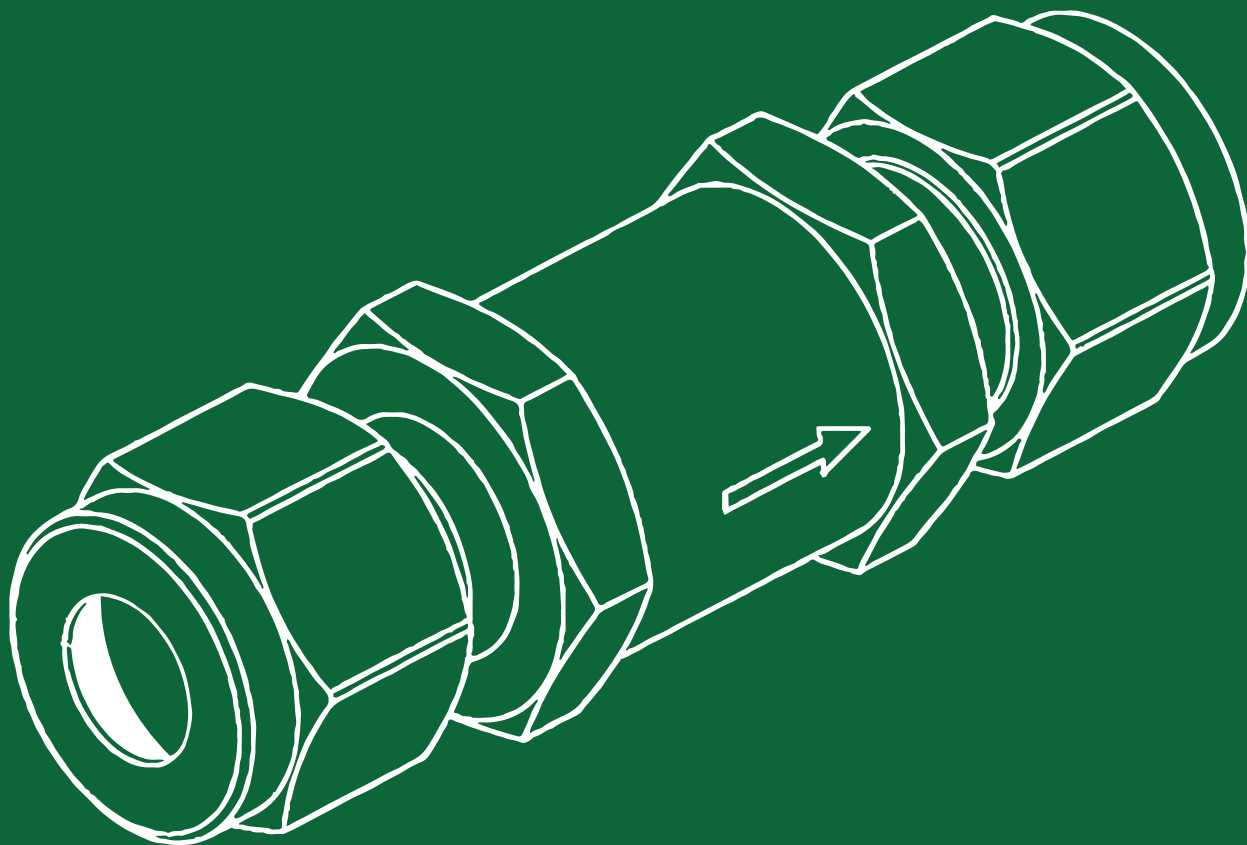




Instrumentation

Check Valve



Ordering Number Description

[illegible]

Wafer Type Flange Block and Bleed Valves

Features & Specifications

Smooth transition from the process piping system to instrumentation in a single configuration.

