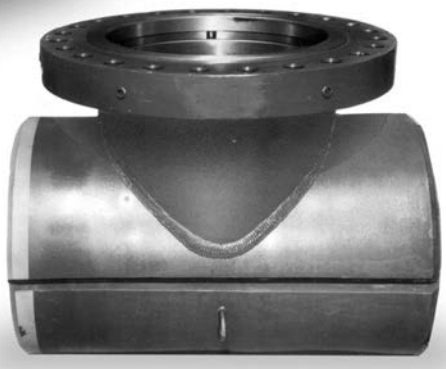
STOPPLE® Fittings

& Reduced Branch Split Tees, Sizes 4-inch and Larger

T.D. Williamson, Inc.

Bulletin No: 1100.001.05
Date: July 2008
Cross Indexing No: n/a
Supersedes: 1100.001.04 (07/06)

■ **STOPPLE® Fitting**
Type B (Extruded Branch)
Sizes 4" through 30"



■ **STOPPLE® Fitting**
Type C (Welded Branch)*
Sizes 32" and larger

Description

STOPPLE® Fittings are full-branch split tees designed for use with TDW plugging machines. The design has undergone extensive strain-gauge and pulsation testing. The average cyclic lives of the fittings are 30% greater than other designs tested. STOPPLE Fittings are furnished with LOCK-O-RING® Flanges drilled and faced to match ASME Class 150, 300, or 600 flanges. Other ASME Class ratings are available upon request.

These reduced branch, split tee fittings are furnished with LOCK-O-RING Flanges for use as bypass fittings.

Features

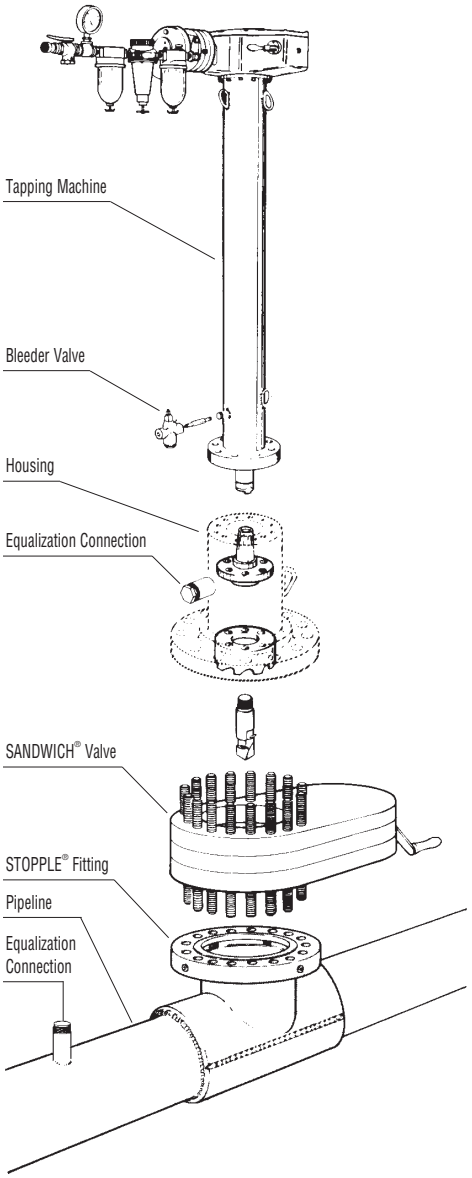
Factory welding of TDW STOPPLE fittings is 100% radiographically inspected at all TDW manufacturing plants except Nivelles, Belgium, where 100% ultasonic examination is used.

Option

■ **Reducing Branch Fitting**

* 22", 26", 28" are Type C

■ **Typical Tapping Setup For Plugging Operation**



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STOPPLE® Fittings

Class 150

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Inches[1]	DN	Lbs.	Kg.	Design factor 0.72	0.6	0.5	0.4	Part Number
14	350	400	182	285	285	285	285	06-8807-1415
14	350	400	182	285	285	285	285	36-1043-1415-X1[2]
14	350	400	182	285	285	285	285	36-1045-1415-X1[3]
18	450	760	345	285	285	285	285	36-1043-1815-X1[2]
18	450	760	345	285	285	285	285	36-1045-1815-X1[3]
20	500	1000	454	285	285	262	285	36-1043-2015-X1[2]
20	500	1000	454	285	285	262	285	36-1045-2015-X1[3]
22	550	940	426	285	285	285	238	06-8807-2215
24	600	1605	728	285	279	233	186	06-8807-2415
26	650	1340	608	285	285	285	259	06-8807-2615
28	700	1465	665	285	285	250	200	06-8807-2815
30	750	2895	1303	285	285	285	248	06-8807-3015
34	850	2320	1044	285	285	258	206	06-8807-3415
36	900	2780	1251	285	285	239	191	06-8807-3615
40	1000	--	--	--	--	--	--	--[4]
42	1050	--	--	--	--	--	--	--[4]
48	1200	--	--	--	--	--	--	--[4]

Maximum Allowable Operatiing Pressure per ASME B31.4 at -20 to +180° F = 285 psi

1. For sizes 4- through 12-inch and 16-inch sizes, see bulletins 1100.005.01 and 1100.006.01.
2. For B31.4 applications. 0.72 and 0.6 Design Factor only.
3. For B31.8 applications
4. Consult the factory.

Class 300

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Inches[1]	DN	Lbs.	Kg.	Design Factor 0.72	0.6	0.5	0.4	Part Number
14	350	400	182	740	740	720	575	36-1043-1430-X1[2]
14	350	400	182	740	740	720	575	36-1045-1430-X1[3]
18	450	780	354	740	710	595	475	36-1043-1830-X1[2]
18	450	780	354	740	710	595	475	36-1045-1830-X1[3]
20	500	1050	477	740	630	525	420	36-1043-2030-X1[2]
20	500	1050	477	740	630	525	420	36-1045-2030-X1[3]
22	550	975	442	740	641	534	427	06-8807-2230
24	600	1690	767	740	740	627	502	06-8807-2430
26	650	1540	699	740	740	646	517	06-8807-2630
28	700	1950	885	740	625	520	415	06-8807-2830
30	750	2985	1343	740	740	740	672	06-8807-3030
34	850	3065	1379	740	685	570	455	06-8807-3430
36	900	3780	1701	740	700	580	465	06-8807-3630
40	1000	--	--	--	--	--	--	--[4]
42	1050	--	--	--	--	--	--	--[4]
48	1200	--	--	--	--	--	--	--[4]

Maximum Allowable Operatiing Pressure per ASME B31.4 at -20 to +180° F = 740 psi

1. For sizes 4- through 12-inch and 16-inch sizes, see bulletins 1100.005.01 and 1100.006.01.
2. For B31.4 applications. 0.72 and 0.6 Design Factor only.
3. For B31.8 applications
4. Consult the factory.

STOPPLE® Fittings & Reduced Branch Split Tees

Maximum Allowable Operatiing Pressure per ASME B31.4 at -20 to +180° F = 1480 psi

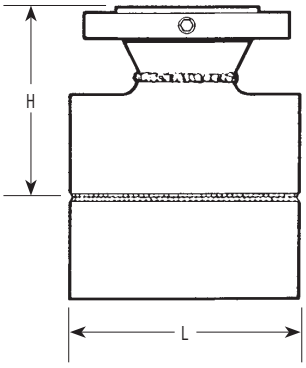
Class 600

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Inches[1]	DN	Lbs.	Kg.	Design Factor 0.72	0.6	0.5	0.4	Part Number
14	350	470	214	1480	1230	1025	820	36-1043-1460-X1[2]
14	350	470	214	1480	1230	1025	820	36-1045-1460-X1[3]
18	450	900	409	1480	1300	1080	865	36-1043-1860-X1[2]
18	450	900	409	1480	1300	1080	865	36-1045-1860-X1[3]
20	500	1200	545	1480	1320	1100	880	36-1043-2060-X1[2]
20	500	1200	545	1480	1320	1100	880	36-1045-2060-X1[3]
22	550	1725	782	1480	1480	1235	985	06-8807-2260
24	600	1895	860	1480	1335	1125	900	06-8807-2460
26	650	2070	932	1480	1245	1035	830	06-8807-2660
28	700	2730	1238	1480	1270	1060	845	06-8807-2860
30	750	3180	1431	1480	1255	1045	835	06-8808-3060
34	850	4640	2088	1480	1372	1143	914	06-8807-3460
36	900	5990	2696	1480	1335	1110	890	06-8807-3660
40	1000	6705	3041	1480	1315	1095	875	06-8807-4060
42	1050	7650	3470	1480	1265	1050	840	06-8807-4260
48	1200	--	--	--	--	--	--	--[4]

1. For sizes 4- through 12-inch and 16-inch sizes, see bulletins 1100.005.01 and 1100.006.01.
2. For B31.4 applications. 0.72 and 0.6 Design Factor only.
3. For B31.8 applications
4. Consult the factory.

Reducing Branch Fitting



Reducing Branch Split Tees (Hot Drawn) with LOCK-O-RING® Flanges

Class 600

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Size		Dimension L		Dimension H		Weight			Design Factor			
Inches	DN	Inches	mm	Inches	mm	Lbs.	Kg.	Part Number	0.72	0.60	0.50	0.40
6 x 4	150 x 100	10.750	273	8.375	213	75	34	06-8812-0604	1480	1480	1295	1035
8 x 4	200 x 100	10.750	273	9.375	238	80	36	06-8812-0804	1480	1235	1030	825
10 x 6	250 x 150	14.000	356	11.250	286	140	64	06-8812-1006	1480	1305	1085	870
12 x 6	300 x 150	14.000	356	12.438	316	170	77	06-8812-1206	1480	1260	1050	840
14 x 8	350 x 200	16.500	419	13.688	348	245	111	06-8812-1408	1480	1230	1025	820
16 x 12	400 x 300	24.000	610	15.938	405	485	220	06-8812-1612	1480	1270	1058	847
20 x 12	500 x 300	24.000	610	18.312	465	605	274	06-8812-2012	1480	1270	1058	847

STOPPLE® Fittings

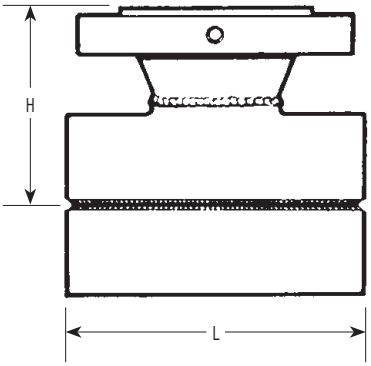
Description of Fittings

Type B: Hot-drawn, full-branch opening, snug-fitting sleeve and a LOCK-O-RING® Flange of the desired series.

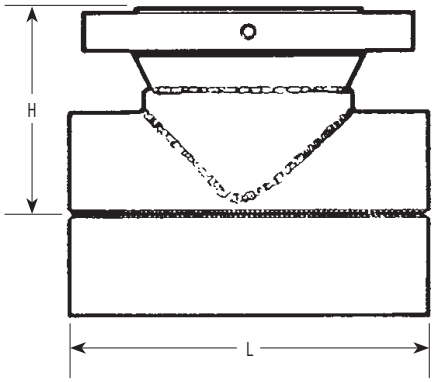
Type C: Fabricated full-size nipple, branch outlet welded to snug-fitting sleeve and a LOCK-O-RING Flange of the desired series.

