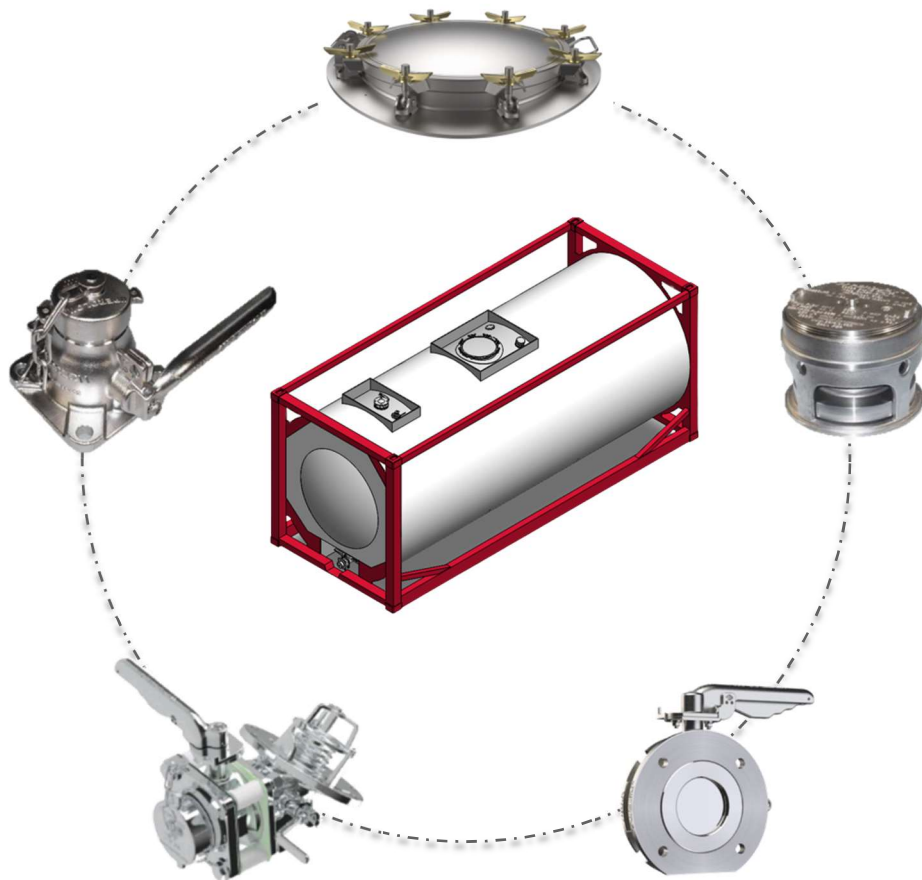




ISO Tank Container Spare Parts Catalog



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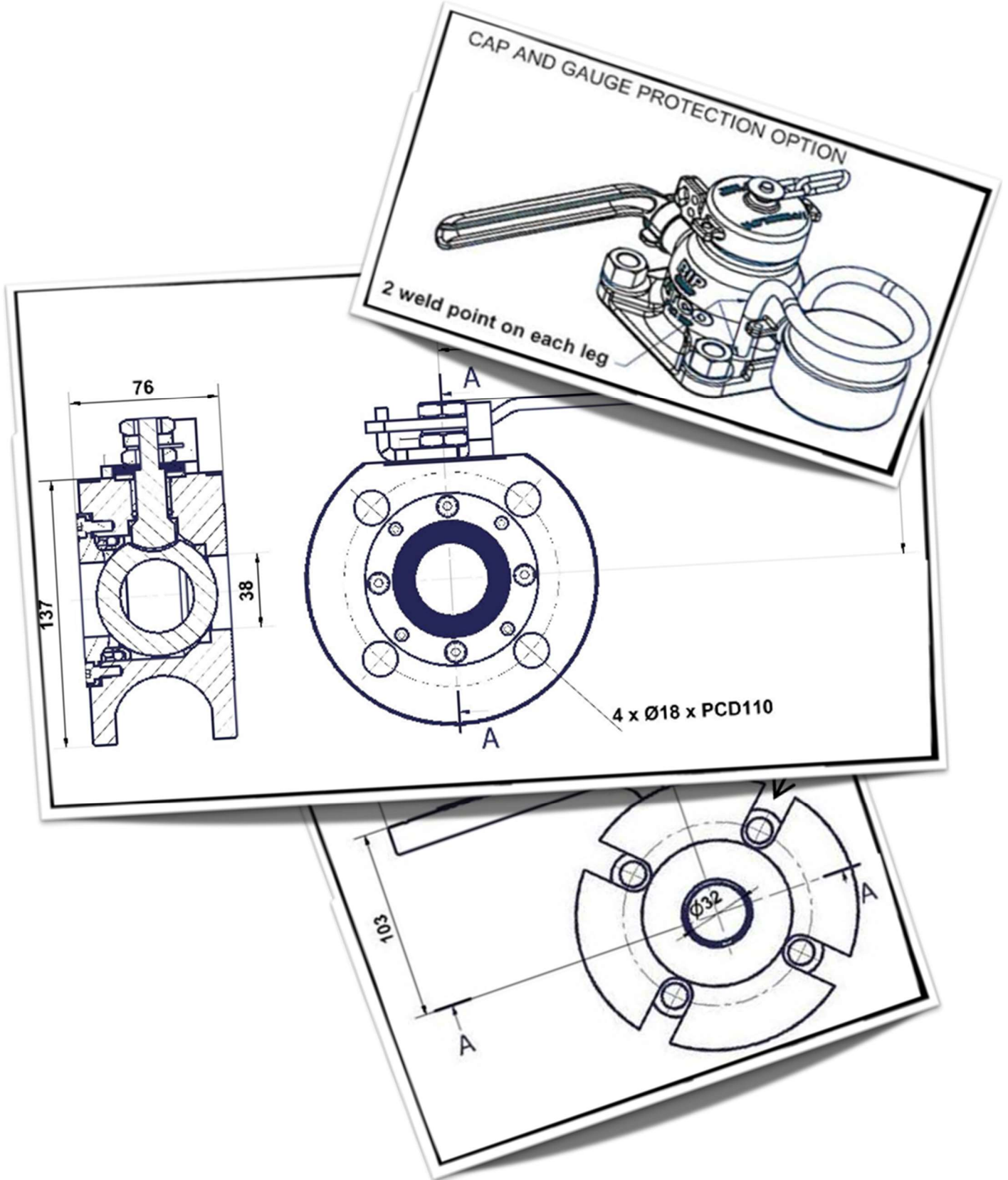
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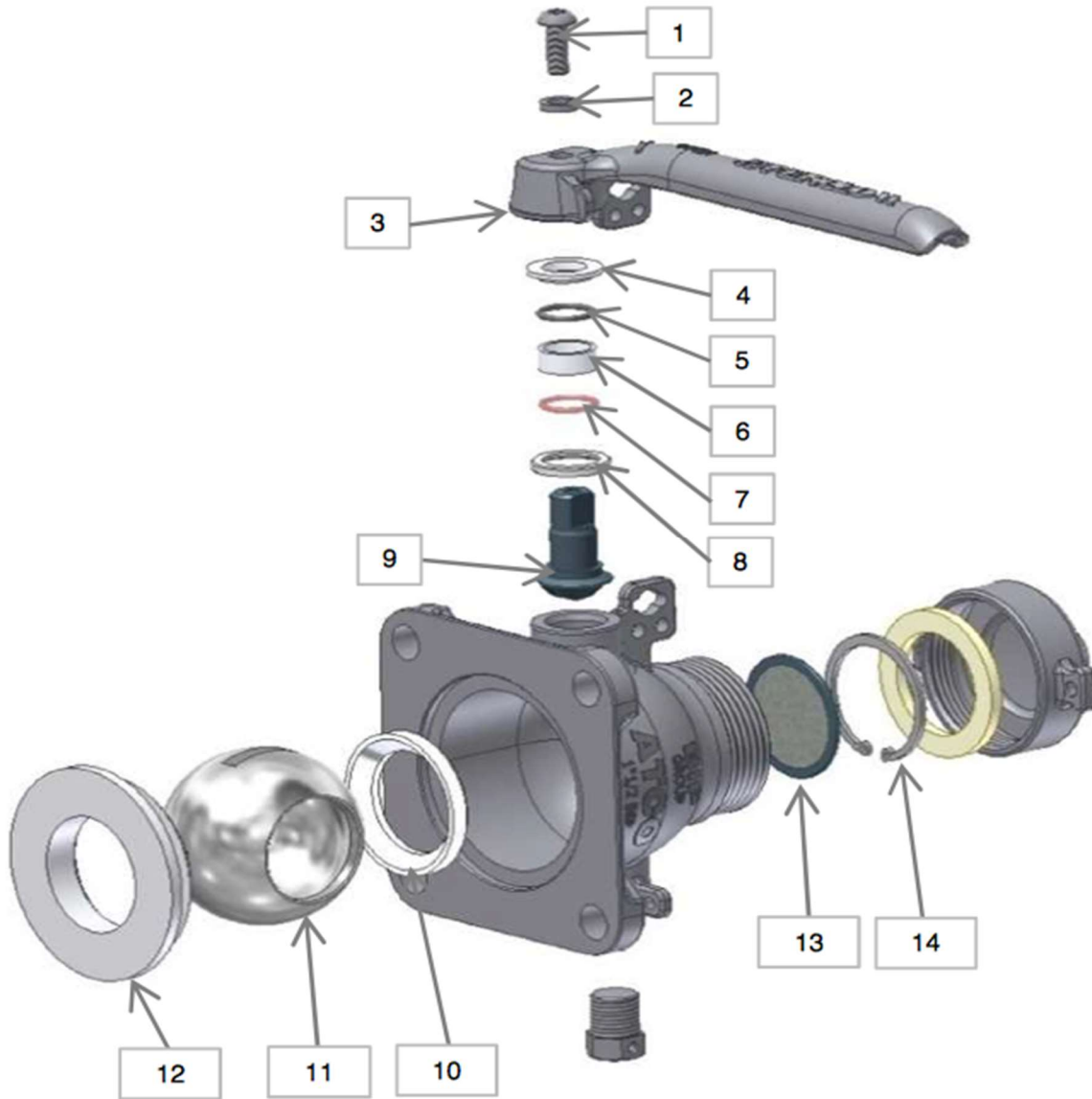
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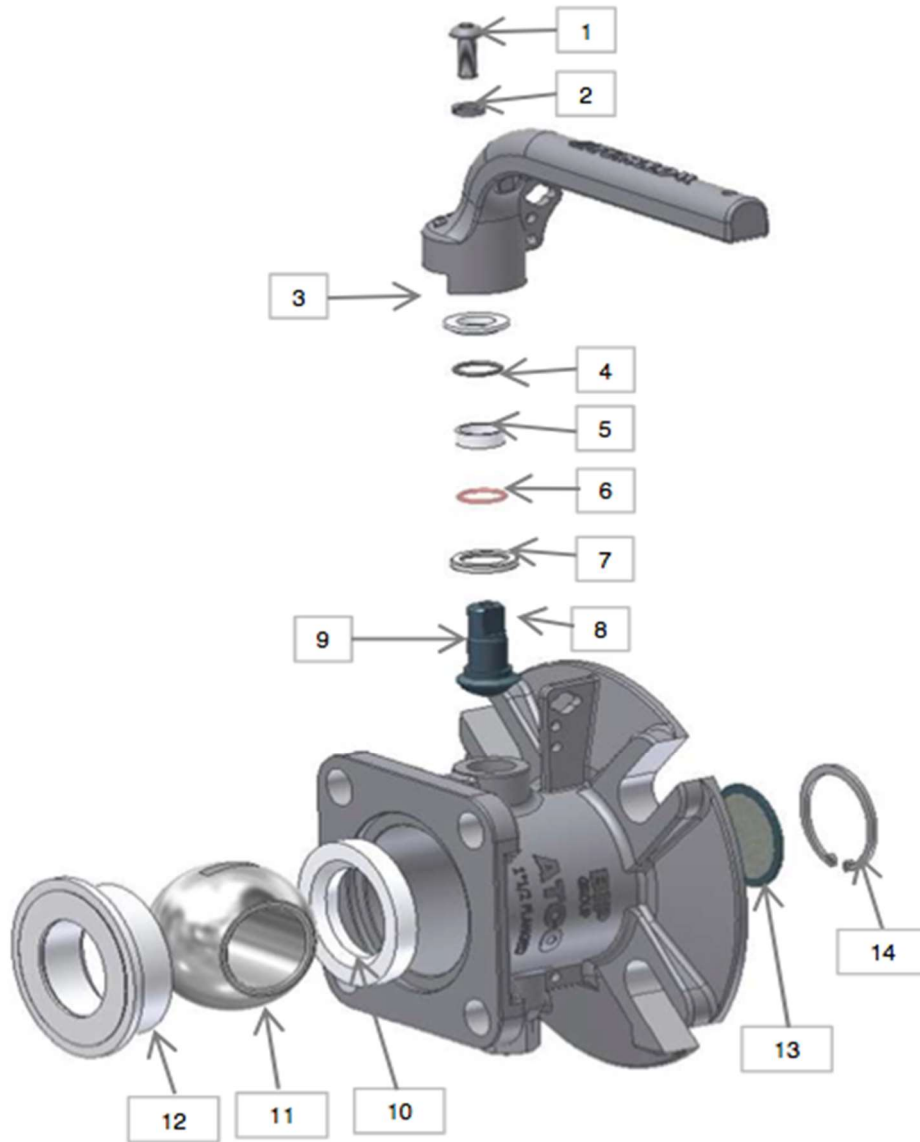
1.5" ATCO™ Airline BSP Threaded Ball Valve



Description	TSI Part No.	MFG. Part No.
1.5" BSP ATCO™ AIR INLET BALL VALVE	BVTF150-BA3X-SS-01	AD3X7T21CS21
1.5" BSP ATCO™ AIR INLET BALL VALVE w/ GAUGE GUARD	BVTF150-BA3G-SS-01	AD3X7T21CS22

Item	Description	TSI Part No.	MFG. Part No.
	Ball seals kit:	BVTF150-SK1B-01	11 14 01 93 00
10	Ball seal (PFTE)		
12	Main seal (PTFE)		
	High temp° ball seals kit:		On Request
	(working temp°: -40° to +250°C)		
10	Ball seal (PFTE/Graphite)		
12	Main seal (PTFE/Graphite)		
	Ball:	BVXX150-SP3A-01	11 14 01 94 00
11	Ball (316)		
	Handle kit:	BVTF150-SK3B-01	11 14 01 91 00
1	Screw M6x16 (304)		
2	Washer W6 (304L)		
3	Handle (304L)		
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
9	Spindle	BVXX150-SP4B-01	11 14 02 00 02
	Spindle seals kit:	BVXX150-SK2B-01	11 14 01 92 00
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
	Filter kit:	BVXX150-SK4B-01	11 14 01 95 00
13	Filter (316L)		
14	Elastic ring (304L)		

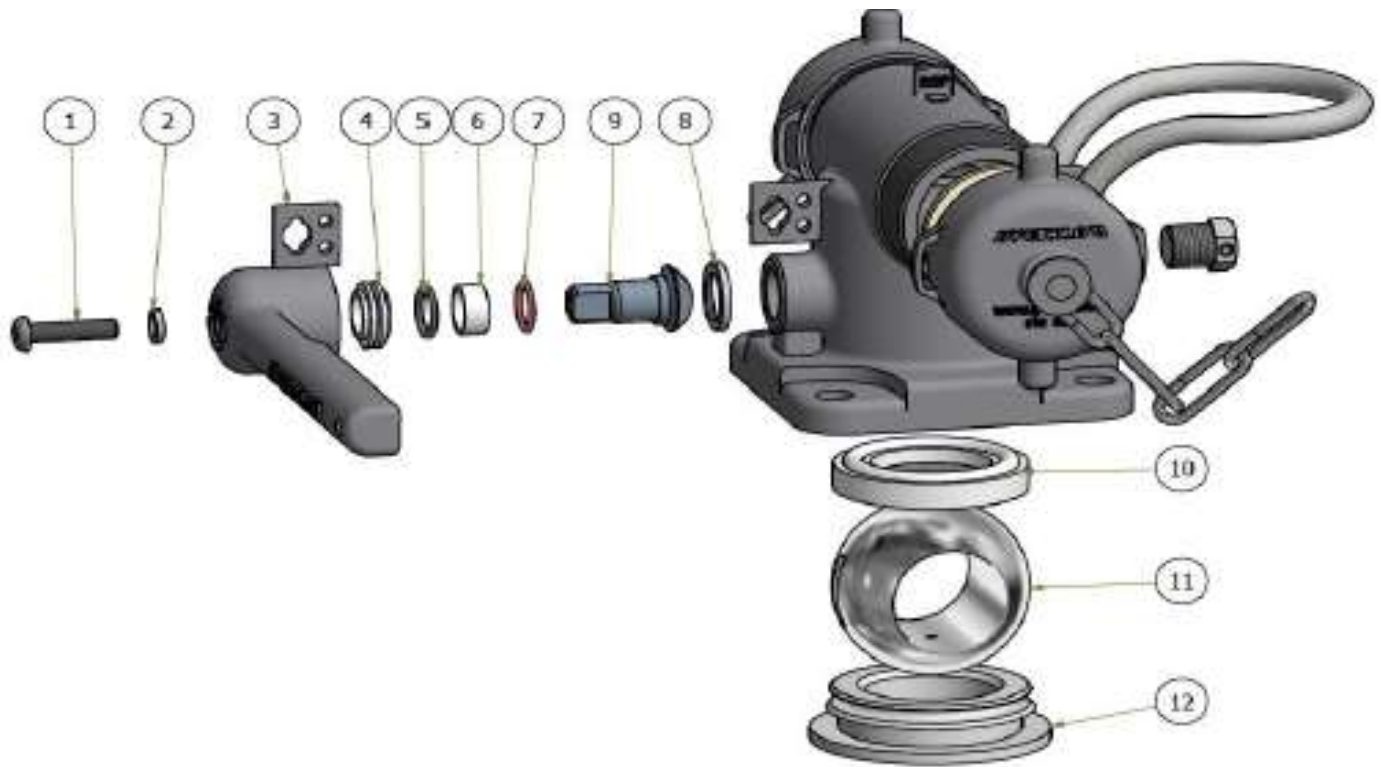
1.5" ATCO™ Airline Flanged Ball Valve



Description	TSI Part No.	MFG. Part No.
1.5" BSP ATCO™ AIR INLET FLANGED BALL VALVE	BVFF150-A3X-SS-01	AF3X7T25S21
1.5" BSP ATCO™ AIR INLET FLANGED BALL VALVE w/ GAUGE GUARD	BVFF150-A3G-SS-01	AF3X7T25S22

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFF150-SK1B-01	11 91 09 00 00
10	Ball seal (PFTE)		
12	Main seal (PTFE)		
High temp° ball seals kit:			On Request
10	Ball seal (PFTE/Graphite)		
12	Main seal (PTFE/Graphite)		
Ball:		BVXX150-SP3A-01	11 14 01 94 00
11	Ball (316)		
Handle kit:		BVFF150-SK3B-01	11 14 02 91 00
1	Screw M6x16 (304)		
2	Washer W6 (304L)		
3	Handle (304L)		
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
9	Spindle	BVXX150-SP4B-01	11 14 02 00 02
Spindle seals kit:		BVXX150-SK2B-01	11 14 01 92 00
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
Filter kit:		BVXX150-SK4B-01	11 14 01 95 00
13	Filter (316L)		
14	Elastic ring (304L)		

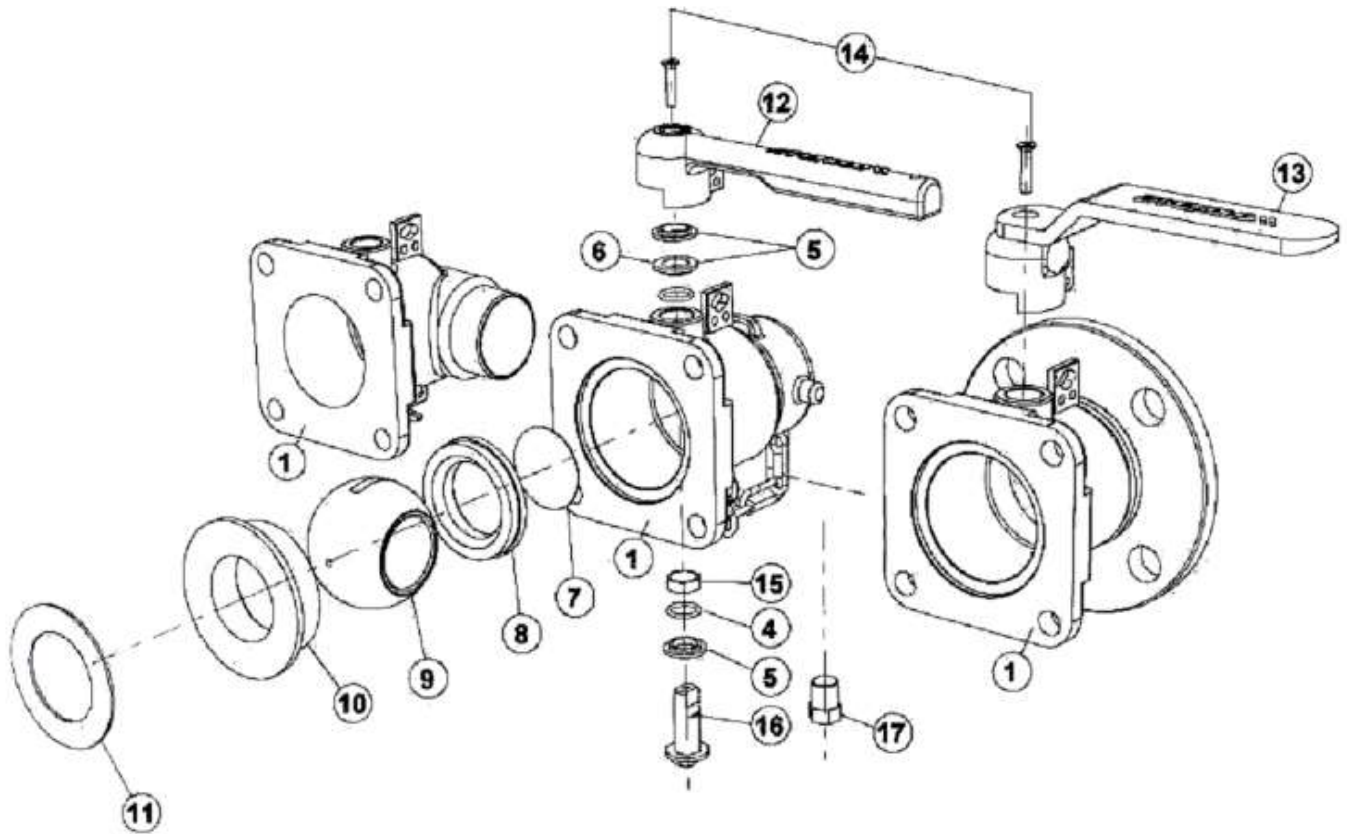
1.5" ATCO™ Airline BSP/NPT Threaded Ball Valve



Description	TSI Part No.	MFG. Part No.
1.5" BSP/NPT ATCO™ AIR INLET BALL VALVE	BVDL150-A3X-SS-01	AT4X6T23CS11

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVTF150-SK1B-01	11 14 01 93 00
10	Ball seal (PFTE)		
12	Main seal (PTFE)		
High temp° ball seals kit:		On Request	11 14 01 96 00
10	Ball seal (PFTE/Graphite)		
12	Main seal (PTFE/Graphite)		
Ball:		BVXX150-SP3A-01	11 14 01 94 00
11	Ball (316)		
Handle kit:		BVDL150-SK3B-01	12 96 06 92 50
1	Screw M6x16 (304)		
2	Washer W6 (304L)		
3	Handle (304L)		
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
9	Spindle	BVXX150-SP4B-01	11 14 02 00 02
Spindle seals kit:		BVXX150-SK2B-01	11 14 01 92 00
4	Bearing (PTFE)		
5	O-ring (Viton)		
6	Spacer (PTFE)		
7	O-ring (FEP/Silicon)		
8	Spindle Seal		
Remote Control Handle kit:		MISC-RMC-HND2	11 14 15 91 00
A	Filter (316L)		

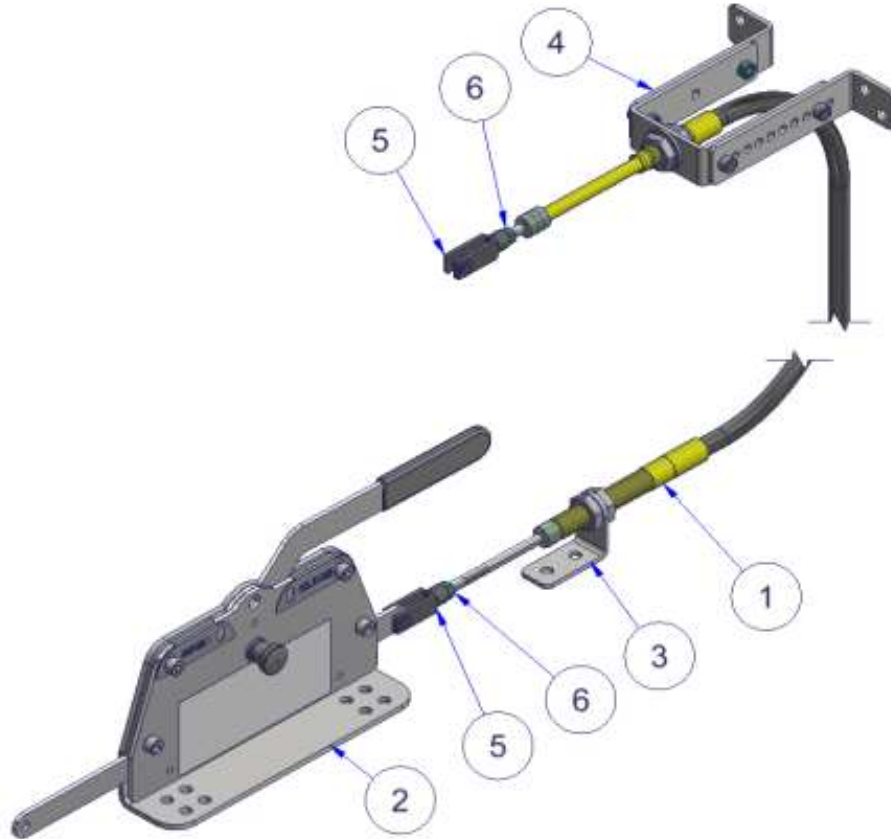
1.5" ATCO™ Airline BSP Ball Valve– Older Version



Item	Description	TSI Part No.	MFG. Part No.
	Ball seals kit:		
8	Ball seal (PFTE) Old Style	BVXX150-SP1A-01	
10	Main seal (PTFE) Old Style	BVXX150-SP2A-01	
	Ball:	BVXX150-SP3A-01	11 14 01 94 00
9	Ball (316)		(Prev.# 12 96 06 00 09)
	Spindle seals kit:	BVXX150-SK2A-01	11 91 06 00 00
4	O-ring (FEP/Silicon)		
5	Bearing (PTFE)		
6	O-ring (Viton)		
15	Spacer (PTFE)		
	BSP /Dual Handle kit Old Style:	BVTF150-SK3A-01	11 91 08 00 00
14	Screw (304)		
12	Handle (304L)		
16	Spindle		
	Flanged Handle kit Old Style:	BVFF150-SK3A-01	11 91 07 00 00
14	Screw (304)		
13	Handle (304L)		
16	Spindle		
	Filter kit:	BVXX150-SK4A-01	12 91 94 00 00
7	Filter		
















Remote Control for Airline Ball Valve

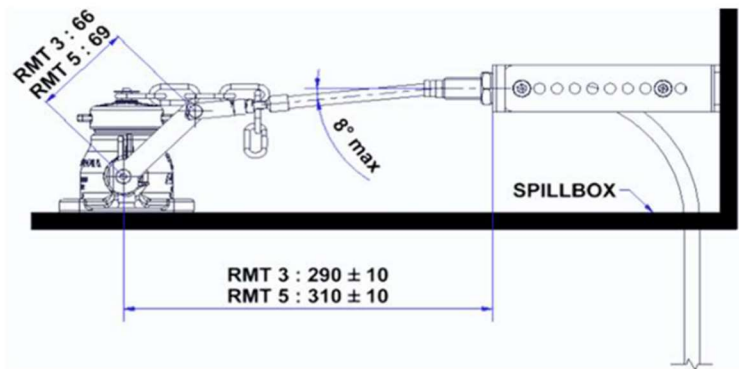
Item	Description	RMT3 Part No.	RMT5 Part No.
	5 Meter Cable W/Left Control Box	MISC-RMC-LAR5	MISC-RMC-L505
	7 Meter Cable W/Left Control Box	MISC-RMC-LAR7	MISC-RMC-L507
1	5 Meter Cable Only	MISC-RMC-CAR5	MISC-RMC-C505
2	Right Control Box	11 14 15 10 00	11 14 69 10 00
	Left Control Box	11 14 15 80 00	11 14 69 50 00
3	Adaptor Bracket	-	-
4	Fix Bracket	-	-
5	Yoke	-	-
	SS KNOB FOR REMOTE CONTROL BOX	MISC-RMC-KNOB	MISC-RMC-KNOB



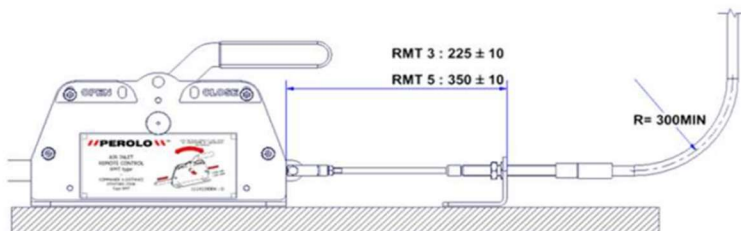
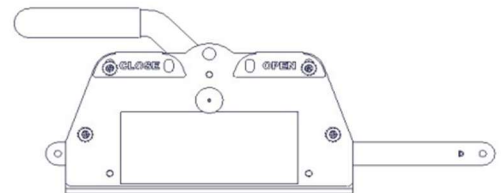
Item	Description	TSI Part No.	MFG. Part No.
7	AD3 Remote Control Ball Handle	MISC-RMC-HNDL	11 14 15 60 00
8	AF3 Remote Control Flanged Handle	MISC-RMC-HND4	11 14 15 94 00
9	AT4 Remote Control Dual Handle	MISC-RMC-HND2	12 96 07 16 00
10	1.5" Fort Vale Remote Handle	MISC-RMC-HND5	11 14 15 70 10
11	ALN5 Remote Control Handle	MISC-RMC-HND3	11 14 70 00 01

Remote Control for Airline Ball Valve

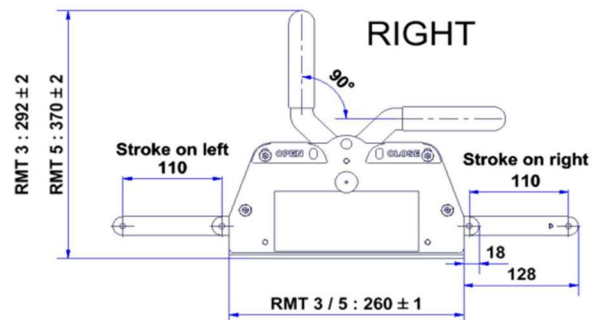
RMT3				
				
AD3 Ball Valve	AF3 Ball Valve	AT4 Ball Valve	AFN4 Ball Valve	ADN4 Ball Valve
RMT5				
				
ADC5 Ball Valve	AD5X7 Ball Valve	AD5X16 Ball Valve	TF5 Butterfly Valve	TT5 Butterfly Valve
				
ATC5 Ball Valve	AFN5 Ball Valve	AHN5 Ball Valve	ALN5 Ball Valve	AKN5 Ball Valve



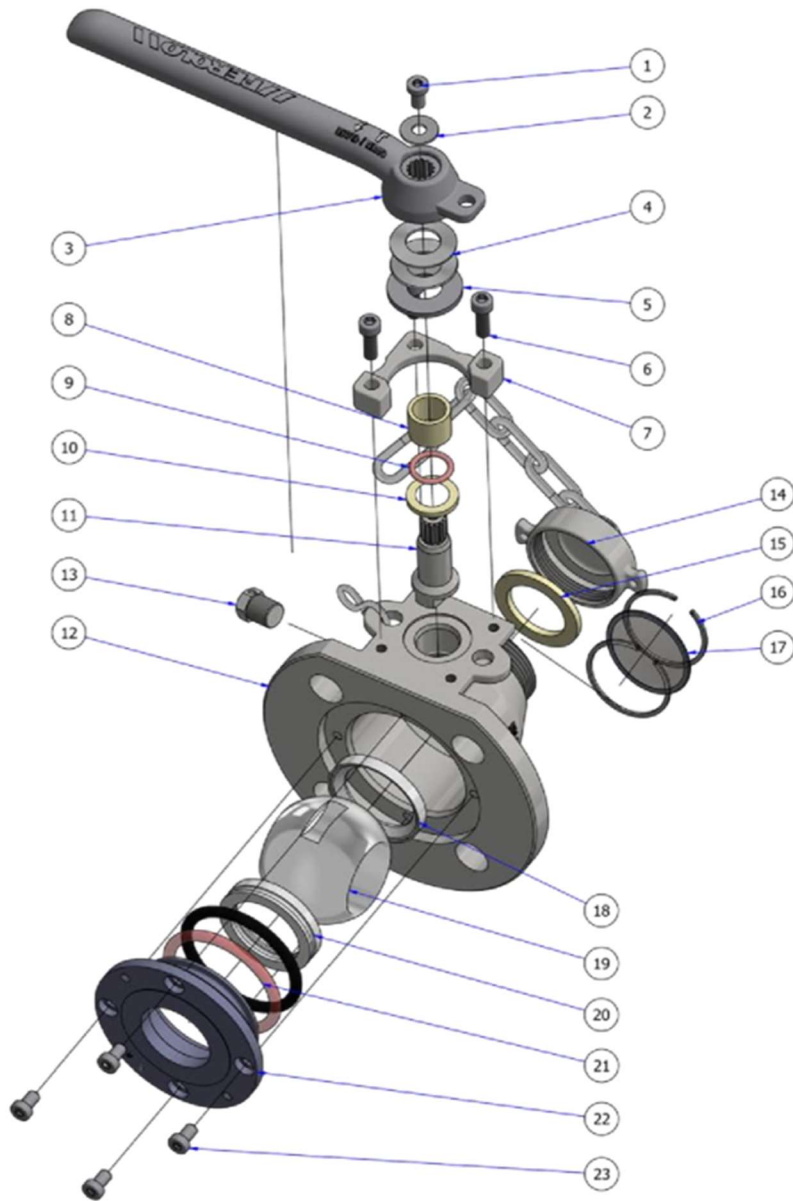
LEFT



RIGHT



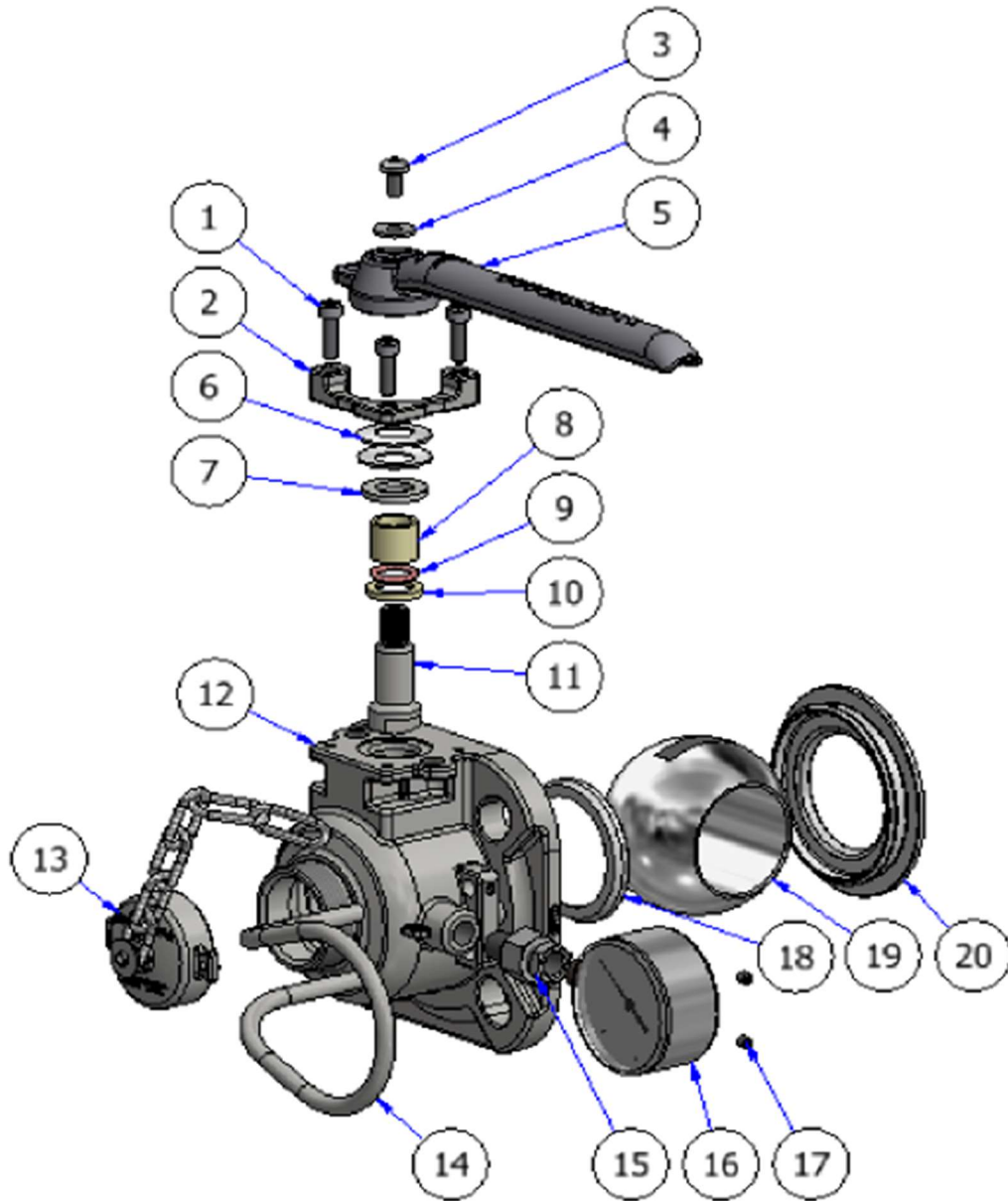
1.5" (ND40) ATCO™ – BSP Threaded Ball Valve – ADN4X



Description	TSI Part No.	MFG. Part No.
DN40 – 1.5" ATCO™ BALL VALVE	On Request	ADN4X16T1BCS0000

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		On Request	11 24 01 93 00
18	Upper Gasket (PTFE)		11 12 82 00 03
20	Lower Gasket (PTFE)		11 24 01 30 00
21	O'ring (FEP+Silicon)		
-	O'ring (Viton/FPM)		
Ball kit:		On Request	11 24 01 94 00
19	Ball (316)		11 12 82 00 05
Handle kit:		On Request	
3	Kit Right handle (11 14 99 10 01L)		11 14 99 95 00
	Kit Left handle (11 14 99 10 01)		11 14 99 92 00
	Kit Remote Lever (11 24 06 00 01)		11 24 06 92 00
1	Screw M6x12		70 13 10 37 31
2	Washer W6		70 13 25 37 20
5	Washer W16		70 13 25 37 15
4	Spring washer		70 13 26 37 22
Spindle seals kit:		On Request	11 24 01 92 00
8	Spacer (PTFE)		11 12 39 00 14
9	O'ring (FEP+Silicon)		70 10 15 00 12
10	Spindle Gasket (PTFE)		11 12 39 00 21
Filter kit:		On Request	11 24 01 95 00
17	Filter		11 14 01 20 00
16	Circlip		70 13 14 37 08
1.5" BSP Cap kit:		DC150-B-SS	11 14 01 30 00
15	Cap Seal		12 85 97 00 10
14	BSP Cap & Chain		
1.5" NPT Cap kit:		DC150-N-SS	On Request
15	Cap Seal		12 85 97 00 10
14	NPT Cap & Chain		

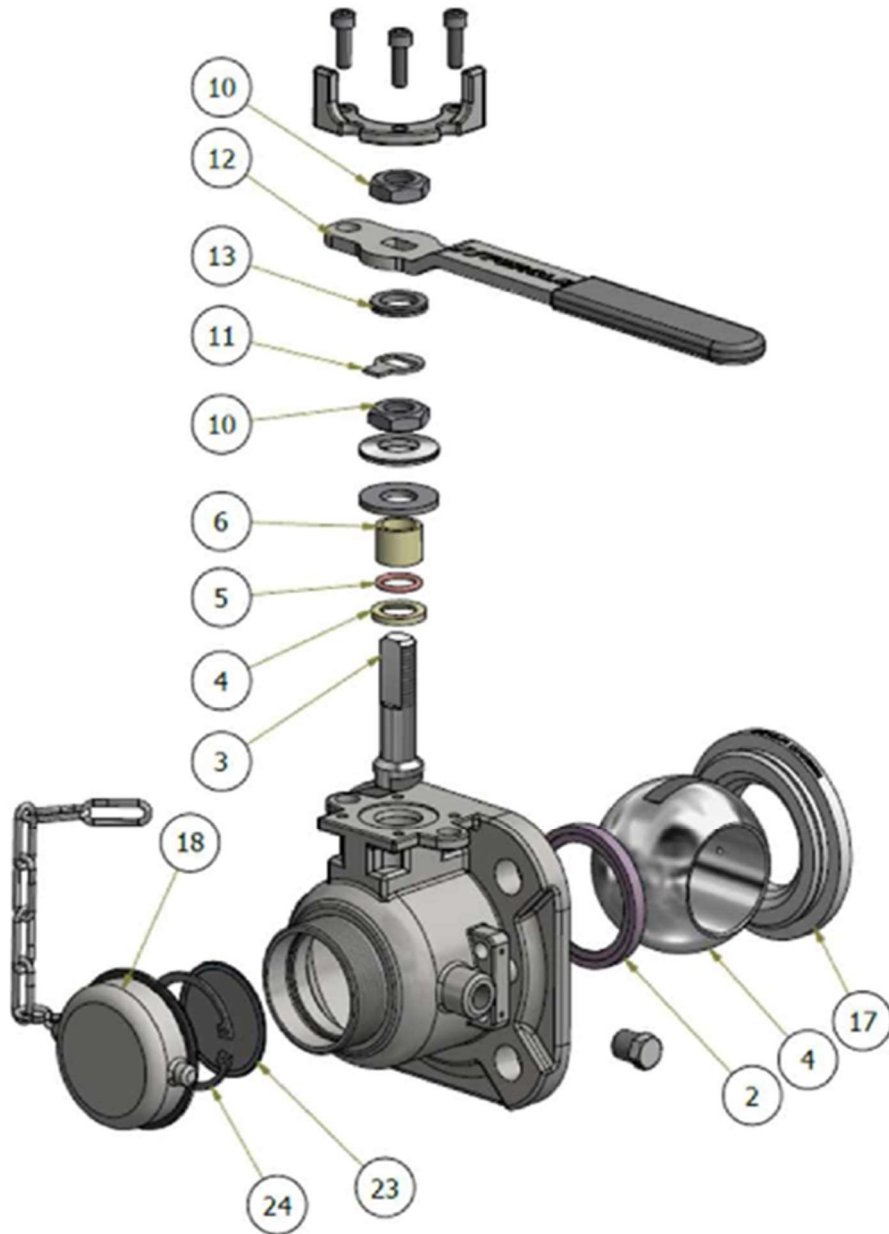
2" – 1.5" ND50 ATCO™ – Compact Airline Ball Valve – ADC5



Description	TSI Part No.	MFG. Part No.
2" – 1.5" ATCO™ BALL VALVE	BVTF150-BD5X-SS-01	ADC5X7T1BCS1100

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVTF150-BD5X-SK1-01	11 14 99 90 00
18	Upper ball seal (PTFE)		11 12 39 00 09
20	Lower gasket (PTFE)		11 14 99 10 04
Ball kit:		On Request	11 12 42 00 11
19	Ball (316)		
Handle kit:		On Request	11 14 99 92 00
3	Screw M6x12		-
4	Washer W6		-
5	Handle		11 14 99 10 01
6	Elastic washer Ø16		-
7	Washer Ø16 wide series		-
Stop handle kit:		On Request	11 14 99 30 00
2	Stop handle		11 14 99 1A 02
1	Screw M6x20		-
Spindle seals kit:		BVTF150-BD5X-SK2-01	11 14 99 93 00
8	Spacer (PTFE)		11 12 39 00 14
9	O'ring (FEP+Silicon)		70 10 15 00 12
10	Spindle Gasket (PTFE)		11 12 39 00 21
Spindle kit:		On Request	11 14 99 94 00
11	Spindle (Duplex)		11 14 99 10 05
6	Elastic washer Ø16		
7	Washer Ø16 wide series		
Filter kit:		On Request	11 14 99 95 00
17	Filter		11 12 03 20 00
16	Lock Ring (St st)		-
1.5" BSP Cap kit:		DC150-B-SS	
13	1,5" std BSP Cap + Seal + Chain		11 14 01 31 00
	Cap Seal		11 12 03 40 02
Pressure protection:		DC150-B-SS	
14	Gauge protection		11 14 99 00 01

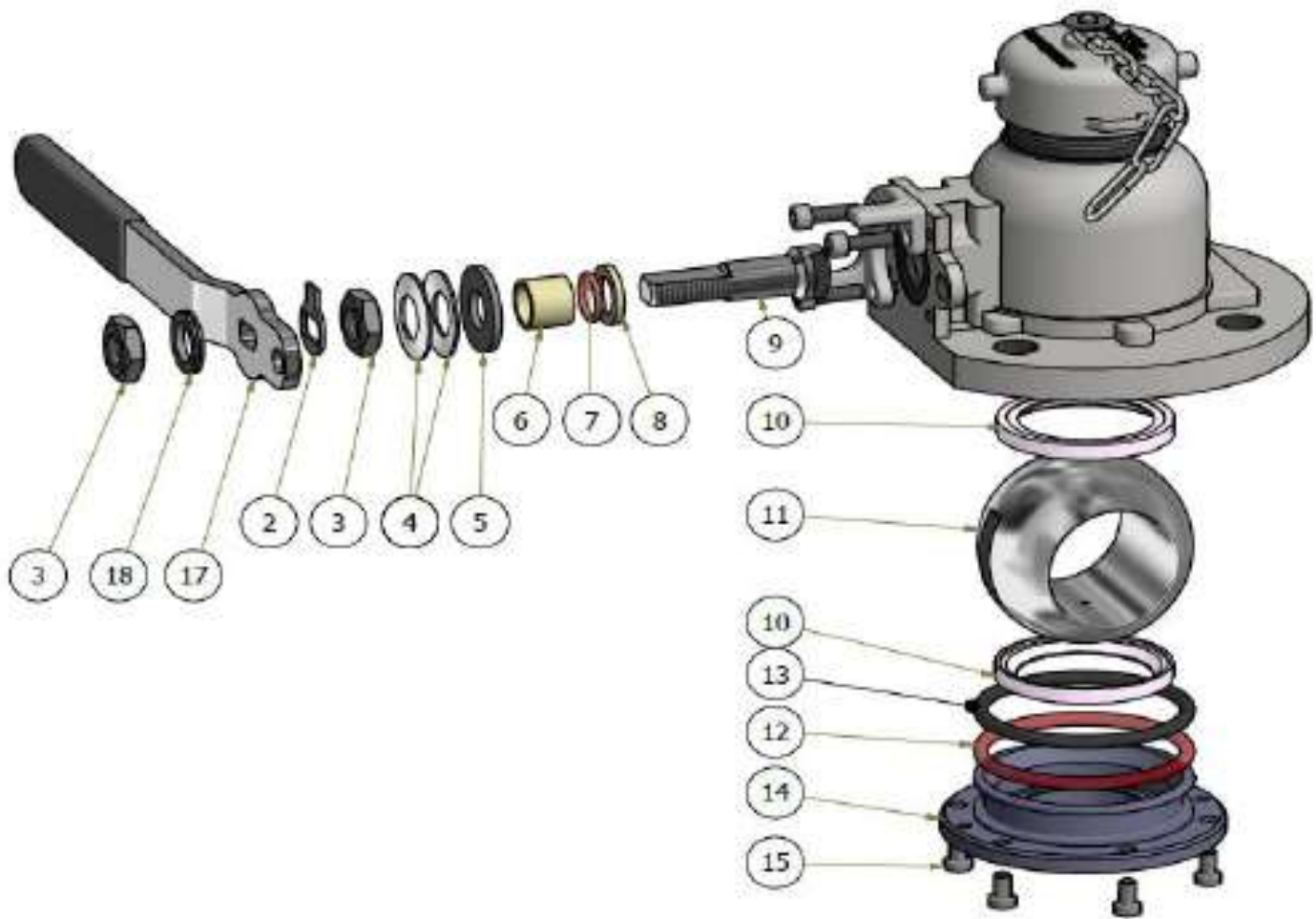
2" (ND50) ATCO™ – Threaded Ball Valve – AD5X7T



Description	TSI Part No.	MFG. Part No.
DN50 ATCO™ THREADED BALL VALVE	On Request	AD5X7T1BCS0000

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		On Request	11 14 75 90 00
2	Upper ball seal (PTFE)		11 12 39 00 09
17	Lower gasket (PTFE)		11 14 73 00 01
Ball kit:		BVFFD5X-SP3A-01	11 12 42 91 00
4	Ball (316)		11 12 42 00 11
Drilled Ball kit:		On Request	11 12 39 94 00
4	Drilled Ball (316)		11 12 39 00 11
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
12	Handle (st st)		-
	Handle cap, nitrile		-
10	M16 Nut		-
11	Stop washer		-
13	Washer Nordlock Ø 16		-
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
6	Spacer (PTFE)		11 12 39 00 14
5	O'ring (FEP+Silicon)		70 10 15 00 12
4	Spindle Gasket (PTFE)		11 12 39 00 21
Spindle kit:		On Request	On Request
3	Spindle (St st)	BVFFD45-SP4A-01	11 12 39 00 16
9	Elastic washer (St st)		
8	Washer (St st)		
Filter kit:		On Request	11 14 75 92 00
23	Filter		11 12 03 20 00
24	Lock Ring (St st)		70 13 14 37 08
2" BSP Cap kit:		DC200-B-SS	
18	2" BSP Cap + Seal + Chain		11 14 64 20 00
18	2" NPT Cap + Seal + Chain		11 14 75 20 00
-	Cap Seal		11 12 03 40 02

