

AirTech<sup>®</sup> - Energy Efficient Air Handling Systems



## Table Of Contents

Guide Specifications: Polyvinyl Chloride (PVC) .....	3
Guide Specifications: Polypropylene (PPd) .....	4
Guide Specifications: Flame Retardant Polypropylene (PPs) .....	5
Guide Specifications: Electrically Conductive Flame Retardant Polypropylene (PPs-EL) .....	6
Guide Specifications: PVDF .....	7
Physical Properties .....	8
Combustion Behavior .....	9
Support Spacing .....	10

### Dimensional Information

Bird Mesh Grille .....	52-52
BlastGates .....	46
Blind Flange .....	36
Coupling .....	37
Deflector Cowl .....	54-55
Double Wyes (Trousers):	
90° Double Wye (Trouser) .....	20
45° Double Wye (Trouser) .....	21
30° Double Wye (Trouser) .....	22
Duct .....	11
End Cap .....	38
Elbows:	
90° .....	12
75° .....	13
60° .....	14
45° .....	15
30° .....	16
15° .....	17
Expansion Joint .....	47-51
Flange .....	35
Lateral .....	19
Reducers:	
Concentric .....	26-31
Eccentric .....	32-34
Saddles:	
90° Saddle Connection .....	23
90° Short Saddle Connection .....	24
45° Saddle Connection .....	25
Tee .....	18
Volume Control Damper:	
3" through 16" w/Continuous Adjustment Lock .....	39
18" through 48" w/Continuous Adjustment Lock .....	41
Flanged .....	40
Pneumatically Actuated .....	42
Electrically Actuated .....	43
Volume Flow Controller .....	44-45
Wellflex .....	56



# AirTech® Guide Specification

## PVC (Polyvinyl Chloride) Fume Exhaust Systems

Scope: This Specification encompasses PVC (Polyvinyl chloride) thicknesses, and welding methods used for corrosive exhaust ventilation piping, 3" (90mm) thru 36" (900mm).

**1.0 Material**

Pipe and fittings shall be manufactured from virgin rigid PVC (Polyvinyl chloride) vinyl compounds with a Cell Class of 12454 as identified in ASTM D 1784. Pigmented to RAL 7011

**1.1 Duct**

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.4.

**1.2 Fittings**

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod, or solvent cement.

**1.3 Joining**

Installation shall comply with the latest installation instructions published by Simtech and shall conform to all local plumbing, building, and fire code requirements.

**1.3.1 Welding rod**

Welding rod shall be the same material as the pipe and fitting.

**1.3.1a Hot Air Welding**

Welding is to be performed using a hot air welder having a source of clean dry air. Compressed air shall not be used for welding.

**1.3.2 Solvent Cement**

Solvent cement joints shall be made in a two-step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM D 2564. Systems shall be hydrostatically tested after installation.

**1.4 Wall Thickness**

Minimal Wall thicknesses will be as follows:

Diameter	Thickness	Diameter	Thickness
3" (90mm)	2.7mm	16" (400mm)	3.2mm
4" (110mm)	2.5mm	18" (450mm)	3.6mm
6" (160mm)	2.5mm	20" (500mm)	4.0mm
8" (200mm)	2.5mm	24" (600mm)	5.0mm
10" (250mm)	2.9mm	28" (700mm)	6.0mm
12" (315mm)	2.9mm	32" (800mm)	6.3mm
14" (355mm)	2.9mm	36" (900mm)	10.0mm

**2.0 Velocity**

Recommended velocity not to exceed 10 meters per second. ( 32.8 feet per second)

**3.0 MANUFACTURER**

SIMTECH  
877-777-2467  
www.Simtech.com



# AirTech® Guide Specification

## Polypropylene (PPd) Fume Exhaust Systems

Scope: This Specification encompasses Polypropylene (PPd) thickness's, and welding methods used for corrosive exhaust ventilation piping, 3" (90mm) thru 24" (630mm).

### 1.0 Material

Material of construction shall be from Group 1. Class 1, Grade 0 Polypropylene Homopolymer material per ASTM-D4101, Federal Specification L-P-39413 and Military Spec Mil P 461096. PP material to be heat stabilized, UV stabilized and pigmented to RAL 7032.

### 1.1 Duct

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.4.

### 1.2 Fittings

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod.

### 1.3 Welding rod

Welding rod shall be the same material as the pipe and fitting.

#### 1.3.1 Use of Welder

Welding is to be performed using a hot air welder having a source of clean dry air. Compressed air shall not be used for welding.

### 1.4 Wall Thickness

Minimal Wall thicknesses will be as follows:

<u>Diameter</u>	<u>Thickness</u>	<u>Diameter</u>	<u>Thickness</u>
3" (90mm)	3.0mm	14" (355mm)	5.0mm
4" (110mm)	3.0mm	16" (400mm)	6.0mm
6" (160mm)	3.0mm	18" (450mm)	7.0mm
8" (200mm)	3.0mm	20" (500mm)	8.0mm
10" (250mm)	3.5mm	24" (630mm)	10.0mm
12" (315mm)	5.0mm		

### 2.0 Static Loading

Duct and fittings shall be capable of a maximum 1 bar (14.5psi) static pressure and a maximum of 0.5 bar negative static pressure.

### 3.0 MANUFACTURER

SIMTECH  
877-777-2467  
www.SimtechUSA.com



# AirTech® Guide Specification

## Flame Retardant Polypropylene (PPs) Fume Exhaust Systems

Scope: This Specification encompasses Flame Retardant Polypropylene (PPs) thickness's, and welding methods used for corrosive exhaust ventilation piping, 2" (63mm) thru 39" (1000mm).

### 1.0 Material

Material shall be Group 1. Class 1, Grade 0 Polypropylene Homopolymer material per ASTM- D4101, Federal Specification L-P-39413 and Military Spec Mil P 461096. PP material to be heat stabilized, U.V. stabilized and will have a flame retardant additive, and pigmented to RAL 7037. Combustion behavior shall be as follows:

- BI Flame Retardant per DIN 4102
- 28% Oxygen Index per ASTM2863
- >380° C Ignition Temperature per ASTM 1929
- Y=0 Class per U.L. 94

### 1.1 Duct

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.4.

### 1.2 Fittings

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod.

### 1.3 Welding rod

Welding rod shall be the same material as the pipe and fitting.

#### 1.3.1 Use of Welder

Welding is to be performed using a hot air welder having a source of clean dry air. Compressed air shall not be used for welding.

### 1.4 Wall Thickness

Minimal Wall thicknesses will be as follows:

Diameter	Thickness	Diameter	Thickness
2" (63mm)	3.0mm	16" (400mm)	6.0mm
3" (90mm)	3.0mm	18" (450mm)	7.0mm
4" (110mm)	3.0mm	20" (500mm)	8.0mm
6" (160mm)	3.0mm	24" (600mm)	10.0mm
8" (200mm)	3.0mm	28" (700mm)	12.0mm
10" (250mm)	3.5mm	32" (800mm)	12.0mm
12" (315mm)	5.0mm	36" (900mm)	10.00mm
14" (355mm)	5.0mm	39" (1000mm)	12.00mm

### 2.0 Static Loading

Duct and fittings shall be capable of a maximum 1 bar (14.5psi) static pressure and a maximum of 0.5 bar negative static pressure.

### 3.0 MANUFACTURER

SIMTECH  
877-777-2467  
www.Simtech.com



# AirTech® Guide Specification

## Electrically Conductive Flame Retardant Polypropylene (PPs-EL) Fume Exhaust Systems

Scope: This Specification encompasses Electrically Conductive Flame Retardant Polypropylene (PPs-EL) thickness's, and welding methods used for corrosive exhaust gas ventilation piping. 3" (90mm) thru 24" (630mm).

**1.0 Material**

Material shall be Group 1. Class 1, Grade 0 Polypropylene Homopolymer material per ASTM- D4101, Federal Specification L-P-39413 and Military Spec Mil P 461096. PP material to be heat stabilized, U.V. stabilized, will have a flame retardant additive fire class: V-O; US standard UL 94, and will feature an electrically conductive particles which discharge static per DIN 4102, surface resistant of 105 Ohms. Color shall be Black.

**1.1 Duct**

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.4.

**1.2 Fittings**

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod.

**1.3 Welding rod**

Welding rod shall be the same material as the pipe and fitting.

**1.3.1 Use of Welder**

Welding is to be performed using a hot air welder having a source of clean dry air. Compressed air shall not be used for welding.

**1.4 Wall Thickness**

Minimal Wall thicknesses will be as follows:

<u>Diameter</u>	<u>Thickness</u>	<u>Diameter</u>	<u>Thickness</u>
3" (90mm)	3.0mm	14" (355mm)	5.0mm
4" (110mm)	3.0mm	16" (400mm)	6.0mm
6" (160mm)	3.0mm	18" (450mm)	7.0mm
8" (200mm)	3.0mm	20" (500mm)	8.0mm
10" (250mm)	3.5mm	24" (630mm)	10.0mm
12" (315mm)	5.0mm		

**2.0 Static Loading**

Duct and fittings shall be capable of a maximum 1 bar (14.5psi) static pressure and a maximum of 0.5 bar negative static pressure.

**3.0 MANUFACTURER**

SIMTECH  
877-777-2467  
www.SimtechUSA.com



# AirTech® Guide Specification

## Polyvinylidene Fluoride (PVDF) Fume Exhaust Systems

Scope: This Specification encompasses Polyvinylidene Fluoride (PVDF) thickness's, and welding methods used for corrosive exhaust ventilation piping, 2" (63mm) thru 24" (630mm).

**1.0 Material**

Pipe shall be extruded from virgin, pure, unpigmented homopolymer KYNAR 740® resin, as manufactured by ARKEMA Chemicals, Inc. Material shall meet or exceed requirements of Table 1 of ASTM D-3222. Pipe manufacturing shall not employ any stabilizers, antioxidants, fillers, pigmentation or additives of any kind. Kynar homopolymer resins may be safely used in articles for repeated contact with food per Title 21, Code of Federal Regulations, Chapter1, part 177.2510. Kynar homopolymer resin grades have been listed with NSF under Standard 61, Standard 51 and Standard 14

**1.1 Flammability**

KYNAR homopolymer resins meet both the Factor Mutual 4910 (FM 4910) and corresponding UL 2360 burn test criteria. Specification test reports available upon request.

**1.2 Duct**

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.5.

**1.3 Fittings**

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod.

**1.4 Welding rod**

Welding rod shall be the same material as the pipe and fitting.

**1.4.1 Use of Welder**

Welding is to be performed using a hot air welder having a source of clean dry air or inert air. Compressed air shall not be used for welding.

**1.5 Wall Thickness**

Minimal Wall thicknesses will be as follows:

<u>Diameter</u>	<u>Thickness</u>	<u>Diameter</u>	<u>Thickness</u>
2" (63mm)	3.0mm	12" (315mm)	5.0mm
3" (90mm)	3.0mm	14" (355mm)	5.0mm
4" (110mm)	3.0mm	16" (400mm)	5.0mm
6" (160mm)	3.0mm	18" (450mm)	6.0mm
8" (200mm)	3.0mm	20" (500mm)	6.0mm
10" (250mm)	4.0mm	24" (630mm)	8.0mm

**2.0 Static Loading**

Duct and fittings shall be capable of a maximum 1 bar (14.5psi) static pressure and a maximum of 0.5 bar negative static pressure.

**3.0 MANUFACTURER**

SIMTECH  
877-777-2467  
www.SimtechnUSA.com



## Material Properties

	Test Standard	Test Method Test Specimen	Dimension	PP			
				PP-H	PP-R	PPs	PP-EL-s
<b>Mechanical Properties</b>							
Density	DIN 53479	Method C	g/cm <sup>3</sup>	0.915	0.900	0.950	1.160
Melting Index Group	DIN 16776	MFI 190-5	Group	006	006	012	-
Tensile Test	DIN 53455	Test Bar 3	-	-	-	-	-
Yield Stress	-	Test Speed 50 mm/ min	N/mm <sup>2</sup>	33	24	32	25
Elongation At Yield Stress	-	-	%	8	10	8	7
Elongation At Rupture	-	-	%	80	>50	100	40
Bending Test	DIN 53457	Test Bar	-	-	-	-	-
Bending Modulus E	1 min.	120 x 10 x 4 mm	N/mm <sup>2</sup>	1700	800	1600	1400
Impact Bending Test	DIN 53453	Charpy	-	-	-	-	-
Impact Strength	-	Standard Miniature Bar	kJ/m <sup>2</sup>	No Break	No Break	No Break	No Break
Notched Bar Impact Strength	-	Standard Miniature Bar With U-Notch	kJ/m <sup>2</sup>	9	20	6	5

### Surface Hardness

Ball Impression Hardness	DIN 53456	H 358/30	N/mm <sup>2</sup>	70	45	70	66
Shore Hardness	DIN 53505	D	-	72	65	72	70

### Thermal Properties

Crystallite Melting Range	-	Polarization Microscope	K (°C)	160-165	160-164	160-165	-
Mean Thermal Coefficient Of Linear Expansion	DIN 53752	-	K <sup>-1</sup> (°C <sup>-1</sup> )	1.6x10 <sup>-4</sup>	1.6x10 <sup>-4</sup>	1.6x10 <sup>-4</sup>	1.6x10 <sup>-4</sup>
Thermal Conductivity	DIN 53752	Two-Plate Method	W/m x K	0.22	0.22	0.22	-

### Electrical Properties

Dielectric Strength	DIN 53481	K 20/P 50	kV/mm	52	52	22	-
Impedance	DIN 53482	Annular Electrode	Ohm x cm	>10 <sup>16</sup>	>10 <sup>16</sup>	>10 <sup>17</sup>	-
Surface Resistance	DIN 53482	Electrode A	Ohm x cm	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>6</sup>
Leakage Path Resistance	DIN 53480	Method KC	Step	> 600	> 600	> 600	-

### Other Properties

Flammability	DIN 4012	-	Class	B2	B2	B1	Low Flammability*
Water Absorption	DIN 53495	Method C	%/24h	<0.01	<0.01	<0.01	-
Physiologically Harmless	Recommendation	BGA/KTW	-	Yes	Yes	No	No
Chemical Resistance	DIN 8078 Addendum	-	-	Complies	Complies	Complies	Complies

\* UL 94-V-0





## Polypropylene Combustion Behavior

DIN 4102 distinguishes between:

- non combustible material (Class A) and
- combustible material (Class B)

Plastics belong without exception to the latter class.

