

**ASAHI/AMERICA**

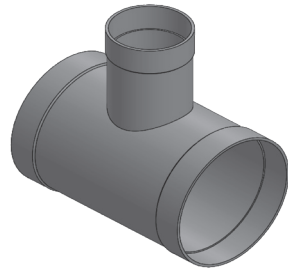
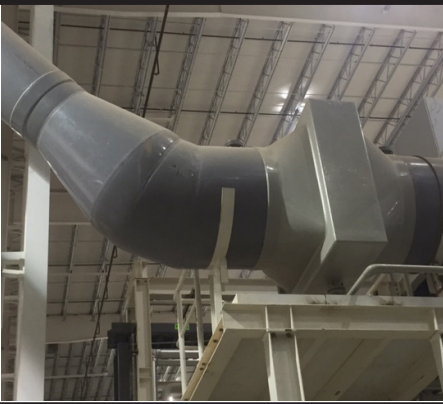
EFFECTIVE: 07/1/16

SUBJECT TO CHANGE WITHOUT NOTICE

# Pro-Vent<sup>®</sup>

## Duct System

### Dimensional Guide



**Another  
Corrosion  
Problem  
Solved.<sup>™</sup>**



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# Pro-Vent® Duct System



**Material Properties**

			PP	PPs	PPs-eI	PE	PVDF
Specific density at 23°C	ISO 1183	g/cm <sup>3</sup>	0.91	0.93	1.13	0.96	1.78
MFR 190/5	ISO 1133	g/10min	0.5	0.8	0.6	0.9	6
MFR 190/2.16							
Tensile stress at yield	ISO 527	MPa	30	30	30	25	50
Elongation at yield	ISO 527	%	10	10	10	9	9
Elongation at break	ISO 527	%	>300	>50	43	>600	80
Impact strength notched at +23°C	ISO 179	kJ/m <sup>2</sup>	8	9	9.5	16	11
Impact strength notched at 0°C			2.8	2.8	n/a	n/a	
Impact strength notched at -30°C			2.2	2.2	2.3	6	
Modulus of elasticity	ISO 527	MPa	1300	1300	n/a	1100	2000
Vicat-Softening point VST/B/50	ISO 306	°C	91	85	133	77	140
Heat deflection temperature HDT/B	ISO 75	°C	96	85	47	75	145
Linear coefficient of thermal expansion	DIN 53752	K <sup>-1</sup> x 10 <sup>-4</sup>	1.6	1.6	n/a	1.8	1.2
Thermal conductivity at 20 °C	DIN 52612	W/(m x K)	0.22	0,2	n/a	0.4	0.2
Flammability	UL94	--	94-HB	V-2	V-0	94-HB	V-0
	DIN 4102	--	B2	B1		B2	
Specific volume resistance	VDE 0303	OHM cm	>10 <sup>16</sup>	>10 <sup>15</sup>	>10 <sup>8</sup>	>10 <sup>16</sup>	>10 <sup>13</sup>
Specific surface resistance	VDE 0303	OHM	>10 <sup>13</sup>	>10 <sup>15</sup>	>10 <sup>6</sup>	>10 <sup>13</sup>	>10 <sup>12</sup>
Physiologically non-toxic	EEC 90/128	--	Yes	Yes	No	Yes	Yes
FDA	--	--	Yes	No	No	Yes	Yes
UV stabilized	--	--	No	No	Yes	Yes	Yes
Color	--	--	Grey	Grey	Black	Black	Natural



Pressure Ratings		20°C 68°F		30°C 86°F		40°C 104°F		50°C 122°F	
		10 year	25 year	10 year	25 year	10 year	25 year	10 year	25 year
OD x wall thickness	Material	inch WC		inch WC		inch WC		inch WC	
110 x 3.0	PVDF	78.7	75.6	-	-	59.8	56.7	-	-
110 x 2.7	PP, PPs	24.0	22.0	22.0	20.0	20.0	18.0	18.0	16.0
110 x 2.7	PE	16.4	14.4	14.4	13.2	12.4	11.6	11.2	10.0
200 x 3.0	PVDF	12.6	12.1	-	-	9.6	9.1	-	-
200 x 3.0	PP, PPs	5.6	5.0	4.8	4.6	4.4	4.2	4.0	3.6
200 x 4.9	PE	16.4	14.4	14.4	13.2	12.4	11.6	11.2	10.0
315 x 4.0	PVDF	7.6	7.3	-	-	5.8	5.5	-	-
315 x 5.0	PP, PPs	6.6	6.0	5.8	5.4	5.2	5.0	4.6	4.4
315 x 7.7	PE	16.4	14.4	14.4	13.2	12.4	11.6	11.2	10.0
400 x 5.0	PVDF	7.2	7.0	-	-	5.5	5.2	-	-
400 x 6.0	PP, PPs	5.6	5.0	4.8	4.6	4.4	4.2	4.0	3.6
400 x 8.0	PE	8.1	7.3	6.8	6.2	5.5	5.1	4.4	-
500 x 8.0	PP, PPs	6.8	6.2	6.0	5.6	5.4	5.0	4.8	4.0
500 x 8,0	PE	4.0	3.7	3.3	3.1	2.6	2.4	2.2	-
630 x 10,0	PP, PPs	6.6	6.0	5.8	5.4	5.2	5.0	4.6	4.4
630 x 10,0	PE	4.0	3.5	3.3	2.9	2.6	2.4	2.2	-

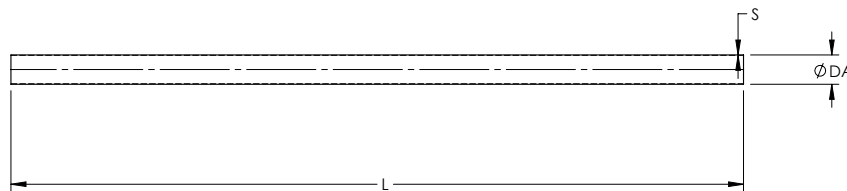
Note: PPs-EI pressure ratings must be reduced by 50% of value shown for PP,PPs.

Common sizes and material shown for overview of pressure/ vacuum, contact Asahi/America for sizes not shown.

## PIPE

in	mm	PP	PPs	PPsEI	PE	PVDF
		Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277010002	1777010002	-	-	3077010002
2-1/2	75	-	-	-	-	3077010025
3	90	1277010003	1777010003	1977010003	2577010003	3077010003
4	110	1277010004	1777010004	1977010004	2577010004	3077010004
5	140	1277010005	1777010005	-	2577010005	-
6	160	1277010006	1777010006	1977010006	2577010006	3077010006
7	180	1277010007	1777010007	1977010007	2577010007	-
8	200	1277010008	1777010008	1977010008	2577010008	3077010008
9	225	1277010009	1777010009	1977010009	2577010009	-
10	250	1277010010	1777010010	1977010010	2577010010	3077010010
11	280	1277010011	1777010011	-	2577010011	-
12	315	1277010012	1777010012	1977010012	2577010012	3077010012
14	355	1277010014	1777010014	1977010014	2577010014	3077010014
16	400	1277010016	1777010016	1977010016	2577010016	3077010016
18	450	1277010018	1777010018	-	2577010018	-
20	500	1277010020	1777010020	-	2577010020	-
22	560	1277010022	1777010022	-	2577010022	-
24	630	1277010024	1777010024	-	2577010024	-
28	710	1277010028	1777010028	-	2577010028	-
32	800	1277010032	1777010032	-	2577010032	-
36	900	1277010036	1777010036	-	2577010036	-
40	1000	1277010040	1777010040	-	2577010040	-
48	1200	1277010048	1777010048	-	2577010048	-

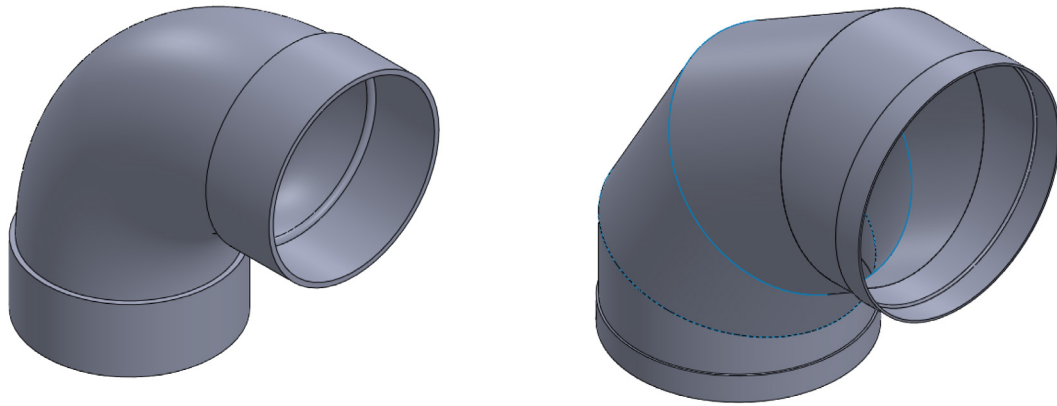
\*Sold in 5m (16.4') lengths only.  
Diameter is metric, inch size provided as nominal only.



### PIPE

DA	PP-KG	PPs-KG	PPsEL-KG	PE-KG	PVDF-KG	NOM in	DA in	PP Lbs	PPs Lbs	PPsEI Lbs	PE Lbs	PVDF Lbs
63	1.90	1.95	-	-	3.75	2	2.48	4.18	4.29	-	-	8.25
75	2.60	2.25	-	-	5.55	2-1/2	2.95	5.72	4.95	-	-	12.21
90	3.80	3.10	4.70	4.00	7.40	3	3.54	8.36	6.82	10.34	8.80	16.28
110	4.50	4.60	6.15	4.75	9.70	4	4.33	9.90	10.12	13.53	10.45	21.34
140	7.40	6.60	0.00	7.80	12.45	5	5.51	16.28	14.52	-	17.16	-
160	9.55	7.65	9.05	10.10	14.30	6	6.30	21.01	16.83	19.91	22.22	31.46
180	11.80	8.55	10.20	12.40	-	7	7.09	25.96	18.81	22.44	27.28	-
200	9.15	9.50	11.35	15.40	17.90	8	7.87	20.13	20.90	24.97	33.88	39.38
225	18.50	12.35	14.90	19.50	-	9	8.86	40.70	27.17	32.78	42.90	-
250	13.30	13.75	16.60	24.20	22.40	10	9.84	29.26	30.25	36.52	53.24	49.28
280	28.65	17.40	0.00	30.20	-	11	11.02	63.03	38.28	-	66.44	-
315	23.70	24.55	29.40	37.95	37.35	12	12.40	52.14	54.01	64.68	83.49	82.17
355	31.95	27.70	33.20	48.25	46.70	14	13.98	70.29	60.94	73.04	106.15	102.74
400	36.00	36.95	44.70	50.20	59.05	16	15.75	79.20	81.29	98.34	110.44	129.91
450	40.50	41.65	-	56.50	-	18	17.72	89.10	91.63	-	124.30	-
500	59.50	61.50	-	63.00	-	20	19.69	130.90	135.30	-	138.60	-
560	67.05	69.00	-	88.00	-	22	22.05	147.51	151.80	-	193.60	-
630	94.00	96.50	-	99.00	-	24	24.80	206.80	212.30	-	217.80	-
710	126.50	130.00	-	133.50	-	28	27.95	278.30	286.00	-	293.70	-
800	143.00	146.50	-	151.00	-	32	31.50	314.60	322.30	-	332.20	-
900	200.50	206.00	-	211.50	-	36	35.43	441.10	453.20	-	465.30	-
1000	223.00	229.50	-	235.00	-	40	39.37	490.60	504.90	-	517.00	-
1200	320.50	329.00	-	338.50	-	48	47.24	705.10	723.80	-	744.70	-

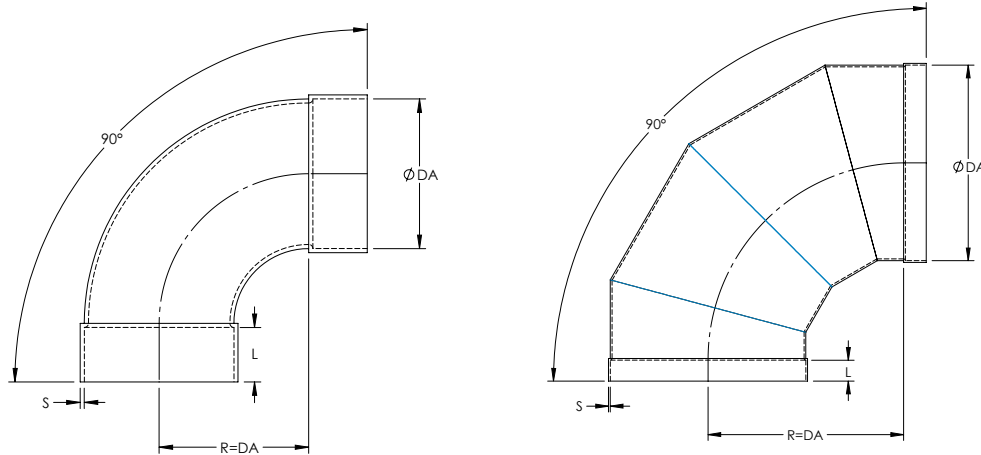
\*Sold in 5m (16.4') lengths only.  
 Diameter is metric, inch size provided as nominal only.



## 90 DEGREE ELBOW

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277020002	1777020002	1977020002	2577020002	-
2-1/2	75	-	-	-	-	3077020025
3	90	1277020003	1777020003	1977020003	2577020003	-
4	110	1277020004	1777020004	1977020004	2577020004	3077020004
5	140	1277020005	1777020005	1977020005	2577020005	-
6	160	1277020006	1777020006	1977020006	2577020006	3077020006
7	180	1277020007	1777020007	1977020007	2577020007	-
8	200	1277020008	1777020008	1977020008	2577020008	3077020008
9	225	1277020009	1777020009	1977020009	2577020009	-
10	250	1277020010	1777020010	1977020010	2577020010	3077020010
11	280	1277020011	1777020011	1977020011	2577020011	-
12	315	1277020012	1777020012	1977020012	2577020012	3077020012
14	355	1277020014	1777020014	1977020014	2577020014	-
16	400	1277020016	1777020016	1977020016	2577020016	3077020016
18	450	1277020018	1777020018	1977020018	2577020018	-
20	500	1277020020	1777020020	1977020020	2577020020	-
22	560	1277020022	1777020022	1977020022	2577020022	-
24	630	1277020024	1777020024	1977020024	2577020024	-
28	710	1277020028	1777020028	1977020028	2577020028	-
32	800	1277020032	1777020032	1977020032	2577020032	-
36	900	1277020036	1777020036	-	2577020036	-
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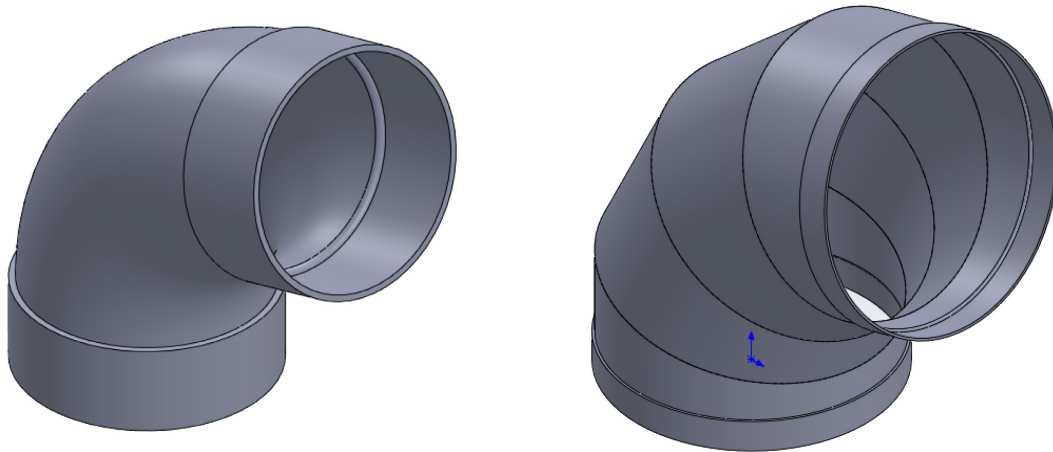




### 90 DEGREE ELBOW

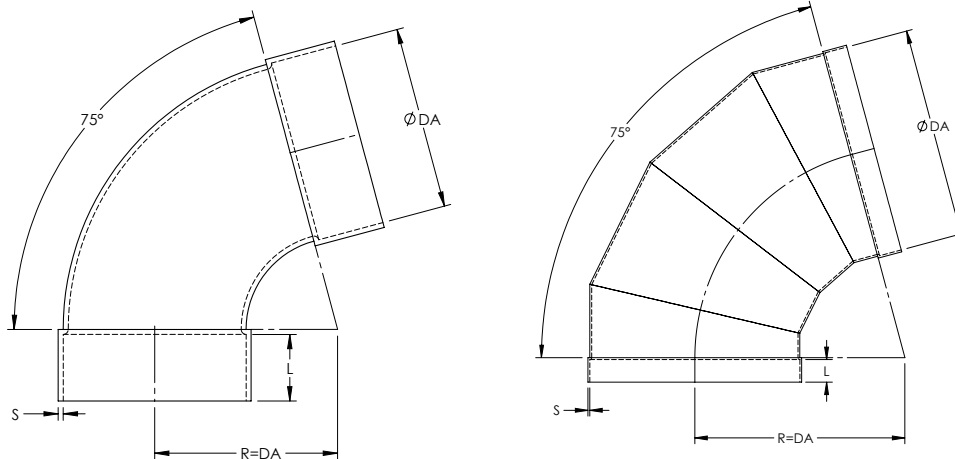
Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



### 75 DEGREE ELBOW

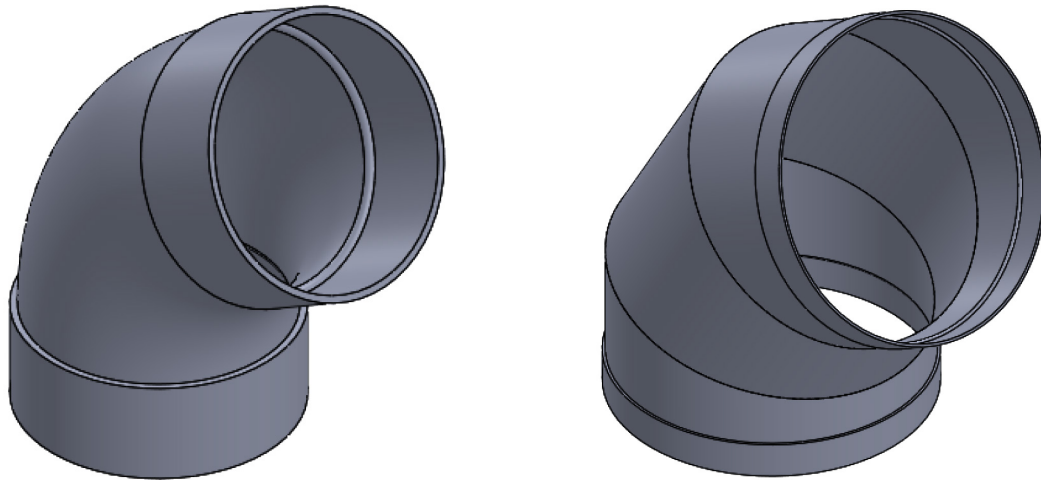
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277030002	1777030002	1977030002	2577030002	-
2-1/2	75	-	-	-	-	3077030025
3	90	1277030003	1777030003	1977030003	2577030003	-
4	110	1277030004	1777030004	1977030004	2577030004	3077030004
5	140	1277030005	1777030005	1977030005	2577030005	-
6	160	1277030006	1777030006	1977030006	2577030006	3077030006
7	180	1277030007	1777030007	1977030007	2577030007	-
8	200	1277030008	1777030008	1977030008	2577030008	3077030008
9	225	1277030009	1777030009	1977030009	2577030009	-
10	250	1277030010	1777030010	1977030010	2577030010	3077030010
11	280	1277030011	1777030011	1977030011	2577030011	-
12	315	1277030012	1777030012	1977030012	2577030012	3077030012
14	355	1277030014	1777030014	1977030014	2577030014	-
16	400	1277030016	1777030016	1977030016	2577030016	3077030016
18	450	1277030018	1777030018	1977030018	2577030018	-
20	500	1277030020	1777030020	1977030020	2577030020	-
22	560	1277030022	1777030022	1977030022	2577030022	-
24	630	1277030024	1777030024	1977030024	2577030024	-
28	710	1277030028	1777030028	1977030028	2577030028	-
32	800	1277030032	1777030032	1977030032	2577030032	-
36	900	1277030036	1777030036	-	2577030036	-
40	1000	1277030040	1777030040	-	2577030040	-
48	1200	1277030048	1777030048	-	2577030048	-



### 75 DEGREE ELBOW

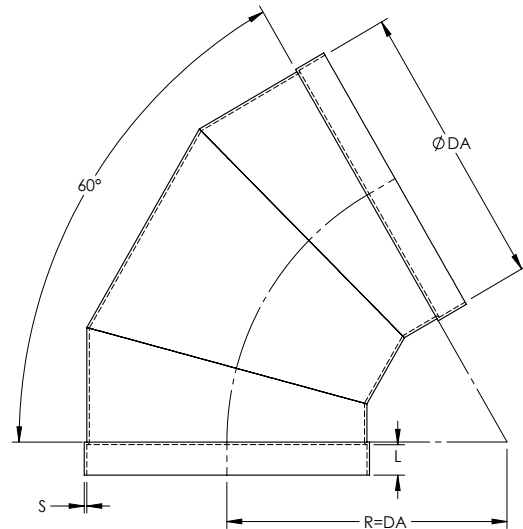
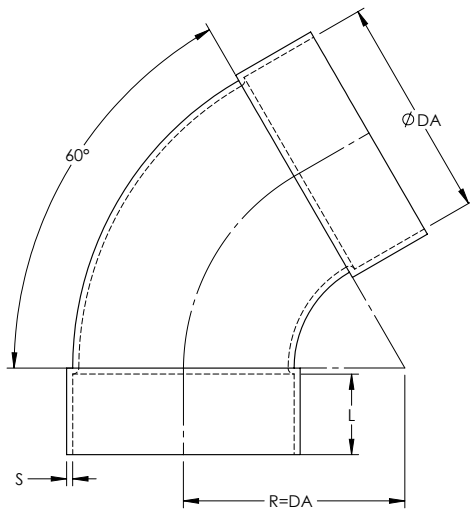
Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



### 60 DEGREE ELBOW

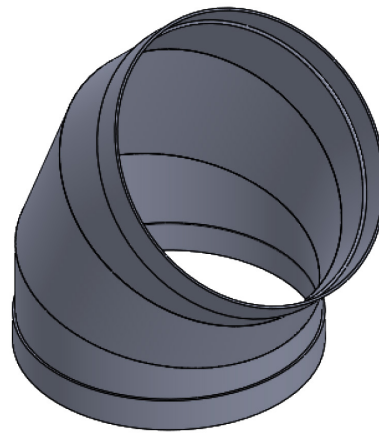
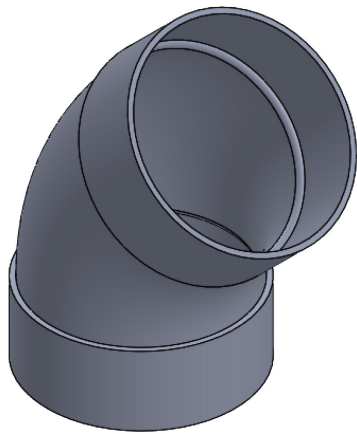
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277060002	1777060002	1977060002	2577060002	-
2-1/2	75	-	-	-	-	3077060025
3	90	1277060003	1777060003	1977060003	2577060003	-
4	110	1277060004	1777060004	1977060004	2577060004	3077060004
5	140	1277060005	1777060005	1977060005	2577060005	-
6	160	1277060006	1777060006	1977060006	2577060006	3077060006
7	180	1277060007	1777060007	1977060007	2577060007	-
8	200	1277060008	1777060008	1977060008	2577060008	3077060008
9	225	1277060009	1777060009	1977060009	2577060009	-
10	250	1277060010	1777060010	1977060010	2577060010	3077060010
11	280	1277060011	1777060011	1977060011	2577060011	-
12	315	1277060012	1777060012	1977060012	2577060012	3077060012
14	355	1277060014	1777060014	1977060014	2577060014	-
16	400	1277060016	1777060016	1977060016	2577060016	3077060016
18	450	1277060018	1777060018	1977060018	2577060018	-
20	500	1277060020	1777060020	1977060020	2577060020	-
22	560	1277060022	1777060022	1977060022	2577060022	-
24	630	1277060024	1777060024	1977060024	2577060024	-
28	710	1277060028	1777060028	1977060028	2577060028	-
32	800	1277060032	1777060032	1977060032	2577060032	-
36	900	1277060036	1777060036	-	2577060036	-
40	1000	1277060040	1777060040	-	2577060040	-
48	1200	1277060048	1777060048	-	2577060048	-



### 60 DEGREE ELBOW

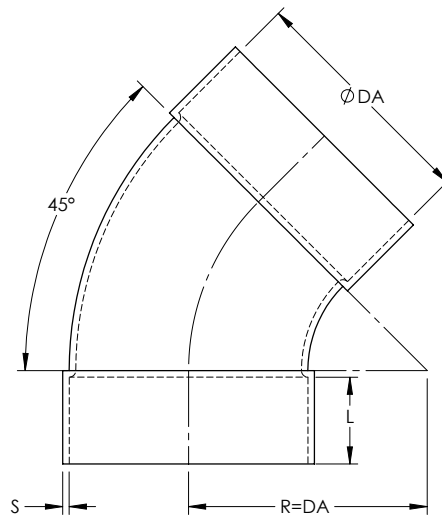
Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



### 45 DEGREE ELBOW

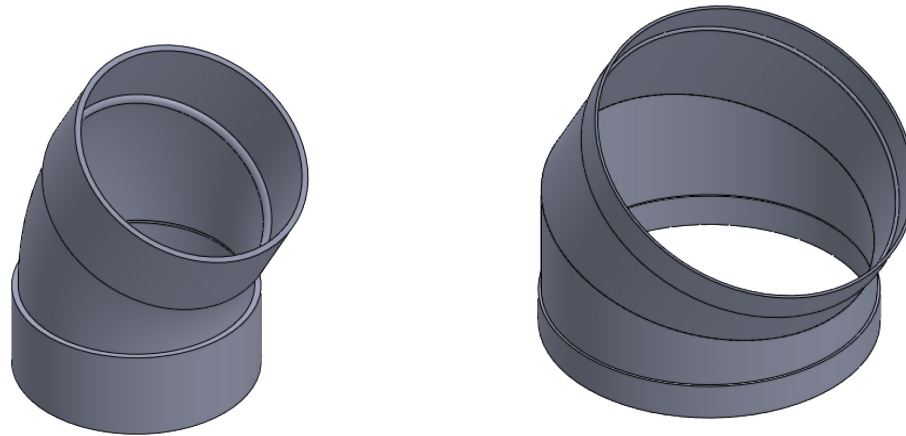
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277050002	1777050002	1977050002	2577050002	-
2-1/2	75	-	-	-	-	3077050025
3	90	1277050003	1777050003	1977050003	2577050003	-
4	110	1277050004	1777050004	1977050004	2577050004	3077050004
5	140	1277050005	1777050005	1977050005	2577050005	-
6	160	1277050006	1777050006	1977050006	2577050006	3077050006
7	180	1277050007	1777050007	1977050007	2577050007	-
8	200	1277050008	1777050008	1977050008	2577050008	3077050008
9	225	1277050009	1777050009	1977050009	2577050009	-
10	250	1277050010	1777050010	1977050010	2577050010	3077050010
11	280	1277050011	1777050011	1977050011	2577050011	-
12	315	1277050012	1777050012	1977050012	2577050012	3077050012
14	355	1277050014	1777050014	1977050014	2577050014	-
16	400	1277050016	1777050016	1977050016	2577050016	3077050016
18	450	1277050018	1777050018	1977050018	2577050018	-
20	500	1277050020	1777050020	1977050020	2577050020	-
22	560	1277050022	1777050022	1977050022	2577050022	-
24	630	1277050024	1777050024	1977050024	2577050024	-
28	710	1277050028	1777050028	1977050028	2577050028	-
32	800	1277050032	1777050032	1977050032	2577050032	-
36	900	1277050036	1777050036	-	2577050036	-
40	1000	1277050040	1777050040	-	2577050040	-
48	1200	1277050048	1777050048	-	2577050048	-



### 45 DEGREE ELBOW

Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

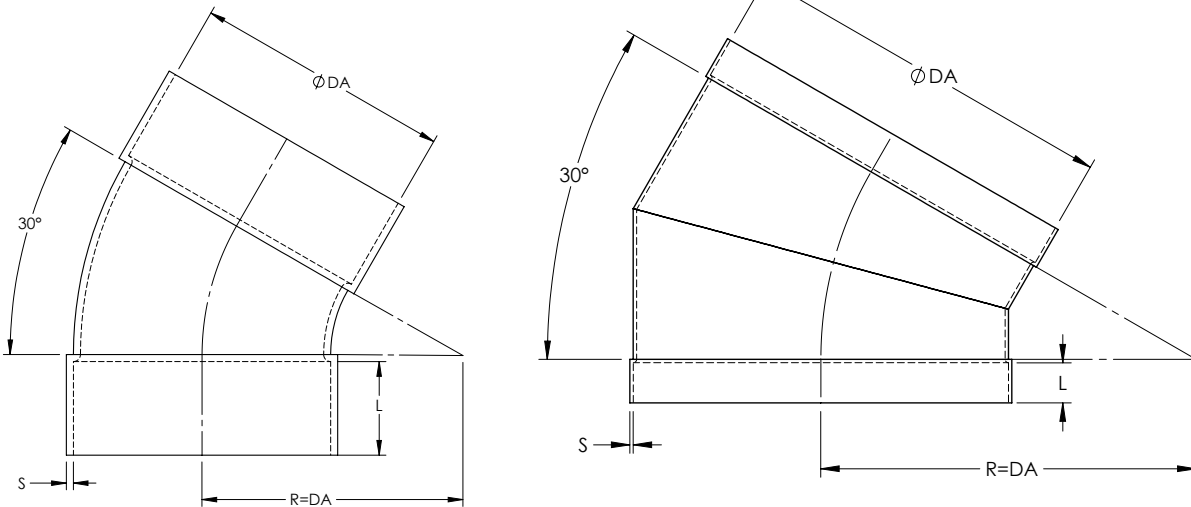
\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



### 30 DEGREE ELBOW

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277070002	1777070002	1977070002	2577070002	-
2-1/2	75	-	-	-	-	3077070025
3	90	1277070003	1777070003	1977070003	2577070003	-
4	110	1277070004	1777070004	1977070004	2577070004	3077070004
5	140	1277070005	1777070005	1977070005	2577070005	-
6	160	1277070006	1777070006	1977070006	2577070006	3077070006
7	180	1277070007	1777070007	1977070007	2577070007	-
8	200	1277070008	1777070008	1977070008	2577070008	3077070008
9	225	1277070009	1777070009	1977070009	2577070009	-
10	250	1277070010	1777070010	1977070010	2577070010	3077070010
11	280	1277070011	1777070011	1977070011	2577070011	-
12	315	1277070012	1777070012	1977070012	2577070012	3077070012
14	355	1277070014	1777070014	1977070014	2577070014	-
16	400	1277070016	1777070016	1977070016	2577070016	3077070016
18	450	1277070018	1777070018	1977070018	2577070018	-
20	500	1277070020	1777070020	1977070020	2577070020	-
22	560	1277070022	1777070022	1977070022	2577070022	-
24	630	1277070024	1777070024	1977070024	2577070024	-
28	710	1277070028	1777070028	1977070028	2577070028	-
32	800	1277070032	1777070032	1977070032	2577070032	-
36	900	1277070036	1777070036	-	2577070036	-
40	1000	1277070040	1777070040	-	2577070040	-
48	1200	1277070048	1777070048	-	2577070048	-

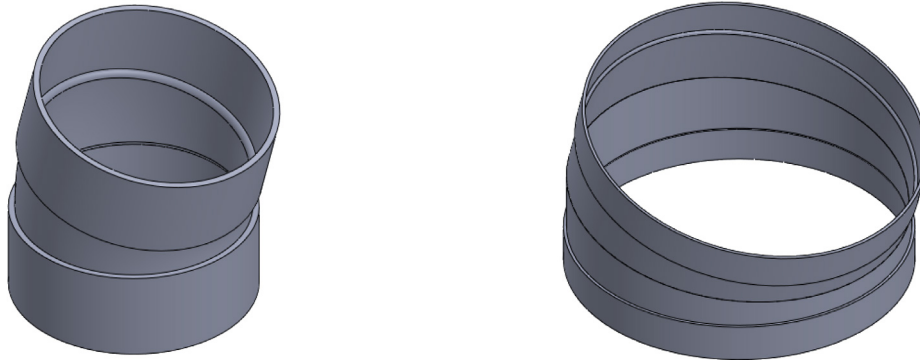




### 30 DEGREE ELBOW

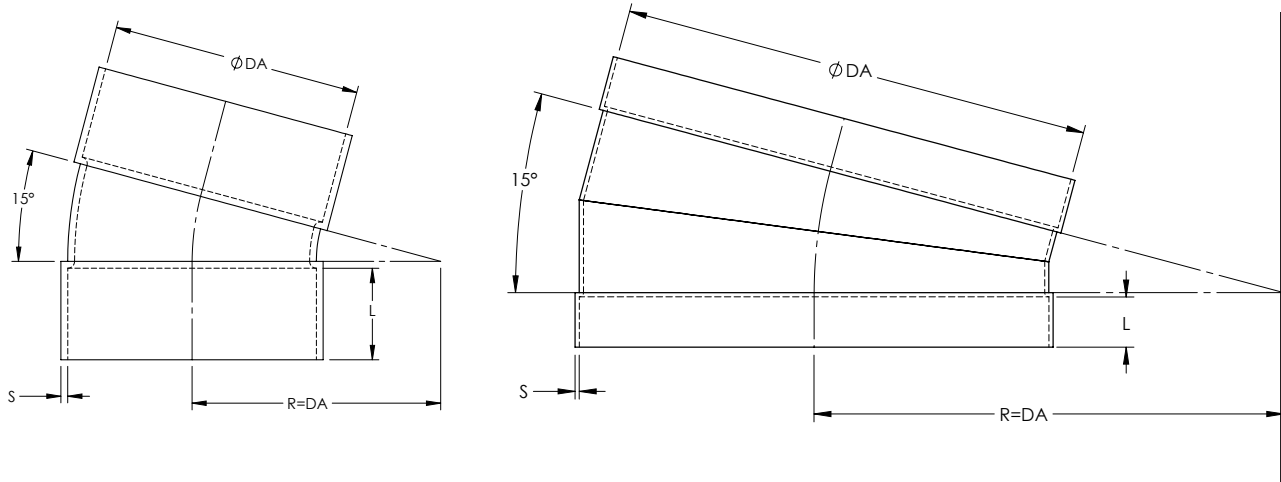
Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



### 15 DEGREE ELBOW

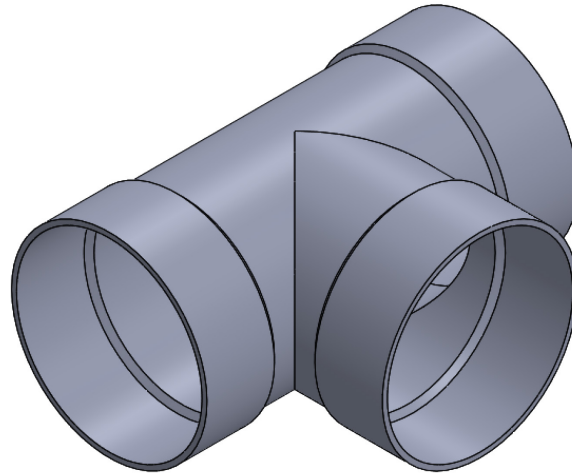
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277080002	1777080002	1977080002	2577080002	-
2-1/2	75	-	-	-	-	3077080025
3	90	1277080003	1777080003	1977080003	2577080003	-
4	110	1277080004	1777080004	1977080004	2577080004	3077080004
5	140	1277080005	1777080005	1977080005	2577080005	-
6	160	1277080006	1777080006	1977080006	2577080006	3077080006
7	180	1277080007	1777080007	1977080007	2577080007	-
8	200	1277080008	1777080008	1977080008	2577080008	3077080008
9	225	1277080009	1777080009	1977080009	2577080009	-
10	250	1277080010	1777080010	1977080010	2577080010	3077080010
11	280	1277080011	1777080011	1977080011	2577080011	-
12	315	1277080012	1777080012	1977080012	2577080012	3077080012
14	355	1277080014	1777080014	1977080014	2577080014	-
16	400	1277080016	1777080016	1977080016	2577080016	3077080016
18	450	1277080018	1777080018	1977080018	2577080018	-
20	500	1277080020	1777080020	1977080020	2577080020	-
22	560	1277080022	1777080022	1977080022	2577080022	-
24	630	1277080024	1777080024	1977080024	2577080024	-
28	710	1277080028	1777080028	1977080028	2577080028	-
32	800	1277080032	1777080032	1977080032	2577080032	-
36	900	1277080036	1777080036	-	2577080036	-
40	1000	1277080040	1777080040	-	2577080040	-
48	1200	1277080048	1777080048	-	2577080048	-



### 15 DEGREE ELBOW

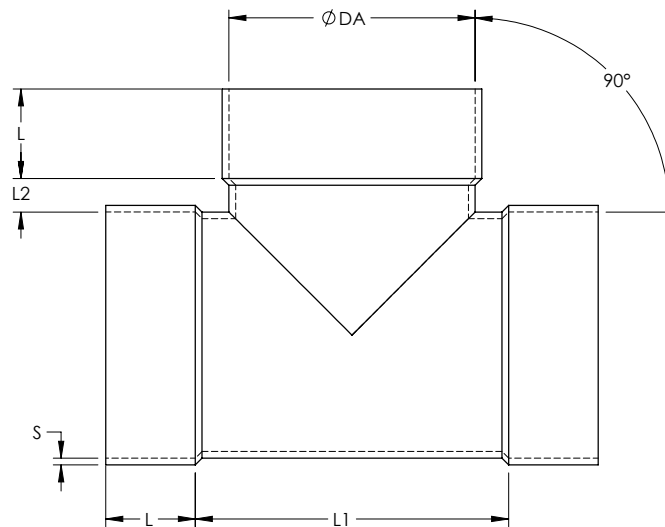
Dimensions							
DA mm	L	TOL	S	Nom In.	DA	L	S
63	25	0.7	3	2	2.48	0.98	0.118
75	40	0.7	3	2 1/2	2.95	1.57	0.118
90	40	0.9	3	3	3.54	1.57	0.118
110	40	1	3	4	4.33	1.57	0.118
140	40	1.3	3	5	5.51	1.57	0.118
160	40	1.5	3	6	6.30	1.57	0.118
180	40	1.7	3	7	7.09	1.57	0.118
200	40	1.8	3	8	7.87	1.57	0.118
225	40	1.9	3.5	9	8.86	1.57	0.138
250	40	2	3.5	10	9.84	1.57	0.138
280	50	2.2	3.5	11	11.02	1.97	0.138
315	50	2.4	4	12	12.40	1.97	0.157
355	50	2.7	4	14	13.98	1.97	0.157
400	50	3	4.5	16	15.75	1.97	0.177
450	50	3.5	5	18	17.72	1.97	0.197
500	50	4	5	20	19.69	1.97	0.197
560	60	4.5	5	22	22.05	2.36	0.197
630	70	4.5	6	24	24.80	2.76	0.236
710	80	4.5	6	28	27.95	3.15	0.236
800	80	4.5	8	32	31.50	3.15	0.315
900	90	4.5	8	36	35.43	3.54	0.315
1000	100	5	10	40	39.37	3.94	0.394
1200	120	5	12	48	47.24	4.72	0.472

\*PPsEI and PVDF >16" (400mm) and PP, PPs, and PE >20" (500mm) are segmented style



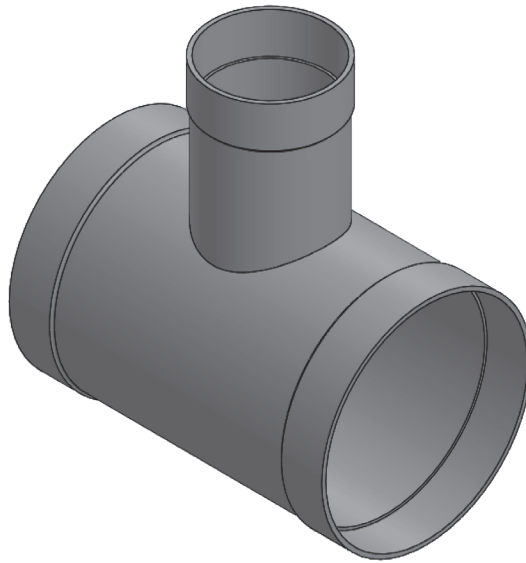
**TEE**

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277090002	1777090002	1977090002	2577090002	-
2-1/2	75	-	-	-	-	3077090025
3	90	1277090003	1777090003	1977090003	2577090003	-
4	110	1277090004	1777090004	1977090004	2577090004	3077090004
5	140	1277090005	1777090005	1977090005	2577090005	-
6	160	1277090006	1777090006	1977090006	2577090006	3077090006
7	180	1277090007	1777090007	1977090007	2577090007	-
8	200	1277090008	1777090008	1977090008	2577090008	3077090008
9	225	1277090009	1777090009	1977090009	2577090009	-
10	250	1277090010	1777090010	1977090010	2577090010	3077090010
11	280	1277090011	1777090011	1977090011	2577090011	-
12	315	1277090012	1777090012	1977090012	2577090012	3077090012
14	355	1277090014	1777090014	1977090014	2577090014	-
16	400	1277090016	1777090016	1977090016	2577090016	3077090016
18	450	1277090018	1777090018	1977090018	2577090018	-
20	500	1277090020	1777090020	1977090020	2577090020	-
22	560	1277090022	1777090022	1977090022	2577090022	-
24	630	1277090024	1777090024	-	2577090024	-
28	710	1277090028	1777090028	-	2577090028	-
32	800	1277090032	1777090032	1977090032	2577090032	-
36	900	1277090036	1777090036	-	2577090036	-
40	1000	1277090040	1777090040	-	2577090040	-
48	1200	1277090048	1777090048	-	2577090048	-