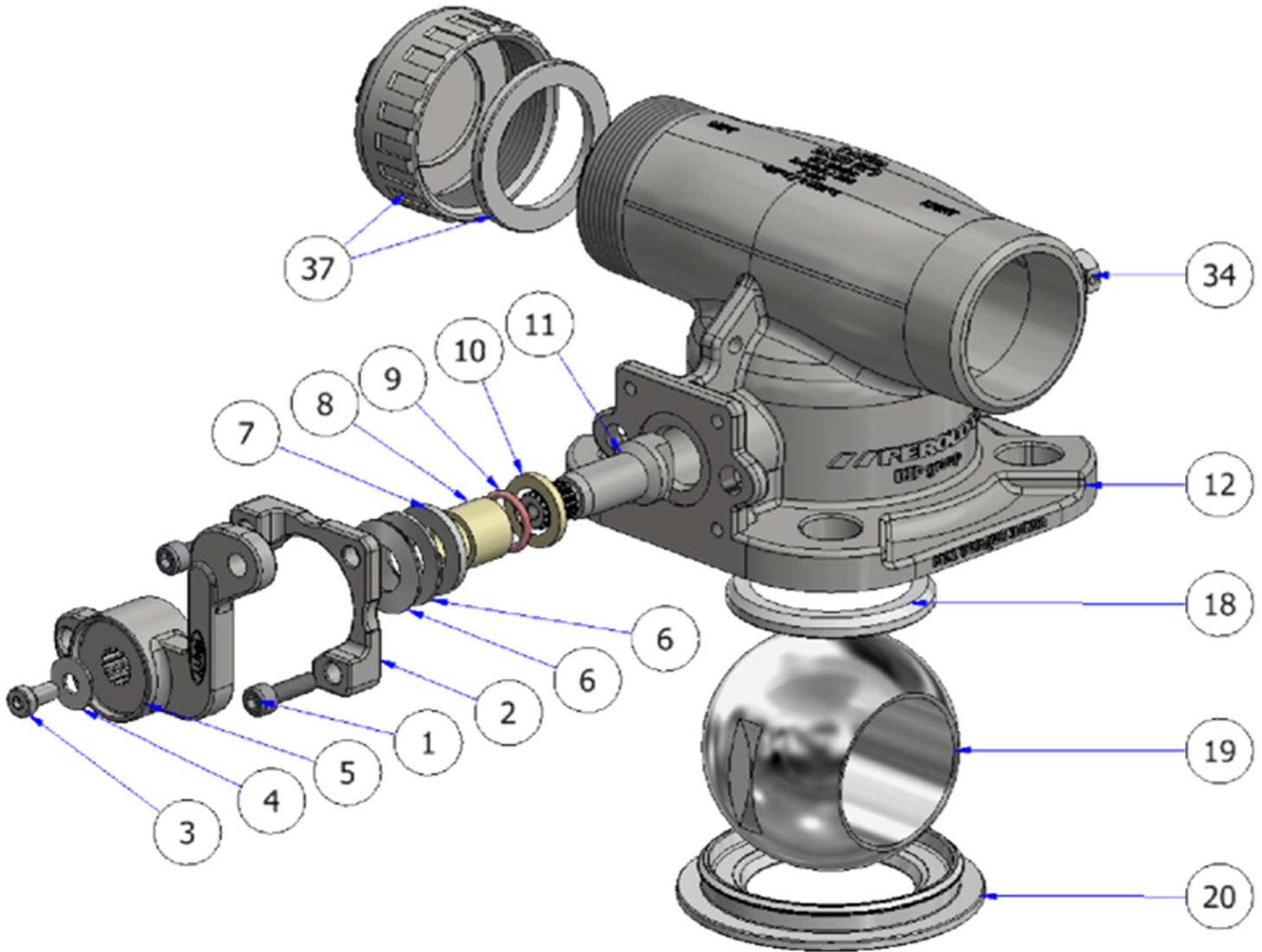
DN50 ATCO™ Straight Full-Bore Ball Valve



Description	TSI Part No.	MFG. Part No.
DN50 ATCO™ STRAIGHT BALL VALVE	BVTf200-BD5X-SS-01	AD5X16T11CS0000

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD5X-SK1A-01	11 12 42 92 00
10	2 x ball seals (PTFE)		
12	O-ring (FEP encapsulated)		
13	O-ring (Viton)		
Ball kit:		BVXX200-SP3A-01	11 14 59 00 11
11	Ball		
9	Spindle	BVFFD45-SP4A-01	11 12 39 00 16
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
6	Bearing bush (PTFE)		
7	O-ring (FEP encapsulated)		
8	Spindle seal (PTFE)		
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
17	Handle		
3	2 x nuts		
2	Washer (stainless steel)		
18	Nordlock washer		
Clamping ring kit:		BVFFD50-SK6B-01	11 12 69 93 00
14	Clamping ring (stainless steel)		
15	6 x screw M16 (stainless steel)		
Tools kit:		BVFFD50-TK1-01	11 12 69 94 00
A	Spindle assembly tool		
B	O-ring assembly tool		

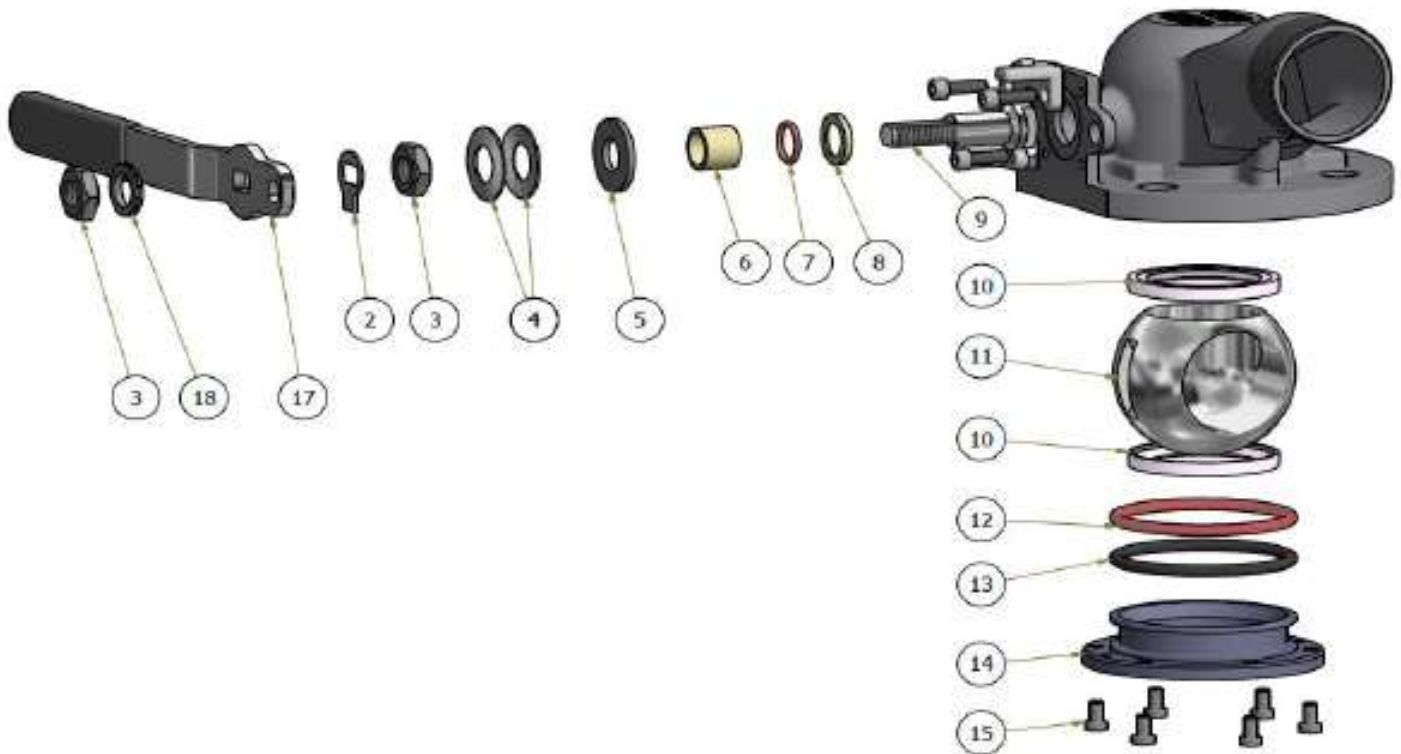
2'' (ND50) ATCO™ – Dual Compact Ball Valve – ATC5



Description	TSI Part No.	MFG. Part No.
DN50 ATCO™ DUAL BALL VALVE	On Request	ATC5X7T1BB000

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVTF150-BD5X-SK1-01	11 14 99 90 00
18	Upper ball seal (PTFE)		11 12 39 00 09
20	Lower gasket (PTFE)		11 14 99 10 04
Ball kit:		On Request	
19	Ball (316)		11 12 42 00 11
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
5	Kit Right handle (11 14 99 10 01L)		11 14 99 95 00
5	Kit Left handle (11 14 99 10 01)		11 14 99 92 00
5	Kit Lever (11 24 06 00 01)		11 24 06 92 00
3	Screw M6x12		-
4	Washer Ø6		-
6	Elastic washer Ø16		-
7	Washer Ø16 wide series		-
Stop handle kit:		On Request	11 14 99 30 00
2	Stop handle		11 14 99 1A 02
1	Screw M6x20		
Spindle seals kit:		BVTF150-BD5X-SK2-01	11 14 99 93 00
8	Spacer (PTFE)		11 12 39 00 14
9	O'ring (FEP+Silicon)		70 10 15 00 12
10	Spindle Gasket (PTFE)		11 12 39 00 21
Spindle kit:		On Request	11 14 99 94 00
11	Spindle (Duplex)		11 14 99 10 05
6	Elastic washer Ø16		-
7	Washer Ø16 wide series		-
2" BSP Cap kit:		DC200-B-SS	
37	2" BSP Cap + Seal + Chain		11 24 06 30 00
-	Cap Seal		11 12 03 40 02
Pressure protection:		On Request	
-	Gauge protection		11 14 99 00 01

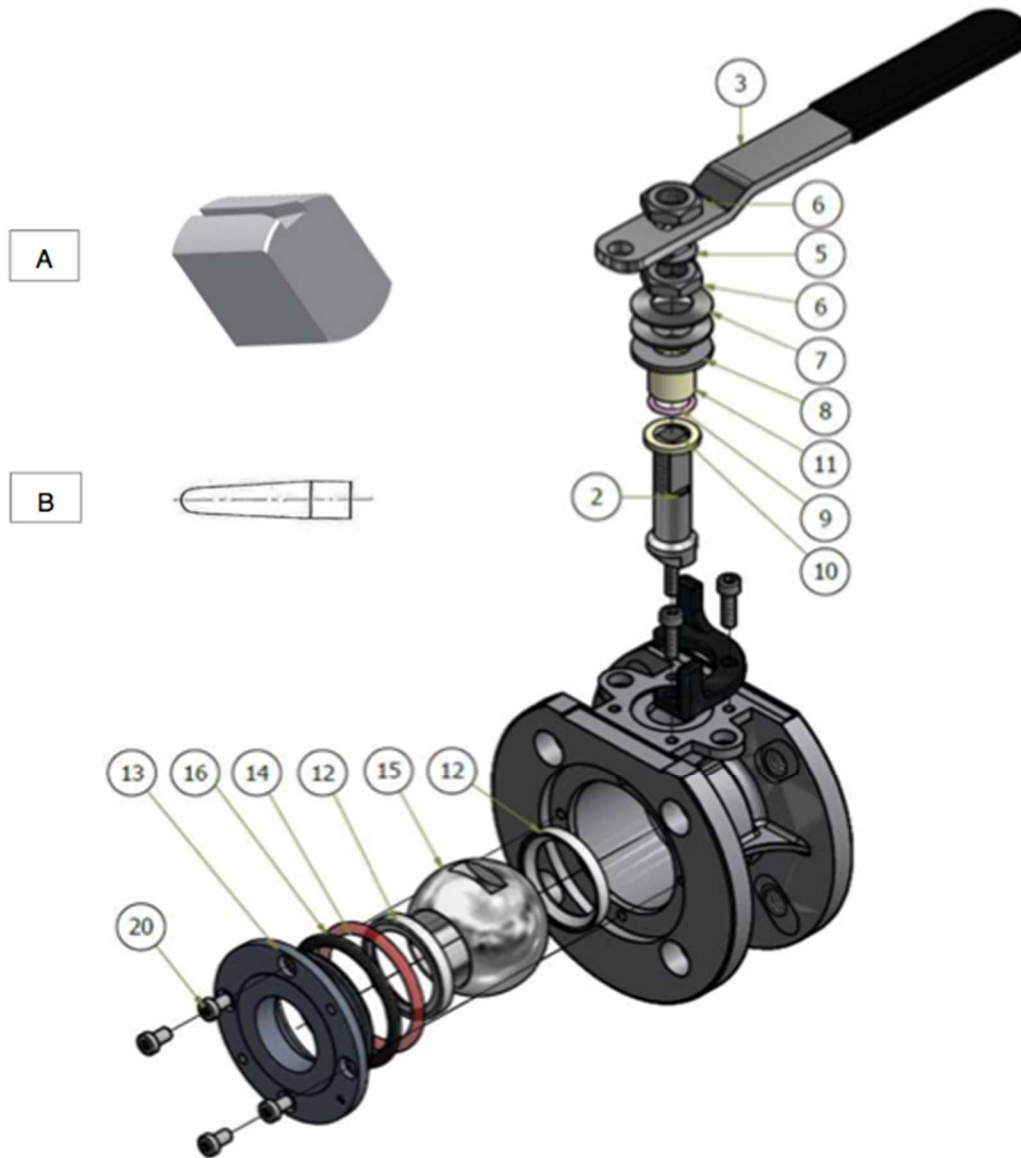
DN50 ATCO™ 90° Full Bore Ball Valve



Description	TSI Part No.	MFG. Part No.
DN50 ATCO™ 90° BALL VALVE	BVT9BD50-SS-01	ALN5X6T11M
PEROLO DN50 X DN80 ATCO 90° BALL VALVE	BVT9BD5X8-BF64-SS-01	AKN5X6T31M

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD5X-SK1A-01	11 12 42 92 00
10	2 x ball seals (PTFE)		
12	O-ring (FEP encapsulated)		
13	O-ring (Viton)		
Ball kit:		BVFFD5X-SP3A-01	11 12 42 91 00
11	Ball		
Drilled ball kit:		On Request	11 12 39 94 00
11	Drilled ball		
9	Spindle	BVFFD45-SP4A-01	11 12 39 00 16
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
6	Bearing bush (PTFE)		
7	O-ring (FEP encapsulated)		
8	Spindle seal (PTFE)		
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
17	Handle		
3	2 x nuts		
2	Washer (stainless steel)		
18	Nordlock washer		
Clamping ring kit:		BVFFD50-SK6B-01	11 12 69 93 00
14	Clamping ring (stainless steel)		
15	6 x screw M16 (stainless steel)		
Tools kit:		BVFFD50-TK1-01	11 12 69 94 00
A	Spindle assembly tool		
B	O-ring assembly tool		

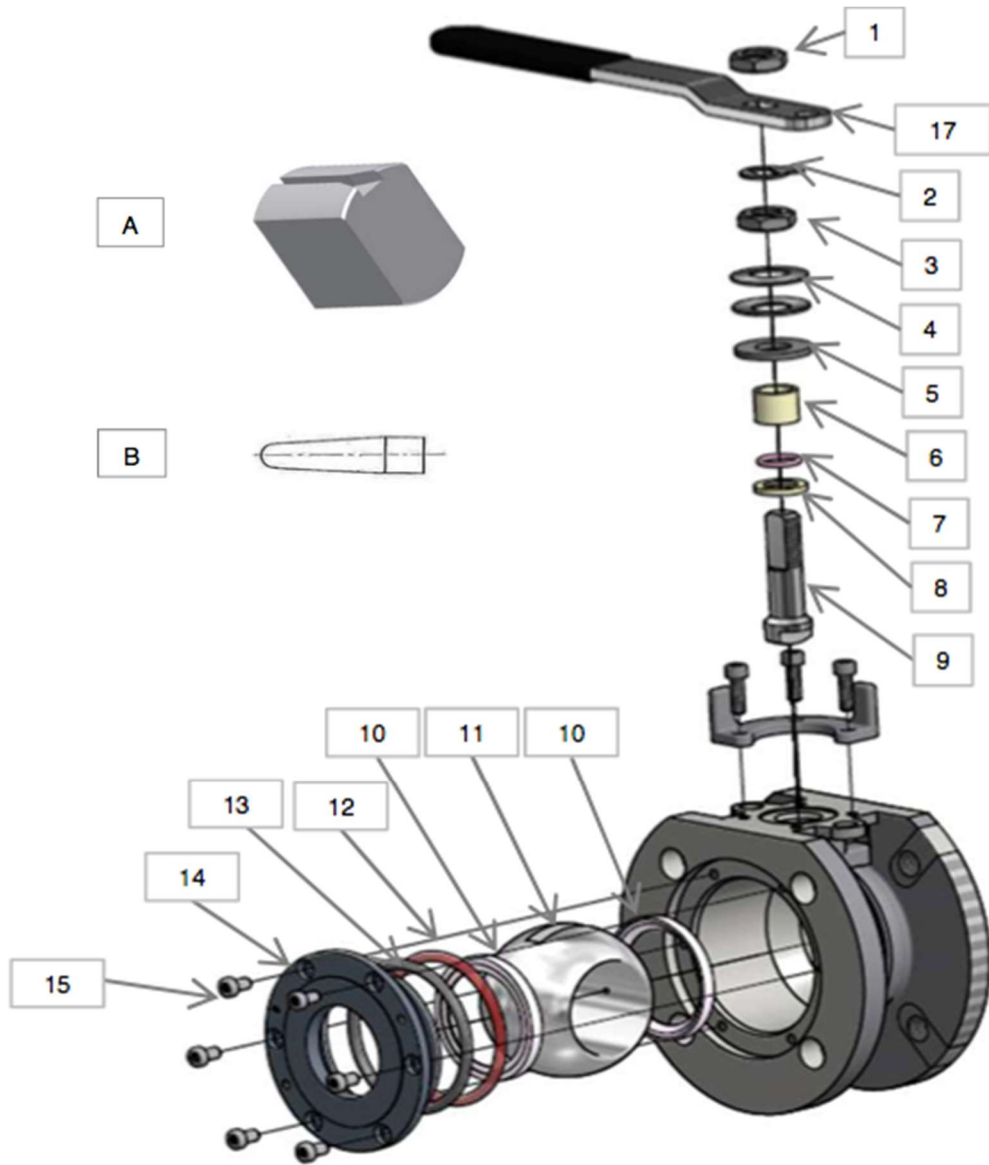
DN40 ATCO™ Full Bore Ball Valve



Description	TSI Part No.	MFG. Part No.
DN40 ATCO™ BALL VALVE	BVFFD40-SS-01	AFN4X16T1300000
DN40 ATCO™ BALL VALVE (HALAR COATED)		Special Request

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD40-SK1A-01	11 12 82 91 00
12	2 x ball seals (PTFE)		
14	O-ring (FEP encapsulated)		
16	O-ring (Viton)		
Ball kit:		BVFFD40-SP3A-01	11 12 82 92 00
15	Ball		
Drilled ball kit:		On Request	11 12 39 97 00
15	Drilled ball		
2	Spindle	BVFFD45-SP4A-01	11 12 39 00 16
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
11	Bearing bush (PTFE)		
9	O-ring (FEP encapsulated)		
10	Spindle seal (PTFE)		
Spindle kit:		BVFFD45-SK14A-01	10 14 16 91 00
2	Spindle (stainless steel)		
6	2 x nuts (stainless steel)		
5	Stop washer (stainless steel)		
7	2 x elastic washers (stainless steel)		
8	Washer (stainless steel)		
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
3	Handle		
6	2 x nuts		
5	Washer (stainless steel)		
Clamping ring kit:		BVFFD40-SK6B-01	11 12 82 97 00
13	Clamping ring (stainless steel)		
20	4 x screw M16 (stainless steel)		
Tools kit:		BVFFD40-TK1-01	11 12 82 96 00
A	Spindle assembly tool		
B	O-ring assembly tool		

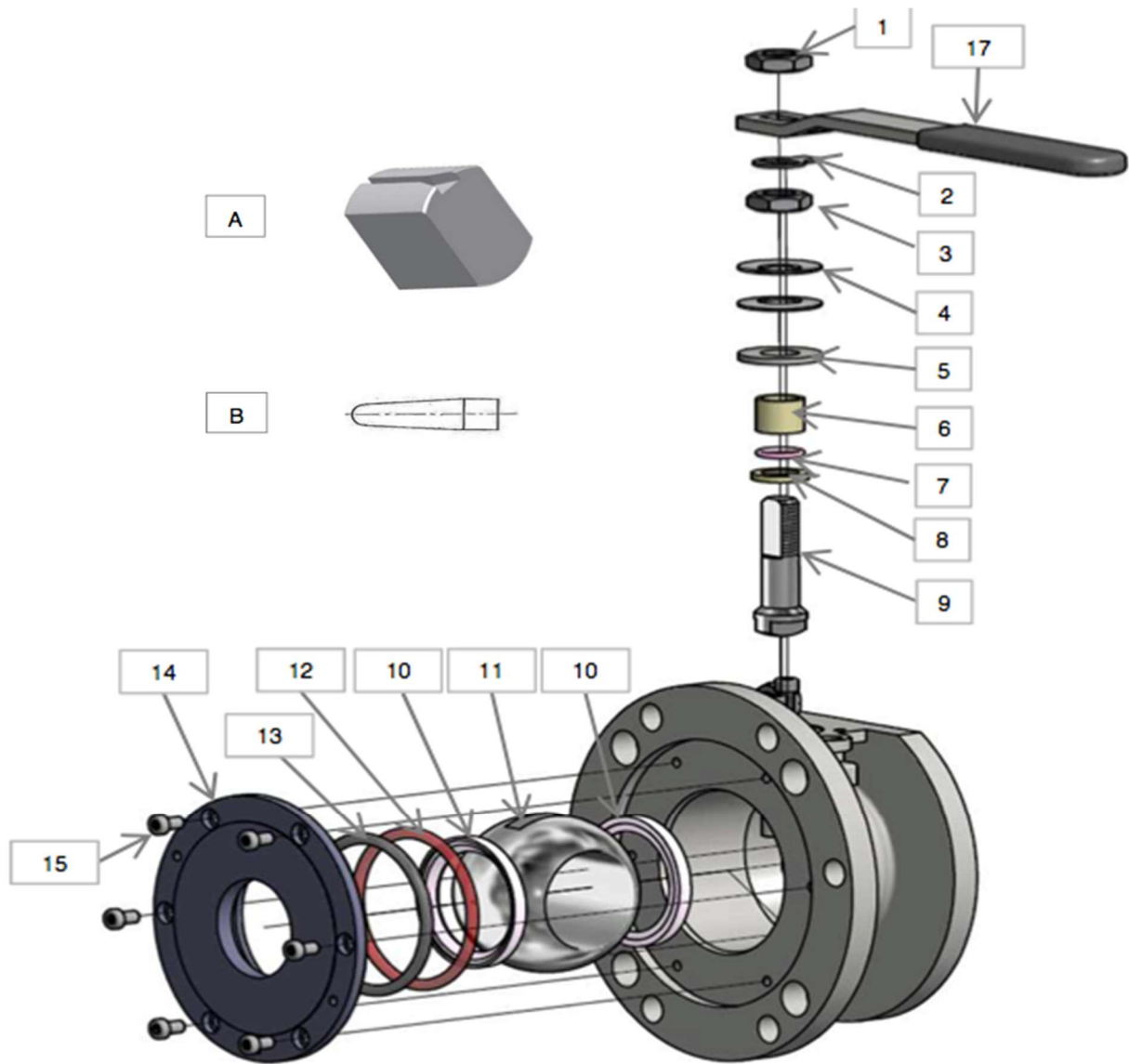
DN50 ATCO™ Full Bore Ball Valve



Description	TSI Part No.	MFG. Part No.
DN50 ATCO™ BALL VALVE	BVFFD50-SS-01	AFN5X16T1300S00
DN50 ATCO™ BALL VALVE (HALAR COATED)		Special Request

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD5X-SK1A-01	11 12 42 92 00
10	2 x ball seals (PTFE)		
12	O-ring (FEP encapsulated)		
13	O-ring (Viton)		
Ball kit:		BVFFD5X-SP3A-01	11 12 42 91 00
11	Ball		
Drilled ball kit:		On Request	11 12 39 94 00
11	Drilled ball		
9	Spindle	BVFFD45-SP4A-01	11 12 39 00 16
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
6	Bearing bush (PTFE)		
7	O-ring (FEP encapsulated)		
8	Spindle seal (PTFE)		
Handle kit:		BVFFD45-SK3A-01	11 14 16 92 00
17	Handle		
3	2 x nuts		
2	Washer (stainless steel)		
18	Nordlock washer		
Clamping ring kit:		BVFFD50-SK6B-01	11 12 69 93 00
14	Clamping ring (stainless steel)		
15	6 x screw M16 (stainless steel)		
Tools kit:		BVFFD50-TK1-01	11 12 69 94 00
A	Spindle assembly tool		
B	O-ring assembly tool		

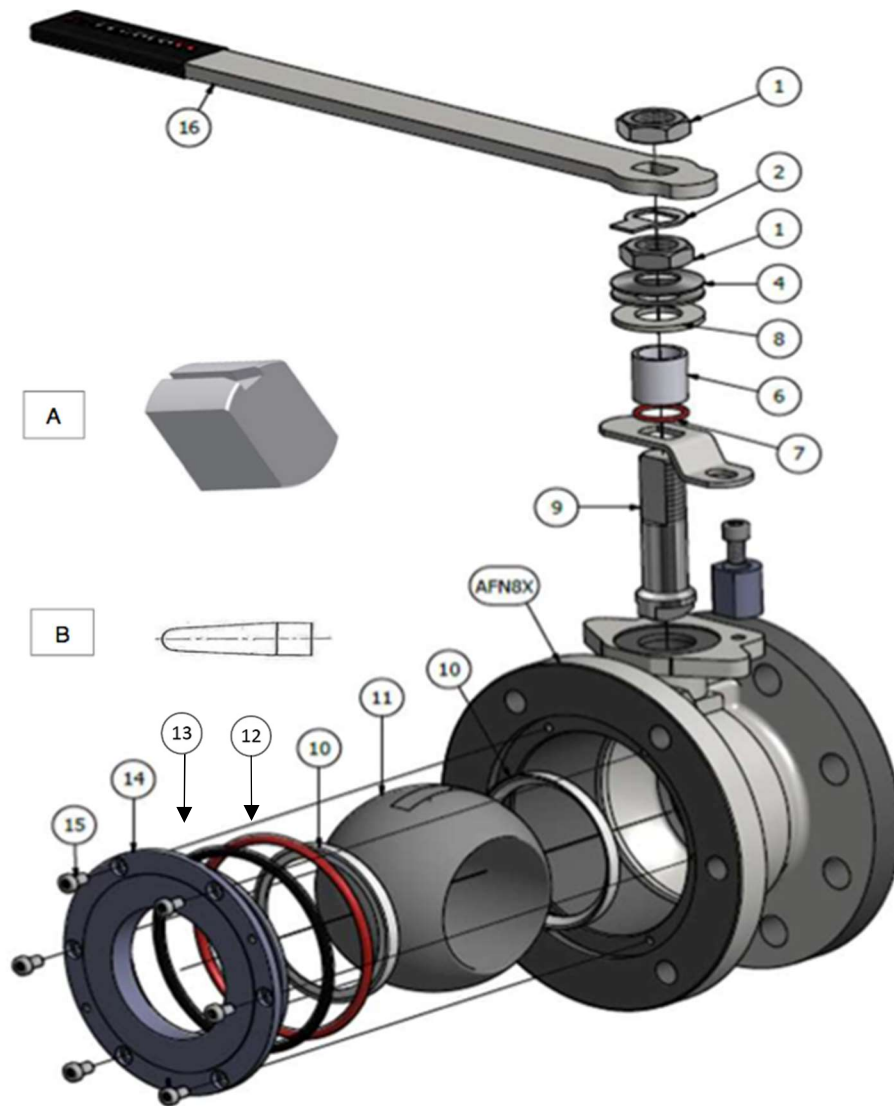
DN50 x DN80 ATCO™ Full Bore Ball Valve



Description	TSI Part No.	MFG. Part No.
DN50 X DN80 ATCO™ BALL VALVE	BVFFD5X8-BF64-SS-01	AHN5X16T1300S00

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD5X-SK1A-01	11 12 42 92 00
10	2 x ball seals (PTFE)		
12	O-ring (FEP encapsulated)		
13	O-ring (Viton)		
Ball kit:		BVFFD5X-SP3A-01	11 12 42 91 00
11	Ball		
Drilled ball kit:		On Request	11 12 39 94 00
11	Drilled ball		
9	Spindle	BVFFD45-SP4A-01	11 12 39 00 16
Spindle seals kit:		BVFFD45-SK2A-01	11 12 42 93 00
6	Bearing bush (PTFE)		
7	O-ring (FEP encapsulated)		
8	Spindle seal (PTFE)		
Spindle kit:		BVFFD45-SK14A-01	10 14 16 91 00
9	Spindle (stainless steel)		
1&3	2 x nuts (stainless steel)		
2	Washer (stainless steel)		
4	2 x elastic washers (stainless steel)		
5	Washer (stainless steel)		
Handle kit:		BVFFD5X8-SK3B-01	11 17 07 94 00
17	Handle		
1&3	2 x nuts		
2	Washer (stainless steel)		
Clamping ring kit:		BVFFD5X8-SK6B-01	11 17 07 93 00
14	Clamping ring (stainless steel)		
15	6 x screw M16 (stainless steel)		
Tools kit:		BVFFD50-TK1-01	11 12 69 94 00
A	Spindle assembly tool		
B	O-ring assembly tool		







DN80 ATCO™ Full Bore Ball Valve



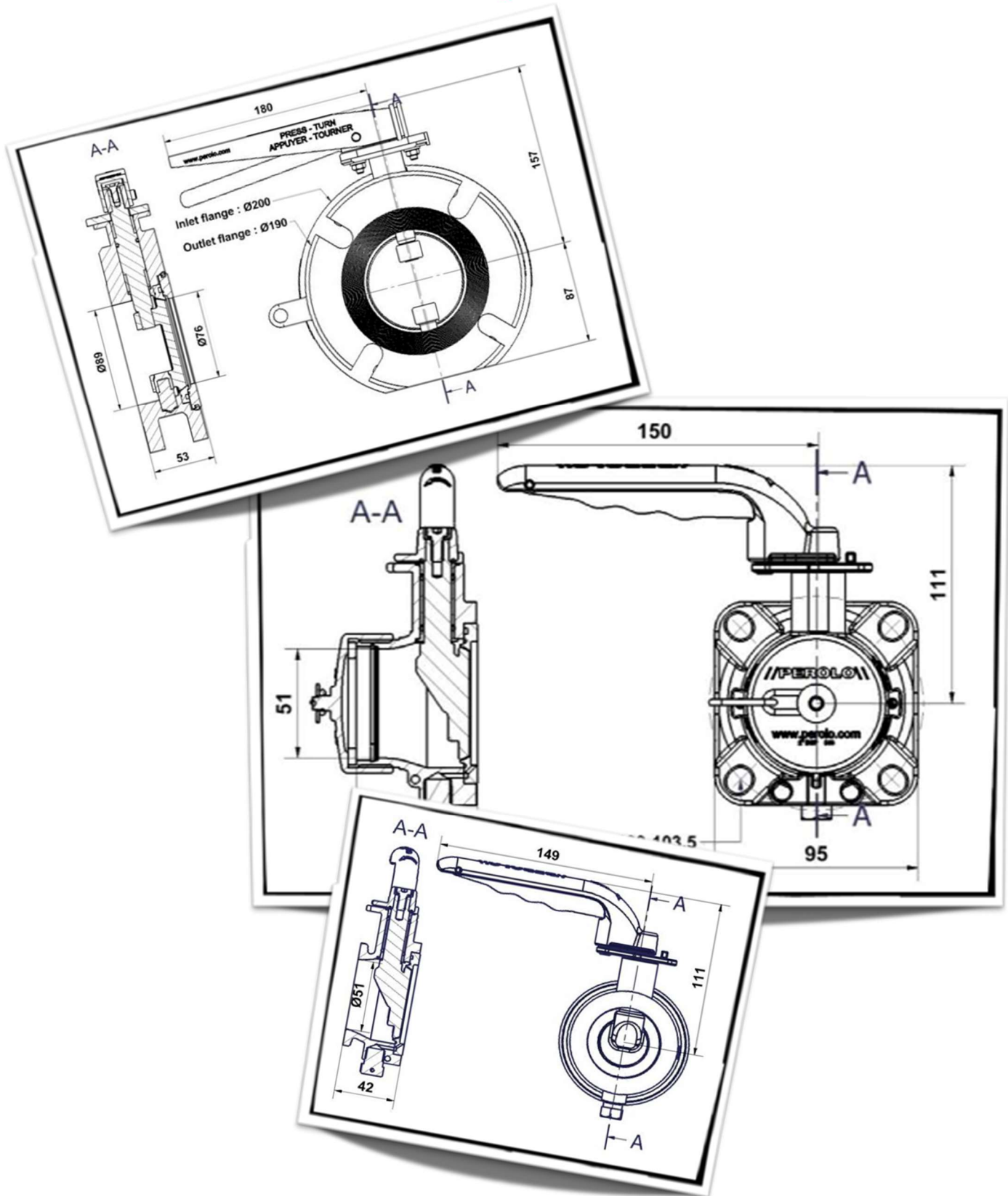
Description	TSI Part No.	MFG. Part No.
DN80 ATCO™ BALL VALVE	BVFFD80-BF64-SS-01	AFN8X16T53S000
DN80 ATCO™ BALL VALVE (HALAR COATED)		Special Request

Item	Description	TSI Part No.	MFG. Part No.
Ball seals kit:		BVFFD80-SK1A-01	11 12 52 92 00
10	2 x ball seals (PTFE or PEEK)		
12	O-ring (FEP encapsulated)		
13	O-ring (Viton)		
Ball kit:		BVFFD80-SP3A-01	11 12 52 91 00
11	Ball		
9	Spindle	BVFFD80-SP4A-01	11 12 52 00 24
Spindle seals kit:		BVFFD80-SK2A-01	11 12 52 93 00
6	Bearing bush (PTFE)		
7	O-ring (FEP encapsulated)		
8	Spindle seal (PTFE)		
Spindle kit:		BVFFD80-SK14B-01	11 12 71 95 00
9	Spindle (stainless steel)		
1	2 x nuts (stainless steel)		
2	Washer (stainless steel)		
4	2 x elastic washers (stainless steel)		
5	Washer (stainless steel)		
Handle kit:		BVFFD80-SK3A-01	11 12 71 97 00
16	Handle		
1	2 x nuts		
2	Washer (stainless steel)		
Clamping ring kit:		BVFFD80-SK6B-01	11 12 71 90 00
14	Clamping ring (stainless steel)		
15	6 x screw M16 (stainless steel)		
Tools kit:		BVFFD80-TK1-01	11 12 71 96 00
A	Spindle assembly tool		
B	O-ring assembly tool		

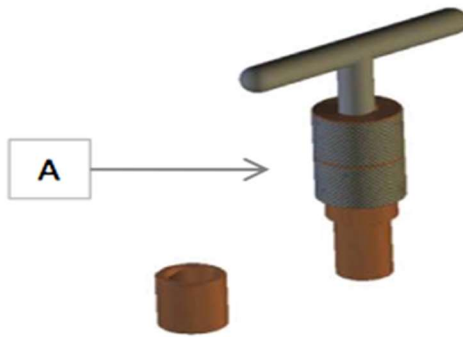
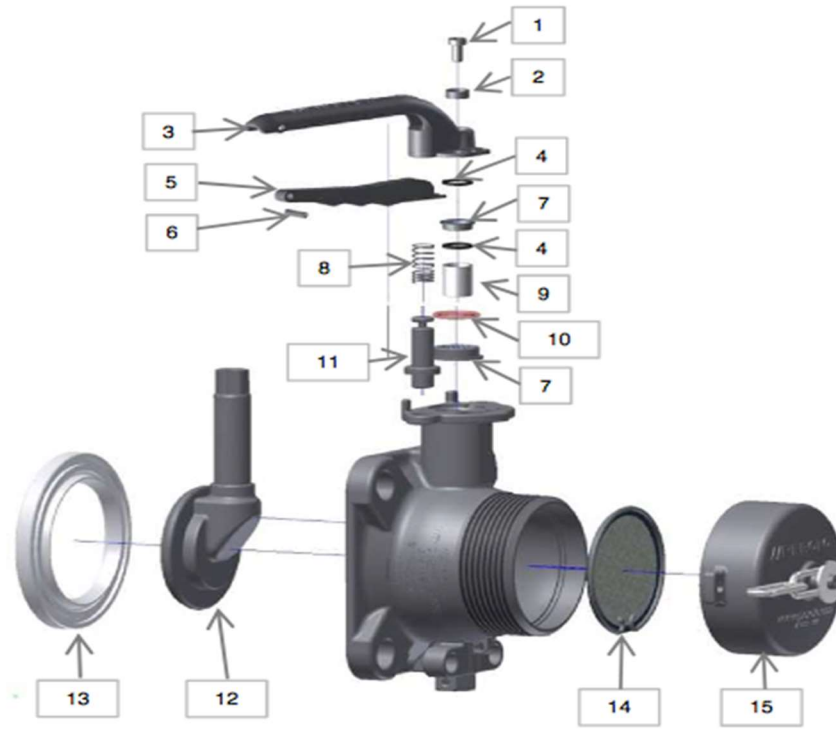
Ball Valve Spare Parts

	Item	Description	TSI Part No.	Compatible to Part No.
1		<p style="text-align: center;">TOP SEAT FOR 1.5" AIRLINE BALL VALVE</p>	<p style="text-align: center;">BVXX150-SP1A-02</p>	<p style="text-align: center;">5005-006</p>
2		<p style="text-align: center;">BOTTOM SEAT FOR 1.5" AIRLINE BALL VALVE</p>	<p style="text-align: center;">BVXX150-SP2A-02</p>	<p style="text-align: center;">5005-007</p>
3		<p style="text-align: center;">SS BALL FOR 1.5" AIRLINE BALL VALVE</p>	<p style="text-align: center;">BVXX150-SP3A-02</p>	<p style="text-align: center;">350/0002</p>
4		<p style="text-align: center;">TOP SEAT FOR GESTRA AIRLINE BALL VALVE</p>	<p style="text-align: center;">BVXX150-SP1A-03</p>	<p style="text-align: center;">gestra front</p>
5		<p style="text-align: center;">BOTTOM SEAT FOR GESTRA AIRLINE BALL VALVE</p>	<p style="text-align: center;">BVXX150-SP2A-03</p>	<p style="text-align: center;">gestra rear</p>
6		<p style="text-align: center;">Seal Tab</p>	<p style="text-align: center;">MISC-STB-BVBF</p>	

Butterfly Valves



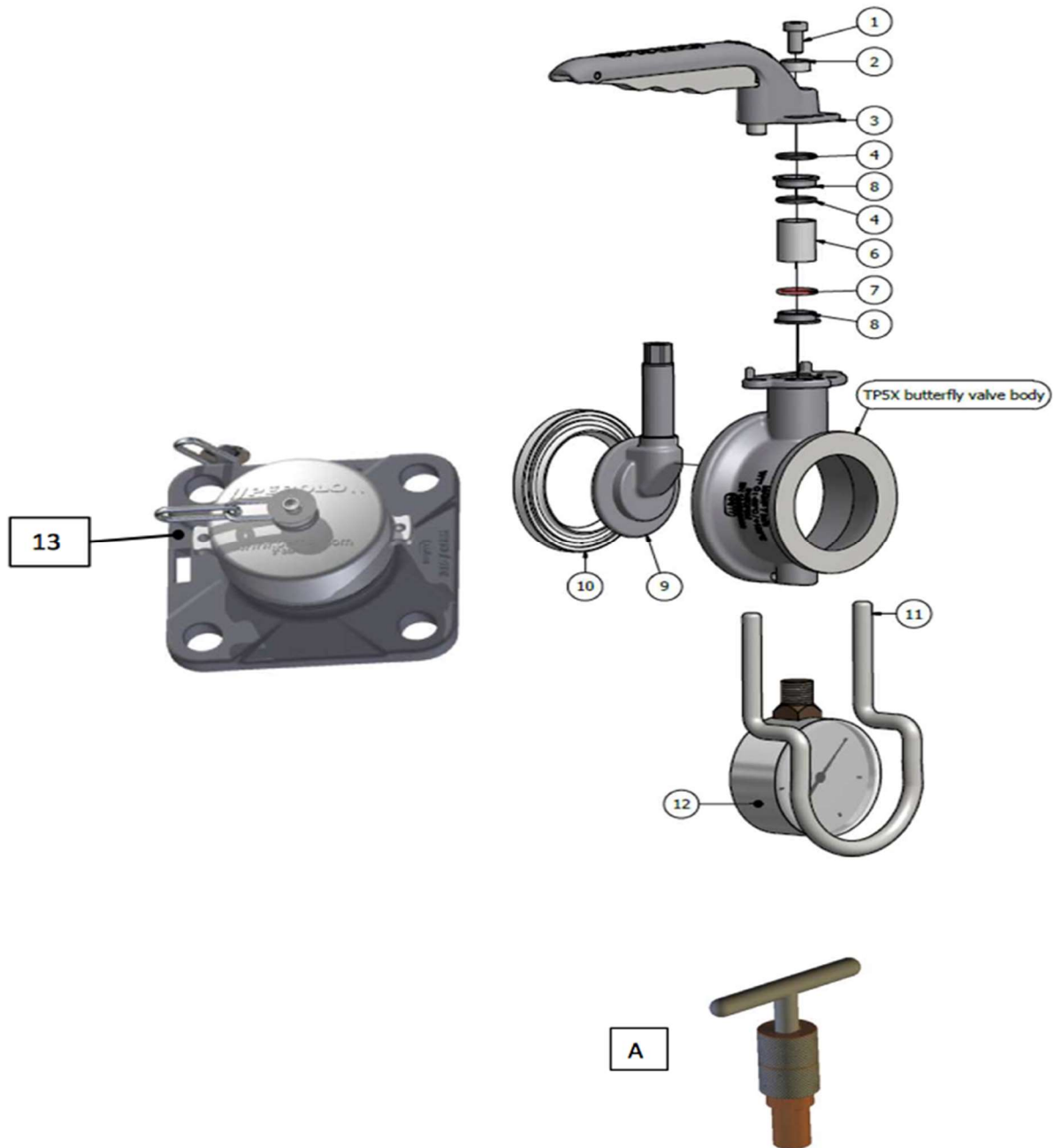
2" TANKFLY™ MK II Airline BSP Butterfly Valve



Description	TSI Part No.	MFG. Part No.
2" TANKFLY™ BSP BUTTERFLY VALVE MKII	BFTF200B-BF5S-SS-01	TT5X7T1CS11

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX200-SK3B-01	11 17 11 92 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
3	Handle (SS)		
4	2 x O-ring (Viton)		
5	Operating Lever (SS)		
6	Pin (SS)		
8	Spring (SS)		
11	Latch (SS)		
Seals Kit:		BFXX200-SK24B-01	11 17 11 91 00
4	2 x O-ring (Viton)		
7	Bearing (SS)		
9	Spacer (PTFE)		
10	O-ring (FEP encapsulated Silicone)		
13	Closure plate seal (PTFE)	BFXX200-SP1B-01	11 17 11 90 01
Closure plate kit:		BFXX200-SK11B-01	11 17 11 90 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
4	2 x O-ring (Viton)		
7	Bearing (SS)		
9	Spacer (PTFE)		
10	O-ring (FEP encapsulated Silicone)		
12	Closure plate (SS)		
13	Closure plate seal (PTFE)		
2" BSP CAP kit:		DC200-B-SS	11 17 11 20 00
15	2" BSP CAP & chain (SS)		
15	Gasket (PTFE)		
Gauze kit:		BFXX200-SK4A-01	11 12 03 94 00
14	Gauze filter S.A. (SS)		
A	Special tool for valve assembly	On Request	AS188

2" TANKFLY™ Clamped Butterfly Valve



Description	TSI Part No.	MFG. Part No.
2" TANKFLY™ CLAMPED BUTTERFLY VALVE	BFCL200B-SS-01	TP5X7T11

Item	Description	TSI Part No.	MFG. Part No.
	Handle Kit:	BFXX200-SK3B-01	11 17 11 92 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
3	Handle (SS)		
	Seals Kit:	BFXX200-SK24B-01	11 17 11 91 00
4	O-ring (Viton)		
8	Bearing (SS)		
6	Spacer (PTFE)		
7	O-ring (FEP encapsulated Silicone)		
10	Closure plate seal (PTFE)	BFXX200-SP1B-01	11 17 11 90 01
	Closure plate kit:	BFXX200-SK11B-01	11 17 11 90 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
4	O-ring (Viton)		
8	Bearing (SS)		
6	Spacer (PTFE)		
7	O-ring (FEP encapsulated Silicone)		
9	Closure plate (SS)		
10	Closure plate seal (PTFE)	BFXX200-SP1B-01	11 17 11 90 01
	Outlet nozzle kit:	On Request	11 17 15 20 00
13	Outlet nozzle with cap and chain		
11	Gauge protection	On Request	11 17 15 00 01
12	Pressure gauge , brass internal parts, stainless steel external parts, 1/4" BSP male connection, 0-6 bar	On Request	70 21 02 00 22
A	Special tool for valve assembly	On Request	AS188

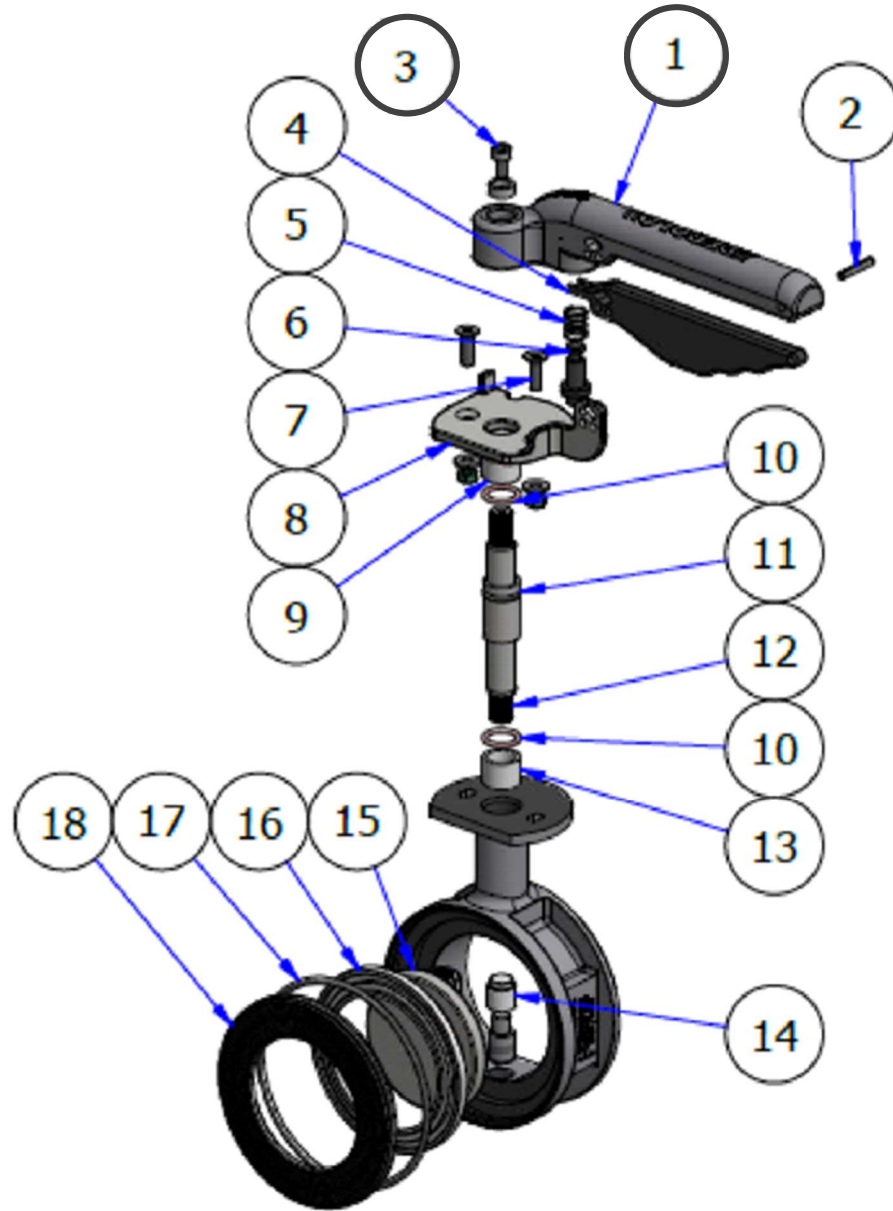
2" TANKFLY™ MK II Airline Flanged Butterfly Valve



Description	TSI Part No.	MFG. Part No.
2" TANKFLY™ FLANGED BUTTERFLY VALVE	BFFL200B-D5X-SS-01	TF5X7T11S11

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX200-SK3B-01	11 17 11 92 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
3	Handle (SS)		
4	2 x O-ring (Viton)		
5	Operating Lever (SS)		
6	Pin (SS)		
8	Spring (SS)		
11	Latch (SS)		
Seals Kit:		BFXX200-SK24B-01	11 17 11 91 00
4	2 x O-ring (Viton)		
7	Bearing (SS)		
9	Spacer (PTFE)		
10	O-ring (FEP encapsulated Silicone)		
13	Closure plate seal (PTFE)	BFXX200-SP1B-01	11 17 11 90 01
Closure plate kit:		BFXX200-SK11B-01	11 17 11 90 00
1	Screw M6-10 (SS)		
2	Washer (SS)		
4	2 x O-ring (Viton)		
7	Bearing (SS)		
9	Spacer (PTFE)		
10	O-ring (FEP encapsulated Silicone)		
12	Closure plate (SS)		
13	Closure plate seal (PTFE)	BFXX200-SP1B-01	11 17 11 90 01
Gauze kit:		BFXX200-SK4A-01	11 12 03 94 00
14	Gauze filter S.A. (SS)		
A	Special tool for valve assembly	On Request	AS188

