6 (4.00)	151.8 (5.98)	38.1 (1.50)	114.3 (4.50)	145.5 (5.73)

HD\*3MCPEXT - Female threaded - NPT x Flanged



Inlet	Outlet	Drain/Bleed/Test	Dimension				
			A	B	C	D	E
1/2" NPT	Flanged	Optional	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			114.3 (4.50)	215.9 (8.50)	88.9 (3.50)	38.1 (1.50)	114.3 (4.50)

HD\*5MCPEXT - Female threaded - NPT x Flanged



Inlet	Outlet	Drain/Bleed/Test	Dimension					
			A	B	C	D	E	F
1/2" NPT	Flanged	1/4" NPT	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)
			114.3 (4.50)	215.9 (8.50)	88.9 (3.50)	38.1 (1.50)	114.3 (4.50)	145.5 (5.73)

# Manifolds for 2051/3051 Coplanar™ Transmitters

Brackets for direct mount manifolds

## Brackets for 2, 3 and 5-valve direct mount manifolds - BKT3

- Universal manifold mounting bracket, suitable for all direct mount manifolds
- This bracket design enables horizontal or vertical instrument positioning.



Image shown: Part No.: HDS2MCPBK



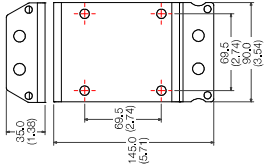
Image shown: Part No.: HDS3MCPBK



Image shown: Part No.: HDS5MCPBK



Image shown: Part No.: BKT3SSB2



### How to order:

Item	Part Number		Suitable for Manifold Type	
	Bracket material: Carbon Steel	Bracket material: Stainless Steel	2-valve	3 & 5-valve
Bracket with M8 'U' Bolts and manifold Bolt Kit (Nuts and washers: M10 x 12 Bolt (2-OFF))	BKT3CSB2	BKT3SSB2	HD'2MCP	HD'3MCP HD'5MCP

# Essential Manifold Accessories

## Introduction

To complement the entire manifold range and provide complete solutions for all applications, Parker offers the following accessory products. These are in addition to the wide range of brackets and mounting solutions found elsewhere in this catalogue (see pages 34, 40, 48, 49, 60).

Parker can also offer a diverse portfolio of tube fitting solutions and other products, all manufactured to the same exacting standards. Please consult your local Parker representative for further details and information.

## Pressure Blanking Plug (Code HPH)

Threaded high quality pressure blanking plug used in manifolds for the blanking off the vent/drain/bleed/test calibration ports, but also available separately for use where any female port requires to be closed off.

Other thread type and sizes may be available.



### Ordering information:

Size	Part Number
1/4"	HPH'4M
1/2"	HPH'8M

\* Specify material

Materials				
S	316/316L Stainless Steel	HC	Alloy C276	
6MO	6MO Sup. Aust. St. Steel	T	Titanium Gr. 2	
M	Alloy M400	825	Alloy 825	
D1	Duplex 22 Cr. Steel	625	Alloy 625	
D2	Super Duplex 25 Cr. Steel			

## Pressure Bleed Plug (Code HBV)

Threaded high quality pressure blanking plug, incorporating bleed screw and directional spout; widely used directly in association with the manifolds for the closure of vent/drain/bleed/test calibration ports, but allows the safe & controlled bleed/vent of enclosed process media. These compact bleed plugs are also available separately for use where any female port requires to be closed off and enclosed media is required to be bled off or vented.

The bleed screw itself is captive within the plug, cannot be removed and cannot be ejected in proper use.

Other thread type and sizes may be available.



### Ordering information:

Size	Part Number
1/4"	HBV'4M
1/2"	HBV'8M

\* Specify material

Materials				
S	316/316L Stainless Steel	HC	Alloy C276	
6MO	6MO Sup. Aust. St. Steel	T	Titanium Gr. 2	
M	Alloy M400	825	Alloy 825	
D1	Duplex 22 Cr. Steel	625	Alloy 625	
D2	Super Duplex 25 Cr. Steel			

## Compact Gauge Syphon

A discrete range of compact gauge syphons available in 1/2" NPS only - please consult your local Parker support.



# Essential Manifold Accessories

## Swivel Gauge Adaptors

Parker's range of swivel gauge adaptors has been designed to provide 360° rotational movement enabling maximum positional orientation of installed gauges and measuring instruments. A fully contained sealing mechanism ensures total system integrity and offers the user up to 10,000 psig (690 barg) working pressure. Silver plated swivel nut thread and bearing area prevent threat galling of stainless steel threads and allow trouble free repeatable re-assembly.

