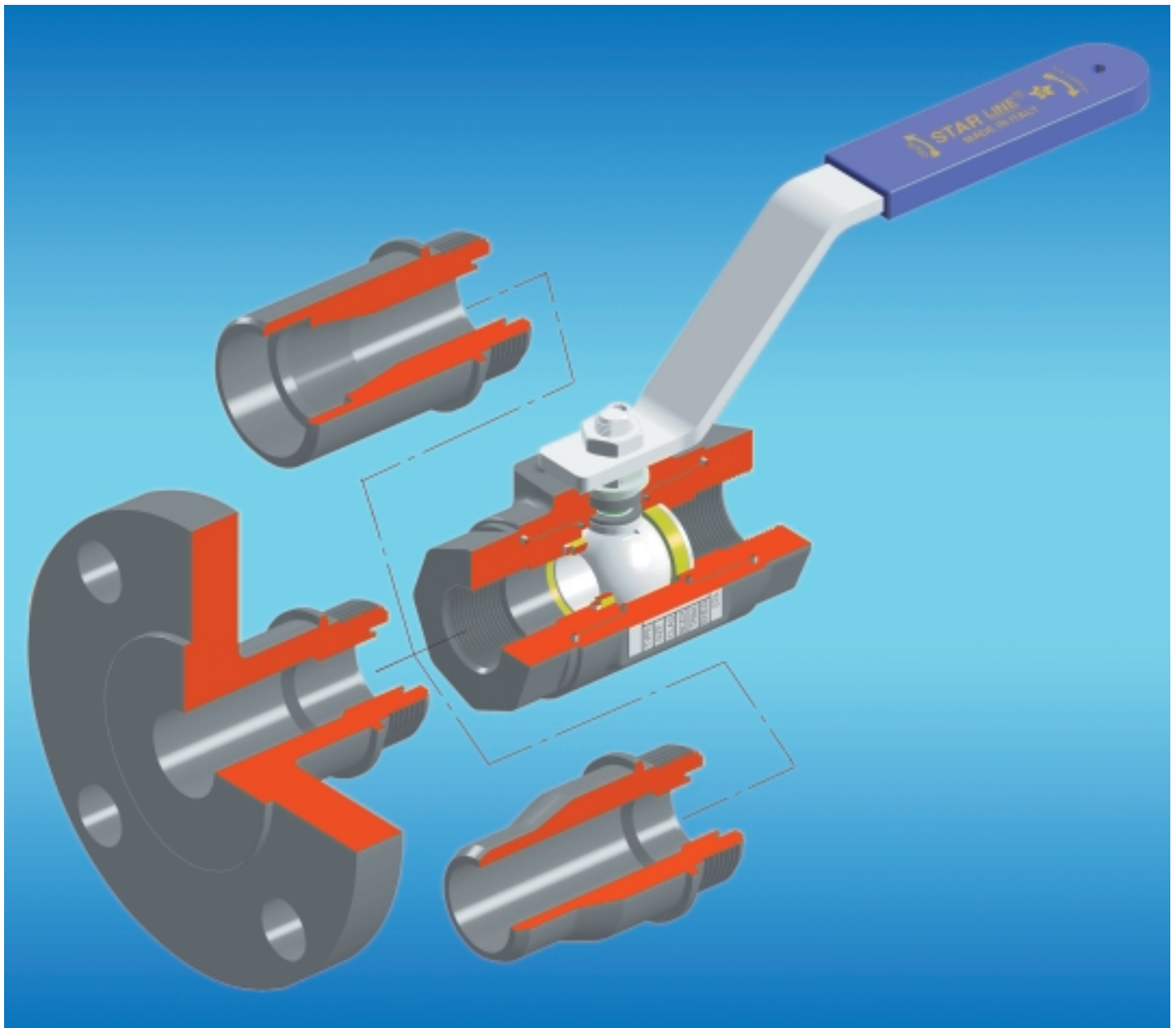
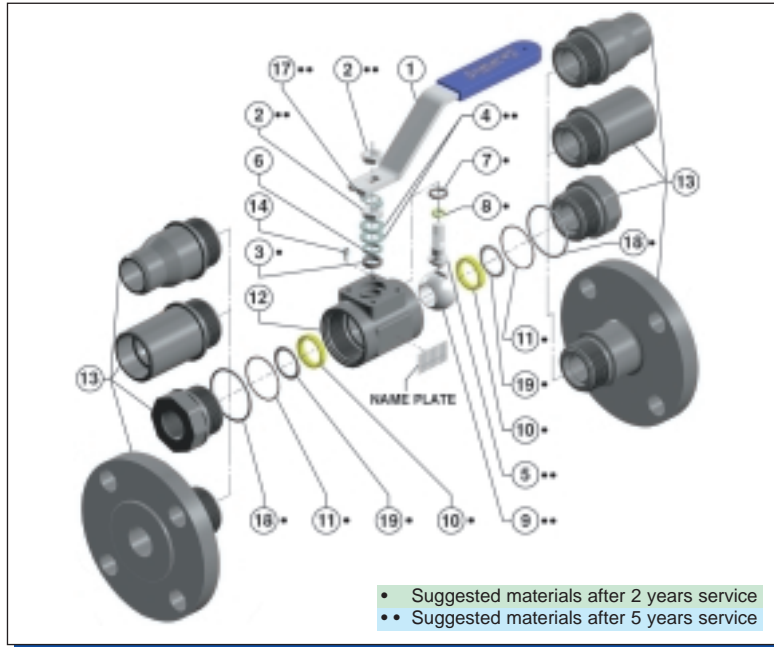