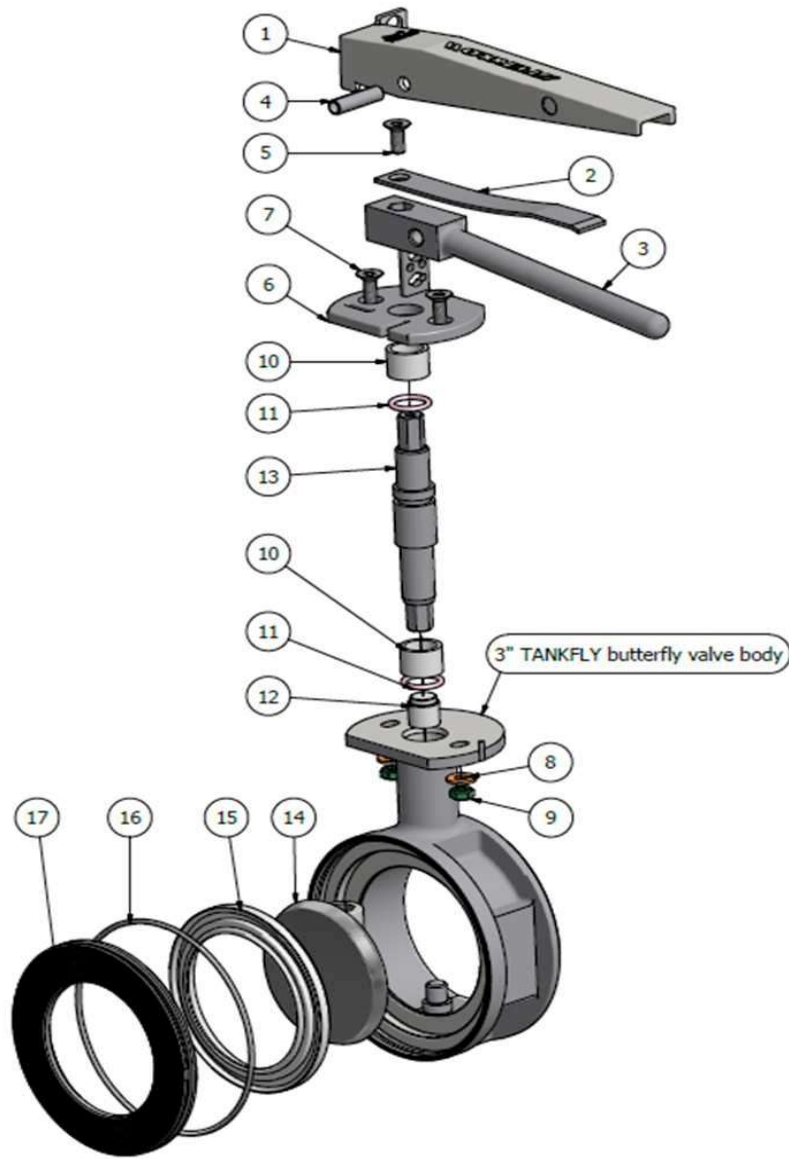
3" (ND80) TANKFLY™ – Clamped Butterfly Valve – (Splined Version)



Description	TSI Part No.	MFG. Part No.
3" TANKFLY CLAMPED B-FLY VALVE - SPLINED SHAFT	BFCL300-SS-01B	TPS8X7T00

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX300-SK3C-01	11 14 85 90 00
1	Handle, stainless steel	On Request	11 14 85 40 01
2	Split pin, stainless steel		-
3	Screw M6-12		-
	Washer		-
4	Handle lever, stainless steel	On Request	11 11 83 40 03
5	Handle Spring, stainless steel		-
6	Locking Pin, stainless steel		-
Spindle Seals kit:		BFXX300-SK24A-01	11 12 62 91 00
3	Screws M6-12		-
7	Screws M6-20		-
	Washers		-
	Nuts		-
9	Spindle bush, PTFE & glass 25%		12 85 30 00 03
13	Short spindle bush		11 12 62 00 01
10	O'ring, FEP & silicone		70 10 15 00 12
11	O'ring, FKM/Viton (Green)		70 10 01 02 12
12	Spindle, 1.4462	BFXX300-SP4C-01	12 85 57 00 23
Spindle & Spindle Seals kit:		On Request	11 12 62 97 00
	Includes spindle, but excludes item #3 (Screw M6-12) from the spindle seals kit		
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
16	1 x Closure plate seal, PTFE		12 85 57 00 01
Closure plate kit:		On Request	12 85 57 81 00
14	Closure plate bush, PTFE & glass 25%	On Request	12 85 57 00 04
15	Closure plate, stainless steel	BFXX300-SP17C-01	11 14 85 20 00
Clamping ring kit:		BFXX300-SP18A-01	12 85 57 95 00
17	O'Ring, nitrile	BFXX300-SP54A-01	70 10 03 07 05
18	Clamping ring, stainless steel	On Request	12 85 57 00 02

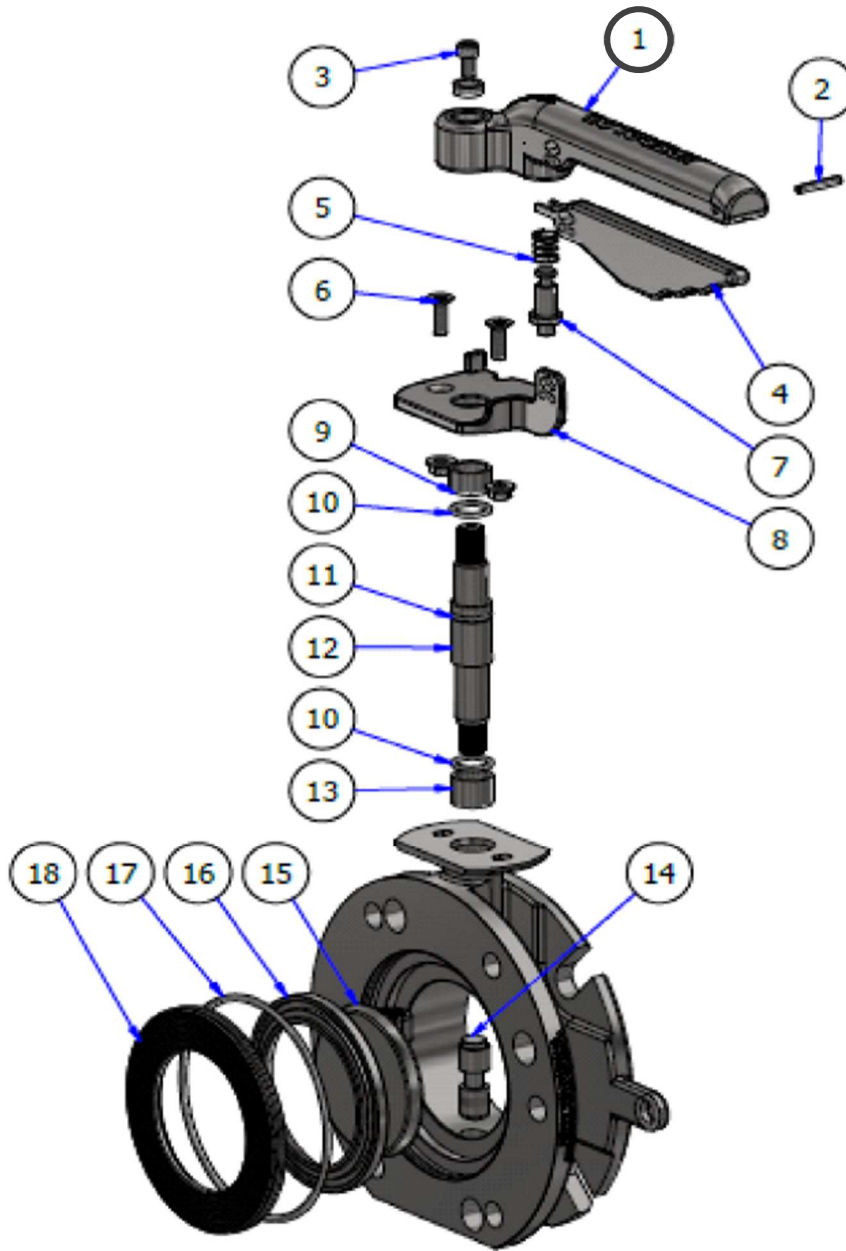
3" TANKFLY™ Clamped Butterfly Valve – Older Version



Description	TSI Part No.	MFG. Part No.
3" TANKFLY CLAMPED B-FLY VALVE	Discontinued	11 12 62 00 00

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX300-SK15A-01	11 12 62 90 00
5	1 x screw M6-16, 304/1.4301		
1	1 x handle, 316/1.4401		
4	1 x split pin, 304/1.4301		
2	1 x plane spring, 304/1.4301		
3	1 x handle lever, 316/1.4401		
Spindle Seals Kit:		BFXX300-SK24A-01	11 12 62 91 00
5	1 x screw M6-16, 304/1.4301		
4	1 x split pin, 304/1.4301		
7	2 x screws M6-20, 304/1.4301		
8	2 x washers, 304/1.4301		
9	2 x nuts, 316/1.4401		
10	2 x spindle bush, PTFE & glass 25%		
11a	1 x O-ring, PTFE & silicon		
11b	1 x O-ring, Viton		
12	1 x closure plate bush, PTFE & glass 25%		
13	Spindle	BFXX300-SP4A-01	12 85 57 97 00
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
15	1 x Closure plate seal, PTFE		
Closure plate kit:		BFXX300-SP17A-01	12 85 57 93 00
14	Closure plate, CF3M/1.4408		
12	Closure plate bush, PTFE & glass 25%		
Spherical Closure plate kit:		BFCL300-SK11A-01	11 12 62 93 00
14	Closure plate, CF3M/1.4408		
12	Closure plate bush, PTFE & glass 25%		
Seal clamp kit:		BFXX300-SP18A-01	12 85 57 95 00
17	Seal clamp, 316L/1.4404		
16	Ring, 302 rubber		

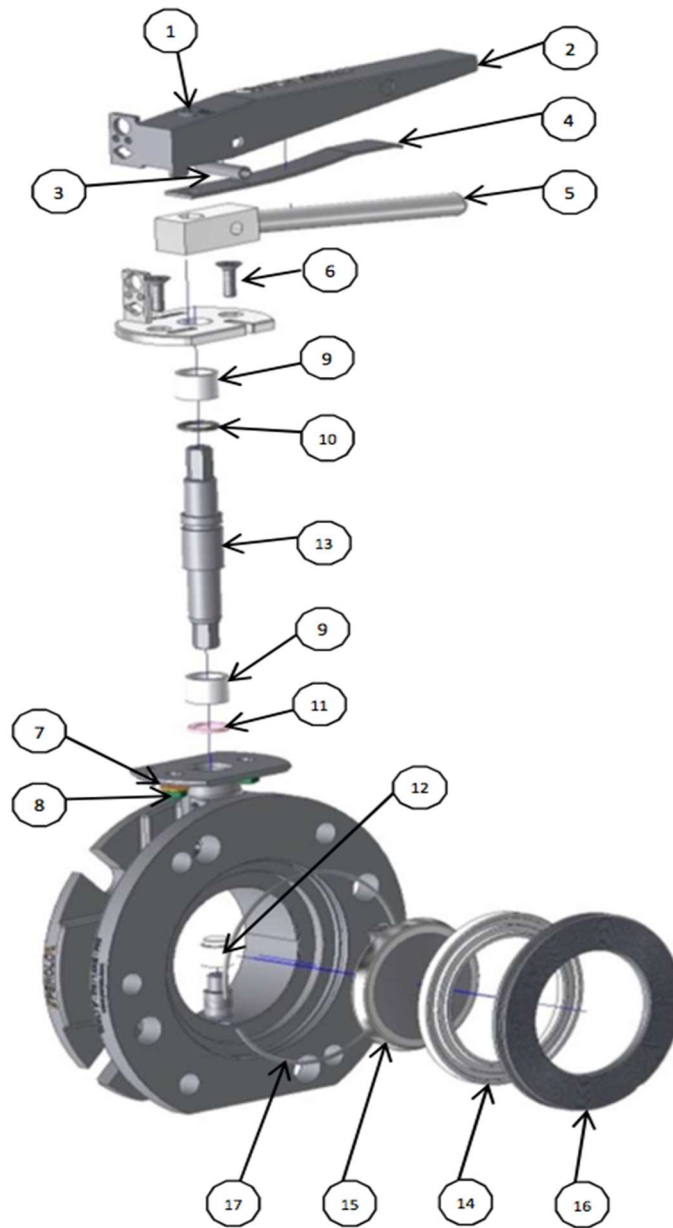
3" (ND80) TANKFLY™ – Flanged Butterfly Valve – (Splined Version)



Description	TSI Part No.	MFG. Part No.
3" TANKFLY FLANGED B-FLY VALVE - 4 & 6 HOLE - SPLINED SHAFT	BFFL300-BF64-SS-01C	TFS8X7T1100

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX300-SK3C-01	11 14 85 90 00
1	Handle, stainless steel		11 14 85 40 01
2	Split pin, stainless steel		-
3	Screw M6-12		-
	Washer		-
4	Handle lever, stainless steel		11 11 83 40 03
5	Handle Spring, stainless steel		-
6	Locking Pin, stainless steel		-
Spindle Seals kit:		BFXX300-SK24A-01	11 12 62 91 00
3	Screws M6-12		-
7	Screws M6-20		-
	Washers		-
	Nuts		-
			-
9	Spindle bush, PTFE & glass 25%		12 85 30 00 03
13	Short spindle bush		11 12 62 00 01
10	O'ring, FEP & silicone		70 10 15 00 12
11	O'ring, FKM/Viton (Green)		70 10 01 02 12
12	Spindle, 1.4462	BFXX300-SP4C-01	12 85 57 00 23
Spindle & Spindle Seals kit:		On Request	11 12 62 97 00
	Includes spindle, but excludes item #3 (Screw M6-12) from the spindle seals kit		
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
16	1 x Closure plate seal, PTFE		12 85 57 00 01
Closure plate kit:		On Request	12 85 57 81 00
14	Closure plate bush, PTFE & glass 25%	On Request	12 85 57 00 04
15	Closure plate, stainless steel	BFXX300-SP17C-01	11 14 85 20 00
Clamping ring kit:		BFXX300-SP18A-01	12 85 57 95 00
17	O'Ring, nitrile	BFXX300-SP54A-01	70 10 03 07 05
18	Clamping ring, stainless steel		12 85 57 00 02





3" TANKFLY™ Flanged Butterfly Valve – Older Version



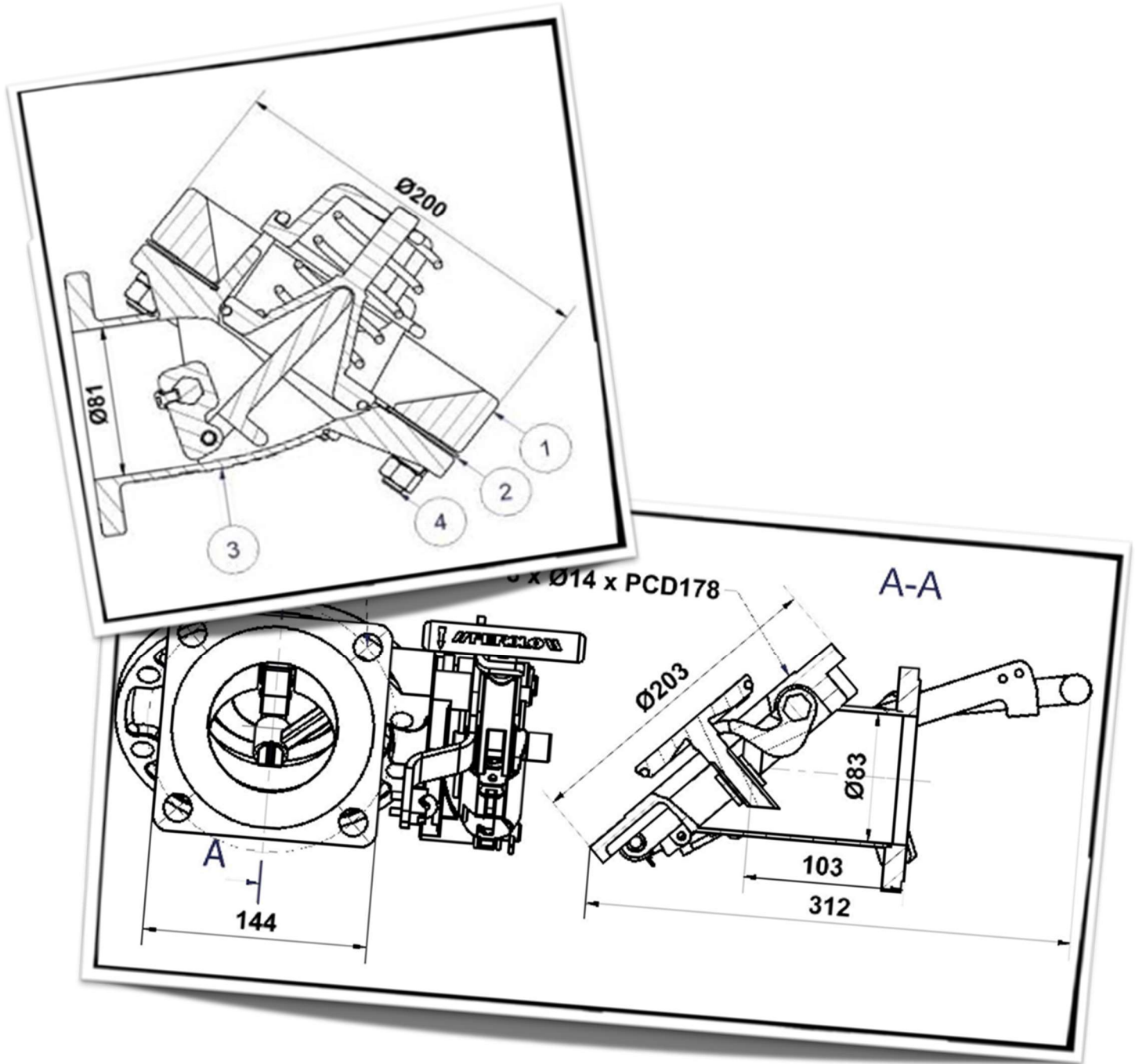
Description	TSI Part No.	MFG. Part No.
3" TANKFLY FLANGED B-FLY VALVE - 4 & 6 HOLE	Discontinued	11 12 31 00 00

Item	Description	TSI Part No.	MFG. Part No.
Handle Kit:		BFXX300-SK15A-01	11 12 62 90 00
1	1 x screw M6-16, 304/1.4301		
2	1 x handle, 316/1.4401		
3	1 x split pin, 304/1.4301		
4	1 x plane spring, 304/1.4301		
5	1 x handle lever, 316/1.4401		
Spindle Seals Kit:		BFXX300-SK24A-01	11 12 62 91 00
1	1 x screw M6-16, 304/1.4301		
3	1 x split pin, 304/1.4301		
6	2 x screws M6-20, 304/1.4301		
7	2 x washers, 304/1.4301		
8	2 x nuts, 316/1.4401		
9	2 x spindle bush, PTFE & glass 25%		
10	1 x O-ring, PTFE & silicon		
11	1 x O-ring, Viton		
12	1 x closure plate bush, PTFE & glass 25%		
13	Spindle	BFXX300-SP4A-01	12 85 57 97 00
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
14	1 x Closure plate seal, PTFE		
Closure plate kit:		BFXX300-SP17A-01	12 85 57 93 00
15	Closure plate, CF3M/1.4408		
12	Closure plate bush, PTFE & glass 25%		
Seal clamp kit:		BFXX300-SP18A-01	12 85 57 95 00
16	Seal clamp, 316L/1.4404		
17	Ring, 302 rubber		

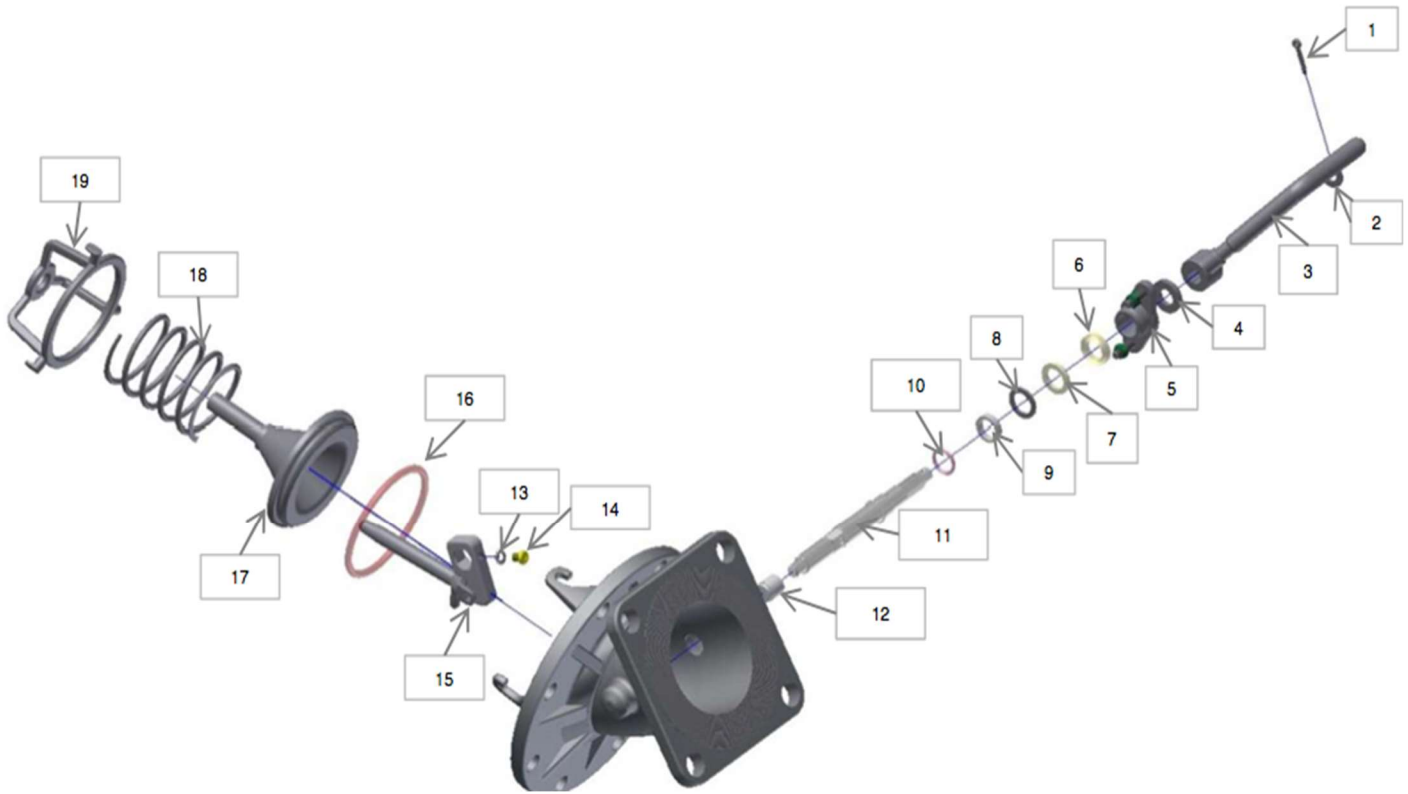
Butterfly Valve Spare Parts

Item	Description	TSI Part No.	Compatible to Part No.
<p style="text-align: center;">1</p> 	<p style="text-align: center;">MAIN SEAT FOR 2" B-FLY</p>	<p style="text-align: center;">BFXX200-SP1A-02</p>	<p style="text-align: center;">355/0202</p>
<p style="text-align: center;">2</p> 	<p style="text-align: center;">MAIN SEAT FOR 3" B-FLY</p>	<p style="text-align: center;">BFXX300-SP1A-02</p>	<p style="text-align: center;">368/0002</p>
<p style="text-align: center;">3</p> 	<p style="text-align: center;">NITRILE O-RING – 3" B-FLY VALVE</p>	<p style="text-align: center;">BFXX300-SP44A-02</p>	<p style="text-align: center;">5005-342</p>
<p style="text-align: center;">4</p> 	<p style="text-align: center;">3" CLAMPED BUTTERFLY NYLON SPACER</p>	<p style="text-align: center;">BF300CL-SK8A/01</p>	<p style="text-align: center;">12 85 57 91 00</p>

Foot Valves



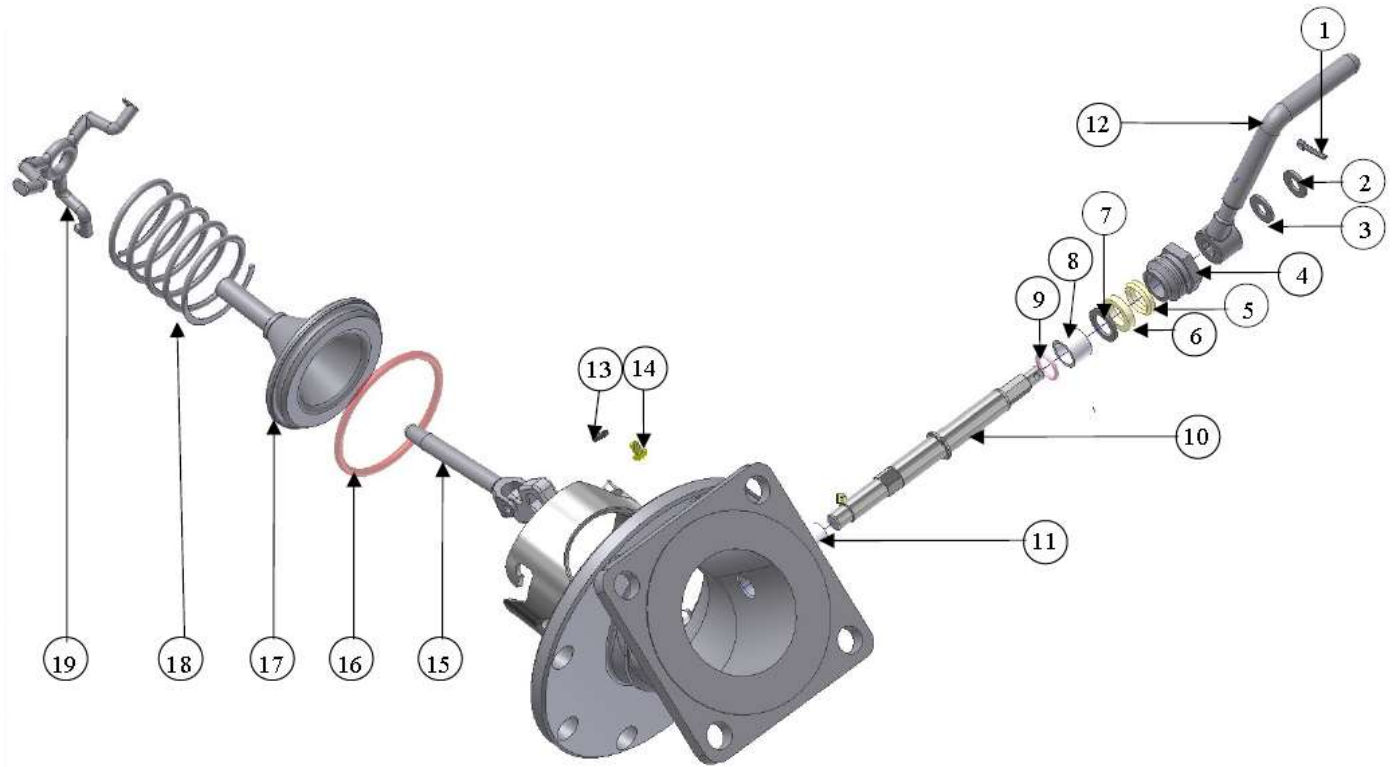
3" NEATCO™ MKII Foot Valve



Description	TSI Part No.	MFG. Part No.
3" 30° NEATCO™ MKII FOOT VALVE	FVNC300B-30FVX-SS-01	NT33115B1
3" 45° NEATCO™ MKII FOOT VALVE	FVNC300B-45D-SS-01	NT34115A1

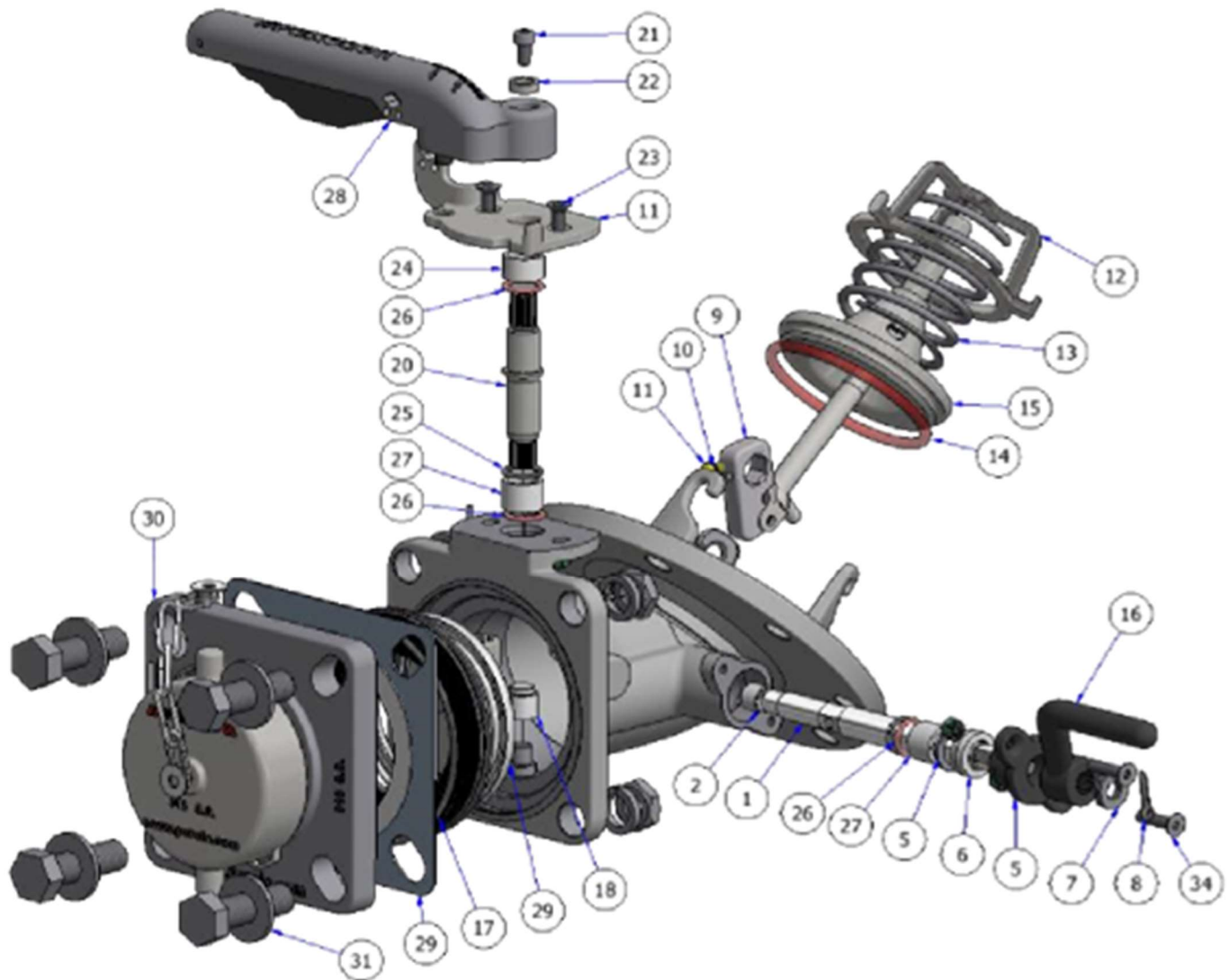
Item	Description	TSI Part No.	MFG. Part No.
11	Spindle, 316L/1.4404	FVNC300-SP4B-01	11 16 01 00 01
Spindle seals kit:		FVNC300-SK2B-01	11 16 01 93 00
12	Spindle bush, PTFE & 25% Glass		
10	O-ring, FEP/Silicon		
9	Spindle bush, PTFE		
7	Packing ring, 316L/1.4404		
6	Packing gland, PTFE		
4	Spacer, 316L/1.4404		
2	Washer, 304/1.4301		
1	Split pin, 316L, 1.4404		
Pushrod kit:		FVNC300-SK19A-01	11 16 01 92 00
15	Crank & pushrod, 316L/1.4404		
14	M6-8 screw, 304/1.4301		
13	M6 washer, 316L/1.4404		
Bayonet cap:		FVNC300-SP10B-01	11 16 01 00 04
19	Bayonet cap, 316L/1.4404		
Spring:		FVNC300-SP11A-01	12 85 38 00 02
18	Spring, 304L/1.4307		
Poppet seal:		FVXX300-SP9A-02	11 11 24 91 00
16	O-ring, FEP/Silicon		
Poppet kit:		FVNC300-SK5A-01	11 11 14 97 00 MK2
17	Poppet, 316L/1.4404		
16	O-ring, FEP/Silicon		
Handle kit:		FVNC300-SK3A-01	12 85 24 93 00
3	Handle, 316L		
1	Split pin		
2	Washer		
Remote control kit:		FVNC300-SK18B-01	11 16 28 91 00
	Remote control lever		
	Rope clamp		
	Spring		
	Arresting bracket		
	Outlet nozzle:		12 85 69 00 00
	3" Outlet nozzle, 316/1.4401	FLSP300B-4SL-SS	12 85 69 60 00

3" NEATCO™ MKI Foot Valve



Item	Description	TSI Part No.	MFG. Part No.
10	Spindle, 316L/1.4404		
1-3 5-6 7-8 9-11	Spindle seals kit: (Without spindle)	FVNC300-SK2A-01	12 85 38 91 00
Spindle seals kit:		N/A	11 11 14 99 07
11	Spindle bush, PTFE & 25% Glass		
10	Spindle, 316L/1.4404	FVNC300-SP4A-01	11 11 14 99 00
9	O-ring, FEP/Silicon		
8	Spindle bush, PTFE		
7	Packing ring, 316L/1.4404		
6	Packing gland Part Two, PTFE		
5	Packing gland Part One, PTFE		
4	Stuffing Clamp, 316L/1.4404		
2	Washer, 304/1.4301		
1	Split pin, 316L, 1.4404		
Pushrod kit:		FVNC300-SK19A-01	11 16 01 92 00
15	Crank & pushrod, 316L/1.4404		
14	M6-8 screw, 304/1.4301		
13	M6 washer, 316L/1.4404		
Bayonet cap:		FVNC300-SP10A-01	11 11 14 00 02
19	Bayonet cap, 316L/1.4404		
Spring:		FVNC300-SP11A-01	12 85 38 00 02
18	Spring, 304L/1.4307		
Poppet seal:		FVXX300-SP9A-02	11 11 24 91 00
16	O-ring, FEP/Silicon		
Poppet kit:		FVNC300-SK5A-01	11 11 14 97 00 MK2
17	Poppet, 316L/1.4404		
16	O-ring, FEP/Silicon		
Handle kit:		FVNC300-SK3A-01	12 85 24 93 00
12	Handle, 316L		
1	Split pin		
2	Washer		

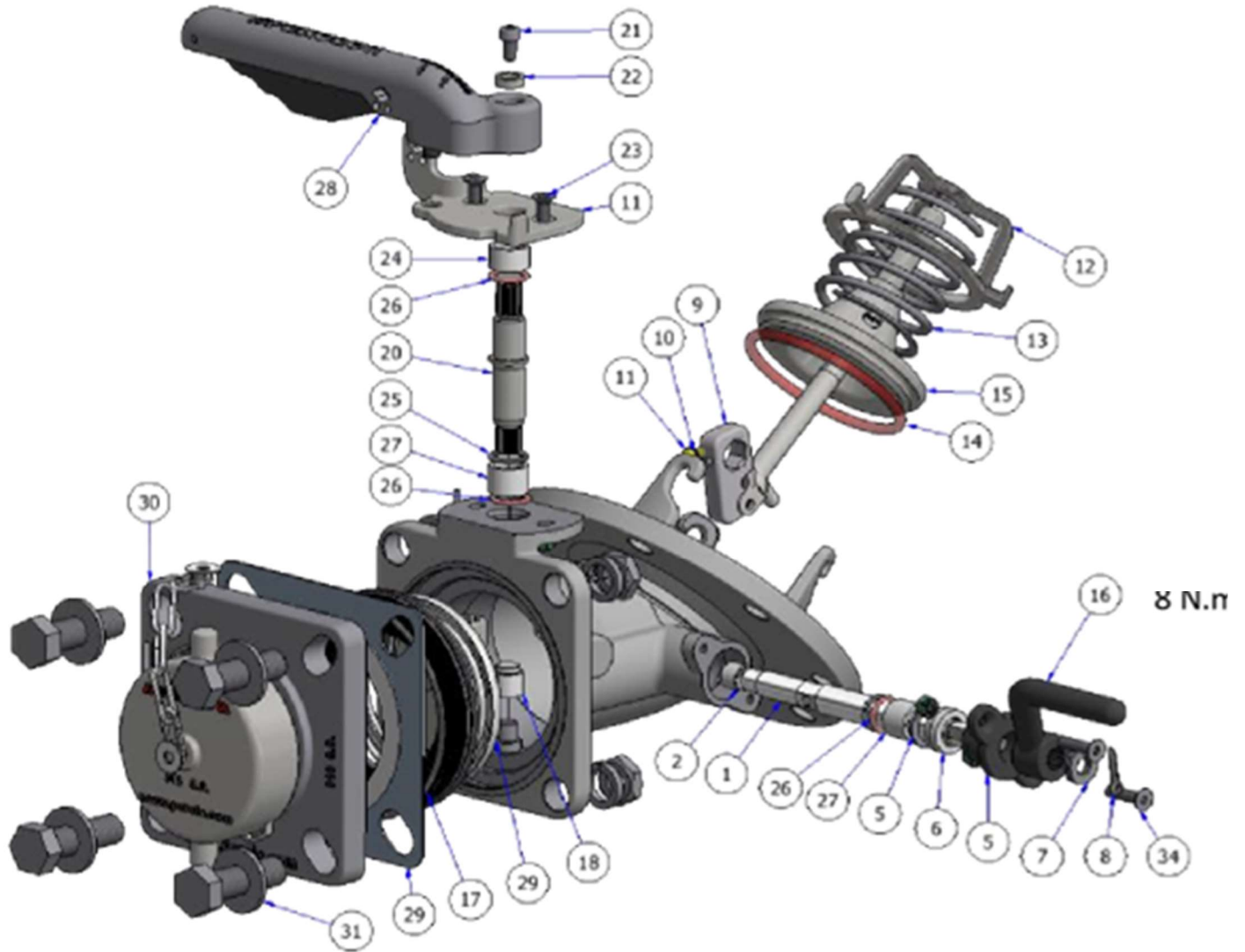
3" (ND80) TWINCO™ MKII – 45° Combined Bottom Discharge – VTSCX3



Description	TSI Part No.	MFG. Part No.
3" 45° TWINCO™ FOOT VALVE	FVTC300-45D-SS-01B	VTSCX34SCR

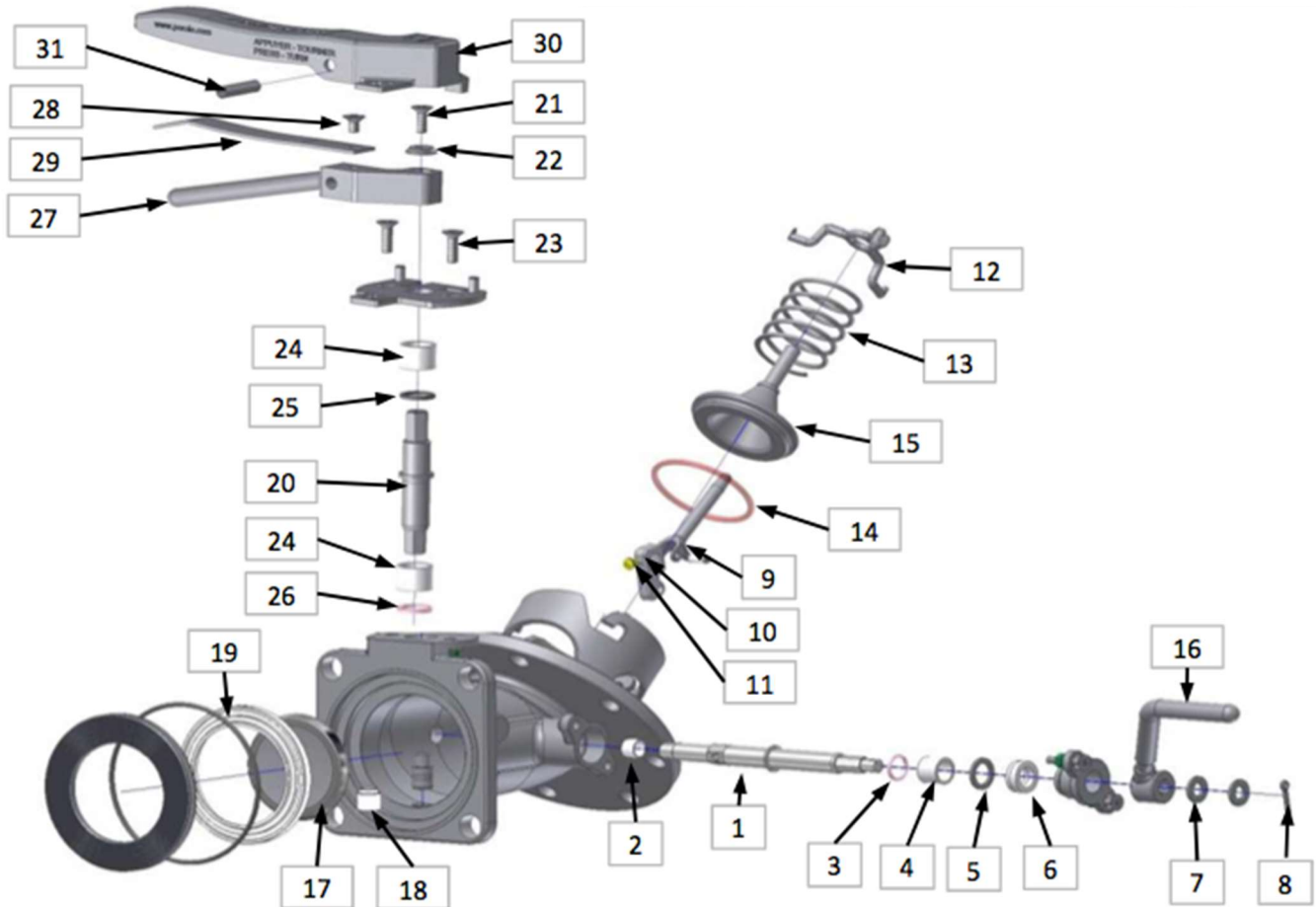
Item	Description	TSI Part No.	MFG. Part No.
Spindle:		FVTC300-SP4A-01	11 11 14 00 05
1	Spindle, stainless steel		
Spindle Seals kit:		On Request	11 11 73 93 00
8	Split pin, stainless steel		
7	Washer, stainless steel		
6	Packing gland, PTFE	FVNC300-SK7A-01	12 85 30 30 00
5	Packing ring, stainless steel		
27	Spindle bush, PTFE & glass 25%		12 85 30 00 03
26	O'ring, FEP & silicone		70 10 15 00 12
2	Spindle bush, PTFE		12 85 30 00 05
-	Screw M6-25, stainless steel		-
Pushrod kit:		FVNC300-SK19A-01	11 16 01 92 00
9	M6-8 screw, stainless steel		
10	M6 washer, stainless steel		
11	Crank & pushrod, stainless steel		11 16 01 30 00
Bayonet cap & spring:			
12	Bayonet cap, stainless steel	FVNC300-SP10B-01	11 16 01 00 04
13	Spring, stainless steel	FVNC300-SP11A-01	12 85 38 00 02
Poppet kit:		FVNC300-SK5A-01	11 11 14 97 00 MK2
14	O'ring, FEP/Silicon		70 10 15 00 53
15	Poppet, stainless steel		11 16 01 70 00
Closure plate kit:		On Request	12 85 57 81 00
17	Closure plate, stainless steel	BFXX300-SP17C-01	11 14 85 20 00
18	Closure plate bush, PTFE & glass		12 85 57 00 04
Closure plate seal kit:		BFXX300-SP1A-01	12 85 57 94 00
19	Closure plate seal, PTFE		12 85 57 00 01

3" (ND80) TWINCO™ MKII – 45° Combined Bottom Discharge – VTSCX3 (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Butterfly valve spindle kit:			
20	Short spindle, Duplex / 1.4462	On Request	17 12 88 00 01
Butterfly valve spindle and seals kit:		On Request	11 11 73 93 00
27	Spindle bush, PTFE & glass 25%		12 85 30 00 03
26	O'rings, FEP & silicon		70 10 15 00 12
23	Screw, Nuts & Washer stainless steel		
21	Screw M6-12, Stainless steel		
22	Ring washer, Stainless steel		
24	Short Spindle bush, PTFE & glass 25%		11 12 62 00 01
25	O'ring, FKM/Viton		70 10 01 02 12
Ring clamp kit:		BFXX300-SP18A-01	12 85 57 95 00
39	O'ring, Nitrile	BFXX300-SP54A-01	70 10 03 07 05
32	Ring clamp, stainless steel		12 85 57 00 02
Butterfly valve handle kit:		BFXX300-SK3C-01	11 14 85 90 00
28	Handle, stainless steel		11 14 54 40 00
21	Screw M6-12, stainless steel		-
22	Ring washer, stainless steel		
Foot valve handle kit:		FVNC300-SK3A-01	12 85 24 93 00
16	Handle, stainless steel		11 11 69 0A 00
8	Split pin		-
7	Washer		-
Outlet nozzle kit:		On Request	12 85 69 00 00
30	1 Chain, stainless steel		
	Cap seal, PTFE		12 85 59 00 01
	Cap, stainless steel	DC300-B-SS	12 85 59 30 01
	Outlet nozzle square, stainless steel	FLSP300B-4SL-SS	12 85 69 60 00
CNAF/PTFE Gasket (item 29):			12 91 42 00 00
Bolting kit (item 31):			11 16 92 30 00

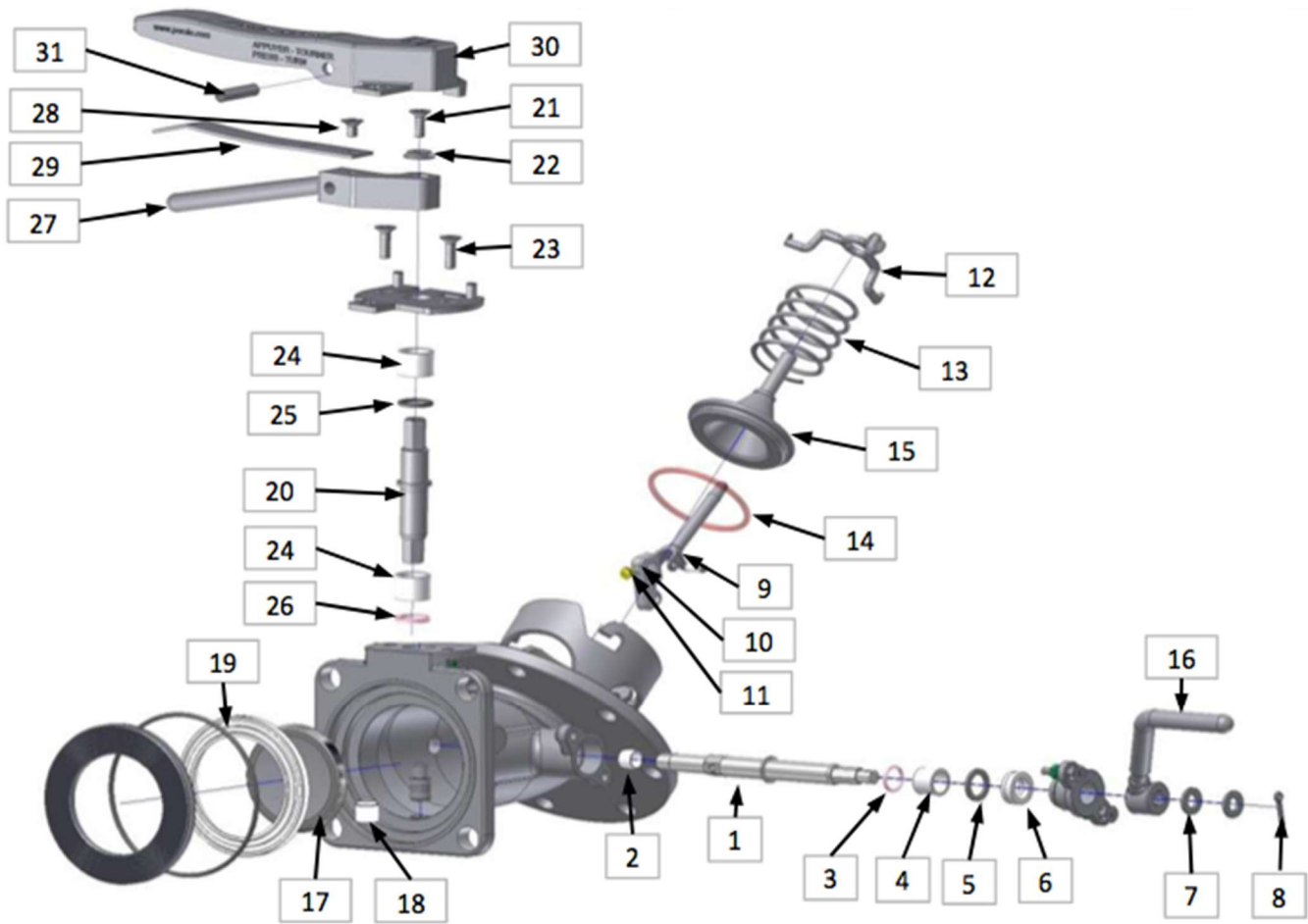
3" TWINCO™ Foot Valve



Description	TSI Part No.	MFG. Part No.
3" 45° TWINCO™ FOOT VALVE	Discontinued	VTCS34SCR

