Anderson Greenwood Instrumentation Primary Isolation Valves

Two piece full bore ball isolation in a double block and bleed configuration range for process to instrument primary isolation applications

General Application

Suitable for double block and bleed applications including pressure, level and flow measurement, sampling, chemical seal isolation and injection services. Instruments may be mounted directly to the valve outlet or remotely with gauge lines/impulse pipe work.

TECHNICAL DATA

Materials

CS, 316 SS, Duplex, For other materials consult factory

Seats: Soft

Connections

Flanged 1" to 2" ANSI to AMSE B16.5 (inlet/ outlet) Threaded 1/2" FNPT (vent)

Presuure (max): To ASME B16.5 RPTFE seats: 302°F (150°C) max PEEK seats 428°F (220°C) max

Temperature (min/max): -70°F to 428°F (-57°C to 220°C)

DESIGN CODES AS STANDARD

All Keyblok primary isolation valves are designed to comply with the following code requirements:

ASME B16.34 Material wall thickness

ASME B16.5 Flanged dimensions

ASME VIII, DIV 1 Design procedures and materials

ASME B1.20.1 National Pipe Threads



Features

- Compact design provides 55% less weight and 60% of envelope size when compared to fabricated arrangement.
- Face-to-face length means no unnecessary change to existing installation when replacing a single isolation valve to ASME B16.10 length for class 600 and above.
- Single body joint means fewer potential leak paths and a safer, more practical arrangement.
- DBB assembly provides up to 65% installation time reduction against some traditional methods with fewer connections necessary.
- Provides security with double isolation barrier on process connection to valve outlet.



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Compact Two Piece Primary Isolation Valves

These valves provide an ultimate solution for forged body primary isolation valves, featuring a choice of end connections, body styles and valve technology.

Advantages compared to individual valves

A two piece Keyblok primary isolation valve provides the following advantages when compared to individual isolation valves configured for double block and bleed:

Advantages

- Reduced weight
- Reduced height
- Reduced leakage points
- Reduced effect of system vibration
- Reduced bending moment acting on the vessel branch fitting weld
- Reduced installation cost
- Reduced gaskets and bolting





Keyblok full bore solution

Traditional practice



Com	ponents
1	Body
2	Vent bonnet
3	Sleeve primary seal
	Sleeve secondary seal
4	Ball
5	Seat
6	Stop pin
7	Stem assembly lock nut
8	Lever handle

Testing

All valves hydrostatically and pneumatically tested in accordance with API 598 as per our standard procedure



TESCOM

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Materials of Construction

	Options available
Body	Carbon steel (ASTM A105N)
	LT Carbon steel (ASTM A350 LF2)
	Stainless steel (ASTM A182 F316)
	Duplex (ASTM A182 F51)
Trim	316 SS (available for all body materials)
	Duplex SS UNS S31803 (Duplex F51 body only)
Bolting	ASTM A193 B8M Class 2

Options

- Compliant to NACE MR-01-75
- Anti-tamper vent (needle valve only)
- Lockable ball valve handles
- Devlon-V[®] seats (ball valve) available ANSI CL1500 max. consult factory
- External paint finishes available to international standards or our in-house procedure, with customer specification subject for review.
- Filled PTFE (ANSI class 150/300/600) or PEEK seats (ANSI class 1500/2500)
- Floating ball design
- Self-relieving seats provide cavity relief
- Anti-blow out, one piece stem design
- Anti-static design to ensure electrical continuity between ball and body
- Compliant with Pressure Equipment Directive 97/23/EC Cat II
- Fire-tested design to API 607
- Vent needle/globe type only graphite stem packing
- Body material certified to EN10204 3.1
- Ball valve vent consult factory





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Dimensions, Inches (mm)