# T1 THREADED STAR

## FORGED STEEL BALL VALVES

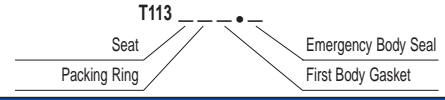




STARLINE Figure No.	Full Bore	T 113	T 115	T 116
	Reduced Bore	T 213	T 215	T 216
PART NO	PART NAME	MATERIALS		MATERIALS
		A105 / 316	LF2 / 316	316 / 316
NP	NAME PLATE	Stainless Steel	Stainless Steel	Stainless Steel
1	HANDLE	C.S. Zinc Plated+Plastic	C.S. Zinc Plated+Plastic	C.S. Zinc Plated+Plastic
•• 2	HANDLE NUT	C.S. Zinc Plated	Stainless Steel	Stainless Steel
• 3	PACKING RING	Graphite - T - S	Graphite - T - S	Graphite - T - S
•• 4	SPRING WASHER	Special S.S. For Springs	Special S.S. For Springs	Special S.S. For Springs
•• 5	STEM	S.S. 316	S.S. 316	S.S. 316
6	GLAND PACKING	S.S. 316	S.S. 316	S.S. 316
• 7	THRUST WASHER	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
• 8	O' RING STEM	Viton	Viton	Viton
•• 9	BALL	S.S. 316	S.S. 316	S.S. 316
• 10	SEATS	T - S - N - D - P	T - S - N - D - P	T - S - N - D - P
• 11	FIRST BODY GASKET	Viton	Viton	Viton
12	BODY	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
13	END CONNECTION	ASTM A105N	ASTM A305 LF2	ASTM A182 F316
14	STOP PIN	C.S. Zinc Plated	Stainless Steel	Stainless Steel
•• 17	STOP WASHER	Stainless Steel	Stainless Steel	Stainless Steel
• 18	EMERGENCY BODY SEAL	Graphite	Graphite	Graphite
• 19	RING SEAL	PTFE - Graphite	PTFE - Graphite	PTFE - Graphite

Ring Seal (19) are not used when seat material are in T - S

Complete figure No.:



**DESCRIPTION**

**DESIGN** : THREE PIECES SCREWED CONSTRUCTION (SEAL WELDED ON REQUEST)  
 SOLID BALL - ANTI BLOW OUT PROOF STEM DESIGN - ENCAPSULATED SOFT SEATS - ANTISTATIC DEVICE - ISO 5211 ON THE TOP FOR EASY AUTOMATION FIRE TEST APPROVED.