A further distinction is made within the classes:

- B 1 flame retardant
- B 2 normally combustible
- B 3 easily combustible

Table 2

Assessment of combustion behavior

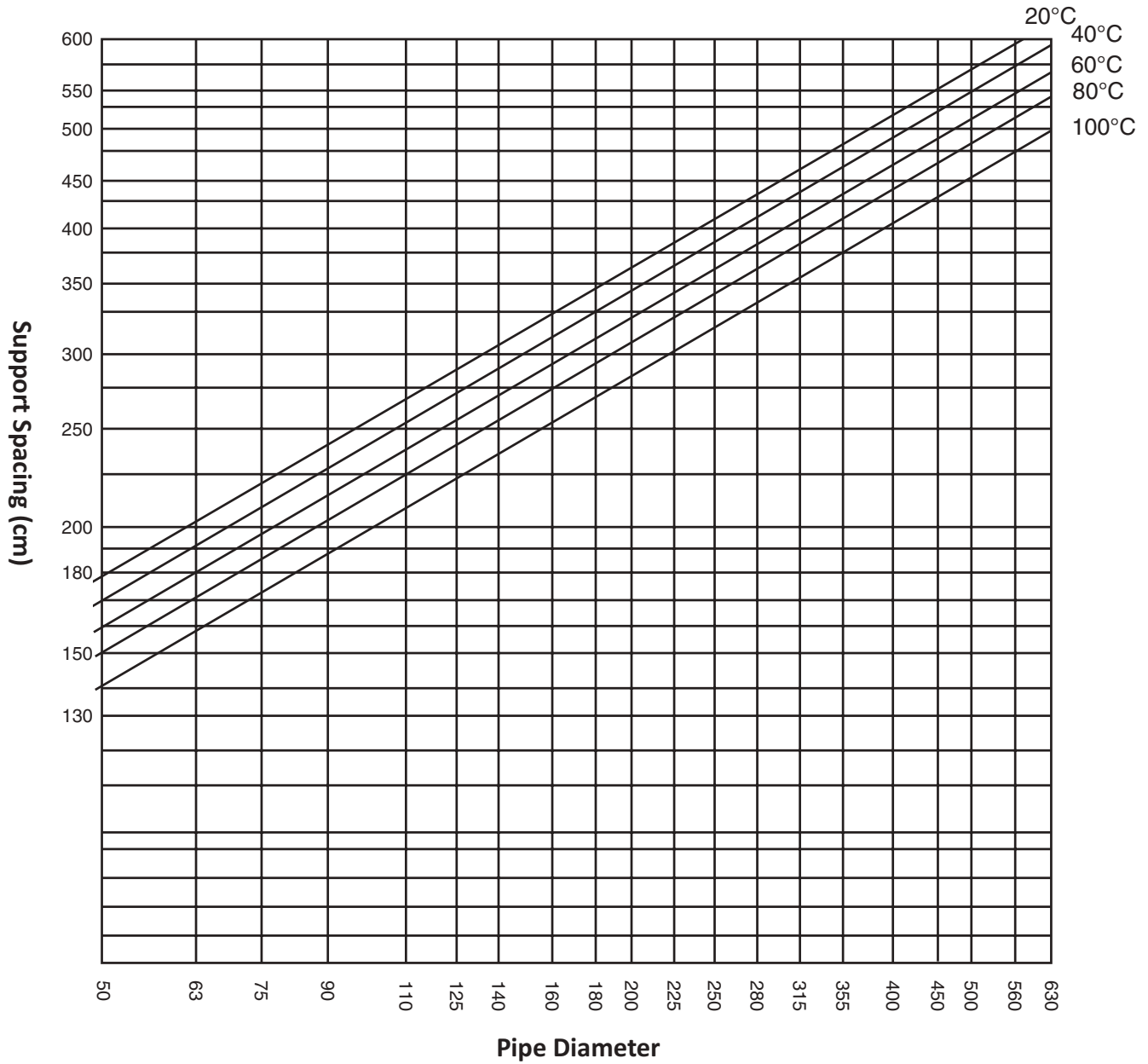
Material	Combustion behavior acc. to DIN 4102 Class	External ignition temperature acc. to ASTM 1929 °C	Oxygen Index According to ASTM 2863 %	Assessment* acc. to UL 94 Class	Assessment according to DIN 53438 Class	
PE-HD VPE PE-EL PB	B2	340	18		F2	K2
PP Type 1 PP Type 2 PP Type 3		345				
PVC PPs PVDF	B1	> 390	40	V-0	F1	K1
		> 380	28	V-2		
		> 600	78	V-0		

Further information about the combustion behavior is contained in the oxygen index (see table 2). This number indicates the minimum oxygen concentration in the combustion atmosphere which is necessary for sustained combustion. If the values are less than 20.8 % (oxygen content in the atmosphere), ignition and continuous combustion after removal of the source of ignition is possible.



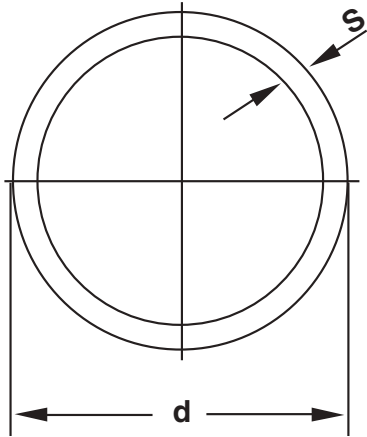
## PPs, PP, & PPs-EL DUCT SUPPORT SPACING

(Based on 1 cm deflection after 10 years)





## Duct



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

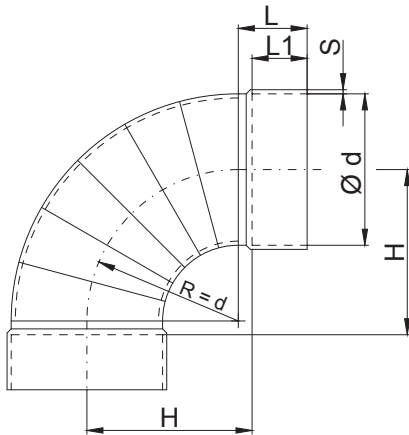
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	D in	S in	Weight lbs/m	Weight lbs/Ft
2"	2.480 (63mm)	2.48	0.12	1.28	0.39
2½"	2.953 (75mm)	2.95	0.12	1.53	0.47
3"	3.543 (90mm)	3.54	0.12	1.85	0.56
4"	4.331 (110mm)	4.33	0.12	2.29	0.70
4½"	4.921 (125mm)	4.92	0.12	2.60	0.79
5"	5.512 (140mm)	5.51	0.12	2.93	0.89
6"	6.299 (160mm)	6.30	0.12	3.34	1.02
7"	7.087 (180mm)	7.09	0.12	3.76	1.15
8"	7.874 (200mm)	7.87	0.12	4.20	1.28
9"	8.858 (225mm)	8.86	0.14	5.52	1.68
10"	9.843 (250mm)	9.84	0.14	6.14	1.87
11"	11.024 (280mm)	11.02	0.16	7.79	2.37
12"	12.402 (315mm)	12.40	0.20	10.87	3.31
14"	13.976 (355mm)	13.98	0.20	12.28	3.74
16"	15.748 (400mm)	15.75	0.24	16.54	5.04
18"	17.717 (450mm)	17.72	0.28	21.65	6.60
20"	19.685 (500mm)	19.69	0.31	27.50	8.38
22"	22.047 (560mm)	22.05	0.31	30.80	9.39
24"	24.803 (630mm)	24.80	0.39	43.12	13.15
28"	27.953 (710mm)	27.95	0.31	37.18	11.34
32"	31.496 (800mm)	31.50	0.39	52.58	16.03
36"	35.433 (900mm)	35.43	0.39	58.96	17.98
39"	39.370 (1000mm)	39.37	0.47	78.76	24.01



## 90° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

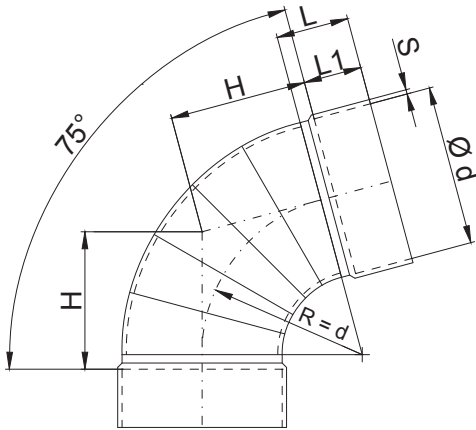
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	2.76	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	3.15	1.57	1.38	0.12	0.44
3"	3.543 (90mm)	3.54	3.74	1.57	1.38	0.12	0.44
4"	4.331 (110mm)	4.33	4.72	1.97	1.57	0.14	0.66
4½"	4.921 (125mm)	4.92	5.31	1.97	1.57	0.12	0.88
5"	5.512 (140mm)	5.51	5.91	1.97	1.57	0.14	0.88
6"	6.299 (160mm)	6.30	6.69	1.97	1.57	0.12	1.10
7"	7.087 (180mm)	7.09	7.48	2.36	1.97	0.12	1.54
8"	7.874 (200mm)	7.87	8.27	2.36	1.97	0.12	1.98
9"	8.858 (225mm)	8.86	9.25	2.36	1.97	0.16	2.64
10"	9.843 (250mm)	9.84	10.24	2.36	1.97	0.14	3.30
11"	11.024 (280mm)	11.02	11.42	2.36	1.97	0.16	6.16
12"	12.402 (315mm)	12.40	12.80	2.36	1.97	0.20	7.04
14"	13.976 (355mm)	13.98	14.37	2.36	1.97	0.20	9.02
16"	15.748 (400mm)	15.75	16.14	2.76	2.36	0.24	11.22
18"	17.717 (450mm)	17.72	18.11	2.76	2.36	0.24	14.30
20"	19.685 (500mm)	19.69	20.08	2.76	2.36	0.24	15.40
22"	22.047 (560mm)	22.05	22.83	3.94	3.54	0.24	25.30
24"	24.803 (630mm)	24.80	25.59	4.53	3.94	0.31	30.80
28"	27.953 (710mm)	27.95	28.15	4.53	3.74	0.31	44.00
32"	31.496 (800mm)	31.50	31.69	4.53	3.94	0.39	88.00



## 75° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

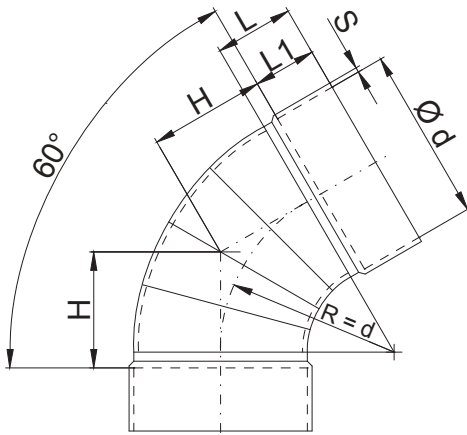
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	2.17	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	2.56	1.57	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	2.95	1.57	1.38	0.12	0.44
4"	4.331 (110mm)	4.33	3.74	1.97	1.57	0.12	0.66
4½"	4.921 (125mm)	4.92	4.13	1.97	1.57	0.12	0.66
5"	5.512 (140mm)	5.51	4.53	1.97	1.57	0.12	0.88
6"	6.299 (160mm)	6.30	5.31	1.97	1.57	0.12	1.10
7"	7.087 (180mm)	7.09	5.91	2.36	1.97	0.12	1.32
8"	7.874 (200mm)	7.87	6.50	2.36	1.97	0.12	1.76
9"	8.858 (225mm)	8.86	7.28	2.36	1.97	0.14	2.20
10"	9.843 (250mm)	9.84	7.87	2.36	1.97	0.16	2.86
11"	11.024 (280mm)	11.02	8.86	2.36	1.97	0.16	3.96
12"	12.402 (315mm)	12.40	9.84	2.36	1.97	0.20	5.94
14"	13.976 (355mm)	13.98	11.02	2.36	1.97	0.20	7.26
16"	15.748 (400mm)	15.75	12.60	2.76	2.36	0.24	11.00
18"	17.717 (450mm)	17.72	14.17	2.76	2.36	0.24	12.54
20"	19.685 (500mm)	19.69	15.94	2.76	2.36	0.24	16.50
22"	22.047 (560mm)	22.05	17.72	4.33	3.54	0.24	20.02
24"	24.803 (630mm)	24.80	19.09	4.33	3.54	0.31	25.52
28"	27.953 (710mm)	27.95	22.24	4.33	3.54	0.31	41.80
32"	31.496 (800mm)	31.50	24.80	4.72	3.94	0.39	72.60



## 60° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

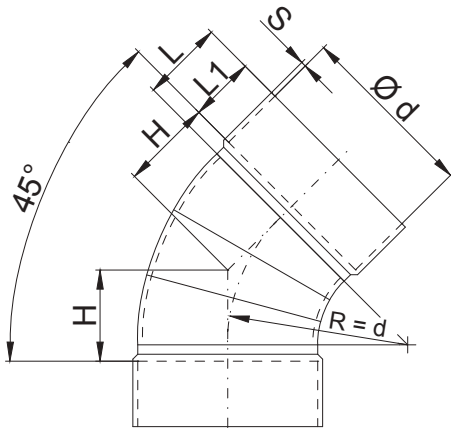
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	1.57	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	1.97	1.57	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	2.17	1.57	1.38	0.12	0.44
4"	4.331 (110mm)	4.33	2.95	1.97	1.57	0.12	0.44
4½"	4.921 (125mm)	4.92	3.15	1.97	1.57	0.12	0.66
5"	5.512 (140mm)	5.51	3.54	1.97	1.57	0.12	0.88
6"	6.299 (160mm)	6.30	3.94	1.97	1.57	0.12	0.88
7"	7.087 (180mm)	7.09	4.53	2.36	1.97	0.12	1.10
8"	7.874 (200mm)	7.87	4.92	2.36	1.97	0.12	1.54
9"	8.858 (225mm)	8.86	5.51	2.36	1.97	0.14	1.98
10"	9.843 (250mm)	9.84	6.10	2.36	1.97	0.16	2.20
11"	11.024 (280mm)	11.02	6.69	2.36	1.97	0.16	3.30
12"	12.402 (315mm)	12.40	7.48	2.36	1.97	0.20	5.06
14"	13.976 (355mm)	13.98	8.46	2.36	1.97	0.20	6.16
16"	15.748 (400mm)	15.75	9.65	2.76	2.36	0.24	9.46
18"	17.717 (450mm)	17.72	10.83	2.76	2.36	0.24	13.42
20"	19.685 (500mm)	19.69	12.20	2.76	2.36	0.24	14.96
22"	22.047 (560mm)	22.05	13.58	4.33	3.54	0.24	19.14
24"	24.803 (630mm)	24.80	15.16	4.33	3.54	0.31	20.24
28"	27.953 (710mm)	27.95	16.93	4.33	3.54	0.31	31.24
32"	31.496 (800mm)	31.50	18.90	4.72	4.33	0.39	62.26



## 45° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

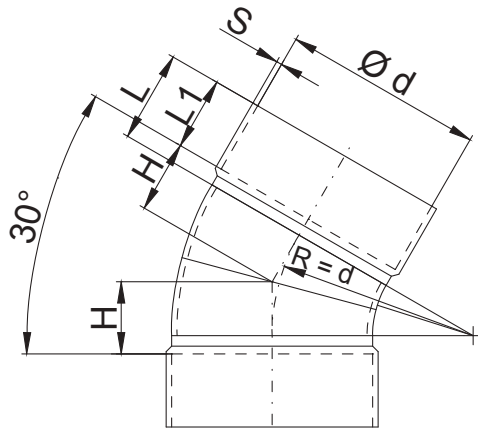
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	1.26	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	1.38	1.57	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	1.57	1.57	1.38	0.12	0.22
4"	4.331 (110mm)	4.33	2.17	1.97	1.57	0.12	0.44
4½"	4.921 (125mm)	4.92	2.36	1.97	1.57	0.12	0.66
5"	5.512 (140mm)	5.51	2.76	1.97	1.57	0.12	0.66
6"	6.299 (160mm)	6.30	2.95	1.97	1.57	0.12	0.88
7"	7.087 (180mm)	7.09	3.35	2.36	1.97	0.12	1.10
8"	7.874 (200mm)	7.87	3.74	2.36	1.97	0.12	1.32
9"	8.858 (225mm)	8.86	4.13	2.36	1.97	0.14	1.76
10"	9.843 (250mm)	9.84	4.53	2.36	1.97	0.16	1.98
11"	11.024 (280mm)	11.02	4.92	2.36	1.97	0.16	2.64
12"	12.402 (315mm)	12.40	5.51	2.36	1.97	0.20	4.18
14"	13.976 (355mm)	13.98	6.30	2.36	1.97	0.20	5.06
16"	15.748 (400mm)	15.75	6.89	2.76	2.36	0.24	7.70
18"	17.717 (450mm)	17.72	7.87	2.76	2.36	0.24	11.22
20"	19.685 (500mm)	19.69	8.46	2.76	2.36	0.24	11.88
22"	22.047 (560mm)	22.05	9.84	4.33	3.54	0.24	12.76
24"	24.803 (630mm)	24.80	11.02	4.33	3.54	0.31	18.04
28"	27.953 (710mm)	27.95	12.20	4.33	3.54	0.31	22.00
32"	31.496 (800mm)	31.50	13.78	4.72	4.33	0.39	44.00



