



API Q1, 6D
License # 6D-0694



Quality
ISO 9001
SAI GLOBAL

KPL Double block and bleed valves



KPL VALVE IND. CO., LTD.

INTRODUCTION

We are very grateful to our valuable customers who have shown a deep attention on to KPL's growth and extended generous supports.

KPL VALVE IND. CO., LTD. was established in 1986 and for the past years, we KPL as a specialized company to manufacture valves that were used pipe line and processed plant for instrumentation.

KPL became the leading company for its business productions in Korea with its qualified equipments, manpower and technical capability to design, manufacture and test in spite of young company.

These products are manufactured in our modern facilities where the quality is rigidly control in conformance to all application codes, standards and design criteria demanded by our licensors and clients.

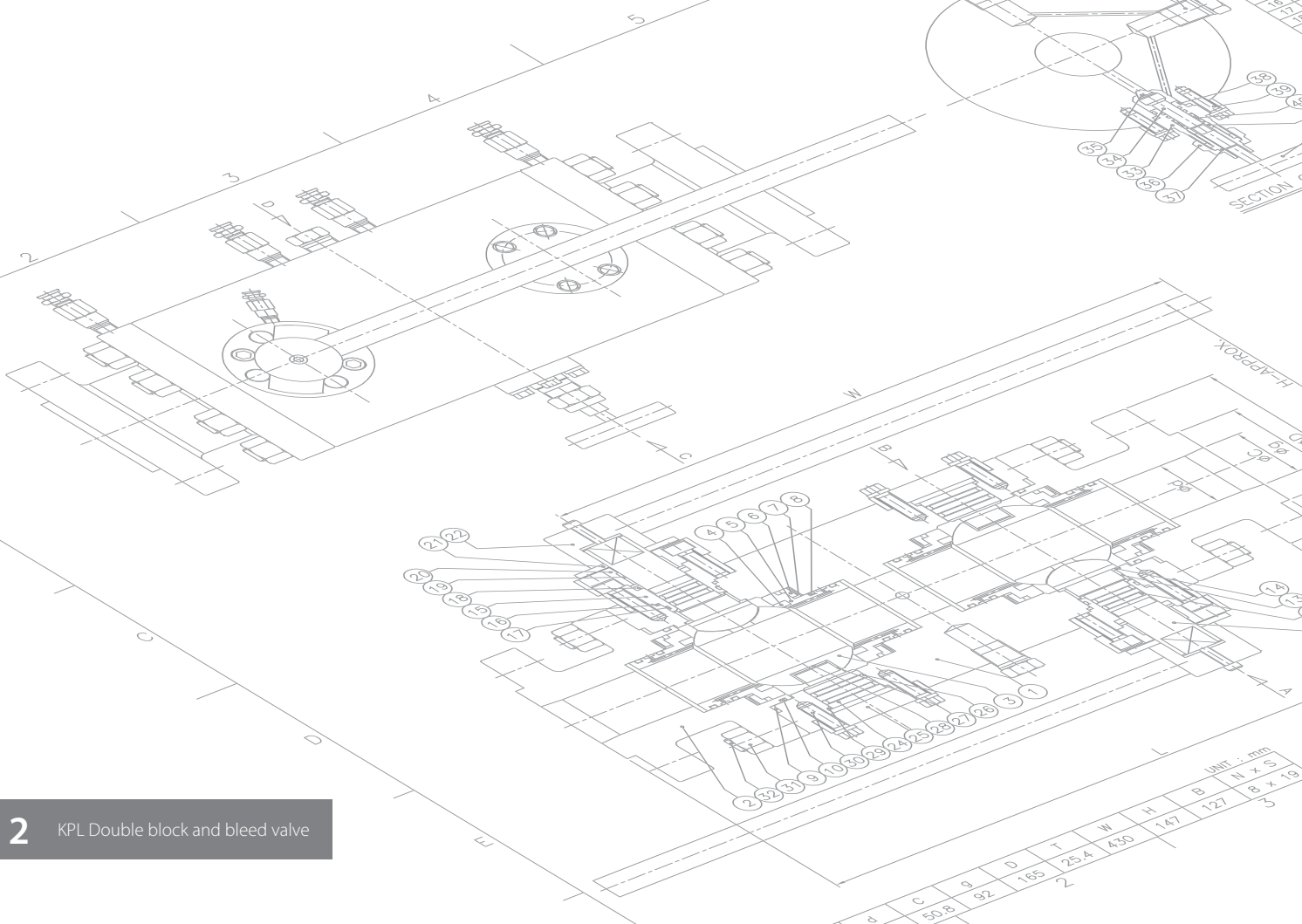
We will do our best to accumulate advanced valve engineering technologies, to reduce production cost and improve quality assurance rules.

We promise that we will meet the needs and expectations of our valuable customers through the valve technology services and products of the highest quality.



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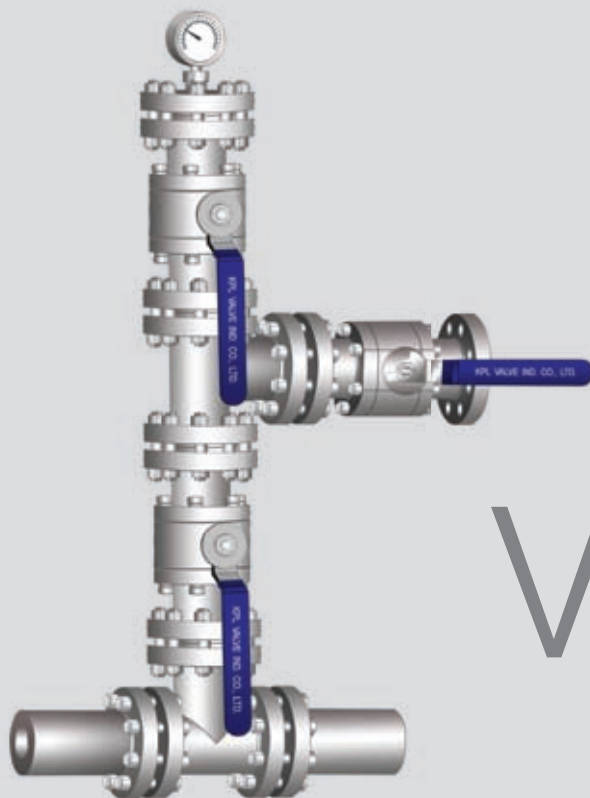
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APPLICATIONS AND INSTALLATIONS

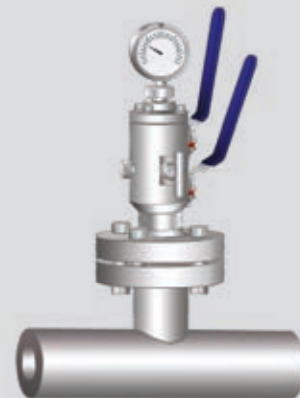
In prior double block and bleed system, 2 blocked(off) the valves and 1 bleed valve should be assembled with Flange or piping screws to pipe tee. The problem is that installation is costly because it needs too many parts and leakage would increase. And the size of the system is big and it needs huge space for the installation and it is vulnerable to vibration.

KPL Double block and bleed valve has been developed to solve these problems. Compactly designed 1-piece or a 2-piece body with 2 blocked(off) valve and 1 bleed valve can replace the existing Double block and bleed system with 1 Double block and bleed valve and it can reduce installation space and time.