**SIZE** : DN 8 ÷ 80 FULL BORE -- DN 15 ÷ 100 REDUCED BORE  
 1/4" ÷ 3" FULL BORE -- 1/2" ÷ 4" REDUCED BORE

**CLASS** : ASME 150 ÷ 1500 LBS or 870 ÷ 5000 WOG/CWP or PN 16 ÷ 250

**MATERIAL** : ASTM A105 - LF2 - 316 - 316L

**CONSTRUCTION** : ASME B16.34 - BS5351 - API6D

**MARKING** : MSS SP25

**TEST CERTIFICATE** : UNI EN 10204 TYPE 3.1B UNLESS OTHERWISE REQUIRED

**FIRE TEST APPROVED** : BS6755 PART 2, - API607 - API6FA

**SERVICES** : FOR PETROLEUM, CHEMICALS, PETROLCHEMICALS, GAS APPLICATION AND ALLIED INDUSTRIES

**MAXIMUM WORKING PRESSURE (WOG/CWP)**

VALVE SIZE	FULL BORE		1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	
	REDUCED BORE		1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"		
SEAT MATERIAL	DEVLON (N) - NYLON DELIN (D) - PEEK (P)		<b>Psi</b>	5000	5000	4600	4000	4000	3600	3000	2400	2000	1440
			<b>Bar</b>	350	350	320	280	280	250	210	168	140	100
	Virgin PTFE (T)		<b>Psi</b>	2460	2460	2320	2160	1950	1740	1590	1440	1160	870
			<b>Bar</b>	170	170	160	150	135	120	110	100	80	60
	Reinforced PTFE (S)		<b>Psi</b>	2590	2590	2460	2320	2160	2030	1880	1740	1440	1160
			<b>Bar</b>	180	180	170	160	150	140	130	120	100	80

**ASME / ANSI CLASS RATING**

VALVE SIZE	FULL BORE		1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"
	REDUCED BORE		1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"	
SEAT MATERIAL	DEVLON (N) - NYLON DELIN (D) - PEEK (P)		CLASS	150 to 1500				150 to 900		150 to 600		
	Virgin PTFE (T)		CLASS	150 to 900			150 to 600		150 to 300			
Reinforced PTFE (S)		CLASS	150 to 900			150 to 600		150 to 300				

**FLOW DATA** The following flow rates were determined for ball valves in fully open position and a water temperature of 60°F (15°C).

Kv value is the full capacity flow rate through the ball valve in cubic metres per hour (m³/h) with a pressure drop of 1 bar.

Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60°F with a pressure drop of 1 psi.

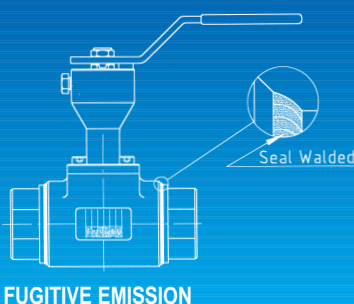
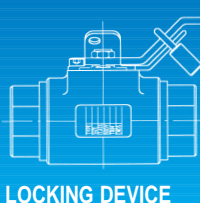
**REDUCED BORE**

VALVE SIZE	-	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"
Cv	-	8	13	32	48	82	120	275	460	700
KV	-	6,8	11	27,5	41	70	103	236	394	600

**FULL BORE**

VALVE SIZE	1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"
Cv	8	10	15	20	25	32	40	50	65	80
KV	6,8	8,8	12	30	45	78	115	265	445	680

**DIFFERENT CONFIGURATION**

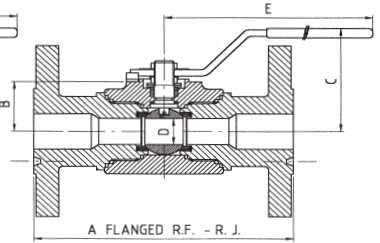
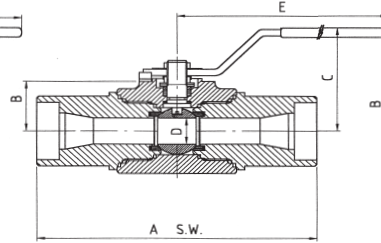
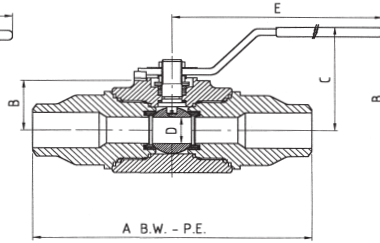
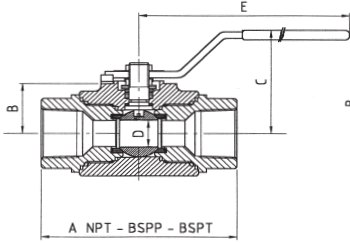


BSP Parallel: BS21Rp - ISO 228/1 - ISO 7/1Rp  
 BSP Taper: BS21Rc - ISO 7/1Rc - DIN 2999/1  
 NPT: ANSI B1 20.1

B.W. - P.E.: ANSI B16.25 Sch. 40 - XS - 80 - 160  
 Note: other overall lengths are available on request.  
 Instruction for welding the valve on the line:  
 With the valve in open position tack-weld in four points on both ends and then complete the welding without desmantling the valve.

