



**STAR LINE®** FORGED STEEL BALL VALVE

**STARLINE S.p.A.**  
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APPROVAL CERTIFICATE No. 911234

# FORGED STEEL VALVES

FOR GAS TRANSPORTATION, DISTRIBUTION AND STORAGE



- CONSTRUCTION** : API 6D ■ ASME/ANSI B16.34 FOR 2" AND LARGER SIZE  
: BS5351 ■ ASME/ANSI B16.34 FOR 1/1/2" AND SMALLER SIZE  
: BS6755 PART 2: 1987 - API607 FOURTH EDITION MAY 1993 - API6FA: MAY 1985 (REAFFIRMED MAY 1990)
- FIRE TEST APPROVED MARKING** : MSS SP25
- SIZE** : 1/4" ÷ 4" FULL BORE  
**SIZE** : 1/2" ÷ 6 RED BORE
- MATERIALS** : ASTM A105 - LF2 - 316 - 316L - 304L - F44 - F51 AND SPECIAL MATERIALS. NACE LAST EDITION
- CLASS** : ASME/ANSI 150 UP TO 1500 Lbs.
- TEST CERTIFICATE** : DIN 50.049/3.1 B UNLESS OTHERWISE REQUIRED
- TEMPERATURES** : -200°C UP TO + 350°C.



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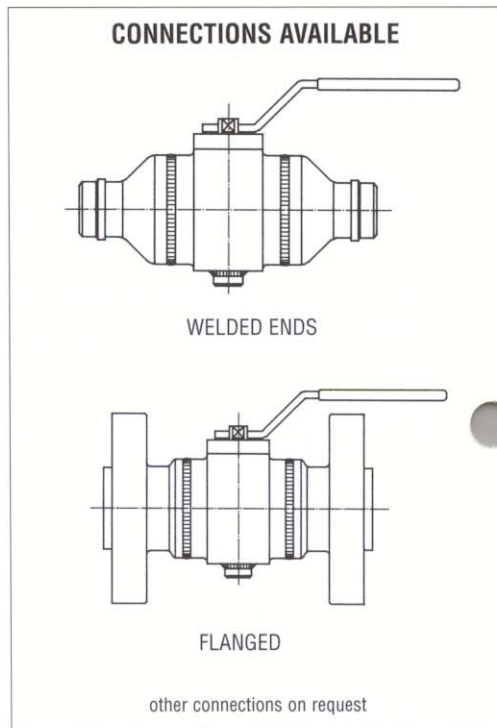
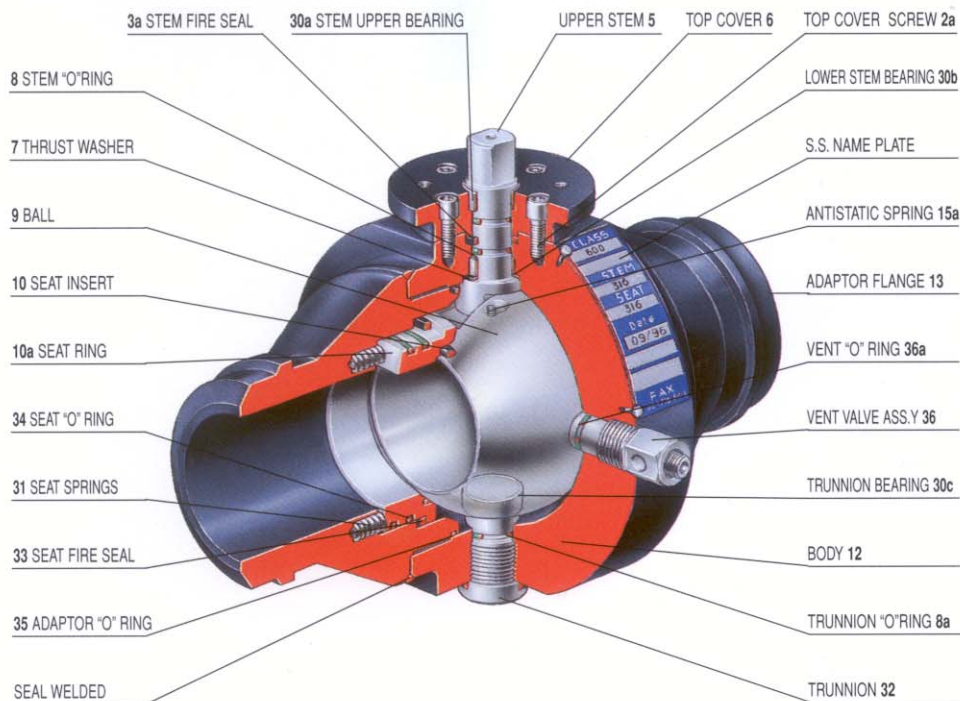
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# STARLINE WELDED BALL VALVES FOR GAS TRANSPORTATION, DISTRIBUTION AND STORAGE

Forged steel three pieces seal welded construction ball valves - trunnion mounted spring energized seats, soft insert seats self relieving in case of body overpressure. Block and bleed facility, anti blow-out stem design, antistatic device. Designed in conformity to last edition of API 6D - BS 5351 - ASME/B16.34. Fire safe to API 6FA - API 607 - BS 6755.