Reducing-Branch Split Tee: Hot-drawn, reduced-branch opening, snug-fitting sleeve and a LOCK-O-RING Flange or standard weld-neck flange of the desired series.

Type B



Type C



Standard cataloged Class 600 STOPPLE® fittings and Class 600 reduced-branch fittings are designed for working pressure of 1480 psi (102 bar) with a design factor F of .72 per ASME B31.8-1995 and B31.4-1992. Consult the factory for fittings for other applications or design factors.

Dimensions

Size			L (All Series)		H (Class 150)		H (Class 300)		H (Class 600)	
Inches	DN	Type	Inches	mm	Inches	mm	Inches	mm	Inches	mm
14	350	B	26.000	660	13.922	354	13.922	354	14.922	380
18	450	B	33.000	838	17.546	446	17.546	446	17.922	456
20	500	B	36.000	914	19.046	484	19.046	484	20.172	513
22	550	C	40.000	1016	19.125	477	20.312	507	21.312	532
24	600	B	43.000	1092	20.500	512	21.938	547	22.375	557
26	650	C	[1] 47.000	1194	21.250	530	22.500	562	25.750	642
28	700	C	49.000	1245	22.688	565	23.812	595	25.812	645
30	750	B	56.000	1423	24.562	612	25.000	632	27.234	692
34	850	C	61.000	1541	27.188	677	27.750	692	30.438	760
36	900	C	65.000	1651	28.438	710	29.062	725	31.125	777
40	1000	C	--	--	--	--	--	--	--	--
42	1050	C	--	--	--	--	--	--	--	--
48	1200	C	--	--	--	--	--	--	--	--

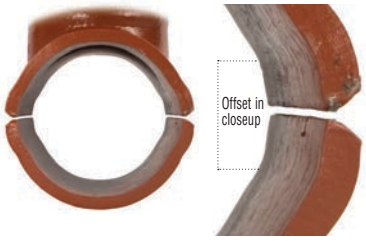
NOTE: Flanges in sizes 10" (250 mm) and below are drilled and faced according to ANSI B16.5. Flanges above 10" (250 mm) are drilled and faced according to MSS-SP44. When ordering replacement fittings, please specify fitting equipped with flanges which will fit existing hot tap or STOPPLE® equipment.

[1] Class 600 50.00 (1270)

STOPPLE® Fittings

ASME B31.3 - Sizes 4- through 12- & 16-inch

T.D. Williamson, Inc.
Bulletin No: 1100.004.01
Date: November 2008
Cross Indexing No: n/a
Supersedes: January 2008



New fittings incorporate a designed and manufactured offset allowing the placement of back-up strips

■ **STOPPLE® Fitting**
LOCK-O-RING® Plug, Blind flange, studs, nuts and gasket sold separately

Description

STOPPLE® Fittings are 4- through 12- & 16-inch full-branch split tees designed for use with the TDW STOPPLE plugging system. They meet B31.3 specifications for use in refinery and chemical plant piping systems. STOPPLE Fittings are furnished with LOCK-O-RING® Flanges to accept a LOCK-O-RING Completion Plug, permitting removal of the tapping valve after work is completed.

Features

Flange-to-sleeve weld joints and sleeves are designed to meet pressure and reinforcement requirements of ASME codes, and are available in Class 150, 300 and 600. Other ASME Class ratings available upon request.

Fittings are manufactured with a controlled carbon equivalent to make welding easier in harsh environments. Back-up strips are provided for all fittings.

All pressure-containing welds on the fittings have undergone X-ray inspection per ASME requirements.

Fitting sleeves are an extruded type design. They are manufactured from a pressure-vessel quality, normalized, killed carbon steel plate with hardness below Rc22.

The Charpy impact value of the sleeves at -50°F is 15 ft-lbs average with 12 ft-lbs minimum.

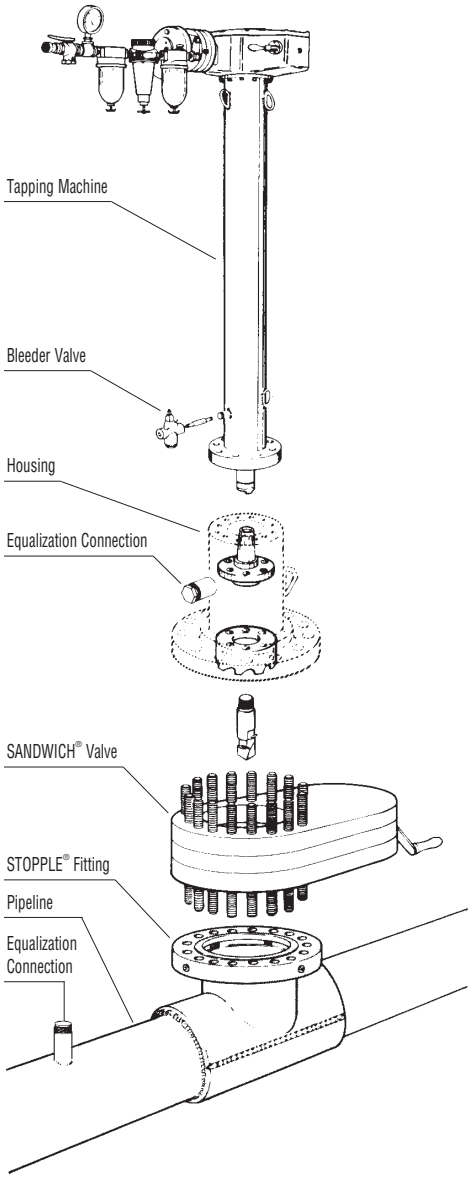
Options

- Rapid delivery: If the desired fitting meets standard specifications, it can be shipped from stock or within two weeks in most cases.
- Choice of flanges.
- Available also to ASME B31.4 and B31.8 specifications

Use the grid inside to develop the part number for the STOPPLE fitting of your choice*

Contact the factory for information concerning ordering of split sleeves (tees).
*Please confirm your choice with a Factory Representative

■ **Typical Tapping Setup For Plugging Operation**



ISO 9001 Certified

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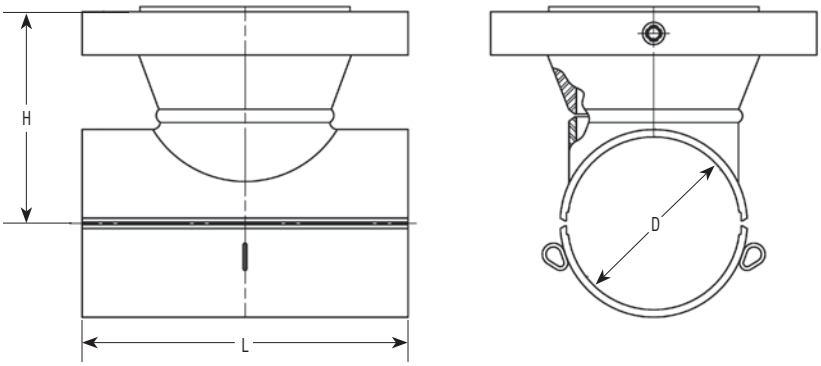
STOPPLE® Fittings - ASME B31.3

Example

36-1041-0630-11 is a STOPPLE® Fitting with 6" (run) x 6" (branch), with an RF standard weight flange, A105 TDW std. flange material, BUNA-N o-rings, class 300, and A 537 CL. 1 TDW Std. sleeve material with back-up strips.

36 - 1041 - X X X X - X X



STOPPLE® Fitting Size

Inches	Dim. H (Inches)			Dim. L	Dim D
(Nom.)	Class 150	Class 300	Class 600	Inches	Inches
04	7.015	7.015	7.266	10.75	4.656
06	8.828	8.828	9.078	14.00	6.781
08	10.156	10.156	10.406	16.50	8.812
10	11.218	11.218	12.844	20.00	10.938
12	12.406	12.906	13.922	22.00	12.968
16	16.172	16.172	16.546	30.00	16.218

STOPPLE® Fitting ASME Class

Part Number	Option
15	150 LB
30	300 LB
60	600 LB

Flange and O-Ring Material

Option	Flange/O-Ring Material	O-Ring Temp Ratings
1X	A105 w/ Buna-N O-Rings	212° F
2X	A694 F46 w/ Buna-N O-Rings (See Note)	
3X	A105 w/ NEOPRENE O-Rings	225° F
4X	A694 F46 w/ NEOPRENE O-Rings (See Note)	
5X	A105 w/ VITON O-Rings	400° F
6X	A694 F46 w/ VITON O-Rings (See Note)	
7X	A105 w/ EPDM O-Rings	250° F / 500° F Steam
8X	A694 F46 w/ EPDM O-Rings (See Note)	

Note: Standard flange material for 4- through 12-inch is A105, 16-inch is A694 F46.
Viton® is a registered trademarks of DuPont Performance Elastomers LLC Ltd

Sleeve Material

Option	Sleeve Material
X1	A537 CL1
X2	A516 GR 70

Fitting Weights and Pressure Ratings

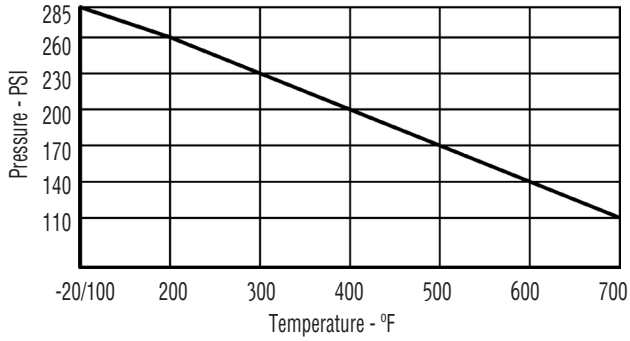
Size	Weight (lbs.)	Weight (lbs.)	Weight (lbs.)	MAOP (in psi) @ -20 to 100°F		
Inches (Nom.)	Class 150	Class 300	Class 600	Class 150	Class 300	Class 600
04	55	60	65	285	740	1480
06	90	100	105	285	740	1145
08	135	140	160	285	740	915
10	190	190	280	285	740	965
12	300	300	380	285	740	930
16	580	600	700	285	740	965

