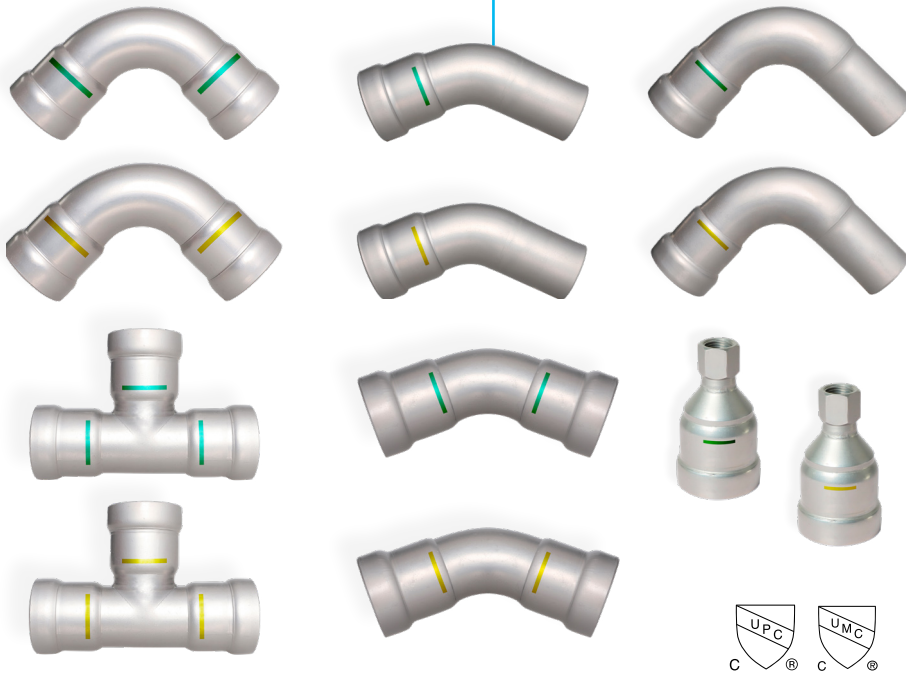


SCI® Press – Carbon Fittings



Material Specifications

Body

Carbon steel Alloy conforming to ASTM A1008

Grip Ring

Stainless Steel conforming to ASTM A240

Sealing Element

HNBR: -40°F to 180°F (Service Temperature Range) (-29°C to 82°C) Recommended for petroleum applications. NOT FOR USE IN HOT WATER OR HOT AIR. NOT FOR USE IN DRINKING WATER.

EPDM: -20°F to 250°F (Operating Temperature Range) NOT FOR USE IN PETROLEUM APPLICATIONS.

Lubrication: Silicone Grease

Approvals & Certifications

EPDM: IAPMO Z1117

HNBR: ANSI LC4/CSA 6.32



The SCI Press Carbon Steel System includes couplings, elbows, tees, adapters, reducers, caps, unions, and flanges for mechanical carbon steel piping systems.

They provide an economical and reliable piping connection that can be used for commercial, industrial, and residential markets; providing an alternative to the conventional methods of welding and threading.

SCI Press Carbon steel Fittings are intended for use with ASTM A53 carbon steel piping, Sched 10 and 40, in sizes ½" to 2". Color-coded depth indicator lines provides quick visual reference for EPDM (green) and HNBR (yellow) sealing element.

After visual confirmation of each connection, a system pressure test may be performed in accordance with local code requirements.

The SCI Press Technology for Carbon Steel Systems is compatible with common pressing tools and jaws.

PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

Applications

SCI Press Carbon Steel fittings are intended for use with ASTM A53 seamless carbon steel pipe, Sched 10 and 40, in commercial plumbing and mechanical systems. Common applications are listed below:

	HNBR	EPDM
Chilled Water (≤50% Ethylene/Propylene glycol): 200 psi / 0° to 250°F		×
Hydronic Heating Water (≤50% Ethylene/Propylene glycol): 200 psi / 0° to 250°F)		×
Isopropyl Alcohol: 200psi / Ambient		×
Steam (Residential): 5psi / Max 227°F		×
Mineral Oil: 200 psi / Ambient	×	
Lube Oil (Petroleum Based): 200psi / Max 150°F	×	
Propane: 125 psi / -40° to 180°F	×	
Butane: 125 psi / -40° to 180°F	×	
Natural Gas (Primarily methane): 125 psi / - 40° to 180°F	×	
Heating Fuel Oil: 125 psi / Max 100°F	×	
Diesel Fuel: 125 psi / Max 100°F	×	
Compressed Air (Oil concentration ≤25 mg/m3): 200 psi / Temp: Max 140°F	×	×
Compressed Air (Oil concentration >25 mg/m3): 200 psi / Temp: Max 140°F	×	
Nitrogen: 200 psi / Temp: Max 140°F	×	×
Carbon Dioxide (Dry): 200 psi / Temp: Max 140°F	×	×
Argon: 200 psi / Temp: Max 140°F	×	×
Oxygen (Non-Medical, Keep free of oil and grease): 140 psi / Temp: Max 140°F	×	×
Hydrogen: 125 psi / Temp: Max 140°F	×	×
Acetylene (Test pressure 350psi): 20 psi / Temp: Ambient	×	×
Vacuum (Maximum absolute pressure): 750µm Hg / Temp: Max 160°F	×	×
Vacuum (Maximum differential pressure): 29.2" Hg / Temp: Max 160°F	×	×

NOT FOR USE IN DRINKING WATER.

