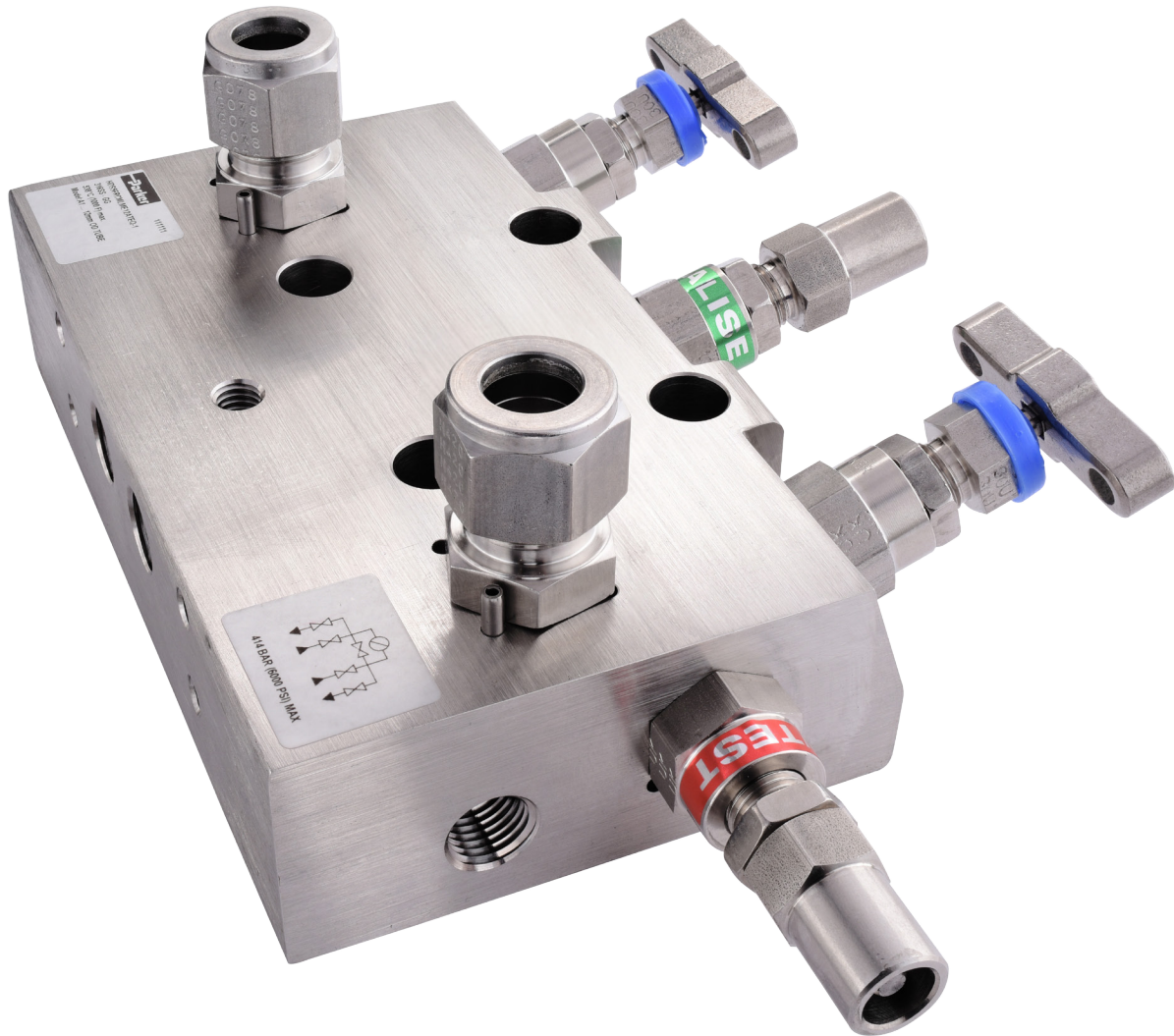




**TOTAL**  
COMMITTED TO BETTER ENERGY



## Manifolds Class 600 and 1500

Total RC THR RC INS 920

Contract: GLOB-0560

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



ENGINEERING YOUR SUCCESS.

**Total Refining and Chemicals - THR RC INS 920**

<b>Page 3</b>	Introduction
<b>Page 4</b>	Manifolds for Transmitters
<b>Page 10</b>	Manifolds for Pressure Gauges
<b>Page 15</b>	Seals
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<b>Page 18</b>	Complementary Products
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<b>Page 31</b>	Appendix

**WARNING**

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries or its authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

**Offer of Sale**

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Welcome to Parker catalogue 4190-Total, compliant to the TOTAL RC's Contract GLOB-0560, further requisition THR RC INS 920. This contract between TOTAL RC and Parker is for Manifold ANSI Class 600 and 1500.

Total RC is standardising on manifolds produced by the Instrumentation Products Division of Parker Hannifin, the global leader in motion and control technologies. The decision follows several years' extensive temperature, pressure and corrosion testing of products from different manufacturers – Parker is the first company to have secured a 100 percent pass rate.

**Specification**

All 2, 4, 5 valve Manifolds, Close Couple Monoflange or Monoflange supplied for this contract GLOB-0560 have the following features:

- Stainless Steel 316 construction
- NACE MR0175 / ISO 15156 certified for the wetted parts
- IEC 61518 Type B with Graphite seals.
- Graphoil packing
- Anti-Tamper Bonnets on Vent Valves
- Steam Trace port for heat tracing (Available without this standard option)
- PTFree Connect™ or with welded Class 600 & 1500 Flanges
- Heat Code Traced

**PTFree connect™**

Our PTFree connect™ system provides a simple means of connecting impulse lines to manifolds without involving the use of taper threads, PTFE tape or thread sealant. Available as an option for every type of manifold valve block that Parker produces, PTFree connect offers different versions that accommodate metric tube sizes from 6 to 12 mm and imperial sizes from 1/4 to 1/2 inch.

**In this Catalogue**

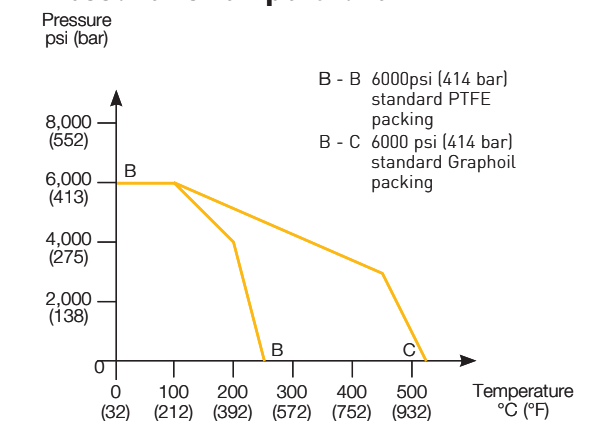
This catalogue details design innovation - based around TOTAL RC standardisation - that will save significant engineering and installation time and costs for users of process fluid instrumentation.

The following pages detail a range of manifolds and accessories for small-bore instrumentation requirements that allow anyone to select and order a manifold and available options for a process application in a few minutes. Once you have made your selection, Parker assembles and delivers the finished manifold to you - ready for immediate installation.