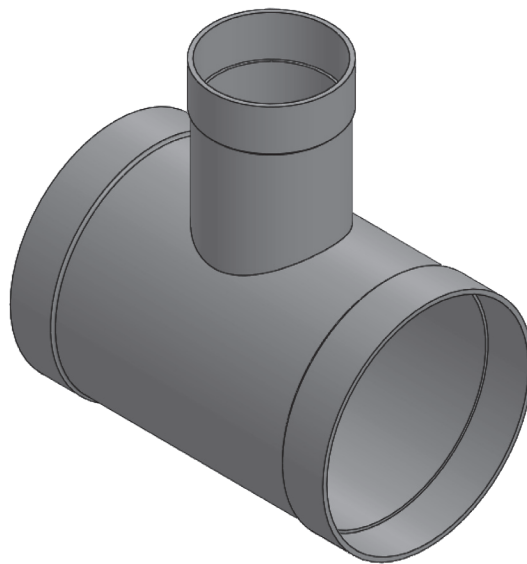
**TEE**

Dimensions											
DA	L	L1	L2	TOL	S	Nom In.	DA in	L	L1	L2	s
63	25	105	22	0.7	3	2	2.48	0.98	4.13	0.87	0.118
75	40	105	15	0.7	3	2 1/2	2.95	1.57	4.13	0.59	0.118
90	40	120	15	0.9	3	3	3.54	1.57	4.72	0.59	0.118
110	40	140	15	1	3	4	4.33	1.57	5.51	0.59	0.118
140	40	170	15	1.3	3	5	5.51	1.57	6.69	0.59	0.118
160	40	190	15	1.5	3	6	6.30	1.57	7.48	0.59	0.118
180	40	210	15	1.7	3	7	7.09	1.57	8.27	0.59	0.118
200	40	230	15	1.8	4	8	7.87	1.57	9.06	0.59	0.157
225	40	270	15	1.9	4	9	8.86	1.57	10.63	0.59	0.157
250	40	280	12	2	4	10	9.84	1.57	11.02	0.47	0.157
280	50	320	20	2.2	4	11	11.02	1.97	12.60	0.79	0.157
315	50	345	8	2.4	5	12	12.40	1.97	13.58	0.31	0.197
355	50	405	55	2.7	5	14	13.98	1.97	15.94	2.17	0.197
400	50	460	60	3	6	16	15.75	1.97	18.11	2.36	0.236
450	50	586	70	3.5	5	18	17.72	1.97	23.07	2.76	0.197
500	50	650	75	4	5	20	19.69	1.97	25.59	2.95	0.197
560	60	728	85	4.5	6	22	22.05	2.36	28.66	3.35	0.236
630	70	820	100	4.5	6	24	24.80	2.76	32.28	3.94	0.236
710	80	924	110	4.5	6	28	27.95	3.15	36.38	4.33	0.236
800	80	1040	120	4.5	8	32	31.50	3.15	40.94	4.72	0.315
900	90	1170	135	4.5	8	36	35.43	3.54	46.06	5.31	0.315
1000	100	1300	150	5	10	40	39.37	3.94	51.18	5.91	0.394
1200	120	1560	180	5	12	48	47.24	4.72	61.42	7.09	0.472

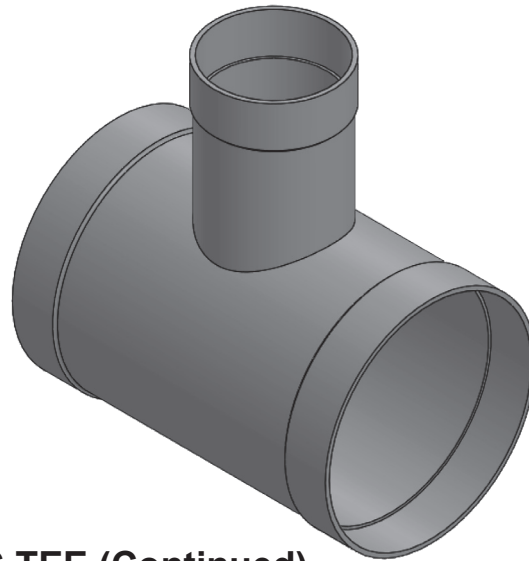


## REDUCING TEE

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4 x 3	110 x 90	1277100403	1777100403	1977100403	2577100403	-
5 x 4	140 x 110	1277100504	1777100504	-	2577100504	-
6 x 3	160 x 90	1277100603	1777100603	1977100603	2577100603	-
6 x 4	160 x 110	1277100604	1777100604	1977100604	2577100604	-
6 x 5	160 x 140	1277100605	1777100605	-	2577100605	-
7 x 3	180 x 90	1277100703	1777100703	-	2577100703	-
7 x 4	180 x 110	1277100704	1777100704	-	2577100704	-
7 x 5	180 x 140	1277100705	1777100705	-	2577100705	-
7 x 6	180 x 160	1277100706	1777100706	-	2577100706	-
8 x 3	200 x 90	1277100803	1777100803	1977100803	2577100803	-
8 x 4	200 x 110	1277100804	1777100804	1977100804	2577100804	-
8 x 5	200 x 140	1277100805	1777100805	-	2577100805	-
8 x 6	200 x 160	1277100806	1777100806	-	2577100806	-
8 x 7	200 x 180	1277100807	1777100807	-	2577100807	-
9 x 3	225 x 90	1277100903	1777100903	-	2577100903	-
9 x 4	225 x 110	1277100904	1777100904	1977100904	2577100904	-
9 x 5	225 x 140	1277100905	1777100905	-	2577100905	-
9 x 6	225 x 160	1277100906	1777100906	1977100906	2577100906	-
9 x 7	225 x 180	1277100907	1777100907	-	2577100907	-
9 x 8	225 x 200	1277100908	1777100908	-	2577100908	-
10 x 3	250 x 90	1277101003	1777101003	-	2577101003	-
10 x 4	250 x 110	1277101004	1777101004	1977101004	2577101004	-
10 x 5	250 x 140	1277101005	1777101005	1977101005	2577101005	-
10 x 6	250 x 160	1277101006	1777101006	1977101006	2577101006	-
10 x 7	250 x 180	1277101007	1777101007	-	2577101007	-
10 x 8	250 x 200	1277101008	1777101008	1977101008	2577101008	-
10 x 9	250 x 225	1277101009	1777101009	-	2577101009	-
11 x 3	280 x 90	1277101103	1777101103	-	2577101103	-
11 x 4	280 x 110	1277101104	1777101104	1977101104	2577101104	-

**REDUCING TEE (Continued)**

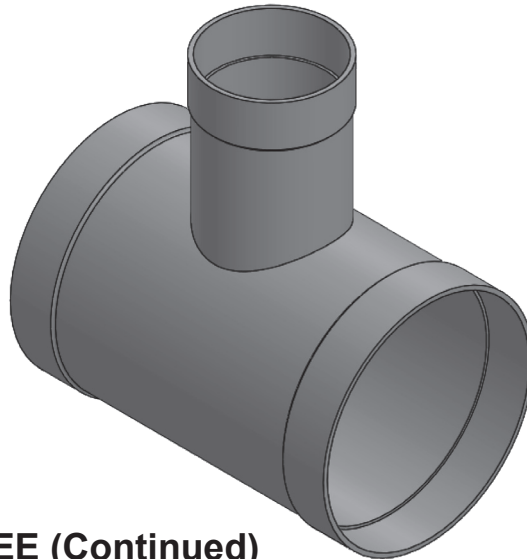
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
11 x 5	280 x 140	1277101105	1777101105	-	2577101105	-
11 x 6	280 x 160	1277101106	1777101106	-	2577101106	-
11 x 7	280 x 180	1277101107	1777101107	-	2577101107	-
11 x 8	280 x 200	1277101108	1777101108	1977101108	2577101108	-
11 x 9	280 x 225	1277101109	1777101109	-	2577101109	-
11 x 10	280 x 250	1277101110	1777101110	-	2577101110	-
12 x 3	315 x 90	1277101203	1777101203	1977101203	2577101203	-
12 x 4	315 x 110	1277101204	1777101204	1977101204	2577101204	3077101204
12 x 5	315 x 140	1277101205	1777101205	-	2577101205	-
12 x 6	315 x 160	1277101206	1777101206	-	2577101206	-
12 x 7	315 x 180	1277101207	1777101207	-	2577101207	-
12 x 8	315 x 200	1277101208	1777101208	1977101208	2577101208	-
12 x 9	315 x 225	1277101209	1777101209	-	2577101209	-
12 x 10	315 x 250	1277101210	1777101210	1977101210	2577101210	-
12 x 11	315 x 280	1277101211	1777101211	-	2577101211	-
14 x 3	355 x 90	1277101403	1777101403	-	2577101403	-
14 x 4	355 x 110	1277101404	1777101404	1977101404	2577101404	-
14 x 5	355 x 140	1277101405	1777101405	-	2577101405	-
14 x 6	355 x 160	1277101406	1777101406	-	2577101406	-
14 x 7	355 x 180	1277101407	1777101407	-	2577101407	-
14 x 8	355 x 200	1277101408	1777101408	1977101408	2577101408	-
14 x 9	355 x 225	1277101409	1777101409	-	2577101409	-
14 x 10	355 x 250	1277101410	1777101410	1977101410	2577101410	-
14 x 11	355 x 280	1277101411	1777101411	-	2577101411	-
14 x 12	355 x 315	1277101412	1777101412	-	2577101412	-
16 x 3	400 x 90	1277101603	1777101603	-	2577101603	-
16 x 4	400 x 110	1277101604	1777101604	1977101604	2577101604	-
16 x 5	400 x 140	1277101605	1777101605	-	2577101605	-
16 x 6	400 x 160	1277101606	1777101606	1977101606	2577101606	-



**REDUCING TEE (Continued)**

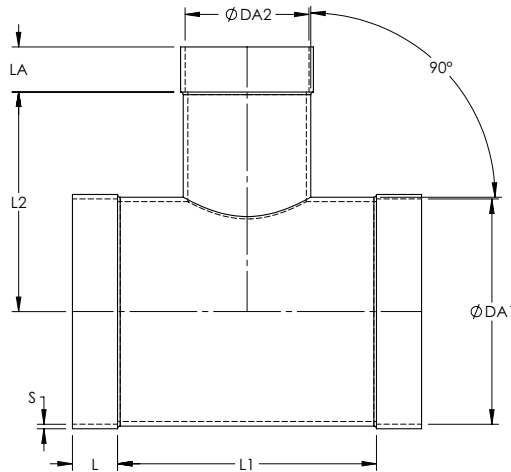
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
16 x 7	400 x 180	1277101607	1777101607	-	2577101607	-
16 x 8	400 x 200	1277101608	1777101608	1977101608	2577101608	-
16 x 9	400 x 225	1277101609	1777101609	-	2577101609	-
16 x 10	400 x 250	1277101610	1777101610	1977101610	2577101610	-
16 x 11	400 x 280	1277101611	1777101611	-	2577101611	-
16 x 12	400 x 315	1277101612	1777101612	1977101612	2577101612	-
16 x 14	400 x 355	1277101614	1777101614	1977101614	2577101614	-
18 x 3	450 x 90	1277101803	1777101803	-	2577101803	-
18 x 4	450 x 110	1277101804	1777101804	-	2577101804	-
18 x 5	450 x 140	1277101805	1777101805	-	2577101805	-
18 x 6	450 x 160	1277101806	1777101806	-	2577101806	-
18 x 7	450 x 180	1277101807	1777101807	-	2577101807	-
18 x 8	450 x 200	1277101808	1777101808	-	2577101808	-
18 x 9	450 x 225	1277101809	1777101809	-	2577101809	-
18 x 10	450 x 250	1277101810	1777101810	-	2577101810	-
18 x 11	450 x 280	1277101811	1777101811	-	2577101811	-
18 x 12	450 x 315	1277101812	1777101812	-	2577101812	-
18 x 14	450 x 355	1277101814	1777101814	-	2577101814	-
18 x 16	450 x 400	1277101816	1777101816	-	2577101816	-
20 x 3	500 x 90	1277102003	1777102003	-	2577102003	-
20 x 4	500 x 110	1277102004	1777102004	-	2577102004	-
20 x 5	500 x 140	1277102005	1777102005	-	2577102005	-
20 x 6	500 x 160	1277102006	1777102006	-	2577102006	-
20 x 7	500 x 180	1277102007	1777102007	-	2577102007	-
20 x 8	500 x 200	1277102008	1777102008	-	2577102008	-
20 x 9	500 x 225	1277102009	1777102009	-	2577102009	-
20 x 10	500 x 250	1277102210	1777102210	-	2577102210	-
20 x 11	500 x 280	1277102011	1777102011	-	2577102011	-
20 x 12	500 x 315	1277102012	1777102012	-	2577102012	-
20 x 14	500 x 355	1277102014	1777102014	-	2577102014	-
20 x 16	500 x 400	1277102016	1777102016	-	2577102016	-





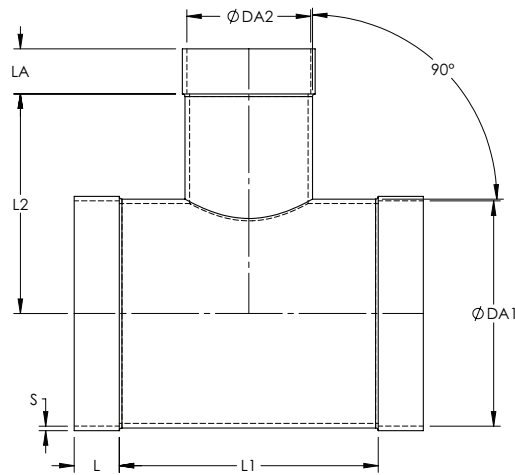
### REDUCING TEE (Continued)

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
20 x 18	500 x 450	1277102018	1777102018	-	2577102018	-
22 x 3	560 x 90	1277102203	1777102203	-	2577102203	-
22 x 4	560 x 110	1277102204	1777102204	-	2577102204	-
22 x 5	560 x 140	1277102205	1777102205	-	2577102205	-
22 x 6	560 x 160	1277102206	1777102206	-	2577102206	-
22 x 7	560 x 180	1277102207	1777102207	-	2577102207	-
22 x 8	560 x 200	1277102208	1777102208	-	2577102208	-
22 x 9	560 x 225	1277102209	1777102209	-	2577102209	-
22 x 10	560 x 250	1277102210	1777102210	-	2577102210	-
22 x 11	560 x 280	1277102211	1777102211	-	2577102211	-
22 x 12	560 x 315	1277102212	1777102212	-	2577102212	-
22 x 14	560 x 355	1277102214	1777102214	-	2577102214	-
22 x 16	560 x 400	1277102216	1777102216	-	2577102216	-
22 x 18	560 x 450	1277102218	1777102218	-	2577102218	-
22 x 20	560 x 500	1277102220	1777102220	-	2577102220	-
24 x 6	630 x 160	-	-	-	2577102406	-
24 x 10	630 x 250	-	-	-	2577102410	-
24 x 12	630 x 315	-	-	-	2577102412	-
24 x 14	630 x 355	-	1777102414	-	-	-
24 x 16	630 x 400	-	1777102416	-	2577102416	-
24 x 18	630 x 450	-	1777102418	-	2577102418	-
24 x 20	630 x 500	-	-	-	2577102420	-
24 x 22	630 x 560	-	-	-	2577102422	-
28 x 20	710 x 500	-	1777102820	-	-	-
28 x 22	710 x 560	1277102822	-	-	-	-
32 x 24	800 x 630	1277103224	-	-	-	-
36 x 20	900 x 500	-	1777103620	-	2577103620	-
40 x 32	1000 x 800	-	-	-	2577104032	-
40 x 36	1000 x 900	-	1777104036	-	2577104036	-
48 x 32	1200 x 800	-	-	-	-	-
48 x 36	1200 x 900	-	-	-	2577104832	-



**REDUCING TEE**

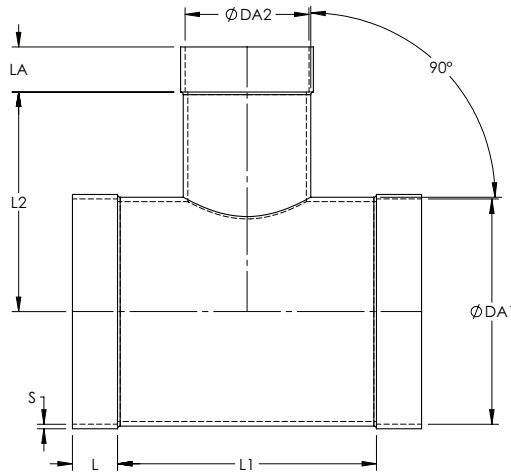
Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
110	90	40	40	140	130	3	4 x 3	4.33	3.54	1.57	1.57	5.51	5.12	0.118
140	110	40	40	170	155	3	5 x 4	5.51	4.33	1.57	1.57	6.69	6.10	0.118
160	90	40	40	190	145	3	6 x 3	6.30	3.54	1.57	1.57	7.48	5.71	0.118
160	110	40	40	190	135	3	6 x 4	6.30	4.33	1.57	1.57	7.48	5.31	0.118
160	140	40	40	190	155	3	6 x 5	6.30	5.51	1.57	1.57	7.48	6.10	0.118
180	90	40	40	210	165	3	7 x 3	7.09	3.54	1.57	1.57	8.27	6.50	0.118
180	110	40	40	210	165	3	7 x 4	7.09	4.33	1.57	1.57	8.27	6.50	0.118
180	140	40	40	210	140	3	7 x 5	7.09	5.51	1.57	1.57	8.27	5.51	0.118
180	160	40	40	210	125	3	7 x 6	7.09	6.30	1.57	1.57	8.27	4.92	0.118
200	90	40	40	230	195	4	8 x 3	7.87	3.54	1.57	1.57	9.06	7.68	0.157
200	110	40	40	230	195	4	8 x 4	7.87	4.33	1.57	1.57	9.06	7.68	0.157
200	140	40	40	230	165	4	8 x 5	7.87	5.51	1.57	1.57	9.06	6.50	0.157
200	160	40	40	230	150	4	8 x 6	7.87	6.30	1.57	1.57	9.06	5.91	0.157
200	180	40	40	230	175	4	8 x 7	7.87	7.09	1.57	1.57	9.06	6.89	0.157
225	90	40	40	270	235	3.5	9 x 3	8.86	3.54	1.57	1.57	10.63	9.25	0.138
225	110	40	40	270	210	3.5	9 x 4	8.86	4.33	1.57	1.57	10.63	8.27	0.138
225	140	40	40	270	230	3.5	9 x 5	8.86	5.51	1.57	1.57	10.63	9.06	0.138
225	160	40	40	270	210	3.5	9 x 6	8.86	6.30	1.57	1.57	10.63	8.27	0.138
225	180	40	40	270	195	3.5	9 x 7	8.86	7.09	1.57	1.57	10.63	7.68	0.138
225	200	40	40	270	190	3.5	9 x 8	8.86	7.87	1.57	1.57	10.63	7.48	0.138
250	90	40	40	280	150	3.5	10 x 3	9.84	3.54	1.57	1.57	11.02	5.91	0.138
250	110	40	40	280	210	3.5	10 x 4	9.84	4.33	1.57	1.57	11.02	8.27	0.138
250	140	40	40	280	215	3.5	10 x 5	9.84	5.51	1.57	1.57	11.02	8.46	0.138
250	160	40	40	280	215	3.5	10 x 6	9.84	6.30	1.57	1.57	11.02	8.46	0.138
250	180	40	40	280	190	3.5	10 x 7	9.84	7.09	1.57	1.57	11.02	7.48	0.138
250	200	40	40	280	280	3.5	10 x 8	9.84	7.87	1.57	1.57	11.02	11.02	0.138
250	225	40	40	280	220	3.5	10 x 9	9.84	8.86	1.57	1.57	11.02	8.66	0.138
280	90	50	40	320	295	4	11 x 3	11.02	3.54	1.97	1.57	12.60	11.61	0.157
280	110	50	40	320	280	4	11 x 4	11.02	4.33	1.97	1.57	12.60	11.02	0.157
280	140	50	40	320	260	4	11 x 5	11.02	5.51	1.97	1.57	12.60	10.24	0.157
280	160	50	40	320	270	4	11 x 6	11.02	6.30	1.97	1.57	12.60	10.63	0.157
280	180	50	40	320	235	4	11 x 7	11.02	7.09	1.97	1.57	12.60	9.25	0.157



Pro-Vent®

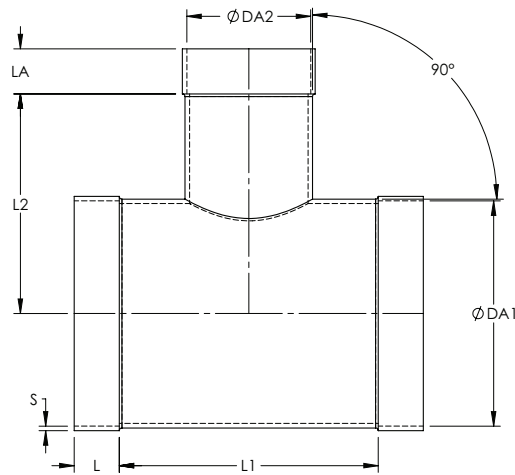
**REDUCING TEE (Continued)**

Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
280	200	50	40	320	275	4	11 x 8	11.02	7.87	1.97	1.57	12.60	10.83	0.157
280	225	50	40	320	235	4	11 x 9	11.02	8.86	1.97	1.57	12.60	9.25	0.157
280	250	50	40	320	205	4	11 x 10	11.02	9.84	1.97	1.57	12.60	8.07	0.157
315	90	50	40	345	320	5	12 x 3	12.40	3.54	1.97	1.57	13.58	12.60	0.197
315	110	50	40	345	305	5	12 x 4	12.40	4.33	1.97	1.57	13.58	12.01	0.197
315	140	50	40	345	390	5	12 x 5	12.40	5.51	1.97	1.57	13.58	15.35	0.197
315	160	50	40	345	305	5	12 x 6	12.40	6.30	1.97	1.57	13.58	12.01	0.197
315	180	50	40	345	260	5	12 x 7	12.40	7.09	1.97	1.57	13.58	10.24	0.197
315	200	50	40	345	340	5	12 x 8	12.40	7.87	1.97	1.57	13.58	13.39	0.197
315	225	50	40	345	310	5	12 x 9	12.40	8.86	1.97	1.57	13.58	12.20	0.197
315	250	50	40	345	275	5	12 x 10	12.40	9.84	1.97	1.57	13.58	10.83	0.197
315	280	50	50	345	195	5	12 x 11	12.40	11.02	1.97	1.97	13.58	7.68	0.197
355	90	50	40	230	248	5	14 x 3	13.98	3.54	1.97	1.57	9.06	9.76	0.197
355	110	50	40	250	243	5	14 x 4	13.98	4.33	1.97	1.57	9.84	9.57	0.197
355	140	50	40	280	248	5	14 x 5	13.98	5.51	1.97	1.57	11.02	9.76	0.197
355	160	50	40	300	243	5	14 x 6	13.98	6.30	1.97	1.57	11.81	9.57	0.197
355	180	50	40	320	248	5	14 x 7	13.98	7.09	1.97	1.57	12.60	9.76	0.197
355	200	50	40	340	243	5	14 x 8	13.98	7.87	1.97	1.57	13.39	9.57	0.197
355	225	50	40	365	248	5	14 x 9	13.98	8.86	1.97	1.57	14.37	9.76	0.197
355	250	50	40	390	243	5	14 x 10	13.98	9.84	1.97	1.57	15.35	9.57	0.197
355	280	50	50	420	248	5	14 x 11	13.98	11.02	1.97	1.97	16.54	9.76	0.197
355	315	50	50	455	248	5	14 x 12	13.98	12.40	1.97	1.97	17.91	9.76	0.197
400	90	50	40	230	270	6	16 x 3	15.75	3.54	1.97	1.57	9.06	10.63	0.236
400	110	50	40	250	265	6	16 x 4	15.75	4.33	1.97	1.57	9.84	10.43	0.236
400	140	50	40	280	270	6	16 x 5	15.75	5.51	1.97	1.57	11.02	10.63	0.236
400	160	50	40	300	265	6	16 x 6	15.75	6.30	1.97	1.57	11.81	10.43	0.236
400	180	50	40	320	270	6	16 x 7	15.75	7.09	1.97	1.57	12.60	10.63	0.236
400	200	50	40	340	265	6	16 x 8	15.75	7.87	1.97	1.57	13.39	10.43	0.236
400	225	50	40	365	270	6	16 x 9	15.75	8.86	1.97	1.57	14.37	10.63	0.236
400	250	50	40	390	265	6	16 x 10	15.75	9.84	1.97	1.57	15.35	10.43	0.236
400	280	50	50	420	270	6	16 x 11	15.75	11.02	1.97	1.97	16.54	10.63	0.236
400	315	50	50	455	270	6	16 x 12	15.75	12.40	1.97	1.97	17.91	10.63	0.236



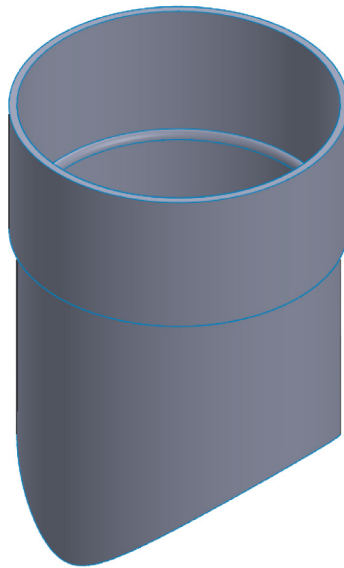
**REDUCING TEE (Continued)**

Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
400	355	50	50	495	270	6	16 x 14	15.75	13.98	1.97	1.97	19.49	10.63	0.236
450	90	50	40	230	295	5	18 x 3	17.72	3.54	1.97	1.57	9.06	11.61	0.197
450	110	50	40	250	290	5	18 x 4	17.72	4.33	1.97	1.57	9.84	11.42	0.197
450	140	50	40	280	295	5	18 x 5	17.72	5.51	1.97	1.57	11.02	11.61	0.197
450	160	50	40	300	290	5	18 x 6	17.72	6.30	1.97	1.57	11.81	11.42	0.197
450	180	50	40	320	295	5	18 x 7	17.72	7.09	1.97	1.57	12.60	11.61	0.197
450	200	50	40	340	290	5	18 x 8	17.72	7.87	1.97	1.57	13.39	11.42	0.197
450	225	50	40	365	295	5	18 x 9	17.72	8.86	1.97	1.57	14.37	11.61	0.197
450	250	50	40	390	290	5	18 x 10	17.72	9.84	1.97	1.57	15.35	11.42	0.197
450	280	50	50	420	295	5	18 x 11	17.72	11.02	1.97	1.97	16.54	11.61	0.197
450	315	50	50	455	295	5	18 x 12	17.72	12.40	1.97	1.97	17.91	11.61	0.197
450	355	50	50	495	295	5	18 x 14	17.72	13.98	1.97	1.97	19.49	11.61	0.197
450	400	50	50	540	295	5	18 x 16	17.72	15.75	1.97	1.97	21.26	11.61	0.197
500	90	50	40	230	320	5	20 x 3	19.69	3.54	1.97	1.57	9.06	12.60	0.197
500	110	50	40	250	315	5	20 x 4	19.69	4.33	1.97	1.57	9.84	12.40	0.197
500	140	50	40	280	320	5	20 x 5	19.69	5.51	1.97	1.57	11.02	12.60	0.197
500	160	50	40	300	315	5	20 x 6	19.69	6.30	1.97	1.57	11.81	12.40	0.197
500	180	50	40	320	320	5	20 x 7	19.69	7.09	1.97	1.57	12.60	12.60	0.197
500	200	50	40	340	315	5	20 x 8	19.69	7.87	1.97	1.57	13.39	12.40	0.197
500	225	50	40	365	320	5	20 x 9	19.69	8.86	1.97	1.57	14.37	12.60	0.197
500	250	50	40	390	315	5	20 x 10	19.69	9.84	1.97	1.57	15.35	12.40	0.197
500	280	50	50	420	320	5	20 x 11	19.69	11.02	1.97	1.97	16.54	12.60	0.197
500	315	50	50	455	320	5	20 x 12	19.69	12.40	1.97	1.97	17.91	12.60	0.197
500	355	50	50	495	320	5	20 x 14	19.69	13.98	1.97	1.97	19.49	12.60	0.197
500	400	50	50	540	320	5	20 x 16	19.69	15.75	1.97	1.97	21.26	12.60	0.197
500	450	50	50	586	318	5	20 x 18	19.69	17.72	1.97	1.97	23.07	12.52	0.197
560	90	60	40	230	350	6	22 x 3	22.05	3.54	2.36	1.57	9.06	13.78	0.236
560	110	60	40	250	345	6	22 x 4	22.05	4.33	2.36	1.57	9.84	13.58	0.236
560	140	60	40	280	350	6	22 x 5	22.05	5.51	2.36	1.57	11.02	13.78	0.236



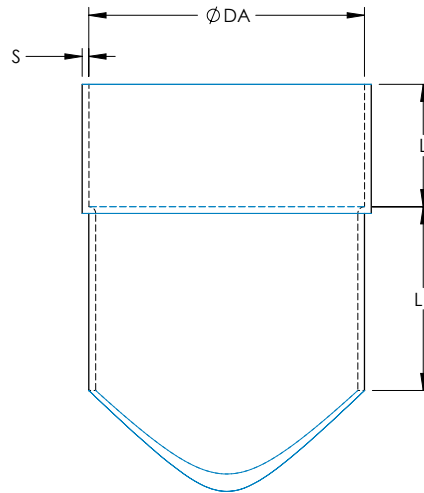
**REDUCING TEE (Continued)**

Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
560	160	60	40	300	345	6	22 x 6	22.05	6.30	2.36	1.57	11.81	13.58	0.236
560	180	60	40	320	350	6	22 x 7	22.05	7.09	2.36	1.57	12.60	13.78	0.236
560	200	60	40	340	345	6	22 x 8	22.05	7.87	2.36	1.57	13.39	13.58	0.236
560	225	60	40	365	350	6	22 x 9	22.05	8.86	2.36	1.57	14.37	13.78	0.236
560	250	60	40	390	345	6	22 x 10	22.05	9.84	2.36	1.57	15.35	13.58	0.236
560	280	60	50	420	350	6	22 x 11	22.05	11.02	2.36	1.97	16.54	13.78	0.236
560	315	60	50	455	350	6	22 x 12	22.05	12.40	2.36	1.97	17.91	13.78	0.236
560	355	60	50	495	350	6	22 x 14	22.05	13.98	2.36	1.97	19.49	13.78	0.236
560	400	60	50	540	350	6	22 x 16	22.05	15.75	2.36	1.97	21.26	13.78	0.236
560	450	60	50	586	348	6	22 x 18	22.05	17.72	2.36	1.97	23.07	13.70	0.236
560	500	60	50	650	355	6	22 x 20	22.05	19.69	2.36	1.97	25.59	13.98	0.236
630	160	70	40	300	380	6	24 x 6	24.80	6.30	2.76	1.57	11.81	14.96	0.236
630	250	70	40	390	3880	6	24 x 10	24.80	9.84	2.76	1.57	15.35	152.76	0.236
630	315	70	50	455	385	6	24 x 12	24.80	12.40	2.76	1.97	17.91	15.16	0.236
630	355	70	50	495	385	6	24 x 14	24.80	13.98	2.76	1.97	19.49	15.16	0.236
630	400	70	50	540	385	6	24 x 16	24.80	15.75	2.76	1.97	21.26	15.16	0.236
630	450	70	50	586	383	6	24 x 18	24.80	17.72	2.76	1.97	23.07	15.08	0.236
630	500	70	50	650	390	6	24 x 20	24.80	19.69	2.76	1.97	25.59	15.35	0.236
630	560	70	60	728	399	6	24 x 22	24.80	22.05	2.76	2.36	28.66	15.71	0.236
710	500	80	50	650	430	6	28 x 20	27.95	19.69	3.15	1.97	25.59	16.93	0.236
710	560	80	60	728	439	6	28 x 22	27.95	22.05	3.15	2.36	28.66	17.28	0.236
800	630	80	70	820	495	8	32 x 24	31.50	24.80	3.15	2.76	32.28	19.49	0.315
900	500	90	50	650	525	8	36 x 20	35.43	19.69	3.54	1.97	25.59	20.67	0.315
1000	800	100	80	1040	620	10	40 x 32	39.37	31.50	3.94	3.15	40.94	24.41	0.394
1000	900	100	90	1170	635	10	40 x 36	39.37	35.43	3.94	3.54	46.06	25.00	0.394
1200	800	120	80	1040	720	12	48 x 32	47.24	31.50	4.72	3.15	40.94	28.35	0.472
1200	900	120	90	1170	735	12	48 x 36	47.24	35.43	4.72	3.54	46.06	28.94	0.472



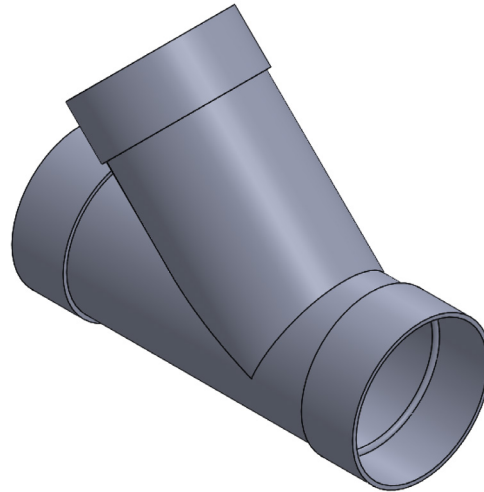
**TEE SADDLE - Specify main header size**

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277110003	1777110003	1977110003	2577110003	-
4	110	-	-	-	-	-
5	140	1277110005	1777110005	1977110005	2577110005	-
6	160	1277110006	1777110006	1977110006	2577110006	-
7	180	1277110007	1777110007	1977110007	2577110007	-
8	200	1277110008	1777110008	1977110008	2577110008	-
9	225	1277110009	1777110009	1977110009	2577110009	-
10	250	1277110010	1777110010	1977110010	2577110010	-
11	280	1277110011	1777110011	1977110011	2577110011	-
12	315	1277110012	1777110012	1977110012	2577110012	-
14	355	1277110014	1777110014	1977110014	2577110014	-
16	400	1277110016	1777110016	1977110016	2577110016	-
18	450	1277110018	1777110018	-	2577110018	-
20	500	1277110020	1777110020	-	2577110020	-
22	560	1277110022	1777110022	-	2577110022	-
24	630	1277110024	1777110024	-	2577110024	-
28	710	1277110028	1777110028	-	2577110028	-
32	800	1277110032	1777110032	-	2577110032	-
36	900	1277110036	1777110036	-	2577110036	-
40	1000	1277110040	1777110040	-	2577110040	-
48	1200	1277110048	1777110048	-	2577110048	-



**TEE SADDLE - Specify main header size**

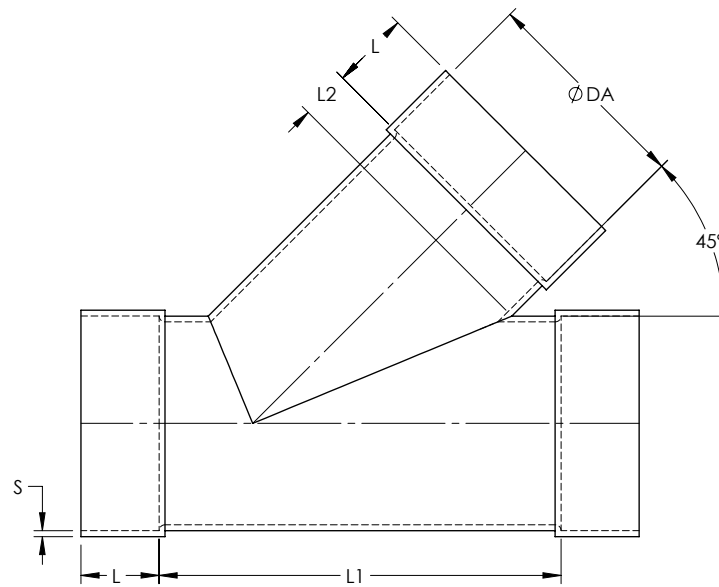
Dimensions														
DA	L	L1	s-PP	s-PPS	s-PPsEI	s-PE	Nom In.	DA in	L	L1	s-PP	s-PPs	s-PPsEI	s-PE
90	40	60	2.2	3	3	5.4	3	3.54	1.57	2.36	0.087	0.118	0.118	0.213
110	40	70	2.7	3	3	3.4	4	4.33	1.57	2.76	0.106	0.118	0.118	0.134
160	40	95	4	3	3	4	6	6.30	1.57	3.74	0.157	0.118	0.118	0.157
180	40	105	4.4	3	3.5	5.5	7	7.09	1.57	4.13	0.173	0.118	0.138	0.217
200	40	115	3	3	3.5	6.2	8	7.87	1.57	4.53	0.118	0.118	0.138	0.244
225	40	135	5.5	3.5	3.5	6.9	9	8.86	1.57	5.31	0.217	0.138	0.138	0.272
250	40	145	3.5	3.5	5	6.2	10	9.84	1.57	5.71	0.138	0.138	0.197	0.244
280	50	160	6.9	3.5	5	8.6	11	11.02	1.97	6.30	0.272	0.138	0.197	0.339
315	50	184	5	5	6	7.7	12	12.40	1.97	7.24	0.197	0.197	0.236	0.303
355	50	193	5	5	6	10.9	14	13.98	1.97	7.60	0.197	0.197	0.236	0.429
400	50	230	6	6	6	12.3	16	15.75	1.97	9.06	0.236	0.236	0.236	0.484
450	50	293	5	5	6	5	18	17.72	1.97	11.54	0.197	0.197	0.236	0.197
500	50	325	5	5	6	5	20	19.69	1.97	12.80	0.197	0.197	0.236	0.197
560	60	364	5	5	6	5	22	22.05	2.36	14.33	0.197	0.197	0.236	0.197
630	70	410	6	6	6	6	24	24.80	2.76	16.14	0.236	0.236	0.236	0.236
710	80	462	6	6	8	6	28	27.95	3.15	18.19	0.236	0.236	0.315	0.236
800	80	520	8	8	10	8	32	31.50	3.15	20.47	0.315	0.315	0.394	0.315
900	90	585	8	8	12	8	36	35.43	3.54	23.03	0.315	0.315	0.472	0.315
1000	100	650	10	10	12	10	40	39.37	3.94	25.59	0.394	0.394	0.472	0.394
1200	120	780	12	12	12	12	48	47.24	4.72	30.71	0.472	0.472	0.472	0.472



## LATERAL - WYE

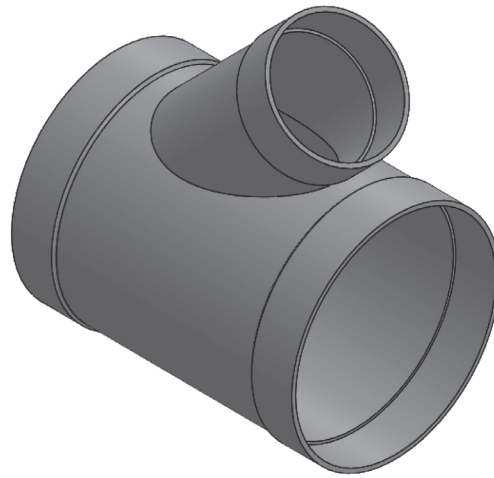
Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277120003	1777120003	1977120003	2577120003	-
4	110	-	-	-	-	-
5	140	1277120005	1777120005	1977120005	2577120005	-
6	160	1277120006	1777120006	1977120006	2577120006	-
7	180	1277120007	1777120007	1977120007	2577120007	-
8	200	1277120008	1777120008	1977120008	2577120008	-
9	225	1277120009	1777120009	1977120009	2577120009	-
10	250	1277120010	1777120010	1977120010	2577120010	-
11	280	1277120011	1777120011	1977120011	2577120011	-
12	315	1277120012	1777120012	1977120012	2577120012	-
14	355	1277120014	1777120014	1977120014	2577120014	-
16	400	1277120016	1777120016	1977120016	2577120016	-
18	450	1277120018	1777120018	1977120018	2577120018	-
20	500	1277120020	1777120020	1977120020	2577120020	-
22	560	1277120022	1777120022	-	2577120022	-
24	630	1277120024	1777120024	-	2577120024	-
28	710	1277120028	1777120028	-	2577120028	-
32	800	1277120032	1777120032	-	2577120032	-
36	900	1277120036	1777120036	-	2577120036	-
40	1000	1277120040	1777120040	-	2577120040	-
48	1200	1277120048	1777120048	-	2577120048	-



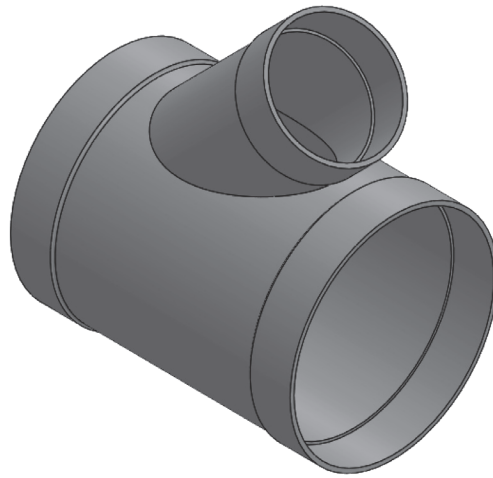


**LATERAL - WYE**

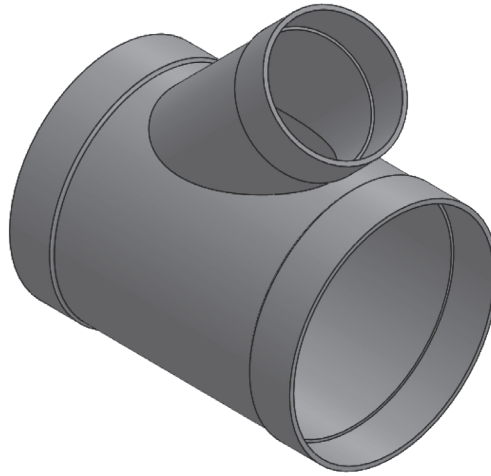
Dimensions											
DA	L	L1	L2	TOL	s	NOM in	DA in	L	L1	L2	s
90	35	178	25	0.9	3	3	3.54	1.38	7.01	0.98	0.118
110	35	206	25	1	3	4	4.33	1.38	8.11	0.98	0.118
140	35	254	28	1.3	3	5	5.51	1.38	10.00	1.10	0.118
160	35	292	32	1.5	3	6	6.30	1.38	11.50	1.26	0.118
180	35	328	36	1.7	3	7	7.09	1.38	12.91	1.42	0.118
200	35	364	40	1.8	4	8	7.87	1.38	14.33	1.57	0.157
225	35	410	45	1.9	4	9	8.86	1.38	16.14	1.77	0.157
250	35	454	50	2	4	10	9.84	1.38	17.87	1.97	0.157
280	40	508	56	2.2	4	11	11.02	1.57	20.00	2.20	0.157
315	40	574	63	2.4	5	12	12.40	1.57	22.60	2.48	0.197
355	40	646	71	2.7	5	14	13.98	1.57	25.43	2.80	0.197
400	40	726	80	3	6	16	15.75	1.57	28.58	3.15	0.236
450	50	818	90	3.5	5	18	17.72	1.97	32.20	3.54	0.197
500	50	908	100	4	5	20	19.69	1.97	35.75	3.94	0.197
560	60	1016	112	4.5	6	22	22.05	2.36	40.00	4.41	0.236
630	70	1144	126	4.5	6	24	24.80	2.76	45.04	4.96	0.236
710	80	1290	1742	4.5	6	28	27.95	3.15	50.79	68.58	0.236
800	80	1452	160	4.5	8	32	31.50	3.15	57.17	6.30	0.315
900	90	1634	180	4.5	8	36	35.43	3.54	64.33	7.09	0.315
1000	100	1816	200	5	10	40	39.37	3.94	71.50	7.87	0.394
1200	120	2178	240	5	12	48	47.24	4.72	85.75	9.45	0.472

