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Instrumentation Solutions





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Block and Bleed Valves

ZHEJIANG FANGDUN INSTRUMENT VALVE CO., LTD

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BB Series: Single Block and Bleed Valves

04 Instrument Single Block and Bleed Valves

07 Root Single Block and Bleed Valves

08 Monoflange Single Block and Bleed Valves

Features

- Maximum working pressure: 10000 psig (690 bar) • Working temperature up to 1200°F (649°C) with Graphite packing
- Colour coded valve function identification
- Every design is hydraulic pressure tested in accordance with EN 12266-1 and API 598. Every set is tested with nitrogen for leak-tight performance at 6000 psig
- Fire-tested design in accordance with BS 6755 part 2
- Flanged connections comply with ANSI B16.5 RF and RTJ
- Pressure ratings in accordance with ANSI B16.34

Ball Valve Model

DB Series: Double Block Valves

10 Double Block Valves

11 Single Block Valve

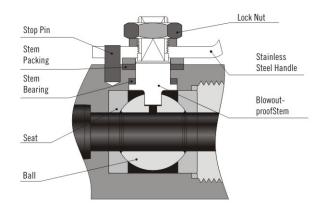
SB Series: Single Block Valve

DBB Series: Double Block and Bleed Valves

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18 Monoflange Double Block & Bleed Valves

20 Injection Double Block & Bleed Valves

20 Sampling Double Block & Bleed Valves

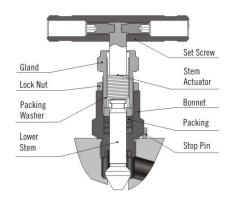
Block and Bleed Valves

Features

- Maximum working pressure is 10000 psig (690 bar).
- Working temperature are as follows: PTFE:-65°F to 450°F (-54°C to 232°C) PEEK:-65°F to 450°F (-54°C to 232°C)
- Actuate at quarter-turn.
- Directional stem flats show open or closed position.
- · Bottom-loaded stem prevents stem blowout and enhances system safety.
- High-strength stem bearing provides smooth actuation and eliminates galling between valve stem and body.
- It may be required to adjust the packing during the service life of the valve.
- FD-LOK ball valves are designed to be operated in a fully open or fully closed position.

Block and Bleed Valves

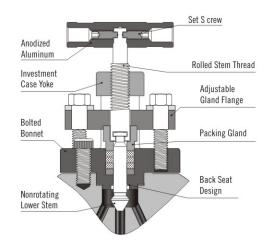
Needle Type Valve Model



Features

- Maximum working pressure is 10000 psig (690 bar).
- Working temperature are as follows:
- PTFE: -65°F to 450°F (54°C to 232°C)
- Graphite: -65°F to 1200°F (54°C to 649°C)
- We offer two-stem design: thread hardened upper stem and smooth surface hardened lower stem.
- Upper stem thread lubricant is isolated from system fluid.
- The nonrotating lower stem, linearly instead of helical movement, avoids galling damage to the seat and tip, as well as reduces the total friction area between the packing and the lower stem.
- Stem back seating seals in fully open position.
- Panel mounting is available as an option.
- · Double lock-pins enable steady and durable fastening of the handle.
- · Handle of different colors are available for option.

OS & Y Needle Type Valve Model



Handle colors indicate functions: Needle and OS&Y valves: BLACK = Isolate/Block RED = Vent/Bleed Ball valves: YELLOW = Isolate/Block RED = Vent/Bleed

Features

- Maximum working pressure is 10000 psig (690 bar).
- Working temperature are as follows: PTFE: -65°F to 450°F (-54℃ to 232℃)
- Graphite: -65°F to 1200°F (-54°C to 649°C)
 Two-stem design: thread hardened upper stem and smooth surface hardened lower stem.
- Upper stem thread lubricant is isolated from system fluid.
- The nonrotating lower stem, linearly instead of helical movement, avoids galling damage to the seat and tip, as well as reduces the total friction area between the packing and the lower stem.
- · Bolted bonnet enhance strength and reliability.
- Back seat design provides secondary stem sealing and prevents stem blowout.
 Adjustable gland flange allows easy access to the packing gland and packing
- adjustment for an effective stem seal.
 Investment case yoke is formed by precision casting which enhances strength and perfect stem alignment.
- Two handle pins make the handle fixed firmly and lastingly.

Standard Materials of Construction

				Body N	lateria	I
Comp	onent	Stainles	Stainless Steel			St
			Materia	al Grade	/Speci	ification
Body conn	/End ector	F316 SS, F316L SS /A182	316 SS, 316L SS /A479	LF2//	4350	F51/A1
	Ball					
D-II	Stem	21				
Ball Valve	Retainer					
	Socket					
	Seat		EK			
Needle	Stem Tip					
Type Globe	Stem	316 SS, 31	6L SS/A479			S31803/
Valve	Bonnet					
0S&Y	Stem Tip					
Needle	Stem	316 SS, 316L SS/A479				S31803/
Type Globe	Bonnet			Ial Grade/Specification		
Valve	Yoke		CF8M	/A351 or F	316 SS/A	A182

Stainless steel is standard material, others are available upon request.

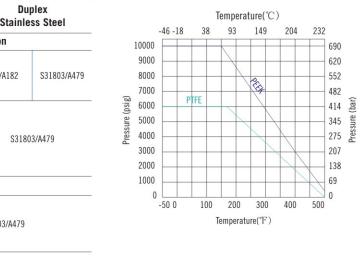
Sour Gas Service / NACE Compliant

Process interface valves for sour gas service are available. Materials are selected in accordance with NACE MR0175/ISO 15156. Contact the authorized representative or FD-LOK if any request.