Consult factory for other pressure and temperature requirements

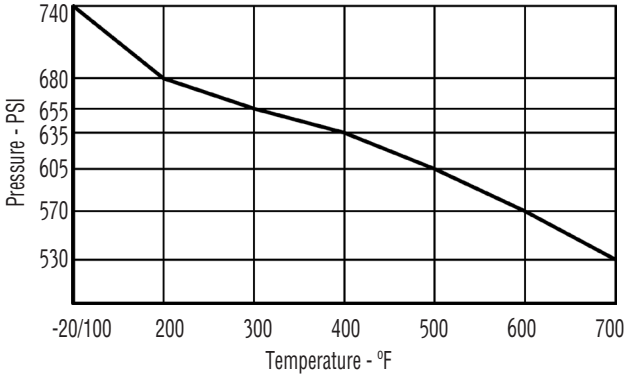
STOPPLE® Fittings - ASME B31.3

Pressure and Temperature Ratings

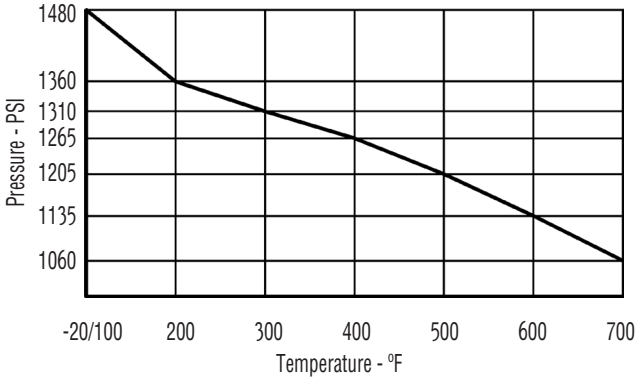
4-, 6- and 8-inch 150 LB A105 Flange and A537 CL1 or A516 GR 70 Sleeve



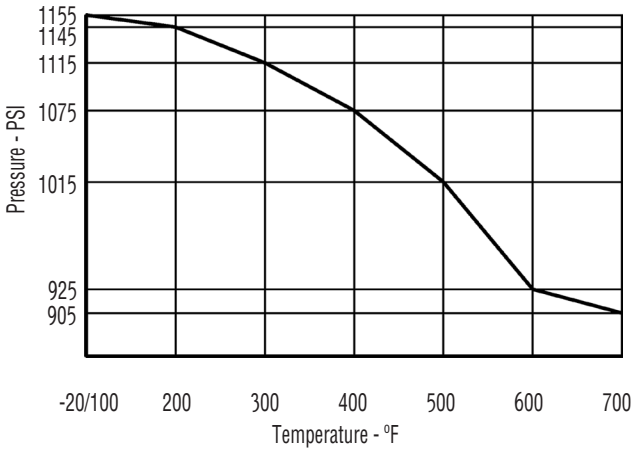
4-, 6- and 8-inch 300 LB A105 Flange and A537 CL1 or A516 GR 70 Sleeve



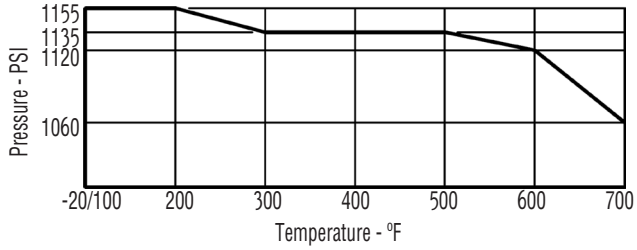
4-inch 600 LB A105 Flange and A537 CL1 or A516 GR 70 Sleeve



6-inch 600 LB A105 Flange and A516 GR 70 Sleeve



6-inch 600 LB A105 Flange and A537 CL1 Sleeve

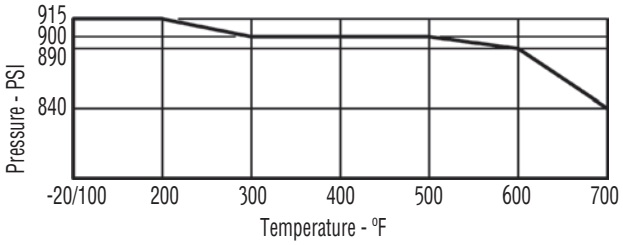


NOTE: The pressure/temperatue ratings in the charts only apply after pipe plugs and blind flange have been installed. (See O-Ring Temperature ratings on page 2)

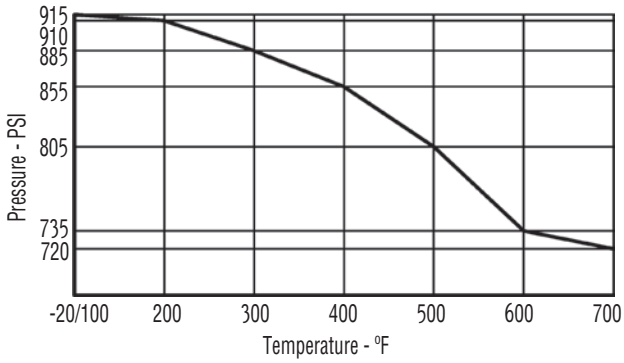
STOPPLE® Fittings - ASME B31.3

Pressure and Temperature Ratings

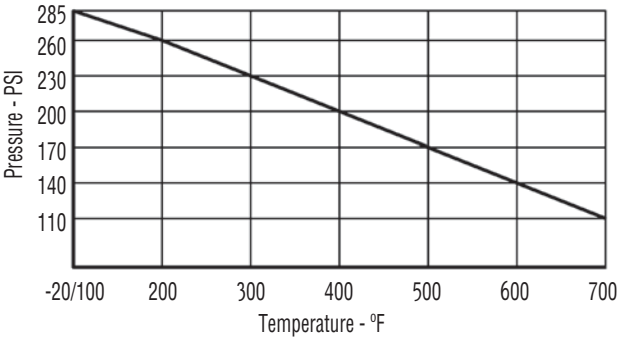
8-inch 600 LB A105 Flange and A537 CL1 Sleeve



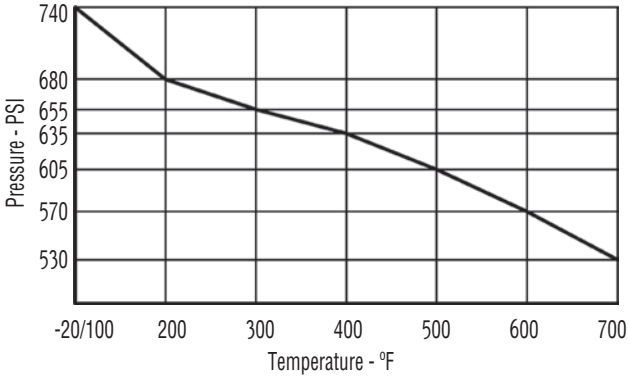
8-inch 600 LB A105 Flange and A516 GR 70 Sleeve



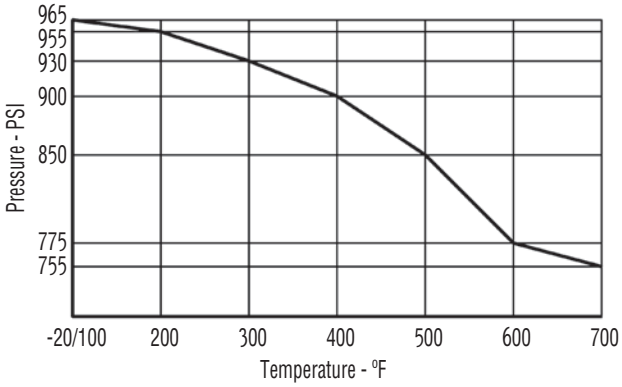
10-, 12- and 16-inch 150 LB A105 Flange and A537 CL1 or A516 GR 70 Sleeve



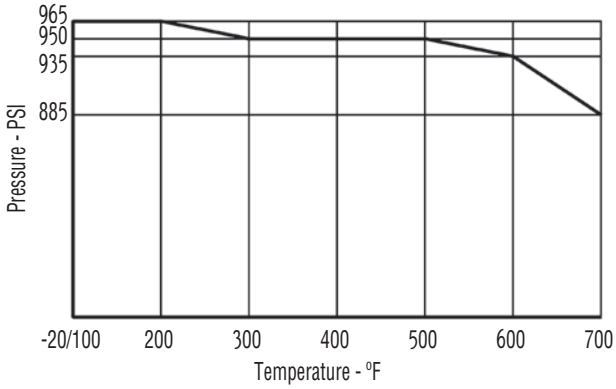
10-, 12- and 16-inch 300 LB A105 Flange and A537 CL1 or A516 GR 70 Sleeve



10-inch 600 LB A105 Flange and A516 GR 70 Sleeve



10-inch 600 LB A105 Flange and A537 CL1 Sleeve

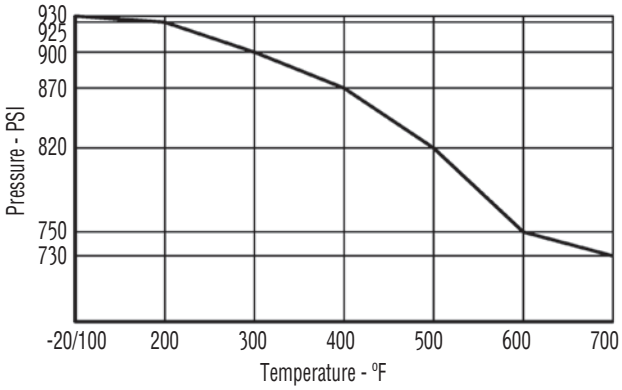


NOTE: The pressure/temperatue ratings in the charts only apply after pipe plugs and blind flange have been installed. (See O-Ring Temperature ratings on page 2)

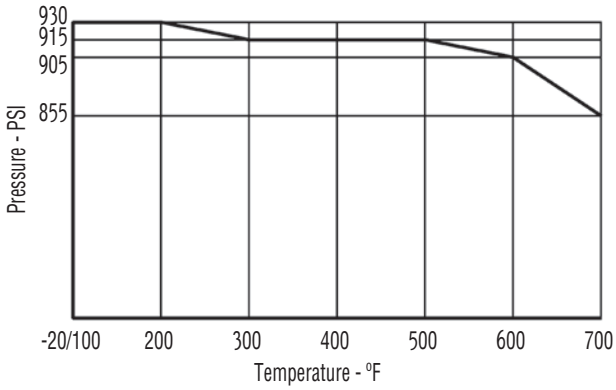
STOPPLE® Fittings - ASME B31.3

Pressure and Temperature Ratings

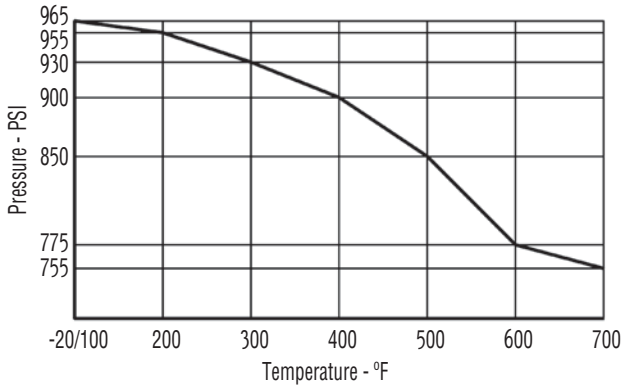
12-inch 600 LB A105 Flange and A516 GR 70 Sleeve



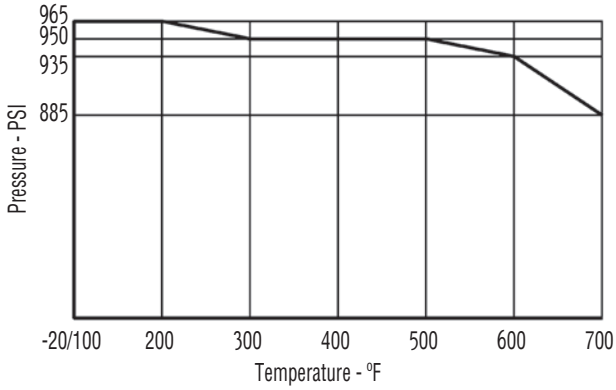
12-inch 600 LB A105 Flange and A537 CL1 Sleeve



16-inch 600 LB A105 Flange and A516 GR 70 Sleeve



16-inch 600 LB A105 Flange and A537 CL1 Sleeve



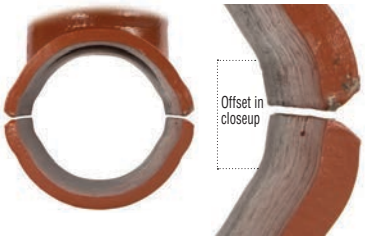
NOTE: The pressure/temperatue ratings in the charts only apply after pipe plugs and blind flange have been installed. (See O-Ring Temperature ratings on page 2)

STOPPLE® Fittings

ASME B31.4 - Sizes 4- through 12- & 16-inch

T.D. Williamson, Inc.

