



# LOKRING-COLDWELD™ PIPE SOLUTIONS

PATENTED WELD EQUIVALENT® —



## **QUALIFIED**

Per ASME® B31  
Standards

## **PERMANENT**

Cold Weld ESP® Technology -  
Elastic Strain Preload Connector

## **INSTALLED**

Within Minutes



## PRODUCTS

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# THE LOKRING™ PIPE FITTING ADVANTAGE

## LOKRING PIPE FITTINGS >

Developed for the *Apollo I: Saturn Mission* in 1968, the Lokring joint has a long history of success. Our products for pipe fittings are qualified to the ASME B31 standard pressure piping codes for pressure and fatigue design, as well as fabrication and materials of construction.

Extensive mechanical and environmental testing have demonstrated the mechanical and sealing integrity of the Lokring-Coldweld™ connection in a wide range of applications. These strict standards mean that Lokring has created the most reliable connection in the marketplace.

### FASTER. SAFER. STRONGER.

Lokring-Coldweld™ takes minutes to install compared to a weld. Our fittings typically are used in locations where fire-safe conditions must be maintained. By using a cold weld, installation is safer. The strength of the metal-to-metal seal means that historical rework rates for Lokring fittings are less than 0.01 % of all installations compared to 5% to 10% for welded installations.



## INSTALLATION COST SAVINGS >

By eliminating the welding process, many overhead costs relating to safety, personnel, equipment and supplies, inspection, rework, and monitoring can be eliminated or substantially reduced. The Lokring installation process does not require:

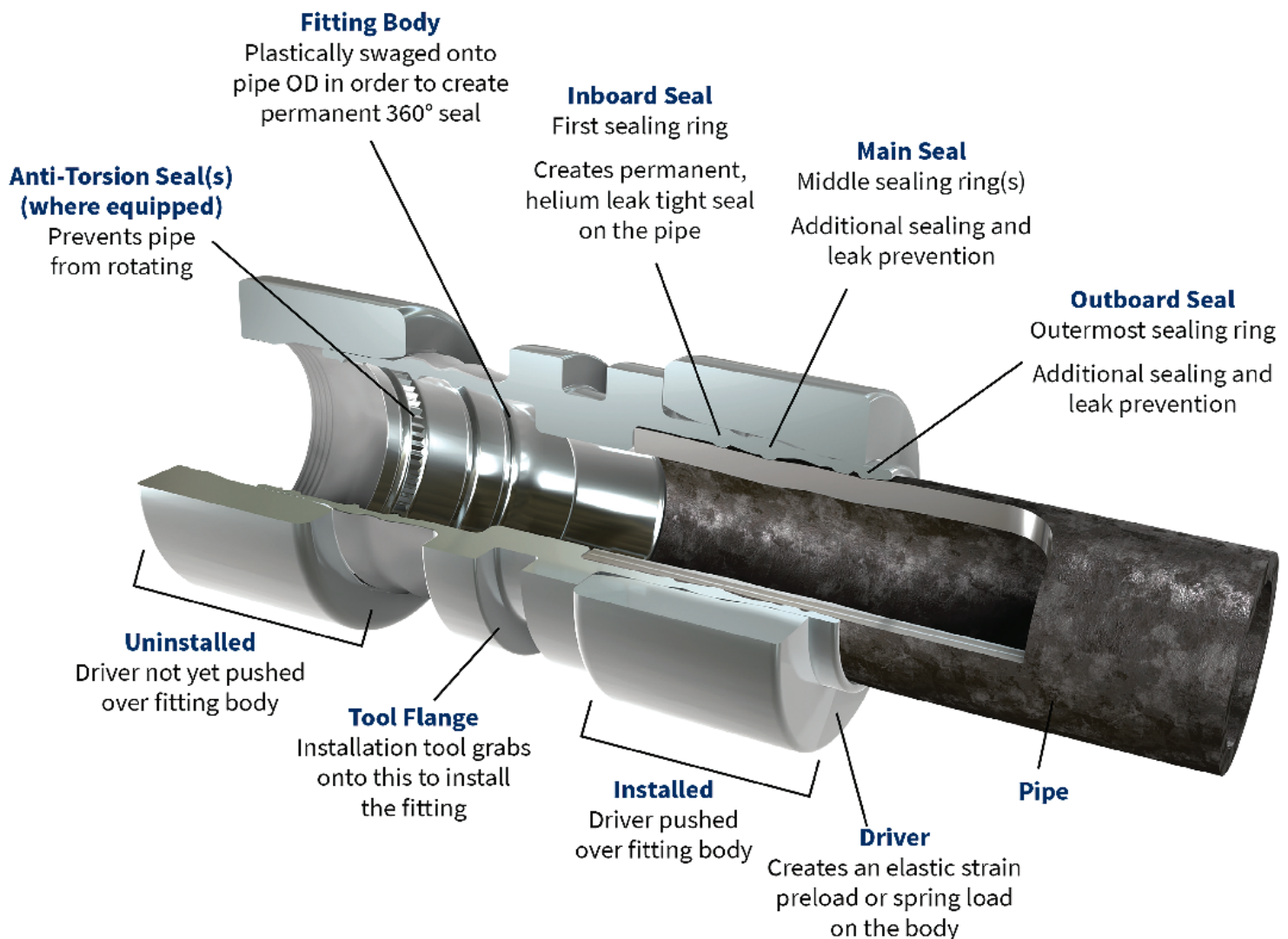
- Fire Watch
- Fire permit for hot work
- Scaffolding and regulated ventilation
- Restricted work area for welding only
- “Sniff” area, gas free, and weather protected area
- Cranes, welders, grinders, and small tools
- Higher priced workers’ compensation insurance and benefits
- Weld X-ray or other NDT
- Maintaining and monitoring flanges for leakage

In addition, high-demand ASME-certified welders are freed up for large-bore pipe or pressure vessel welding.

## SAFE SELECTION >

System design and system safety are the ultimate responsibilities of the end-user. Consideration to system function, compatibility, product ratings, as well as other factors, must be given to ensure proper product selection and function. All information in this catalog has been compiled with regard to accuracy; however, the most up-to-date information should be verified before use of the product. Lokring reserves the right to change product dimensions, ratings, or other information.

# ELASTIC STRAIN PRELOAD (ESP®) TECHNOLOGY



The leak-free seal is the result of Lokring ESP® installation where the axial movement of the Lokring driver over the body swages the body onto the pipe's surface. This compresses the pipe wall first elastically and then plastically.

The pipe wall resists this swaging action, generating high unit compressive loads at the contact points between narrow sealing lands inside the fitting body and the pipe surface.

These contact stresses are sufficiently high to plastically yield the pipe surface under the sealing lands, forming a 360° circumferential, permanent, metal-to-metal seal between the pipe and fitting body.

The driver, which experiences a small increase in diameter (elastic strain) during installation, exerts an elastic, radial preload on the metallic seals for the life of the connection, which is called Elastic Strain Preload (ESP).



# PRESSURE AND TEMPERATURE RATINGS - CARBON STEEL MAS-3000 PIPE FITTINGS

Lokring Carbon Steel Pipe Fittings	Lokring Size	Pipe NPS in.	ASME B31x Pipe Schedules		
			40	80	160
			Pressure Rating, psi (bar)		
Carbon Steel Pipe Product (MAS - Micro Alloyed Steel)	P04	1/4	6280 (433)	8520 (587)	A
	P06	3/8	5020 (346)	6510 (449)	A
	P08	1/2	4480 (309)	6620 (456)	6370 (439)
	P12	3/4	3600 (248)	4550 (314)	4650 (321)
	P16	1	3060 (211)	4590 (316)	3730 (257)
	P20	1 1/4	3300 (228)	3950 (272)	A
	P24	1 1/2	2680 (185)	3160 (218)	A
	P32	2	2620 (181)	2710 (187)	A
	P40	2 1/2	2290 (158)	2540 (175)	A
	P48	3	3150 (218)	2630 (181)	A
	P64	4	1680 (116)	2240 (154)	A

A. Not available.

**Temperature De-rating Table for Carbon Steel (CS) Pipe Fittings**

Temperature °F (°C)	Temperature De-rating Factor B31x
400 (204)	1.00
500 (260)	0.95
600 (316)	0.87
650 (343)	0.75

Lokring offers Carbon Steel Repair Couplings which are of a “slip-over” design in order to facilitate repair work. They consist of a stainless steel body with carbon steel drive rings. Their pressure ratings are the same as those of Lokring stainless steel pipe fittings, and have a temperature rating of the carbon steel pipe fittings.

Pressure ratings are for Lokring proprietary joint design assembled on designated pipe. Lokring Technology, LLC also manufactures nonproprietary joint connections to design standards (e.g. SAE, NPS, 37 Flare, etc.) which are to be considered by the piping design engineer for rating the system.

The Lokring design technology is compatible with the OD and wall thickness tolerance for carbon steel as outlined in BS EN 10216-2:2002 Section 8.7.4.1.

## Ordering Information:

Other fittings not listed in this catalog and special shapes may be available. Contact your authorized Lokring distributor for more information. See [www.lokring.com/distributors](http://www.lokring.com/distributors) for a complete listing of distributors.

All dimensions are for reference only and are subject to change. CAD files are available in most configurations upon request or in an online CAD product catalog.

## TEMPERATURE RATING:

Piping systems containing the piping assemblies listed may establish design pressures up to and including the ambient maximum design pressure given for temperatures from –20 to 400 °F (–28 to 204 °C) for ASME B31.1 and B31.3. For temperatures above 400 °F (204 °C) the maximum design pressure given shall be multiplied by the temperature de-rating factor listed below.

## NOTES:

1. Fitting material micro alloyed carbon steel (MAS-3000) in accordance with ASTM A675 or A513.
2. Lokring carbon steel pipe fittings are designed with an internal stop facilitating corrosion allowances.
3. See Lokring Specification FS-3000 for details on pressure and temperature ratings.
4. See Lokring “Corrosive Service Guidelines” for specific service details.
5. See “Lokring Fitting Applications Guide” for additional design and service details.

## MATCHING PIPE:

For use on carbon steel pipe per:

- ASTM A53 Grades A and B, Seamless and Welded
- ASTM A587 Welded
- ASTM A106 Grades A, B and C
- API 5L Grades B and X42

Pipe shall be of high quality construction with maximum Rockwell B scale hardness of 90.



# PRESSURE AND TEMPERATURE RATINGS - STAINLESS STEEL PIPE FITTINGS

Lokring Stainless Steel Pipe Fittings	Lokring Size	Pipe NPS in.	ASME B31x Pipe Schedules		
			10	40	80
			Pressure Rating, psi (bar)		
Stainless Steel Pipe Product	P04	1/4	5320 (367)	7490 (516)	7930 (546)
	P06	3/8	4170 (288)	5690 (392)	6100 (420)
	P08	1/2	4290 (296)	5370 (370)	5690 (392)
	P12	3/4	3370 (232)	4700 (324)	5450 (375)
	P16	1	3550 (245)	3660 (252)	4050 (279)
	P20	1 1/4	2520 (174)	2870 (198)	2750 (189)
	P24	1 1/2	2400 (165)	3040 (210)	2700 (186)
	P32	2	1900 (131)	2160 (149)	2160 (149)
	P48	3	1400 (97)	2590 (179)	2540 (175)

## TEMPERATURE RATING:

Piping systems containing the piping assemblies listed may establish design pressures up to and including the ambient maximum design pressure given for temperatures from -20 to 100 °F (-28 to 38 °C) for ASME B31.1 and B31.3. For temperatures above 200 °F (93 °C) the maximum design pressure given shall be multiplied by the temperature de-rating factor listed to the right.