HNBR NOT FOR USE IN HOT WATER OR HOT AIR.

EPDM NOT FOR USE IN NATURAL GAS OR PETROLEUM APPLICATIONS.

*Fluids containing hydrocarbon-based oils are not compatible with the EPDM seal.

All carbon steel pipe must comply with the ASTM A53 standard.

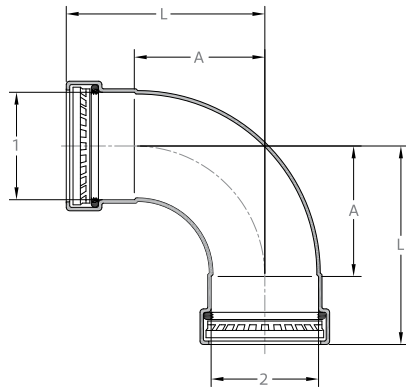
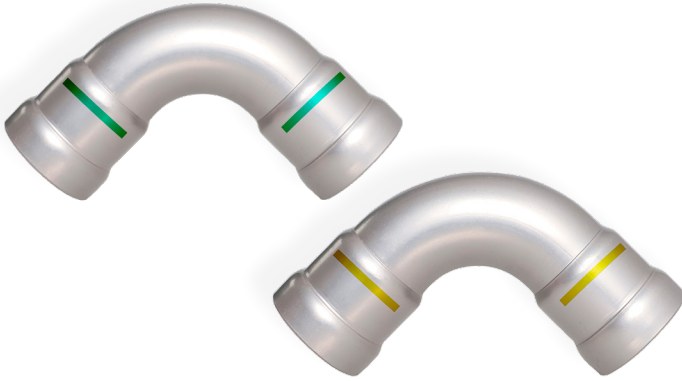
Fittings are approved for installations above and below ground as permitted by local building codes.



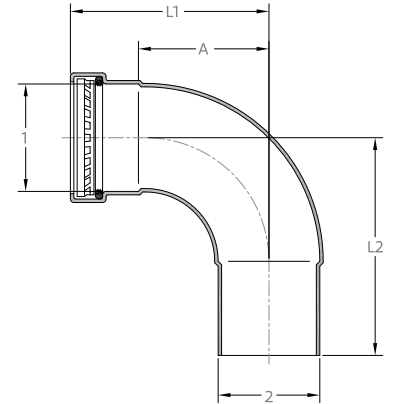
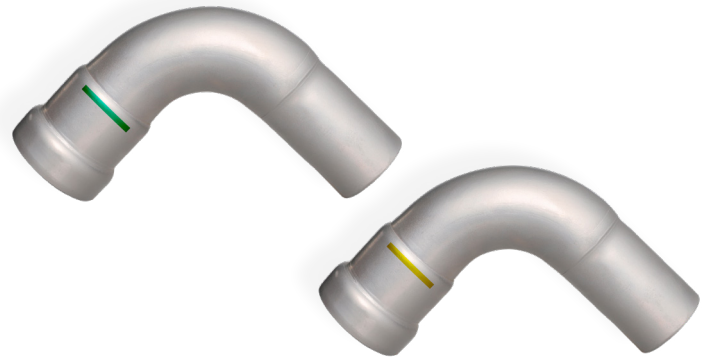
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SCI® Press – Carbon 90° Elbow Fig. SP790



SCI® Press – Carbon 90° Street Elbow Fig. SP799



SP790 CS P X P 90 ELL

Inlet 1	Inlet 2	A	L
in.	in.	in./mm	in./mm
½	½	1.555 39.5	2.579 65.5
¾	¾	1.831 46.5	3.012 76.5
1	1	2.205 56.0	3.563 90.5
1¼	1¼	2.669 67.8	4.469 113.5
1½	1½	2.933 74.5	4.783 121.5
2	2	3.661 93.0	5.591 142.0

SP799 CS P X FTG STREET 90 ELL

Inlet 1	Inlet 2	A	L1	L2
in	in	in./mm	in./mm	in./mm
½	½	1.555 39.5	2.579 65.5	2.874 73.0
¾	¾	1.831 46.5	3.012 76.5	3.268 83.0
1	1	2.205 56.0	3.563 90.5	3.858 98.0
1¼	1¼	2.669 67.8	4.469 113.5	4.606 117.0
1½	1½	2.933 74.5	4.783 121.5	5.118 130.0
2	2	3.661 93.0	5.591 142.0	6.083 154.5