## 30° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

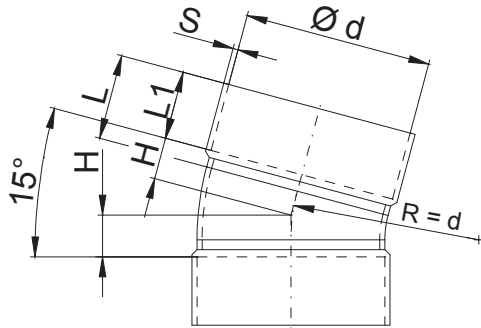
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	0.79	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	0.98	1.57	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	1.18	1.57	1.38	0.12	0.22
4"	4.331 (110mm)	4.33	1.57	1.57	1.57	0.12	0.44
4½"	4.921 (125mm)	4.92	1.77	1.97	1.57	0.12	0.44
5"	5.512 (140mm)	5.51	1.97	1.97	1.57	0.12	0.66
6"	6.299 (160mm)	6.30	2.17	1.97	1.57	0.12	0.66
7"	7.087 (180mm)	7.09	2.36	1.97	1.97	0.12	0.88
8"	7.874 (200mm)	7.87	2.56	2.36	1.97	0.12	1.10
9"	8.858 (225mm)	8.86	2.76	2.36	1.97	0.14	1.32
10"	9.843 (250mm)	9.84	2.95	2.36	1.97	0.16	1.54
11"	11.024 (280mm)	11.02	3.35	2.36	1.97	0.16	2.20
12"	12.402 (315mm)	12.40	3.74	2.36	1.97	0.20	3.08
14"	13.976 (355mm)	13.98	4.13	2.36	1.97	0.20	3.74
16"	15.748 (400mm)	15.75	4.72	2.36	2.36	0.24	5.94
18"	17.717 (450mm)	17.72	5.31	2.76	2.36	0.24	9.02
20"	19.685 (500mm)	19.69	6.10	2.76	2.36	0.24	10.56
22"	22.047 (560mm)	22.05	6.69	2.76	3.54	0.24	11.22
24"	24.803 (630mm)	24.80	7.48	4.33	3.54	0.31	16.50
28"	27.953 (710mm)	27.95	8.27	4.33	3.54	0.31	19.58
32"	31.496 (800mm)	31.50	9.25	4.72	4.33	0.39	40.70





# 15° Elbow



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

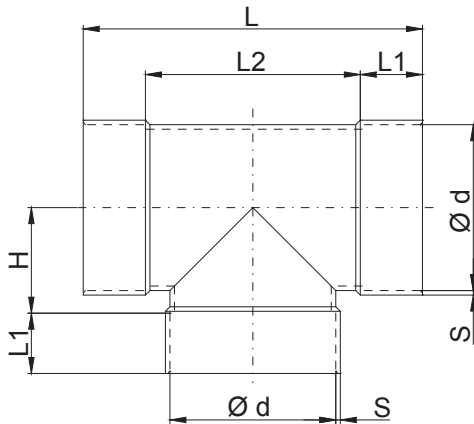
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	0.59	1.18	0.98	0.12	0.22
2½"	2.953 (75mm)	2.95	0.59	1.57	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	0.59	1.57	1.38	0.12	0.22
4"	4.331 (110mm)	4.33	0.59	1.97	1.57	0.12	0.44
4½"	4.921 (125mm)	4.92	0.98	1.97	1.57	0.12	0.44
5"	5.512 (140mm)	5.51	1.18	1.97	1.57	0.12	0.44
6"	6.299 (160mm)	6.30	0.98	1.97	1.57	0.12	0.44
7"	7.087 (180mm)	7.09	1.38	2.36	1.97	0.12	0.66
8"	7.874 (200mm)	7.87	0.98	2.36	1.97	0.12	0.88
9"	8.858 (225mm)	8.86	1.57	2.36	1.97	0.14	1.10
10"	9.843 (250mm)	9.84	1.38	2.36	1.97	0.16	1.10
11"	11.024 (280mm)	11.02	1.77	2.36	1.97	0.16	1.54
12"	12.402 (315mm)	12.40	1.97	2.36	1.97	0.20	2.20
14"	13.976 (355mm)	13.98	2.17	2.36	1.97	0.20	2.64
16"	15.748 (400mm)	15.75	2.76	2.76	2.36	0.24	4.18
18"	17.717 (450mm)	17.72	2.95	2.76	2.36	0.24	6.38
20"	19.685 (500mm)	19.69	3.35	2.76	2.36	0.24	7.92
22"	22.047 (560mm)	22.05	3.74	4.33	3.54	0.24	10.78
24"	24.803 (630mm)	24.80	3.94	4.33	3.54	0.31	12.76
28"	27.953 (710mm)	27.95	4.53	4.33	3.54	0.31	15.62
32"	31.496 (800mm)	31.50	4.92	4.72	3.94	0.39	26.84



# Tee



## Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

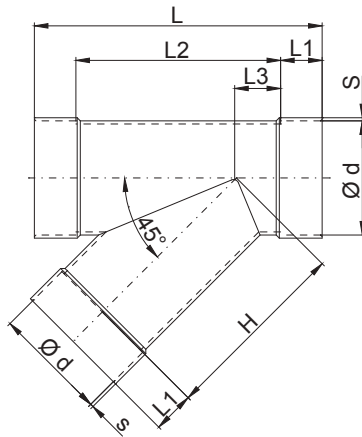
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	1.65	6.30	1.38	3.15	0.12	0.22
2½"	2.953 (75mm)	2.95	1.97	6.69	1.38	3.54	0.12	0.22
3"	3.543 (90mm)	3.54	2.56	7.87	1.38	4.13	0.12	0.44
4"	4.331 (110mm)	4.33	2.76	8.86	1.57	5.71	0.12	0.66
4½"	4.921 (125mm)	4.92	3.15	11.22	1.57	7.48	0.12	0.88
5"	5.512 (140mm)	5.51	3.35	11.61	1.57	7.48	0.12	0.88
6"	6.299 (160mm)	6.30	3.74	12.99	1.57	9.65	0.12	1.10
7"	7.087 (180mm)	7.09	4.13	14.96	1.97	10.83	0.12	1.54
8"	7.874 (200mm)	7.87	4.72	15.16	1.97	11.02	0.12	1.76
9"	8.858 (225mm)	8.86	5.31	17.91	1.97	12.60	0.14	2.64
10"	9.843 (250mm)	9.84	5.71	16.34	1.97	12.20	0.14	2.64
11"	11.024 (280mm)	11.02	6.30	18.31	1.97	14.17	0.16	3.96
12"	12.402 (315mm)	12.40	7.28	20.87	2.36	16.54	0.20	6.16
14"	13.976 (355mm)	13.98	7.68	23.62	1.77	20.08	0.20	7.26
16"	15.748 (400mm)	15.75	10.24	24.02	2.36	19.29	0.20	10.56
18"	17.717 (450mm)	17.72	11.61	27.56	2.76	23.23	0.24	13.20
20"	19.685 (500mm)	19.69	12.60	30.71	2.76	25.20	0.24	16.72
22"	22.047 (560mm)	22.05	13.78	33.07	2.76	27.56	0.24	20.24
24"	24.803 (630mm)	24.80	15.35	35.83	2.76	30.31	0.24	24.42
28"	27.953 (710mm)	27.95	19.29	37.40	4.72	37.40	0.31	44.88
32"	31.496 (800mm)	31.50	20.87	40.94	4.72	40.94	0.31	56.10
36"	35.433 (900mm)	35.43	22.83	44.88	4.72	44.88	0.31	92.40
39"	39.370 (1000mm)	39.37	24.80	53.54	4.72	48.82	0.39	129.80
48"	49.213 (1250mm)	49.21	29.53	68.11	4.72	58.66	0.39	150.26



## 45° Lateral



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

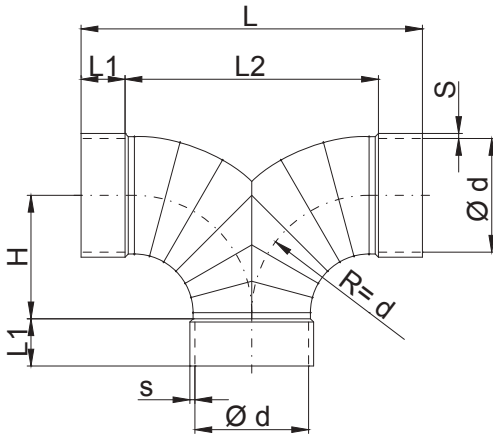
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	L2 in	L3 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	3.54	7.09	1.38	4.33	0.79	0.12	0.44
2½"	2.953 (75mm)	2.95	4.13	7.87	1.38	5.12	0.98	0.12	0.66
3"	3.543 (90mm)	3.54	4.92	8.66	1.38	5.91	1.18	0.12	0.66
4"	4.331 (110mm)	4.33	5.91	10.43	1.57	7.28	1.38	0.12	1.10
4½"	4.921 (125mm)	4.92	6.89	11.42	1.57	8.27	1.57	0.12	1.32
5"	5.512 (140mm)	5.51	7.68	12.40	1.57	9.25	1.77	0.12	1.54
6"	6.299 (160mm)	6.30	8.66	13.58	1.57	10.43	1.97	0.12	1.98
7"	7.087 (180mm)	7.09	9.84	15.55	1.97	11.61	2.17	0.12	2.20
8"	7.874 (200mm)	7.87	10.83	16.93	1.97	12.99	2.36	0.12	2.64
9"	8.858 (225mm)	8.86	12.20	18.70	1.97	14.76	2.76	0.14	3.96
10"	9.843 (250mm)	9.84	13.58	20.28	1.97	16.34	3.15	0.14	4.84
11"	11.024 (280mm)	11.02	15.16	22.24	1.97	18.31	3.35	0.16	6.60
12"	12.402 (315mm)	12.40	17.13	24.41	1.97	20.47	3.74	0.20	9.68
14"	13.976 (355mm)	13.98	19.09	26.97	1.97	23.03	4.33	0.20	11.88
16"	15.748 (400mm)	15.75	21.65	30.71	2.36	25.98	4.92	0.24	17.60
18"	17.717 (450mm)	17.72	25.39	38.58	2.76	33.07	7.68	0.24	24.20
20"	19.685 (500mm)	19.69	27.56	41.34	2.76	35.83	8.07	0.24	28.60
22"	22.047 (560mm)	22.05	30.51	44.49	2.76	38.98	8.46	0.24	34.10
24"	24.803 (630mm)	24.80	34.25	49.21	2.76	43.70	9.45	0.24	42.90
28"	27.953 (710mm)	27.95	39.76	60.83	4.72	51.38	11.73	0.31	94.60
32"	31.496 (800mm)	31.50	43.90	65.75	4.72	56.30	12.40	0.31	112.20
36"	35.433 (900mm)	35.43	49.21	72.05	4.72	62.60	13.58	0.31	136.40
39"	39.370 (1000mm)	39.37	53.94	77.76	4.72	68.31	14.49	0.39	202.40
48"	49.213 (1250mm)	49.21	65.75	91.73	4.72	82.28	16.54	0.39	286.00



## 90° Double Wye



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

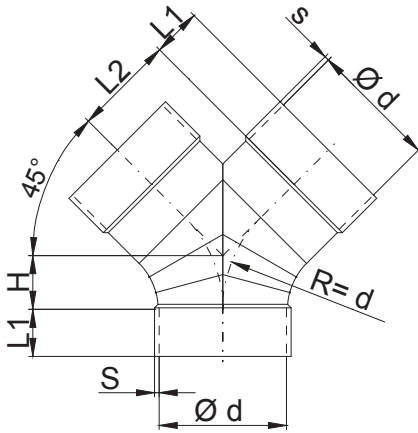
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	2.76	7.87	1.18	5.51	0.12	0.44
2½"	2.953 (75mm)	2.95	3.15	9.06	1.38	6.30	0.12	0.44
3"	3.543 (90mm)	3.54	3.74	10.24	1.38	7.48	0.12	0.66
4"	4.331 (110mm)	4.33	4.72	12.60	1.57	9.45	0.12	0.88
4½"	4.921 (125mm)	4.92	5.31	13.78	1.57	10.63	0.12	1.32
5"	5.512 (140mm)	5.51	5.91	14.96	1.57	11.81	0.12	1.54
6"	6.299 (160mm)	6.30	6.69	16.54	1.57	13.39	0.12	1.76
7"	7.087 (180mm)	7.09	7.48	18.90	1.97	14.96	0.12	2.20
8"	7.874 (200mm)	7.87	8.27	20.47	1.97	16.54	0.12	3.08
9"	8.858 (225mm)	8.86	9.25	22.44	1.97	18.50	0.14	3.96
10"	9.843 (250mm)	9.84	10.24	24.41	1.97	20.47	0.16	5.06
11"	11.024 (280mm)	11.02	11.42	26.77	1.97	22.83	0.16	9.24
12"	12.402 (315mm)	12.40	12.80	29.53	1.97	25.59	0.20	10.56
14"	13.976 (355mm)	13.98	14.37	32.68	1.97	28.74	0.20	13.64
16"	15.748 (400mm)	15.75	16.14	36.22	1.97	32.28	0.24	16.94
18"	17.717 (450mm)	17.72	18.31	40.55	1.97	36.61	0.24	26.40
20"	19.685 (500mm)	19.69	20.47	44.88	1.97	40.94	0.24	33.00



## 45° Double Wye



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

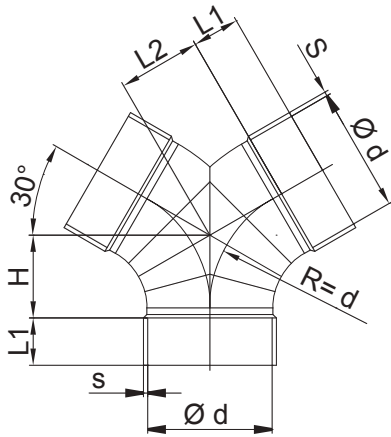
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	1.18	1.18	2.17	0.12	0.22
2½"	2.953 (75mm)	2.95	1.38	1.38	2.56	0.12	0.44
3"	3.543 (90mm)	3.54	1.57	1.38	2.76	0.12	0.44
4"	4.331 (110mm)	4.33	1.77	1.57	3.35	0.12	0.88
4½"	4.921 (125mm)	4.92	2.36	1.57	3.94	0.12	0.88
5"	5.512 (140mm)	5.51	2.76	1.57	4.72	0.12	1.10
6"	6.299 (160mm)	6.30	2.56	1.57	5.51	0.12	1.54
7"	7.087 (180mm)	7.09	3.35	1.97	5.91	0.12	2.20
8"	7.874 (200mm)	7.87	3.35	1.97	6.89	0.12	2.42
9"	8.858 (225mm)	8.86	4.13	1.97	7.28	0.14	3.08
10"	9.843 (250mm)	9.84	4.13	1.97	8.46	0.14	3.30
11"	11.024 (280mm)	11.02	4.92	1.97	9.65	0.16	5.28
12"	12.402 (315mm)	12.40	5.51	1.97	10.83	0.20	6.60
14"	13.976 (355mm)	13.98	6.10	1.97	12.01	0.20	8.80
16"	15.748 (400mm)	15.75	7.09	1.97	13.98	0.24	13.86
18"	17.717 (450mm)	17.72	7.87	1.97	16.34	0.24	20.90
20"	19.685 (500mm)	19.69	8.86	1.97	18.11	0.24	23.10