Direct mount to instruments

Close coupling of instruments

Double block and bleed isolation

Vents and drains

1/2 female NPT standard outlet

1/2 female NPT standard vent with plug

Maximum working pressure up to 10000 psig (689 bar)

Working temperature up to 1200°F(649°C)with Graphite packing

Colour coded valve function identification

Every valve 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/API 607

Flanged connections comply with ASME B16.5 RF and RTJ

Pressure ratings in accordance with ASME B16.34



Standard Materials of Construction

Material		316 SS	316L SS	Carbon Steel
Component				
	Body	F316/A182	F316/A182	A105
Ball Valve	Ball	316/A479	316/A479	316/A479
	Stem	316/A479	316/A479	316/A479
	Endconnection	316/A479	316/A479	316/A479
	Seat	PEEK		
	BodySeal	Graphite or PTFE		
	StemPacking	Graphite or PTFE		
Screwed	LowerStem	316/A479	316/A479	316/A479
Bonnet	Bonnet	316/A479	316/A479	316/A479
Needle	BonnetSeal	316L/A269	316L/A269	316L/A269
Valves	StemPacking	Graphite or PTFE		
OS&Y	LowerStem	316/A479	316/A479	316/A479
Needle	Bonnet	F316/A182	F316/A182	A105
Valves	BonnetSeal	316L/A269	316L/A269	316L/A269
	StemPacking	Graphite or PTFE		

Double Block and Bleed Valves (DBB)

Configuration (NNN): Isolateneedle, Isolateneedle, Ventneedle

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
Body			F316/A182	F316/A182	A105
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Configuration (ONN): Isolate-OS&Y, Isolate-needle, Vent-needle

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Single Block and Bleed Valves (BB)

Configuration (ONN): Isolateneedle, Ventneedle

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Configuration (ONN): Isolate-OS&Y, Ventneedle

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Double Block Valves (DB)

Configuration (NN): needle primary, needle secondary

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	-	See Size Chart
		RJ Flange	1/2 Female NPT	-	

Configuration (NN): OS&Y primary, needle secondary

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	-	See Size Chart
		RJ Flange	1/2 Female NPT	-	

Single BlockValves (B)

Configuration (CNN): needle isolate with vent port

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Configuration (ONN): Isolate-OS&Y, Isolate with Vent port

Connection: Flange + Thread

Basic Ordering Information		Inlet/Process Connection	Outlet/Instrument Connection	Bleed / Vent	Dimensions
		RF Flange	1/2 Female NPT	1/2 Female NPT	See Size Chart
		RJ Flange	1/2 Female NPT	1/2 Female NPT	

Single Block and Bleed Valves (BB)

Size Chart: Flange Options and Dimensions for 1/8 in.(4mm) Bone Size (Ball/Needle) configuration: N