**Need any help?**

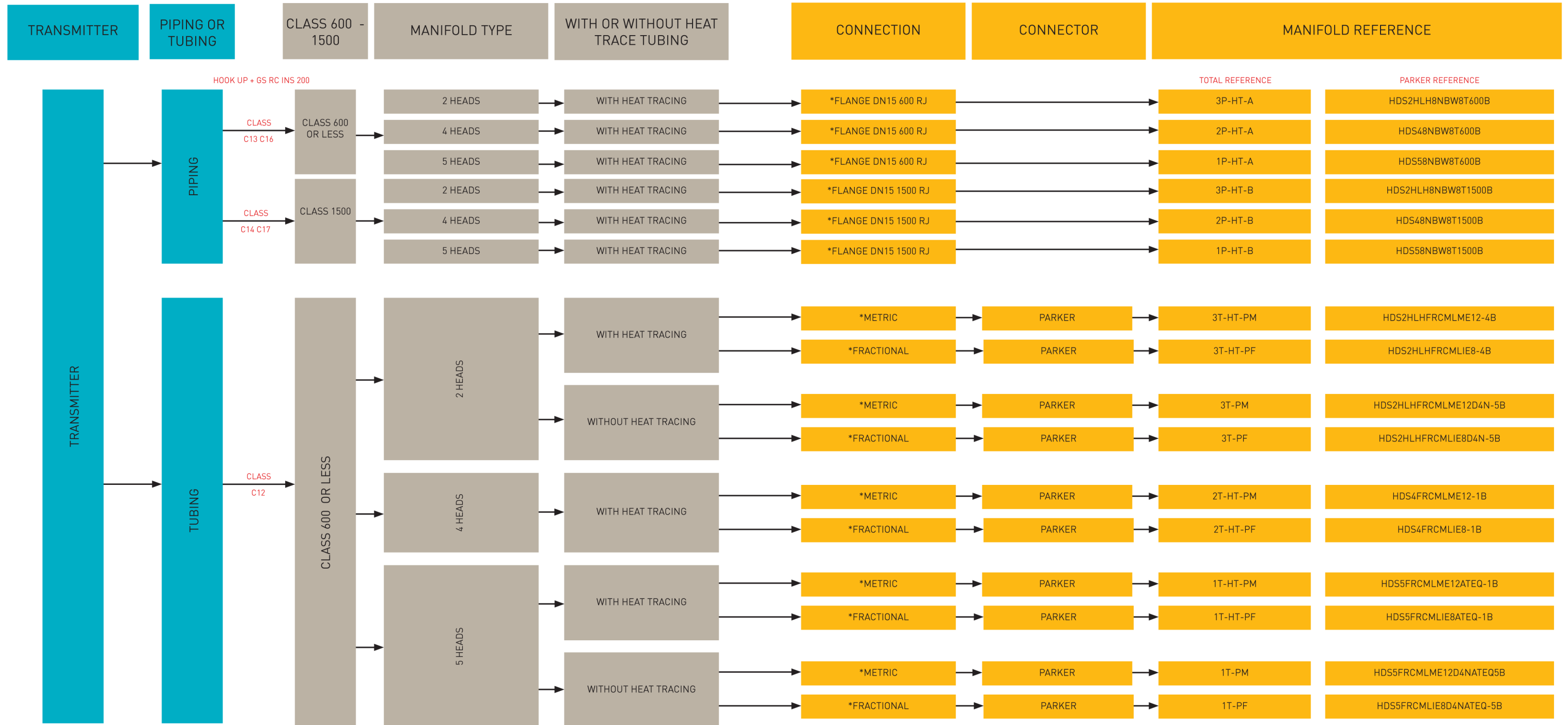
If you need help in selecting a manifold, available options or complementary products, Parker welcomes your contact, see the back page of this catalogue to find your local office.

**Pressure vs temperature**



# Manifolds for Transmitters

## Choice Guide, Manifold for New Installation or Revamped Hook-ups

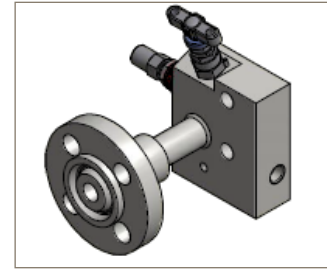
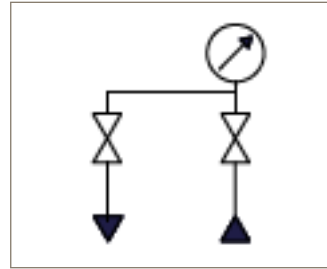


\*DIRECT MOUNTING (OVAL FLANGE) INSTRUMENT SIDE

# Manifolds for Transmitters

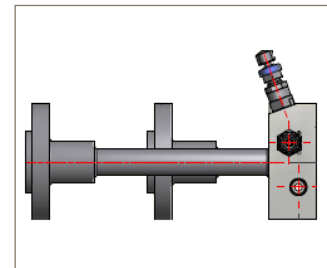
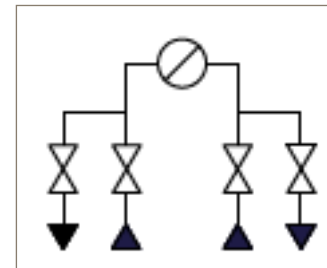
## 2, 4, 5 Valve Manifolds for Transmitter to Piping Class 600

- 2 Valve Manifold
- With Heat Tracing
- Flange DN15 600 RJ
- IEC 61518 Type B



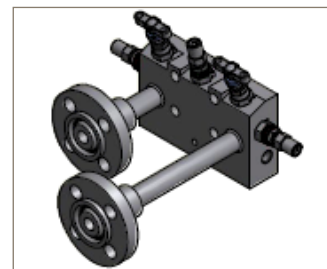
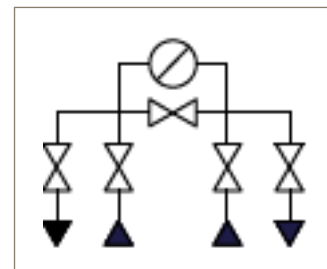
Inlet	Outlet	Vent	Total Part Number	Parker Part Number
1/2" NB RT 600 LB ANSI B16.5 R11 Ring Groove	Flanged	1/4-18 NPT (FEM)	3P-HT-A	HDS2HLH8NBW8T600B

- 4 Valve Manifold
- With Heat Tracing
- Flange DN15 600 RJ
- IEC 61518 Type B



Inlet	Outlet	Vents	Total Part Number	Parker Part Number
1/2" NB RT 600 LB ANSI B16.5 R11 Ring Groove	Flanged	1/4-18 NPT (FEM)	2P-HT-A	HDS48NBW8T600B

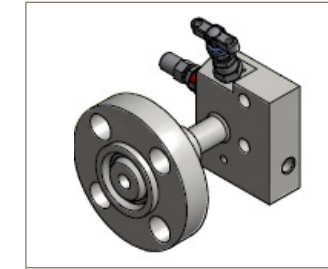
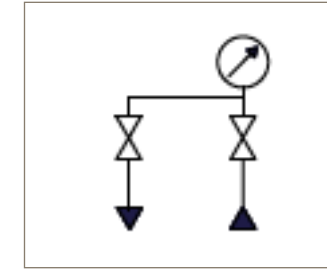
- 5 Valve Manifold
- With Heat Tracing
- Flange DN15 600 RJ
- IEC 61518 Type B



Inlet	Outlet	Vents	Total Part Number	Parker Part Number
1/2" NB RT 600 LB ANSI B16.5 R11 Ring Groove	Flanged	1/4-18 NPT (FEM)	1P-HT-A	HDS58NBW8T600B

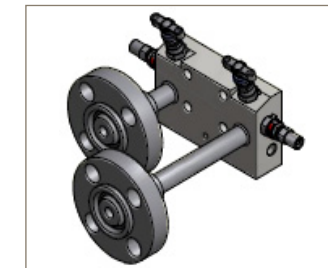
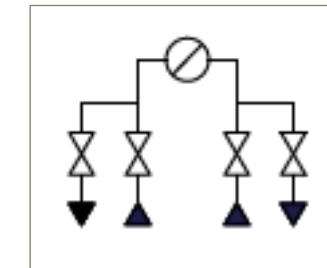
## 2, 4, 5 Valve Manifolds for Transmitter to Piping Class 1500

- 2 Valve Manifold
- With Heat Tracing
- Flange DN15 1500 RJ
- IEC 61518 Type B



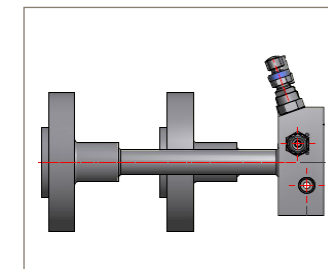
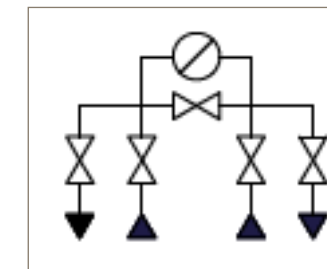
Inlet	Outlet	Vent	Total Part Number	Parker Part Number
1/2" NB RT 1500 LB ANSI B16.5 R12 Ring Groove	Flanged	1/4-18 NPT (FEM)	3P-HT-B	HDS2HLH8NBW8T1500B