## 30° Double Wye



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

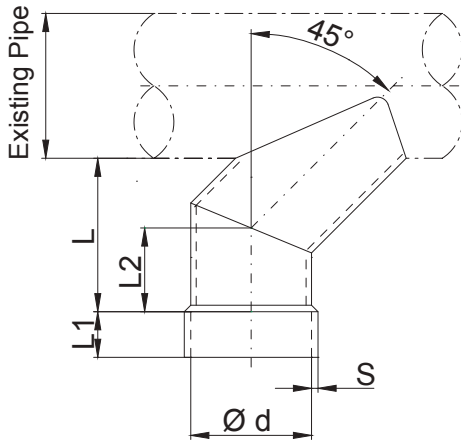
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L1 in	L2 in	H in	s in	Weight lbs
2"	2.480 (63mm)	2.48	1.18	1.57	1.57	0.12	0.22
2½"	2.953 (75mm)	2.95	1.18	1.97	1.97	0.12	0.44
3"	3.543 (90mm)	3.54	1.38	2.17	2.17	0.12	0.44
4"	4.331 (110mm)	4.33	1.57	2.95	2.95	0.12	0.66
4½"	4.921 (125mm)	4.92	1.57	3.15	3.15	0.12	0.88
5"	5.512 (140mm)	5.51	1.57	3.54	3.54	0.12	1.10
6"	6.299 (160mm)	6.30	1.57	3.94	3.94	0.12	1.32
7"	7.087 (180mm)	7.09	1.97	4.53	4.53	0.12	1.98
8"	7.874 (200mm)	7.87	1.97	4.92	4.92	0.12	2.20
9"	8.858 (225mm)	8.86	1.97	5.51	5.51	0.14	2.86
10"	9.843 (250mm)	9.84	1.97	6.10	6.10	0.16	3.08
11"	11.024 (280mm)	11.02	1.97	6.69	6.69	0.16	4.84
12"	12.402 (315mm)	12.40	1.97	7.48	7.48	0.20	5.72
14"	13.976 (355mm)	13.98	1.97	8.46	8.46	0.20	7.92
16"	15.748 (400mm)	15.75	1.97	9.65	9.65	0.24	10.56
18"	17.717 (450mm)	17.72	1.97	10.83	10.83	0.24	18.70
20"	19.685 (500mm)	19.69	1.97	12.20	12.20	0.24	20.90
24"	24.803 (630mm)	24.80	3.54	15.16	15.16	0.31	30.80



## 90° Saddle Connection



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

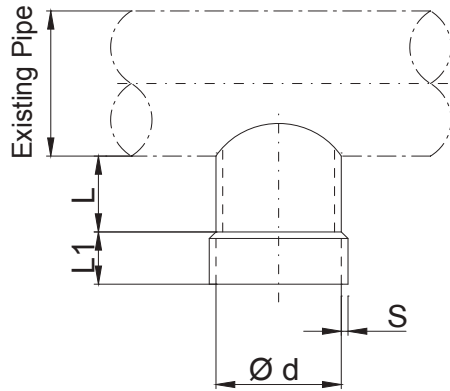
Nom. Size	Actual OD Size	d in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	3.15	1.38	1.30	0.12	0.22
2½"	2.953 (75mm)	2.95	3.54	1.38	1.42	0.12	0.22
3"	3.543 (90mm)	3.54	3.94	1.38	1.54	0.12	0.44
4"	4.331 (110mm)	4.33	5.12	1.57	2.09	0.12	0.66
4½"	4.921 (125mm)	4.92	5.71	1.57	2.20	0.12	0.66
5"	5.512 (140mm)	5.51	6.30	1.57	2.32	0.12	0.88
6"	6.299 (160mm)	6.30	7.28	1.57	2.87	0.12	1.10
7"	7.087 (180mm)	7.09	8.07	1.97	3.03	0.13	1.32
8"	7.874 (200mm)	7.87	8.86	1.97	3.19	0.14	1.76
9"	8.858 (225mm)	8.86	10.04	1.97	3.82	0.14	2.42
10"	9.843 (250mm)	9.84	11.02	1.97	4.02	0.16	2.86
11"	11.024 (280mm)	11.02	12.01	1.97	4.25	0.20	4.18
12"	12.402 (315mm)	12.40	13.39	1.97	4.53	0.20	6.16
14"	13.976 (355mm)	13.98	14.76	1.97	4.88	0.24	7.70
16"	15.748 (400mm)	15.75	16.34	2.36	5.24	0.24	11.66
18"	17.717 (450mm)	17.72	18.50	2.76	6.02	0.24	15.40
20"	19.685 (500mm)	19.69	20.28	2.76	6.46	0.24	21.56
22"	22.047 (560mm)	22.05	22.44	2.76	6.93	0.24	30.14
24"	24.803 (630mm)	24.80	25.39	2.76	7.91	0.24	37.40
28"	27.953 (710mm)	27.95	28.35	4.72	10.51	0.31	53.90
32"	31.496 (800mm)	31.50	31.50	4.72	11.26	0.31	66.00

Saddle cut to match size as pipe. ie: 110mm cut for 110mm Pipe

Saddle can be cut to fit larger pipe upon request ie: 110mm cut for 400mm pipe



## 90° Short Saddle Connection



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	0.79	1.38	0.12	0.22
2½"	2.953 (75mm)	2.95	0.79	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	0.79	1.38	0.12	0.22
4"	4.331 (110mm)	4.33	0.79	1.57	0.12	0.22
4½"	4.921 (125mm)	4.92	0.79	1.57	0.12	0.44
5"	5.512 (140mm)	5.51	0.98	1.57	0.12	0.44
6"	6.299 (160mm)	6.30	0.98	1.57	0.12	0.66
7"	7.087 (180mm)	7.09	0.98	1.97	0.12	0.66
8"	7.874 (200mm)	7.87	0.98	1.97	0.12	0.88
9"	8.858 (225mm)	8.86	0.98	1.97	0.14	1.32
10"	9.843 (250mm)	9.84	1.38	1.97	0.14	1.54
11"	11.024 (280mm)	11.02	1.38	1.97	0.16	2.20
12"	12.402 (315mm)	12.40	1.38	1.97	0.20	3.08
14"	13.976 (355mm)	13.98	1.77	1.97	0.20	3.96
16"	15.748 (400mm)	15.75	1.77	2.36	0.24	5.94
18"	17.717 (450mm)	17.72	1.77	2.36	0.24	7.70
20"	19.685 (500mm)	19.69	1.77	2.36	0.24	10.78

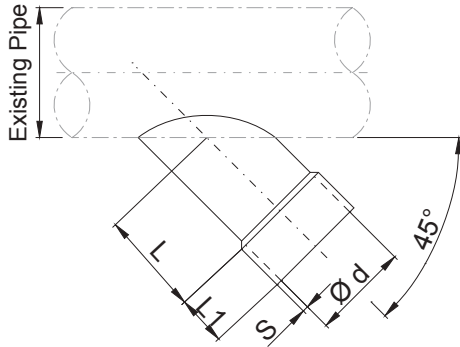
Saddle cut to match size as pipe. ie: 110mm cut for 110mm Pipe

Saddle can be cut to fit larger pipe upon request ie: 110mm cut for 400mm pipe





## 45° Saddle Connection



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

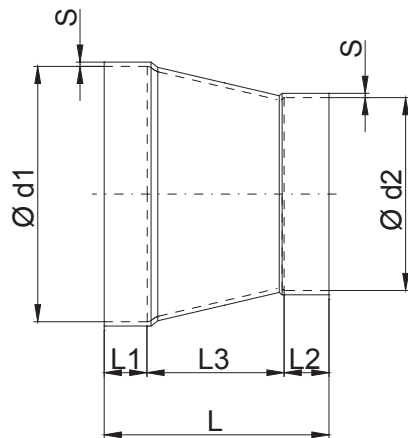
Nom. Size	Actual OD Size	d in	L in	L1 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	1.77	1.38	0.12	0.22
2½"	2.953 (75mm)	2.95	1.97	1.38	0.12	0.22
3"	3.543 (90mm)	3.54	2.36	1.38	0.12	0.44
4"	4.331 (110mm)	4.33	2.76	1.57	0.12	0.66
4½"	4.921 (125mm)	4.92	3.35	1.57	0.12	0.66
5"	5.512 (140mm)	5.51	3.74	1.57	0.12	0.88
6"	6.299 (160mm)	6.30	4.13	1.57	0.12	1.10
7"	7.087 (180mm)	7.09	4.92	1.97	0.12	1.32
8"	7.874 (200mm)	7.87	5.31	1.97	0.12	1.76
9"	8.858 (225mm)	8.86	5.91	1.97	0.14	2.42
10"	9.843 (250mm)	9.84	6.69	1.97	0.14	2.99
11"	11.024 (280mm)	11.02	7.28	1.97	0.16	4.18
12"	12.402 (315mm)	12.40	8.27	1.97	0.20	6.16
14"	13.976 (355mm)	13.98	9.25	1.97	0.20	7.70
16"	15.748 (400mm)	15.75	10.43	2.36	0.24	11.66
18"	17.717 (450mm)	17.72	11.81	2.36	0.24	15.40
20"	19.685 (500mm)	19.69	12.80	2.36	0.24	21.56
24"	24.803 (630mm)	24.80	16.54	3.54	0.31	32.34

Saddle cut to match size as pipe. ie: 110mm cut for 110mm Pipe

Saddle can be cut to fit larger pipe upon request ie: 110mm cut for 400mm pipe



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

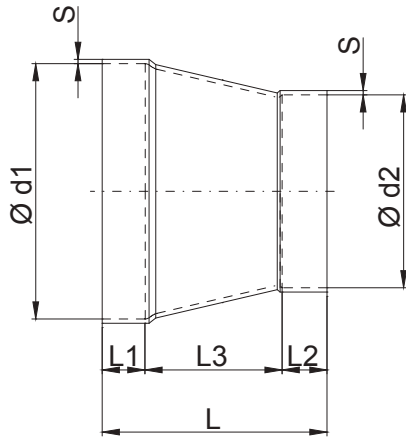
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	s in	Weight Lbs
2½" x 2"	2.953 (75mm) x 2.480 (63mm)	2.95	2.48	3.74	1.38	1.38	1.38	0.12	0.22
3" x 2"	3.543 (90mm) x 2.480 (63mm)	3.54	2.48	4.92	1.38	1.38	2.56	0.12	0.22
3" x 2½"	3.543 (90mm) x 2.953 (75mm)	3.54	2.95	4.33	1.38	1.38	1.57	0.12	0.22
4" x 2"	4.331 (110mm) x 2.480 (63mm)	4.33	2.48	6.50	1.57	1.38	3.94	0.12	0.22
4" x 2½"	4.331 (110mm) x 2.953 (75mm)	4.33	2.95	6.69	1.57	1.38	3.74	0.12	0.44
4" x 3"	4.331 (110mm) x 3.543 (90mm)	4.33	3.54	4.92	1.57	1.38	1.97	0.12	0.44
4½" x 2"	4.921 (125mm) x 2.480 (63mm)	4.92	2.48	7.68	1.57	1.38	5.12	0.12	0.44
4½" x 2½"	4.921 (125mm) x 2.953 (75mm)	4.92	2.95	7.28	1.57	1.38	4.33	0.12	0.44
4½" x 3"	4.921 (125mm) x 3.543 (90mm)	4.92	3.54	6.10	1.57	1.38	3.15	0.12	0.44
4½" x 4"	4.921 (125mm) x 4.331 (110mm)	4.92	4.33	4.53	1.57	1.57	1.57	0.12	0.22
5" x 2"	5.512 (140mm) x 2.480 (63mm)	5.51	2.48	9.25	1.57	1.38	6.30	0.12	0.44
5" x 2½"	5.512 (140mm) x 2.953 (75mm)	5.51	2.95	8.27	1.57	1.38	5.31	0.12	0.44
5" x 3"	5.512 (140mm) x 3.543 (90mm)	5.51	3.54	7.28	1.57	1.38	4.33	0.12	0.44
5" x 4"	5.512 (140mm) x 4.331 (110mm)	5.51	4.33	5.91	1.57	1.57	2.76	0.12	0.44
5" x 4"	5.512 (140mm) x 4.921 (125mm)	5.51	4.92	4.72	1.57	1.57	1.57	0.12	0.44
6" x 2"	6.299 (160mm) x 2.480 (63mm)	6.30	2.48	10.24	1.57	1.38	7.68	0.14	0.66
6" x 2½"	6.299 (160mm) x 2.953 (75mm)	6.30	2.95	9.84	1.57	1.38	6.69	0.14	0.66
6" x 3"	6.299 (160mm) x 3.543 (90mm)	6.30	3.54	8.66	1.57	1.38	5.71	0.14	0.66
6" x 4"	6.299 (160mm) x 4.331 (110mm)	6.30	4.33	7.28	1.57	1.38	4.33	0.14	0.66
6" x 4½"	6.299 (160mm) x 4.921 (125mm)	6.30	4.92	6.30	1.57	1.57	3.15	0.14	0.44
6" x 5"	6.299 (160mm) x 5.512 (140mm)	6.30	5.51	5.12	1.57	1.57	1.97	0.14	0.44
7" x 2"	7.087 (180mm) x 2.480 (63mm)	7.09	2.48	12.20	1.97	1.38	9.06	0.14	0.88
7" x 2½"	7.087 (180mm) x 2.953 (75mm)	7.09	2.95	11.61	1.97	1.38	8.27	0.14	0.88
7" x 3"	7.087 (180mm) x 3.543 (90mm)	7.09	3.54	10.63	1.97	1.38	7.09	0.14	0.66
7" x 4"	7.087 (180mm) x 4.331 (110mm)	7.09	4.33	9.25	1.97	1.57	5.71	0.14	0.66
7" x 4½"	7.087 (180mm) x 4.921 (125mm)	7.09	4.92	8.27	1.97	1.57	4.53	0.14	0.66
7" x 5"	7.087 (180mm) x 5.512 (140mm)	7.09	5.51	7.09	1.97	1.57	3.54	0.14	0.66
7" x 6"	7.087 (180mm) x 6.299 (160mm)	7.09	6.30	5.51	1.97	1.57	1.97	0.14	0.44