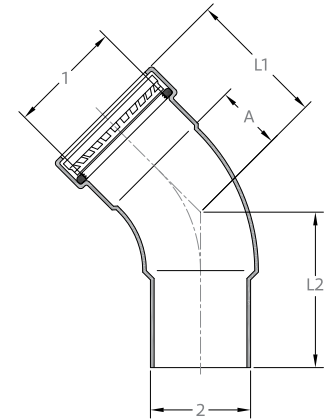
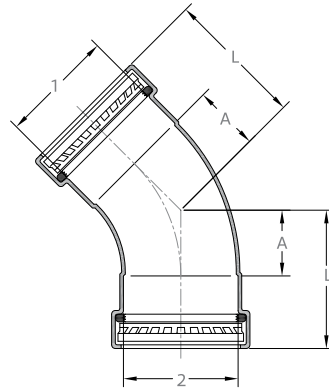
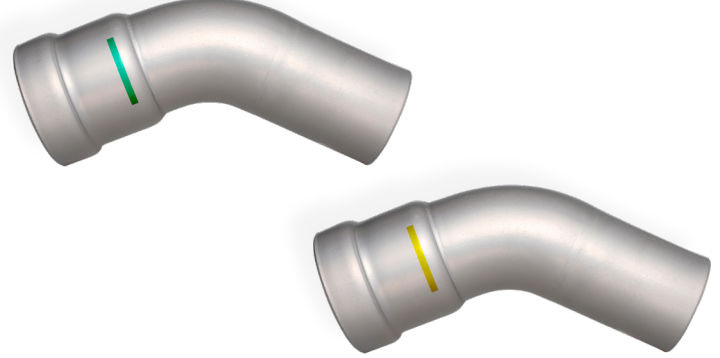
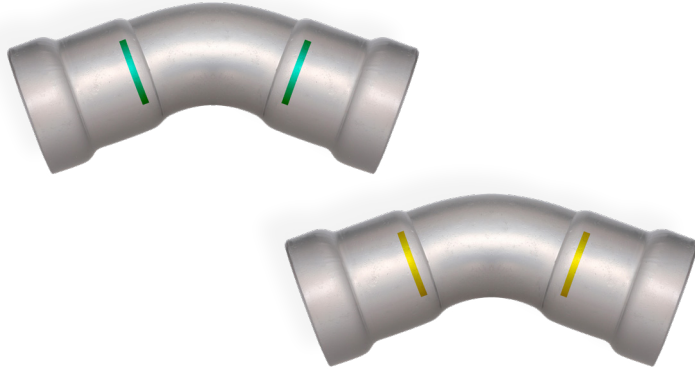


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SCI Press – Carbon 45° Elbow Fig. SP745

SCI Press – Carbon 45° Street Elbow Fig. SP749



SP745 CS P X P 45 ELL

Inlet 1	Inlet 2	A1	L
in	in	in/mm	in/mm
½	½	0.866 22.0	1.890 48.0
¾	¾	1.004 25.5	2.185 55.5
1	1	1.161 29.5	2.520 64.0
1¼	1¼	1.429 36.3	3.228 82.0
1½	1½	1.555 39.5	3.406 86.5
2	2	1.870 47.5	3.799 96.5

SP749 CS P X FTG STREET 45 ELL

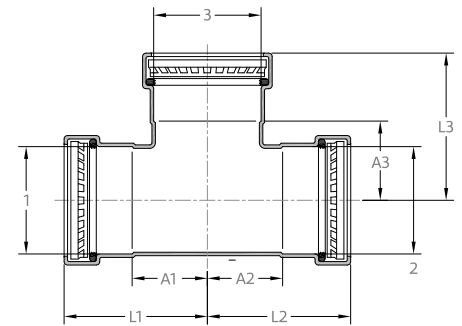
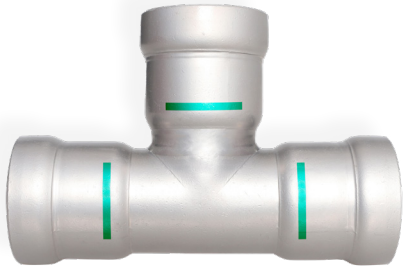
Inlet 1	Inlet 2	A1	L	L2
in	in	in/mm	in/mm	in/mm
½	½	0.866 22.0	1.890 48.0	2.165 55.0
¾	¾	1.004 25.5	2.185 55.5	2.421 61.5
1	1	1.161 29.5	2.520 64.0	3.071 78.0
1¼	1¼	1.429 36.3	3.228 82.0	3.425 87.0
1½	1½	1.555 39.5	3.406 86.5	3.740 95.0
2	2	1.870 47.5	3.799 96.5	3.937 100.0



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SCI Press – Carbon Tee Fig. SP720



SP720 CS P X P X P Tee

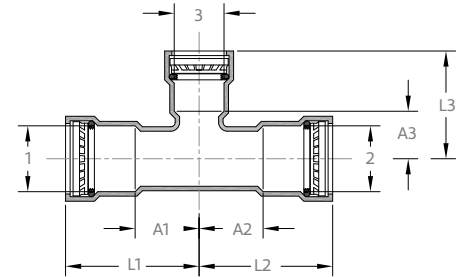
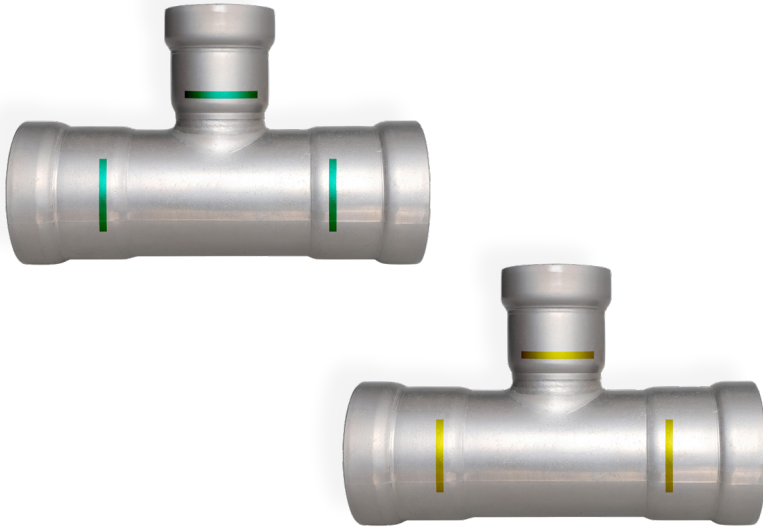
Inlet 1	Inlet 2	Inlet 3	A1	A2	A3	L1	L2	L3
in	in	in	in/mm	in/mm	in/mm	in/mm	in/mm	in/mm
½	½	½	0.886 22.5	0.886 22.5	0.886 22.5	1.909 48.5	1.909 48.5	1.909 48.5
¾	¾	¾	1.024 26.0	1.024 26.0	1.024 26.0	2.205 56.0	2.205 56.0	2.205 56.0
1	1	1	1.181 30.0	1.181 30.0	1.181 30.0	2.539 64.5	2.539 64.5	2.539 64.5
1¼	1¼	1¼	1.488 37.8	1.488 37.8	1.488 37.8	3.287 83.5	3.287 83.5	3.287 83.5
1½	1½	1½	1.614 41.0	1.614 41.0	1.614 41.0	3.465 88.0	3.465 88.0	3.465 88.0
2	2	2	1.929 49.0	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	3.858 98.0