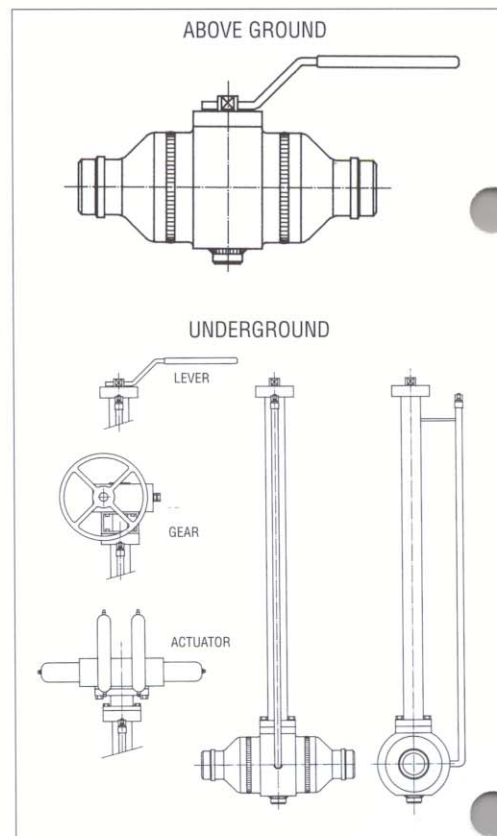


**note:** On gas services valves may used either UNDERGROUND OR ABOVE GROUND

PART. No.	DESCRIPTION	A105/316	LF2/316
1	LEVER	C.S. Galvanized/Plastic cover	C.S. Galvanized/Plastic cover
1a	LEVER BOLT	C.S. Zinc plated	C.S. Zinc plated
2a	TOP COVER SCERW	ASTM A193 B7/Zinc plated	ASTM A320 L7M
3a	STEM FIRE SEAL	Graphite	Graphite
5	UPPER STEM	ASI 316	ASI 316
6	TOP COVER	A105	ASTM A350 LF2
7	THRUST WASHER	DU-DRY OR TYPE S	DU-DRY OR TYPE S
8a	TRUNNION "O" RING	NBR	VITON
8b	STEM "O" RING		
9	BALL	ASTM A182 F316	ASTM A182 F316
10	INSERT SEAT	T-R-S-LOW PR/N-D-P-E HIGH PR	T-R-S-LOW PR/N-D-P-E HIGH PR
10a	SEAT RING	ASI 316	ASI 316
12	BODY	ASTM A105	ASTM A350 LF2
13	ADAPTOR FLANGE	ASTM A105	ASTM A350 LF2
14	STOP PIN	Stainless Steel	Stainless Steel
15a	ANTISTATIC SRING	S.S. 316	S.S. 316
15b			
17	STOP LEVER WASHER	Stainless Steel only for bigger size	Stainless Steel only for bigger size
30a	STEM UPPER BEARING	DU-DRY	DU-DRY
30b	LOWER STEM BEARING		
30c	TRUNNION BEARING		
31	SEAT SPRINGS	INCONEL X-750	INCONEL X-750
32	TRUNNION	AISI 316	AISI 316
33	SEAT FIRE SEAL	GRAPHITE	GRAPHITE
34	SEAT "O" RING	NBR	VITON
35	ADAPTOR "O" RING	NBR	VITON
36	VENT VALVE/BLEEDER	AISI 316	AISI 316
36a	VENT "O" RING	NBR	VITON
NP	NAME PLATE	S.S. 316	S.S. 316

When ball valves are to be installed below ground on buried pipelines or where not easily accessible, operators can be remote mounted by means of suitable stem extension. Drain lines and grease injectors (if required) will be piped up to the top of the extension for an easier access.