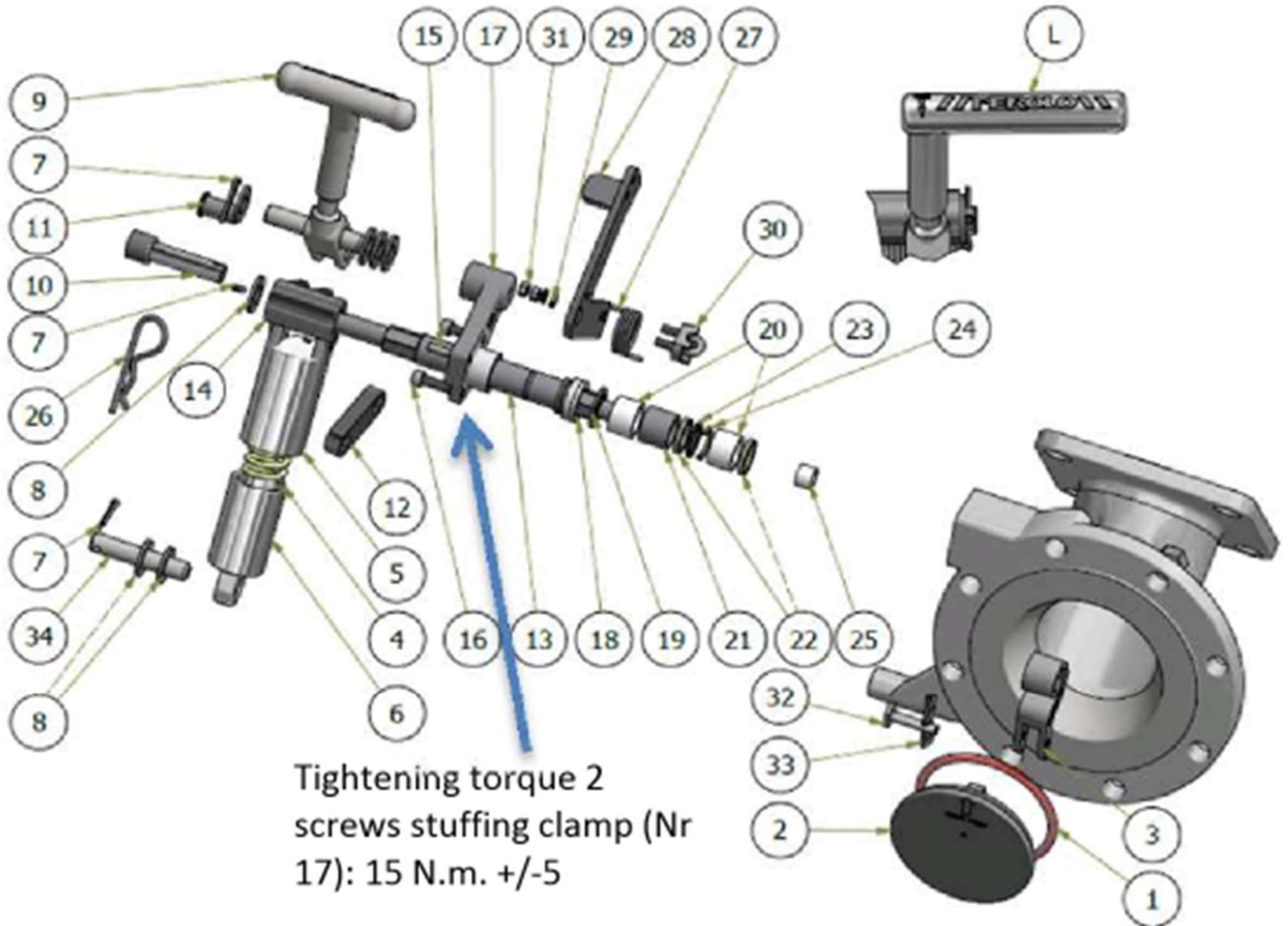
Item	Description	TSI Part No.	MFG. Part No.
1	Spindle, 316L/1.4404	FVTC300-SP4A-01	11 11 14 00 05
Spindle seals kit:		FVNC300-SK2A-01	12 85 38 91 00
2	Spindle bush, PTFE		
3	O-ring, FEP/Silicon		
4	Spindle bush, PTFE & glass 25%		
5	Packing ring, 316L/1.4404		
6	Packing gland, PTFE		
7	2 x washer, 304/1.4301		
8	Split pin, 316L, 1.4404		
Pushrod kit:		FVNC300-SK19A-01	11 16 01 92 00
9	Crank & pushrod, 316L/1.4404		
10	M6-8 screw, 304/1.4301		
11	M6 washer, 316L/1.4404		
Bayonet cap:		FVNC300-SP10A-01	11 11 14 00 02
12	Bayonet cap, 316L/1.4404		
Spring:		FVNC300-SP11A-01	12 85 38 00 02
13	Spring, 304L/1.4307		
Poppet seal:		FVXX300-SP9A-12	11 11 24 91 00
14	O-ring, FEP/Silicon		
Poppet kit:		FVNC300-SK5A-01	1111149700MK2
15	Poppet, 316L/1.4404		
14	O-ring, FEP/Silicon		
Handle kit:		FVNC300-SK3A-01	12 85 24 93 00
16	Handle, 316L		
8	Split pin		
7	Washer		
Remote control kit:		FVTC300-SK18A-01	11 11 82 91 00
Closure plate kit:		BFXX300-SP17A-01	12 85 57 93 00
17	Closure plate		
18	Closure plate bush, PTFE & glass 25%		
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
19	Closure plate seal		
Butterfly valve Spindle:		FVTS300-SP4A-01	11 12 10 91 00
20	Spindle		

3" TWINCO™ Foot Valve (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Butterfly valve Spindle seals kit:		FVTS300-SK2A-01	17 12 01 91 00
21	Screw M6-16, 304/1.4301		
22	Ring washer, 304/1.4301		
23	2 x screws M6-20, 304/1.4301		
	2 x nuts, 316/1.4401		
	2 x washers, 304/1.4301		
24	2 x spindle bush, PTFE & glass 25%		
25	O-rings, PTFE & silicon OR Viton		
26	O-rings, PTFE & silicon OR Viton		
18	Closure plate bush, PTFE & glass 25%		
Butterfly valve handle kit:		FVTS300-SK3A-01	11 11 83 91 00
27	Handle lever, 316/1.4401		
21	Screw M6-16, 304/1.4301		
22	Ring washer, 304/1.4301		
28	Screw M6-10, 304/1.4301		
29	Plane spring 304/1.4301		
30	Handle, 316L/1.4404		
31	Split pin, 316L, 1.4301		
Outlet nozzle:		FLSP300B-4SL-SS	12 85 69 00 00
	3" Outlet nozzle, 316/1.4401		
Outlet nozzle seal:		GF300-4SQ-TC	12 91 42 00 00
	Square seal, PTFE		
Outlet nozzle seal kit:		On Request	12 91 42 00 00
	5 x Square seal, PTFE		
Outlet nozzle screw kit:		On Request	12 85 84 91 00
	4 x screw		
	4 x washer		
	4 x nut		
	4 x washer		

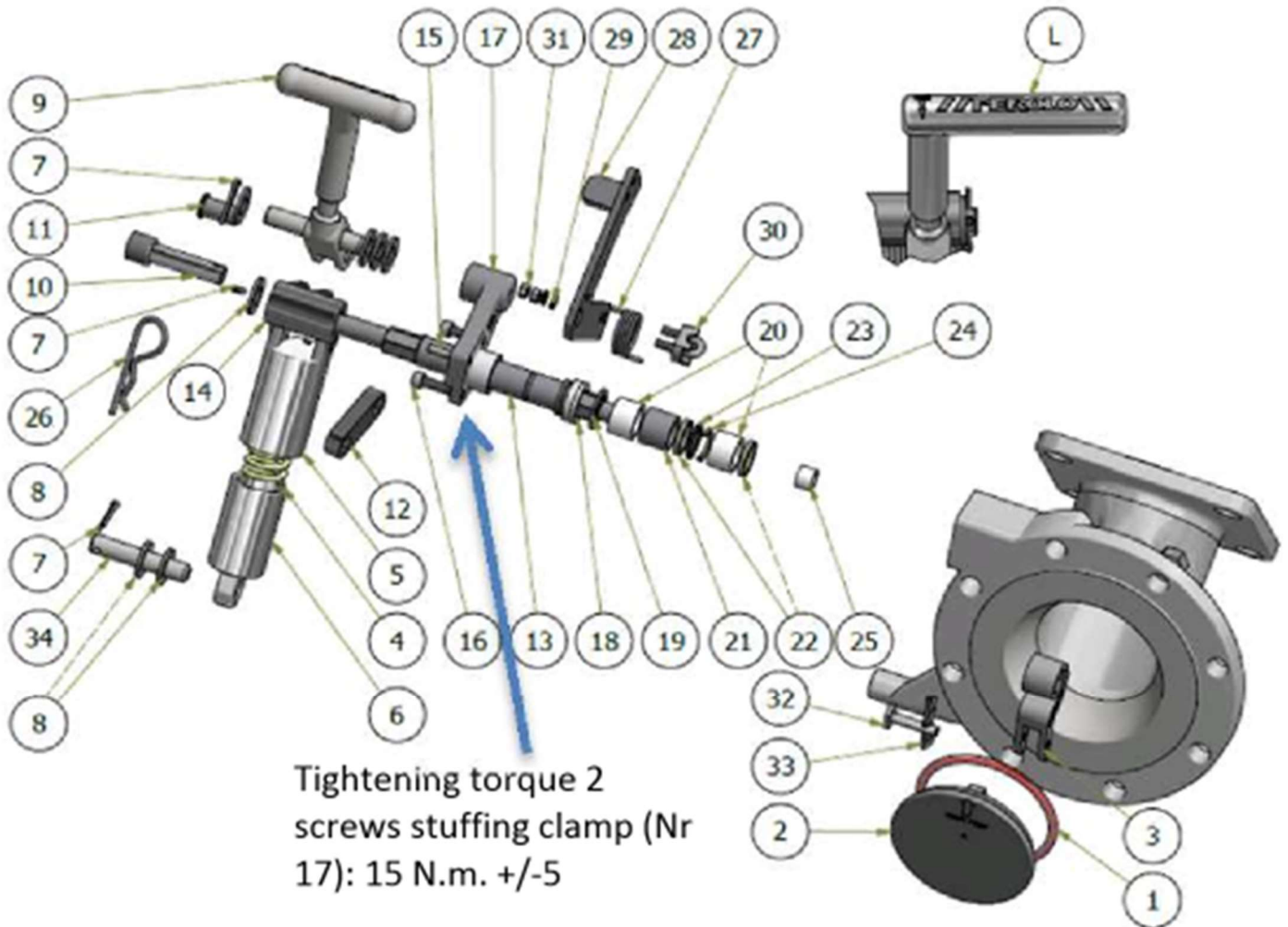
3" (ND80) NEATFLOW™ MKIV – Foot Valve – NX34 OR NF33



Description	TSI Part No.	MFG. Part No.
3" 45° NEATFLOW™ MKIV FOOT VALVE	FVNF300D-45D-SS-01	NX34AX1
3" 30° NEATFLOW™ MKIV FOOT VALVE	On Request	NX33AX1

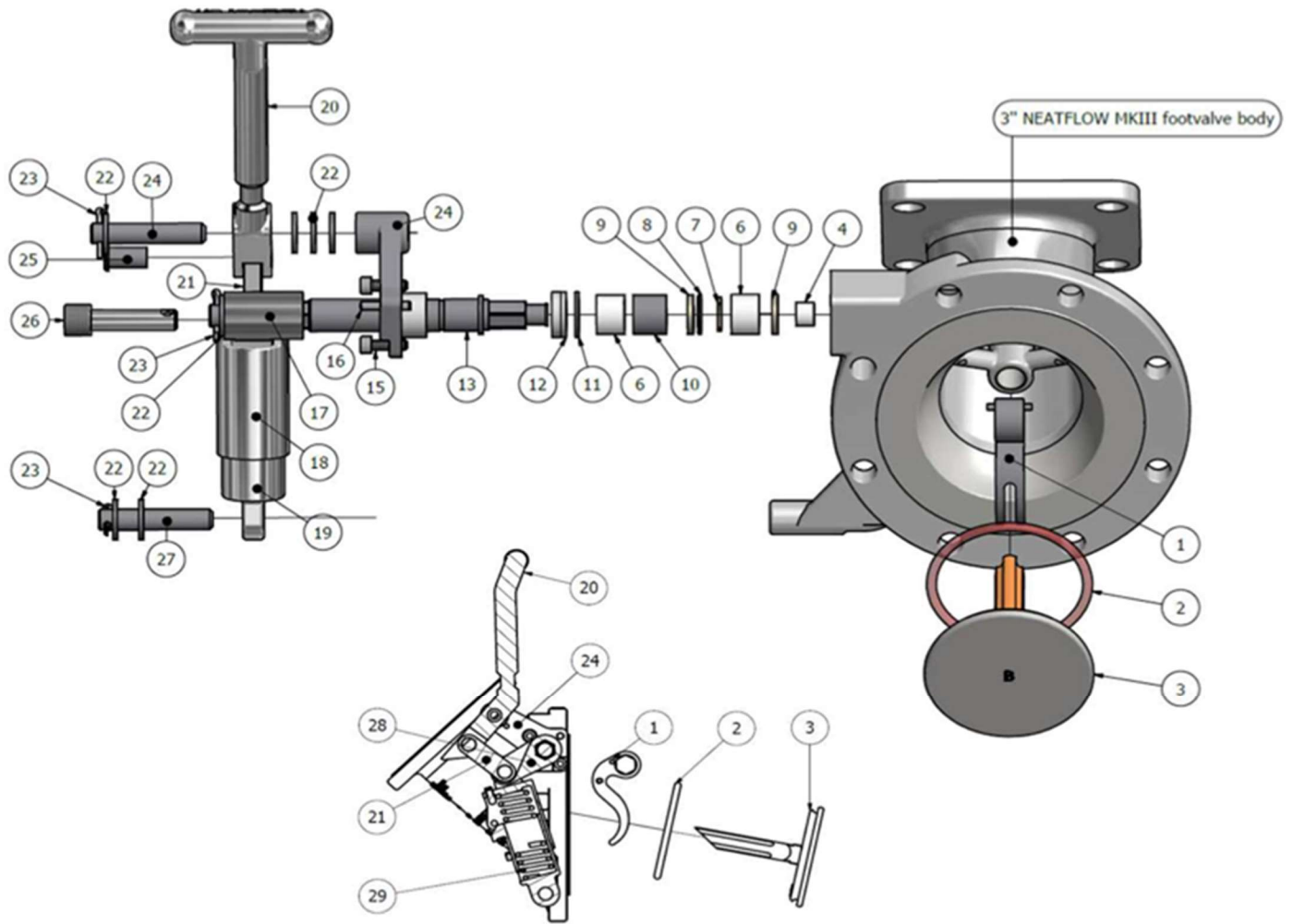
Item	Description	TSI Part No.	MFG. Part No.
Spindle kit:		On Request	
13	Spindle, stainless steel	FVNF300-SP4C-01	17 11 25 00 01
15	Grooved pin, Stainless steel		
17	Stuffing clamp, Stainless steel		
Spindle Seals kit:		FVNF300-SK2A-01	11 11 24 95 00
25	Spindle bush, PTFE		12 85 30 00 05
22	Gasket Ekonol, PTFE		70 10 90 00 93
20	Spindle bush, PTFE		11 11 24 00 06
24	Elastic ring, Stainless steel		-
23	Stop ring, Stainless steel		-
21	Spacer, Stainless steel		-
19	Packing gland, PTFE		11 11 24 00 15
18	Packing ring, Stainless steel		-
8	Washer, S.S.		-
7	V-pin, S.S.		-
Pusher Mk4:		On Request	
3	Pusher, Stainless steel		11 16 87 00 02
Poppet seal kit:		FVXX300-SP9A-12	11 11 24 91 00
1	O'ring, FEP/Silicon		70 10 15 00 53
Poppet kit:		On Request	11 16 87 90 00
1	O'ring, FEP/Silicon		70 10 15 00 53
2	Poppet, stainless steel		11 16 87 00 06
32	Poppet Spindle, Stainless steel		11 16 87 00 05
33	Beta Pin		11 16 87 00 04
Remote control kit:		FVNF300-SK18C-01	11 16 25 95 00
28	Remote control lever, Stainless steel		11 16 25 00 02
27	Spring, Stainless steel		11 16 25 00 03
31	M5 nut, Stainless steel		-
29	M5 washer, Stainless steel		-
30	Rope clamp, Stainless steel		-

3" (ND80) NEATFLOW™ MKIV – Foot Valve – NX34 OR NF33 (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Spring system kit:		On Request	11 11 14 99 19
6	Female MK2 case, Stainless steel		11 11 70 0A 03
5	Male MK2 case, Stainless steel		11 11 70 0A 04
26	Beta pin, Stainless steel		70 13 20 37 14
8	Washer, Stainless steel		-
7	V-pin, Stainless steel		-
4	Spring, Stainless steel		11 11 70 00 16
-	Chain		-
Handle kit:		FVNF300-SK3C-01	11 16 25 94 00
9	Handle, Stainless steel		11 11 83 1A 10
12	Connecting rod, Stainless steel		-
11	Spindle roller, Stainless steel		-
8	Z12 washer, Stainless steel		-
7	Split pin, Stainless steel		-
L Handle kit:		FVNF300-SK27C-01	11 12 99 10 00
L	L handle, Stainless steel		11 11 70 0A 08
12	Connecting rod, Stainless steel		-
11	Spindle roller, Stainless steel		-
8	Z12 washer, Stainless steel		-
7	Split pin, Stainless steel		-
High Temperature		On Request	
1	O'ring, PFA/Silicon		70 10 17 00 32
19	Packing gland, PTFE Graphite		17 11 71 00 03
20	Spindle bush, PTFE Graphite		17 11 71 00 02
22a	Gasket, KALREZ		80 10 01 93 20
22b	Gasket, PTFE		70 10 90 00 93
25	Spindle bush, PTFE Graphite		17 11 71 00 01

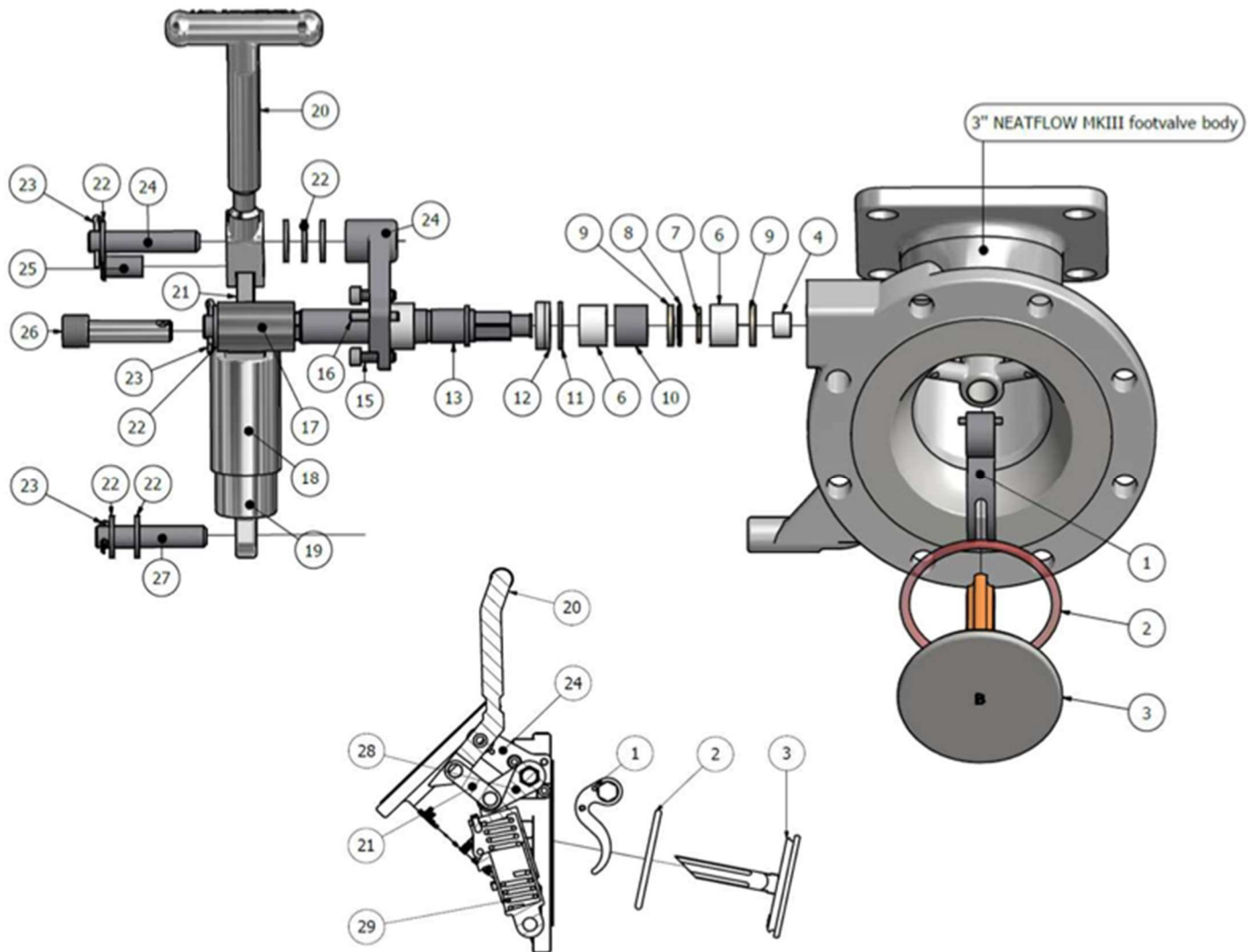
3" NEATFLOW™ MKIII Foot Valve



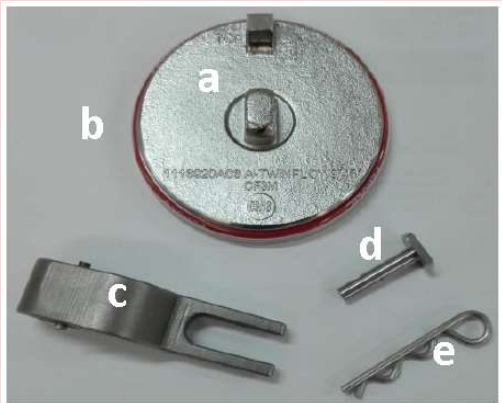
Description	TSI Part No.	MFG. Part No.
3" 45° NEATFLOW™ MKIII FOOT VALVE	Discontinued	NL33AX1
3" 30° NEATFLOW™ MKIII FOOT VALVE	Discontinued	NL34AX1

Item	Description	TSI Part No.	MFG. Part No.
13	Spindle 316L/1.4404	FVNF300-SP4C-01	17 11 25 00 01
Spindle seals kit:		FVNF300-SK2A-01	11 11 24 95 00
4	Spindle bush, PTFE & 25% glass		
9	2 x Elastic Gasket, Ekonol / S. S.		
6	2 x Spindle bush, PTFE & 25% glass		
7	Elastic ring 316L/1.4404		
8	Stop ring, 316L/1.4404		
10	Spacer, 316L/1.4404		
11	Packing gland, PTFE		
12	3 x Packing ring, 316L/1.4404		
22	Washer, S. S.		
21	V-pin, S. S.		
Lift fork:		FVNF300-SP12C-01	11 16 25 92 00
1	Lift fork (type C), 316L/CF3M		
Poppet seal:		FVXX300-SP9A-12	11 11 24 91 00
2	O-ring, FEP/Silicon		
Poppet kit:		FV300NFL-SK5C-01	11 16 25 93 00
3	Poppet, 316L/1.4404		
2	O-ring, FEP/Silicon		
Congealing Poppet kit:		On Request	11 16 25 93 20
3	Conical poppet, 316/CF3M		
2	O-ring, FEP/Silicon		
Spring system kit:		FVNF300-SK9B-01	11 11 70 95 00
18	Female MK2 case, 316/CF8M		
19	Male MK2 casting, 316/CF8M		
26	Removable shaft, 316L/1.4404		
23	V-pin, S. S.		
22	2 x washer, S. S.		
27	Beta pin, S. S.		
29	Spring, S. S.		
	Chain, 316L/1.4404		
	M6-16 screw, 304/1.4301		

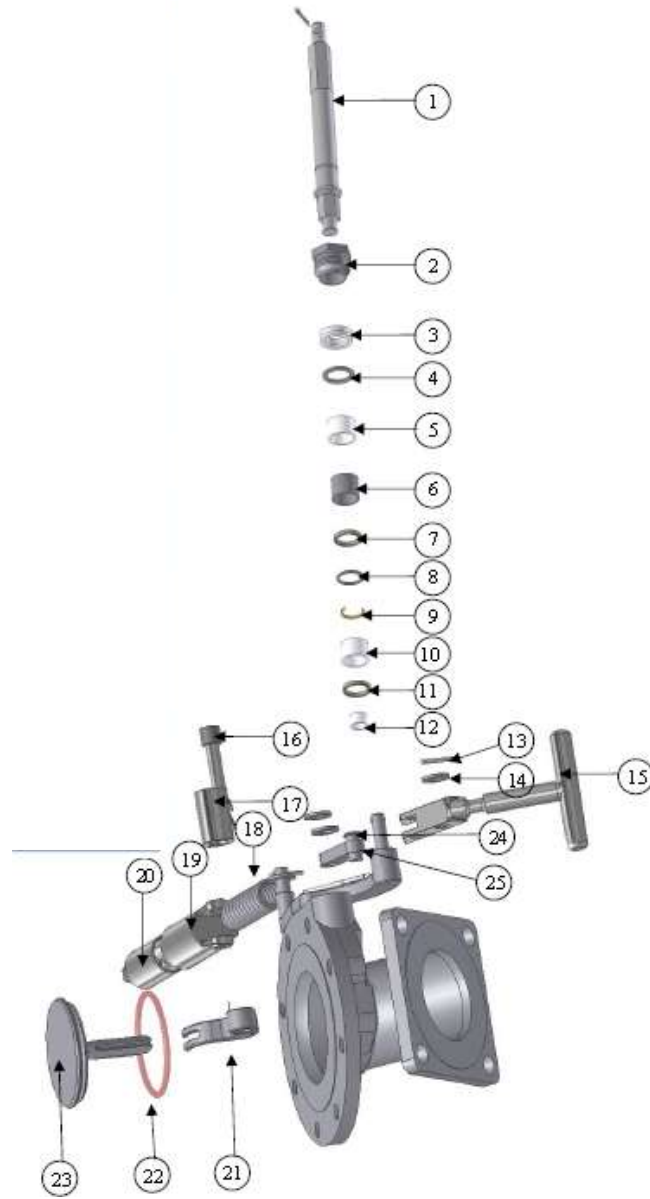
3" NEATFLOW™ MKIII Foot Valve (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Handle kit:		FVNF300-SK3C-01	11 16 25 94 00
20	Handle, 316L/1.4409		
21	Connecting rod, 316/CF8M		
28	Spindle roller, 304L/1.4307		
22	2 x Z12 washer, 316L/1.4404		
23	Split pin, 316L/1.4404		
L Handle kit:		FVNF300-SK27C-01	11 12 99 10 00
20	L handle, 316L/1.4409		
21	Connecting rod, 316/CF8M		
28	Spindle roller, 304L/1.4307		
22	2 x Z12 washer, 316L/1.4404		
23	Split pin, 316L/1.4404		
Remote control kit:		FVNF300-SK18C-01	11 16 25 95 00
	Remote control lever, 316L/1.4404		
	Spring, 302		
	M5 nut, 304L/1.4307		
	M6 washer, 316L/1.4404		
	Rope clamp, 316L/1.4404		

Upgrade KIT: Neatflow MK3 to MK4	TSI Part No.	MFG. Part No.
	FVNF300-SK21C-01	11 16 87 70 00

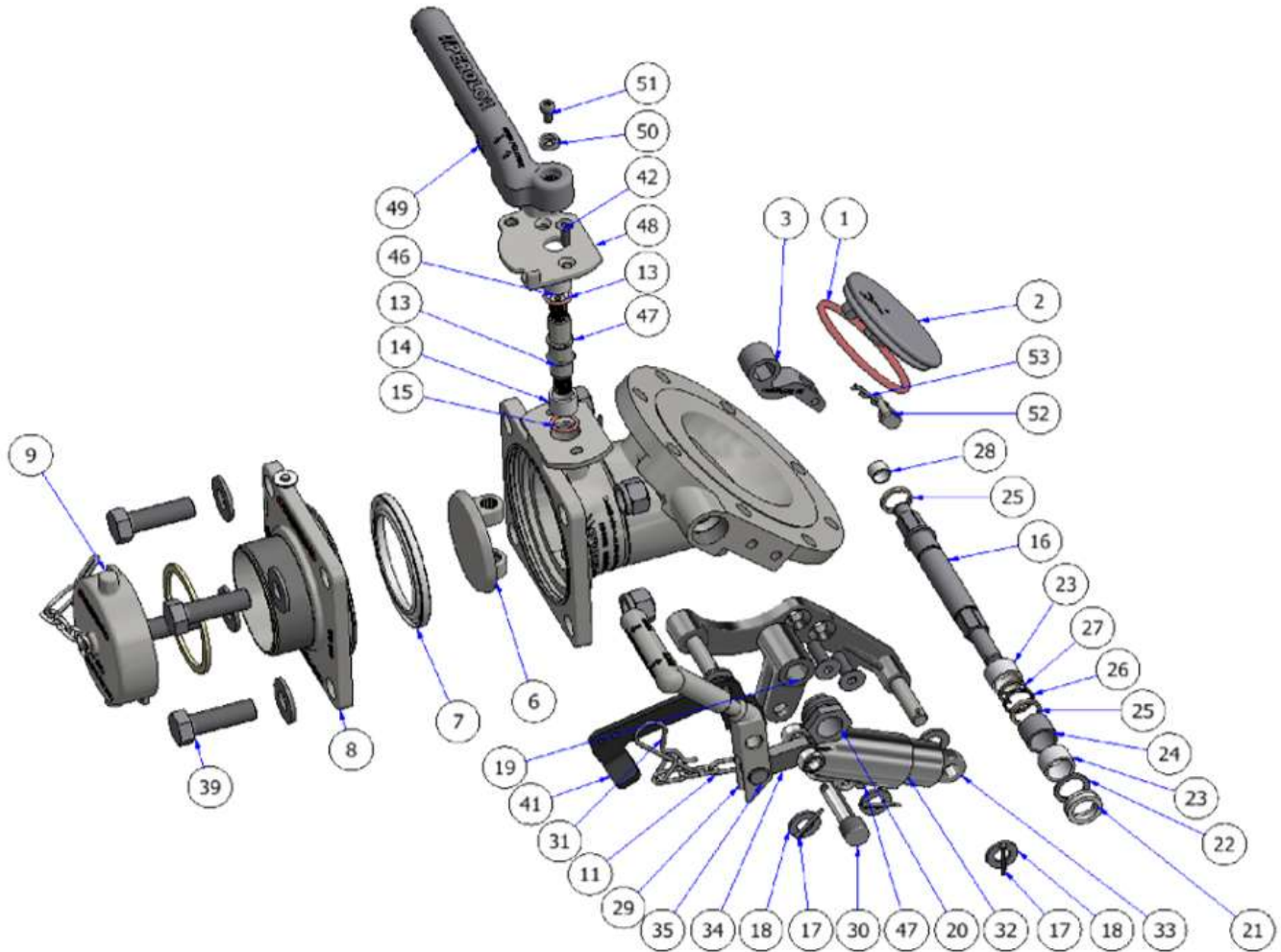
3" NEATFLOW™ MKII Foot Valve



Description	TSI Part No.	MFG. Part No.
3" 45° NEATFLOW™ MKII FOOT VALVE	Discontinued	NF34A1
3" 30° NEATFLOW™ MKII FOOT VALVE	Discontinued	NF33A1

Item	Description	TSI Part No.	MFG. Part No.
1	Spindle 316L/1.4404	FVNF300-SP4B-01	11 11 14 99 11
Spindle seals kit:		FVNF300-SK2A-01	11 11 24 95 00
2	Stuffing clamp (316L/1.4404)		
3	Packing (PTFE/Graphite)		
4	Packing ring (316L/1.4404)		
5	Spindle bush, PTFE & 25% glass		
6	Spacer, 316L/1.4404		
7	Elastic Gasket, Ekonol / S. S.		
8	Stop ring, 316L/1.4404		
9	Elastic ring, 316L/1.4404		
10	Spindle bush, PTFE & 25% glass		
11	Elastic Gasket, Ekonol / S. S.		
12	Spindle bush, PTFE & 25% glass		
Handle kit including:		FVNF300-SK3A-01	11 11 24 93 00
13	Split pin (316L/1.4404)		
14	Washer (316L/1.4404)		
15	Handle (316L/1.4404)		
24	Roller Spindle (304L/1.4307)		
25	Connecting rod (316L/1.4404)		
MKII Spring system kit including:		FVNF300-SK9B-01	11 11 14 99 12
16	Removable shaft, 316L/1.4404		
17	Drive yoke (316/1.4408)		
18	Spring (Stainless Steel)		
19	Female MK2 casting, 316/1.4409		
20	Male MK2 casting, 316/1.4409		
Cam:		FVNF300-SP12B-01	11 11 24 99 02
21	Cam (316/1.4409)		
Poppet seal:		FVXX300-SP9A-12	11 11 24 91 00
22	Poppet seal (FEP/ Silicone)		
Poppet kit including:		FVNF300-SK5B-01	11 11 27 92 00
22	Poppet seal (FEP/ Silicone)		
23	Poppet (316/1.4409)		
Poppet & Cam kit including:		N/A	11 11 27 95 00
21	Cam (316/1.4409)		
22	Poppet seal (FEP/ Silicone)		
23	Poppet (316/1.4409)		

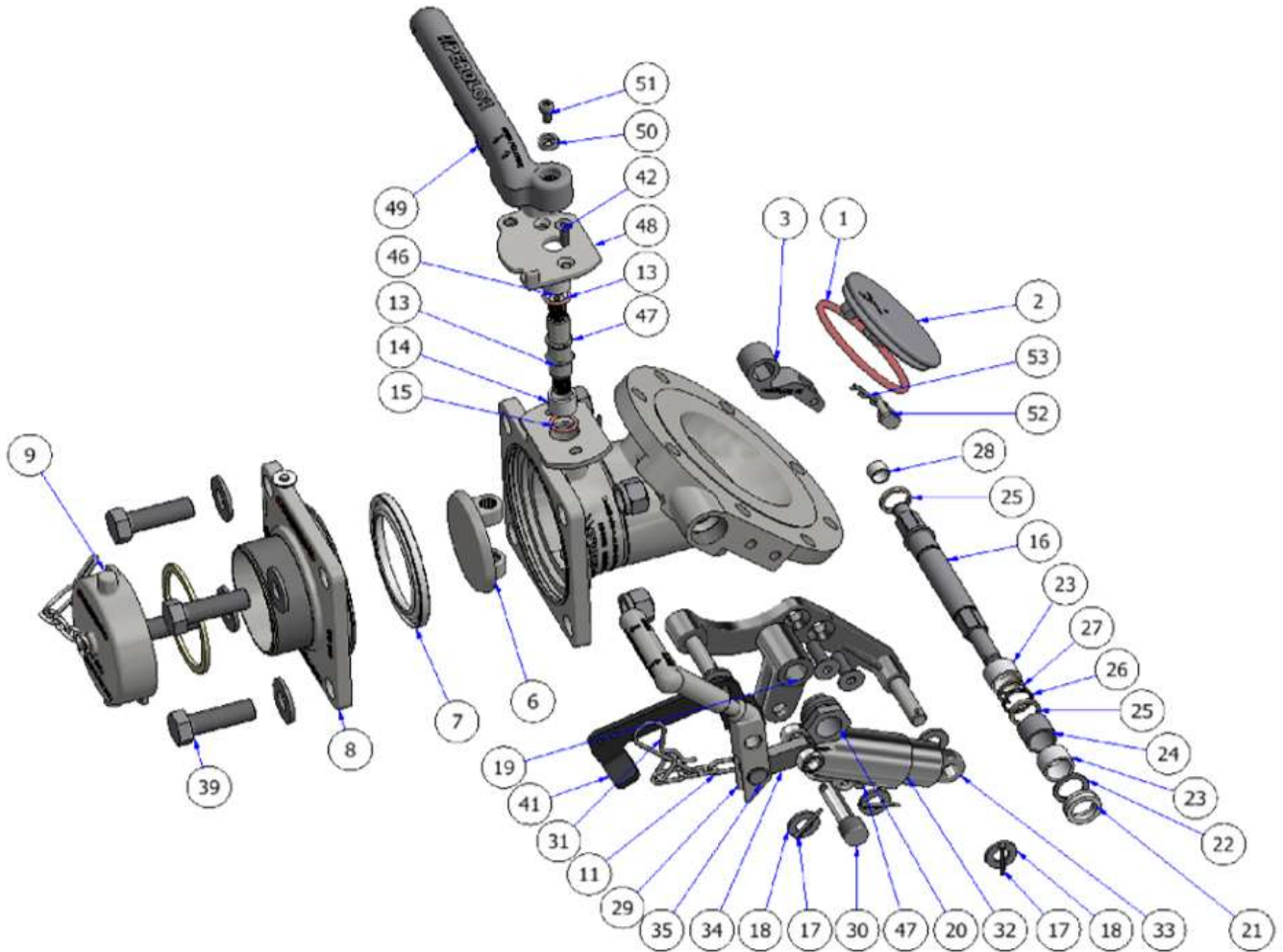
3" (ND80) TWINFLOW™ MKIV – Bottom Discharge – VTSXS3



Description	TSI Part No.	MFG. Part No.
3" TWINFLOW™ FOOT VALVE MK4	FVTF300D-45D-SS-01B	VTSXS34CW

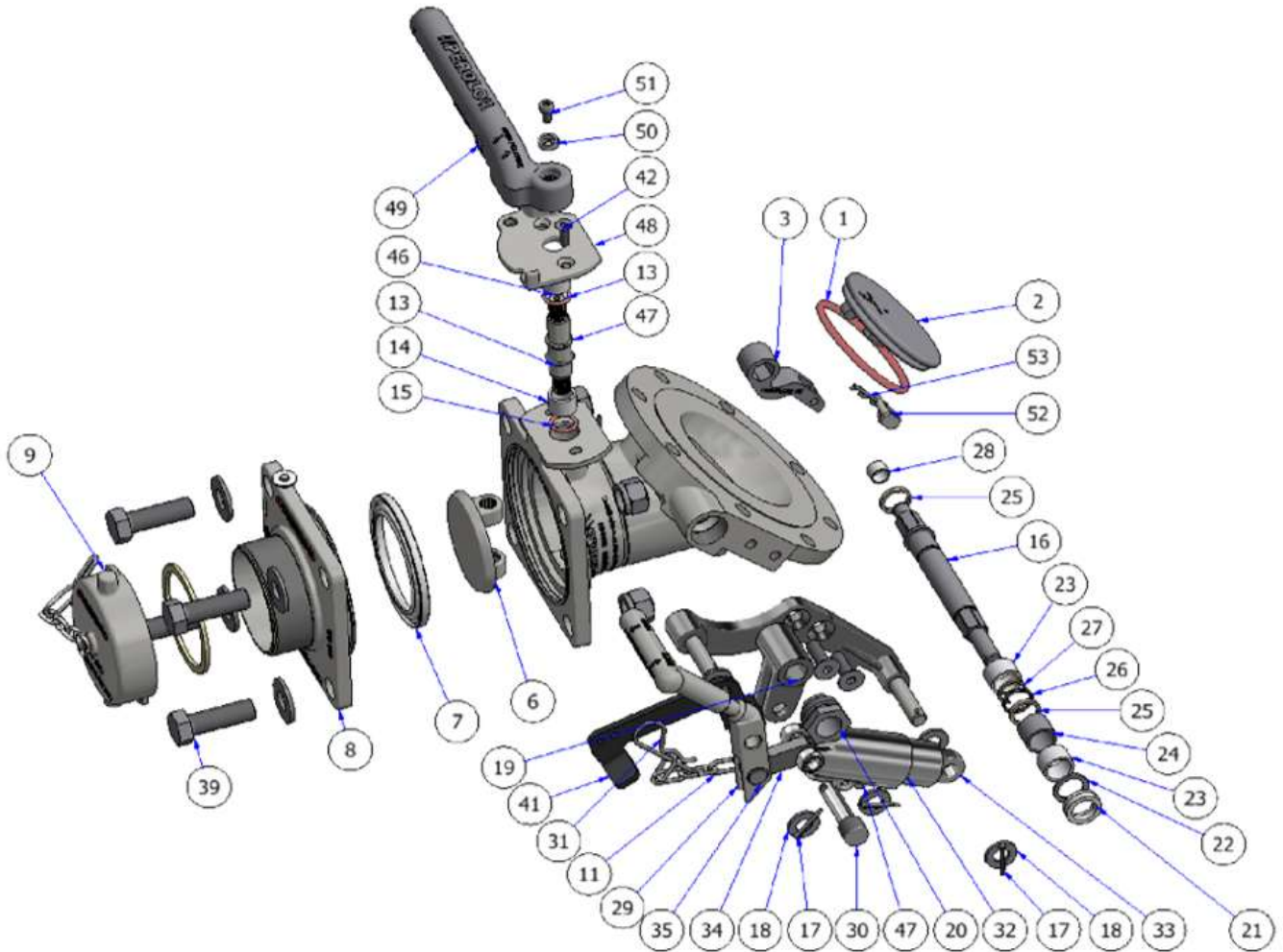
Item	Description	TSI Part No.	MFG. Part No.
Spindle kit:		On Request	
16	Spindle, stainless steel	FVNF300-SP4C-01	17 11 25 00 01
19	Drive yoke, Stainless steel		
20	Stuffing clamp, Stainless steel		
Spindle Seals kit:		FVNF300-SK2A-01	11 11 24 95 00
17	V-pin, S.S.		-
18	Washer, S.S.		-
21	Packing ring, Stainless steel		-
22	Packing gland, PTFE		11 11 24 00 15
23	Spindle bush, PTFE		11 11 24 00 06
24	Spacer, Stainless steel		-
25	Gasket Ekonol, PTFE		70 10 90 00 93
26	Stop ring, Stainless steel		-
27	Elastic ring, Stainless steel		-
28	Spindle bush, PTFE		12 85 30 00 05
Pusher Mk4:		On Request	
3	Pusher, Stainless steel		11 16 92 00 02
Poppet seal kit:		FVXX300-SP9A-12	11 11 24 91 00
1	O'ring, FEP/Silicon		70 10 15 00 53
Poppet kit:		On Request	11 16 92 90 00
1	O'ring, FEP/Silicon		70 10 15 00 53
2	Poppet, stainless steel		11 16 92 00 06
52	Poppet Spindle, Stainless steel		11 16 87 00 05
53	Beta Pin		11 16 87 00 04
Remote control kit:		FVTF300-SK18A-01	11 11 98 90 00
41	Remote control lever, Stainless steel		11 11 70 00 17
40	Rope clamp		
-	Spring, Stainless steel		11 11 57 00 02

3" (ND80) TWINFLOW™ MKIV – Bottom Discharge – VTSXS3 (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Spring system kit:		On Request	11 11 14 99 19
33	Female MK2 case, Stainless steel		11 11 70 0A 03
32	Male MK2 case, Stainless steel		11 11 70 0A 04
31	Beta pin, Stainless steel		70 13 20 37 14
18	Washer, Stainless steel		-
17	V-pin, Stainless steel		-
47	Spring, Stainless steel		11 11 70 00 16
11	Chain		-
Handle kit:		On Request	11 16 92 20 00
29	Handle, Stainless steel		11 11 83 1A 10
34	Connecting rod, Stainless steel		-
35	Spindle roller, Stainless steel		-
18	Z12 washer, Stainless steel		-
17	Split pin, Stainless steel		-
L Handle kit:		FVNF300-SK27C-01	11 12 99 10 00
L	L handle, Stainless steel		11 11 70 0A 08
12	Connecting rod, Stainless steel		-
11	Spindle roller, Stainless steel		-
8	Z12 washer, Stainless steel		-
7	Split pin, Stainless steel		-
High Temperature		On Request	
1	O'ring, PFA/Silicon		70 10 17 00 32
19	Packing gland, PTFE Graphite		17 11 71 00 03
20	Spindle bush, PTFE Graphite		17 11 71 00 02
22a	Gasket, KALREZ		80 10 01 93 20
22b	Gasket, PTFE		70 10 90 00 93
25	Spindle bush, PTFE Graphite		17 11 71 00 01

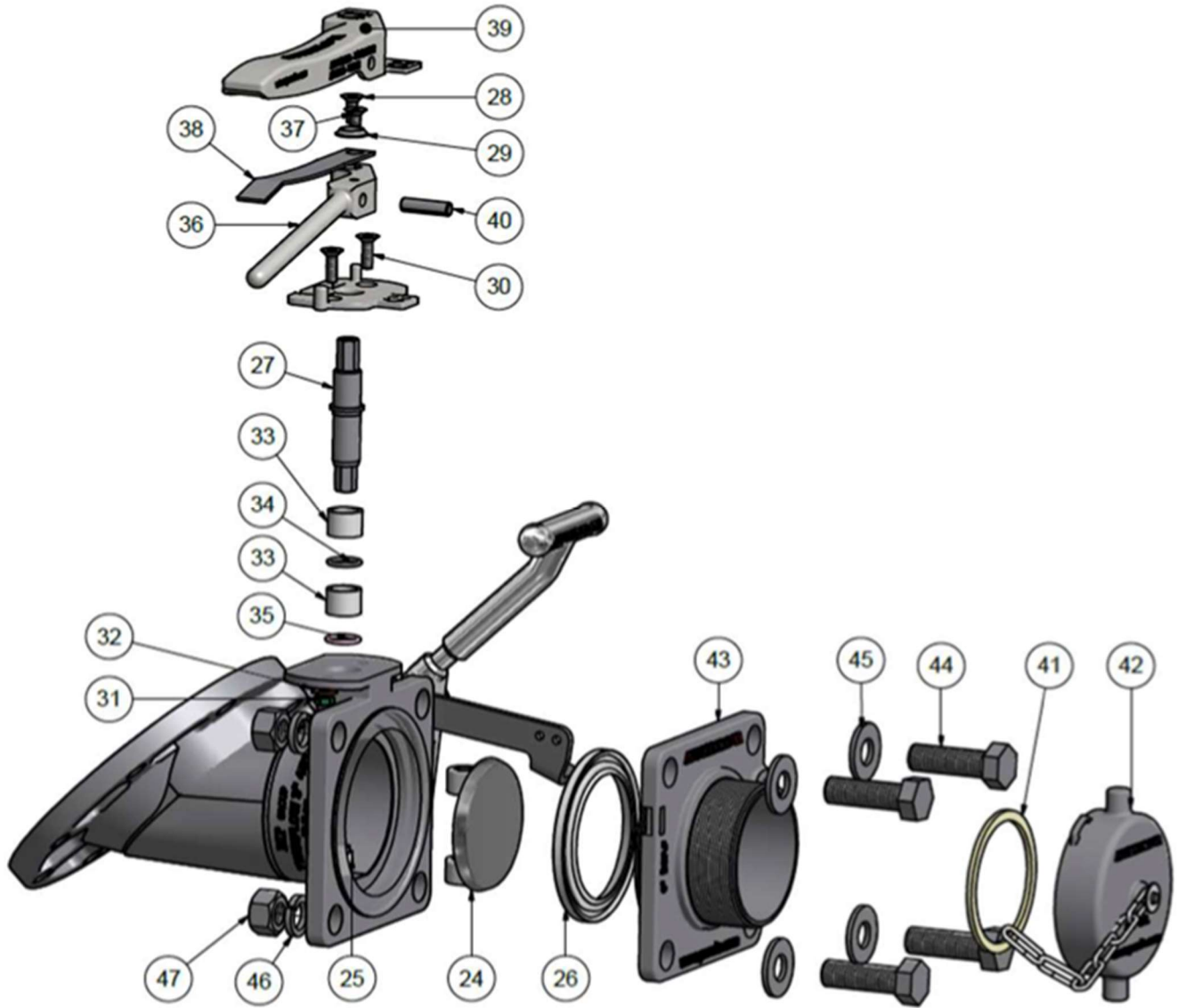
3" (ND80) TWINFLOW™ MKIV – Bottom Discharge – VTSXS3 (cont'd)



Item	Description	TSI Part No.	MFG. Part No.
Butterfly valve spindle kit:			
13	Short spindle, Duplex / 1.4462	On Request	17 12 88 00 01
Butterfly valve spindle and seals kit:		On Request	11 16 92 40 00
4	Closure plate bush, PTFE & glass 25%		12 85 57 00 04
51	Screw M6-12, Stainless steel		-
50	Ring washer, Stainless steel		-
42	Screw M6-20, Stainless steel		-
44	Nuts, stainless steel		-
43	Washers, stainless steel		-
14	Spindle bush, PTFE & glass 25%		12 85 30 00 03
15	O'rings, FEP & silicon		70 10 15 00 12
47	O'ring, FKM/Viton		70 10 01 02 12
46	Short Spindle bush, PTFE & glass 25%		11 12 62 00 01
Butterfly valve handle kit:		On Request	11 17 58 20 00
51	Screw M6-12, stainless steel		
50	Ring washer, stainless steel		-
49	Handle, stainless steel		11 14 54 40 00
Closure plate kit:		On Request	12 85 57 81 00
6	Closure plate, stainless steel	BFXX300-SP17C-01	11 14 85 20 00
4	Closure plate bush, PTFE & glass		12 85 57 00 04
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
7	Closure plate seal, PTFE		12 85 57 00 01
Outlet nozzle kit:		On Request	11 11 83 93 00
7	Closure plate seal, PTFE		12 85 57 00 01
12	Washer, Stainless steel		
11	Chain, Stainless steel		
10	Cap seal, PTFE		12 85 59 00 01
9	Cap, stainless steel		12 85 59 30 01
8	Outlet nozzle square, stainless steel	FVTF300-SP26A-01	11 11 83 20 01
Bolting kit (items 36-39):			11 16 92 30 00

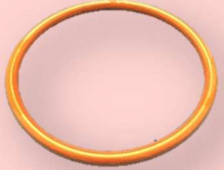
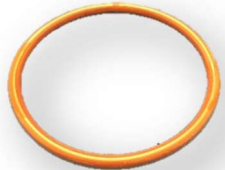
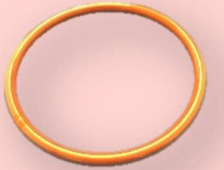

Item	Description	TSI Part No.	MFG. Part No.
1	Spindle, 316L/1.4404	FVNF300-SP4C-01	17 11 25 00 01
Spindle seals kit:		FVNF300-SK2A-01	11 11 24 95 00
3	Spindle bush, PTFE & 25% glass		
4	2 x Elastic Gasket, Ekonol / S. S.		
5	2 x Spindle bush, PTFE & 25% glass		
6	Elastic ring, 316L/1.4404		
7	Stop ring, 316L/1.4404		
8	Spacer, 316L/1.4404		
9	Packing gland, PTFE		
10	3 x Packing ring, 316L/1.4404		
11	Washer, S. S.		
12	V-pin, S. S.		
Lift fork kit:		FVNF300-SP12C-01	11 16 25 92 00
20	Lift fork (type C), 316L/CF3M		
Poppet seal:		FVXX300-SP9A-12	11 11 24 91 00
21	O-ring, FEP/Silicon		
Poppet kit:		FV300NFL-SK5C-01	11 16 25 93 00
22	Poppet, 316L/1.4404		
21	O-ring, FEP/Silicon		
Spring system kit:		On Request	11 11 70 96 00
13	Female MK2 case, 316/CF8M		
14	Male MK2 casting, 316/CF8M		
15	Removable shaft, 316L/1.4404		
16	V-pin, S. S.		
11	2 x Washer, S. S.		
12	Beta pin, S. S.		
17	Spring, S. S.		
18	Chain, 316L/1.4404		
19	M6-16 screw, 304/1.4301		
Handle kit:		FVTF300-SK3A-01	11 16 25 97 00
23	Handle, 316L/1.4409		
	Connecting rod, 316/CF8M		
	Spindle roller, 304L/1.4307		
	2 x Z12 washer, 316L/1.4404		
	Split pin, 316L/1.4404		
L Handle kit:		FVNF300-SK27C-01	11 12 99 10 00
23	L handle, 316L/1.4409		
	Connecting rod, 316/CF8M		
	Spindle roller, 304L/1.4307		
	2 x Z12 washer, 316L/1.4404		
	Split pin, 316L/1.4404		

3" TWINFLOW™ Foot Valve (cont'd)