Block and Bleed Valves

Pressure vs. Temperature

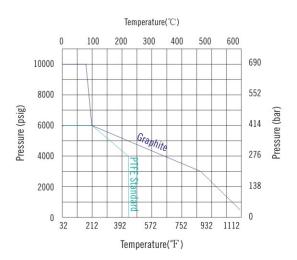
Ball Valve



3/A479

Needle and OS&Y Needle

Type Valve



BB Series:Single Block and Bleed Valves

Instrument Single Block and Bleed Valves

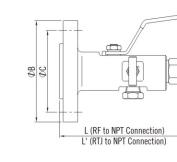
Features

• Utilising bar stock body

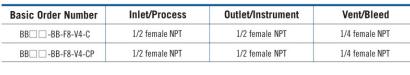
- · Combines piping & instrument valves in one body
- Weight, space and cost saving over traditional designs
- Standard high performance bonnet design Blowout-proof valve stems and needles
- Combinations of ball valves and needle valves in various configurations
- Complete traceability of materials
- · Bleed port equipped with plug
- Optional port sizes and threads available

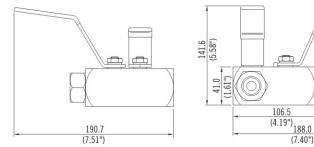
BB Series:Single Block and Bleed Valves

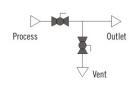
Block: ball Bleed: needle (BN)



Block: ball Bleed: ball (BB)

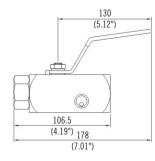


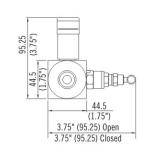




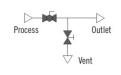
Block: ball Bleed: needle (BN)

Basic Order Number	Inlet/Process	Outlet/Instrument	Vent/Bleed	
BB -BN-F8-V4-V	1/2 female NPT	1/2 female NPT	1/4 female NPT	
BB -BN-F8-V4-VP	1/2 female NPT	1/2 female NPT	1/4 female NPT	
BB -BN-F8-NS8-V4-V	1/2 female NPT	1/2 male NPT	1/4 female NPT	
BB -BN-F8-M8-V4-VP	1/2 female NPT	1/2 male NPT	1/4 female NPT	

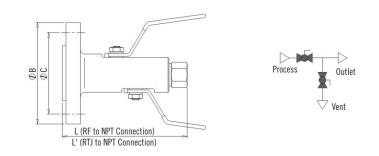




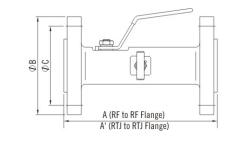
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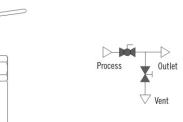
Block: ball Bleed: ball (BB)



Block: ball Bleed: needle (BN)







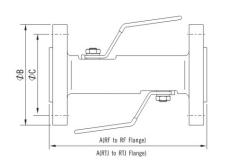


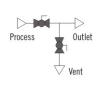


BB Series:Single Block and Bleed Valves

Instrument Single Block and Bleed Valves

Block: ball Bleed: ball (BB)





lange Size	Bore Size in. (mm)	ANS IClass	L in. (mm)	L' in. (mm)	A in. (mm)	A' in. (mm)	ФВ in.(mm)	Ф С in. (mm)
		150		1 — I	6.41 (162.8)	-	3.50 (88.9)	2.38 (60.5)
		300	4.88 (124.0)	4.88 (124.0)	6.81 (173.0)	6.81 (173.0)	3.75 (95.3)	0.00.0005
1/2 (DN 15)		600		4.00 (124.0)	0.01 (175.0)	0.01 (175.0)	3.73 (33.3)	2.62 (66.5)
		900/1500	- 5.67 (144.0)	5.67 (144.0)	7.99 (202.9)	7.99 (202.9)	4.75 (120.7)	3.25 (82.6)
		2500	5.07 (144.0)	5.07 (144.0)	7.99 (202.9)	7.99 (202.9)	5.25 (133.4)	3.50 (88.9)
		150			6.41 (162.8)	-	3.88 (98.6)	2.75 (69.9)
		300	4.88 (124.0)	4.88 (124.0)	6.81 (173.0)	6.81 (173.0)	4.62 (117.3)	3.25 (82.6)
3/4 (DN 20)		600		4.00 (124.0)	0.01 (175.0)	0.01 (175.0)	4.02 (117.3)	5.25 (62.0)
		900/1500	- 5.67 (144.0)	5.67 (144.0)	7.99 (202.9)	7.99 (202.9)	5.13 (130.3)	3.50 (88.9)
		2500	5.07 (144.0)	5.07 (144.0)	7.55 (202.5)	7.55 (202.5)	5.50 (139.7)	3.75 (95.3)
		150			6.41 (162.8)	6.61 (167.9)	4.25 (108.0)	3.12 (79.2)
1		300	4.88 (124.0)	4.88 (124.0)	7.00 (177.8)		4.00./104.01	0.50 (00.0)
(DN 25)	0.39 (10.0)	600				7.00 (177.8)	4.88 (124.0)	3.50 (88.9)
		900/1500			10.30 (261.6)	10.30 (261.6)	5.88 (149.4)	4.00 (101.6)
		2500			10.70 (271.8)	10.70 (271.8)	6.25 (158.8)	4.25 (108.0)
		150	5.98 (151.9)	5.98 (151.9)	8.90 (226.1)	9.49 (241.0)	5.00 (127.0)	3.88 (98.6)
1 1/2	-	300		9.89 (251.2)	9.89 (251.2)	6.12 (155.4)	4.50 (114.3)	
(DN 40)		600 900/1500	0.01/107.00	0.01/107.00	11.50 (292.1)	11.50 (292.1)	7.00 (177.8)	4.88 (124.0)
		2500	6.61 (167.9)	6.61 (167.9)	12.40 (315.0)	12.40 (315.0)	8.00 (203.2)	5.75 (146.1)
		150			9.09 (230.9)	9.49 (241.0)	6.00 (152.4)	4.75 (120.7)
		300	5.98 (151.9)	5.98 (151.9)	10.10 (050.5)	10.00 (001.0)	0.50 (105.1)	F 00 (107 0)
2 (DN 50)		600	1		10.10 (256.5)	10.30 (261.6)	6.50 (165.1)	5.00 (127.0)
,		900/1500	6.61 (167.9)	6.61 (167.9)	12.00 (304.8)	12.00 (304.8)	8.50 (215.9)	6.50 (165.1)
		2500	7.00 (177.8)	7.00 (177.8)	13.60 (345.4)	13.60 (345.4)	9.25 (235.0)	6.75 (171.5)