## NOTES:

1. Fitting material 316L stainless steel in accordance with ASTM A276 or ASTM A479.
2. Lokring stainless steel pipe fittings are of a "slip-over" design facilitating zero-clearance pipe repair.
3. See Lokring Specification FS40 for details on Pressure and Temperature Ratings.
4. See Lokring "Corrosive Service Guidelines" for specific service details.
5. See "Lokring Fitting Applications Guide" for additional design and service details.

Temperature De-rating Table for Stainless Steel (SS) Pipe Fittings	
Temperature F° (°C)	Temperature De-rating Factor B31x
300 (149)	1.00
400 (204)	0.98
500 (260)	0.90
600 (316)	0.85
700 (371)	0.82
800 (427)	0.80

## MATCHING PIPE:

For use on stainless steel pipe per:

- ASTM A312 TP304/TP304L
- ASTM A312 TP316/TP316L

For use on carbon steel pipe per:

- ASTM A53 Grades A and B, seamless and welded
- ASTM A587 welded
- ASTM A106 Grades A, B and C

Pipe shall be of high quality construction with maximum

Rockwell B scale hardness of 90

## Contact an authorized Lokring distributor for more information.

Our distributors serve global regions in:

UNITED STATES | CANADA | EUROPE | UNITED KINGDOM | SOUTH AMERICA | AFRICA | MIDDLE EAST | ASIA | SOUTH PACIFIC

Visit our website at [www.lokring.com/distributors](http://www.lokring.com/distributors) for details.

# PRESSURE AND TEMPERATURE RATINGS - LTCS-333 PIPE FITTINGS

Lokring LTCS Pipe Fittings	Lokring Size	Pipe NPS in.	ASME B31x Pipe Schedules		
			40	80	160
			Pressure Rating, psi (bar)		
4130 Alloy Steel (LTCS-333) Pipe Product	P08	1/2	4900 (338)	6780 (467)	7280 (502)
	P12	3/4	4050 (279)	4810 (332)	6070 (419)
	P16	1	3790 (261)	5440 (375)	4300 (297)
	P24	1 1/2	2770 (191)	3560 (245)	4350 (300)
	P32	2	2090 (144)	3240 (223)	4180 (288)
	P48	3	2010 (139)	2960 (204)	A
	P64	4	1900 (131)	2170 (150)	A

A. Not available.

## TEMPERATURE RATING:

Piping systems containing the piping assemblies listed may establish design pressures up to and including the ambient maximum design pressure given for temperature from -20°F to +800° F (-29°C to 427° C) for ASME B31.1 and -50°F to +800° F (-46°C to +427° C) B31.3 (based on allowable stresses for the matching pipe of 15,000 psi (1034 bar) for B31.1 and 20,000 psi (1379 bar) for B31.3 applications).

## NOTES:

1. Fitting material is low alloy carbon steel (LTCS-333) in accordance with ASTM A519 4130 grade.
2. Lokring LTCS pipe fittings are designed with an internal stop facilitating corrosion allowances.
3. See Lokring Specification FS-333 for details on pressure and temperature ratings.
4. See Lokring "Corrosive Service Guidelines" for specific service details.
5. See "Lokring Fitting Applications Guide" for additional design and service details.

## MATCHING PIPE:

For use on carbon steel pipe per:

- ASTM A53 Grades A and B, seamless and welded
- ASTM A587 welded
- ASTM A106 Grades A, B and C
- ASTM A333 Grades 1 and 6
- ASTM A335 Grades P11 and P22
- API 5L Grades B and X42

Pipe shall be of high quality construction with maximum Rockwell B scale hardness of 90

Temperature De-rating Table for 4130 Alloy Steel (LTCS-333) Pipe Fittings	
Temperature F° (°C)	Temperature De-rating Factor B31x
150 (66)	1.00
200 (93)	0.98
300 (149)	0.98
400 (204)	0.98
500 (260)	0.98
600 (318)	0.98
650 (343)	0.98
700 (378)	0.97
800 (427)	0.87

# PRESSURE AND TEMPERATURE RATINGS - COPPER-NICKEL PIPE FITTINGS

## TEMPERATURE RATING:

Piping systems containing the piping assemblies listed may establish design pressures up to and including the ambient maximum design pressure given for temperatures from -60°F to 100°F (-51°C to 38°C) for ASME B31. For temperatures above 100°F (38°C) the maximum design pressure given shall be multiplied by the temperature de-rating factor listed here.

## NOTES:

1. Fitting material per MIL-T-16420, Alloy 70600 and MIL-T-16420, Alloy 71500.
2. Coupling "thru-bore" design permits pipe to pass completely through. All other fittings have an internal travel stop.
3. Other part configurations than those shown, as well as custom configurations, may be available. Contact your authorized Lokring distributor for more information.
4. Lokring CN-200 pipe fittings are fire approved per NAVSEA, ABS and CFR 46 regulations.

## MATCHING PIPE:

CN-200 class fittings:

- For use on copper-nickel pipe per MIL-T-16420 (class 200, 90/10) or copper pipe per MIL-T-24107 (0.065" wall).

CN-700 class fittings:

- For use on copper-nickel pipe per MIL-T-16420 (class 200, 90/10, class 200 70/30, and class 700 70/30).

LOKRING PRODUCT LINE				PIPE/TUBE SPECIFICATIONS		
P/N PREFIX	TEMPERATURE RATING	PRESSURE RATING	FITTING MATERIAL	SIZES	PIPE/TUBE MATERIAL WALL THICKNESS	PIPE/TUBE SPECIFICATION
CN-200	-60F to 425F	250 psi	90/10 CuNi	1/4" NPS to 2" NPS	Class 200 & 200S 90/10	MIL-T-16420
					.065" wall copper	MIL-T-24107
CN-700	-60F to 425F	700 psi	70/30 CuNi	1/4" NPS to 2" NPS	Class 200 90/10	MIL-T-16420
					Class 200 70/30	MIL-T-16420
					Class 700 70/30	MIL-T-16420
CN-3300	-60F to 425F	3300 psi	70/30 CuNi	1/4" OD	.035" to .065" wall CuNi	MIL-T-16420

## TRAINING

The handling, installation, and inspection of Lokring fittings must be carried out by qualified and trained personnel. Installers should be familiar with and use good pipe fitting practices. All installers must undergo a formal training session provided by an authorized Lokring trainer. Contact your local Lokring distributor for more information on training.



## NOMINAL PIPE SIZE (NPS) 1 IN. (25 MM)



**Schedule 10**  
(Light Wall)



**Schedule 40**  
(Standard)



**Schedule 80**  
(Extra Strong)



**Schedule 160**

### Outside Diameter, in. (mm)

1.315 (33.4)

1.315 (33.4)

1.315 (33.4)

1.315 (33.4)

### Inside Diameter, in. (mm)

1.097 (27.9)

1.049 (26.7)

0.957 (24.3)

0.815 (20.7)

### Wall Thickness, in. (mm)

0.109 (27.7)

0.133 (3.4)

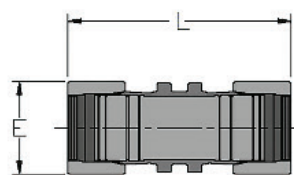
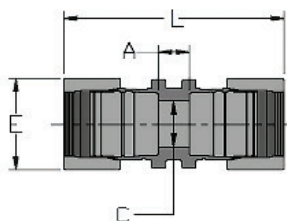
0.179 (4.6)

0.250 (6.4)

$$\text{Wall Thickness} = \frac{\text{Outside Diameter} - \text{Inside Diameter}}{2}$$

## PIPE SCHEDULES

Nominal Pipe Size in.	Outside Diameter in.	Nominal Wall Thickness, in.			
		Schedule 10	Schedule 40	Schedule 80	Schedule 160
1/4	0.540	0.065	0.088	0.119	—
3/8	0.675	0.065	0.091	0.126	—
1/2	0.840	0.083	0.109	0.147	0.188
3/4	1.050	0.083	0.113	0.154	0.219
1	1.315	0.109	0.133	0.179	0.250
1 1/4	1.660	0.109	0.140	0.191	0.250
1 1/2	1.900	0.109	0.145	0.200	0.281
2	2.375	0.109	0.154	0.218	0.344
2 1/2	2.875	—	0.203	0.276	0.375
3	3.5	0.120	0.216	0.300	0.438
4	4.5	0.120	0.237	0.337	0.674

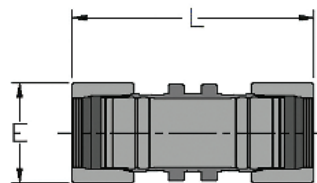


Pipe Size NPS in.	Ordering Information			Dimensions, in.				Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	C	
1/4	CS	-CPL-	P04	2.88	1.05	0.40	0.38	IT20/IT45/IT50
	SS			2.88	1.05	-	-	
	CN-200			2.58	0.84	-	-	IT10/IT20
	CN-700			2.58	0.84	-	-	
3/8	CS	-CPL-	P06	3.20	1.24	0.45	0.50	IT30/IT45/IT50
	SS			3.20	1.24	-	-	
	CN-200			2.81	1.05	-	-	IT20
	CN-700			2.80	1.05	-	-	
1/2	CS	-CPL-	P08	3.33	1.46	0.47	0.63	IT30/IT45/IT50
	SS			3.45	1.46	-	-	
	LTCs			3.33	1.46	0.47	0.63	IT45
	CN-200			3.22	1.26	-	-	IT20
	CN-700			3.21	1.26	-	-	
3/4	CS	-CPL-	P12	3.78	1.60	0.55	0.81	IT30/IT45/IT50
	SS			3.88	1.63	-	-	
	LTCs			3.78	1.75	0.55	0.81	IT45
	CN-200			3.72	1.49	-	-	IT30/IT45
	CN-700			3.72	1.49	-	-	
1	CS	-CPL-	P16	4.55	1.95	0.60	1.03	IT45/IT50/IT60
	SS			4.39	1.96	-	-	
	LTCs			4.61	1.98	0.60	0.96	IT60
	CN-200			4.33	1.80	-	-	IT45/IT50
	CN-700			4.33	1.80	-	-	
1 1/4	CS	-CPL-	P20	5.02	2.29	0.59	1.38	IT50/IT60
	SS			5.02	2.36	-	-	
	CN-200			5.19	2.15	-	-	IT45/IT50
	CN-700			5.19	2.10	-	-	
1 1/2	CS	-CPL-	P24	5.44	2.61	0.66	1.59	IT60
	SS			5.60	2.58	-	-	
	LTCs			5.39	2.70	0.65	1.60	
	CN-200			5.89	2.42	-	-	
	CN-700			5.97	2.49	-	-	
2	CS	-CPL-	P32	6.54	3.25	0.71	2.05	IT60
	SS			6.56	3.25	-	-	
	LTCs			6.90	3.28	0.71	2.03	IT50
	CN-200			6.94	3.00	-	-	
	CN-700			6.54	3.12	-	-	IT60
2 1/2	CS	-CPL-	P40	8.79	3.80	1.33	2.42	IT300
	SS			8.79	3.80	-	-	
	LTCs			8.85	3.80	1.33	2.42	
3	CS	-CPL-	P48	9.43	4.34	0.85	2.96	IT300/IT400
	SS			9.43	4.50	-	-	
	LTCs			9.43	4.48	0.85	2.96	
4	CS	-CPL-	P64	10.88	5.52	-	-	IT400
	SS			10.88	5.52	-	-	
	LTCs			10.88	5.52	-	-	

All dimensions are for reference only and are subject to change.  
 Consult your authorized Lokring distributor for details and other options.