Conventional DBB installation

VS

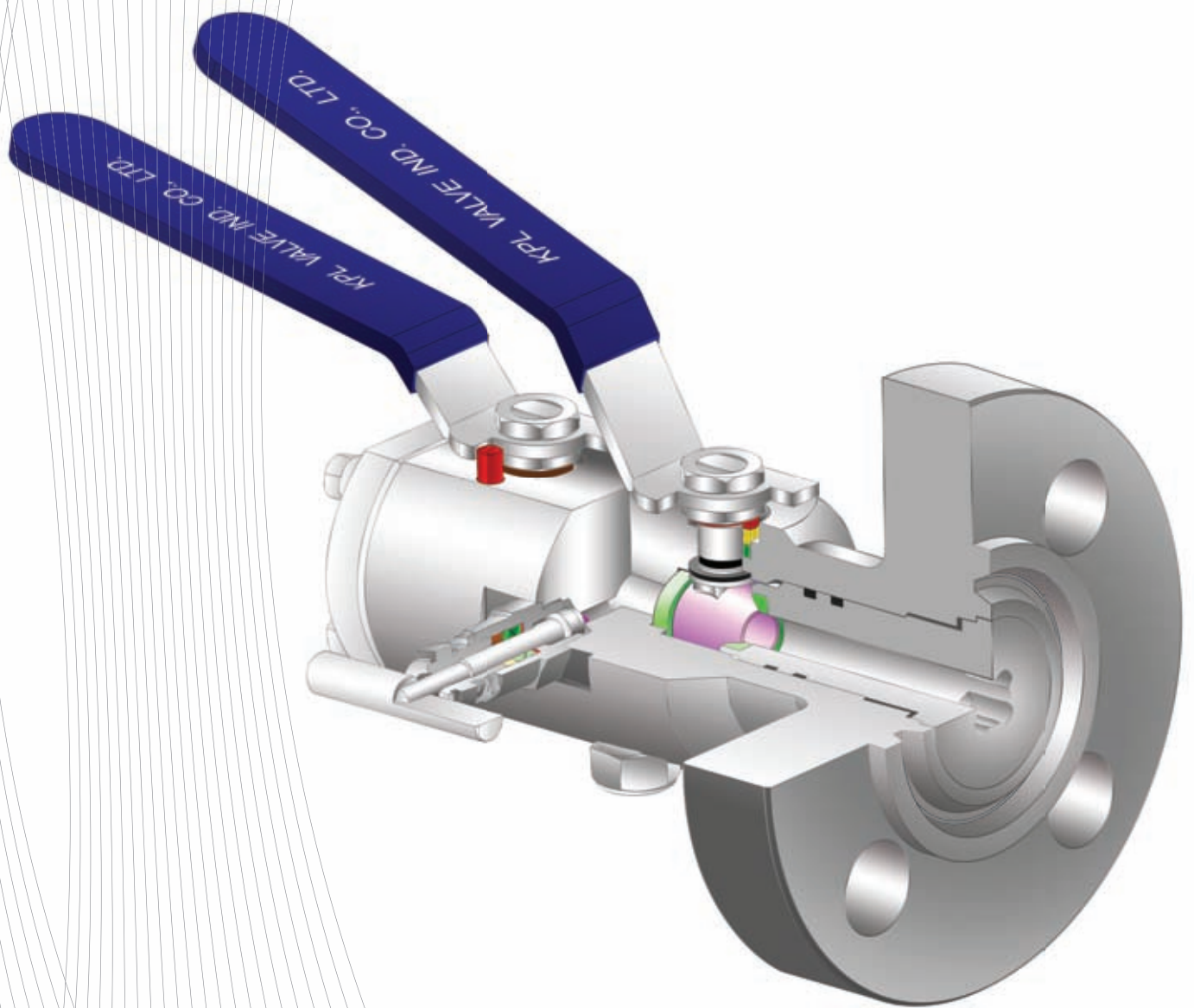


KPL DBB installation

© BENEFITS DURING INSTALLATION OF KPL DOUBLE BLOCK AND BLEED VALVE

- Compact assembly
- Easy installation and maintenance
- Reduced installation cost
- Space and weight saving
- Reduced leakage points
- Reduced effect of system vibration

KPL DOUBLE BLOCK AND BLEED VALVES

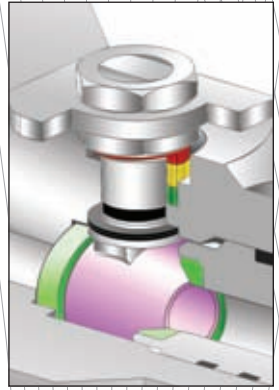


KPL Double block and bleed (DBB) valve is designed and manufactured in conformance with specification of API 6D and ASME B 16.34

KPL DBB valve is available in variety of size (1/2" through 12"), working pressure and configurations. KPL DBB valves are available in full range of materials and options to meet the individual user requirements. Each and every DBB valve is completely tested before leaving the factory to ensure adherence to customer specifications and proper performance.

◎ BALL VALVE SPECIFICATIONS

- Floating ball design for improved performance smooth, low torque operation.
 - Bubble tight shut off.
- Available to anti static device.
 - Anti blowout stem.
 - Bi-directional design.
- Fire safety to API 607 4th edition.
- Available to metal seated construction.
- Pressure rating up to 6000 psig [414 bar]



Seat pressure ratings

Class 150

PTFE or R PTFE seated
Max. working pressure : 20 Bar

Class 300

PTFE or R PTFE seated
Max. working pressure : 51 Bar

Class 600

PTFE or R PTFE seated
Max. working pressure : 103 Bar

Class 800

PTFE or R PTFE seated
Max. working pressure : 126 Bar

Class 900

Nylon or Devlon seated
Max. working pressure : 155 Bar

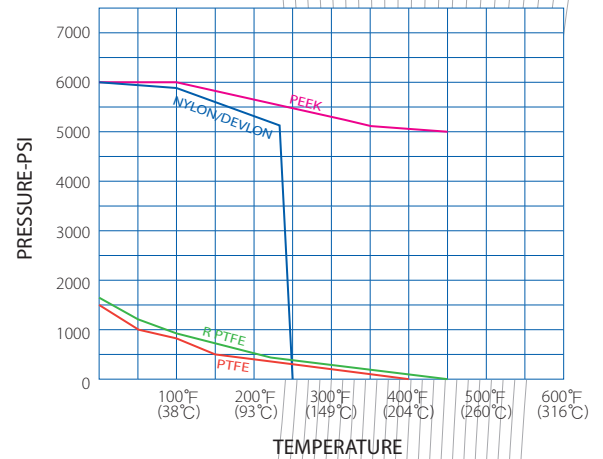
Class 1500

Nylon or Devlon seated
Max. working pressure : 255 Bar

Class 2500

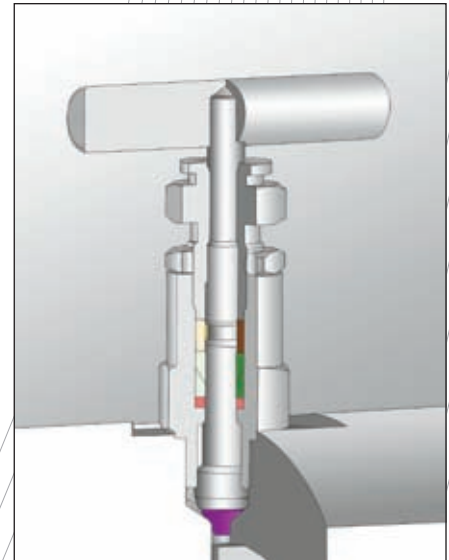
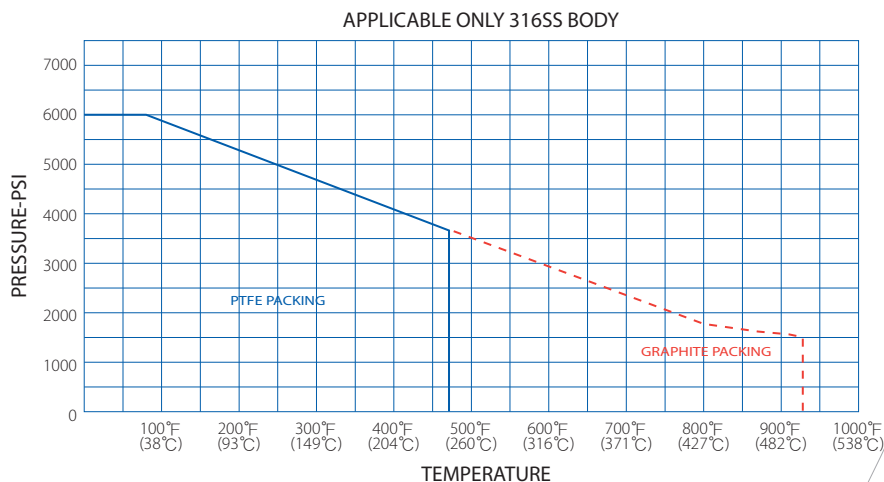
PEEK seated
Max. working pressure : 425 Bar