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

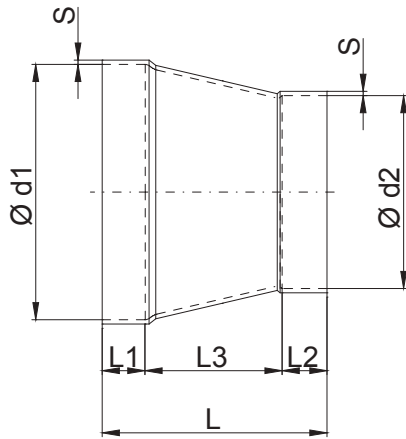
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	S in	Weight Lbs
8" x 2"	7.874 (200mm) x 2.480 (63mm)	7.87	2.48	13.58	1.97	0.98	10.63	0.12	0.88
8" x 2½"	7.874 (200mm) x 2.953 (75mm)	7.87	2.95	12.99	1.97	1.38	9.84	0.12	0.88
8" x 3"	7.874 (200mm) x 3.543 (90mm)	7.87	3.54	12.01	1.97	1.38	8.66	0.12	0.88
8" x 4"	7.874 (200mm) x 4.331 (110mm)	7.87	4.33	11.81	1.97	1.57	8.27	0.12	0.88
8" x 4½"	7.874 (200mm) x 4.921 (125mm)	7.87	4.92	9.65	1.97	1.57	6.10	0.12	0.88
8" x 5"	7.874 (200mm) x 5.512 (140mm)	7.87	5.51	8.46	1.97	1.57	4.92	0.12	0.66
8" x 6"	7.874 (200mm) x 6.299 (160mm)	7.87	6.30	7.68	1.97	1.97	3.74	0.12	0.88
8" x 7"	7.874 (200mm) x 7.087 (180mm)	7.87	7.09	6.10	1.97	1.97	1.97	0.12	0.66
9" x 2"	8.858 (225mm) x 2.480 (63mm)	8.86	2.48	15.35	1.97	0.98	12.40	0.12	1.10
9" x 2½"	8.858 (225mm) x 2.953 (75mm)	8.86	2.95	14.96	1.97	1.38	11.61	0.12	1.10
9" x 3"	8.858 (225mm) x 3.543 (90mm)	8.86	3.54	13.78	1.97	1.38	10.43	0.12	1.10
9" x 4"	8.858 (225mm) x 4.331 (110mm)	8.86	4.33	12.60	1.97	1.57	9.06	0.12	1.10
9" x 4½"	8.858 (225mm) x 4.921 (125mm)	8.86	4.92	11.42	1.97	1.57	7.87	0.12	1.10
9" x 5"	8.858 (225mm) x 5.512 (140mm)	8.86	5.51	10.24	1.97	1.57	6.69	0.12	0.88
9" x 6"	8.858 (225mm) x 6.299 (160mm)	8.86	6.30	8.86	1.97	1.57	5.31	0.12	0.88
9" x 7"	8.858 (225mm) x 7.087 (180mm)	8.86	7.09	7.87	1.97	1.97	3.94	0.12	0.88
9" x 8"	8.858 (225mm) x 7.874 (200mm)	8.86	7.87	6.30	1.97	1.97	2.36	0.12	0.66
10" x 2"	9.843 (250mm) x 2.480 (63mm)	9.84	2.48	17.32	1.97	0.98	14.37	0.14	1.76
10" x 2½"	9.843 (250mm) x 2.953 (75mm)	9.84	2.95	16.73	1.97	1.38	13.39	0.14	1.76
10" x 3"	9.843 (250mm) x 3.543 (90mm)	9.84	3.54	15.75	1.97	1.38	12.40	0.14	1.54
10" x 4"	9.843 (250mm) x 4.331 (110mm)	9.84	4.33	14.37	1.97	1.57	10.83	0.14	1.54
10" x 4½"	9.843 (250mm) x 4.921 (125mm)	9.84	4.92	13.19	1.97	1.57	9.84	0.14	1.54
10" x 5"	9.843 (250mm) x 5.512 (140mm)	9.84	5.51	12.20	1.97	1.57	8.66	0.14	1.54
10" x 6"	9.843 (250mm) x 6.299 (160mm)	9.84	6.30	11.22	1.97	1.57	7.68	0.14	1.32
10" x 7"	9.843 (250mm) x 7.087 (180mm)	9.84	7.09	10.04	1.97	1.97	5.71	0.14	1.32
10" x 8"	9.843 (250mm) x 7.874 (200mm)	9.84	7.87	8.46	1.97	1.97	4.53	0.14	1.32
10" x 9"	9.843 (250mm) x 8.858 (225mm)	9.84	8.86	6.50	1.97	1.97	2.56	0.14	0.88



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

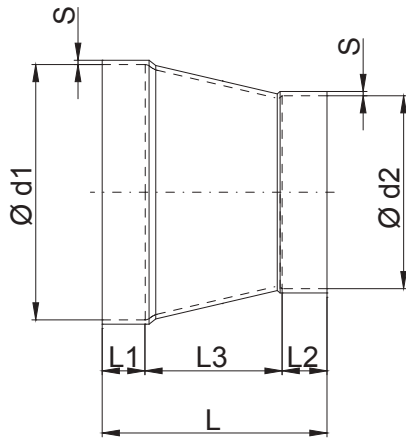
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	S in	Weight Lbs
11" x 4"	11.024 (280mm) x 4.331 (110mm)	11.02	4.33	16.73	1.97	1.57	13.19	0.14	1.98
11" x 4½"	11.024 (280mm) x 4.921 (125mm)	11.02	4.92	15.55	1.97	1.57	12.01	0.14	1.98
11" x 5"	11.024 (280mm)x 5.512 (140mm)	11.02	5.51	14.37	1.97	1.57	10.83	0.14	1.76
11" x 6"	11.024 (280mm) x 6.299 (160mm)	11.02	6.30	13.39	1.97	1.97	9.45	0.14	1.76
11" x 7"	11.024 (280mm) x 7.087 (180mm)	11.02	7.09	12.01	1.97	1.97	8.07	0.14	1.76
11" x 8"	11.024 (280mm) x 7.874 (200mm)	11.02	7.87	10.43	1.97	1.97	6.50	0.14	1.54
11" x 9"	11.024 (280mm) x 8.858 (225mm)	11.02	8.86	8.66	1.97	1.97	4.72	0.14	1.54
11" x 10"	11.024 (280mm) x 9.843 (250mm)	11.02	9.84	6.69	1.97	1.97	2.76	0.14	1.10
12" x 4"	12.402 (315mm) x 4.331 (110mm)	12.40	4.33	18.50	1.97	1.57	14.96	0.16	2.20
12" x 4½"	12.402 (315mm) x 4.921 (125mm)	12.40	4.92	18.11	1.97	1.57	14.57	0.16	2.86
12" x 5"	12.402 (315mm)x 5.512 (140mm)	12.40	5.51	17.13	1.97	1.57	13.58	0.16	2.64
12" x 6"	12.402 (315mm) x 6.299 (160mm)	12.40	6.30	15.55	1.97	1.57	12.01	0.16	2.64
12" x 7"	12.402 (315mm) x 7.087 (180mm)	12.40	7.09	14.17	1.97	1.57	10.63	0.16	2.42
12" x 8"	12.402 (315mm) x 7.874 (200mm)	12.40	7.87	13.19	1.97	1.97	9.25	0.16	2.42
12" x 9"	12.402 (315mm) x 8.858 (225mm)	12.40	8.86	11.22	1.97	1.97	7.28	0.18	2.42
12" x 10"	12.402 (315mm) x 9.843 (250mm)	12.40	9.84	9.45	1.97	1.97	5.51	0.18	1.98
12" x 11"	12.402 (315mm) x 11.024 (280mm)	12.40	11.02	7.28	1.97	1.97	3.35	0.18	1.76
14" x 6"	13.976 (355mm) x 6.299 (160mm)	13.98	6.30	19.09	1.97	1.97	15.16	0.20	4.18
14" x 7"	13.976 (355mm) x 7.087 (180mm)	13.98	7.09	17.52	1.97	1.97	13.58	0.20	3.96
14" x 8"	13.976 (355mm) x 7.874 (200mm)	13.98	7.87	16.14	1.97	1.97	12.20	0.20	3.74
14" x 9"	13.976 (355mm) x 8.858 (225mm)	13.98	8.86	14.17	1.97	1.97	10.24	0.20	3.52
14" x 10"	13.976 (355mm) x 9.843 (250mm)	13.98	9.84	12.40	1.97	1.97	8.46	0.18	2.86
14" x 11"	13.976 (355mm) x 11.024 (280mm)	13.98	11.02	10.24	1.97	1.97	6.30	0.20	2.86
14" x 12"	13.976 (355mm) x 12.402 (315mm)	13.98	12.40	8.07	2.36	1.97	3.74	0.20	2.20
16" x 6"	15.748 (400mm) x 6.299 (160mm)	15.75	6.30	22.83	2.36	1.97	18.50	0.20	5.50
16" x 7"	15.748 (400mm) x 7.087 (180mm)	15.75	7.09	21.26	2.36	1.97	16.93	0.20	5.28



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

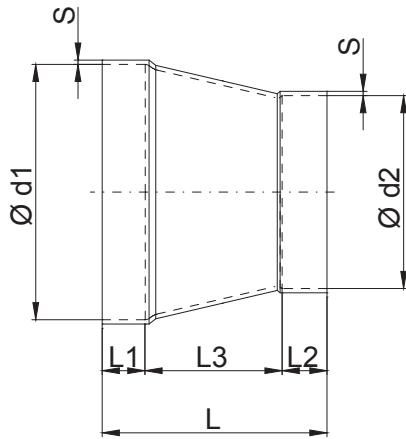
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	S in	Weight Lbs
16" x 8"	15.748 (400mm) x 7.874 (200mm)	15.75	7.87	19.69	2.36	1.97	15.35	0.20	5.06
16" x 9"	15.748 (400mm) x 8.858 (225mm)	15.75	8.86	17.91	2.36	1.97	13.58	0.20	4.84
16" x 10"	15.748 (400mm) x 9.843 (250mm)	15.75	9.84	16.14	2.36	1.97	11.81	0.20	4.62
16" x 11"	15.748 (400mm) x 11.024 (280mm)	15.75	11.02	13.98	2.36	1.97	9.65	0.20	4.18
16" x 12"	15.748 (400mm) x 12.402 (315mm)	15.75	12.40	11.42	2.36	1.97	7.09	0.20	3.52
16" x 14"	15.748 (400mm) x 13.976 (355mm)	15.75	13.98	8.46	2.36	1.97	4.13	0.20	2.86
18" x 8"	17.717 (450mm) x 7.874 (200mm)	17.72	7.87	23.62	2.36	1.97	19.29	0.24	7.92
18" x 9"	17.717 (450mm) x 8.858 (225mm)	17.72	8.86	21.65	2.36	1.97	17.32	0.24	7.48
18" x 10"	17.717 (450mm) x 9.843 (250mm)	17.72	9.84	19.88	2.36	1.97	15.55	0.24	7.26
18" x 11"	17.717 (450mm) x 11.024 (280mm)	17.72	11.02	17.72	2.36	1.97	13.39	0.24	6.60
18" x 12"	17.717 (450mm) x 12.402 (315mm)	17.72	12.40	15.16	2.36	1.97	10.83	0.24	5.94
18" x 14"	17.717 (450mm) x 13.976 (355mm)	17.72	13.98	12.20	2.36	1.97	7.87	0.24	5.06
18" x 16"	17.717 (450mm) x 15.748 (400mm)	17.72	15.75	9.25	2.36	2.36	4.53	0.24	4.18
20" x 8"	19.685 (500mm) x 7.874 (200mm)	19.69	7.87	26.77	1.97	1.97	22.83	0.24	9.68
20" x 9"	19.685 (500mm) x 8.858 (225mm)	19.69	8.86	25.00	1.97	1.97	21.06	0.24	9.24
20" x 10"	19.685 (500mm) x 9.843 (250mm)	19.69	9.84	24.02	2.76	1.97	19.29	0.24	9.24
20" x 11"	19.685 (500mm) x 11.024 (280mm)	19.69	11.02	21.85	2.76	1.97	17.13	0.24	8.80
20" x 12"	19.685 (500mm) x 12.402 (315mm)	19.69	12.40	19.69	2.56	2.56	14.57	0.24	8.14
20" x 14"	19.685 (500mm) x 13.976 (355mm)	19.69	13.98	16.14	2.56	1.97	11.61	0.24	7.04
20" x 16"	19.685 (500mm) x 15.748 (400mm)	19.69	15.75	13.19	2.76	2.17	8.27	0.24	6.16
20" x 16"	19.685 (500mm) x 17.717 (450mm)	19.69	17.72	9.65	2.76	2.36	4.53	0.24	4.84
22" x 10"	22.047 (560mm) x 9.843 (250mm)	22.05	9.84	28.35	2.76	1.97	23.62	0.24	11.88
22" x 11"	22.047 (560mm) x 11.024 (280mm)	22.05	11.02	26.18	2.76	1.97	21.46	0.24	11.44
22" x 12"	22.047 (560mm) x 12.402 (315mm)	22.05	12.40	23.62	2.76	1.97	18.90	0.24	10.56
22" x 14"	22.047 (560mm) x 13.976 (355mm)	22.05	13.98	20.67	2.76	1.97	15.94	0.24	9.68
22" x 16"	22.047 (560mm) x 15.748 (400mm)	22.05	15.75	18.31	3.54	2.17	12.60	0.24	9.24
22" x 18"	22.047 (560mm) x 17.717 (450mm)	22.05	17.72	14.96	3.54	2.36	9.06	0.24	7.92
22" x 20"	22.047 (560mm) x 19.685 (500mm)	22.05	19.69	11.22	3.54	2.36	5.31	0.24	6.16