# PRODUCTS

## REPAIR/SLIP COUPLING



Pipe Size NPS in.	Ordering Information			Dimensions, in.		Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	
1/4	CS	-RCPL-	P04	2.88	1.05	IT20/IT45/IT50
3/8	CS	-RCPL-	P06	3.20	1.24	IT30/IT45/IT50
1/2	CS	-RCPL-	P08	3.33	1.46	IT30/IT45/IT50
3/4	CS	-RCPL-	P12	3.78	1.60	IT30/IT45/IT50
1	CS	-RCPL-	P16	4.55	1.95	IT45/IT50/IT60
1 1/4	CS	-RCPL-	P20	5.02	2.29	IT50/IT60
1 1/2	CS	-RCPL-	P24	5.44	2.61	IT60
2	CS	-RCPL-	P32	6.54	3.25	IT60
3	CS	-RCPL-	P48	9.43	4.34	IT300/IT400

All dimensions are for reference only and are subject to change.

Consult your authorized Lokring distributor for details and other options.

Lokring carbon steel repair couplings are "slip-over" couplings made without an internal stop in order to facilitate zero-clearance pipe repair work. They consist of a stainless steel body with carbon steel drivers, their pressure ratings are the same as those of Lokring stainless steel pipe fittings, and their temperature ratings are those of the carbon steel fittings.

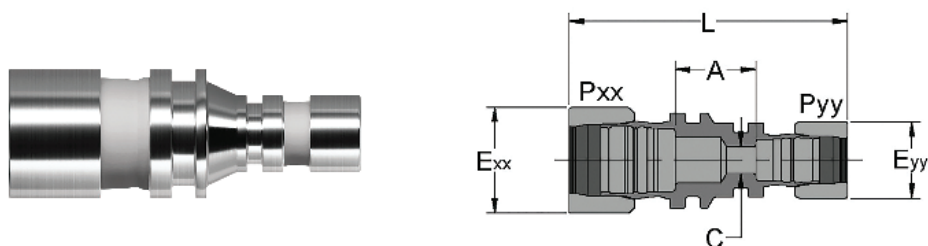


Lokring fittings meet all the criteria of a welded connection without the expense and risks associated with conventional hot welding.



# PRODUCTS

## REDUCING COUPLING

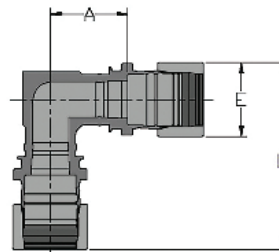


Pipe Size NPS in.	Ordering Information			Dimensions, in.				
	Fitting Material	Shape	Fitting size PXX-PYY	Part Length (Uninstalled) L	Exx	Eyy	Take-Out A	C
1/2 to 1/4	CS	-RED-	P08-P04	3.75	1.46	1.05	1.09	0.38
	SS			3.81	1.46	1.05	0.66	0.38
1/2 to 3/8	CS	-RED-	P08-P06	3.92	1.46	1.24	1.12	0.49
	SS			3.99	1.46	1.24	0.67	0.49
3/4 to 1/2	CS	RED	P12 P08	4.37	1.60	1.46	1.32	0.63
	SS			4.49	1.63	1.46	0.83	0.64
1 to 1/2	CS	-RED-	P16-P08	4.90	1.95	1.46	1.50	0.63
	SS			4.93	1.96	1.46	1.02	0.64
1 to 3/4	CS	-RED-	P16-P12	5.17	1.95	1.60	1.58	0.81
	SS			5.03	1.96	1.63	0.90	0.82
1 1/4 to 3/4	CS	-RED-	P20-P12	5.32	2.29	1.60	1.48	0.81
	SS			5.40	2.36	1.63	0.86	0.82
1 1/4 to 1	CS	-RED-	P20-P16	5.92	2.29	1.95	1.73	1.03
	SS			5.78	2.36	1.96	1.04	1.07
1 1/2 to 1/2	CS	-RED-	P24-P08	5.94	2.61	1.46	2.12	0.63
	SS			5.93	2.58	1.46	1.41	0.62
1 1/2 to 3/4	CS	-RED-	P24-P12	6.08	2.61	1.60	2.08	0.81
	SS			6.59	2.58	1.63	1.85	0.82
1 1/2 to 1	CS	-RED-	P24-P16	6.24	2.61	1.95	1.88	1.03
	SS			6.70	2.58	1.96	1.70	1.07
1 1/2 to 1 1/4	CS	-RED-	P24-P20	6.05	2.61	2.29	1.44	1.38
	SS			6.22	2.58	2.36	0.88	1.44
2 to 1/2	CS	-RED-	P32-P08	6.84	3.25	1.46	2.50	0.63
	SS			7.35	3.25	1.46	2.19	0.62
2 to 3/4	CS	-RED-	P32-P12	6.86	3.25	1.60	2.32	0.81
	SS			7.26	3.25	1.63	2.04	0.82
2 to 1	CS	-RED-	P32-P16	7.14	3.25	1.95	2.25	1.03
	SS			7.56	3.25	1.96	2.08	1.07
2 to 1 1/4	CS	-RED-	P32-P20	7.36	3.25	2.29	2.23	1.38
	SS			6.65	3.25	2.36	0.83	1.41
2 to 1 1/2	CS	-RED-	P32-P24	7.62	3.25	2.61	2.32	1.59
	SS			7.33	3.25	2.58	1.26	1.65
3 to 1/2	CS	-RED-	P48-P08	10.91	4.34	1.46	5.20	0.63
	SS			11.58	4.34	1.95	5.32	0.96
3 to 1	CS	-RED-	P48-P16	11.41	4.50	1.96	4.50	1.05
	SS			12.05	4.34	2.61	5.37	1.51
3 to 1 1/2	CS	-RED-	P48-P24	9.05	4.50	2.58	1.53	1.65
	SS			12.59	4.34	3.25	5.39	1.94
3 to 2	CS	-RED-	P48-P32	12.61	4.50	3.25	4.62	2.07
	SS							

Note: Reference individual fitting sizes for tooling information.

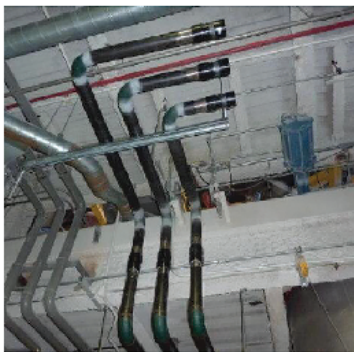
# PRODUCTS

## 90° ELBOW (SHORT RADIUS)

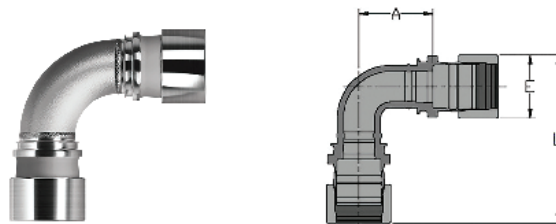


Pipe Size NPS in.	Ordering Information			Dimensions, in.		Loktool®	
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Installation Tool Kit
1/4	SS	-EL90SR-	P04	3.11	1.05	1.11	IT20/IT45/IT50
3/8	SS	-EL90SR-	P06	3.37	1.24	1.11	IT30/IT45/IT50
1/2	CS	-EL90SR-	P08	3.78	1.46	1.62	IT30/IT45/IT50
	SS			3.58	1.46	1.13	
3/4	CS	-EL90SR-	P12	4.04	1.60	1.62	IT30/IT45/IT50
1	CN-200	-EL90SR-	P16	4.57	1.80	1.51	IT45/IT50/IT60
	CN-700			4.58	1.80	1.51	
1 1/4	CN-200	-EL90SR-	P20	5.43	2.15	1.76	IT50/IT60
	CN-700			5.40	2.10	1.76	
1 1/2	CN-200	-EL90SR-	P24	6.16	2.42	2.01	IT60
	CN-700			6.28	2.49	2.01	
2	CN-200	-EL90SR-	P32	7.43	3.00	2.51	IT50
	CN-700			7.34	3.12	2.51	IT60

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.



# PRODUCTS 90° ELBOW (LONG RADIUS)



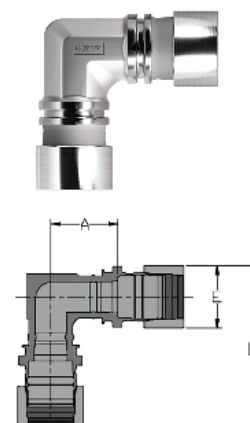
Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-EL90-	P08	4.31	1.46	2.15	IT30/IT45/IT50
	SS			4.30	1.46	1.85	
3/4	CS	-EL90-	P12	4.65	1.60	2.23	IT30/IT45/IT50
	SS			4.63	1.63	1.88	
1	CS	-EL90-	P16	5.22	1.95	2.27	IT45/IT50/IT60
	SS			5.05	1.96	1.88	
	CN-200			5.07	1.80	2.01	IT45/IT50
	CN-700			5.07	1.80	2.01	
1 1/4	CS	-EL90-	P20	5.99	2.29	2.63	IT60
	SS			6.02	2.36	2.30	
	CN-200			6.12	2.15	2.45	IT45/IT50
	CN-700			6.09	2.10	2.45	
1 1/2	CS	-EL90-	P24	6.75	2.61	3.07	IT60
	SS			6.77	2.58	2.68	
	CN-200			7.10	2.42	2.95	IT60
	CN-700			7.21	2.49	2.95	
2	CS	-EL90-	P32	8.38	3.25	3.84	IT60
	SS			8.40	3.25	3.50	
	CN-200			8.65	3.00	3.73	IT50
	CN-700			8.56	3.12	3.73	IT60
3	CS	-EL90-	P48	12.01	4.34	5.55	IT300/IT400
	SS			12.09	4.50	5.13	
4	CS	-EL90-	P64	15.28	5.52	7.06	IT400

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.

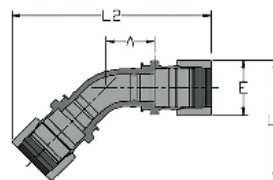
# PRODUCTS 90° ELBOW (FORGED)

Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
3/8	CS	-EL90-FRG-	P06	3.53	1.24	1.54	IT30/IT45/IT50
1/2	CS			3.85	1.46	1.69	
	SS	-EL90-FRG-	P08	3.58	1.46	1.13	IT30/IT45/IT50
	LTCS			3.73	1.46	1.62	IT45
3/4	CS	-EL90-FRG-	P12	4.43	1.60	2.01	IT30/IT45/IT50
	LTCS			4.49	1.75	2.12	IT45
1	CS	-EL90-FRG-	P16	5.03	1.95	2.08	IT45/IT50/IT60
	LTCS			4.83	1.98	2.06	IT60
1 1/2	CS	-EL90-FRG-	P24	6.52	2.61	2.82	IT60
	LTCS			6.24	2.70	2.82	
2	CS	-EL90-FRG-	P32	7.68	3.25	3.14	IT60
	LTCS			7.32	3.28	2.95	

All dimensions are for reference only and subject to change.  
Consult your authorized Lokring distributor for details and other options.







