



# Process to Instrument and Piping Valves Double Block and Bleed (DBB)

Monoflange and Pro-Bloc® Valves  
Including Low Emissions and API 6A Valves



ENGINEERING YOUR SUCCESS.

# Introduction

Parker's range of Process to Instrument valves has evolved and grown over the last two decades. The range has been designed to meet customer requirements for both double block and bleed and single block and bleed valves in all materials used by the industry today. It covers all the pressure requirements for ASME flange ended valves up to class 2500 and for API 6A up to 15K pressures. The bore sizes start at 10mm and are offered in increments up to 54mm (2"). Many of the valves were designed to meet specific customer needs.

One of Parker's unique advantages is the offering of an integral A-LOK® two ferrule fitting or CP1™ single

ferrule fitting connections for remote mounting of an instrument or for sample and injection valves. The specification of the world renowned and universally acceptable Parker compression type connections will improve system performance, increase safety, reduce size and weight and simplify installation which ultimately reduces overall user costs.

Continuous product development may from time to time necessitate changes in the details contained in this catalogue. Parker reserves the right to make such changes at their discretion and without prior notice. All dimensions shown in this catalogue are approximate and subject to change.

Every effort is made to provide sufficient, clear and accurate information to allow the correct selection of product from this catalogue, but ultimately it is the system designer's or user's responsibility to ensure selected product is suitable for the intended application. Should you require further information please do not hesitate to contact your local Parker support.

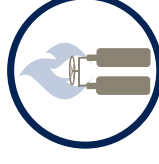
With thousands of distributor outlets and stores worldwide, and hundreds of Parker personnel and locations, Parker also offers the superior advantage of supply and support in your locale.



Upstream Oil & Gas



Downstream Oil & Gas



Industrial Gas

## Parker EHS Vision Statement:

Parker recognizes, and believes, in the importance of safeguarding natural resources and the global environment. We are committed to our employees, our communities, and our customers: their health, safety and understanding of the need for environmental stewardship.

We are committed to the concept of continuous improvement in environmental performance. Accordingly, we are committed to the following principles:

- We will seek to comply with environmental, health, and safety laws worldwide.
- We strive to minimize or eliminate the generation of waste.
- We will monitor compliance with environmental, health and safety regulations.

# General Technical Information

## Design

Parker's Process to Instrument valves are designed to meet the pressure and temperature ratings of ASME B16.34 Class 2500. Conformity to the recommendations of MSS SP-99 is also assured.

- Parker's Pro-Bloc® EP series valves conform to the EEMUA 182 specification for integral block and bleed valve manifolds for direct connection to pipework. This specification covers manifolds comprising two or more isolating valves and a vent valve, in an integral body, intended for the following applications:
- Having an inlet directly connected to the process pipework and an outlet connection not larger than DN 50 (NPS 2), whose principal use is as a replacement for individual block and bleed valves at tapping points in piping systems.
  - Arrangements having an inlet and outlet directly connected to the process pipework, whose principal use is for equipment or process isolation.

Code/Specification	Description
EEMUA 182	Specification for Integral Block and Bleed and Bleed Valve Manifolds for Direct Connection to Pipework
ASME B16.34/ ASME VIII Div. I	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
API 607 / ISO 10497	Fire Test of Soft-Seated Quarter Turn Valves Fire Type-Testing Requirements
MSS SP-25	Standard Marking Systems for Valves, Fittings, Flange and Unions
MSS SP-61	Pressure Testing of Valves
MSS SP-99	Instrument Valves
ISO 15848	Industrial valves— Measurement, test and qualification procedures for fugitive emissions
TA Luft	TA-Luft 2002, Absatz 5.2.6.4 und VDI 2440 (Ausgabe Nov. 2000), Absatz 3.3.1.3

## 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.	ASTM Material Grade
Carbon Steel	A105 / A350-LF2	UNS 1.0482	A105
Austenitic Stainless Steel	316/316L Dual Certified	UNS S31600	A479 Gr 316
		UNS S31603	A479 Gr 316L
		UNS S31254	A479/A276
Super Austenitic Stainless Steel	6Mo	UNS S31803	A479/A276
Austenitic-Ferritic Steel (Duplexes)	Duplex 22Cr	UNS S32750	A479/A276
		UNS S32760	A479/A276
		UNS N08825	ASTM B425
Nickel Alloy	Alloy 825	UNS N06625	ASTM B446

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.

