



Composites USA

Pipe Fitting Sheets

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Composites USA (CUSA) fabricates pipe and other fittings with “Plain” or “Flanged” ends to meet the attachment needs of your application. Flange and pipe thickness are designed to meet the pressure requirements specified. Table 1 shows the thicknesses required for pressures ranging from 25 psi to 150 psi.

Contact CUSA for thicknesses designed to meet your need.

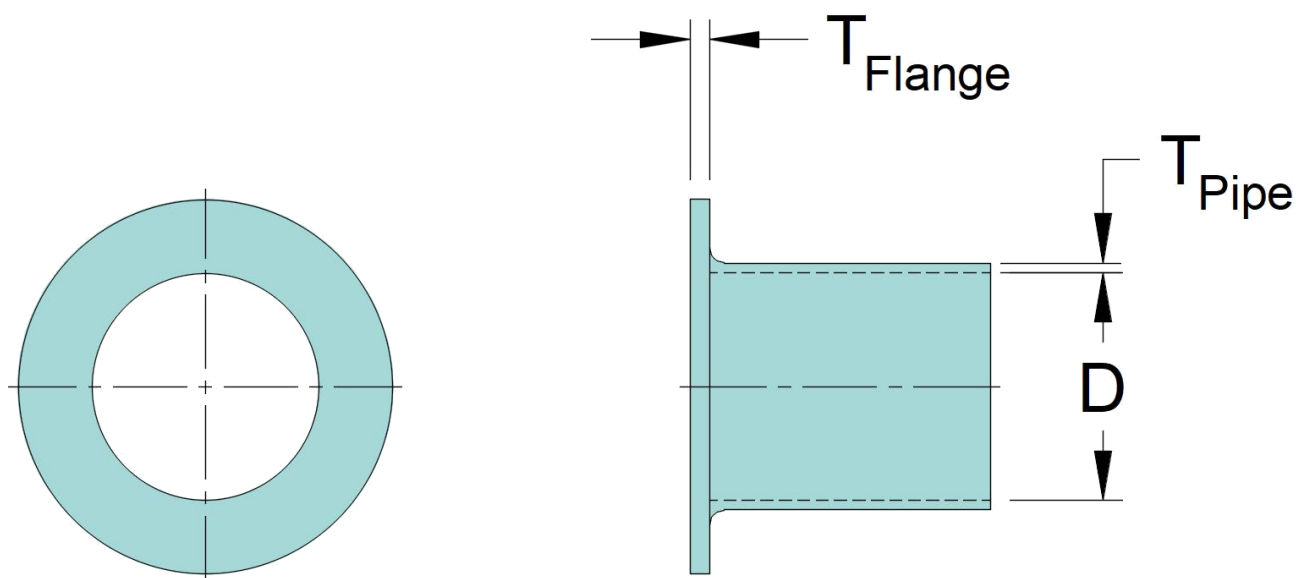


Table 1: Pipe and Flange thickness for varying pipe pressure applications.

Pipe ID	25 psi		50 psi		75psi		100 psi		125 psi		150 psi	
	T _{Pipe}	T _{Flange}	T _{Pipe}	T _{Flange}	T _{Pipe}	T _{Flange}	T _{Pipe}	T _{Flange}	T _{Pipe}	T _{Flange}	T _{Pipe}	T _{Flange}
	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
1-1/2	0.188	0.500	0.188	0.500	0.188	0.500	0.188	0.563	0.188	0.625	0.188	0.688
2	0.188	0.500	0.188	0.500	0.188	0.500	0.188	0.563	0.188	0.625	0.188	0.688
3	0.188	0.500	0.188	0.500	0.188	0.625	0.188	0.688	0.250	0.750	0.250	0.813
4	0.188	0.500	0.188	0.564	0.188	0.688	0.250	0.813	0.250	0.875	0.250	0.938
6	0.188	0.500	0.188	0.625	0.250	0.750	0.250	0.875	0.313	1.000	0.375	1.063
8	0.188	0.564	0.250	0.750	0.250	0.875	0.313	1.000	0.375	1.125	0.438	1.250
10	0.188	0.688	0.250	0.875	0.313	1.063	0.375	1.188	0.438	1.313	0.500	1.438
12	0.188	0.750	0.250	1.000	0.375	1.250	0.438	1.438	0.500	1.625	0.625	1.750
14	0.250	0.813	0.313	1.063	0.375	1.313	0.500	1.500	0.625	1.750	0.750	1.875
16	0.250	0.875	0.313	1.188	0.438	1.438	0.563	1.625	0.688	1.875	0.875	2.125
18	0.250	0.938	0.375	1.250	0.500	1.500	0.625	1.750	0.750	2.000	1.000	2.250
20	0.250	1.000	0.375	1.313	0.500	1.625	0.688	1.875	0.875	2.125	1.000	2.500
24	0.250	1.125	0.438	1.500	0.625	1.875	0.813	2.250	1.000	2.500	1.250	2.750
30	0.313	1.375	0.500	1.875	0.750	2.250	1.000	2.625	1.250	2.875	1.500	3.000
36	0.375	1.750	0.625	2.000	0.938	2.625	1.250	3.000	1.500	3.250	1.813	3.438
42	0.375	2.000	0.750	2.250	1.063	3.000	1.438	3.250	1.750	3.438	2.125	3.813
48	0.500	2.500	1.000	2.938	1.250	3.250	1.625	3.438	2.000	3.813	2.438	4.250

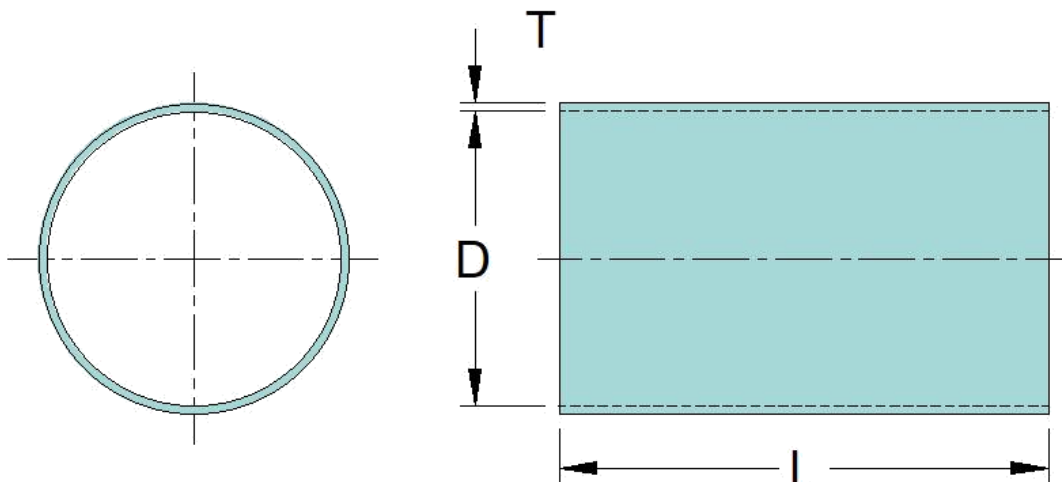
Fitting: **Round Pipe**

Fitting No: **100**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#100: "D" / "L"**
#100 F x P: "D" / "L" for flange by plain end
#100 F x F: "D" / "L" for flange by flange end


D	T @ 50 psi	T @ 150 psi	L
inches	inches	inches	inches
1-1/2	0.188	0.188	120
2	0.188	0.188	240
3	0.188	0.250	240
4	0.188	0.250	240
6	0.188	0.375	240
8	0.250	0.438	240
10	0.250	0.500	240
12	0.250	0.625	240
14	0.313	0.750	240

D	T @ 50 psi	T @ 150 psi	L
inches	inches	inches	inches
16	0.313	0.875	240
18	0.375	1.000	240
20	0.375	1.000	240
24	0.438	1.250	240
30	0.500	1.500	240
36	0.625	1.813	240
42	0.750	2.125	240
48	1.000	2.438	240

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Product Class: Pipe

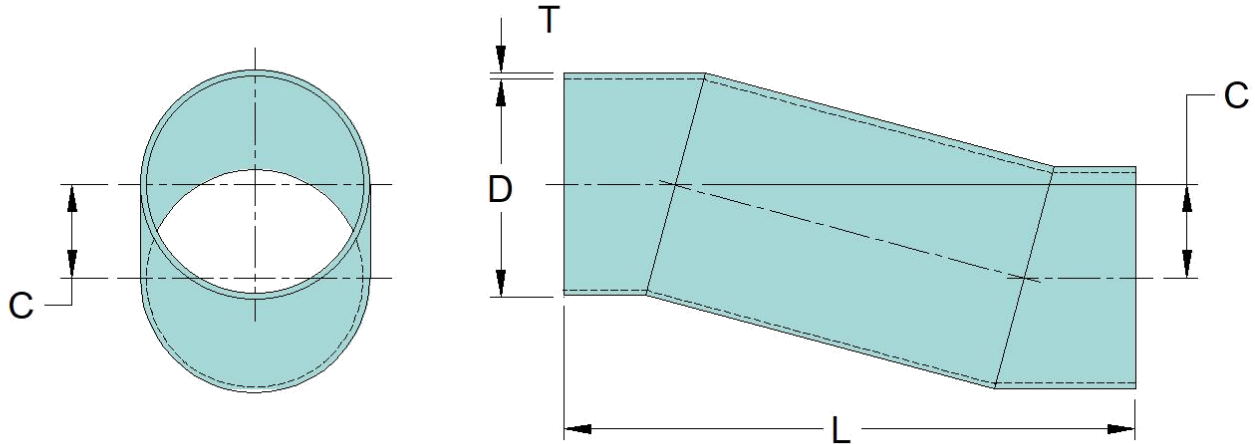
Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#101: "L" / "C"**

#101 F x P: "L" / "C" for flange by plain end

#101 F x F: "L" / "C" for flange by flange end



D	L	C
inches	inches	inches
Specify	Specify	Specify

D	L	C
inches	inches	inches

Notes:

Notes:

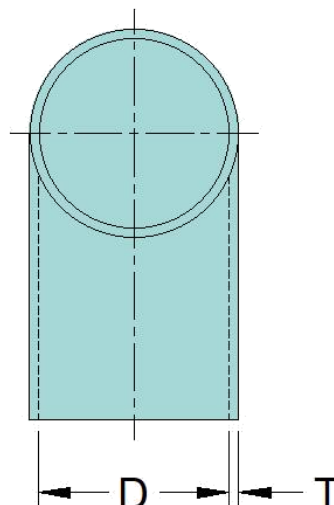
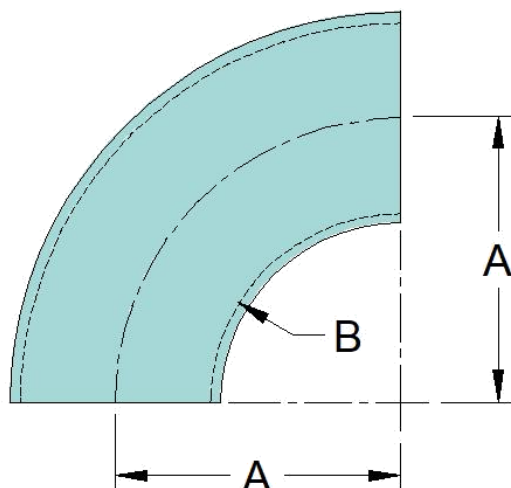
- 1) Custom lengths available
- 2) Contact CUSA for Thickness "T"

Fitting: **90° Standard Long Radius Sweep Elbow**Fitting No: **110**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#110: "D"**#110 F x P: **"D"** for flange by plain end#110 F x F: **"D"** for flange by flange end

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

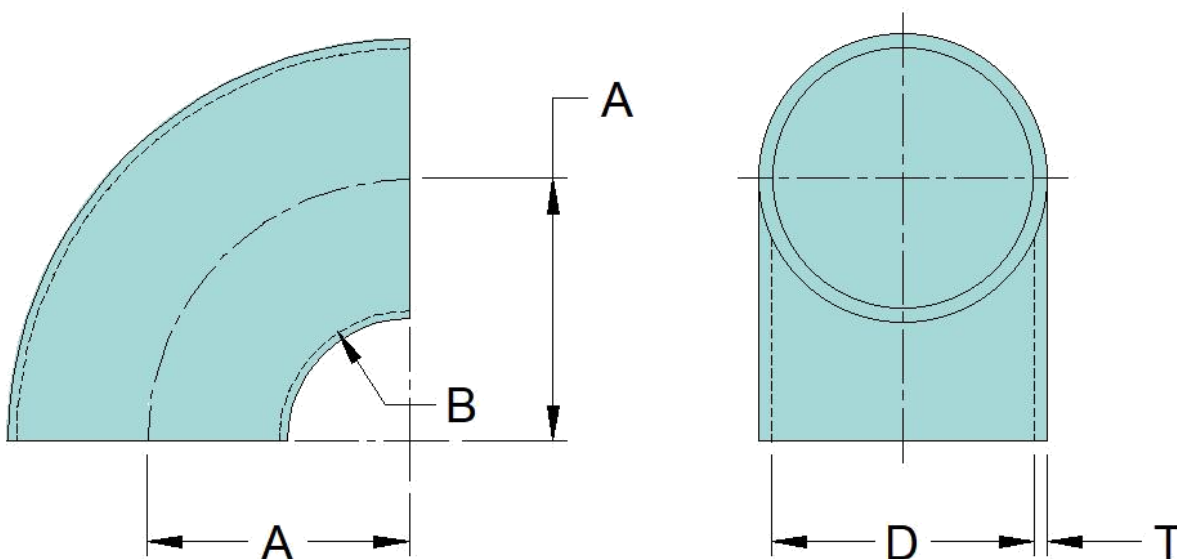
- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Short Radius Sweep Elbow**Fitting No: **111**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#111: "D"**#111 F x P: **"D"** for flange by plain end#111 F x F: **"D"** for flange by flange end

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Product Class: Pipe

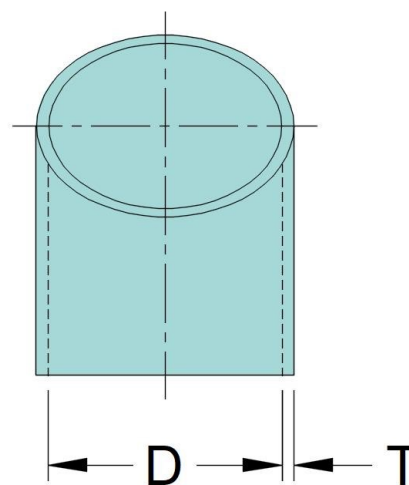
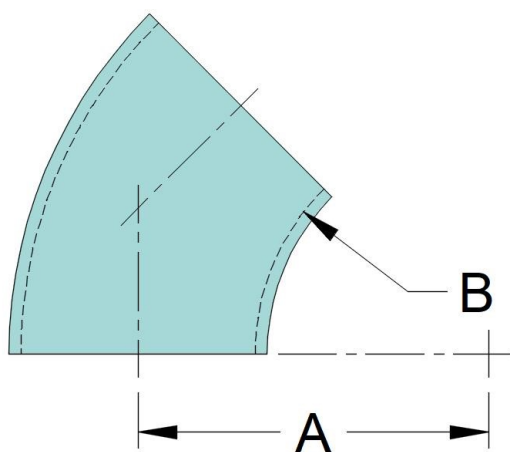
Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: #115: "D"

