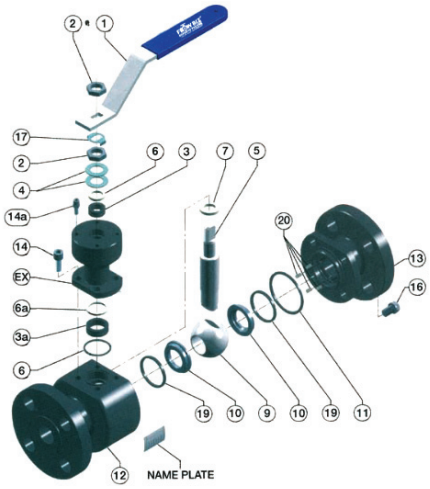
FLOW BIZ™
EXPORTS PVT. LTD.
WE KNOW THE FLOW

METAL SEATED BALL VALVES (BAR STOCK)



FlowBiz metal seated seamless design ball valves range is the best in class product for the most severe rasping industrial conditions. Our valves are the best market player for too high temperatures up to 650° C / 1200° F, an abrasive medium such as fly-ash, slurry, pulp applications, and pressures up to class 2500. Our valves are ideal for high erosion or corrosion applications.

The production of zero maintenance, the high-performance metal seated valve, has been the goal of many engineers. FlowBiz is unique as their combination metal seat / Viton seat offers a suitable class VI shut off.

Our state of art precision engineering makes our metal seated ball valve exceeds the FCI-70-2 Class V leak rate with outstanding repeatability.

STARLINE Figure No.		Full Bore	143 MGG	145 MGG	146 MGG
		Reduced Bore	243 MGG	245 MGG	246 MGG
PART NO	UNIT Q.TY	PART NAME	MATERIALS	MATERIALS	MATERIALS
			A105 / 316	LF2 / 316	316 / 316
NP	1	NAME PLATE	Stainless Steel	Stainless Steel	Stainless Steel
• G	1	EXTENTION GASKET	Graphite	Graphite	Graphite
• EX	1	EXTENTION	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
1	1	HANDLE	Stainless Steel + Plastic	Stainless Steel + Plastic	Stainless Steel + Plastic
•• 2	2	HANDLE NUT	C.S. Zinc Plated	Stainless Steel	Stainless Steel
• 3	3+3	PACKING RING	Graphite	Graphite	Graphite
•• 4	2	SPRING WASHER	Special S.S. for Springs	Special S.S. for Springs	Special S.S. for Springs
•• 5	1	STEM	UNS S31803	UNS S31803	UNS S31803
6	1+1	GLAND PACKING	Stainless Steel	Stainless Steel	Stainless Steel
•• 7	1	THRUST WASHER	Stainless Steel	Stainless Steel	Stainless Steel
•• 9	1	BALL	S.S. 316 Hardnet note 3	S.S. 316 Hardnet note 3	S.S. 316 Hardnet note 3
•• 10	2	SEATS	S.S. 316 Hardnet note 3	S.S. 316 Hardnet note 3	S.S. 316 Hardnet note 3
• 11	2	BODY GASKET	Graphite	Graphite	Graphite
12	1	BODY	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
13	1	END CONNECTION	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
14	4	EXTENTION SCREW	Steinless Steel	Steinless Steel	Steinless Steel
14a	1	STOP PIN	Steinless Steel	Steinless Steel	Steinless Steel
16	nota 1	BOLTS	ASTM A193 B8	ASTM A193 B8	ASTM A193 B8
•• 17	1	STOPWASHER	Steinless Steel	Steinless Steel	Steinless Steel
• 19	2	SEAT SEALS	Graphite	Graphite	Graphite
• 20	nota 2	SEAT SPRINGS	Inconell X-750	Inconell X-750	Inconell X-750