- 4 Valve Manifold
- With Heat Tracing
- Flange DN15 1500 RJ
- IEC 61518 Type B



Inlet	Outlet	Vents	Total Part Number	Parker Part Number
1/2" NB RT 1500 LB ANSI B16.5 R12 Ring Groove	Flanged	1/4-18 NPT (FEM)	2P-HT-B	HDS48NBW8T1500B

- 5 Valve Manifold
- With Heat Tracing
- Flange DN15 1500 RJ
- IEC 61518 Type B

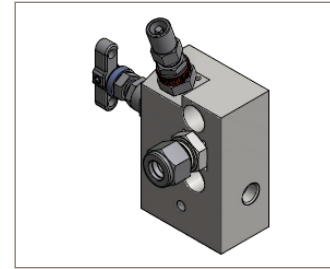
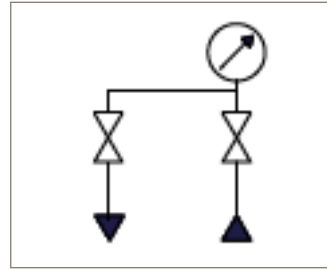


Inlet	Outlet	Vents	Total Part Number	Parker Part Number
1/2" NB RT 1500 LB ANSI B16.5 R12 Ring Groove	Flanged	1/4-18 NPT (FEM)	1P-HT-B	HDS58NBW8T1500B

# Manifolds for Transmitters

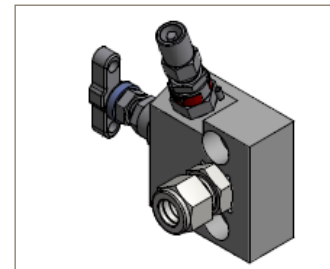
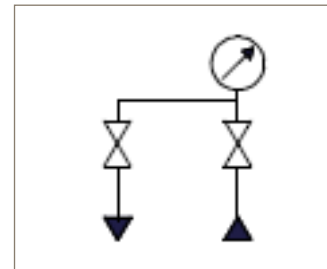
## 2, 4, 5 Valve Manifolds for Transmitter to Tubing Below Class 600

- 2 Valve Manifold
- With Heat Tracing
- Metric and Imperial Connections
- IEC 61518 Type B



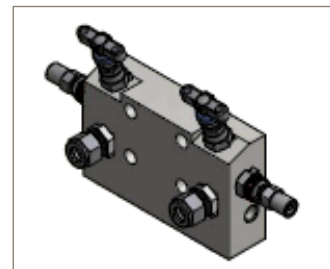
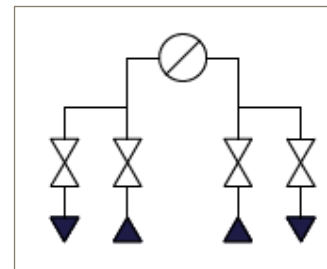
	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK	Flanged	1/4-18 NPT (FEM)	3T-HT-PM	HDS2HLHFRCLME12-4B
Imperial	1/2" O.D A-LOK	Flanged	1/4-18 NPT (FEM)	3T-HT-PF	HDS2HLHFRCLIE8-4B

- 2 Valve Manifold
- Without Heat Tracing
- Metric and Imperial Connections
- IEC 61518 Type B



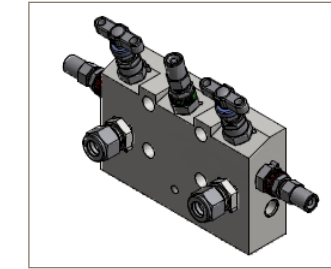
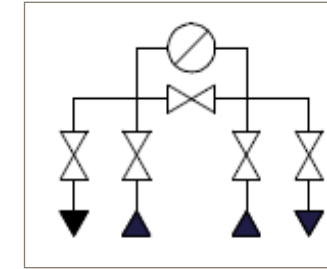
	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK	Flanged	1/4-18 NPT (FEM)	3T-PM	HDS2HLHFRCLME12D4N-5B
Imperial	1/2" O.D A-LOK	Flanged	1/4-18 NPT (FEM)	3T-PF	HDS2HLHFRCLIE8D4N-5B

- 4 Valve Manifold
- With Heat Tracing
- Metric and Imperial Connections
- IEC 61518 Type B



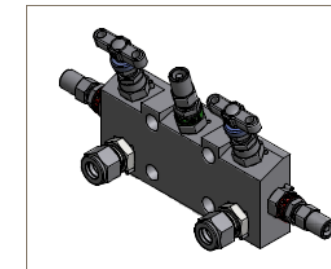
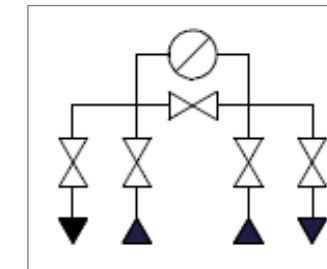
	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK PTFree	Flanged	1/4-18 NPT (FEM)	2T-HT-PM	HDS4FRCMLME12-1B
Imperial	1/2" O.D A-LOK PTFree	Flanged	1/4-18 NPT (FEM)	2T-HT-PF	HDS4FRCMLIE8-1B

- 5 Valve Manifold
- With Heat Tracing
- Metric and imperial connections
- IEC 61518 Type B



	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK	Flanged	1/4-18 NPT (FEM)	1T-HT-PM	HDS5FRCMLME12ATEQ-1B
Imperial	1/2" O.D A-LOK PTFree	Flanged	1/4-18 NPT (FEM)	1T-HT-PF	HDS5FRCMLIE8ATEQ-1B

- 5 Valve Manifold
- Without Heat Tracing
- Metric and imperial connections
- IEC 61518 Type B

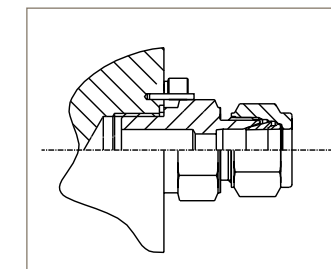
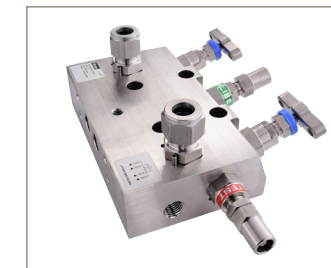


	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK	Flanged	1/4-18 NPT (FEM)	1T-PM	HDS5FRCMLME12D4NATEQ5B
Imperial	1/2" O.D A-LOK	Flanged	1/4-18 NPT (FEM)	1T-PF	HDS5FRCMLIE8D4NATEQ-5B

### PTFree connect™ Manifold connections

The PTFree connect™ system enables users to assemble tube lines to any of the manifold ports without the need for PTFE tape or liquid sealant. This connection can be applied to any of the manifolds featured in this catalogue. These will be factory-fitted, pin-locked and pressure tested.