S.W.: ANSI B16.11  
 Instruction for welding the valve on the line:  
 With the valve in open position tack-weld in four points on both ends and then complete the welding without desmantling the valve.

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



VALVE SIZE		DIMENSIONS mm / Inch										ISO 5211	WEIGHT KG/LBS											
		A											B	C	D	E	NPT BSPP BSPT	B.W. P.E. S.W.	FLANGED					
		150		300		600		900		1500									150	300	600	900	1500	
mm	8	85	127	-	-	-	-	-	-	-	-	24	67.5	11.1	152	F03	1	1.4	-	-	-	-	-	
Inch	1/4"	3.34	5	-	-	-	-	-	-	-	-	0.95	2.65	0.44	6	F03	2.2	3.1	-	-	-	-	-	
mm	10	85	127	-	-	-	-	-	-	-	-	24	67.5	11.1	152	F03	1	1.4	-	-	-	-	-	
Inch	3/8"	3.34	5	-	-	-	-	-	-	-	-	0.95	2.65	0.44	6	F03	2.2	3.1	-	-	-	-	-	
mm	15	98.5	140	108	139.7	151	165	163.5	216	216	216	216	27	70	14.2	152	F03	1.2	1.6	2.8	3.3	4	5.6	5.6
Inch	1/2"	3.87	5.51	4.25	5.5	5.94	6.5	6.44	8.5	8.5	8.5	8.5	1.06	2.75	0.56	6	F03	2.6	3.5	6.2	7.3	8.8	12.3	12.3
mm	20	108	152.5	-	152.5	165	190.5	190.5	229	229	229	229	33.5	80	21	193	F04	2	2.4	-	4.9	5.6	8.4	8.4
Inch	3/4"	4.25	6	-	6	6.5	7.5	7.5	9	9	9	9	1.3	3.15	0.83	7.5	F04	4.4	5.3	-	10.8	12.3	18.5	18.5
mm	25	118	165	127	165	178	216	216	254	254	254	254	38	92	25.4	193	F04	2.7	3.8	4.9	6.5	7.3	10.9	10.9
Inch	1"	4.64	6.5	5	6.5	7	8.5	8.5	10	10	10	10	1.5	3.65	1	7.5	F04	5.9	8.4	10.8	14.3	16	24	24
mm	32	137	178	-	178	190.5	228.5	228.5	279.5	279.5	-	-	43.5	100	31.7	225	F05	3.8	4.9	-	9.5	10.3	13	-
Inch	1 1/4"	5.39	7	-	7	7.5	9	9	11	11	-	-	1.7	3.95	1.25	9	F05	8.4	10.8	-	20.9	22.7	28.6	-
mm	40	150	190.5	165	190.5	203	241	241	305	305	-	-	47.5	113	38	225	F05	5.3	6.7	8.9	12.5	14.5	19	-
Inch	1 1/2"	5.9	7.5	6.5	7.5	8	9.5	9.5	12	12	-	-	1.9	4.45	1.5	9	F05	11.7	14.7	19.6	27.5	31.9	41.8	-
mm	50	158.8	216	178	216	231.5	292	295	368.5	371.5	-	-	58.5	118	49	225	F05	8.5	11.5	13.9	17.5	19.5	31	-
Inch	2"	6.25	8.5	7	8.5	9.12	11.5	11.5	14.5	14.62	-	-	2.3	4.65	1.93	9	F05	18.7	25.3	30.6	38.5	42.9	68.2	-
mm	65	184	241	-	241	257	330	333	-	-	-	-	70	135	63.5	360	F07	14	18.3	-	25.5	28.5	-	-
Inch	2 1/2"	7.24	9.5	-	9.5	10.12	13	13.12	-	-	-	-	2.75	5.35	2.5	14	F07	30.8	40.3	-	56.1	62.7	-	-
mm	80	222	282.5	-	282.5	298.2	355.6	358.6	-	-	-	-	88	150	76	500	F07	23	29.3	-	43.5	49.5	-	-
Inch	3"	8.74	11.12	-	11.12	11.74	14	14.12	-	-	-	-	3.5	4.85	3	20	F07	50.6	64.5	-	95.7	108.9	-	-