## Flange Connections

### Pressure-temperature ratings for flanges ASME/ANSI B 16.5

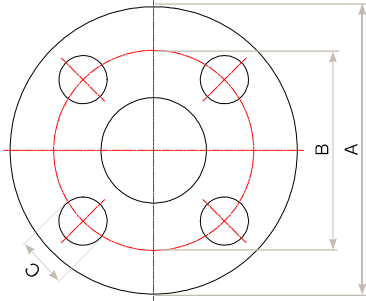
Parker's Process to Instrument valves carry the pressure-temperature ratings of their flange end interface according to ASME B16.5 dimensional specifications and pressure ratings.

Flange Material	°C	-29	38	50	100	150	200	250
	°F	-20	100	122	212	302	392	482
Working Pressure - PSI (bar)								
Class 150								
Carbon Steel		284 (19.6)	284 (19.6)	278 (19.2)	257 (17.7)	229 (15.8)	200 (13.8)	175 (12.1)
316/316L St.Steel		276 (19.0)	276 (19.0)	267 (18.4)	235 (16.2)	215 (14.8)	199 (13.7)	175 (12.1)
Duplex		290 (20.0)	290 (20.0)	283 (19.5)	257 (17.7)	229 (15.8)	200 (13.8)	175 (12.1)
Class 300								
Carbon Steel		741 (51.1)	741 (51.1)	727 (50.1)	676 (46.6)	654 (45.1)	635 (43.8)	608 (41.9)
316/316L St.Steel		719 (49.6)	719 (49.6)	698 (48.1)	612 (42.2)	558 (38.5)	518 (35.7)	484 (33.4)
Duplex		750 (51.7)	750 (51.7)	750 (51.7)	735 (50.7)	666 (45.9)	619 (42.7)	587 (40.5)
Class 600								
Carbon Steel		1481 (102.1)	1481 (102.1)	1453 (100.2)	1352 (93.2)	1308 (90.2)	1270 (87.6)	1271 (83.9)
316/316L St.Steel		1440 (99.3)	1440 (99.3)	1395 (96.2)	1224 (84.4)	1117 (77.0)	1034 (71.3)	969 (66.8)
Duplex		1500 (103.4)	1500 (103.4)	1500 (103.4)	1469 (101.3)	1333 (91.9)	1237 (85.3)	1173 (80.9)
Class 900								
Carbon Steel		2222 (153.2)	2222 (153.2)	2181 (150.4)	2028 (139.8)	1961 (135.2)	1906 (131.4)	1824 (125.8)
316/316L St.Steel		2159 (148.9)	2159 (148.9)	2093 (144.3)	1836 (126.6)	1675 (115.5)	1552 (107.0)	1452 (100.1)
Duplex		2249 (155.1)	2249 (155.1)	2249 (155.1)	2204 (152.0)	1999 (137.8)	1856 (128.0)	1761 (121.4)
Class 1500								
Carbon Steel		3703 (255.3)	3703 (255.3)	3634 (250.6)	3379 (233.0)	3269 (225.4)	3176 (219.0)	3041 (209.7)
316/316L St.Steel		3600 (248.2)	3600 (248.2)	3489 (240.6)	3060 (211.0)	2792 (192.5)	2586 (178.3)	2421 (166.9)
Duplex		3750 (258.6)	3750 (258.6)	3750 (258.6)	3674 (253.3)	3330 (229.6)	3093 (213.3)	2934 (202.3)
Class 2500								
Carbon Steel		6171 (425.5)	6171 (425.5)	6058 (417.7)	5632 (388.3)	5447 (375.6)	5294 (365.0)	5069 (349.5)
316/316L St.Steel		6000 (413.7)	6000 (413.7)	5814 (400.9)	5099 (351.6)	4653 (320.8)	4310 (297.2)	4033 (278.1)
Duplex		6249 (430.9)	6249 (430.9)	6249 (430.9)	6123 (422.2)	5550 (382.7)	5154 (355.4)	4890 (337.2)