Flange Size		ASME Class	Dimensions							
			A	B	RF Flange		RJ Flange		Ø D	Ø E
					L	T	L	T		
NPS 1/2 (DN15)	150	3.94(100.0)	1.57(40.0)	1.73(44.0)	1.24(31.5)	-	-	3.54(90)	2.37(60.3)	
	300	4.04(102.5)	1.67(42.5)	1.73(44.0)	1.24(31.5)	1.79(45.5)	1.30(33.0)	3.74(95)	2.63(66.7)	
	600	4.04(102.5)	1.67(42.5)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.30(33.0)	3.74(95)	2.63(66.7)	
	900/1500	4.53(115.0)	2.17(55.0)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.30(33.0)	4.72(120)	3.25(82.6)	
	2500	4.82(122.5)	2.46(62.5)	1.93(48.9)	1.51(38.4)	1.93(48.9)	1.51(38.4)	5.31(135)	3.50(88.9)	
NPS 3/4 (DN20)	150	4.13(105.0)	1.77(45.0)	1.73(44.0)	1.24(31.5)	-	-	3.94(100)	2.75(69.9)	
	300	4.43(112.5)	2.07(52.5)	1.73(44.0)	1.24(31.5)	1.79(45.5)	1.30(33.0)	4.53(115)	3.25(82.6)	
	600	4.43(112.5)	2.07(52.5)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.30(33.0)	4.53(115)	3.25(82.6)	
	900/1500	4.72(120.0)	2.36(60.0)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.38(35.0)	5.12(130)	3.50(88.9)	
	2500	4.92(125.0)	2.56(65.0)	2.00(50.9)	1.59(40.4)	2.00(50.9)	1.59(40.4)	5.51(140)	3.75(95.2)	
NPS 1 (DN25)	150	4.33(110.0)	1.97(50.0)	1.73(44.0)	1.24(31.5)	1.79(45.5)	1.30(33.0)	4.33(110)	3.13(79.4)	
	300	4.63(117.5)	2.26(57.5)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.30(33.0)	4.92(125)	3.50(88.9)	
	600	4.63(117.5)	2.26(57.5)	1.73(44.0)	1.32(33.5)	1.79(45.5)	1.30(33.0)	4.92(125)	3.50(88.9)	
	900/1500	5.12(130.0)	2.76(70.0)	2.00(50.9)	1.51(38.4)	2.00(59.0)	1.51(38.4)	5.91(150)	4.00(101.6)	
	2500	5.31(135.0)	2.95(75.0)	2.00(50.9)	1.71(43.4)	2.00(59.0)	1.71(43.4)	6.30(160)	4.25(108.0)	
NPS 1-1/2 (DN40)	150	4.63(117.5)	2.26(57.5)	1.73(44.0)	1.24(31.5)	1.79(45.5)	1.30(33.0)	4.92(125)	3.87(98.4)	
	300	5.22(132.5)	2.85(72.5)	1.81(46.0)	1.32(33.5)	1.87(47.5)	1.38(35.0)	6.10(155)	4.50(114.3)	
	600	5.22(132.5)	2.85(72.5)	1.81(46.0)	1.32(33.5)	1.87(47.5)	1.38(35.0)	6.10(155)	4.50(114.3)	
	900/1500	5.71(154.0)	3.37(85.0)	2.08(52.9)	1.59(40.4)	2.08(52.9)	1.59(40.4)	7.09(180)	4.87(123.8)	
	2500	6.20(157.5)	3.84(97.5)	2.38(60.4)	2.16(54.9)	2.38(60.4)	2.16(54.9)	8.07(205)	5.75(146)	
NPS 2 (DN50)	150	5.12(130.0)	2.76(70.0)	1.81(46.0)	1.24(31.5)	1.87(47.5)	1.30(33.0)	5.91(150)	4.75(120.7)	
	300	5.41(137.5)	3.05(77.5)	1.89(48.0)	1.32(33.5)	1.95(49.5)	1.38(35.0)	6.49(165)	5.00(127.0)	
	600	5.41(137.5)	3.05(77.5)	1.89(48.0)	1.32(33.5)	1.95(49.5)	1.38(35.0)	6.49(165)	5.00(127.0)	
	900/1500	6.30(160.0)	3.94(100.0)	2.38(60.4)	1.89(47.9)	2.38(60.4)	1.89(47.9)	8.46(215)	6.50(165.1)	
	2500	6.50(165.0)	4.13(105.0)	2.59(65.9)	2.44(61.9)	2.59(65.9)	2.44(61.9)	9.25(235)	6.75(171.4)	

Single Block and Bleed Valves (BB)