**REDUCING - WYE**

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4 x 2	110 x 63	1277140402	-	-	-	-
4 x 3	110 x 90	1277140403	1777140403	-	2577140403	-
5 x 3	140 x 90	1277140503	1777140503	-	2577140503	-
5 x 4	140 x 110	1277140504	1777140504	-	2577140504	-
6 x 3	160 x 90	1277140603	1777140603	-	2577140603	-
6 x 4	160 x 110	1277140604	1777140604	-	2577140604	-
6 x 5	160 x 140	1277140605	1777140605	-	2577140605	-
7 x 3	180 x 90	1277140703	1777140703	-	2577140703	-
7 x 4	180 x 110	1277140704	1777140704	-	2577140704	-
7 x 5	180 x 140	1277140705	1777140705	-	2577140705	-
7 x 6	180 x 160	1277140706	1777140706	-	2577140706	-
8 x 2	200 x 63	-	1777140802	-	-	-
8 x 3	200 x 90	1277140803	1777140803	-	2577140803	-
8 x 4	200 x 110	1277140804	1777140804	-	2577140804	-
8 x 5	200 x 140	1277140805	1777140805	-	2577140805	-
8 x 6	200 x 160	1277140806	1777140806	-	2577140806	-
8 x 7	200 x 180	1277140807	1777140807	-	2577140807	-
9 x 3	225 x 90	1277140903	1777140903	-	2577140903	-
9 x 4	225 x 110	1277140904	1777140904	-	2577140904	-
9 x 5	225 x 140	1277140905	1777140905	-	2577140905	-
9 x 6	225 x 160	1277140906	1777140906	-	2577140906	-
9 x 7	225 x 180	1277140907	1777140907	-	2577140907	-
9 x 8	225 x 200	1277140908	1777140908	-	2577140908	-
10 x 3	250 x 90	1277141003	1777141003	-	2577141003	-
10 x 4	250 x 110	1277141004	1777141004	-	2577141004	-
10 x 5	250 x 140	1277141005	1777141005	-	2577141005	-
10 x 6	250 x 160	1277141006	1777141006	1977141006	2577141006	-
10 x 7	250 x 180	1277141007	1777141007	-	2577141007	-
10 x 8	250 x 200	1277141008	1777141008	-	2577141008	-
10 x 9	250 x 225	1277141009	1777141009	-	2577141009	-

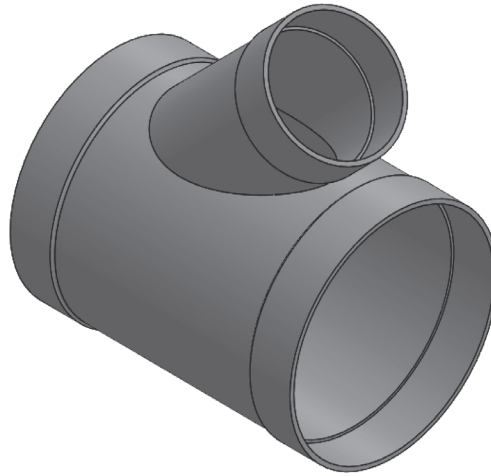
**REDUCING - WYE (Continued)**

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
11 x 3	280 x 90	1277141103	1777141103	-	2577141103	-
11 x 4	280 x 110	1277141104	1777141104	-	2577141104	-
11 x 5	280 x 140	1277141105	1777141105	-	2577141105	-
11 x 6	280 x 160	1277141106	1777141106	-	2577141106	-
11 x 7	280 x 180	1277141107	1777141107	-	2577141107	-
11 x 8	280 x 200	1277141108	1777141108	-	2577141108	-
11 x 9	280 x 225	1277141109	1777141109	-	2577141109	-
11 x 10	280 x 250	1277141110	1777141110	-	2577141110	-
12 x 3	315 x 90	1277141203	1777141203	-	2577141203	-
12 x 4	315 x 110	1277141204	1777141204	-	2577141204	-
12 x 5	315 x 140	1277141205	1777141205	-	2577141205	-
12 x 6	315 x 160	1277141206	1777141206	1977141206	2577141206	-
12 x 7	315 x 180	1277141207	1777141207	-	2577141207	-
12 x 8	315 x 200	1277141208	1777141208	-	2577141208	-
12 x 9	315 x 225	1277141209	1777141209	-	2577141209	-
12 x 10	315 x 250	1277141210	1777141210	-	2577141210	-
12 x 11	315 x 280	1277141211	1777141211	-	2577141211	-
14 x 3	355 x 90	1277141403	1777141403	-	2577141403	-
14 x 4	355 x 110	1277141404	1777141404	-	2577141404	-
14 x 5	355 x 140	1277141405	1777141405	-	2577141405	-
14 x 6	355 x 160	1277141406	1777141406	1977141406	2577141406	-
14 x 7	355 x 180	1277141407	1777141407	-	2577141407	-
14 x 8	355 x 200	1277141408	1777141408	-	2577141408	-
14 x 9	355 x 225	1277141409	1777141409	-	2577141409	-
14 x 10	355 x 250	1277141410	1777141410	-	2577141410	-
14 x 11	355 x 280	1277141411	1777141411	-	2577141411	-
14 x 12	355 x 315	1277141412	1777141412	-	2577141412	-



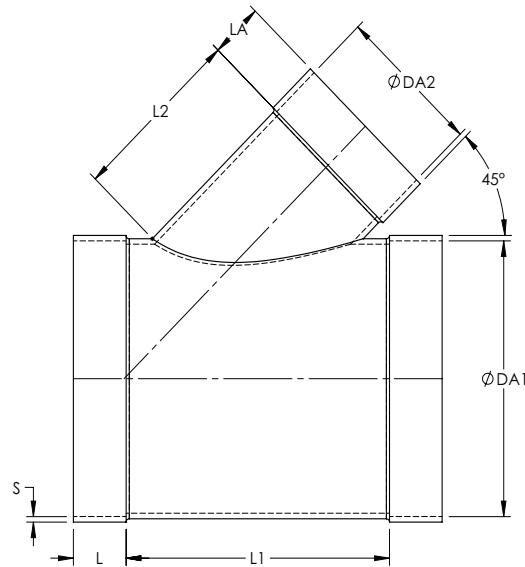
### REDUCING - WYE (Continued)

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
16 x 3	400 x 90	1277141603	1777141603	-	2577141603	-
16 x 4	400 x 110	1277141604	1777141604	-	2577141604	-
16 x 5	400 x 140	1277141605	1777141605	-	2577141605	-
16 x 6	400 x 160	1277141606	1777141606	1977141606	2577141606	-
16 x 7	400 x 180	1277141607	1777141607	-	2577141607	-
16 x 8	400 x 200	1277141608	1777141608	-	2577141608	-
16 x 9	400 x 225	1277141609	1777141609	-	2577141609	-
16 x 10	400 x 250	1277141610	1777141610	-	2577141610	-
16 x 11	400 x 280	1277141611	1777141611	-	2577141611	-
16 x 12	400 x 315	1277141612	1777141612	-	2577141612	-
16 x 14	400 x 355	1277141614	1777141614	-	2577141614	-
18 x 3	450 x 90	1277141803	1777141803	-	2577141803	-
18 x 4	450 x 110	1277141804	1777141804	-	2577141804	-
18 x 5	450 x 140	1277141805	1777141805	-	2577141805	-
18 x 6	450 x 160	1277141806	1777141806	-	2577141806	-
18 x 7	450 x 180	1277141807	1777141807	-	2577141807	-
18 x 8	450 x 200	1277141808	1777141808	-	2577141808	-
18 x 9	450 x 225	1277141809	1777141809	-	2577141809	-
18 x 10	450 x 250	1277141810	1777141810	-	2577141810	-
18 x 11	450 x 280	1277141811	1777141811	-	2577141811	-
18 x 12	450 x 315	1277141812	1777141812	-	2577141812	-
18 x 14	450 x 355	1277141814	1777141814	-	2577141814	-
18 x 16	450 x 400	1277141816	1777141816	-	2577141816	-
20 x 3	500 x 90	1277142003	1777142003	-	2577142003	-
20 x 4	500 x 110	1277142004	1777142004	-	2577142004	-
20 x 5	500 x 140	1277142005	1777142005	-	2577142005	-
20 x 6	500 x 160	1277142006	1777142006	-	2577142006	-
20 x 7	500 x 180	1277142007	1777142007	-	2577142007	-
20 x 8	500 x 200	1277142008	1777142008	-	2577142008	-

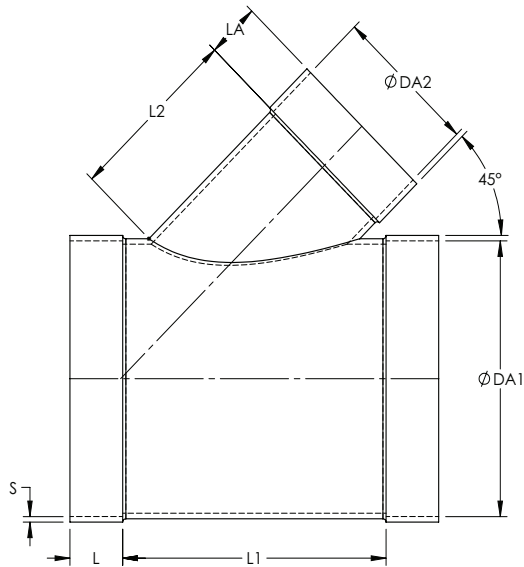
**REDUCING - WYE (Continued)**

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
20 x 9	500 x 225	1277142009	1777142009	-	2577142009	-
20 x 10	500 x 250	1277142010	1777142010	-	2577142010	-
20 x 11	500 x 280	1277142011	1777142011	-	2577142011	-
20 x 12	500 x 315	1277142012	1777142012	-	2577142012	-
20 x 14	500 x 355	1277142014	1777142014	-	2577142014	-
20 x 16	500 x 400	1277142016	1777142016	-	2577142016	-
20 x 18	500 x 450	1277142018	1777142018	-	2577142018	-
22 x 3	560 x 90	1277142203	1777142203	-	2577142203	-
22 x 4	560 x 110	1277142204	1777142204	-	2577142204	-
22 x 5	560 x 140	1277142205	1777142205	-	2577142205	-
22 x 6	560 x 160	1277142206	1777142206	-	2577142206	-
22 x 7	560 x 180	1277142207	1777142207	-	2577142207	-
22 x 8	560 x 200	1277142208	1777142208	-	2577142208	-
22 x 9	560 x 225	1277142209	1777142209	-	2577142209	-
22 x 10	560 x 250	1277142210	1777142210	-	2577142210	-
22 x 11	560 x 280	1277142211	1777142211	-	2577142211	-
22 x 12	560 x 315	1277142212	1777142212	-	2577142212	-
22 x 14	560 x 355	1277142214	1777142214	-	2577142214	-
22 x 16	560 x 400	1277142216	1777142216	-	2577142216	-
22 x 18	560 x 450	1277142218	1777142218	-	2577142218	-
22 x 20	560 x 500	1277142220	1777142220	-	2577142220	-
24 x 4	630 x 110	-	1777142404	-	-	-
24 x 6	630 x 160	-	1777142406	-	-	-
24 x 8	630 x 200	-	1777142408	-	-	-
24 x 18	630 x 450	-	1777142418	-	-	-
24 x 20	630 x 500	-	1777142420	-	-	-
32 x 4	800 x 110	-	1777143204	-	-	-
32 x 16	800 x 400	-	1777143216	-	-	-
32 x 20	800 x 500	-	1777143220	-	-	-

**REDUCING - WYE**



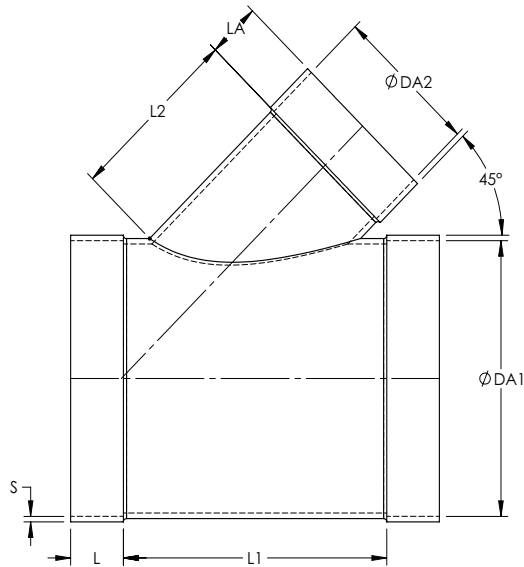
Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
110	63	40	40	115	76	3	4 x 2	4.33	2.48	1.57	1.57	4.53	2.99	0.118
110	90	40	40	164	108	3	4 x 3	4.33	3.54	1.57	1.57	6.46	4.25	0.118
140	90	40	40	164	108	3	5 x 3	5.51	3.54	1.57	1.57	6.46	4.25	0.118
140	110	40	40	200	132	3	5 x 4	5.51	4.33	1.57	1.57	7.87	5.20	0.118
160	90	40	40	164	108	3	6 x 3	6.30	3.54	1.57	1.57	6.46	4.25	0.118
160	110	40	40	200	132	3	6 x 4	6.30	4.33	1.57	1.57	7.87	5.20	0.118
160	140	40	40	254	168	3	6 x 5	6.30	5.51	1.57	1.57	10.00	6.61	0.118
180	90	40	40	164	108	3	7 x 3	7.09	3.54	1.57	1.57	6.46	4.25	0.118
180	110	40	40	200	132	3	7 x 4	7.09	4.33	1.57	1.57	7.87	5.20	0.118
180	140	40	40	254	168	3	7 x 5	7.09	5.51	1.57	1.57	10.00	6.61	0.118
180	160	40	40	292	192	3	7 x 6	7.09	6.30	1.57	1.57	11.50	7.56	0.118
200	63	40	35	115	76	4	8 x 2	7.87	2.48	1.57	1.38	4.53	2.99	0.157
200	90	40	40	164	108	4	8 x 3	7.87	3.54	1.57	1.57	6.46	4.25	0.157
200	110	40	40	200	132	4	8 x 4	7.87	4.33	1.57	1.57	7.87	5.20	0.157
200	140	40	40	254	168	4	8 x 5	7.87	5.51	1.57	1.57	10.00	6.61	0.157
200	160	40	40	292	192	4	8 x 6	7.87	6.30	1.57	1.57	11.50	7.56	0.157
200	180	40	40	328	216	4	8 x 7	7.87	7.09	1.57	1.57	12.91	8.50	0.157
225	90	40	40	164	164	3.5	9 x 3	8.86	3.54	1.57	1.57	6.46	6.46	0.138
225	110	40	40	200	200	3.5	9 x 4	8.86	4.33	1.57	1.57	7.87	7.87	0.138
225	140	40	40	254	168	3.5	9 x 5	8.86	5.51	1.57	1.57	10.00	6.61	0.138
225	160	40	40	292	192	3.5	9 x 6	8.86	6.30	1.57	1.57	11.50	7.56	0.138
225	180	40	40	328	216	3.5	9 x 7	8.86	7.09	1.57	1.57	12.91	8.50	0.138
225	200	40	40	364	240	3.5	9 x 8	8.86	7.87	1.57	1.57	14.33	9.45	0.138
250	90	40	40	164	108	3.5	10 x 3	9.84	3.54	1.57	1.57	6.46	4.25	0.138
250	110	40	40	200	132	3.5	10 x 4	9.84	4.33	1.57	1.57	7.87	5.20	0.138
250	140	40	40	254	168	3.5	10 x 5	9.84	5.51	1.57	1.57	10.00	6.61	0.138
250	160	40	40	292	192	3.5	10 x 6	9.84	6.30	1.57	1.57	11.50	7.56	0.138
250	180	40	40	328	216	3.5	10 x 7	9.84	7.09	1.57	1.57	12.91	8.50	0.138
250	200	40	40	364	240	3.5	10 x 8	9.84	7.87	1.57	1.57	14.33	9.45	0.138
250	225	40	40	410	270	3.5	10 x 9	9.84	8.86	1.57	1.57	16.14	10.63	0.138
280	90	50	40	164	108	4	11 x 3	11.02	3.54	1.97	1.57	6.46	4.25	0.157
280	110	50	40	200	132	4	11 x 4	11.02	4.33	1.97	1.57	7.87	5.20	0.157



**REDUCING - WYE (Continued)**



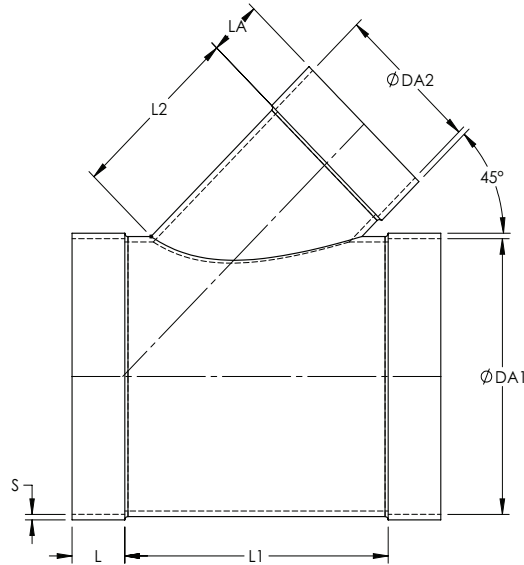
Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
280	140	50	40	254	168	4	11 x 5	11.02	5.51	1.97	1.57	10.00	6.61	0.157
280	160	50	40	292	192	4	11 x 6	11.02	6.30	1.97	1.57	11.50	7.56	0.157
280	180	50	40	328	216	4	11 x 7	11.02	7.09	1.97	1.57	12.91	8.50	0.157
280	200	50	40	364	240	4	11 x 8	11.02	7.87	1.97	1.57	14.33	9.45	0.157
280	225	50	40	410	270	4	11 x 9	11.02	8.86	1.97	1.57	16.14	10.63	0.157
280	250	50	40	454	300	4	11 x 10	11.02	9.84	1.97	1.57	17.87	11.81	0.157
315	90	50	40	164	108	5	12 x 3	12.40	3.54	1.97	1.57	6.46	4.25	0.197
315	110	50	40	200	132	5	12 x 4	12.40	4.33	1.97	1.57	7.87	5.20	0.197
315	140	50	40	254	168	5	12 x 5	12.40	5.51	1.97	1.57	10.00	6.61	0.197
315	160	50	40	292	192	5	12 x 6	12.40	6.30	1.97	1.57	11.50	7.56	0.197
315	180	50	40	328	216	5	12 x 7	12.40	7.09	1.97	1.57	12.91	8.50	0.197
315	200	50	40	364	240	5	12 x 8	12.40	7.87	1.97	1.57	14.33	9.45	0.197
315	225	50	40	410	270	5	12 x 9	12.40	8.86	1.97	1.57	16.14	10.63	0.197
315	250	50	40	454	300	5	12 x 10	12.40	9.84	1.97	1.57	17.87	11.81	0.197
315	280	50	50	508	336	5	12 x 11	12.40	11.02	1.97	1.97	20.00	13.23	0.197
355	90	50	40	164	108	5	14 x 3	13.98	3.54	1.97	1.57	6.46	4.25	0.197
355	110	50	40	200	132	5	14 x 4	13.98	4.33	1.97	1.57	7.87	5.20	0.197
355	140	50	40	254	168	5	14 x 5	13.98	5.51	1.97	1.57	10.00	6.61	0.197
355	160	50	40	292	192	5	14 x 6	13.98	6.30	1.97	1.57	11.50	7.56	0.197
355	180	50	40	328	216	5	14 x 7	13.98	7.09	1.97	1.57	12.91	8.50	0.197
355	200	50	40	364	240	5	14 x 8	13.98	7.87	1.97	1.57	14.33	9.45	0.197
355	225	50	40	410	270	5	14 x 9	13.98	8.86	1.97	1.57	16.14	10.63	0.197
355	250	50	40	454	300	5	14 x 10	13.98	9.84	1.97	1.57	17.87	11.81	0.197
355	280	50	50	508	336	5	14 x 11	13.98	11.02	1.97	1.97	20.00	13.23	0.197
355	315	50	50	574	378	5	14 x 12	13.98	12.40	1.97	1.97	22.60	14.88	0.197
400	90	50	40	164	108	6	16 x 3	15.75	3.54	1.97	1.57	6.46	4.25	0.236
400	110	50	40	200	132	6	16 x 4	15.75	4.33	1.97	1.57	7.87	5.20	0.236
400	140	50	40	254	168	6	16 x 5	15.75	5.51	1.97	1.57	10.00	6.61	0.236
400	160	50	40	292	192	6	16 x 6	15.75	6.30	1.97	1.57	11.50	7.56	0.236
400	180	50	40	328	216	6	16 x 7	15.75	7.09	1.97	1.57	12.91	8.50	0.236
400	200	50	40	364	240	6	16 x 8	15.75	7.87	1.97	1.57	14.33	9.45	0.236
400	225	50	40	410	270	6	16 x 9	15.75	8.86	1.97	1.57	16.14	10.63	0.236



**REDUCING - WYE (Continued)**

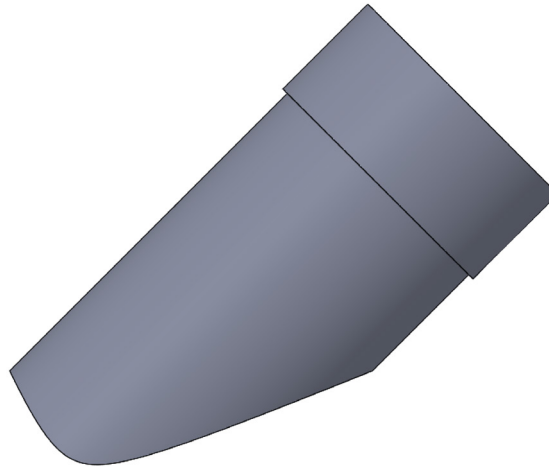
Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
400	250	50	40	454	300	6	16 x 10	15.75	9.84	1.97	1.57	17.87	11.81	0.236
400	280	50	50	508	336	6	16 x 11	15.75	11.02	1.97	1.97	20.00	13.23	0.236
400	315	50	50	574	378	6	16 x 12	15.75	12.40	1.97	1.97	22.60	14.88	0.236
400	355	50	50	646	426	6	16 x 14	15.75	13.98	1.97	1.97	25.43	16.77	0.236
450	90	50	40	164	108	5	18 x 3	17.72	3.54	1.97	1.57	6.46	4.25	0.197
450	110	50	40	200	132	5	18 x 4	17.72	4.33	1.97	1.57	7.87	5.20	0.197
450	140	50	40	254	168	5	18 x 5	17.72	5.51	1.97	1.57	10.00	6.61	0.197
450	160	50	40	292	192	5	18 x 6	17.72	6.30	1.97	1.57	11.50	7.56	0.197
450	180	50	40	328	216	5	18 x 7	17.72	7.09	1.97	1.57	12.91	8.50	0.197
450	200	50	40	364	240	5	18 x 8	17.72	7.87	1.97	1.57	14.33	9.45	0.197
450	225	50	40	410	270	5	18 x 9	17.72	8.86	1.97	1.57	16.14	10.63	0.197
450	250	50	40	454	300	5	18 x 10	17.72	9.84	1.97	1.57	17.87	11.81	0.197
450	280	50	50	508	336	5	18 x 11	17.72	11.02	1.97	1.97	20.00	13.23	0.197
450	315	50	50	574	378	5	18 x 12	17.72	12.40	1.97	1.97	22.60	14.88	0.197
450	355	50	50	646	426	5	18 x 14	17.72	13.98	1.97	1.97	25.43	16.77	0.197
450	400	50	50	726	480	5	18 x 16	17.72	15.75	1.97	1.97	28.58	18.90	0.197
500	90	50	40	164	108	5	20 x 3	19.69	3.54	1.97	1.57	6.46	4.25	0.197
500	110	50	40	200	132	5	20 x 4	19.69	4.33	1.97	1.57	7.87	5.20	0.197
500	140	50	40	254	168	5	20 x 5	19.69	5.51	1.97	1.57	10.00	6.61	0.197
500	160	50	40	292	192	5	20 x 6	19.69	6.30	1.97	1.57	11.50	7.56	0.197
500	180	50	40	328	216	5	20 x 7	19.69	7.09	1.97	1.57	12.91	8.50	0.197
500	200	50	40	364	240	5	20 x 8	19.69	7.87	1.97	1.57	14.33	9.45	0.197
500	225	50	40	410	270	5	20 x 9	19.69	8.86	1.97	1.57	16.14	10.63	0.197
500	250	50	40	454	300	5	20 x 10	19.69	9.84	1.97	1.57	17.87	11.81	0.197
500	280	50	50	508	336	5	20 x 11	19.69	11.02	1.97	1.97	20.00	13.23	0.197
500	315	50	50	574	378	5	20 x 12	19.69	12.40	1.97	1.97	22.60	14.88	0.197
500	355	50	50	646	426	5	20 x 14	19.69	13.98	1.97	1.97	25.43	16.77	0.197
500	400	50	50	726	480	5	20 x 16	19.69	15.75	1.97	1.97	28.58	18.90	0.197
500	450	50	50	818	540	5	20 x 18	19.69	17.72	1.97	1.97	32.20	21.26	0.197
560	90	60	40	164	108	6	22 x 3	22.05	3.54	2.36	1.57	6.46	4.25	0.236





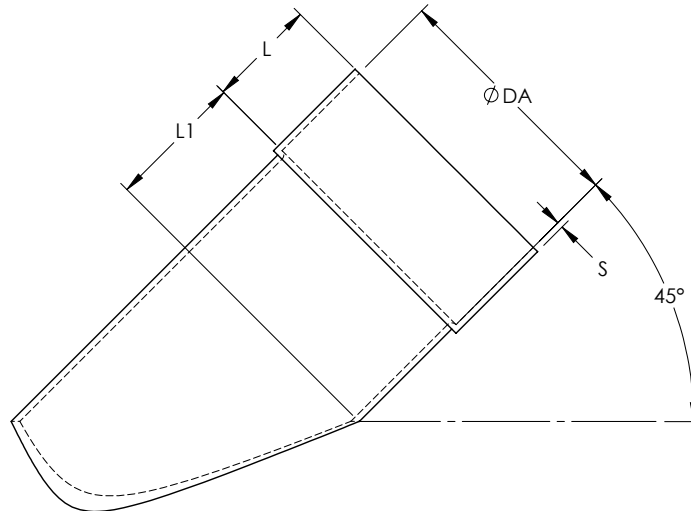
**REDUCING - WYE (Continued)**

Dimensions														
DA1	DA2	L	LA	L1	L2	S	NOM in	DA1 in	DA2 in	L in	LA in	L1 in	L2 in	S in
560	110	60	40	200	132	6	22 x 4	22.05	4.33	2.36	1.57	7.87	5.20	0.236
560	140	60	40	254	168	6	22 x 5	22.05	5.51	2.36	1.57	10.00	6.61	0.236
560	160	60	40	292	192	6	22 x 6	22.05	6.30	2.36	1.57	11.50	7.56	0.236
560	180	60	40	328	216	6	22 x 7	22.05	7.09	2.36	1.57	12.91	8.50	0.236
560	200	60	40	364	240	6	22 x 8	22.05	7.87	2.36	1.57	14.33	9.45	0.236
560	225	60	40	410	270	6	22 x 9	22.05	8.86	2.36	1.57	16.14	10.63	0.236
560	250	60	40	454	300	6	22 x 10	22.05	9.84	2.36	1.57	17.87	11.81	0.236
560	280	60	50	508	336	6	22 x 11	22.05	11.02	2.36	1.97	20.00	13.23	0.236
560	315	60	50	574	378	6	22 x 12	22.05	12.40	2.36	1.97	22.60	14.88	0.236
560	355	60	50	646	426	6	22 x 14	22.05	13.98	2.36	1.97	25.43	16.77	0.236
560	400	60	50	726	480	6	22 x 16	22.05	15.75	2.36	1.97	28.58	18.90	0.236
560	450	60	50	818	540	6	22 x 18	22.05	17.72	2.36	1.97	32.20	21.26	0.236
560	500	60	50	908	600	6	22 x 20	22.05	19.69	2.36	1.97	35.75	23.62	0.236
630	110	70	40	200	132	6	24 x 4	24.80	4.33	2.76	1.57	7.87	5.20	0.236
630	160	70	40	292	192	6	24 x 6	24.80	6.30	2.76	1.57	11.50	7.56	0.236
630	200	70	40	364	240	6	24 x 8	24.80	7.87	2.76	1.57	14.33	9.45	0.236
630	450	70	50	818	540	6	24 x 18	24.80	17.72	2.76	1.97	32.20	21.26	0.236
630	500	70	50	908	600	6	24 x 20	24.80	19.69	2.76	1.97	35.75	23.62	0.236
800	110	80	40	200	132	8	32 x 4	31.50	4.33	3.15	1.57	7.87	5.20	0.315
800	400	80	50	726	480	8	32 x 16	31.50	15.75	3.15	1.97	28.58	18.90	0.315
800	500	80	50	908	600	8	32 x 20	31.50	19.69	3.15	1.97	35.75	23.62	0.315



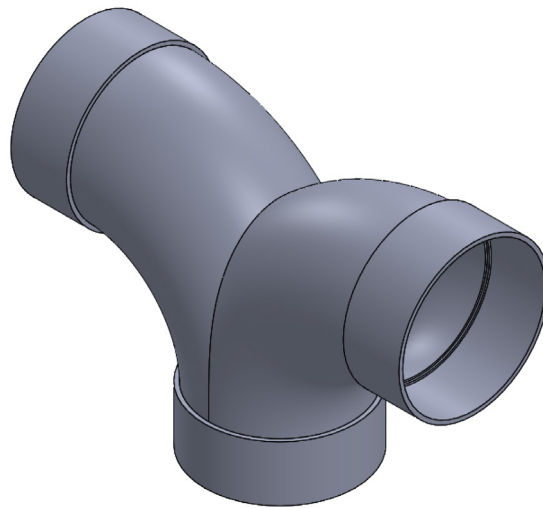
### WYE SADDLE - Specify main header size

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277130003	1777130003	1977130003	2577130003	-
4	110	1277130004	1777130004	1977130004	2577130004	-
5	140	1277130005	1777130005	1977130005	2577130005	-
6	160	1277130006	1777130006	1977130006	2577130006	-
7	180	1277130007	1777130007	1977130007	2577130007	-
8	200	1277130008	1777130008	1977130008	2577130008	-
9	225	1277130009	1777130009	1977130009	2577130009	-
10	250	1277130010	1777130010	1977130010	2577130010	-
11	280	1277130011	1777130011	1977130011	2577130011	-
12	315	1277130012	1777130012	1977130012	2577130012	-
14	355	1277130014	1777130014	1977130014	2577130014	-
16	400	1277130016	1777130016	1977130016	2577130016	-
18	450	1277130018	1777130018	-	2577130018	-
20	500	1277130020	1777130020	-	2577130020	-
22	560	1277130022	1777130022	-	2577130022	-
24	630	1277130024	1777130024	-	2577130024	-
28	710	1277130028	1777130028	-	2577130028	-
32	800	1277130032	1777130032	-	2577130032	-
36	900	1277130036	1777130036	-	2577130036	-
40	1000	1277130040	1777130040	-	2577130040	-
48	1200	1277130048	1777130048	-	2577130048	-

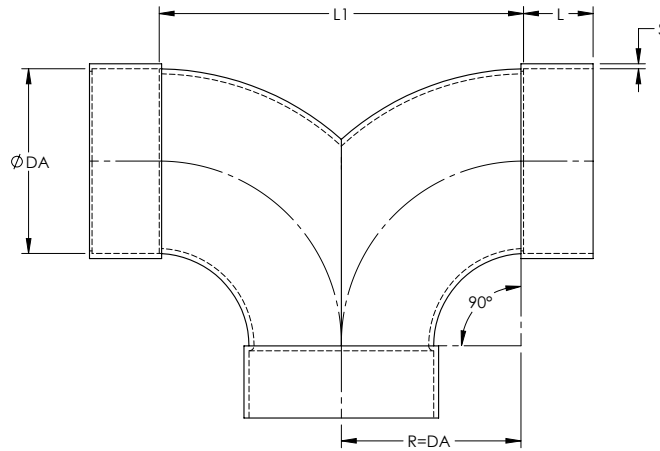


**WYE SADDLE - Specify main header size**

Dimensions														
DA	L	L1	s-PP	s-PPS	s-PP-EL-S	s-PE	NOM in	DA in	L	L1	s-PP	s-PPS	s-PP-EL-S	s-PE
90	40	50	2.2	3	3	5.4	3	3.54	1.57	1.97	0.087	0.118	0.118	0.213
110	40	50	2.7	3	3	3.4	4	4.33	1.57	1.97	0.106	0.118	0.118	0.134
140	40	50	3.5	3	3	4.3	5	5.51	1.57	1.97	0.138	0.118	0.118	0.169
160	40	50	4	3	3	4	6	6.30	1.57	1.97	0.157	0.118	0.118	0.157
180	40	50	4.4	3	3.5	5.5	7	7.09	1.57	1.97	0.173	0.118	0.138	0.217
200	40	50	3	3	3.5	6.2	8	7.87	1.57	1.97	0.118	0.118	0.138	0.244
225	40	50	5.5	3.5	3.5	6.9	9	8.86	1.57	1.97	0.217	0.138	0.138	0.272
250	40	50	3.5	3.5	5	6.2	10	9.84	1.57	1.97	0.138	0.138	0.197	0.244
280	50	60	6.9	3.5	5	8.6	11	11.02	1.97	2.36	0.272	0.138	0.197	0.339
315	50	65	5	5	6	7.7	12	12.40	1.97	2.56	0.197	0.197	0.236	0.303
355	50	75	5	5	6	10.9	14	13.98	1.97	2.95	0.197	0.197	0.236	0.429
400	50	80	6	6	6	12.3	16	15.75	1.97	3.15	0.236	0.236	0.236	0.484
450	50	90	5	5	5	5	18	17.72	1.97	3.54	0.197	0.197	0.197	0.197
500	50	100	5	5	5	5	20	19.69	1.97	3.94	0.197	0.197	0.197	0.197
560	60	115	6	6	6	6	22	22.05	2.36	4.53	0.236	0.236	0.236	0.236
630	70	130	6	6	6	6	24	24.80	2.76	5.12	0.236	0.236	0.236	0.236
710	80	145	6	6	6	6	28	27.95	3.15	5.71	0.236	0.236	0.236	0.236
800	80	160	8	8	8	8	32	31.50	3.15	6.30	0.315	0.315	0.315	0.315
900	90	180	8	8	8	8	36	35.43	3.54	7.09	0.315	0.315	0.315	0.315
1000	100	200	10	10	10	10	40	39.37	3.94	7.87	0.394	0.394	0.394	0.394
1200	120	240	12	12	12	12	48	47.24	4.72	9.45	0.472	0.472	0.472	0.472

**TEE WYE - DOUBLE 90**

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277180003	1777180003	1977180003	2577180003	-
4	110	-	-	-	-	-
5	140	1277180005	1777180005	1977180005	2577180005	-
6	160	1277180006	1777180006	1977180006	2577180006	-
7	180	1277180007	1777180007	1977180007	2577180007	-
8	200	1277180008	1777180008	1977180008	2577180008	-
9	225	1277180009	1777180009	1977180009	2577180009	-
10	250	1277180010	1777180010	1977180010	2577180010	-
11	280	1277180011	1777180011	1977180011	2577180011	-
12	315	1277180012	1777180012	1977180012	2577180012	-
14	355	1277180014	1777180014	1977180014	2577180014	-
16	400	1277180016	1777180016	1977180016	2577180016	-
18	450	1277180018	1777180018	-	2577180018	-
20	500	1277180020	1777180020	-	2577180020	-
22	560	1277180022	1777180022	-	2577180022	-
24	630	1277180024	1777180024	-	2577180024	-
28	710	1277180028	1777180028	-	2577180028	-
32	800	1277180032	1777180032	-	2577180032	-
36	900	1277180036	1777180036	-	2577180036	-
40	1000	1277180040	1777180040	-	2577180040	-
48	1200	1277180048	1777180048	-	2577180048	-



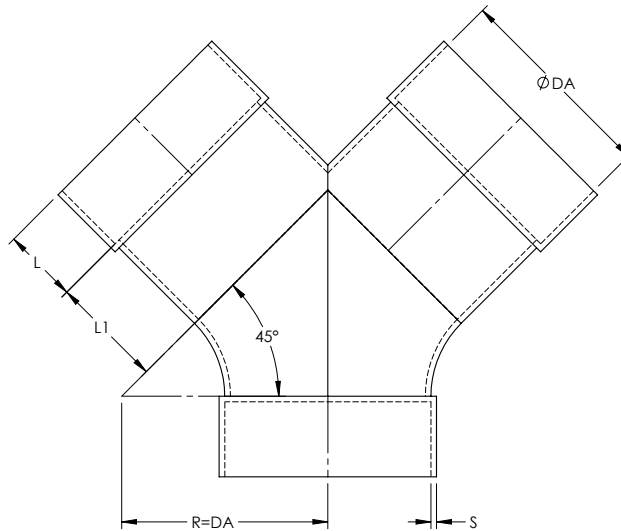
**TEE WYE - DOUBLE 90**

Dimensions									
DA	L	L1	TOL	S	NOM in	DA in	L	L1	S
90	40	180	0.9	3	3	3.54	1.57	7.09	0.035
110	40	220	1	3	4	4.33	1.57	8.66	0.039
140	40	280	1.3	3	5	5.51	1.57	11.02	0.051
160	40	320	1.5	3	6	6.30	1.57	12.60	0.059
180	40	360	1.7	3	7	7.09	1.57	14.17	0.067
200	40	400	1.8	3	8	7.87	1.57	15.75	0.071
225	40	450	1.9	3.5	9	8.86	1.57	17.72	0.075
250	40	500	2	3.5	10	9.84	1.57	19.69	0.079
280	50	560	2.2	3.5	11	11.02	1.97	22.05	0.087
315	50	630	2.4	4	12	12.40	1.97	24.80	0.094
355	50	710	2.7	4	14	13.98	1.97	27.95	0.106
400	50	800	3	4.5	16	15.75	1.97	31.50	0.118
450	50	900	3.5	5	18	17.72	1.97	35.43	0.138
500	50	1000	4	5	20	19.69	1.97	39.37	0.157
560	60	1120	4.5	6	22	22.05	2.36	44.09	0.177
630	70	1260	4.5	6	24	24.80	2.76	49.61	0.177
710	80	1420	4.5	6	28	27.95	3.15	55.91	0.177
800	80	1600	4.5	8	32	31.50	3.15	62.99	0.177
900	90	1800	4.5	8	36	35.43	3.54	70.87	0.177
1000	100	2000	5	10	40	39.37	3.94	78.74	0.197
1200	120	2400	5	12	48	47.24	4.72	94.49	0.197



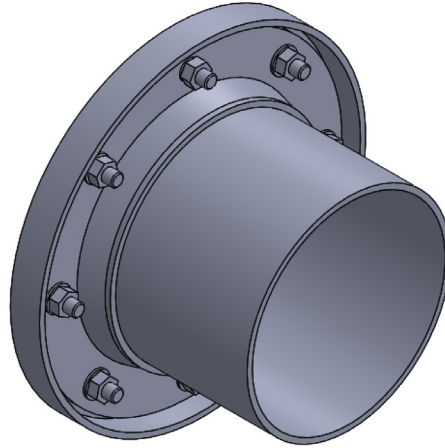
### TEE WYE - DOUBLE 45

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277170003	1777170003	-	2577170003	-
4	110			-		-
5	140	1277170005	1777170005	-	2577170005	-
6	160	1277170006	1777170006	-	2577170006	-
7	180	1277170007	1777170007	-	2577170007	-
8	200	1277170008	1777170008	-	2577170008	-
9	225	1277170009	1777170009	-	2577170009	-
10	250	1277170010	1777170010	-	2577170010	-
11	280	1277170011	1777170011	-	2577170011	-
12	315	1277170012	1777170012	-	2577170012	-
14	355	1277170014	1777170014	-	2577170014	-
16	400	1277170016	1777170016	-	2577170016	-
18	450	1277170018	1777170018	-	2577170018	-
20	500	1277170020	1777170020	-	2577170020	-
22	560	1277170022	1777170022	-	2577170022	-
24	630	1277170024	1777170024	-	2577170024	-
28	710	1277170028	1777170028	-	2577170028	-
32	800	1277170032	1777170032	-	2577170032	-
36	900	1277170036	1777170036	-	2577170036	-
40	1000	1277170040	1777170040	-	2577170040	-
48	1200	1277170048	1777170048	-	2577170048	-



**TEE WYE - DOUBLE 45**

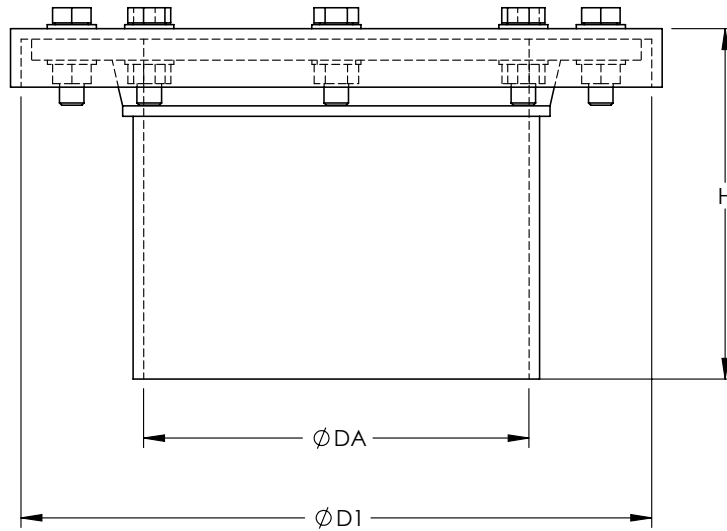
Dimensions									
DA	L	L1	TOL	S	NOM in	DA in	L	L1	S
90	40	40	0.9	3	3	3.54	1.57	1.57	0.118
110	40	60	1	3	4	4.33	1.57	2.36	0.118
140	40	60	1.3	3	5	5.51	1.57	2.36	0.118
160	40	60	1.5	3	6	6.30	1.57	2.36	0.118
180	40	60	1.7	3	7	7.09	1.57	2.36	0.118
200	40	80	1.8	3	8	7.87	1.57	3.15	0.118
225	40	80	1.9	3.5	9	8.86	1.57	3.15	0.138
250	40	80	2	3.5	10	9.84	1.57	3.15	0.138
280	50	80	2.2	3.5	11	11.02	1.97	3.15	0.138
315	50	100	2.4	4	12	12.40	1.97	3.94	0.157
355	50	100	2.7	4	14	13.98	1.97	3.94	0.157
400	50	100	3	4.5	16	15.75	1.97	3.94	0.177
450	50	150	3.5	5	18	17.72	1.97	5.91	0.197
500	50	150	4	5	20	19.69	1.97	5.91	0.197
560	60	200	4.5	6	22	22.05	2.36	7.87	0.236
630	70	200	4.5	6	24	24.80	2.76	7.87	0.236
710	80	250	4.5	6	28	27.95	3.15	9.84	0.236
800	80	300	4.5	8	32	31.50	3.15	11.81	0.315
900	90	300	4.5	8	36	35.43	3.54	11.81	0.315
1000	100	350	5	10	40	39.37	3.94	13.78	0.394
1200	120	350	5	12	48	47.24	4.72	13.78	0.472