Ball valve seat pressure/temperature chart



◎ NEEDLE GLOBE VALVE SPECIFICATIONS

Needle globe valve pressure/temperature chart



- Heavy duty needle type globe valve in designed to ensuring bubble tight.
 - Non-rotating stem tip.
 - PTEE or Graphite packing.
- Rolled stem operating threads prevent galling.
- Backseat design.
- Available to outside screw and yoke(OS&Y) type globe valve.
 - Fire safety to API 607 4th edition.
 - Pressure rating up to 6000 psig [414 bar]

FLANGE TO SCREW DOUBLE BLOCK AND BLEED VALVES - 2 BALL 1 NEEDLE PATTERN

◎ FEATURES & BENEFITS

- Integral flange
- 2 ball 1 needle pattern
- 1/2" PT or NPT threaded female outlet
- ANSI B 16.5 flanged inlet connections
- 1/2" NPT threaded bleed connection
- 14mm ball valve bore
- Floating ball design
- Pressure ratings : class 150 to class 2500
- Available to Fire safe to API 607
- Available to NACE MR-01-75
- Flanged connections according to ASME B 16.5
RF and RTJ

◎ MATERIALS

316, 316L, 304, 304L, A105, LF2.

Titanium, monel, inconel625, C95800
and other special materials are available
to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Chemical injection
- Sampling
- Flow measurement

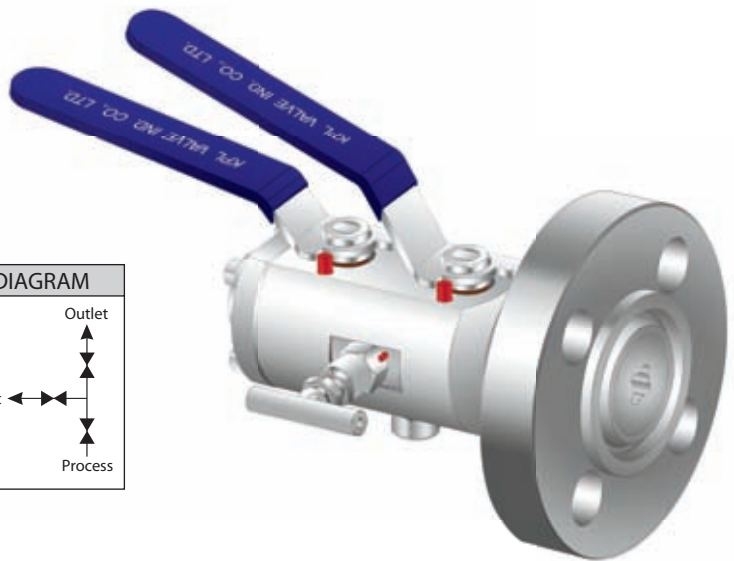
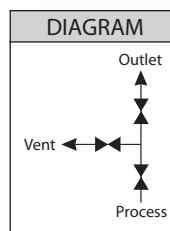
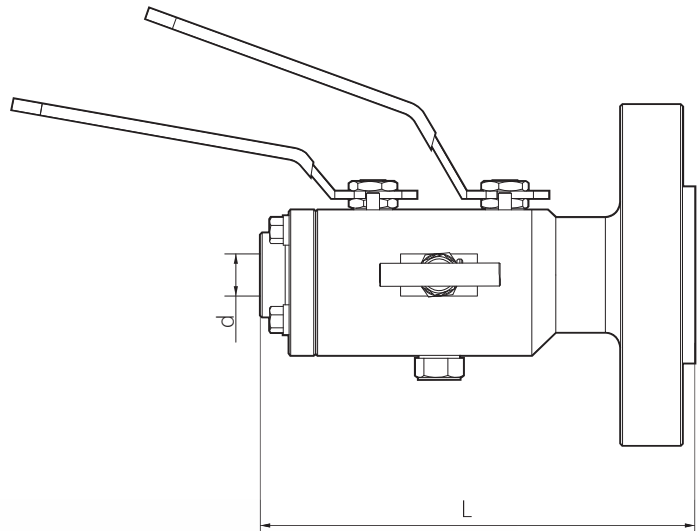
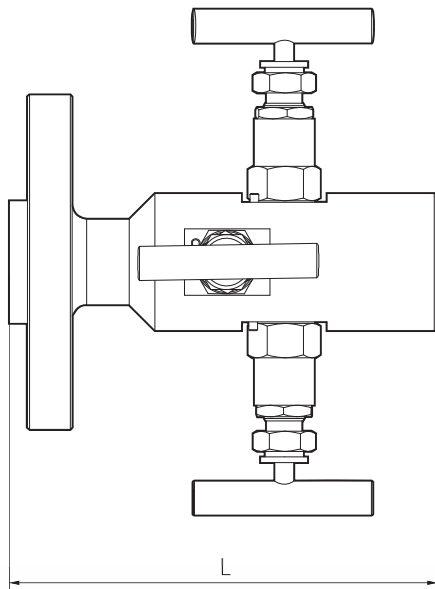


TABLE 1 - FLANGE TO SCREW DBB VALVE

Rating	150				300				600				900/1500				2500			
Flange size	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)
1/2"	156	-	14	3.5	164	163	14	3.9	164	163	14	3.9	212	212	14	8.8	220	220	12	11.0
3/4"	160	-	14	3.9	166	171	14	4.3	166	171	14	4.3	212	212	14	9.1	222	222	12	13.5
1"	164	169	14	4.3	175	180	14	4.9	175	180	14	5.1	221	221	14	10.5	228	228	12	21.0
1-1/4"	168	173	14	5.1	178	183	14	5.7	178	183	14	5.9	224	224	14	11.5	231	231	12	23.0
1-1/2"	173	178	14	6.2	185	190	14	6.9	185	190	14	7.1	227	227	14	12.3	240	240	12	27.5
2"	175	183	14	7.3	187	195	14	8.0	187	195	14	8.2	230	232	14	18.0	242	242	12	42.3

FLANGE TO SCREW DOUBLE BLOCK AND BLEED VALVES - 3 NEEDLE PATTERN

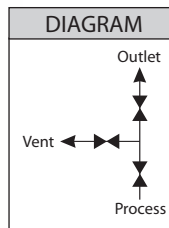
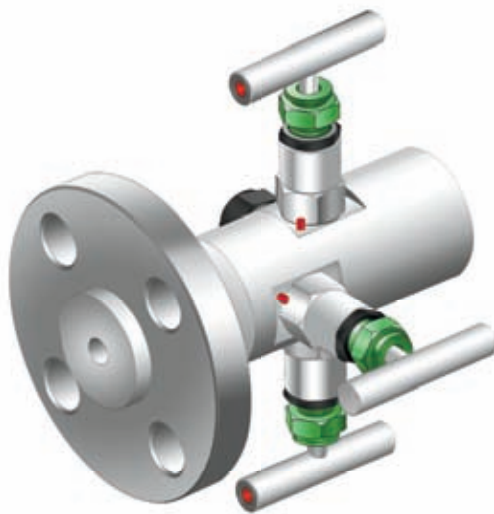


◎ FEATURES & BENEFITS

- Integral flange
- 3 needle pattern
- 1/2" PT or NPT threaded female outlet
- ANSI B 16.5 flanged inlet connections
- 1/2" NPT threaded bleed connection
- Pressure ratings : class 150 to class 2500
 - Available to Fire safe to API 607
 - Available to NACE MR-01-75
- Flanged connections according to ASME B 16.5
RF and RTJ

◎ MATERIALS

316, 316L, 304, 304L, A105, LF2.
Titanium, monel, inconel625, C95800 and other special materials are available to customer spec.