NOTE:
1) For size 1/4" to 1.1/2" n° 4 bolts - For size 2" n° 6 bolts
2) For size 1/4" to 1.1/2" n° 4 springs - For size 2" n° 6 springs.
3) Surface are coated with tungsten carbide, chrome carbide, stellite 6 and other coated on request

• Suggested materials after 2 years service
• • Suggested materials after 5 years service

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For hardening, we use various technical procedures like nitriding of austenitic stainless steel, nickel plating, chromium plating, plasma thermal arc (PTA) welding of stellite and high-velocity oxygen fuel (HVOF) spray technique of tungsten carbide or chromium carbide over cobalt-base layer. Each approach well-crafted with complete care, keeping in mind application parameters.

- Condensate and Condenser Drain.
- Economizer Drain.
- Main Steam Vent and Drain.
- Preheat and Reheat Drain.
- Superheated Steam Drain.
- Turbine Drain.

DESCRIPTION

CONSTRUCTION	TWO PIECES BOLTED CONSTRUCTION - ANTI BLOW OUT PROOF STEM DESIGN - SOLID BALL AND METAL SEATS SURFACES ARE COATED WITH TUNGSTEN CARBIDE, CHROME CARBIDE AND STELLITE 6 - ANTISTATIC DEVICE - FIRE SAFE DESIGN - ISO 5211 ON THE TOP FOREASY AUTOMATION
SIZE	DN 8 ÷ 50 FULL BORE -- DN 20 ÷ 80 REDUCED BORE 1/4" ÷ 2" FULL BORE -- 3/4" ÷ 3" REDUCED BORE
CLASS	PN16 ÷ 100 or ASME 150 ÷ 600 LBS
TEMPERATURE	-200° C UP TO +700° C
MATERIAL	ASTM A105 - LF2 - 316 - 316L - F22 - INCONELAND SPECIAL MATERIALS
DESIGN	ASME B16.34 - ASME B31.1 - BS5351 - API 6D - P.E.D. 97/23/ECATEX 94/9 CE
MARKING	MSS SP25
CE 0038	ACCORDING TO DIRECTIVE 97/23/CE - MODULE H CATEGORY III NOTIFIED BODY LLOYD'S REGISTERED CERTIFICATE NR. RPS 01060304/01
Ex IM2/II 2GD	ACCORDING TO ATEX 94/9 CE - TECHNICAL FILE NR. ST01 ATEX
TEST CERTIFICATE	UNI EN 10204 TYPE 3.1B UNLESS OTHERWISE REQUIRED
SERVICES	FOR EXTREME TEMPERATURE, ABRASIVE AND CORROSIVE SERVICE

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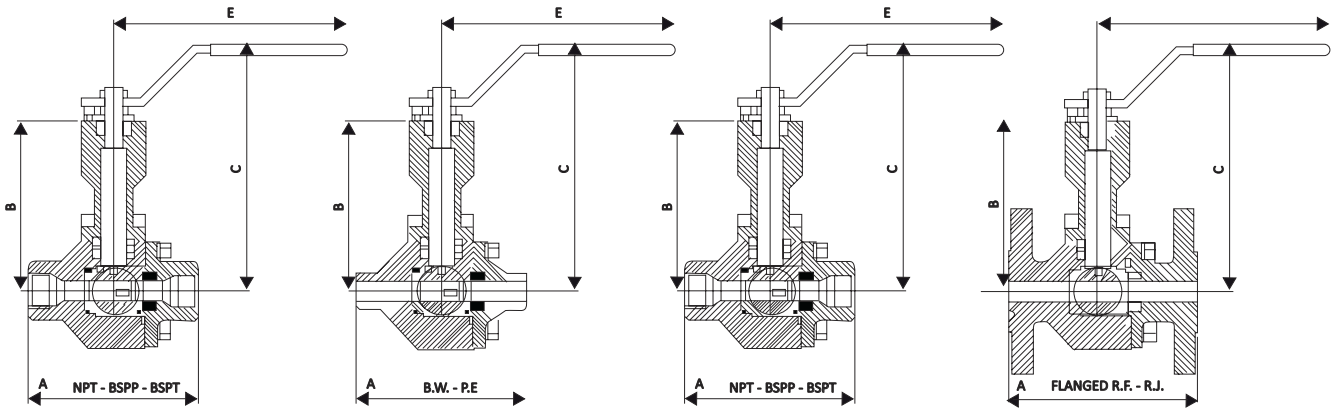
DIMENSIONS

