

Stainless Steel Pipe System

Vic-Press® for Schedule 10S Type 304 Stainless Steel



18.12



* The Victaulic PFT510 tool is the only press tool approved for use on the Vic-Press® for Schedule 10S System.

Approvals/Listings:



See Victaulic Publication [10.01](#) for more fire protection details.

See Victaulic Publication [02.06](#) for potable water approvals if applicable.

Product Description:

Vic-Press for Schedule 10S Type 304/304L stainless steel pipe provides a fast, easy, clean and reliable means for joining ½ – 2”/15 – 50mm standard ASTM A 312 Schedule 10S stainless steel pipe. Vic-Press for Schedule 10S products meet ASME requirements and ratings for ANSI Class 150 systems for water, oil, gases and general chemical services are rated for vacuum service and are pressure rated up to a maximum of 500 psi/3450 kPa.¹ FM Approved to 175 psi/1205 kPa.

The Vic-Press for Schedule 10S system requires no flame or arc as with welding, and no cutting oil, chips or preparation time as with threading or flanging. Off-the-shelf Type 304 ASTM A 312 Schedule 10S stainless steel pipe is cut to length, inserted into the coupling/fitting and the fitting is pressed onto the pipe in seconds.

The Vic-Press for Schedule 10S system meets the requirements of ASME B31.1, B31.3 and B31.9. Request publication [18.16](#), [18.17](#) and [18.18](#) for details.

Vic-Press for Schedule 10S Type 304/304L couplings and fittings are recommended on services conveying water, hydrocarbons, water/hydrocarbon mixtures, air (wet/dry/with

oil vapors), other gases, vegetable and mineral oils, as well as automotive fluids such as engine oil and transmission fluid within the temperature range of -30°F to +300°F/-34°C to +149°C, depending on seal material selected.

Vic-Press for Schedule 10S seals are pre-lubricated to further simplify the installation process. To maintain the integrity of the lubrication, components are shipped in factory sealed bags and should remain bagged until ready for use. For more information regarding the lubrication used, please refer to publication [05.07](#).

Alternative Grade O seals available.

For product installation instructions, refer to Victaulic Product Assembly Instructions (I-P500) and the Tool Operating and Maintenance Instructions Manual (TM-PFT510).

¹ Pressure rating up to 300 psi/2065 kPa when used with Schedule 5S pipe.

Material Specifications:

Housing Body: Made from Type 304L stainless steel.

Threaded Outlets: Made from stainless steel bar or stainless steel pipe conforming to ASTM A 312, Type 304L.

Plain End or Grooved End Products: Stainless steel pipe conforming to ASTM A 312, Type 304L.

Style P595 Flange Adapter: ANSI Class 150 or AS 2129 Table E, Type 316L raised face one-piece Type 304L stainless steel flange adapter.

Style P565 Van Stone Flange Adapter: ANSI Class 150 or AS 2129 Table E, Carbon Steel raised face slip on flange with Type 304 stainless steel stub end.

Style P594 Concentric Reducer: Reducer body made from Type 304 stainless steel, press ends made from Type 304L stainless steel.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	



Material Specifications:

Housing: Type 316 stainless steel, conforming to ASTM A 351, A 743 and A 744, Grade CF8M

Housing: None

Standard:

Grade "H" HNBR

HNBR (Orange stripe color code). Temperature range -20°F to +210°F/-29°C to +98°C. May be specified for hot petroleum/water mixtures, hydrocarbons, air with oil vapors, vegetable and mineral oils, engine oil, transmission oil. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372.

Optional Gasket: (specify choice¹)

Grade "E" EPDM

EPDM (Green stripe color code). Temperature range -30°F to +250°F/-34°C to +121°C. May be specified for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR PETROLEUM SERVICES. NOT COMPATIBLE FOR STEAM SERVICES.

Grade "O" fluoroelastomer

Fluoroelastomer (Blue stripe color code). Temperature range +20°F to +300°F/-7°C to +149°C. May be specified for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons. NOT COMPATIBLE FOR HOT WATER OR STEAM SERVICES.

Other gaskets are available. Please refer to [publication 05.01](#).

Gaskets:

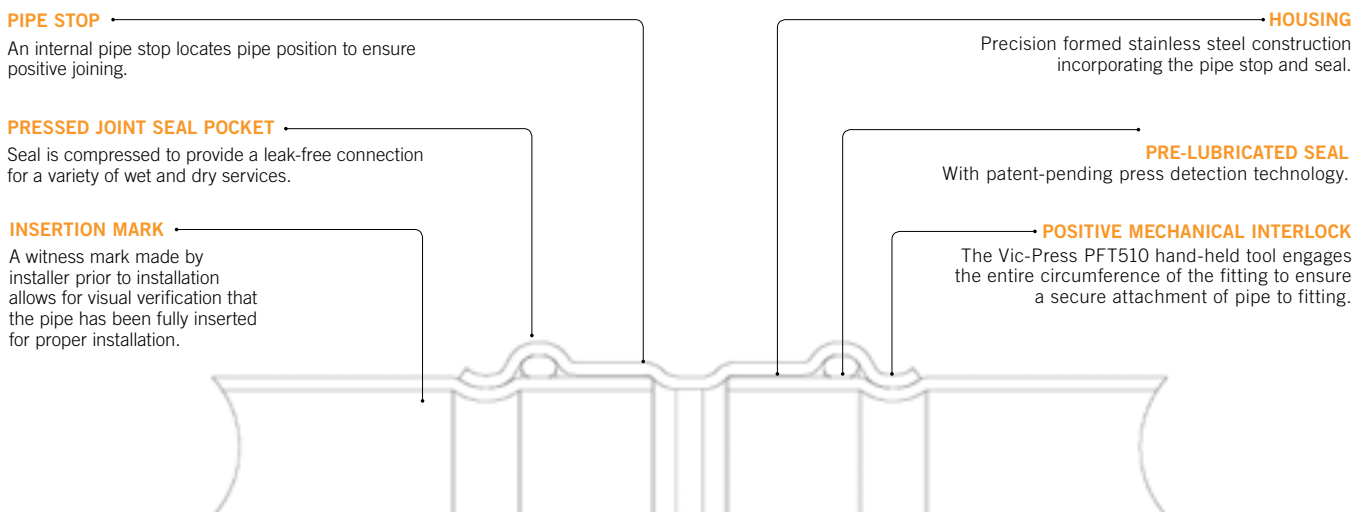
¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

WARNING

- **Vic-Press for Schedule 10S products for Type 304 /304L stainless steel must only be used on services compatible with seal and fitting materials.**

Incompatible services may result in leakage. Always reference the latest Victaulic Gasket Selection Guide (05.01) for specific seal service recommendations and for a listing of services which are not recommended.