# General Technical Information

## Flange Connections

### Flange dimensions



Nominal Pipe Size inch	Dimensions inch (mm)			Number of Mounting Holes
	A	B	C	
Class 150				
1/2	3 1/2 (88.9)	2 3/8 (60.5)	1/2	4
3/4	3 7/8 (98.6)	2 3/4 (69.8)	1/2	4
1	4 1/4 (108)	3 1/8 (79.2)	1/2	4
1 1/2	5 (127)	3 7/8 (98.6)	1/2	4
2	6 (152)	4 3/4 (121)	5/8	4
Class 300/Class 600				
1/2	3 3/5 (95.2)	2 5/8 (66.5)	1/2	4
3/4	4 5/8 (117)	3 1/4 (82.6)	5/8	4
1	4 7/8 (124)	3 1/2 (88.9)	5/8	4
1 1/2	6 1/8 (155)	4 1/2 (114)	3/4	4
2	6 1/2 (165)	5 (127)	5/8	8
Class 900/Class 1500				
1/2	4 3/4 (121)	3 1/4 (82.6)	3/4	4
3/4	5 1/8 (130)	3 1/2 (88.9)	3/4	4
1	5 7/8 (149)	4 (102)	7/8	4
1 1/2	7 (178)	4 7/8 (124)	1	4
2	8 1/2 (216)	6 1/2 (165)	7/8	8
Class 2500				
1/2	5 1/4 (134)	3 1/2 (88.9)	3/4	4
3/4	5 1/2 (140)	3 3/4 (95.2)	3/4	4
1	6 1/4 (159)	4 1/4 (108)	7/8	4
1 1/2	8 (203)	5 3/4 (156)	1 1/8	4
2	9 1/4 (235)	6 3/4 (171)	1	8

Note: Dimensions are for reference only and are subject to change.

## Meeting the ISO Standard

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, which will have significant consequences for all processes. According to the IPPS all plants and factories which fail to comply with the standards set by the directive may be closed from this point.

To put the scale of the challenge into perspective, a typical European refinery loses between 600 and 10,000 tonnes of emissions per annum. Around 70% of these losses are estimated to be caused by plant equipment such as pipe flanges, pumps, valves and vessels. Leakage from valves is often the biggest culprit, reportedly accounting for around 50% of the Ultra-Low emissions within the chemical and petrochemical industries.

Irrespective of the environmental impact, there is a tremendous financial burden on industry because it represents a huge loss of product, and cause of plant inefficiency. However, the true costs to industry are not always appreciated, as many of the costs associated with Ultra-Low emissions are hidden, such as labour and materials to repair leaks, wasted energy, environmental fines and clean up costs. Lost sales due to a poor green image, claims for personal injury and more. In this way, reducing Ultra-Low emissions not only protects the environment, but can save companies time and money.

With the above in mind, the legislation introduces a concept of Best Available Technique (BAT), urging plants to find the best available solution for reducing Ultra-Low emissions throughout the process, from areas such as design, product selection, fitting and fitter training, to maintenance, site monitoring, and so on.

With regard to the design and site monitoring of Ultra-Low emissions ISO 15848 parts 1 and 2 have been developed respectively.

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 Hannifin is now able to offer our full range of

flanged products with a class A approval to ISO 15848-1. These products are identified as the Ultra-Low Emissions range and are certified as ISO FE AH-C01-SSA1-t (RT,180°C)-ANSI2500-ISO 15848-1. This states that the product has been 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 st.st.

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. Production testing can be carried out to and sampling percentage specified by the purchaser with a minimum of one per lot. The production testing is a simpler helium sniffer test which is carried out at room temperature with no mechanical actuations.







## ISO 15848 standard

ISO 15848 parts 1&2 (defining a classification system and qualification procedures, and production acceptance test of industrial valves, respectively) specify new Ultra-Low standards for emissions. This standard is becoming the requirement for oil and gas and petrochemical organisations worldwide. The standard was originally created for process valves and control valves but is now being applied to Instrumentation valves which include primary isolation valves, especially on environmentally sensitive projects.

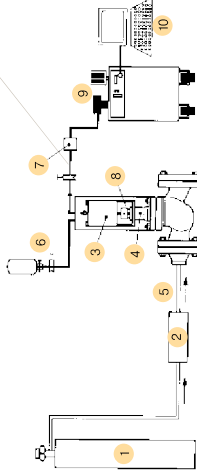
Meeting these low levels is a challenge, which Parker Instrumentation has solved with the new ball and needle valve designs used in these Double Block and Bleed valves and monoflanges. These designs meet the highest class 'A' level over the temperature range -29°C to +180°C celsius, alongside the standard instrumentation manifold pressure ranges.

Production testing and certification is available upon request. Please specify sample quantity required for production testing with your order.