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

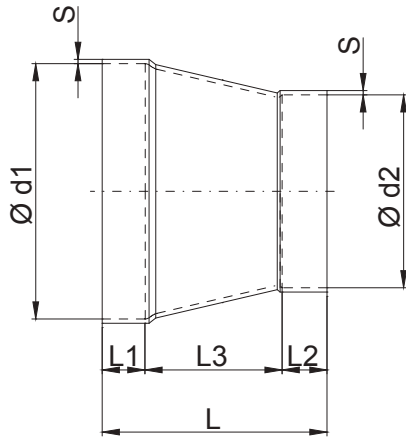
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	S in	Weight Lbs
24" x 11"	24.803 (630mm) x 11.024 (280mm)	24.80	11.02	31.30	2.76	1.97	26.57	0.24	14.74
24" x 12"	24.803 (630mm) x 12.402 (315mm)	24.80	12.40	28.74	2.76	1.97	24.02	0.24	14.08
24" x 14"	24.803 (630mm) x 13.976 (355mm)	24.80	13.98	25.79	2.76	1.97	21.06	0.24	13.20
24" x 16"	24.803 (630mm) x 15.748 (400mm)	24.80	15.75	23.82	3.94	2.17	17.72	0.24	12.76
24" x 18"	24.803 (630mm) x 17.717 (450mm)	24.80	17.72	20.47	3.94	2.36	14.17	0.24	11.44
24" x 20"	24.803 (630mm) x 19.685 (500mm)	24.80	19.69	16.73	3.94	2.36	10.43	0.24	9.90
24" x 22"	24.803 (630mm) x 22.047 (560mm)	24.80	22.05	12.80	3.94	2.76	6.10	0.24	7.92
28" x 12"	27.953 (710mm) x 12.402 (315mm)	27.95	12.40	36.81	4.72	1.97	30.12	0.31	26.62
28" x 14"	27.953 (710mm) x 13.976 (355mm)	27.95	13.98	33.86	4.72	1.97	27.17	0.31	25.30
28" x 16"	27.953 (710mm) x 15.748 (400mm)	27.95	15.75	30.91	4.72	2.36	23.82	0.31	23.98
28" x 18"	27.953 (710mm) x 17.717 (450mm)	27.95	17.72	27.76	4.72	2.76	20.28	0.31	22.44
28" x 20"	27.953 (710mm) x 19.685 (500mm)	27.95	19.69	22.44	3.54	2.36	16.54	0.31	18.92
28" x 22"	27.953 (710mm) x 22.047 (560mm)	27.95	22.05	19.29	3.54	3.54	12.20	0.31	16.72
28" x 24"	27.953 (710mm) x 24.803 (630mm)	27.95	24.80	14.17	3.54	3.54	7.09	0.31	12.98
32" x 14"	31.496 (800mm) x 13.976 (355mm)	31.50	13.98	40.55	4.72	1.97	33.86	0.31	32.78
32" x 16"	31.496 (800mm) x 15.748 (400mm)	31.50	15.75	37.60	4.72	2.36	30.51	0.31	31.46
32" x 18"	31.496 (800mm) x 17.717 (450mm)	31.50	17.72	34.25	4.72	2.76	26.77	0.31	29.92
32" x 20"	31.496 (800mm) x 19.685 (500mm)	31.50	19.69	29.53	3.94	2.36	23.23	0.31	26.62
32" x 22"	31.496 (800mm) x 22.047 (560mm)	31.50	22.05	26.18	3.94	3.54	18.70	0.31	24.64
32" x 24"	31.496 (800mm) x 24.803 (630mm)	31.50	24.80	21.06	3.94	3.54	13.58	0.31	20.68
32" x 28"	31.496 (800mm) x 27.953 (710mm)	31.50	27.95	15.16	3.94	3.54	7.68	0.31	15.84
36" x 16"	35.433 (900mm) x 15.748 (400mm)	35.43	15.75	45.28	4.72	2.76	37.80	0.31	40.92
36" x 18"	35.433 (900mm) x 17.717 (450mm)	35.43	17.72	41.73	4.72	2.76	34.25	0.31	39.16
36" x 20"	35.433 (900mm) x 19.685 (500mm)	35.43	19.69	37.99	4.72	2.76	30.51	0.31	36.96
36" x 22"	35.433 (900mm) x 22.047 (560mm)	35.43	22.05	33.66	4.72	2.76	26.18	0.31	34.10
36" x 24"	35.433 (900mm) x 24.803 (630mm)	35.43	24.80	28.74	4.72	2.76	21.26	0.39	38.06
36" x 28"	35.433 (900mm) x 27.953 (710mm)	35.43	27.95	24.80	4.72	4.72	15.35	0.39	34.32
36" x 32"	35.433 (900mm) x 31.496 (800mm)	35.43	31.50	18.11	4.72	4.72	8.66	0.39	26.62



## Concentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

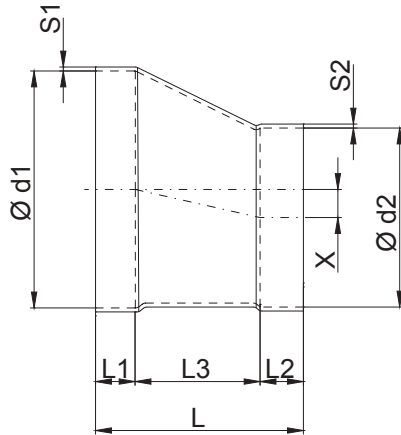
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	S in	Weight Lbs
39" x 20"	39.370 (1000mm) x 19.685 (500mm)	39.37	19.69	45.47	4.72	2.76	37.99	0.39	59.40
39" x 22"	39.370 (1000mm) x 22.047 (560mm)	39.37	22.05	41.14	4.72	2.76	33.66	0.39	55.66
39" x 24"	39.370 (1000mm) x 24.803 (630mm)	39.37	24.80	36.02	4.72	2.76	28.54	0.39	51.04
39" x 28"	39.370 (1000mm) x 27.953 (710mm)	39.37	27.95	32.09	4.72	4.72	22.64	0.39	47.08
39" x 32"	39.370 (1000mm) x 31.496 (800mm)	39.37	31.50	25.39	4.72	4.72	15.94	0.39	39.38
39" x 36"	39.370 (1000mm) x 35.433 (900mm)	39.37	35.43	18.11	4.72	4.72	8.66	0.39	29.70
49" x 24"	49.213 (1250mm) x 24.803 (630mm)	49.21	24.80	53.15	4.72	2.76	45.67	0.39	87.78
49" x 28"	49.213 (1250mm) x 27.953 (710mm)	49.21	27.95	49.21	4.72	4.72	39.76	0.39	84.70
49" x 32"	49.213 (1250mm) x 31.496 (800mm)	49.21	31.50	42.91	4.72	4.72	33.46	0.39	77.00
49" x 36"	49.213 (1250mm) x 35.433 (900mm)	49.21	35.43	35.83	4.72	4.72	26.38	0.39	67.54
49" x 39"	49.213 (1250mm) x 39.370 (1000mm)	49.21	39.37	28.15	4.72	4.72	18.70	0.39	55.66
55" x 28"	55.118 (1400mm) x 27.953 (710mm)	55.12	27.95	60.24	4.72	4.72	50.79	0.47	134.20
55" x 32"	55.118 (1400mm) x 31.496 (800mm)	55.12	31.50	53.54	4.72	4.72	44.09	0.47	124.08
55" x 36"	55.118 (1400mm) x 35.433 (900mm)	55.12	35.43	46.06	4.72	4.72	36.61	0.47	111.54
55" x 39"	55.118 (1400mm) x 39.370 (1000mm)	55.12	39.37	38.78	4.72	4.72	29.33	0.47	97.90
55" x 49"	55.118 (1400mm) x 49.213 (1250mm)	55.12	49.21	20.47	4.72	4.72	11.02	0.47	57.20



## Eccentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

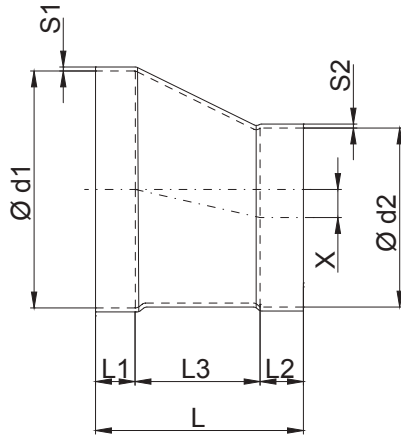
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	D1 in	D2 in	L in	L1 in	L2 in	L3 in	X in	S in	S1 in
4" x 3"	4.331 (110mm) x 3.543 (90mm)	4.33	3.54	4.72	1.57	1.38	1.77	0.39	0.12	0.12
6" x 3"	6.299 (160mm) x 3.543 (90mm)	6.30	3.54	8.07	1.57	1.38	5.12	1.38	0.12	0.12
6" x 4"	6.299 (160mm) x 4.331 (110mm)	6.30	4.33	6.89	1.57	1.57	3.74	0.98	0.12	0.12
6" x 4½"	6.299 (160mm) x 4.921 (125mm)	6.30	4.92	5.91	1.57	1.57	2.76	0.69	0.12	0.12
6" x 5"	6.299 (160mm) x 5.512 (140mm)	6.30	5.51	4.92	1.57	1.57	1.77	0.39	0.12	0.12
8" x 3"	7.874 (200mm) x 3.543 (90mm)	7.87	3.54	11.22	1.97	1.38	7.87	2.17	0.12	0.12
8" x 4"	7.874 (200mm) x 4.331 (110mm)	7.87	4.33	10.04	1.97	1.57	6.50	1.77	0.12	0.12
8" x 6"	7.874 (200mm) x 6.299 (160mm)	7.87	6.30	6.69	1.97	1.57	3.15	0.79	0.12	0.12
10" x 3"	9.843 (250mm) x 3.543 (90mm)	9.84	3.54	14.57	1.97	1.38	11.22	3.15	0.14	0.12
10" x 4"	9.843 (250mm) x 4.331 (110mm)	9.84	4.33	13.39	1.97	1.57	9.84	2.76	0.14	0.12
10" x 6"	9.843 (250mm) x 6.299 (160mm)	9.84	6.30	10.04	1.97	1.57	6.50	1.77	0.14	0.12
10" x 8"	9.843 (250mm) x 7.874 (200mm)	9.84	7.87	7.68	1.97	1.97	3.74	0.98	0.14	0.12
12" x 4"	12.402 (315mm) x 4.331 (110mm)	12.40	4.33	17.91	1.97	1.57	14.37	4.04	0.20	0.12
12" x 6"	12.402 (315mm) x 6.299 (160mm)	12.40	6.30	14.57	1.97	1.57	11.02	3.05	0.20	0.12
12" x 8"	12.402 (315mm) x 7.874 (200mm)	12.40	7.87	12.20	1.97	1.97	8.27	2.26	0.20	0.12
12" x 10"	12.402 (315mm) x 9.843 (250mm)	12.40	9.84	8.86	1.97	1.97	4.92	1.28	0.20	0.14
14" x 6"	13.976 (355mm) x 6.299 (160mm)	13.98	6.30	17.32	1.97	1.57	13.78	3.84	0.20	0.12
14" x 8"	13.976 (355mm) x 7.874 (200mm)	13.98	7.87	14.96	1.97	1.97	11.02	3.05	0.20	0.12
14" x 10"	13.976 (355mm) x 9.843 (250mm)	13.98	9.84	11.42	1.97	1.97	7.48	2.07	0.20	0.14
14" x 12"	13.976 (355mm) x 12.402 (315mm)	13.98	12.40	7.09	1.97	1.97	3.15	0.79	0.20	0.20
16" x 6"	15.748 (400mm) x 6.299 (160mm)	15.75	6.30	20.67	2.36	1.57	16.73	4.72	0.24	0.12
16" x 8"	15.748 (400mm) x 7.874 (200mm)	15.75	7.87	18.31	2.36	1.97	13.98	3.94	0.24	0.12
16" x 10"	15.748 (400mm) x 9.843 (250mm)	15.75	9.84	14.96	2.36	1.97	10.63	2.95	0.24	0.14
16" x 12"	15.748 (400mm) x 12.402 (315mm)	15.75	12.40	10.63	2.36	1.97	6.30	1.67	0.24	0.20
16" x 14"	15.748 (400mm) x 13.976 (355mm)	15.75	13.98	7.87	2.36	1.97	3.54	0.89	0.24	0.20
18" x 8"	17.717 (450mm) x 7.874 (200mm)	17.72	7.87	21.85	2.36	1.97	17.52	4.92	0.24	0.12
18" x 10"	17.717 (450mm) x 9.843 (250mm)	17.72	9.84	18.31	2.36	1.97	13.98	3.94	0.24	0.14
18" x 12"	17.717 (450mm) x 12.402 (315mm)	17.72	12.40	13.98	2.36	1.97	9.65	2.66	0.24	0.20
18" x 14"	17.717 (450mm) x 13.976 (355mm)	17.72	13.98	15.16	2.36	1.97	6.89	1.87	0.24	0.20





## Eccentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

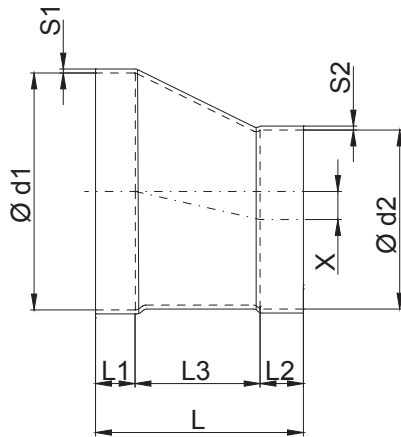
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	X in	s in	s in
18" x 16"	17.717 (450mm) x 15.748 (400mm)	17.72	15.75	8.07	2.36	1.97	3.74	0.98	0.24	0.24
20" x 8"	19.685 (500mm) x 7.874 (200mm)	19.69	7.87	25.20	2.36	1.97	20.87	5.91	0.24	0.12
20" x 10"	19.685 (500mm) x 9.843 (250mm)	19.69	9.84	21.85	2.36	1.97	17.52	4.92	0.24	0.14
20" x 11"	19.685 (500mm) x 11.024 (280mm)	19.69	11.02	19.69	2.36	1.97	15.35	4.33	0.24	0.16
20" x 12"	19.685 (500mm) x 12.402 (315mm)	19.69	12.40	17.32	2.36	1.97	12.99	3.64	0.24	0.20
20" x 14"	19.685 (500mm) x 13.976 (355mm)	19.69	13.98	14.57	2.36	1.97	10.24	2.85	0.24	0.20
20" x 16"	19.685 (500mm) x 15.748 (400mm)	19.69	15.75	12.01	2.36	2.36	7.28	1.97	0.24	0.24
22" x 10"	22.047 (560mm) x 9.843 (250mm)	22.05	9.84	26.97	3.54	1.97	21.46	6.10	0.24	0.14
22" x 11"	22.047 (560mm) x 8.858 (225mm)	22.05	11.02	24.80	3.54	1.97	19.29	5.51	0.24	0.16
22" x 12"	22.047 (560mm) x 12.402 (315mm)	22.05	12.40	22.44	3.54	1.97	16.93	4.82	0.24	0.20
22" x 14"	22.047 (560mm) x 13.976 (355mm)	22.05	13.98	19.69	3.54	1.97	14.17	4.04	0.24	0.20
22" x 16"	22.047 (560mm) x 15.748 (400mm)	22.05	15.75	17.13	3.54	2.36	11.22	3.15	0.24	0.24
22" x 18"	22.047 (560mm) x 17.717 (450mm)	22.05	17.72	13.58	3.54	2.36	7.68	2.17	0.24	0.24
22" x 20"	22.047 (560mm) x 19.685 (500mm)	22.05	19.69	10.24	3.54	2.36	4.33	1.18	0.24	0.24
24" x 11"	24.803 (630mm) x 11.024 (280mm)	24.80	11.02	29.53	3.54	1.97	24.02	6.89	0.24	0.16
24" x 12"	24.803 (630mm) x 12.402 (315mm)	24.80	12.40	27.17	3.54	1.97	21.65	6.20	0.24	0.20
24" x 14"	24.803 (630mm) x 13.976 (355mm)	24.80	13.98	24.41	3.54	1.97	18.90	5.41	0.24	0.20
24" x 16"	24.803 (630mm) x 15.748 (400mm)	24.80	15.75	21.85	3.54	2.36	15.94	4.53	0.24	0.24
24" x 18"	24.803 (630mm) x 17.717 (450mm)	24.80	17.72	18.31	3.54	2.36	12.40	3.54	0.24	0.24
24" x 20"	24.803 (630mm) x 19.685 (500mm)	24.80	19.69	14.96	3.54	2.36	9.06	2.56	0.24	0.24
24" x 22"	24.803 (630mm) x 22.047 (560mm)	24.80	22.05	11.81	3.54	3.54	4.72	1.38	0.24	0.24
28" x 12"	27.953 (710mm) x 12.402 (315mm)	27.95	12.40	32.68	3.54	1.97	27.17	7.78	0.31	0.20
28" x 14"	27.953 (710mm) x 13.976 (355mm)	27.95	13.98	29.92	3.54	1.97	24.41	6.99	0.31	0.20
28" x 16"	27.953 (710mm) x 15.748 (400mm)	27.95	15.75	27.36	3.54	2.36	21.46	6.10	0.31	0.24
28" x 18"	27.953 (710mm) x 17.717 (450mm)	27.95	17.72	23.82	3.54	2.36	17.91	5.12	0.31	0.24
28" x 20"	27.953 (710mm) x 19.685 (500mm)	27.95	19.69	20.08	3.54	1.97	14.57	4.13	0.31	0.24
28" x 22"	27.953 (710mm) x 22.047 (560mm)	27.95	22.05	17.32	3.54	3.54	10.24	2.95	0.31	0.24
28" x 24"	27.953 (710mm) x 24.803 (630mm)	27.95	24.80	12.60	3.54	3.54	5.51	1.57	0.31	0.24