Vic -Press Joining System for Schedule 10S Stainless Steel Pipe

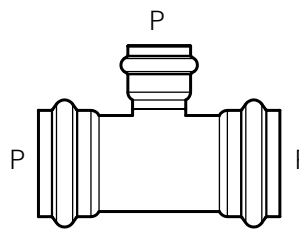


Dimensional Information:

Products in the Vic-Press for Schedule 10S system for Type 304/304L stainless steel have unique center-to-end or end-to-end dimensions which incorporate specific, “takeout” dimensions for easy fabrication calculations.

Use of threaded products employing special features such as probes, escutcheon cups, etc., should be checked to be certain the thread standard and length of insertion are compatible with fitting dimensions.

Failure to verify dimensional suitability in advance may result in difficulties in assembly.



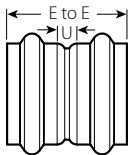
End Type Code

- P = Press
- F = Female Thread
- M = Male Thread
- T = Plain End
- L = Flanged
- G = Grooved
- EOB = End of Branch
- W = Weld Ends

Standard Coupling

Style P597 (P x P)

Working Pressure: 500 psi/3450 kPa



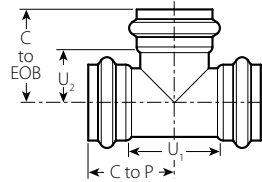
Style P597

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions		Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	
½ 15	0.840 21.3	2.78 70.6	0.65 16.5	0.2 0.1
¾ 20	1.050 26.7	2.78 70.6	0.65 16.5	0.3 0.1
1 25	1.315 33.4	3.11 79.0	0.73 18.5	0.5 0.2
1½ 40	1.900 48.3	3.48 88.4	0.72 18.3	0.7 0.3
2 50	2.375 60.3	3.96 100.6	0.71 18.0	1.0 0.5

Tee

Style P592 (P x P x P)

Working Pressure: 500 psi/3450 kPa



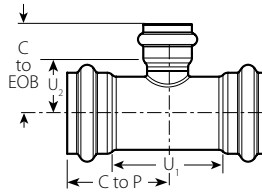
Style P592

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg
		C to P inches mm	U ₁ Takeout inches mm	C to EOB inches mm	U ₂ Takeout inches mm	
½ 15	0.840 21.3	1.71 43.4	1.29 32.8	1.91 48.5	0.84 21.3	0.4 0.2
¾ 20	1.050 26.7	2.01 51.1	1.89 48.0	1.93 49.0	0.87 22.1	0.5 0.2
1 25	1.315 33.4	2.27 57.7	2.17 55.1	2.24 56.9	1.05 26.7	0.9 0.4
1½ 40	1.900 48.3	2.72 69.1	2.68 68.1	2.74 69.6	1.37 34.8	1.5 0.7
2 50	2.375 60.3	3.21 81.5	3.17 80.5	3.36 85.3	1.73 43.9	2.1 1.0

Tee with Reducing Branch

Style P593 (P x P x P)

Working Pressure: 500 psi/3450 kPa



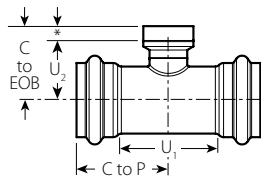
Style P593

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg
		C to P inches mm	U ₁ Takeout inches mm	C to EOB inches mm	U ₂ Takeout inches mm	
¾ 20 x ¾ 20 x ½ 15	1.050 26.7 x 1.050 26.7 x 0.840 21.3	2.01 51.1	1.89 48.0	2.01 51.1	0.95 24.1	0.5 0.2
1 25 x 1 25 x ½ 15	1.315 33.4 x 1.315 33.4 x 0.840 21.3	2.27 57.7	2.17 55.1	2.14 54.4	1.08 27.4	0.8 0.4
1½ 40 x 1½ 40 x ¾ 20	1.900 48.3 x 1.900 48.3 x 1.050 26.7	2.27 57.7	2.17 55.1	2.07 52.6	1.00 25.4	0.8 0.4
		2.72 69.1	2.69 68.3	2.44 62.0	1.17 29.7	1.2 0.5
		2.72 69.1	2.69 68.3	2.36 59.9	1.29 32.8	1.3 0.6
2 50 x 2 50 x ½ 15	2.375 60.3 x 2.375 60.3 x 0.840 21.3	2.72 69.1	2.69 68.3	2.53 64.3	1.34 34.0	1.4 0.6
		3.21 81.5	3.16 80.3	2.67 67.8	1.61 40.9	1.7 0.8
		3.21 81.5	3.16 80.3	2.60 66.0	1.53 38.9	1.7 0.8
		3.21 81.5	3.16 80.3	2.77 70.4	1.58 40.1	1.8 0.8
2 50 x 2 50 x 1½ 40	2.375 60.3 x 2.375 60.3 x 1.900 48.3	3.21 81.5	3.16 80.3	2.98 75.7	1.60 40.6	2.0 0.9
		3.21 81.5	3.16 80.3	2.98 75.7	1.60 40.6	2.0 0.9

Tee with Threaded Branch

Style P588 (P x P x F²)

Working Pressure: 500 psi/3450 kPa



Style P588

*Length of effective thread

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg
		C to P inches mm	U ₁ Takeout inches mm	C to EOB inches mm	U ₂ Takeout inches mm	
1/2 x 1/2 x 1/2 15 x 15 x 15	0.840 x 0.840 x 0.840 21.3 x 21.3 x 21.3	1.71 43.4	1.29 32.8	1.46 37.1	0.93 23.6	0.4 0.2
3/4 x 3/4 x 1/2 20 x 20 x 15	1.050 x 1.050 x 0.840 26.7 x 26.7 x 21.3	2.01 51.1	1.89 48.0	1.57 39.9	1.04 26.4	0.5 0.2
		2.01 51.1	1.89 48.0	1.56 39.6	1.02 25.9	0.6 0.3
1 x 1 x 1/2 25 x 25 x 15	1.315 x 1.315 x 0.840 33.4 x 33.4 x 21.3	2.27 57.7	2.17 55.1	1.70 43.2	1.17 29.7	0.9 0.4
		2.27 57.7	2.17 55.1	1.70 43.2	1.15 29.2	0.9 0.4
		2.27 57.7	2.17 55.1	1.83 46.5	1.15 29.2	1.1 0.5
1 1/2 x 1 1/2 x 1/2 40 x 40 x 15	1.900 x 1.900 x 0.840 48.3 x 48.3 x 21.3	2.72 69.1	2.68 68.1	1.99 50.5	1.46 37.1	1.4 0.6
		2.72 69.1	2.68 68.1	1.99 50.5	1.44 36.6	1.5 0.7
		2.72 69.1	2.68 68.1	2.12 53.8	1.44 36.6	1.5 0.7
2 x 2 x 1/2 50 x 50 x 15	2.375 x 2.375 x 0.840 60.3 x 60.3 x 21.3	3.21 85.1	3.17 80.5	2.23 56.6	1.70 43.2	1.7 0.8
		3.21 85.1	3.17 80.5	2.23 56.6	1.68 42.7	1.7 0.8
		3.21 85.1	3.17 80.5	2.36 59.9	1.68 42.7	2.0 0.9

² Available with British Standard Pipe Threads. Specify BSPT on order.