**ACCESS INSPECTION PORT SADDLE - Specify main header size**

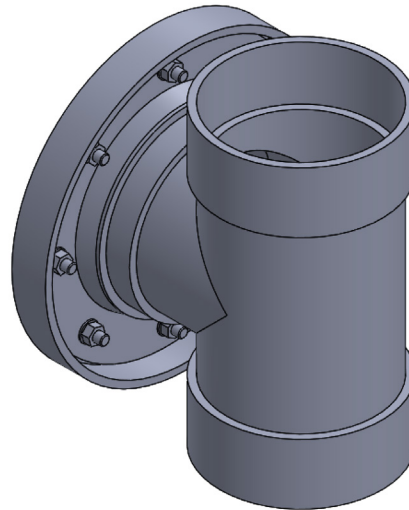
Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277630004	1777630004	1977630004	2577630004	-
5	140	-	-	-	-	-
6	160	1277630006	1777630006	1977630006	2577630006	-
7	180	1277630007	1777630007	1977630007	2577630007	-
8	200	1277630008	1777630008	1977630008	2577630008	-
9	225	1277630009	1777630009	1977630009	2577630009	-
10	250	1277630010	1777630010	1977630010	2577630010	-
11	280	1277630011	1777630011	1977630011	2577630011	-
12	315	1277630012	1777630012	1977630012	2577630012	-
14	355	1277630014	1777630014	-	2577630014	-
16	400	1277630016	1777630016	-	2577630016	-
18	450	1277630018	1777630018	-	2577630018	-
20	500	1277630020	1777630020	-	2577630020	-
22	560	1277630022	1777630022	-	2577630022	-
24	630	1277630024	1777630024	-	2577630024	-
28	710	1277630028	1777630028	-	2577630028	-
32	800	1277630032	1777630032	-	2577630032	-
36	900	1277630036	1777630036	-	2577630036	-
40	1000	1277630040	1777630040	-	2577630040	-
48	1200	1277630048	1777630048	-	2577630048	-





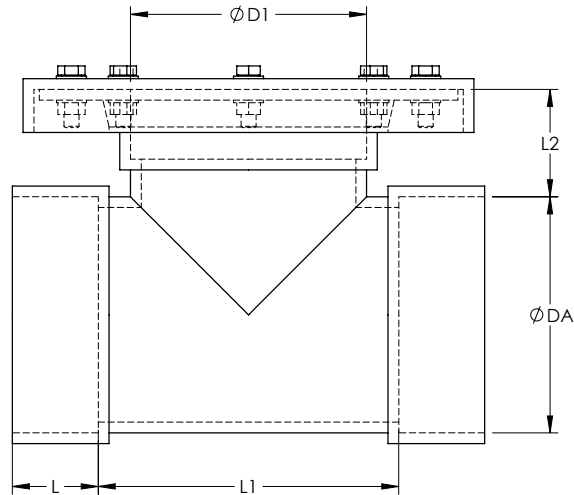
**ACCESS INSPECTION PORT SADDLE - Specify main header size**

Dimensions									
DA	L	L1	TOL	S	NOM in	DA in	L	L1	S
90	40	40	0.9	3	3	3.54	1.57	1.57	0.118
110	40	60	1	3	4	4.33	1.57	2.36	0.118
140	40	60	1.3	3	5	5.51	1.57	2.36	0.118
160	40	60	1.5	3	6	6.30	1.57	2.36	0.118
180	40	60	1.7	3	7	7.09	1.57	2.36	0.118
200	40	80	1.8	3	8	7.87	1.57	3.15	0.118
225	40	80	1.9	3.5	9	8.86	1.57	3.15	0.138
250	40	80	2	3.5	10	9.84	1.57	3.15	0.138
280	50	80	2.2	3.5	11	11.02	1.97	3.15	0.138
315	50	100	2.4	4	12	12.40	1.97	3.94	0.157
355	50	100	2.7	4	14	13.98	1.97	3.94	0.157
400	50	100	3	4.5	16	15.75	1.97	3.94	0.177
450	50	150	3.5	5	18	17.72	1.97	5.91	0.197
500	50	150	4	5	20	19.69	1.97	5.91	0.197
560	60	200	4.5	6	22	22.05	2.36	7.87	0.236
630	70	200	4.5	6	24	24.80	2.76	7.87	0.236
710	80	250	4.5	6	28	27.95	3.15	9.84	0.236
800	80	300	4.5	8	32	31.50	3.15	11.81	0.315
900	90	300	4.5	8	36	35.43	3.54	11.81	0.315
1000	100	350	5	10	40	39.37	3.94	13.78	0.394
1200	120	350	5	12	48	47.24	4.72	13.78	0.472



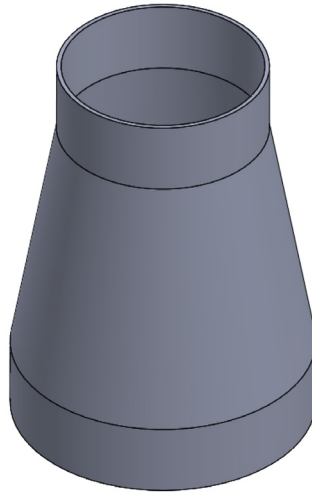
### ACCESS-INSPECTION PORT TEE SOCKET

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4 x 4	110 x 110	1277640404	1777640404	1977640404	2577640404	-
5 x 4	140 x 110	1277640504	1777640504	1977640504	2577640504	-
6 x 4	160 x 110	1277640604	1777640604	1977640604	2577640604	-
6 x 6	160 x 160	1277640606	1777640606	-	2577640606	-
7 x 6	180 x 160	1277640706	1777640706	1977640706	2577640706	-
8 x 6	200 x 160	1277640806	1777640806	-	2577640806	-
8 x 8	200 x 200	1277640808	1777640808	1977640808	2577640808	-
9 x 8	225 x 200	1277640908	1777640908	1977640908	2577640908	-
10 x 8	250 x 200	1277641008	1777641008	-	2577641008	-
10 x 10	250 x 250	1277641010	1777641010	1977641010	2577641010	-
11 x 8	280 x 200	1277641108	1777641108	-	2577641108	-
11 x 10	280 x 250	1277641110	1777641110	1977641110	2577641110	-
12 x 10	315 x 250	1277641210	1777641210	1977641210	2577641210	-
14 x 10	355 x 250	1277641410	1777641410	-	2577641410	-
16 x 10	400 x 250	1277641610	1777641610	-	2577641610	-



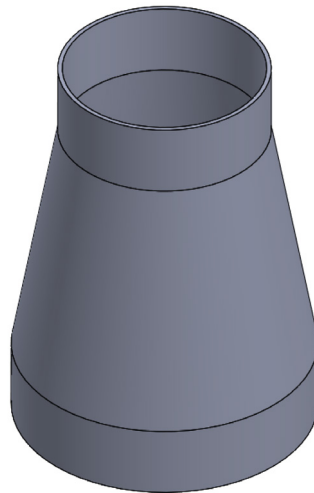
### ACCESS-INSPECTION PORT TEE SOCKET

Dimensions																		
DA	D1	L	L1	L2	s-PP	s-PPs	s-PPsEI	s-PE	NOM in	DA	D1	L	L1	L2	s-PP	s-PPs	s-PPsEI	s-PE
110	110	40	140	50	2.7	3	3	3.4	4 x 4	4.33	4.33	1.57	5.51	1.97	0.106	0.118	0.118	0.134
140	110	40	170	50	3.5	3	-	4.3	5 x 4	5.51	4.33	1.57	6.69	1.97	0.138	0.118	-	0.169
160	110	40	190	50	4	3	3	4	6 x 4	6.30	4.33	1.57	7.48	1.97	0.157	0.118	0.118	0.157
160	160	40	190	50	4	3	3	4	6 x 6	6.30	6.30	1.57	7.48	1.97	0.157	0.118	0.118	0.157
180	160	40	210	50	4.4	3	-	5.5	7 x 6	7.09	6.30	1.57	8.27	1.97	0.173	0.118	-	0.217
200	160	40	230	50	3	3	3	6.2	8 x 6	7.87	6.30	1.57	9.06	1.97	0.118	0.118	0.118	0.244
200	200	40	230	50	3	3	3	6.2	8 x 8	7.87	7.87	1.57	9.06	1.97	0.118	0.118	0.118	0.244
225	200	40	270	50	5.5	3.5	-	6.9	9 x 8	8.86	7.87	1.57	10.63	1.97	0.217	0.138	-	0.272
250	200	40	280	50	3.5	3.5	3.5	6.2	10 x 8	9.84	7.87	1.57	11.02	1.97	0.138	0.138	0.138	0.244
250	250	40	280	50	3.5	3.5	3.5	6.2	10 x 10	9.84	9.84	1.57	11.02	1.97	0.138	0.138	0.138	0.244
280	200	50	320	50	6.9	3.5	-	8.6	11 x 8	11.02	7.87	1.97	12.60	1.97	0.272	0.138	-	0.339
280	250	50	320	50	6.9	3.5	-	8.6	11 x 10	11.02	9.84	1.97	12.60	1.97	0.272	0.138	-	0.339
315	250	50	345	50	5	5	5	7.7	12 x 10	12.40	9.84	1.97	13.58	1.97	0.197	0.197	0.197	0.303
355	250	50	350	50	5	5	-	10.9	14 x 10	13.98	9.84	1.97	13.78	1.97	0.197	0.197	-	0.429
400	250	50	350	50	6	6	6	12.3	16 x 10	15.75	9.84	1.97	13.78	1.97	0.236	0.236	0.236	0.484



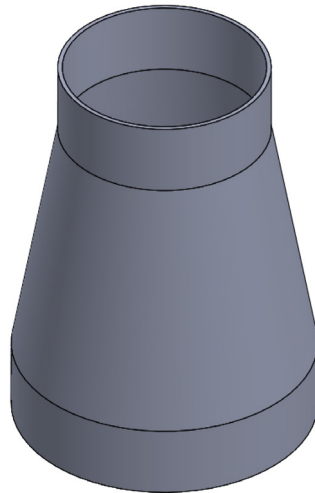
### CONCENTRIC REDUCERS

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4 x 2-1/2	110 x 75	-	-	-	-	3077160425
4 x 3	110 x 90	1277160403	1777160403	1977160403	2577160403	-
5 x 4	140 x 110	1277160504	1777160504	1977160504	2577160504	-
6 x 4	160 x 110	1277160604	1777160604	1977160604	2577160604	3077160604
7 x 4	180 x 110	1277160704	1777160704	1977160704	2577160704	-
8 x 4	200 x 110	1277160804	1777160804	1977160804	2577160804	-
6 x 5	160 x 140	1277160605	1777160605	1977160605	2577160605	-
7 x 5	180 x 140	1277160705	1777160705	1977160705	2577160705	-
8 x 5	200 x 140	1277160805	1777160805	1977160805	2577160805	-
9 x 5	225 x 140	1277160905	1777160905	1977160905	2577160905	-
10 x 5	250 x 140	1277161005	1777161005	1977161005	2577161005	-
7 x 6	180 x 160	1277160706	1777160706	1977160706	2577160706	-
8 x 6	200 x 160	1277160806	1777160806	1977160806	2577160806	3077160806
9 x 6	225 x 160	1277160906	1777160906	1977160906	2577160906	-
10 x 6	250 x 160	1277161006	1777161006	1977161006	2577161006	-
11 x 6	280 x 160	1277161106	1777161106	1977161106	2577161106	-
12 x 6	315 x 160	1277161206	1777161206	1977161206	2577161206	-
8 x 7	200 x 180	1277160807	1777160807	1977160807	2577160807	-
9 x 7	225 x 180	1277160907	1777160907	1977160907	2577160907	-
10 x 7	250 x 180	1277161007	1777161007	1977161007	2577161007	-
11 x 7	280 x 180	1277161107	1777161107	1977161107	2577161107	-
12 x 7	315 x 180	1277161207	1777161207	1977161207	2577161207	-
9 x 8	225 x 200	1277160908	1777160908	1977160908	2577160908	-
10 x 8	250 x 200	1277161008	1777161008	1977161008	2577161008	3077161008
11 x 8	280 x 200	1277161108	1777161108	1977161108	2577161108	-
12 x 8	315 x 200	1277161208	1777161208	1977161208	2577161208	-
14 x 8	355 x 200	1277161408	1777161408	1977161408	2577161408	-



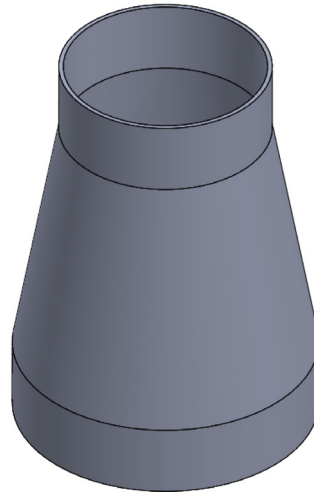
**CONCENTRIC REDUCERS (CONTINUED)**

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
10 x 9	250 x 225	1277161009	1777161009	1977161009	2577161009	-
11 x 9	280 x 225	1277161109	1777161109	1977161109	2577161109	-
12 x 9	315 x 225	1277161209	1777161209	1977161209	2577161209	-
14 x 9	355 x 225	1277161409	1777161409	1977161409	2577161409	-
16 x 9	400 x 225	1277161609	1777161609	1977161609	2577161609	-
11 x 10	280 x 250	1277161110	1777161110	1977161110	2577161110	-
12 x 10	315 x 250	1277161210	1777161210	1977161210	2577161210	3077161210
14 x 10	355 x 250	1277161410	1777161410	1977161410	2577161410	-
16 x 10	400 x 250	1277161610	1777161610	1977161610	2577161610	-
18 x 10	450 x 250	1277161810	1777161810	1977161810	2577161810	-
12 x 11	315 x 280	1277161211	1777161211	1977161211	2577161211	-
14 x 11	355 x 280	1277161411	1777161411	1977161411	2577161411	-
16 x 11	400 x 280	1277161611	1777161611	1977161611	2577161611	-
18 x 11	450 x 280	1277161811	1777161811	1977161811	2577161811	-
20 x 11	500 x 280	1277162011	1777162011	1977162011	2577162011	-
14 x 12	355 x 315	1277161412	1777161412	1977161412	2577161412	-
16 x 12	400 x 315	1277161612	1777161612	1977161612	2577161612	3077161612
18 x 12	450 x 315	1277161812	1777161812	1977161812	2577161812	-
20 x 12	500 x 315	1277162012	1777162012	1977162012	2577162012	-
16 x 14	400 x 355	1277161614	1777161614	1977161614	2577161614	-
18 x 14	450 x 355	1277161814	1777161814	1977161814	2577161814	-
20 x 14	500 x 355	1277162014	1777162014	-	2577162014	-
18 x 16	450 x 400	1277161816	1777161816	1977161816	2577161816	-
20 x 16	500 x 400	1277162016	1777162016	-	2577162016	-
22 x 16	560 x 400	1277162216	1777162216	-	2577162216	-
24 x 16	630 x 400	1277162416	1777162416	-	2577162416	-
28 x 16	710 x 400	1277162816	1777162816	-	2577162816	-



### CONCENTRIC REDUCERS (CONTINUED)

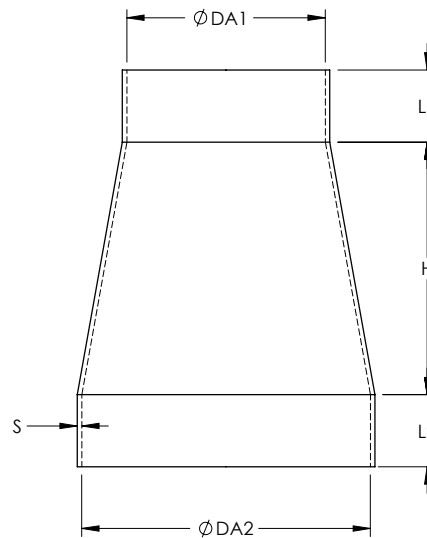
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
32 x 16	800 x 400	1277163216	1777163216	-	2577163216	-
36 x 16	900 x 400	1277163616	1777163616	-	2577163616	-
40 x 16	1000 x 400	1277164016	1777164016	-	2577164016	-
20 x 18	500 x 450	1277162018	1777162018	-	2577162018	-
22 x 18	560 x 450	1277162218	1777162218	-	2577162218	-
24 x 18	630 x 450	1277162418	1777162418	-	2577162418	-
28 x 18	710 x 450	1277162818	1777162818	-	2577162818	-
32 x 18	800 x 450	1277163218	1777163218	-	2577163218	-
36 x 18	900 x 450	1277163618	1777163618	-	2577163618	-
40 x 18	1000 x 450	1277164018	1777164018	-	2577164018	-
22 x 20	560 x 500	1277162220	1777162220	-	2577162220	-
24 x 20	630 x 500	1277162420	1777162420	-	2577162420	-
28 x 20	710 x 500	1277162820	1777162820	-	2577162820	-
32 x 20	800 x 500	1277163220	1777163220	-	2577163220	-
36 x 20	900 x 500	1277163620	1777163620	-	2577163620	-
40 x 20	1000 x 500	1277164020	1777164020	-	2577164020	-
24 x 22	630 x 560	1277162422	1777162422	-	2577162422	-
28 x 22	710 x 560	1277162822	1777162822	-	2577162822	-
32 x 22	800 x 560	1277163222	1777163222	-	2577163222	-
36 x 22	900 x 560	1277163622	1777163622	-	2577163622	-
40 x 22	1000 x 560	1277164022	1777164022	-	2577164022	-
28 x 24	710 x 630	1277162824	1777162824	-	2577162824	-
32 x 24	800 x 630	1277163224	1777163224	-	2577163224	-
36 x 24	900 x 630	1277163624	1777163624	-	2577163624	-
40 x 24	1000 x 630	1277164024	1777164024	-	2577164024	-
48 x 24	1200 x 630	1277164824	1777164824	-	2577164824	-
32 x 28	800 x 710	1277163228	1777163228	-	2577163228	-



**CONCENTRIC REDUCERS (CONTINUED)**

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
36 x 28	900 x 710	1277163628	1777163628	-	2577163628	-
40 x 28	1000 x 710	1277164028	1777164028	-	2577164028	-
48 x 28	1200 x 710	1277164828	1777164828	-	2577164828	-
36 x 32	900 x 800	1277163632	1777163632	-	2577163632	-
40 x 32	1000 x 800	1277164032	1777164032	-	2577164032	-
48 x 32	1200 x 800	1277164832	1777164832	-	2577164832	-
40 x 36	1000 x 900	1277164036	1777164036	-	2577164036	-
48 x 36	1200 x 900	1277164836	1777164836	-	2577164836	-
48 x 40	1200 x 1000	1277164840	1777164840	-		-

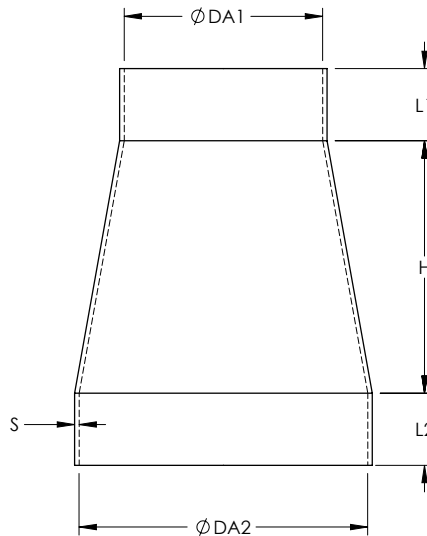
ProVent®



**CONCENTRIC REDUCERS**

Dimensions												
DA2	DA1	H	L1	L2	MIN S	NOM in	DA2 in	DA1 in	H	L1	L2	MIN S
110	75	80	40	40	2.5	4 x 2 1/2	4.33	2.95	3.15	1.57	1.57	0.098
110	90	60	40	40	2.5	4 x 3	4.33	3.54	2.36	1.57	1.57	0.098
140	110	80	40	40	2.5	5 x 4	5.51	4.33	3.15	1.57	1.57	0.098
160	110	140	40	40	2.5	6 x 4	6.30	4.33	5.51	1.57	1.57	0.098
180	110	50	40	40	2.5	7 x 4	7.09	4.33	1.97	1.57	1.57	0.098
200	110	65	40	40	2.5	8 x 4	7.87	4.33	2.56	1.57	1.57	0.098
160	140	60	40	40	2.5	6 x 5	6.30	5.51	2.36	1.57	1.57	0.098
180	140	30	40	40	2.5	7 x 5	7.09	5.51	1.18	1.57	1.57	0.098
200	140	45	40	40	2.5	8 x 5	7.87	5.51	1.77	1.57	1.57	0.098
225	140	60	40	40	2.5	9 x 5	8.86	5.51	2.36	1.57	1.57	0.098
250	140	80	40	40	2.5	10 x 5	9.84	5.51	3.15	1.57	1.57	0.098
180	160	60	40	40	2.5	7 x 6	7.09	6.30	2.36	1.57	1.57	0.098
200	160	120	40	40	2.5	8 x 6	7.87	6.30	4.72	1.57	1.57	0.098
225	160	100	40	40	2.5	9 x 6	8.86	6.30	3.94	1.57	1.57	0.098
250	160	120	40	40	2.5	10 x 6	9.84	6.30	4.72	1.57	1.57	0.098
280	160	85	40	50	2.5	11 x 6	11.02	6.30	3.35	1.57	1.97	0.098
315	160	115	40	50	2.5	12 x 6	12.40	6.30	4.53	1.57	1.97	0.098
200	180	75	40	40	2.5	8 x 7	7.87	7.09	2.95	1.57	1.57	0.098
225	180	85	40	40	2.5	9 x 7	8.86	7.09	3.35	1.57	1.57	0.098
250	180	100	40	40	2.5	10 x 7	9.84	7.09	3.94	1.57	1.57	0.098
280	180	65	40	50	2.5	11 x 7	11.02	7.09	2.56	1.57	1.97	0.098
315	180	100	40	50	2.5	12 x 7	12.40	7.09	3.94	1.57	1.97	0.098
225	200	80	40	40	2.5	9 x 8	8.86	7.87	3.15	1.57	1.57	0.098
250	200	140	40	40	2.5	10 x 8	9.84	7.87	5.51	1.57	1.57	0.098
280	200	105	40	50	2.5	11 x 8	11.02	7.87	4.13	1.57	1.97	0.098
315	200	160	40	50	2.5	12 x 8	12.40	7.87	6.30	1.57	1.97	0.098
355	200	115	40	50	2.5	14 x 8	13.98	7.87	4.53	1.57	1.97	0.098

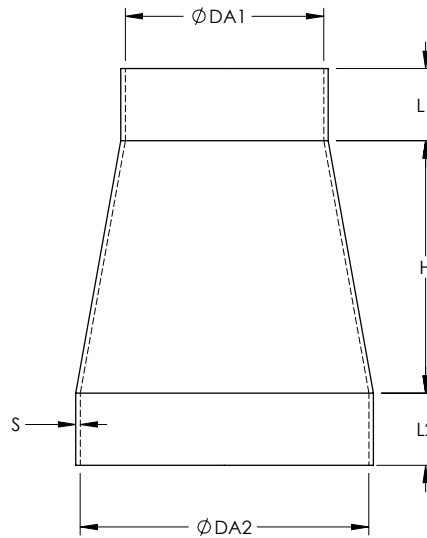




**CONCENTRIC REDUCERS (CONTINUED)**

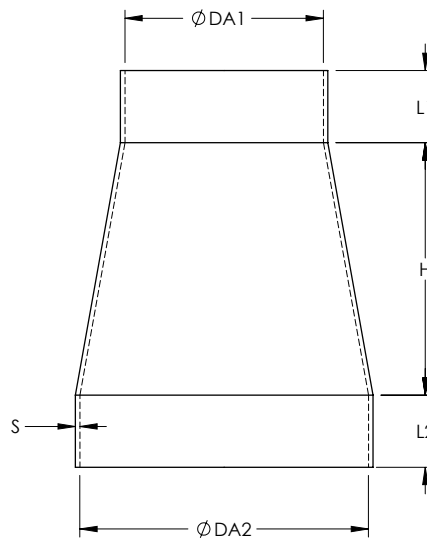


Dimensions												
DA2	DA1	H	L1	L2	MIN S	NOM in	DA2 in	DA1 in	H	L1	L2	MIN S
250	225	80	40	40	2.5	10 x 9	9.84	8.86	3.15	1.57	1.57	0.098
280	225	40	40	50	2.5	11 x 9	11.02	8.86	1.57	1.57	1.97	0.098
315	225	65	40	50	2.5	12 x 9	12.40	8.86	2.56	1.57	1.97	0.098
355	225	95	40	50	2.5	14 x 9	13.98	8.86	3.74	1.57	1.97	0.098
400	225	125	40	50	2.5	16 x 9	15.75	8.86	4.92	1.57	1.97	0.098
280	250	35	40	50	2.5	11 x 10	11.02	9.84	1.38	1.57	1.97	0.098
315	250	100	40	50	2.5	12 x 10	12.40	9.84	3.94	1.57	1.97	0.098
355	250	140	40	50	2.5	14 x 10	13.98	9.84	5.51	1.57	1.97	0.098
400	250	105	40	50	2.5	16 x 10	15.75	9.84	4.13	1.57	1.97	0.098
450	250	145	40	50	2.5	18 x 10	17.72	9.84	5.71	1.57	1.97	0.098
315	280	100	50	50	2.5	12 x 11	12.40	11.02	3.94	1.97	1.97	0.098
355	280	65	50	50	2.5	14 x 11	13.98	11.02	2.56	1.97	1.97	0.098
400	280	90	50	50	2.5	16 x 11	15.75	11.02	3.54	1.97	1.97	0.098
450	280	120	50	50	2.5	18 x 11	17.72	11.02	4.72	1.97	1.97	0.098
500	280	160	50	50	2.5	20 x 11	19.69	11.02	6.30	1.97	1.97	0.098
355	315	20	50	50	2.5	14 x 12	13.98	12.40	4.72	1.97	1.97	0.098
400	315	120	50	50	2.5	16 x 12	15.75	12.40	4.72	1.97	1.97	0.098
450	315	95	50	50	2.5	18 x 12	17.72	12.40	3.74	1.97	1.97	0.098
500	315	135	50	50	2.5	20 x 12	19.69	12.40	5.31	1.97	1.97	0.098
400	355	135	50	50	3	16 x 14	15.75	13.98	5.31	1.97	1.97	0.118
450	355	75	50	50	3	18 x 14	17.72	13.98	2.95	1.97	1.97	0.118
500	355	110	50	50	3	20 x 14	19.69	13.98	4.33	1.97	1.97	0.118
450	400	45	50	50	3	18 x 16	17.72	15.75	1.77	1.97	1.97	0.118
500	400	80	50	50	3	20 x 16	19.69	15.75	3.15	1.97	1.97	0.118
560	400	140	50	60	3	22 x 16	22.05	15.75	5.51	1.97	2.36	0.118
630	400	205	50	60	3	24 x 16	24.80	15.75	8.07	1.97	2.36	0.118
710	400	270	50	70	3	28 x 16	27.95	15.75	10.63	1.97	2.76	0.118



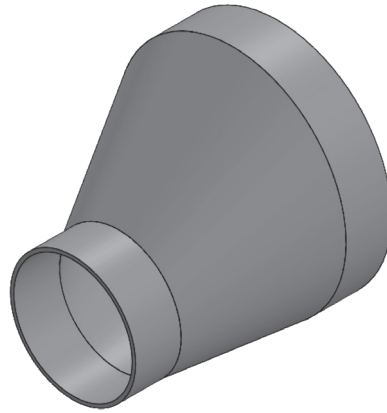
**CONCENTRIC REDUCERS (CONTINUED)**

Dimensions												
DA2	DA1	H	L1	L2	MIN S	NOM in	DA2 in	DA1 in	H	L1	L2	MIN S
800	400	350	50	80	3	32 x 16	31.50	15.75	13.78	1.97	3.15	0.118
900	400	435	50	90	3	36 x 16	35.43	15.75	17.13	1.97	3.54	0.118
1000	400	520	50	100	5	40 x 16	39.37	15.75	20.47	1.97	3.94	0.197
500	450	45	50	50	5	20 x 18	19.69	17.72	1.77	1.97	1.97	0.197
560	450	100	50	60	5	22 x 18	22.05	17.72	3.94	1.97	2.36	0.197
630	450	160	50	60	5	24 x 18	24.80	17.72	6.30	1.97	2.36	0.197
710	450	230	50	70	5	28 x 18	27.95	17.72	9.06	1.97	2.76	0.197
800	450	305	50	80	5	32 x 18	31.50	17.72	12.01	1.97	3.15	0.197
900	450	395	50	90	5	36 x 18	35.43	17.72	15.55	1.97	3.54	0.197
1000	450	480	50	100	5	40 x 18	39.37	17.72	18.90	1.97	3.94	0.197
560	500	55	50	60	5	22 x 20	22.05	19.69	2.17	1.97	2.36	0.197
630	500	115	50	60	5	24 x 20	24.80	19.69	4.53	1.97	2.36	0.197
710	500	185	50	70	5	28 x 20	27.95	19.69	7.28	1.97	2.76	0.197
800	500	265	50	80	5	32 x 20	31.50	19.69	10.43	1.97	3.15	0.197
900	500	350	50	90	5	36 x 20	35.43	19.69	13.78	1.97	3.54	0.197
1000	500	435	50	100	5	40 x 20	39.37	19.69	17.13	1.97	3.94	0.197
630	560	65	60	60	6	24 x 22	24.80	22.05	2.56	2.36	2.36	0.236
710	560	135	60	70	6	28 x 22	27.95	22.05	5.31	2.36	2.76	0.236
800	560	215	60	80	6	32 x 22	31.50	22.05	8.46	2.36	3.15	0.236
900	560	300	60	90	6	36 x 22	35.43	22.05	11.81	2.36	3.54	0.236
1000	560	385	60	100	6	40 x 22	39.37	22.05	15.16	2.36	3.94	0.236
710	630	75	60	70	6	28 x 24	27.95	24.80	2.95	2.36	2.76	0.236
800	630	155	60	80	6	32 x 24	31.50	24.80	6.10	2.36	3.15	0.236
900	630	240	60	90	6	36 x 24	35.43	24.80	9.45	2.36	3.54	0.236
1000	630	325	60	100	6	40 x 24	39.37	24.80	12.80	2.36	3.94	0.236
1200	630	500	60	120	6	48 x 24	47.24	24.80	19.69	2.36	4.72	0.236
800	710	85	70	80	8	32 x 28	31.50	27.95	3.35	2.76	3.15	0.315



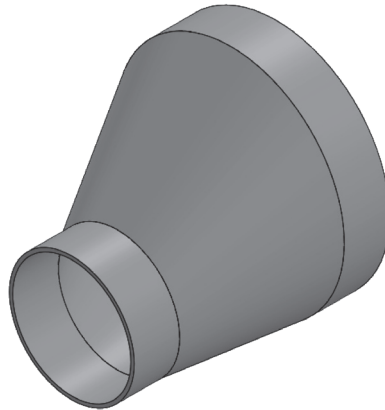
**CONCENTRIC REDUCERS (CONTINUED)**

Dimensions												
DA2	DA1	H	L1	L2	MIN S	NOM in	DA2 in	DA1 in	H	L1	L2	MIN S
900	710	170	70	90	8	36 x 28	35.43	27.95	6.69	2.76	3.54	0.315
1000	710	255	70	100	8	40 x 28	39.37	27.95	10.04	2.76	3.94	0.315
1200	710	430	70	120	8	48 x 28	47.24	27.95	16.93	2.76	4.72	0.315
900	800	90	80	90	8	36 x 32	35.43	31.50	3.54	3.15	3.54	0.315
1000	800	180	80	100	8	40 x 32	39.37	31.50	7.09	3.15	3.94	0.315
1200	800	350	80	120	8	48 x 32	47.24	31.50	13.78	3.15	4.72	0.315
1000	900	90	90	100	8	40 x 36	39.37	35.43	3.54	3.54	3.94	0.315
1200	900	265	90	120	8	48 x 36	47.24	35.43	10.43	3.54	4.72	0.315
1200	1000	180	100	120	10	48 x 40	47.24	39.37	7.09	3.94	4.72	0.394



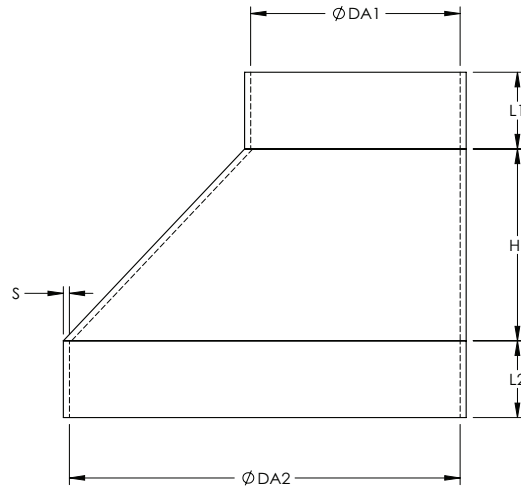
## ECCENTRIC REDUCERS

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4 x 3	110 x 90	-	1777230403	-	-	-
6 x 3	160 x 90	-	1777230603	-	-	-
6 x 4	160 x 110	-	1777230604	-	-	-
8 x 4	200 x 110	-	1777230804	-	2577230804	-
8 x 5	200 x 140	1277230805	-	-	-	-
8 x 6	200 x 160	1277230806	1777230806	1977230806	2577230806	-
8 x 7	200 x 180	-	1777230807	-	-	-
10 x 4	250 x 110	-	1777231004	-	-	-
10 x 5	250 x 140	-	1777231005	-	-	-
10 x 6	250 x 160	1277231006	1777231006	-	2577231006	-
10 x 8	250 x 200	1277231008	1777231008	-	2577231008	-
11 x 6	280 x 160	-	1777231106	-	-	-
11 x 8	280 x 200	-	1777231108	-	-	-
11 x 10	280 x 250	-	1777231110	-	-	-
12 x 6	315 x 160	-	1777231206	-	-	-
12 x 8	315 x 200	1277231208	1777231208	-	2577231208	-
12 x 9	315 x 225	1277231209	-	-	-	-
12 x 10	315 x 250	-	1777231210	1977231210	-	-
12 x 11	315 x 280	-	1777231211	-	-	-
14 x 10	355 x 250	1277231410	1777231410	-	-	-
14 x 11	355 x 280	-	1777231411	-	2577231411	-
14 x 12	355 x 315	-	1777231412	1977231412	-	-
16 x 4	400 x 110	-	-	-	2577231604	-
16 x 6	400 x 160	-	1777231606	-	-	-
16 x 8	400 x 200	-	1777231608	-	-	-
16 x 10	400 x 250	1277231610	1777231610	-	-	-
16 x 12	400 x 315	1277231612	1777231612	-	2577231612	-
16 x 14	400 x 355	-	1777231614	-	-	-
18 x 10	450 x 250	1277231810	1777231810	-	-	-



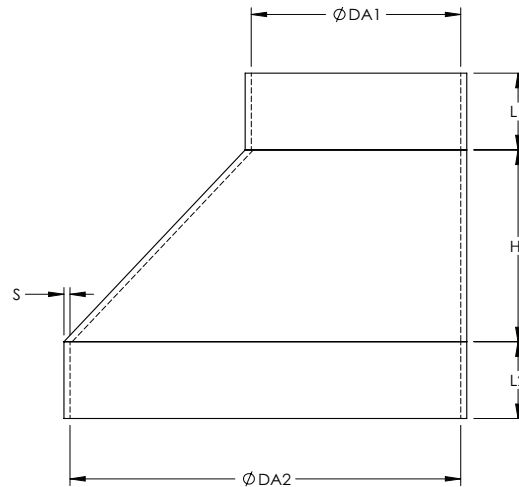
### ECCENTRIC REDUCERS (CONTINUED)

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part	Part	Part	Part	Part
		Number	Number	Number	Number	Number
18 x 11	450 x 280	-	1777231811	-	-	-
18 x 12	450 x 315	-	1777231812	-	2577231812	-
18 x 14	450 x 355	-	1777231814	-	2577231814	-
18 x 16	450 x 400	-	-	-	2577231816	-
20 x 6	500 x 160	-	1777232006	-	2577232006	-
20 x 8	500 x 200	-	-	-	2577232008	-
20 x 11	500 x 280	-	1777232011	-	-	-
20 x 12	500 x 315	1277232012	-	-	2577232012	-
20 x 16	500 x 400	-	1777232016	-	-	-
20 x 18	500 x 450	-	1777232018	-	2577142018	-
22 x 12	560 x 315	1277232212	-	-	-	-
22 x 14	560 x 355	-	1777232214	-	-	-
22 x 16	560 x 400	-	-	-	2577232216	-
22 x 18	560 x 450	-	1777232218	-	-	-
22 x 20	560 x 500	1277232220	-	-	-	-
24 x 10	630 x 250	-	1777232410	-	-	-
24 x 12	630 x 315	-	-	-	2577232412	-
24 x 18	630 x 450	-	1777232418	-	-	-
24 x 20	630 x 500	-	1777232420	-	-	-
24 x 22	630 x 560	-	1777232422	-	-	-
28 x 24	710 x 630	-	-	-	2577232824	-
32 x 18	800 x 450	-	1777233218	-	-	-
32 x 22	800 x 560	-	-	-	2577233222	-
32 x 24	800 x 630	-	-	1977233224	2577233224	-
36 x 14	900 X 355	-	-	-	2577233614	-
36 x 16	900 X 400	-	-	-	2577233616	-
36 x 28	900 X 710	1277233628	-	-	-	-
40 X 22	1000 X 560	1277234022	-	-	-	-
40 X 28	1000 X 710	-	1777234028	-	-	-
40 X 32	1000 X 800	-	1777234032	-	-	-



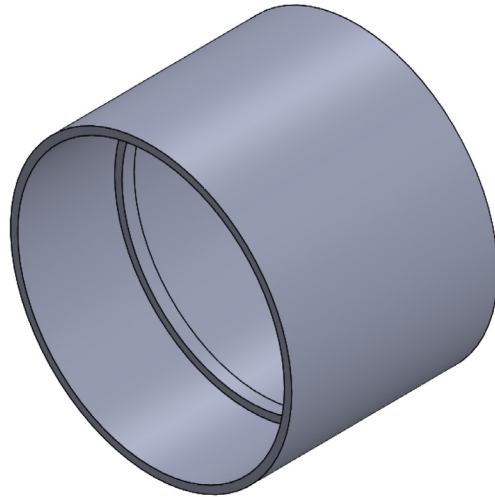
**ECCENTRIC REDUCERS**

Dimensions												
DA1	DA2	H	L1	L2	MIN S	NOM in	DA1 in	DA2 in	H in	L1 in	L2 in	MIN S in
90	110	100	40	40	3	4 x 3	3.54	4.33	3.94	1.57	1.57	0.118
90	160	100	40	40	3	6 x 3	3.54	6.30	3.94	1.57	1.57	0.118
110	160	100	40	40	3	6 x 4	4.33	6.30	3.94	1.57	1.57	0.118
110	200	100	40	40	3	8 x 4	4.33	7.87	3.94	1.57	1.57	0.118
140	200	100	40	40	4	8 x 5	5.51	7.87	3.94	1.57	1.57	0.157
160	200	100	40	40	4	8 x 6	6.30	7.87	3.94	1.57	1.57	0.157
180	200	100	40	40	4	8 x 7	7.09	7.87	3.94	1.57	1.57	0.157
110	250	125	40	40	4	10 x 4	4.33	9.84	4.92	1.57	1.57	0.157
140	250	125	40	40	4	10 x 5	5.51	9.84	4.92	1.57	1.57	0.157
160	250	125	40	40	4	10 x 6	6.30	9.84	4.92	1.57	1.57	0.157
200	250	125	40	40	4	10 x 8	7.87	9.84	4.92	1.57	1.57	0.157
160	280	125	40	50	4	11 x 6	6.30	11.02	4.92	1.57	1.97	0.157
200	280	125	40	50	4	11 x 8	7.87	11.02	4.92	1.57	1.97	0.157
250	280	125	40	50	4	11 x 10	9.84	11.02	4.92	1.57	1.97	0.157
160	315	175	40	50	4	12 x 6	6.30	12.40	6.89	1.57	1.97	0.157
200	315	150	40	50	4	12 x 8	7.87	12.40	5.91	1.57	1.97	0.157
225	315	125	40	50	4	12 x 9	8.86	12.40	4.92	1.57	1.97	0.157
250	315	150	40	50	4	12 x 10	9.84	12.40	5.91	1.57	1.97	0.157
280	315	150	50	50	4	12 x 11	11.02	12.40	5.91	1.97	1.97	0.157
250	355	150	40	50	4	14 x 10	9.84	13.98	5.91	1.57	1.97	0.157
280	355	150	50	50	4	14 x 11	11.02	13.98	5.91	1.97	1.97	0.157
315	355	150	50	50	4	14 x 12	12.40	13.98	5.91	1.97	1.97	0.157
110	400	150	40	50	4	16 x 4	4.33	15.75	5.91	1.57	1.97	0.157
200	400	150	40	50	4	16 x 6	6.30	15.75	5.91	1.57	1.97	0.157
200	400	150	40	50	4	16 x 8	7.87	15.75	5.91	1.57	1.97	0.157
250	400	150	40	50	4	16 x 10	9.84	15.75	5.91	1.57	1.97	0.157
315	400	175	50	50	4	16 x 12	12.40	15.75	6.89	1.97	1.97	0.157
355	400	175	50	50	4	16 x 14	13.98	15.75	6.89	1.97	1.97	0.157
250	450	200	40	50	4	18 x 10	9.84	17.72	7.87	1.57	1.97	0.157
280	450	200	50	50	4	18 x 11	11.02	17.72	7.87	1.97	1.97	0.157