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SCI Press – Carbon Reducing Tee Fig. SP720R



SP720R CS P X P X P REDUCING TEE

Inlet 1	Inlet 2	Inlet 3	A1	A2	A3	L1	L2	L3
in	in	in	in/mm	in/mm	in/mm	in/mm	in/mm	in/mm
¾	¾	½	1.024 26.0	1.024 26.0	0.984 25.0	2.205 56.0	2.205 56.0	2.008 51.0
1	1	½	1.181 30.0	1.181 30.0	1.142 29.0	2.539 64.5	2.539 64.5	2.165 55.0
1	1	¾	1.181 30.0	1.181 30.0	1.181 30.0	2.539 64.5	2.539 64.5	2.362 60.0
1¼	1¼	½	1.488 37.8	1.488 37.8	1.319 33.5	3.287 83.5	3.287 83.5	2.343 59.5
1¼	1¼	¾	1.488 37.8	1.488 37.8	1.358 34.5	3.287 83.5	3.287 83.5	2.539 64.5
1¼	1¼	1	1.488 37.8	1.488 37.8	1.358 34.5	3.287 83.5	3.287 83.5	2.717 69.0
1½	1½	½	1.614 41.0	1.614 41.0	1.417 36.0	3.465 88.0	3.465 88.0	2.441 62.0
1½	1½	¾	1.614 41.0	1.614 41.0	1.457 37.0	3.465 88.0	3.465 88.0	2.638 67.0
1½	1½	1	1.614 41.0	1.614 41.0	1.457 37.0	3.465 88.0	3.465 88.0	2.815 71.5
1½	1½	1¼	1.614 41.0	1.614 41.0	1.587 40.3	3.465 88.0	3.465 88.0	3.386 86.0

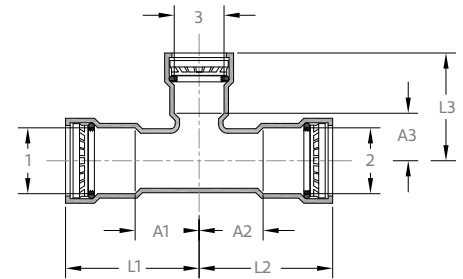
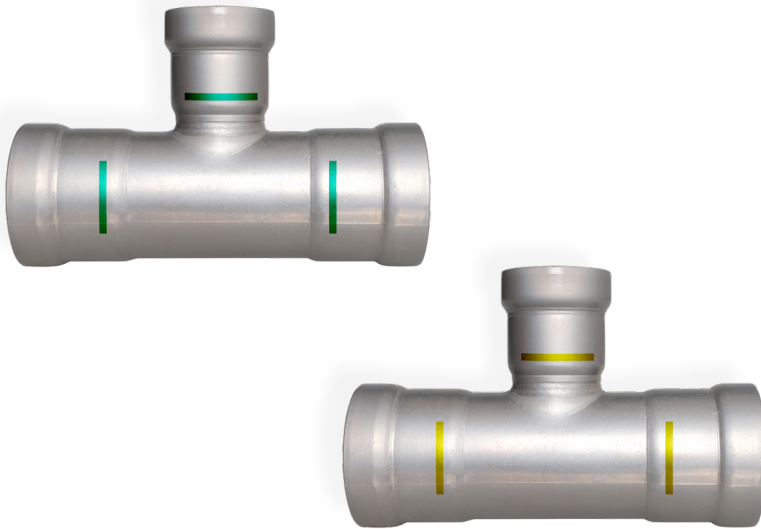


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SCI Press – Carbon Reducing Tee (Cont.)

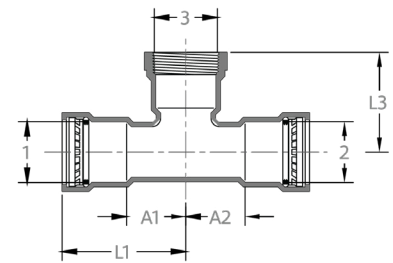
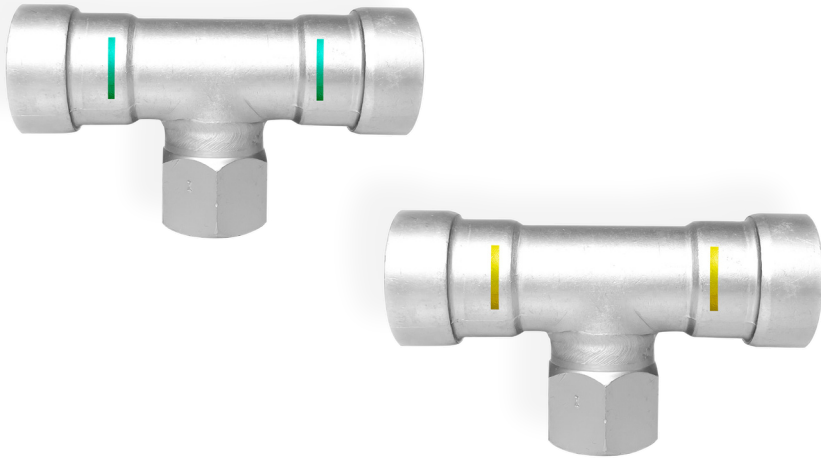
Fig. SP720R



SP720R CS P X P X P REDUCING TEE (Cont.)