Elbows

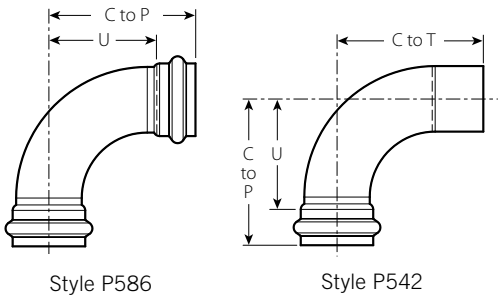
Style P586 90° Elbow (P x P)

Style P542 90° Street Elbow (P x T)

Style P591 45° Elbow (P x P)

Style P543 45° Street Elbow (P x T)

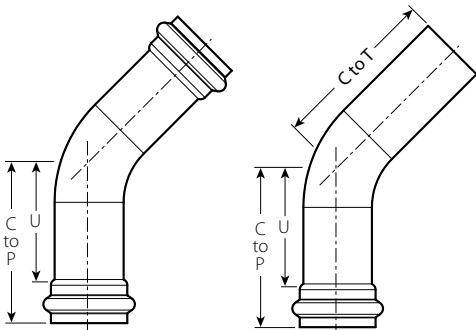
Working Pressure: 500 psi/3450 kPa



Style P586

Style P542

Nominal Size inches mm	Actual Outside Diameter inches mm	Style P586 90° Elbow			Style P542 90° Street Elbow			
		C to P inches mm	U Takeout inches mm	Approx. Weight Each Lbs. kg	C to P inches mm	U Takeout inches mm	C to T inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	2.64 67.1	1.53 38.9	0.3 0.1	2.64 67.1	1.53 38.9	3.04 77.2	0.3 0.1
¾ 20	1.050 26.7	2.95 74.9	1.89 48.0	0.4 0.2	2.95 74.9	1.89 48.0	3.35 85.1	0.4 0.2
1 25	1.315 33.4	3.52 89.4	2.33 59.2	0.8 0.4	3.52 89.4	2.33 59.2	4.32 109.7	0.7 0.3
1½ 40	1.900 48.3	4.55 115.6	3.18 80.8	1.4 0.6	4.55 115.6	3.18 80.8	4.55 115.6	1.4 0.6
2 50	2.375 60.3	5.52 140.2	3.90 99.1	2.0 0.9	5.52 140.2	3.90 99.1	5.52 140.2	2.0 0.9



Style P591

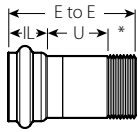
Style P543

Nominal Size inches mm	Actual Outside Diameter inches mm	Style P591 45° Elbow			Style P543 45° Street Elbow			
		C to P inches mm	U Takeout inches mm	Approx. Weight Each Lbs. kg	C to P inches mm	U Takeout inches mm	C to T inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	1.89 48.0	0.83 21.1	0.2 0.1	1.89 48.0	0.83 21.1	1.89 48.0	0.2 0.1
¾ 20	1.050 26.7	2.56 65.0	1.50 38.1	0.4 0.2	2.56 65.0	1.50 38.1	2.56 65.0	0.4 0.2
1 25	1.315 33.4	3.27 83.1	2.09 53.1	0.8 0.4	3.27 83.1	2.09 53.1	3.27 83.1	0.8 0.4
1½ 40	1.900 48.3	4.96 126.0	3.59 91.2	1.7 0.8	4.96 126.0	3.59 91.2	4.96 126.0	1.7 0.8
2 50	2.375 60.3	5.84 148.3	4.22 107.2	2.5 1.1	5.84 148.3	4.22 107.2	5.84 148.3	2.5 1.1

Male Threaded Adapter

Style P596 (P × M³)

Working Pressure: 500 psi/3450 kPa



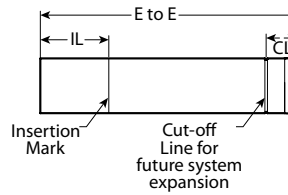
Style P596

*Length of effective thread

End Cap

Style P540

Working Pressure: 500 psi/3450 kPa



Style P540

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions			Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	IL Insertion Length inches mm	
1/2 x 1/2 15 x 15	0.840 x 0.840 21.3 x 21.3	3.93 99.8	2.32 58.9	1.06 26.9	0.3 0.1
3/4 x 1/2 20 x 15	1.050 x 0.840 26.7 x 21.3	3.34 84.8	1.75 44.5	1.06 26.9	0.4 0.2
		3.85 97.8	2.22 56.4	1.06 26.9	0.4 0.2
1 x 3/4 25 x 20	1.315 x 1.050 33.4 x 26.7	3.50 88.9	1.77 45.0	1.19 30.2	0.5 0.2
		4.19 106.4	2.32 58.9	1.19 30.2	0.6 0.3
1 1/2 x 3/4 40 x 20	1.900 x 1.050 48.3 x 26.7	3.65 92.7	1.73 43.9	1.38 35.1	0.8 0.4
		4.38 111.3	2.28 57.9	1.38 35.1	1.0 0.5
2 x 2 50 x 50	2.375 x 2.375 60.3 x 60.3	4.86 123.4	2.46 62.5	1.63 41.4	1.4 0.6

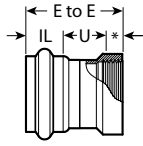
Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions			Approx. Weight Each Lbs. kg
		E to E inches mm	IL Insertion Length inches mm	CL Cut-off Line	
1/2 15	0.840 21.3	4.00 101.60	1.06 26.9	0.5 12.7	0.24 0.11
3/4 20	1.050 26.7	4.00 101.60	1.06 26.9	0.5 12.7	0.30 0.14
1 25	1.315 33.4	4.38 111.25	1.19 30.2	0.5 12.7	0.54 0.24
1 1/2 40	1.900 48.3	4.75 120.65	1.38 35.1	0.5 12.7	0.87 0.39
2 50	2.375 60.3	5.25 133.35	1.63 41.4	0.5 12.7	1.22 0.55

³ Available with British Standard Pipe Threads. Specify BSPT on order.