**ECCENTRIC REDUCERS (CONTINUED)**

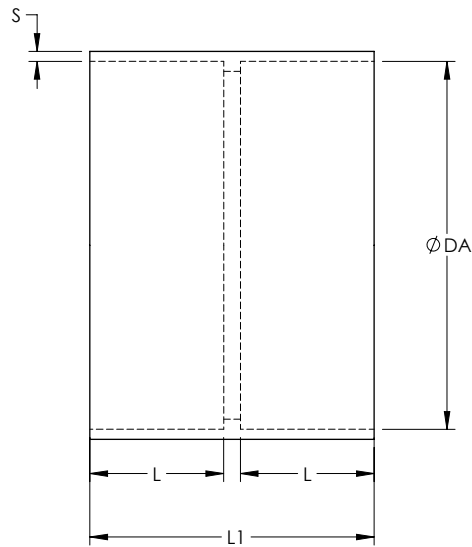
Dimensions												
DA1	DA2	H	L1	L2	MIN S	NOM in	DA1 in	DA2 in	H in	L1 in	L2 in	MIN S in
315	450	175	50	50	4	18 x 12	12.40	17.72	6.89	1.97	1.97	0.157
355	450	175	50	50	4	18 x 14	13.98	17.72	6.89	1.97	1.97	0.157
400	450	175	50	50	4	18 x 16	15.75	17.72	6.89	1.97	1.97	0.157
160	500	250	50	50	4	20 x 6	6.30	19.69	9.84	1.97	1.97	0.157
200	500	250	50	50	4	20 x 8	7.87	19.69	9.84	1.97	1.97	0.157
280	500	250	50	50	4	20 x 11	11.02	19.69	9.84	1.97	1.97	0.157
315	500	200	50	50	4	20 x 12	12.40	19.69	7.87	1.97	1.97	0.157
400	500	175	50	50	4	20 x 16	15.75	19.69	6.89	1.97	1.97	0.157
450	500	175	50	50	5	20 x 18	17.72	19.69	6.89	1.97	1.97	0.197
315	560	225	50	60	4	22 x 12	12.40	22.05	8.86	1.97	2.36	0.098
355	560	225	50	60	4	22 x 14	13.98	22.05	8.86	1.97	2.36	0.157
400	560	200	50	60	4	22 x 16	15.75	22.05	7.87	1.97	2.36	0.157
450	560	175	50	60	5	22 x 18	17.72	22.05	6.89	1.97	2.36	0.197
500	560	175	50	60	6	22 x 20	19.69	22.05	6.89	1.97	2.36	0.236
250	630	250	50	70	5	24 x 10	9.84	24.80	9.84	1.97	2.76	0.197
400	630	250	50	70	5	24 x 12	15.75	24.80	9.84	1.97	2.76	0.197
450	630	200	50	70	5	24 x 18	17.72	24.80	7.87	1.97	2.76	0.197
500	630	175	50	60	6	24 x 20	19.69	24.80	6.89	1.97	2.36	0.236
560	630	175	60	70	6	24 x 22	22.05	24.80	6.89	2.36	2.76	0.236
630	710	200	70	80	6	28 x 24	24.80	27.95	7.87	2.76	3.15	0.236
450	800	350	50	80	6	32 x 18	17.72	31.50	13.78	1.97	3.15	0.236
560	800	250	60	80	6	32 x 22	22.05	31.50	9.84	2.36	3.15	0.236
630	800	200	70	80	6	32 x 24	24.80	31.50	7.87	2.76	3.15	0.236
355	900	550	50	90	5	36 x 14	13.98	35.43	21.65	1.97	3.54	0.197
400	900	500	50	90	6	36 x 16	15.75	35.43	19.69	1.97	3.54	0.236
710	900	200	80	90	8	36 x 28	27.95	35.43	7.87	3.15	3.54	0.315
560	1000	450	60	100	6	40 X 22	22.05	39.37	17.72	2.36	3.94	0.236
710	1000	300	80	100	8	40 X 28	27.95	39.37	11.81	3.15	3.94	0.315
800	1000	200	80	100	8	40 X 32	31.50	39.37	7.87	3.15	3.94	0.315



### COUPLINGS

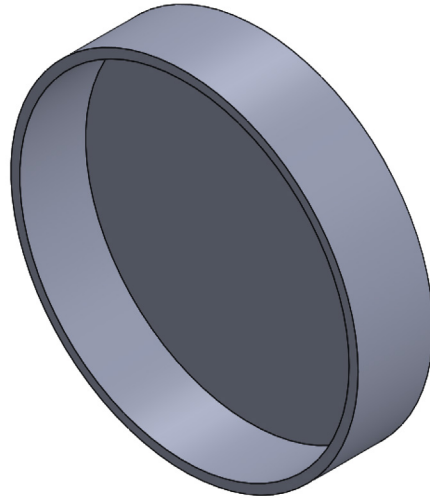
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277150002	1777150002	1977150002	2577150002	-
2-1/2	75	-	-	-	-	3077150025
3	90	1277150003	1777150003	1977150003	2577150003	-
4	110	1277150004	1777150004	1977150004	2577150004	3077150004
5	140	1277150005	1777150005	1977150005	2577150005	-
6	160	1277150006	1777150006	1977150006	2577150006	3077150006
7	180	1277150007	1777150007	1977150007	2577150007	-
8	200	1277150008	1777150008	1977150008	2577150008	3077150008
9	225	1277150009	1777150009	1977150009	2577150009	-
10	250	1277150010	1777150010	1977150010	2577150010	3077150010
11	280	1277150011	1777150011	1977150011	2577150011	-
12	315	1277150012	1777150012	1977150012	2577150012	3077150012
14	355	1277150014	1777150014	1977150014	2577150014	-
16	400	1277150016	1777150016	1977150016	2577150016	3077150016
18	450	1277150018	1777150018	1977150018	2577150018	-
20	500	1277150020	1777150020	1977150020	2577150020	-
22	560	1277150022	1777150022	1977150022	2577150022	-
24	630	1277150024	1777150024	1977150024	2577150024	-
28	710	1277150028	1777150028	-	2577150028	-
32	800	1277150032	1777150032	-	2577150032	-
36	900	1277150036	1777150036	-	2577150036	-
40	1000	1277150040	1777150040	-	2577150040	-
48	1200	1277150048	1777150048	-	2577150048	-





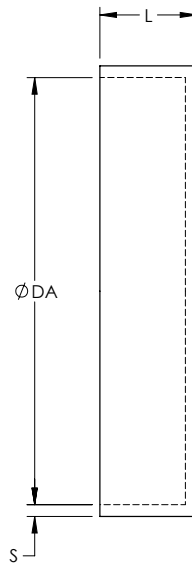
## COUPLINGS

Dimensions									
DA	L	L1	TOL	S	NOM in	DA in	L	L1	S
63	45	45	0.7	3	2	2.48	1.77	1.77	0.118
75	40	85	0.7	3	2-1/2	2.95	1.57	3.35	0.118
90	40	85	0.9	3	3	3.54	1.57	3.35	0.118
110	40	85	1	3	4	4.33	1.57	3.35	0.118
140	40	85	1.3	3	5	5.51	1.57	3.35	0.118
160	40	85	1.5	3	6	6.30	1.57	3.35	0.118
180	40	85	1.7	3	7	7.09	1.57	3.35	0.118
200	40	85	1.8	3	8	7.87	1.57	3.35	0.118
225	40	85	1.9	3.5	9	8.86	1.57	3.35	0.138
250	40	85	2	3.5	10	9.84	1.57	3.35	0.138
280	50	105	2.2	3.5	11	11.02	1.97	4.13	0.138
315	50	105	2.4	4	12	12.40	1.97	4.13	0.157
355	50	105	2.7	4	14	13.98	1.97	4.13	0.157
400	50	105	3	4.5	16	15.75	1.97	4.13	0.177
450	55	120	3.5	5	18	17.72	2.17	4.72	0.197
500	55	120	4	5	20	19.69	2.17	4.72	0.197
560	55	120	4.5	6	22	22.05	2.17	4.72	0.236
630	55	120	4.5	6	24	24.80	2.17	4.72	0.236
710	80	170	4.5	6	28	27.95	3.15	6.69	0.236
800	80	170	4.5	8	32	31.50	3.15	6.69	0.315
900	90	190	4.5	8	36	35.43	3.54	7.48	0.315
1000	100	210	5	10	40	39.37	3.94	8.27	0.394
1200	120	250	5	12	48	47.24	4.72	9.84	0.472



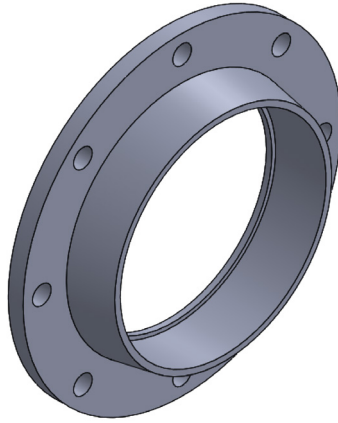
## END CAP

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277190003	1777190003	1977190003	2577190003	-
4	110	1277190004	1777190004	1977190004	2577190004	-
5	140	1277190005	1777190005	1977190005	2577190005	-
6	160	1277190006	1777190006	1977190006	2577190006	-
7	180	1277190007	1777190007	1977190007	2577190007	-
8	200	1277190008	1777190008	1977190008	2577190008	-
9	225	1277190009	1777190009	1977190009	2577190009	-
10	250	1277190010	1777190010	1977190010	2577190010	-
11	280	1277190011	1777190011	1977190011	2577190011	-
12	315	1277190012	1777190012	1977190012	2577190012	-
14	355	1277190014	1777190014	1977190014	2577190014	-
16	400	1277190016	1777190016	1977190016	2577190016	-
18	450	1277190018	1777190018	1977190018	2577190018	-
20	500	1277190020	1777190020	1977190020	2577190020	-
22	560	1277190022	1777190022	1977190022	2577190022	-
24	630	1277190024	1777190024		2577190024	-
28	710	1277190028	1777190028		2577190028	-
32	800	1277190032	1777190032		2577190032	-
36	900	1277190036	1777190036		2577190036	-
40	1000	1277190040	1777190040		2577190040	-
48	1200	1277190048	1777190048		2577190048	-



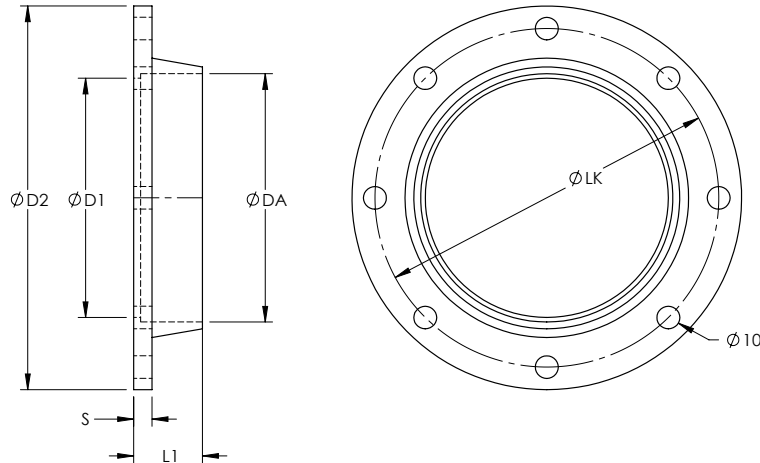
**END CAP**

Dimension						
DA	L	S	NOM in	DA in	L	S
90	25	3	3	3.54	0.98	0.118
110	25	3	4	4.33	0.98	0.118
140	25	3	5	5.51	0.98	0.118
160	25	3	6	6.30	0.98	0.118
180	25	3	7	7.09	0.98	0.118
200	25	3	8	7.87	0.98	0.118
225	25	3	9	8.86	0.98	0.118
250	25	3	10	9.84	0.98	0.118
280	25	3	11	11.02	0.98	0.118
315	25	3	12	12.40	0.98	0.118
355	25	3	14	13.98	0.98	0.118
400	25	3	16	15.75	0.98	0.118
450	30	6	18	17.72	1.18	0.236
500	30	6	20	19.69	1.18	0.236
560	40	6	22	22.05	1.57	0.236
630	40	6	24	24.80	1.57	0.236
710	40	8	28	27.95	1.57	0.315
800	50	8	32	31.50	1.97	0.315
900	50	8	36	35.43	1.97	0.315
1000	50	10	40	39.37	1.97	0.394
1200	60	12	48	47.24	2.36	0.472



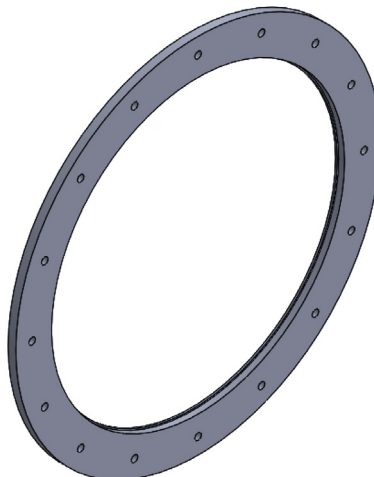
## FLANGES - EN 1506 SOCKET

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2-1/2	75	-	-	-	-	3077200025
3	90	1277200003	1777200003	1977200003	2577200003	-
4	110	1277200004	1777200004	1977200004	2577200004	3077200004
5	140	1277200005	1777200005	1977200005	2577200005	-
6	160	1277200006	1777200006	1977200006	2577200006	3077200006
7	180	1277200007	1777200007	1977200007	2577200007	-
8	200	1277200008	1777200008	1977200008	2577200008	3077200008
9	225	1277200009	1777200009	1977200009	2577200009	-
10	250	1277200010	1777200010	1977200010	2577200010	3077200010
11	280	1277200011	1777200011	1977200011	2577200011	-
12	315	1277200012	1777200012	1977200012	2577200012	3077200012
14	355	1277200014	1777200014	1977200014	2577200014	-
16	400	1277200016	1777200016	1977200016	2577200016	3077200016
18	450	1277200018	1777200018	1977200018	2577200018	-
20	500	1277200020	1777200020	1977200020	2577200020	-
22	560	1277200022	1777200022	1977200022	2577200022	-
24	630	1277200024	1777200024	1977200024	2577200024	-
28	710	1277200028	1777200028	1977200028	2577200028	-
32	800	1277200032	1777200032	1977200032	2577200032	-
36	900	1277200036	1777200036	-	2577200036	-
40	1000	1277200040	1777200040	-	2577200040	-
48	1200	1277200048	1777200048	-	2577200048	-



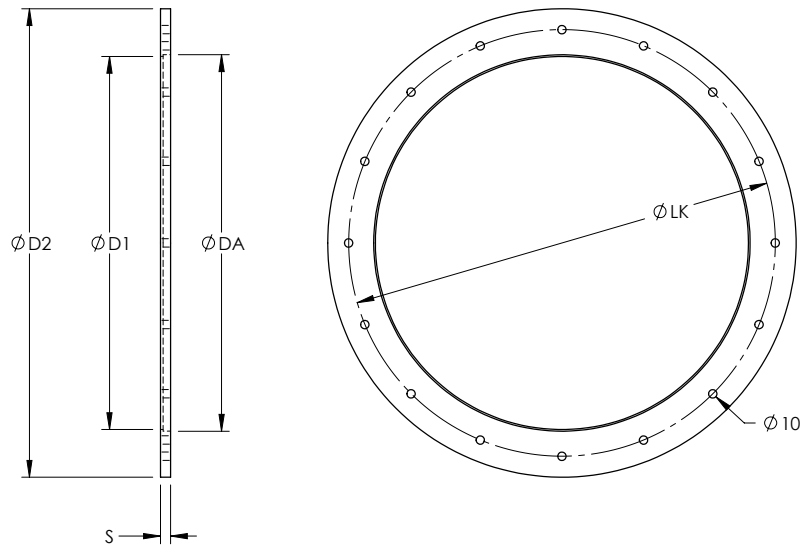
### FLANGES - EN 1506 SOCKET

Dimensions																
DA	L1	LK	D1	D2	X	S	Ø	Nom in	DA in	L1	LK	D1	D2	X	S	Ø
75	29	110	69	140	8	8	10	2-1/2	2.95	1.14	4.33	2.72	5.51	0.31	0.31	0.39
90	29	128	84	158	8	8	10	3	3.54	1.14	5.04	3.31	6.22	0.31	0.31	0.39
110	30	150	106	170	8	8	10	4	4.33	1.18	5.91	4.17	6.69	0.31	0.31	0.39
140	30	175	136	200	8	8	10	5	5.51	1.18	6.89	5.35	7.87	0.31	0.31	0.39
160	30	200	156	230	8	8	10	6	6.30	1.18	7.87	6.14	9.06	0.31	0.31	0.39
180	30	220	176	250	8	8	10	7	7.09	1.18	8.66	6.93	9.84	0.31	0.31	0.39
200	30	240	196	270	8	8	10	8	7.87	1.18	9.45	7.72	10.63	0.31	0.31	0.39
225	30	265	222	295	8	8	10	9	8.86	1.18	10.43	8.74	11.61	0.31	0.31	0.39
250	30	290	246	320	12	8	10	10	9.84	1.18	11.42	9.69	12.60	0.47	0.31	0.39
280	30	325	275	355	12	10	10	11	11.02	1.18	12.80	10.83	13.98	0.47	0.39	0.39
315	30	350	310	395	12	10	10	12	12.40	1.18	13.78	12.20	15.55	0.47	0.39	0.39
355	30	400	349	435	12	10	10	14	13.98	1.18	15.75	13.74	17.13	0.47	0.39	0.39
400	30	445	393	475	16	10	10	16	15.75	1.18	17.52	15.47	18.70	0.63	0.39	0.39
450	60	510	446	560	16	12	10	18	17.72	2.36	20.08	17.56	22.05	0.63	0.47	0.39
500	60	560	496	610	20	12	10	20	19.69	2.36	22.05	19.53	24.02	0.79	0.47	0.39
560	60	610	556	660	20	12	10	22	22.05	2.36	24.02	21.89	25.98	0.79	0.47	0.39
630	80	710	626	760	24	12	10	24	24.80	3.15	27.95	24.65	29.92	0.94	0.47	0.39
710	80	760	706	810	24	12	10	28	27.95	3.15	29.92	27.80	31.89	0.94	0.47	0.39
800	80	866	796	916	28	12	10	32	31.50	3.15	34.09	31.34	36.06	1.10	0.47	0.39
900	100	966	896	1016	32	12	10	36	35.43	3.94	38.03	35.28	40.00	1.26	0.47	0.39
1000	100	1066	993	1116	36	12	10	40	39.37	3.94	41.97	39.09	43.94	1.42	0.47	0.39
1200	120	1270	1193	1320	40	12	10	48	47.24	4.72	50.00	46.97	51.97	1.57	0.47	0.39



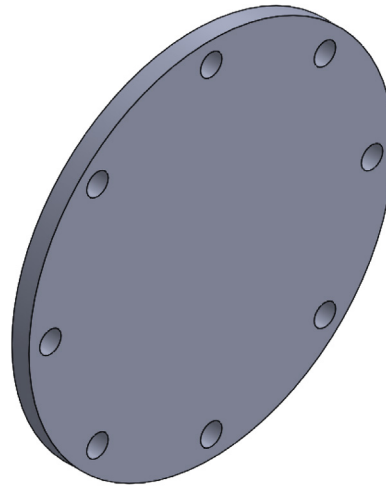
### FLANGE RINGS- EN 1506

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
18	450	1277400018	1777400018	-	2577400018	-
20	500	1277400020	1777400020	-	2577400020	-
22	560	1277400022	1777400022	-	2577400022	-
24	630	1277400024	1777400024	-	2577400024	-
28	710	1277400028	1777400028	-	2577400028	-
32	800	1277400032	1777400032	-	2577400032	-
36	900	1277400036	1777400036	-	2577400036	-
40	1000	1277400040	1777400040	-	2577400040	-



### FLANGE RINGS - EN 1506

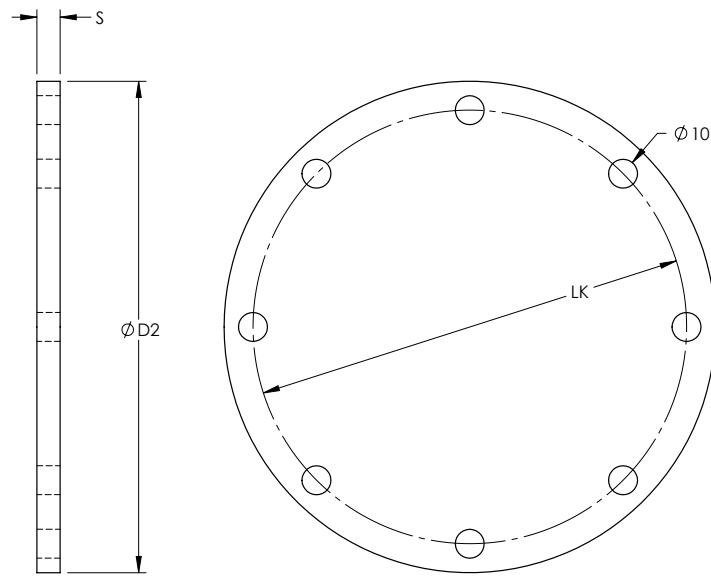
Dimensions															
DA	LK	D1	D2	x	s	$\phi$	Nom in	DA in	LK	D1	D2	x	s	$\phi$	
450	510	446	560	16	12	10	18	17.72	20.08	17.56	22.05	0.63	0.47	0.39	
500	560	496	610	20	12	10	20	19.69	22.05	19.53	24.02	0.79	0.47	0.39	
560	610	556	660	20	12	10	22	22.05	24.02	21.89	25.98	0.79	0.47	0.39	
630	710	626	760	24	12	10	24	24.80	27.95	24.65	29.92	0.94	0.47	0.39	
710	760	706	810	24	12	10	28	27.95	29.92	27.80	31.89	0.94	0.47	0.39	
800	866	796	916	28	12	10	32	31.50	34.09	31.34	36.06	1.10	0.47	0.39	
900	966	896	1016	32	12	10	36	35.43	38.03	35.28	40.00	1.26	0.47	0.39	
1000	1066	993	1116	36	12	10	40	39.37	41.97	39.09	43.94	1.42	0.47	0.39	



### BLIND FLANGES - EN 1506

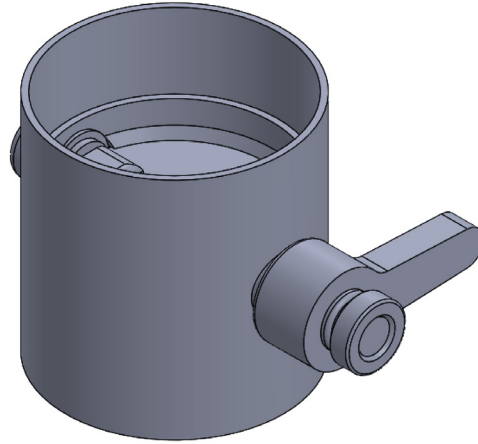
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2-1/2	75	-	-	-	-	3077220025
3	90	1277220003	1777220003	-	2577220003	-
4	110	1277220004	1777220004	1977220004	2577220004	3077220004
5	140	1277220005	1777220005	1977220005	2577220005	-
6	160	1277220006	1777220006	1977220006	2577220006	3077220006
7	180	1277220007	1777220007	1977220007	2577220007	-
8	200	1277220008	1777220008	1977220008	2577220008	3077220008
9	225	1277220009	1777220009	1977220009	2577220009	-
10	250	1277220010	1777220010	1977220010	2577220010	3077220010
11	280	1277220011	1777220011	1977220011	2577220011	-
12	315	1277220012	1777220012	1977220012	2577220012	3077220012
14	355	1277220014	1777220014	-	2577220014	-
16	400	1277220016	1777220016	1977220016	2577220016	3077220016
18	450	1277220018	1777220018	-	2577220018	-
20	500	1277220020	1777220020	-	2577220020	-
22	560	1277220022	1777220022	-	2577220022	-
24	630	1277220024	1777220024	-	2577220024	-
28	710	1277220028	1777220028	-	2577220028	-
32	800	1277220032	1777220032	-	2577220032	-





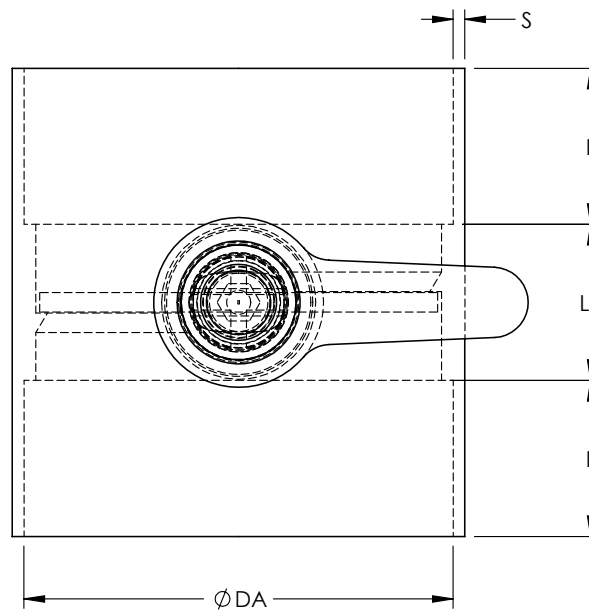
**BLIND FLANGES - EN 1506 SOCKET**

Dimensions												
DA	LK	D2	X	S	Ø	Nom in	DA in	LK	D2	X	S	Ø
75	110	140	8	8	10	2-1/2	2.95	4.33	5.51	0.31	0.31	0.39
90	128	158	8	8	10	3	3.54	5.04	6.22	0.31	0.31	0.39
110	150	170	8	8	10	4	4.33	5.91	6.69	0.31	0.31	0.39
140	175	200	8	8	10	5	5.51	6.89	7.87	0.31	0.31	0.39
160	200	230	8	8	10	6	6.30	7.87	9.06	0.31	0.31	0.39
180	220	250	8	8	10	7	7.09	8.66	9.84	0.31	0.31	0.39
200	240	270	8	8	10	8	7.87	9.45	10.63	0.31	0.31	0.39
225	265	295	8	8	10	9	8.86	10.43	11.61	0.31	0.31	0.39
250	290	320	12	8	10	10	9.84	11.42	12.60	0.47	0.31	0.39
280	325	355	12	10	10	11	11.02	12.80	13.98	0.47	0.39	0.39
315	350	395	12	10	10	12	12.40	13.78	15.55	0.47	0.39	0.39
355	400	435	12	10	10	14	13.98	15.75	17.13	0.47	0.39	0.39
400	445	475	16	10	10	16	15.75	17.52	18.70	0.63	0.39	0.39
450	510	560	16	12	10	18	17.72	20.08	22.05	0.63	0.47	0.39
500	560	610	20	12	10	20	19.69	22.05	24.02	0.79	0.47	0.39
560	610	660	20	12	10	22	22.05	24.02	25.98	0.79	0.47	0.39
630	710	760	24	12	10	24	24.80	27.95	29.92	0.94	0.47	0.39
710	760	810	24	12	10	28	27.95	29.92	31.89	0.94	0.47	0.39
800	866	916	28	12	10	32	31.50	34.09	36.06	1.10	0.47	0.39



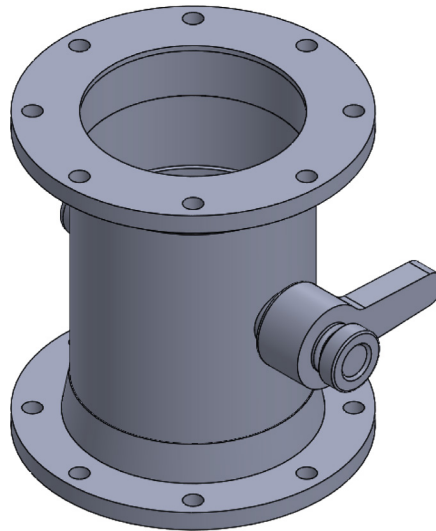
**DAMPERS WITH LEVER SOCKET**

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277250002	1777250002	1977250002	2577250002	-
2-1/2	75	-	-	-	-	3077250025
3	90	1277250003	1777250003	1977250003	2577250003	-
4	110	1277250004	1777250004	1977250004	2577250004	3077250004
5	140	1277250005	1777250005	1977250005	2577250005	-
6	160	1277250006	1777250006	1977250006	2577250006	3077250006
7	180	1277250007	1777250007	1977250007	2577250007	-
8	200	1277250008	1777250008	1977250008	2577250008	3077250008
9	225	1277250009	1777250009	1977250009	2577250009	-
10	250	1277250010	1777250010	1977250010	2577250010	3077250010
11	280	1277250011	1777250011	1977250011	2577250011	-
12	315	1277250012	1777250012	1977250012	2577250012	3077250012
14	355	1277250014	1777250014	1977250014	2577250014	-
16	400	1277250016	1777250016	1977250016	2577250016	3077250016
18	450	1277250018	1777250018	1977250018	2577250018	-
20	500	1277250020	1777250020	1977250020	2577250020	-
22	560	1277250022	1777250022	1977250022	2577250022	-
24	630	1277250024	1777250024	-	2577250024	-
28	710	1277250028	1777250028	-	2577250028	-
32	800	1277250032	1777250032	-	2577250032	-
36	900	1277250036	1777250036	-	2577250036	-
40	1000	1277250040	1777250040	-	2577250040	-
48	1200	1277250048	1777250048	-	2577250048	-



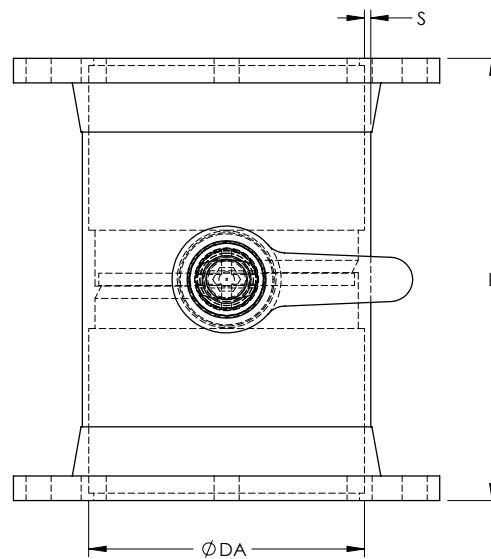
**DAMPERS WITH LEVER SOCKET**

Dimensions									
DA	L	L1	TOL	S	NOM in	DA in	L	L1	S
63	25	80	0.7	3	2	2.48	0.98	3.15	0.118
75	40	40	0.7	3	2-1/2	2.95	1.57	1.57	0.118
90	40	40	0.9	3	3	3.54	1.57	1.57	0.118
110	40	40	1	3	4	4.33	1.57	1.57	0.118
140	40	40	1.3	3	5	5.51	1.57	1.57	0.118
160	40	40	1.5	3	6	6.30	1.57	1.57	0.118
180	40	40	1.7	3.5	7	7.09	1.57	1.57	0.138
200	40	40	1.8	3.5	8	7.87	1.57	1.57	0.138
225	40	40	1.9	3.5	9	8.86	1.57	1.57	0.138
250	40	40	2	3.5	10	9.84	1.57	1.57	0.138
280	50	40	2.2	3.5	11	11.02	1.97	1.57	0.138
315	50	40	2.4	4	12	12.40	1.97	1.57	0.157
355	50	40	2.4	4	14	13.98	1.97	1.57	0.157
400	50	40	2.4	4.5	16	15.75	1.97	1.57	0.177
450	60	320	3.5	5	18	17.72	2.36	12.60	0.197
500	60	360	4	5	20	19.69	2.36	14.17	0.197
560	70	410	4.5	6	22	22.05	2.76	16.14	0.236
630	70	480	4.5	6	24	24.80	2.76	18.90	0.236
710	80	530	4.5	8	28	27.95	3.15	20.87	0.315
800	80	560	4.5	8	32	31.50	3.15	22.05	0.315
900	90	650	4.5	10	36	35.43	3.54	25.59	0.394
1000	100	740	5	10	40	39.37	3.94	29.13	0.394
1200	120	960	5	12	48	47.24	4.72	37.80	0.472



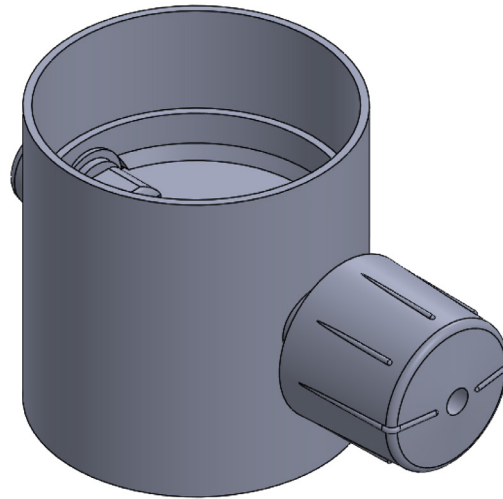
**DAMPERS WITH LEVER FLANGED**

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2-1/2	75	-	-	-	-	3077260025
3	90	1277260003	1777260003	1977260003	2577260003	-
4	110	1277260004	1777260004	1977260004	2577260004	3077260004
5	140	1277260005	1777260005	1977260005	2577260005	-
6	160	1277260006	1777260006	1977260006	2577260006	3077260006
7	180	1277260007	1777260007	1977260007	2577260007	-
8	200	1277260008	1777260008	1977260008	2577260008	3077260008
9	225	1277260009	1777260009	1977260009	2577260009	-
10	250	1277260010	1777260010	1977260010	2577260010	3077260010
11	280	1277260011	1777260011	1977260011	2577260011	-
12	315	1277260012	1777260012	1977260012	2577260012	3077260012
14	355	1277260014	1777260014	1977260014	2577260014	-
16	400	1277260016	1777260016	1977260016	2577260016	3077260016
18	450	1277260018	1777260018	-	2577260018	-
20	500	1277260020	1777260020	-	2577260020	-
22	560	1277260022	1777260022	-	2577260022	-
24	630	1277260024	1777260024	-	2577260024	-
28	710	1277260028	1777260028	-	2577260028	-
32	800	1277260032	1777260032	-	2577260032	-
36	900	1277260036	1777260036	-	2577260036	-
40	1000	1277260040	1777260040	-	2577260040	-
48	1200	1277260048	1777260048	-	2577260048	-



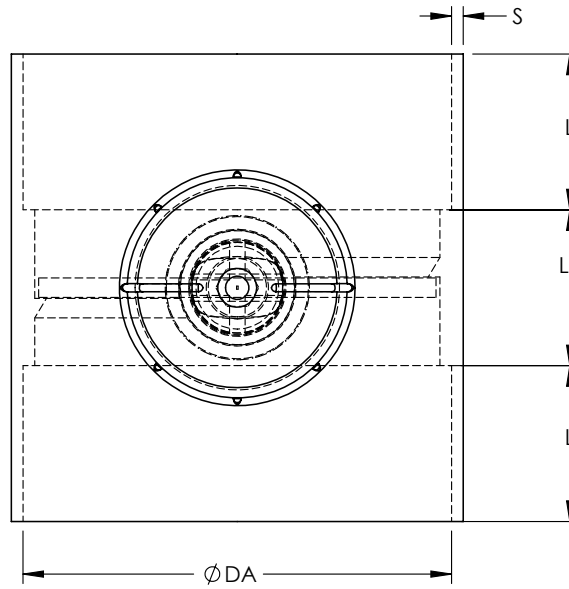
### DAMPERS WITH LEVER FLANGED

Dimensions							
DA	L	TOL	s	NOM in	DA in	L	s
75	180	0.7	3	2-1/2	2.95	7.09	0.118
90	180	0.9	3	3	3.54	7.09	0.118
110	180	1	3	4	4.33	7.09	0.118
140	180	1.3	3	5	5.51	7.09	0.118
160	180	1.5	3	6	6.30	7.09	0.118
180	180	1.7	3.5	7	7.09	7.09	0.138
200	180	1.8	3.5	8	7.87	7.09	0.138
225	180	1.9	3.5	9	8.86	7.09	0.138
250	180	2	3.5	10	9.84	7.09	0.138
280	200	2.2	3.5	11	11.02	7.87	0.138
315	200	2.4	4	12	12.40	7.87	0.157
355	200	2.4	4	14	13.98	7.87	0.157
400	200	2.4	4.5	16	15.75	7.87	0.177
450	378	3.5	5	18	17.72	14.88	0.197
500	418	4	5	20	19.69	16.46	0.197
560	418	4.5	6	22	22.05	16.46	0.236
630	488	4.5	6	24	24.80	19.21	0.236
710	538	4.5	8	28	27.95	21.18	0.315
800	568	4.5	8	32	31.50	22.36	0.315
900	658	4.5	10	36	35.43	25.91	0.394
1000	748	5	10	40	39.37	29.45	0.394
1200	968	5	12	48	47.24	38.11	0.472



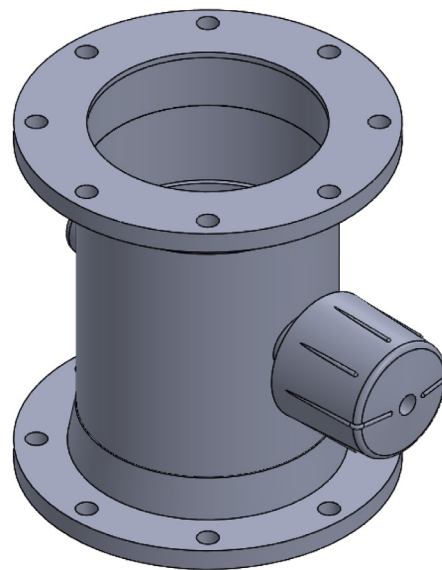
### DAMPERS WITH CONTROL KNOB SOCKET

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277270002	1777270002	1977270002	2577270002	-
2-1/2	75	-	-	-	-	3077270025
3	90	1277270003	1777270003	1977270003	2577270003	-
4	110	1277270004	1777270004	1977270004	2577270004	3077270004
5	140	1277270005	1777270005	1977270005	2577270005	-
6	160	1277270006	1777270006	1977270006	2577270006	3077270006
7	180	1277270007	1777270007	1977270007	2577270007	-
8	200	1277270008	1777270008	1977270008	2577270008	3077270008
9	225	1277270009	1777270009	1977270009	2577270009	-
10	250	1277270010	1777270010	1977270010	2577270010	3077270010
11	280	1277270011	1777270011	1977270011	2577270011	-
12	315	1277270012	1777270012	1977270012	2577270012	3077270012
14	355	1277270014	1777270014	1977270014	2577270014	-
16	400	1277270016	1777270016	1977270016	2577270016	3077270016



**DAMPERS WITH CONTROL KNOB SOCKET**

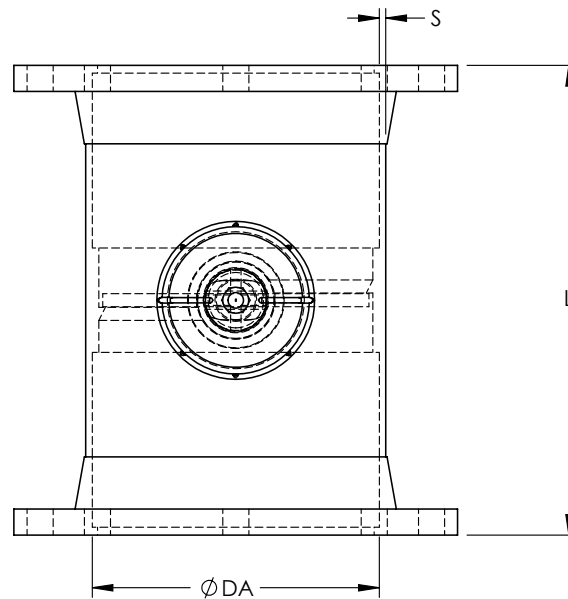
Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
63	25	80	0.7	3	2	2.48	0.98	3.15	0.118
75	40	40	0.7	3	2 -1/2	2.95	1.57	1.57	0.118
90	40	40	0.9	3	3	3.54	1.57	1.57	0.118
110	40	40	1	3	4	4.33	1.57	1.57	0.118
140	40	40	1.3	3	5	5.51	1.57	1.57	0.118
160	40	40	1.5	3	6	6.30	1.57	1.57	0.118
180	40	40	1.7	3.5	7	7.09	1.57	1.57	0.138
200	40	40	1.8	3.5	8	7.87	1.57	1.57	0.138
225	40	40	1.9	3.5	9	8.86	1.57	1.57	0.138
250	40	40	2	3.5	10	9.84	1.57	1.57	0.138
280	50	40	2.2	3.5	11	11.02	1.97	1.57	0.138
315	50	40	2.4	4	12	12.40	1.97	1.57	0.157
355	50	40	2.4	4	14	13.98	1.97	1.57	0.157
400	50	40	2.4	4.5	16	15.75	1.97	1.57	0.177



### DAMPERS WITH CONTROL KNOB FLANGED

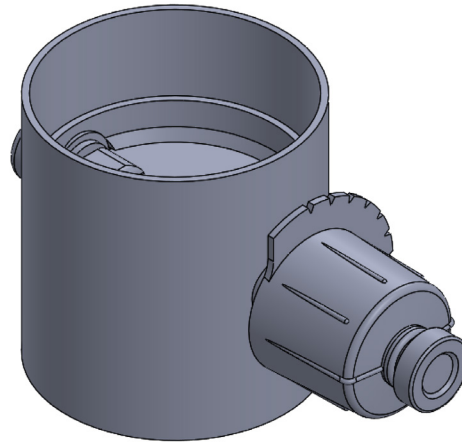
Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2-1/2	75	-	-	-	-	3077280025
3	90	1277280003	1777280003	1977280003	2577280003	-
4	110	1277280004	1777280004	1977280004	2577280004	3077280004
5	140	1277280005	1777280005	1977280005	2577280005	-
6	160	1277280006	1777280006	1977280006	2577280006	3077280006
7	180	1277280007	1777280007	1977280007	2577280007	-
8	200	1277280008	1777280008	1977280008	2577280008	3077280008
9	225	1277280009	1777280009	1977280009	2577280009	-
10	250	1277280010	1777280010	1977280010	2577280010	3077280010
11	280	1277280011	1777280011	1977280011	2577280011	-
12	315	1277280012	1777280012	1977280012	2577280012	3077280012
14	355	1277280014	1777280014	1977280014	2577280014	-
16	400	1277280016	1777280016	1977280016	2577280016	3077280016





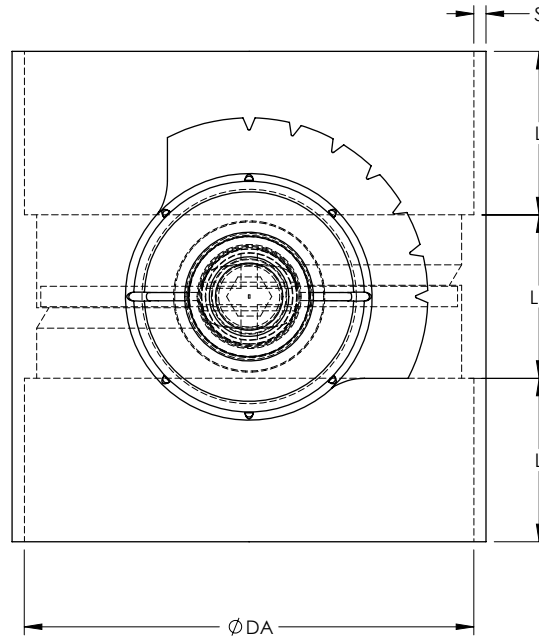
**DAMPERS WITH CONTROL KNOB FLANGED**

Dimensions							
DA	L	TOL	s	NOM in	DA in	L	s
75	180	0.7	3	2-1/2	2.95	7.09	0.118
90	180	0.9	3	3	3.54	7.09	0.118
110	180	1	3	4	4.33	7.09	0.118
140	180	1.3	3	5	5.51	7.09	0.118
160	180	1.5	3	6	6.30	7.09	0.118
180	180	1.7	3.5	7	7.09	7.09	0.138
200	180	1.8	3.5	8	7.87	7.09	0.138
225	180	1.9	3.5	9	8.86	7.09	0.138
250	180	2	3.5	10	9.84	7.09	0.138
280	200	2.2	3.5	11	11.02	7.87	0.138
315	200	2.4	4	12	12.40	7.87	0.157
355	200	2.4	4	14	13.98	7.87	0.157
400	200	2.4	4.5	16	15.75	7.87	0.177