BSP Parallel : BS21Rp - ISO 228/1 - ISO 7/1Rp
BSP Taper : BS21Rc -ISO 7/1Rc - DIN 2999/1
NPT : ANSI B1 20.1

B.W. - P.E. : ANSI B16.25
Sch. 40 - XS - 80 - 160
Note : other overall lenghts are available on request.

S.W.: ANSI B16.11

FLANGES in according to ASME / ANSI B 16.5FACE to FACE in according to ASME / ANSI B16.10Note: when flanges are RF type of finish must be sta-ted on the order



FULL BORE																			
VALVE SIZE		A							B	C	D	E	ISO 5211	WEIGHT KG./LBS					
		NPT BSPP BSPT BW SW	FLANGED											NPT BSPP BSPT BW-PE-SW	FLANGED					
			150 RF	300 RF	300 RJ	600 RF	600 RJ	PN 10/100							150 RF	300 RF JR	600 RF RJ	PN 16-40	PN 63	PN 100
DN	8	106	-	-	-	-	-	-	106	160	13	193	FO4	3.5	-	-	-	-	-	-
Inch	¼"	4.3/16"	-	-	-	-	-	-	4.17"	6.30"	51"	7.60"		7.7	-	-	-	-	-	-
DN	10	106	-	-	-	-	-	130	106	160	13	193	FO4	3.5	-	-	-	5	6	6
Inch	3/8"	4.3/16"	-	-	-	-	-	5.1/8"	4.17"	6.30"	51"	7.60"		7.7	-	-	-	11	13.2	13.2
DN	15	106	140	140	151	165	163.5	130	106	160	13	193	FO4	3.2	4.5	5	7	5	6	6
Inch	½"	4.3/16"	5½"	5½"	5.15/16"	6½"	6.7/16"	5.1/8"	4.17"	6.30"	51"	7.60"		7	9.9	11	15.4	11	13.2	13.2
DN	20	110	152	152	165	191	191	150	110	165	19	193	FO4	4.5	5.5	6.5	10.5	6.5	8.5	8.5
Inch	¾"	4.5/16"	6"	6"	6½"	7½"	7½"	5.7/8"	4.33"	6.50"	75"	7.60"		10	12.1	14.3	23.1	14.3	18.7	18.7
DN	25	127	165	165	178	216	216	160	117	183	25	222	F05	7	7.5	9	13.5	9	11	11
Inch	1"	5"	6½"	6½"	7"	8½"	8½"	6.5/16	4.60"	7.20"	1"	8.75"		15.5	16.5	19.8	29.8	19.8	24.2	24.2
DN	32	180	178	178	191	229	229	180	152	235	38	365	F07	11	13	15	25.5	15	23.5	23.5
Inch	1¼"	7⅛"	7"	7"	7½"	9"	9"	7.1/8"	6"	9.25"	1.5"	14.4"		24	28.6	33	56	33	52	52
DN	40	180	191	191	203	241	241	200	152	235	38	365	F07	11	14	17	28	17.5	25.5	25.5
Inch	1½"	7 ⅛"	7½"	7½"	8"	9½"	9½"	8¼"	6"	9.25"	1.5"	14.4		24	30.8	37.5	62	38.6	56.2	56.2
DN	50	216	216	216	232	292	295	230	167	-	50	-	F07	16	20	24	34	25	30	30
Inch	2"	8½"	8½"	8.1½"	9.1/8"	11½"	11.5/8"	9.1/16"	6.57"	-	1.97"	-		35	44	53	75	55	66	66