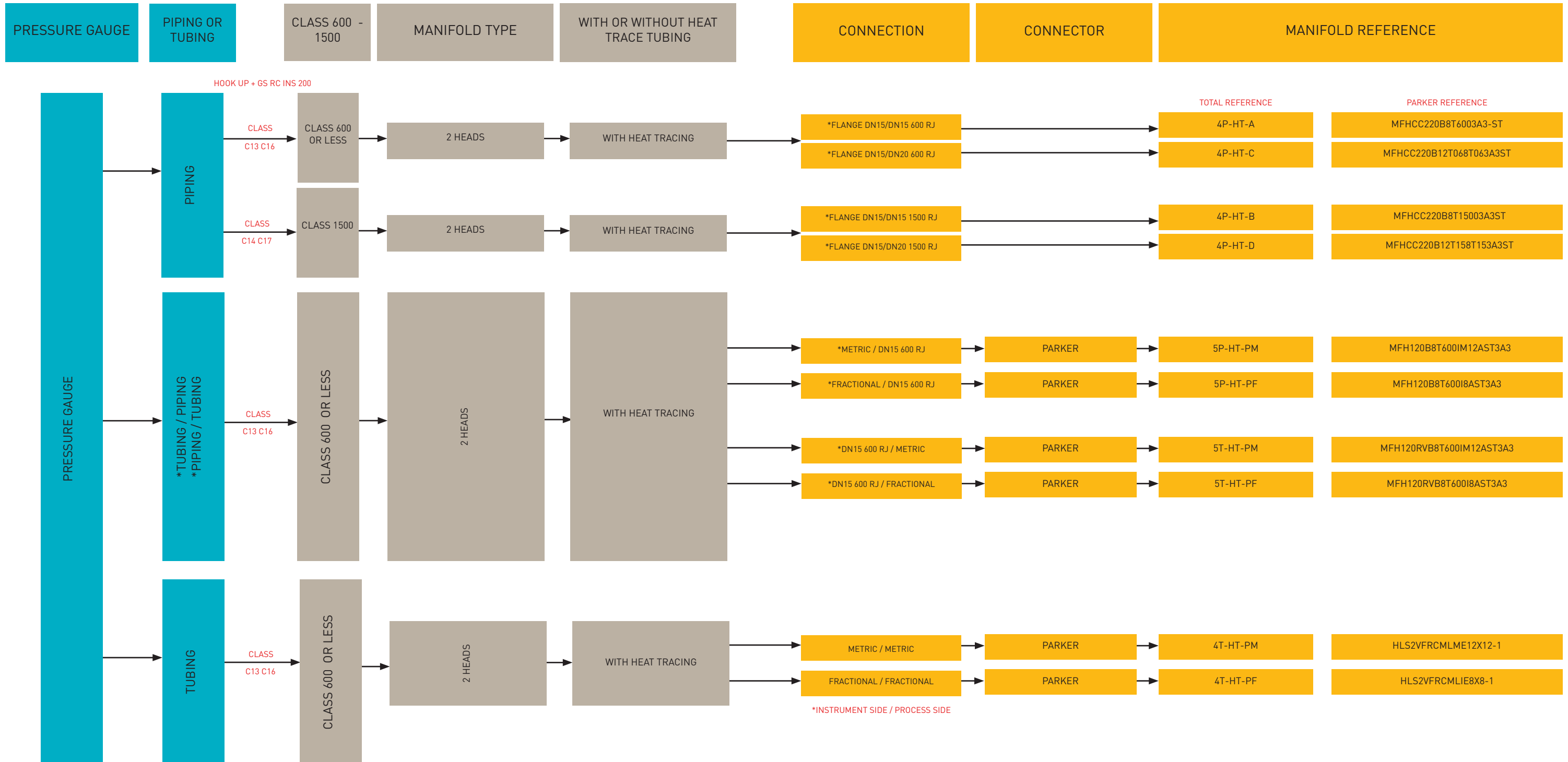
PTFree connect™ enables angled tube connections to be swivelled until the optimum tube alignment position has been achieved. Assembly to the tube connector is gained by tightening the standpipe nut one-quarter turn from the finger tight position.





# Manifolds for Pressure Gauges

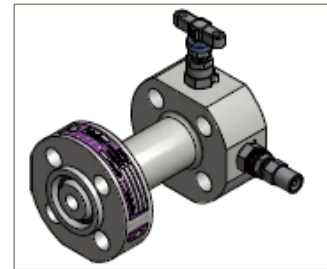
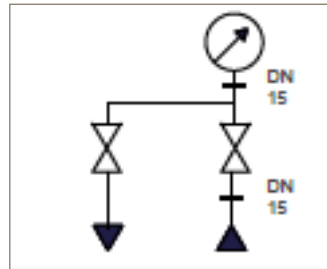
## Choice Guide, Manifold for New Installation or Revamped Hook-ups



# Manifolds for Pressure Gauges

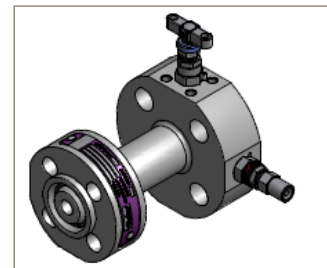
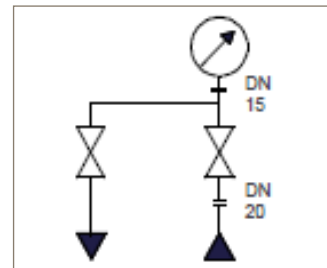
## 2 Valve Close Couple Monoflange for Pressure Gauge to Piping Class 600

- 2 Valve Close Couple Monoflange
- With Heat Tracing
- Flange DN15/DN15 600 RJ



Inlet	Outlet	Vent	Total Part Number	Parker Part Number
1/2" Flanged	1/2" Flanged	1/4-18 NPT (FEM)	4P-HT-A	MFHCC220B8T6003A3-ST

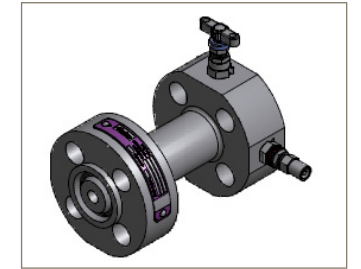
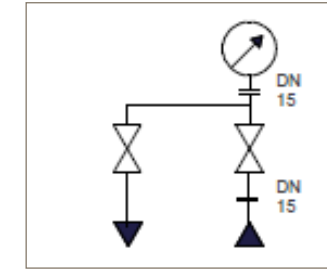
- 2 Valve Close Couple Monoflange
- Without Heat Tracing
- Flange DN15/DN20 600 RJ



Inlet	Outlet	Vent	Total Part Number	Parker Part Number
3/4" Flanged	1/2" Flanged	1/4-18 NPT (FEM)	4P-HT-C	MFHCC220B12T068T063A3ST

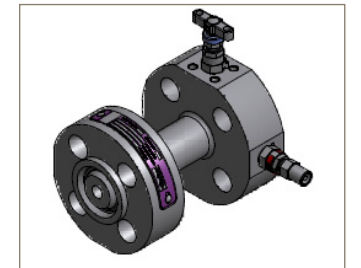
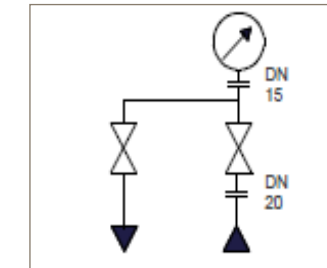
## 2 Valve Close Couple Monoflange for Pressure Gauge to Piping Class 1500

- 2 Valve Close Couple Monoflange
- With Heat Tracing
- Flange DN15/DN15 1500 RJ



Inlet	Outlet	Vent	Total Part Number	Parker Part Number
1/2" Flanged	1/2" Flanged	1/4-18 NPT (FEM)	4P-HT-B	MFHCC220B8T15003A3ST

- 2 Valve Close Couple Monoflange
- With Heat Tracing
- Flange DN15/DN 20 1500 RJ

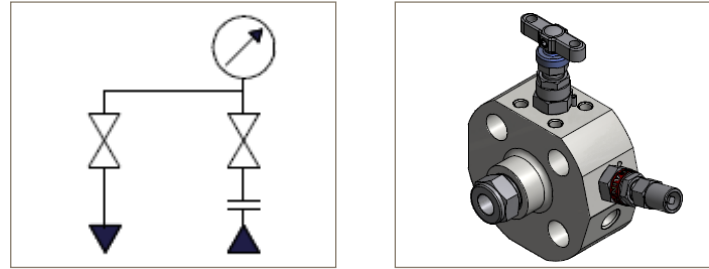


Inlet	Outlet	Vent	Total Part Number	Parker Part Number
3/4" Flanged	1/2" Flanged	1/4-18 NPT (FEM)	4P-HT-D	MFHCC220B12T158T153A3ST

# Manifolds for Pressure Gauges

## 2 Valve Monoflange for Pressure Gauge Flange to Tubing

- 2 Valve Monoflange
- With Heat Tracing
- DN15 600 RJ
- Metric and Imperial Connections



	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	1/2" Flanged	12mm O.D Inverted A-LOK	1/4-18 NPT (FEM)	5P-HT-PM	MFH120B8T600IM12AST3A3
Imperial	1/2" Flanged	1/2" O.D Inverted A-LOK	1/4-18 NPT (FEM)	5P-HT-PF	MFH120B8T600I8AST3A3