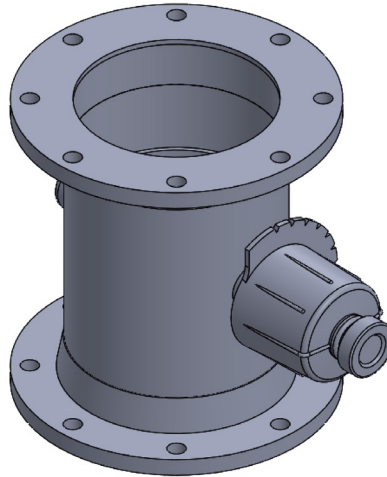
### DAMPERS WITH LOCKING CONTROL KNOB SOCKET

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2	63	1277290002	1777290002	1977290002	2577290002	-
2-1/2	75	-	-	-	-	3077290025
3	90	1277290003	1777290003	1977290003	2577290003	-
4	110	1277290004	1777290004	1977290004	2577290004	3077290004
5	140	1277290005	1777290005	1977290005	2577290005	-
6	160	1277290006	1777290006	1977290006	2577290006	3077290006
7	180	1277290007	1777290007	1977290007	2577290007	-
8	200	1277290008	1777290008	1977290008	2577290008	3077290008
9	225	1277290009	1777290009	1977290009	2577290009	-
10	250	1277290010	1777290010	1977290010	2577290010	3077290010
11	280	1277290011	1777290011	1977290011	2577290011	-
12	315	1277290012	1777290012	1977290012	2577290012	3077290012
14	355	1277290014	1777290014	1977290014	2577290014	-
16	400	1277290016	1777290016	1977290016	2577290016	3077290016



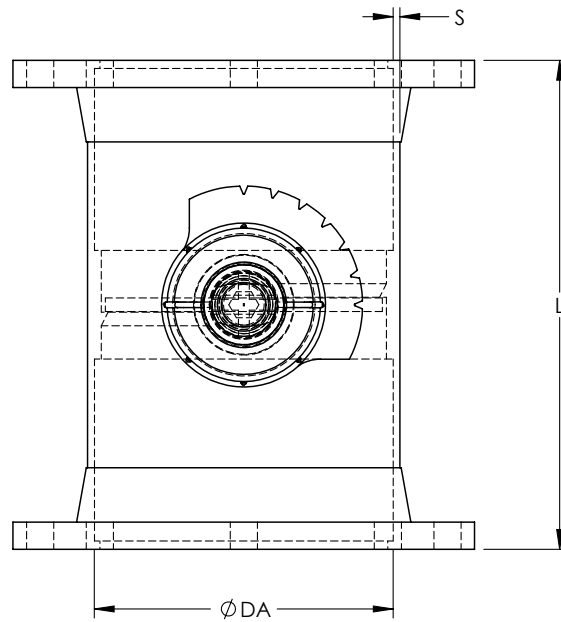
**DAMPERS WITH LOCKING CONTROL KNOB SOCKET**

Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
63	25	80	0.7	3	2	2.48	0.98	3.15	0.118
75	40	40	0.7	3	2 -1/2	2.95	1.57	1.57	0.118
90	40	40	0.9	3	3	3.54	1.57	1.57	0.118
110	40	40	1	3	4	4.33	1.57	1.57	0.118
140	40	40	1.3	3	5	5.51	1.57	1.57	0.118
160	40	40	1.5	3	6	6.30	1.57	1.57	0.118
180	40	40	1.7	3.5	7	7.09	1.57	1.57	0.138
200	40	40	1.8	3.5	8	7.87	1.57	1.57	0.138
225	40	40	1.9	3.5	9	8.86	1.57	1.57	0.138
250	40	40	2	3.5	10	9.84	1.57	1.57	0.138
280	50	40	2.2	3.5	11	11.02	1.97	1.57	0.138
315	50	40	2.4	4	12	12.40	1.97	1.57	0.157
355	50	40	2.4	4	14	13.98	1.97	1.57	0.157
400	50	40	2.4	4.5	16	15.75	1.97	1.57	0.177



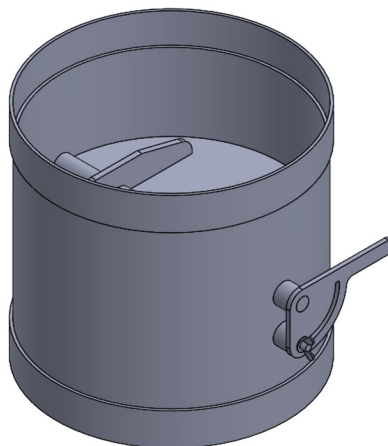
### DAMPERS WITH LOCKING CONTROL KNOB FLANGED

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
2-1/2	75	-	-	-	-	3077300025
3	90	1277300003	1777300003	1977300003	2577300003	-
4	110	1277300004	1777300004	1977300004	2577300004	3077300004
5	140	1277300005	1777300005	1977300005	2577300005	-
6	160	1277300006	1777300006	1977300006	2577300006	3077300006
7	180	1277300007	1777300007	1977300007	2577300007	-
8	200	1277300008	1777300008	1977300008	2577300008	3077300008
9	225	1277300009	1777300009	1977300009	2577300009	-
10	250	1277300010	1777300010	1977300010	2577300010	3077300010
11	280	1277300011	1777300011	1977300011	2577300011	-
12	315	1277300012	1777300012	1977300012	2577300012	3077300012
14	355	1277300014	1777300014	1977300014	2577300014	-
16	400	1277300016	1777300016	1977300016	2577300016	3077300016



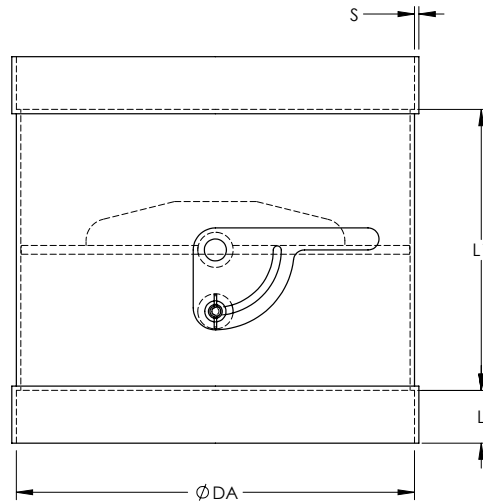
**DAMPERS WITH LOCKING CONTROL KNOB FLANGED**

Dimensions							
75	180	0.7	3	2-1/2	2.95	7.09	0.118
90	180	0.9	3	3	3.54	7.09	0.118
110	180	1	3	4	4.33	7.09	0.118
140	180	1.3	3	5	5.51	7.09	0.118
160	180	1.5	3	6	6.30	7.09	0.118
180	180	1.7	3.5	7	7.09	7.09	0.138
200	180	1.8	3.5	8	7.87	7.09	0.138
225	180	1.9	3.5	9	8.86	7.09	0.138
250	180	2	3.5	10	9.84	7.09	0.138
280	200	2.2	3.5	11	11.02	7.87	0.138
315	200	2.4	4	12	12.40	7.87	0.157
355	200	2.4	4	14	13.98	7.87	0.157
400	200	2.4	4.5	16	15.75	7.87	0.177



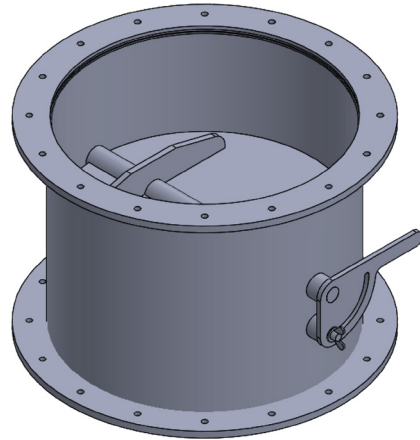
### BUTTERFLY DAMPERS WITH LEVER SOCKET

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
18	450	1277310018	1777310018	-	2577310018	-
20	500	1277310020	1777310020	-	2577310020	-
22	560	1277310022	1777310022	-	2577310022	-
24	630	1277310024	1777310024	-	2577310024	-
28	710	1277310028	1777310028	-	2577310028	-
32	800	1277310032	1777310032	-	2577310032	-
36	900	1277310036	1777310036	-	2577310036	-
40	1000	1277310040	1777310040	-	2577310040	-
48	1200	1277310048	1777310048	-	2577310048	-



### BUTTERFLY DAMPERS WITH LEVER SOCKET

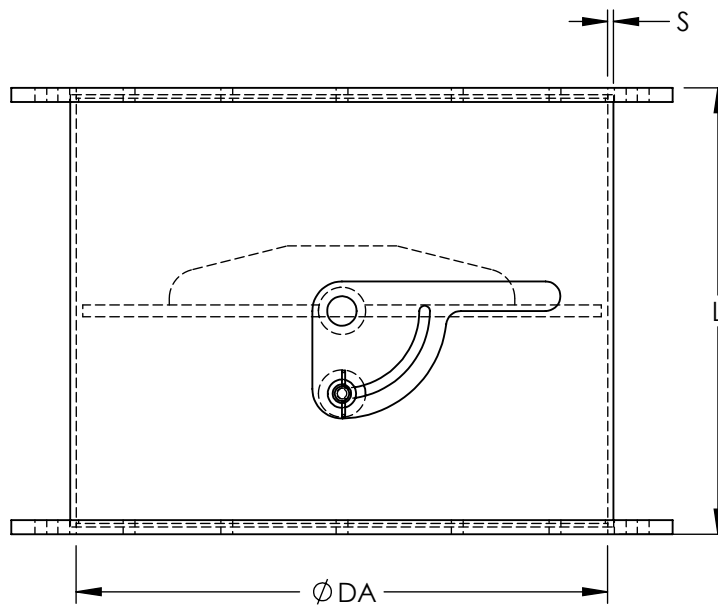
Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
450	60	320	3.5	5	18	17.72	2.36	12.60	0.197
500	60	360	4	5	20	19.69	2.36	14.17	0.197
560	70	410	4.5	6	22	22.05	2.76	16.14	0.236
630	70	480	4.5	6	24	24.80	2.76	18.90	0.236
710	80	530	4.5	8	28	27.95	3.15	20.87	0.315
800	80	560	4.5	8	32	31.50	3.15	22.05	0.315
900	90	650	4.5	10	36	35.43	3.54	25.59	0.394
1000	100	740	5	10	40	39.37	3.94	29.13	0.394
1200	120	960	5	12	48	47.24	4.72	37.80	0.472



### BUTTERFLY DAMPERS WITH LEVER FLANGED

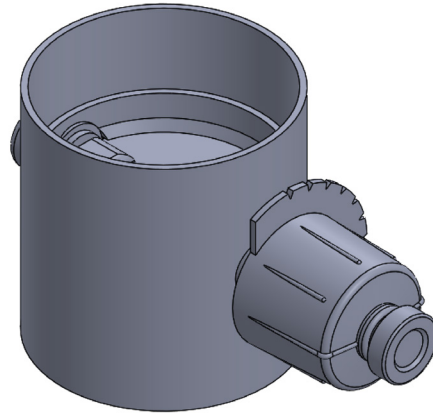
Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
18	450	1277320018	1777320018	-	2577320018	-
20	500	1277320020	1777320020	-	2577320020	-
22	560	1277320022	1777320022	-	2577320022	-
24	630	1277320024	1777320024	-	2577320024	-
28	710	1277320028	1777320028	-	2577320028	-
32	800	1277320032	1777320032	-	2577320032	-
36	900	1277320036	1777320036	-	2577320036	-
40	1000	1277320040	1777320040	-	2577320040	-
48	1200	1277320048	1777320048	-	2577320048	-





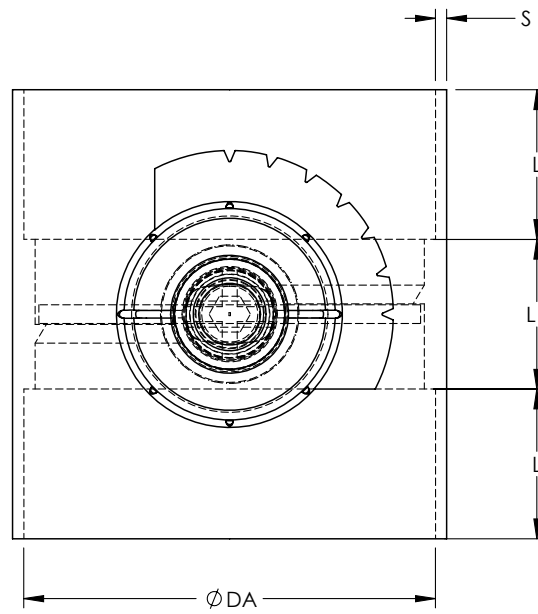
### BUTTERFLY DAMPERS WITH LEVER FLANGED

Dimensions							
DA	L	TOL	S	NOM in	DA in	L	S
450	378	3.5	5	18	17.72	14.88	0.197
500	418	4	5	20	19.69	16.46	0.197
560	418	4.5	6	22	22.05	16.46	0.236
630	488	4.5	6	24	24.80	19.21	0.236
710	538	4.5	8	28	27.95	21.18	0.315
800	568	4.5	8	32	31.50	22.36	0.315
900	658	4.5	10	36	35.43	25.91	0.394
1000	748	5	10	40	39.37	29.45	0.394
1200	968	5	12	48	47.24	38.11	0.472



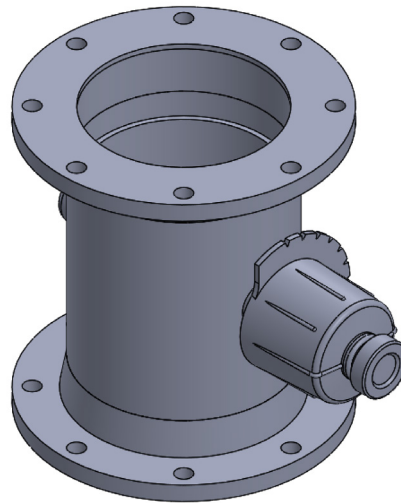
### BUTTERFLY DAMPERS WITH LOCKING CONTROL KNOB SOCKET

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277330004	1777330004	1977330004	2577330004	3077330004
5	140	1277330005	1777330005	1977330005	2577330005	-
6	160	1277330006	1777330006	1977330006	2577330006	3077330006
7	180	1277330007	1777330007	1977330007	2577330007	-
8	200	1277330008	1777330008	1977330008	2577330008	3077330008
9	225	1277330009	1777330009	1977330009	2577330009	-
10	250	1277330010	1777330010	1977330010	2577330010	3077330010
11	280	1277330011	1777330011	1977330011	2577330011	-
12	315	1277330012	1777330012	1977330012	2577330012	3077330012
14	355	1277330014	1777330014	1977330014	2577330014	-
16	400	1277330016	1777330016	1977330016	2577330016	3077330016



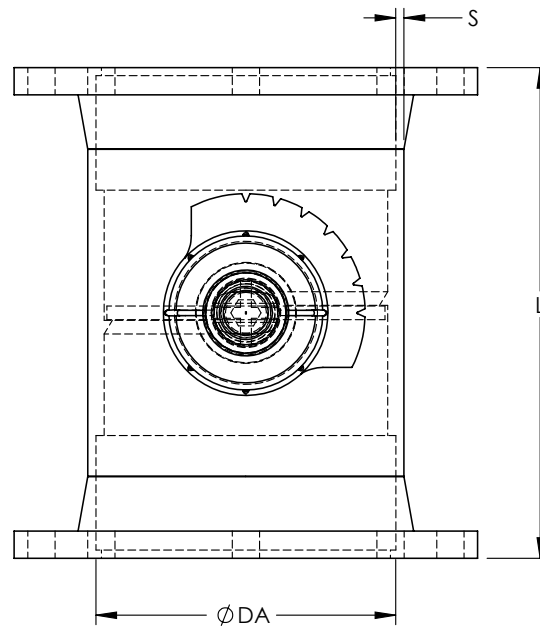
**BUTTERFLY DAMPERS WITH LOCKING CONTROL KNOB SOCKET**

Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
110	40	40	1	3	4	4.33	1.57	1.57	0.118
140	40	40	1.3	3	5	5.51	1.57	1.57	0.118
160	40	40	1.5	3	6	6.30	1.57	1.57	0.118
180	40	40	1.7	3.5	7	7.09	1.57	1.57	0.138
200	40	40	1.8	3.5	8	7.87	1.57	1.57	0.138
225	40	40	1.9	3.5	9	8.86	1.57	1.57	0.138
250	40	40	2	3.5	10	9.84	1.57	1.57	0.138
280	50	40	2.2	3.5	11	11.02	1.97	1.57	0.138
315	50	40	2.4	4	12	12.40	1.97	1.57	0.157
355	50	40	2.4	4	14	13.98	1.97	1.57	0.157
400	50	40	2.4	4.5	16	15.75	1.97	1.57	0.177



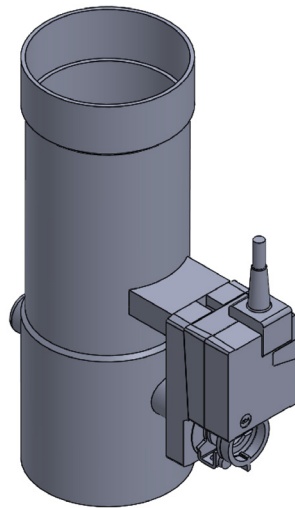
### BUTTERFLY DAMPERS WITH LOCKING CONTROL KNOB FLANGED

Size		PP	PPs	PPsEI	PE	PVDF
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277340004	1777340004	1977340004	2577340004	3077340004
5	140	1277340005	1777340005	1977340005	2577340005	-
6	160	1277340006	1777340006	1977340006	2577340006	3077340006
7	180	1277340007	1777340007	1977340007	2577340007	-
8	200	1277340008	1777340008	1977340008	2577340008	3077340008
9	225	1277340009	1777340009	1977340009	2577340009	-
10	250	1277340010	1777340010	1977340010	2577340010	3077340010
11	280	1277340011	1777340011	1977340011	2577340011	-
12	315	1277340012	1777340012	1977340012	2577340012	3077340012
14	355	1277340014	1777340014	1977340014	2577340014	-
16	400	1277340016	1777340016	1977340016	2577340016	3077340016



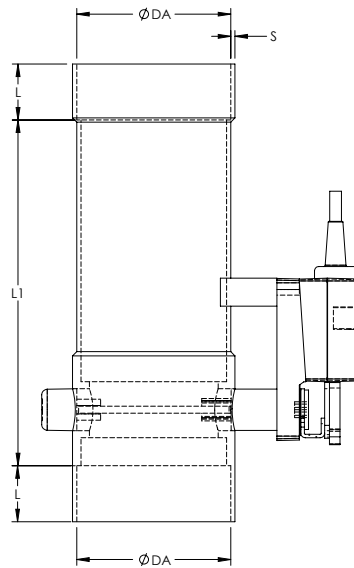
**BUTTERFLY DAMPERS WITH LOCKING CONTROL KNOB FLANGED**

Dimensions							
DA	L	TOL	s	NOM in	DA in	L	s
110	180	1	3	4	4.33	7.09	0.118
140	180	1.3	3	5	5.51	7.09	0.118
160	180	1.5	3	6	6.30	7.09	0.118
180	180	1.7	3.5	7	7.09	7.09	0.138
200	180	1.8	3.5	8	7.87	7.09	0.138
225	180	1.9	3.5	9	8.86	7.09	0.138
250	180	2	3.5	10	9.84	7.09	0.138
280	200	2.2	3.5	11	11.02	7.87	0.138
315	200	2.4	4	12	12.40	7.87	0.157
355	200	2.4	4	14	13.98	7.87	0.157
400	200	2.4	4.5	16	15.75	7.87	0.177



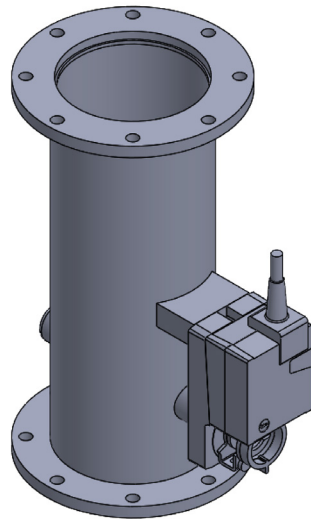
### DAMPERS WITH MOTOR MOUNT SOCKET

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277350003	1777350003	-	2577350003	-
4	110	1277350004	1777350004	-	2577350004	-
5	140	1277350005	1777350005	-	2577350005	-
6	160	1277350006	1777350006	-	2577350006	-
7	180	1277350007	1777350007	-	2577350007	-
8	200	1277350008	1777350008	-	2577350008	-
9	225	1277350009	1777350009	-	2577350009	-
10	250	1277350010	1777350010	-	2577350010	-
11	280	1277350011	1777350011	-	2577350011	-
12	315	1277350012	1777350012	-	2577350012	-
14	355	1277350014	1777350014	-	2577350014	-
16	400	1277350016	1777350016	-	2577350016	-
18	450	1277350018	1777350018	-	2577350018	-
20	500	1277350020	1777350020	-	2577350020	-
22	560	1277350022	1777350022	-	2577350022	-
24	630	1277350024	1777350024	-	2577350024	-
28	710	1277350028	1777350028	-	2577350028	-
32	800	1277350032	1777350032	-	2577350032	-
36	900	1277350036	1777350036	-	2577350036	-
40	1000	1277350040	1777350040	-	2577350040	-
48	1200	1277350048	1777350048	-	2577350048	-



### DAMPERS WITH MOTOR MOUNT SOCKET

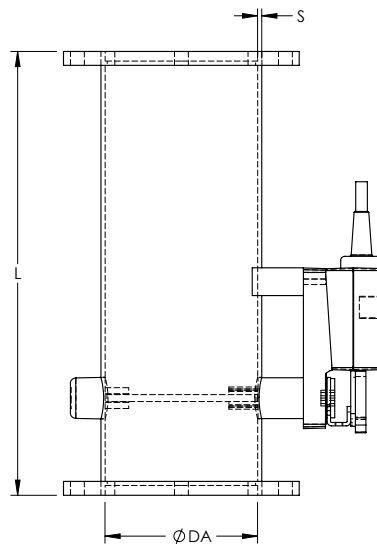
Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
90	40	247	0.9	3	3	3.54	1.57	9.72	0.118
110	40	247	1	3	4	4.33	1.57	9.72	0.118
140	40	247	1.3	3	5	5.51	1.57	9.72	0.118
160	40	276	1.5	3	6	6.30	1.57	10.87	0.118
180	40	276	1.7	3.5	7	7.09	1.57	10.87	0.138
200	40	276	1.8	3.5	8	7.87	1.57	10.87	0.138
225	50	300	1.9	3.5	9	8.86	1.97	11.81	0.138
250	50	300	2	3.5	10	9.84	1.97	11.81	0.138
280	50	300	2.2	3.5	11	11.02	1.97	11.81	0.138
315	50	300	2.4	4	12	12.40	1.97	11.81	0.157
355	60	320	2.4	5	14	13.98	2.36	12.60	0.197
400	60	360	2.4	5	16	15.75	2.36	14.17	0.197
450	60	320	3.5	6	18	17.72	2.36	12.60	0.236
500	70	360	4	6	20	19.69	2.76	14.17	0.236
560	70	410	4.5	6	22	22.05	2.76	16.14	0.236
630	80	480	4.5	8	24	24.80	3.15	18.90	0.315
710	90	530	4.5	8	28	27.95	3.54	20.87	0.315
800	100	560	4.5	8	32	31.50	3.94	22.05	0.315
900	120	650	4.5	10	36	35.43	4.72	25.59	0.394
1000	130	740	5	10	40	39.37	5.12	29.13	0.394
1200	120	960	5	12	48	47.24	4.72	37.80	0.472



### DAMPERS WITH MOTOR MOUNT FLANGED

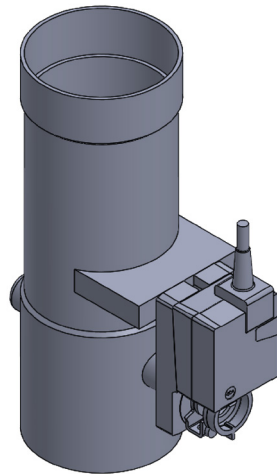
Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277360003	1777360003	-	2577360003	-
4	110	1277360004	1777360004	-	2577360004	-
5	140	1277360005	1777360005	-	2577360005	-
6	160	1277360006	1777360006	-	2577360006	-
7	180	1277360007	1777360007	-	2577360007	-
8	200	1277360008	1777360008	-	2577360008	-
9	225	1277360009	1777360009	-	2577360009	-
10	250	1277360010	1777360010	-	2577360010	-
11	280	1277360011	1777360011	-	2577360011	-
12	315	1277360012	1777360012	-	2577360012	-
14	355	1277360014	1777360014	-	2577360014	-
16	400	1277360016	1777360016	-	2577360016	-
18	450	1277360018	1777360018	-	2577360018	-
20	500	1277360020	1777360020	-	2577360020	-
22	560	1277360022	1777360022	-	2577360022	-
24	630	1277360024	1777360024	-	2577360024	-
28	710	1277360028	1777360028	-	2577360028	-
32	800	1277360032	1777360032	-	2577360032	-
36	900	1277360036	1777360036	-	2577360036	-
40	1000	1277360040	1777360040	-	2577360040	-
48	1200	1277360048	1777360048	-	2577360048	-





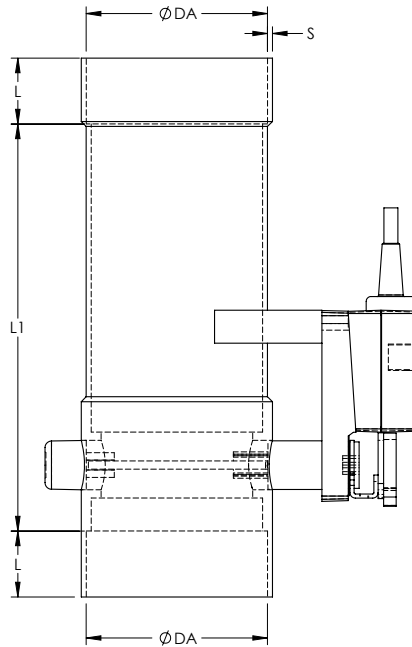
### DAMPERS WITH MOTOR MOUNT FLANGED

Dimensions							
DA	L	TOL	s	NOM in	DA in	L	s
90	320	0.9	3	3	3.54	12.60	0.118
110	320	1	3	4	4.33	12.60	0.118
140	320	1.3	3	5	5.51	12.60	0.118
160	320	1.5	3	6	6.30	12.60	0.118
180	320	1.7	3.5	7	7.09	12.60	0.138
200	350	1.8	3.5	8	7.87	13.78	0.138
225	350	1.9	3.5	9	8.86	13.78	0.138
250	350	2	3.5	10	9.84	13.78	0.138
280	400	2.2	3.5	11	11.02	15.75	0.138
315	400	2.4	4	12	12.40	15.75	0.157
355	400	2.4	4	14	13.98	15.75	0.157
400	400	2.4	4.5	16	15.75	15.75	0.177
450	378	3.5	5	18	17.72	14.88	0.197
500	418	4	5	20	19.69	16.46	0.197
560	418	4.5	6	22	22.05	16.46	0.236
630	488	4.5	6	24	24.80	19.21	0.236
710	538	4.5	8	28	27.95	21.18	0.315
800	568	4.5	8	32	31.50	22.36	0.315
900	658	4.5	10	36	35.43	25.91	0.394
1000	748	5	10	40	39.37	29.45	0.394
1200	968	5	12	48	47.24	38.11	0.472



### BUTTERFLY DAMPER WITH MOTOR MOUNT SOCKET

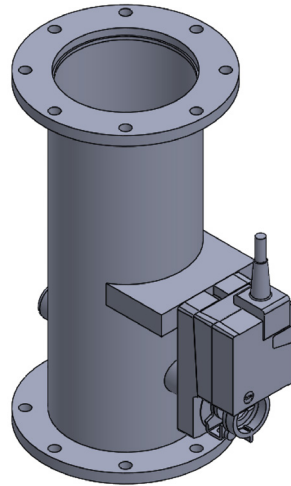
Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277370004	1777370004	-	2577370004	-
5	140	1277370005	1777370005	-	2577370005	-
6	160	1277370006	1777370006	-	2577370006	-
7	180	1277370007	1777370007	-	2577370007	-
8	200	1277370008	1777370008	-	2577370008	-
9	225	1277370009	1777370009	-	2577370009	-
10	250	1277370010	1777370010	-	2577370010	-
11	280	1277370011	1777370011	-	2577370011	-
12	315	1277370012	1777370012	-	2577370012	-
14	355	1277370014	1777370014	-	2577370014	-
16	400	1277370016	1777370016	-	2577370016	-
18	450	1277370018	1777370018	-	2577370018	-
20	500	1277370020	1777370020	-	2577370020	-
22	560	1277370022	1777370022	-	2577370022	-
24	630	1277370024	1777370024	-	2577370024	-
28	710	1277370028	1777370028	-	2577370028	-
32	800	1277370032	1777370032	-	2577370032	-
36	900	1277370036	1777370036	-	2577370036	-
40	1000	1277370040	1777370040	-	2577370040	-
48	1200	1277370048	1777370048	-	2577370048	-



**BUTTERFLY DAMPER WITH MOTOR MOUNT SOCKET**

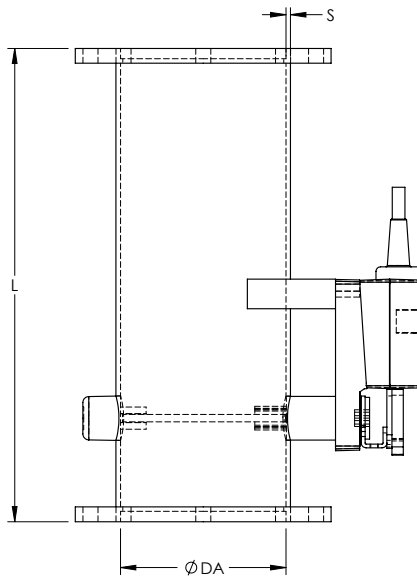
Dimensions									
DA	L	L1	TOL	s	NOM in	DA in	L	L1	s
110	40	247	1	3	4	4.33	1.57	9.72	0.118
140	40	247	1.3	3	5	5.51	1.57	9.72	0.118
160	40	276	1.5	3	6	6.30	1.57	10.87	0.118
180	40	276	1.7	3.5	7	7.09	1.57	10.87	0.138
200	40	276	1.8	3.5	8	7.87	1.57	10.87	0.138
225	50	300	1.9	3.5	9	8.86	1.97	11.81	0.138
250	50	300	2	3.5	10	9.84	1.97	11.81	0.138
280	50	300	2.2	3.5	11	11.02	1.97	11.81	0.138
315	50	300	2.4	4	12	12.40	1.97	11.81	0.157
355	60	320	2.4	5	14	13.98	2.36	12.60	0.197
400	60	360	2.4	5	16	15.75	2.36	14.17	0.197
450	60	320	3.5	6	18	17.72	2.36	12.60	0.236
500	70	360	4	6	20	19.69	2.76	14.17	0.236
560	70	410	4.5	6	22	22.05	2.76	16.14	0.236
630	80	480	4.5	8	24	24.80	3.15	18.90	0.315
710	90	530	4.5	8	28	27.95	3.54	20.87	0.315
800	100	560	4.5	8	32	31.50	3.94	22.05	0.315
900	120	650	4.5	10	36	35.43	4.72	25.59	0.394
1000	130	740	5	10	40	39.37	5.12	29.13	0.394
1200	120	960	5	12	48	47.24	4.72	37.80	0.472





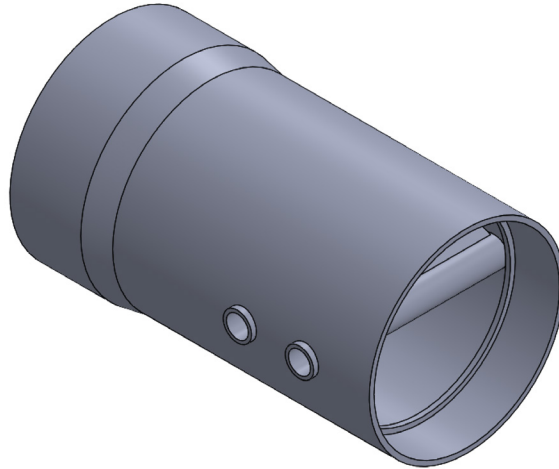
## BUTTERFLY DAMPER WITH MOTOR MOUNT FLANGE

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277380004	1777380004	-	2577380004	-
5	140	1277380005	1777380005	-	2577380005	-
6	160	1277380006	1777380006	-	2577380006	-
7	180	1277380007	1777380007	-	2577380007	-
8	200	1277380008	1777380008	-	2577380008	-
9	225	1277380009	1777380009	-	2577380009	-
10	250	1277380010	1777380010	-	2577380010	-
11	280	1277380011	1777380011	-	2577380011	-
12	315	1277380012	1777380012	-	2577380012	-
14	355	1277380014	1777380014	-	2577380014	-
16	400	1277380016	1777380016	-	2577380016	-
18	450	1277380018	1777380018	-	2577380018	-
20	500	1277380020	1777380020	-	2577380020	-
22	560	1277380022	1777380022	-	2577380022	-
24	630	1277380024	1777380024	-	2577380024	-
28	710	1277380028	1777380028	-	2577380028	-
32	800	1277380032	1777380032	-	2577380032	-
36	900	1277380036	1777380036	-	2577380036	-
40	1000	1277380040	1777380040	-	2577380040	-
48	1200	1277380048	1777380048	-	2577380048	-



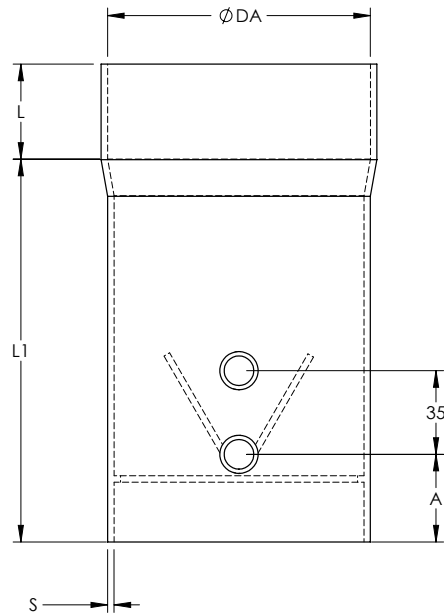
### BUTTERFLY DAMPER WITH MOTOR MOUNT FLANGE

Dimensions							
DA	L	TOL	s	NOM in	DA in	L	s
90	320	0.9	3	3	3.54	12.60	0.118
110	320	1	3	4	4.33	12.60	0.118
140	320	1.3	3	5	5.51	12.60	0.118
160	320	1.5	3	6	6.30	12.60	0.118
180	320	1.7	3.5	7	7.09	12.60	0.138
200	350	1.8	3.5	8	7.87	13.78	0.138
225	350	1.9	3.5	9	8.86	13.78	0.138
250	350	2	3.5	10	9.84	13.78	0.138
280	400	2.2	3.5	11	11.02	15.75	0.138
315	400	2.4	4	12	12.40	15.75	0.157
355	400	2.4	4	14	13.98	15.75	0.157
400	400	2.4	4.5	16	15.75	15.75	0.177
450	378	3.5	5	18	17.72	14.88	0.197
500	418	4	5	20	19.69	16.46	0.197
560	418	4.5	6	22	22.05	16.46	0.236
630	488	4.5	6	24	24.80	19.21	0.236
710	538	4.5	8	28	27.95	21.18	0.315
800	568	4.5	8	32	31.50	22.36	0.315
900	658	4.5	10	36	35.43	25.91	0.394
1000	748	5	10	40	39.37	29.45	0.394
1200	968	5	12	48	47.24	38.11	0.472



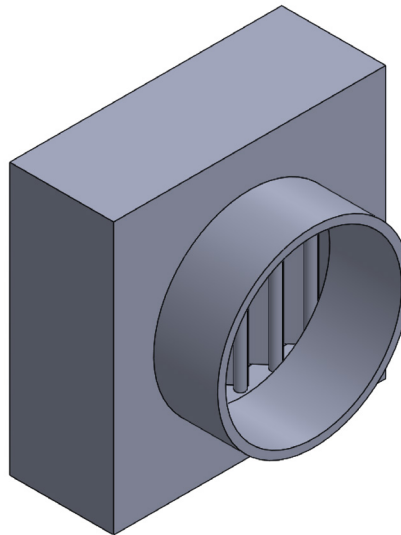
### VERTICAL BACKFLOW DAMPER ROUND BODY SOCKET

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277570004	1777570004	1977570004	2577570004	-
5	140	1277570005	1777570005	1977570005	2577570005	-
6	160	1277570006	1777570006	1977570006	2577570006	-
7	180	1277570007	1777570007	1977570007	2577570007	-
8	200	1277570008	1777570008	1977570008	2577570008	-
9	225	1277570009	1777570009	1977570009	2577570009	-
10	250	1277570010	1777570010	1977570010	2577570010	-
11	280	1277570011	1777570011	1977570011	2577570011	-
12	315	1277570012	1777570012	1977570012	2577570012	-
14	355	1277570014	1777570014	1977570014	2577570014	-
16	400	1277570016	1777570016	-	2577570016	-
18	450	1277570018	1777570018	-	2577570018	-
20	500	1277570020	1777570020	-	2577570020	-
22	560	1277570022	1777570022	-	2577570022	-
24	630	1277570024	1777570024	-	2577570024	-
28	710	1277570028	1777570028	-	2577570028	-
32	800	1277570032	1777570032	-	2577570032	-
36	900	1277570036	1777570036	-	2577570036	-
40	1000	1277570040	1777570040	-	2577570040	-
48	1200	1277570048	1777570048	-	2577570048	-



**VERTICAL BACKFLOW DAMPER ROUND BODY SOCKET**

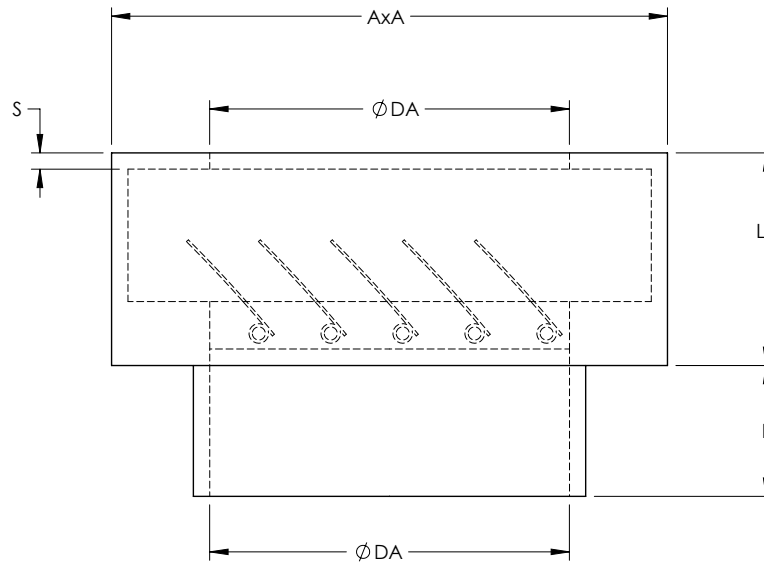
Dimensions								
DA	L	L1	A	NOM in	DA in	L	L1	A
90	40	140	65	3	3.54	1.57	5.51	2.56
110	40	160	65	4	4.33	1.57	6.30	2.56
140	40	170	65	5	5.51	1.57	6.69	2.56
160	40	180	65	6	6.30	1.57	7.09	2.56
180	40	190	65	7	7.09	1.57	7.48	2.56
200	40	200	65	8	7.87	1.57	7.87	2.56
225	40	210	65	9	8.86	1.57	8.27	2.56
250	40	225	65	10	9.84	1.57	8.86	2.56
280	50	240	75	11	11.02	1.97	9.45	2.95
315	50	260	75	12	12.40	1.97	10.24	2.95
355	50	280	75	14	13.98	1.97	11.02	2.95
400	50	300	75	16	15.75	1.97	11.81	2.95
450	50	340	75	18	17.72	1.97	13.39	2.95
500	50	380	75	20	19.69	1.97	14.96	2.95
560	60	420	85	22	22.05	2.36	16.54	3.35
630	70	480	95	24	24.80	2.76	18.90	3.74
710	80	540	105	28	27.95	3.15	21.26	4.13
800	80	600	105	32	31.50	3.15	23.62	4.13
900	90	680	115	36	35.43	3.54	26.77	4.53
1000	100	750	125	40	39.37	3.94	29.53	4.92
1200	120	900	135	48	47.24	4.72	35.43	5.31



### VERTICAL BACKFLOW DAMPER SQUARE BODY SOCKET

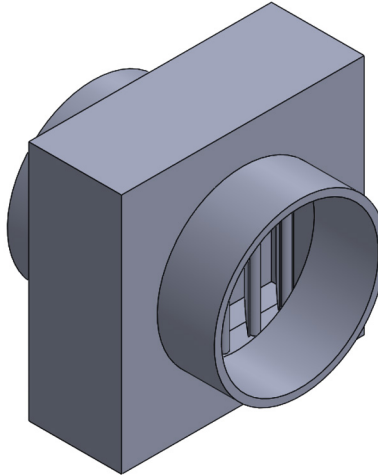
Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277580004	1777580004	-	2577580004	-
5	140	1277580005	1777580005	-	2577580005	-
6	160	1277580006	1777580006	-	2577580006	-
7	180	1277580007	1777580007	-	2577580007	-
8	200	1277580008	1777580008	-	2577580008	-
9	225	1277580009	1777580009	-	2577580009	-
10	250	1277580010	1777580010	-	2577580010	-
11	280	1277580011	1777580011	-	2577580011	-
12	315	1277580012	1777580012	-	2577580012	-
14	355	1277580014	1777580014	-	2577580014	-
16	400	1277580016	1777580016	-	2577580016	-
18	450	1277580018	1777580018	-	2577580018	-
20	500	1277580020	1777580020	-	2577580020	-
22	560	1277580022	1777580022	-	2577580022	-
24	630	1277580024	1777580024	-	2577580024	-
28	710	1277580028	1777580028	-	2577580028	-
32	800	1277580032	1777580032	-	2577580032	-
36	900	1277580036	1777580036	-	2577580036	-
40	1000	1277580040	1777580040	-	2577580040	-
48	1200	1277580048	1777580048	-	2577580048	-