Bulletin No: 1100.005.01
Date: November 2008
Cross Indexing No: n/a
Supersedes: October 2007



New fittings incorporate a designed and manufactured offset allowing the placement of back-up strips

■ **STOPPLE® Fitting**
LOCK-O-RING® Plug, Blind flange, studs, nuts and gasket sold separately

Description

STOPPLE® Fittings are 4- through 12-inch & 16-inch full-branch split tees designed for use with the TDW STOPPLE plugging system. They meet B31.4 specifications for use in pipeline transportation systems for liquid hydrocarbons and other liquids. STOPPLE Fittings are furnished with LOCK-O-RING® Flanges to accept a LOCK-O-RING Completion Plug, permitting removal of the tapping valve after work is completed.

Features

Flange-to-sleeve weld joints and sleeves are designed to meet pressure and reinforcement requirements of ASME codes, and are available in Class 150, 300 and 600. Other ASME Class ratings available upon request.

Fittings are manufactured with a controlled carbon equivalent to make welding easier in harsh environments. Back-up strips are provided for all fittings.

All pressure-containing welds on the fittings have undergone X-ray inspection per ASME requirements.

Fitting sleeves are an extruded type design. They are manufactured from a pressure-vessel quality, normalized, killed carbon steel plate with hardness below Rc22.

The Charpy impact value of the sleeves at -50°F is 15 ft-lbs average with 12 ft-lbs minimum.

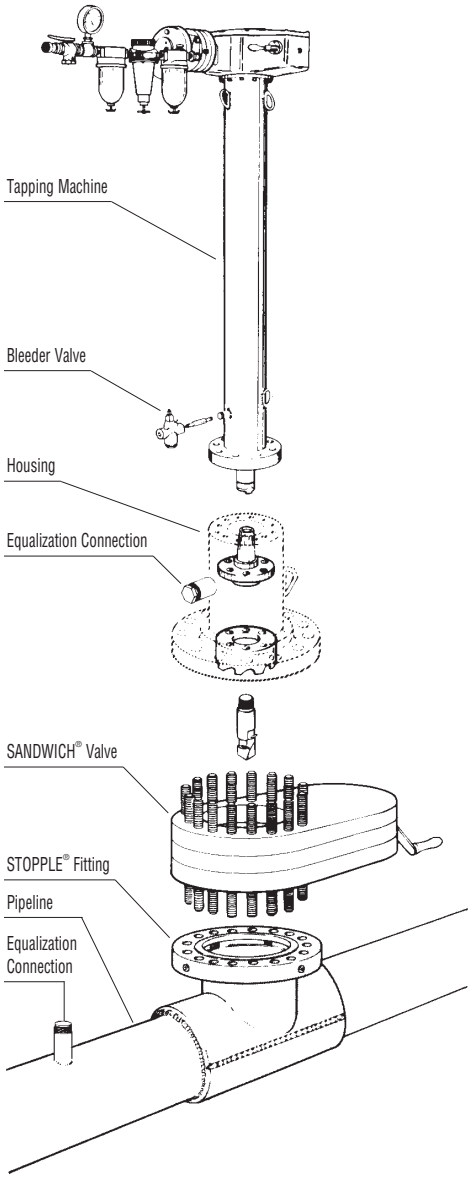
Options

- Rapid delivery: If the desired fitting meets standard specifications, it can be shipped from stock or within two weeks in most cases.
- Choice of flanges.
- Available also to ASME B31.3 and B31.8 specifications

Use the grid inside to develop the part number for the STOPPLE fitting of your choice*

Contact the factory for information concerning ordering of split sleeves (tees).
*Please confirm your choice with a Factory Representative

■ **Typical Tapping Setup For Plugging Operation**



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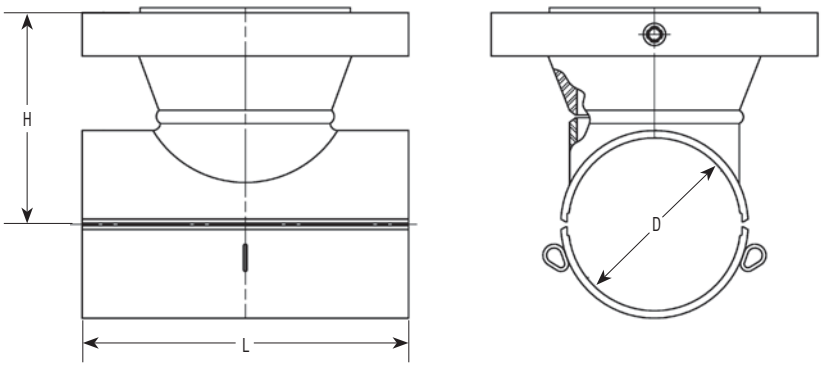
STOPPLE® Fittings - ASME B31.4

Example

36-1043-0430-11 is a STOPPLE® Fitting with 4" (run) x 4" (branch), with an RF standard weight, standard material flange, BUNA-N o-ring, class 300, and A 537 CL. 1 TDW Std. sleeve material with back-up strips.

36-1043-XXXX-XX



STOPPLE® Fitting Size

Inches	Dim. H (Inches)			Dim. L	Dim D
(Nom.)	Class 150	Class 300	Class 600	Inches	Inches
04	7.015	7.015	7.266	10.75	4.656
06	8.828	8.828	9.078	14.00	6.781
08	10.156	10.156	10.406	16.50	8.812
10	10.218	11.218	12.844	20.00	10.938
12	12.406	12.906	13.922	22.00	12.938
16	16.172	16.172	16.546	30.00	16.218

STOPPLE® Fitting Design Code

Part Number	Option
15	150 LB
30	300 LB
60	600 LB

Flange and O-Ring Material

Option	Flange/O-Ring Material	O-Ring Temp. Ratings
1X	A105 w/ Buna-N O-Rings	212º F
3X	A105 w/ NEOPRENE O-Rings	225º F
5X	A105 w/ VITON O-Rings	400º F
7X	A105 w/ EPDM O-Rings	250º F / 500º F Steam

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Sleeve Material

Option	Sleeve Material
X1	A537 CL1
X2	A516 GR 70

Fitting Weights and Pressure Ratings

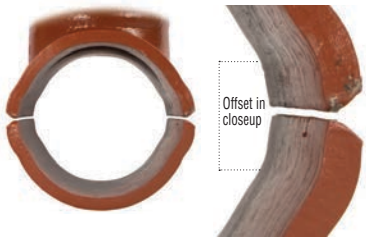
Size	Weight (lbs.)	Weight (lbs.)	Weight (lbs.)	MAOP (in psi) @ -20 to 100°F with .72 Design Factor		
Inches (Nom.)	Class 150	Class 300	Class 600	Class 150	Class 300	Class 600
04	55	60	65	285	740	1480
06	90	100	105	285	740	See Note 1
08	135	140	160	285	740	See Note 2
10	190	190	280	285	740	See Note 3
12	300	300	380	285	740	See Note 4
16	580	600	700	285	740	See Note 5

1.) P-T rating for A537 CL1 is 1480 PSI. - P-T rating for A516 GR 70 is 1420
2.) P-T rating for A537 CL1 is 1480 PSI. - P-T rating for A516 GR 70 is 1130
3.) P-T rating for A537 CL1 is 1480 PSI. - P-T rating for A516 GR 70 is 1190
4.) P-T rating for A537 CL1 is 1480 PSI. - P-T rating for A516 GR 70 is 1150
5.) P-T rating for A537 CL1 is 1480 PSI. - P-T rating for A516 GR 70 is 1170
Consult factory for other pressure and temperature requirements

STOPPLE® Fittings

ASME B31.8 - Sizes 4- through 12-inch & 16-inch

T.D. Williamson, Inc.
Bulletin No: 1100.006.01
Date: November 2008
Cross Indexing No: n/a
Supersedes: October 2007



New fittings incorporate a designed and manufactured offset allowing the placement of back-up strips

■ **STOPPLE® Fitting**
LOCK-O-RING® Plug, Blind flange, studs, nuts and gasket sold separately

Description

STOPPLE® Fittings are 4- through 12-inch & 16-inch full-branch split tees designed for use with the TDW STOPPLE plugging system. They meet B31.8 specifications for gas transmission and distribution piping systems. STOPPLE Fittings are furnished with LOCK-O-RING® Flanges to accept a LOCK-O-RING Completion Plug, permitting removal of the tapping valve after work is completed.

Features

Flange-to-sleeve weld joints and sleeves are designed to meet pressure and reinforcement requirements of ASME codes, and are available in Class 150, 300 and 600. Other ASME Class ratings available upon request.

Fittings are manufactured with a controlled carbon equivalent to make welding easier in harsh environments. Back-up strips are provided for all fittings.

All pressure-containing welds on the fittings have undergone X-ray inspection per ASME requirements.

Fitting sleeves are an extruded type design. They are manufactured from a pressure-vessel quality, normalized, killed carbon steel plate with hardness below Rc22.

The Charpy impact value of the sleeves at -50°F is 15 ft-lbs average with 12 ft-lbs minimum.