VALVE SIZE		DIMENSIONS mm / Inch										ISO 5211	WEIGHT KG/LBS											
		A											B	C	D	E	NPT BSPP BSPT	B.W. P.E. S.W.	FLANGED					
		150		300		600		900		1500									150	300	600	900	1500	
mm	15	85	127	108	139.7	151	165	163.5	216	216	216	216	24	67.5	11.1	152	F03	0.9	1.3	2.6	3.1	3.8	5.4	5.4
Inch	1/2"	3.34	5	4.25	5.5	5.94	6.5	6.44	8.5	8.5	8.5	8.5	0.95	2.65	0.44	6	F03	2	2.86	5.7	6.8	8.4	12.1	12.1
mm	20	98.5	140	117.5	152.5	165	190.5	190.5	229	229	229	229	27	70	14.2	152	F03	1.1	1.5	3.1	4	4.8	7.6	7.6
Inch	3/4"	3.87	5.51	4.62	6	6.5	7.5	7.5	9	9	9	9	1.06	2.75	0.56	6	F03	2.4	3.3	6.8	8.8	10.6	16.7	16.7
mm	25	108	152.5	127	165	178	216	216	254	254	254	254	33.5	80	21	193	F04	1.9	2.3	4.2	5.8	6.6	10.2	10.2
Inch	1"	4.25	6	5	6.5	7	8.5	8.5	10	10	10	10	1.3	3.15	0.83	7.5	F04	4.2	5.1	9.2	12.8	14.5	22.4	22.4
mm	32	118	165	139.7	178	190.5	228.5	228.5	279.5	279.5	279.5	279.5	38	92	25.4	193	F04	2.6	3.6	5.4	8.4	9.2	11	11
Inch	1 1/4"	4.64	6.5	5.5	7	7.5	9	9	11	11	11	11	1.5	3.65	1	7.5	F04	5.7	7.9	11.9	18.5	20.2	24.2	24.2
mm	40	137	178	165	190.5	203	241	241	305	305	-	-	43.5	100	31.7	225	F05	3.7	4.7	7.4	11	13	17.5	-
Inch	1 1/2"	5.39	7	6.5	7.5	8	9.5	9.5	12	12	-	-	1.7	3.95	1.25	9	F05	8.1	10.3	16.3	24.2	28.6	38.5	-
mm	50	150	190.5	178	216	231.5	292	295	368.5	371.5	-	-	47.5	113	38	225	F05	5	6.2	10.7	14.3	16.3	27.8	-
Inch	2"	5.9	7.5	7	8.5	9.12	11.5	11.5	14.5	14.62	-	-	1.9	4.45	1.5	9	F05	11	13.6	23.5	31.5	35.9	61.2	-
mm	65	158.8	216	190.5	241	257	330	333	419	422	-	-	58.5	118	49	225	F05	7.5	10	14.7	20	23	40	-
Inch	2 1/2"	6.25	8.5	7.5	9.5	10.12	13	13.12	16.5	16.62	-	-	2.3	4.65	1.93	9	F05	16.5	22	32.3	44	50.6	88	-
mm	80	184	241	203	282.5	298.2	355.6	358.6	-	-	-	-	70	135	63.5	360	F07	12.7	17	21.6	34	41	-	-
Inch	3"	7.24	9.5	8	11.12	11.74	14	14.12	-	-	-	-	2.75	5.35	2.5	14	F07	27.9	37.4	47.5	74.8	90.2	-	-
mm	100	222	282.5	228.5	305	320.5	432	435	-	-	-	-	88	150	76	500	F07	21.5	27.5	35	44	60	-	-
Inch	4"	8.74	11.12	9	12	12.62	17	17.12	-	-	-	-	3.5	4.85	3	20	F07	47.3	60.5	77	96.8	132	-	-

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