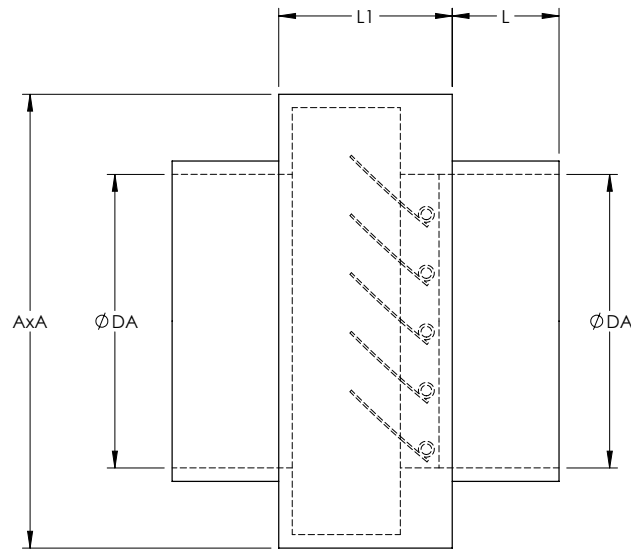
**VERTICAL BACKFLOW DAMPER SQUARE BODY SOCKET**

Dimensions										
DA	L	L1	A x A	s	NOM in	DA in	L	L1	A x A	s
110	40	65	170	5	4	4.92	1.57	2.56	6.69	0.197
140	40	70	170	5	5	5.51	1.57	2.76	6.69	0.197
160	40	70	205	5	6	6.30	1.57	2.76	8.07	0.197
180	40	70	205	5	7	7.09	1.57	2.76	8.07	0.197
200	40	70	255	5	8	7.87	1.57	2.76	10.04	0.197
225	40	80	255	5	9	8.86	1.57	3.15	10.04	0.197
250	40	80	305	5	10	9.84	1.57	3.15	12.01	0.197
280	50	90	305	6	11	11.02	1.97	3.54	12.01	0.236
315	50	90	358	6	12	12.40	1.97	3.54	14.09	0.236
355	50	90	408	6	14	13.98	1.97	3.54	16.06	0.236
400	50	120	474	6	16	15.75	1.97	4.72	18.66	0.236
450	50	120	512	6	18	17.72	1.97	4.72	20.16	0.236
500	50	120	560	6	20	19.69	1.97	4.72	22.05	0.236
560	60	120	712	6	22	22.05	2.36	4.72	28.03	0.236
630	70	120	712	6	24	23.62	2.36	4.72	28.03	0.236
710	Consult Factory				28	24.80	2.76	4.72	28.03	0.236
800					Consult Factory					
900										
1000										
1200										



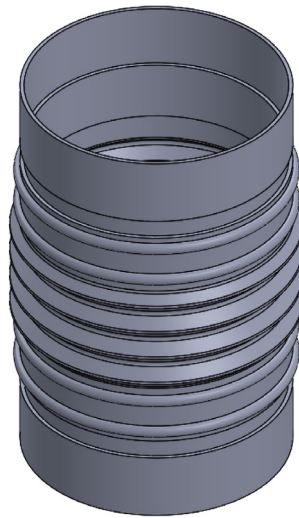
### HORIZONTAL BACKFLOW DAMPER SQUARE BODY SOCKET

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277590004	1777590004	-	2577590004	-
5	140	1277590005	1777590005	-	2577590005	-
6	160	1277590006	1777590006	-	2577590006	-
7	180	1277590007	1777590007	-	2577590007	-
8	200	1277590008	1777590008	-	2577590008	-
9	225	1277590009	1777590009	-	2577590009	-
10	250	1277590010	1777590010	-	2577590010	-
11	280	1277590011	1777590011	-	2577590011	-
12	315	1277590012	1777590012	-	2577590012	-
14	355	1277590014	1777590014	-	2577590014	-
16	400	1277590016	1777590016	-	2577590016	-



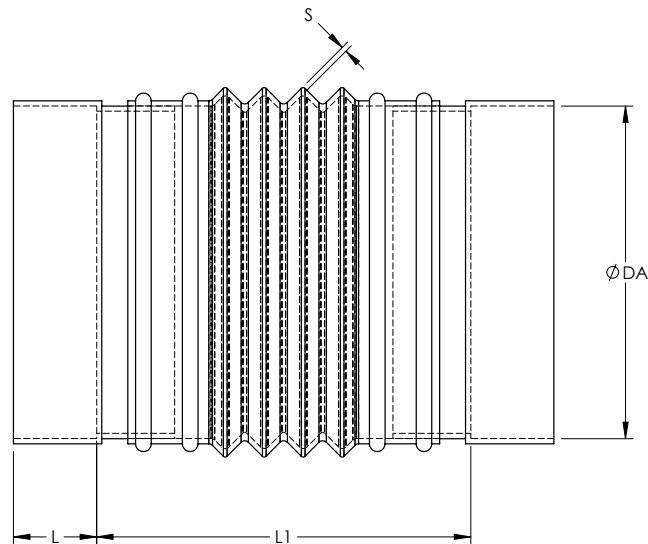
### HORIZONTAL BACKFLOW DAMPER SQUARE BODY SOCKET

Dimensions								
DA	L	L1	A x A	NOM in	DA in	L	L1	A x A
110	40	65	170	4	4.33	1.57	2.56	6.69
140	40	70	170	5	5.51	1.57	2.76	6.69
160	40	70	205	6	6.30	1.57	2.76	8.07
180	40	70	205	7	7.09	1.57	2.76	8.07
200	40	70	255	8	7.87	1.57	2.76	10.04
225	40	80	255	9	8.86	1.57	3.15	10.04
250	40	80	305	10	9.84	1.57	3.15	12.01
280	50	90	305	11	11.02	1.97	3.54	12.01
315	50	90	358	12	12.40	1.97	3.54	14.09
355	50	90	408	14	13.98	1.97	3.54	16.06
400	50	120	474	16	15.75	1.97	4.72	18.66



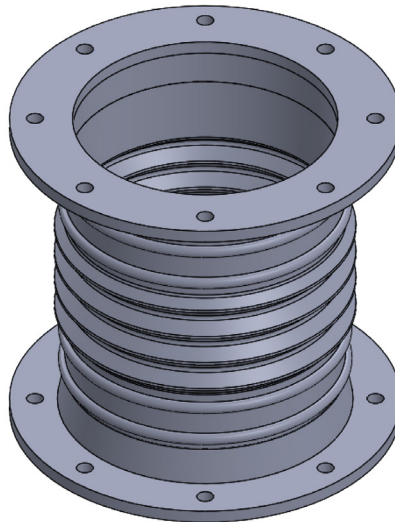
### TPE EXPANSION CONNECTOR 4X SOCKET

Size		PP	PPs	PPsEI (N/A)	PE (N/A)	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
6	160	1277430006	1777430006	-	-	-
7	180	1277430007	1777430007	-	-	-
8	200	1277430008	1777430008	-	-	-
9	225	1277430009	1777430009	-	-	-
10	250	1277430010	1777430010	-	-	-
11	280	1277430011	1777430011	-	-	-
12	315	1277430012	1777430012	-	-	-
14	355	1277430014	1777430014	-	-	-
16	400	1277430016	1777430016	-	-	-
18	450	1277430018	1777430018	-	-	-
20	500	1277430020	1777430020	-	-	-
22	560	1277430022	1777430022	-	-	-
24	630	1277430024	1777430024	-	-	-
28	710	1277430028	1777430028	-	-	-
32	800	1277430032	1777430032	-	-	-
36	900	1277430036	1777430036	-	-	-
40	1000	1277430040	1777430040	-	-	-
48	1200	1277430048	1777430048	-	-	-



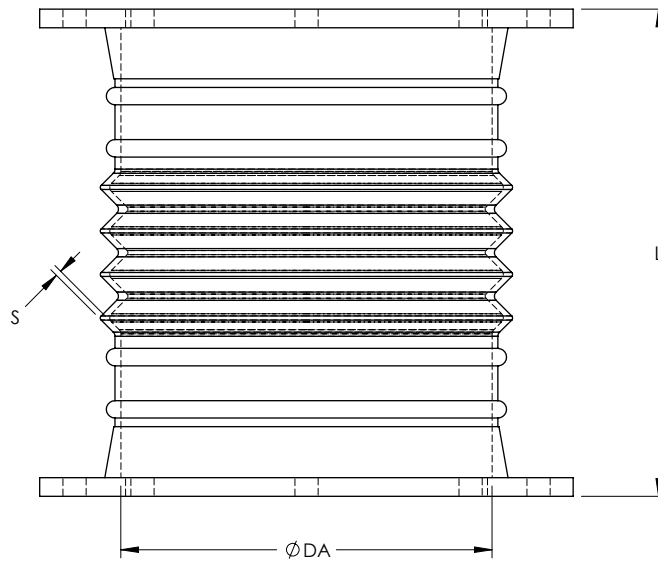
### TPE EXPANSION CONNECTOR 4X SOCKET

Dimensions								
DA	L	L1	s	NOM in	DA in	L	L1	s
160	40	180	2.5	6	6.30	1.57	7.09	0.10
180	40	190	2.5	7	7.09	1.57	7.48	0.10
200	40	180	2.5	8	7.87	1.57	7.09	0.10
225	40	190	2.5	9	8.86	1.57	7.48	0.10
250	40	180	2.5	10	9.84	1.57	7.09	0.10
280	50	190	2.5	11	11.02	1.97	7.48	0.10
315	50	190	2.5	12	12.40	1.97	7.48	0.10
355	50	190	2.5	14	13.98	1.97	7.48	0.10
400	50	190	2.5	16	15.75	1.97	7.48	0.10
450	50	190	2.5	18	17.72	1.97	7.48	0.10
500	50	190	2.5	20	19.69	1.97	7.48	0.10
560	60	190	2.5	22	22.05	2.36	7.48	0.10
630	70	190	2.5	24	24.80	2.76	7.48	0.10
710	80	190	2.5	28	27.95	3.15	7.48	0.10
800	80	190	2.5	32	31.50	3.15	7.48	0.10
900	90	190	2.5	36	35.43	3.54	7.48	0.10
1000	100	190	2.5	40	39.37	3.94	7.48	0.10
1200	120	190	2.5	48	47.24	4.72	7.48	0.10



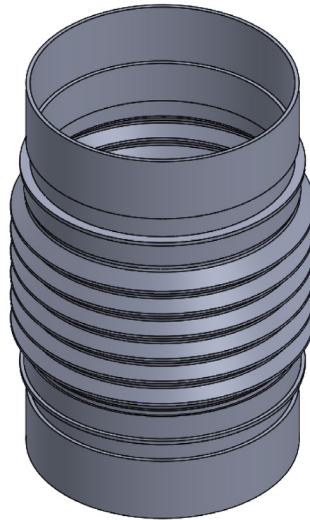
### TPE EXPANSION CONNECTOR 4X FLANGE

Size		PP	PPs	PPsEI (N/A)	PE (N/A)	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
6	160	1277430006	1777430006	-	-	-
7	180	1277430007	1777430007	-	-	-
8	200	1277430008	1777430008	-	-	-
9	225	1277430009	1777430009	-	-	-
10	250	1277430010	1777430010	-	-	-
11	280	1277430011	1777430011	-	-	-
12	315	1277430012	1777430012	-	-	-
14	355	1277430014	1777430014	-	-	-
16	400	1277430016	1777430016	-	-	-
18	450	1277430018	1777430018	-	-	-
20	500	1277430020	1777430020	-	-	-
22	560	1277430022	1777430022	-	-	-
24	630	1277430024	1777430024	-	-	-
28	710	1277430028	1777430028	-	-	-
32	800	1277430032	1777430032	-	-	-
36	900	1277430036	1777430036	-	-	-
40	1000	1277430040	1777430040	-	-	-
48	1200	1277430048	1777430048	-	-	-



### TPE EXPANSION CONNECTOR 4X FLANGE

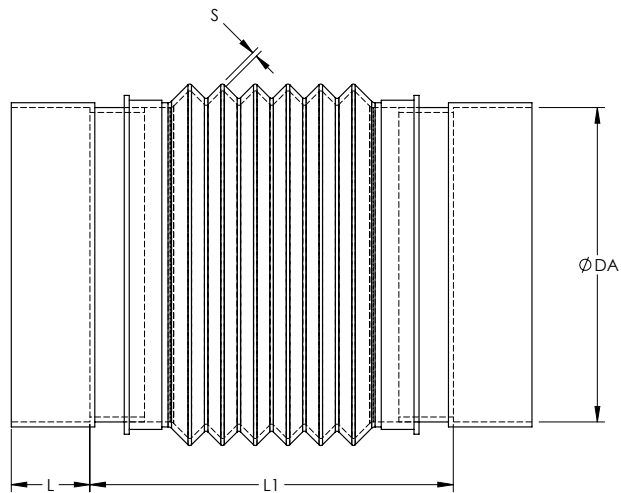
Dimensions								
DA	L	L1	s	NOM in	DA in	L	L1	s
160	40	180	2.5	6	6.30	1.57	7.09	0.10
180	40	190	2.5	7	7.09	1.57	7.48	0.10
200	40	180	2.5	8	7.87	1.57	7.09	0.10
225	40	190	2.5	9	8.86	1.57	7.48	0.10
250	40	180	2.5	10	9.84	1.57	7.09	0.10
280	50	190	2.5	11	11.02	1.97	7.48	0.10
315	50	190	2.5	12	12.40	1.97	7.48	0.10
355	50	190	2.5	14	13.98	1.97	7.48	0.10
400	50	190	2.5	16	15.75	1.97	7.48	0.10
450	50	190	2.5	18	17.72	1.97	7.48	0.10
500	50	190	2.5	20	19.69	1.97	7.48	0.10
560	60	190	2.5	22	22.05	2.36	7.48	0.10
630	70	190	2.5	24	24.80	2.76	7.48	0.10
710	80	190	2.5	28	27.95	3.15	7.48	0.10
800	80	190	2.5	32	31.50	3.15	7.48	0.10
900	90	190	2.5	36	35.43	3.54	7.48	0.10
1000	100	190	2.5	40	39.37	3.94	7.48	0.10
1200	120	190	2.5	48	47.24	4.72	7.48	0.10



### TPE EXPANSION CONNECTOR 6X SOCKET

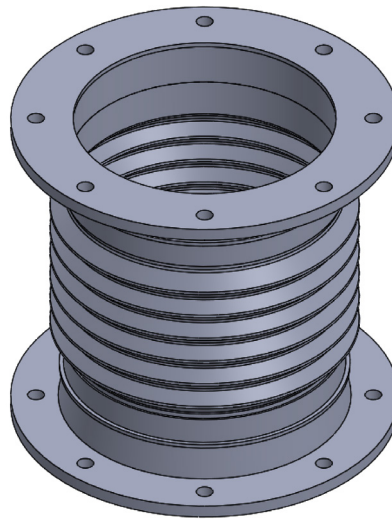
Size		PP	PPs	PPsEI (N/A)	PE (N/A)	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
6	160	1277450006	1777450006	-	-	-
7	180	1277450007	1777450007	-	-	-
8	200	1277450008	1777450008	-	-	-
9	225	1277450009	1777450009	-	-	-
10	250	1277450010	1777450010	-	-	-
11	280	1277450011	1777450011	-	-	-
12	315	1277450012	1777450012	-	-	-
14	355	1277450014	1777450014	-	-	-
16	400	1277450016	1777450016	-	-	-
18	450	1277450018	1777450018	-	-	-
20	500	1277450020	1777450020	-	-	-
22	560	1277450022	1777450022	-	-	-
24	630	1277450024	1777450024	-	-	-
28	710	1277450028	1777450028	-	-	-
32	800	1277450032	1777450032	-	-	-
36	900	1277450036	1777450036	-	-	-
40	1000	1277450040	1777450040	-	-	-
48	1200	1277450048	1777450048	-	-	-





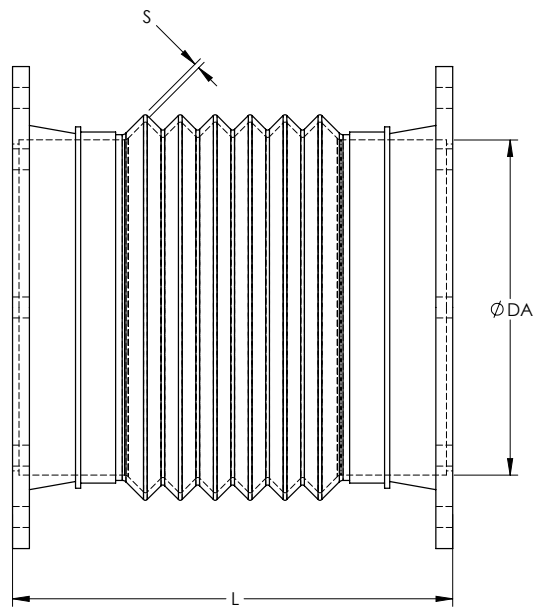
### TPE EXPANSION CONNECTOR 6X SOCKET

Dimensions								
DA	L	L1	S	NOM in	DA in	L	L1	S
160	40	185	2.5	6	6.30	1.57	7.28	0.098
180	40	195	2.5	7	7.09	1.57	7.68	0.098
200	40	185	2.5	8	7.87	1.57	7.28	0.098
225	40	195	2.5	9	8.86	1.57	7.68	0.098
250	40	185	2.5	10	9.84	1.57	7.28	0.098
280	50	195	2.5	11	11.02	1.97	7.68	0.098
315	50	195	2.5	12	12.40	1.97	7.68	0.098
355	50	195	2.5	14	13.98	1.97	7.68	0.098
400	50	195	2.5	16	15.75	1.97	7.68	0.098
450	50	195	2.5	18	17.72	1.97	7.68	0.098
500	50	195	2.5	20	19.69	1.97	7.68	0.098
560	60	195	2.5	22	22.05	2.36	7.68	0.098
630	70	195	2.5	24	24.80	2.76	7.68	0.098
710	80	195	2.5	28	27.95	3.15	7.68	0.098
800	80	195	2.5	32	31.50	3.15	7.68	0.098
900	90	195	2.5	36	35.43	3.54	7.68	0.098
1000	100	195	2.5	40	39.37	3.94	7.68	0.098
1200	120	195	2.5	48	47.24	4.72	7.68	0.098



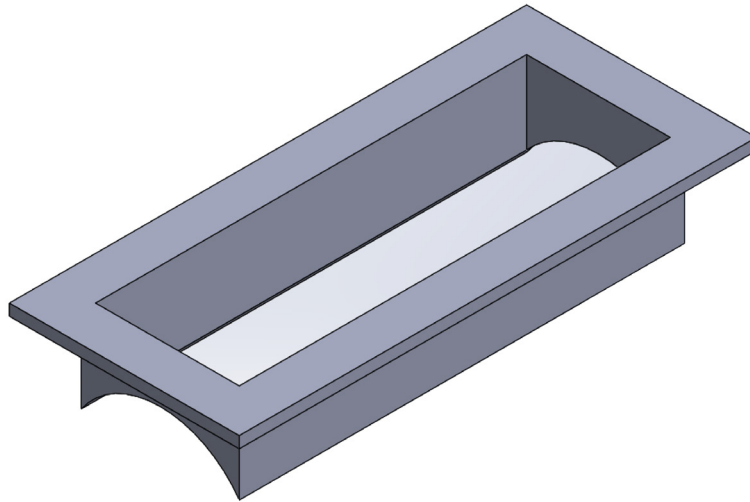
### TPE EXPANSION CONNECTOR 6X FLANGE

Size		PP	PPs	PPsEI (N/A)	PE (N/A)	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
6	160	1277460006	1777460006	-	-	-
7	180	1277460007	1777460007	-	-	-
8	200	1277460008	1777460008	-	-	-
9	225	1277460009	1777460009	-	-	-
10	250	1277460010	1777460010	-	-	-
11	280	1277460011	1777460011	-	-	-
12	315	1277460012	1777460012	-	-	-
14	355	1277460014	1777460014	-	-	-
16	400	1277460016	1777460016	-	-	-
18	450	1277460018	1777460018	-	-	-
20	500	1277460020	1777460020	-	-	-
22	560	1277460022	1777460022	-	-	-
24	630	1277460024	1777460024	-	-	-
28	710	1277460028	1777460028	-	-	-
32	800	1277460032	1777460032	-	-	-
36	900	1277460036	1777460036	-	-	-
40	1000	1277460040	1777460040	-	-	-
48	1200	1277460048	1777460048	-	-	-



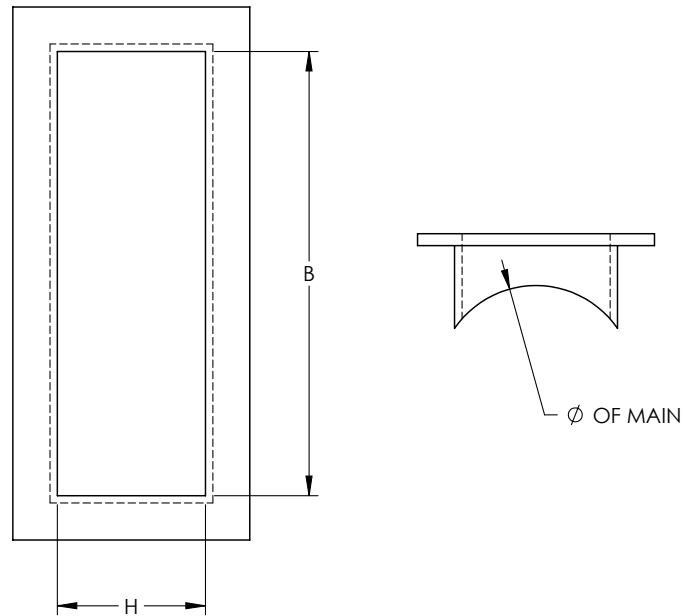
### TPE EXPANSION CONNECTOR 6X FLANGE

Dimensions						
DA	L	S	NOM in	DA in	L	S
160	220	2.5	6	6.30	8.66	0.098
180	220	2.5	7	7.09	8.66	0.098
200	220	2.5	8	7.87	8.66	0.098
225	220	2.5	9	8.86	8.66	0.098
250	220	2.5	10	9.84	8.66	0.098
280	220	2.5	11	11.02	8.66	0.098
315	220	2.5	12	12.40	8.66	0.098
355	220	2.5	14	13.98	8.66	0.098
400	220	2.5	16	15.75	8.66	0.098
450	185	2.5	18	17.72	7.28	0.098
500	185	2.5	20	19.69	7.28	0.098
560	185	2.5	22	22.05	7.28	0.098
630	185	2.5	24	24.80	7.28	0.098
710	185	2.5	28	27.95	7.28	0.098
800	185	2.5	32	31.50	7.28	0.098
900	185	2.5	36	35.43	7.28	0.098
1000	185	2.5	40	39.37	7.28	0.098
1200	185	2.5	48	47.24	7.28	0.098



### GRILL FRAME

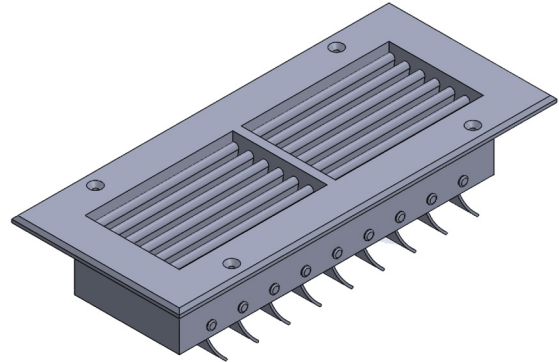
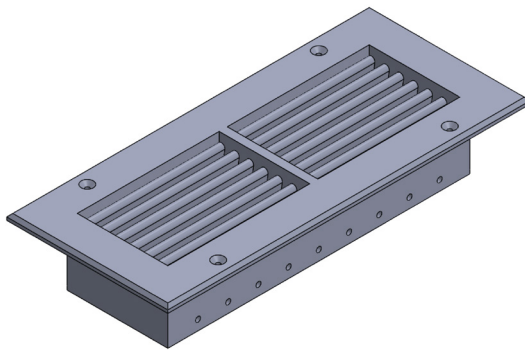
Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
12 x 4	315 x 110	1277511204	1777511204	-	2577511204	-
16 x 4	400 x 110	1277511604	1777511604	-	2577511604	-
20 x 4	500 x 110	1277512004	1777512004	-	2577512004	-
24 x 4	630 x 110	1277512404	1777512404	-	2577512404	-
12 x 6	315 x 160	1277511206	1777511206	-	2577511206	-
16 x 6	400 x 160	1277511606	1777511606	-	2577511606	-
20 x 6	500 x 160	1277512006	1777512006	-	2577512006	-
24 x 6	630 x 160	1277512406	1777512406	-	2577512406	-
12 x 8	315 x 200	1277511208	1777511208	-	2577511208	-
16 x 8	400 x 200	1277511608	1777511608	-	2577511608	-
20 x 8	500 x 200	1277512008	1777512008	-	2577512008	-
24 x 8	630 x 200	1277512408	1777512408	-	2577512408	-
12 x 10	315 x 250	1277511210	1777511210	-	2577511210	-
16 x 10	400 x 250	1277511610	1777511610	-	2577511610	-
20 x 10	500 x 250	1277512010	1777512010	-	2577512010	-
24 x 10	630 x 250	1277512410	1777512410	-	2577512410	-



### GRILL FRAME

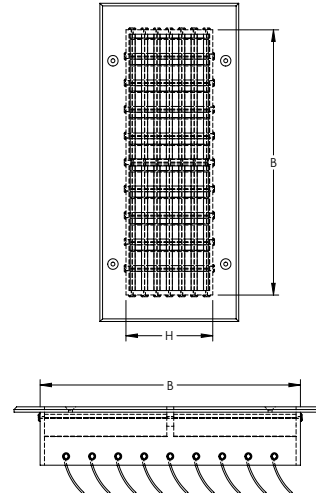
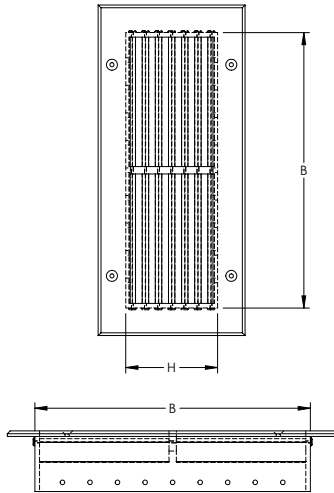
Dimensions				
B	H	NOM in	B	H
300	100	12 x 4	11.8	3.9
400	100	16 x 4	15.7	3.9
500	100	20 x 4	19.7	3.9
600	100	24 x 4	23.6	3.9
300	150	12 x 6	11.8	5.9
400	150	16 x 6	15.7	5.9
500	150	20 x 6	19.7	5.9
600	150	24 x 6	23.6	5.9
300	200	12 x 8	11.8	7.9
400	200	16 x 8	15.7	7.9
500	200	20 x 8	19.7	7.9
600	200	24 x 8	23.6	7.9
300	250	12 x 10	11.8	9.8
400	250	16 x 10	15.7	9.8
500	250	20 x 10	19.7	9.8
600	250	24 x 10	23.6	9.8

\* INDICATE DIAMETER OF MAIN CONNECTING TO



**PVC GRILLS**

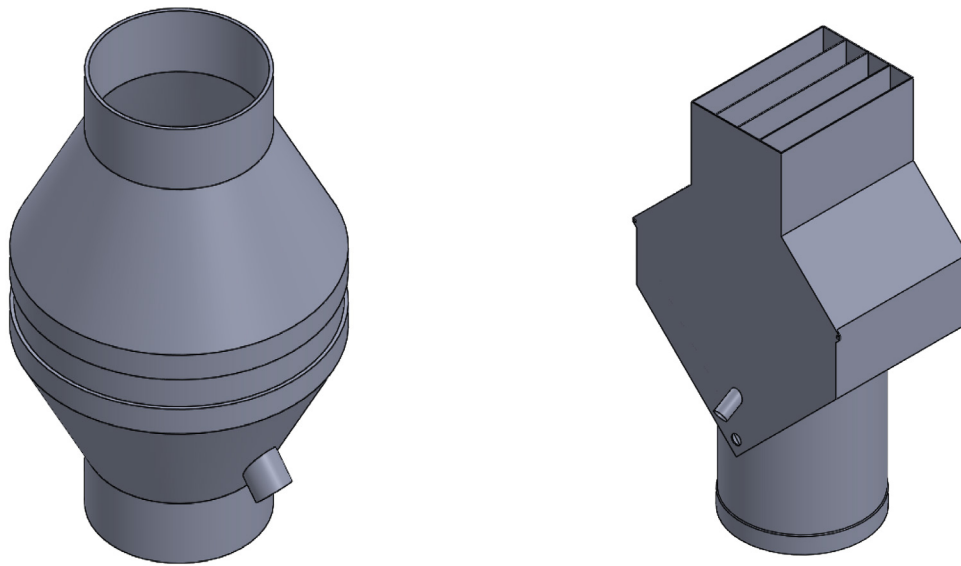
Size		Return	Supply
in	mm	Part Number	Part Number
12 x 4	315 x 110	6477521204	6477531204
16 x 4	400 x 110	6477521604	6477531604
20 x 4	500 x 110	6477522004	6477532004
24 x 4	630 x 110	6477522404	6477532404
32 x 4	800 x 110	6477523204	6477533204
12 x 6	315 x 160	6477521206	6477531206
16 x 6	400 x 160	6477521606	6477531606
20 x 6	500 x 160	6477522006	6477532006
24 x 6	630 x 160	6477522406	6477532406
32 x 6	800 x 160	6477523206	6477533206
12 x 8	315 x 200	6477521208	6477531208
16 x 8	400 x 200	6477521608	6477531608
20 x 8	500 x 200	6477522008	6477532008
24 x 8	630 x 200	6477522408	6477532408
32 x 8	800 x 200	6477523208	6477533208
40 x 8	1000 x 200	6477524008	6477534008
12 x 10	315 x 250	6477521210	6477531210
16 x 10	400 x 250	6477521610	6477531610
20 x 10	500 x 250	6477522010	6477532010
24 x 10	630 x 250	6477522410	6477532410
24 x 12	630 x 315	6477522412	6477532412
32 x 12	800 x 315	6477523212	6477533212
40 x 12	1000 x 315	6477524012	6477534012
24 x 16	630 x 400	6477522416	6477532416
32 x 16	800 x 400	6477523216	6477533216
40 x 16	1000 x 400	6477524016	6477534016
24 x 20	630 x 500	6477522420	6477532420
32 x 20	800 x 500	6477523220	6477533220



**PVC GRILLS**

Dimensions				
B	H	NOM in	B	H
300	100	12 x 4	11.8	3.9
400	100	16 x 4	15.7	3.9
500	100	20 x 4	19.7	3.9
600	100	24 x 4	23.6	3.9
-	-	-	-	-
300	150	12 x 6	11.8	5.9
400	150	16 x 6	15.7	5.9
500	150	20 x 6	19.7	5.9
600	150	24 x 6	23.6	5.9
300	200	12 x 8	11.8	7.9
400	200	16 x 8	15.7	7.9
500	200	20 x 8	19.7	7.9
600	200	24 x 8	23.6	7.9
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
300	250	12 x 10	11.8	9.8
400	250	16 x 10	15.7	9.8
500	250	20 x 10	19.7	9.8
600	250	24 x 10	23.6	9.8
-	-	24 x 12	CONSULT FACTORY	
-	-	32 x 12		
-	-	40 x 12		
-	-	24 x 16		
-	-	32 x 16		
-	-	40 x 16		
-	-	24 x 20		
-	-	32 x 20		

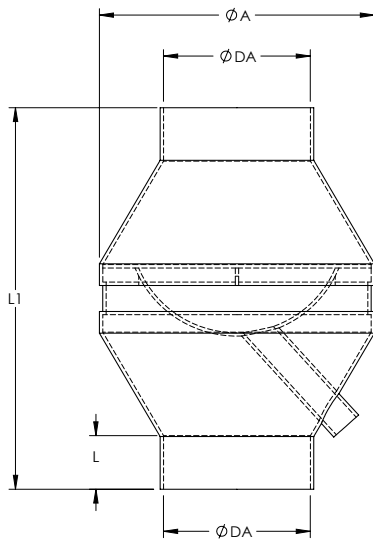




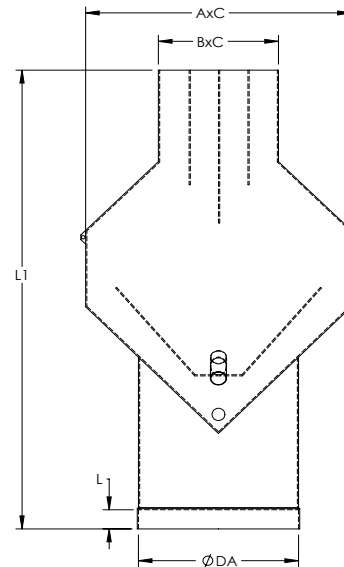
### CONDENSING OUTLET SOCKET

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277470004	1777470004	1977470004	2577470004	-
5	140	1277470005	1777470005	1977470005	2577470005	-
6	160	1277470006	1777470006	1977470006	2577470006	-
7	180	1277470007	1777470007	1977470007	2577470007	-
8	200	1277470008	1777470008	1977470008	2577470008	-
9	225	1277470009	1777470009	1977470009	2577470009	-
10	250	1277470010	1777470010	1977470010	2577470010	-
11	280	1277470011	1777470011	1977470011	2577470011	-
12	315	1277470012	1777470012	1977470012	2577470012	-
14	355	1277470014	1777470014	1977470014	2577470014	-
16	400	1277470016	1777470016	1977470016	2577470016	-
18	450	1277470018	1777470018	-	2577470018	-
20	500	1277470020	1777470020	-	2577470020	-
22	560	1277470022	1777470022	-	2577470022	-
24	630	1277470024	1777470024	-	2577470024	-
28	710	1277470028	1777470028	-	2577470028	-
32	800	1277470032	1777470032	-	2577470032	-
36	900	1277470036	1777470036	-	2577470036	-
40	1000	1277470040	1777470040	-	2577470040	-
48	1200	1277470048	1777470048	-	2577470048	-





< 12"

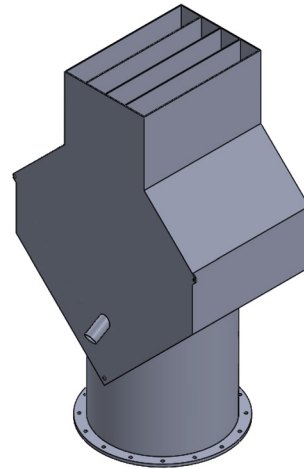
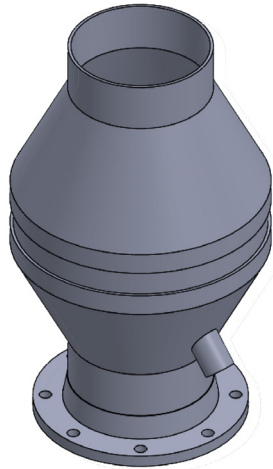


OVER 14"

**CONDENSING OUTLET SOCKET**

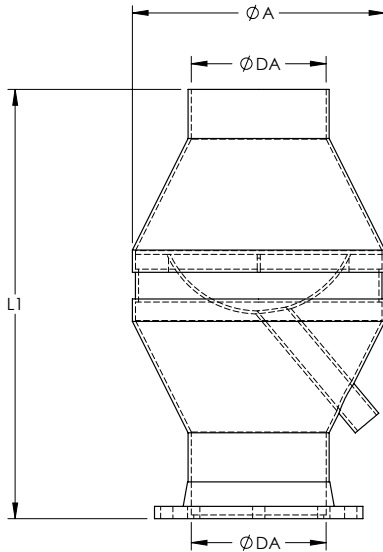
Dimensions										
DA	L	L1	A (XC)	BXC	NOM in	DA in	L	L1	A (XC)	BXC
110	40	290	206		4	4.33	1.57	11.42	8.11	
140	40	320	256		5	5.51	1.57	12.60	10.08	
160	40	410	321		6	6.30	1.57	16.14	12.64	
180	40	380	321		7	7.09	1.57	14.96	12.64	
200	40	410	361		8	7.87	1.57	16.14	14.21	
225	40	430	408		9	8.86	1.57	16.93	16.06	
250	40	470	458		10	9.84	1.57	18.50	18.03	
280	50	520	508		11	11.02	1.97	20.47	20.00	
315	50	440	508		12	12.40	1.97	17.32	20.00	
355	50	1097	600X399	279X399	14	13.98	1.97	43.19	23.6 x 15.7	11.0 x 15.7
400	50	1202	674X448	313X448	16	15.75	1.97	47.32	26.5x17.6	12.3 x 17.6
450	50	1322	758X503	351X503	18	17.72	1.97	52.05	29.8 x 19.8	13.8 x 19.8
500	50	1440	840X558	388X558	20	19.69	1.97	56.69	33.1 x 22.0	15.3 x 22.0
560	60	1570	923X613	425X613	22	22.05	2.36	61.81	36.3 x 24.1	16.7 x 24.1
630	70	1818	1089X723	501X723	24	24.80	2.76	71.57	42.9 x 24.1	19.7 x 28.5
710	80	2066	1254X833	576X833	28	27.95	3.15	81.34	49.4 x 32.8	22.7 x 32.8
800	80	2184	1336X888	613X888	32	31.50	3.15	85.98	52.6 x 35.0	24.1 x 35.0
900	90	2432	1501X998	688X998	36	35.43	3.54	95.75	59.1 x 39.3	27.1 x 39.3
1000	100	2680	1666X1108	763X1108	40	39.37	3.94	105.51	65.6 x 39.3	30.0 x 43.6
1200	120	3176	1997X1328	913X1328	48	47.24	4.72	125.04	78.6 x 52.3	35.9 x 52.3



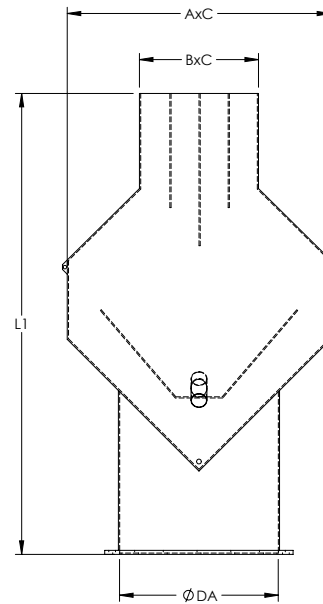


### CONDENSING OUTLET FLANGE

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277480004	1777480004	1977480004	2577480004	-
5	140	1277480005	1777480005	1977480005	2577480005	-
6	160	1277480006	1777480006	1977480006	2577480006	-
7	180	1277480007	1777480007	1977480007	2577480007	-
8	200	1277480008	1777480008	1977480008	2577480008	-
9	225	1277480009	1777480009	1977480009	2577480009	-
10	250	1277480010	1777480010	1977480010	2577480010	-
11	280	1277480011	1777480011	1977480011	2577480011	-
12	315	1277480012	1777480012	1977480012	2577480012	-
14	355	1277480014	1777480014	1977480014	2577480014	-
16	400	1277480016	1777480016	1977480016	2577480016	-
18	450	1277480018	1777480018	-	2577480018	-
20	500	1277480020	1777480020	-	2577480020	-
22	560	1277480022	1777480022	-	2577480022	-
24	630	1277480024	1777480024	-	2577480024	-
28	710	1277480028	1777480028	-	2577480028	-
32	800	1277480032	1777480032	-	2577480032	-
36	900	1277480036	1777480036	-	2577480036	-
40	1000	1277480040	1777480040	-	2577480040	-
48	1200	1277480048	1777480048	-	2577480048	-



UNDER 12"

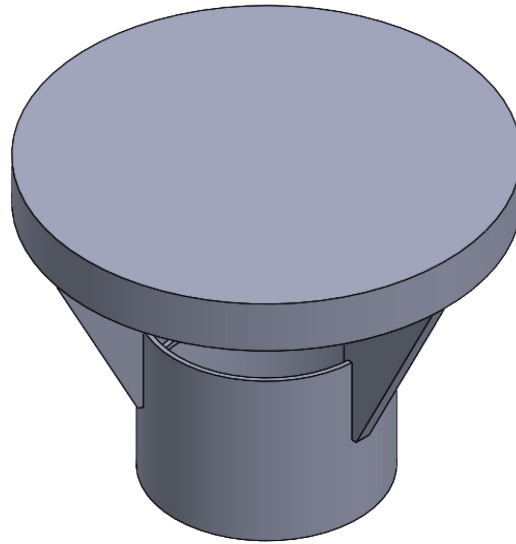


OVER 14"

**CONDENSING OUTLET FLANGE**

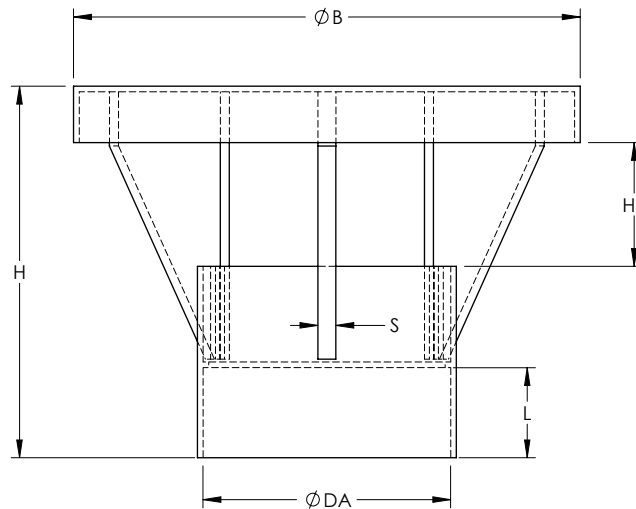
Dimensions								
DA	L1	A (XC)	BXC	NOM in	DA in	L1	A (XC)	BXC
110	350	206	-	4	4.33	13.78	8.11	-
140	380	256	-	5	5.51	14.96	10.08	-
160	470	321	-	6	6.30	18.50	12.64	-
180	440	321	-	7	7.09	17.32	12.64	-
200	470	361	-	8	7.87	18.50	14.21	-
225	490	408	-	9	8.86	19.29	16.06	-
250	530	458	-	10	9.84	20.87	18.03	-
280	580	508	-	11	11.02	22.83	20.00	-
315	500	508	-	12	12.40	19.69	20.00	-
355	1057	600X399	279X399	14	13.98	41.61	23.6 x 15.7	11.0 x 15.7
400	1162	674X448	313X448	16	15.75	45.75	26.5x17.6	12.3 x 17.6
450	1284	758X503	351X503	18	17.72	50.55	29.8 x 19.8	13.8 x 19.8
500	1402	840X558	388X558	20	19.69	55.20	33.1 x 22.0	15.3 x 22.0
560	1522	923X613	425X613	22	22.05	59.92	36.3 x 24.1	16.7 x 24.1
630	1760	1089X723	501X723	24	24.80	69.29	42.9 x 24.1	19.7 x 28.5
710	1998	1254X833	576X833	28	27.95	78.66	49.4 x 32.8	22.7 x 32.8
800	2116	1336X888	613X888	32	31.50	83.31	52.6 x 35.0	24.1 x 35.0
900	2354	1501X998	688X998	36	35.43	92.68	59.1 x 39.3	27.1 x 39.3
1000	2592	1666X1108	763X1108	40	39.37	102.05	65.6 x 39.3	30.0 x 43.6
1200	3066	1997X1328	913X1328	48	47.24	120.71	78.6 x 52.3	35.9 x 52.3