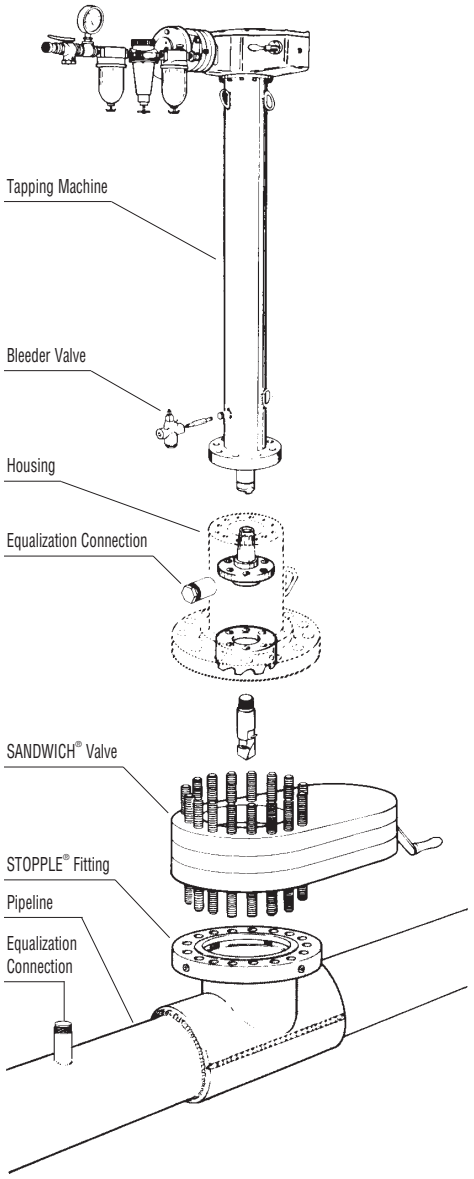
Options

- Rapid delivery: If the desired fitting meets standard specifications, it can be shipped from stock or within two weeks in most cases.
- Choice of flanges.
- Available also to ASME B31.3 and B31.4 specifications

Use the grid inside to develop the part number for the STOPPLE fitting of your choice*

Contact the factory for information concerning ordering of split sleeves (tees).
*Please confirm your choice with a Factory Representative

■ **Typical Tapping Setup For Plugging Operation**



ISO 9001 Certified

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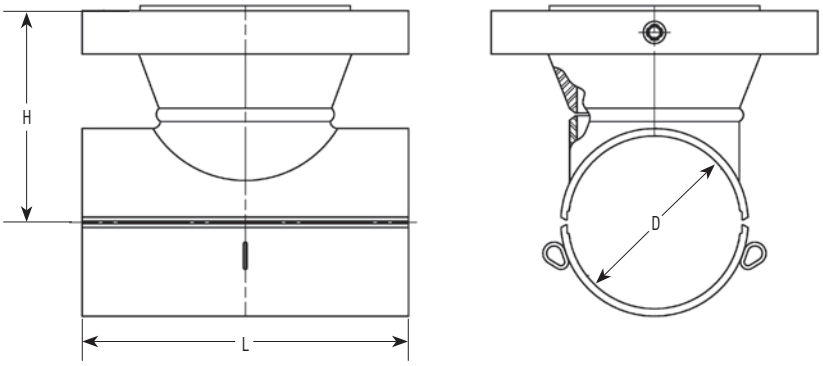
STOPPLE® Fittings - ASME B31.8

Example

36-1045-0430-11 is a STOPPLE® Fitting with 4" (run) x 4" (branch), with an RF standard weight, standard material flange, BUNA-N o-ring, class 300, and A 537 CL. 1 TDW Std. sleeve material with back-up strips.

3 6 - 1 0 4 5 - X X X X - X X



STOPPLE® Fitting Size

Inches	Dim. H (Inches)			Dim. L	Dim D
(Nom.)	Class 150	Class 300	Class 600	Inches	Inches
04	7.015	7.015	7.266	10.75	4.656
06	8.828	8.828	9.078	14.00	6.781
08	10.156	10.156	10.406	16.50	8.812
10	10.218	11.218	12.844	20.00	10.938
12	12.406	12.906	13.922	22.00	12.938
16	16.172	16.172	16.546	30.00	16.218

STOPPLE® Fitting ASME Class

Part Number	Option
15	150 LB
30	300 LB
60	600 LB

Flange and O-Ring Material

Option	Flange/O-Ring Material	O-Ring Temp. Ratings
1X	A105 w/ Buna-N O-Rings	212º F
2X	A694 F46 w/ Buna-N O-Rings (See Note)	
3X	A105 w/ NEOPRENE O-Rings	225º F
4X	A694 F46 w/ NEOPRENE O-Rings (See Note)	
5X	A105 w/ VITON O-Rings	400º F
6X	A694 F46 w/ VITON O-Rings (See Note)	
7X	A105 w/ EPDM O-Rings	250º F / 500º F Steam
8X	A694 F46 w/ EPDM O-Rings (See Note)	

Note: Only 16-inch flange is available in A694 F46.

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Sleeve Material

Option	Sleeve Material
X1	A537 CL1
X2	A516 GR 70

Fitting Weights

Size	Weight (lbs.)	Weight (lbs.)	Weight (lbs.)
Inches (Nom.)	Class 150	Class 300	Class 600
04	55	60	65
06	90	100	105
08	135	140	160
10	190	190	280
12	300	300	380
16	580	600	700

STOPPLE® Fittings - ASME B31.8

Maximum Allowable Operating Pressure (in psi) -20˚F to 100˚F

		.72 Design Factor		.6 Design Factor		.5 Design Factor		.4 Design Factor	
Class	Size	A516 GR 70N	A537 CL 1	A516 GR 70N	A537 CL 1	A516 GR 70N	A537 CL 1	A516 GR 70N	A537 CL 1
150	4	285	285	285	285	285	285	285	285
	6	285	285	285	285	285	285	285	285
	8	285	285	285	285	285	285	285	285
	10	285	285	285	285	285	285	285	285
	12	285	285	285	285	285	285	285	285
	16	285	285	285	285	285	285	285	285
300	4	740	740	740	740	740	740	740	740
A 105 Flange	6	740	740	740	740	740	740	650	650
	8	740	740	735	735	615	615	490	490
	10	740	740	740	740	740	740	625	625
	12	740	740	740	740	740	740	615	615
	16	740	740	740	740	740	740	640	640
300	16	740	740	740	740	740	740	650	685
A694 F46 Flange									
600	4	1480	1480	1480	1480	1380	1480	1105	1205
A 105 Flange	6	1420	1480	1180	1480	985	1295	785	1035
	8	1130	1480	940	1235	785	1030	625	825
	10	1190	1480	990	1305	825	1085	660	870
	12	1150	1480	955	1230	795	1025	635	820
	16	1170	1480	975	1285	815	1070	650	855
600	16	1170	1480	975	1285	815	1070	650	855
A694 F46 Flange									

Note 1: A694 F46 option is available for 16-inch flange only.
Note 2: 16-inch 150 Lb values are the same for A105 and A694 F46 Flanges
Consult Factory for other pressure and temperature requirements

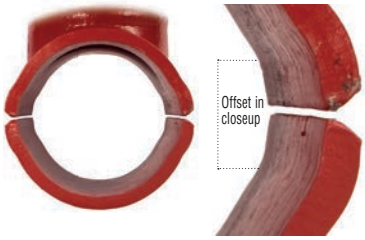
STOPPLE® Plus Fittings

Sizes: 4-Through 36-inch

T.D. Williamson

Bulletin No: **1100.007.02**
Version: 08.2014
Cross Indexing No: n/a
Supercedes: 1100.007.01 (06.2014)

■ **STOPPLE® Plus Fitting**



STOPPLE® Plus fittings incorporate a designed and manufactured offset allowing the placement of back-up strips

Description

STOPPLE® Plus fittings are full-branch split tees designed for use with TDW plugging machines. The design has undergone extensive pressure and functional testing. STOPPLE Plus fittings are furnished with LOCK-O-RING® Plus flanges drilled and faced to match ASME Class 150, 300 or 600 flanges in sizes 4- through 36-inches and ASME Class 900 for 4-and 6-inches.

STOPPLE Plus fittings are an alternative to conventional TDW STOPPLE fittings and are designed to ASME B31.3, B31.4 and B31.8 requirements (see chart for MAOP).

- There are no side openings in the flange, which reduces potential leak paths.
- Interlock system provides positive indication LOCK-O-RING Plus plug leaves are fully extended.
- Complete installation and retrieval of LOCK-O-RING Plus plug is done using tapping machine. Setting LOCK-O-RING Plus completion plug takes less time compared to setting completion plugs using other high-pressure setting methods.

Features

STOPPLE Plus fittings are manufactured with a controlled carbon equivalent of 0.45 or lower. Factory welding of TDW STOPPLE Plus fittings is 100 percent radiographically inspected. Fitting sleeves are an extruded or fabricated type design, manufactured from a pressure-vessel quality, normalized, killed carbon steel plate with a hardness of Rc22 or lower.

The charpy impact value of 20 ft-lbs average with 15 ft-lbs minimum can be reached at -20°F for the standard option and at -50°F for the low-temp option.

LOCK-O-RING Plus plugs are retained in the STOPPLE Plus fittings by means of retaining leaves, mounted on the plug, that are extended into a mating groove in the flange of the fitting.

■ **LOCK-O-RING® Plus Plugs**

Options

Standard STOPPLE Plus fittings are furnished in a kit featuring the following components: LOCK-O-RING Plus flange with raised face; matching blind flange, studs, nuts, anti-rotational pin and a stainless steel spiral wound gasket; LOCK-O-RING Plus plug with Buna-N O-ring; scarfed nipple for the LOCK-O-RING Plus plug to replace the coupon cut from pipeline; and tile red primer coating.

Standard STOPPLE Plus fittings incorporate a designed and manufactured offset allowing the placement of backup strips.

Options include:

- Neoprene, Viton®, EPDM or Low-Temp Buna-N O-rings.
- LOCK-O-RING Plus flange with ring type joint facing for 4- through 14-inch.
- Reduced branch variations can be ordered.
- Standard Temp/Non-NACE MR 0175 versus Low Temp/NACE MR 0175.

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ISO 9001 Certified

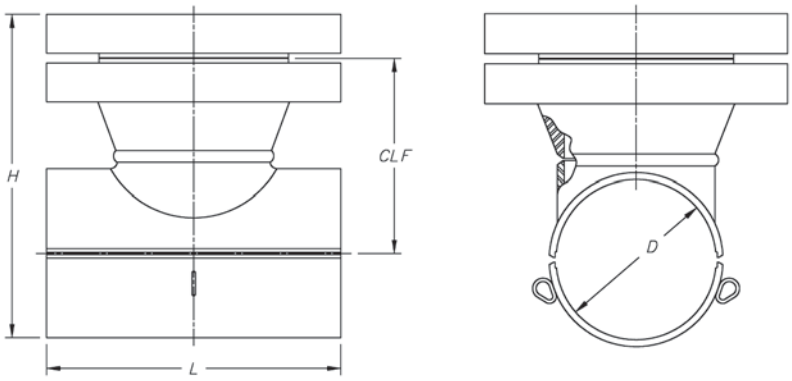
T.D. Williamson

STOPPLE® Plus Fittings

Example

26-2357-0630-14 is a STOPPLE Plus Fitting kit which includes the following:

- A fitting with a 6" run X 6" branch, an ASME Class 300 RF flange, and 2 (loose) longitudinal back-up strips.
- A plug with a Buna-N O-ring and a (loose) scarfed nipple.
- ASME B31.4 design code compliant.
- An ASME class 300 RF blind flange with studs, nuts, gasket and anti-rotation pin.