Inlet 1	Inlet 2	Inlet 3	A1	A2	A3	L1	L2	L3
in	in	in	in/mm	in/mm	in/mm	in/mm	in/mm	in/mm
2	2	½	1.929 49.0	1.929 49.0	1.713 43.5	3.858 98.0	3.858 98.0	2.736 69.5
2	2	¾	1.929 49.0	1.929 49.0	1.752 44.5	3.858 98.0	3.858 98.0	2.933 74.5
2	2	1	1.929 49.0	1.929 49.0	1.752 44.5	3.858 98.0	3.858 98.0	3.11 79.0
2	2	1¼	1.929 49.0	1.929 49.0	1.882 47.8	3.858 98.0	3.858 98.0	3.681 93.5
2	2	1½	1.929 49.0	1.929 49.0	1.909 48.5	3.858 98.0	3.858 98.0	3.76 95.5

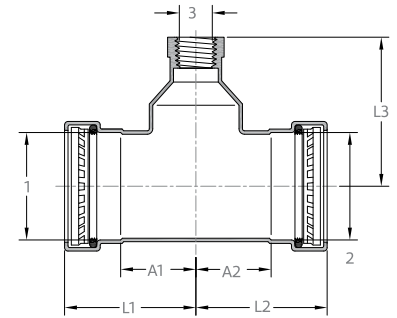
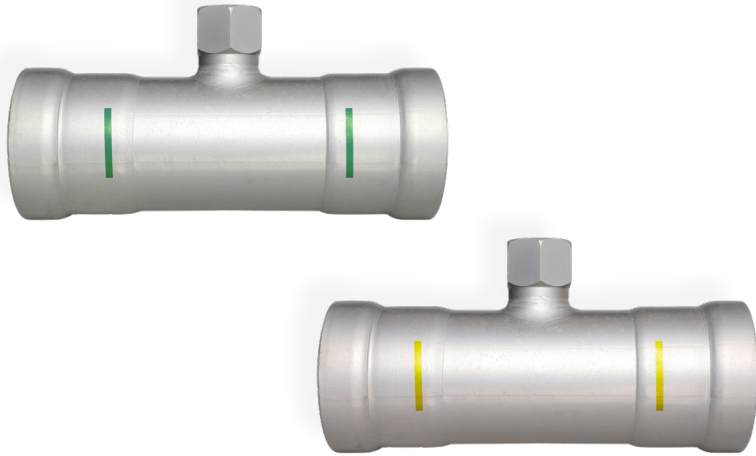
SCI Press – Carbon Female Thread Adapter Tee Fig. SP728



SP728 CS P X P X FT ADAPTER TEE

Inlet 1	Inlet 2	Inlet 3	A1	A2	L1	L2	L3
in	in	in	in/mm	in/mm	in/mm	in/mm	in/mm
3/4	3/4	3/4	1.024 26.0	1.024 26.0	2.205 56.0	2.205 56.0	1.85 47.0

SCI Press – Carbon Female Tee Reducer Fig. SP728R



SP728R CS P X P X FT RED ADAPTER TEE

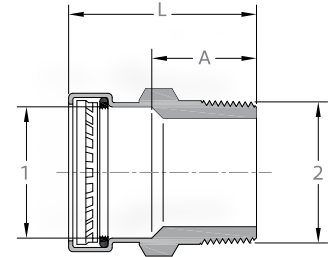
Inlet 1	Inlet 2	Inlet 3	A1	A2	L1	L2	L3
in	in	in	in/mm	in/mm	in/mm	in/mm	in/mm
¾	¾	½	1.024 26.0	1.024 26.0	2.205 56.0	2.205 56.0	1.850 47.0
1	1	½	1.181 30.0	1.181 30.0	2.539 64.5	2.539 64.5	2.008 51.0
1	1	¾	1.181 30.0	1.181 30.0	2.539 64.5	2.539 64.5	2.008 51.0
1¼	1¼	½	1.488 37.8	1.488 37.8	3.287 83.5	3.287 83.5	2.185 55.5
1¼	1¼	¾	1.488 37.8	1.488 37.8	3.287 83.5	3.287 83.5	2.185 55.5
1¼	1¼	1	1.488 37.8	1.488 37.8	3.287 83.5	3.287 83.5	2.343 59.5
1½	1½	½	1.614 41.0	1.614 41.0	3.465 88.0	3.465 88.0	2.283 58.0
1½	1½	¾	1.614 41.0	1.614 41.0	3.465 88.0	3.465 88.0	2.283 58.0
1½	1½	1	1.614 41.0	1.614 41.0	3.465 88.0	3.465 88.0	2.441 62.0
1½	1½	1¼	1.614 41.0	1.614 41.0	3.465 88.0	3.465 88.0	2.539 64.5
2	2	½	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	2.579 65.5
2	2	¾	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	2.579 65.5
2	2	1	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	2.736 69.5
2	2	1¼	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	2.835 72.0
2	2	1½	1.929 49.0	1.929 49.0	3.858 98.0	3.858 98.0	2.933 74.5