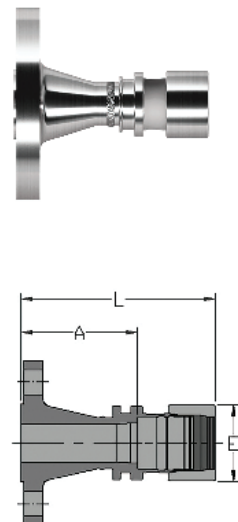
Pipe Size NPS in.	Ordering Information			Dimensions, in.				Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L1	Part Length (Uninstalled) L2	E	Take-Out A	
1/4	SS	-EL45-	P04	2.62	4.55	1.05	1.02	IT20/IT45/IT50
	CN-200			2.27	4.05	0.84	0.91	IT10/IT20
3/8	SS	-EL45-	P06	2.85	4.77	1.24	0.95	IT30/IT45/IT50
	CN-200			2.51	4.00	1.05	0.88	IT20
1/2	CS	-EL45-	P08	3.15	5.13	1.46	1.28	IT30/IT45/IT50
	SS			3.14	5.11	1.46	0.98	
	CN-200			3.01	5.13	1.26	1.14	IT20
	CN-700			3.00	5.09	1.26	1.12	
3/4	CS	-EL45-	P12	3.33	5.31	1.60	1.17	IT30/IT45/IT50
	SS			3.32	5.27	1.63	0.82	
	CN-200			3.39	5.64	1.49	1.14	IT30/IT45
	CN-700			3.38	5.62	1.49	1.20	
1	CS	-EL45-	P16	4.20	6.84	1.95	1.64	IT45/IT50/IT60
	SS			4.10	6.57	1.96	1.25	
	CN-200			3.87	5.95	1.80	1.13	IT45/IT50
	CN-700			3.87	6.27	1.80	1.13	
1 1/4	CS	-EL45-	P20	4.73	7.56	2.29	1.75	IT50/IT60
	SS			4.80	7.58	2.36	1.42	
	CN-200			4.63	7.16	2.15	1.35	IT45/IT50
	CN-700			4.58	7.48	2.10	1.35	
1 1/2	CS	-EL45-	P24	5.28	8.31	2.61	1.94	IT60
	SS			5.26	8.33	2.58	1.56	
	CN-200			5.03	8.67	2.42	1.64	
	CN-700			5.42	8.83	2.49	1.63	
2	CS	-EL45-	P32	6.38	9.88	3.25	2.21	IT60
	SS			6.39	9.92	3.25	1.87	
	CN-200			6.38	10.28	3.00	1.98	IT50
	CN-700			6.37	10.06	3.12	1.98	IT60
3	CS	-EL45-	P48	8.85	14.07	4.34	3.09	IT300/IT400
	SS			8.96	14.05	4.50	2.63	

All dimensions are for reference only and are subject to change.  
 Consult your authorized Lokring distributor for details and other options.

# PRODUCTS

## ASME FLANGE (ADAPTER CLASS 150)

Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-FLNG150-	P08	3.96	1.46	2.53	IT30/IT45/ IT50
	SS			3.95	1.46	2.23	
	LTCS			3.30	1.46	1.87	IT45
	CN-200			3.77	1.26	2.16	IT20
3/4	CS	-FLNG150-	P12	4.41	1.60	2.79	IT30/IT45/ IT50
	SS			4.38	1.63	2.44	
	LTCS			3.68	1.75	2.06	IT45
	CN-200			3.59	1.49	1.73	IT30/IT45
1	CS	-FLNG150-	P16	4.93	1.95	2.96	IT45/IT50/ IT60
	SS			4.76	1.96	2.57	
	LTCS			4.19	1.98	2.18	IT60
	CN-200			4.03	1.80	1.86	IT45/IT50
1 1/4	CS	-FLNG150-	P20	5.22	2.29	3.00	IT50/IT60
	SS			5.22	2.36	2.67	
	LTCS			4.49	2.15	1.89	IT45/IT50
	CN-200			5.65	2.61	3.26	
1 1/2	SS	-FLNG150-	P24	5.67	2.58	2.87	IT60
	LTCS			4.82	2.70	2.44	
	CN-200			4.91	2.42	1.97	
	CN-700			5.19	2.49	2.17	
	CS			6.26	3.25	3.34	
2	SS	-FLNG150-	P32	6.27	3.25	3.00	IT60
	LTCS			5.60	3.28	2.50	
	CN-200			5.43	3.00	2.01	
	CS			8.09	4.34	3.80	
3	SS	-FLNG150-	P48	8.09	4.50	3.38	IT300/IT400
	LTCS			7.04	4.48	2.75	
	CS			9.52	5.52	4.06	
4	SS	-FLNG150-	P64	8.44	5.52	3.00	IT400
	LTCS						



Note: Class 150 dimensions shown. All dimensions are for reference only and are subject to change.

Lokring flange fittings in flange class 300, 600, 900, and 1500 are also available. Replace 150 in Ordering Information Shape with desired class to specify part.

Consult your authorized Lokring distributor for details and other options.

## APPLICATION SUCCESS STORY >

### STEAM / WATER SEPARATOR INSTALL IN MAJOR OCCUPIED HOSPITAL

**Location:** Major Urban Hospital, New England

**Time Allowed:** 6 hours Weekday – Midnight to 6am

### PROBLEM

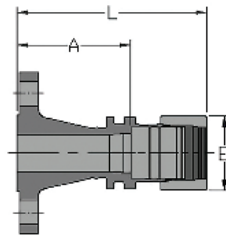
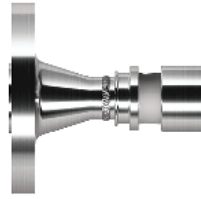
When *J C Higgins Mechanical* was tasked with installing a water separator in a 3" CS steam system at a major hospital, they knew it would be a challenge. Installation would require shutting down the entire instrument sterilizer operation for dozens of operating rooms. The hospital needed to avoid prolonged interruption of patient services. Additionally, the installation site presented its own challenge being in the ceiling. The tight quarters disallowed the use of hot work.





# PRODUCTS

## ASME FLANGE (ADAPTER CLASS 300)



Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-FLNG300-	P08	4.14	1.46	2.71	IT30/IT45/IT50
	SS			4.13	1.46	2.41	
	LTCS			3.49	1.46	2.06	IT45
3/4	CS	-FLNG300-	P12	4.60	1.60	2.98	IT30/IT45/IT50
	SS			4.57	1.63	2.63	
	LTCS			3.87	1.75	2.25	IT45
1	CS	-FLNG300-	P16	5.19	1.95	3.21	IT45/IT50/IT60
	SS			5.02	1.96	2.82	
	LTCS			4.45	1.98	2.44	IT60
1 1/4	CS	-FLNG300-	P20	5.53	2.29	3.31	IT50/IT60
	SS			5.53	2.36	2.98	
1 1/2	CS	-FLNG300-	P24	5.90	2.61	3.51	IT60
	SS			5.92	2.58	3.12	
	LTCS			5.06	2.70	2.69	IT60
2	CS	-FLNG300-	P32	6.50	3.25	3.59	IT60
	SS			6.53	3.25	3.25	
	LTCS			5.85	3.28	2.75	IT60
3	CS	-FLNG300-	P48	8.46	4.34	4.17	IT300/IT400
	SS			8.46	4.50	3.75	
	LTCS			7.41	4.48	3.12	
4	CS	-FLNG300-	P64	9.90	5.52	4.44	IT400
	LTCS			8.82	5.52	3.38	

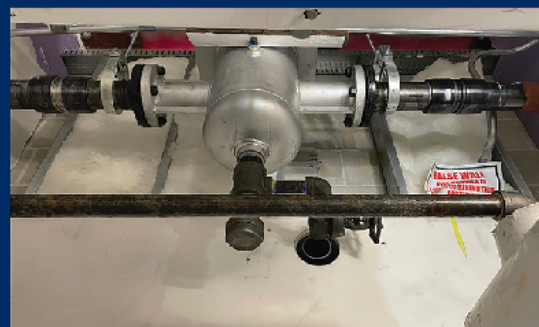
Note: Class 300 dimensions shown. All dimensions are for reference only and are subject to change.

Lokring flange fittings in ASME class 150, 600, 900, and 1500 are also available. Replace 300 in Ordering Information Shape with desired class to specify part. Consult your authorized Lokring distributor for details and other options.



### SOLUTION

Having done other steam, fuel oil and medical gas jobs in the local healthcare community for ten years, the Senior PM and General Foreman in charge of the job were not new to Lokring Technology. When the installation dimensions and obstructions were carefully considered, Lokring-Coldweld™ was the obvious choice to them.



### RESULTS

The job was staged, and some welded spool pieces prepared. A combination of Lokring standard and slip style couplings were chosen. From start to finish, the entire system was up and running in less than 3 hours, with no leaks, no hot work and minimal operation disruption!



# PRODUCTS

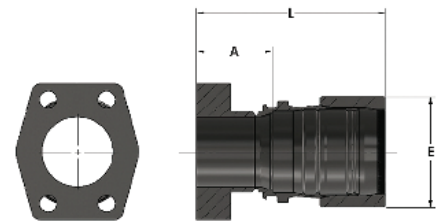
## SAE61 SOLID FLANGE (ADAPTER)

Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-SAE61SLD-	P08	3.50	1.46	2.07	IT30/IT45/IT50
	SS			3.41	1.46	1.69	
3/4	CS	-SAE61SLD-	P12	3.77	1.60	2.15	IT30/IT45/IT50
	SS			3.74	1.63	1.80	
1	CS	-SAE61SLD-	P16	4.25	1.95	2.27	IT45/IT60/IT50
	SS			3.99	1.96	1.80	
1 1/4	CS	-SAE61SLD-	P20	4.58	2.29	2.36	IT50/IT60
	SS			4.51	2.36	1.96	
1 1/2	CS	-SAE61SLD-	P24	4.94	2.61	2.55	IT60
	SS			4.92	2.58	2.12	
2	CS	-SAE61SLD-	P32	5.52	3.25	2.86	IT60
	SS			5.47	3.25	2.19	
3	CS	-SAE61SLD-	P48	7.34	4.34	3.05	IT300/IT400
	SS			7.11	4.50	3.74	

All dimensions are for reference only and are subject to change.

Non Lokring end conforms to SAE J518 code 61 solid (tapped holes). Kit packaged separately.

Consult your authorized Lokring distributor for details and other available options.



# PRODUCTS

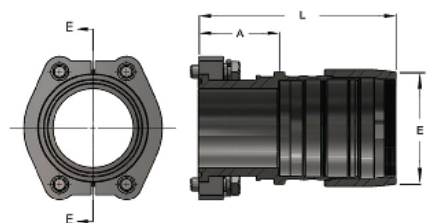
## SAE61 SPLIT FLANGE

Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-SAE61KIT-	P08	3.71	1.46	2.28	IT30/IT45/IT50
	SS			3.77	1.46	2.05	
3/4	CS	-SAE61KIT-	P12	3.73	1.60	2.11	IT30/IT45/IT50
	SS			3.78	1.63	1.84	
1	CS	-SAE61KIT-	P16	4.23	1.95	2.25	IT45/IT50/IT60
	SS			4.02	1.96	1.83	
1 1/4	CS	-SAE61KIT-	P20	4.62	2.29	2.41	IT50/IT60
	SS			4.62	2.36	2.08	
1 1/2	CS	-SAE61KIT-	P24	4.94	2.61	2.54	IT60
	SS			4.89	2.58	2.09	
2	CS	-SAE61KIT-	P32	5.40	3.25	2.48	IT60
3	CS	-SAE61KIT-	P48	7.21	4.44	2.93	IT300/IT400

All dimensions are for reference only and are subject to change.

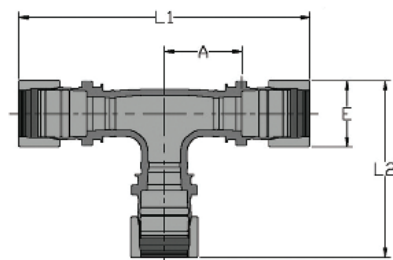
Non Lokring end conforms to SAE J518 code 61 split (tapped holes). Kit packaged separately.

Consult your authorized Lokring distributor for details and other available options.