The distance between valve centreline and operator handwheel must be specified

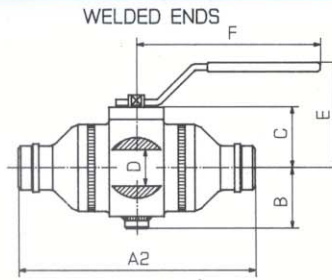
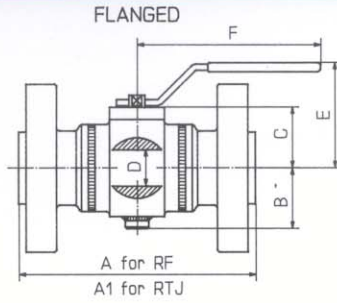


## VALVE PROTECTION

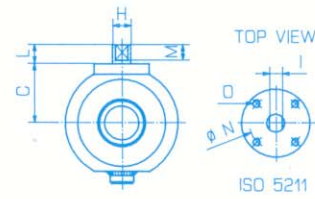
Valves for above ground service are usually supplied as a standard with phosphating treatment. Valves for underground service are supplied with a 400 microns epoxy paint. Alternative paintings to Customer's spec. are available on request.

## VALVE CERTIFICATION

Valves are supplied with EN 10204/3.1B certification as a standard. On request we are in the position to supply EN 10204/3 1C certification with Third Party Inspection.



MANUAL GEAR OPERATION OR AUTOMATION



## CLASS 150

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
1/2" x 1/2"	15 x 15	140	152	165	40	40	12.7	95	193	4	4.5	3
3/4" x 3/4"	20 x 20	152	165	191	48	48	19	110	225	6.5	7	6
1" x 1"	25 x 25	165	178	216	61	61	25.4	115	225	9	10	9
1 1/4" x 1 1/4"	32 x 32	-	-	-	-	-	-	-	-	-	-	-
1 1/2" x 1 1/2"	40 x 40	191	203	241	75	72	38	145	365	15	16	12.5
2" x 2"	50 x 50	216	232	292	88	88	51	160	365	22	26	22
3" x 3"	80 x 80	283	298	356	120	120	76	195	470	57	60	48
4" x 4"	100 x 100	305	320.5	432	160	160	101.6	250	600	110	112	110

DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
-	-	-	-	-	-	-	-
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
3/4" x 1/2"	20 x 15	152	165	191	40	40	12.7	95	193	5.5	6	3.5
1" x 3/4"	25 x 20	165	178	216	48	48	19	110	225	7	7.5	6.5
1 1/4" x 1"	32 x 25	178	191	229	61	61	25.4	115	225	11	12	9.5
1 1/2" x 1 1/4"	40 x 25	191	203	241	61	61	25.4	115	225	13	14	9.5
2" x 1 1/2"	50 x 40	216	232	292	75	72	38	145	365	21	22	13.5
3" x 2"	80 x 50	283	298	356	88	88	51	160	365	32	34	24
4" x 3"	100 x 80	305	320.5	432	120	120	76	195	470	78	82	55
6" x 4"	150 x 100	403	419	559	160	160	101.6	250	600	120	124	112

DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
15	9	10	9	50	M6		F05
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

## CLASS 300

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
1/2" x 1/2"	15 x 15	140	152	165	40	40	12.7	95	193	3.5	4	3
3/4" x 3/4"	20 x 20	152	165	191	48	48	19	110	225	6	6.5	6
1" x 1"	25 x 25	165	178	216	61	61	25.4	115	225	8.5	9.5	9
1 1/4" x 1 1/4"	32 x 32	-	-	-	-	-	-	-	-	-	-	-
1 1/2" x 1 1/2"	40 x 40	191	203	241	75	72	38	145	365	14	15	12.5
2" x 2"	50 x 50	216	232	292	88	88	51	160	365	21	25	22
3" x 3"	80 x 80	283	298	356	120	120	76	195	470	55	57	48
4" x 4"	100 x 100	305	320.5	432	160	160	101.6	250	600	105	108	110

DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
-	-	-	-	-	-	-	-
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
3/4" x 1/2"	20 x 15	152	165	191	40	40	12.7	95	193	5	5.5	3.5
1" x 3/4"	25 x 20	165	178	216	48	48	19	110	225	6.5	7	6.5
1 1/4" x 1"	32 x 25	178	191	229	61	61	25.4	115	225	10	11	9.5
1 1/2" x 1 1/4"	40 x 25	191	203	241	61	61	25.4	115	225	12	13	9.5
2" x 1 1/2"	50 x 40	216	232	292	75	72	38	145	365	20	21	13.5
3" x 2"	80 x 50	283	298	356	88	88	51	160	365	30	32	24
4" x 3"	100 x 80	305	320.5	432	120	120	76	195	470	75	78	55
6" x 4"	150 x 100	403	419	559	160	160	101.6	250	600	115	118	112

DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
15	9	10	9	50	M6		F05
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

## CLASS 600

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
1/2" x 1/2"	15 x 15	165	163.5	165	40	40	12.7	95	193	4.5	4.5	3
3/4" x 3/4"	20 x 20	191	191	191	48	48	19	110	225	7	7	6
1" x 1"	25 x 25	216	216	216	61	61	25.4	115	225	10	10	9
1 1/4" x 1 1/4"	32 x 32	-	-	-	-	-	-	-	-	-	-	-
1 1/2" x 1 1/2"	40 x 40	241	241	241	75	72	38	145	365	16	16	12.5
2" x 2"	50 x 50	292	295	292	88	88	51	160	365	26	26.5	22
3" x 3"	80 x 80	356	359	356	120	120	76	195	470	53	54	48
4" x 4"	100 x 100	432	435	432	160	160	101.6	250	600	120	122	110

DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
-	-	-	-	-	-	-	-
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

VALVE SIZE		DIMENSIONS in mm								WEIGHT KG		
INCH	mm	A	A1	A2	B	C	D	E	F	RF	RTJ	BW
3/4" x 1/2"	20 x 15	191	191	191	40	40	12.7	95	193	5.5	5.5	3.5
1" x 3/4"	25 x 20	216	216	216	48	48	19	110	225	8	8	6.5
1 1/4" x 1"	32 x 25	229	229	229	61	61	25.4	115	225	12	12	9.5
1 1/2" x 1 1/4"	40 x 25	241	241	241	61	61	25.4	115	225	15	15	9.5
2" x 1 1/2"	50 x 40	292	295	292	75	72	38	145	365	25	25.5	13.5
3" x 2"	80 x 50	356	359	356	88	88	51	160	365	35	36	24
4" x 3"	100 x 80	432	435	432	120	120	76	195	470	65	67	55
6" x 4"	150 x 100	559	562	559	160	160	101.6	250	600	160	165	112

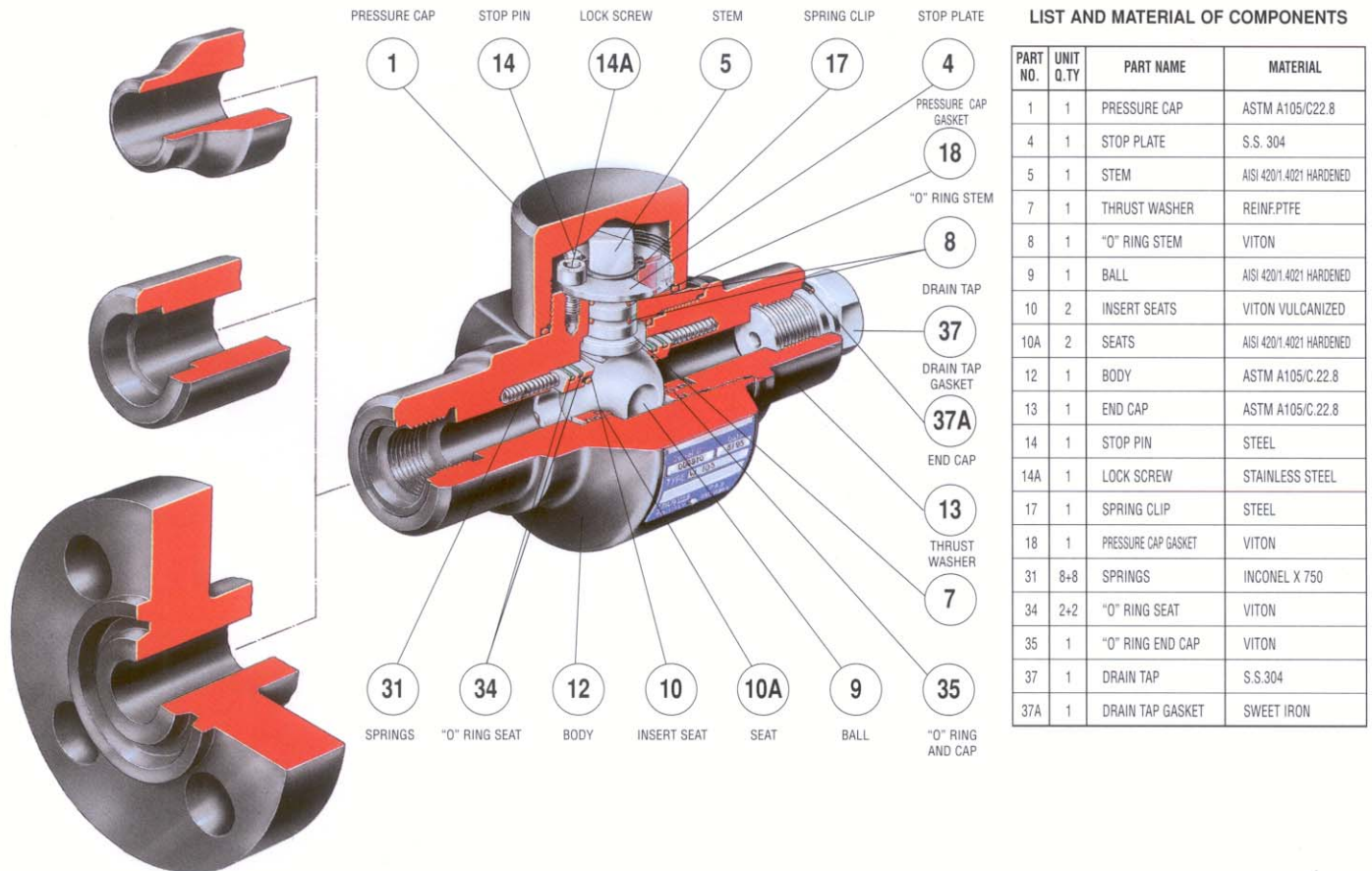
DIMENSIONS in mm							ISO 5211
H	I	L	M	N	O		
12	7.5	6.5	6.5	42	M5		F04
15	9	8.5	7.5	50	M6		F05
15	9	10	9	50	M6		F05
15	9	10	9	50	M6		F05
22	16	19	16	70	M8		F07
22	16	19	16	70	M8		F07
24	18	24	22	70	M8		F07
40	30	32	29	102	M10		F10