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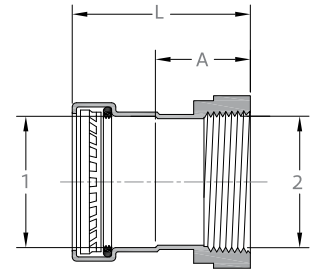
SCI Press – Carbon MPT Male Adapter Fig. SP707



SP707 CS P X MT ADAPTER CPLG

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
½	½	1.654 42.0	2.677 68.0
¾	¾	1.693 43.0	2.874 73.0
1	1	1.732 44.0	3.091 78.5
1¼	1¼	2.059 52.3	3.858 98.0
1½	1½	2.244 57.0	4.094 104.0
2	2	2.402 61.0	4.331 110.0

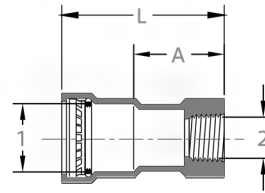
SCI Press – Carbon FPT Female Adapter Fig. SP708



SP708 CS P X FT ADAPTER CPLG

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
½	½	1.496 38.0	2.520 64.0
¾	¾	1.535 39.0	2.717 69.0
1	1	1.693 43.0	3.051 77.5
1¼	1¼	1.921 48.8	3.720 94.5
1½	1½	2.047 52.0	3.898 99.0
2	2	2.224 56.5	4.154 105.5

SCI Press – Carbon Female Thread Reducing Adapter Coupling Fig. SP708R



SP708R CS P X FT RED ADAPTER CPLG

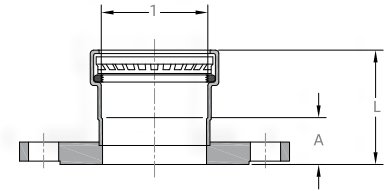
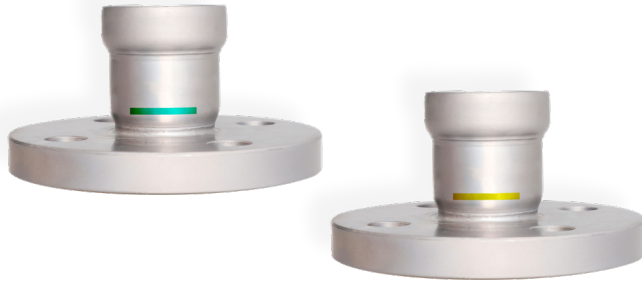
Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
¾	½	1.654 42.0	2.835 72.0
1	½	2.126 54.0	3.484 88.5
1	¾	1.752 44.5	3.110 79.0
1¼	½	2.335 59.3	4.134 105.0
1¼	¾	2.335 59.3	4.134 105.0
1¼	1	1.961 49.8	3.760 95.5
1½	½	2.362 60.0	4.213 107.0
1½	¾	2.362 60.0	4.213 107.0
1½	1	2.520 64.0	4.370 111.0
1½	1¼	2.047 52.0	3.898 99.0
2	½	2.382 60.5	4.311 109.5
2	¾	2.382 60.5	4.311 109.5
2	1	2.539 64.5	4.469 113.5
2	1¼	2.638 67.0	4.567 116.0
2	1½	2.441 62.0	4.370 111.0



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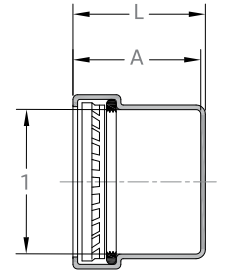
SCI Press – Carbon Flange Adapter Fig. SP716



SP716 CS P x FLNG ADPTR, 4-BOLT

Inlet 1	A	L
in	in/mm	in/mm
½	1.228 31.2	2.252 57.2
¾	1.425 36.2	2.606 66.2
1	1.594 40.5	2.953 75.0
1¼	1.083 27.5	2.882 73.2
1½	1.173 29.8	3.024 76.8
2	1.260 32.0	3.189 81.0

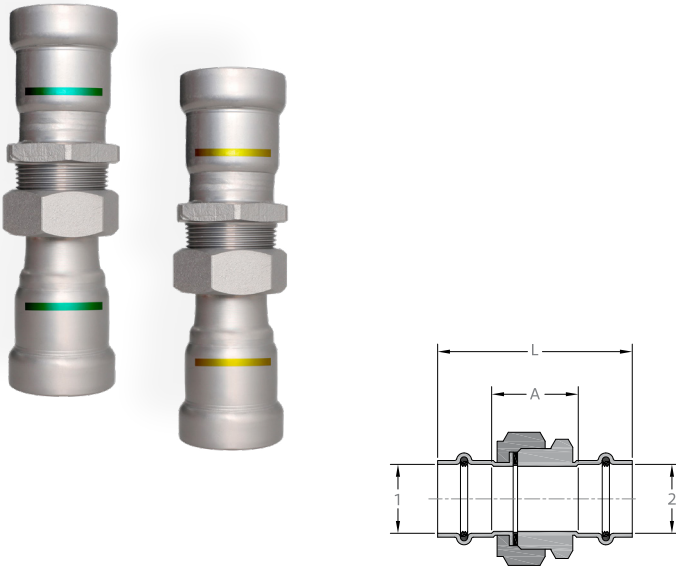
SCI Press – Carbon End Cap Fig. SP700



SP700 CS P END CAP

Inlet 1	A	AL
in	in/mm	in/mm
½	0.787 20.0	1.811 46.0
¾	0.827 21.0	2.008 51.0
1	0.827 21.0	2.185 55.5
1¼	1.035 26.3	2.835 72.0
1½	1.063 27.0	2.913 74.0
2	1.083 27.5	3.012 76.5