◎ TYPICAL APPLICATIONS

- Double block and bleed applications
 - Primary isolation
 - Chemical injection
 - Sampling
- Flow measurement

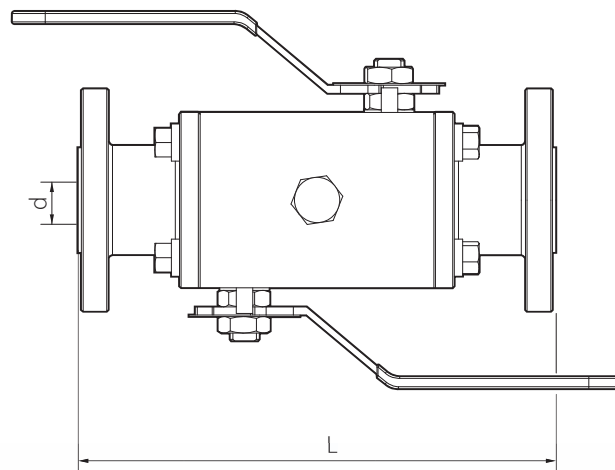
TABLE 2 - FLANGE TO SCREW(3 NEEDLE PATTERN) DBB VALVE

Rating	150			300			600			900/1500			2500		
Flange size	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)
1/2"	135	-	2.5	135	140	2.6	145	145	3.3	160	160	5.2	170	170	6.3
3/4"	135	-	3.2	135	140	3.4	150	150	3.9	165	160	6.0	180	180	7.0
1"	135	140	3.8	135	140	3.9	153	153	4.5	168	160	7.3	183	183	9.5
1-1/4"	155	160	4.3	155	160	4.5	160	160	5.4	175	175	9.2	188	188	13.8
1-1/2"	160	165	4.8	160	165	5.0	170	170	7.0	185	185	10.2	190	190	15.5
2"	160	168	7.0	160	168	7.2	174	177	8.3	185	187	12.3	193	195	21.3

FLANGE TO FLANGE DOUBLE BLOCK AND BLEED VALVES - 2 BALL 1 NEEDLE PATTERN

◎ FEATURES & BENEFITS

- 3-piece construction
- 2 ball 1 needle pattern
- ANSI B 16.5 flanged connections
- 1/2" NPT threaded bleed connection
- Floating or trunnion ball design
- 10mm to 50mm ball valve bore
- Pressure rating : class 150 to class 2500
- Available to Fire safe to API 607
- Available to NACE MR-01-75
- Flanged connections according to ASME B 16.5
RF and RTJ



◎ MATERIALS

316, 316L, 304, 304L, A105, LF2.

Titanium, monel, inconel625, C95800 and other special materials are available to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Sampling
- Venting

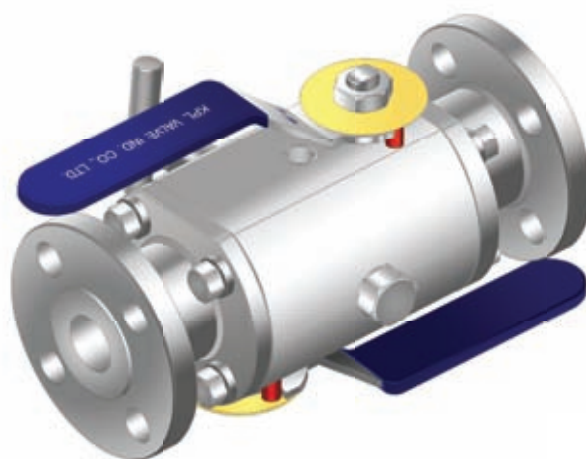
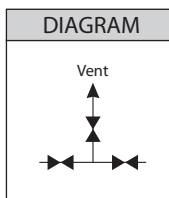
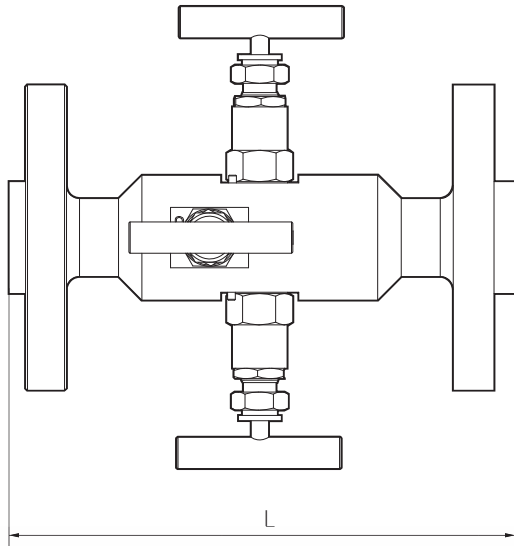


TABLE 3 - FLANGE TO FLANGE DBB VALVE

Rating	150				300				600				900/1500				2500			
	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)	L(RF)	L(RTJ)	d	Approx Weight(kg)
1/2"	174	-	11	4.4	186	194	11	4.7	211	209	11	7.5	240	240	11	9.0	340	340	9	19.6
	175	-	14	5.2	190	198	14	5.6	215	215	14	8.0	245	245	14	12.2	346	346	12	24.9
3/4"	183	-	14	5.8	197	206	14	6.3	234	234	14	8.9	267	267	14	13.7	355	355	12	27.2
	205	-	20	9.2	215	224	20	10.2	252	252	20	12.9	288	288	20	17.3	363	363	16	30.8
1"	211	220	20	9.8	215	224	20	11.5	278	278	20	13.5	312	312	20	20.6	398	398	16	36.2
	234	243	25	13.7	236	245	25	14.7	286	286	25	17.0	324	324	25	24.6	408	408	22	47.0
1-1/4"	241	250	25	15.3	248	247	25	16.0	293	293	25	19.3	349	349	25	27.0	449	449	22	55.0
	245	254	32	17.8	256	265	32	18.3	308	308	32	25.0	356	356	32	32.0	516	516	26	82.3
1-1/2"	254	267	32	18.3	269	278	32	21.0	320	320	32	28.5	384	384	32	45.2	554	554	26	88.6
	290	300	38	24.5	294	303	38	26.1	328	328	38	33.0	477	477	38	78.0	563	563	32	105.2
2"	296	309	38	26.3	303	316	38	27.5	379	379	38	38.6	540	543	38	96.8	630	630	32	125.0
	319	331	50	38.7	330	343	50	42.3	395	395	50	52.3	553	556	48	112.0	683	683	42	145.6

FLANGE TO FLANGE DOUBLE BLOCK AND BLEED VALVES - 3 NEEDLE PATTERN



◎ FEATURES & BENEFITS

- 1-piece construction
- 3 needle pattern
- ANSI B 16.5 flanged connections
- 1/2" NPT threaded bleed connection
- Pressure rating : class 150 to class 2500
 - Available to Fire safe to API 607
 - Available to NACE MR-01-75
- Flanged connections according to ASME B 16.5
RF and RTJ

◎ MATERIALS

316, 316L, 304, 304L, A105, LF2.
Titanium, monel, inconel625, C95800 and other special materials are available to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
 - Primary isolation
 - Sampling
 - Venting

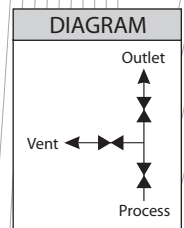
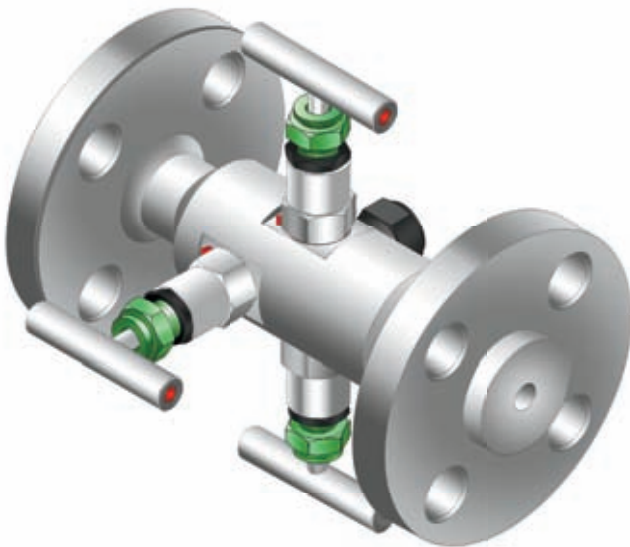