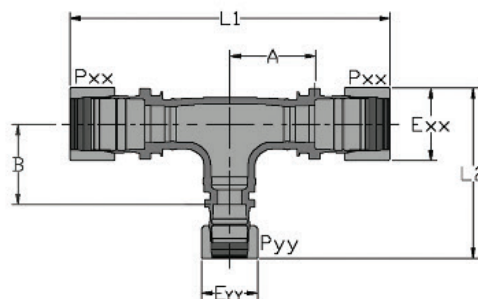
Pipe Size NPS in.	Ordering Information			Dimensions, in.				Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L1	Part Length (Uninstalled) L2	E	Take- Out A	
1/4	SS	-TEE-	P04	5.09	3.07	1.05	1.11	IT20/IT45/ IT50
	CN-200			4.56	2.70	0.84	0.99	IT10/IT20
	CN-700			4.56	2.70	0.84	0.99	
3/8	SS	-TEE-	P06	5.41	3.32	1.24	1.11	IT30/IT45/ IT50
	CN-200			4.64	2.84	1.05	0.92	IT20
	CN-700			4.98	3.01	1.05	1.09	
1/2	CS	-TEE-	P08	6.10	3.78	1.46	1.62	IT30/IT45/ IT50
	SS			6.14	3.80	1.46	1.35	IT45
	LTCS			5.99	3.73	1.46	1.57	
	CN-200			5.39	3.32	1.26	1.09	IT20
	CN-700			5.55	3.41	1.26	1.17	
3/4	CS	-TEE-	P12	6.47	4.03	1.60	1.62	IT30/IT45/ IT50
	SS			6.41	4.02	1.63	1.26	IT45
	LTCS			6.88	4.32	1.75	1.82	
	CN-200			6.10	3.80	1.49	1.19	IT30/IT45
	CN-700			6.68	4.09	1.49	1.48	
1	CS	-TEE-	P16	8.49	5.22	1.95	2.27	IT45/IT50/ IT60
	SS			8.15	5.05	1.96	1.88	IT60
	LTCS			8.13	5.06	1.98	2.06	
	CN-200			7.35	4.87	1.80	1.51	IT45/IT50
	CN-700			7.35	4.57	1.80	1.51	
1 1/4	CS	-TEE-	P20	9.69	5.99	2.29	2.63	IT50/IT60
	SS			9.69	6.02	2.36	2.30	
	CN-200			8.96	5.56	2.15	1.89	IT45/IT50
	CN-700			8.96	5.54	2.10	1.89	
1 1/2	CS	-TEE-	P24	10.93	6.77	2.61	3.07	IT60
	SS			10.96	6.77	2.58	2.68	
	LTCS			10.38	6.54	2.70	2.82	
	CN-200			10.40	6.42	2.42	2.26	IT60
	CN-700			10.56	6.46	2.49	3.02	
2	CS	-TEE-	P32	12.51	7.88	3.25	3.34	IT60
	SS			12.55	7.90	3.25	3.00	
	LTCS			12.56	7.92	3.28	3.18	
	CN-200			11.86	7.44	3.00	2.51	IT50
	CN-700			11.56	7.34	3.12	2.51	IT60
3	CS	-TEE-	P48	17.43	10.88	4.34	4.43	IT300/IT400
	SS			17.43	10.96	4.50	4.00	
4	CS	-TEE-	P64	21.28	13.40	5.52	5.18	IT400

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.



# PRODUCTS

## REDUCING BRANCH TEE



Pipe Size NPS in.	Ordering Information			Dimensions, in.					
	Fitting Material	Shape	Fitting size PXX-PYY	Part Length (Uninstalled) L1	Part Length (Uninstalled) L2	Exx	Eyy	Take-Out A	Take-Out B
1/2 to 1/4	SS	-RTEE-	P08-P04	5.69	3.34	1.46	1.05	1.13	1.17
1/2 to 3/8	SS	-RTEE-	P08-P06	5.69	3.43	1.46	1.24	1.13	1.10
3/4 to 1/4	SS	-RTEE-	P12-P04	6.41	3.53	1.63	1.05	1.26	1.28
3/4 to 1/2	CS	-RTEE-	P12-P08	6.47	4.24	1.60	1.46	1.62	2.01
	SS			6.41	3.87	1.63	1.46	1.26	1.33
1 to 1/4	SS	-RTEE-	P16-P04	8.15	5.06	1.96	1.05	1.88	2.64
1 to 1/2	CS	-RTEE-	P16-P08	8.49	4.55	1.95	1.46	2.27	2.15
	SS			8.15	4.83	1.96	1.46	1.88	2.13
1 to 3/4	CS	-RTEE-	P16-P12	8.49	4.83	1.95	1.60	2.27	2.23
	SS			8.15	4.94	1.96	1.63	1.88	2.02
1 1/4 to 3/4	CS	-RTEE-	P20-P12	9.69	5.87	2.29	1.60	2.63	3.11
1 1/4 to 1	CS	-RTEE-	P20-P16	9.69	5.84	2.29	1.95	2.63	2.72
	SS			9.69	5.87	2.36	1.96	2.30	2.50
1 1/2 to 1/2	CS	-RTEE-	P24-P08	10.92	5.63	2.61	1.46	3.07	2.90
	SS			10.96	5.90	2.58	1.46	2.68	2.88
1 1/2 to 3/4	CS	-RTEE-	P24-P12	10.92	5.90	2.61	1.60	3.07	2.98
	SS			10.96	6.00	2.58	1.63	2.68	2.77
1 1/2 to 1	CS	-RTEE-	P24-P16	10.83	6.30	2.61	1.95	3.07	3.02
	SS			10.96	6.12	2.58	1.96	2.68	2.63
1 1/2 to 1 1/4	CS	-RTEE-	P24-P20	10.92	6.72	2.61	2.29	3.07	3.20
	SS			10.96	6.53	2.58	2.36	2.68	2.70

Note: Reference individual fitting sizes for tooling information.

## APPLICATION SUCCESS STORY >

### ELECTRIC VEHICLE ASSEMBLY PLANT PROCESS PIPING PROJECT

#### PROJECT OVERVIEW

Lokring Technology was used to complete the racked piping systems transferring the highlighted process fluids from tank farm to final assembly. Lokring fittings were utilized in lieu of welding due to the project time constraints as well as the elevated location of the piping systems.

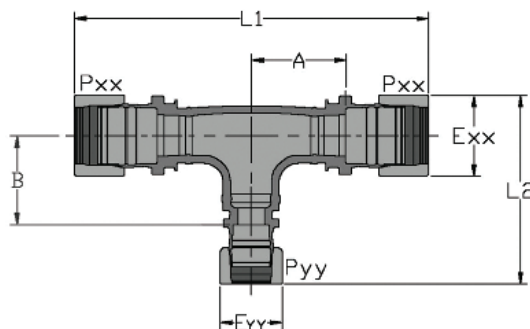
Lokring fittings were also used within double containment piping systems per environmental standards to CFR 40.





# PRODUCTS

## REDUCING BRANCH TEE (CONTINUED)



Pipe Size NPS in.	Ordering Information			Dimensions, in.					
	Fitting Material	Shape	Fitting Size PXX-PYY	Part Length (Uninstalled) L1	Part Length (Uninstalled) L2	Exx	Eyy	Take-Out A	Take-Out B
2 to 1/2	CS	-RTEE-	P32-P08	12.51	5.70	3.25	1.46	3.34	2.65
	SS			12.55	5.98	3.25	1.46	3.00	2.63
2 to 3/4	CS	-RTEE-	P32-P12	12.51	5.97	3.25	1.60	3.34	2.73
	SS			12.55	6.09	3.25	1.63	3.00	2.52
2 to 1	CS	-RTEE-	P32-P16	12.51	6.37	3.25	1.95	3.34	2.77
	SS			12.55	6.20	3.25	1.96	3.00	2.38
2 to 1 1/4	CS	-RTEE-	P32-P20	12.51	7.17	3.25	2.29	3.34	3.33
2 to 1 1/2	CS	-RTEE-	P32-P24	12.51	7.21	3.25	2.61	3.34	3.20
	SS			12.55	7.68	3.25	2.58	3.00	3.26
3 to 1/2	SS	-RTEE-	P48-P08	17.43	7.48	4.50	1.46	4.00	3.51
3 to 3/4	CS	-RTEE-	P48-P12	17.43	7.14	4.34	1.60	4.43	3.36
	SS			17.43	7.59	4.50	1.63	4.00	3.40
3 to 1	CS	-RTEE-	P48-P16	17.43	7.54	4.34	1.95	4.43	3.39
	SS			17.43	7.70	4.50	1.96	4.00	3.25
3 to 1 1/4	CS	-RTEE-	P48-P20	17.43	8.22	4.34	2.29	4.43	3.83
3 to 1 1/2	CS	-RTEE-	P48-P24	17.43	8.26	4.34	2.61	4.43	3.70
	SS			17.43	8.36	4.50	2.58	4.00	3.31
3 to 2	CS	-RTEE-	P48-P32	17.43	6.01	4.34	3.25	4.43	3.84
	SS			17.43	6.61	4.50	3.25	4.00	4.36

Note: Reference individual fitting sizes for tooling information.



### APPLICATIONS

Methanol – Window Washing Fluid  
Hydrofluoro-Olefin 1234YF

Brake Fluid Oil

Transmission Fuel

Glycol

### FITTINGS

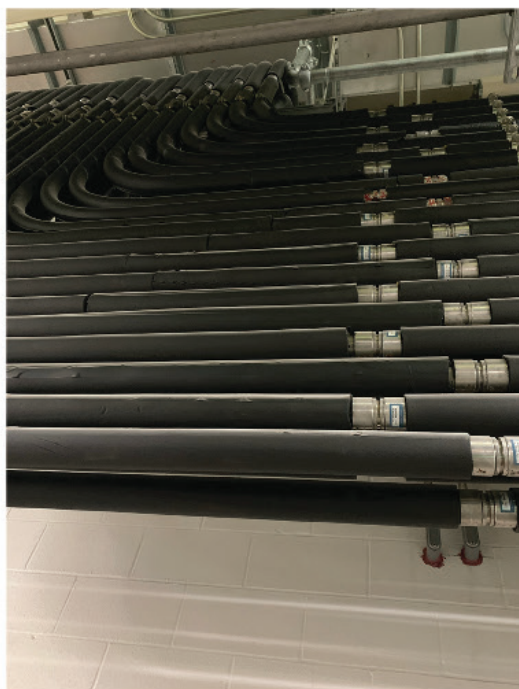
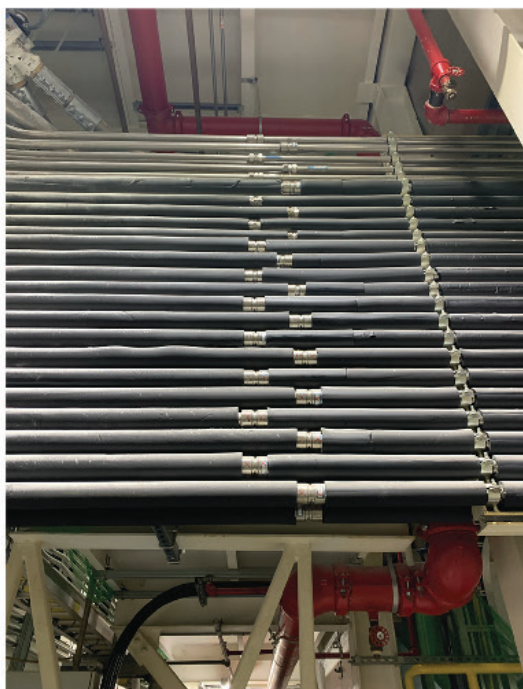
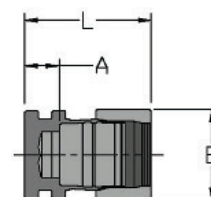
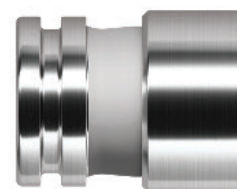
1-1/4" Carbon Steel Fittings = 152

2" Carbon Steel Fittings = 444

2" Stainless Steel Fittings = 160

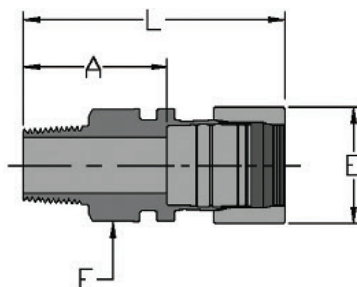
Pipe Size NPS in.	Ordering Information			Dimensions, in.			Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	
1/2	CS	-CAP-	P08	1.96	1.46	0.53	IT30/IT45/ IT50
	SS			2.10	1.46	0.38	
	LTCS			1.96	1.46	0.53	IT45
3/4	CS	-CAP-	P12	2.24	1.60	0.62	IT30/IT45/ IT50
	SS			2.23	1.63	0.29	
	LTCS			2.24	1.75	0.62	IT45
1	CS	-CAP-	P16	2.70	1.95	0.73	IT45/IT50/ IT60
	SS			2.61	1.96	0.42	
	LTCS			2.74	1.98	0.73	IT60
1 1/4	CS	-CAP-	P20	3.00	2.29	0.78	IT50/IT60
	SS			2.98	2.36	0.43	
1 1/2	CS	-CAP-	P24	3.21	2.61	0.82	IT60
	SS			3.29	2.58	0.49	
2	CS	-CAP-	P32	5.25	3.25	2.34	IT60
	SS			4.06	3.25	0.79	
3	CS	-CAP-	P48	7.34	4.34	3.05	IT300/IT400
	SS			7.34	4.50	2.63	

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.