O-ring material grade is a fluoroelastomer FKM tetrapolymer, specially formulated for explosive decompression (ED) resistance. The seals are qualified to the stringent Norsok M-710 standard that covers both ED resistance and sour gas (H<sub>2</sub>S) ageing tests.

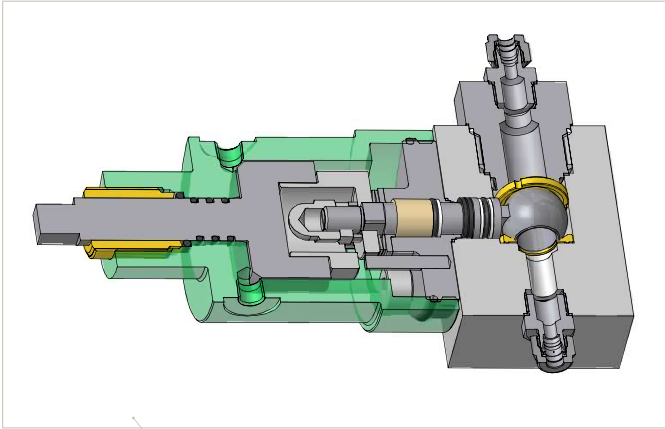
### Features

- Class 'A' leakage rates achieved
- Bolted ball valve bonnet assembly
- All threads sealed from the media
- All ball valves are bi-directional
- Firesafe design available



Prototype testing schematic as per ISO 15848-1

Reference	Description
1	Helium at 97% purity
2	Pressure control
3	Actuator
4	Vacuum
5	Helium
6	Standard calibrated leak
7	Vacuum safety
8	Tested stem sealing
9	Helium mass spectrometer
10	Data acquisition



Ball valve ISO 15848-1  
Prototype testing assembly

# Low Emissions Pro-Bloc® - Modular Single Piece DBB Valve

FM Series - 10mm Bore

Parker offer Pro-Bloc® Modular Single Piece DBB valves in accordance to ISO 15848-1. The valves prototype testing (part 1) is third party witnessed and verified. All valves are production tested to part 2 of the standard.

## Technical Specifications

Bore sizes	10 mm
Seat materials	PEEK (ball valve) Metal to Metal (needle valve)
Packing material	Graphite
Body materials	Stainless Steel ASTM A182-F316/F316L Duplex A182-F51 Super Duplex ASTM A182-F53/F55 Low Temp Carbon Steel ASTM A350 LF2/ ASTM A105 6Mo Alloy 625 Alloy 825
Max. Working Temperature (FE)	150° C (302° F)
Min. Working Temperature	-29° C (-20° F); non-operable at -50° C (-58° F)
Max. Working Pressure	6,249 PSI (431 bar)
Tightness class B	≤1.78 x 10 <sup>-5</sup> mbarI/(s.mm <sub>sub</sub> )

Pro-Bloc® FE Series valve (10mm bore) in accordance to ISO 15848-1

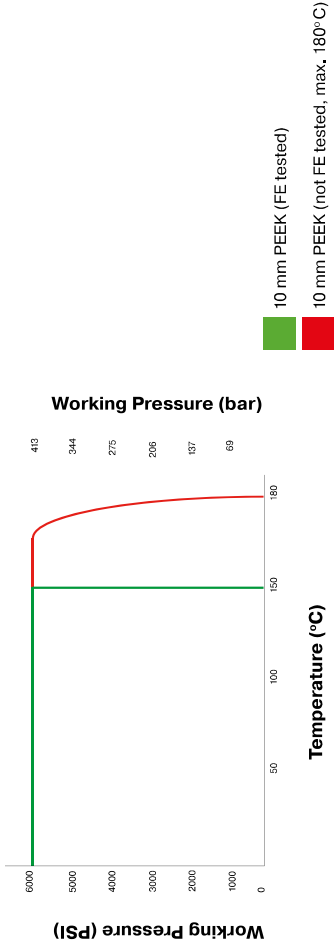
### Design Standards:

- ISO15848-1
- EEMUA 182
- Body wall thickness: ASME B16.34/ASME VIII Div. I
- Fire safe: API 6FA and API 607
- NACE