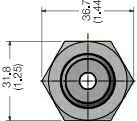
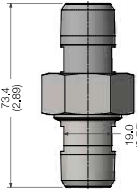
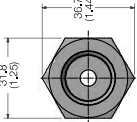
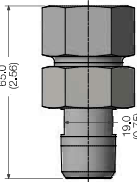


### Features

- Silver plated swivel thread and bearing surface to prevent thread galling and maximising re-make opportunities
- Variety of thread options
- Compact design
- Fully contained and retained sealing mechanism

### Specification

- Available in materials listed below. The nut as standard is 316 Stainless Steel.
- Maximum pressure rating: 10,000 psig (690 barg)
- Maximum temperature rating: 538°C (1000°F)
- Fully heat code traceable



### Ordering information:

Example 1: SGS8M8F3HP

Example 2: SGS8RDM8RFNC

Series		SG		Swivel gauge adaptor	
Materials		S		316/316L Stainless Steel	
		M		Alloy M400	
		D1		Duplex 22 Cr. Steel	
		D2		Super Duplex 25 Cr. Steel	
Connections - Standard		Inlet		Outlet	
		4M		1/4" NPT Fem.	
		6M		3/8" NPT Male	
		8M		1/2" NPT Fem.	
		4M		1/4" NPT Male	
		6M		3/8" NPT Male	
		8M		1/2" NPT Male	
Other Connection Options		•VF		Fem. connection	
		•FM		Male connection	
		R		BSPT BS21 ISO7/1 - British Standard Taper Pipe Thread	
		RD		BSPP BS21/9 British Standard Parallel Pipe thread	
				DN 1628/1628EN637 BSPP gauge connection type	
Options		3		Graphite Seal option <sup>1</sup>	
		HP		High Pressure 10,000 PSI option	
		NC		NACE option	

<sup>1</sup> Insert size designator.

<sup>#</sup> Insert specification designator (K/R/RD).

<sup>\*</sup> Interface seal material PTFE as standard. Graphite seal optional.

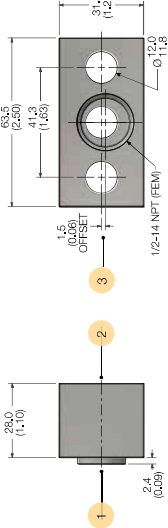
## Instrument Flange Adaptors (Kidney/Oval Flanges)



Example shown with traditional 1/2" NPT Fem. connection.



Example shown with integral A-LOK® connection.



Example of the instrument flange adaptor with 1.5mm offset connection (Code OS) which accommodates variation of impulse line centres between 51-57mm.

### Ordering information:

Example 1: HKSM12ASB3

Example 2: HK6MOIM12ASB3

Example 3: HKD18FOSSB

Example 4: HKSBW83

Example 5: HK625BW8AXSB3

Series		HK		Kidney/oval flange	
Materials		S		316/316L Stainless Steel	
		6MO		6MO Sup. Aust. St. Steel	
		M		Alloy M400	
		D1		Duplex 22 Cr. Steel <sup>1</sup>	
		D2		Super Duplex 25 Cr. Steel <sup>1</sup>	
Connections		4F		1/4" NPT Fem.	
		6F		3/8" NPT Fem.	
		8F		1/2" NPT Fem.	
		4A		1/4" A-LOK <sup>2</sup>	
		6A		3/8" A-LOK <sup>2</sup>	
		8A		1/2" A-LOK <sup>2</sup>	
		M6A		6mm A-LOK <sup>2</sup>	
		M10A		10mm A-LOK <sup>2</sup>	
		M12A		12mm A-LOK <sup>2</sup>	
Butt Weld - Pipe		Type		Schedule (Thickness)	
		BW		Butt Weld	
				Extension	
				• 25mm	
				• 75mm	
				• 100mm	
Options		OS		Offset 1.5mm option <sup>3</sup>	
		SB		Stainless Steel Bolt option <sup>4</sup>	
		3		Graphite Seal option <sup>5</sup>	
		NC		NACE option	

<sup>1</sup> Not available with tube connections.

<sup>2</sup> For CPT<sup>TM</sup> change A to Z, example: M10Z.

<sup>\*</sup> No designator required.

<sup>3</sup> Offset option only available on Fem. threaded connection; accommodates variation of impulse line centres between 51-57mm. See diagram above.

<sup>4</sup> Bolt material as standard HT Carbon Steel, Stainless Steel optional. Both in accordance with IEC 61518.

<sup>5</sup> Interface seal material PTFE as standard. Graphite seal optional. Both in accordance with IEC 61518 Type A.

### OTHER NOTES:

- Tube connection selection as per Parker recommended tube guides.
- Flange interface connection to DIN IEC 61518 Type A.
- Inverted A-LOK® connections supplied with Socket Cap Head bolts. All other connections supplied with Hex Head bolts.
- Not all options/combinations are necessarily available in each single product model type. Care should be taken to consult the main catalogue. If in doubt, please consult your local Parker representation.

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