NOTE :
For size DN 40 or 1½" gear operated for class 300 to 600 or PN 40 to 100
For size DN 50 or 2" gear operated for all pressure ratings

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Reduce Bore																				
VALVE SIZE		A							B	C	D	E	ISO 5211	WEIGHT KG./LBS						
		NPT BSPP BSPT BW SW	FLANGED											NPT BSPP BSPT BW-PE-SW	FLANGED					
			150 RF	300 RF	300 RJ	600 RF	600 RJ	PN 10/100							150 RF	300 RF JR	600 RF RJ	PN 16-40	PN 63	PN 100
DN	20	106	152	152	165	191	191	150	106	160	13	193	FO4	3.2	5	6	8	6	7	7
Inch	3/4"	4.3/16"	6"	6"	6 ½	7 ½"	7 ½"	5 ⅞"	4.17"	6.30"	51"	7.60"		7	11	13.2	17.6	13.2	15.4	15.4
DN	25	110	165	165	178	216	216	160	110	165	19	193	FO4	4.5	6	7.5	12.5	7.5	9.5	9.5
Inch	1"	4 5/16"	6 ½"	6 ½"	7"	8 ½	8 ½	6 5/16"	4.33"	6.50"	75"	7.60"		10	13.2	16.5	27.5	16.5	21	21
DN	32	127	178	178	191	229	229	180	117	183	25	222	FO5	7	8.5	11	15	11	13	13
Inch	1¼"	5"	7"	7"	7 ½	9"	9"	7 ⅛"	4.60"	7.20"	1"	8.75"		15.5	18.7	24.2	33	24.2	28.6	28.6
DN	40	180	191	191	203	241	241	200	152	235	38	365	FO7	11	14	17	28	17.5	25	25
Inch	1½"	7 ⅛"	7 ½	7 ½	8"	9 ½	9 ½"	8 ¼	6"	9.25"	1.5"	14.4"		24	30.8	37.5	62	38.6	55	55
DN	50	180	216	216	232	292	295	230	152	235	38	365	F07	11	17	21	36	22	28	28
Inch	2"	7 ⅛"	8 ½"	8 ½"	9 ⅛"	11 ½	11 ⅝	9 1/16	6"	9.25"	1.5"	14.4"		24	37.5	46.3	79.4	48.5	62	62
DN	80	216	283	283	298	356	359	310	152	-	38	-	F07	16	28	32	44	34	36	36
Inch	3"	8½"	11 ⅛"	11 ⅜"	11 ¾	14"	14 ⅛"	12 3/16	6"	-	1.5"	-		35	62	71	97	75	80	80

NOTE :

For size DN 40 or 1½" gear operated for class 300 to 600 or PN 40 to 100

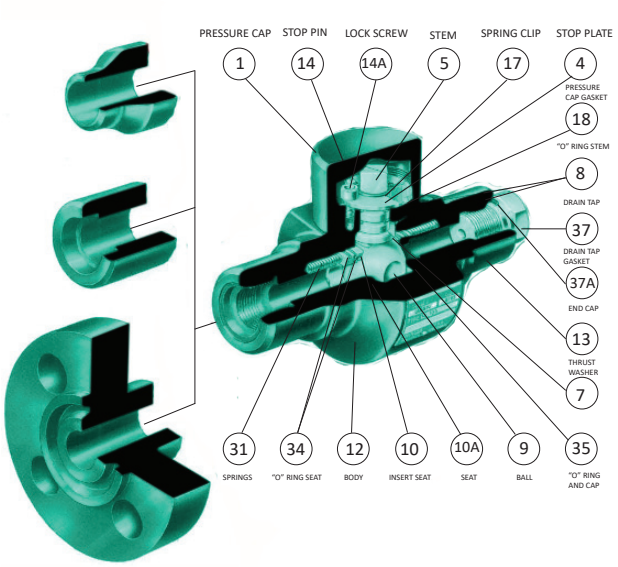
For size DN 50 or 2" gear operated for all pressure ratings

FLOWBIZ WELDED BALL VALVES FOR GAS STORAGE

One piece seal welded body, floating ball double block. Primary seal METAL, secondary seal vulcanized Viton or NBR, pressure safe cover for the stem to prevent any leakage. For operation remove the cover.