Female Threaded Adapter

Style P599 (P × F⁴)

Working Pressure: 500 psi/3450 kPa



Style P599

*Length of effective thread

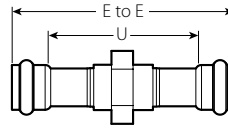
Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions			Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	IL Insertion Length inches mm	
½ x ½ 15 x 15	0.840 x 0.840 21.3 x 21.3	2.39 60.7	0.79 20.1	1.06 26.9	0.3 0.1
¾ x ½ 20 x 15	1.050 x 0.840 26.7 x 21.3	2.31 58.7	0.71 18.0	1.06 26.9	0.3 0.1
	x ¾ x 20	x 1.050 x 26.7	x 0.79 x 20.1	x 1.06 x 26.9	x 0.4 x 0.2
1 x ½ 25 x 15	1.315 x 0.840 33.4 x 21.3	2.47 62.7	0.75 19.1	1.19 30.2	0.7 0.3
	x ¾ x 20	x 1.050 x 26.7	x 0.73 x 18.5	x 1.19 x 30.2	x 0.6 x 0.3
	x 1 x 25	x 1.315 x 33.4	x 0.88 x 22.4	x 1.19 x 30.2	x 0.6 x 0.3
1 ½ x 1 40 x 25	1.900 x 1.315 48.3 x 33.4	2.92 74.2	0.91 23.1	1.38 35.1	1.0 0.5
	x 1 ¼ x 32	x 1.660 x 42.4	x 0.86 x 21.8	x 1.38 x 35.1	x 0.8 x 0.4
	x 1 ½ x 40	x 1.900 x 48.3	x 0.86 x 21.8	x 1.38 x 35.1	x 1.0 x 0.5
2 x 1 ¼ 50 x 32	2.375 x 1.660 60.3 x 42.4	3.57 90.7	1.24 31.5	1.63 41.4	1.1 0.5
	x 1 ½ x 40	x 1.900 x 48.3	x 1.24 x 31.5	x 1.63 x 41.4	x 1.3 x 0.6
	x 2 x 50	x 2.375 x 60.3	x 1.24 x 31.5	x 1.63 x 41.4	x 1.2 x 0.5

⁴ Available with British Standard Pipe Threads. Specify BSPT on order.

Threaded Union

Style P584 (P × P)

Working Pressure: 500 psi/3450 kPa



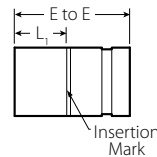
Style P584

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions		Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	
½ 15	0.840 21.3	7.50 190.5	5.37 136.4	3.0 1.4
¾ 20	1.050 26.7	7.37 187.2	5.24 133.1	3.7 1.7
1 25	1.315 33.4	7.59 192.8	5.21 132.3	4.3 2.0
1 ½ 40	1.900 48.3	8.36 212.3	5.61 142.5	6.0 2.7
2 50	2.375 60.3	8.01 203.5	4.76 120.9	6.8 3.1

Transition Nipple

Style P587 (G × T)

Working Pressure: 500 psi/3450 kPa



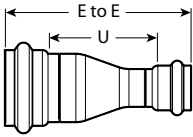
Style P587

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions		Approx. Weight Each Lbs. kg
		E to E inches mm	L ₁ Minimum inches mm	
¾ 20	1.050 26.7	4.00 101.6	1.06 26.9	0.3 0.1
1 25	1.315 33.4	4.00 101.6	1.19 30.2	0.5 0.2
1 ½ 40	1.900 48.3	4.00 101.6	1.38 35.1	0.7 0.3
2 50	2.375 60.3	4.00 101.6	1.63 41.4	0.9 0.4

Concentric Reducer

Style P594 (P x P)

Working Pressure: 500 psi/3450 kPa



Style P594

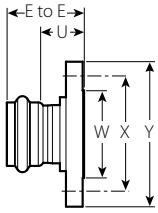
Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions		Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	
3/4 x 1/2 20 x 15	1.050 x 0.840 26.7 x 21.3	4.25	2.13	0.5
		108.0	54.1	0.2
1 x 1/2 25 x 15	1.315 x 0.840 33.4 x 21.3	4.92	2.67	0.6
		125.0	67.8	0.3
x 3/4 x 20	x 1.050 x 26.7	4.84	2.59	0.7
		122.9	65.8	0.3
1 1/2 x 1/2 40 x 15	1.900 x 0.840 48.3 x 21.3	5.57	3.13	0.9
		141.5	79.5	0.4
x 3/4 x 20	x 1.050 x 26.7	5.49	3.06	1.0
		139.4	77.7	0.5
x 1 x 25	x 1.315 x 33.4	5.66	3.09	1.1
		143.8	78.5	0.5
2 x 1/2 50 x 15	2.375 x 0.840 60.3 x 21.3	6.52	3.84	1.2
		165.6	97.5	0.5
x 3/4 x 20	x 1.050 x 26.7	6.44	3.76	1.3
		163.6	95.5	0.6
x 1 x 25	x 1.315 x 33.4	6.60	3.79	1.4
		167.6	96.3	0.6
x 1 1/2 x 40	x 1.900 x 48.3	6.75	3.76	1.6
		171.5	95.5	0.7

Flange Adapter

Raised face one-piece 304L stainless steel flange adapter

Style P595 (P x L)

Working Pressure: 275 psi/1896 kPa



Style P595

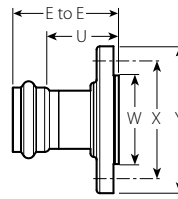
ANSI Class 150 Flange Adapter							
Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions					Approx. Weight Each Lbs. kg
		E to E inches mm	W inches mm	X inches mm	Y inches mm	U Takeout inches mm	
½ 15	0.840 21.3	3.46 87.9	1.38 35.0	2.38 60.5	3.50 88.9	2.39 60.7	2.2 1.0
¾ 20	1.050 26.7	3.34 84.8	1.69 42.9	2.75 69.9	3.88 98.6	2.27 57.7	2.3 1.0
1 25	1.315 33.4	3.46 87.9	2.00 50.8	3.12 79.3	4.25 108.0	2.27 57.7	2.8 1.3
1½ 40	1.900 48.3	3.45 87.6	2.88 73.2	3.88 98.6	5.00 127.0	2.07 52.3	3.6 1.6
2 50	2.375 60.3	3.42 86.9	3.62 92.0	4.75 120.7	6.00 152.4	1.79 45.5	5.8 2.6

Van Stone Flange Adapter

Carbon Steel raised face slip on flange, with 304 stainless steel stub end

Style P565 (P x L)

Working Pressure: 275 psi/1896 kPa



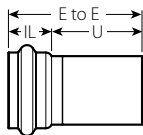
Style P565

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions					U Takeout inches mm	Approx. Weight Each Lbs. kg
		E to E inches mm	W inches mm	X inches mm	Y inches mm			
½ 15	0.840 21.3	3.37 85.6	1.38 35.0	2.38 60.5	3.50 88.9	2.30 58.4	2.4 1.1	
¾ 20	1.050 26.7	3.29 83.6	1.69 42.9	2.75 69.9	3.88 98.6	2.22 56.4	2.5 1.1	
1 25	1.315 33.4	3.45 87.6	2.00 50.8	3.12 79.3	4.25 108.0	2.26 57.4	3.0 1.4	
1½ 40	1.900 48.3	3.61 91.7	2.88 73.2	3.88 98.6	5.00 127.0	2.22 56.4	4.1 1.9	
2 50	2.375 60.3	4.55 115.6	3.62 92.0	4.75 120.7	6.00 152.4	2.92 74.2	6.8 3.1	