# STARLINE WELDED BALL VALVES FOR GAS STORAGE

One piece seal welded body, floating ball double block. Primary seal METAL, to 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 valve sizes and as Gas Storage valves, these valves have passed a critical prototype testing simulating 50 years service life with raw gas, and sand.

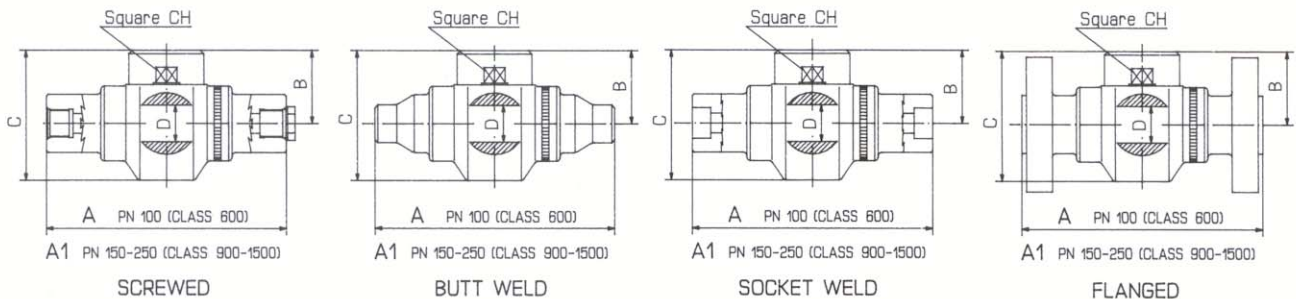


**LIST AND MATERIAL OF COMPONENTS**

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 4201.4021 HARDENED
7	1	THRUST WASHER	REINF.PTFE
8	1	"O" RING STEM	VITON
9	1	BALL	AISI 4201.4021 HARDENED
10	2	INSERT SEATS	VITON VULCANIZED
10A	2	SEATS	AISI 4201.4021 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 CAP GASKET	VITON
31	8+8	SPRINGS	INCONEL X 750
34	2+2	"O" RING SEAT	VITON
35	1	"O" RING END CAP	VITON
37	1	DRAIN TAP	S.S.304
37A	1	DRAIN TAP GASKET	SWEET IRON

**Valve range:**  
produced in the 3 typical sizes 1/2" - 1" - 2"  
different combinations of end connections to suit any requirement

**Class ratings:**  
all sizes are available in **ASME class 600 Lbs (ISO PN 100)** and **ASME class 1500 Lbs (ISO PN250)**



SIZE		DIMENSION						WEIGHT KG			
INCH	DN	A	A1	B	C	D	CH	SREWED-BUTT WELD-SOCKET WELD		FLANGED	
								PN100 (600)	PN150-200 (900-1500)	PN 100 (600)	PN150-250 (900-1500)
1/2"	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