Product Dimensions

Dime	Duosouno elece	Length L			B	ore	Dimension						Foot)A/oimht		
ripe			RF		RTJ		В		Н		w		R	Seal	vve	agnt
size	(ASIVIE DI0.5)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	materia	Ю	(kg)
1"	150	8.5	(216)	8.5	(216)	0.94	(24)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	40	(18)
1"	300	8.5	(216)	8.5	(216)	0.94	(24)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	42	(19)
1"	600	8.5	(216)	8.5	(216)	0.94	(24)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	42	(19)
1"	1500	10.0	(254)	10.0	(254)	0.94	(24)	9.84	(250)	11.81	(300)	5.39	(137)	PEEK	53	(24)
1"	2500	12.12	(308)	12.12	(308)	0.94	(24)	9.84	(250)	11.81	(300)	5.79	(147)	PEEK	77	(35)
1½"	150	9.50	(241)	9.5	(241)	1.46	(37)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	49	(22)
1½"	300	9.50	(241)	9.5	(241)	1.46	(37)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	53	(24)
1½"	600	9.50	(241)	9.5	(241)	1.46	(37)	9.84	(250)	11.81	(300)	5.39	(137)	RPTFE	55	(25)
1½"	1500	12.0	(305)	12.0	(305)	1.46	(37)	11.02	(280)	15.74	(400)	5.79	(147)	PEEK	81	(37)
1½"	2500	15.12	(384)	15.24	(387)	1.46	(37)	11.02	(280)	15.74	(400)	6.5	(165)	PEEK	128	(58)
2"	150	11.5	(292)	11.61	(295)	2.01	(51)	11.02	(280)	11.81	(300)	5.79	(147)	RPTFE	77	(35)
2"	300	11.5	(292)	11.61	(295)	2.01	(51)	11.02	(280)	11.81	(300)	5.79	(147)	RPTFE	79	(36)
2"	600	11.5	(292)	11.61	(295)	2.01	(51)	11.02	(280)	11.81	(300)	5.79	(147)	RPTFE	84	(38)
2"	1500	14.5	(368)	14.61	(371)	1.46	(37)	11.02	(280)	15.74	(400)	6.5	(152)	PEEK	106	(48)
2"	2500	17.75	(451)	17.87	(454)	1.46	(37)	11.02	(280)	15.74	(400)	6.5	(165)	PEEK	154	(70)



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Pressure/Temperature Guidelines - Seat Material

Valve schematic





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Selection Guide

	F2569	v		С	S			
	BASIC SERIES	BALL VALVE SEAT MATERIAL		BODY MATERIAL	TRIM MATERIAL			
Ba	Configuration all valve type isolate	Ball valve type						
F2569	Flanged x flanged double block and bleed (1")	V RPTFE	c	Carbon steel (A105N)	s	316 SS		
F3869	Flanged x flanged double block and bleed (1 ½")	e peek	L	LT Carbon steel (A350 LF2)	D	Duplex stainless steel UNS S31803		
F5069	Flanged x flanged double block and bleed (2")	N Devlon V [®] (optional, consult factory)	s	Stainless steel (A182 F316)				
			D	Duplex stainless steel (A182 F51)	Sta C, L D b	ndard trim combinations . and S Body = S Trim, .ody = D Trim		

081A							081A					-AL				
STANDARD INLET CONNECTIONS							STANDARD OUTLET CONNECTION					STANDARD OUTLET CONNECTION				
0) 1) 1)	3 1" 2 1 ^{1/2} " 5 2"	1 3	RF RTJ	A- J- K- L- M-	ANSI CL150 ANSI CL300 ANSI CL600 ANSI CL900 ANSI CL1500 ANSI CL2500	08 12 16	1" 1 ^{1/2} " 2"	1 3	RF RTJ	A J K T L	ANSI CL150 ANSI CL300 ANSI CL600 ANSI CL900 ANSI CL1500 ANSI CL2500	316T AL AT CB ST IQ() BVL PT PV QV SG	Full 316 SS trim (non-wetted) Low temperature service (-58°F (-50°C)) Anti-tamper vent (needle/globe valve only) Ceramic ball ended stem (needle/globe valve only) Stellite ball ended stem (needle/globe valve only) Integral quill (consult factory) Lockable ball valve handles (specify number required (1 or 2)) PTFE stem packing (needle/globe valve only) Plugged vent ¼" NPT (f) vent (Sour Gas) meets the requirements of NACE MR0175/ ISO 15156-3 (for chloride conditions ≤ 50 mg/l [ppm]*) and NACE MR0103-2005 Vent option (please specify compression fittings, if required)			

NOTES

Devlon-V[®] is a registered trademark of Devol Engineering Ltd.
* For Sour Gas with chloride > 50 mg/l [ppm] consult your sales representative