#115 F x P: "D" for flange by plain end

#115 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 45° Short Radius Sweep Elbow

Fitting No: **116**

Product Class: Pipe

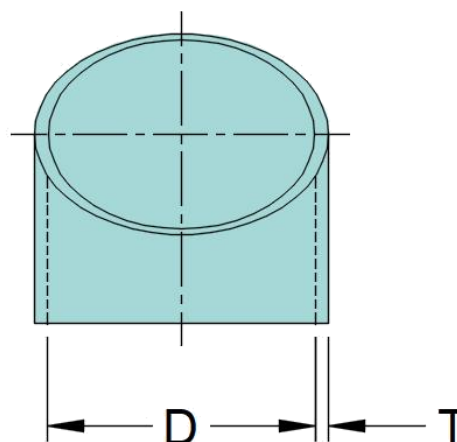
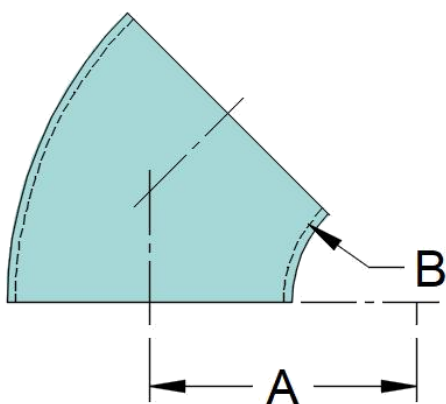
Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#116: "D"**

#116 F x P: "D" for flange by plain end

#116 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **22.5° Standard Long Radius Sweep Elbow** Fitting No: **118**

Product Class: Pipe

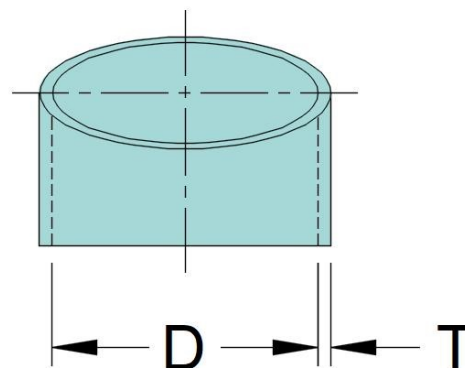
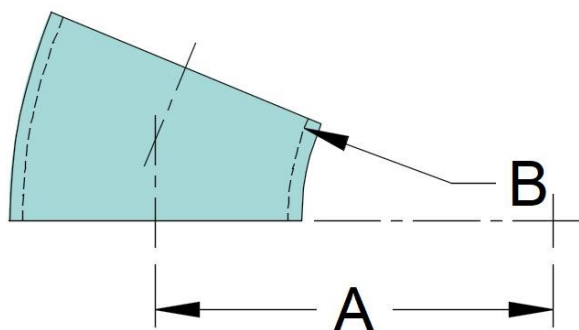
Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#118: "D"**

#118 F x P: "D" for flange by plain end

#118 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

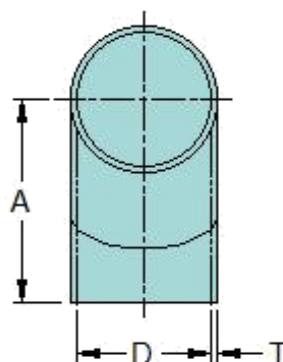
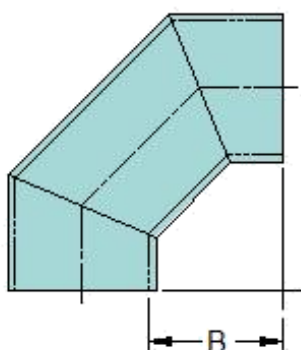
- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Long Radius 3-Gore Mitered Elbow**Fitting No: **120**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#120: "D"****#120 F x P: "D" for flange by plain end****#120 F x F: "D" for flange by flange end**

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Product Class: Pipe

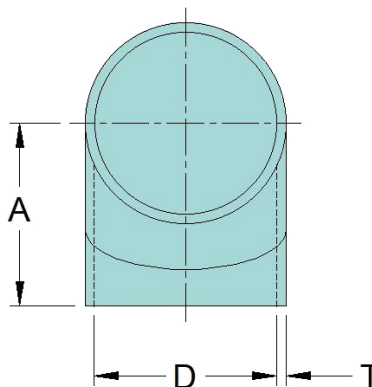
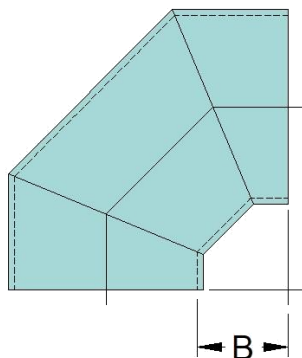
Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#121: "D"**

#121 F x P: "D" for flange by plain end

#121 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

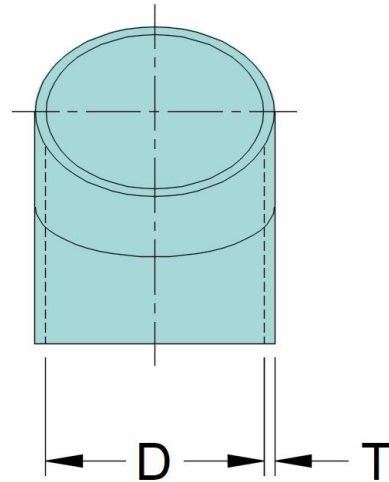
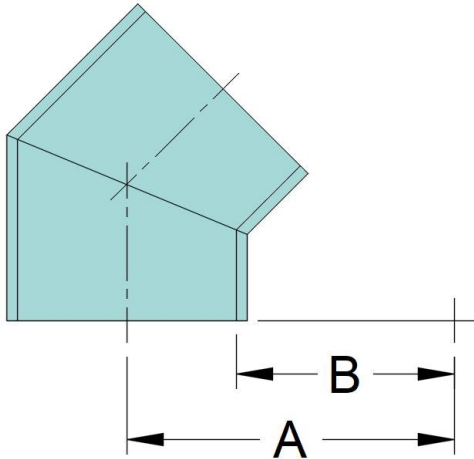
- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Long Radius 2-Gore Mitered Elbow**Fitting No: **125**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#125: "D"****#125 F x P: "D" for flange by plain end****#125 F x F: "D" for flange by flange end**

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Product Class: Pipe

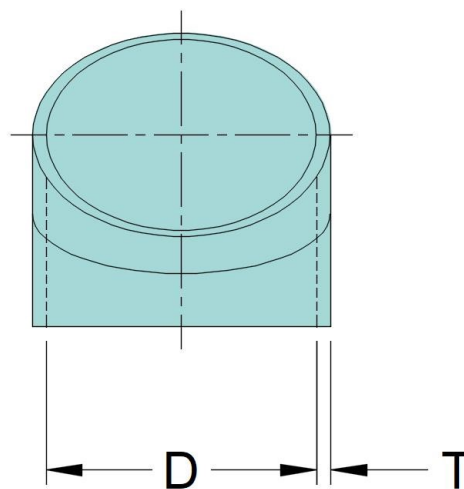
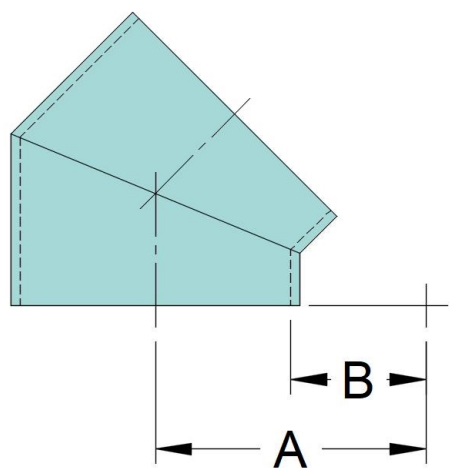
Resin Types: Vinylester such as Derethane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#126: "D"**

#126 F x P: "D" for flange by plain end

#126 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 90° Long Radius 5-Gore Mitered Elbow

Fitting No: **130**

Product Class: Pipe

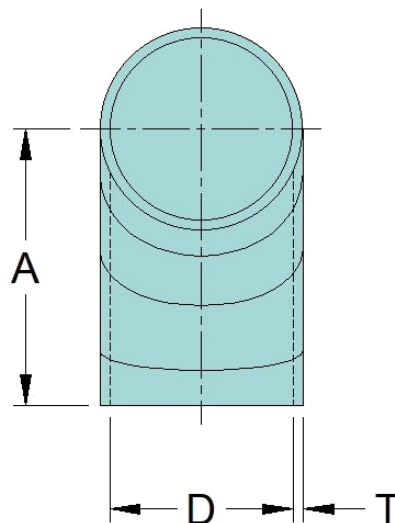
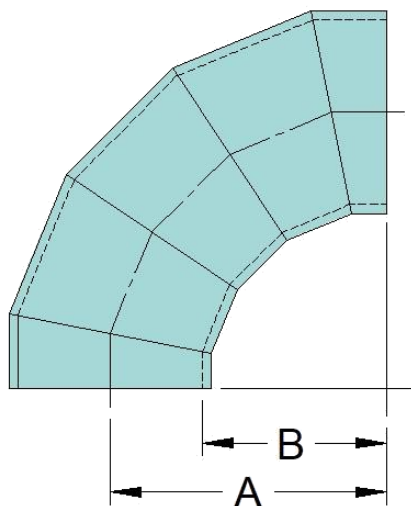
Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: #130: "D"

#130 F x P: "D" for flange by plain end

#130 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Product Class: Pipe

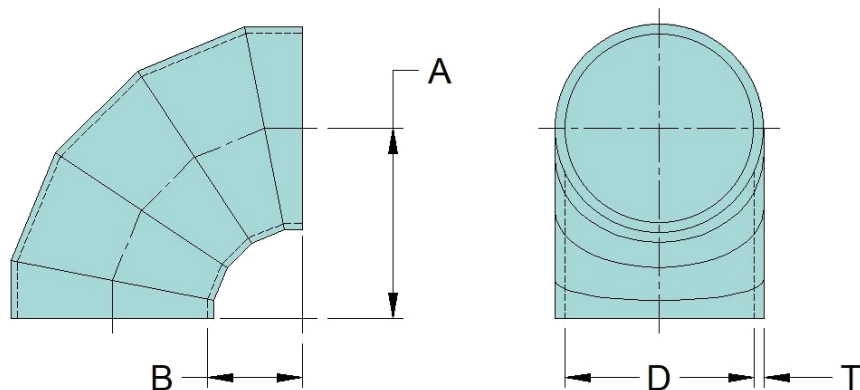
Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#131: "D"**

#131 F x P: "D" for flange by plain end

#131 F x F: "D" for flange by flange end



D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

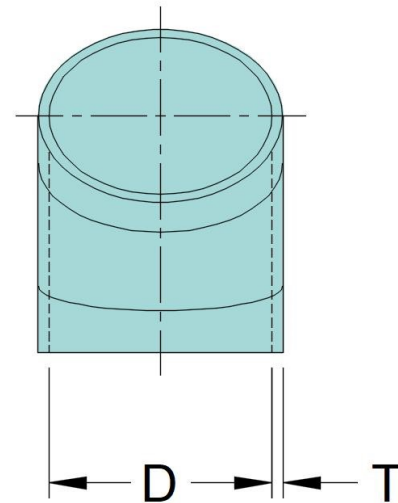
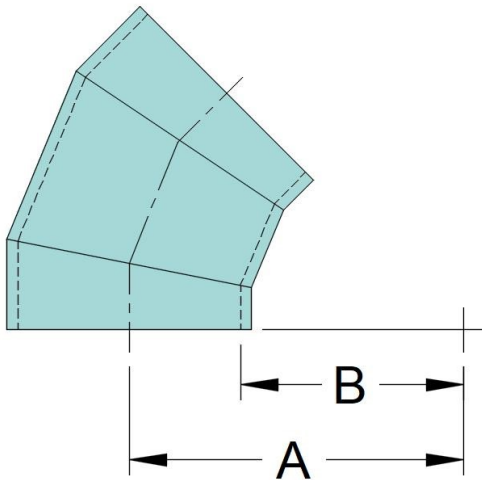
- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Long Radius 3-Gore Mitered Elbow**Fitting No: **135**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#135: "D"****#135 F x P: "D" for flange by plain end****#135 F x F: "D" for flange by flange end**

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	2.3	1.5
2	0.188	0.188	3.0	2.0
3	0.188	0.250	4.5	3.0
4	0.188	0.250	6.0	4.0
6	0.188	0.375	9.0	6.0
8	0.250	0.438	12.0	8.0
10	0.250	0.500	15.0	10.0
12	0.250	0.625	18.0	12.0
14	0.313	0.750	21.0	14.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	24.0	16.0
18	0.375	1.000	27.0	18.0
20	0.375	1.000	30.0	20.0
24	0.438	1.250	36.0	24.0
30	0.500	1.500	45.0	30.0
36	0.625	1.813	54.0	36.0
42	0.750	2.125	63.0	42.0
48	1.000	2.438	72.0	48.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)



Fitting:

45° Short Radius 3-Gore Mitered Elbow

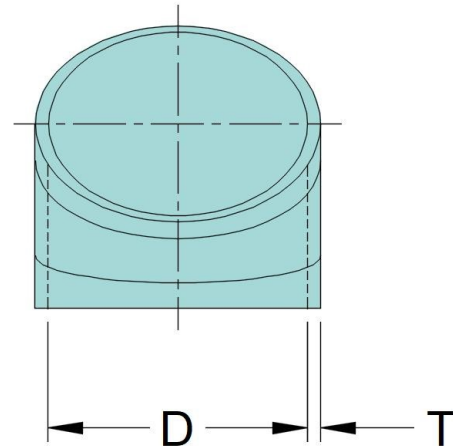
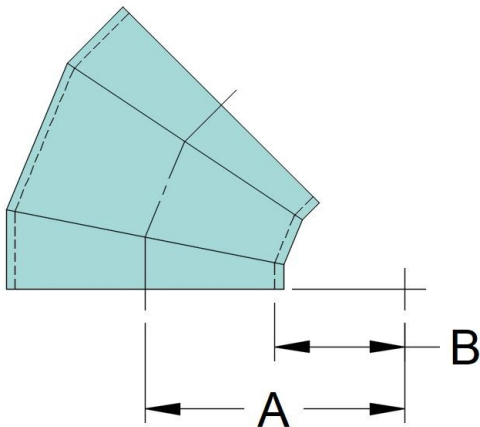
Fitting No:

136

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#136: "D"****#136 F x P: "D" for flange by plain end****#136 F x F: "D" for flange by flange end**

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
1-1/2	0.188	0.188	1.5	0.8
2	0.188	0.188	2.0	1.0
3	0.188	0.250	3.0	1.5
4	0.188	0.250	4.0	2.0
6	0.188	0.375	6.0	3.0
8	0.250	0.438	8.0	4.0
10	0.250	0.500	10.0	5.0
12	0.250	0.625	12.0	6.0
14	0.313	0.750	14.0	7.0

D	T @ 50 psi	T @ 150 psi	A	B
inches	inches	inches	inches	inches
16	0.313	0.875	16.0	8.0
18	0.375	1.000	18.0	9.0
20	0.375	1.000	20.0	10.0
24	0.438	1.250	24.0	12.0
30	0.500	1.500	30.0	15.0
36	0.625	1.813	36.0	18.0
42	0.750	2.125	42.0	21.0
48	1.000	2.438	48.0	24.0

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **11.4° (Inc Angle) 5:1 Concentric Reducer** Fitting No: **160-11**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

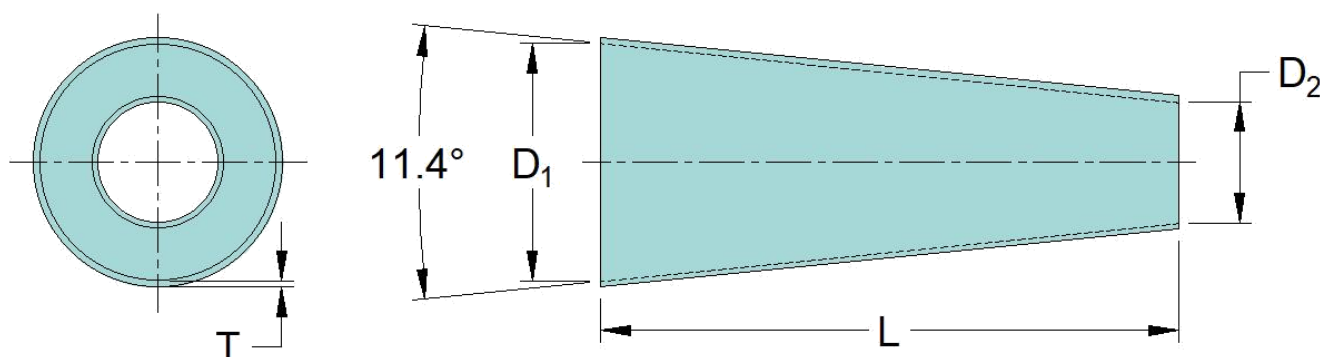
- Contact CUSA for resin recommendations -

Order as: **#160 - 11 - "D1" x "D2"**

#160 - 11 - "D1" x "D2" - F x P (Flanged on D1)

#160 - 11 - "D1" x "D2" - P x F (Flanged on D2)

#160 - 11 - "D1" x "D2" - F x F (Flanged both ends)



D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	5 x (D1 - D2)	0.188	0.188
2	< D1	5 x (D1 - D2)	0.188	0.188
3	< D1	5 x (D1 - D2)	0.188	0.250
4	< D1	5 x (D1 - D2)	0.188	0.250
6	< D1	5 x (D1 - D2)	0.188	0.375
8	< D1	5 x (D1 - D2)	0.250	0.438
10	< D1	5 x (D1 - D2)	0.250	0.500
12	< D1	5 x (D1 - D2)	0.250	0.625
14	< D1	5 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	5 x (D1 - D2)	0.313	0.875
18	< D1	5 x (D1 - D2)	0.375	1.000
20	< D1	5 x (D1 - D2)	0.375	1.000
24	< D1	5 x (D1 - D2)	0.438	1.250
30	< D1	5 x (D1 - D2)	0.500	1.500
36	< D1	5 x (D1 - D2)	0.625	1.813
42	< D1	5 x (D1 - D2)	0.750	2.125
48	< D1	5 x (D1 - D2)	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **22° (Inc Angle) 2.5:1 Concentric Reducer** Fitting No: **160-22**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

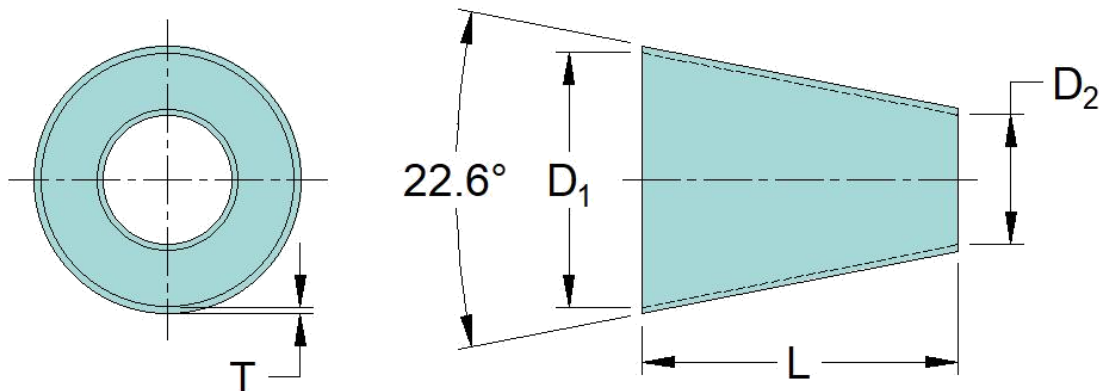
- Contact CUSA for resin recommendations -

Order as: **#160 - 22 - "D1" x "D2"**

#160 - 22 - "D1" x "D2" - F x P (Flanged on D1)

#160 - 22 - "D1" x "D2" - P x F (Flanged on D2)

#160 - 22 - "D1" x "D2" - F x F (Flanged both ends)



D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	2.5 x (D1 - D2)	0.188	0.188
2	< D1	2.5 x (D1 - D2)	0.188	0.188
3	< D1	2.5 x (D1 - D2)	0.188	0.250
4	< D1	2.5 x (D1 - D2)	0.188	0.250
6	< D1	2.5 x (D1 - D2)	0.188	0.375
8	< D1	2.5 x (D1 - D2)	0.250	0.438
10	< D1	2.5 x (D1 - D2)	0.250	0.500
12	< D1	2.5 x (D1 - D2)	0.250	0.625
14	< D1	2.5 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	2.5 x (D1 - D2)	0.313	0.875
18	< D1	2.5 x (D1 - D2)	0.375	1.000
20	< D1	2.5 x (D1 - D2)	0.375	1.000
24	< D1	2.5 x (D1 - D2)	0.438	1.250
30	< D1	2.5 x (D1 - D2)	0.500	1.500
36	< D1	2.5 x (D1 - D2)	0.625	1.813
42	< D1	2.5 x (D1 - D2)	0.750	2.125
48	< D1	2.5 x (D1 - D2)	1.000	2.438

Notes:

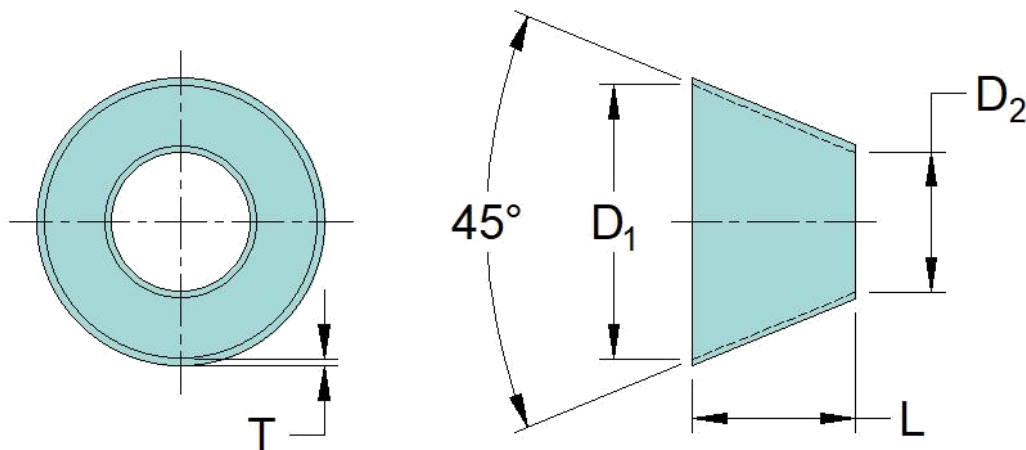
- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° (Inc Angle) 1:1 Concentric Reducer**Fitting No: **160-45**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#160 - 45 - "D1" x "D2"****#160 - 45 - "D1" x "D2" - F x P (Flanged on D1)****#160 - 45 - "D1" x "D2" - P x F (Flanged on D2)****#160 - 45 - "D1" x "D2" - F x F (Flanged both ends)**

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	(D1 - D2)	0.188	0.188
2	< D1	(D1 - D2)	0.188	0.188
3	< D1	(D1 - D2)	0.188	0.250
4	< D1	(D1 - D2)	0.188	0.250
6	< D1	(D1 - D2)	0.188	0.375
8	< D1	(D1 - D2)	0.250	0.438
10	< D1	(D1 - D2)	0.250	0.500
12	< D1	(D1 - D2)	0.250	0.625
14	< D1	(D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	(D1 - D2)	0.313	0.875
18	< D1	(D1 - D2)	0.375	1.000
20	< D1	(D1 - D2)	0.375	1.000
24	< D1	(D1 - D2)	0.438	1.250
30	< D1	(D1 - D2)	0.500	1.500
36	< D1	(D1 - D2)	0.625	1.813
42	< D1	(D1 - D2)	0.750	2.125
48	< D1	(D1 - D2)	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **60° (Inc Angle) 0.86:1 Concentric Reducer** Fitting No: **160-60**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

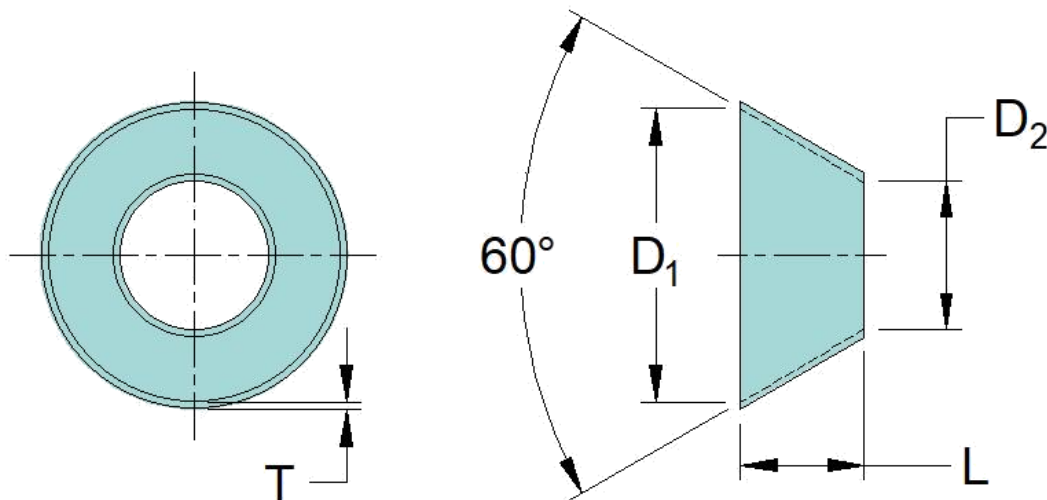
- Contact CUSA for resin recommendations -

Order as: **#160 - 60 - "D1" x "D2"**

#160 - 60 - "D1" x "D2" - F x P (Flanged on D1)

#160 - 60 - "D1" x "D2" - P x F (Flanged on D2)

#160 - 60 - "D1" x "D2" - F x F (Flanged both ends)



D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	0.86 x (D1 - D2)	0.188	0.188
2	< D1	0.86 x (D1 - D2)	0.188	0.188
3	< D1	0.86 x (D1 - D2)	0.188	0.250
4	< D1	0.86 x (D1 - D2)	0.188	0.250
6	< D1	0.86 x (D1 - D2)	0.188	0.375
8	< D1	0.86 x (D1 - D2)	0.250	0.438
10	< D1	0.86 x (D1 - D2)	0.250	0.500
12	< D1	0.86 x (D1 - D2)	0.250	0.625
14	< D1	0.86 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	0.86 x (D1 - D2)	0.313	0.875
18	< D1	0.86 x (D1 - D2)	0.375	1.000
20	< D1	0.86 x (D1 - D2)	0.375	1.000
24	< D1	0.86 x (D1 - D2)	0.438	1.250
30	< D1	0.86 x (D1 - D2)	0.500	1.500
36	< D1	0.86 x (D1 - D2)	0.625	1.813
42	< D1	0.86 x (D1 - D2)	0.750	2.125
48	< D1	0.86 x (D1 - D2)	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° (Inc Angle) 0.5:1 Concentric Reducer** Fitting No: **160-90**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

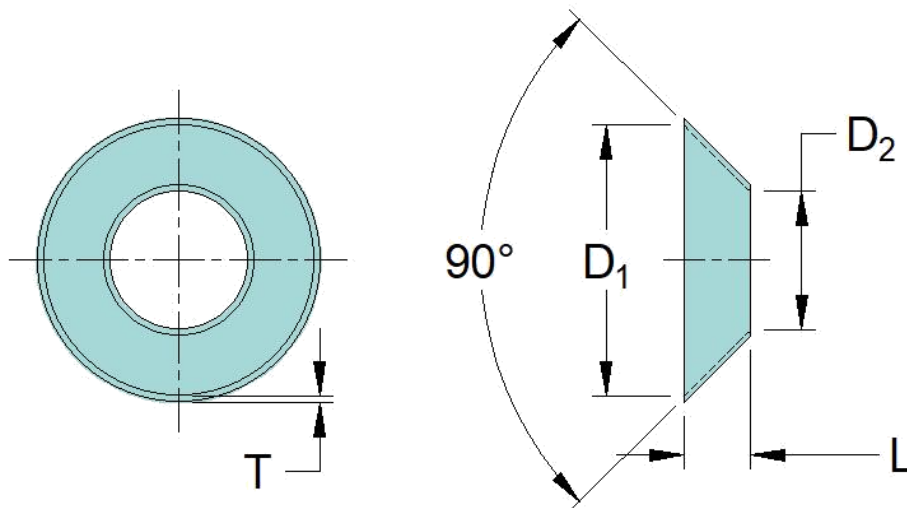
- Contact CUSA for resin recommendations -

Order as: **#160 - 90 - "D1" x "D2"**

#160 - 90 - "D1" x "D2" - F x P (Flanged on D1)

#160 - 90 - "D1" x "D2" - P x F (Flanged on D2)

#160 - 90 - "D1" x "D2" - F x F (Flanged both ends)