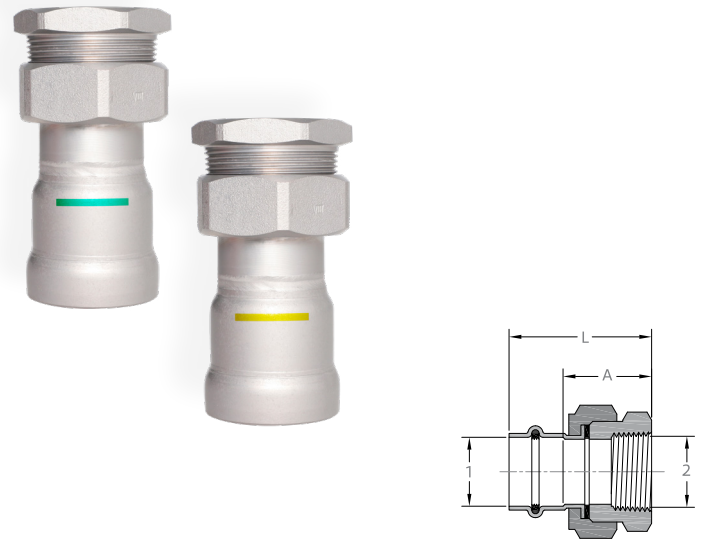
SCI Press – Carbon Union Fig. SP755



SP755 CS P X P UNION

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
½	½	2.835 72.0	4.882 124.0
¾	¾	3.189 81.0	5.551 141.0
1	1	3.504 89.0	6.220 158.0
1¼	1¼	4.079 103.6	7.677 195.0
1½	1½	4.134 105.0	7.835 199.0
2	2	4.921 125.0	8.780 223.0

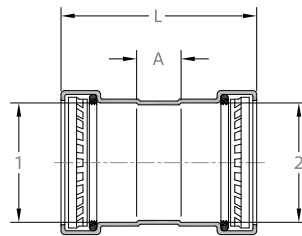
SCI® Press – Carbon Female Thread Adapter Union Fig. SP758



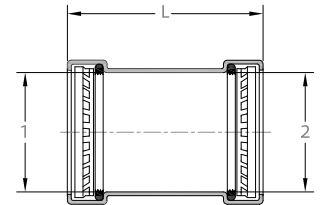
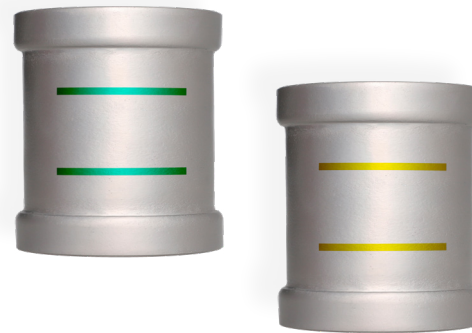
SP758 CS P X FT ADAPTER UNION

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
½	½	2.205 56.0	3.228 82.0
¾	¾	2.441 62.0	3.622 92.0
1	1	2.657 67.5	4.016 102.0
1¼	1¼	3.122 79.3	4.921 125.0
1½	1½	3.150 80.0	5.000 127.0
2	2	3.858 98.0	5.787 147.0

SCI Press – Carbon Coupling with Stop Fig. SP704



SCI Press – Carbon Coupling No Stop Fig. SP705



SP704 CS P X P COUPLING

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
½	½	0.787 20.0	2.835 72.0
¾	¾	0.866 22.0	3.228 82.0
1	1	0.866 22.0	3.583 91.0
1¼	1¼	1.126 28.6	4.724 120.0
1½	1½	1.181 30.0	4.882 124.0
2	2	1.260 32.0	5.118 130.0

SP705 CS P X P COUPLING NO STOP

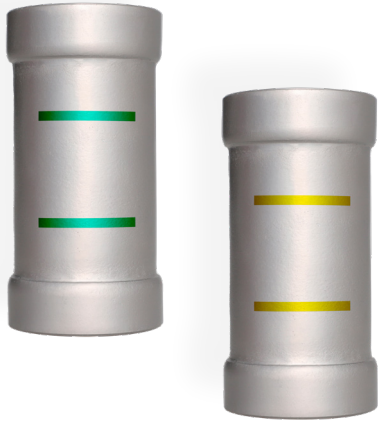
Inlet 1	Inlet 2	L
in	in	in/mm
½	½	2.835 72.0
¾	¾	3.228 82.0
1	1	3.583 91.0
1¼	1¼	4.724 120.0
1½	1½	4.882 124.0
2	2	5.118 130.0



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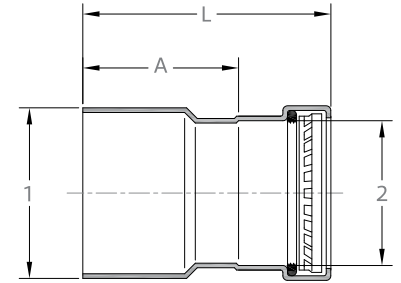
SCI Press – Carbon Extended Coupling No Stop Fig. SP705L