## 2 Valve Monoflange for Pressure Gauge Tubing to Flange

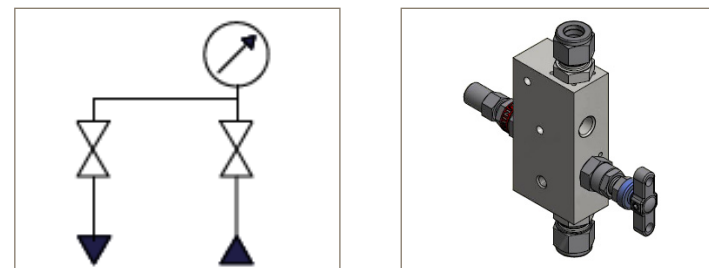
- 2 Valve Monoflange
- Without Heat Tracing
- DN15 600 RJ
- Metric and Imperial Connections
- Reverse Flow



	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D Inverted A-LOK	1/2" Flanged	1/4-18 NPT (FEM)	5T-HT-PM	MFH120RVB8T600IM12AST3A3
Imperial	1/2" O.D A-LOK	1/2" Flanged	1/4-18 NPT (FEM)	5T-HT-PF	MFH120RVB8T600I8AST3A3

## 2 Valve Manifolds for Pressure Gauge to Tubing Class 600 or less

- 2 Valve Manifold
- With Heat Tracing
- Metric and Imperial Connections

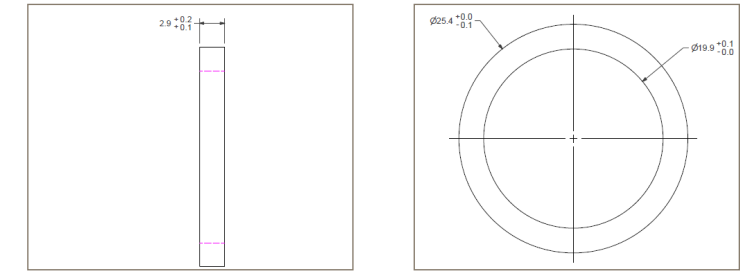


	Inlet	Outlet	Vent	Total Part Number	Parker Part Number
Metric	12mm O.D A-LOK	12mm O.D A-LOK	1/4-18 NPT (FEM)	4T-HT-PM	HLS2VFRCLME12X12-1
Imperial	1/2" O.D A-LOK	1/2" O.D A-LOK	1/4-18 NPT (FEM)	4T-HT-PF	HLS2VFRCLIE8X8-1

# Seals

## Direct Mount Seal - Graphite

- IEC 61518
- Type B direct mount seal
- Graphite for manifold without extended spigot
- PTFE option available



Type	Mount	Description	Parker Part Number
IEC B	Direct	Standard Manifold Graphoil Packing	HIEC001-GRAPHITE
IEC B	Direct	O <sup>2</sup> Manifold PTFE Packing	HIEC001-PTFE/1

Item	Service	Part Number	
1 graphite seal	HC SERVICE	HIEC001-GRAPHITE/1	Order desired QTY
1 PTFE seal	O <sup>2</sup> SERVICE	HIEC001-PTFE/1	Order desired QTY
Isolating valve and accessories with graphite seals	HC SERVICE	HBNTSISGRF	316SS / T-Bar Isolate/ Blue Cap / GRAPHITE
Isolating valve and accessories with PTFE seals	O <sup>2</sup> SERVICE	HBNTSISPTFE	316SS / T-Bar Isolate / Blue Cap / PTFE
Drain valve and accessories	HC SERVICE	HBNTSDRGRFAT	316SS / Anti-tamper / Red Vent Sticker / GRAPHITE / No AT Key
Drain valve and accessories	O <sup>2</sup> SERVICE	HBNTSDRPTFEAT	316SS / Anti-tamper / Red Vent Sticker / PTFE / No AT Key
Equalizing valve and accessories	HC SERVICE	HBNTSEQGRFAT	316SS / Anti-tamper / Green Equalise Sticker / GRAPHITE / No AT Key
Equalizing valve and accessories	O <sup>2</sup> SERVICE	HBNTSEQPTFEAT	316SS / Anti-tamper / Green Equalise Sticker / PTFE / No AT Key
Bolting / Fastenings for 4 or 5 heads manifold for transmitter connection		PH582-2INCHSS/1 H-BOLT-7/16-1.63-SS/4	For 1.5" THK manifolds For 1.125" & 1.25" THK manifolds Order desired QTY
Bolting / Fastenings for 2 heads manifold for transmitter connection		PH582-2INCHSS/1 H-BOLT-7/16-1.63-SS/4	For 1.5" THK manifolds For 1.125" & 1.25" THK manifolds Order desired QTY
Anti-tamper equipment		ATHKEY/1	Anti-Tamper key
Manifold for electrical tracing 90 mm		Heater 2HDS2	
Manifold for electrical tracing 105 mm		Heater 5HDS5	



# Manifold Options

TOTAL standard	Type	FITTING		Equipment reference (no SS bracket included)
		Diameter	Type	
1P-HT A	5 heads direct assembly with heat tracing	N/A	N/A	HDS58NBW8T600B
1P-HT B	5 heads direct assembly with heat tracing	N/A	N/A	HDS58NBW8T1500B
2P-HT A	4 heads direct assembly with heat tracing	N/A	N/A	HDS48NBW8T600B
2P-HT B	4 heads direct assembly with heat tracing	N/A	N/A	HDS48NBW8T1500B
3P-HT A	2 heads direct assembly with heat tracing	N/A	N/A	HDS2HLH8NBW8T600B
3P-HT B	2 heads direct assembly with heat tracing	N/A	N/A	HDS2HLH8NBW8T1500B
4P-HT A	2 heads pressure gauge with heat tracing	N/A	N/A	MFHCC220B8T6003A3-ST
4P-HT B	2 heads pressure gauge with heat tracing	N/A	N/A	MFHCC220B8T15003A3ST
4P-HT C	2 heads pressure gauge with heat tracing	N/A	N/A	MFHCC220B12T068T063A3ST
4P-HT D	2 heads pressure gauge with heat tracing	N/A	N/A	MFHCC220B12T158T153A3ST

1T-PM	5 heads direct assembly without heat tracing	12 mm	Metric	HDS5FRCMLME12D4NATEQ5B
1T-HT-PM	5 heads direct assembly with heat tracing	12 mm	Metric	HDS5FRCMLME12ATEQ-1B
2T-HT-PM	4 heads direct assembly with heat tracing	12 mm	Metric	HDS4FRCMLME12-1B
3T-PM	2 heads direct assembly without heat tracing	12 mm	Metric	HDS2HLHFRCMLME12D4N-5B
3T-HT-PM	2 heads direct assembly with heat tracing	12 mm	Metric	HDS2HLHFRCMLME12-4B
5P-HT-PM	2 heads pressure gauge with heat tracing	12 mm	Metric	MFH120B8T600IM12AST3A3
5T-HT-PM	2 heads pressure gauge with heat tracing	12 mm	Metric	MFH120RVB8T600IM12AST3A3
4T-HT-PM	2 heads pressure gauge with heat tracing	12 mm	Metric	HLS2VFCMLME12X12-1

1T-PF	5 heads direct assembly without heat tracing	1/2	Fractional	HDS5FRCMLIE8D4NATEQ-5B
1T-HT-PF	5 heads direct assembly with heat tracing	1/2	Fractional	HDS5FRCMLIE8ATEQ-1B
2T-HT-PF	4 heads direct assembly with heat tracing	1/2	Fractional	HDS4FRCMLIE8-1B
3T-PF	2 heads direct assembly without heat tracing	1/2	Fractional	HDS2HLHFRCMLIE8D4N-5B
3T-HT-PF	2 heads direct assembly with heat tracing	1/2	Fractional	HDS2HLHFRCMLIE8-4B
5P-HT-PF	2 heads pressure gauge with heat tracing	1/2	Fractional	MFH120B8T600I8AST3A3
5T-HT-PF	2 heads pressure gauge with heat tracing	1/2	Fractional	MFH120RVB8T600I8AST3A3
4T-HT-PF	2 heads pressure gauge with heat tracing	1/2	Fractional	HLS2VFCMLIE8X8-1