# PRODUCTS

## MALE ADAPTER (NPT)



Pipe Size NPS in.	Ordering Information			Dimensions, in.				Thread	Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Across Wrench Flats F		
1/4	CS	-ADPT-	P04-1/4 MPT	2.71	1.05	1.47	0.88	1/4-18	IT20/IT45/ IT50
	SS			2.89	1.05	1.45	0.63		
3/8	SS	-ADPT-	P06-3/8 MPT	3.17	1.24	1.58	0.75	3/8-18	IT30/IT45/ IT50
1/2	CS	-ADPT-	P08-1/2 MPT	3.11	1.46	1.69	1.13	1/2-14	IT30/IT45/ IT50
	SS			3.18	1.46	1.46	0.94		
3/4	CS	-ADPT-	P12-3/4 MPT	3.52	1.60	1.90	1.38	3/4-14	IT30/IT45/ IT50
	SS			3.89	1.63	1.95	1.12		
1	CS	-ADPT-	P16-1 MPT	4.64	1.95	2.36	1.63	1-11.5	IT45/IT50/ IT60
	SS			4.46	1.96	2.26	1.37		
1 1/4	CS	-ADPT-	P20-1 1/4 MPT	4.40	2.29	2.19	1.72	1-1/4-11.5	IT50/IT60
	SS			4.91	2.36	2.37	1.75		
1 1/2	CS	-ADPT-	P24-1 1/2 MPT	4.83	2.61	2.45	2.13	1-1/2-11.5	IT60
	SS			5.33	2.58	2.53	2.00		
2	CS	-ADPT-	P32-2 MPT	5.43	3.25	2.51	2.50	2-11.5	IT60
	SS			5.91	3.25	2.64	2.37		
3	CS	-ADPT-	P48-3 MPT	7.58	4.34	3.29	3.50	3-8	IT300/IT400

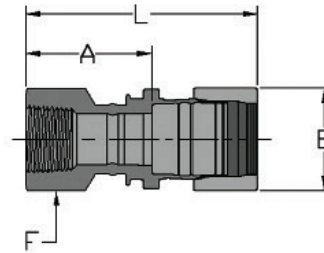
All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.





# PRODUCTS

## FEMALE ADAPTER (NPT)



Pipe Size NPS in.	Ordering Information			Dimensions, in.					Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Across Wrench Flats F	Thread	
1/4	SS	-ADPT-	P04-1/4 FPT	2.03	1.05	0.60	0.69	1/4-18	IT20/IT45/IT50
3/8	CS	-ADPT-	P06-3/8 FPT	2.35	1.24	0.98	1.13	3/8-18	IT30/IT45/IT50
	SS			2.50	1.24	0.90	0.93		
1/2	CS	-ADPT-	P08-1/2 FPT	2.41	1.46	0.98	1.13	1/2-14	IT30/IT45/IT50
	SS			2.51	1.46	0.78	1.11		
3/4	CS	-ADPT-	P12-3/4 FPT	2.96	1.60	1.34	1.30	3/4-14	IT30/IT45/IT50
	SS			2.74	1.63	0.80	1.30		
1	CS	-ADPT-	P16-1 FPT	3.48	1.95	1.50	1.63	1-11.5	IT45/IT50/IT60
	SS			3.11	1.96	0.91	1.49		
1 1/4	CS	-ADPT-	P20-1 1/4 FPT	3.96	2.29	1.75	2.00	1 1/4-11.5	IT50/IT60
	SS			3.48	2.36	0.93	1.84		
1 1/2	CS	-ADPT-	P24-1 1/2 FPT	4.20	2.61	1.81	2.25	1 1/2-11.5	IT60
	SS			3.69	2.58	0.93	2.03		
2	CS	-ADPT-	P32-2 FPT	4.81	3.25	1.89	2.75	2-11.5	IT60
	SS			4.83	3.25	1.55	2.75		

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.

## APPLICATION SUCCESS STORY >

### OLD DREDGE BACK IN ACTION WITH THE HELP OF LOKRING

**Location:** Feeney Shipyard, Kingston NY

**Time Allowed:** ASAP

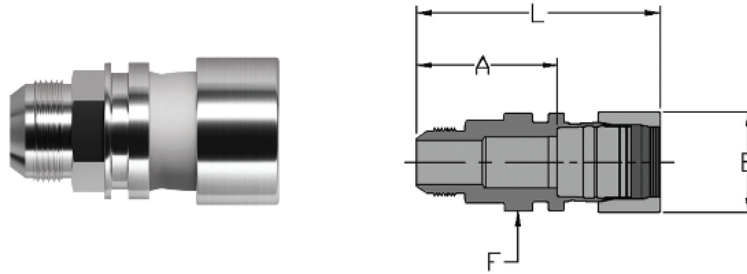
#### PROBLEM

An old hopper scowl was out of commission. The owners had plans for the old boat. Re-pipe the boat with all new equipment and add her to their dredge fleet. The scowl was taken to the Feeney Yard, up the Hudson and placed on the "hard." Demolition of old equipment, sanding and painting started. Jerry Johnson, owner of Johnson Hydraulics, works regularly on ship and wharf hydraulic installations and repairs. Over 1000' of 1/2" and 1" SS Pipe would be needed to get all the pump equipment installed.



# PRODUCTS

## MALE ADAPTER (37° FLARE STRAIGHT THREAD)<sup>A</sup>



Pipe Size NPS in.	Ordering Information			Dimensions, in.					Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Across Wrench Flats F	Thread	
1/4	SS	-ADPT-	P04-37F04	2.57	1.05	1.14	0.69	7/16-20 UNF	IT30/IT45/IT50
1/2	CS	-ADPT-	P08-37F08	3.27	1.46	1.84	0.81	3/4-16 UNF	IT30/IT45/IT50
	SS			3.08	1.46	1.36	1.13		
3/4	CS	-ADPT-	P12-37F12	4.03	1.60	2.41	1.13	1 1/16-12 UNF	IT30/IT45/IT50
	SS			3.54	1.63	1.60	1.13		
1	CS	-ADPT-	P16-37F16	4.61	1.95	2.63	1.38	1 5/16-12 UNF	IT45/IT50/IT60
	SS			3.84	1.96	1.64	1.38		
1 1/4	CS	-ADPT-	P20-37F20	4.94	2.29	2.72	1.68	1 5/8-12 UNF	IT50/IT60
	SS			4.23	2.36	1.68	1.68		
1 1/2	CS	-ADPT-	P24-37F24	5.72	2.61	3.33	1.97	1 7/8-12 UNF	IT60
	SS			5.34	2.58	2.54	1.97		
2	CS	-ADPT-	P32-37F32	6.75	3.25	3.83	2.59	2 1/2-12 UNF	IT60
	SS			6.52	3.25	3.25	2.63		

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.  
A. Threaded end conforms to SAE J514 (37° flare).



### SOLUTION

Jerry is a long-time user of Lokring Technology. He knew weld access would be tough and the cost of hundreds of welds can be exorbitant. Pipe had to be mounted close to the hull deck and walls. The “U” shaped Loktool is designed for use in confined spaces. He had concerns for the long-term viability of welded joints under high pressure and constant vibration. The permanent metal-to-metal seal of the Lokring-Coldweld™ was the perfect choice.



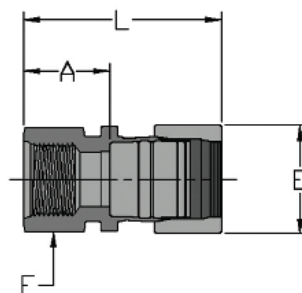
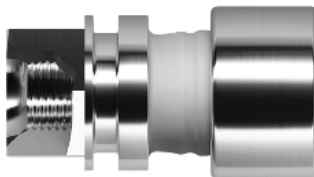
### RESULTS

Over 1000' of SS pipe run without a leak! The old dredge is on her way to her first assignment as a new vessel.



# PRODUCTS

## FEMALE ADAPTER (SAE STRAIGHT THREAD)<sup>A</sup>



Pipe Size NPS in.	Ordering Information			Dimensions, in.					Loktool® Installation Tool Kit
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Across Wrench Flats F	Thread	
1/2	CS	-ADPT-	P08-0.50 SAE	2.43	1.46	1.00	1.06	3/4-16 UNF	IT30/IT45/IT50
	SS			2.54	1.46	0.82	1.06		
3/4	CS	-ADPT-	P12-0.75 SAE	3.07	1.60	1.45	1.44	1 1/16-12 UNF	IT30/IT45/IT50
	SS			3.12	1.63	1.18	1.44		
1	CS	-ADPT-	P16-1.00 SAE	3.48	1.95	1.50	1.63	1 5/16-12 UNF	IT45/IT50/IT60
	SS			3.40	1.96	1.20	1.63		
1 1/4	CS	-ADPT-	P20-1.25 SAE	3.72	2.29	1.50	2.00	1 5/8-12 UNF	IT50/IT60
	SS			3.72	2.36	1.17	2.00		
1 1/2	CS	-ADPT-	P24-1.50 SAE	4.02	2.61	1.63	2.25	1 7/8-12 UNF	IT60
	SS			4.17	2.58	1.37	2.25		
2	CS	-ADPT-	P32-2.00 SAE	5.92	3.25	3.00	3.00	2 1/2-12 UNF	IT60
	SS			5.94	3.25	2.37	3.00		

All dimensions are for reference only and are subject to change.

Consult your authorized Lokring distributor for details and other options.

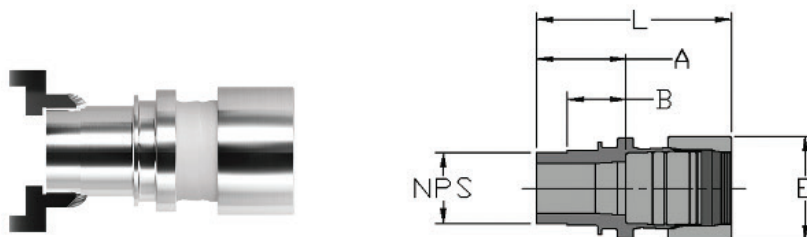
A. Threaded end conforms to SAE J1926/1 (O-ring straight thread adapter).