Weld Adapter

Style P561 (P x W)

Working Pressure: 500 psi/3450 kPa



Style P561

Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions			Approx. Weight Each Lbs. kg
		E to E inches mm	U Takeout inches mm	IL Insert Length inches mm	
½ 15	0.840 21.3	3.92 99.6	2.85 72.4	1.06 26.9	0.3 0.1
¾ 20	1.050 26.7	3.84 97.5	2.77 70.4	1.06 26.9	0.4 0.2
1 25	1.315 33.4	4.18 106.2	3.00 76.2	1.19 30.2	0.6 0.3
1½ 40	1.900 48.3	4.37 111.0	2.98 75.7	1.38 35.1	0.9 0.4
2 50	2.375 60.3	4.85 123.2	3.22 81.8	1.63 41.4	1.4 0.6

Vic-Press Schedule 10S Type 316 Stainless Steel Ball Valve

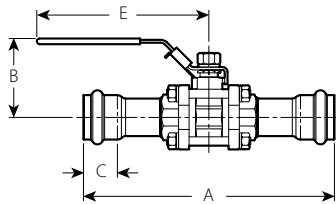
Series P569

Working Pressure: 400 psi/2750 kPa

Series P569 Vic-Press for Schedule 10S System Ball Valves with Type 316 ends feature full stainless steel body and trim, rated for service up to 400 psi/2750 kPa.

The valves are constructed of rugged Type 316 (CF8M) stainless steel with PTFE seats. The valves feature a blow-out proof stem and self-adjusting floating ball which provides uniform sealing. The full port design minimizes pressure drop for maximum flow efficiency. The three-piece swing-out design permits easy in-line maintenance.

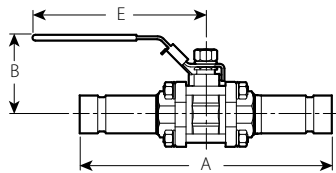
Vic-Press for Schedule 10S x Vic-Press Schedule 10S (P x P)



Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg
		A End to End inches mm	B inches mm	C inches mm	E inches mm	
½ 15	0.840 21.3	8.26 209.8	2.17 55.1	1.06 26.9	5.24 133.1	1.5 0.7
¾ 20	1.050 26.7	8.36 212.3	2.32 58.9	1.06 26.9	5.24 133.1	2.4 1.1
1 25	1.315 33.4	8.77 222.8	2.76 70.1	1.19 30.2	6.02 152.9	3.6 1.6
1½ 40	1.900 48.3	9.76 247.9	3.31 84.1	1.38 35.1	7.52 191.0	6.9 3.1
2 50	2.375 60.3	9.83 249.7	3.62 91.9	1.63 41.4	7.52 191.0	9.5 4.3

For dimensions and weights with gear operator contact Victaulic.

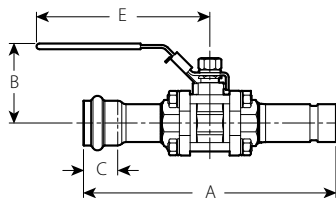
Groove x Groove (G x G)



Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions			Approx. Weight Each Lbs. kg
		A End to End inches mm	B inches mm	E inches mm	
¾ 20	1.050 26.7	8.54 216.9	2.32 58.9	5.24 133.1	2.4 1.1
1 25	1.315 33.4	8.75 222.3	2.76 70.1	6.02 152.9	3.6 1.6
1½ 40	1.900 48.3	10.90 276.9	3.31 84.1	7.52 191.0	6.9 3.1
2 50	2.375 60.3	12.11 307.6	3.62 91.9	7.52 191.0	9.5 4.3

For dimensions and weights with gear operator contact Victaulic.

Vic-Press Schedule 10S x Groove (P x G)



Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg
		A End to End inches mm	B inches mm	C Lbs. kg	E inches mm	
¾ 20	1.050 26.7	8.44 214.4	2.32 58.9	1.06 26.9	5.24 133.1	2.4 1.1
1 25	1.315 33.4	8.76 222.5	2.76 70.1	1.19 30.2	6.02 152.9	3.6 1.6
1½ 40	1.900 48.3	10.32 262.1	3.31 84.1	1.38 35.1	7.52 191.0	6.9 3.1
2 50	2.375 60.3	10.92 277.4	3.62 91.9	1.63 41.4	7.52 191.0	9.5 4.3

For dimensions and weights with gear operator contact Victaulic.

Series P569 Material Specifications:

Body: Stainless steel, CF8M, ASTM A-351

Ball: Stainless steel, CF8M, ASTM A-351

Stem: Stainless steel, Type 316

Seats: (PTFE) Polytetrafluoroethylene

Locking Handle: Stainless steel, Type 304

Stem Nut: Stainless steel, Type 304

Stem Washer: Stainless steel, Type 304

Stem Packing and Thrust Washer: (PTFE)
Polytetrafluoroethylene

Bolt/Nut/Washer: Stainless steel, Type 304

Cap: Stainless steel, CF8M, ASTM A-351

Extended Ends: Schedule 10S Stainless steel, Type 316

Specify end style:

Vic-Press Schedule 10S x Vic-Press Schedule 10S (P x P)

Grooved End (G x G)

Vic-Press Schedule 10S x Grooved End (P x G)



WARNING

- **Vic-Press for Schedule 10S products for Type 304/304L stainless steel must only be used on services compatible with seal and fitting materials.**

Incompatible services may result in leakage. Always reference the latest Victaulic Gasket Selection Guide (05.01) for specific seal service recommendations and for a listing of services which are not recommended.

Performance:

Flow Characteristics

Flow testing for the Vic-Press Style P569 3-Piece Ball Valve demonstrated superior flow characteristics.

Testing was performed in our own engineering laboratory facilities with systems and equipment calibrated to National Bureau of Standards.

Cv/Kv values for flow of water at +60°F/+16°C with a fully open valve are shown in tables below.

Where:

Formulas for Cv and Kv values

$\Delta P = Q^2 / C_v^2$

$\Delta P = Q^2 / K_v^2$

$Q = C_v \times \sqrt{\Delta P}$

$Q = K_v \times \sqrt{\Delta P}$

Flow Coefficient	Cv	Kv
Q (Flow)	GPM	m³/hr
ΔP (Pressure Drop)	psi	bar

Valve Size		Full Open
Nominal Size inches mm	Actual Outside Diameter inches mm	Flow Coefficient Cv Kv
½ 15	0.840 21.3	10 9
¾ 20	1.050 26.7	17 14
1 25	1.315 33.4	45 39
1½ 40	1.900 48.3	125 107
2 50	2.375 60.3	365 314

Series P569 Repair Kits

Kits and replacement parts are available for the Series P569 valve.