## Eccentric Reducer



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

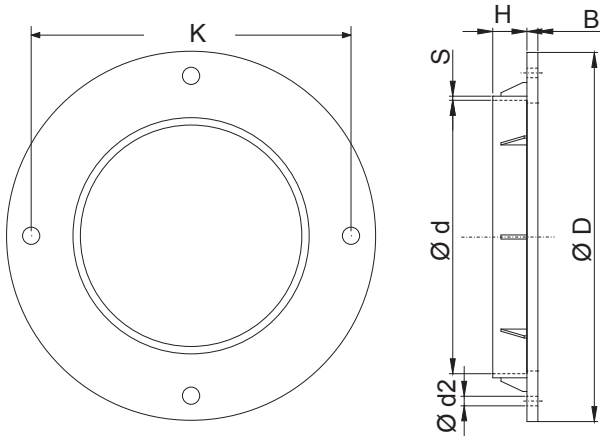
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d1 in	d2 in	L in	L1 in	L2 in	L3 in	X in	s in	s in
30" x 14"	31.496 (800mm) x 13.976 (355mm)	31.50	13.98	36.02	3.54	1.97	30.51	8.88	0.31	0.20
30" x 16"	31.496 (800mm) x 15.748 (400mm)	31.50	15.75	33.46	3.54	2.36	27.56	7.87	0.31	0.24
30" x 18"	31.496 (800mm) x 17.717 (450mm)	31.50	17.72	29.92	3.54	2.36	24.02	6.89	0.31	0.24
30" x 20"	31.496 (800mm) x 19.685 (500mm)	31.50	19.69	26.57	3.54	2.36	20.67	5.91	0.31	0.24
30" x 22"	31.496 (800mm) x 22.047 (560mm)	31.50	22.05	23.43	3.54	3.54	16.34	4.72	0.31	0.24
30" x 24"	31.496 (800mm) x 24.803 (630mm)	31.50	24.80	18.70	3.54	3.54	11.61	3.35	0.31	0.24
30" x 28"	31.496 (800mm) x 27.953 (710mm)	31.50	27.95	13.19	3.54	3.54	6.10	1.77	0.31	0.31
36" x 16"	35.433 (900mm) x 15.748 (400mm)	35.43	15.75	41.38	4.92	2.36	34.09	9.84	0.31	0.31
36" x 18"	35.433 (900mm) x 17.717 (450mm)	35.43	17.72	38.19	4.92	2.36	30.91	8.86	0.31	0.24
36" x 20"	35.433 (900mm) x 19.685 (500mm)	35.43	19.69	34.84	4.92	2.36	27.56	8.66	0.31	0.24
36" x 22"	35.433 (900mm) x 22.047 (560mm)	35.43	22.05	32.09	4.92	3.54	23.62	6.69	0.31	0.24
36" x 24"	35.433 (900mm) x 24.803 (630mm)	35.43	24.80	26.97	4.92	3.54	18.50	5.31	0.31	0.24
36" x 28"	35.433 (900mm) x 27.953 (710mm)	35.43	27.95	21.46	4.92	3.54	12.99	3.74	0.31	0.31
36" x 30"	35.433 (900mm) x 31.496 (800mm)	35.43	31.50	15.35	4.92	3.54	6.89	1.97	0.31	0.31
39" x 20"	39.370 (1000mm) x 19.685 (500mm)	39.37	19.69	41.14	4.92	1.97	34.25	9.84	0.39	0.24
39" x 22"	39.370 (1000mm) x 22.047 (560mm)	39.37	22.05	38.78	4.92	3.94	29.92	8.66	0.39	0.24
39" x 24"	39.370 (1000mm) x 24.803 (630mm)	39.37	24.80	34.06	4.92	3.94	25.20	7.28	0.39	0.24
39" x 28"	39.370 (1000mm) x 27.953 (710mm)	39.37	27.95	28.54	4.92	3.94	19.69	5.71	0.39	0.31
39" x 30"	39.370 (1000mm) x 31.496 (800mm)	39.37	31.50	23.43	4.92	4.92	13.58	3.94	0.39	0.31
39" x 36"	39.370 (1000mm) x 35.433 (900mm)	39.37	35.43	16.73	4.92	4.92	6.89	1.97	0.39	0.31
48" x 24"	49.213 (1250mm) x 24.803 (630mm)	49.21	24.80	51.18	4.92	3.94	42.32	12.20	0.39	0.24
48" x 28"	49.213 (1250mm) x 27.953 (710mm)	49.21	27.95	45.67	4.92	3.94	36.81	10.63	0.39	0.31
48" x 30"	49.213 (1250mm) x 31.496 (800mm)	49.21	31.50	40.55	4.92	4.92	30.71	8.86	0.39	0.31
48" x 36"	49.213 (1250mm) x 35.433 (900mm)	49.21	35.43	33.66	4.92	4.92	23.82	6.89	0.39	0.31
48" x 39"	49.213 (1250mm) x 39.370 (1000mm)	49.21	39.37	26.97	4.92	4.92	17.13	4.92	0.39	0.39
54" x 28"	55.118 (1400mm) x 27.953 (710mm)	55.12	27.95	57.87	6.89	3.94	47.05	13.58	0.47	0.31
54" x 30"	55.118 (1400mm) x 31.496 (800mm)	55.12	31.50	52.76	6.89	4.92	40.94	11.81	0.47	0.31
54" x 36"	55.118 (1400mm) x 35.433 (900mm)	55.12	35.43	45.87	6.89	4.92	34.06	9.84	0.47	0.31
54" x 39"	55.118 (1400mm) x 39.370 (1000mm)	55.12	39.37	39.17	6.89	4.92	27.36	7.87	0.47	0.39
54" x 48"	55.118 (1400mm) x 49.213 (1250mm)	55.12	49.21	22.05	6.89	4.92	10.24	2.95	0.47	0.39



## Flange



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

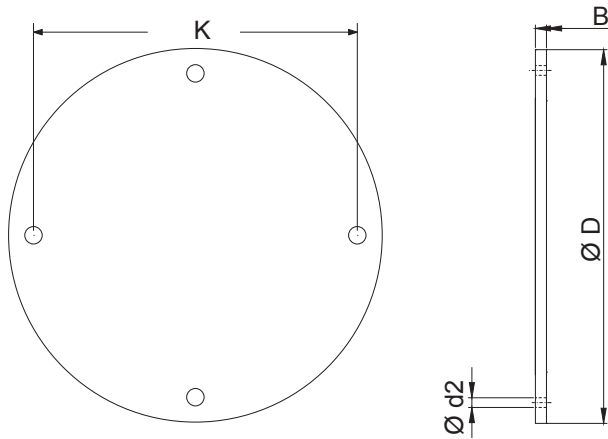
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	D in	B in	s in	K in	H in	d2 in	# Holes	Weight lbs
2"	2.480 (63mm)	2.48	4.72	0.31	0.12	3.94	0.98	0.28	4	0.22
2½"	2.953 (75mm)	2.95	5.31	0.31	0.12	4.53	0.98	0.28	4	0.22
3"	3.543 (90mm)	3.54	5.91	0.31	0.12	5.12	0.98	0.28	4	0.22
4"	4.331 (110mm)	4.33	6.69	0.31	0.16	5.91	0.98	0.28	4	0.44
4½"	4.921 (125mm)	4.92	7.28	0.31	0.16	6.50	0.98	0.28	8	0.44
5"	5.512 (140mm)	5.51	7.87	0.31	0.16	6.89	0.98	0.28	8	0.44
6"	6.299 (160mm)	6.30	9.06	0.31	0.16	7.87	0.98	0.28	8	0.44
7"	7.087 (180mm)	7.09	9.84	0.31	0.16	8.86	0.98	0.28	8	0.66
8"	7.874 (200mm)	7.87	10.63	0.31	0.16	9.45	0.98	0.28	8	0.66
9"	8.858 (225mm)	8.86	11.61	0.31	0.16	10.43	0.98	0.28	8	0.66
10"	9.843 (250mm)	9.84	12.60	0.39	0.16	11.42	0.98	0.28	12	0.66
11"	11.024 (280mm)	11.02	14.17	0.39	0.16	12.80	0.98	0.35	12	0.88
12"	12.402 (315mm)	12.40	15.55	0.39	0.18	13.78	0.98	0.35	12	1.10
14"	13.976 (355mm)	13.98	17.13	0.39	0.24	15.75	0.98	0.35	12	1.32
16"	15.748 (400mm)	15.75	18.90	0.39	0.26	17.52	0.98	0.35	16	1.76
18"	17.717 (450mm)	17.72	20.87	0.39	0.24	19.49	3.94	0.35	16	3.30
20"	19.685 (500mm)	19.69	22.83	0.47	0.24	21.46	3.94	0.35	20	3.52
22"	22.047 (560mm)	22.05	27.56	0.47	0.24	25.98	3.94	0.43	24	5.72
24"	24.803 (630mm)	24.80	28.74	0.47	0.24	27.56	3.94	0.43	24	5.94
28"	27.953 (710mm)	27.95	31.89	0.47	0.31	30.31	3.94	0.43	24	7.04
32"	31.496 (800mm)	31.50	35.43	0.47	0.31	33.86	3.94	0.43	32	8.14
36"	35.433 (900mm)	35.43	39.37	0.47	0.31	37.80	3.94	0.43	32	9.24
39"	39.370 (1000mm)	39.37	43.31	0.47	0.39	41.73	3.94	0.43	32	12.32
48"	49.213 (1250mm)	49.21	53.15	0.59	0.39	51.57	3.94	0.43	32	16.28



## Blind Flange



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

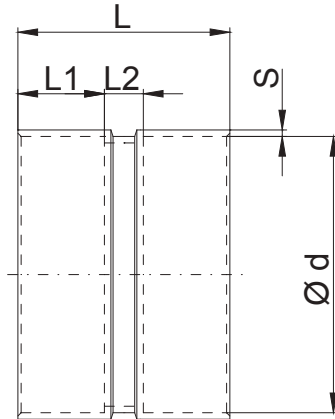
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	B in	D in	K in	# Holes	d2 in
2"	2.480 (63mm)	0.31	4.72	3.94	4	0.28
2½"	2.953 (75mm)	0.31	5.31	4.53	4	0.28
3"	3.543 (90mm)	0.31	5.91	5.12	4	0.28
4"	4.331 (110mm)	0.31	6.69	5.91	4	0.28
4½"	4.921 (125mm)	0.31	7.28	6.50	8	0.28
5"	5.512 (140mm)	0.31	7.87	6.89	8	0.28
6"	6.299 (160mm)	0.31	9.06	7.87	8	0.28
7"	7.087 (180mm)	0.31	9.84	8.86	8	0.28
8"	7.874 (200mm)	0.31	10.63	9.45	8	0.28
9"	8.858 (225mm)	0.31	11.61	10.43	8	0.28
10"	9.843 (250mm)	0.39	12.60	11.42	12	0.28
11"	11.024 (280mm)	0.39	14.17	12.80	12	0.35
12"	12.402 (315mm)	0.39	15.55	13.78	12	0.35
14"	13.976 (355mm)	0.39	17.13	15.75	12	0.35
16"	15.748 (400mm)	0.39	18.90	17.52	16	0.35
18"	17.717 (450mm)	0.39	20.87	19.49	16	0.35
20"	19.685 (500mm)	0.47	22.83	21.46	20	0.35
22"	22.047 (560mm)	0.47	27.56	25.98	24	0.43
24"	24.803 (630mm)	0.47	28.74	27.56	24	0.43
28"	27.953 (710mm)	0.47	31.89	30.31	24	0.43
30"	31.496 (800mm)	0.47	35.43	33.86	32	0.43
36"	35.433 (900mm)	0.47	39.37	37.80	32	0.43
39"	39.370 (1000mm)	0.47	43.31	41.73	32	0.43
48"	49.213 (1250mm)	0.59	53.15	51.57	32	0.43



## Coupling



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

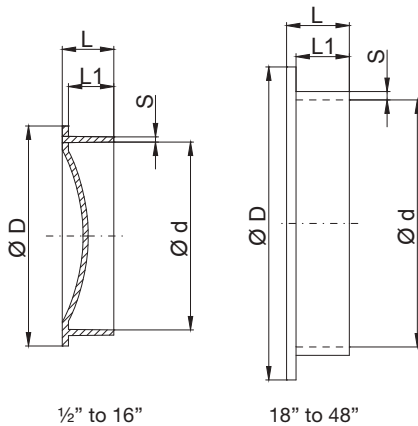
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	3.15	0.98	1.18	0.12	0.22
2½"	2.953 (75mm)	2.95	3.94	1.38	1.18	0.12	0.22
3"	3.543 (90mm)	3.54	3.94	1.38	1.18	0.12	0.22
4"	4.331 (110mm)	4.33	3.94	1.57	0.79	0.12	0.22
4½"	4.921 (125mm)	4.92	3.94	1.57	0.79	0.12	0.22
5"	5.512 (140mm)	5.51	3.94	1.57	0.79	0.12	0.44
6"	6.299 (160mm)	6.30	3.94	1.57	0.79	0.12	0.44
7"	7.087 (180mm)	7.09	3.94	1.57	0.79	0.12	0.44
8"	7.874 (200mm)	7.87	3.94	1.97	0.79	0.12	0.44
9"	8.858 (225mm)	8.86	4.72	1.97	0.79	0.14	0.66
10"	9.843 (250mm)	9.84	4.72	1.97	0.79	0.14	0.88
11"	11.024 (280mm)	11.02	4.72	1.97	0.79	0.16	0.88
12"	12.402 (315mm)	12.40	4.72	1.97	0.79	0.20	1.76
14"	13.976 (355mm)	13.98	5.31	1.97	0.98	0.20	1.98
16"	15.748 (400mm)	15.75	6.10	2.36	1.57	0.24	2.20
18"	17.717 (450mm)	17.72	6.30	2.36	1.57	0.24	2.64
20"	19.685 (500mm)	19.69	6.30	2.36	0.79	0.24	2.20
22"	22.047 (560mm)	22.05	6.69	3.54	1.18	0.24	4.40
24"	24.803 (630mm)	24.80	6.69	3.54	1.18	0.31	4.84
28"	27.953 (710mm)	27.95	8.46	3.54	1.38	0.31	7.26
32"	31.496 (800mm)	31.50	9.06	3.94	1.18	0.31	9.24
36"	35.433 (900mm)	35.43	7.87	3.94	0.00	0.31	11.44
39"	39.370 (1000mm)	39.37	7.87	3.94	0.00	0.31	15.84
48"	49.213 (1250mm)	49.21	9.84	4.92	0.00	0.39	19.80
54"	55.118 (1400mm)	55.12	13.78	6.89	0.00	0.47	31.24