D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	0.5 x (D1 - D2)	0.188	0.188
2	< D1	0.5 x (D1 - D2)	0.188	0.188
3	< D1	0.5 x (D1 - D2)	0.188	0.250
4	< D1	0.5 x (D1 - D2)	0.188	0.250
6	< D1	0.5 x (D1 - D2)	0.188	0.375
8	< D1	0.5 x (D1 - D2)	0.250	0.438
10	< D1	0.5 x (D1 - D2)	0.250	0.500
12	< D1	0.5 x (D1 - D2)	0.250	0.625
14	< D1	0.5 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	0.5 x (D1 - D2)	0.313	0.875
18	< D1	0.5 x (D1 - D2)	0.375	1.000
20	< D1	0.5 x (D1 - D2)	0.375	1.000
24	< D1	0.5 x (D1 - D2)	0.438	1.250
30	< D1	0.5 x (D1 - D2)	0.500	1.500
36	< D1	0.5 x (D1 - D2)	0.625	1.813
42	< D1	0.5 x (D1 - D2)	0.750	2.125
48	< D1	0.5 x (D1 - D2)	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **11.4° (Inc Angle) 5:1 Eccentric Reducer**

Fitting No: **165-11**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

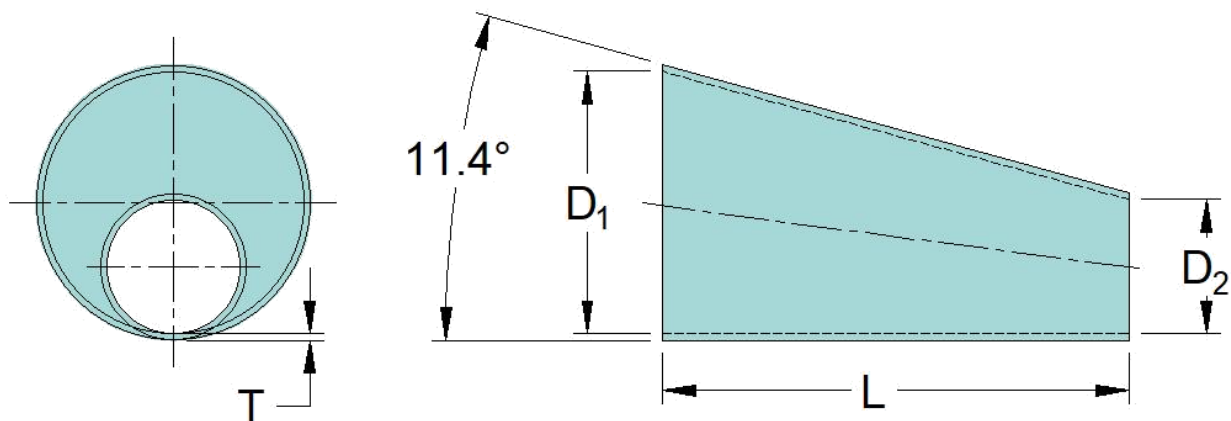
- Contact CUSA for resin recommendations -

Order as: **#165 - 11 - "D1" x "D2"**

#165 - 11 - "D1" x "D2" - F x P (Flanged on D1)

#165 - 11 - "D1" x "D2" - P x F (Flanged on D2)

#165 - 11 - "D1" x "D2" - F x F (Flanged both ends)



D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	5 x (D1 - D2)	0.188	0.188
2	< D1	5 x (D1 - D2)	0.188	0.188
3	< D1	5 x (D1 - D2)	0.188	0.250
4	< D1	5 x (D1 - D2)	0.188	0.250
6	< D1	5 x (D1 - D2)	0.188	0.375
8	< D1	5 x (D1 - D2)	0.250	0.438
10	< D1	5 x (D1 - D2)	0.250	0.500
12	< D1	5 x (D1 - D2)	0.250	0.625
14	< D1	5 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	5 x (D1 - D2)	0.313	0.875
18	< D1	5 x (D1 - D2)	0.375	1.000
20	< D1	5 x (D1 - D2)	0.375	1.000
24	< D1	5 x (D1 - D2)	0.438	1.250
30	< D1	5 x (D1 - D2)	0.500	1.500
36	< D1	5 x (D1 - D2)	0.625	1.813
42	< D1	5 x (D1 - D2)	0.750	2.125
48	< D1	5 x (D1 - D2)	1.000	2.438

Notes:

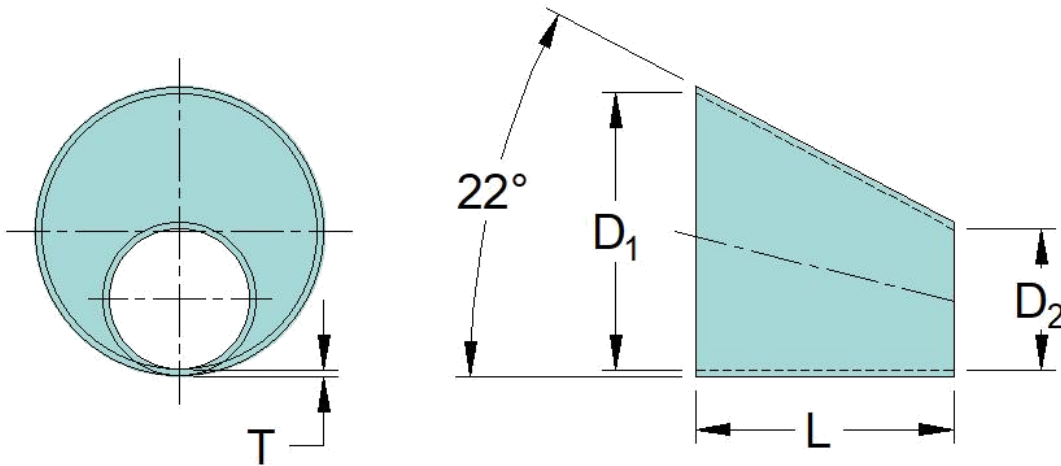
- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **22.6° (Inc Angle) 2.5:1 Eccentric Reducer**Fitting No: **165-22**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#165 - 22 - "D1" x "D2"****#165 - 22 - "D1" x "D2" - F x P (Flanged on D1)****#165 - 22 - "D1" x "D2" - P x F (Flanged on D2)****#165 - 22 - "D1" x "D2" - F x F (Flanged both ends)**

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	< D1	2.5 x (D1 - D2)	0.188	0.188
2	< D1	2.5 x (D1 - D2)	0.188	0.188
3	< D1	2.5 x (D1 - D2)	0.188	0.250
4	< D1	2.5 x (D1 - D2)	0.188	0.250
6	< D1	2.5 x (D1 - D2)	0.188	0.375
8	< D1	2.5 x (D1 - D2)	0.250	0.438
10	< D1	2.5 x (D1 - D2)	0.250	0.500
12	< D1	2.5 x (D1 - D2)	0.250	0.625
14	< D1	2.5 x (D1 - D2)	0.313	0.750

D ₁	D ₂	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	< D1	2.5 x (D1 - D2)	0.313	0.875
18	< D1	2.5 x (D1 - D2)	0.375	1.000
20	< D1	2.5 x (D1 - D2)	0.375	1.000
24	< D1	2.5 x (D1 - D2)	0.438	1.250
30	< D1	2.5 x (D1 - D2)	0.500	1.500
36	< D1	2.5 x (D1 - D2)	0.625	1.813
42	< D1	2.5 x (D1 - D2)	0.750	2.125
48	< D1	2.5 x (D1 - D2)	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **Standard Tee**

Fitting No: **170**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

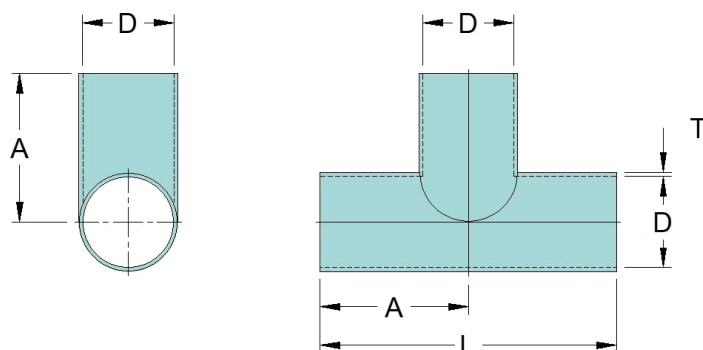
Order as: **#170 - "D"**

#170 - PPF - "D" for one end (Branch) flanged

#170 - FFP - "D" for two ends (Run, Run) flanged

#170 - FFF - "D" for all flanged ends

Show "F" in the desired flange location



D	A	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	6	12	0.188	0.188
2	6	12	0.188	0.188
3	6	12	0.188	0.250
4	7	14	0.188	0.250
6	7	14	0.188	0.375
8	8	16	0.250	0.438
10	8	16	0.250	0.500
12	10	20	0.250	0.625
14	10	20	0.313	0.750

D	A	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	24	48	0.313	0.875
18	26	52	0.375	1.000
20	28	56	0.375	1.000
24	30	60	0.438	1.250
30	31	62	0.500	1.500
36	32	64	0.625	1.813
42	33	66	0.750	2.125
48	36	72	1.000	2.438

Notes:

1) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

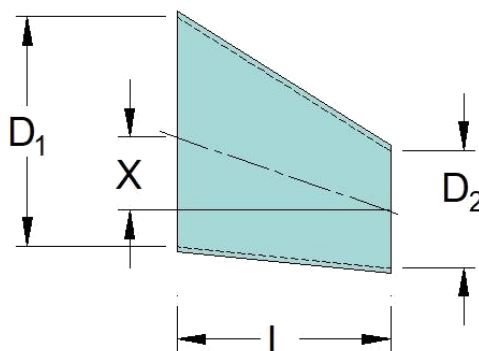
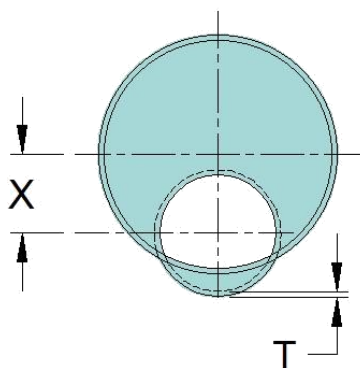
Fitting: **Offset Reducer, Round to Round**

Fitting No: **169**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#169 - "D1" x "D2" x "L" x "X"**
#169 - "D1" x "D2" x "L" x "X" - F x P (Flanged on D1)
#169 - "D1" x "D2" x "L" x "X" - P x F (Flanged on D2)
#169 - "D1" x "D2" x "L" x "X" - F x F (Flanged both ends)


D ₁	D ₂	X	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
1-1/2	< D1	Specify	Specify	0.188	0.188
2	< D1	Specify	Specify	0.188	0.188
3	< D1	Specify	Specify	0.188	0.250
4	< D1	Specify	Specify	0.188	0.250
6	< D1	Specify	Specify	0.188	0.375
8	< D1	Specify	Specify	0.250	0.438
10	< D1	Specify	Specify	0.250	0.500
12	< D1	Specify	Specify	0.250	0.625
14	< D1	Specify	Specify	0.313	0.750

D ₁	D ₂	X	L	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
16	< D1	Specify	Specify	0.313	0.875
18	< D1	Specify	Specify	0.375	1.000
20	< D1	Specify	Specify	0.375	1.000
24	< D1	Specify	Specify	0.438	1.250
30	< D1	Specify	Specify	0.500	1.500
36	< D1	Specify	Specify	0.625	1.813
42	< D1	Specify	Specify	0.750	2.125
48	< D1	Specify	Specify	1.000	2.438

Notes:

- 1) Thickness "T" is based on D₁
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 90° Bonded Reducing Tee

Fitting No: **172**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

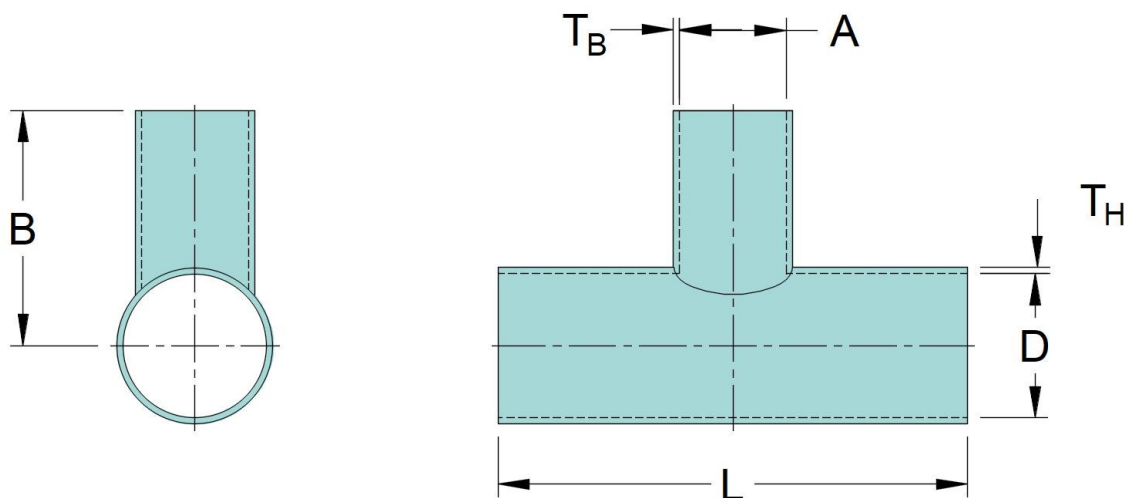
- Contact CUSA for resin recommendations -

Order as: #172 - "D" - "A"

#172 - PPF - "D" - "A" for one end (Branch) flanged

#172 - FFP - "D" - "A" for two ends (Run, Run) flanged

#172 - FFF - "D" - "A" for all flanged ends



D	A	B	L
inches	inches	inches	inches
1-1/2	≤ D	6 + D/2	A + 12
2	≤ D	6 + D/2	A + 12
3	≤ D	6 + D/2	A + 12
4	≤ D	6 + D/2	A + 12
6	≤ D	6 + D/2	A + 12
8	≤ D	6 + D/2	A + 12
10	≤ D	6 + D/2	A + 12
12	≤ D	6 + D/2	A + 12
14	≤ D	6 + D/2	A + 12

D	A	B	L
inches	inches	inches	inches
16	≤ D	6 + D/2	A + 12
18	≤ D	6 + D/2	A + 12
20	≤ D	6 + D/2	A + 12
24	≤ D	6 + D/2	A + 12
30	≤ D	6 + D/2	A + 12
36	≤ D	6 + D/2	A + 12
42	≤ D	6 + D/2	A + 12
48	≤ D	6 + D/2	A + 12

Notes:

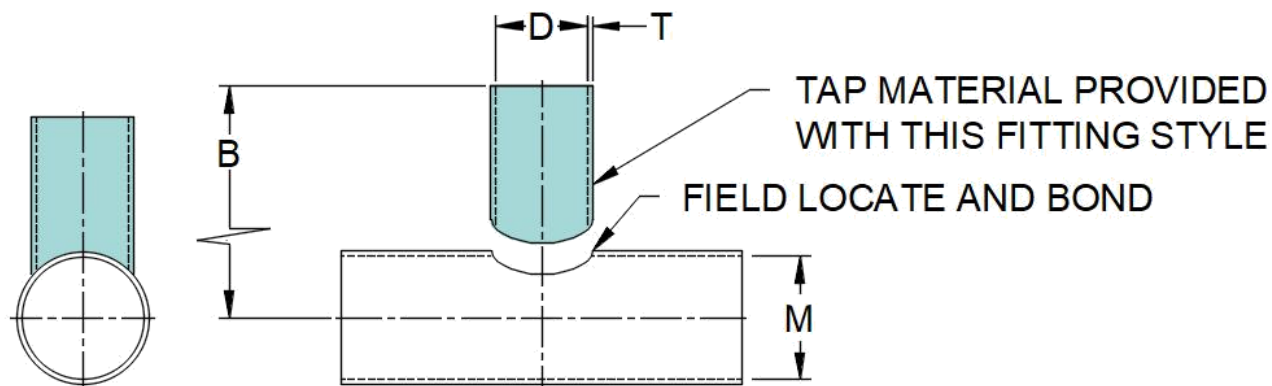
- 1) Thickness "T_H" is based on D, Thickness "T_B" is based on A
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Pre-Configured Tap**Fitting No: **173**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#173 - PT - "D" - "M"****#173 - PTF - "D" - "M" (Flange on tap)**

D	M	B	T @	T @
inches	inches	inches	50 psi	150 psi
1-1/2	$\geq D$	$6 + M/2$	0.188	0.188
2	$\geq D$	$6 + M/2$	0.188	0.188
3	$\geq D$	$6 + M/2$	0.188	0.250
4	$\geq D$	$6 + M/2$	0.188	0.250
6	$\geq D$	$6 + M/2$	0.188	0.375
8	$\geq D$	$6 + M/2$	0.250	0.438
10	$\geq D$	$6 + M/2$	0.250	0.500
12	$\geq D$	$6 + M/2$	0.250	0.625
14	$\geq D$	$6 + M/2$	0.313	0.750

D	M	B	T @	T @
inches	inches	inches	50 psi	150 psi
16	$\geq D$	$6 + M/2$	0.313	0.875
18	$\geq D$	$6 + M/2$	0.375	1.000
20	$\geq D$	$6 + M/2$	0.375	1.000
24	$\geq D$	$6 + M/2$	0.438	1.250
30	$\geq D$	$6 + M/2$	0.500	1.500
36	$\geq D$	$6 + M/2$	0.625	1.813
42	$\geq D$	$6 + M/2$	0.750	2.125
48	$\geq D$	$6 + M/2$	1.000	2.438

Notes:

- 1) "B" shown is standard, custom lengths available.
- 2) Tap Material is pre-cut in the factory, or pre-configured, to the customer specified header diameter.
- 3) Thickness "T" is based on D
- 4) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Saddle Tap**

Fitting No: **174**

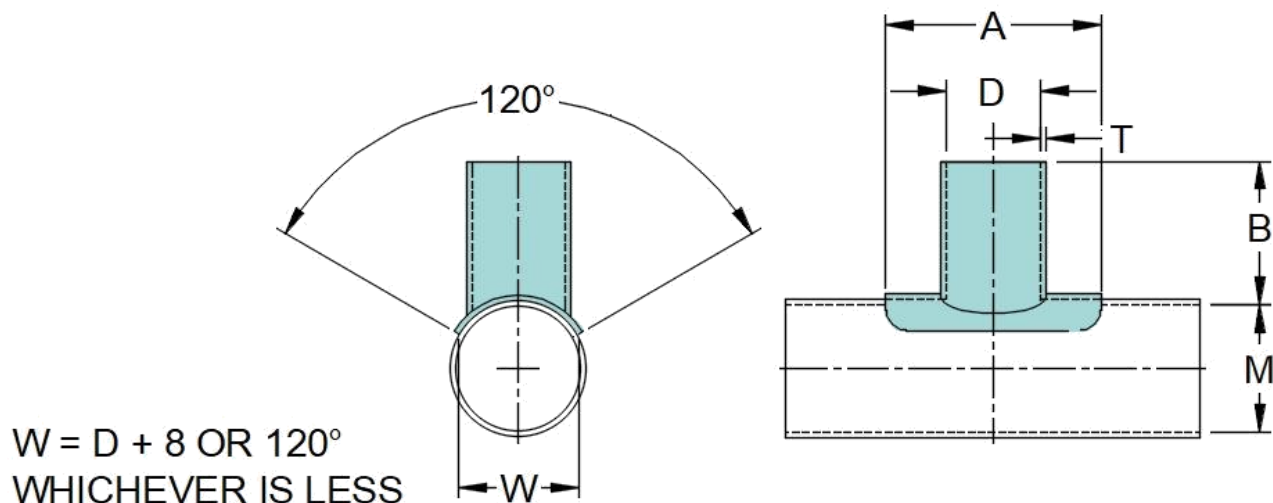
Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#174 - ST - "D" - "M"**

#174 - STF - "D" - "M" (Flange on tap)



D	A	W	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
1-1/2	D + 8	D + 8	6 + M/2	0.188	0.188
2	D + 8	D + 8	6 + M/2	0.188	0.188
3	D + 8	D + 8	6 + M/2	0.188	0.250
4	D + 8	D + 8	6 + M/2	0.188	0.250
6	D + 8	D + 8	6 + M/2	0.188	0.375
8	D + 8	D + 8	6 + M/2	0.250	0.438
10	D + 8	D + 8	6 + M/2	0.250	0.500
12	D + 8	D + 8	6 + M/2	0.250	0.625
14	D + 8	D + 8	6 + M/2	0.313	0.750

D	A	W	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
16	D + 8	D + 8	6 + M/2	0.313	0.875
18	D + 8	D + 8	6 + M/2	0.375	1.000
20	D + 8	D + 8	6 + M/2	0.375	1.000
24	D + 8	D + 8	6 + M/2	0.438	1.250
30	D + 8	D + 8	6 + M/2	0.500	1.500
36	D + 8	D + 8	6 + M/2	0.625	1.813
42	D + 8	D + 8	6 + M/2	0.750	2.125
48	D + 8	D + 8	6 + M/2	1.000	2.438

Notes:

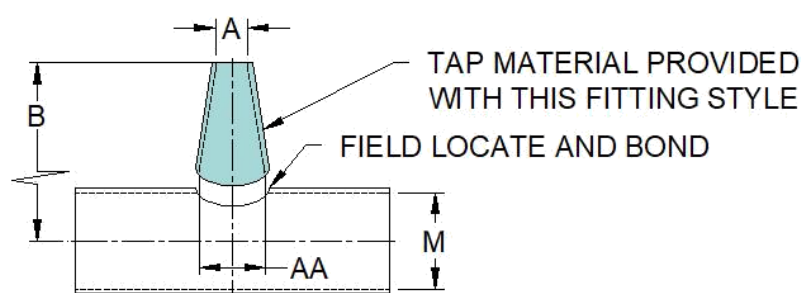
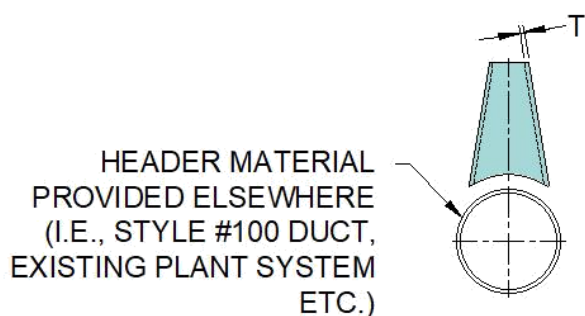
- 1) "B" shown is standard, custom lengths available.
- 2) Thickness "T" is based on D
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Pre-Configured Conical Reducing Tap** Fitting No: **176**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#176 - PT - "A" - "D"****#176 - PTF - "A" - "D" flange on tap**

A	M	AA	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
2	> A	A + 4.85	6 + M/2	0.188	0.188
3	> A	A + 4.85	6 + M/2	0.188	0.250
4	> A	A + 4.85	6 + M/2	0.188	0.250
6	> A	A + 4.85	6 + M/2	0.188	0.375
8	> A	A + 4.85	6 + M/2	0.250	0.438
10	> A	A + 4.85	6 + M/2	0.250	0.500
12	> A	A + 4.85	6 + M/2	0.250	0.625
14	> A	A + 4.85	6 + M/2	0.313	0.750

A	M	AA	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
16	> A	A + 4.85	6 + M/2	0.313	0.875
18	> A	A + 4.85	6 + M/2	0.375	1.000
20	> A	A + 4.85	6 + M/2	0.375	1.000
24	> A	A + 4.85	6 + M/2	0.438	1.250
30	> A	A + 4.85	6 + M/2	0.500	1.500
36	> A	A + 4.85	6 + M/2	0.625	1.813
42	> A	A + 4.85	6 + M/2	0.750	2.125
48	> A	A + 4.85	6 + M/2	1.000	2.438

Notes:

- 1) "B" shown is standard, custom lengths available
- 2) Tap material is pre-cut in the factory, or pre-configured to the customer specified header diameter
- 3) Thickness "T" is based on AA
- 4) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 90° Bonded Concentric Conical Tee

Fitting No: **175**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

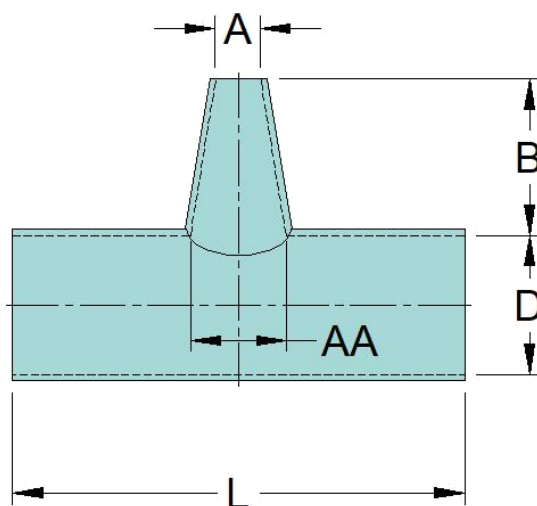
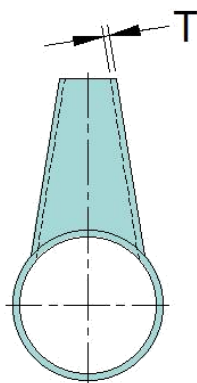
Order as: #175 - "D" - "A"

#175 - PPF - "D" - "A" one end (Branch) flanged

#175 - FFP- "D" - "A" two ends (Run, Run) flanged

#175 - FFF - "D" - "A" flanged

Show "F" in desired flange location



D	A	AA	L	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches	inches
2	≤ D	A + 4.85	AA + 12	6 + D/2	0.188	0.188
3	≤ D	A + 4.85	AA + 12	6 + D/2	0.188	0.250
4	≤ D	A + 4.85	AA + 12	6 + D/2	0.188	0.250
6	≤ D	A + 4.85	AA + 12	6 + D/2	0.188	0.375
8	≤ D	A + 4.85	AA + 12	6 + D/2	0.250	0.438
10	≤ D	A + 4.85	AA + 12	6 + D/2	0.250	0.500
12	≤ D	A + 4.85	AA + 12	6 + D/2	0.250	0.625
14	≤ D	A + 4.85	AA + 12	6 + D/2	0.313	0.750

D	A	AA	L	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches	inches
16	≤ D	A + 4.85	AA + 12	6 + D/2	0.313	0.875
18	≤ D	A + 4.85	AA + 12	6 + D/2	0.375	1.000
20	≤ D	A + 4.85	AA + 12	6 + D/2	0.375	1.000
24	≤ D	A + 4.85	AA + 12	6 + D/2	0.438	1.250
30	≤ D	A + 4.85	AA + 12	6 + D/2	0.500	1.500
36	≤ D	A + 4.85	AA + 12	6 + D/2	0.625	1.813
42	≤ D	A + 4.85	AA + 12	6 + D/2	0.750	2.125
48	≤ D	A + 4.85	AA + 12	6 + D/2	1.000	2.438

Notes:

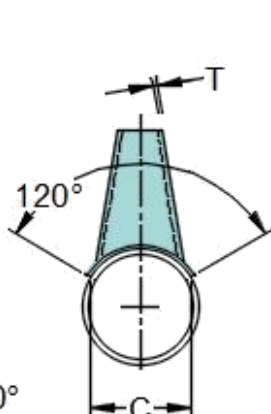
- 1) Thickness "T" is based on AA
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° Conical Reducing Saddle Tap**Fitting No: **177**

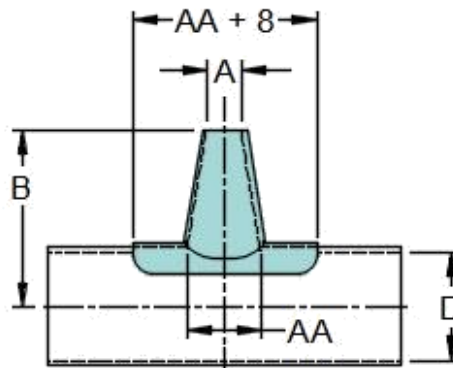
Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#177 - ST - "A" - "D"****#177 - STF - "A" - "D" flange on tap**

$C = AA + 8$ OR 120°
WHICHEVER IS LESS



A	D	AA	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
2	> A	A + 4.85	6 + D/2	0.188	0.188
3	> A	A + 4.85	6 + D/2	0.188	0.250
4	> A	A + 4.85	6 + D/2	0.188	0.250
6	> A	A + 4.85	6 + D/2	0.188	0.375
8	> A	A + 4.85	6 + D/2	0.250	0.438
10	> A	A + 4.85	6 + D/2	0.250	0.500
12	> A	A + 4.85	6 + D/2	0.250	0.625
14	> A	A + 4.85	6 + D/2	0.313	0.750

A	D	AA	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches	inches
16	> A	A + 4.85	6 + D/2	0.313	0.875
18	> A	A + 4.85	6 + D/2	0.375	1.000
20	> A	A + 4.85	6 + D/2	0.375	1.000
24	> A	A + 4.85	6 + D/2	0.438	1.250
30	> A	A + 4.85	6 + D/2	0.500	1.500
36	> A	A + 4.85	6 + D/2	0.625	1.813
42	> A	A + 4.85	6 + D/2	0.750	2.125
48	> A	A + 4.85	6 + D/2	1.000	2.438

Notes:

- 1) "B" shown is standard, custom lengths available
- 2) Thickness "T" is based on AA
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 45° Lateral Bonded Tap