SP705L CS P X P EXTENDED CPLG NO STOP

Inlet 1	Inlet 2	L
in	in	in/mm
½	½	3.819 97.0
¾	¾	3.996 101.5
1	1	4.370 111.0
1¼	1¼	5.315 135.0
1½	1½	5.433 138.0
2	2	5.630 143.0

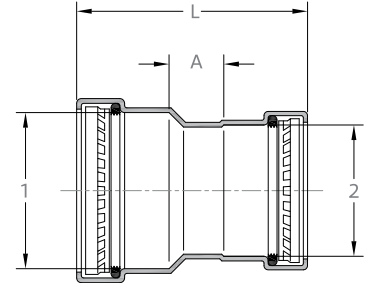
SCI Press – Carbon Bushing Reducer Fig. SP709R



SP709R CS FTG X P BUSHING REDUCER

Inlet 1	Inlet 2	A	L
in	in	in/mm	in/mm
¾	½	1.831 46.5	3.012 76.5
1	½	2.028 51.5	3.386 86.0
1	¾	2.087 53.0	3.445 87.5
1¼	1	2.295 58.3	4.094 104.0
1½	¾	2.598 66.0	4.449 113.0
1½	1	2.421 61.5	4.272 108.5
1½	1¼	2.874 73.0	4.724 120.0
2	1	2.795 71.0	4.724 120.0
2	1¼	3.248 82.5	5.177 131.5
2	1½	3.228 82.0	5.157 131.0

SCI Press – Carbon Reducing Coupling Fig. SP704R



SP704R CS P X P RED COUPLING

Inlet 1 in	Inlet 2 in	A in	L in/mm
¾	½	0.827 21.0	3.031 77.0
1	½	0.965 24.5	3.346 85.0
1	¾	0.945 24.0	3.484 88.5
1¼	¾	1.311 33.3	4.291 109.0
1¼	1	1.035 26.3	4.193 106.5
1½	1	1.220 31.0	4.429 112.5
1½	1¼	1.075 27.3	4.724 120.0
2	1¼	1.587 40.3	5.315 135.0
2	1½	1.496 38.0	5.276 134.0

SCI Press – Carbon Systems ½" to 1"



Read and understand all instructions before use.

WARNING

Ensure system is drained and depressurized before installation or service.

Use appropriate personal protective equipment.



Failure to follow these instructions could result in serious personal injury and/or property damage.

- 1 Cut carbon steel pipe at right angles to desired length.
- 2 Remove all burrs from inside and outside of piping to prevent damage to sealing element. Pipe end must be free from scores, seams, chips, rust or scale, which may interfere with sealing.
- 3 Check seal for correct fit. Do not apply additional oils or lubricants. Use only SCI Press EPDM or HNBR sealing element.
- 4 Mark proper insertion depth as indicated by the SCI Press insertion Depth Chart. Inadequate Insertion depth may result in an improper seal.



SCI Press Insertion Depth

Size	½"	¾"	1"	1¼"	1½"	2"
Depth	1"	1 ⅜"	1 ⅝"	1 ¾"	1 ⅞"	1 15/16"



- 5 While turning slightly, slide press fitting onto pipe until the pipe end contacts the stop in the fitting. A properly inserted fitting lines up with the insertion depth line.



- 6 Install appropriate jaw into the pressing tool. Refer to specific tool manufacturer's instructions.



- 7 Open the jaw and place at right angles on the fitting. Visually check insertion depth using mark on pipe. Both groove halves of the jaw must be engaged with the fitting.



- 8 Start pressing process and hold the trigger until the tool has completed its cycle. Refer to specific tool manufacturer's instructions.



- 9 After pressing, remove the jaw and inspect that the fitting is secured. After visual confirmation of each connection, a system pressure test may be performed in accordance with local code requirements.



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SCI Press – Carbon Systems 1¼" to 2"



Read and understand all instructions before use.

WARNING

Ensure system is drained and depressurized before installation or service.

Use appropriate personal protective equipment.



Failure to follow these instructions could result in serious personal injury and/or property damage.

- 1 Cut carbon steel pipe at right angles to desired length.
- 2 Remove all burrs from inside and outside of piping to prevent damage to sealing element. Pipe end must be free from scores, seams, chips, rust or scale, which may interfere with sealing.
- 3 Check seal for correct fit. Do not apply additional oils or lubricants. Use only SCI Press EPDM or HNBR sealing element.
- 4 Mark proper insertion depth as indicated by the SCI Press Insertion Depth Chart. Inadequate insertion depth may result in an improper seal.



SCI Press Insertion Depth

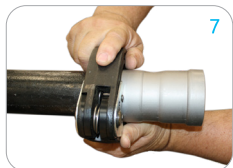
Size	½"	¾"	1"	1¼"	1½"	2"
Depth	1"	1 ⅜"	1 ⅝"	1 ¾"	1 ⅞"	1 15/16"



- 5 While turning slightly, slide press fitting onto piping until the pipe end contacts the stop in the fitting. A properly inserted fitting lines up with the insertion depth line.



- 6 SCI Press fitting connections must be performed with press rings. Use of incorrect press rings and/or actuator will result in an improper connection. Refer to specific tool manufacturer's instructions for each fitting size.



- 7 Open the press ring and place and place at right angles on the fitting. Visually check insertion depth using mark on pipe. Both groove halves of pipe the must be engaged with the fitting.



- 8 Open the press tool actuator as shown and connect actuator to the press ring.



- 9 Start pressing process. Hold the trigger until the tool has completed its cycle. Refer to specific tool manufacturer's instructions. After visual confirmation of each connection, a system pressure test may be performed in accordance with local code requirements.



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