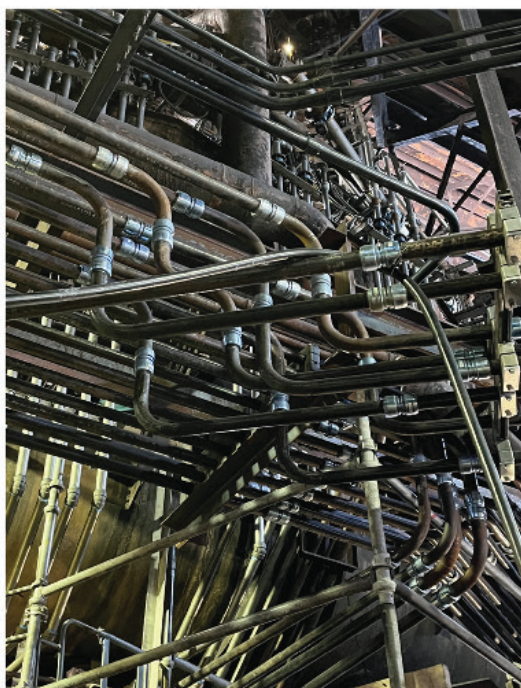
# PRODUCTS

## SOCKET WELD (ADAPTER)



Pipe Size NPS in.	Ordering Information			Dimensions, in.				Loktool®
	Fitting Material	Shape	Fitting Size PXX	Part Length (Uninstalled) L	E	Take-Out A	Take-Out B	Installation Tool Kit
3/8	CS	-ADPT-	P06-3/8 NPS	2.71	1.24	1.34	1.00	IT30/IT45/IT50
	SS			2.94	1.24	1.34	1.00	
1/2	CS	-ADPT-	P08-1/2 NPS	2.83	1.46	1.40	1.00	IT30/IT45/IT50
	SS			3.07	1.46	1.35	1.00	
3/4	CS	-ADPT-	P12-3/4 NPS	3.08	1.60	1.46	1.00	IT30/IT45/IT50
	SS			3.40	1.63	1.46	1.00	
1	CS	-ADPT-	P16-1 NPS	3.50	1.95	1.52	1.00	IT45/IT50/IT60
	SS			3.72	1.96	1.52	1.00	
1 1/4	CS	-ADPT-	P20-1 1/4 NPS	3.81	2.29	1.59	1.00	IT50/IT60
	SS			4.14	2.36	1.59	1.00	
1 1/2	CS	-ADPT-	P24-1 1/2 NPS	4.04	2.61	1.65	1.00	IT60
	SS			4.30	2.58	1.50	1.00	
2	CS	-ADPT-	P32-2 NPS	4.62	3.25	1.70	1.00	IT60
	SS			5.21	3.25	1.94	1.35	

All dimensions are for reference only and are subject to change.  
Consult your authorized Lokring distributor for details and other options.



## **PRODUCTS** **ADDITIONAL FITTING LINES**

In addition to the fittings listed in this catalog, Lokring offers:

- Metric fittings
- SAE fittings
- Double containment couplings
- Pipe to tube, tube to pipe adapters
- Male and female pipe thread connectors
- Socket weld connectors
- Tube and pipe stub connectors
- Ferrule type tube fitting connectors
- ASME flange connectors
- CIP connectors
- 45° tees
- Unions, union threads, union tails
- Brass medical gas fittings for ASTM B88 (drawn) and B819 copper tube
- Bulkhead penetrators
- for pipe and tube
- Carbon steel (MAS-3000) pipe fittings
- Marine 90/10 copper nickel (CN-200) pipe fittings
- Marine 70/30 copper nickel (CN-700) pipe and tube fittings
- Marine 70/30 copper nickel (CN-3300) tube fittings
- Marine stainless steel (SS-3300) pipe fittings
- Marine stainless steel (SS-3300) tube fittings
- Railroad carbon steel (RR) pipe fittings
- Stainless steel (SS40) pipe fittings
- 4130 alloy steel (LTCS-333) pipe fittings



Special configurations may exist and can be created to your specifications. Contact your authorized Lokring distributor for details.

## **LOKRING TOOLING**

Lokring tools come in several sizes to facilitate proper installation of our broad range of fitting sizes.

Installation of a Lokring fitting requires a Loktool tool head with inserts, multipurpose gage, hydraulic pump, and hydraulic hose.

Tools, inserts and gages come packaged as:

- ITK Series – Individual tool kits designed for installing one size of fittings only

OR

- MTK Series – Multiple purpose tool kits designed for installing multiple size fittings with one tool.



**Contact your authorized Lokring distributor for ordering details.**

## **FAST, SIMPLE, PORTABLE INSTALLATION** **1/4" TO 4" PIPE CONNECTIONS COMPLETED IN MINUTES!!**

All Loktool system components (installation tool, hose, pump, hydraulic couplers) are rated at 10,000 psi (689 bar) max operating pressure.

Any pumps or hoses can be used with any Lokring installation tools.



### **Manual Pump**

**(Kit Part Number 9080050)**

Manually operated, designed for low-volume installations (or emergency repairs) where there is limited or no access to electricity or compressed air, or for atmospheres which need to be fire-safe.



### **PNEUMATIC PUMP**

**(Kit Part Number 9080189)**

Foot-operated, lightweight, pneumatic pump operates off shop air (80 psi [5.6 bar] minimum). Fast and suitable for installation of Lokring fittings in atmospheres which need to be fire-safe.



### **ELECTRIC PUMP**

**(Kit Part Number 9080184)**

120 V(ac) foot-operated, high-speed pump, best selection for high volume installations of larger fitting sizes.



### **HYDRAULIC HOSE ASSEMBLY**

**(Part Number 9080111)**

15 ft. hose for all fitting sizes, pumps, and tool heads. Two or more hoses can be connected together to form longer lengths.



# HOW TO SELECT TOOLING

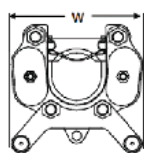
Tool	Tool Selection for Carbon and Stainless Steel Pipe Fittings										
	Fitting Size, in.										
	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
IT20											
IT30											
IT45											
IT50											
IT60											
IT300											
IT400											

The shaded cells show which size tool can install which size fitting.

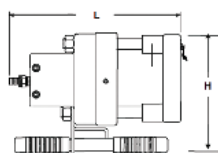
Specify the fitting size and material, along with desired tool name in order to receive the proper tool kit for installing Lokring fittings. (i.e. 1/2", carbon, IT30)

Tool rentals available through your authorized Lokring distributor.

## TOOLING DIMENSIONS



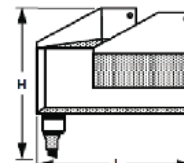
IT300/IT400 TOOLS



N/N1



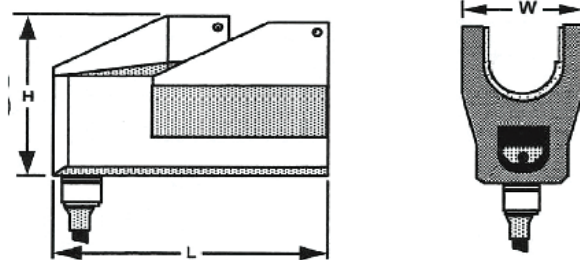
IT10/IT20/IT30/IT45/IT50/IT60 TOOLS



Carbon and Stainless Steel Pipe Fittings							
Dimensions, in.							
Pipe Size (Fitting Size)	Pipe OD	Loktool Size	Tool Width W	Tool Length L	Tool Height H	Minimum Spacing Center to Center N	Minimum Spacing Center to Center, with fittings adjacent to each other N1
1/4 NPS (P04)	0.540	IT20	2.36	5.00	4.95	1.58	1.83
3/8 NPS (P06)	0.675	IT30	2.66	6.45	5.72	1.80	2.08
3/8 NPS (P06)	0.675	IT45	3.91	6.38	6.66	2.43	2.70
3/8 NPS (P06)	0.675	IT50	4.21	7.29	7.08	2.58	2.85
1/2 NPS (P08)	0.840	IT30	2.66	6.45	5.72	1.88	2.19
1/2 NPS (P08)	0.840	IT45	3.91	6.38	6.66	2.51	2.81
1/2 NPS (P08)	0.840	IT50	4.21	7.29	7.08	2.66	2.96
3/4 NPS (P12)	1.050	IT30	2.66	6.45	5.72	1.99	2.27
3/4 NPS (P12)	1.050	IT45	3.91	6.38	6.66	2.61	2.90
3/4 NPS (P12)	1.050	IT50	4.21	7.29	7.08	2.76	3.05
1 NPS (P16)	1.315	IT45	3.91	6.38	6.66	2.75	3.06
1 NPS (P16)	1.315	IT50	4.21	7.29	7.08	2.90	3.21
1 NPS (P16)	1.315	IT60	5.01	8.59	7.59	3.30	3.61
1 1/4 NPS (P20)	1.660	IT50	4.21	7.29	7.08	3.07	3.41
1 1/4 NPS (P20)	1.660	IT60	5.01	8.59	7.59	3.47	3.81
1 1/2 NPS (P24) <sup>A</sup>	1.900	IT50	4.21	7.29	7.08	3.19	3.52
1 1/2 NPS (P24)	1.900	IT60	5.01	8.59	7.59	3.59	3.94
2 NPS (P32)	2.375	IT60	5.01	8.59	7.59	3.83	4.26
2 1/2 NPS (P40)	2.875	IT300	10.8	14	10.8	6.80	7.30
3 NPS (P48)	3.500	IT300	10.8	14	10.8	7.00	7.50
3 NPS (P48)	3.500	IT400	11.3	14	11.5	7.80	8.30
4 NPS (P64)	4.500	IT400	11.3	14	11.5	8.20	8.80

L and H dimensions include quick-connect.

A. Stainless steel SS fittings only.



MTK 45 and MTK 60

	MTK 45								
	MAS-3000			LTCS-333			SS-40		
Pipe Size	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"
Distance to Cut Point for Forward Install	143mm	144mm	142mm	145mm	147mm	N/A	153mm	152mm	148mm
Distance to Cut Point for Reverse Install	52mm		63mm	55mm	60mm	N/A	58mm	65mm	75mm
Tool Length (L)	162mm			162mm			162mm		
Tool Width (W)	100mm			100mm			100mm		
Tool Height (H)	125mm			125mm			125mm		
Tool Height with Handle*	200mm			200mm			200mm		
Minimum Spacing between Parallel Pipes, Centre to Centre	64mm	67mm	70mm	64mm	67mm	N/A	64mm	67mm	70mm
Minimum Spacing between Parallel Pipes with Lokring's adjacent to each other, Centre to Centre	72mm	74mm	78mm	72mm	74mm	N/A	72mm	74mm	78mm
	MTK 60								
	MAS-3000			LTCS-333			SS-40		
Pipe Size	1"	1-1/2"	2"	1"	1-1/2"	2"	1"	1-1/2"	2"
Distance to Cut Point for Forward Install	#	197mm	185mm	195mm	182mm	195mm	#	207mm	194mm
Distance to Cut Point for Reverse Install	#	83mm	104mm	75mm	95mm	104mm	#	91mm	114mm
Tool Length (L)	219mm			219mm			219mm		
Tool Width (W)	128mm			128mm			128mm		
Tool Height (H)	149mm			149mm			149mm		
Tool Height with Handle *	220mm			220mm			220mm		
Minimum Spacing between Parallel Pipes, Centre to Centre	84mm	92mm	98mm	84mm	92mm	98mm	84mm	92mm	98mm
Minimum Spacing between Parallel Pipes with Lokring's adjacent to each other, Centre to Centre	92mm	101mm	109mm	92mm	101mm	109mm	92mm	101mm	109mm

\* All tools have handles attached as standard, which can be removed if necessary

# Minimum distance to cut point of pipe for MAS-3000 and SS-40 is using the MTK 40 tool not the MTK 60, although MTK 60 can still be used to install 1" Lokring Fittings.