Equipment reference (with SS bracket assembled)	Reference for the Stainless Steel mounting bracket kit alone	Service O2 (Brackets not included) Equipment reference
HDS58NBW8T600BBRK	BKT5SSB6	HDS58NBW8T600BOX
HDS58NBW8T1500BBRK	BKT5SSB6	HDS58NBW8T1500BOX
HDS48NBW8T600BBRK	BKT5SSB6	HDS48NBW8T600BOX
HDS48NBW8T1500BBRK	BKT5SSB6	HDS48NBW8T1500BOX
HDS2HLH8NBW8T600BBRK	BKT3SSBM10-KG	HDS2HLH8NBW8T600BOX
HDS2HLH8NBW8T1500BBRK	BKT3SSBM10-KG	HDS2HLH8NBW8T1500BOX
MFHCC220B8T6003A3-ST	N/A	MFHCC220B8T600A3STOX
MFHCC220B8T15003A3ST	N/A	MFHCC220B8T1500A3STOX
MFHCC220B12T068T063A3ST	N/A	MFHCC220B12T068T06A3STOX
MFHCC220B12T158T153A3ST	N/A	MFHCC220B12T158T15A3STOX

HDS5FRCMLME12D4NATEQ5BBRK	BKT5SSB6	HDS5FRCMLME12D4NATEQ5BOX
HDS5FRCMLME12ATEQ-1BBRK	BKT5SSB6	HDS5FRCMLME12ATEQ-1BOX
HDS4FRCMLME12-1BBRK	BKT5SSB6	HDS4FRCMLME12-1BOX
HDS2HLHFRCMLME12D4N-5BBRK	BKT3SSB3	HDS2HLHFRCMLME12D4N-5BOX
HDS2HLHFRCMLME12-4BBRK	BKT3SSB3	HDS2HLHFRCMLME12-4BOX
MFH120B8T600IM12AST3A3	N/A	MFH120B8T600IM12ASTA3OX
MFH120RVB8T600IM12AST3A3	N/A	MFH120RVB8T06IM12ASTA3OX
HLS2VFCMLME12X12-1BRK	BKT1SSB1	HLS2VFCMLME12X12-1OX

HDS5FRCMLIE8D4NATEQ5BBRK	BKT5SSB6	HDS5FRCMLIE8D4NATEQ5BOX
HDS5FRCMLIE8ATEQ-1BBRK	BKT5SSB6	HDS5FRCMLIE8ATEQ-1BOX
HDS4FRCMLIE8-1BBRK	BKT5SSB6	HDS4FRCMLIE8-1BOX
HDS2HLHFRCMLIE8D4N-5BBRK	BKT3SSB3	HDS2HLHFRCMLIE8D4N-5BOX
HDS2HLHFRCMLIE8-4BBRK	BKT3SSB3	HDS2HLHFRCMLIE8-4BOX
MFH120B8T600I8AST3A3	N/A	MFH120B8T600I8ASTA3OX
MFH120RVB8T600I8AST3A3	N/A	MFH120RVB8T600I8ASTA3OX
HLS2VFCMLIE8X8-1BRK	BKT1SSB1	HLS2VFCMLIE8X8-1OX

## Complementary Products

### Enclosures (Catalogue 4190-ENC)

- Sized to suit single, double, triple or multiple instrument installations
- GRP Fire Retardant to BS476, part 7, class 2
- Weather protection to IP66 (EN60529, NEMA 4X)
- Supplied pre-fitted with Parker 'EXT' style manifolds



Description	Width	Height	Depth	Part Number
Compact Single Instrument Enclosure	380 mm	395 mm	310 mm	PEX-S1
Standard Single Instrument Enclosure	400 mm	450 mm	400 mm	PEX-S2
Enclosure to suit Double Pressure Application	600 mm	450 mm	400 mm	PEX-D1
Enclosure to suit Double DP Application	700 mm	450 mm	400 mm	PEX-D2
Enclosure to suit Triple Instrument Application	900 mm	450 mm	400 mm	PEX-T1
Enclosure for Multi-Instrument Assemblies	500 mm	600 mm	500 mm	PEX-M1

### Protective Shades (Catalogue 4190- ENC)

- Available in a wide range of sizes (single, double or triple width) to protect various instrumentation applications
- Shades can be drilled to suit clients' requirements, or 'bespoke' mounting can be designed and manufactured by Parker's specialist team
- GRP Fire Retardant to BS476, part 7, class 2



Width	Height	Depth	Part Number
360 mm	370 mm	455 mm	PS-S1
500 mm	400 mm	450 mm	PS-S2
450 mm	400 mm	600 mm	PS-S3
530 mm	430 mm	640 mm	PS-S4
220 mm	125 mm	365 mm	PS-S5
345 mm	160 mm	405 mm	PS-S6
300 mm	240 mm	250 mm	PS-S7
405 mm	165 mm	315 mm	PS-S8
700 mm	400 mm	450 mm	PS-D1
600 mm	400 mm	600 mm	PS-D1
1000 mm	400 mm	450 mm	PS-T1
900 mm	400 mm	600 mm	PS-T2
1100 mm	400 mm	600 mm	PS-T3

### Tube Cutter

- Cuts stainless steel, soft copper and aluminium tubing
- For 1/8" to 1-1/8" and 4 to 28 mm O.D. tubing



Type	Series	Part Number
Cutter	PT	PT-C
Spare Wheel	PT	PT-CS

### Tube Bender

- For bending soft copper, aluminium, brass, stainless steel and other tubing
- For 1/8" to 1-1/8" and 4 to 28 mm O.D. tubing



Tube O.D.	Bend Radius	Part Number
Imperial		
1/4"	9/16"	PTB-4T
3/8"	15/16"	PTB-6T
1/2"	1 1/2"	PTB-8T
Metric		
6 mm	14.3 mm	PTB-6M
8 mm	23.8 mm	PTB-8M
10 mm	23.8 mm	PTB-10M
12 mm	38.1 mm	PTB-12M

### Reaming and Deburring Tool

- For 3/16" to 1-1/2" O.D. tubing
- Reams both inside and outside edges of tube with 3 hollow ground cutters
- Deburrs both clockwise and anti-clockwise

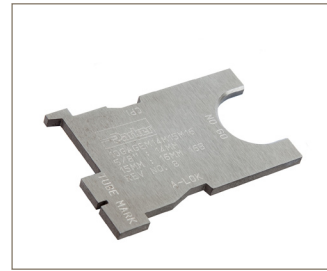


Type	Series	Part Number
Deburrer	PT	PT-D
Spare Blade	PT	PT-DS

## Complementary Products

### Parker PT Inspection Gauges

- Parker PT Combination Gauge



Size	Parker Part Number	Size	Part Number
1/4"	PT-CG-4T	6 mm	PT-CG-6M
3/8"	PT-CG-6T	8 mm	PT-CG-8M
1/2"	PT-CG-8T	10 mm	PT-CG-10M
5/8"	PT-CG-10T	12 mm	PT-CG-12M
3/4"	PT-CG-12T	16 mm	PT-CG-16M
1"	PT-CG-16T	20 mm	PT-CG-20M
		25 mm	PT-CG-25M

- Parker PT Gap Gauge



Size	Part Number
1/4"	PT-GG-4
3/8"	PT-GG-6
1/2"	PT-GG-8
3/4"	PT-GG-12
1"	PT-GG-16

### Gaugeability Tools

- Parker PTM Tube Marker



Size	Parker Part Number	Size	Part Number
1/8"	PTM-2T	6 mm	PTM-6M
1/4"	PTM-4T	8 mm	PTM-8M
3/8"	PTM-6T	10 mm	PTM-10M
1/2"	PTM-8T	12 mm	PTM-12M
5/8"	PTM-10T	16 mm	PTM-16M
3/4"	PTM-12T	20 mm	PTM-20M
1"	PTM-16T	25 mm	PTM-25M