26 - X 3 5 7 - X X X X - X X

Fitting Kit Material

Option	Fitting Kit Material
2	Non-NACE MR 0175/Standard Temp (-20ºF)
3	NACE MR 0175/Low Temp (-50ºF)

STOPPLE® Plus Fitting Size

Inches	Dim CLF (inches)				Dim H (inches)				Dim L	Dim D
(Nom)	Class 150	Class 300	Class 600	Class 900	Class 150	Class 300	Class 600	Class 900	Inches	Inches
04	6.390	6.390	7.015	7.453	10.161	10.473	11.598	12.286	10.75	4.656
06	8.078	8.078	9.078	9.359	12.974	13.412	15.099	15.695	14.00	6.781
08	9.625	9.625	10.750	-	15.661	16.161	18.099	-	16.50	8.812
10	11.218	11.218	12.844	-	18.505	19.192	21.693	-	20.00	10.938
12	12.922	12.922	13.609	-	21.411	22.161	23.723	-	22.00	12.968
14	13.922	13.922	14.453	-	23.161	23.911	25.317	-	26.00	14.218
16	14.640	14.640	15.922	-	25.067	25.879	28.161	-	30.00	16.218
18	16.484	16.484	17.640	-	28.160	28.973	31.254	-	33.00	18.218
20	17.812	17.812	19.328	-	30.739	31.551	34.317	-	36.00	20.218
22	20.141	21.047	20.297		34.3955	36.1145	36.4895	-	40.00	22.125
24	20.922	21.672	21.797	-	36.2395	38.8645	39.2395	-	43.00	24.125
26	22.172	23.922	23.922	-	39.3025	41.6765	43.3025	-	50.00	26.125
28	23.187	25.094	24.969	-	40.879	43.849	45.787	-	49.00	28.25
30	26.282	27.782	27.532	-	45.7875	48.0995	49.5995	-	56.00	31.125
32	*	*	*	-	*	*	*	-	*	*
34	*	*	30.718	-	*	*	55.786	-	61.50	34.25
36	*	*	30.829	-	*	*	57.723	-	65.50	36.25

STOPPLE® Plus Fittings

Fitting Kit Weights

Size Inches (Nom.)	Weight (lbs.) Class 150	Weight (lbs.) Class 300	Weight (lbs.) Class 600	Weight (lbs.) Class 900
04	75	100	130	160
06	130	180	250	320
08	210	260	380	-
10	340	410	660	-
12	510	640	880	-
14	660	840	1100	-
16	920	1150	1550	-
18	1250	1500	2000	-
20	1600	1950	2650	-
22	2250	2620	3250	-
24	2500	3200	3900	-
26	3250	4050	5100	-
28	2900	4100	5950	-
30	4600	5750	7000	-
32	*	*	*	-
34	*	*	10050	-
36	*	*	12800	-

*Consult Factory for other pressure and temperature requirements

ASME Design Code Compliance

Option	Design Code
X3	B31.3
X4	B31.4
X8	B31.8

Plug O-Ring Material

Option	O-ring Material	O-Ring temperature range
1X	Buna-N O-Ring (STD)	-20º F … 250º F
2X*	Buna-N O-Ring (Low-Temp)	-50º F … 180º F
3X	Neoprene O-Ring	-20º F … 225º F
5X	Viton® O-Ring (STD)	-20º F … 400º F
6X*	Viton® O-Ring (Low-Temp)	-50º F … 400º F
7X	EPDM O-Ring	-20º F … 250º F/400º F Steam

* Only available for NACE/Low-Temperature material.

STOPPLE® Plus Fitting ASME Class

Option	Class
15	150 LB
30	300 LB
60	600 LB
90	900 LB

NOTE: 900 LB fittings are available as standard in 4- and 6-inch only. Consult factory for other 900 LB sizes.

MAOP in PSI per ASME B31.3 at -20°F to 100°F for Standard, -50°F to 100°F for NACE / Low-Temp

Class	Size	PSI
150	All	285
300	All	740
600	4	1480
	6	1155
	8	915
	10	965
	12	930
	14	920
	16	965
	18	975
	20	980
	22	1090
	24	995
	26	995
	28	955
	30	930
	32	*
	34	1080
	36	1080
900	4	1610
	6	1500

*Consult Factory for other pressure and temperature requirements

STOPPLE® Plus Fittings

Class 150 STOPPLE Plus Fitting	MAOP in PSI per ASME B31.4 at -20°F to 250°F (225°F max with Neoprene O-ring)		MAOP in PSI per ASME B31.8 at -20˚F to 100˚F			
Size	0.72 DF	0.6 DF	0.72 DF	0.6 DF	0.5 DF	0.4 DF
4	285	285	285	285	285	285
6	285	285	285	285	285	285
8	285	285	285	285	285	285
10	285	285	285	285	285	285
12	285	285	285	285	285	285
14	285	285	285	285	285	285
16	285	285	285	285	285	285
18	285	285	285	285	285	285
20	285	285	285	285	285	285
22	285	285	285	285	285	285
24	285	285	285	285	285	285
26	285	285	285	285	285	285
28	285		285			
30	285	285	285	285	285	285
32			*	*	*	*
34			*	*	*	*
36			*	*	*	*

Class 300 STOPPLE Plus Fitting	MAOP in PSI per ASME B31.4 at -20°F to 250°F (225°F max with Neoprene O-ring)		MAOP in PSI per ASME B31.8 at -20˚F to 100˚F			
Size	0.72 DF	0.6 DF	0.72 DF	0.6 DF	0.5 DF	0.4 DF
4	740	740	740	740	740	590
6	740	740	740	740	740	610
8	740	740	740	740	615	490
10	740	740	740	740	665	530
12	740	740	740	740	615	490
14	740	740	740	740	695	555
16	740	740	740	740	620	495
18	740	740	740	740	685	545
20	740	740	740	740	615	490
22	740	740	740	740	740	740
24	740	740	740	740	740	740
26	740	740	740	740	740	740
28	740		740			
30	740	740	740	740	740	740
32			*	*	*	*
34			*	*	*	*
36			*	*	*	*

*Consult Factory for other pressure and temperature requirements

STOPPLE® Plus Fittings

Class 600 STOPPLE Plus Fitting	MAOP in PSI per ASME B31.4 at -20°F to 250°F (225°F max with Neoprene O-ring)		MAOP in PSI per ASME B31.8 at -20˚F to 100˚F			
Size	0.72 DF	0.6 DF	0.72 DF	0.6 DF	0.5 DF	0.4 DF
4	1480	1480	1480	1480	1480	1240
6	1480	1480	1480	1480	1295	1035
8	1480	1235	1480	1235	1030	825
10	1480	1305	1480	1305	1085	870
12	1480	1260	1480	1260	1050	840
14	1480	1230	1480	1230	1025	820
16	1480	1285	1480	1285	1070	855
18	1480	1300	1480	1300	1080	865
20	1480	1320	1480	1320	1100	880
22	1480	1470	1480	1470	1225	980
24	1480	1340	1480	1340	1115	895
26	1480	1330	1480	1330	1105	885
28	1480	1270	1480	1350	1060	850
30	1480	1245	1480	1245	1035	830
32	*	*	*	*	*	*
34	1480	1415	1480	1415	1180	940
36	1480	1350	1480	1350	1125	900

Class 900 STOPPLE Plus Fitting	MAOP in PSI per ASME B31.4 at -20°F to 250°F (225°F max with Neoprene O-ring)		MAOP in PSI per ASME B31.8 at -20˚F to 100˚F			
Size	0.72 DF	0.6 DF	0.72 DF	0.6 DF	0.5 DF	0.4 DF
4	2220	2185	2220	2185	1820	1455
6	2220	2005	2220	2005	1670	1335

*Consult Factory for other pressure and temperature requirements

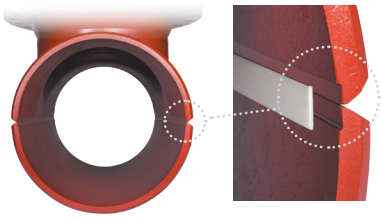
STOPPLE® Fittings

Multi-Certified / Sizes 2- through 24-inch

Certified to ASME B31.3, CSA Z662, NACE MR0103 & CAT II at -50° F

T.D. Williamson

Bulletin No: **1100.08.00**
Version: 12.2014
Cross Indexing No: n/a
Supersedes: n/a



Fittings incorporate a designed and milled groove, allowing the placements of back-up strips

■ **STOPPLE® Fitting**
LOCK-O-RING® Plug, blind flange, studs, nuts and gasket sold separately

Description

STOPPLE® Fittings are 2- through 24-inch full-branch split tees designed for use with the TDW STOPPLE® plugging system. They meet both ASME B31.3 and CSA Z662 for use in refinery and chemical plant piping, and oil and gas pipeline systems, respectively. STOPPLE Fittings are furnished with LOCK-O-RING Flanges to accept a LOCK-O-RING Completion Plug, permitting removal of the tapping valve after work is completed.

Features

Flange-to-sleeve weld joints and sleeves are designed to meet pressure and reinforcement requirements of CSA Z662 & ASME B31.3 codes and are available in class 600. Additional ASME class ratings are available upon request.

All pressure-containing welds on the fittings have undergone X-ray inspection per ASME and CSA requirements.

Fittings are manufactured with a controlled Carbon Equivalent to make welding easier in harsh environments. Back-up strips are provided for all fittings.

Each fitting is designed and manufactured as:

- Meets both ASME B31.3 & CSA Z662
- NACE MR0103
- Covered CRN for Canada
- CAT II at -50°F for Z662
- The charpy impact values at -50°F with absorbed energy 20ft-lbs min. average and 15 ft-lbs min.
- Carbon Equivalent (CE) of 0.40% Max, based on both IIW and CSA formulas

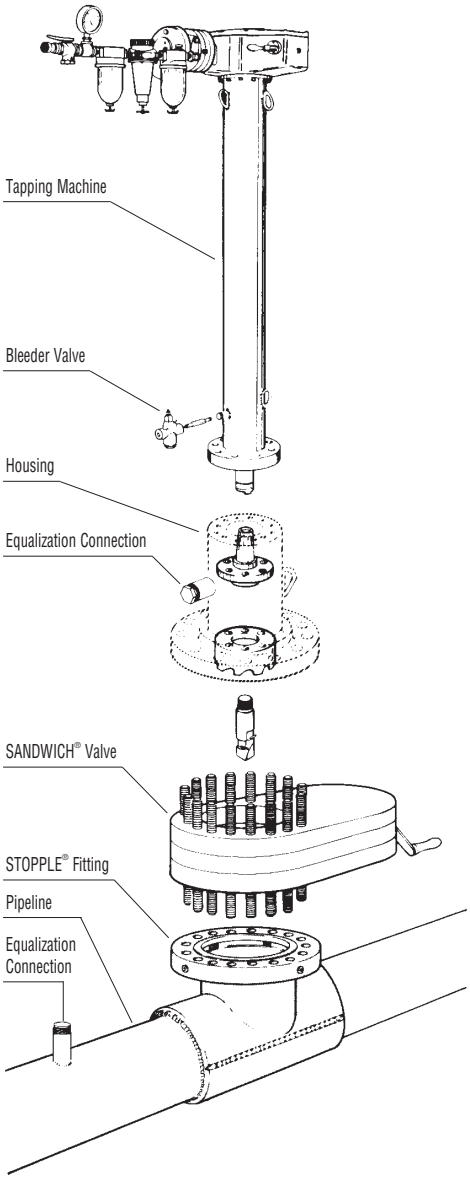
All pressure containing welds on the fittings have undergone 100% radiography inspection.