TABLE 4 - FLANGE TO FLANGE(3 NEEDLE PATTERN) DBB VALVE

Rating Flange size	150			300			600			900/1500			2500		
	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)	L(RF)	L(RTJ)	Approx Weight(kg)
1/2"	168	-	3.5	173	173	3.8	173	173	4.5	203	203	5.5	210	210	7.1
3/4"	168	-	3.9	173	173	4.0	173	173	4.7	210	210	7.0	233	233	8.3
1"	175	185	4.5	180	180	5.3	180	180	5.8	261	261	15.3	272	272	18.0
1-1/4"	185	195	6.4	205	205	7.0	205	205	6.6	275	275	18.0	308	308	35.3
1-1/2"	225	165	7.5	252	252	8.9	252	252	12.5	293	293	22.3	330	330	44.2
2"	233	168	11.3	260	260	13.3	260	260	18.3	305	305	33.5	350	350	56.5

INSTRUMENT DOUBLE BLOCK AND BLEED VALVES - 3 BALL PATTERN

◎ FEATURES & BENEFITS

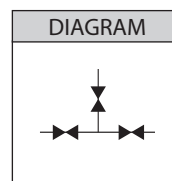
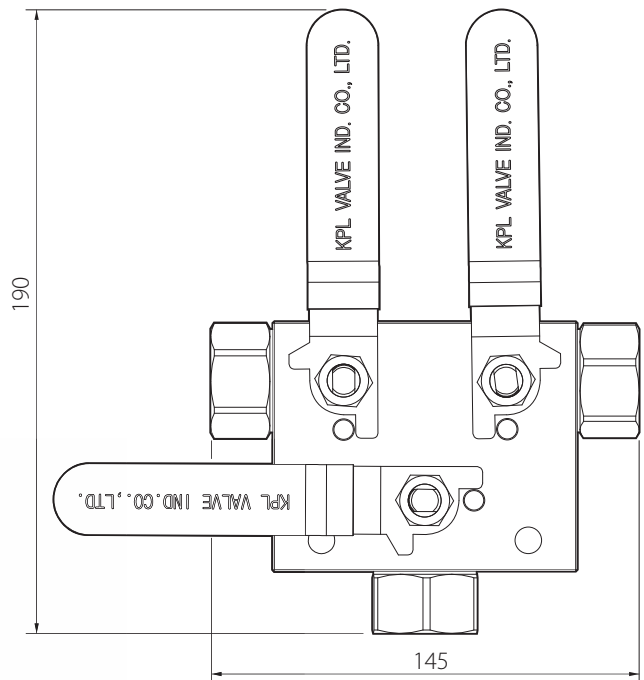
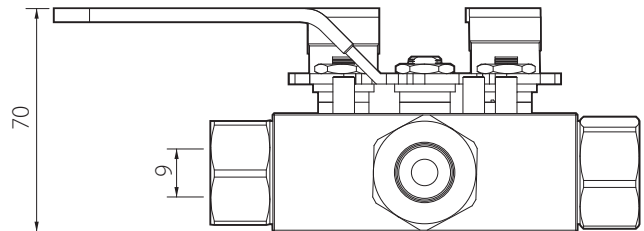
- 3 ball pattern
- FNPT threaded connections
- 1/2" NPT threaded bleed connection
- Floating ball design
- 10mm ball valve bore
- Pressure ratings : 6000 psi
- Available to Fire safe to API 607
- Available to NACE MR-01-75

◎ MATERIALS

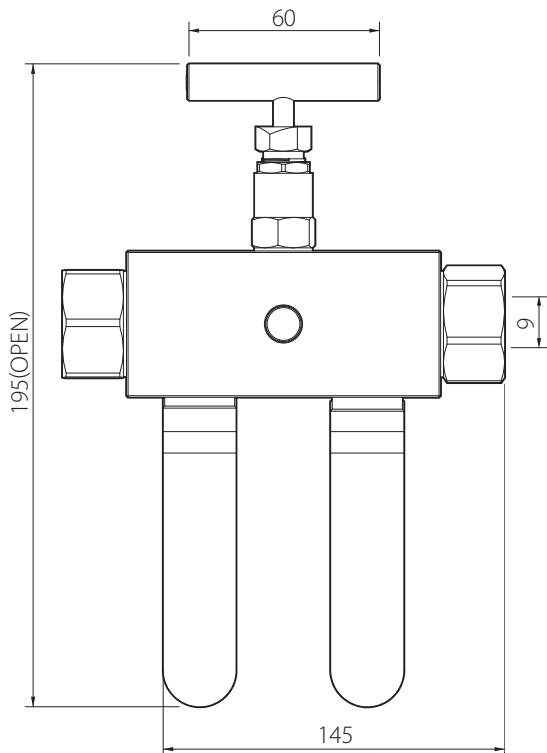
316, 316L, 304, 304L, A105, LF2.
Titanium, monel, inconel625, C95800
and other special materials are
available to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Sampling
- Venting



INSTRUMENT DOUBLE BLOCK AND BLEED VALVES - 2 BALL 1 NEEDLE PATTERN



◎ FEATURES & BENEFITS

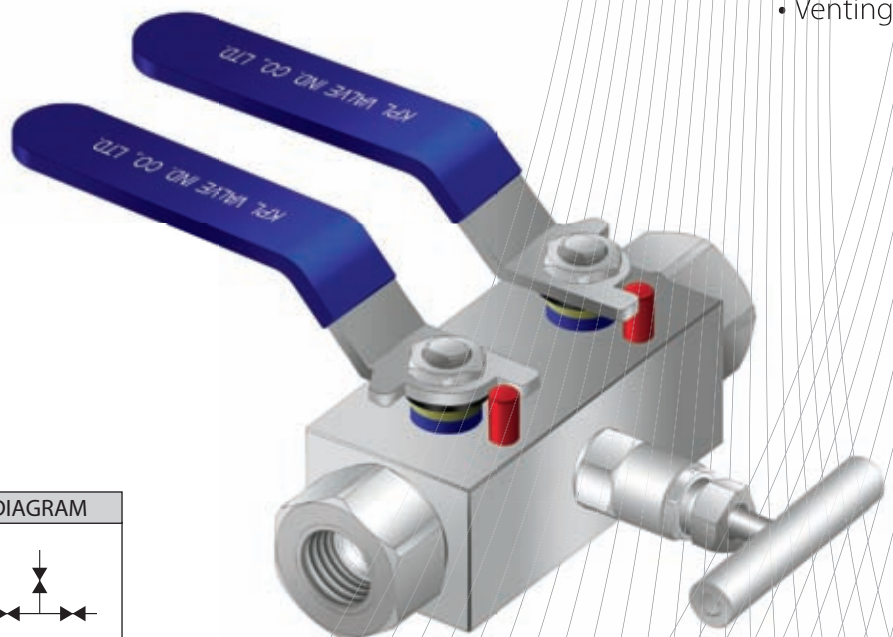
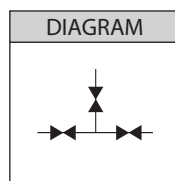
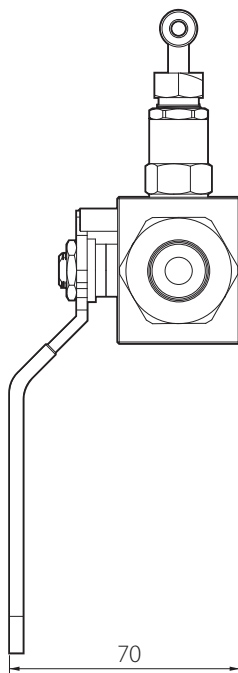
- 2 ball 1 needle pattern
- FNPT threaded connections
- 1/4" NPT threaded bleed connection
 - Floating ball design
 - 10mm ball valve bore
- Pressure ratings : 6000 psi
- Available to Fire safe to API 607
- Available to NACE MR-01-75