- Parker PPT Preassembly Tool



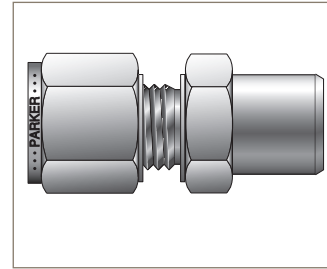
Size	Parker Part Number	Size	Part Number
1/8"	PPT-2T	3 mm	PPT-3M
3/16"	PPT-3T	4 mm	PPT-4M
1/4"	PPT-4T	6 mm	PPT-6M
5/16"	PPT-5T	8 mm	PPT-8M
3/8"	PPT-6T	10 mm	PPT-10M
1/2"	PPT-8T	12 mm	PPT-12M
5/8"	PPT-10T	14 mm	PPT-14M
3/4"	PPT-12T	16 mm	PPT-16M
7/8"	PPT-14T	18 mm	PPT-18M
1"	PPT-16T	20 mm	PPT-20M
		22 mm	PPT-22M
		25 mm	PPT-25M

## Complementary Products

### Tube Fittings

- Buttweld Connector
- For CPI™/A-LOK® to Pipe Buttweld Connection

Tube O.D.	Buttweld Pipe N.B.	Part Number
12 mm	1/2"	ZHLW2-12-1/2-SS
12 mm	3/4"	ZHLW2-12-3/4-SS



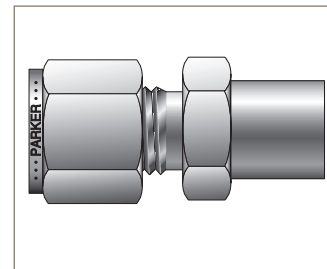
- Tube to Tube Union
- Straight Connector
- Stainless Steel

Tube O.D.	Part Number
12 mm	SCM12-316



- Socket Weld Connector
- For CPI™/A-LOK® to Tubing Socket Weld Connection

Tube O.D.	Socket Weld N.B.	Part Number
12 mm	1/2"	ZHLW-12-1/2NB-SS
12 mm	3/4"	ZHLW-12-3/4NB-SS



- Tube to Tube Union
- Elbow
- Stainless Steel

Tube O.D.	Part Number
12 mm	EEM12-316



- NPT Female Connector
- Tube to Female Pipe

Tube O.D.	NPT Thread	Part Number
12 mm	1/2"	M12FSC1/2N-316
12 mm	3/4"	M12FSC3/4N-316



- Tube to Tube Union
- Union Tee

Tube O.D.	Part Number
12 mm	ETM12-316



- Male Connector to NPT
- NPT Thread
- Stainless Steel

Tube O.D.	Straight Thread Size	Part Number
12 mm	1/2"	M12MSC1/2N-316
12 mm	1/4"	M12MSC1/4N-316



- Male Elbow Connector
- NPT Thread
- Stainless Steel

Tube O.D.	Straight Thread Size	Part Number
12 mm	1/2"	M12MSEL1/2N-316
12 mm	1/4"	M12MSEL1/4N-316



## Complementary Products

### Components

- Cap for metric tube
- For capping open ended tubing
- Stainless Steel

Tube O.D.	Part Number
12 mm	BLENM12-316

- Tube nut for metric tube
- Stainless Steel

Tube O.D.	Part Number
12 mm	NUM12-316

- Front ferrule for metric tube
- Stainless Steel

Tube O.D.	Part Number
12 mm	FFM12-316

- Back ferrule for metric tube
- For Stainless Steel
- Suparcase™

Tube O.D.	Part Number
12 mm	BFM12-316

- Anti-tamper key

Description	Part Number
Spare Anti-tamper Key	ATHKEY/1



### Flange Connector-Flange to Parker Tube Fittings

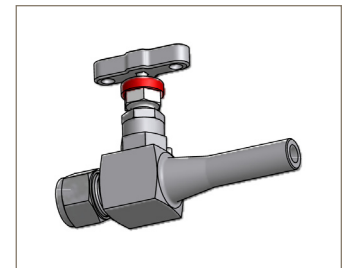
- Two Ferrule Compression Fitting (A-LOK®)
- Stainless Steel
- ANSI Flange Class 600



Designation	Flange Face	Part Number
316 12 mm O.D. 1/2" 600RF	Raised Face	FCBM12A8F600
316 12 mm O.D. 3/4" 600RF	Raised Face	FCBM12A12F600
316 12 mm O.D. 1/2" 600RTJ	Ring Type Joint	FCBM12A8T600
316 12 mm O.D. 3/4" 600RTJ	Ring Type Joint	FCBM12A12T600
316 12 mm O.D. 2" 600RF	Raised Face	FCBM12A32F600

### Needle Valve for Flushing Ring

- Inlet: 1/4" NB Male Pipe Socket Weld
- Outlet: O.D. A-LOK®
- Gland packing: Graphite



Inlet	Outlet O.D.	Part Number
1/4" NB SW	10 mm	HNVSMSW4NB60MMM10A3DRPT
1/4" NB SW	12 mm	HNVSMSW4NB60MMM12A3DRPT

### HiPro Ball Valve

- PEEK seals
- Gland packing: Graphite



Tube O.D.	Part Number
12 mm	HPBYBM12APK3



## Complementary Products

### Ball Valves B Series (Catalogue 4121-BV)

- 2-way, 3-way diverting or spring-lead 3-way selector designs
- Wide temperature application range
- Rated up to 6000 psi (413.7 bar)



### Metering Valves HR Series (Catalogue 4170-MV)

- Bubble tight shut-off capability
- High resolution metering valve with limited hysteresis
- Seven optional valve stem tapers



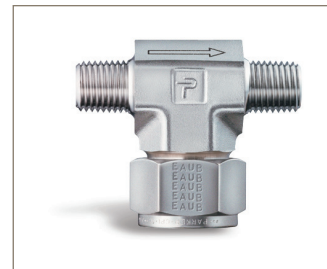
### Check Valves C Series (Catalogue 4135-CV)

- Resilient, custom molded seat design
- Back stopped poppet to minimise spring stress
- Cracking Pressures: 1/3, 1, 5, 10, 25, 50, 75 and 100 psi (.023, .069, .345, .69, 1.72, 3.45, 5.17, 6.9 bar)
- Port connections include male and female NPT, CPI™, A-LOK®, UltraSeal™, VacuSeal™, BSP, SAE and Seal-Lok®



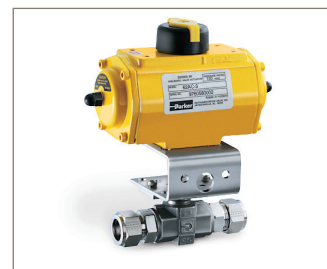
### Filters FT Series (Catalogue 4135-CV)

- Filter elements are easily replaced without disconnecting the tube lines
- Fast Loop bypass option enables a continuous self cleaning flow
- Replaceable sintered 316 stainless steel filter element
- Optional 250 and 450 micron wire cloth filter elements



### Pneumatic/Electric Actuators (Catalogue 4121-BV)

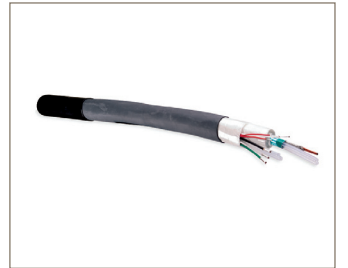
- 60 Series pneumatic actuators provide 90° and 180° rotation in both double acting and spring return models
- 70 and 80 Series electric actuators provide 90° and 180° actuation for our B, MB, HB, SWB series ball valves



## Accessories

### Multitube® Instrument and Heat Trace Tubing (Catalogue 4200-M-2)

- Available in a variety of configurations
- For containment, transmission and control of pneumatic signals, gases and liquids
- Materials include copper, stainless steel, metal alloys and PFA/PTFE



### Sample Cylinders (Catalogue 4160-SC)

- 1800 psig (124 barg) DOT rated sample cylinders
- Stainless steel construction
- ANSI/ASME B1.20.1 internal pipe threads



### Air Distribution Manifolds (Catalogue 4190-DM)

- Specified to Customer Requirements

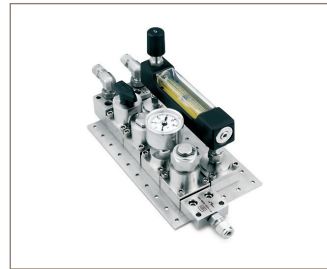


## Complementary Products

### Analytical Systems

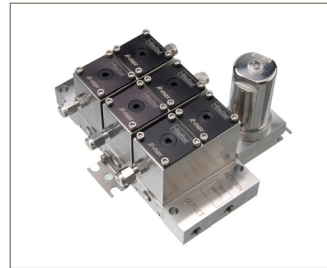
#### IntraFlow™ (Catalogue 4250)