Fitting No: **182**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

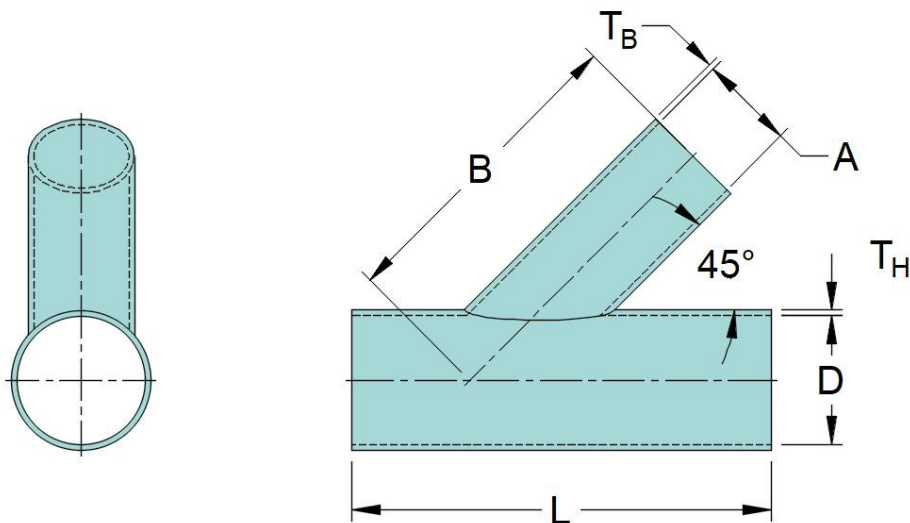
Order as: #182 - "D" - "A"

#182 - PPF - "D" - "A" one end (Branch) flanged

#182 - FFP - "D" - "A" two ends (Run, Run) flanged

#182 - FFF - "D" - "A" flanged

Show "F" on desired flange location



D	A	B	L
inches	inches	inches	inches
1-1/2	≤ D	6	1.4 x A + 12
2	≤ D	6	1.4 x A + 12
3	≤ D	6	1.4 x A + 12
4	≤ D	6	1.4 x A + 12
6	≤ D	6	1.4 x A + 12
8	≤ D	6	1.4 x A + 12
10	≤ D	6	1.4 x A + 12
12	≤ D	6	1.4 x A + 12
14	≤ D	6	1.4 x A + 12

D	A	B	L
inches	inches	inches	inches
16	≤ D	6	1.4 x A + 12
18	≤ D	6	1.4 x A + 12
20	≤ D	6	1.4 x A + 12
24	≤ D	6	1.4 x A + 12
30	≤ D	6	1.4 x A + 12
36	≤ D	6	1.4 x A + 12
42	≤ D	6	1.4 x A + 12
48	≤ D	6	1.4 x A + 12

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

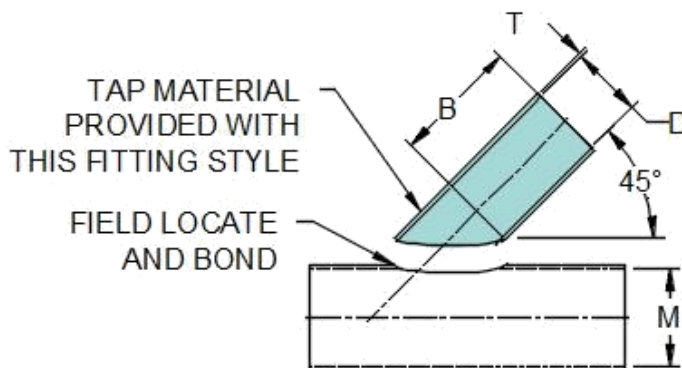
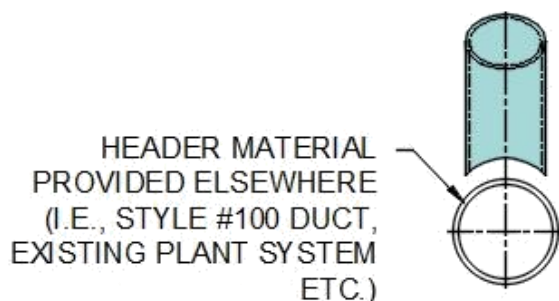
Fitting: 45° Lateral Pre-Configured Tap

Fitting No: **183**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#183 - PT - "D" - "M"**
#183 - PTF - "D" - "M" flanged on tap


D	M	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
1-1/2	≥ D	6	0.188	0.188
2	≥ D	6	0.188	0.188
3	≥ D	6	0.188	0.250
4	≥ D	6	0.188	0.250
6	≥ D	6	0.188	0.375
8	≥ D	6	0.250	0.438
10	≥ D	6	0.250	0.500
12	≥ D	6	0.250	0.625
14	≥ D	6	0.313	0.750

D	M	B	T @ 50 psi	T @ 150 psi
inches	inches	inches	inches	inches
16	≥ D	6	0.313	0.875
18	≥ D	6	0.375	1.000
20	≥ D	6	0.375	1.000
24	≥ D	6	0.438	1.250
30	≥ D	6	0.500	1.500
36	≥ D	6	0.625	1.813
42	≥ D	6	0.750	2.125
48	≥ D	6	1.000	2.438

Notes:

- 1) "B" shown is standard, custom lengths available.
- 2) Tap Material is pre-cut in the factory, or pre-configured, to the customer specified header diameter.
- 3) Thickness "T" is based on D
- 4) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Lateral Saddle Tap**

Fitting No: **184**

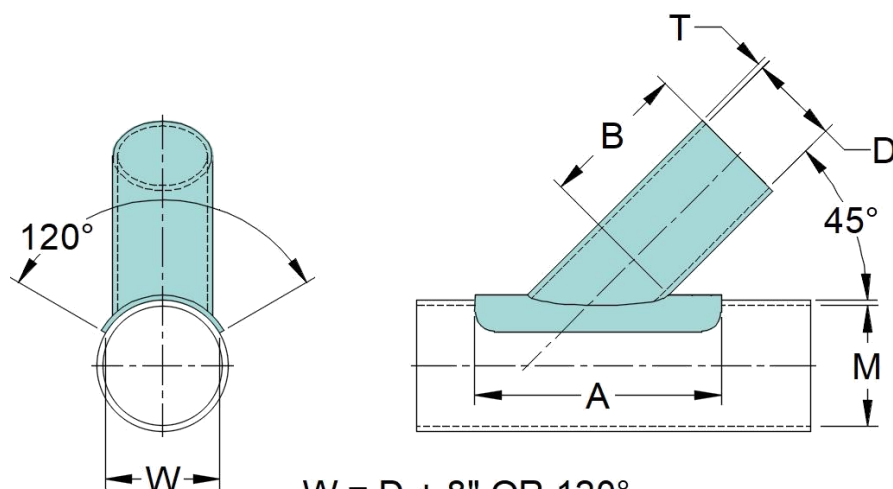
Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#184 - ST - "D" - "M"**

#184 - STF - "D" - "M" flanged on tap



**W = D + 8" OR 120°
WHICHEVER IS LESS**

D	A	W	B	T @	T @
inches	inches	inches	inches	50 psi	150 psi
1-1/2	1.4 x D + 8	D + 8 or 120°	6	0.188	0.188
2	1.4 x D + 8	D + 8 or 120°	6	0.188	0.188
3	1.4 x D + 8	D + 8 or 120°	6	0.188	0.250
4	1.4 x D + 8	D + 8 or 120°	6	0.188	0.250
6	1.4 x D + 8	D + 8 or 120°	6	0.188	0.375
8	1.4 x D + 8	D + 8 or 120°	6	0.250	0.438
10	1.4 x D + 8	D + 8 or 120°	6	0.250	0.500
12	1.4 x D + 8	D + 8 or 120°	6	0.250	0.625
14	1.4 x D + 8	D + 8 or 120°	6	0.313	0.750

D	A	W	B	T @	T @
inches	inches	inches	inches	50 psi	150 psi
16	1.4 x D + 8	D + 8 or 120°	6	0.313	0.875
18	1.4 x D + 8	D + 8 or 120°	6	0.375	1.000
20	1.4 x D + 8	D + 8 or 120°	6	0.375	1.000
24	1.4 x D + 8	D + 8 or 120°	6	0.438	1.250
30	1.4 x D + 8	D + 8 or 120°	6	0.500	1.500
36	1.4 x D + 8	D + 8 or 120°	6	0.625	1.813
42	1.4 x D + 8	D + 8 or 120°	6	0.750	2.125
48	1.4 x D + 8	D + 8 or 120°	6	1.000	2.438

Notes:

- 1) "B" shown is standard, custom lengths available.
- 2) Thickness "T" is based on D
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Double Wye**

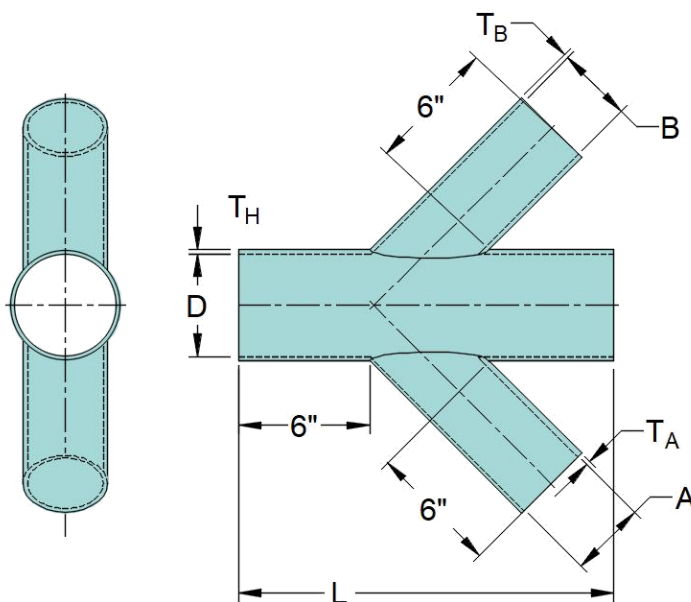
Fitting No: **185**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: #185 - "D" - "A" - "B"



D	A	B	L
inches	inches	inches	inches
2	$\leq D$	$\leq A$	$1.4 \times A + 12$
3	$\leq D$	$\leq A$	$1.4 \times A + 12$
4	$\leq D$	$\leq A$	$1.4 \times A + 12$
6	$\leq D$	$\leq A$	$1.4 \times A + 12$
8	$\leq D$	$\leq A$	$1.4 \times A + 12$
10	$\leq D$	$\leq A$	$1.4 \times A + 12$
12	$\leq D$	$\leq A$	$1.4 \times A + 12$
14	$\leq D$	$\leq A$	$1.4 \times A + 12$

D	A	B	L
inches	inches	inches	inches
16	$\leq D$	$\leq A$	$1.4 \times A + 12$
18	$\leq D$	$\leq A$	$1.4 \times A + 12$
20	$\leq D$	$\leq A$	$1.4 \times A + 12$
24	$\leq D$	$\leq A$	$1.4 \times A + 12$
30	$\leq D$	$\leq A$	$1.4 \times A + 12$
36	$\leq D$	$\leq A$	$1.4 \times A + 12$
42	$\leq D$	$\leq A$	$1.4 \times A + 12$
48	$\leq D$	$\leq A$	$1.4 \times A + 12$

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H , T_A and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Reducing Wye**

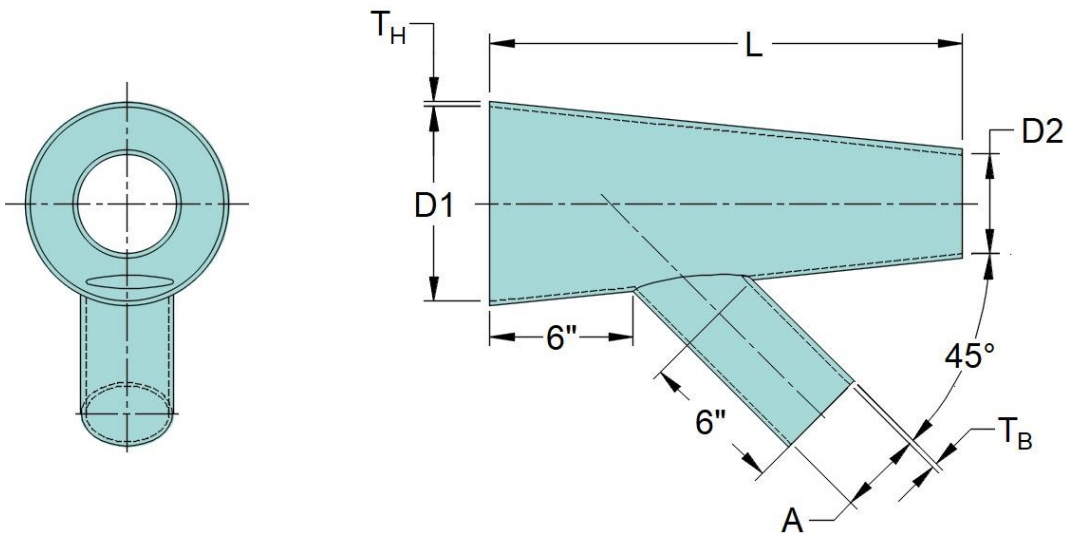
Fitting No: **186**

Product Class: Pipe

Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: #186 - "D" - "A" - "B"



D ₁	D ₂	A	L
inches	inches	inches	inches
2	≤ D1	≤ D1	≥ 1.4 x A + 12
3	≤ D1	≤ D1	≥ 1.4 x A + 12
4	≤ D1	≤ D1	≥ 1.4 x A + 12
6	≤ D1	≤ D1	≥ 1.4 x A + 12
8	≤ D1	≤ D1	≥ 1.4 x A + 12
10	≤ D1	≤ D1	≥ 1.4 x A + 12
12	≤ D1	≤ D1	≥ 1.4 x A + 12
14	≤ D1	≤ D1	≥ 1.4 x A + 12

D ₁	D ₂	A	L
inches	inches	inches	inches
16	≤ D1	≤ D1	≥ 1.4 x A + 12
18	≤ D1	≤ D1	≥ 1.4 x A + 12
20	≤ D1	≤ D1	≥ 1.4 x A + 12
24	≤ D1	≤ D1	≥ 1.4 x A + 12
30	≤ D1	≤ D1	≥ 1.4 x A + 12
36	≤ D1	≤ D1	≥ 1.4 x A + 12
42	≤ D1	≤ D1	≥ 1.4 x A + 12
48	≤ D1	≤ D1	≥ 1.4 x A + 12

Notes:

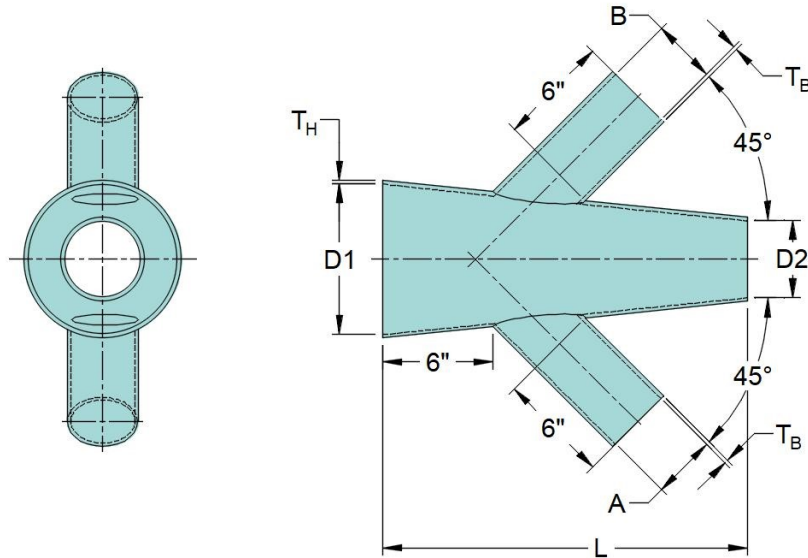
- 1) Thickness "T_H" is based on D1, Thickness "T_B" is based on B
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **45° Double Reducing Wye**Fitting No: **187**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: #187 - "D₁" - "D₂" - "A" - "B"

D ₁	D ₂	A	B	L
inches	inches	inches	inches	inches
2	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
3	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
4	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
6	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
8	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
10	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
12	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
14	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12

D ₁	D ₂	A	B	L
inches	inches	inches	inches	inches
16	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
18	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
20	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
24	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
30	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
36	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
42	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12
48	≤ D ₁	≤ D ₁	≤ A	1.4 x A + 12

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H, T_A and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

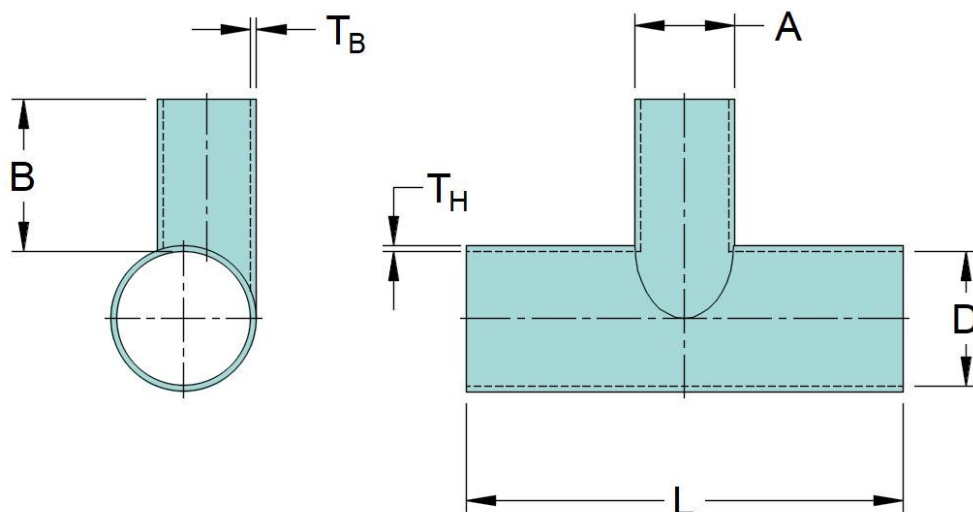
Fitting: 90° Bonded Tangential Tee

Fitting No: **190**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#190 - "D" - "A"**
#190 - PPF - "D" - "A" one end (Branch) flanged
#190 - FFP - "D" - "A" two ends (Run, Run) flanged
#190 - FFF - "D" - "A" flanged
Show "F" in the desired flange location


D	A	B	L
inches	inches	inches	inches
2	$\leq D$	$6 + D/2$	$A + 12$
3	$\leq D$	$6 + D/2$	$A + 12$
4	$\leq D$	$6 + D/2$	$A + 12$
6	$\leq D$	$6 + D/2$	$A + 12$
8	$\leq D$	$6 + D/2$	$A + 12$
10	$\leq D$	$6 + D/2$	$A + 12$
12	$\leq D$	$6 + D/2$	$A + 12$
14	$\leq D$	$6 + D/2$	$A + 12$

D	A	B	L
inches	inches	inches	inches
16	$\leq D$	$6 + D/2$	$A + 12$
18	$\leq D$	$6 + D/2$	$A + 12$
20	$\leq D$	$6 + D/2$	$A + 12$
24	$\leq D$	$6 + D/2$	$A + 12$
30	$\leq D$	$6 + D/2$	$A + 12$
36	$\leq D$	$6 + D/2$	$A + 12$
42	$\leq D$	$6 + D/2$	$A + 12$
48	$\leq D$	$6 + D/2$	$A + 12$

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: 45° Bonded Tangential Tee

Fitting No: **192**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

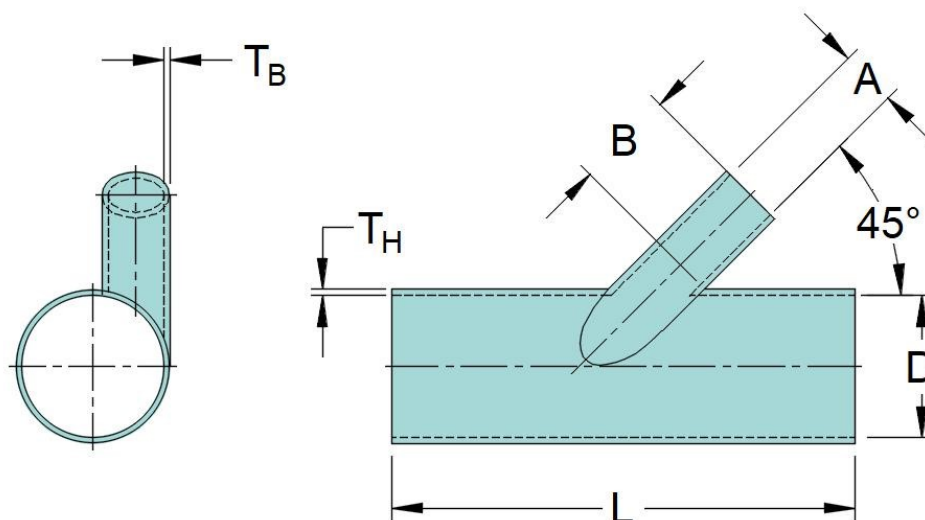
Order as: #192 - "D" - "A"

#192 - PPF - "D" - "A" one end (Branch) flanged

#192 - FFP - "D" - "A" two ends (Run, Run) flanged

#192 - FFF - "D" - "A" flanged

Show "F" in the desired flange location



D	A	B	L
inches	inches	inches	inches
2	≤ D	6	1.4 x A + 12
3	≤ D	6	1.4 x A + 12
4	≤ D	6	1.4 x A + 12
6	≤ D	6	1.4 x A + 12
8	≤ D	6	1.4 x A + 12
10	≤ D	6	1.4 x A + 12
12	≤ D	6	1.4 x A + 12
14	≤ D	6	1.4 x A + 12

D	A	B	L
inches	inches	inches	inches
16	≤ D	6	1.4 x A + 12
18	≤ D	6	1.4 x A + 12
20	≤ D	6	1.4 x A + 12
24	≤ D	6	1.4 x A + 12
30	≤ D	6	1.4 x A + 12
36	≤ D	6	1.4 x A + 12
42	≤ D	6	1.4 x A + 12
48	≤ D	6	1.4 x A + 12

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **90° True Wye**

Fitting No: **195**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

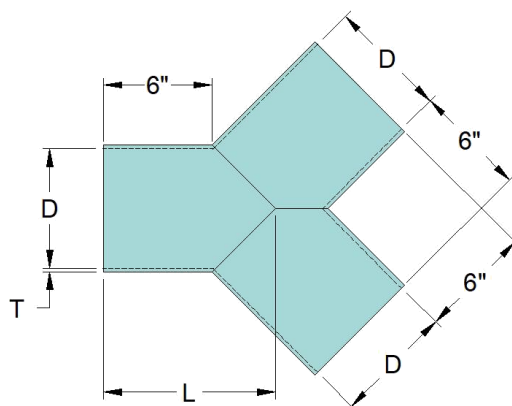
Order as: **#195 - "D"**

#195 - PPF - "D" one end (Branch) flanged

#195 - FFP - "D" two ends (Run, Run) flanged

#195 - FFF - "D" flanged

Show "F" in the desired flange location



D	L	T
inches	inches	inches
1-1/2	7	0.188
2	7	0.188
3	7	0.188
4	7	0.188
6	8	0.188
8	8	0.250
10	9	0.250
12	9	0.250
14	10	0.313

D	L	T
inches	inches	inches
16	18	0.3125
18	19	0.375
20	20	0.375
24	21	0.4375
30	22	0.5
36	23	0.625
42	24	0.75
48	27	1

Notes:

- 1) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 2) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

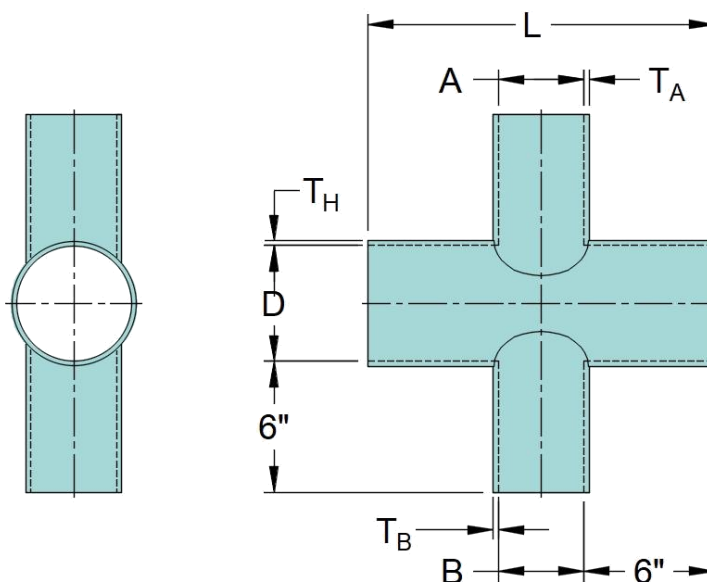
Fitting: **90° Cross**

Fitting No: **197**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#197 - "D" - "A" - "B"**
#197 - FFF - "D" - "A" - "B" flanged


D	A	B	L
inches	inches	inches	inches
1-1/2	≤ D	≤ A	A + 12
2	≤ D	≤ A	A + 12
3	≤ D	≤ A	A + 12
4	≤ D	≤ A	A + 12
6	≤ D	≤ A	A + 12
8	≤ D	≤ A	A + 12
10	≤ D	≤ A	A + 12
12	≤ D	≤ A	A + 12
14	≤ D	≤ A	A + 12

D	A	B	L
inches	inches	inches	inches
16	≤ D	≤ A	A + 12
18	≤ D	≤ A	A + 12
20	≤ D	≤ A	A + 12
24	≤ D	≤ A	A + 12
30	≤ D	≤ A	A + 12
36	≤ D	≤ A	A + 12
42	≤ D	≤ A	A + 12
48	≤ D	≤ A	A + 12

Notes:

- 1) Custom lengths available.
- 2) Thicknesses T_H , T_A and T_B designed based on pressure requirements
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **Stub Flange**

Fitting No: **200**

Product Class: Pipe

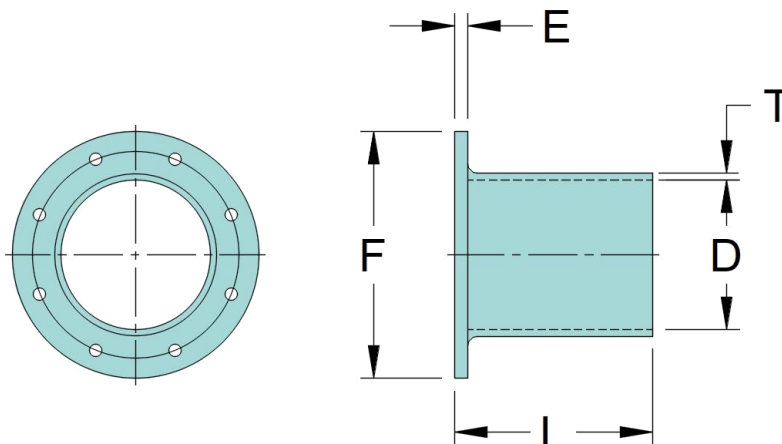
Resin Types: Vinylester such as DerekanTM 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#200 - "D"**

Flange OD: 150# or specify

Flange Drilling: **150# or specify**



D	F	E @ 50 psi	L	T @ 50 psi
inches	inches	inches	inches	inches
1-1/2	5.25	0.500	6	0.188
2	6.25	0.500	6	0.188
3	7.75	0.500	6	0.188
4	9.25	0.564	6	0.188
6	11.25	0.625	6	0.188
8	13.75	0.750	8	0.250
10	16.25	0.875	8	0.250
12	19.25	1.000	8	0.250
14	21.25	1.063	8	0.313

D	F	E @ 50 psi	L	T @ 50 psi
inches	inches	inches	inches	inches
16	23.75	1.188	15	0.313
18	25.25	1.250	15	0.375
20	27.75	1.313	15	0.375
24	32.25	1.500	15	0.438
30	39.00	1.875	15	0.500
36	46.25	2.000	15	0.625
42	53.25	2.250	15	0.750
48	59.75	2.938	18	1.000

Notes:

- 1) Custom lengths available
- 2) Thickness "T" can be adjusted for pressure requirements. Contact Engineering for details.
- 3) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

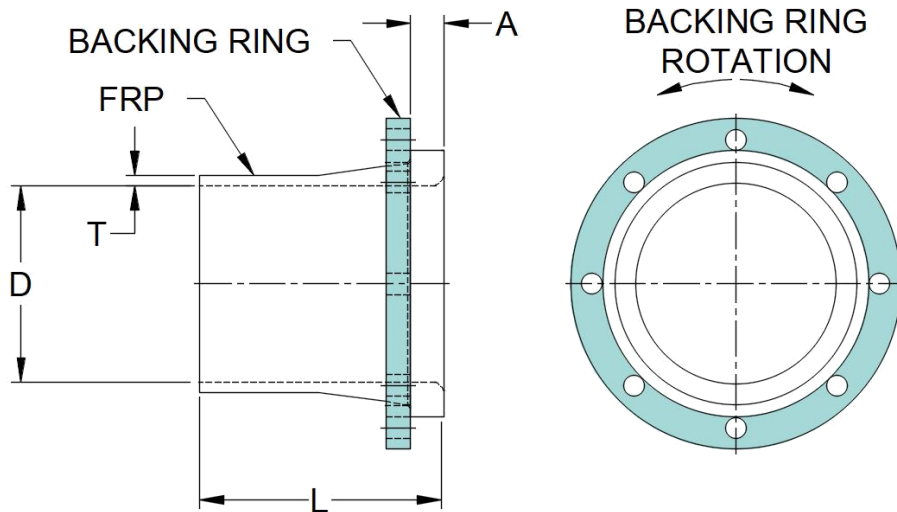
Fitting: **Van Stone Style Stub Flange with Ring**Fitting No: **202**