Completely in accordance to spec. KN251-005.

Specifically designed as shut off drain and vent lines for larges valves sizes and as Gas Storage valves, these valves have passed a critical prototype testing simulating 50 years service life with raw gas, and sand.



LIST AND MATERIAL OF COMPONENTS

PART NO.	UNIT Q.TY	PART NAME	MATERIAL
1	1	PRESSURE CAP	ASTM A105 / C22.8
4	1	STOP PLATE	S.S 304
5	1	STEM	AISI 420/1.4021 HARDENED
7	1	THRUST WASHER	Reinforced PTFE
8	1	"O" RING STEM	VITON
9	1	BALL	AISI 420/1.4021 HARDENED
10	2	INSERT SEATS	VITON VULCANIZED
10A	2	SEATS'	AISI 420/1.4021 HARDENED
12	1	BODY	ASTM A105/C.22.8
13	1	END CAP	ASTM A105/C.22.8
14	1	STOP PIN	STEEL
14A	1	LOCK SCREW	STAINLESS STEEL
17	1	SPRING CLIP	STEEL
18	1	PRESSURE GASKET	VITON
31	8+8	SPRINGS	INCONEL X 750
34	2+2	"O" RING SEAT	VITON
35	1	"O" RING SEAT CAP	VITON
37	1	DRAIN TAP	S.S 304
37A	1	DRAIN TAP GASKET	SWEET IRON

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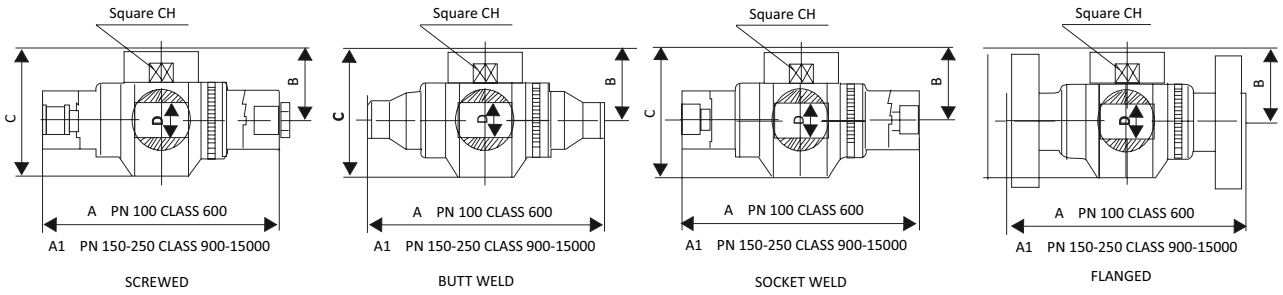
Valve range :

Produced in the 3 typical sizes ½" - 1" - 2"
different combinations of end connections to suit any reqrierment

Class ratings :

all sizes are available in **ASME class 600 Lbs (ISO PN 100) and ASME class 1500 Lbs (ISO PN 250)**



Size		Dimension						Weight Kg			
								SREWED-BUTT WELD-SOCKET WELD		FLANGED	
INCH	DN	A	A1	B	C	D	CH	PN 100 (600)	PN 150-200 (900-1500)	PN 100 (600)	PN 150-250 (900-1500)
½"	15	165	216	58	100	13	11	3.5	4	6	7
1"	25	216	254	90	155	25	14	9	10	11	15
2"	50	292	368	135	240	50	17	37	40	40	55

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