Fitting sleeves are an extruded type design with back-up strip groove. They are manufactured from a pressure vessel quality, normalized, killed carbon steel plate.

Options

- Different O-ring options are available.
- Class 150 and 300 also available upon request. Consult factory.

■ **Typical Tapping Setup For Plugging Operation**



ISO 9001 Certified

Contact the factory for information concerning ordering of split sleeves (tees).

Use the grid on back to develop the part number for the STOPPLE fitting of your choice. Confirm choice with a factory representative.

T.D. Williamson

STOPPLE® Fittings

Multi-Certified to ASME B31.3, CSA Z662,
NACE MR0103 & CAT II at -50°F – Sizes 2- through 24-inch

Example: TC-0136-1260-10 is a STOPPLE® Fitting with 12" (run) x 12" (branch), with a RF standard weight flange, dual certified to A350 LF2 CL1 and A105 N flange material, BUNA-N O-rings, class 600, and A 537 CL 1 TDW Std. sleeve material with back-up strips.

T C - 0 1 3 6 - X X 6 0 - X 0

STOPPLE® Fitting Size

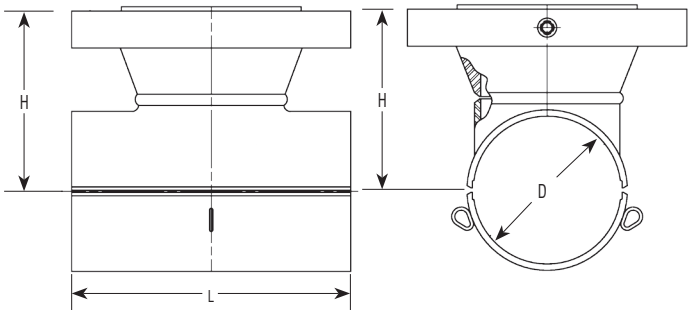
Size (Nom.)	Dim. H	Dim. L	Dim D
Inches	Inches	Inches	Inches
02	8.368	5.750	2.469
03	8.718	7.625	3.625
04	7.281	10.750	4.656
06	9.109	14.000	6.781
08	10.813	16.500	8.813
10	12.797	20.000	10.844
12	13.953	22.000	12.968
14	14.938	26.000	14.220
16	16.563	30.000	16.220
20	20.204	36.000	20.220
24	22.375	43.000	24.220

O-Ring Material

Option	O-Ring Material	Temperature Ratings
00	BUNA-N, Low Temperature	-65°F to 250°F Max
10	BUNA-N, Regular	-20°F to 212°F Max
20	Viton, Regular	-15°F to 400°F Max
30	Viton, Low Temperature	-55°F to 400°F Max
40	EPDM	- 20°F to 250°F Max (500°F Max for steam)

STOPPLE® Fitting Design Class

Part Number	Option
60	600 LB



Maximum Allowable Operating Pressure (in psi) @ -50 to 100°F

	Size (Nom.)	Weight	CSA Z662 f/CAT II	ASME B31.3
Class	Inches	(Lbs.)	MAOP (in psi) with .72 DF	MAOP (in psi) with .062" Corrosion Allowance
600 LB	02	60	1480	1195 *
	03	65	1480	825
	04	65	1480	1315
	06	120	1480	945
	08	160	1480	750
	10	300	1480	825
	12	400	1480	820
	14	540	1480	815
	16	1000	1480	875
	20	1230	1480	905
	24	1900	1480	935

* NOTE: For 2-inch STOPPLE® Fitting, the corrosion allowance is .034 inches.

Material

Size	Sleeve Material	Flange Material
2-3	Dual certified to A 234 WPB & A 420 WPL6	Dual certified to A 350 LF2 CL1 & A 105 N
4-24	A 537 CL1	Dual certified to A 350 LF2 CL1 & A 105 N

LOCK-O-RING® Flanges & Plugs

Sizes: 4- Through 36-inch

T.D. Williamson, Inc.

Bulletin No: 1120.001.02
Date: April 2009
Cross Indexing No: n/a
Supersedes: October 2002

■ LOCK-O-RING® Plug with Scarfed Nipple

■ LOCK-O-RING® Flange

Description

LOCK-O-RING® Flanges and Plugs are used as a means of recovering tapping valves after a STOPPLE® Plugging Machine operation. They are used in new construction to permit future expansion of a pipeline or a piping system.

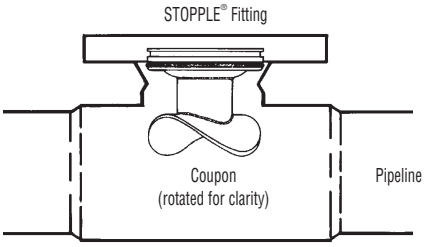
Providing a pressure-tight seal over the tapped holes, LOCK-O-RING Flanges eliminate the need for valves until such time as valves may be necessary. For example, fittings with LOCK-O-RING Flanges and Plugs are installed on the line during construction. Later, when branch connections are needed, valves can be installed on the fittings and the LOCK-O-RING Plugs removed with a tapping machine. In some applications, LOCK-O-RING Flanges entirely eliminate the need for permanent valves.

Features

LOCK-O-RING Flanges are drilled and faced to match ASME Class 150, 300 or 600 flanges.

LOCK-O-RING Flanges are mounted on STOPPLE® Fittings. They are also used on reduced branch fittings and plain nipples (See Bulletin 1100.001.00).

■ LOCK-O-RING® Plug With Scarfed Nipple For Coupon



LOCK-O-RING® Plugs can be welded to scarfed pipe spacers to install original coupons inside tapped holes to eliminate pigging hazards.

■ Flow-Through LOCK-O-RING® With Pig Guide Bars

For pig guides in side openings, a special flow-through LOCK-O-RING® assembly with guide bars will allow full flow into a branch line and will permit pigs to traverse the opening.

Patented in the United States and in foreign countries.
ISO 9001 Certified

Toll Free
1-888-TDWmSon (839-6766)

LOCK-O-RING® Flanges

ASME Class 150 Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Size		Approx. Weight		Design Factor				
Inches	DN	Lbs.	Kg.	0.72	0.6	0.5	0.4	Part Number
4	100	27	12	285	285	285	285	06-6423-0415
6	150	45	20	285	285	285	285	06-6423-0615
8	200	70	32	285	285	285	285	06-6423-0815
10	250	94	43	285	285	285	285	06-6423-1015
12	300	140	64	285	285	285	285	06-6423-1215
14	350	207	94	285	285	285	260	06-6423-1415
16	400	265	120	285	285	285	285	06-8823-1615
18	450	275	125	285	285	285	250	06-6423-1815
20	500	350	159	285	285	262	210	06-6423-2015
22	550	406	184	285	285	285	238	06-6423-2215
24	600	487	221	285	279	233	186	06-6423-2415
26	650	680	308	285	285	285	259	06-6423-2615
28	700	666	302	285	285	250	200	06-6423-2815
30	750	870	395	285	285	242	194	06-6423-3015
34	850	1101	500	285	285	258	206	06-6423-3415
36	900	1240	562	285	285	239	191	06-6423-3615

For sizes and series not shown, consult the factory.
Consult the factory before pressure-testing above 1800 psi (124 bar).

LOCK-O-RING® Flanges are drilled and faced to match ASME Class 150, 300 or 600 flanges.

MAOP per ASME B31.4 at -20 to +180° F = 285 psi

ASME Class 300 Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Size		Approx. Weight		Design Factor				
Inches	DN	Lbs.	Kg.	0.72	0.6	0.5	0.4	Part Number
4	100	38	17	740	740	740	740	06-6423-0430
6	150	42	19	740	740	740	733	06-6423-0630
8	200	63	29	740	740	624	499	06-6423-0830
10	250	90	41	740	740	629	503	06-6423-1030
12	300	123	56	740	740	634	507	06-6423-1230
14	350	158	72	740	740	658	527	06-6423-1430
16	400	239	108	740	740	699	559	06-6423-1630
18	45	290	132	740	740	740	610	06-8823-1830
20	500	345	156	740	740	621	497	06-8823-2030
22	550	487	221	740	641	534	427	06-8823-2230
24	600	625	283	740	740	627	502	06-8823-2430
26	650	676	307	740	740	646	517	06-8823-2630
28	700	834	378	740	739	616	452	06-8823-2830
30	750	981	445	740	690	575	460	06-8823-3030
34	850	1204	546	740	657	548	438	06-8823-3430
36	900	1459	662	740	740	634	507	06-8823-3630

For sizes and series not shown, consult the factory.
Consult the factory before pressure-testing above 1800 psi (124 bar).

LOCK-O-RING® Flanges are drilled and faced to match ASME Class 150, 300 or 600 flanges.

MAOP per ASME B31.4 at -20 to +180° F = 285 psi

T.D. Williamson, Inc.

LOCK-O-RING® Flanges & Plugs

LOCK-O-RING® Flanges ASME Class 600

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Size		Approx. Weight		Design Factor				
Inches	DN	Lbs.	Kg.	0.72	0.6	0.5	0.4	Part Number
4	100	46	21	1480	1480	1480	1411	06-6423-0460
6	150	66	30	1480	1372	1140	915	06-6423-0660
8	200	111	50	1480	1480	1304	1020	06-6423-0860
10	250	180	82	1480	1480	1255	1004	06-6423-1060
12	300	225	102	1480	1270	1058	847	06-6423-1260
14	350	334	151	1480	1350	1125	900	06-6423-1460
16	400	481	218	1480	1293	1078	862	06-8823-1660
18	450	531	241	1480	1313	1094`	875	06-8823-1860
20	500	590	268	1480	1313	1094	875	06-8823-2060
22	550	730	331	1480	1313	1094	875	06-8823-2260
24	600	923	419	1480	1313	1094	875	06-8823-2460
26	650	1060	481	1480	1199	999	799	06-8823-2660
28	700	1137	516	1480	1239	1032	826	06-8823-2860
30	750	1227	556	1480	1239	1032	826	06-8823-3060
34	850	1472	668	1480	1238	1032	825	06-8823-3460
36	900	1741	790	1480	1238	1032	825	06-8823-3660

For sizes and series not shown, consult the factory.
Consult the factory before pressure-testing above 1800 psi (124 bar).

LOCK-O-RING® Flanges are drilled and faced to match ASME Class 150, 300 or 600 flanges.