- Modular instrument system
- ISA/ANSI 76.00.02 compliant
- Every component can be upgraded to Gen 2 & 3 NeSSI Technologies
- Vacuum to 500 psig (34 barg)
- Optional pressure up to 3000 psig (207 barg)



#### R-max™ Gen II (Catalogue 4141-R)

- Surface mount technology for stream switching valves
- Low internal volume to reduce system purge time
- Low pressure actuation of valves-40 psig (-2.76)
- Rated from vacuum to 500 psig (34 barg)



#### ChangeOver System (Catalogue 25000214)

- Compact turnkey module designed for continuous gas management
- Optional outlet regulator to control application specific outlet pressure
- Audio/visual alarm annunciator available
- Available in 316L stainless steel and brass
- Suitable for oxygen service



#### Vent Master™ (Catalogue 4142-VM)

- Pre-engineered compact instrument panel that includes regulators, gauges, rotometer, an eductor and a separate pressure controller
- Creates a stable pressure within the analyzer shelter vent header system
- Provide analysis accuracy with .06% over a vent header flow of 0-18SLPM



### Regulators

#### Pressure Regulator IR4000 Series (Catalogue 25000226)

- Internally threadless design
- Convoluted Hastelloy C-22® diaphragm
- Available in 316L SST, Brass, Hastelloy C-22®, Monel®
- Seals available for nitrous oxide and hydrocarbon applications
- Low dead volume
- General purpose for instrument/analyzer and semiconductor applications



#### Pressure Regulator IR6000 Series (Catalogue 25000141)

- Dual stage regulator
- Internally threadless design
- Convoluted Hastelloy C-22® diaphragm
- Virtually eliminates supply pressure effect
- Provides cylinder gas pressure reduction in refineries, process analytical systems and specialty gases



#### Vaporising Regulator AVR3 (Catalogue 25000138)

- Steam heat design
- Internally threadless design
- Internal liquid volume only .5cc
- Convoluted Hastelloy C-22® diaphragm



#### Vaporising Regulator AVR4 (Catalogue 25000137)

- Electrical heat design
- Field serviceable heat transfer element
- CSA, Cenelec and ATEX certified
- Internally threadless design
- 120v or 240v, 50/60 Hz
- Convoluted Hastelloy C-22® diaphragm



## The Right Tube + The Right Fitting + A Parker Trained Fitter = A High Integrity Solution

Parker is pleased to announce the arrival and running of its new Small Bore Expert (SBEx) courses.

The course has been developed as an upgrade and replacement to our industry leading Safety at Work Programme, providing material that is relevant to your engineers on site.

Some of the advantages over our existing programme are:

- Greater knowledge of small bore tubing systems
- Increased product familiarity
- Increased skills and confidence in dealing with small bore systems

The benefits that your engineers will gain are:

- Increased understanding of their own systems and installation practices
- Improvements in the safety and integrity of their small bore tubing systems
- Overall asset integrity improvement



This will be the only licensed and certified training course that we will allow to be run with our support.

Each individual fittings package incorporates summarised installation instructions which are adequate for most circumstances. However, it is strongly recommended that attention is given to the contents of the Parker Instrument Tube Fitting Installation Mini A-lok book; attendance to the Parker Certified Installer SBEx 'Small Bore Expert' Training is also highly beneficial and would be further recommended.



Parker Hannifin Manufacturing Ltd  
Instrumentation Products Division Europe  
Riverside Road  
Pottington Business Park  
Barnstaple  
Devon, UK  
EX31 1NP

Tel: +44 (0)1271 313131  
Fax: +44 (0)1271 373636  
[www.parker.com/ipd](http://www.parker.com/ipd)

### Statement of Conformity. To Total specification REQ RC INS 202 – Rev 01

### REQUISITION INSTRUMENTATION REQ RC INS 202

### Manifold for instruments CLASS 600 and CLASS 1500

Parker Hannifin Manufacturing Ltd has reviewed Total specification REQ RC INS 202 and can confirm it's products meets the intent of this standard in full with exception to the deviations/clarifications as listed within the following detailed document:

DECLARATION OF CONFORMITY WITH TOTAL REQUISITION  
REQ RC INS 202 rev01

Barnstaple, 21<sup>st</sup> March 2014

Kevin Ballard  
Technical Manager  
Instrumentation Products Division Europe







# Parker Worldwide

## Europe, Middle East, Africa

### AE – United Arab Emirates,

Dubai  
Tel: +971 4 8127100  
parker.me@parker.com

### AT – Austria, Wiener Neustadt

Tel: +43 (0)2622 23501-0  
parker.austria@parker.com

### AT – Eastern Europe, Wiener Neustadt

Tel: +43 (0)2622 23501 900  
parker.easteurope@parker.com

### AZ – Azerbaijan, Baku

Tel: +994 50 2233 458  
parker.azerbaijan@parker.com

### BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900  
parker.belgium@parker.com

### BG – Bulgaria, Sofia

Tel: +359 2 980 1344  
parker.bulgaria@parker.com

### BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00  
parker.switzerland@parker.com

### CZ – Czech Republic, Klecany

Tel: +420 284 083 111  
parker.czechrepublic@parker.com

### DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0  
parker.germany@parker.com

### DK – Denmark, Ballerup

Tel: +45 43 56 04 00  
parker.denmark@parker.com

### ES – Spain, Madrid

Tel: +34 902 330 001  
parker.spain@parker.com

### FI – Finland, Vantaa

Tel: +358 (0)20 753 2500  
parker.finland@parker.com

### FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25  
parker.france@parker.com

### GR – Greece, Athens

Tel: +30 210 933 6450  
parker.greece@parker.com

### HU – Hungary, Budaörs

Tel: +36 23 885 470  
parker.hungary@parker.com

### IE – Ireland, Dublin

Tel: +353 (0)1 466 6370  
parker.ireland@parker.com

### IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21  
parker.italy@parker.com

### KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000  
parker.easteurope@parker.com

### NL – The Netherlands, Oldenzaal

Tel: +31 (0)541 585 000  
parker.nl@parker.com

### NO – Norway, Asker

Tel: +47 66 75 34 00  
parker.norway@parker.com

### PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### PT – Portugal, Leca da Palmeira

Tel: +351 22 999 7360  
parker.portugal@parker.com

### RO – Romania, Bucharest

Tel: +40 21 252 1382  
parker.romania@parker.com

### RU – Russia, Moscow

Tel: +7 495 645-2156  
parker.russia@parker.com

### SE – Sweden, Spånga

Tel: +46 (0)8 59 79 50 00  
parker.sweden@parker.com

### SK – Slovakia, Banská Bystrica

Tel: +421 484 162 252  
parker.slovakia@parker.com

### SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650  
parker.slovenia@parker.com

### TR – Turkey, Istanbul

Tel: +90 216 4997081  
parker.turkey@parker.com

### UA – Ukraine, Kiev

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878  
parker.uk@parker.com

### ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700  
parker.southafrica@parker.com

## North America

### CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

### US – USA, Cleveland

Tel: +1 216 896 3000

## Asia Pacific

### AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

### CN – China, Shanghai

Tel: +86 21 2899 5000

### HK – Hong Kong

Tel: +852 2428 8008

### IN – India, Mumbai

Tel: +91 22 6513 7081-85

### JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

### KR – South Korea, Seoul

Tel: +82 2 559 0400

### MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

### NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

### SG – Singapore

Tel: +65 6887 6300

### TH – Thailand, Bangkok

Tel: +662 186 7000

### TW – Taiwan, Taipei

Tel: +886 2 2298 8987

## South America

### AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

### BR – Brazil, Sao Jose dos Campos

Tel: +55 800 727 5374

### CL – Chile, Santiago

Tel: +56 2 623 1216

### MX – Mexico, Toluca

Tel: +52 72 2275 4200

European Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, EI, ES, FI, FR, IT, NL, NO, PL, RU, SE, SK, UK, ZA)