The Repair Kit consists of two seats, two gaskets, one stem seal and one thrust washer, all made of PTFE.

A replacement ball of CF8M stainless steel is also available.

For replacement stem information, contact Victaulic.

Size		Repair Kit	Replacement Ball
Nominal Size inches mm	Actual Outside Diameter inches mm	Part No.	Part No.
½ 15	0.840 21.3	K-004-569-001	K-004-569-000
¾ 20	1.050 26.7	K-006-569-001	K-006-569-000
1 25	1.315 33.4	K-010-569-001	K-010-569-000
1½ 40	1.900 48.3	K-014-569-001	K-014-569-000
2 50	2.375 60.3	K-020-569-001	K-020-569-000

 **WARNING**

- It is the responsibility of designers of piping systems to verify the suitability of Schedule 10S, Type 304/304L stainless steel pipe for use with the intended fluid media. The fluid’s chemical composition, pH level, operating temperature, chloride level, oxygen level and flow rate and their effect on AISI Type 304/304L stainless steel must be evaluated by the material specifier to confirm system life will be adequate for the intended service.

Failure to do so may cause serious personal injury or property damage.

**Vic-Press Brass Body Ball Valve with Stainless Steel
Vic-Press Schedule 10S Ends**

Series P589* (P × P)

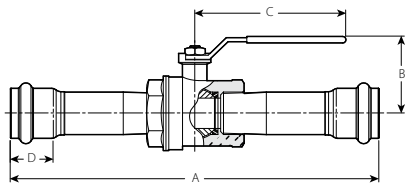
Working Pressure: 300 psi/2065 kPa

Series P589 Ball Valve is a full port valve with Vic-Press Schedule 10S ends for fast, easy installation. The valve, with Vic-Press Schedule 10S ends, is designed for service to 300 psi/ 2068 kPa.

The valve body is constructed from forged brass. The ball is chrome plated brass and seals on PTFE seats. A hollow ball design eliminates unnecessary weight while maintaining flow and mechanical strength. PTFE seats and washers reduce the friction coefficient which eases valve operation.

The Vic-Press Schedule 10S ends are of ASTM A-312 Type 304 stainless steel.

The Series P589 Brass Body Ball Valve is NOT ANSI/NSF certified for potable water. For potable water applications use the Series P569 Stainless Steel Ball Valve.



Nominal Size inches mm	Actual Outside Diameter inches mm	Dimensions				Approx. Weight Each Lbs. kg	Flow Coefficient ⁵ (Fully Open) Cv Values Kv Values
		A ± 0.125 3.18 inches mm	B inches mm	C inches mm	D inches mm		
1/2 15	0.840 21.3	9.030 229.3	1.42 36.1	3.03 77.0	1.06 26.9	1.0 0.5	11 9.4
3/4 20	1.050 26.7	9.120 231.7	1.90 48.3	3.74 95.0	1.06 26.9	1.6 0.7	25 21.3
1 25	1.315 33.4	10.11 256.7	2.05 52.1	3.74 95.0	1.19 30.2	2.8 1.3	36 30.7
1 1/2 40	1.900 48.3	11.18 283.9	2.76 70.1	5.40 137.2	1.38 35.1	4.7 2.1	112 95.5
2 50	2.375 60.3	12.69 322.3	3.15 80.0	5.40 137.2	1.63 41.4	6.9 3.1	195 166.3

⁵ Cv/Kv values for flow of water at +60°F/+16°C with valve fully open.

Series P589 Material Specifications:

Valve Body: Forged Brass ASTM B-30

Ball: Brass ASTM B-30, chrome plated

Stem: Brass ASTM B-16

Seats: (PTFE) Polytetrafluoroethylene

Handle: Carbon steel, zinc plated

Stem Nut: Carbon steel, zinc plated

Stem Washer: (PTFE) Polytetrafluoroethylene

Extended Ends: Schedule 10S Stainless Steel, Type 304



WARNING

- **Vic-Press for Schedule 10S products for Type 304/304L stainless steel must only be used on services compatible with seal and fitting materials.**

Incompatible services may result in leakage. Always reference the latest Victaulic Gasket Selection Guide (05.01) for specific seal service recommendations and for a listing of services which are not recommended.

Pipe Support

Piping joined with Vic-Press Schedule 10S System products for Type 304 stainless steel, like all other piping systems, requires support to carry the weight of pipes and equipment. As for other methods of joining pipes, the support or hanging method must be such as to eliminate undue stresses on joints, piping and other components. Additionally, the method of support must be such as to allow movement of the pipes where required and to provide drainage, etc., as may be specified by the designer.

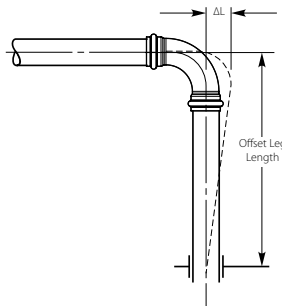
The maximum hanger spacing corresponds to ASME B31.1, B31.3 or B31.9 as noted, and should be used in conjunction with Victaulic Vic-Press Schedule 10S System products on approved Type 304 Schedule 10S stainless steel pipe.

Nominal Size inches mm	Actual Outside Diameter inches mm	Suggested Max. Span Between Supports - Feet/meters					
		Water Service			Gas/Air Service		
		B31.1	B31.3	B31.9	B31.1	B31.3	B31.9
½ 15	0.840 21.3	6.5 2.0	6.5 2.0	7.0 2.1	7.0 2.1	7.0 2.1	7.5 2.3
¾ 20	1.050 26.7	7.5 2.3	7.5 2.3	8.5 2.6	8.0 2.4	8.0 2.4	9.0 2.7
1 25	1.315 33.4	8.5 2.6	8.5 2.6	10.0 3.1	9.0 2.7	9.0 2.7	10.5 3.2
1½ 40	1.900 48.3	10.0 3.1	10.0 3.1	12.5 3.8	11.0 3.6	11.0 3.6	13.5 4.1
2 50	2.375 60.3	11.0 3.6	11.0 3.6	13.0 4.0	12.5 3.8	12.5 3.8	15.5 4.7