Size Chart: Flange Options and Dimensions for 1/8 in.(4mm) Bone Size (Ball/Needle) configuration: N									
Flange Size	ASME Class	Dimensions							
		F	B	RF Flange		RJ Flange		Ø D	Ø E
		L	T	L	T	L	T		
NPS 1/2 (DN15)	150	4.33(110.0)	1.57(40.0)	2.03(51.6)	1.58(40.1)	-	-	3.54(90)	2.37(60.3)
	300	4.43(112.5)	1.67(42.5)	2.03(51.6)	1.58(40.1)	2.03(51.6)	1.58(40.1)	3.74(95)	2.63(66.7)
	600	4.43(112.5)	1.67(42.5)	2.03(51.6)	1.58(40.1)	2.03(51.6)	1.58(40.1)	3.74(95)	2.63(66.7)
	900/1500	4.92(125.0)	2.17(55.0)	2.03(51.6)	1.58(40.1)	2.03(51.6)	1.58(40.1)	4.72(120)	3.25(82.6)
	2500	5.22(132.5)	2.46(62.5)	2.03(51.6)	1.58(40.1)	2.03(51.6)	1.58(40.1)	5.31(135)	3.50(88.9)
NPS 3/4 (DN20)	150	4.53(115.0)	1.77(45.0)	2.03(51.6)	1.58(40.1)	-	-	3.94(100)	2.75(69.9)
	300	4.82(122.5)	2.07(52.5)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.53(115)	3.25(82.6)
	600	4.82(122.5)	2.07(52.5)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.53(115)	3.25(82.6)
	900/1500	5.12(130.0)	2.36(60.0)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	5.12(130)	3.50(88.9)
	2500	5.31(135.0)	2.56(65.0)	2.11(53.5)	1.65(42.0)	2.00(50.9)	1.65(42.0)	5.51(140)	3.75(95.2)
NPS 1 (DN25)	150	4.72(120.0)	1.97(50.0)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.33(110)	3.13(79.4)
	300	5.02(127.5)	2.26(57.5)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.92(125)	3.50(88.9)
	600	5.02(127.5)	2.26(57.5)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.92(125)	3.50(88.9)
	900/1500	5.51(140.0)	2.76(70.0)	2.11(53.5)	1.65(42.0)	2.00(59.0)	1.65(42.0)	5.91(150)	4.00(101.6)
	2500	5.71(145.0)	2.95(75.0)	2.11(53.5)	1.65(42.0)	2.00(59.0)	1.65(42.0)	6.30(160)	4.25(108.0)
NPS 1-1/2 (DN40)	150	5.02(127.5)	2.26(57.5)	2.03(51.6)	1.58(40.1)	1.79(45.5)	1.58(40.1)	4.92(125)	3.87(98.4)
	300	5.61(142.5)	2.85(72.5)	2.11(53.5)	1.65(42.0)	1.87(47.5)	1.65(42.0)	6.10(155)	4.50(114.3)
	600	5.61(142.5)	2.85(72.5)	2.11(53.5)	1.65(42.0)	1.87(47.5)	1.65(42.0)	6.10(155)	4.50(114.3)
	900/1500	6.10(155.0)	3.37(85.0)	2.19(55.5)	1.59(40.4)	2.08(52.9)	1.59(44.0)	7.09(180)	4.87(123.8)
	2500	6.59(167.5)	3.84(97.5)	2.67(67.9)	2.22(56.4)	2.38(60.4)	2.22(56.4)	8.07(205)	5.75(146)
NPS 2 (DN50)	150	5.51(140.0)	2.76(70.0)	2.11(53.5)	1.65(42.0)	1.87(47.5)	1.65(42.0)	5.91(150)	4.75(120.7)
	300	5.81(147.5)	3.05(77.5)	2.19(55.5)	1.73(44.0)	1.95(49.5)	1.73(44.0)	6.49(165)	5.00(127.0)
	600	5.81(147.5)	3.05(77.5)	2.19(55.5)	1.73(44.0)	1.95(49.5)	1.73(44.0)	6.49(165)	5.00(127.0)
	900/1500	6.69(170.0)	3.94(100.0)	2.42(61.5)	1.97(50.0)	2.38(60.4)	1.97(50.0)	8.46(215)	6.50(165.1)
	2500	6.89(175.0)	4.13(105.0)	2.88(73.4)	2.44(61.9)	2.59(65.9)	2.44(61.9)	9.25(235)	6.75(171.4)