◎ MATERIALS

316, 316L, 304, 304L, A105, LF2.
Titanium, monel, inconel625,
C95800 and other special
materials are available to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
 - Primary isolation
 - Sampling
 - Venting



INSTRUMENT DOUBLE BLOCK AND BLEED VALVES - 3 NEEDLE PATTERN

◎ FEATURES & BENEFITS

- 3 needle pattern
- FNPT threaded connections
- 1/4" NPT threaded bleed connection
- Pressure ratings : 6000 psi
- Available to Fire safe to API 607
- Available to NACE MR-01-75

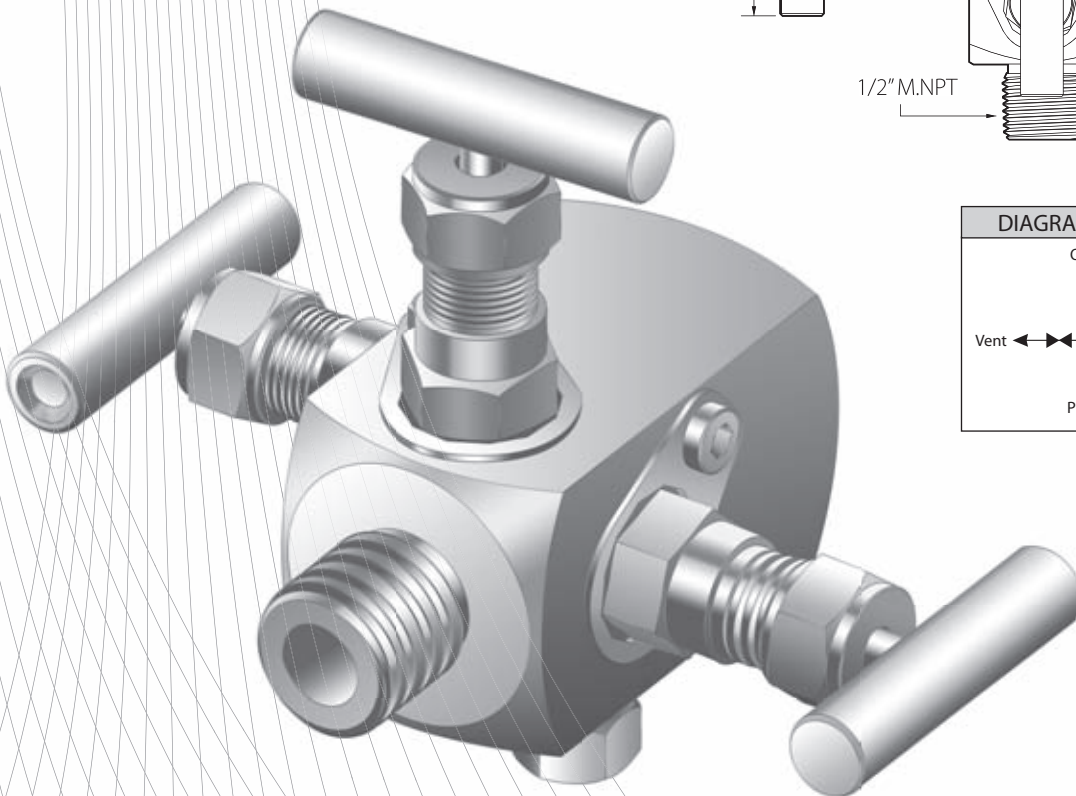
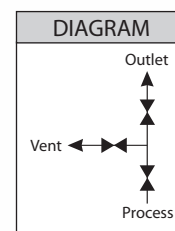
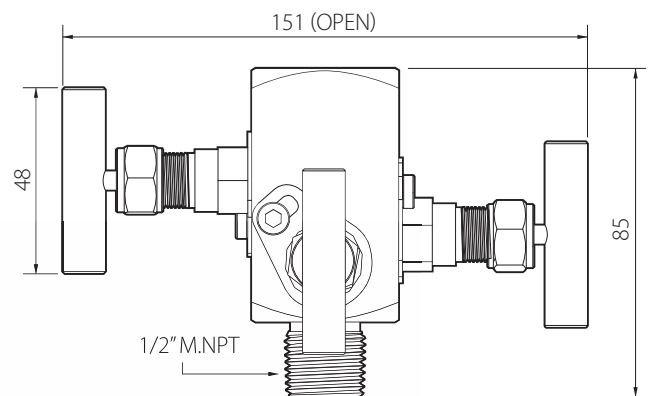
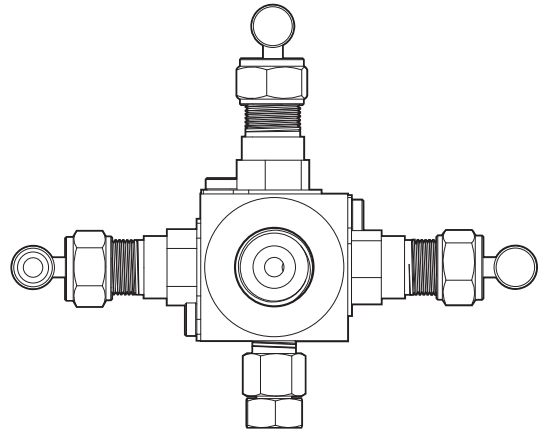
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◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Sampling
- Venting



© HOW TO SPECIFY KPL DOUBLE BLOCK AND BLEED VALVES

DB	A	1	50R	15N	15	16	P	F
Model			Inlet		Vent			Option
Double block and bleed			1/2" 15		1/4" NPT 08			Fire safe F
			3/4" 20		3/8" NPT 10			Anti static device .. A
			1" 25		1/2" NPT 15			locking device LO
			1-1/4" 25		3/4" NPT 20			Injection quill Q
			1-1/2" 32		1" NPT 25			Graphite seals GP
			2" 50					NACE MR-01-75 N
Type			Female NPT N					
A - DBB Valve integral flange 2 ball 1 needle pattern			RF Flange R					
S - DBB Valve 3-piece type 2 ball 1 needle pattern			RTJ RJ					
I - DBB Valve instrument 3 ball pattern			Stub ST					
N - DBB Valve instrument 3 needle pattern			Socket weld S					
H - DBB Valve instrument 2 ball 1 needle pattern			Butt weld B					
					Material			Ball valve Seat material
					316 16			PTFE P
					316L 16L			RTEE R
					304 04			PEEK K
					304L 04L			DEVCON N
					A105 05			NYLON D
					LF2 F2			METAL TO METAL .. MS
					Monel MO			
					Titanium TI			
					Hastelloy C276 HC			
					Alloy 20 A20			
					Inconel 625 IN			
					F51(Duolex) F5			
Ratings			Outlet					
150# 1			1/2" 15					
300# 3			3/4" 20					
600# 6			1" 25					
900# 9			1-1/4" 32					
1500# 15			1-1/2" 40					
2500# 25			2" 50					
3000 PSI 3P			Female NPT N					
6000 PSI 6P			RF Flange F					
			RTJ R					
			Stub ST					
			Socket weld S					
			Butt weld B					

WARNING!! - FOR YOUR SAFETY

Select the right component for safety's sake. The total design of the system must be taken into consideration when selecting components in order to ensure that your KPL Valve products provide safe, trouble free operation. It is the responsibility of the system designer and the user to consider the compatibility of the materials, of the components and system, the function of the component, appropriate ratings and to ensure proper installation, operation and maintenance. Improper selection or use of products can cause property damage or personal injury, in respect of which the system designer and/or the user shall be solely liable and responsible.