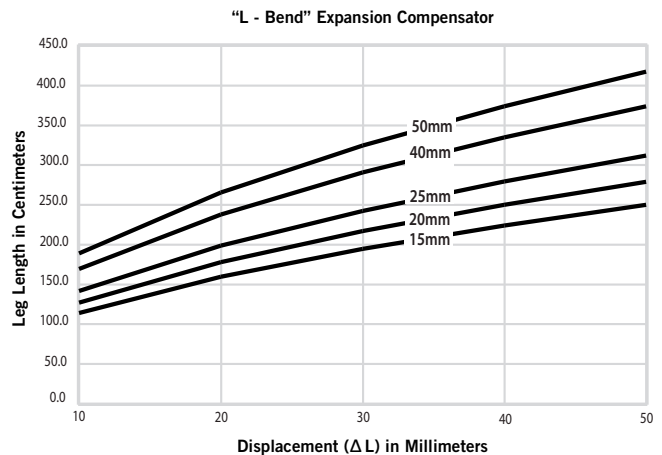
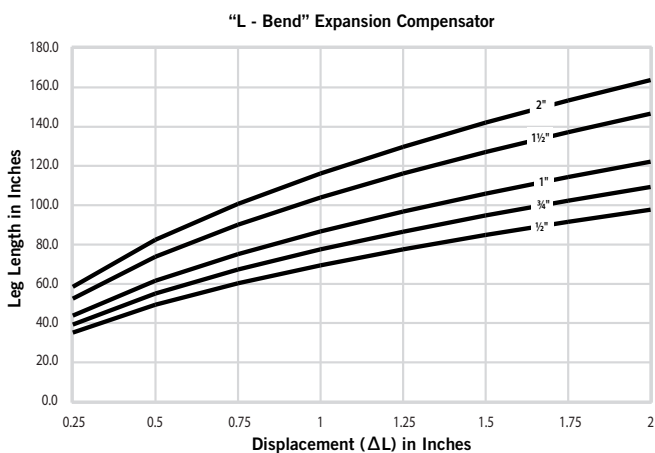
Thermal Expansion/Contraction

For stainless steel pipes, expansion/contraction will occur with temperature changes at a rate of 1 1/8 inch per 100 feet of pipe per 100°F (96mm per 100 meters of pipe per 100°C). This change in length may not seem significant; however, piping which cannot expand or contract may create substantial stresses within the piping system resulting in damage to the piping system and/or components.

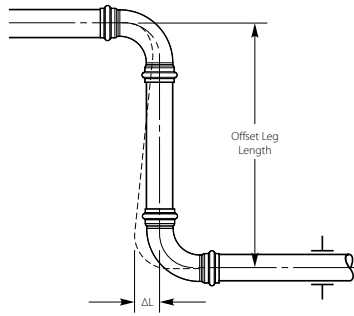
The change in length due to thermal movement may be absorbed by the flexibility of the piping system, particularly in systems using light wall pipe. This can be done at a simple change in direction using an “L-Bend”, or with an offset leg in a “Z-Bend” configuration or with a “U-Bend” (expansion loop). A proper design will utilize offset legs of sufficient minimum length prior to any element that will restrict movement (anchors, guides, fixed equipment connection) to minimize pipe stress. In addition, since these methods are symmetric about the offset axis, (i.e.: The expansion loop can open or close in equal amounts), one only needs to size the compensator for the greater of the thermal expansion or contraction from the installed ambient condition. The following charts that designate the minimum offset leg length for each of the aforementioned configurations were developed from the methodology found in ASHRAE Handbook – Systems and Equipment.



"L-Bend" Expansion Compensator

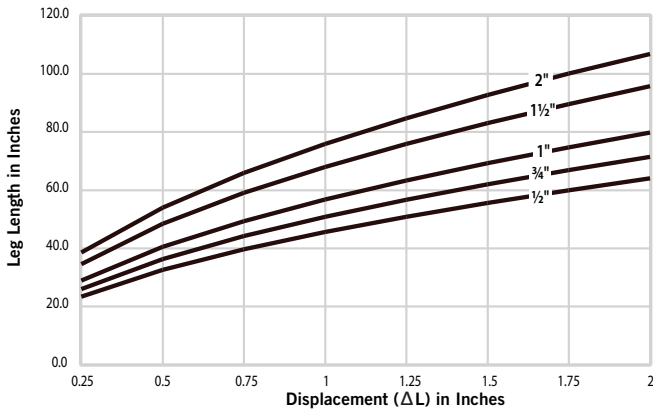


Thermal Expansion/Contraction

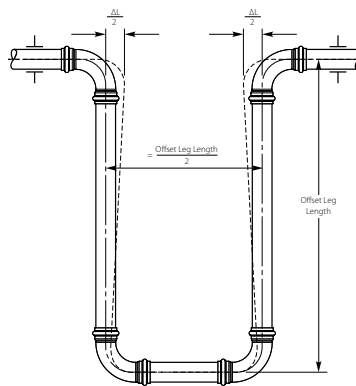
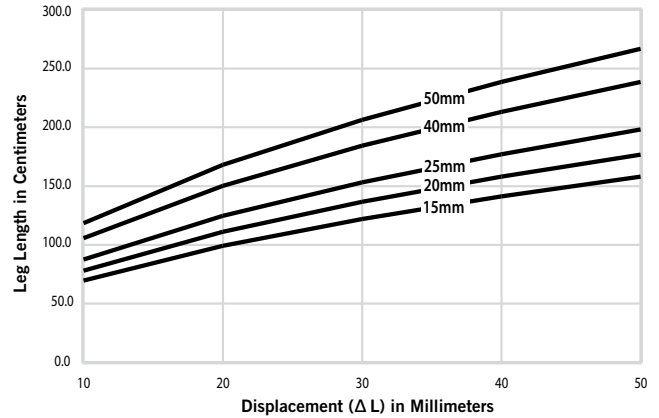