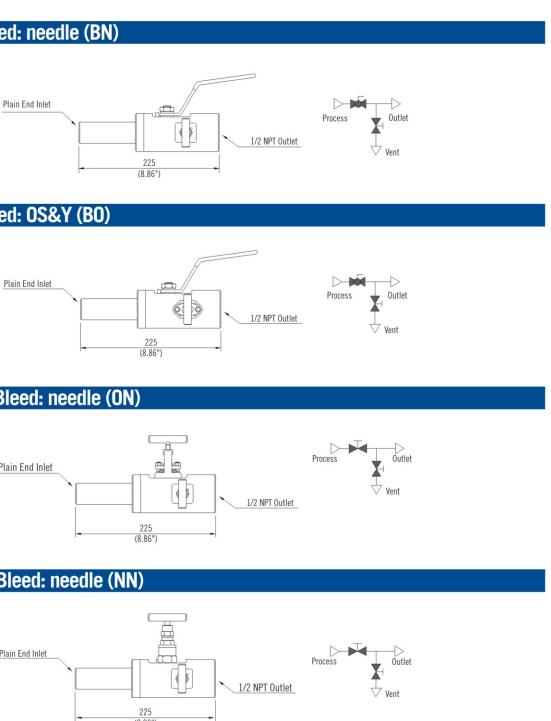
Dimensions are for reference only and are subject to change

BB Series:Single Block and Bleed Valves

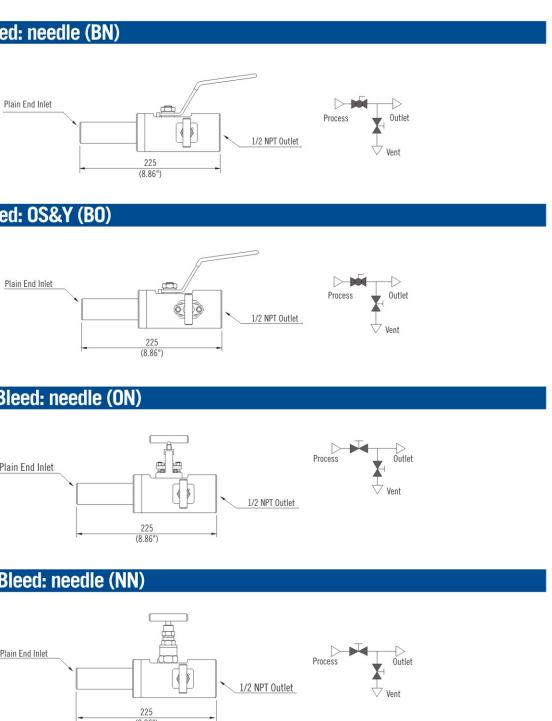
Features

- Directly-mounted root valves available to the vessel or process pipe
- Weight, space and cost saving over traditional designs
- Weld inlet connection sizes from 1/2 to 2
- Blowout-proof valve stems and needles
- Complete traceability of materials
- 1/2 female NPT standard vent with plug
- 1/2 female NPT standard outlet with plug

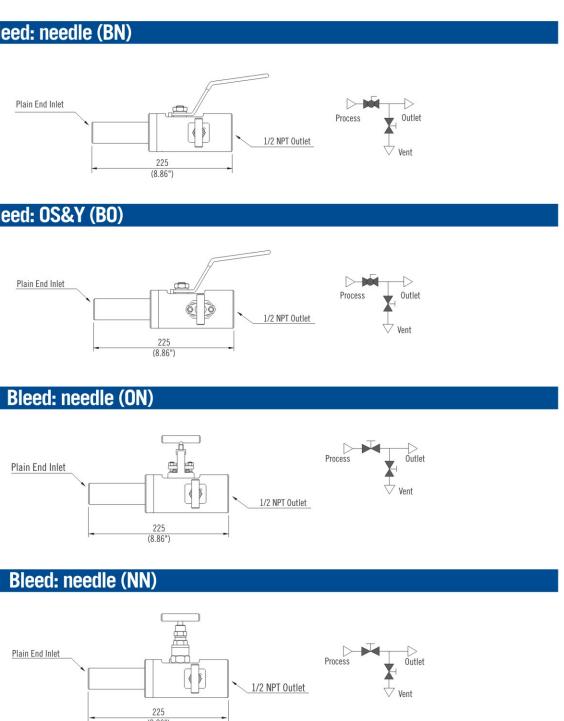
Block: ball Bleed: needle (BN)



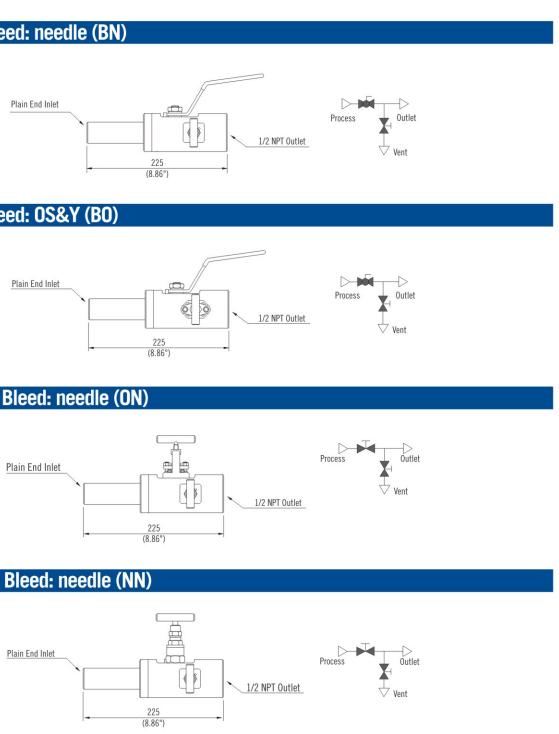
Block: ball Bleed: 0S&Y (B0)