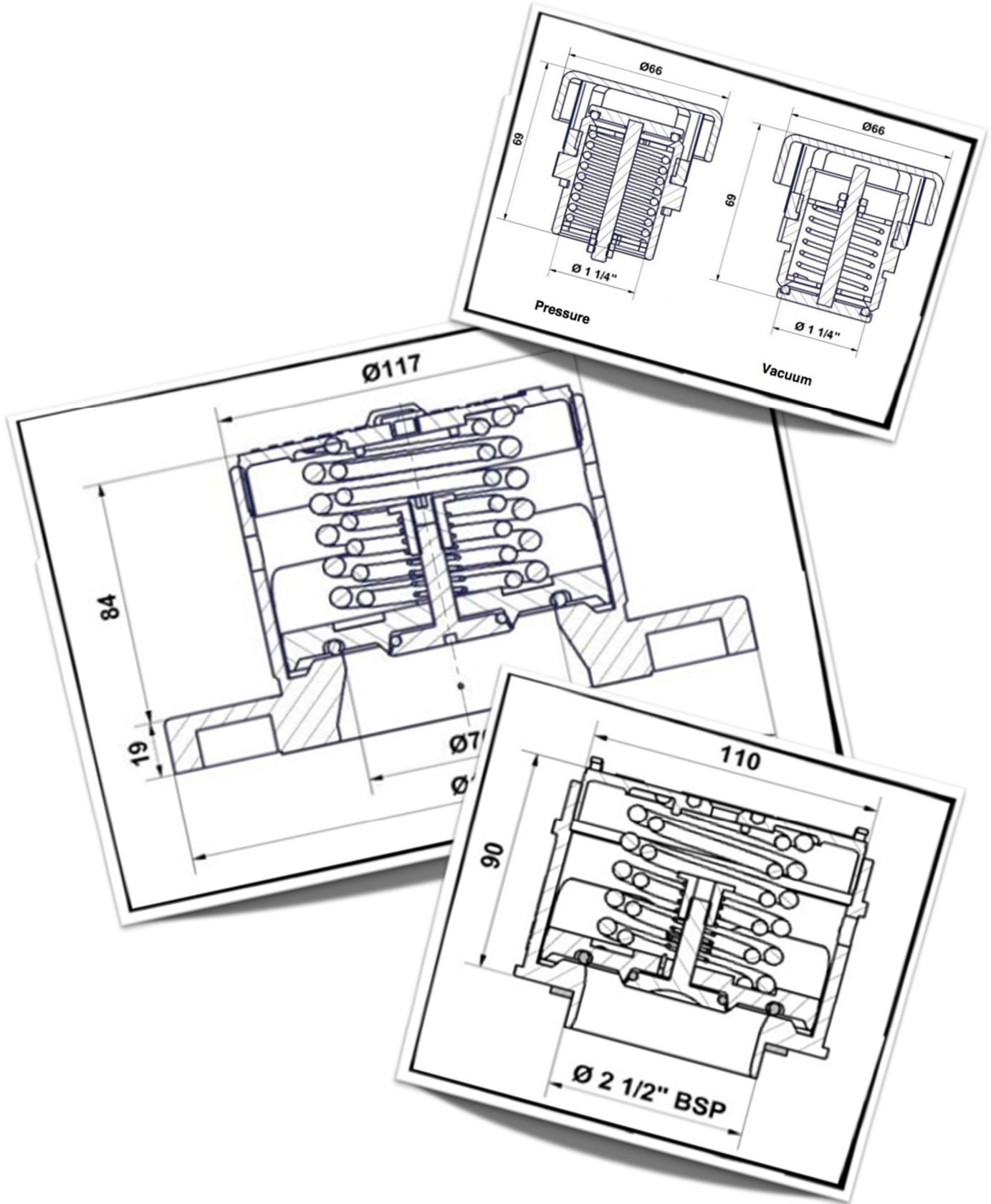


Item	Description	TSI Part No.	MFG. Part No.
Closure plate kit:		BFXX300-SP17A-01	12 85 57 93 00
24	Closure plate		
25	Closure plate bush, PTFE & 25% glass		
Closure plate seal:		BFXX300-SP1A-01	12 85 57 94 00
26	Closure plate seal		
Butterfly valve Spindle:		FVTS300-SP4A-01	11 12 10 91 00
27	Spindle		
Butterfly Spindle seals kit:		FVTS300-SK2A-01	17 12 01 91 00
28	Screw M6-16, 304/1.4301		
29	Ring washer, 304/1.4301		
30	2 x Screw M6-20, 304/1.4301		
31	2 x Nuts, 316/1.4401		
32	2 x Washer, 304/1.4301		
33	2 x Spindle bush, PTFE & 25% glass		
34	O-rings, PTFE & silicon OR Viton		
35	O-rings, PTFE & silicon OR Viton		
25	Closure plate bush, PTFE & 25% glass		
Butterfly valve handle kit:		FVTS300-SK3A-01	11 11 83 91 00
36	Handle lever, 316/1.4401		
28	M6-16 screw, 304/1.4301		
29	Washer, 304L/1.4307		
37	M6-10 screw, 304/1.4301		
38	Plane spring, 304/1.4301		
39	Handle, 316L/1.4404		
40	Split pin, 304/1.4301		
Outlet nozzle square kit:		On Request	11 11 83 93 00
26	Closure plate seal, PTFE		
	2 x Washer, 316L/1.4404		
	Chain, 304L/1.4307		
41	Cap seal, PTFE		
42	Cap, 316/1.4408		
43	Outlet nozzle square, 316/1.4401		
43	Outlet nozzle square, 316	FVTF300-SP26A-01	11 11 83 20 01
Outlet nozzle bolting kit:		On Request	17 12 10 95 00
44	4 x M16 bolt		
45	4 x M16 washer		
46	4 x W16 grower washer		
47	4 x Nut		
Remote control:		FVTF300-SK18A-01	11 11 98 90 00
	Remote control lever		
	Rope clamp		
	Spring		

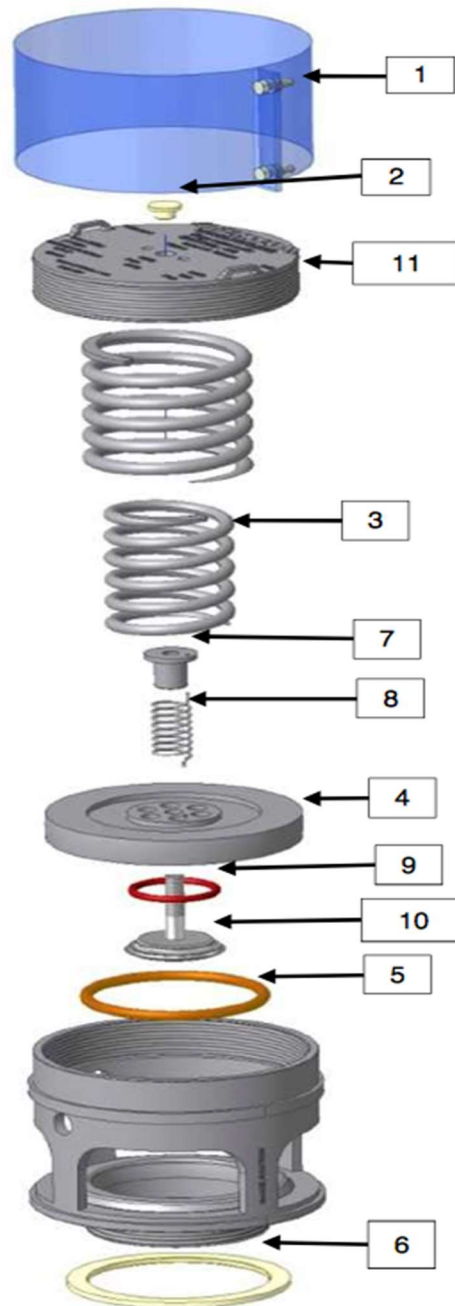
Foot Valve Spare Parts & Tools

Item	Image	Description	TSI Part No.	Compatible to Part No.
1		FOOT VALVE ENCAPSULATED O-RING	FVXX300-SP9A-02	5005-104
2		3" UNIVERSAL FOOT VALVE ENCAPSULATED O-RING	FVXX300-SP9A-12	
3		3" UNIVERSAL FOOT VALVE THICK-STYLE ENCAPSULATED O-RING	FVXX300-SP39A-12	
4		PORTABLE VACUUM TESTER	MISC-PVT-ASM	

Safety Relief Valves



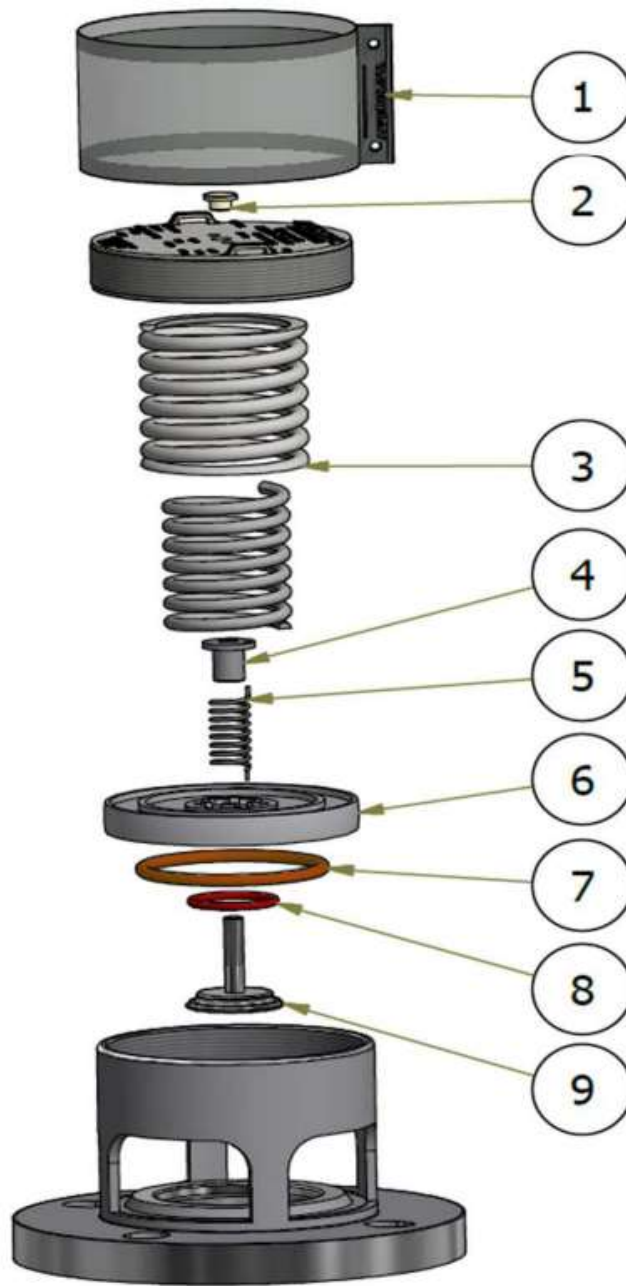
2.5" MEGA SUPERVENTIX™ BSP Safety Relief Valve



Item	Description	TSI Part No.	MFG. Part No.
1	2.5" BSP SRV - 2.18 BAR – Pressure / Vacuum w/ Gauze	PVTB250-22V-SS-01	MX65F218T21GC
2	2.5" BSP SRV - 3.75 BAR _ Pressure/Vacuum w/ Gauze	PVTB250-38V-SS-01	MX65F375T21GC
3	2.5" BSP SRV - 4.40 BAR – Pressure/Vacuum w/ Gauze	PVTB250-44V-SS-01	MX65F44T21GC
4	2.5" BSP SRV - 4.40 BAR – PRESSURE ONLY	PVTB250-44X-SS-01	MX65F44TSC

Item	Description	TSI Part No.	MFG. Part No.
Pressure & Vacuum O'ring / Gaskets:			
5	Pressure O-ring (FEP/Silicon)	PVXX250-SP9A-01	11 10 01 99 05
9	Vacuum O'ring (FEP/Silicone)	PVXX250-SP14A-12	11 10 01 91 00
6	Setting gasket (Composite/PTFE)	GR250-PVX-TC	12 91 31 91 01
6	Setting gasket (Perbunan/PTFE)	GR250-PVX-TN	11 10 01 93 00
Spring sets:			
3	Spring set pressure 2.18 Bar	PVXX250-SP46A-01	11 10 01 95 00
3	Spring set pressure 3.30 Bar	On Request	12 12 84 90 00
3	Spring set pressure 3.75 Bar	PVXX250-SP47A-01	11 10 01 96 00
3	Spring set pressure 4.40 Bar	PVXX250-SP48A-01	11 10 01 97 00
8	Spring set vacuum 0.21 bar	PVXX250-SP16A-01	11 10 01 98 00
Plates, Gauze & Cap:			
1	Flame proof gauze kit	PVXX250-SK4B-01	11 10 01 50 91
2	Plug (304L)	PVXX000-SP56A-01	70 14 06 90 15
4	Pressure plate for pressure only (316L, 1.4404)	PVXX250-SP13A-01	11 10 01 99 01
4	Pressure plate, pressure/vacuum (316L, 1.4404)	PVXX250-SP20A-01	11 10 01 99 00
7	Adjustment nut	PVXX250-SP15A-01	11 10 02 99 06
10	Vacuum poppet (316L/1.4404)	PVXX250-SP8A-01	11 10 01 99 02
2, 4, 5, 7, 8, 9, 10	Vacuum set kit (plug, pressure plate, O-rings, adjustment nut, spring set and vacuum poppet)	N/A	11 10 01 99 08

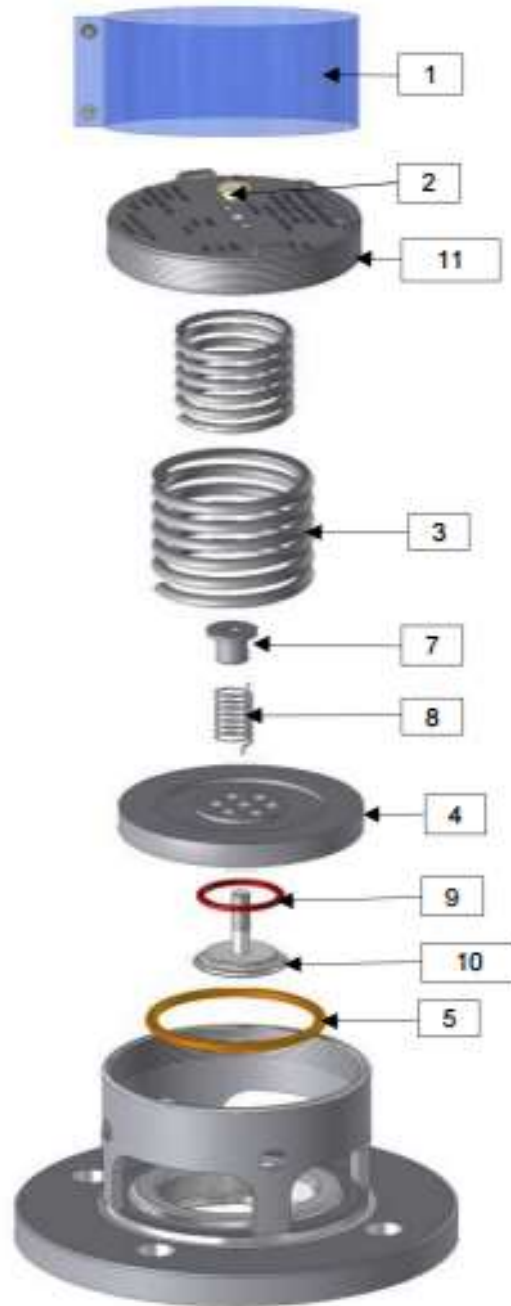
2½” (ND65) Safety Relief Valve – DN65 Flanged MEGA SUPERVENTIX™



Description	TSI Part No.	MFG. Part No.
2.5” FLANGED SRV - 4.40 BAR – PRESSURE ONLY	PVFL250-44X-SS-01	MX65S44TS
2.5” FLANGED SRV - 4.40 BAR - PRESSURE/VACUUM	PVFL250-44VG-SS-01	MX65S44T21S

Item	Description	TSI Part No.	MFG. Part No.
Pressure & Vacuum O'ring:			
7	Pressure O'ring (FEP/Silicone)	PVXX250-SP9A-01	11 10 01 99 05
8	Vacuum O'ring (FEP/Silicone)	PVXX250-SP14A-12	11 10 17 99 00
Spring sets:			
3	Spring set pressure 2.18 Bar	PVXX250-SP46A-01	11 10 01 95 00
3	Spring set pressure 3.30 Bar	On Request	12 12 84 90 00
3	Spring set pressure 3.75 Bar	PVXX250-SP47A-01	11 10 01 96 00
3	Spring set pressure 4.40 Bar	PVXX250-SP48A-01	11 10 01 97 00
3	Spring set vacuum 0.21 bar	PVXX250-SP16A-01	11 10 01 98 00
Plates, Gauze & Cap:			
6	Pressure plate for pressure only	PVXX250-SP13A-01	11 10 01 99 01
6	Pressure plate, pressure/vacuum	PVXX250-SP20A-01	11 10 01 99 00
9	Vacuum poppet	PVXX250-SP8A-01	11 10 01 99 02
2,4, 5,6, 7,8, 9	Vacuum set kit (plug, adjustment nut, pressure plate, o'rings, spring set and vacuum poppet)	N/A	11 10 01 99 08
4	Adjustment nut	PVXX250-SP15A-01	11 10 02 99 06
1	Flame proof gauze kit	PVXX250-SK4B-01	11 10 01 94 00
2	Plug (LDPE)	PVXX000-SP56A-01	70 14 06 90 15

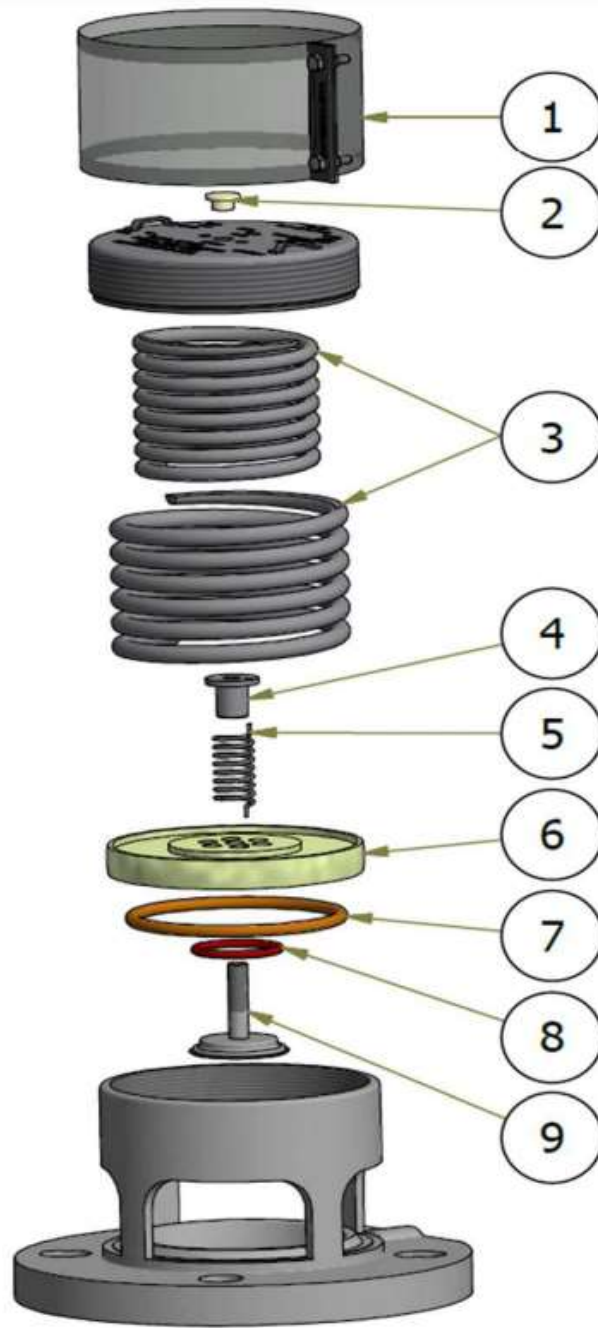
3" MEGA SUPERVENTIX™ Flanged Safety Relief Valve



Description	TSI Part No.	MFG. Part No.
3" FLANGED SRV - 4.40 BAR - PRESSURE ONLY	PVFL300-44X-SS-01	MX80S44TS
3" FLANGED SRV - 4.40 BAR - PRESSURE/VACUUM	PVFL300-44VG-SS-01	MX80S44T21S

Item	Description	TSI Part No.	MFG. Part No.
Pressure & Vacuum O'ring:			
5	Pressure O-ring (FEP/Silicon)	PVFL300-SP9A-01	11 10 17 98 00
9	Vacuum O'ring (FEP/Silicone)	PVXX250-SP14A-12	11 10 17 99 00
Spring sets:			
3	Spring set pressure 2.18 Bar	PVXX300-SP46A-01	11 10 17 91 00
3	Spring set pressure 3.30 Bar	On Request	11 10 17 92 00
3	Spring set pressure 3.75 Bar	PVXX300-SP47A-01	11 10 17 93 00
3	Spring set pressure 4.40 Bar	PVXX300-SP48A-01	11 10 17 94 00
8	Spring set vacuum 0.21 bar	PVXX250-SP16A-01	11 10 01 98 00
Plates, Gauze & Cap:			
1	Flame proof gauze kit (SS)	On Request	11 10 01 94 00
2	Plug (304L)	PVXX000-SP56A-01	70 14 06 90 15
4	Pressure plate for pressure only (316L, 1.4404)	PVXX300-SP13A-01	11 10 17 99 02
4	Pressure plate, pressure/vacuum (316L, 1.4404)	PVFL300-SP20A-01	11 10 17 99 01
7	Adjustment nut	PVXX250-SP15A-01	11 10 02 99 06
10	Vacuum poppet (316L/1.4404)	PVXX250-SP8A-01	11 10 01 99 02
2, 4, 5, 7, 8, 9, 10	Vacuum set kit (plug, pressure plate, O-rings, adjustment nut, spring set and vacuum poppet)	N/A	11 10 01 99 08

3" (ND80) High Flow Safety Relief Valve Flanged MEGA SUPERVENTIX™





Description	TSI Part No.	MFG. Part No.
3" FLANGED HIGH FLOW SRV - 4.40 BAR - PRESSURE ONLY	On Request	MG80S44TS
3" FLANGED HIGH FLOW SRV - 4.40 BAR - PRESSURE/VACUUM	On Request	MG80S44T21S

Item	Description	TSI Part No.	MFG. Part No.
Pressure & Vacuum O'ring:			
7	Pressure O'ring (FEP/Silicone)	PVFL300-SP9A-01	11 10 17 98 00
8	Vacuum O'ring (FEP/Silicone)	PVXX250-SP14A-12	11 10 17 99 00
Spring sets:			
3	Spring set pressure 3.30 Bar	On Request	11 10 17 50 00
5	Spring set vacuum 0.21 bar	PVXX250-SP16A-01	11 10 01 98 00
Plates, Gauze & Cap:			
6	Pressure plate for pressure only	PVXX300-SP13A-01	11 10 17 99 02
6	Pressure plate, pressure/vacuum	PVFL300-SP20A-01	11 10 17 99 01
9	Vacuum poppet	PVXX250-SP8A-01	11 10 01 99 02
4	Adjustment nut	PVXX250-SP15A-01	11 10 02 99 06
1	Flame proof gauze kit	On Request	11 10 01 94 00
2	Plug (LDPE)	PVXX000-SP56A-01	70 14 06 90 15

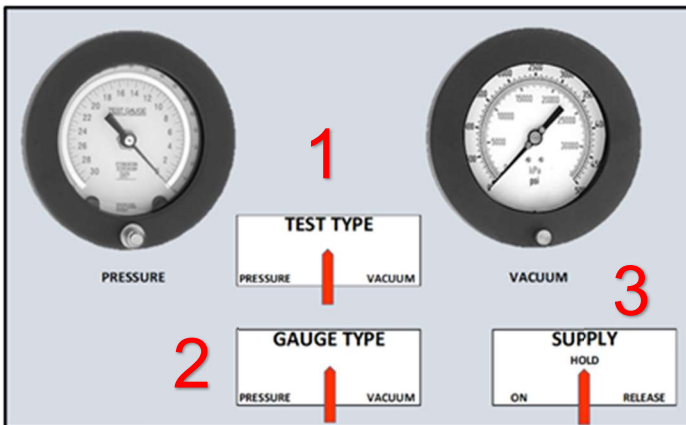
SRV Spare Parts & Tools

Item	Image	Description	TSI Part No.
1		FLAME SCREEN FOR PEROLO 2.5" PRV PREVIOUS DESIGN	PVXX250-SK4A-01
2		FLAME SCREEN FOR PEROLO 2.5" PRV NEW STYLE	PVXX250-SK4B-01
3		FLAME SCREEN FOR FORT VALE 2.5" PRV	PVXX250-SK4A-02
4		RAIN PLUG FOR PEROLO PRV	PVXX000-SP56A-01
5		RAIN PLUG FOR FORT VALE PRV	PVXX000-SP56A-02
6		PRV PRESSURE PLATE O-RING COMPATIBLE TO 5005-101	PVXX250-SP9B-02
7		PRV VACUUM O-RING COMPATIBLE TO 5005-108	PVXX250-SP14A-12

SRV Tools

Item	Description	TSI Part No.
1	 3" SPANNER WRENCH	MISC-PRV-WRCH
2	 SAFETY RELIEF VALVE BENCH TESTER MADE TO ORDER	MISC-PRV-TSTR

Bench Tester Instructions



ALWAYS start valve (3) on **HOLD** position and valves (1 & 2) in the **NEUTRAL** position as shown in picture

TO TEST PRESSURE:

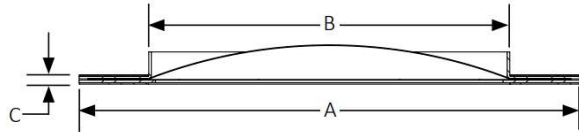
- 1st Step** - Turn valve (#1) to **Pressure**
- 2nd Step** - Turn Valve (#2) to **Pressure**
- 3rd Step** - Slowly Turn Valve (#3) to **On** to supply Air
- 4th Step** - When finished with TEST turn Valve (#3) to **Release** to depressurize lines
- 5th Step** - Return all valves to Original position before each test

TO TEST VACUUM:

- 1st Step** - Turn valve (#1) to **Vacuum**
- 2nd Step** - Turn Valve (#2) to **Vacuum**
- 3rd Step** - Slowly Turn Valve (#3) to **On** to supply Air
- 4th Step** - When finished with TEST turn Valve (#3) to **Release** to depressurize lines
- 5th Step** - Return all valves to Original position before each test

Rupture Disc

The ICON-TL Rupture Disc is manufactured with a fluoropolymer liner on the inlet side of the inlet ring allowing the rupture disc to be installed on applications with highly corrosive process media.



SIZE	A	B	C
2 1/2" 65 mm	3.54" 90 mm	2.56" 65 mm	.06" 1,5 mm
3" 80 mm	4.72" 120 mm	3.15" 80 mm	.06" 1,5 mm

Item	Description	Pressure Rating	TSI Part No.
1	2.5" RUPTURE ICON DISC	3.67 BAR	RDICD250-367
2		3.75 BAR	RDICD250-375
3		4.10 BAR	RDICD250-410
4		4.84 BAR	RDICD250-484
5		6.80 BAR	RDICD250-680
6		8.03 BAR	RDICD250-803
7	3" RUPTURE ICON DISC	4.84 BAR	RDICD30-484
8		6.90 BAR	RDICD30-690
9		8.03 BAR	RDICD30-803

Note: Consult your sales representative for additional materials and pressure ratings

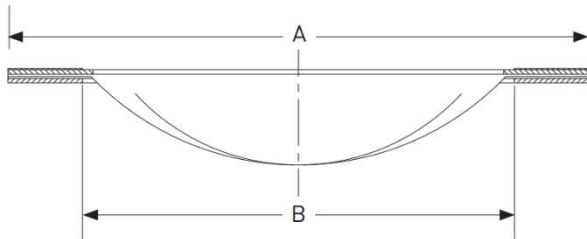
Rupture Disc



Standard Rupture Disc is a solid metal, differential pressure relief device that provides instantaneous overpressure protection for systems, equipment, and vessels.

The Standard Rupture Disc provides a full-opening design that responds within milliseconds to potentially damaging overpressure accumulation, permitting its use in a variety of protection applications.

Item	Description	Pressure Rating	TSI Part No.
1	10" RUPTURE STD DISC	4.50 BAR	RDICD1000-450
2		6.00 BAR	RDICD1000-600



SIZE	A	B
3 1/2" 89 mm	4.71" 120 mm	3.50" 89 mm



Item	Description	Pressure Rating	TSI Part No.
3	89MM REVERSED ACTING RUPTURE DISC – MADE FOR GAS TANKS	15.10 BAR	RDRVS350-1510
4		16.61 BAR	RDRVS350-1661
5		19.80 BAR	RDRVS350-1980
6		23.10 BAR	RDRVS350-2310
7		30.25 BAR	RDRVS350-3025
8		37.84 BAR	RDRVS350-3784

Note: Consult your sales representative for additional materials and pressure ratings.

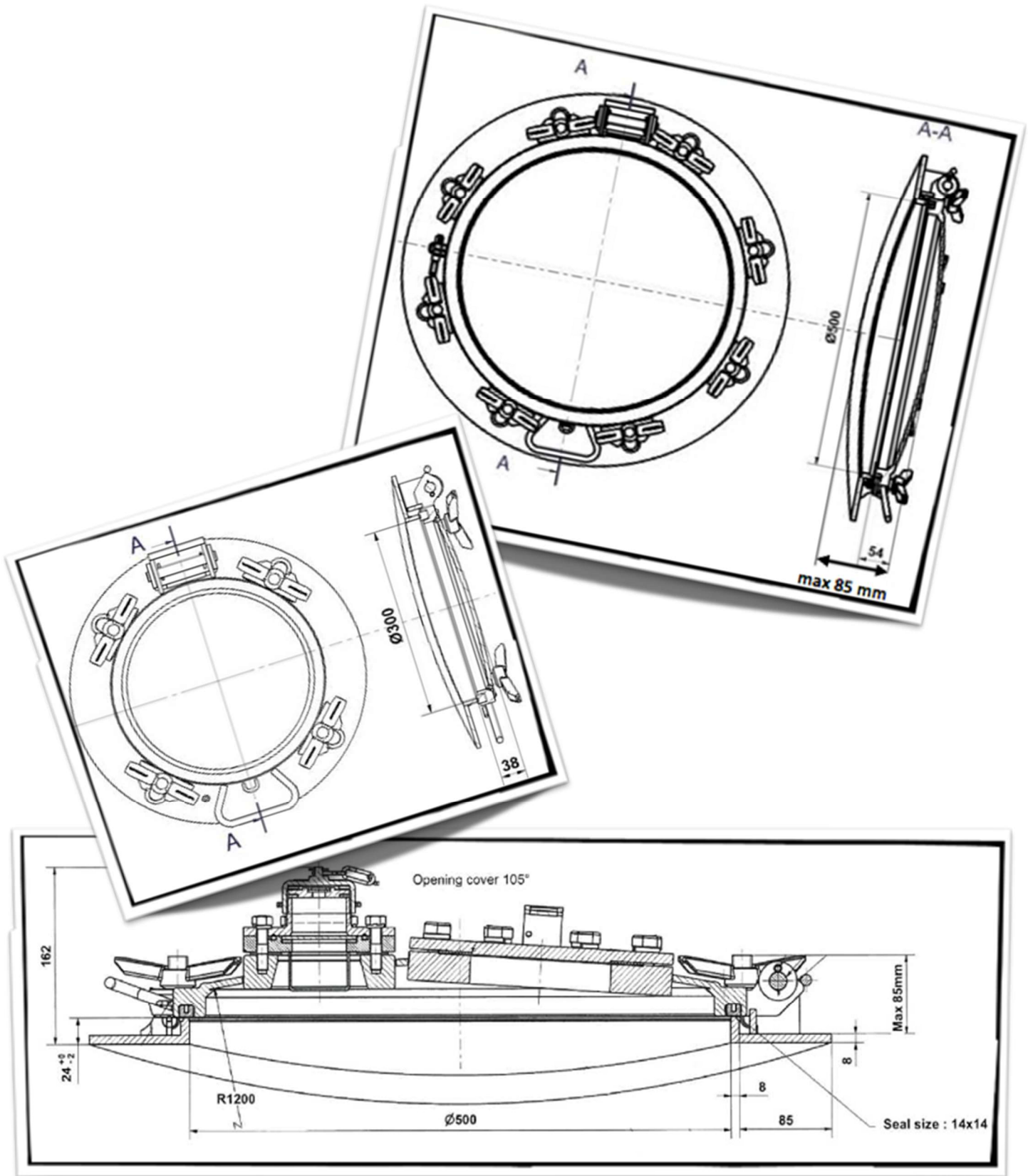
Steam Valves



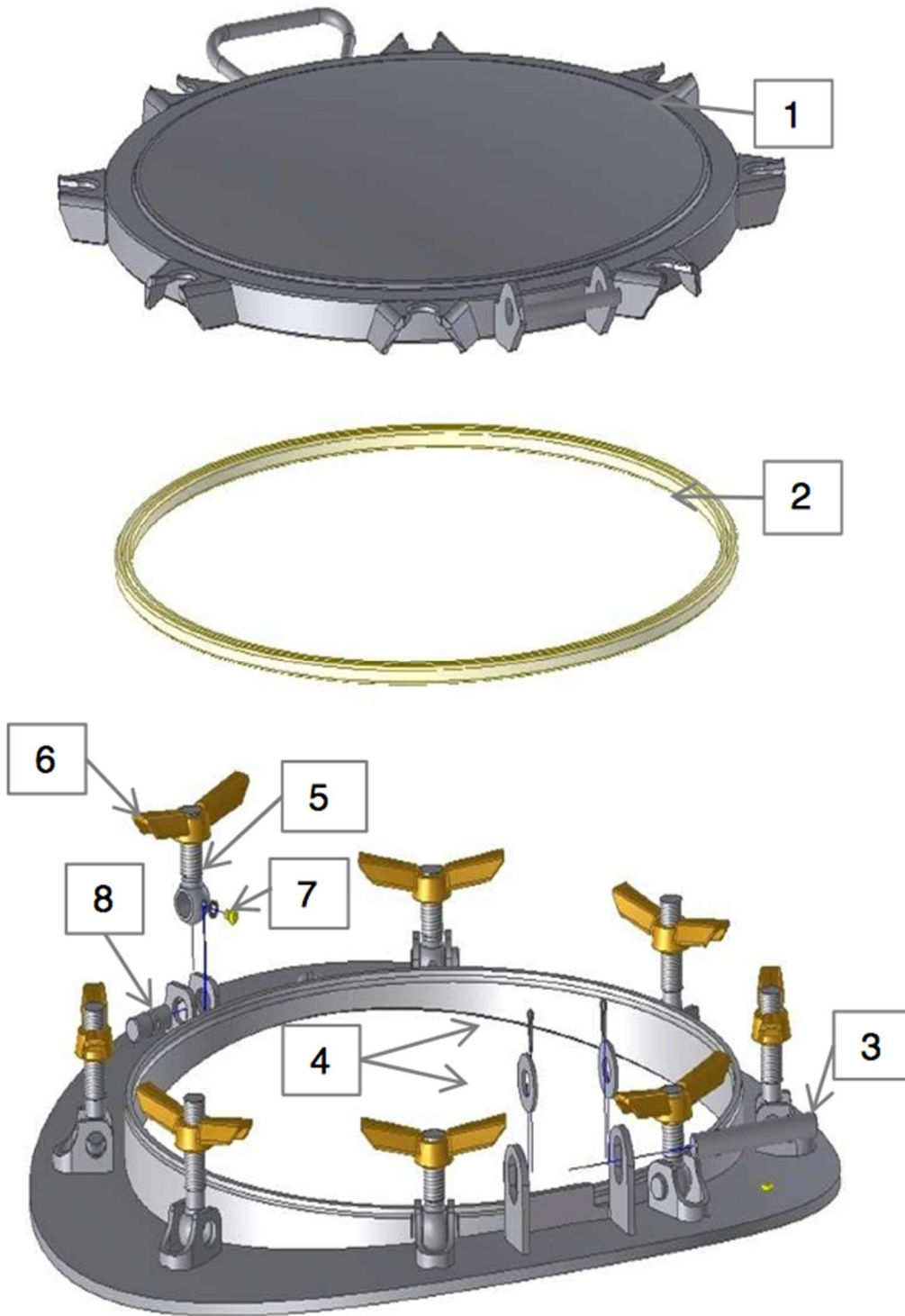
SPECIFICATION	
Nominal diameter	20 mm (3/4")
Weight	120 g
Connection	3/4" BSP
Pressure settings	from 1 to 10 Bar
Working Temperature	-40° to +180°C
Temperature range may vary according to the seal material	
STANDARD FEATURES	
Made of (material)	316L / 1.4409 stainless steel
O'rings material	Viton

Item	Description	TSI Part No.	MFG. Part No.
1	3/4" BSP Steam Valve 1 bar	PVTB075-SC1-SS-01 Special Order	SV1M
2	3/4" BSP Steam Valve 2 bar	PVTB075-SC2-SS-01 Special Order	SV2M
3	3/4" BSP Steam Valve 3 bar	PVTB075-SC3-SS-01 Special Order	SV3M
4	3/4" BSP Steam Valve 4 bar	PVTB075-SC4-SS-01 Special Order	SV4M
5	3/4" BSP Steam Valve 5 bar	PVTB075-SC5-SS-01 Special Order	SV5M
6	3/4" BSP Steam Valve 6 bar	PVTB075-SC6-SS-01 Special Order	SV6M

Manlids

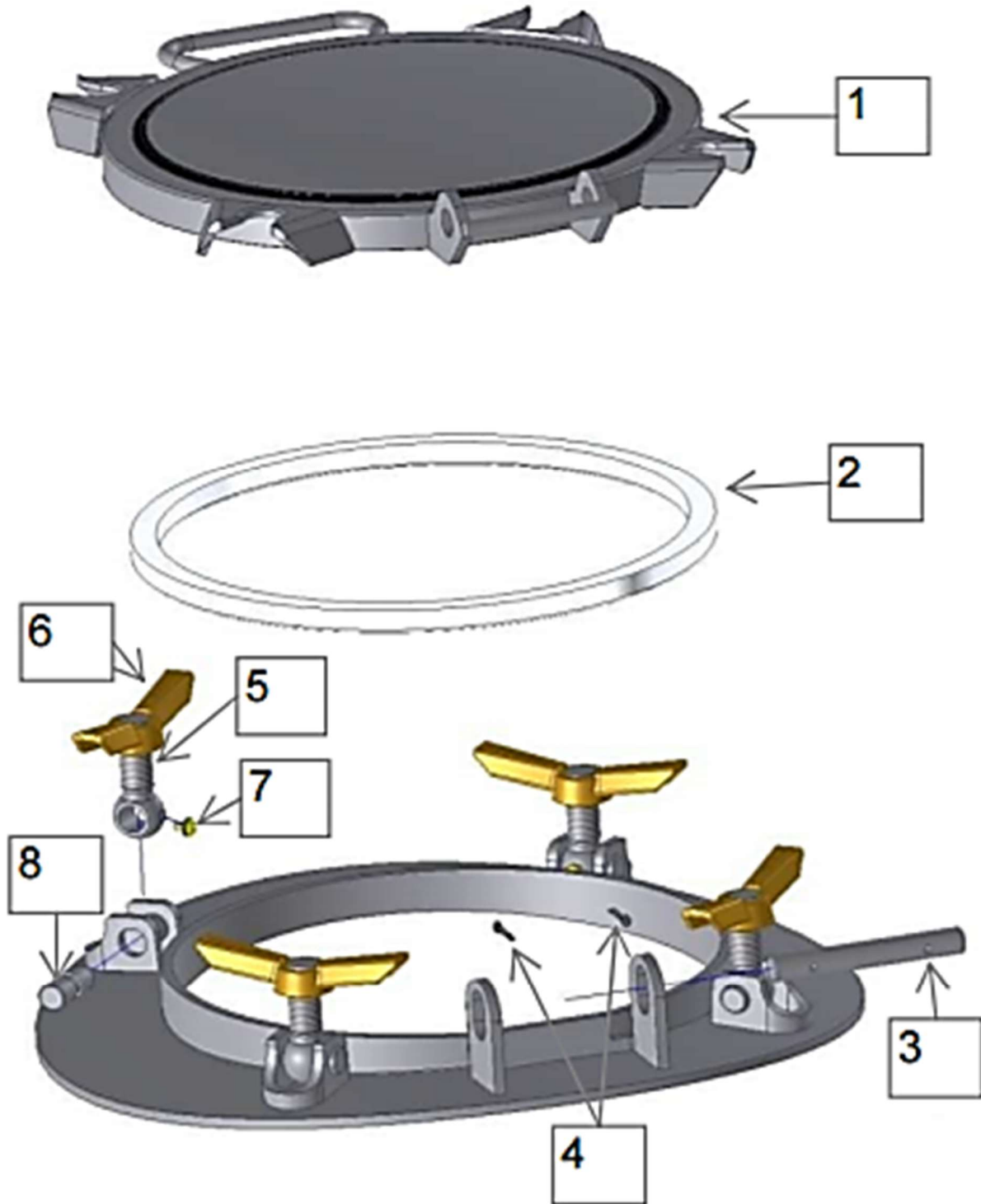


DN500 MULTIDO™ Manlid



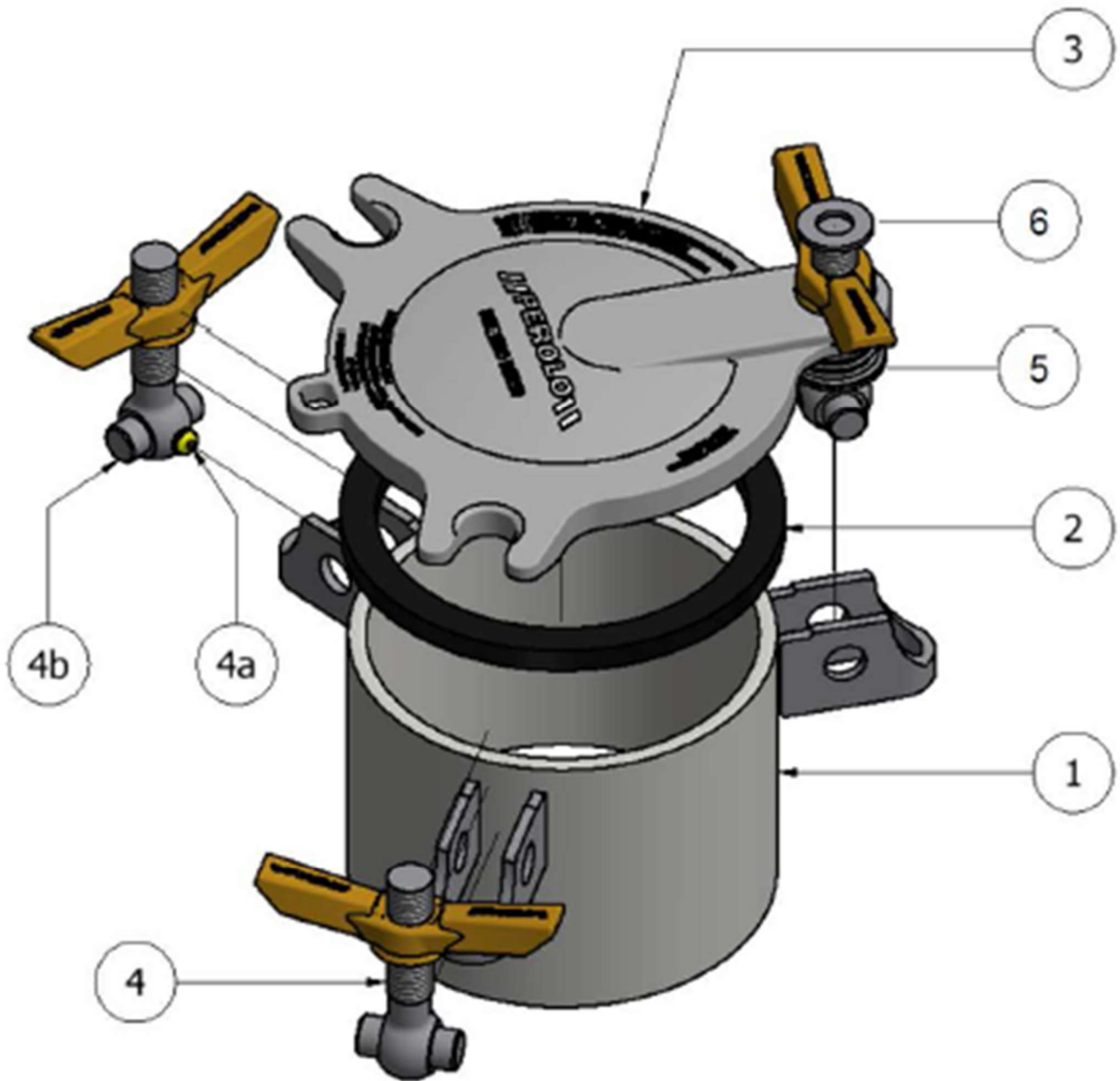
Item	Description	TSI Part No.	MFG. Part No.
1	8 Points Standard Profile	MLD500-8STD-01	CMS54D8DS
1	8 points low profile coverlid, standard sealing	MLD500-8LOW-01	CMS54D8SS
1	8 points low profile coverlid, T.I.R. sealing	On Request	CMS54D8ST
1	6 Points Standard Profile	MLD500-6STD-01	CMS53D6DS
1	6 points low profile coverlid, standard sealing	MLD500-6LOW-01	CMS53D6SS
1	6 points low profile coverlid, T.I.R. sealing	On Request	CMS5D6ST
2	Coverlid Seal, PTFE/EPDM 14x14	GMD500-1414-TE	11 13 75 00 19
2	Coverlid Seal, Nitrile/PTFE 14x14	On Request	11 13 75 00 14
	Hinge pin kit:	MLHG-PNKT-01	12 13 68 91 00
3	Hinge pin axis		
4	Washers		
	V4-28 Pin		
	58 mm Eye bolt kit:	MLSB58-16-BR	12 93 86 92 00
5	Eye bolt 58mm, stainless steel		
6	Wing nut, copper aluminum		
7	TBHC screw and washer		
8	Eye bolt pin		
	70 mm Eye bolt kit:	On Request	11 13 92 93 00
5	Eye bolt 70mm, stainless steel		
6	Wing nut, copper aluminum		
7	TBHC screw and washer		
8	Eye bolt pin		
	83 mm Eye bolt kit:	MLSB83-16-BR	12 93 86 91 00
5	Eye bolt 83mm, stainless steel		
6	Wing nut, copper aluminum		
7	TBHC screw and washer		
8	Eye bolt pin		
	93 mm Eye bolt kit:	MLSB93-16-BR	11 13 92 92 00
5	Eye bolt 93mm, stainless steel		
6	Wing nut, copper aluminum		
7	TBHC screw and washer		
8	Eye bolt pin		
	Complete 6 points bolting kit	On Request	11 15 18 96 00
	1 x kit 12 13 68 91 00		
	2 x kit 12 93 86 92 00		
	4 x kit 11 13 92 91 00		
	Complete 8 points bolting kit	On Request	11 15 18 93 00
	1 x kit 12 13 68 91 00		
	4 x kit 12 93 86 92 00		
	4 x kit 11 13 92 91 00		


DN300 MULTIDO™ Manlid



Item	Description	TSI Part No.	MFG. Part No.
1	4 points low profile coverlid	On Request	11 13 87 10 00
1	4 points Standard profile coverlid	On Request	12 13 58 10 00
2	Coverlid Seal, PTFE braided 15x14	On Request	11 13 75 00 12
Hinge pin kit:		MLHG-PNKT-01	12 13 68 91 00
3	1x Hinge pin axis		
4	2x V4-28 Pin		
	2x Washers		
58 mm Eye bolt kit:		MLSB58-16-BR	12 93 86 92 00
5	Eye bolt 58mm, stainless steel		
6	Wing nut, copper aluminum		
7	TBHC screw and washer		
8	Eye bolt pin		
Bolting kit		On Request	11 15 27 91 00
3	1x Hinge pin axis		
4	2x V4-28 Pin		
	2x Washers		
5	4x Eye bolt 58mm, stainless steel		
6	4x Wing nut, copper aluminum		
7	4x M6x8 TBHC screw and washer		
8	4x Eye bolt pin		

DN150 MULTIDO™ Manlid

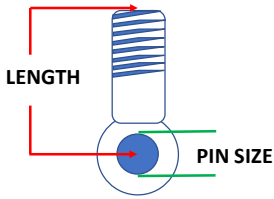


Description	TSI Part No.	MFG. Part No.
	ND150 Coverlid, 316L/1.4409 Full Assembly	On Request 11 18 94 00 00

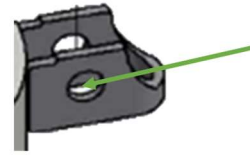
Item	Description	TSI Part No.	MFG. Part No.
1	Neck ring, Height: 120mm, 316L/1.4409	On Request	11 13 91 10 00
2	Coverlid Seal, Nitrile/PTFE 14x14	On Request	11 13 91 10 02
3	DN150 Coverlid, 316L/1.4409	On Request	11 18 94 10 02
3a	Coverlid kit (including item n°2, 3, 4, 4a, 4b, 5 & 6)	On Request	11 18 94 90 00
5	Spring, 302/1.4319	On Request	17 10 06 00 08
83 mm Eye bolt kit:		MLSB83-16-BR	12 93 86 91 00
4	Eye bolt 83mm, stainless steel		
4a	Eye bolt pin		
4b	TBHC screw and washer		

Swing Bolts

The **Length** of a Swing bolt is measured from the top of the bolt to the center of the pin.




Pin size is the thickness of pivot pin.
Size is determined by the existing hole on mount bracket on the neck ring.