"Z-Bend" Expansion Compensator

"Z - Bend" Expansion Compensator

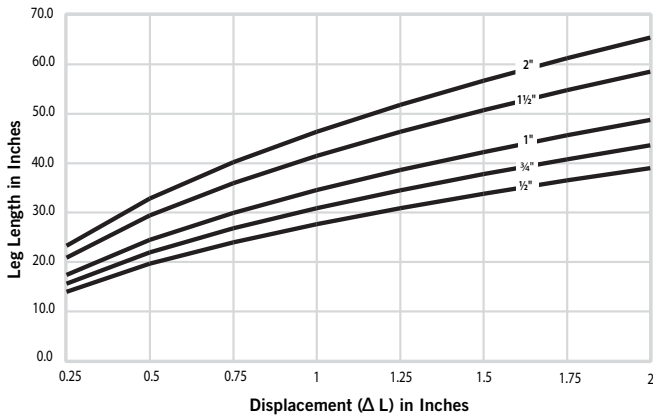


"Z - Bend" Expansion Compensator

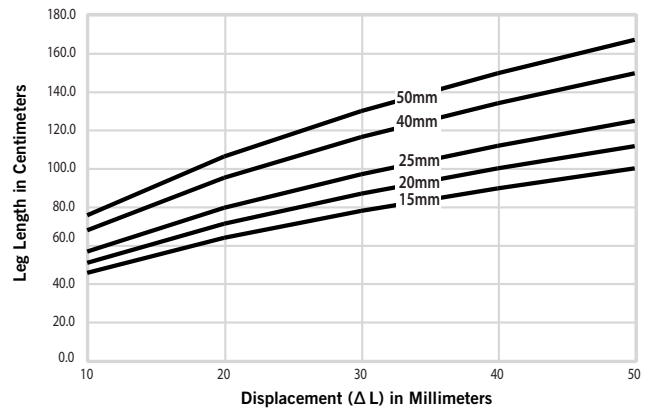


"U-Bend" Expansion Compensator

"Expansion Loop" Compensator



"Expansion Loop" Compensator



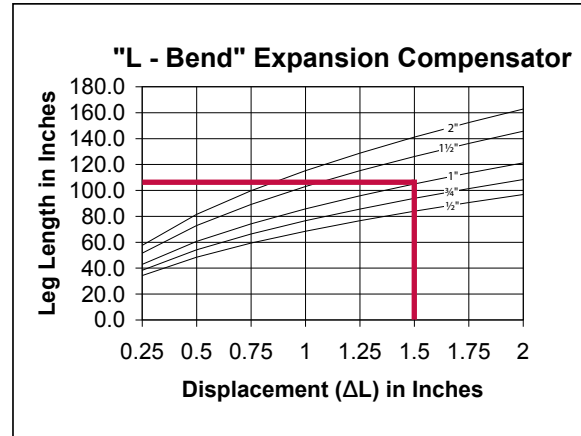
Thermal Expansion/Contraction

Examples:

L-Bend

A 1 1/2" diameter pipeline will have thermal growth of 1.50"/40mm (ΔL) towards the elbow as shown in the above Figure 1. What is the minimum offset leg length from the elbow to the pipe restriction for the "L-Bend" configuration?

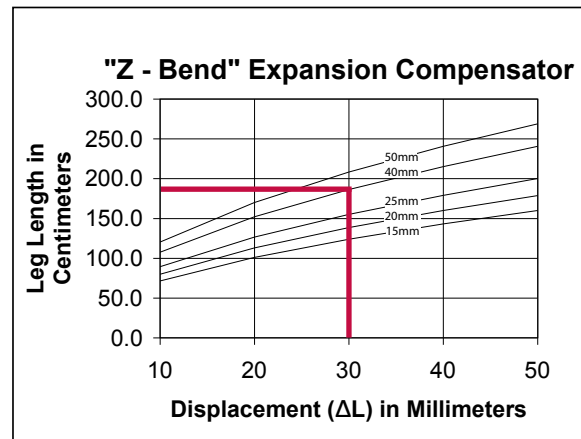
Use the "L-Bend" expansion compensator graph. Find the intersection of $\Delta L=1.50"/40mm$ (on the horizontal axis) where it crosses the 1 1/2" pipe curve. At that point, read the "Leg Length in Inches" (on the vertical axis) to determine the minimum offset leg length from the elbow to the pipe restriction. For a thermal growth of 1.50"/40mm of 1 1/2" diameter pipe in an "L-Bend" configuration, the minimum offset leg length should be 105"/2670mm.



Z-Bend

A 1.50"/40mm diameter pipeline will have thermal growth of 1.25"/30mm between two opposing anchors, however, there is a perpendicular offset designed within the piping system that may be used to accommodate the thermal growth of the main run of pipe. What is the minimum offset leg length required for this "Z-Bend" configuration to accommodate the 1.25"/30mm of thermal growth?

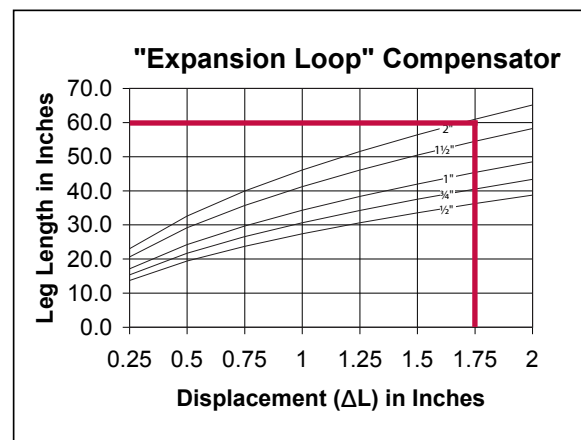
Use the "Z-Bend" expansion compensator graph. Find the intersection of $\Delta L=1.25"/30mm$ (on the horizontal axis) where it crosses the 1.50"/40mm pipe curve. At that point, read the "Leg Length in Centimeter" (on the vertical axis) to determine the minimum offset leg length. For a thermal growth of 1.25"/30mm of 1.50"/40mm diameter pipe in a "Z-Bend" configuration, the minimum offset leg length should be 7.25"/186cm.



Expansion Loop

A 2"/50mm diameter pipeline will have thermal growth of 1.75"/45mm between two opposing anchors. The configuration of the system is such that there are no changes in direction; straight pipe only between the anchors. To accommodate the thermal growth an expansion loop will be required. What is the minimum offset leg length required for this expansion loop to accommodate the 1.75"/45mm of thermal growth?

Use the "Expansion Loop" compensator graph. Find the intersection of $\Delta L=1.75"/45mm$ (on the horizontal axis) where it crosses the 2"/50mm pipe curve. At that point, read the "Leg Length in Inches" (on the vertical axis) to determine the minimum offset leg length of the expansion loop. For a thermal growth of 1.75"/45mm of 2"/50mm diameter pipe in an "L-Bend" configuration, the minimum offset leg length should be 61"/1550mm.



Vic-Press Tool

Vic-Press PFT510

- The PFT-510 Vic-Press tool is specifically designed to join Vic-Press components to Schedule 10S* stainless steel pipe.
 - * Can also be used for Schedule 5S pipe using Vic-Press components.
- Tool package includes one (1) Vic-Press PFT510 tool, two (2) 18V Lithium Ion batteries, one (1) battery charger, one (1) tool carrying case, one (1) jaw carrying case, one (1) ½"/15mm jaw, one (1) ¾"/20mm jaw, one (1) 1"/25mm jaw, one (1) 1½"/40mm hinged jaw, one (1) 2"/50mm hinged jaw, and one (1) adapter jaw, one (1) set of insertion gauges, one (1) cleaning brush, and one (1) marker.
- Jaws are included with every tool purchase.
- Vic-Press PFT510 is designed for industrial and trade use only

Capacity: ½"/15mm, ¾"/20mm, 1"/25mm, 1 ½"/40mm, 2"/50mm Schedule 10S stainless steel pipe

Power Charger Requirements: 110 volt/60 cycle/6.5 amp

Optional: 220 volt

Note: The Vic-Press for Schedule 10S System is not compatible with PFT505 and/or PFT509 tools/components. The Vic-Press Schedule 10S System requires the use of a Vic-Press FT510 tool package.



PFT510

Installation

Reference should always be made to the [I-P500 Vic-Press Installation Instructions](#) for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Trademarks

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