Block: 0S&Y Bleed: needle (0N)



Block: needle Bleed: needle (NN)





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BB Series:Single Block and Bleed Valves

Monoflange Single Block and Bleed Valves

BB Series:Single Block and Bleed Valves

Block: needle Bleed: needle (NN)

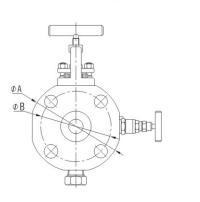
Flange Size	Bore Size in. (mm)	ANS IClass	L in. (mm)	L' in. (mm)	ΦA in. (mm)	ФВ in. (mm)
		150		_	3.50 (88.9)	2.38 (60.5)
		300	-		0.75 (05.0)	0.00.0005
1/2 (DN15)		600	2.03 (51.6)	0.00 (51.0)	3.75 (95.2)	2.62 (66.5)
		900/1500	-	2.03 (51.6)	4.75 (120.7)	3.25 (82.5)
		2500	-		5.25 (133.4)	3.50 (88.9)
		150		_	3.88 (98.6)	2.75 (69.8)
		300	2.02.(51.0)		4 60 (117 0)	2.05 (82.0)
3/4 (DN 20)		600	2.03 (51.6)	2.03 (51.6)	4.62 (117.3)	3.25 (82.6)
		900/1500	-		5.13 (130.3)	3.50 (88.9)
		2500	2.11 (53.5)	2.11 (53.5)	5.50 (139.7)	3.75 (95.2)
		150	2.03 (51.6)		4.25 (108.0)	3.12 (79.2)
		300		2.03 (51.6)	4.00 (104.0)	2.50.(00.0)
1 (DN 25)	0.39 (10.0)	600	-		4.88 (124.0)	3.50 (88.9)
		900/1500	2.11 (53.5)	0.11 (50.5)	5.88 (149.4)	4.00 (101.6)
		2500		2.11 (53.5)	6.25 (158.8)	4.25 (108.0)
		150	2.03 (51.6)	2.03 (51.6)	5.00 (127.0)	3.88 (98.6)
		300	0.11 (52.5)		0.10 (155.5)	4.50 (114.0)
1 1/2 (DN 40)		600	2.11 (53.5)	2.11 (53.5)	6.12 (155.5)	4.50 (114.3)
		900/1500	2.19 (55.5)	2.19 (55.5)	7.00 (177.8)	4.88 (124.0)
		2500	2.67 (67.9)	2.67 (67.9)	8.00 (203.2)	5.75 (146.1)
		150	2.11 (53.5)	2.11 (53.5)	6.00 (152.4)	4.75 (120.7)
2 (DN 50)		300	2.10 (55.5)	2 10 (55 5)	C EQ (10E 1)	E 00 (107 0)
		600	2.19 (55.5)	2.19 (55.5)	6.50 (165.1)	5.00 (127.0)
		900/1500	2.42 (61.5)	2.42 (61.5)	8.50 (215.9)	6.50 (165.1)
		2500	2.88 (73.4)	2.88 (73.4)	9.25 (235.0)	6.75 (171.5)

Dimensions are for reference only and are subject to change.

Features

- Piping and instrument valves in one body
- Weight, space and cost saving over traditional designs
- Blowout-proof valve stems and needles • Complete traceability of materials
- 1/4 female NPT standard vent with plug
 1/2 female NPT standard outlet with plug

Block: OS&Y Bleed: needle (ON)



QD

6 L (RF) (RTJ

COLUMN I

ØD

L' (RTJ)

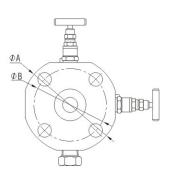
QD

L (RF) L' (RTJ) Process

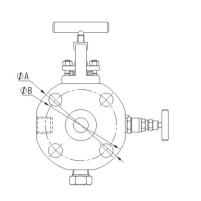
Outlet

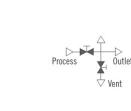
Outlet

Block: needle Bleed: needle (NN)

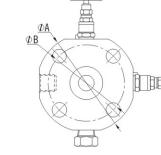


Block: 0S&Y Bleed:needle (0N)

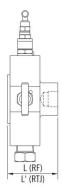




Process









DB Series: Double Block Valves

Features

Piping and instrument valves in one body

- Weight, space and cost saving over traditional designs
- Blowout-proof valve stems and needles
 Complete traceability of materials
- 1/2 female NPT standard outlet with plug

Features

Piping and instrument valves in one body

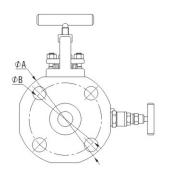
• Weight, space and cost saving over traditional designs

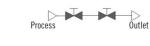
Blowout-proof valve stems and needles
 Complete traceability of materials

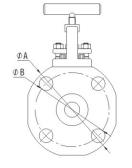
Block: 0S&Y (0)

• 1/2 female NPT standard outlet with plug

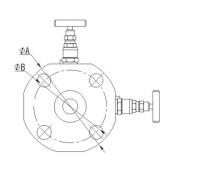
Primary: OS & Y Secondary: needle (ON)

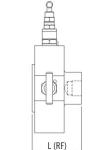






Primary: needle Secondary: needle (NN)



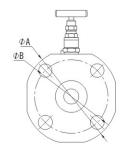


1' (RT)

L (RF)



Block: needle (N)



Dimensions are the same as the monoflange single block & bleed valves

Dimensions are the same as the Monoflange single block & bleed valves

SB Series: Single Block Valve









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Instrument Double Block and Bleed Valves

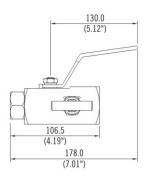
Features

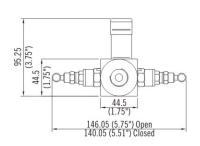
• Utilising bar stock body

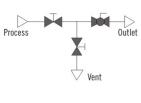
- Standard high performance bonnet design
- Optional port sizes and thread forms available
- Combinations of ball pattern and needle pattern valves in various configurations
- Suitable for double block and bleed of instrument
- Easy operation
- · Complete traceability of materials