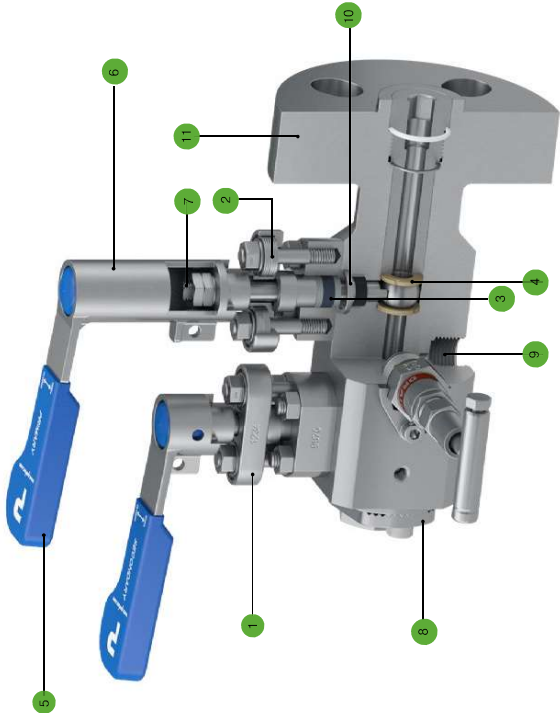
### Notes:

- Production testing and certification available on request
- ISO 15848-1 prototype tested using global helium vacuum method

## Pressure-Temperature Ratings for Ball Valve PEEK Seat



## Features, Benefits and Values



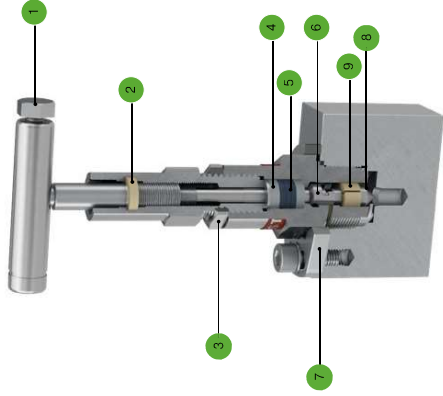
Reference	Feature	Benefit	Value
1	Packing adjustment outside screw and yoke	Allows removal of handle without compromising packing integrity	Safety Performance & Reliability
2	Belleville washers	Belleville washers maintain load on packing, reducing packing adjustment and ensuring FE capability	Safety Performance & Reliability
3	Graphite stem packing	Live loaded for FE capability and to compensate for wear	Safety Performance & Reliability
4	Slotted seats	Cavity relief on seats prevents over pressurisation of ball cavity. Conforms to EEMUA 182	Safety
5	Ergonomic vinyl sleeves	Easy to grip and comfortable	Ease of Operation
6	Longer and thicker gauge levers	Gives more hand clearance More rugged and positive feel	Ease of Operation Durability
7	Double D stem drive for 10mm bore size, rectangular drive on stems for bore sizes over 10mm	Ensures handle orientation is correct Conforms to EEMUA 182	Performance & Reliability Ease of Operation
8	Tru-Loc®	Prevents accidental disassembly of end loaded valves	Safety
9	5mm Bleed Hole	Prevents plugging and conforms to EEMUA 182	Performance & Reliability
10	Blowout proof stem	Prevents catastrophic failure and conforms to EEMUA 182	Safety
11	Close to shape forgings	Strength Reduction in potential leak paths	Safety Durability



# Low Emissions Pro-Bloc® - Modular Single Piece DBB Valve

FM Series - 10mm Bore

Low Emissions needle valve head design



Reference	Description
1	Ergonomic 'T' bar style handle with positive retention
2	PEEK upper stem support gland
3	Secure anti-vibration gland lock nut
4	Gland thrust bush
5	Graphite packing
6	Anti-blowout low torque back seating stem
7	Tru-Loc® bonnet locking plate
8	Self-centering, non-rotating stem for bubble tight shut off
9	PEEK lower stem support gland