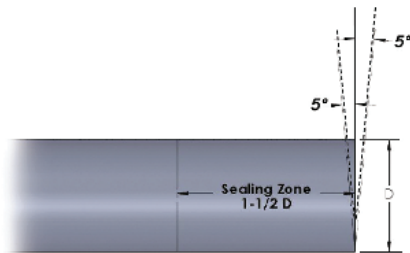
## INSTALLATION PROCEDURE

Note: Refer to Lokring procedure LP-105 for detailed installation instructions or scan the QR code to watch an instructional video.



### STEP 1:

Cut pipe/tube to within 5° of square. Sand the Sealing Zone with 120 grit aluminum oxide abrasive cloth in circumferential direction to clean surface and remove longitudinal scratches, flat spots, paint, lacquer or other mill finishes, corrosion, grease, sand, and grit. If deep scratches, pits or other surface incongruities persist, use of 60 grit aluminum oxide abrasive cloth followed by 120 grit cloth is recommended.



### STEP 2:

Using Multipurpose Gage, verify that pipe OD is correctly sized, and mark pipe ends as shown.

(Not oversized or undersized to ASTM pipe specifications)

**Special Note:** A thin coat of Loctite® 567™ PST thread sealant with PTFE may be applied as an aid to seal where pipe surface is poor, and is suggested in applications where the pipe wall thickness to OD ratio is less than 0.07. The sealant should be applied from the end of the pipe up to the first inspection mark.

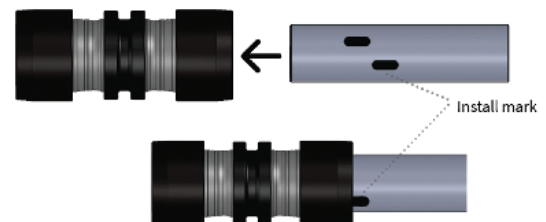


### STEP 3:

Select and assemble required Loktool. Inspect and cycle tool to assure proper function.

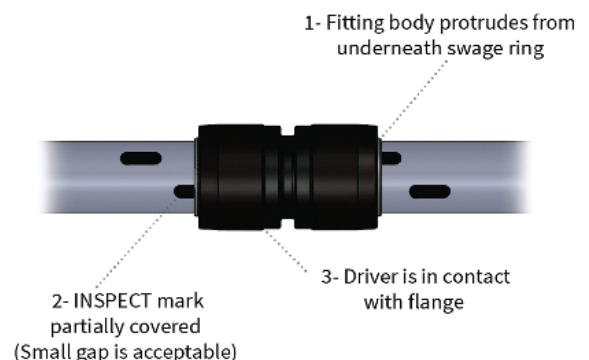
### STEP 4:

Position fitting on “INSTALL” mark, fully engage and actuate tool.



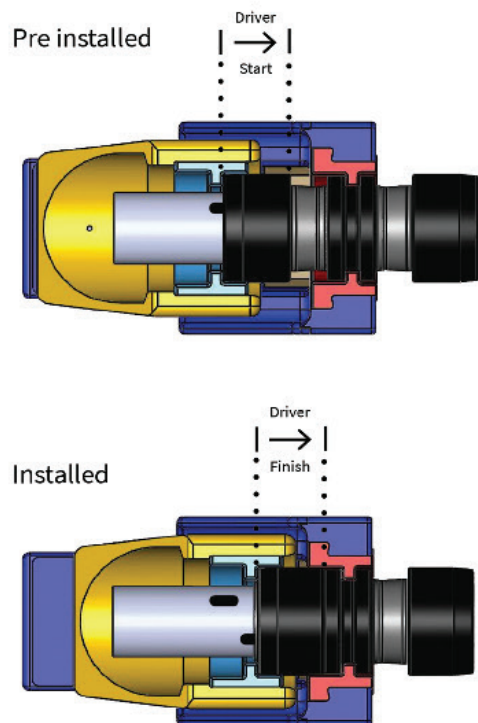
### STEP 5:

Carry out visual checks below to verify successful installation.

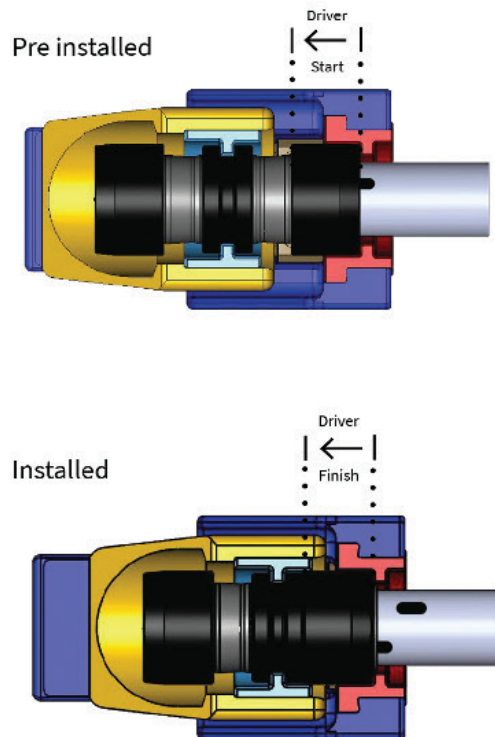




## Forward Install



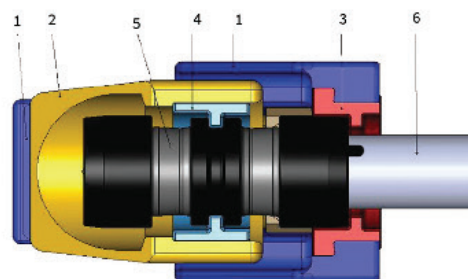
## Reverse Install



Tool colors used for indication purposes only.

Item	Part	Description <sup>A</sup>	Part Number
1	Loktool Body	IT45-BDY-MACH	3080035
2	Loktool Jaw	IT45-JAW-CST-MACH	3080036
3	Body Insert	BI45-MAS/SS4-P16-FR	7080146
4	Jaw Insert	JI45-MAS/SS4-P16-FR	7080147
5	Coupling	MAS-3000-CPL-P16	9040069
6	Pipe	1" NPS PIPE	N/A

A. Descriptions listed are specific to IT45 tool only. Contact your authorized distributor for information on other tools.



# ELIMINATING HOT WORK > EFFICIENT CONSTRUCTION

Lokring Technology has always supported industries in cases where hot-work welding poses elevated risk. As more operators become familiar and comfortable with the Lokring product, they find more opportunities in which to incorporate our fittings for their customers' projects.



Applications in which Lokring has proven to be the favored choice over hot weld began with, open and closed hazardous drains and vents, gas-lift, flare gas, propane, butane, LPG, hydrocarbon, sour water and sour gas, diesel, and chemical injection. With the introduction of more applications, we are seeing entire scopes of new pipework installation being carried out using Lokring products.

Along with ease of installation and enhanced safety, customers appreciate many cost-saving benefits. By using Lokring products and installation, customers have the opportunity to reduce scaffolding, and experience the benefits of no post-weld heat treatment requirement, no decontamination, no flushing, no purging, no hot-work permits, no enclosures or fire tents, and no atmospheric tests. Customers can also eliminate the costs of heat affected zone issues and non-destructive testing.

Projects that called for fabricating onshore and shipping pipework offshore are simplified by the Lokring-Coldweld™. Fabrications can be made onsite, and systems can be fully field routed. This significantly reduces the overall cost of design, fabrication, and off-site work. Several customers have reported cost savings between 25% and 45% for overall installation. They have also found that the rework rate of a Lokring connection is much lower (0.0015 vs ~10%) than hot-work welding.

Customers striving to achieve efficient construction practices realize there is more to welding than the weld itself. Many of the challenges and costs associated with hot weld are eliminated or reduced by streamlining the installation process through the use of high quality, dependable Lokring products.



## > FAST. SIMPLE. SAFE.

Lokring Technology is proud to offer the IT300 and IT400 installation tools. These hydraulically actuated tools provide the ultimate in safety, efficiency, and ease-of-use for your pipe connection opportunities. Designed and built in Cleveland, Ohio, these are our most advanced installation tools yet.





The State of California through its Air Resources Board (ARB) has developed the Equipment and Process Precertification Program. Lokring products and installation process have been evaluated and verified as meeting the air quality performance standards set by ARB. The metal-to-metal seal of the SS40 Stainless Steel and MAS-3000 Carbon Steel Series of fittings controls volatile organic compound (VOC) emissions from pipe without the use of O-rings or other elastomeric seals.

CARB has issued an Executive Order finding that Lokring Technology has met the requirements specified in Title 17, California Code of Regulation section 91400 and has satisfactorily demonstrated through independent testing that the fittings meet the precertification standards. Please visit our website for more information on this performance precertification.

(The Executive Order from CARB is not an endorsement or approval of Lokring™ Technology fittings.)

## WARRANTY INFORMATION

Other parts not listed in this catalog may be available. Some parts listed here may be subject to availability at time of order. Consult your authorized Lokring distributor for details.

### To Order

Contact your Lokring distributor for more information. See [www.lokring.com](http://www.lokring.com) for a complete listing of distributors.

### Dimensions

All dimensions are reference only and subject to change.

### CAD Templates

CAD files AutoCAD-DWG, AutoCAD-DXF and Intergraph PDS are available in 2D and 3D for most configurations. Contact your authorized Lokring distributor for details or use our online product catalog to download CAD drawings.

### Warranty Information

Lokring™ and its authorized distributors warrant to the purchaser of Lokring fittings from them that these fittings shall be free from defects in material and workmanship under normal use and service for the life of the product.

The purchaser's remedies shall be limited to replacement of any Lokring fittings that fail through a defect in material or workmanship.

*Lokring™ does not offer a warranty for its tools. For optimal performance, the Lokring tools must be regularly maintained.*

IN NO EVENT SHALL LOKRING, OR ITS AUTHORIZED DISTRIBUTORS, BE LIABLE FOR ANY OTHER DAMAGES (WHETHER DIRECT, INDIRECT, FORESEEABLE, CONSEQUENTIAL, OR INCIDENTAL) SUFFERED BY THE PURCHASER OR ANYONE ELSE ARISING OUT OF THE USE OF LOKRING PRODUCTS. THIS EXPRESS WARRANTY DISCLAIMS ALL OTHER WARRANTIES, GUARANTEES, AND REPRESENTATIONS, EXPRESSED OR IMPLIED.

## LOKRING CERTIFICATIONS

At Lokring Technology, we work to make sure our products comply with industry standards. Recurrent auditing of our processes and products ensures customers are receiving manufactured goods that meet their needs and expectations.

Lokring continues to maintain approval and certifications for compliance with technical specifications and standards from:



American Bureau of  
Shipping (ABS)



ANSI/ASME



CSA Group



ISO 9001:2015



Ministry  
of Defence

Ministry of Defense



NAVSEA



Lloyd's  
Register

Lloyd's Register



ASSOCIATION OF  
AMERICAN RAILROADS

Association of American Railroads

To get details about approvals and certifications, go to [lokring.com/approvals](http://lokring.com/approvals)





For more information  
visit [www.lokring.com](http://www.lokring.com)

**Headquarters**

38376 Apollo Parkway  
Willoughby OH 44094

**phone:** 440.942.0880

**toll free:** 800.876.2323

**fax:** 440.942.1186



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OUR WEBSITE**