Primary: needle Secondary: ball Bleed: needle (NBN)

Basic Order Number	Inlet/Process	Outlet/Instrument	Vent/Bleed	
DBB NBN-F8-V4-V 1/2 female NPT		1/2 female NPT	1/4 female NPT	
DBB	1/2 female NPT	1/2 female NPT	1/4 female NPT	

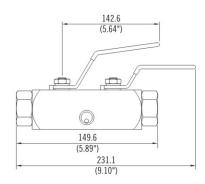


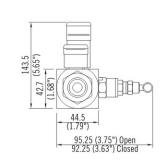


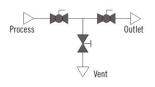


Primary: ball Secondary: ball Bleed: needle (BBN)

Basic Order Number	Inlet/Process	Outlet/Instrument	Vent/Bleed	
DBBBBN-F8-V4-V 1/2 female NPT		1/2 female NPT	1/4 female NPT	
DBB	1/2 female NPT	1/2 female NPT	1/4 female NPT	



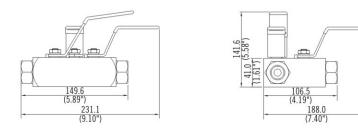




DBB Series: Double Block and Bleed Valves

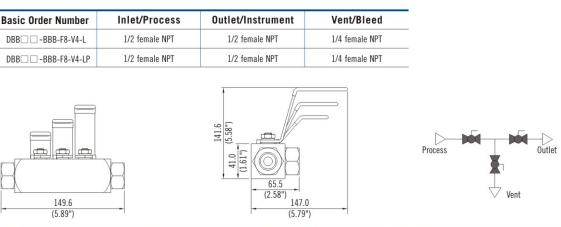
Primary: ball Secondary: ball Bleed: ball (BBB)

Basic Order Number	Inlet/Process	Outlet/Instrument	Vent/Bleed
DBB -BBB-F8-V4-C	1/2 female NPT	1/2 female NPT	1/4 female NPT
DBB	1/2 female NPT	1/2 female NPT	1/4 female NPT



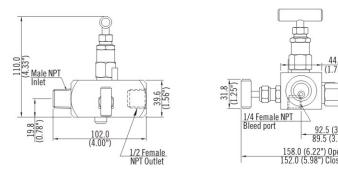
Primary: ball Secondary: ball Bleed: ball (BBB)

Basic Order Number	Inlet/Process	Outlet/Instrument
DBB -BBB-F8-V4-L	1/2 female NPT	1/2 female NPT
DBB	1/2 female NPT	1/2 female NPT



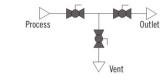
Primary: needle Secondary: needle Bleed: needle (NNN)

Basic Order Number	Inlet/Process	Outlet/Instrument	Vent/Bleed	
DBB	1/2 male NPT	1/2 female NPT	1/4 female NPT	
DBB	3/4 male NPT	1/2 female NPT	1/4 female NPT	

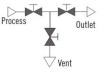




Instrument Double Block and Bleed Valves









Flange Double Block and Bleed Valves

DBB Series: Double Block and Bleed Valves

Primary: 0S&Y Secondary: 0S&Y Bleed: needle (00N)

Features

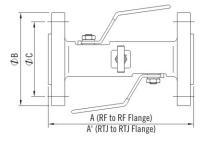
• One piece forged body, minimize potential leak point

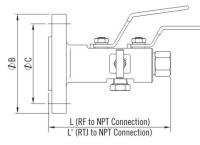
Piping and instrument valves in one design
Weight, space and cost saving over traditional designs

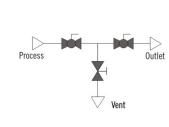
· Blowout-proof valve stems and needles

• Complete traceability of materials

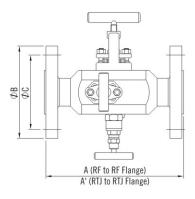
Primary: ball Secondary: ball **Bleed: needle (BBN)**