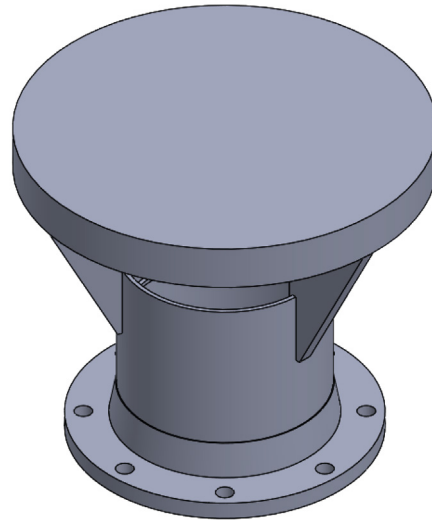
### ROOF OUTLET COWL SOCKET

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277490004	1777490004	-	2577490004	-
5	140	1277490005	1777490005	-	2577490005	-
6	160	1277490006	1777490006	-	2577490006	-
7	180	1277490007	1777490007	-	2577490007	-
8	200	1277490008	1777490008	-	2577490008	-
9	225	1277490009	1777490009	-	2577490009	-
10	250	1277490010	1777490010	-	2577490010	-
11	280	1277490011	1777490011	-	2577490011	-
12	315	1277490012	1777490012	-	2577490012	-
14	355	1277490014	1777490014	-	2577490014	-
16	400	1277490016	1777490016	-	2577490016	-
18	450	1277490018	1777490018	-	2577490018	-



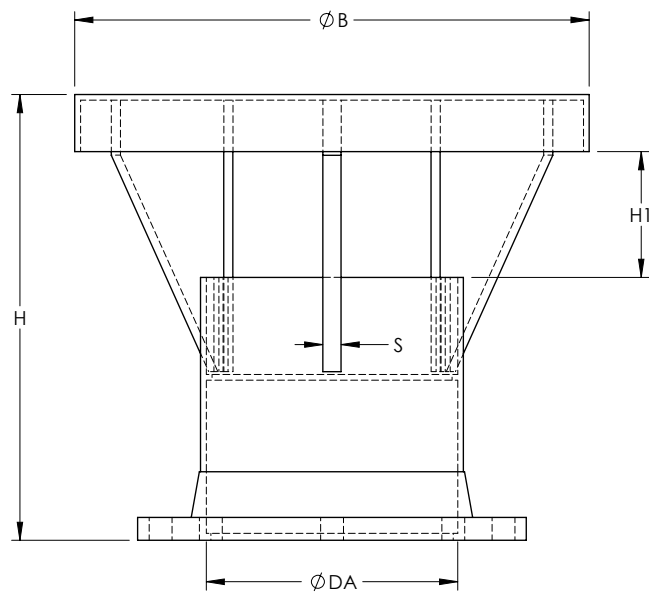
### ROOF OUTLET COWL SOCKET

Dimensions									
DA	L	H	H1	B	NOM in	L	H	H1	B
110	40	165	55	225	4	1.57	6.50	2.17	8.86
140	40	180	70	250	5	1.57	7.09	2.76	9.84
160	40	190	80	250	6	1.57	7.48	3.15	9.84
180	40	200	90	280	7	1.57	7.87	3.54	11.02
200	40	210	100	315	8	1.57	8.27	3.94	12.40
225	40	225	115	355	9	1.57	8.86	4.53	13.98
250	40	235	125	400	10	1.57	9.25	4.92	15.75
280	50	275	165	450	11	1.97	10.83	6.50	17.72
315	50	295	185	500	12	1.97	11.61	7.28	19.69
355	50	305	195	550	14	1.97	12.01	7.68	21.65
400	50	335	225	600	16	1.97	13.19	8.86	23.62
450	50	375	255	650	18	1.97	14.76	10.04	25.59



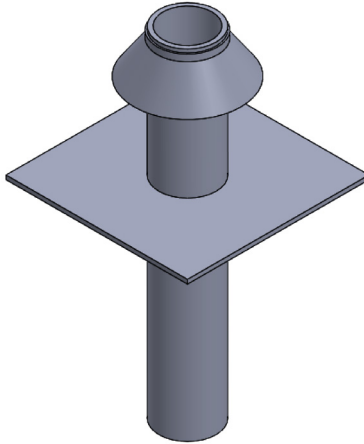
### ROOF OUTLET COWL FLANGE

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277500004	1777500004	-	2577500004	-
5	140	1277500005	1777500005	-	2577500005	-
6	160	1277500006	1777500006	-	2577500006	-
7	180	1277500007	1777500007	-	2577500007	-
8	200	1277500008	1777500008	-	2577500008	-
9	225	1277500009	1777500009	-	2577500009	-
10	250	1277500010	1777500010	-	2577500010	-
11	280	1277500011	1777500011	-	2577500011	-
12	315	1277500012	1777500012	-	2577500012	-
14	355	1277500014	1777500014	-	2577500014	-
16	400	1277500016	1777500016	-	2577500016	-
18	450	1277500018	1777500018	-	2577500018	-



### ROOF OUTLET COWL FLANGE

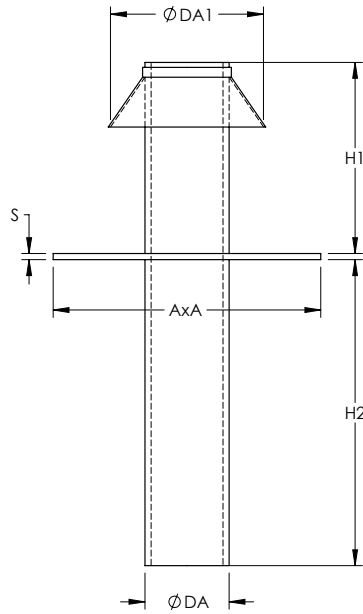
Dimensions								
DA	H	H1	B	NOM in	DA in	H	H1	B
110	195	55	225	4	4.33	7.68	2.17	8.86
140	210	70	250	5	5.51	8.27	2.76	9.84
160	220	80	250	6	6.30	8.66	3.15	9.84
180	230	90	280	7	7.09	9.06	3.54	11.02
200	240	100	315	8	7.87	9.45	3.94	12.40
225	255	115	355	9	8.86	10.04	4.53	13.98
250	265	125	400	10	9.84	10.43	4.92	15.75
280	305	165	450	11	11.02	12.01	6.50	17.72
315	325	185	500	12	12.40	12.80	7.28	19.69
355	335	195	550	14	13.98	13.19	7.68	21.65
400	365	225	600	16	15.75	14.37	8.86	23.62
450	385	255	650	18	17.72	15.16	10.04	25.59



### FLAT ROUND OUTLET

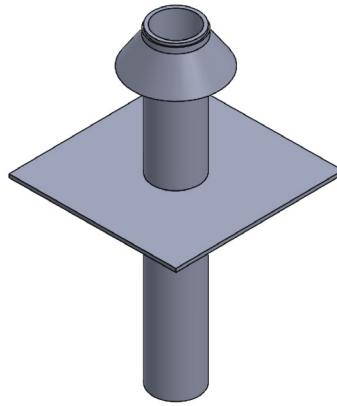
Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277540004	1777540004	1977540004	2577540004	-
5	140	1277540005	1777540005	1977540005	2577540005	-
6	160	1277540006	1777540006	1977540006	2577540006	-
7	180	1277540007	1777540007	1977540007	2577540007	-
8	200	1277540008	1777540008	1977540008	2577540008	-
9	225	1277540009	1777540009	1977540009	2577540009	-
10	250	1277540010	1777540010	1977540010	2577540010	-
11	280	1277540011	1777540011	1977540011	2577540011	-
12	315	1277540012	1777540012	1977540012	2577540012	-
14	355	1277540014	1777540014	-	2577540014	-
16	400	1277540016	1777540016	-	2577540016	-
18	450	1277540018	1777540018	-	2577540018	-
20	500	1277540020	1777540020	-	2577540020	-
22	560	1277540022	1777540022	-	2577540022	-





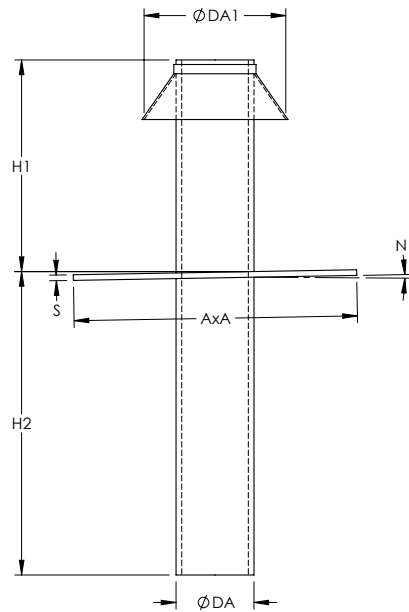
**FLAT ROUND OUTLET**

Dimensions											
DA	H1	H2	A x A	Ø 1	s	NOM in	DA in	H1	H2	A x A	Ø 1
110	250	400	350x350	200	8	4	4.33	9.84	15.75	13.8 sq	7.87
140	250	400	350x350	250	8	5	5.51	9.84	15.75	13.8 sq	9.84
160	250	400	400x400	315	8	6	6.30	9.84	15.75	15.8 sq	12.40
180	250	400	400x400	315	8	7	7.09	9.84	15.75	15.8 sq	12.40
200	250	400	400x400	315	8	8	7.87	9.84	15.75	15.8 sq	12.40
225	250	400	450x450	400	10	9	8.86	9.84	15.75	17.7 sq	15.75
250	250	400	450x450	450	10	10	9.84	9.84	15.75	17.7 sq	17.72
280	250	400	500x500	500	10	11	11.02	9.84	15.75	19.7 sq	19.69
315	250	400	500x500	500	10	12	12.40	9.84	15.75	19.7 sq	19.69
355	250	400	550x550	500	10	14	13.98	9.84	15.75	21.7 sq	19.69
400	250	400	600x600	500	10	16	15.75	9.84	15.75	23.6 sq	19.69
450	250	400	750x750	600	10	18	17.72	9.84	15.75	29.5 sq	23.62
500	250	400	800x800	700	10	20	19.69	9.84	15.75	31.5 sq	27.56
560	250	400	860x860	800	10	22	22.05	9.84	15.75	33.9 sq	31.50



**1-22 DEGREE ROOF OUTLET (Specify angle of roof)**

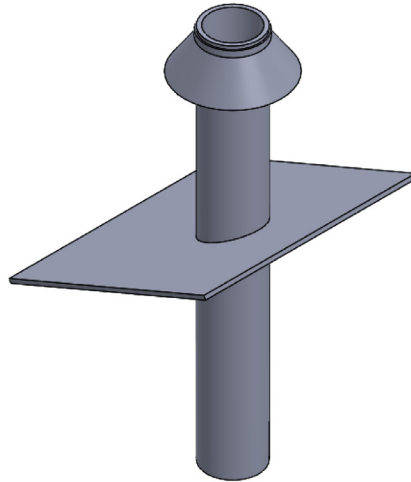
Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277550004	1777550004	1977550004	2577550004	-
5	140	1277550005	1777550005	1977550005	2577550005	-
6	160	1277550006	1777550006	1977550006	2577550006	-
7	180	1277550007	1777550007	1977550007	2577550007	-
8	200	1277550008	1777550008	1977550008	2577550008	-
9	225	1277550009	1777550009	1977550009	2577550009	-
10	250	1277550010	1777550010	1977550010	2577550010	-
11	280	1277550011	1777550011	1977550011	2577550011	-
12	315	1277550012	1777550012	1977550012	2577550012	-
14	355	1277550014	1777550014	-	2577550014	-
16	400	1277550016	1777550016	-	2577550016	-
18	450	1277550018	1777550018	-	2577550018	-
20	500	1277550020	1777550020	-	2577550020	-
22	560	1277550022	1777550022	-	2577550022	-
24	630	1277550024	1777550024	-	2577550024	-
28	710	1277550028	1777550028	-	2577550028	-
32	800	1277550032	1777550032	-	2577550032	-
36	900	1277550036	1777550036	-	2577550036	-
40	1000	1277550040	1777550040	-	2577550040	-
48	1200	1277550048	1777550048	-	2577550048	-



**1-22 DEGREE ROOF OUTLET (Specify angle of roof)**

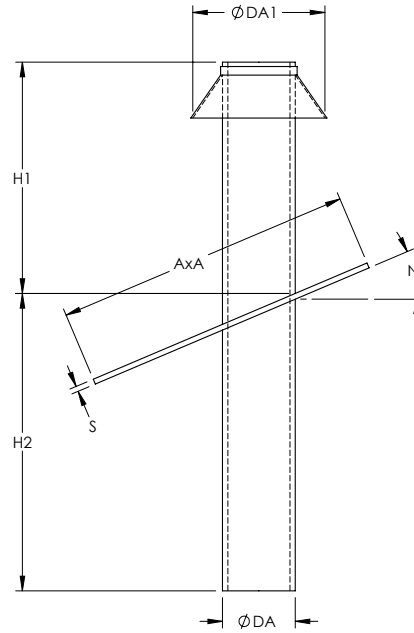
Dimensions											
DA	H1	H2	A x A	Ø 1	s	NOM in	DA	H1	H2	A x A	Ø 1
110	300	430	400x400	200	8	4	4.33	11.81	16.93	15.8 sq	7.87
140	300	435	400x400	250	8	5	5.51	11.81	17.13	15.8 sq	9.84
160	300	440	450x450	315	8	6	6.30	11.81	17.32	17.7 sq	12.40
180	300	445	450x450	315	8	7	7.09	11.81	17.52	17.7 sq	12.40
200	300	450	450x450	315	8	8	7.87	11.81	17.72	17.7 sq	12.40
225	300	455	500x500	400	10	9	8.86	11.81	17.91	19.7 sq	15.75
250	300	460	500x500	450	10	10	9.84	11.81	18.11	19.7 sq	17.72
280	300	470	550x550	500	10	11	11.02	11.81	18.50	21.7 sq	19.69
315	300	480	550x550	500	10	12	12.40	11.81	18.90	21.7 sq	19.69
355	300	490	600x600	500	10	14	13.98	11.81	19.29	23.6 sq	19.69
400	300	500	650x650	500	10	16	15.75	11.81	19.69	25.6 sq	19.69
450	300	550	800x800	600	10	18	17.72	11.81	21.65	31.5 sq	23.62
500	300	550	850x850	700	10	20	19.69	11.81	21.65	33.5 sq	27.56
560	300	600	910x910	800	10	22	22.05	11.81	23.62	35.8 sq	31.50
630	300	600	1000x1000	800	10	24	24.80	11.81	23.62	39.4 sq	31.50
710	300	650	1200x1200	900	12	28	27.95	11.81	25.59	47.2 sq	35.43
800	300	700	1300x1300	1000	12	32	31.50	11.81	27.56	51.2 sq	39.37
900	300	750	1400x1400	1200	12	36	35.43	11.81	29.53	55.2 sq	47.24
1000	300	800	1500x1500	1200	12	40	39.37	11.81	31.50	59.1 sq	47.24
1200	300	850	1700x1700	1400	12	48	47.24	11.81	33.46	66.9 sq	55.12

\*SPECIFY ANGLE OF ROOF



**23-45 DEGREE ROOF OUTLET (Specify angle of roof)**

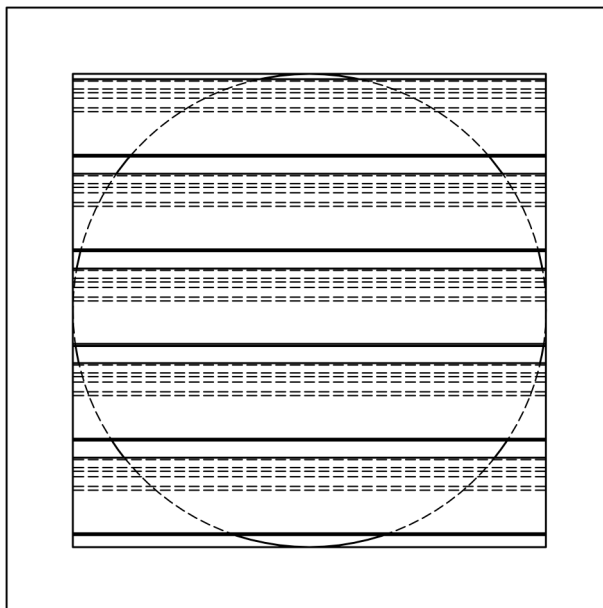
Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277560004	1777560004	1977560004	2577560004	-
5	140	1277560005	1777560005	1977560005	2577560005	-
6	160	1277560006	1777560006	1977560006	2577560006	-
7	180	1277560007	1777560007	1977560007	2577560007	-
8	200	1277560008	1777560008	1977560008	2577560008	-
9	225	1277560009	1777560009	1977560009	2577560009	-
10	250	1277560010	1777560010	1977560010	2577560010	-
11	280	1277560011	1777560011	1977560011	2577560011	-
12	315	1277560012	1777560012	1977560012	2577560012	-
14	355	1277560014	1777560014	-	2577560014	-
16	400	1277560016	1777560016	-	2577560016	-
18	450	1277560018	1777560018	-	2577560018	-
20	500	1277560020	1777560020	-	2577560020	-
22	560	1277560022	1777560022	-	2577560022	-
24	630	1277560024	1777560024	-	2577560024	-
28	710	1277560028	1777560028	-	2577560028	-
32	800	1277560032	1777560032	-	2577560032	-
36	900	1277560036	1777560036	-	2577560036	-
40	1000	1277560040	1777560040	-	2577560040	-
48	1200	1277560048	1777560048	-	2577560048	-



**23-45 DEGREE ROOF OUTLET (Specify angle of roof)**

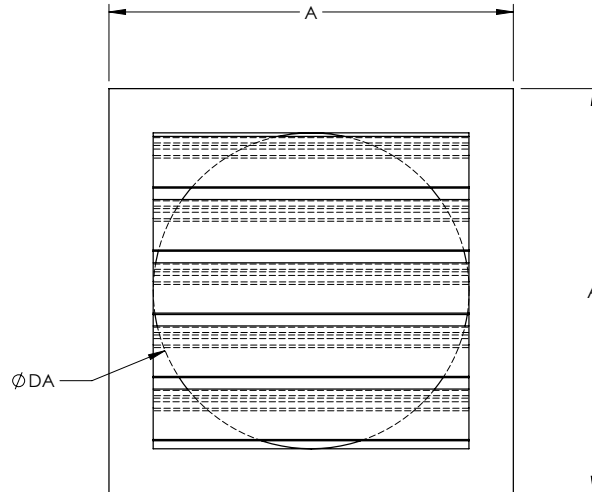
Dimensions											
DA	H1	H2	A x A	Ø 1	s	NOM in	DA	H1	H2	A x A	Ø 1
110	350	430	400x400	200	8	4	4.33	13.78	16.93	15.8 sq	7.87
140	350	435	400x400	250	8	5	5.51	13.78	17.13	15.8 sq	9.84
160	350	440	450x450	315	8	6	6.30	13.78	17.32	17.7 sq	12.40
180	350	445	450x450	315	8	7	7.09	13.78	17.52	17.7 sq	12.40
200	350	450	450x450	315	8	8	7.87	13.78	17.72	17.7 sq	12.40
225	350	455	500x500	400	10	9	8.86	13.78	17.91	19.7 sq	15.75
250	350	460	500x500	450	10	10	9.84	13.78	18.11	19.7 sq	17.72
280	350	470	550x550	500	10	11	11.02	13.78	18.50	21.7 sq	19.69
315	350	480	550x550	500	10	12	12.40	13.78	18.90	21.7 sq	19.69
355	350	490	600x600	500	10	14	13.98	13.78	19.29	23.6 sq	19.69
400	350	500	650x650	500	10	16	15.75	13.78	19.69	25.6 sq	19.69
450	350	550	800x800	600	10	18	17.72	13.78	21.65	31.5 sq	23.62
500	350	550	850x850	700	10	20	19.69	13.78	21.65	33.5 sq	27.56
560	350	600	910x910	800	10	22	22.05	13.78	23.62	35.8 sq	31.50
630	350	600	1000x1000	800	10	24	24.80	13.78	23.62	39.4 sq	31.50
710	350	650	1200x1200	900	12	28	27.95	13.78	25.59	47.2 sq	35.43
800	350	700	1300x1300	1000	12	32	31.50	13.78	27.56	51.2 sq	39.37
900	350	750	1400x1400	1200	12	36	35.43	13.78	29.53	55.2 sq	47.24
1000	350	800	1500x1500	1200	12	40	39.37	13.78	31.50	59.1 sq	47.24
1200	350	850	1700x1700	1400	12	48	47.24	13.78	33.46	66.9 sq	55.12

\*SPECIFY ANGLE OF ROOF



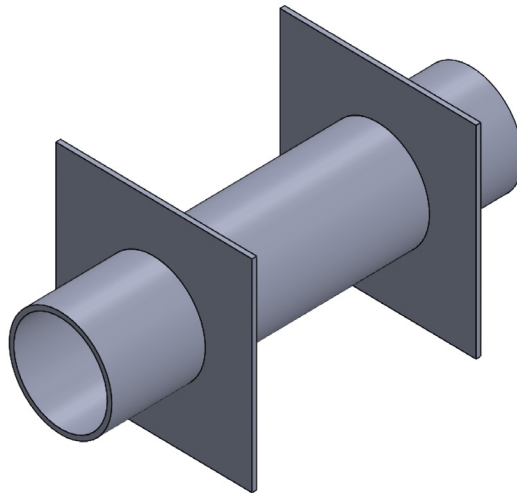
### EXTERIOR WALL EXHAUST LOUVER

Size		PVC	
in	mm	Part Number	Fits
4	110	6477600004	110-125mm
6	160	6477600006	140-160mm
8	200	6477600008	180-200mm
10	250	6477600010	225-250mm
12	315	6477600012	280-315mm
14	355	6477600014	355.00
16	400	6477600016	400.00
18	450	6477600018	450.00
20	500	6477600020	500.00
32	800	6477600032	800.00



### EXTERIOR WALL EXHAUST LOUVER

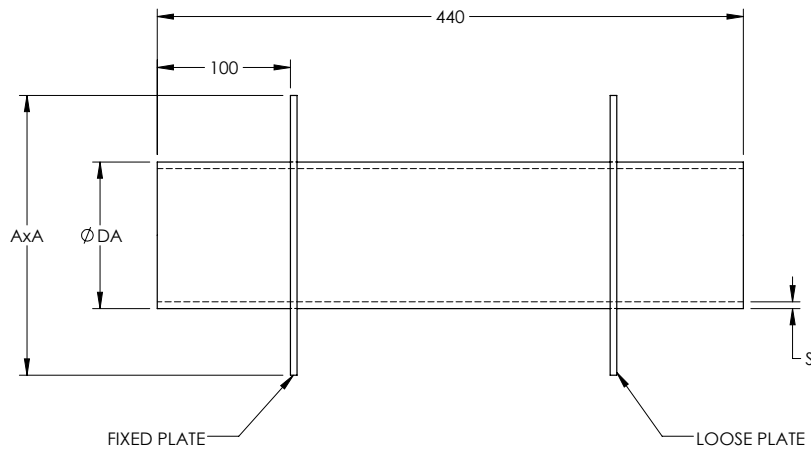
Dimensions				
DA	A x A	NOM in	DA in	A x A
110	160	4	4.33	6.30
160	194	6	6.30	7.64
200	244	8	7.87	9.61
250	294	10	9.84	11.57
315	347	12	12.40	13.66
355	397	14	13.98	15.63
400	462	16	15.75	18.19
450	501	18	17.72	19.72
500	549	20	19.69	21.61
800	CF	32	31.50	CF



## THRU WALL SLEEVE

Size		PP	PPs	PPsEI (N/A)	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
4	110	1277610004	1777610004	-	2577610004	-
5	140	1277610005	1777610005	-	2577610005	-
6	160	1277610006	1777610006	-	2577610006	-
7	180	1277610007	1777610007	-	2577610007	-
8	200	1277610008	1777610008	-	2577610008	-
9	225	1277610009	1777610009	-	2577610009	-
10	250	1277610010	1777610010	-	2577610010	-
11	280	1277610011	1777610011	-	2577610011	-
12	315	1277610012	1777610012	-	2577610012	-
14	355	1277610014	1777610014	-	2577610014	-
16	400	1277610016	1777610016	-	2577610016	-
18	450	1277610018	1777610018	-	2577610018	-
20	500	1277610020	1777610020	-	2577610020	-
22	560	1277610022	1777610022	-	2577610022	-
24	630	1277610024	1777610024	-	2577610024	-
28	710	1277610028	1777610028	-	2577610028	-
32	800	1277610032	1777610032	-	2577610032	-
36	900	1277610036	1777610036	-	2577610036	-
40	1000	1277610040	1777610040	-	2577610040	-
48	1200	1277610048	1777610048	-	2577610048	-





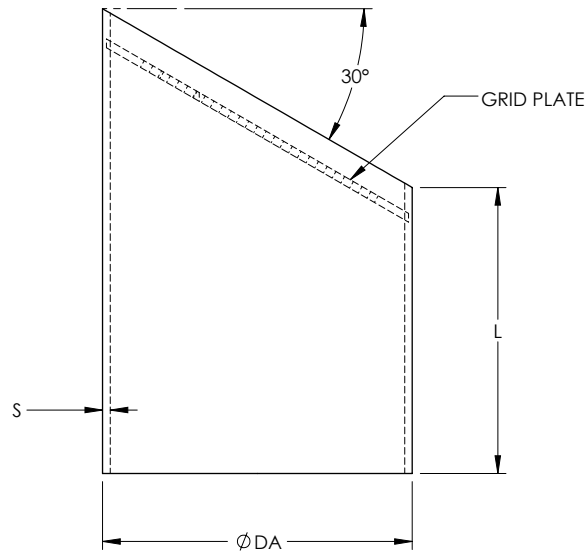
### THRU WALL SLEEVE

Dimensions						
DA	A x A	s	NOM in	DA in	A x A	s
110	210	5	4	4.33	8.27	0.20
140	290	5	5	5.51	11.42	0.20
160	310	5	6	6.30	12.20	0.20
180	330	5	7	7.09	12.99	0.20
200	350	8	8	7.87	13.78	0.31
225	425	8	9	8.86	16.73	0.31
250	450	8	10	9.84	17.72	0.31
280	480	8	11	11.02	18.90	0.31
315	515	8	12	12.40	20.28	0.31
355	555	8	14	13.98	21.85	0.31
400	600	8	16	15.75	23.62	0.31
450	750	10	18	17.72	29.53	0.39
500	800	10	20	19.69	31.50	0.39
560	860	10	22	22.05	33.86	0.39
630	930	10	24	24.80	36.61	0.39
710	1100	12	28	27.95	43.31	0.47
800	1200	12	32	31.50	47.24	0.47
900	1300	12	36	35.43	51.18	0.47
1000	1400	12	40	39.37	55.12	0.47
1200	1600	12	48	47.24	62.99	0.47



### 30 DEGREE ANGLE OUTLET WITH GRILL

Size		PP	PPs	PPsEI	PE	PVDF (N/A)
in	mm	Part Number	Part Number	Part Number	Part Number	Part Number
3	90	1277620003	1777620003	1977620003	2577620003	
4	110	1277620004	1777620004	1977620004	2577620004	-
5	140	1277620005	1777620005	1977620005	2577620005	-
6	160	1277620006	1777620006	1977620006	2577620006	-
7	180	1277620007	1777620007	1977620007	2577620007	-
8	200	1277620008	1777620008	1977620008	2577620008	-
9	225	1277620009	1777620009	1977620009	2577620009	-
10	250	1277620010	1777620010	1977620010	2577620010	-
11	280	1277620011	1777620011	1977620011	2577620011	-
12	315	1277620012	1777620012	1977620012	2577620012	-
14	355	1277620014	1777620014	-	2577620014	-
16	400	1277620016	1777620016	1977620016	2577620016	-
18	450	1277620018	1777620018	-	2577620018	-
20	500	1277620020	1777620020	-	2577620020	-
22	560	1277620022	1777620022	-	2577620022	-
24	630	1277620024	1777620024	-	2577620024	-
28	710	1277620028	1777620028	-	2577620028	-
32	800	1277620032	1777620032	-	2577620032	-
36	900	1277620036	1777620036	-	2577620036	-
40	1000	1277620040	1777620040	-	2577620040	-
48	1200	1277620048	1777620048	-	2577620048	-



### 30 DEGREE ANGLE OUTLET WITH GRILL

Dimensions				
DA	L	NOM in	DA in	L
90	100	3	3.54	3.94
110	100	4	4.33	3.94
140	100	5	5.51	3.94
160	100	6	6.30	3.94
180	150	7	7.09	5.91
200	150	8	7.87	5.91
225	150	9	8.86	5.91
250	150	10	9.84	5.91
280	200	11	11.02	7.87
315	200	12	12.40	7.87
355	200	14	13.98	7.87
400	200	16	15.75	7.87
450	250	18	17.72	9.84
500	250	20	19.69	9.84
560	250	22	22.05	9.84
630	300	24	24.80	11.81
710	350	28	27.95	13.78
800	400	32	31.50	15.75
900	450	36	35.43	17.72
1000	500	40	39.37	19.69
1200	600	48	47.24	23.62

**FABRICATION MATERIAL**

Sheet	2x1 meter		6.56' x 3.28'			
	in	mm	PP	PPs	PPsEI	PE
0.079	2	5078002	-	-	25600201002	30600201002
0.118	3	5078003	17600201003	19600201003	25600201003	30600201003
0.157	4	5078004	17600201004	19600201004	25600201004	30600201004
0.197	5	5078005	17600201005	19600201005	25600201005	30600201005
0.236	6	5078006	17600201006	19600201006	25600201006	30600201006
0.315	8	5078008	17600201008	19600201008	25600201008	30600201008
0.394	10	5078010	17600201010	19600201010	25600201010	30600201010
0.472	12	5078012	-	19600201012	25600201012	30600201012
0.591	15	5078015	-	19600201015	25600201015	30600201015

Other size sheet is available, contact Asahi/America for availability.

**WELDING ROD**

in	mm	PP*	PPs*	PPsEI*	PE*	PVDF#
1/8	3	5223005	17410000030	19410000030	25410000030	5453003
5/32	4	5223004	17410000040	19410000040	25410000040	5453004
3/16 x 9/32	5x7 tri	5223005	-	-	-	-

\*3KG roll/ 6.6 lbs.

#2KG roll/ 4.4 lbs.

## Standard Freight Policy Valves, Pipe, Fittings, & Equipment

Freight will be allowed on the following orders:

1. \$ 2,000.00 Net or greater for valves.\*
2. \$ 5,000.00 Net or greater for single wall pipe and fittings.

\* Combined orders of valves and pipe must meet requirements of pipe orders to qualify for freight allowed.

Freight will be allowed on the following orders for Alaska, Hawaii, and Puerto Rico:

1. \$ 3,000.00 Net or greater for valves.
2. \$ 25,000.00 Net or greater for single wall pipe and fittings.

The following shipments are NOT freight allowed:

1. International orders
2. All HDPE products excluding Air-Pro and Chem Proline
3. Rental machines
4. Prefabricated pipe spools
5. EM-Technik products
6. Dymatrix specialty valves
7. Polytetra heat exchangers & heaters
8. Pro-Lock piping
9. Dual wall pipe and fitting order
10. Leak detection equipment

### NOTES:

- All truck shipments are via common carrier and are to be selected by Asahi/America, Inc.
- Selection of alternate carriers is negotiable between Distributors and Asahi/America, Inc.
- Freight charges for expedited portions of freight allowed shipments are the responsibility of the distributor.
- Freight charges on freight allowed backorders will be paid by Asahi/America, Inc.
- Freight for add-ons and releases will not be allowed.
- Returns of rental equipment must be prepaid.
- Freight will not be allowed on oversized loads, spools, double lengths of pipe, etc.
- International orders must include contact name, telephone or fax number, and international freight account number.

### Terms and Conditions

**Shipments:** Asahi/America will not be liable for any delay in performance of orders or contracts, or in delivery of shipment of goods, or for any damage suffered by buyer by reason of such delay performance, when such delay is directly or indirectly caused by acts of God, war, labor difficulties, shortage of materials, or supplies beyond its control. Asahi/America reserves the right to discontinue products and make changes in products offered at any time.

**Claims:** All claims must be made in writing and received by Asahi/America within 10 days after receipt of merchandise. If a shipment is received in damaged condition, a claim must be filed with the delivering carrier and noted on the freight bill before you accept the merchandise.

**Returns and Cancellations:** Refer to our policy on next page.

**Terms:** 2% 15 days. Net 30 days. An interest charge of 1-1/2% percent per month (an annual rate of 18%) will be charged in states where legal on the unpaid balance owed together with cost of collection including reasonable attorney's costs.

**Minimum Billing Charge:** Asahi/America will charge a \$75.00 net minimum order requirement on all orders. Any tax or duty imposed by any government will be added to the sales price.

## Return Merchandise Policy

EFFECTIVE 02/01/04

Asahi/America, Inc., (A/A) will authorize the return of product providing guidelines are adhered to as follows.

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### Canceled Orders

A/A will accept the cancellation of Purchase Orders (PO) with no restocking charges under the following conditions:

- A/A has not started production of manufactured products.
- A/A has not placed a purchase order to our vendors for non-stock product or custom product.
- A/A has not already, picked, packaged and or shipped the product.

Cancellation of orders that do not meet the above conditions may be approved under special consideration and will be subject to a minimum 30% restocking charge, or cancellation charge.

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### Authorized Returns

A/A will authorize the return of product with a minimum 30% restocking charge under the following conditions.

- Product must have been purchased within the last six months.
- Product must be considered stock item by A/A.
- Product must be in resellable condition.
- Pipe is non-returnable, machined items are non-returnable

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### Product Evaluations

A/A will authorize the return of product for evaluation upon completion of the RMA form. (See enclosure)

- A/A, upon completion of the evaluation, will repair, replace, or issue a credit for the defective product if it is determined that the cause of failure is the responsibility of A/A. A/A retains the sole right to determine the correct course of action.
- A/A will notify the customer if it is determined that the cause of failure is due to normal wear and tear after the expiration of the warranty, misapplication, or improper use. In the event that the failure is not the responsibility of A/A the customer is to determine the corrective action that will be taken. A/A will not proceed with a repair or replacement until a purchase order is supplied by the customer. The purchase order must cover all expenses incurred by A/A.

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### Freight

Customer is responsible for all freight costs associated with a return that is not directly attributed to an A/A error or product failure covered under warranty. All returns must be sent prepaid; any collect shipments will be refused and returned to the Customer.

- A/A will be responsible for all standard freight costs for product evaluations where it is determined that the cause of failure is the responsibility of A/A.

## Return Merchandise Policy (continued)

### Procedures

A/A will process all RMAs within four (4) weeks of receipt of the product providing the following procedures were followed. Please note; A/A is not responsible for any product that is shipped to our facilities without a completed RMA form. **A/A will not process returns that are not accompanied by an authorized RMA number, and product may be returned to the Customer at the customer's expense.**

All correspondence must be made directly to our RMA department.

Telephone Numbers: 1-800-343-3618 ext. 4543

1-781-388-4543

Fax Number 1-781-388-4777

E-mail [RMA@Asahi-America.com](mailto:RMA@Asahi-America.com)

RMA form must be filled out with all relevant information and forwarded to A/A's RMA department. The form must include the following minimum information:

- Original PO #, Original Invoice #, Original Order #.
- Supply itemized list of proposed return with A/A part numbers.
- Specify reason for return.

Upon successful completion of the RMA form and preliminary review, A/A will assign an RMA number and forward to the customer. A/A may elect to inspect product on site prior to issuing an RMA number.

Customer must properly package the product. The RMA number must be visible on all packages and indicated on the packing list, and arrange shipment of the product to A/A.

Customer must insure that product is returned in resellable condition in original packaging excluding product that is returned for repair or evaluation.

Customer must insure that all product has been decontaminated and does not present a health or safety problem to anyone that handles it.

A/A will notify customer of any discrepancies with regards to quantity and/or quality of the returned product.

A/A will process credit upon completion of a successful inspection of the returned product.

Product returned for evaluation will follow the above guidelines with the following exception.

A resolution to the evaluation must be agreed upon prior to the repair/replacement/credit of the product. The customer will have a two-week period to act upon A/A's resolution to the evaluation. A/A will return the product to the customer at the customer's expense, if no response is forwarded within this time frame. The customer, prior to the completion of the repair, must place a purchase order if it is determined that the failure is proven not to be the responsibility of A/A.

A/A will provide a full report of product returned for evaluation upon written request.

### Lost/Damaged Shipments

Damaged shipments and shortages must be signed and acknowledged by the carrier's driver. All claims for lost or damaged shipments must be made directly by the customer to the delivering carrier at time of delivery.

A/A's Customer Service Department must be notified in writing within 10 days of receipt of orders that appear to be short shipped by our shipping department. A/A will validate this claim through weight calculations and other means available. Customer's requests for proof of delivery by A/A must be made within 30 days of receipt of invoice. After 30 days, the product will be considered as delivered.



**TERMS AND CONDITIONS**

1. Asahi/America, Inc. ("Asahi") hereby gives notice of its objection to any different or additional terms and conditions except for any such items and conditions as may be expressly accepted by it in writing. The terms and conditions herein are the final expression of the parties' agreement and shall supersede any provisions, terms and conditions contained on any confirmation order or other writing buyer may give or receive and rights of the parties shall be governed exclusively by the terms and conditions hereof.
2. Buyer's confirmation is accepted for merchandise selection purpose only. All orders are subject to acceptance by Asahi at its Malden, Massachusetts office and Asahi reserves the right to reject any order in whole or in part without incurring any liability to buyer or any branch or division thereof for such order as may be rejected. Asahi shall have the right at its discretion to limit any credit to be extended hereunder or to require payment before delivery. In the event Asahi should be unable to manufacture or decide not to manufacture any product ordered, Asahi shall notify the buyer, but shall not be liable for any non-delivery of such merchandise. Buyer shall, however, accept delivery and pay for all other merchandise that is included on that order.
3. An order once placed with and accepted by Asahi cannot be cancelled or modified by buyer without Asahi's written consent which, if granted, will be subject to terms that will indemnify Asahi against loss.
4. Asahi does not accept in-store completion dates and cancellation dates will not be accepted on made-to-order product once the order has been put into production.
5. Asahi orders (once accepted) may have backorders when necessary. Backorders are not subject to cancellation by buyer unless 30 days past scheduled delivery date.
6. Delivery shall occur and risk of loss shall pass upon delivery of the merchandise sold hereunder to the carrier. Asahi will use buyer's routing guide or instructions after approval from Asahi's Traffic Department. All customers routings are F.O.B. shipping point. Asahi generates one invoice per shipment and does not include invoices with shipment.
7. The buyer agrees that no shipment from Asahi will be returned from a carrier unless damage or shortages are acknowledged and signed by the carrier's driver. All claims for lost or damaged shipments must be made directly by buyer to the delivering carrier at time of delivery. Shortages due to packing errors must be reported in writing within 10 days of receipt to Asahi's Customer Service Department. Adjustments can be made only if reported to Asahi in writing within that time. Buyer's requests for proof of delivery by Asahi must be made within 30 days of receipt of invoice. After 30 days, the merchandise will be considered as delivered.
8. Written approval from Asahi must be obtained before returning any merchandise of any quantity. Approval will be granted only to return unused, resalable merchandise shipped as a result of Asahi error. Upon approval by Asahi, merchandise must be returned within 30 days. All returns must be sent prepaid with return authorizations numbers visible on the outside carton. Returns not carrying return authorization numbers will be refused delivery by Asahi and returned to sender at senders expense.
9. Buyer agrees that it will not impose upon Asahi any handling, service or any other charges of that nature whatsoever.
10. Asahi will not be liable for any delay in performance of orders or contracts, or in delivery or shipment of goods, or for any damage suffered by buyer by reason of such delay in performance of orders or contracts, or in delivery or shipment of goods, or for any damage suffered by buyer by reason of such delay, when such delay is directly or indirectly caused by or in any manner arises from fire, flood, accident, riot, act of God, war, governmental interference or embargoes, strikes, labor difficulties, shortage of labor, fuel, power, materials, or supplies, transportation delays or any other cause or causes (whether or not similar in nature to any of these hereinbefore specified) beyond its control. Asahi reserves the right to discontinue product lines and make changes in products offered at any time.
11. Asahi products are intended to be sold in buyer's outlet(s) as addressed on this order. All branches must be separately approved. Transshipping of merchandise to approved branches of an approved account may not take place without the written approval of Asahi.
12. Asahi warrants only that the goods described on the face of the purchase order conform to Asahi's customary quality standards for such goods. Otherwise ASAHI MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THE ORDER. Without limiting the generality of the foregoing, ASAHI SPECIFICALLY EXCLUDES AND DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLICATION OR USE AND ANY IMPLIED WARRANTY AGAINST CLAIMS BY THIRD PARTIES FOR INFRINGEMENT AND THE LIKE. This warranty constitutes the only warranty given, superseding all prior or contemporaneous oral or written representations. No Seller, employee or any other person is authorized to modify this warranty or make any warranty in addition to those set forth herein.
13. ASAHI FURTHER MAKES NO WARRANTIES, EITHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLICATION OR USE AND ANY IMPLIED WARRANTY AGAINST CLAIMS BY THIRD PARTIES FOR INFRINGEMENT AND THE LIKE FOR PRODUCTS ORDERED TO CUSTOM SPECIFICATIONS BY THE BUYER, THAT ARE EXPERIMENTAL, DEVELOPMENTAL OR PROTOTYPE PRODUCTS.
14. Buyer's remedies in the event of any breach by Asahi shall be exclusively limited to the return of the goods and repayment of the price. These remedies are the purchaser's exclusive remedies for breach of warranty. In no event shall buyer be entitled to claim any special, incidental, punitive or consequential damages of any nature, including, but not limited to, loss of anticipated profits and injury to persons or property. Provided further, Seller shall not be responsible for any warranty for its products integrated into systems designed or specified by third parties without the specific written authority of the Seller.
15. Payment terms shall be as set forth on the face of Asahi's invoice to buyer. Terms adjustment will be made upon request of buyer only if shipment is made more than 7 days in advance of buyer's requested ship date. Discounts will not be allowed on late payments. Discounts are applicable on merchandise only and not on freight or service charges. An interest charge of 1 1/2% percent per month (an annual rate of 18%) will be charged in states where legal on the unpaid balance owed together with cost of collection including reasonable attorney's costs. Asahi will charge a \$75.00 minimal order requirement on all orders. Any tax or duty imposed by any government will be added to the sales price.
16. Any waiver of any of these terms of sale by Asahi shall not be construed to be a waiver of the terms and conditions hereof as applied to subsequent transactions.
17. Any controversy or claim arising out of or relating to this agreement or that breach thereof shall be governed by the laws of the Commonwealth of Massachusetts. Any action or suit must be commenced within one year following delivery of the goods.

Note: Current Terms and Conditions may be found online at the following address

<http://asahi-america.com/support/warranty-policy>

# Another Corrosion Problem Solved.™



**ASAHI/AMERICA®**

655 Andover St, Lawrence, MA 01843

Tel: 800-343-3618; 781-321-5409

East (800) 232-7244  
Direct Sales: Central (800) 442-7244  
West (800) 282-7244

Fax: 800-426-7058

[www.asahi-america.com](http://www.asahi-america.com)

[asahi@asahi-america.com](mailto:asahi@asahi-america.com)