LOCK-O-RING® Plug Spare O-Rings*

ASME Class 150, 300, 600 Part Number
00-1250-0001
00-1250-0002
00-1250-0003
00-1250-0004
00-1250-0005
00-1250-0006
00-7877-0001
00-7877-0002
00-7877-0003
00-7877-0004
00-7877-0005
00-7877-0006
00-7877-0007
00-7877-0008
00-7877-0010
00-7877-0011

*Standard O-Rings are Buna-N

■ LOCK-O-RING® Flange

■ LOCK-O-RING® Plug

LOCK-O-RING® Plugs ASME Class 150, 300, 600

Maximum allowable operating pressure (in psi) per ASME B31.8 at -20 to +100° F

Size		Approx. Weight		Design Factor				
Inches	DN	Lbs.	Kg.	0.72	0.60	0.50	0.40	Part Number
4	100	9	4	1480	1480	1480	1480	07-0312-0000
6	150	19	9	1480	1480	1480	1480	07-1265-0000
8	200	35	16	1480	1480	1480	1480	07-1266-0000
10	250	56	25	1480	1480	1480	1480	07-0286-0000
12	300	76	34	1480	1480	1480	1480	07-0287-0000
14	350	95	43	1480	1480	1480	1480	07-0288-0000
16	400	140	63	1480	1480	1480	1480	07-0289-0000
18	450	200	91	1480	1480	1480	1480	07-0290-0000
20	500	260	118	1480	1480	1480	1350	07-0291-0000
22	550	320	145	1480	1480	1480	1480	07-0292-0000
24	600	383	174	1480	1480	1480	1480	07-0293-0000
26	650	370	168	1480	1480	1480	1345	07-0294-0000
28	700	273	124	1480	1480	1480	1235	07-0295-0000
30	750	520	236	1480	1480	1480	1360	07-0296-0000
34	850	715	324	1480	1480	1480	1365	07-0298-0000
36	900	850	386	1480	1480	1480	1350	07-0299-0000

Consult the factory for larger sizes.

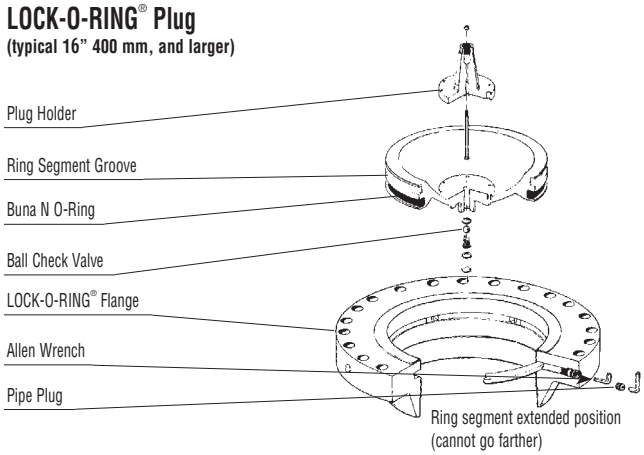
LOCK-O-RING® Plugs

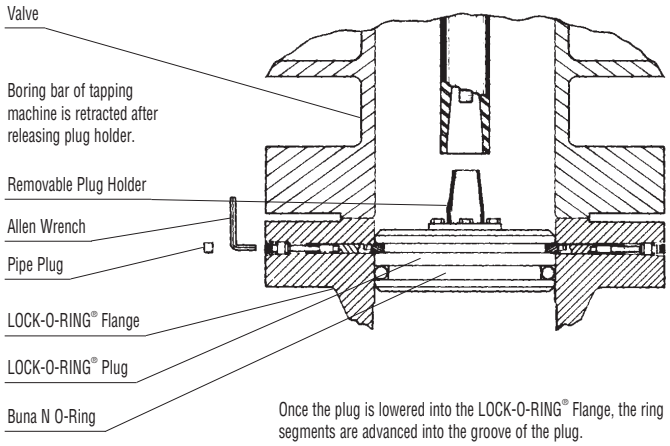
■ LOCK-O-RING® Plug with Scarfed Nipple

LOCK-O-RING® Plugs with Scarfed Nipple for Use with TDW STOPPLE® Fittings

Size		ASME Class 150	ASME Class 300	ASME Class 600
Inches	DN	Part Number	Part Number	Part Number
4	100	07-1267-0004	07-1268-0004	07-1270-0004
6	150	07-1267-0006	07-1268-0006	07-1270-0006
8	200	07-1267-0008	07-1268-0008	07-1270-0008
10	250	07-1267-0010	07-1268-0010	07-1270-0010
12	300	07-1267-0012	07-1268-0012	07-1270-0012
14	350	07-1267-0014	07-1268-0014	07-1270-0014
16	400	07-1267-0016	07-1268-0016	07-1270-0016
18	450	07-1267-0018	07-1268-0018	07-1270-0018
20	500	07-1267-0020	07-1268-0020	07-1270-0020
22	550	07-1267-0022	07-1268-0022	07-1270-0022
24	600	07-1267-0024	07-1268-0024	07-1270-0024
26	650	07-1267-0026	07-1268-0026	07-1270-0026
28	700	07-1267-0028	07-1268-0028	07-1270-0028
30	750	07-1267-0030	07-1268-0030	07-1270-0030
34	850	07-1267-0034	07-1268-0034	07-1270-0034
36	900	07-1267-0036	07-1268-0036	07-1270-0036

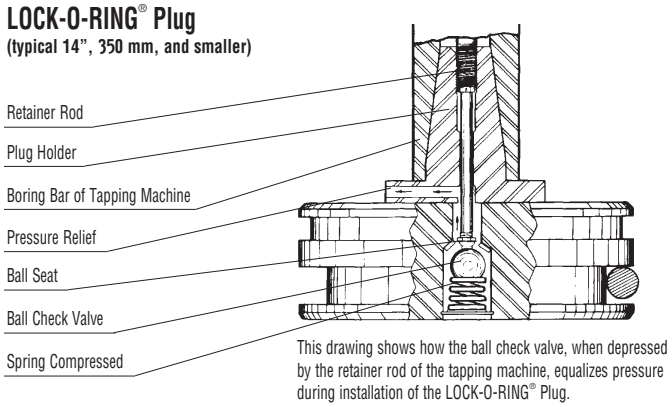
LOCK-O-RING® Plug
(typical 16" 400 mm, and larger)



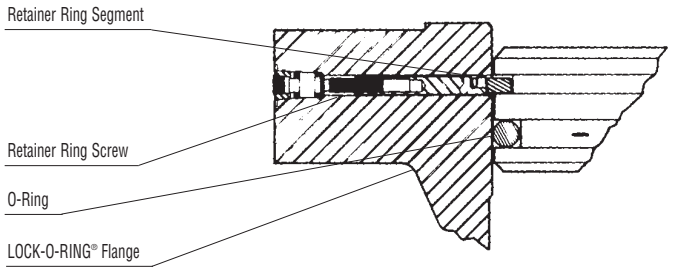


Once the plug is lowered into the LOCK-O-RING® Flange, the ring segments are advanced into the groove of the plug.

LOCK-O-RING® Plug
(typical 14", 350 mm, and smaller)



This drawing shows how the ball check valve, when depressed by the retainer rod of the tapping machine, equalizes pressure during installation of the LOCK-O-RING® Plug.



Typical Application

LOCK-O-RING® Flanges & Plugs

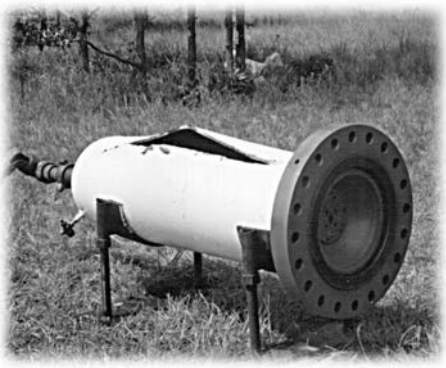
T.D. Williamson, Inc.

1120.001.02- p5

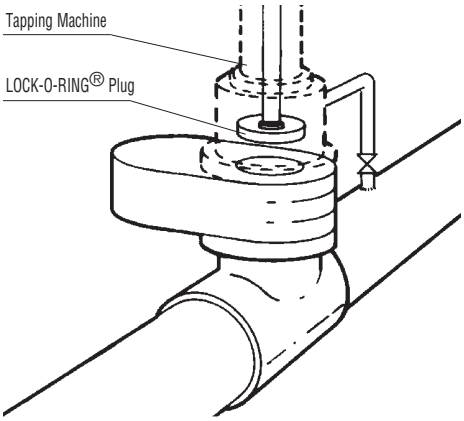
Destruction Tests Prove Strength of LOCK-O-RING® Flange and Plug

For test purposes, a LOCK-O-RING® Flange was welded to a test vessel made of 16" (400 mm), Grade B, 1/2" (12.7 mm) wall pipe. A LOCK-O-RING® Plug was installed in the flange. The test vessel was then hydrostatically pressured to failure, rupturing at 4,400 psi (300 bar). The LOCK-O-RING Plug and Flange assembly was undamaged.

Standard LOCK-O-RING Flanges are welding neck type with thickness to mate with standard weight, Grade B pipe, unless otherwise ordered. Special flanges can be supplied for higher yield pipe. Consult the factory.

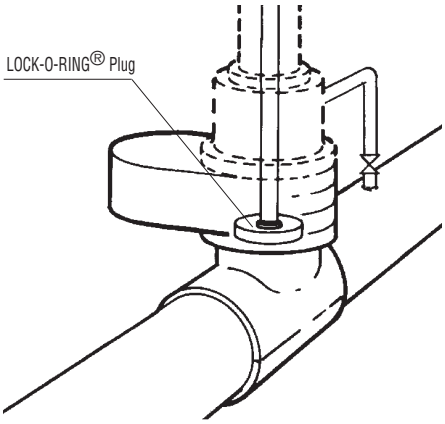


■ Step 1



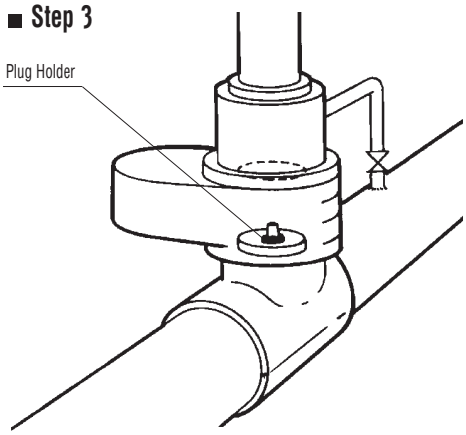
Upon completion of a tapping or plugging job, a LOCK-O-RING® Plug is installed on the boring bar of the tapping machine. The machine is mounted on the tapping valve.

■ Step 2



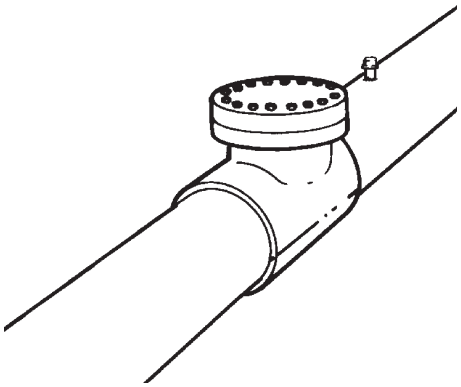
The valve is opened, and the tapping machine boring bar is extended to lower the plug into position inside the LOCK-O-RING® Flange.

■ Step 3



The flange segments are advanced into plug groove. The tapping machine is released from the plug holder, and the boring bar is retracted.

■ Step 4



The tapping machine, valve and plug holder are removed and a blind flange is installed. The plug can be removed any time to provide for reentry.