Mount Bracket Hole


Swing Bolts (Brass Wing Nut)

	Item	Description	TSI Part No.	MFG. Part No.
	1	58mm Eye Bolt Kit	MLSB58-16-BR	12 93 86 92 00
	2	70mm Eye Bolt Kit	On Request	
	3	83mm Eye Bolt Kit	MLSB83-16-BR	12 93 86 91 00
	4	93mm Eye Bolt Kit	MLSB93-16-BR	11 13 92 92 00



Swing Bolts (SS Wing Nut)

	Item	Description	TSI Part No.	MFG. Part No.
	5	58mm Eye Bolt Kit	On Request	13 15 12 93 00
	6	70mm Eye Bolt Kit	On Request	
	7	83mm Eye Bolt Kit	On Request	13 15 12 92 00
	8	93mm Eye Bolt Kit	On Request	11 13 18 91 00
	9	66MM Eye Bolt Kit – 16 mm Pin	MLSB66-16-SS	N/A
	10	66MM Eye Bolt Kit – 19 mm Pin	MLSB66-19-SS	Discontinued
	11	89MM Eye Bolt Kit – 16 mm Pin	MLSB89-16-SS	N/A
	12	89MM Eye Bolt Kit – 19 mm Pin	MLSB89-19-SS	N/A




Swing Bolts (SS Hex Nut)

	Item	Description	TSI Part No.	MFG. Part No.
	13	58mm Swing bolt with Hex Nut – 16mm Pivot Pin - SS	MLSB58-16NT-SS	11 20 28 90 00
	14	83mm Swing bolt with Hex Nut – 16mm Pivot Pin - SS	MLSB83-16NT-SS	11 20 28 91 00
	15	82mm Swing bolt with Hex Nut – 19mm Pivot Pin - SS	MLSB82-19NT-SS	11 13 84 30 03
	16	18mm Nut for Swing bolt	MLSB-NT18-SS	11 15 18 91 03

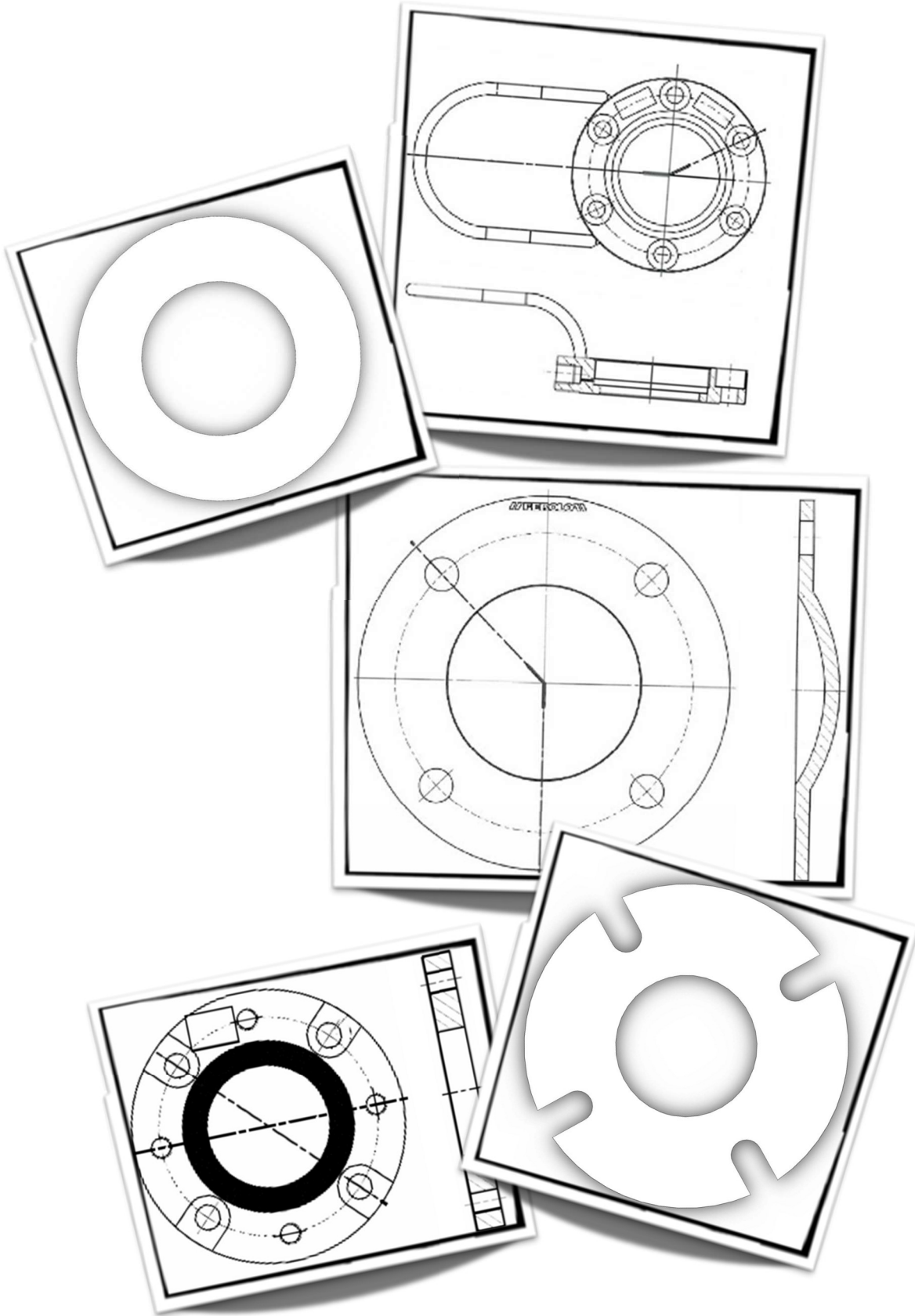
Manlid & Swing Bolt Accessories

	Item	Description	TSI Part No.
1		SET SCREW WASHER FOR PEROLO SWINGBOLT	MLSWBT-WSH-PL
2		6MM X 8MM BUTTON HEAD SCREW FOR PEROLO SWINGBOLT	FA-QXBK06X008
3		6MM X 8MM SET SCREW FOR PEROLO SWINGBOLT	MLSWBT-SET-PL
4		8MM X 8MM SET SCREW FOR SWINGBOLT - LARGE PIN	MLSWBT-SET-FV
5		Straight Pin	MISC-PIN-STRT
6		Manlid Bracket For Swing Bolt	MLSB-BRK-SS
7		Plastic Security Seal	MISC-TIR-SBPL
8		Security Metal Seal	MISC-TIR-SBGV

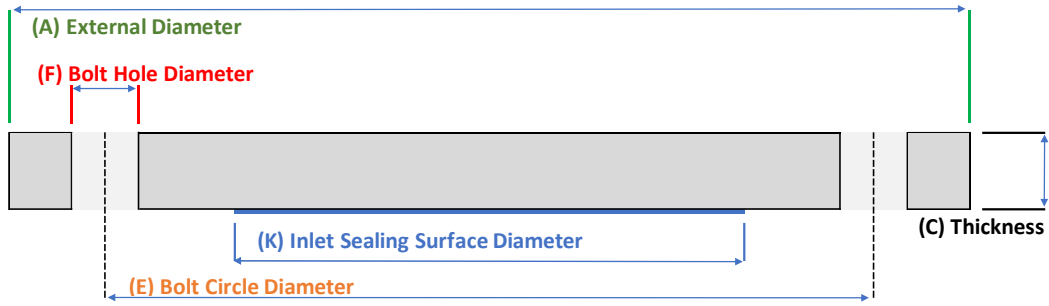
Manlid Tools

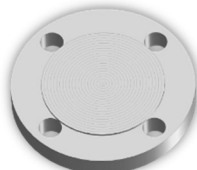
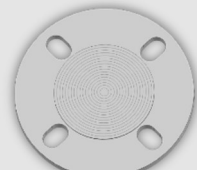
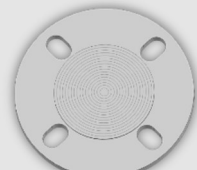
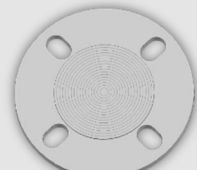
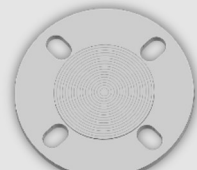
Item	Description	TSI Part No.
1		<p>GASKET CUTTERS</p> <p>MISC-CTR-GSKT</p>
2		<p>GASKET CUTTER BLADES</p> <p>MISC-CTR-BLDS</p>
3		<p>ALUMINUM TANK ENTRY LADDER</p> <p>MADE TO ORDER</p> <p>2015-09-30-01</p>

Flanges & Gaskets

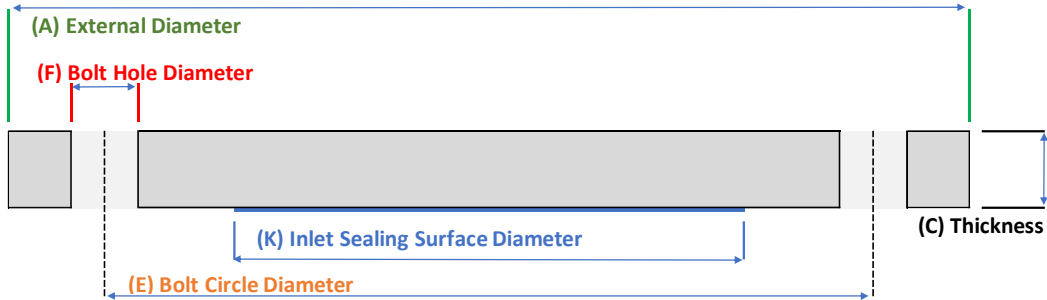


Blind Flanges



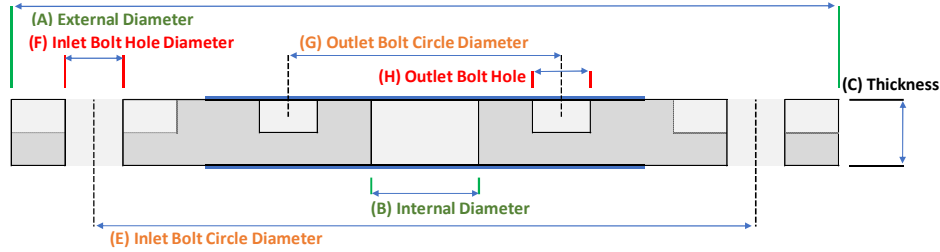
Item	TSI Part No.	External	Thickness	Bolt Pattern
	1.5" ANSI 150# BLIND FLANGE - 316SS			
	FLBL150-A1-SS	5"	0.68"	4 X 0.62" X BCD 3.88 "
	2" ANSI 150# BLIND FLANGE - 316SS			
2	FLBL200-A1-SS	6"	.75"	4 X 0.75" X BCD 4.75"
	3" ANSI 150# BLIND FLANGE - 316SS			
	FLBL300-A1-SS	7.5"	0.94"	4 X 0.75" X BCD 6"
	DN 40 / 1.5" 4 HOLE SLOTTED BLIND FLANGE - 304SS			
	FLBL1504SL-304	140 MM	8.5 MM	4 X 18 X BCD 99-110 MM
	DN 50 / 2" 4 HOLE SLOTTED BLIND FLANGE - 304SS			
	FLBL200-4SL-304	159 MM	9.5 MM	4 X 18 X BCD 110-125 MM
	DN80 / 3" 4 HOLE SLOTTED BLIND FLANGE - 304SS			
	FLBL300-4SL-304	203 MM	9.5 MM	4 X 18 X BCD 149-170 MM

Blind Flanges



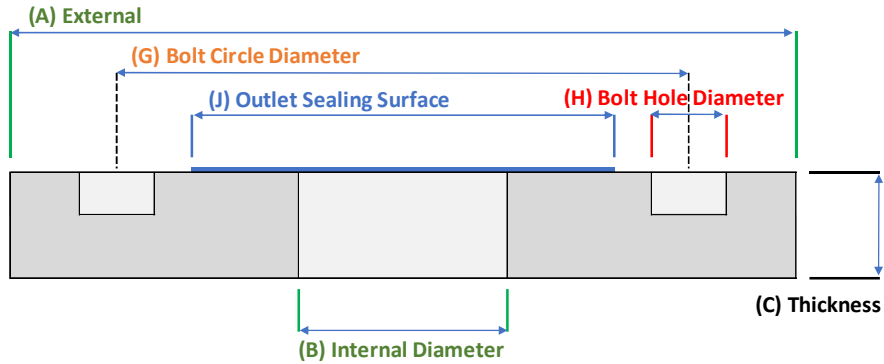
Item	TSI Part No.	External	Thickness	Bolt Pattern
1	DN32 AIRLINE BLIND FLANGE - 316SS			
	FLBLA3X-SS	127 MM	13.5 MM	4 X 12 X BCD 103.5 MM
2	2.5" 6 HOLE SRV BLIND FLANGE - 316SS			
	FLBL250-PV6-SS	127 MM	8.5 MM	6 X 11 X BCD 105 MM
3	3" DISHED BUTTERFLY BLIND FLANGE			
	FLBLD80-DSH-SS	200 MM	8.5 MM	4 X 18 X BCD 160 MM
4	3" 6 HOLE OFFSET BLIND FLANGE - 316SS			
	FLBL300-6F-SS	200 MM	9.5 MM	6 X 14 X BCD 168 MM
5	3" 4 X 6 HOLE BLIND FLANGE - UNIVERSAL – 316 SS			
	FLBL300-6F4SL-304	203 MM	9.5 MM	6 X 13 X BCD 168 MM
				4 X 18 X BCD 149-170 MM

Adapter Flanges



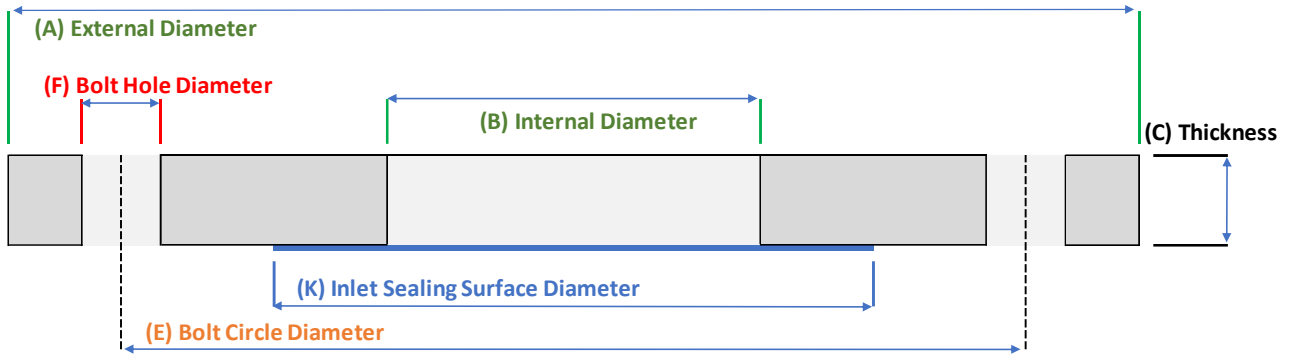
Item	TSI Part No.	Internal	External	Thickness	Bolt Pattern
1	DN32 TO 1.5" AIRLINE BALL VALVE FLANGE – 316 SS				
	FLADA3X-BF5-SS	32 MM	127 MM	27 MM	4 X M10 X BCD 103.5 MM
2	DN40 TO 1.5" 150# FLANGE – 316 SS				
	FLAD150A1-D40-SS	1.95"	5.91"	1"	4 x Ø ½"-13 x BCD 3.875"
3	DN50 TO 2" 150# FLANGE – 316 SS				
	FLAD200A1-D50-SS	2.5"	6.5"	1"	4 X Ø 5/8"-11 X BCD 4.75"
4	DN50 TO 1.5" AIRLINE BALL VALVE FLANGE – 316 SS				
	FLADA3X-D50-SS	1.25"	6.5"	.75"	4 X M10 X BCD 103.5 MM
5	2.5" 6 HOLE BSP FLANGE - WITH GAUGE PROTECTION – 316 SS				
	FLAD250B-PV6G-SS	2.5" BSP	127 MM	22.5 MM	6 X 11 X BCD 105 MM
6	2.5" 6 HOLE BSP FLANGE– 316 SS				
	FLAD250B-PV6-SS	2.5" BSP	127 MM	22.5 MM	6 X 11 X BCD 105 MM
7	3" TO 2" TOP OUTLET FLANGE – 316 SS				
	FLAD50-D80-SS	62 MM	200 MM	19 MM	4 X M16 X BCD 125 MM
8	3" DN80 PN10 BUTTERFLY CLAMPING FLANGE – 316 SS				
	FLAD80-D80-SS	90 MM	200 MM	24 MM	4 X M16 X BCD 160 MM



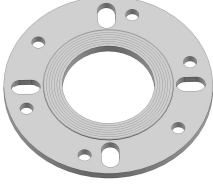
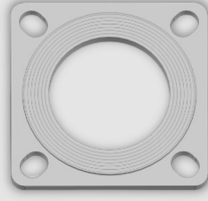
Weld Pad Flanges



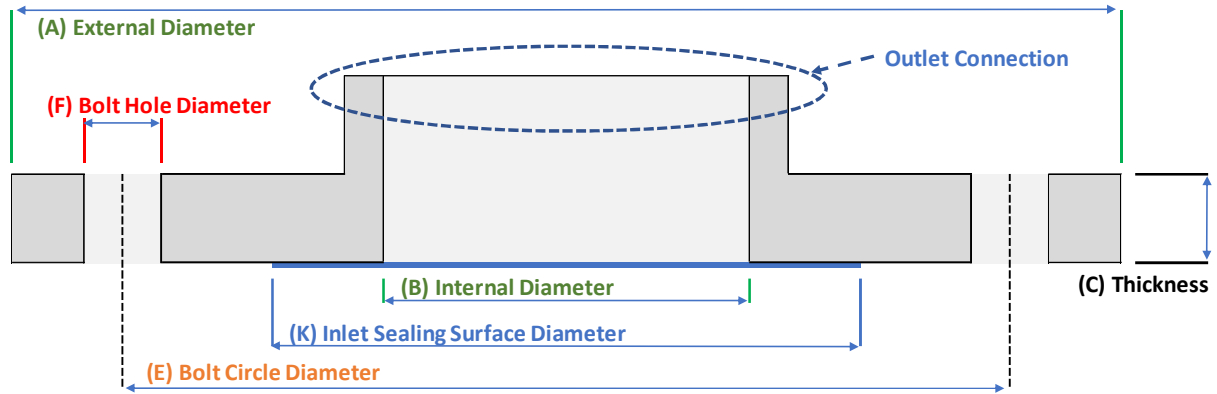
Item	TSI Part No.	External Diameter	Internal Diameter	Thickness	Bolt Pattern
1.5" AIRLINE WELD PAD FLANGE - 316SS					
1	FLWPA3X-SS	127 MM	32 MM	22 MM	4 X M10 X BCD 103.5
2.5" 6 HOLE SRV WELD PAD FLANGE - 316SS					
2	FLWP250-PV6-SS	127 MM	2.5" BSP	22 MM	6 X M10 X BCD 105
3" UNIVERSAL WELD PAD - 6 HOLE OFFSET & 4 HOLE PATTERNS - 316SS					
3	FLWP300-BF64-SS	200 MM	94 MM	26.5 MM	6 X M12 X BCD 168
					4 X M16 X BCD 160
3" 30 FOOT VALVE WELD PAD FLANGE - 4 & 8 HOLE PATTERN - 316SS					
4	FLWP300-30FV84-SS	200 MM	114.3 MM	45 MM	8 X M12 X BCD 178
					4 X M16 X BCD 178
3" 45 FOOT VALVE WELD PAD FLANGE - 8 HOLE PATTERN - 316SS					
5	FLWP300-FV8-SS	200 MM	114.3 MM	45 MM	8 X M12 X BCD 178

Slip-On Flanges



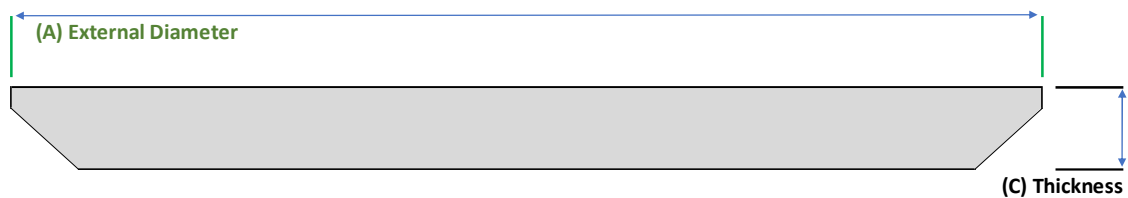
Item	Description	TSI Part No.	External Diameter	Internal Diameter	Thickness	Bolt Pattern
1.5" ANSI 150# SLIP ON FLANGE - 316SS						
1		FLSL150-A1-SS	5.00 IN	1.95 IN	0.68 IN	4 X 0.62 IN X BCD 3.88 IN
2" ANSI 150# SLIP ON FLANGE - 316SS						
2		FLSL200-A1-SS	6.00 IN	2.44 IN	0.69 IN	4 X 0.75 IN X BCD 4.75 IN
3" 4 X 6 HOLE DIP TUBE FLANGE - 304SS						
3		FLS300-6F4SL-304	203 MM	90 MM	9.5 MM	6 X 13 X BCD 168 4 X 18 X BCD 149-170
3" 4 HOLE BOTTOM OUTLET SLIP ON FLANGE						
4		FLS300-SQ4SL-304	5.67"	3.54"	.375"	4 X 3/4"(18 MM) X BCD 6"-6.3"



Spigot Flanges



Item	TSI Part No.	External Diameter	Outlet Connection	Thickness	Bolt Pattern
1	1.5" BSP SPIGOT FLANGE				
	FLSP150B-4SL-SS	150 MM	1.5" MALE BSP	10 MM	4 X 18 X BCD 95-130
2	3" 4 HOLE SLOTTED SPIGOT FLANGE MALE BSP				
	FLSP300B-4SL-SS	144 X 144 MM	3" MALE BSP	14 MM	4 X 19 X BCD 146-160
3	3" 4 HOLE SLOTTED SPIGOT FLANGE MALE CAM				
	FLSP300C-4SL-SS	144 MM	3" MALE CAM	14 MM	4 X 19 X BCD 146-160

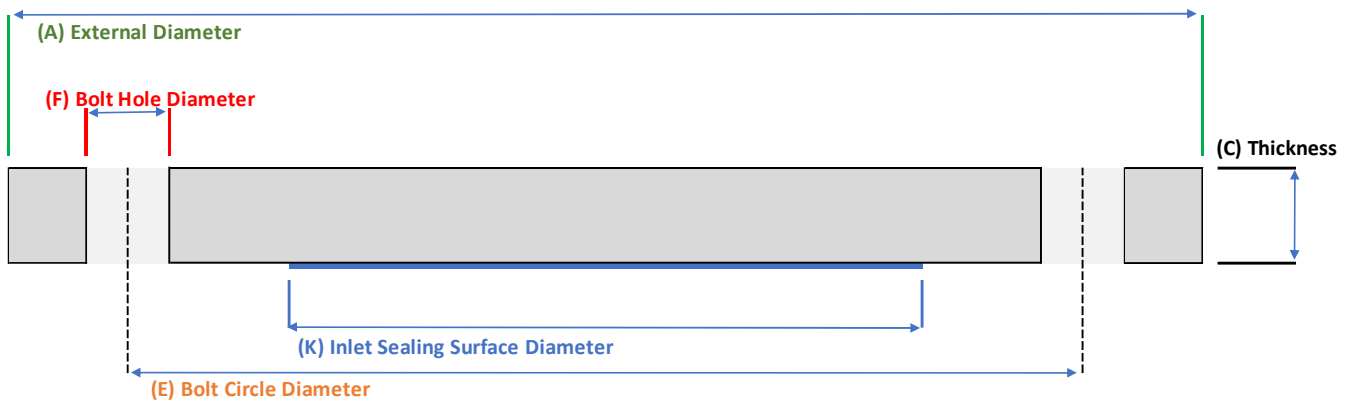
Blank Flanges



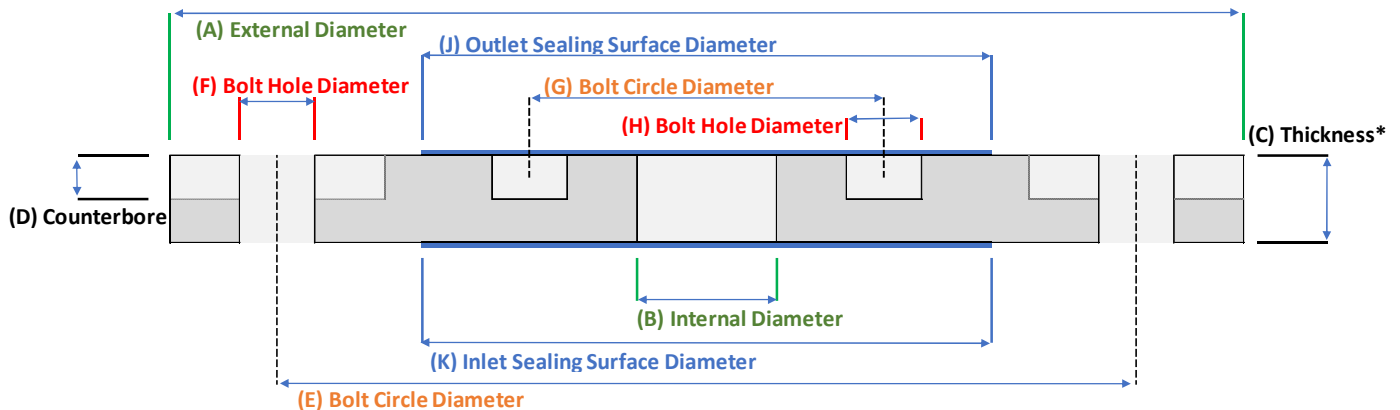
Item	Description	TSI Part No.	External Diameter	Thickness
4	STANDARD BLANKING PLATE FOR BOTTOM DISCHARGE PAD FLANGE – 316 SS			
		FLBNK300-FV	116 MM 4.566"	9.5 MM 0.374"
5	BLANKING PLATE ONLY FOR PEROLO 45 BOTTOM DISCHARGE WELD PAD – 316 SS			
		FLBNK300-FVP45	116.66 MM 4.593"	9.525 MM 3/8"

Custom Flanges

Blind Flange Diagram



Adapter Flange Diagram



Please provide the following information for custom flanges:






- Flange type: Blind, Threaded, Slip-on, Weld-on, Adapter etc.
- Flange Material: Please include material grade; 316, 304 etc.
- **Bolt Pattern(s):**
 - Bolt Diameter is the size of the bolt hole
 - Tapped (threaded) holes:
 - Metric sizes use a “M” ex.: M16
 - American sizes include the Threads Per Inch after size ex.: 5/8-11
 - Through holes use a Ø in front of hole size Ø18mm * see (F)
 - Blind holes don’t go all the way through the flange * see (H)
 - Bolt Circle Diameter (BCD or PCD) is an imaginary circle passing through the centers of all the bolts
- Counterbore: provide depth and width, note if bore exits the side of flange
- Thickness: Provide the thickness of the flange excluding the sealing surface(s)
- Sealing Surface external dimensions, include height: 1/16” is standard
- Internal Diameter Measurement; if threaded, include Connection Size
- External Diameter Measurement

Flange Bolt Pattern Reference Chart

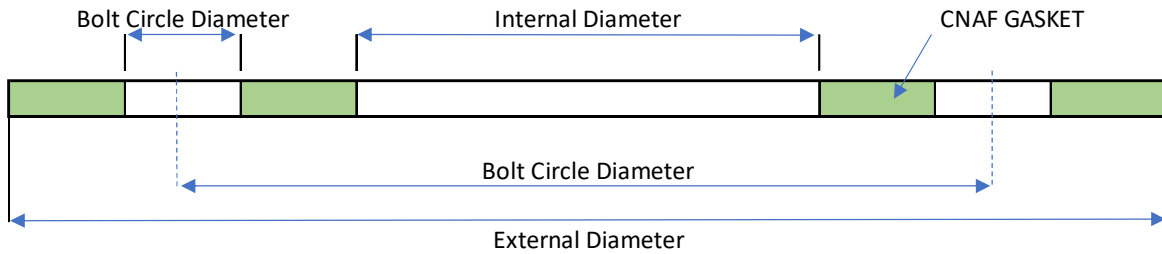
STANDARD BOLT PATTERNS	# HOLES	METRIC HOLE SIZE	INCH HOLE SIZE	METRIC BCD	INCH BCD	BOLT SIZE
ANSI - ASA						
1.5" 150#	4	15.9	0.62	98.55	3.88	1/2"
2" 150#	4	19	0.75	120.65	4.75	5/8"
3" 150#	4	19	0.75	152.4	6.00	5/8"
BRITISH STANDARD TABLE D						
1.5" BSTD	4	14.5	0.57	98.6	3.88	12MM
2" BSTD	4	17.5	0.69	114.3	4.50	16MM
2.5" BSTD	4	17.5	0.69	127	5.00	16MM
3" BSTD	4	17.5	0.69	146.1	5.75	16MM
METRIC STANDARD						
DN40 PN6	4	14	0.55	100	3.94	12MM
DN40 PN10/16	4	18	0.71	110	4.33	16MM
DN50 PN10/16	4	18	0.71	125	4.92	16MM
DN80 PN 6	4	18	0.71	150	5.91	16MM
DN80 PN 10	4	18	0.71	160	6.30	16MM
DN80 PN 16	8	18	0.71	160	6.30	16MM
ISO TANK STANDARD						
AIRLINE BALL VALVE	4	12	0.39	103.5	4.07	10MM
2" BFLY 4 HOLE	4	11	0.43	100	3.94	10MM
3" BFLY 6 HOLE OFFSET	6	14	0.55	168	6.61	12MM
FOOT VALVE 4 HOLE	4	18	0.71	178	7.01	16MM
FOOT VALVE 8 HOLE	8	14	0.55	178	7.01	12MM
SRV 4 HOLE	4	18	0.71	145	5.71	16MM
SRV 6 HOLE	6	11	0.43	105	4.13	10MM






Cap Gaskets



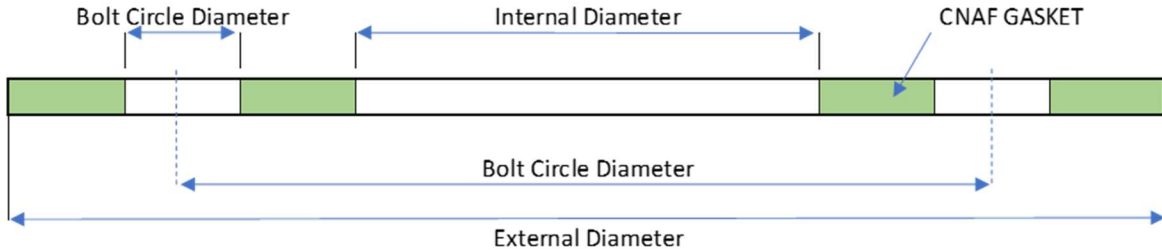
Item	TSI PART NO.	CONNECTION	GASKET TYPE	THK	ID	OD	GASKET DESIGN
1	GC075-03-TF	¾" Cap Gasket	Solid PTFE	1mm 0.039"	16mm 0.63"	26mm 1.02"	
2	GC100-06-TF	1" Cap Gasket	Solid PTFE	1.5mm 0.059"	22mm 0.86"	32mm 1.25"	
3	GC150-06-TF	1 ½" Cap Gasket	Solid PTFE	1.5mm 0.059"	35mm 1.37"	47mm 1.85"	
4	GC200-06-TF	2" Cap Gasket	Solid PTFE	1.5mm 0.059"	42mm 1.65"	60mm 2.36"	
5	GC300-06-TF	3" Cap Gasket	Solid PTFE	1.5mm 0.059"	72mm 2.83"	87mm 3.42"	

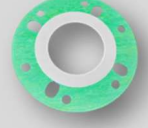
Ring Gaskets



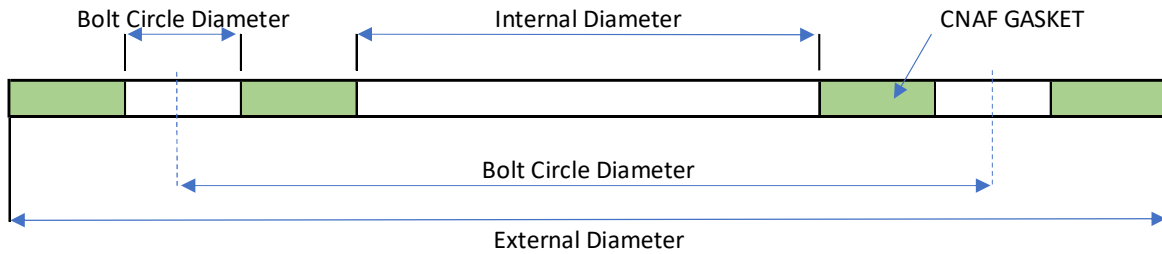
Item	TSI PART NO.	CONNECTION	GASKET TYPE	THK	ID	OD	GASKET DESIGN
1	GR150-TC	DN 40 / 1 ½" Ring Gasket	PTFE/CNAF	3mm 0.11"	45mm 1.77"	83mm 3.26"	
2	GRD50-TC	DN 50 / 2" Ring Gasket	PTFE/CNAF	3mm 0.11"	50mm 1.96"	80mm 3.14"	
3	GRD80-TC	DN 80 / 3" Ring Gasket (Bfly Inlet Side)	PTFE/CNAF	3mm 0.11"	80mm 3.14"	130mm 5.11"	
4	GRD90-TC	DN 80 / 3" Ring Gasket (Bfly Outlet Side)	PTFE/CNAF	3mm 0.11"	90mm 3.54"	130mm 5.11"	
5	GRD100-TC	3" 4 Hole for Syphon Tube on Recessed Flange	PTFE/CNAF	3mm 0.11"	100mm 3.93"	130mm 5.11"	



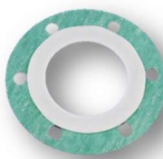

Flange Gaskets



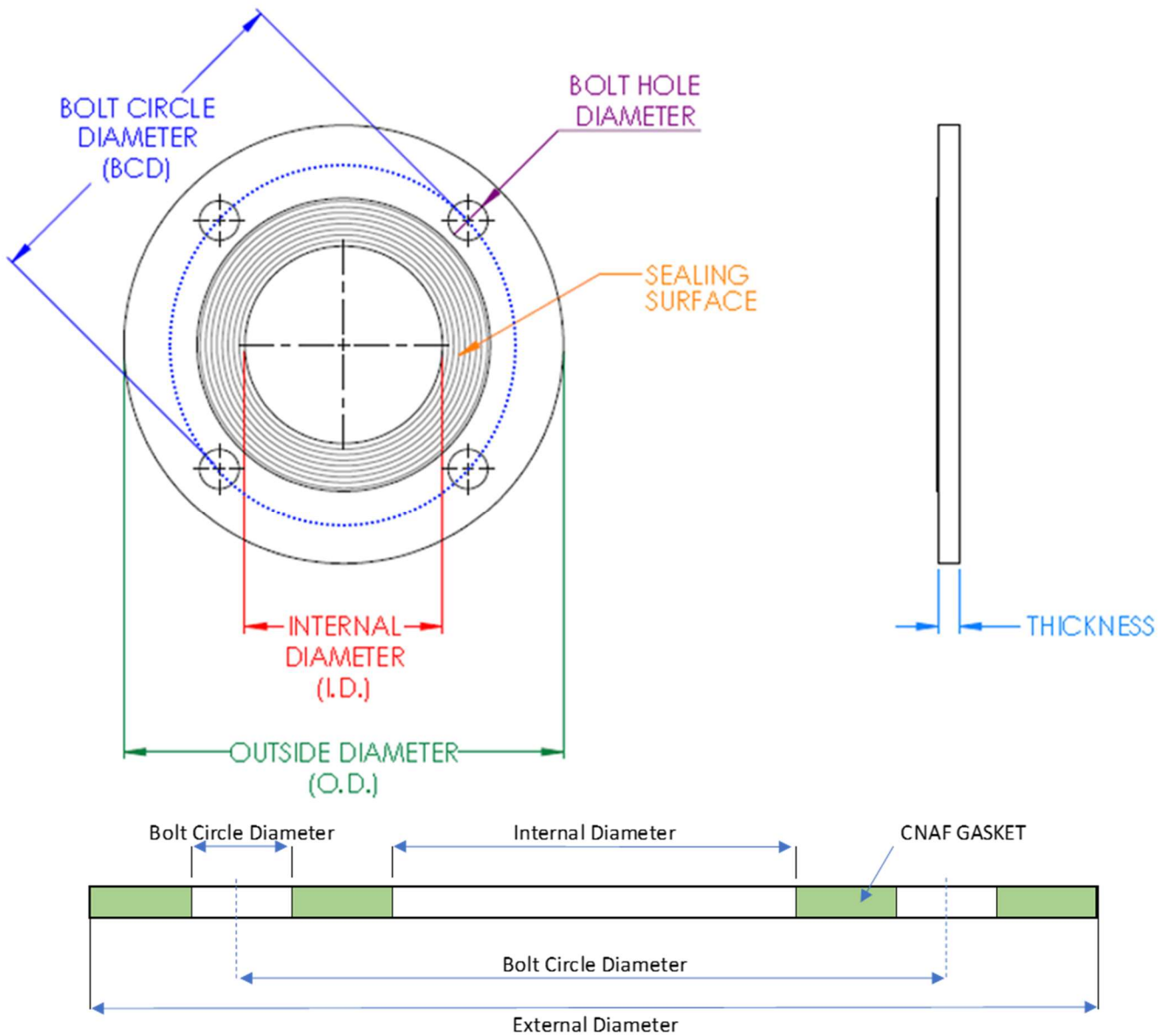
Item	TSI PART NO.	CONNECTION	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
1	GF200-BF5-TC	DN50 4 HOLE - 100 BCD	PTFE/CNAF	3mm 0.11"	50mm 1.96"	120mm 4.72"	4 x 12 x BCD 100mm	
2	GF200-D45-TC	DN50/40 Dual Drilled	PTFE/CNAF	3mm 0.11"	50mm 1.96"	150mm 5.90	4 x 18 x BCD 110mm 4 x 18 x BCD 125mm	
3	GF300-6F-TC	3" 6 Hole Offset	PTFE/CNAF	3mm 0.11"	78mm 3.07"	198mm 7.79"	6 x 14 x BCD 168mm	
4	GF300-6F4SL-TC	3" 6 Hole Offset/4 Hole Slotted	PTFE/CNAF	3mm 0.11"	90mm 3.54"	200mm 7.87"	6 x 14 x BCD 168mm 4 x 18 x BCD 146mm	
5	GFD100-4SQ-TC	3" 4 Hole Slotted Syphon Tube	PTFE/CNAF	3mm 0.11"	100mm 3.93"	144mm 4.48" SQ	4 x 18 x BCD 146 Square	
6	GF300-4SQ-TC	3" Clamped Bfly	PTFE/CNAF	3mm 0.11"	90mm 3.54"	144mm 4.48" SQ	4 x 18 x BCD 146mm Square	
7	GF300-FVX-TC	3" Foot Valve Weld Pad	PTFE/CNAF	3mm 0.11"	114mm 4.48"	210mm 8.26"	4 x 14 x BCD 178mm 4 x 18 x BCD 178mm	

SRV Gaskets



Item	TSI PART NO.	CONNECTION	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
1	GR250-PVX-TC	2 ½" Safety Relief Valve	PTFE/CNAF	3.2mm 0.125"	75mm 2.95"	92mm 3.62"		
2	GR250-PVX-TN	2 ½" Safety Relief Valve	PTFE/RUBBER	3.2mm 0.125"	76mm 2.99"	92mm 3.62"		
3	GF250-PV6-TC	2 ½" 6 Hole Safety Relief Adapter Flange	PTFE/CNAF	3.2mm 0.125"	75mm 2.95"	127mm 5.00"	6 x 11 x BCD 105mm	
4	GF300-PV4-TC	3" Flanged SRV	PTFE/CNAF	3.2mm 0.125"	84mm 3.30"	185mm 7.28"	4 x 18 x BCD 145mm	

Custom Gaskets




Please provide the following information for custom gaskets:

- Connection type: Raise face, Flat face, Tongue and Groove etc.
- Gasket Material
- Thickness
- Internal Diameter Measurement
- External Diameter Measurement
- Bolt Pattern(s)
- Bolt circle diameter


Manlid Gaskets



Profile	Material	Chemical resistance	Temperature range	FDA compliant
	PTFE Braided Acrylic fiber yarn, impregnated with PTFE emulsion	General purpose Manlid seal with good chemical resistance that are compatible with PTFE	-45°C up to 120°C (-49°F to 248°F)	No

Item	TSI Part No.	Nominal Diameter	Thickness	Material
1	GMD300-1414-TR	300 MM	14 X 14 MM	PTFE ROPE
2	GMD500-1414-TR	500 MM		
3	GMD500-1510-TR	500 MM		




Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>PTFE Extruded Packing</u> PTFE Packing is extruded from fine PTFE powder with food grade silicone oil.	For corrosive medium, food grade. Not suitable for oxygen, alkali metal, severe caustic media, fluorine, and its compounds at high temp.	-100°C to +280°C (-148°F to +536°F)	Yes

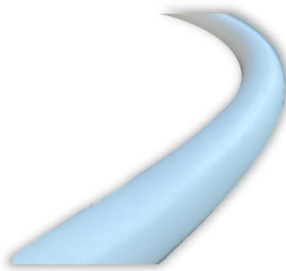
Item	TSI Part No.	Nominal Diameter	Thickness	Material
4	GMD500-1414-TX	500 MM (64.5" LONG)	14 X 14 MM	EXTRUDED PTFE


Manlid Gaskets



Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>PTFE/EPDM</u> One piece PTFE envelope, bonded to an EPDM rubber core	For corrosive cargoes, chemically inert to products in the range pH 0-14	-45° up to 120° C (-49°F to 248°F)	No

Item	TSI Part No.	Nominal Diameter	Thickness	Material
1	GMD300-1414-TE	300 MM	14 X 14 MM	PTFE ENVELOPE EPDM
2	GMD500-1410-TE	500 MM	14 X 10 MM	
3	GMD500-1412-TE	500 MM	14 X 12 MM	
4	GMD500-1414-TE	500 MM	14 X 14 MM	




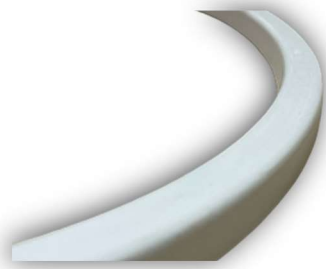
Profile	Material	Chemical resistance	Temperature range	FDA compliant
	Hollow D-section endless ring of PTFE	Chemically inert to media in the range pH 0-14 including all bulk liquid cargoes in all IMO classes. It is nonabsorbent, non-tainting, and hygienic for use with foodstuffs and edible oils.	-50° up to 150° C (-58°F to 302°F)	Yes


Item	TSI Part No.	Nominal Diameter	Thickness	Material
5	GMD300-HA	300 MM	14 MM D SECTION	HOLLOW PTFE
6	GMD500-HA	500 MM		

Manlid Gaskets



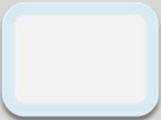
Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>White NBR (SWR)</u> Acrylonitrile butadiene Nitrile rubber WHITE BUNA-N	White NBR rubber Tank Lid Seal is FDA Compliant for repeated food contact use	-50° up to 80° C (-58°F to 176°F)	Yes
Item	TSI Part No.	Nominal Diameter	Thickness	Material
1	GMD300-1610-SW	300 MM	16 X 10 MM	SWEET WHITE RUBBER (NBR)
2	GMD500-1412-SW	500 MM	14 X 12 MM	
3	GMD500-1414-SW	500 MM	14 X 14 MM	




Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>Hypalon (CSM)</u> Chlorosulfonated polyethylene (CSM, CSPE)	Our Hypalon® or CSM seals are resistant to dilute acids, alcohols, alkalis, mineral and silicone oils and have excellent ozone and weathering resistance.	-30° up to 120° C (-22°F to 248°F)	No
Item	TSI Part No.	Nominal Diameter	Thickness	Material
4	GMD300-1414-HY	300 MM	14 MM (9/16")	HYPALON (CSM)
5	GMD500-1414-HY	500 MM		

Manlid Gaskets




Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>Ultraseal™ PFA</u> Silicon core with encapsulation of PFA	PFA is inert to almost all chemicals, except for some alkali metals, Fluorine and some rare, fluorinated compounds and complex halogen compounds at high temperatures and pressures.	-60°C to 260°C (-75°F to +500°F)	Yes
Item	TSI Part No.	Nominal Diameter	Thickness	Material
1	GMD300-1412-TK	300 MM	14 X 12 MM	SILICON PFA ENCAPSULATED
2	GMD500-1412-TK	500 MM		



Profile	Material	Chemical resistance	Temperature range	FDA compliant
	<u>Silicon</u> Silicon core with thin encapsulation of Teflon®	Resistant to practically all chemicals. Gas permeation is at a substantially lower rate than most other plastics. Immune & absorb near zero acid or alkaline	Up to 300°C (Up to 572°F)	Yes
Item	TSI Part No.	Nominal Diameter	Thickness	Material
3	GMD300-1412-SE	300 MM	14 X 12 MM	SILICON ENCAPSULATED
4	GMD300-SE	300 MM	15 MM O-RING	
5	GMD500-SE	500 MM		


Manlid Gaskets



Profile	Material	Chemical resistance	Temperature range	FDA compliant
	VITON (FKM) Fluoroelastomers or Fluorocarbons	Corrosive cargo FKM materials operate efficiently under severe chemical conditions where many other seal materials cannot survive. Excellent resistance to petroleum fuels and mineral based oils.	-15° up to 200° C (-5°F to 392°F)	No

Item	TSI Part No.	Nominal Diameter	Thickness	Material
1	GMD300-1414-VT	300 MM	14 X 14 MM	VITON
2	GMD300-1510-VT		15 X 10 MM	
3	GMD500-1410-VT	500 MM	14 X 10 MM	
4	GMD500-1412-VT		14 X 12 MM	
5	GMD500-1414-VT		14 X 14 MM	



Profile	Material	Chemical resistance	Temperature range	FDA compliant
	EPDM	Not suited for liquified or petrolic products Some corrosive cargo. Not suitable for petroleum	-45° up to 120° C (-49°F to 248°F)	No

Item	TSI Part No.	Nominal Diameter	Thickness	Material
6	GMD300-1414-EP	300 MM	14 X 14 MM	EPDM
7	GMD500-1414-EP	500 MM		



Raised Face Flange Gaskets



VSP PITA

- ▶ Corrugated 316 stainless steel insert fully encapsulated within expanded PTFE
- ▶ High thermal cycling/operating tightness
- ▶ 2X blow-out resistance
- ▶ Lower relaxation & torque loss
- ▶ Low torque sealing
- ▶ Unlimited shelf life
- ▶ No adhesive - zero process contamination
- ▶ Corrugated peaks - defined contact points result in lower stress to seal than conventional virgin PTFE, filled PTFE, or ePTFE gaskets.



TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	THK	ID	OD
VSP# 8010	NPS 1/2 CLASS 150	RAISED FACE	0.125" 3.2mm	0.674" 17.1mm	1.875" 47.6mm
GF075-8035-PT VSP# 8035	NPS 3/4 CLASS 150	RAISED FACE	0.125" 3.2mm	0.884" 22.5mm	2.250" 57.2mm
GF100-8055-PT VSP# 8055	NPS 1 CLASS 150	RAISED FACE	0.125" 3.2mm	1.097" 27.9mm	2.625" 66.7mm
GF150-8134-PT VSP# 8134	NPS 1-1/2 CLASS 150	RAISED FACE	0.125" 3.2mm	1.682" 42.7mm	3.375" 85.7mm
GF200-8235-PT VSP# 8235	NPS 2 CLASS 150	RAISED FACE	0.125" 3.2mm	2.375" 60.3mm	4.125" 104.8mm
GF250-8285-PT VSP# 8285	NPS 2-1/2 CLASS 150/DIN 65 PN 16	RAISED FACE	0.125" 3.2mm	2.875" 73mm	4.875" 123.8mm
GF300-8362-PT VSP# 8362	NPS 3 CLASS 150	RAISED FACE	0.125" 3.2mm	3.500" 88.9mm	5.375" 136.5mm
GF400-8500-PT VSP# 8500	NPS 4 CLASS 150	RAISED FACE	0.125" 3.2mm	4.500" 114.3mm	6.875" 174.6mm
GF500-8553-PT VSP# 8553	NPS 5 CLASS 150/DIN 125 PN 16	RAISED FACE	0.125" 3.2mm	5.563" 141.3mm	7.750" 196.9mm

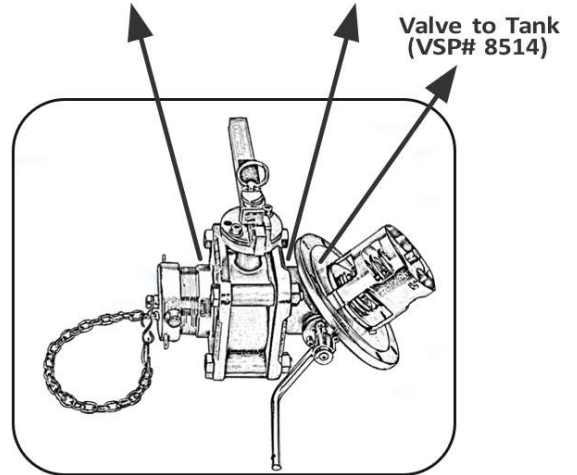
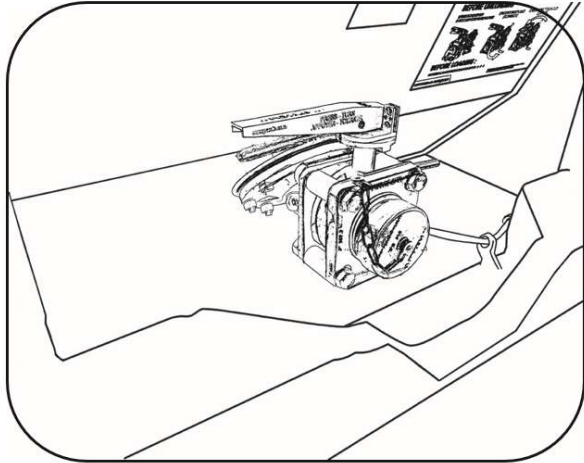


Foot Valve Gaskets



Valve Outlet Side
(VSP# 8383)

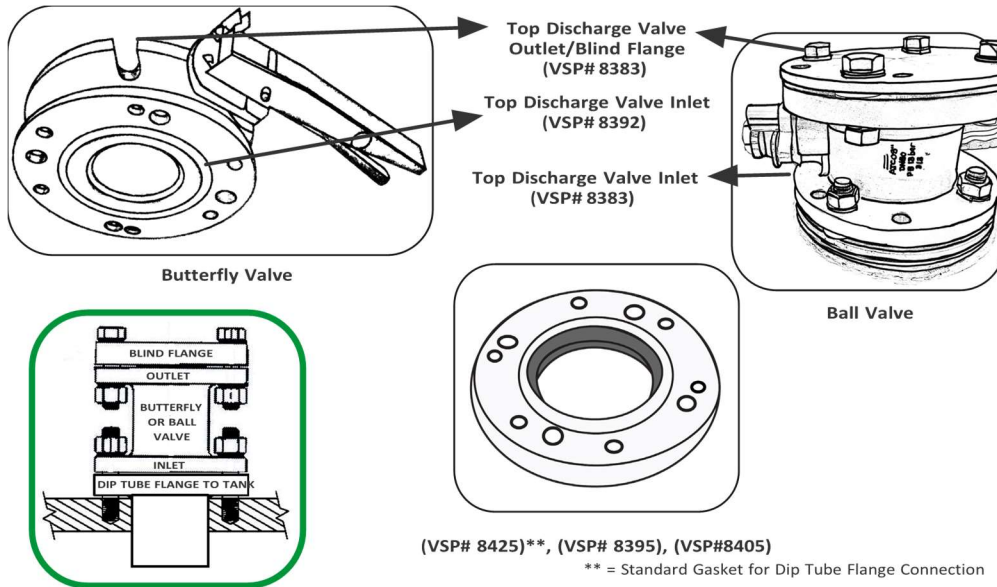
Valve Inlet Side
(VSP# 8381)



TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
GF300-8514-PT VSP# 8514	LIQUID TANK INTERNAL FOOT VALVE FLANGE (4 AND 8 BOLT) - FT VALE, PEROLO, GIRARD	RAISED OR FLAT FACE	VSP PITA OPRA	0.125in 3.2mm	4.750in 120.7mm	8.188in 208mm	W/(4) 0.563in (14.3mm) AND (4) 0.750in (19.1mm) BHS, BCD= 7.000in (177.8mm)	
GF300-8381-PT VSP# 8381	CLAMP STYLE BUTTERFLY VALVE, INLET SIDE ONLY	BUTTERFLY VALVE INLET SIDE	VSP PITA OPRA	0.125in 3.2mm	3.000in 76.2mm	7.870in 199.9mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 5.984in (152mm) TO 6.299in (160mm)	
GF300-8383-PT VSP# 8383	NPS 3 CLASS 150 / DIN 80 PN 16	BUTTERFLY VALVE OUTLET SIDE	VSP PITA DNA OPRA	0.125in 3.2mm	3.500in 88.9mm	7.870in 199.9mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 5.984in (152mm) TO 6.299in (160mm)	



Top Discharge Gaskets



TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
GF300-8425-PT VSP# 8425	WELD PAD TO TANK EDUCATION FLANGE BUTTERFLY VALVE 4 AND 6 BOLT - FT VALE, PEROLO, GIRARD	DIPTUBE FLANGE	VSP PITA OPRA	0.125 3.0mm	4.000in 101.6mm	7.625in 193.7mm	W/(4) 0.563in (14.3mm) AND (4) 0.709in (18mm) SLOTS, BCD= 6.250" (158.8mm and 6.688in) (169.9mm)	
GF300-8405-PT VSP# 8405	DIP TUBE FLANGE TO TANK FLANGE, RECESSED FLANGE ONLY - FT VALE, PEROLO, GIRARD	DIP TUBE RECESSED FLANGE	VSP PITA RING	0.125in 3.0mm	3.750in 95.3mm	5.125in 130.2mm		
GF300-8395-PT VSP# 8395	DIP TUBE FLANGE TO TANK FLANGE LARGE BORE - FT VALE, PEROLO, GIRARD	DIP TUBE FLANGE	VSP PITA RING	0.125in 3.0mm	3.750in 95.3mm	5.875in 149.2mm		
GF300-8392-PT VSP# 8392	FLANGED STYLE BUTTERFLY VALVE INLET SIDE ONLY	BUTTERFLY VALVE INLET SIDE	VSP PITA OPRA	0.125in 3.0mm	3.000in 76.2mm	7.625in 193.7mm	W/(4) 0.563in (14.3mm) AND (4) 0.719in 18.3mm) SLOTS, BCD=5.688in (144.5mm) to 6.676in (169.6mm)	
GF300-8383-PT VSP# 8383	NPS 3 CLASS 150/DIN 80 PN 16	RAISED OR FLAT FACE/ BUTTERFLY OUTLET SIDE/ BALL VALVE INLET AND OUTLET SIDE	VSP PITA DNA OPRA	0.125in 3.0mm	3.500in 88.9mm	7.870in 199.9mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 5.984in (152mm) TO 6.299in (160mm)	

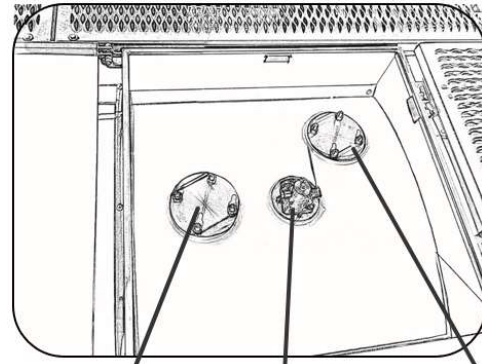
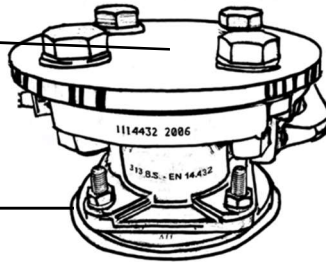


Top Tank Pad Gaskets



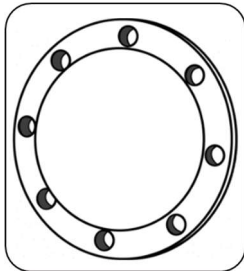
NPS 2 Class 150/ DIN 50 PN 16
(VSP# 8241)

NPS 1-1/2 Class 150/ DIN 40 PN 16
(VSP# 8136)



Dip Tube to Tank Pad &
Provisional / 4 and 8
Bolt

(VSP# 8427)



NPS 1-1/2 Class 150/
DIN 40 PN 16
(VSP# 8136)

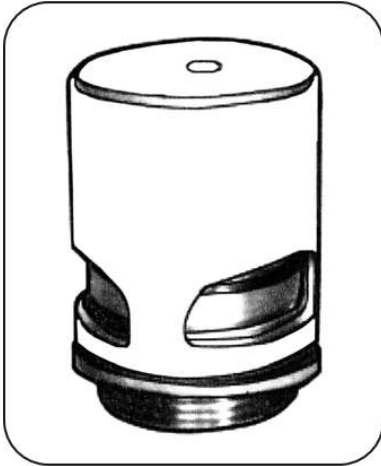
NPS 2 Class 150/
DIN 50 PN 16
(VSP# 8241)

NPS 3 Class 150/
DIN 80 PN 16
(VSP# 8383)

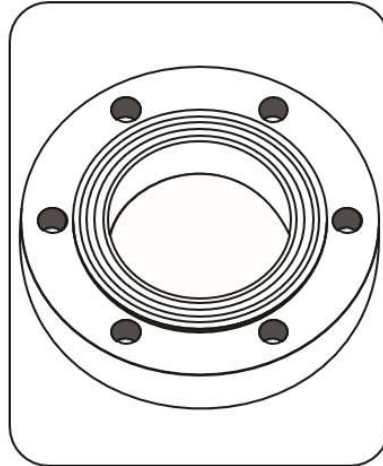
TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
GF150-8136-PT VSP# 8136	NPS 1-1/2 CLASS 150/DIN 40 PN 16	RAISED OR FLAT FACE	VSP PITA DNA OPRA	0.125in 3.0mm	1.910in 48.5mm	5.900in 149.9mm	W/(4) 0.625in (15.9mm) BHS, BCD = 3.875in (98.4mm) AND (4) 0.750in (19.1mm) BHS, BCD = 4.331in (110mm)	
GF200-8241-PT VSP# 8241	NPS 2 Class 150/DIN50 PN16	RAISED OR FLAT FACE	VSP PITA DNA OPRA	0.125in 3.0mm	2.375in 60.3mm	6.500in 165.1mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 4.750in (120.7mm) TO 4.921in (125mm)	
GF300-8383-PT VSP# 8383	NPS 3 CLASS 150/DIN 80 PN 16	RAISED OR FLAT FACE	VSP PITA DNA OPRA	0.125in 3.0mm	3.500in 88.9mm	7.870in 199.9mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 5.984in (152mm) TO 6.299in (160mm)	
GF300-8391-PT VSP# 8391	BUTTERFLY VALVE 4 AND 6 BOLT - FT VALE, PEROLO, GIRARD	RAISED OR FLAT FACE	VSP PITA OPRA	0.125in 3.0mm	3.438in 87.3mm	7.625in 193.7mm	W/(4) 0.563in (14.3mm) AND (4) 0.750in (19.1mm) SLOTS, BCD = 5.688in (144.5mm) to 6.688in (169.9mm)	
VSP# 8427	DIP TUBE TO TANK PAD & PROVISIONAL/4 AND 8 BOLT	RAISED OR FLAT FACE	VSP PITA OPRA	0.125in 3.0mm	4.000in 101.6mm	7.875in 200mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 6.125in (155.6mm) TO 6.297in (160mm)	



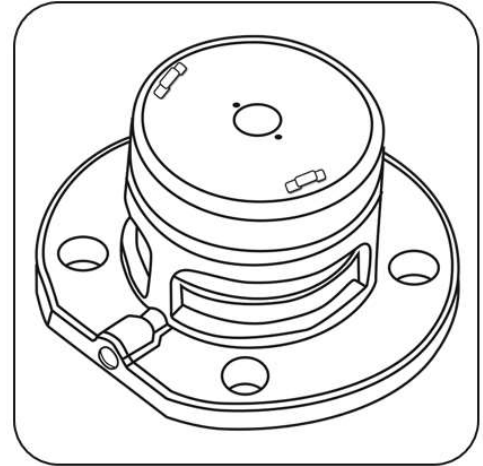
SRV Gaskets



Threaded SRV
(VSP# 8275)



SRV Adapter Flange
(VSP# 8305)

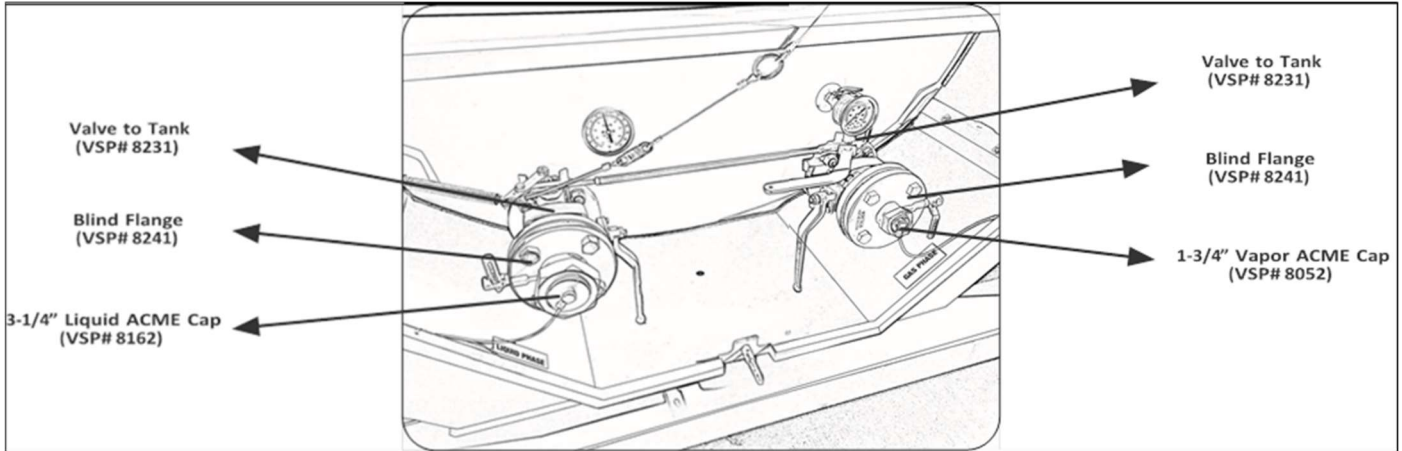


Flanged Body SRV
(VSP# 8391)

TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
GF250-8275-VG VSP# 8275	SAFETY RELIEF VALVE (THREADED) INTO TANK BASE MOUNT FLANGE - FT VALVE, PEROLO, GIRARD	RAISED OR FLAT FACE	VIRGIN PTFE RING	0.125in 3.0mm	2.970in (75.4mm)	3.750in 95.3mm		
GF250-8305-ET VSP# 8305	SAFETY RELIEF VALVE (THREADED) ADAPTER FLANGE TO TANK BASE MOUNT FLANGE (6 BOLT) - FT. VALE, PEROLO, GIRARD	RAISED OR FLAT FACE	PREMIUM ePTFE VSP OPRA	0.125in 3.0mm	3.250in 82.6mm	5.000in 127mm	W/(6) 0.453in (11.5mm) BHS, BCD = 4.125" (104.8mm)	
GF300-8391-PT VSP# 8391	BUTTERFLY VALVE 4 AND 6 BOLT - FT VALE, PEROLO, GIRARD FLANGED BODY SRV	FLANGE VALVE BODY	VSP PITA OPRA	0.125in 3.0mm	3.438in (87.3mm)	7.625in 193.7mm	W/(4) 0.563in (14.3mm) AND (4) 0.750" (19.1mm) SLOTS, BCD = 5.688in (144.5mm) to 6.688in (169.9mm)	



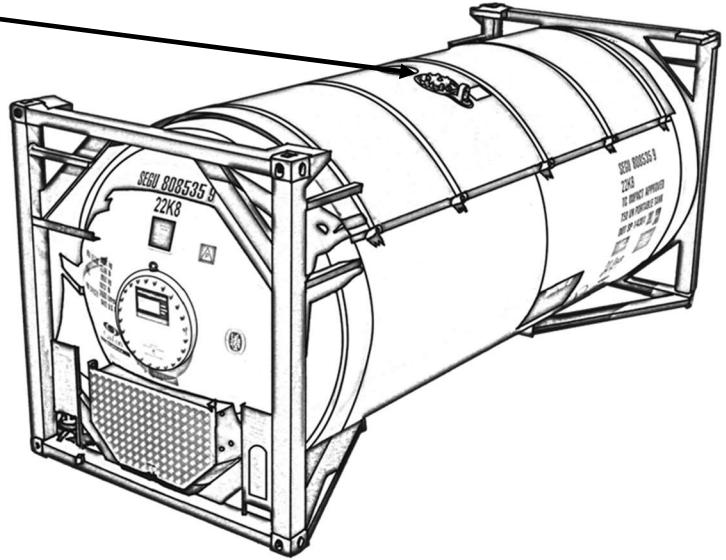
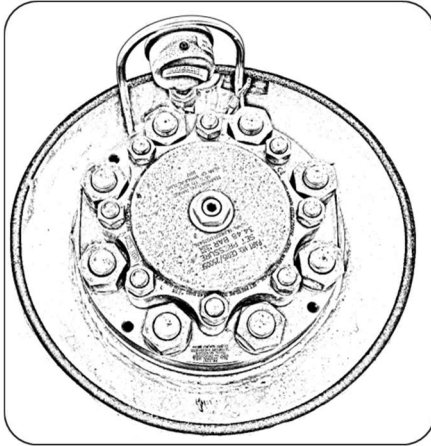
Gas Tank Valve Gaskets





TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	FULL-FACE DIMENSIONS	GASKET DESIGN
GF200-8231-PT VSP# 8231	INTERNAL VALVE FLANGE TO TANK FLANGE (NPS 2, DIN 50) - FT. VALE, MECHOTHERMIC	RAISED FACE OR RECESSED FLANGE	VSP PITA RING	0.125" 3.0mm	2.375" 60.3mm	3.375" 85.7mm		
GF200-8241-PT VSP# 8241	NPS 2 CLASS 150/DIN 50 PN 16	RAISED OR FLAT FACE	VSP PITA DNA OPRA	0.125in 3.0mm	2.375in 60.3mm	6.500in 165.1mm	W/(4) 0.750in (19.1mm) SLOTS, BCD = 4.750in (120.7mm) TO 4.921in (125mm)	
GC125-8052-VG VSP# 8052	1-3/4" ACME CAP	CAP	VIRGIN PTFE RING	0.125in 3.0mm	1.063in 27mm	1.377in 35mm		
GC325-8162-VG VSP# 8162	3-1/4in ACME CAP	CAP	VIRGIN PTFE RING	0.125in 3.0mm	2.094in 53.2mm	2.844in 72.2mm		



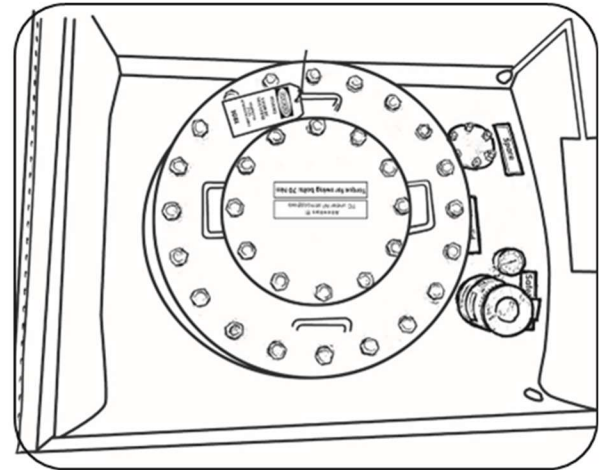
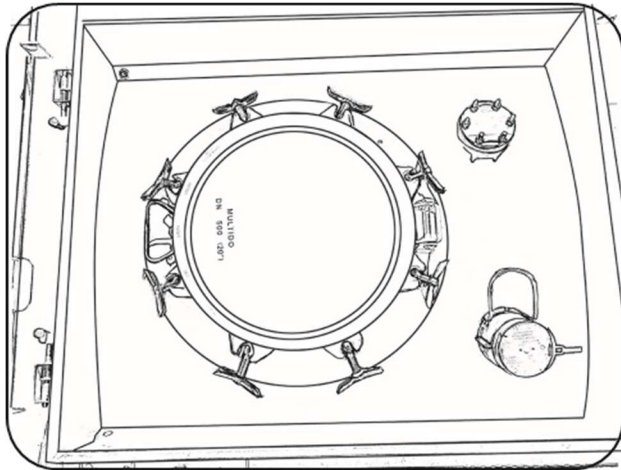
Gas Tank SRV Gaskets



TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	GASKET DESIGN
GF300-8601-PT VSP# 8601	SAFETY RELIEF VALVE FLANGE – FT. VALE	RAISED OR FLAT FACE	VSP PITA RING	0.125in 3.0mm	6.250in 158.8mm	7.500in 190.5mm	
GF300-8602-PT VSP# 8602	SAFETY RELIEF VALVE, RECESSED WELD PAD - FT. VALE	RAISED OR FLAT FACE	VSP PITA RING	0.125in 3.0mm	6.250in 158.8mm	7.250in 184.2mm	



Manlid Gaskets



VSP CargoTight™



- ▶ Chemically inert
- ▶ Self-Centering Design fits all common tank container manways
- ▶ Torque retention through engineered V-Notch™ and stainless steel core



VSP CycleTight®

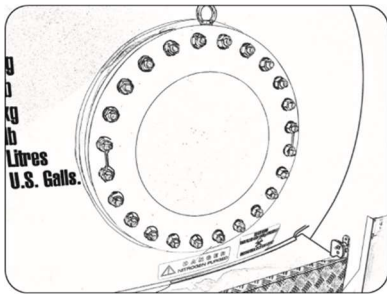
- ▶ Broad range of chemical resistance
- ▶ Patented insert technology achieves lower stress to seal, lower relaxation & torque loss, and protection against cut through, cracks & distortion



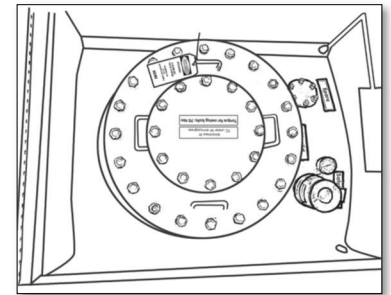
TSI PART NO. VSP#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD	GASKET DESIGN
*SEE CHART ON PG. 142	MANWAY	RAISED/ FLAT FACE OR TONGUE & GROOVE	VSP CYCLETIGHT® TYPE 7/TYPE 6	***	***	***	
GMD500- 9008-CT VSP# 9008	MANWAY	500mm HINGED MANWAY	VSP CARGOTIGHT	0.520in 13.2mm	19.300in 490.2mm	20.263in 514.7mm	



Cycletight Gaskets



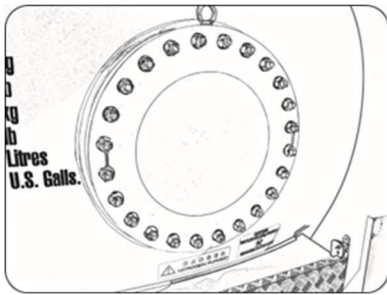
- **Broad range of chemical resistance**
- **Patented insert technology achieves lower stress to seal, lower relaxation & torque loss, and protection against cut through, cracks & distortion**



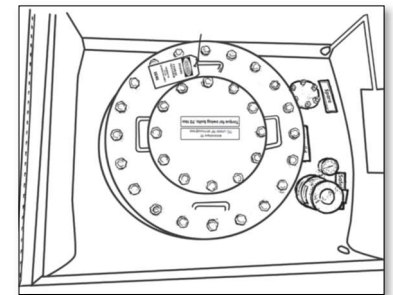
VSP MCC#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD
VSP# 9200	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 7	0.125" 3.2mm	17.750" 450.9mm	20.500" 520.7mm
VSP# 8990	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	18.750" 476.3mm	20.250" 514.4mm
VSP# 9218	MANWAY	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	19.500" 495.3mm	20.375" 517.5mm
VSP# 9220	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 7	0.125" 3.2mm	19.500" 495.3mm	21.500" 546.1mm
VSP# 9240	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 7	0.125" 3.2mm	19.500" 495.3mm	22.000" 558.8mm
VSP# 9245	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	19.685" 500mm	22.244" 565mm
VSP# 9256	MANWAY	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.000" 508mm	21.250" 539.8mm
VSP# 9250	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.000" 508mm	22" 558.8mm
VSP# 9252	MANWAY - NPS 20 CLASS 150	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.000" 508mm	23.875" 606.4mm
VSP# 9254	MANWAY - NPS 20 CLASS 300	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.000" 508mm	25.750" 654.1mm
VSP# 9199	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.157" 512mm	20.787" 528mm
VSP# 9258	MANWAY	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.375" 517.5mm	21.375" 542.9mm



Cycletight Gaskets





- **Broad range of chemical resistance**
- **Patented insert technology achieves lower stress to seal, lower relaxation & torque loss, and protection against cut through, cracks & distortion**



VSP MCC#	CONNECTION	FLANGE TYPE	GASKET TYPE	THK	ID	OD
VSP# 9265	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.472" 520mm	22.835" 580mm
VSP# 9043	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.500" 520.7mm	22.375" 568.3mm
VSP# 9260	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 7	0.125" 3.2mm	20.500" 520.7mm	23.000" 584.2mm
VSP# 9261	MANWAY	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.625" 523.9mm	21.875" 555.6mm
VSP# 9257	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.629" 524mm	22.204" 564mm
VSP# 9259	MANWAY	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.750" 527.1mm	21.625" 549.3mm
VSP# 9058	MANWAY - GASCON	FLAT FACE OR TONGUE & GROOVE	CYCLETIGHT TYPE 6	0.125" 3.2mm	20.750" 527.1mm	21.750" 552.5mm
VSP# 9270	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	21.000" 533.4mm	21.938" 557.2mm
VSP# 9272	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	21.260" 540mm	22.835" 580mm
VSP# 9273	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	21.260" 540mm	23.504" 597mm
VSP# 9262	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	21.625" 549.3mm	22.625" 574.7mm
VSP# 9264	MANWAY	RAISED OR FLAT FACE	CYCLETIGHT TYPE 6	0.125" 3.2mm	21.750" 552.5mm	23.188" 589mm

Tape & Anti-Seize

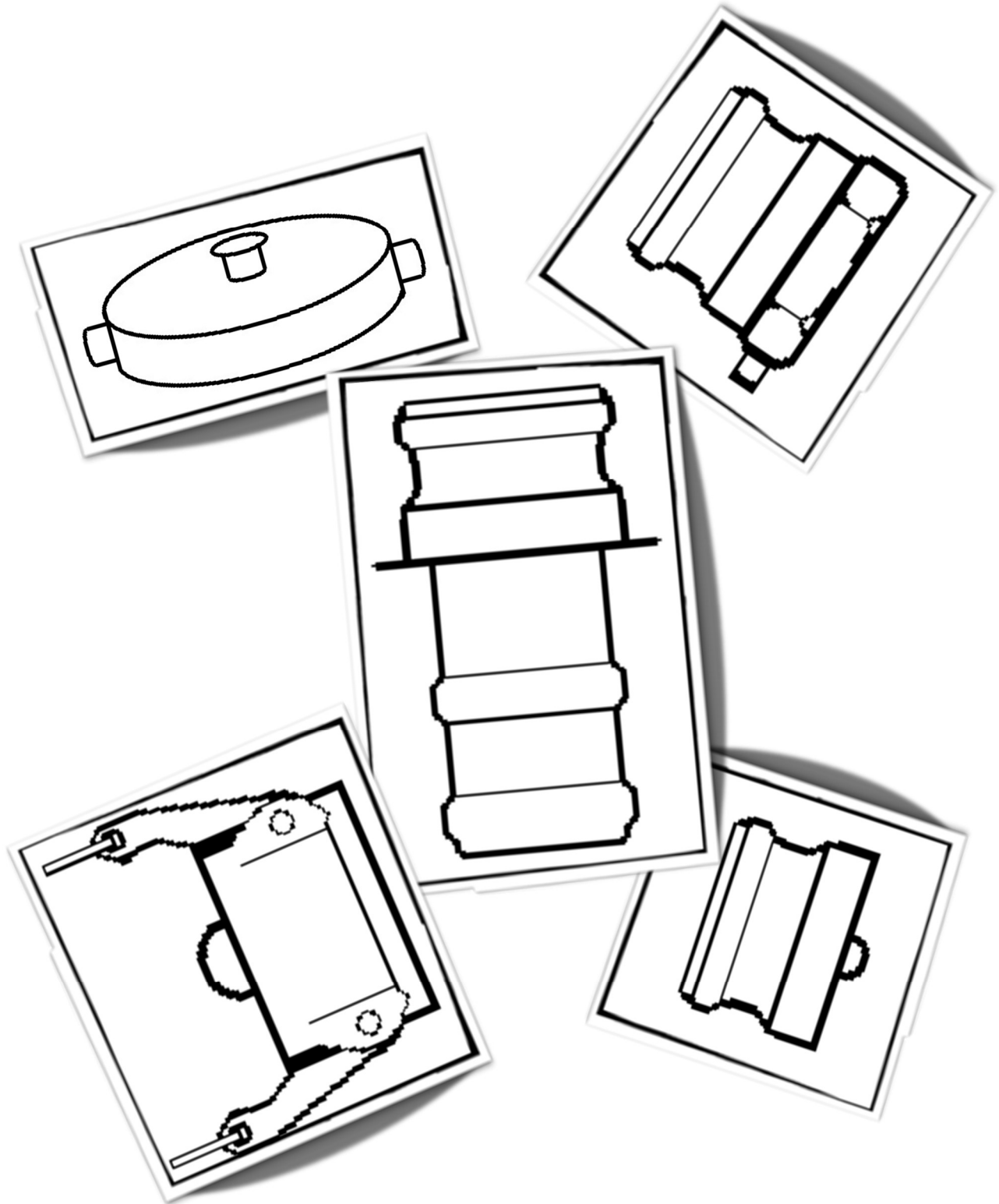
1/2" High Density Thread Seal Tape	
TSI Part No. SP-TFT-H050	
	Width
	1/2"
	Length
	260"
	Thickness
	.004"
Material	
100% Expanded PTFE	

3/4" High Density Thread Seal Tape	
TSI Part No. SP-TFT-H075	
	Width
	3/4"
	Length
	520"
	Thickness
	.004"
Material	
100% Expanded PTFE	

Anti-Seize Jet Lube 550®	
TSI Part No. SP-LBR-JT55	
	Its homogeneous composition offers maximum protection against seizure and heat freeze, eases assembling and dismantling, and saves man hours
Material	
PETROCHEMICAL LUBRICANT	

Anti-Seize Jet Lube® White Knight™	
TSI Part No. SP-LBR-JTWK	
	WHITE KNIGHT™ protects metal parts from seizure, galling, rust, corrosion and heat freeze by tenaciously adhering to the metal surface.
Material	
Food Grade Mineral Oil & Synthetic White Paste	

Dust Caps and Fittings

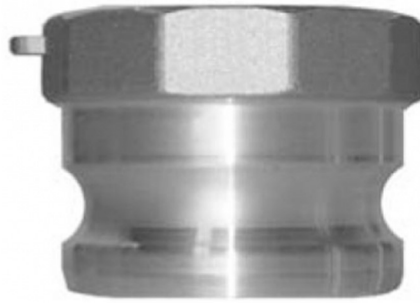


Dust Caps



Description	Cap Gasket	BSP		NPT
	PTFE Part No.	Aluminum Part No.	Stainless Steel Part No.	Stainless Steel Part No.
3/4" DUST CAP	GC075-03-TF	DC075-B-AL	DC075-B-SS	
1" DUST CAP	GC100-06-TF	DC100-B-AL	DC100-B-SS	
1-1/4" DUST CAP	GC100-06-TF	DC125-B-AL		
1.5" DUST CAP	GC150-06-TF		DC150-B-SS	DC150-N-SS
2" DUST CAP	GC200-06-TF		DC200-B-SS	DC200-N-SS
2.5" DUST CAP			DC250-B-SS	
3" DUST CAP	GC300-06-TF	DC300-B-AL	DC300-B-SS	DC300-N-SS

Cam and Groove Fittings



Part A Male Adapter X Female Threads

BSP Taper Threads

Size	316SS Part No.
1.5"	CGXA150-B-SS
2"	CGXA200-B-SS
3"	CGXA300-B-SS

BSP Parallel Threads

Size	Details	316SS Part No.
3"	PART A WITH GASKET	CGXAP300-B-SS
3" x 12"	PART A EXTENSION WITH GASKET	CGXA300-BGX-SS

NPT

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXA075-N-SS	CGXA075-N-304	CGXA075-N-PP
1"	CGXA100-N-SS	CGXA100-N-304	CGXA100-N-PP
1.5"	CGXA150-N-SS	CGXA150-N-304	CGXA150-N-PP
2"	CGXA200-N-SS	CGXA200-N-304	CGXA200-N-PP
3"	CGXA300-N-SS	CGXA300-N-304	CGXA300-N-PP

Cam and Groove Fittings



Part B

Female Coupler X Male Threads

BSP

Size	316SS Part No.
1.5"	CGXB150-B-SS
2"	CGXB200-B-SS
3"	CGXB300-B-SS

NPT

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXB075-N-SS	CGXB075-N-304	CGXB075-N-PP
1"	CGXB100-N-SS	CGXB100-N-304	CGXB100-N-PP
1.5"	CGXB150-N-SS	CGXB150-N-304	CGXB150-N-PP
2"	CGXB200-N-SS	CGXB200-N-304	CGXB200-N-PP
3"	CGXB300-N-SS	CGXB300-N-304	CGXB300-N-PP

Cam and Groove Fittings



Part C

Female Coupler X Hose Shank

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXC075-SS	CGXC075-304	CGXC075-PP
1"	CGXC100-SS	CGXC100-304	CGXC100-PP
1.5"	CGXC150-SS	CGXC150-304	CGXC150-PP
2"	CGXC200-SS	CGXC200-304	CGXC200-PP
3"	CGXC300-SS	CGXC300-304	CGXC300-PP

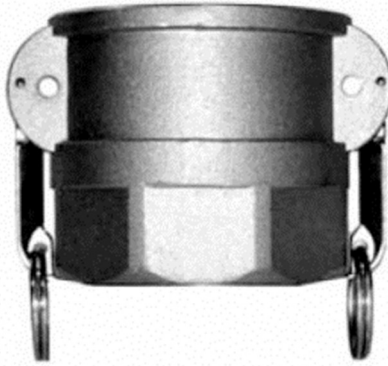


Part E

Male Adapter X Hose Shank

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXE075-SS	CGXE075-304	CGXE075-PP
1"	CGXE100-SS	CGXE100-304	CGXE100-PP
1.5"	CGXE150-SS	CGXE150-304	CGXE150-PP
2"	CGXE200-SS	CGXE200-304	CGXE200-PP
3"	CGXE300-SS	CGXE300-304	CGXE300-PP

Cam and Groove Fittings



Part D

Female Coupler X Female Threads

BSP

Size	316SS Part No.
1.5"	CGXD150-B-SS
2"	CGXD200-B-SS
3"	CGXD300-B-SS

NPT

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXD075-N-SS	CGXD075-N-304	CGXD075-N-PP
1"	CGXD100-N-SS	CGXD100-N-304	CGXD100-N-PP
1.5"	CGXD150-N-SS	CGXD150-N-304	CGXD150-N-PP
2"	CGXD200-N-SS	CGXD200-N-304	CGXD200-N-PP
3"	CGXD300-N-SS	CGXD300-N-304	CGXD300-N-PP

Cam and Groove Fittings



Part F

Male Adapter X Male Threads

BSP

Size	316SS Part No.
1.5"	CGXF150-B-SS
2"	CGXF200-B-SS
3"	CGXF300-B-SS

NPT

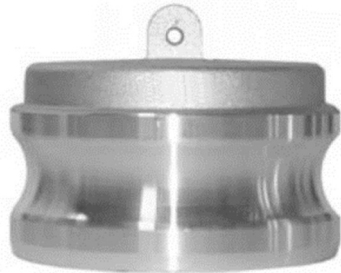
Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGXF075-N-SS	CGXF075-N-304	CGXF075-N-PP
1"	CGXF100-N-SS	CGXF100-N-304	CGXF100-N-PP
1.5"	CGXF150-N-SS	CGXF150-N-304	CGXF150-N-PP
2"	CGXF200-N-SS	CGXF200-N-304	CGXF200-N-PP
3"	CGXF300-N-SS	CGXF300-N-304	CGXF300-N-PP

Cam and Groove Fittings



Part DC
Dust Cap


Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGDC075-SS	CGDC075-304	CGDC075-PP
1"	CGDC100-SS	CGDC100-304	CGDC100-PP
1.5"	CGDC150-SS	CGDC150-304	CGDC150-PP
2"	CGDC200-SS	CGDC200-304	CGDC200-PP
3"	CGDC300-SS	CGDC300-304	CGDC300-PP





Part DP
Dust Plug

Size	316SS Part No.	304SS Part No.	Poly Part No.
3/4"	CGDP075-SS	CGDP075-304	CGDP075-PP
1"	CGDP100-SS	CGDP100-304	CGDP100-PP
1.5"	CGDP150-SS	CGDP150-304	CGDP150-PP
2"	CGDP200-SS	CGDP200-304	CGDP200-PP
3"	CGDP300-SS	CGDP300-304	CGDP300-PP


Cam and Groove Fittings



PART DA /PIPE TAP	Item	Female Coupler	Male Adapter	Tap Size	316SS Part No.
	1	2"	2"	1/2"	CGDA2020-SS-050TAP
	2	2"	2"	3/4"	CGDA2020-SS-075TAP
	3	3"	2"	1/2"	CGDA3020-SS-050TAP
	4	3"	2"	3/4"	CGDA3020-SS-075TAP
	5	3"	3"	1/2"	CGDA3030-SS-050TAP



PART DD /PIPE TAP	Item	Female Coupler	Female Adapter	Tap Size	316SS Part No.
	6	2"	2"	1/2"	CGDD200-SS-050TAP
	7	2"	2"	3/4"	CGDD200-SS-075TAP
	8	3"	3"	1/2"	CGDD300-SS-050TAP
	9	3"	3"	3/4"	CGDD300-SS-075TAP

PART SA /PIPE TAP	Item	Male Coupler	Male Adapter	Tap Size	316SS Part No.
	10	2"	2"	1/2"	CGSA200-SS-050TAP
	11	2"	2"	3/4"	CGSA200-SS-075TAP
	12	3"	3"	1/2"	CGSA300-SS-050TAP
	13	3"	3"	3/4"	CGSA300-SS-075TAP








Cam and Groove Fittings

PART DA	Item	Female Coupler	Male Adapter	316SS Part No.
	1	1.5"	2"	CGDA1520-SS
	2	2"	1.5"	CGDA2015-SS
	3	2"	3"	CGDA2030-SS
	4	3"	1.5"	CGDA3015-SS
	5	3"	2"	CGDA3020-SS

PART DD	Item	Female Coupler	Female Coupler	316SS Part No.
	6	1.5"	1.5"	CGDD150-SS
	7	2"	2"	CGDD200-SS
	8	3"	3"	CGDD300-SS
	9	3"	2"	CGDD3020-SS

PART SA	Item	Male Adapter	Male Adapter	316SS Part No.
	10	1.5"	1.5"	CGSA150-SS
	11	2"	2"	CGSA200-SS
	12	3"	3"	CGSA300-SS
	13	2"	3"	CGSA2030-SS

Cam and Groove Gaskets

BUNA N: BLUE STRIPE -40°F to +250°F 	Buna N is standard It is generally recommended for petroleum derivatives, neutral or slightly acidic salt solutions, alcohols, ethers, glycols, fats, oils, and greases.				
	Item	Size	TSI Part No.	TSI Part No. – Extra Thick	
	1	1.5"	CGGK150-NR	CGGK150-NRX	
	2	2"	CGGK200-NR	CGGK200-NRX	
3	3"	CGGK300-NR	CGGK300-NRX		
BUNA N - FDA: WHITE -40°F to +250°F 	NEOPRENE: RED STRIPE -65°F to 250°F 		It is generally recommended for food handling, neutral or slightly acidic salt solutions, alcohols, ethers, glycols, fats, oils, and greases.		
Recommended for alkaline and acid salt solutions and aldehydes such as formaldehyde.			Item Size TSI Part No.		
4	1.5"	CGGK150-NR-FDA	7	1.5"	CGGK150-NP
5	2"	CGGK200-NR-FDA	8	2"	CGGK200-NP
6	3"	CGGK300-NR-FDA	9	3"	CGGK300-NP
EPDM: WHITE STRIPE -40°F to 160°F 	VITON A: GREEN -40°F to 400°F 		Ethylene-propylene rubber. Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids		
Recommended for aromatics, hydrocarbons, liquid chlorine, carbon disulfide and molten sulfur. Viton A is not recommended for esters or the ketone family.			Item Size TSI Part No.		
10	1.5"	CGGK150-EP	13	1.5"	CGGK150-VT
11	2"	CGGK200-EP	14	2"	CGGK200-VT
12	3"	CGGK300-EP	15	3"	CGGK300-VT
PTFE ENVELOPE NEOPRENE CORE: -40°F to 500°F 	PTFE ENCAPSULATED SILICON CORE: -40°F to 500°F 		PTFE is recommended for highly oxidizing fluids, esters, ketones, and other liquids not generally handled by natural and synthetic rubbers		
PTFE is recommended for highly oxidizing fluids, esters, ketones, and other liquids not generally handled by natural and synthetic rubbers			Item Size TSI Part No.		
16	1.5"	CGGK150-TN	19	1.5"	CGGK150-SE
17	2"	CGGK200-TN	20	2"	CGGK200-SE
18	3"	CGGK300-TN	21	3"	CGGK300-SE

Driver's Kit



Description	TSI Part No.
3" BSP - PART A – PARALLEL - WITH GASKET - 316 SS	CGXAP300-BG-SS



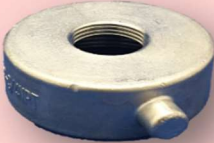


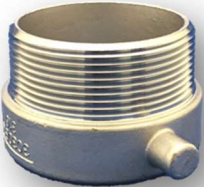
Description	TSI Part No.
3" BSP EXTENDED PART A - 12" LONG - WITH GASKET - 316 SS	CGXA300-BGX-SS







Custom built
driver's kit
On Request

Description	TSI Part No.
Driver's Kit	MISC-KIT-DRVR


Cap Adapters

Item	Description	TSI Part No.
1	 <p>1.5" FEMALE BSP X 3/4" MALE BSP - SS</p>	CA150B-075MB-SS
2	 <p>1.5" FEMALE BSP X 3/4" FEMALE NPT - SS</p>	CA150B-075N-SS
3	 <p>2" FEMALE BSP X 3/4" FEMALE NPT - SS</p>	CA200B-075N-SS
4	 <p>3" FEMALE BSP X 2" MALE NPT - SS</p>	CA300B-200MN-SS
5	 <p>3" FEMALE NPT X 2" MALE NPT - SS</p>	CA300N-200MN-SS
6	 <p>3" FEMALE BSP X 3" MALE NPT - SS</p>	CA300B-300MN-SS

Crowfoot Fittings

Item	Description	TSI Part No.	
1		CROWFOOT BLIND CAP - STAINLESS STEEL	PFCFT-BCAP-SS
2		CROWFOOT X 3/4" FEMALE NPT THREADS - SS	PFCFT075-FN-SS
3		CROWFOOT X 1" FEMALE NPT THREADS - SS	PFCFT100-FN-SS
4		CROWFOOT X 3/4" MALE NPT THREADS - SS	PFCFT075-MN-SS
5		CROWFOOT X 1" MALE NPT THREADS - SS	PFCFT100-MN-SS
6		UNIVERSAL CROWFOOT WASHER - PACK OF 50 - PER PACK	PFCFT-UWSH-RB

Inline Ball Valves

1 Piece Ball Valves - NPT- 316 SS			
	Item	Size	TSI Part No.
	1	0.25"	BVT1025-N-SS
	2	0.5"	BVT1050-N-SS
	3	0.75"	BVT1075-N-SS
	4	1.5"	BVT1150-N-SS
	5	2"	BVT1200-N-SS

More inline ball valves available, please choose from the following:

1. Body type of ball valve
1 pc



2 pc



3pc



Flanged Ball Valve



2. **Half Port** available only in 1pc ball valve



Full Port or Bore – wider opening allowing more flow



3. Connection type and size

- Connections. Threaded BSP or NPT, Socket Weld
- Flanged connection – ANSI (American) or DIN (metric)
- Size: 1/4", 1/2", 3/4", 1, 1 1/2", 2", 3"

4. Material for Body and ball

- SS 316 (CF8M), Hastelloy, Alloy 20, Brass, Carbon Steel, Polypropylene

5. Pressure rating

- Threaded or Socket Weld: 400WOG, 600WOG, 1000WOG
- ANSI: 150#, 300#,
- DIN: PN10 (150#), PN16 (300#)


6. Handle style


- Standard – Manual Locking Handle
- Pneumatic – controlled by air pressure


7. Additional Specific requirements must be disclosed


Example height requirements, seat types, and codes

Tape & Liquid Thread Sealant

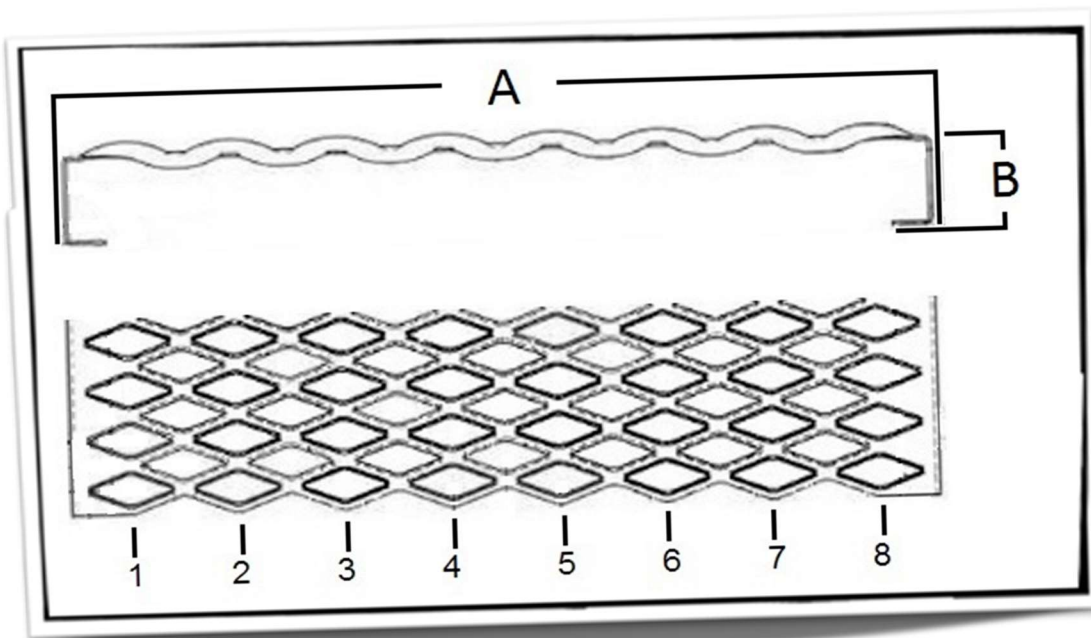
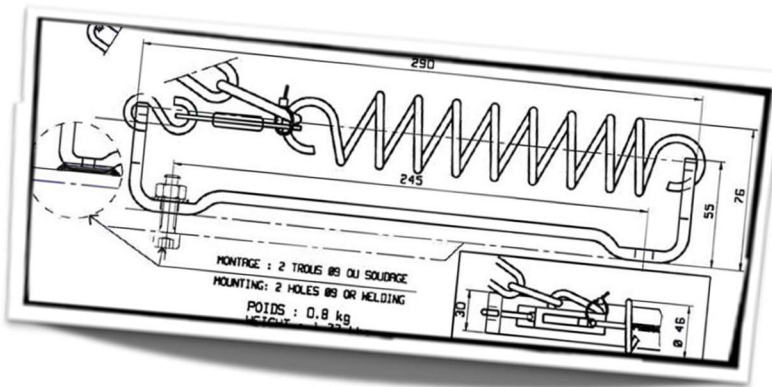
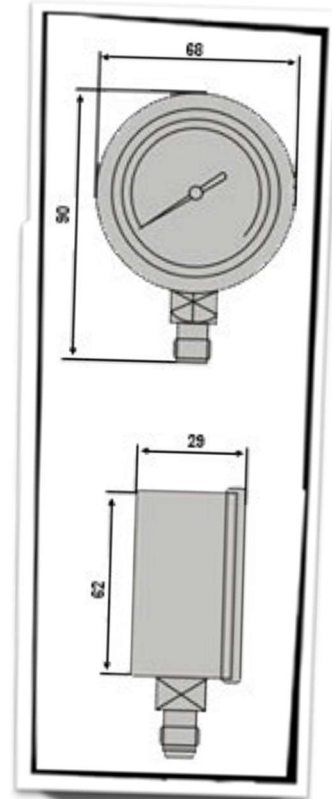
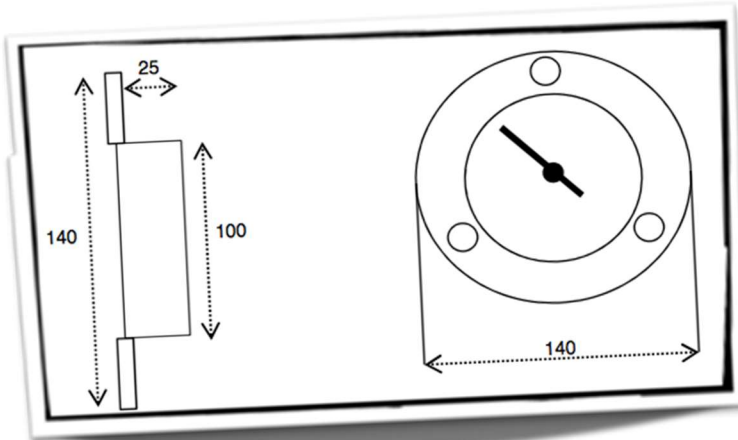
1/2" Low Density Tape	
TSI Part No. SP-TFT-050	
	Width
	1/2"
	Length
	520"
	Thickness
	.004"
Material	
PTFE	

3/4" Low Density Tape	
TSI Part No. SP-TFT-075	
	Width
	3/4"
	Length
	520"
	Thickness
	.004"
Material	
PTFE	

PLS® 2 Pipe Thread	
TSI Part No. SP-SLT-PLS2	
	<p>Brush on to seal pipe joints, plugs, screwed fittings and gasket connections in steam systems, refineries, gas service, refrigeration systems and chemical plants</p>
Material	
Lead-free, non-hardening, non-toxic, opaque gray paste	

PTFE Pipe Thread	
TSI Part No. SP-SLT-TF16	
	<p>Pipe thread sealant for 1/2" to 2" NPT metal piping.</p>
Material	
This PTFE white paste has a smooth consistency and no grit.	

Tank Parts & Accessories



Pressure Gauges

Standard 2.5" Pressure Gauge



TELL-TALE Gauges

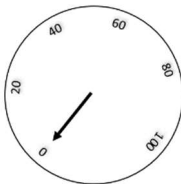
These gauges have a red needle that indicates the highest pressure reached since the last setting.

Item	Description	Connection Location/Size	TSI Part No.
1	2.5" 0-7 BAR/0-100PSI - SS	Bottom 1/4" BSP	PG250-700-BM25B-SS
2	2.5" 0-7 BAR/0-100PSI - SS – w/ DRAG POINTER	Bottom 1/4" BSP	PG250-700-BM25B-SS-MX
3	2.5" 0-10/0-150PSI BAR - SS – w/ DRAG POINTER	Bottom 1/4" BSP	PG250-1000-BM25B-SS-MX
4	2.5" 0-60 PSI - SS	Bottom 1/4" NPT	PG250-414-BM25N-SS
5	2.5" 0-100 PSI - SS	Bottom 1/4" NPT	PG250-689-BM25N-SS
6	2.5" 0-160 PSI - SS	Bottom 1/4" NPT	PG250-1103-BM25N-SS
7	2.5" 0-200 PSI - SS	Bottom 1/4" NPT	PG250-1379-BM25N-SS
8	2.5" 0-600 PSI - SS	Bottom 1/4" NPT	PG250-4137-BM25N-SS
9	2.5" 0-600 PSI - SS	Back 1/4" NPT	PG250-4137-BK25N-SS

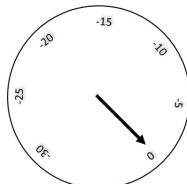
Need a Custom Pressure Gauge please provide the following:

1. Type of Gauge

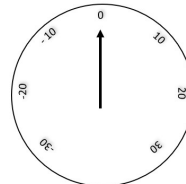
Pressure only



Vacuum Only



Compound (Pressure/Vacuum)



Digital



2. Connection Material

Brass (non-corrosive application) or **Stainless Steel** (corrosive application)

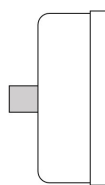
3. Connection Location/Size

Location:

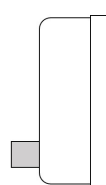
Bottom



Center Back



Lower Back



Thread Type/Size:

BSP or NPT 1/4", 1/2", 3/4" etc.