## Bill of Materials

Description	Stainless Steel	Carbon Steel	Duplex
Body	316/316L St.Stl ASTM A182-F316/F316L	ASTM A105 /A350-LF2	Duplex St.Stl ASTM A182-F51
End Connections and Flange Inserts	316/316L St.Stl ASTM A479 UNS S31600/S31603	ASTM A105 /A350-LF2	Duplex St.Stl ASTM A479 UNS S31803
Ball Valve Ball	316/316L St.Stl ASTM A479 UNS S31600/S31603		Duplex St.Stl ASTM A479 UNS S31803
Ball Valve Stems	316/316L St.Stl ASTM A479 UNS S31600/S31603		Duplex St.Stl ASTM A479 UNS S31803
Ball Valve Seats		PEEK	
Ball Valve Packing		Graphite	
Body Seals	316/316L St.Stl ASTM A479 UNS S31600/S31603 Graphite		6MO ASTM A479 UNS S31254
Needle Valve Stem	316/316L St.Stl ASTM A479 UNS S31600/S31603		Duplex St.Stl ASTM A479 UNS S31803
Needle Valve Tip	17/4 PH St.Stl ASTM A564/A564M UNS S17400		Super Duplex St.Stl ASTM A479 UNS S32750/S32760
Needle Valve Screwed Bonnet and Gland Adjuster	316/316L St.Stl ASTM A479 UNS S31600/S31603		Duplex St.Stl ASTM A479 UNS S31803
All other components	316 St.Stl		



# Low Emissions Pro-Bloc® - Modular Single Piece DBB Valve

FM Series - 10mm Bore

## Ordering Information

FMPBY

Y

100

B

Series		Ball Valve Bore Size
Low Emissions Pro-Bloc®	FMPB	
		10 mm FMPBY

Material	
316 Stainless Steel/ 316L ASTM A182-F316/ F316L	B
Duplex A182-F51	E
Low Temp Carbon Steel ASTM A350 LP2/ ASTM A105	H
6MO ASTM 479/A276	K
Super Duplex ASTM A182-F53/F55	F
Alloy 825 ASTM B425	L
Alloy 625 ASTM B446	M

Available for arrangements 300, 400, 500, 600

Arrangement						
		Block-Bleed-Block 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	100		Block-Bleed-Block 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	200
		Block-Bleed-Block 1st Isolate: Ball 2nd Isolate: Ball Vent: Ball	120		Block-Bleed-Block 1st Isolate: Ball 2nd Isolate: Ball Vent: Ball	220
		Block-Bleed 1st Isolate: Ball Vent: Needle	130		Block-Bleed 1st Isolate: Ball Vent: Needle	230
		Block-Bleed 1st Isolate: Ball Vent: Ball	140		Block-Bleed 1st Isolate: Ball Vent: Ball	240
		Block-Bleed-Block (Modular Construction) 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	300		Block-Bleed-Block (Modular Construction) 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	400
		Block-Bleed-Block (Modular Construction) 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	500		Block-Bleed-Block (Modular Construction) 1st Isolate: Ball 2nd Isolate: Ball Vent: Needle	600

8F136

A3

F

Optional Outlet Connection			
3/8"	6	Female NPT	F
10 mm	M10	A-LOK®	A
12 mm	M12	CPI™	Z

1/2" Female NPT standard vent, no designator required

Compliance	
Fire Safe (Graphite packing)	F
NACE	N
Fire Safe & NACE	FN

Certification requirements and customer specifications MUST be provided at enquiry and order stage.

Flange Details			
Flange Size	Flange Style	Flange Class	
1/2"	8	Raised Face Spiral	F
3/4"	12	Ring Type Joint	T
1"	16	3/4"	150
1-1/2"	24		300, 600
2"	32	900, 1500, 2500	150
			300, 600
		1"	150
			300, 600
		1-1/2"	900
			1500
		2"	2500

Valve Handle Options	
Anti-Tamper Break-Valve Only	A*
Padlock Handle Locking	L*

\* Insert valve number  
1 = Primary  
2 = Secondary  
12 = Primary and Secondary  
3 = Vent  
4 = All

NB: Padlocks not supplied



### Notes:

- Plugged vent 1/2" Female NPT as standard. 1/2" NPT plug supplied loose.
- All non wetted parts will be supplied in standard stainless steel for corrosion resistant alloys. For carbon steel construction trim materials will be supplied in stainless steel
- All valves are graphite packed as standard. No PTFE option available
- All valves are Fire Safe as standard
- All ball valves are PEEK seated
- Materials are offered to NACE as standard



# Complementary Products for Complete Installation Solutions

## Flushing Rings (Spoofs)

Flushing Rings, historically referred to as drip rings are used between an isolation valve and the diaphragm seal of a pressure transmitter. Side ports on the rings allow media to be injected/ejected so that the diaphragm seal can be flushed free of deposits that affect transmitter measurement accuracy.