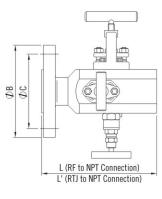




Flange Size	Bore Size in. (mm)	ANSI Class	L in. (mm)	L' in. (mm)	A in. (mm)	A' in. (mm)	ФВ in. (mm)	ΦC in. (mm)
		150		-	6.41 (162.8)		3.50 (88.9)	2.38 (60.5)
2040004		300	5.91 (150.1)	E 01 (150 1)	C 01 (172 0)	0.01 (170.0)	2.75 (05.2)	0.00.000.51
1/2 (DN15)		600		5.91 (150.1)	6.81 (173.0)	6.81 (173.0)	3.75 (95.3)	2.62 (66.5)
		900/1500	0.00 (170.0)	6.69 (170.0)	7.00 (202.0)	7.99 (202.9)	4.75 (120.7)	3.25 (82.6)
		2500	6.69 (170.0)	0.09 (170.0)	7.99 (202.9)	7.99 (202.9)	5.25 (133.4)	3.50 (88.9)
		150		-	6.41 (162.8)	-	3.88 (98.6)	2.75 (69.9)
		300	5.91 (150.1)	5.91 (150.1)	6.81 (173.0)	6.81 (173.0)	4.62 (117.3)	2 25 (02 6)
3/4 (DN 20)		600		5.91 (150.1)	0.81 (173.0)	0.81 (1/3.0)	4.02 (117.3)	3.25 (82.6)
		900/1500	0.00 (170.0)	C CO (170 D)		7.00 (202.0)	5.13 (130.3)	3.50 (88.9)
		2500	6.69 (170.0)	6.69 (170.0)	7.99 (202.9)	7.99 (202.9)	5.50 (139.7)	3.75 (95.3)
		150	5.91 (150.1)		6.41 (162.8)	6.61 (167.9)	4.25 (108.0)	3.12 (79.2)
	2/0 (0 5)	300		5.91 (150.1)	7.00 (177.8)	7.00 (177.8)	4.88 (124.0)	3.50 (88.9)
1 (DN 25)	3/8 (9.5)	600				7.00 (177.8)		
		900/1500			10.30 (261.6)	10.30 (261.6)	5.88 (149.4)	4.00 (101.6)
		2500			10.70 (271.8)	10.70 (271.8)	6.25 (158.8)	4.25 (108.0)
		150	7.00 (177.8)	7.00 (177.8)	8.90 (226.1)	9.49 (241.0)	5.00 (127.0)	3.88 (98.6)
		300			9.89 (251.2)	9.89 (251.2)	6.12 (155.4)	4.50 (114.3)
1 1/2 (DN 40)		600			9.69 (201.2)	9.69 (201.2)	0.12 (133.4)	4.30 (114.3)
		900/1500	7.64 (194.1)	7.64 (194.1)	11.50 (292.1)	11.50 (292.1)	7.00 (177.8)	4.88 (124.0)
		2500	7.04 (194.1)	7.04 (194.1)	12.40 (315.0)	12.40 (315.0)	8.00 (203.2)	5.75 (146.1)
		150			9.09 (230.9)	9.49 (241.0)	6.00 (152.4)	4.75 (120.7)
		300	7.00 (177.8)	7.00 (177.8)	10.10 (256.5)	10.30 (261.6)	6.50 (165.1)	5.00 (127.0)
2 (DN 50)		600			10.10 (200.3)	10.30 (201.0)	0.30 (103.1)	5.00 (127.0)
80 M		900/1500	7.64 (194.1)	7.64 (194.1)	12.00 (304.8)	12.00 (304.8)	8.50 (215.9)	6.50 (165.1)
		2500	8.03 (204.0)	8.03 (204.0)	13.60 (345.4)	13.60 (345.4)	9.25 (235.0)	6.75 (171.5)



Flange Size	Bore Size in. (mm)	ANSI Class	L in. (mm)	L' in. (mm)	A in. (mm)	A' in. (mm)	ФВ in. (mm)	ФС in. (mm)	
		150			6.41 (162.8)	-	3.50 (88.9)	2.38 (60.5)	
		300	4.88 (124.0)	4.88 (124.0)	6.81 (173.0)	6.81 (173.0)	3.75 (95.3)	2.62 (66.5)	
1/2 (DN15)		600		4.88 (124.0)	6.81 (173.0)	6.81 (173.0)	3.75 (95.3)	2.02 (00.3)	
		900/1500	5.60 (142.2)	E CO (140 0)	7.00 (202.0)	7.00 (202.0)	4.75 (120.7)	3.25 (82.6)	
		2500	- 5.00 (142.2)	5.60 (142.2)	7.99 (202.9)	7.99 (202.9)	5.25 (133.4)	3.50 (88.9	
		150		_	6.41 (162.8)		3.88 (98.6)	2.75 (69.9	
		300 4.88 (124.0) 600	4.00 (104.0)	C 01 (172 0)	0.01 (172.0)	4 60 (117 0)	2.05 (02.0		
3/4 (DN 20)				4.88 (124.0)	6.81 (173.0)	6.81 (173.0)	4.62 (117.3)	3.25 (82.6)	
		900/1500	5.00 (140.0)	F (0 (140 0)	F (0 (140 0)	7.00 (202.0)	7 00 (202 0)	5.13 (130.3)	3.50 (88.9)
		2500 5.60 (142	5.60 (142.2)	5.60 (142.2)	7.99 (202.9)	7.99 (202.9)	5.50 (139.7)	3.75 (95.3	
		150			6.41 (162.8)	6.61 (167.9)	4.25 (108.0)	3.12 (79.2	
		300	4.88 (124.0)	4.88 (124.0)	7.00 (177.8)	7.00 (177.8)	4.88 (124.0)	3.50 (88.9)	
1 (DN 25)	3/8(9.5)	600	-		7.00 (177.8)	7.00 (177.8)			
		900/1500			10.30 (261.6)	10.30 (261.6)	5.88 (149.4)	4.00 (101.6	
		2500	-	5.98 (151.9) 5.98 (151.9)	10.70 (271.8)	10.70 (271.8)	6.25 (158.8)	4.25 (108.0	
		150	5.98 (151.9)		8.90 (226.1)	9.49 (241.0)	5.00 (127.0)	3.88 (98.6)	
		300			0.90 (251.2)	0.80 (251.2)	C 10 (155 A)	4 60 /114 2	
1 1/2 (DN 40)		600			9.89 (251.2)	9.89 (251.2)	6.12 (155.4)	4.50 (114.3	
		900/1500	C C1 (1C7 D)	6.61 (167.0)	11.50 (292.1)	11.50 (292.1)	7.00 (177.8)	4.88 (124.0	
		2500	6.61 (167.9)	6.61 (167.9)	12.40 (315.0)	12.40 (315.0)	8.00 (203.2)	5.75 (146.1	
	150	9.09 (230.9)	9.49 (241.0)	6.00 (152.4)	4.75 (120.7				
		300	5.98 (151.9)	5.98 (151.9)	10.10 (050.5)	10.20 (201.0)	0 50 (105 1)	E 00 (107 0	
2 (DN 50)		600			10.10 (256.5)	10.30 (261.6)	6.50 (165.1)	5.00 (127.0	
		900/1500	6.61 (167.9)	6.61 (167.9)	12.00 (304.8)	12.00 (304.8)	8.50 (215.9)	6.50 (165.1	
		2500	7.00 (177.8)	7.00 (177.8)	13.60 (345.4)	13.60 (345.4)	9.25 (235.0)	6.75 (171.5	



Large-bore Bolted Double Block and Bleed Valves

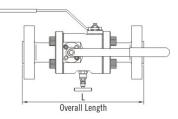
Features

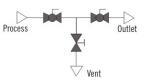
• Complementing the existing one-piece range, flange to flange bolted

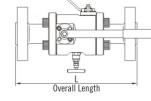
• construction DBB valves available in sizes from 1/2 to 2.