4. Dry or Liquid Filled

Liquid filled gauges help minimize the vibration on the indicator for easy reading

5. Dial Size

2.5" is Standard but available in more sizes

6. Pressure Range

Please indicate the minimum and maximum pressure ranges and accuracy if applicable

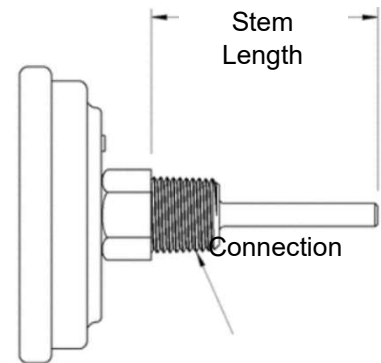
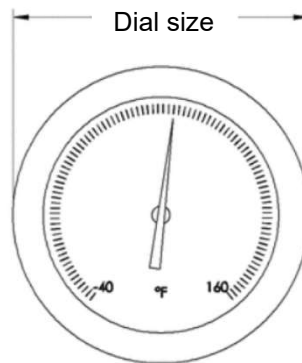
Temperature Gauges



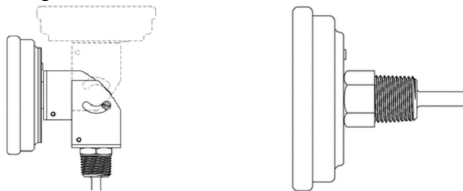
Item	Description	TSI Part No.
1	4" THERMOMETER - 1.5% ACCURACY - 20-200°C	TG400-200-15-DL
2	4" THERMOMETER - 1.5% ACCURACY - 20-200°C w/ Glass Protection	TG400-200-15-DL-GP

Threaded thermometers need to be ordered, please provide the following:

1. **Dial size**
2. **Temperature ranges max and minimum**
3. **Stem length and Diameter**
4. **Connection location and pipe size**
 - a. Back location is standard
 - b. 1/2" NPT is common



5. **Adjustable or Fixed Dial**



6. **Material type**






Stainless steel is standard for stem material

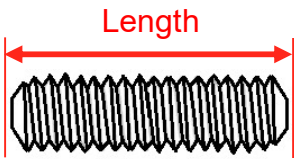
Document Holders

	Item	Description	TSI Part No.
1		Aluminum Placard Holder with Mounting Holes	CL-PLCRD-AL-MH
2		Document Holder	MISC-DOC-TUBE
3		Document Holder - Tethered	MISC-DOC-TUBE-TC

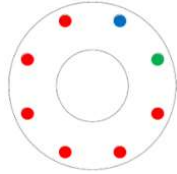
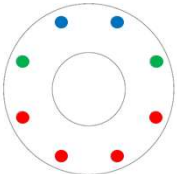
Fasteners



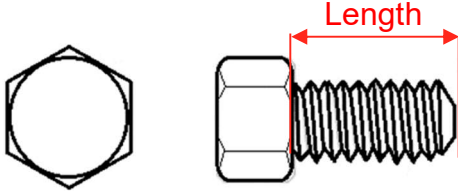
A2-70						
Item	Size	Flat Washer	Lock Washer	Lock Nut	Half Nut	Hex Nut
1	6mm	FA-QXWF06X	FA-QXWL06X	FA-QXNL06X		FA-QXNH06X
2	8mm	FA-QXWF08X	FA-QXWL08X	FA-QXNL08X	FA-QXNJ08X	FA-QXNH08X
3	10mm	FA-QXWF10X	FA-QXWL10X	FA-QXNL10X		FA-QXNH10X
4	12mm	FA-QXWF12X	FA-QXWL12X	FA-QXNL12X	FA-QXNJ12X	FA-QXNH12X
5	16mm	FA-QXWF16X	FA-QXWL14X	FA-QXNL16X	FA-QXNJ16X	FA-QXNH16X

Studs A2-70				
*Other sizes Available		10mm	12mm	16mm
Item	Length			
6	40mm	FA-QXDT10X040		
7	50mm		FA-QXDT12X050	FA-QXDT16X050
8	60mm		FA-QXDT12X060	FA-QXDT16X060
9	70mm		FA-QXDT12X070	
10	1 Meter Rod		FA-Q5DT12XROD	FA-Q5DT16XROD

Fasteners – Stud Kits


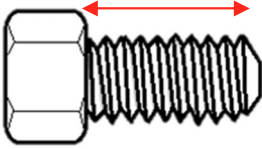

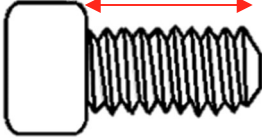

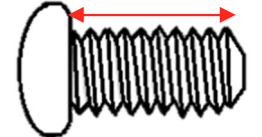

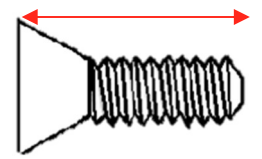

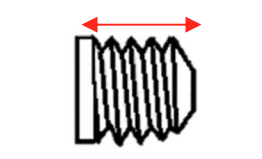
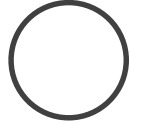
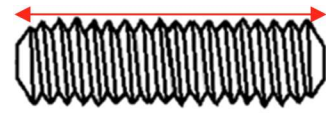
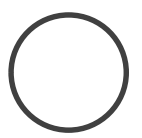
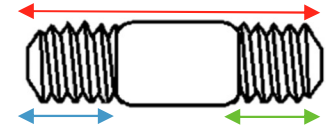
Item	Valve to Tank Pad	Stud Kit No.	Specification
1	Thread Airline Ball Valve	FA-KT-QXD4-10X040	<ul style="list-style-type: none"> (4) 10mm x 40mm Stud (4) 10mm Lock Washer (4) 10mm Hex Nut
2	Flanged Airline Ball Valve		
3	Threaded Airline Bfly		
4	Flanged Airline Bfly		
5	Clamped Airline 2” Bfly	FA-KT-QXD4-16X075	<ul style="list-style-type: none"> (4) 16mm x 75mm Stud (4) 16mm Lock Washer (4) 16mm Hex Nut
6	Threaded Full Bore Ball Valve	FA-KT-QXD4-16X050	<ul style="list-style-type: none"> (4) 16mm x 50mm Stud (4) 16mm Lock Washer (4) 16mm Hex Nut
7	Flanged Full Bore Ball Valve		
8	Flanged SRV		
9	Flanged 3” Bfly 4 Hole Pattern		
10	Flanged 3” Bfly 6 Hole pattern	FA-KT-QXD6-12X050	<ul style="list-style-type: none"> (4) 12mm x 50mm Stud (4) 12mm Lock Washer (4) 12mm Hex Nut
11	Foot Valve Neatco & Highlift	FA-KT-QXD8-NCOFV	<ul style="list-style-type: none"> (8) 12mm x 50mm Stud (8) 12mm Lock Washer (8) 12mm Hex Nut
12	Foot Valve Twin+Neatflow Style	FA-KT-QXD8-NFLFV 	<ul style="list-style-type: none"> (6) 12mm x 50mm Stud (1) 12mm x 60mm Stud (1) 12mm x 70mm Stud (8) 12mm Lock Washer (7) 12mm Hex Nut (1) 12mm Hex Half Nut
13	Foot Valve Uni+CleanFlow Style	FA-KT-QXD8-CFLFV 	<ul style="list-style-type: none"> (4) 12mm x 50mm Stud (2) 12mm x 60mm Stud (2) 12mm x 70mm Stud (8) 12mm Lock Washer (8) 12mm Hex Nut

Fasteners – Bolts & Bolt Kits

Hex Bolt A2-70 *Other sizes Available						
Item	Length	6mm	8mm	10mm	12mm	16mm
1	20mm		FA-QXBH08X020	FA-QXBH10X020		FA-QXBH16X020
2	25mm	FA-QXBH06X025	FA-QXBH08X025	FA-QXBH10X025		FA-QXBH16X025
3	30mm		FA-QXBH08X030	FA-QXBH10X030	FA-QXBH12X030	FA-QXBH16X030
4	40mm			FA-QXBH10X040	FA-QXBH12X040	FA-QXBH16X040
5	50mm		FA-QXBH08X050		FA-QXBH12X050	FA-QXBH16X050
6	60mm		FA-QXBH08X060		FA-QXBH12X060	FA-QXBH16X060
7	100mm					FA-QXBH16X100

Bolt Kits			
Item	Valve to Blind Flange	Stud Kit No.	Specification
8	Flanged Airline Ball Valve	FA-KT-QXD4-10X050	<ul style="list-style-type: none"> (4) 16mm x 50mm Stud (4) 16mm Lock Washer (4) 16mm Flat Washer (4) 16mm Hex Nut
9	Flanged Airline Bfly		
10	Flanged Full Bore Ball Valve		
11	Flanged 3" Bfly		
12	Clamped Bfly to Foot Valve	FA-KT-QXD4-16X075	<ul style="list-style-type: none"> (4) 16mm x 100mm Stud (4) 16mm Lock Washer (4) 16mm Flat Washer (4) 16mm Hex Nut (4) Spacers

Fasteners –Tool Guide

Item	Top View	Measurement Side View	Metric Size	Wrench/ Key Size	Inch Size	Wrench/ Key Size
HEX CAP SCREW "BOLT"						
1			6mm	10mm	1/4"	7/16
			8mm	13mm	3/8"	9/16
			10mm	16/17mm	1/2"	3/4
			12mm	18/19mm	5/8"	15/16
			16mm	24mm	3/4"	1 1/8
SOCKET CAP SCREW						
2			6mm	5mm	1/4"	3/16
			8mm	6mm	3/8"	5/16
			10mm	8mm	1/2"	3/8
			12mm	10mm	5/8"	1/2
			16mm	14mm	3/4"	5/8
BUTTON HEAD SCREW						
3			6mm	4mm	1/4"	5/32
			8mm	5mm	3/8"	7/32
			10mm	6mm	1/2"	5/16
			12mm	8mm	5/8"	3/8
			16mm	10mm	3/4"	1/2
FLAT HEAD SCREW						
4			6mm	4mm	1/4"	5/32
			8mm	5mm	3/8"	7/32
			10mm	6mm	1/2"	5/16
			12mm	8mm	5/8"	3/8
			16mm	10mm	3/4"	1/2
SET SCREW						
5			6mm	3mm	1/4"	1/8
			8mm	4mm	3/8"	3/16
			10mm	5mm	1/2"	1/4
			12mm	6mm	5/8"	5/16
			16mm	8mm	3/4"	3/8
"ALL THREADED" - STUD						
6			Studs are measured by its overall length			
DOUBLE END STUD						
7			Double End Studs are measured by Overall Length and both threaded length ends. The center part of the stud is called a shoulder.			

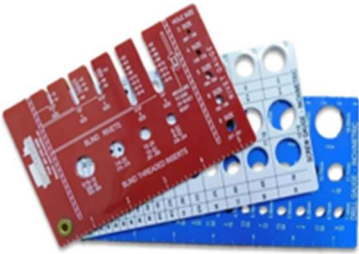

Fastener Measurements & Markings Chart

Conversion Chart		
Inch Size	Inch Decimal	Metric
1/32	0.03125	0.794
1/16	0.0625	1.588
1/8	0.125	3.175
3/16	0.1875	4.7625
1/4	0.25	6.350
5/16	0.3125	7.9375
3/8	0.375	9.525
7/16	0.4375	11.1125
1/2	0.5	12.700
9/16	0.5625	14.2875
5/8	0.625	15.875
3/4	0.75	19.050
7/8	0.875	22.225
1	1	25.400

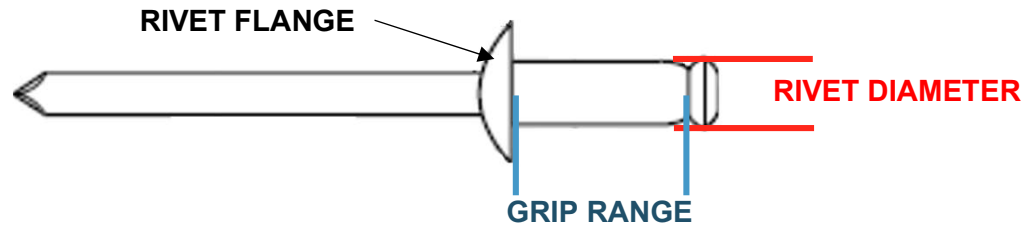
Inch Course Thread	Metric Course Thread
UNC Size-TPI	Size-Pitch
8-32	3mm-0.50
10-24	4mm-0.70
1/4-20	5mm-0.80
5/16-18	6mm-1.00
3/8-16	8mm-1.25
7/16-14	10mm-1.50
1/2-13	12mm-1.75
9/16-12	14mm-2.00
5/8-11	16mm-2.00
3/4-10	18mm-2.00
7/8-9	20mm-2.50
1"-8	24mm-3.00

Markings Chart		
Material Marking	Specification	Material
B7	ASTM A193 GRADE B7	AISI 4140,4142 or 4105
B16	ASTM A193 GRADE B16	CrMoVa Alloy Steel
B8	ASTM A193 GRADE B8	AISI 304
B8M	ASTM A193 GRADE B8M	AISI 316
L7	ASTM A320 GRADE L7	AISI 4140, 4142 or 4145
<u>B8</u>	ASTM A320 GRADE B8 CL. 2	AISI 304 STRAIN HARDENED
<u>B8M</u>	ASTM A320 GRADE B8M CL. 2	AISI 316 STRAIN HARDENED
<u>B8SH</u>	ASTM A193 GRADE B8 CL. 2	AISI 304 STRAIN HARDENED
<u>B8MSH</u>	ASTM A193 GRADE B8M CL. 2	AISI 316 STRAIN HARDENED
A2-70	ISO 3506 A2	304, 304L, 321, 347
A4-70	ISO 3506 A4	316, 316L, 317, 317L
2H	ASTM A194 GRADE 2H	Medium Carbon Steel, Quenched and Tempered

Fasteners – Bolt Gauges

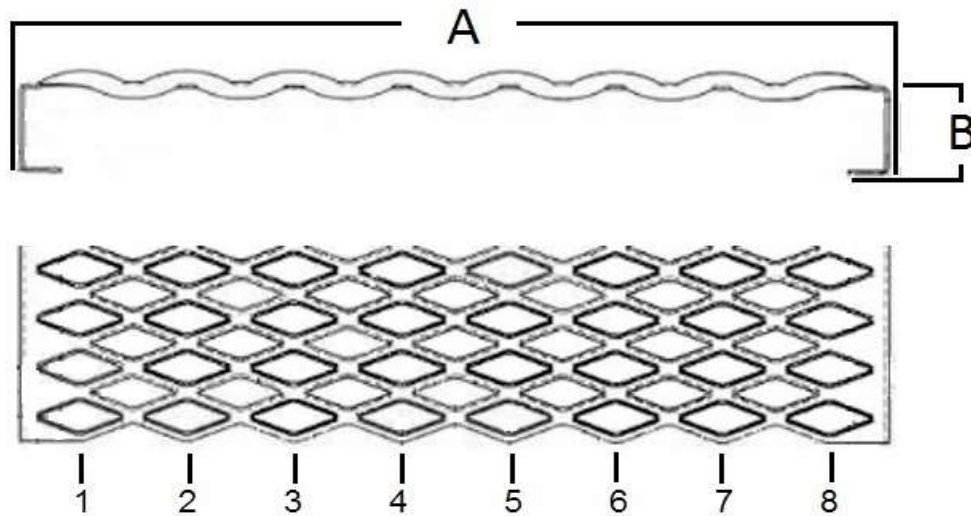
Item	Description	TSI Part No.
1		<p style="text-align: center;">Metric and Inch Bolt Gauge</p> <p style="text-align: center;">M-GAUGE1</p> <hr/> <p><u>RIVET GAUGE - RED</u></p> <ul style="list-style-type: none"> • Measure pop rivets & blind thread inserts • 5 inch ruler <p><u>Internally Threaded Screw Gauge - WHITE</u></p> <ul style="list-style-type: none"> • #0 - 3/4 coarse & fine thread inch • 1.6mm - 16mm metric • Drill & Tap Gauge on reverse side <p><u>Drill Bit Gauge - BLUE</u></p> <ul style="list-style-type: none"> • Inch & metric diameters • 7-1/2 inch ruler
2		<p style="text-align: center;">Metric and Inch Large Bolt Gauge</p> <p style="text-align: center;">M-GAUGE2</p> <hr/> <ul style="list-style-type: none"> • Sizing large diameter nuts, bolts, studs & washers • Metric and inch dimensions • Size washers from 3/4" to 3 1/4" & 20mm to 80mm • Size studs & bolts from 3/4" to 2" & 20mm to 50mm • On the reverse side you can size UNF & UNC nuts from 3/4" to 3" • On the reverse side you have a head id chart for inch & metric head markings • Very useful and durable tool.

Fasteners - Rivets



Item	Description	Rivet Diameter	Grip Range	TSI Part No.
1	BLIND RIVET – ALUMINUM	1/8"	3/8"	CL-RVT46-AL
2	BLIND RIVET – SS			CL-RVT46-SS
3	BLIND RIVET – ALUMINUM	3/16"	1/4"	CL-RVT64-AL
4	BLIND RIVET – ALUMINUM – CLOSED END			CL-RVT64-AL-CE
5	BLIND RIVET – SS			CL-RVT64-SS
6	BLIND RIVET – ALUMINUM – CLOSED END		3/8"	CL-RVT66-AL-CE
7	BLIND RIVET – ALUMINUM – LARGE FLANGE			CL-RVT66-AL-LF
8	BLIND RIVET – SS	3/16"	1/2"	CL-RVT66-SS
9	BLIND RIVET – ALUMINUM			CL-RVT68-AL
10	BLIND RIVET – SS			CL-RVT68-SS
11	BLIND RIVET – SS LARGE FLANGE	1/4"	3/8"	CL-RVT68-SS-LF
12	BLIND RIVET – ALUMINUM			CL-RVT86-AL
13	BLIND RIVET – SS			CL-RVT86-SS
14	BLIND RIVET – ALUMINUM	3/8"	1/2"	CL-RVT88-AL
15	BLIND RIVET – ALUMINUM		1/2"	CL-RVT128-AL


Catwalk





Item	Diamond #	A	B	Material	TSI Part No.
1	2	4.75"	2"	Aluminum	CW2-200-10-AL
2	3	7"	2"	Aluminum	CW3-200-10-AL
3	4	9.5"	2"	Aluminum	CW4-200-10-AL
4	5	11.75"	2"	Aluminum	CW5-200-10-AL
5	5	11.75"	1.5"	Aluminum	CW5-150-10-AL
6	5 or 6	15.75"	1.5"	Aluminum	CW6-150-10-AL
7	8	18.75"	1.5"	Aluminum	CW8-150-10-AL
8	8	18.75"	2"	Aluminum	CW8-200-10-AL

Note: Other sizes available On Request
Stainless steel and galvanized available On Request

Catwalk Accessories


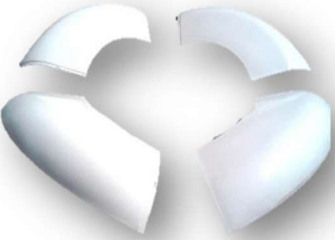
Item	Description	TSI Part No.
<p style="text-align: center;">1</p> 	<p style="text-align: center;">WALKWAY ELEMENT FITTINGS</p>	<p style="text-align: center;">CW-08-25-A2-SS-NY</p>
<p style="text-align: center;">2</p> 	<p style="text-align: center;">COLLAPSIBLE HANDRAILS ALUMINUM</p>	<p style="text-align: center;">CW-HANDRAIL-AL</p>
<p style="text-align: center;">3</p> 	<p style="text-align: center;">COLLAPSIBLE HANDRAILS STAINLESS STEEL</p>	<p style="text-align: center;">CW-HANDRAIL-SS- ASM</p>
<p style="text-align: center;">4</p> 	<p style="text-align: center;">ALUMINUM TREAD GRIP SHEET – 3' X 10'</p>	<p style="text-align: center;">CW-TG36X120-AL</p>
<p style="text-align: center;">5</p> 	<p style="text-align: center;">2 ROW LADDER RUNG – ALUMINUM</p>	<p style="text-align: center;">CW-LR-2R-AL</p>
<p style="text-align: center;">6</p> 	<p style="text-align: center;">2 ROW LADDER RUNG – STAINLESS STEEL</p>	<p style="text-align: center;">CW-LR-2R-SS</p>
<p style="text-align: center;">7</p> 	<p style="text-align: center;">DIAMOND WASHER FOR WALKWAY</p>	<p style="text-align: center;">CW-DW-AL</p>

Cladding

	Item	Description	TSI Part No.
1		<p>48" GRP Cladding Cut to length</p>	CL-FG-048065-WT
2		<p>48" Gray Aluminum Cladding Cut to length</p>	CL-AL-048040-ML
3		<p>48" White Aluminum Cladding Cut to length</p>	CL-AL-048040-WM
4		<p>48" Stainless Steel Cladding Cut to length</p>	CL-SS-048030-BA

Note: We can cut to length on any cladding On Request

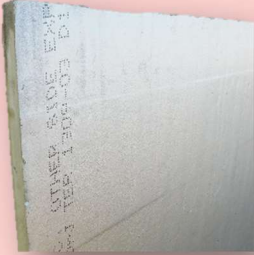
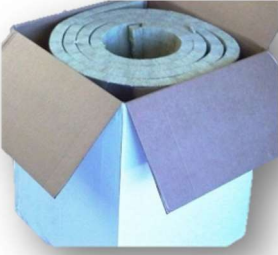

Cladding

	Item	Description	TSI Part No.
1		<p>56" WHITE GRP CLADDING</p> <p>Cut to length</p>	<p>CL-FG-056065-WT</p>
2		<p>72" GREY GRP CLADDING</p> <p>Cut to length</p>	<p>CL-FG-072065-GR</p>
3		<p>Cladding Heads</p> <p>Material: Fiber Glass</p> <p>Type: Frame Tank</p>	<p>CL-TANKHEAD-FR</p>
4		<p>Cladding Head Quarter Panels</p> <p>*Sold individually</p> <p>Material: Fiber Glass</p>	<p>CL-TANKHEAD-QPNL</p>

Cladding Banding

	Item	Description	TSI Part No.
1		<p>2" Stainless Steel Banding</p> <p>Size: 2"</p> <p>Cut to length</p>	CL-BND200-SS029-ML
2		<p>3" Stainless Steel Banding</p> <p>Size: 3"</p> <p>Cut to length</p>	CL-BND300-SS029-ML
3		<p>Rubber Strip</p> <p>3" x 0.25"</p>	CL-BND300-RBSTRP
4		<p>Rubber Strip</p> <p>4" x 0.25"</p>	CL-BND400-RBSTRP

Cladding Insulation



	Item	Description	TSI Part No.
1		1" Board Insulation URETHANE 48"x 8' Sheet	CL-INSL100-UTH048
2		1.5" Mineral Wool 3' Wide 81 SQ Ft Per Box	CL-INSL150-MWL036
3		2" Mineral Wool 3' Wide 60 SQ Ft Per Box	CL-INSL200-MWL036

Drain Hose



Item	Description	Length per roll	TSI Part No.
1	.75" CLEAR BRAIDED PVC HOSE	300 ft	HSCBS075
2	1" CLEAR BRAIDED PVC HOSE	300 ft	HSCBS100
3	1.25" CLEAR BRAIDED PVC HOSE	50 ft	HSCBS125
4	1.5" CLEAR BRAIDED PVC HOSE	50 ft	HSCBS150
5	2" CLEAR BRAIDED PVC HOSE	50 ft	HSCBS200

Drain Hose Accessories




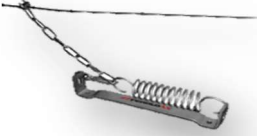
	Item	Description	TSI Part No.
1		1" TEE HOSE BARB ENDS	HSBRB100-TEE-PL
2		1" ELBOW HOSE BARB ENDS	HSBRB100-ELB-PL

Drain Hose Clamps

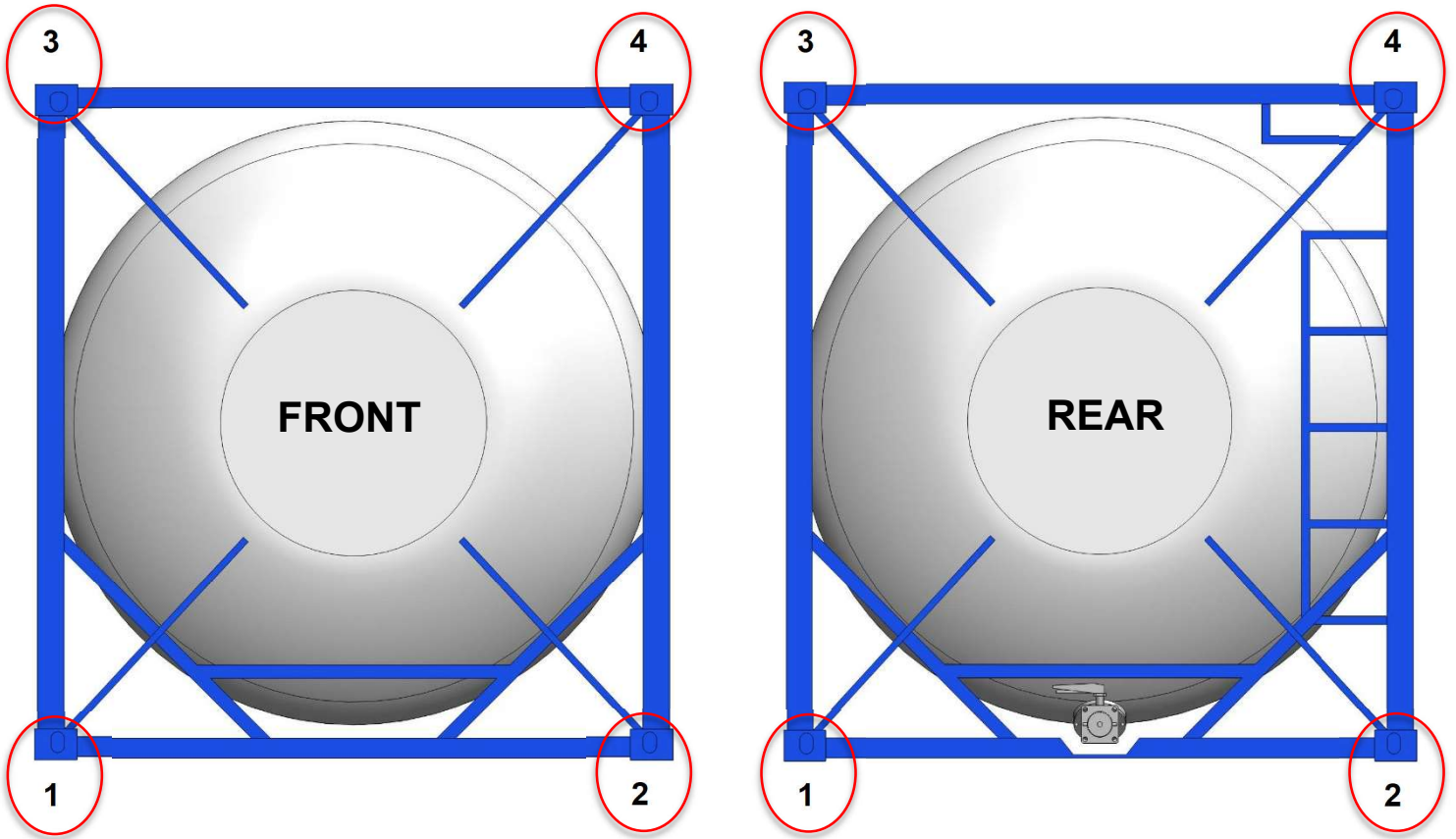






Item	Description	TSI Part No.
3	1.5" HOSE CLAMP - 0.5" THICK – DIAMETER RANGE: 13/16" X 1.5" - 304SS	HSCLP150-050-304
4	2" HOSE CLAMP - 0.5" THICK – DIAMETER RANGE: 1-5/16" X 2-1/4" - 304SS	HSCLP200-050-304
5	3" HOSE CLAMP - 0.5" THICK – DIAMETER RANGE: 2-1/16" X 3" - 304SS	HSCLP300-050-304

Remote Cable

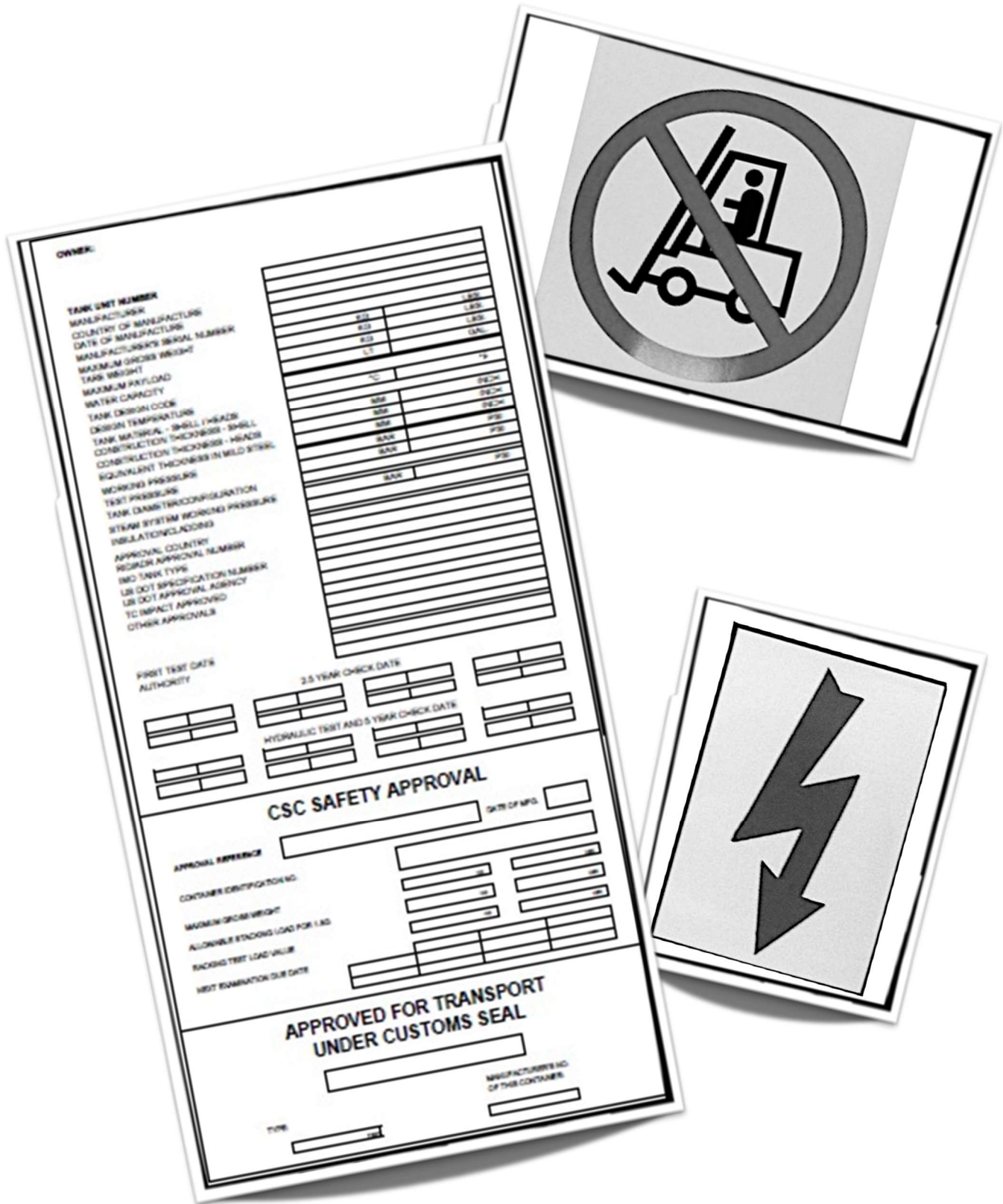
Item	Description	TSI Part No.
1		1/16" Ferrule – SS MISC-FRL-063S
2		3/32" Ferrule – SS MISC-FRL-094A
3		1/8" Ferrule – SS MISC-FRL-125S
4		1/8" Rope Clamp – SS MISC-RCC-125S
5		1/16" Cable – SS MISC-CBL-063S
6		3/32" Cable – SS MISC-CBL-094S
7		1/8" Cable – SS MISC-CBL-125S
8		Fusible Link MISC-FUS-LINK

Corner Castings


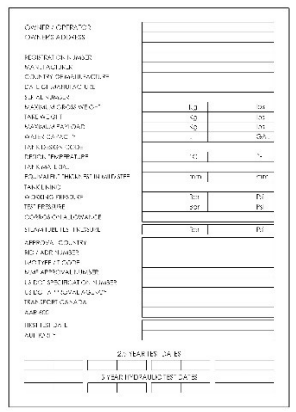



Item	Description	TSI Part No.
1	 BOTTOM LEFT CORNER CASTING	STR-CC-BL-CS
2	 BOTTOM RIGHT CORNER CASTING	STR-CC-BR-CS
3	 TOP LEFT CORNER CASTING	STR-CC-TL-CS
4	 TOP RIGHT CORNER CASTING	STR-CC-TR-CS


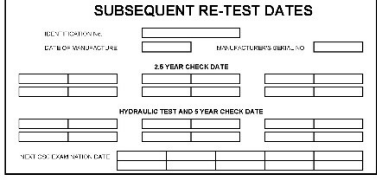
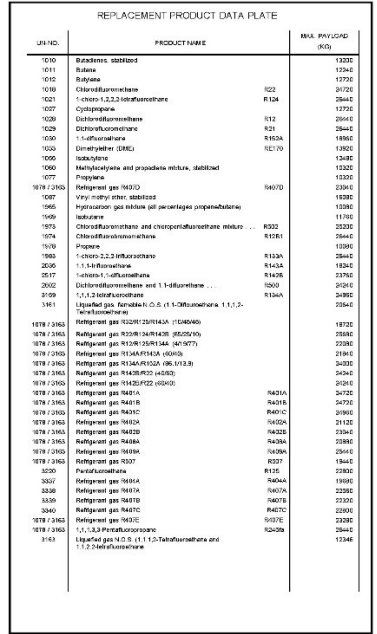
Data Plates & Decals



Data Plate Templates

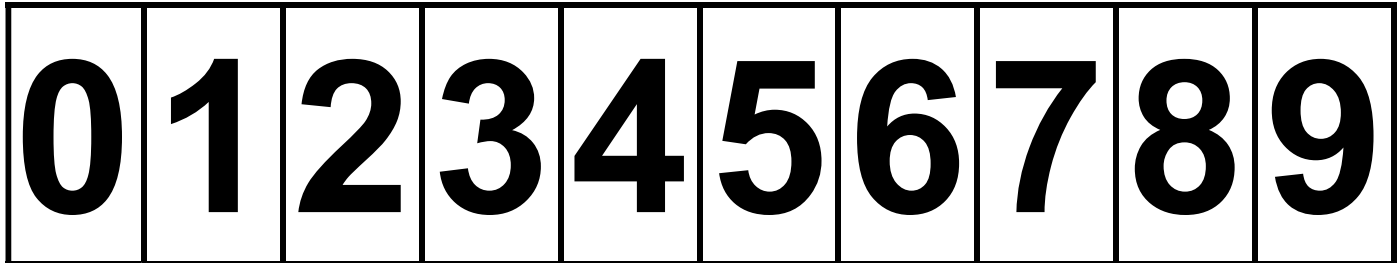
Item	Description	Description	TSI Part No.
1	 <p>The image shows a 'CONSOLIDATED DATA PLATE' template. It includes fields for Owner/Operator, Manufacturer, Dimensions (Length, Width, Height), Weight, and Capacity. It also features a 'CSC SAFETY APPROVAL' section with fields for Approval Reference, Date, and various weight and strength specifications. At the bottom, there is a section for 'APPROVED FOR TRANSPORT UNDER CUSTOMS SEAL' with a signature line and a date field.</p>	<p>CONSOLIDATED DATA PLATE</p> <p>Material: SS</p> <p>Size: 8" x 20"</p>	DPCMB-8X20-SS
2	 <p>The image shows a 'MANUFACTURER DATA PLATE' template. It includes fields for Owner/Operator, Manufacturer, Dimensions (Length, Width, Height), Weight, and Capacity. It also features a 'CSC SAFETY APPROVAL' section with fields for Approval Reference, Date, and various weight and strength specifications. At the bottom, there is a section for 'APPROVED FOR TRANSPORT UNDER CUSTOMS SEAL' with a signature line and a date field.</p>	<p>MANUFACTURER DATA PLATE</p> <p>Material: SS</p> <p>Size: 8" x 12"</p>	DPMFG-8X12-SS
3	 <p>The image shows a 'CSC SAFETY APPROVAL PLATE' template. It includes fields for Approval Reference, Date, and various weight and strength specifications. It also features a section for 'APPROVED FOR TRANSPORT UNDER CUSTOMS SEAL' with a signature line and a date field.</p>	<p>CSC SAFETY APPROVAL PLATE</p> <p>Material: SS</p> <p>Size: 4" x 8"</p>	DPCSC-8X4-SS

Data Plate Templates

	Item	Description	TSI Part No.
4		<p>TIR/CUSTOMS PLATE</p> <p>Material: SS</p> <p>Size: 4" x 8"</p>	DPTIR-4X8-SS
5		<p>SUBSEQUENT RE-TEST DATE PLATE</p> <p>Material: SS</p> <p>Size: 4" x 8"</p>	DPSBT-8X4-SS
6		<p>PRODUCT PLATE</p> <p>Material: SS</p> <p>Size: 11 3/4" x 19 3/4"</p> <p>All Product Plates are Made to Order</p> <p>Please Provide Artwork and Information for Print</p>	DPPDT-19X11-SS

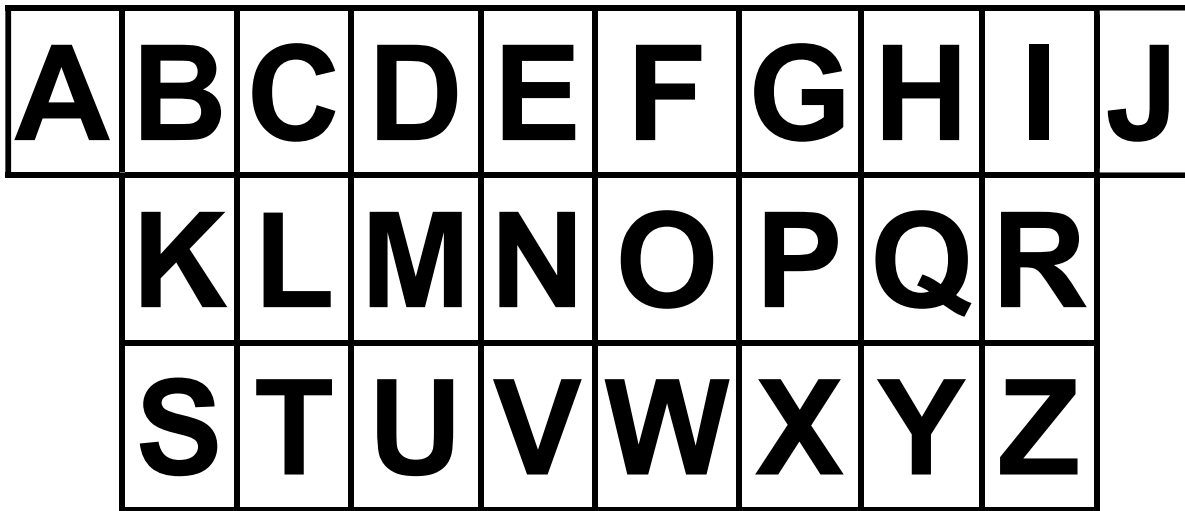
Note: Custom data plates On Request

Free Standing Number Decals



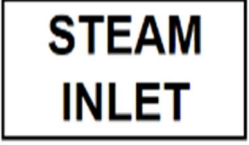
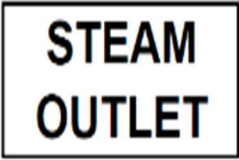



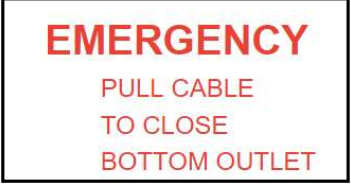
Item	2" TSI Part No.	4" TSI Part No.
0	D-200-NBR0	D-400-NBR0
1	D-200-NBR1	D-400-NBR1
2	D-200-NBR2	D-400-NBR2
3	D-200-NBR3	D-400-NBR3
4	D-200-NBR4	D-400-NBR4
5	D-200-NBR5	D-400-NBR5
6	D-200-NBR6	D-400-NBR6
7	D-200-NBR7	D-400-NBR7
8	D-200-NBR8	D-400-NBR8
9	D-200-NBR9	D-400-NBR9

Free Standing Letter Decals








Item	2" TSI Part No.	4" TSI Part No.	Item	2" TSI Part No.	4" TSI Part No.
A	D-200-LTRA	D-400-LTRA	N	D-200-LTRN	D-400-LTRN
B	D-200-LTRB	D-400-LTRB	O	D-200-LTRO	D-400-LTRO
C	D-200-LTRC	D-400-LTRC	P	D-200-LTRP	D-400-LTRP
D	D-200-LTRD	D-400-LTRD	Q	D-200-LTRQ	D-400-LTRQ
E	D-200-LTRE	D-400-LTRE	R	D-200-LTRR	D-400-LTRR
F	D-200-LTRF	D-400-LTRF	S	D-200-LTRS	D-400-LTRS
G	D-200-LTRG	D-400-LTRG	T	D-200-LTRT	D-400-LTRT
H	D-200-LTRH	D-400-LTRH	U	D-200-LTRU	D-400-LTRU
I	D-200-LTRI	D-400-LTRI	V	D-200-LTRV	D-400-LTRV
J	D-200-LTRJ	D-400-LTRJ	W	D-200-LTRW	D-400-LTRW
K	D-200-LTRK	D-400-LTRK	X	D-200-LTRX	D-400-LTRX
L	D-200-LTRL	D-400-LTRL	Y	D-200-LTRY	D-400-LTRY
M	D-200-LTRM	D-400-LTRM	Z	D-200-LTRZ	D-400-LTRZ

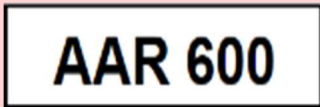

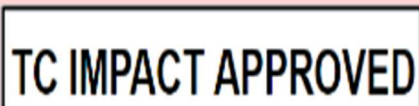
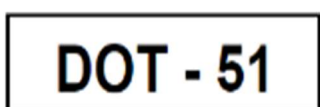

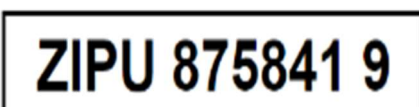
Tank Decals

	Item	Description	TSI Part No.
1		"STEAM INLET" DECAL	DE-STMINLT
2		"STEAM OUTLET" DECAL	DE-STMOTLT
3		GROUNDING LUG	DE-GRDLUG
4		NO FOOTWEAR DECAL - 12" DIAMETER	DE-NOSTEP
5		NO FORKLIFT – 8" DIAMETER	DE-NONFRK
6		"EMERGENCY - PULL CABLE TO CLOSE BOTTOM OUTLET" DECAL	DE-EMGYFVCL

Tank Decals

	Item	Description	TSI Part No.
1		"NO ENTRY UNDER NITROGEN PRESSURE" DECAL - 4" X 6" - BLACK LETTERS ON ORANGE BACKGROUND	DE-NTRGNOENT
2		DANGER DO NOT ENTER NITROGEN PRESSURE	DE-NTRGDNGR
3		OVERHEAD HAZARD WARNING (LIGHTNING BOLT)	DE-OVRHD
4		SUPER HEAVY	DE-SPRHVY
5		TANK LINER DECAL	DE-TNKLNR

Tank Decals

Item	Description	TSI Part No.
1		2" AAR 600 DE-AAR600
2		2" RID/ADR DE-RIDADR
3		2" TC IMPACT APPROVED DE-TCIMPAPV
4		2" DOT-51 DE-DOT51
5		BLANK OWNER'S UNIT NUMBER DECAL – 5.25" TALL X 24" LONG DE-UNTNMB-BLNK
6		4" OWNER'S OPERATING NUMBER (MADE TO ORDER) DE-UNTNMB

ISO6346 International Shipping Container Standard



OWNER CODE

SERIAL NUMBER

CHECK DIGIT

CATEGORY IDENTIFIER:





J: detachable freight container related equipment

R: reefer (refrigerated) containers

U: freight containers

Z: trailers and chassis

Height Marker

	Item	Description	TSI Part No.
1		7 1/2' TALL CONTAINERS	DE-HT7.5
2		8' TALL CONTAINERS	DE-HT8.0
3		8 1/2' TALL CONTAINERS	DE-HT8.5
4		9 1/2' TALL CONTAINERS	DE-HT9.5

Size & Type

	Item	Description	TSI Part No.
1	22K2	22K2	DE-22K2
2	22K8	22K8	DE-22K8
3	22T4	22T4	DE-22T4
4	22T5	22T5	DE-22T5
5	22T6	22T6	DE-22T6
6	22T7	22T7	DE-22T7
7	22T8	22T8	DE-22T8

Size & Type

ISO6346 International Shipping Container Standard



LENGTH **HEIGHT** **TYPE**

LENGTH	HEIGHT	TYPE*
2: 20'	0: 8'	T0-2 Non Dangerous Liquids
4: 40'	2: 8' 6"	T3-6 Dangerous Liquids
L: 45'	4: 9'	T7-9 Gases
M: 48'	5: 9' 6"	T11 Non-Hazardous Chemicals T50 LPG and Ammonia Gas

* Please refer to Federal Register / Vol. 66, No. 120 / Thursday, June 21, 2001 / Rules and Regulations

Code	Type Designation	Type group code	Main characteristics	Detailed type code ^a	Detailed type code ^b
K	Pressurized tank container (liquids and gases)				
K		KL	Liquid tank non-regulated goods	K0	KA
K			Liquid tank Dangerous goods ≤ 2,65 bar^c pressure	K1	KB
K			Liquid tank Dangerous goods > 2,65 bar^c and ≤ 10 bar pressure	K2	KD
K			Liquid tank Dangerous goods > 10 bar^c pressure	K3	KG
K			Liquid tank non-regulated goods requiring power supply	K4	KJ
K			Liquid tank Dangerous goods ≤ 10 bar^c pressure requiring power supply	K5	KM
K			Liquid tank Dangerous goods > 10 bar^c pressure requiring power supply	K6	KV
K			Cryogenic tank	K7	KW
K			Gas tank	K8	KX
K			(unassigned)	K9	KY

^a For containers designed and tested with full stacking (minimum superimposed mass of 192,000 kg) and racking (minimum transverse force of 150 kN) capabilities. Superimposed mass is as defined in ISO 1496-1:1990.

^b This includes containers designed and tested with reduced stacking and/or racking capabilities, but not containers that are approved or operated with one door off or otherwise operated with a temporary reduced capability.

^c 100kPa = 1 Bar = 105 Pa = 105 N/m² = 14.5 lbf/in²

UN Tank

	Item	Description	TSI Part No.
1	TANK INSTRUCTION T11	2" TANK INSTRUCTION T11	DE-TNKT11
2	T11	2" T11	DE-UNTNKT11
3	T14	2" T14	DE-UNTNKT14
4	T20	2" T20	DE-UNTNKT20
5	T50	2" T50	DE-UNTNKT50
6	UN PORTABLE TANK	2" UN PORTABLE TANK	DE-UNPRTTNK

T Codes

Portable Tank Instruction	Pressure-relief requirements	Bottom opening requirements	Minimum test pressure (bar)	Minimum shell thickness (in mm-reference steel)
	(see IMDG 6.7.2.8)	(see IMDG 6.7.2.6)		(see IMDG 6.7.2.4)
T1	normal	int + ext	1,5	>or = 6mm
T2	normal	Int+ext+cap/blank	1,5	>or = 6mm
T3	normal	int + ext	2,65	>or = 6mm
T4	normal	Int+ext+cap/blank	2,65	>or = 6mm
T5	normal + rupture disc	not allowed	2,65	>or = 6mm
T6	normal	int + ext	4	>or = 6mm
T7	normal	Int+ext+cap/blank	4	>or = 6mm
T8	normal	not allowed	4	>or = 6mm
T9	normal	not allowed	4	6 mm
T10	normal + rupture disc	not allowed	4	6 mm
T11	normal	Int+ext+cap/blank	6	>or = 6mm
T12	normal + rupture disc	Int+ext+cap/blank	6	>or = 6mm
T13	normal	not allowed	6	6 mm
T14	normal + rupture disc	not allowed	6	6 mm
T15	normal	Int+ext+cap/blank	10	>or = 6mm
T16	normal + rupture disc	Int+ext+cap/blank	10	>or = 6mm
T17	normal	Int+ext+cap/blank	10	6 mm
T18	normal + rupture disc	Int+ext+cap/blank	10	6 mm
T19	normal + rupture disc	not allowed	10	6 mm
T20	normal + rupture disc	not allowed	10	8 mm
T21	normal	not allowed	10	10 mm
T22	normal + rupture disc	not allowed	10	10 mm
T23	Depending on product	Depending on product	Depending on product	Depending on product
T50	Depending on gas	Depending on gas	Depending on gas	Depending on gas
T75	Depending on gas(frozen)	Depending on gas(frozen)	Depending on gas(frozen)	Depending on gas(frozen)

Capacity

	Item	Description	TSI Part No.
1	CAPACITY 14300 LT	2" - 14300 LT	DE-CP143LTR
2	CAPACITY 17500 LT	2" - 17500 LT	DE-CP175LTR
3	CAPACITY 21000 LT	2" - 21000 LT	DE-CP210LTR
4	CAPACITY 23000 LT	2" - 23000 LT	DE-CP230LTR
5	CAPACITY 24000 LT	2" - 24000 LT	DE-CP240LTR
6	CAPACITY 25000 LT	2" - 25000 LT	DE-CP250LTR
7	CAPACITY 26000 LT	2" - 26000 LT	DE-CP260LTR

Working Pressure

	Item	Description	TSI Part No.
1	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 1.75 BAR MAWP </div>	1.75 BAR MAWP	DE-MX175BAR
2	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 3 BAR MAWP </div>	3 BAR MAWP	DE-MX3XXBAR
3	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 4 BAR M. A. W. P. </div>	4 BAR MAWP	DE-MX4XXBAR
4	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 10 BAR MAWP </div>	10 BAR MAWP	DE-MX10XBAR
5	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 22 BAR MAWP </div>	22 BAR MAWP	DE-MX22XBAR
6	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 27.5 BAR MAWP </div>	27.5 BAR MAWP	DE-MX275XBAR
7	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 34.4 BAR MAWP </div>	34.4 BAR MAWP	DE-MX344XBAR

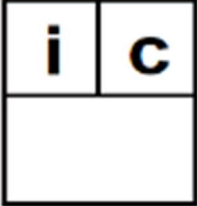
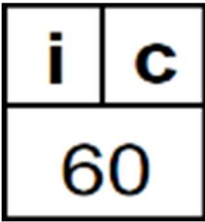
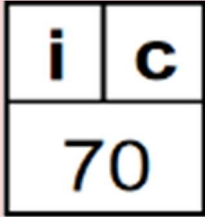
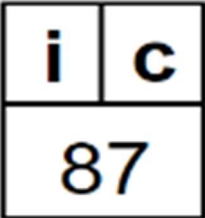
Weight

	Item	Description	TSI Part No.												
1	<table border="1" data-bbox="256 373 675 483"> <tr> <td>MAX</td> <td>30480 KG</td> </tr> <tr> <td>GROSS</td> <td>67197 LB</td> </tr> </table>	MAX	30480 KG	GROSS	67197 LB	MAX GROSS WEIGHT (Made to order)	DE-MXGRSWG								
MAX	30480 KG														
GROSS	67197 LB														
2	<table border="1" data-bbox="256 623 675 732"> <tr> <td>TARE</td> <td>3600 KG</td> </tr> <tr> <td></td> <td>7937 LB</td> </tr> </table>	TARE	3600 KG		7937 LB	TARE WEIGHT (Made to order)	DE-MXTARWG								
TARE	3600 KG														
	7937 LB														
3	<table border="1" data-bbox="256 875 675 984"> <tr> <td>MAX</td> <td>26880 KG</td> </tr> <tr> <td>PAYLOAD</td> <td>59260 LB</td> </tr> </table>	MAX	26880 KG	PAYLOAD	59260 LB	MAX PAYLOAD (Made to order)	DE-MXPAYLDX								
MAX	26880 KG														
PAYLOAD	59260 LB														
4	<table border="1" data-bbox="297 1136 634 1367"> <tr> <td>MGW</td> <td>kg</td> </tr> <tr> <td></td> <td>lb</td> </tr> <tr> <td>TARE</td> <td>kg</td> </tr> <tr> <td></td> <td>lb</td> </tr> </table>	MGW	kg		lb	TARE	kg		lb	WEIGHT DECAL - BLANK – INCLUDES MGW & TARE	DE-MXWGTGWT				
MGW	kg														
	lb														
TARE	kg														
	lb														
5	<table border="1" data-bbox="313 1501 618 1774"> <tr> <td>M.G.W.</td> <td>KG</td> </tr> <tr> <td></td> <td>LB</td> </tr> <tr> <td>TARE</td> <td>KG</td> </tr> <tr> <td></td> <td>LB</td> </tr> <tr> <td>PAYLOAD</td> <td>KG</td> </tr> <tr> <td></td> <td>LB</td> </tr> </table>	M.G.W.	KG		LB	TARE	KG		LB	PAYLOAD	KG		LB	WEIGHT DECAL - BLANK - INCLUDES MGW, TARE & PAYLOAD	DE-MXWGTALL
M.G.W.	KG														
	LB														
TARE	KG														
	LB														
PAYLOAD	KG														
	LB														

IM & IMO

	Item	Description	TSI Part No.
1	IM 101	2" IM 101	DE-IM101
2	IM 102	2" IM 102	DE-IM102
3	IMO 1	2" IMO1	DE-IMO1
4	IMO 2	2" IMO2	DE-IMO2
5	IMO 5	2" IMO5	DE-IMO5

IC – Railway Approval

	Item	Description	TSI Part No.
1		IC BLANK	DE-IC00
2		IC 60	DE-IC60
3		IC 70	DE-IC70
4		IC 87	DE-IC87