LARGE BORE DOUBLE BLOCK AND BLEED VALVES

◎ FEATURES & BENEFITS

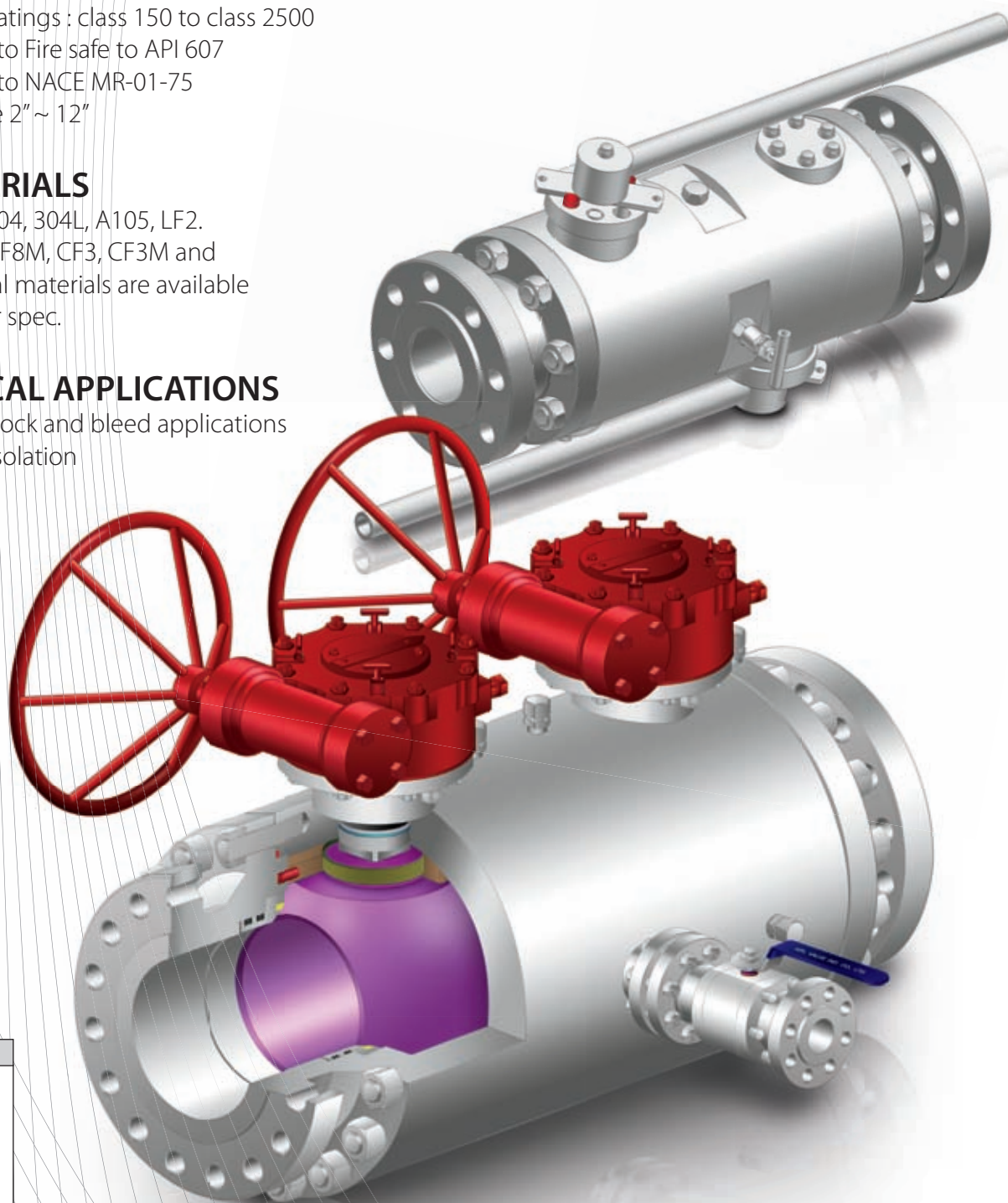
- 2 isolate ball valve pattern
- ANSI B 16.5 flanged connections
- Floating or trunnion ball design
- Pressure ratings : class 150 to class 2500
- Available to Fire safe to API 607
- Available to NACE MR-01-75
- Size range 2" ~ 12"

◎ MATERIALS

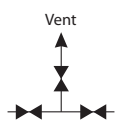
316, 316L, 304, 304L, A105, LF2.
WCB, CF8, CF8M, CF3, CF3M and
other special materials are available
to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Sampling
- Venting



DIAGRAM



FLANGE TO SCREW SINGLE BLOCK AND BLEED VALVES

© FEATURES & BENEFITS

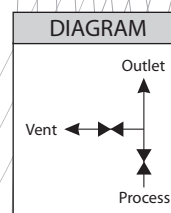
- Integral flange
- 1 ball 1 needle pattern
- 1/2" PT or NPT threaded female outlet
- ANSI B 16.5 flanged inlet connections
- 1/2" NPT threaded bleed connection
 - Size Range : 1/2" ~ 4"
- Pressure ratings : class 150 to class 1500
 - Available to Fire safe to API 607
 - Available to NACE MR-01-75
- Flanged connections according to ASME B 16.5 RF and RTJ

© MATERIALS

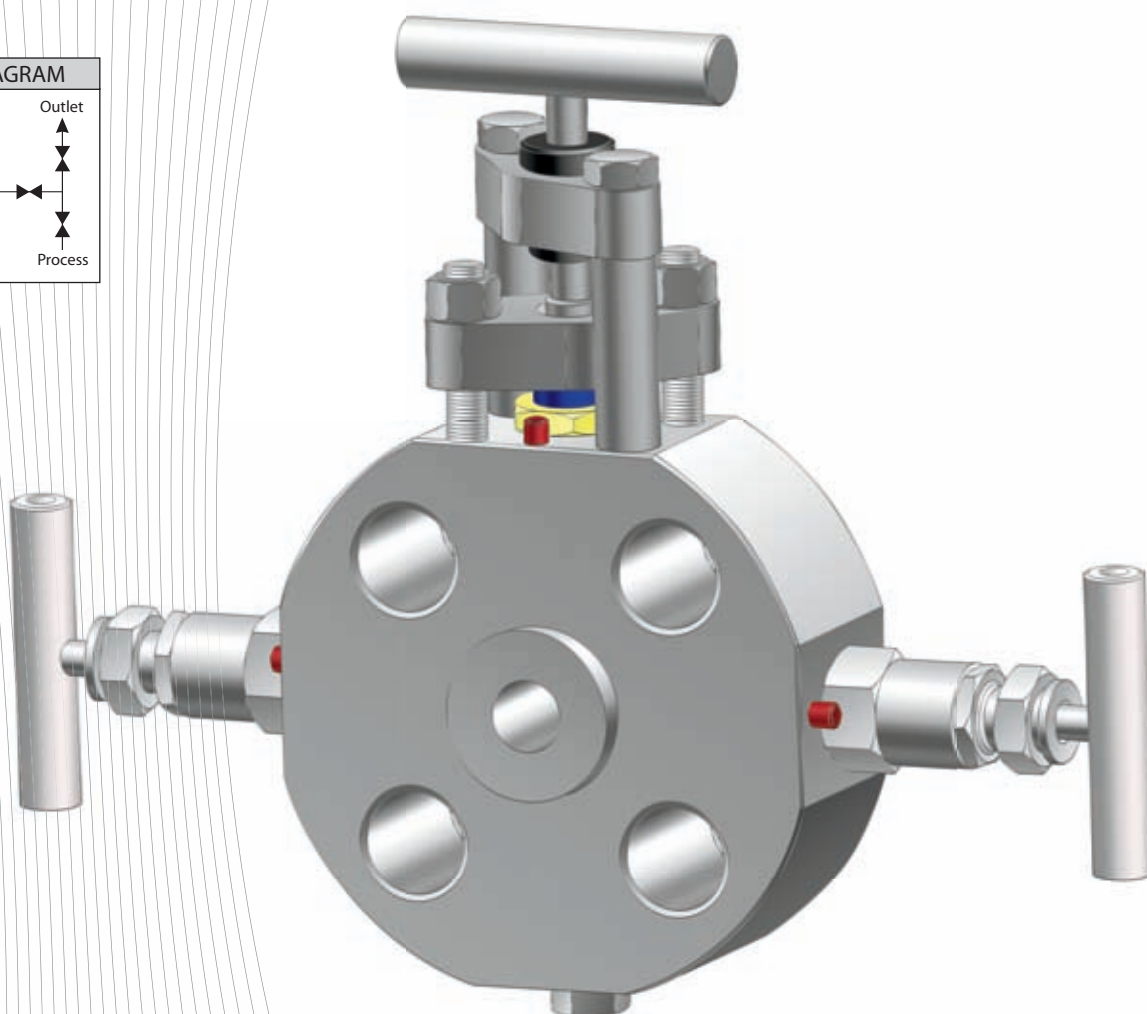
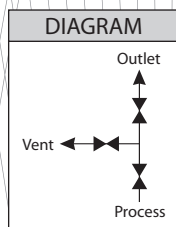
316, 316L, 304, 304L, A105, LF2.
Titanium, monel, inconel625, C95800 and other special materials are available to customer spec.