- Designed according to ASME VIII & ANSI B16.34 . Weight, space and cost saving over traditional designs.
- · Complete traceability of materials

Full-bore Series







Reduced-bore Series

Dimensions

Flange Size

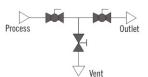
11/2 (DN 40)

2

(DN 50)

3

(DN 80)



ANSI

Class

150 300

600

900/1500

2500

150

300

600

900/1500

2500

150

300

600

900

1500

Bore Size

in. (mm)

(25.4)

11/2

(38.1)

(50.8)

Dimensions

Flange Size	Bore Size in. (mm)	ANSI Class	L in. (mm)
		150	10.7 (272)
		300	11.0 (279)
1 (DN25)	1 (25.4)	600	11.5 (292)
		900/1500	14.3 (364)
		2500	14.8 (377)
		150	14.2 (361)
		300	14.4 (367)
1 1/2 (DN 40)	11/2 (38.1)	600	15.1 (384)
		900/1500	15.8 (402)
		2500	18.2 (463)
		150	15.4 (390)
2	2	300	15.7 (398)
(DN 50)	(50.8)	600	16.4 (416)
		900/1500	18.9 (481)

Dimensions are for reference only and are subject to change

L

in. (mm)

11.0 (279)

11.2 (285)

11.9 (301)

14.6 (370)

15.6 (396)

14.3 (364)

14.6 (372)

15.4 (390)

16.3 (415)

18.7 (475)

15.7 (400)

16.1 (410)

16.9 (428)

17.4 (441)

19.7 (500)

DBB Series: Double Block and Bleed Valves

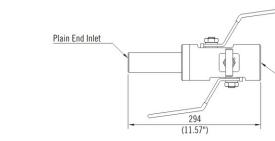
Features

- Directly-mounted root valves available to the vessel or process pipe
- Weight, space and cost saving over traditional designs
- Weld inlet connections in sizes from 1/2 to 2
- Blowout-proof valve stems and needles

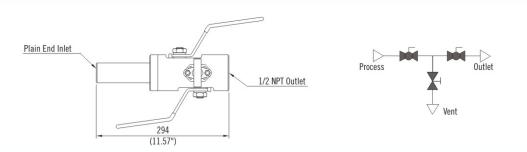
• Complete traceability of materials

• 1/2 female NPT standard vent with plug • 1/2 female NPT standard outlet with plug

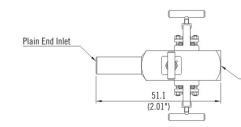
Primary: ball Secondary: ball



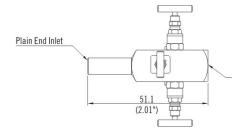
Primary: ball Secondary: ball Bleed: OS&Y (BBO)



Primary: 0S&Y Secondary: 0S&Y

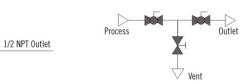


Primary: needle Secondary: needle



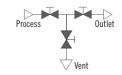
Dimensions are for reference only and are subject to change

Bleed: needle (BBN)

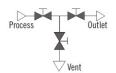


Bleed: needle (00N)

1/2 NPT Outlet



Bleed: needle (NNN)



1/2 NPT Outlet



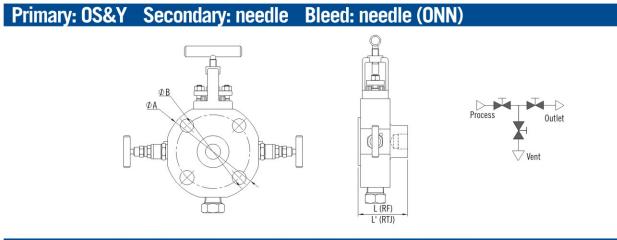
Monoflange Double Block & Bleed Valves

DBB Series: Double Block and Bleed Valves

Primary: needle Secondary: needle Bleed: needle (NNN)

Features

- Piping and instrument valves in one body
- Weight, space and cost saving over traditional designs
- Blowout-proof valve stems and needles • Complete traceability of materials
- 1/4 female NPT standard vent with plug
- 1/2 female NPT standard outlet with plug



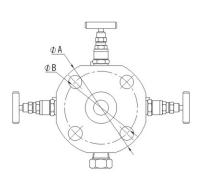
L (RF)

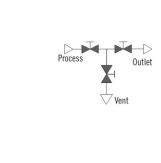
A

ØD

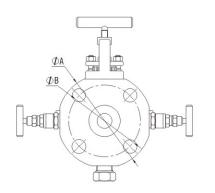
L (RF) L' (RTJ)

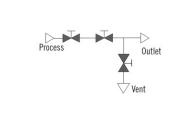
Primary: needle Secondary: needle **Bleed: needle (NNN)**

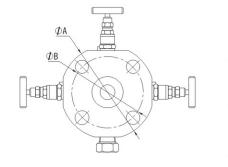




Primary: 0S&Y Secondary: needle Bleed: needle (ONN)