Parker offers a bespoke range of flushing rings in number of different styles and configurations. Historically, drip rings are secured between the two raised faces **only** and held in position by the force exerted through the bolts. The Parker Flushing Ring solution is held in place by the through bolting, this allows for ease of installation and give positive locating. Options with this range of flushing rings include captive studs. This gives the added benefit of the flushing ring staying in place if either the process valve side or diaphragm side require removal.

For full details see Data Sheet ref. 4190-FR.



## ProSpool

The Parker ProSpool feature a combined, single-piece valve consisting of a double block and bleed configuration with an integral flushing spool. It can be easily installed and, having fewer component parts, reduces inventory and purchase orders.

With the captive stud option torquing of the nuts is simplified. Extremely useful in restricted spaces.

For full details see Data Sheet ref. 4190-PSV.



## Ball Valves and Manifolds Hi-Pro Series

These high performance bi-directional Ball Valves & Manifolds offer the user full cold working pressure ratings up to 10,000 psi (689 bar), giving 100% bubble tight shut off and continuous repeatable performance. These products are suitable for the most demanding applications in the oil, gas and process control industries. All valves also meet the requirements of ANSI B31.1 for use in power plants. The design reduces potential body leakage paths to a minimum. With the added opportunity to select Parker Superior Advantage integral compression ends the user can eliminate the use of taper threads and thread sealant, thus avoiding system contamination, reducing leakage paths, installation costs, weight and space.

For full details see Catalogues ref. 4190-HBV and 4190-HBM.



## Air Header Distribution Manifolds - LPAHM Series

These air header distribution manifolds are designed to distribute air from the compressor to the actuators on pneumatic instruments, such as steam flow meters, pressure controllers and valve positioners. They are widely used in industrial chemical processing, plastic processing and energy industries and are approved for low pressure applications up to 275 psi. Manufactured from AISI 316 Stainless Steel material, the air header distribution manifolds offer complete customer system compatibility that reduces installation time and potential leak paths. The coded welded construction with non-destructive tested design minimises the number of potential leak paths, rather than fabricating with instrumentation connections with tubing, therefore reducing labour costs. These manifolds are designed for use with air only and are supplied with a number of lockable ball valves on opposite sides, right side or left side only to prevent unauthorized access.

For full details see Catalogue ref. 4190-DM.



## Air Header Distribution Manifolds - HPAHM Series

These distribution manifolds are designed for applications that use liquid or gas, low temperature steam and hydraulic actuation. The pressure rating of these manifolds is dictated by the inlet/outlet Flange Class or the thread connection. These distribution manifolds feature an ergonomic vinyl sleeve on the valve handle to provide positive grip and to ensure ease of operation. Each nut has an innovative domed design, which prevents ingress of moisture and contamination of the thread, therefore preventing corrosion. They feature a part-welded construction, with all welds carried out by coded welders, providing assurance of their robustness and performance. These manifolds are NDT (Non-Destructive Testing) applied, giving the customer greater assurance.

For full details see Catalogue ref. 4190-DM.



## Hi-Pro Modular Distribution Manifold

Unique to Parker, these manifolds are the ideal choice when ultimate flexibility is required within a distribution manifold. They are approved to operate at pressures up to 6,000 psi and are used extensively in the oil, gas, chemical and petrochemical industries to provide safety and performance. These innovative Hi-Pro modular distribution manifolds can be easily arranged in a layout to suit a wide range of different applications to distribute liquid or gas. They use standard components, therefore making it more affordable for the customer. The Hi-Pro modular distribution manifolds feature an ergonomic vinyl sleeve on the valve handle to provide positive grip and to ensure ease of operation. Each nut is domed in shape, which prevents ingress of moisture and contamination of the thread, which could cause corrosion. This manifold is available with up to 20 valves (even numbers only - spare valves can be blanked off). Temperature range is up to 232°C with PEEK seats.

For full details see Catalogue ref. 4190-DM.



## Lapped Joint Tube Adaptor

Available in the full range of fitting materials and sizes up to 1/2" (M12) as standard, these lapped joint tube adaptors are suitable for applications involving small flanged process valves and offer a simple, safe and effective conversion to instrument lines.



## Flange Connector - Flange to Parker Tube Fittings

Offered in a range of materials and with either A-LOK® or CP1™ tube fitting technology, these flange connectors deliver huge flexibility in terms of offering. Tube connections up to 1" (25mm), flange connections up to 2" NB and pressures to ANSI Class 2500 (6,000 PSI Nom.). The one-piece integral connection adaptors allow the safe, easy and efficient transition from process to instrumentation in just one step.