© TYPICAL APPLICATIONS

- Double block and bleed applications
 - Primary isolation
 - Chemical injection
 - Sampling
 - Flow measurement



MONOFLANGE VALVES



◀ OS&Y Type Double Block & Bleed

◎ FEATURES & BENEFITS

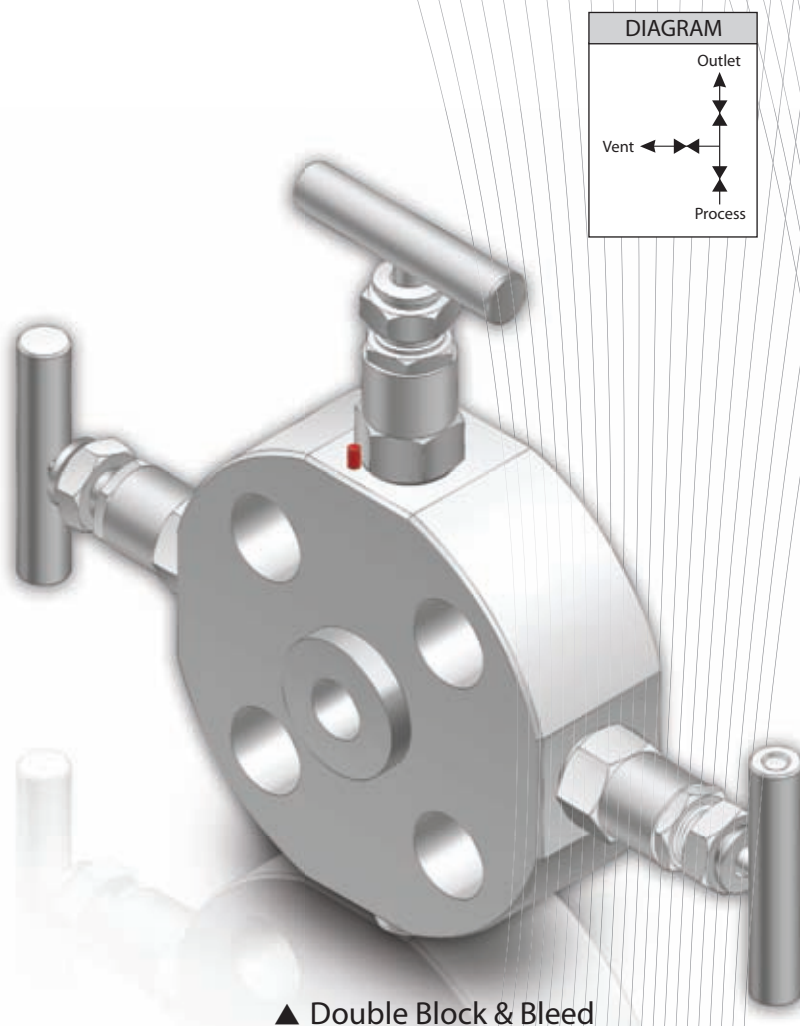
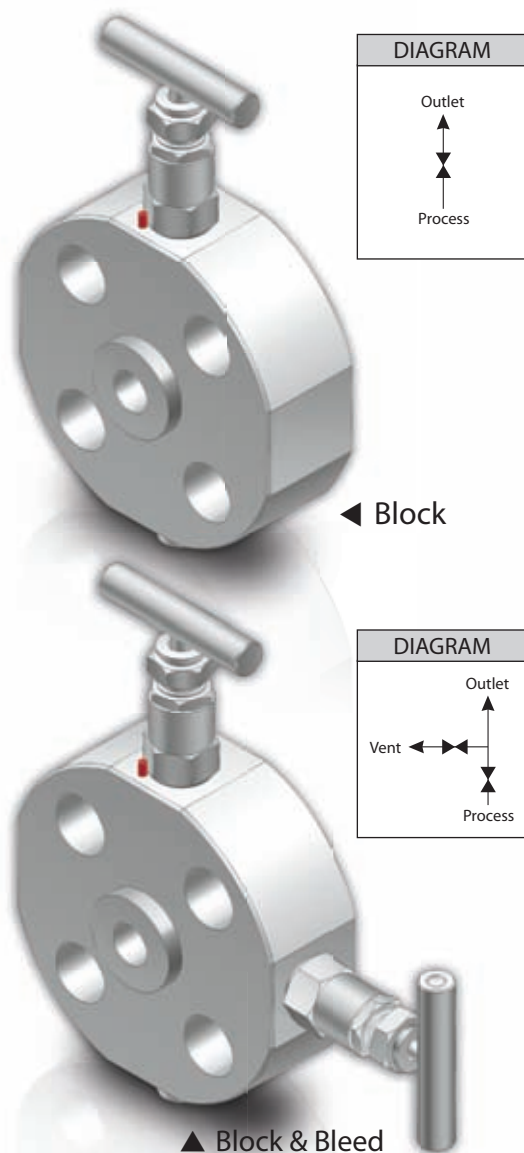
- 3 Needle pattern
- 1/2" PT or NPT threaded female outlet
- ANSI B 16.5 flanged inlet connections
- 1/2" NPT threaded bleed connection
- Pressure ratings : class 150 to class 2500
- Available to Fire safe to API 607
- Available to NACE MR-01-75
- Single block and bleed type is available
- Flanged connections according to ASME B 16.5 RF and RTJ

◎ MATERIALS

316, 316L, 304, 304L, A105, LF2 C95800. Titanium, monel, inconel625, and other special materials are available to customer spec.

◎ TYPICAL APPLICATIONS

- Double block and bleed applications
- Primary isolation
- Sampling
- Venting



© HOW TO SPECIFY KPL MONOFLANGE VALVES

M	D	F 50A	15N	15	16	F
Model		Flange Detail		Vent		Option
Monoflange		RF F RTJ R		1/4" NPT 08 3/8" NPT 10 1/2" NPT 15		Fire safe F locking device LO Graphite seals GP NACE MR-01-75 N
Type		1/2" 15 3/4" 20 1" 25 1-1/4" 32 1-1/2" 40 2" 50		Outlet		Material
D- Double block & Bleed B- Block E- Block & Bleed		150# A 300# B 600# C 900# D 1500# F 2500# G		1/4" NPT 8N 3/8" NPT 10N 1/2" NPT 15N * Other thread connections are available		316 16 316L 16L 304 04 304L 04L A105 05 LF2 F2 Monel MO Titanium TI Hastelloy C276 HC Alloy 20 A20 Inconel 625 IN F51(Duolex) F5

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API Q1, 6D
License # 6D-0694



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ISO 9001
SAI GLOBAL