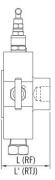


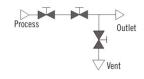


Flange Size	Bore Size in. (mm)	ANSI Class	L in. (mm)	L' in. (mm)	ΦA in. (mm)	ФВ in. (mm)	
1/2 (DN15)	0.39 (10.0)	150	2.03 (51.6)	-	3.50 (88.9)	2.38 (60.5)	
		300		2.03 (51.6)	3.75 (95.2)	2.62 (66.5)	
		600					
		900/1500			4.75 (120.7)	3.25 (82.5)	
		2500			5.25 (133.4)	3.50 (88.9)	
3/4 (DN 20)		150	- 2.03 (51.6)	_	3.88 (98.6)	2.75 (69.8)	
		300		2.03 (51.6)	4.62 (117.3)	3.25 (82.6)	
		600					
		900/1500	-		5.13 (130.3)	3.50 (88.9)	
		2500	2.11 (53.5)	2.11 (\$3.5)	5.50 (139.7)	3.75 (95.2)	
		150	2.03 (51.6)	2.03 (51.6)	4.25 (108.0)	3.12 (79.2)	
		300			4.88 (124.0)	3.50 (88.9)	
1 (DN 25)		600	-				
(01123)		900/1500	0.11 (50.5)	0.11 (50.5)	5.88 (149.4)	4.00 (101.6)	
		2500	2.11 (53.5)	2.11 (53.5)	6.25 (158.8)	4.25 (108.0)	
1 1/2 (DN 40)		150	2.03 (51.6)	2.03 (51.6)	5.0 (127.0)	3.88 (98.6)	
		300	0.11 (50.5)	0.11 (52.5)	C 10 (155 A)	4.50 (114.2)	
		600	2.11 (53.5)	2.11 (53.5)	6.12 (155.4)	4.50 (114.3)	
		900/1500	2.19 (55.5)	2.19 (55.5)	7.00 (177.8)	4.88 (124.0)	
		2500	2.67 (67.9)	2.67 (67.9)	8.00 (203.2)	5.75 (146.1)	
2 (DN 50)		150	2.11 (53.5)	2.11 (53.5)	6.00 (152.4)	4.75 (120.7)	
		300	0.10 (55.5)	0.10 (55.5)	0.50 (105.1)	F 00 (107 0)	
		600	- 2.19 (55.5)	2.19 (55.5)	6.50 (165.1)	5.00 (127.0)	
		900/1500	2.42 (61.5)	2.42 (61.5)	8.50 (215.9)	6.50 (165.1)	
		2500	2.88 (73.4)	2.88 (73.4)	9.25 (235.0)	6.75 (171.5)	

Dimensions are for reference only and are subject to change

Monoflange Double Block & Bleed Valves

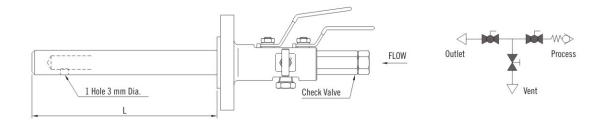




Injection Double Block & Bleed Valves

Function - injection

Injection of chemicals and other media into the process stream can be accomplished with this design. A check valve is installed to prevent process fluid from reaching the inlet injection position. There is a 0.125" (3 mm) hole in the injection nozzle orifice. The length of the injection nozzle orifice can be manufactured to meet customer requirements and needs to be specified. The injection orifice can also be rotated. Injection valves can be provided in most of the styles and options offered for the DBB ranges.



Injection Quill

The injection quill length (L) is manufactured to meet customer requirements. The injection nozzle is a 3 mm diameter hole (standard).

Integral Check Valve

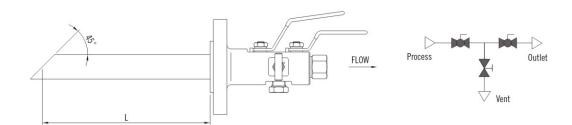
This poppet type spring return valve has a FKM soft seal (standard).

DBB Series: Double Block and Bleed Valves

Sampling Double Block & Bleed Valves

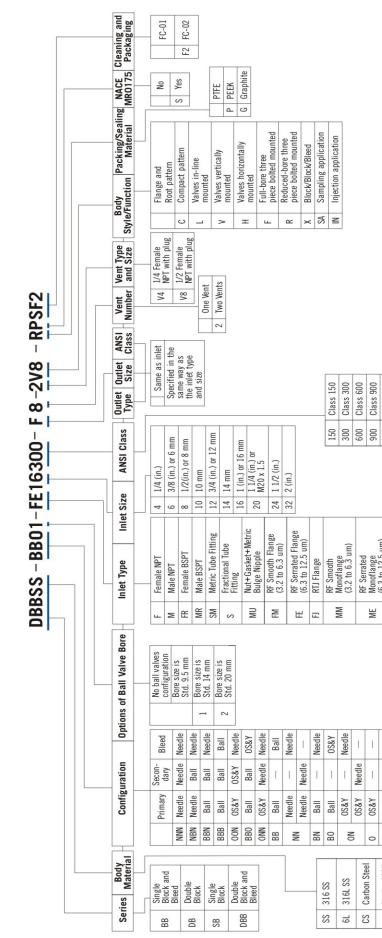
Function - sampling

This design is developed to remove a sample directly from process stream at full system pressure. The customised sampling probe extends from the pipe flange connection for correct sample removal. Sampling valves can be provided without a probe and valves can be provided in most of the styles and options offered for the DBB ranges.



Sampling Probe

The sampling probe length (L) is manufactured to meet customer requirements.



Ordering Information

22.2	X Bloc	SA Sam	IN Injec
	Block/Block/Bleed	Sampling application	Injection application

]		150	300	600	006	1500	2500	222	
]									1
ited Flange .2.5 um)	ge	oth	nge i.3 um)	ted	nge	(mn c.2	otlange	ve Plain End	

MM

S&Y

BN BO

Veedle

NO oz

316L SS 316 SS

Carbon Steel Duplex 2205 904L SS

SS 6L CS D5 04L

ME

M N

150 300 600 900 1500 2500

Class Class Class Class Class Class

intection 3453), intections and the size DN25, DN40 or DN50) ease connections; select size DN40 or DN50) and electric actuator, contact the authorized represent rvice, contact the authorized representative or FD-LOK. nts to proc itted system compone in ASTM G93 Level C. Istrial p nection sizes) ng for stat. Options of ball valve bore: 3/8" (9.5 mm) bore (all process connection 1/2" (14 mm) bore (1, 1 1/2, or 2process connor 3/4" (20 mm) bore (1 1/2 or 2process connor 3/4" (20 mm) bore (1 1/2 or 2process connor 3. For oxygen or virulent medium service, co 4. Cleaning and Packaging FC-01: Standard cleaning and packaging for FC-02: Special cleaning and packaging for with product cleanliness requirement as sta

or FD-LOK.

tive