Product Class: Pipe

Order as: **#202 - "D"**

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -



D	L	T	A
inches	inches	inches	inches
1-1/2			
2			
3			
4			
6			
8			
10			
12			
14			

D	L	T	A
inches	inches	inches	inches
16			
18			
20			
24			
30			
36			
42			
48			

Notes:

- 1) Contact CUSA for design details

Fitting: **Blind Flange**

Fitting No: **205**

Product Class: Pipe

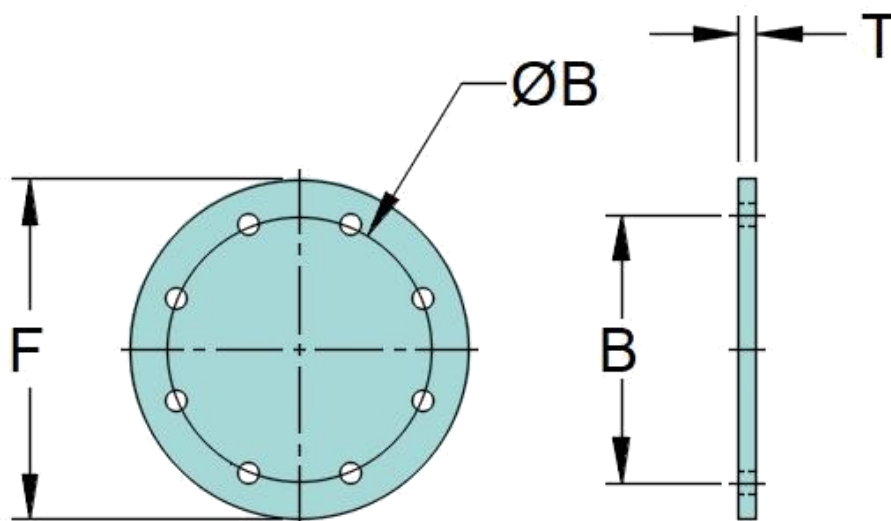
Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#205 - "D"**

Flange OD: **150# or Specify**

Flange Drilling: **150# or specify**



D	F	B	# Bolts	T @ 50 psi
inches	inches	inches		inches
1-1/2	5.25	4.625	4	0.500
2	6.25	4.75	4	0.500
3	7.75	6	4	0.500
4	9.25	7.5	8	0.564
6	11.25	9.5	8	0.625
8	13.75	11.75	8	0.750
10	16.25	14.25	12	0.875
12	19.25	17	12	1.000
14	21.25	18.75	12	1.063

D	F	B	# Bolts	T @ 50 psi
inches	inches	inches		inches
16	23.75	21.25	16	1.188
18	25.25	22.75	16	1.250
20	27.75	25	20	1.313
24	32.25	29.25	20	1.500
30	39	36	28	1.875
36	46.25	42	32	2.000
42	53.25	75	36	2.250
48	59.75	49.5	44	2.938

Notes:

- 1) [See Table 1 for thickness sizing from 25 psi through 150 psi.](#)

Fitting: **End Cap Dished**

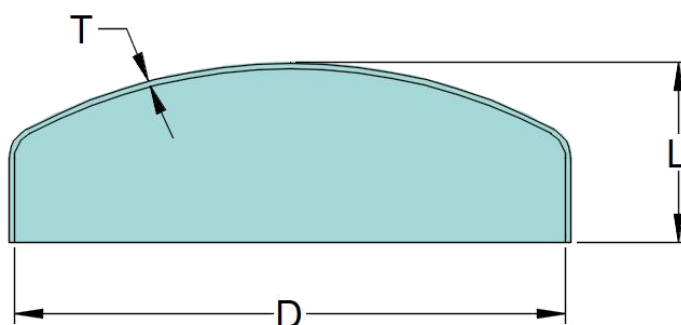
Fitting No: **212**

Product Class: Pipe

Order as: **#212 - "D"**

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -



D	T	L
inches	inches	inches
1-1/2		
2		
3		
4		
6		
8		
10		
12		
14		

D	T	L
inches	inches	inches
16		
18		
20		
24		
30		
36		
42		
48		

Notes:

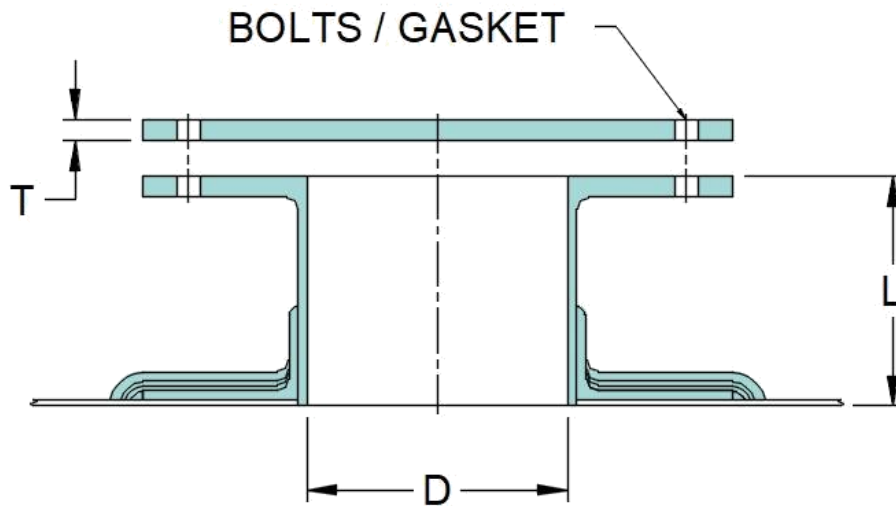
1) Contact CUSA for design details

Fitting: **Access Door Flanged Stand Off**Fitting No: **235**

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#235 - "D"**Options: **Gasket Material (Specify)****Bolts / Nuts (Specify)****Hinged Top (Specify)**

D	T @ 50 psi	L
inches	inches	inches
6	0.625	6
8	0.750	6
10	0.875	6
12	1.000	6
14	1.0625	6
16	1.188	6
18	1.250	6

D	T @ 50 psi	L
inches	inches	inches
20	1.3125	12
24	1.500	12
30	1.875	12
36	2.000	12
42	2.25	12
48	2.938	12

Notes:

- 1) Neoprene gasket and plated bolts are standard
- 2) Contact CUSA for design details

Composites USA One Peninsula Drive, North East, MD 21901 T (410) 287-2700 F (410) 287-5222

Web: www.compositesusa.com Email: Info@compositesusa.com



Fitting: **Flex Connector - Flanged**

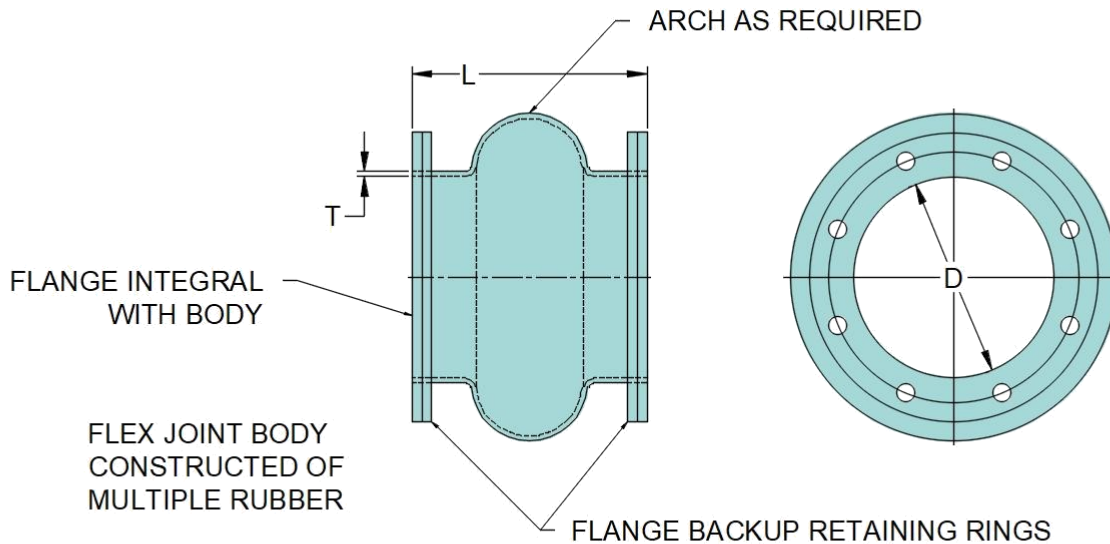
Fitting No: **275**

Product Class: Pipe

Order as: **#275 - "D"**

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -



D	Flange Drilling		L	T
inches	# Holes	BC - inches	inches	inches
Specify				

D	Flange Drilling		L	T
inches	# Holes	BC - inches	inches	inches

Notes:

- 1) Neoprene gasket and plated bolts are standard
- 2) Contact CUSA for design details

Fitting: **Sample Tap - Flanged**

Fitting No: **280**

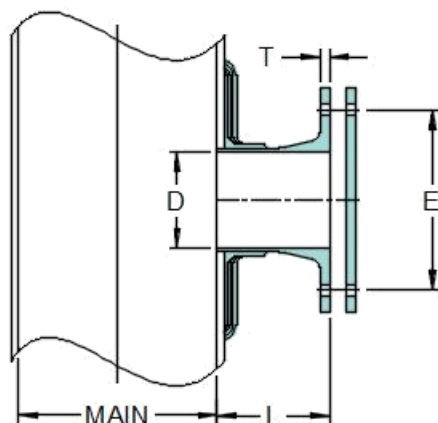
Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#280 - "D"**

Options: **FRP or CPVC Blind Flange**
Drilling Patterns, Bolts, Gaskets



D	Flange Drilling		L	T @ 50 psi
inches	# Holes	BC - inches	inches	inches
1-1/2	4	4.625	6	0.5
2	4	4.750	6	0.5
3	4	6.000	6	0.5
4	8	7.500	6	0.5635
6	8	9.500	6	0.625
8	8	11.750	6	0.75
10	12	14.250	6	0.875
12	12	17.000	6	1
14	12	18.750	6	1.0625

D	Flange Drilling		L	T @ 50 psi
inches	# Holes	BC - inches	inches	inches
16	16	21.250	6	1.188
18	16	22.750	6	1.250
20	20	25.000	12	1.313
24	20	29.250	12	1.500
30	28	36.000	12	1.875
36	32	42.000	12	2.000
42	36	75.000	12	2.250
48	44	49.500	12	2.938

Notes:

- 1) Neoprene gasket and plated bolts are standard
- 2) Contact CUSA for design details

Fitting: **Drain Tap - Threaded**

Fitting No: **285**

Product Class: Pipe

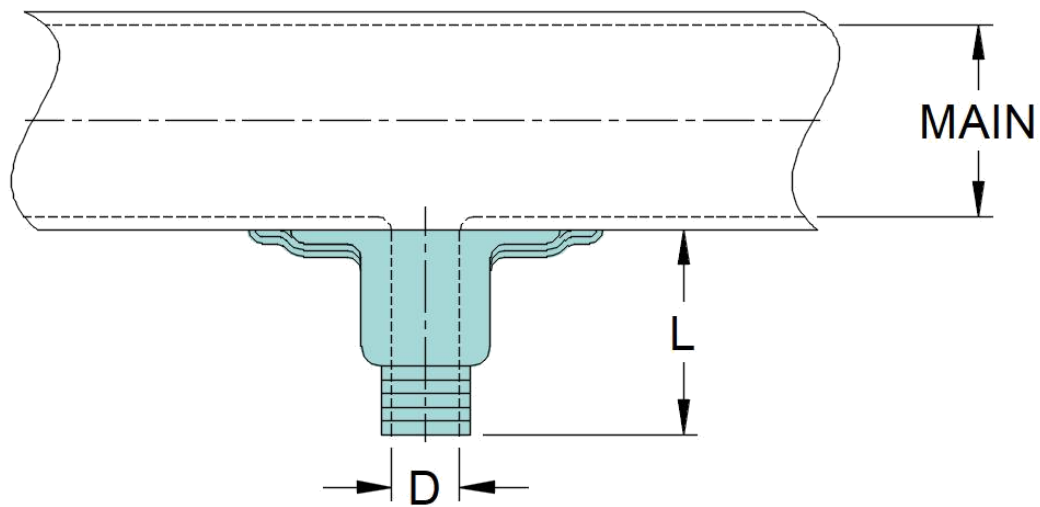
Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

Order as: **#285 - "D"**

Materials: **Coupling - FRP**

Plug - CPVC



D	L
inches	inches
1-1/2	2
2	2
3	2
4	2
5	2
6	2
Specify alternative sizes as required	

D	L
inches	inches

Notes:

- 1) Drain tap installed flush with pipe / Pipe ID.
- 2) Contact CUSA for design details

Fitting: Drain Tap Leg and Valve
Fitting No: 286

Product Class: Pipe

Resin Types: Vinylester such as Derekane™ 411, 510A/B/C, 470, Interplastic CORVE8400 and others, depending on chemical exposures.

- Contact CUSA for resin recommendations -

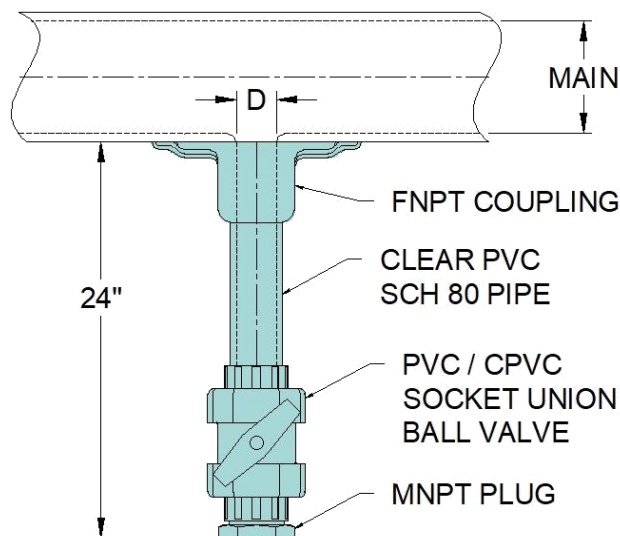
Order as: **#286 - "D"**

Materials: **Coupling - FRP**

Sight Tube - Clear PVC

Valve - PVC

Plug - CPVC



D	L
inches	inches
1-1/2	24
2	24
3	24
4	24
5	24
6	24
Specify alternative sizes as required	

D	L
inches	inches

Notes:

- 1) Drain tap installed flush with pipe / Pipe ID.
- 2) Contact CUSA for design details