## End Cap



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

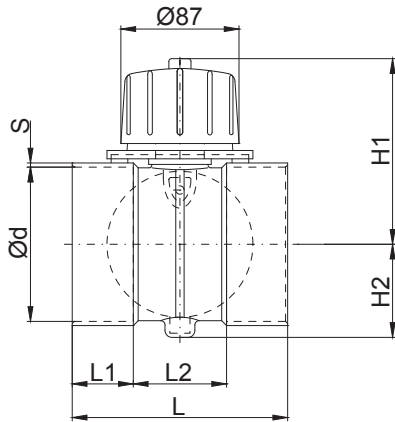
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	D in	L in	L1 in	S in
2"	2.480 (63mm)	2.480	3.150	0.984	0.866	0.118
2½"	2.953 (75mm)	2.953	3.543	0.984	0.866	0.118
3"	3.543 (90mm)	3.543	4.134	0.984	0.866	0.118
4"	4.331 (110mm)	4.331	5.512	1.063	0.945	0.138
4½"	4.921 (125mm)	4.921	6.102	1.102	0.906	0.138
5"	5.512 (140mm)	5.512	6.693	1.102	0.984	0.138
6"	6.299 (160mm)	6.299	7.480	1.102	0.984	0.138
7"	7.087 (180mm)	7.087	8.268	1.102	0.945	0.138
8"	7.874 (200mm)	7.874	9.055	1.102	0.945	0.138
9"	8.858 (225mm)	8.858	10.039	1.102	0.984	0.157
10"	9.843 (250mm)	9.843	11.024	1.102	0.984	0.157
11"	11.024 (280mm)	11.024	1.260	1.102	0.984	0.157
12"	12.402 (315mm)	12.402	13.858	1.102	0.945	0.157
14"	13.976 (355mm)	13.976	15.354	1.102	0.906	0.157
16"	15.748 (400mm)	15.748	17.008	1.142	0.984	0.236
18"	17.717 (450mm)	17.717	18.898	2.992	2.756	0.236
20"	19.685 (500mm)	19.685	20.866	2.992	2.756	0.236
22"	22.047 (560mm)	22.047	23.228	2.992	2.756	0.236
24"	24.803 (630mm)	24.803	25.984	2.992	2.756	0.236
28"	27.953 (710mm)	27.953	29.134	5.039	4.724	0.315
32"	31.496 (800mm)	31.496	33.465	5.039	4.724	0.315
36"	35.433 (900mm)	35.433	37.402	5.118	4.724	0.315
39"	39.370 (1000mm)	39.370	41.339	5.118	4.724	0.394
48"	49.213 (1250mm)	49.213	51.181	5.118	4.724	0.394



## Volume Control Damper w/ Continuous Adjustment Lock - 3" Through 16"



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

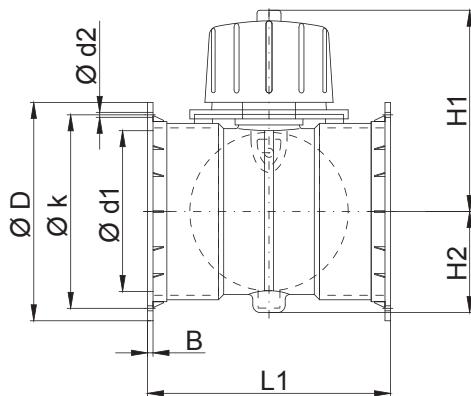
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L in	L1 in	L2 in	H1 in	H2 in	s in	Weight Lbs.
2"	2.480 (63mm)	2.48	5.12	1.38	2.36	4.21	1.73	0.12	0.44
2½"	2.953 (75mm)	2.95	5.12	1.38	2.36	4.45	1.97	0.12	0.44
3"	3.543 (90mm)	3.54	5.12	1.38	2.36	4.72	2.24	0.12	0.44
4"	4.331 (110mm)	4.33	6.10	1.57	2.95	5.12	2.64	0.12	0.66
4½"	4.921 (125mm)	4.92	5.91	1.57	2.76	5.43	3.19	0.12	0.66
5"	5.512 (140mm)	5.51	5.91	1.57	2.76	5.71	3.46	0.12	0.88
6"	6.299 (160mm)	6.30	5.98	1.57	2.83	6.10	3.86	0.16	0.88
7"	7.087 (180mm)	7.09	6.69	1.97	2.76	6.50	4.29	0.16	1.10
8"	7.874 (200mm)	7.87	6.69	1.97	2.76	6.89	4.65	0.16	1.32
9"	8.858 (225mm)	8.86	6.69	1.97	2.76	7.40	5.16	0.16	1.32
10"	9.843 (250mm)	9.84	6.69	1.97	2.76	7.87	5.71	0.16	1.76
11"	11.024 (280mm)	11.02	6.69	1.97	2.76	8.46	6.30	0.16	1.98
12"	12.402 (315mm)	12.40	6.69	1.97	2.76	9.17	7.01	0.16	2.42
14"	13.976 (355mm)	13.98	6.89	1.97	2.95	9.96	8.39	0.16	3.30
16"	15.748 (400mm)	15.75	7.87	1.97	3.15	10.83	9.25	0.16	4.18



## Volume Control Damper - Flanged



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

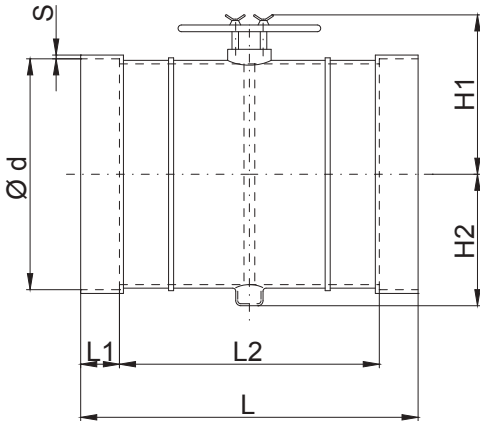
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	B in	d in	d1 in	d2 in	D in	L1 in	H1 in	H2 in	k in	Holes #	Weight Lbs
4"	4.331 (110mm)	0.31	4.33	4.17	0.28	6.69	8.46	5.12	2.64	5.91	4.0	1.54
4½"	4.921 (125mm)	0.31	4.92	4.76	0.28	7.28	8.27	5.43	3.19	6.50	8.0	1.76
5"	5.512 (140mm)	0.31	5.51	5.35	0.28	7.87	8.27	5.71	3.46	6.89	8.0	1.98
6"	6.299 (160mm)	0.31	6.30	6.14	0.28	9.06	8.27	6.10	3.86	7.87	8.0	2.20
7"	7.087 (180mm)	0.31	7.09	6.93	0.28	9.84	9.06	6.50	4.25	8.86	8.0	2.42
8"	7.874 (200mm)	0.31	7.87	7.72	0.28	10.63	9.06	6.89	4.65	9.45	8.0	2.64
9"	8.858 (225mm)	0.31	8.86	8.70	0.28	11.61	9.06	7.40	5.16	10.43	8.0	3.08
10"	9.843 (250mm)	0.39	9.84	9.69	0.28	12.60	9.25	7.87	5.71	11.42	12.0	3.96
11"	11.024 (280mm)	0.39	11.02	10.79	0.35	14.17	9.45	8.46	6.30	12.80	12.0	4.40
12"	12.402 (315mm)	0.39	12.40	12.17	0.35	15.55	9.45	9.17	7.01	13.78	12.0	5.94





## Volume Control Damper w/ Continuous Adjustment Lock - 18" Through 48"



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

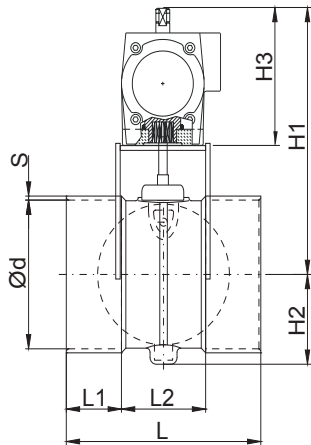
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H1 in	H2 in	L in	L1 in	L2 in	S in	Weight lbs
18"	17.717 (450mm)	17.72	12.40	10.24	17.72	1.97	13.78	0.24	16.50
20"	19.685 (500mm)	19.69	13.39	11.22	19.69	1.97	15.75	0.24	20.90
22"	22.047 (560mm)	22.05	14.57	12.40	22.05	1.97	18.11	0.24	24.20
24"	24.803 (630mm)	24.80	15.94	13.78	24.80	1.97	20.87	0.24	29.70
28"	27.953 (710mm)	27.95	17.52	15.75	27.95	2.76	22.44	0.31	41.80
32"	31.496 (800mm)	31.50	19.29	17.52	31.50	4.72	22.05	0.31	53.90
36"	35.433 (900mm)	35.43	21.26	19.49	35.43	4.72	25.98	0.31	70.40
39"	39.370 (1000mm)	39.37	23.23	21.46	39.37	4.72	29.92	0.39	99.00
48"	49.213 (1250mm)	49.21	28.15	26.38	49.21	4.72	39.76	0.39	176.00



## Pneumatically Actuated Volume Control Damper



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

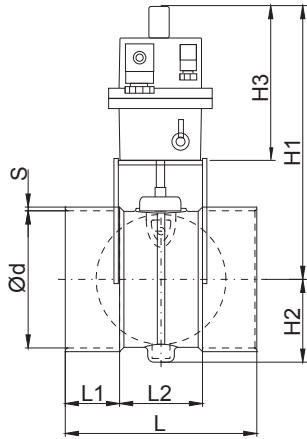
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H1 in	H2 in	H3 in	L in	L1 in	L2 in	S in	Weight lbs
3"	3.543 (90mm)	3.54	8.07	2.24	3.58	5.12	1.38	2.36	0.12	0.44
4"	4.331 (110mm)	4.33	8.86	2.64	3.58	6.10	1.57	2.36	0.12	0.66
6"	6.299 (160mm)	6.30	11.38	3.90	3.58	5.98	1.57	2.36	0.16	0.88
8"	7.874 (200mm)	7.87	12.95	4.69	3.58	6.69	1.97	2.36	0.16	1.32
10"	9.843 (250mm)	9.84	14.92	5.67	3.58	6.69	1.97	2.36	0.16	1.76
12"	12.402 (315mm)	12.40	18.23	6.93	4.37	6.69	1.97	2.36	0.16	2.42
14"	13.976 (355mm)	13.98	19.96	7.80	4.37	6.89	1.97	2.36	0.16	3.30
16"	15.748 (400mm)	15.75	21.69	8.66	4.37	7.87	1.97	2.36	0.16	4.18



## Electrically Actuated Volume Control Damper



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

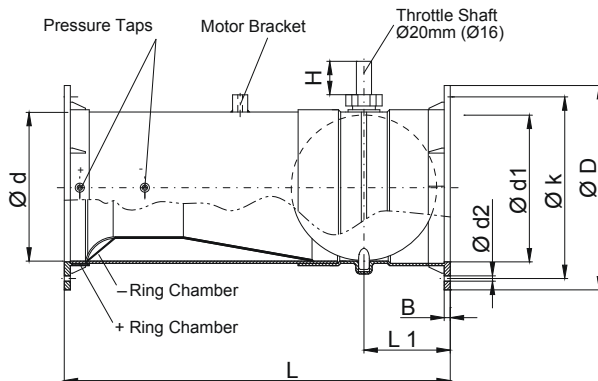
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H1 in	H2 in	H3 in	L in	L1 in	L2 in	S in	Weight lbs.
3"	3.543 (90mm)	3.54	10.28	2.24	5.79	5.12	1.38	2.36	0.12	6.44
4"	4.331 (110mm)	4.33	11.07	2.64	5.79	6.10	1.57	2.36	0.12	6.44
6"	6.299 (160mm)	6.30	13.59	3.90	5.79	5.98	1.57	2.36	0.16	6.44
8"	7.874 (200mm)	7.87	15.16	4.69	5.79	6.69	1.97	2.36	0.16	6.44
10"	9.843 (250mm)	9.84	17.13	5.67	5.79	6.69	1.97	2.36	0.16	6.66
12"	12.402 (315mm)	12.40	19.65	6.93	5.79	6.69	1.97	2.36	0.16	6.66
14"	13.976 (355mm)	13.98	21.38	7.80	5.79	6.89	1.97	2.36	0.16	6.88
16"	15.748 (400mm)	15.75	23.11	8.66	5.79	7.87	1.97	2.36	0.16	6.88
18"	17.717 (450mm)	17.72	14.76	10.24	7.72	20.67	2.36	15.94	0.24	10.10
20"	19.685 (500mm)	19.69	15.74	11.22	7.72	20.67	2.36	15.94	0.24	10.32
22"	22.047 (560mm)	22.05	17.32	12.40	7.72	22.05	1.97	18.11	0.24	10.32
24"	24.803 (630mm)	24.80	18.69	13.78	7.72	24.80	1.97	20.87	0.24	10.76
28"	27.953 (710mm)	27.95	20.27	15.35	7.72	27.95	2.76	22.44	0.31	10.98
30"	31.496 (800mm)	31.50	22.04	17.13	7.72	31.50	4.72	22.05	0.31	11.42
34"	35.433 (900mm)	35.43	24.01	19.09	7.72	35.43	4.72	25.98	0.31	12.30
39"	39.370 (1000mm)	39.37	25.98	21.06	7.72	39.37	4.72	29.92	0.39	13.18
48"	49.213 (1250mm)	49.21	30.90	25.98	7.72	49.21	4.72	39.76	0.39	25.50



## Volume Flow Controller - Flanged



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

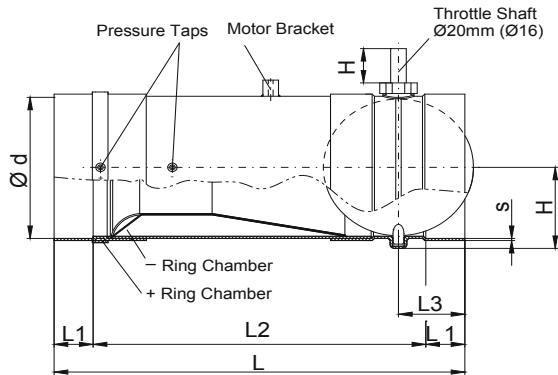
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	D in	B in	L in	L1 in	d2 in	k in	d in	d1 in	# Holes
4"	4.331 (110mm)	6.69	0.31	15.75	4.21	0.28	5.91	4.33	4.37	4
4½"	4.921 (125mm)	7.28	0.31	15.75	4.21	0.28	6.50	4.92	4.96	8
5"	5.512 (140mm)	7.87	0.31	15.75	4.21	0.28	6.89	5.51	5.55	8
6"	6.299 (160mm)	9.06	0.31	17.72	4.21	0.28	7.87	6.30	6.34	8
7"	7.087 (180mm)	9.84	0.31	19.29	4.49	0.28	8.66	7.09	7.13	8
8"	7.874 (200mm)	10.63	0.31	20.08	4.49	0.28	9.45	7.87	7.91	8
9"	8.858 (225mm)	11.61	0.31	27.56	4.49	0.28	10.43	8.86	8.90	8
10"	9.843 (250mm)	12.60	0.39	27.56	4.49	0.28	11.42	9.84	9.88	12
11"	11.024 (280mm)	14.17	0.39	29.92	4.57	0.35	12.80	11.02	11.06	12
12"	12.402 (315mm)	15.55	0.39	29.92	4.57	0.35	13.78	12.40	12.44	12
14"	13.976 (355mm)	17.13	0.39	41.34	7.87	0.35	15.75	13.98	14.02	12
16"	15.748 (400mm)	18.90	0.39	43.31	7.87	0.35	17.52	15.75	15.79	16
18"	17.717 (450mm)	20.87	0.39	49.21	10.24	0.35	19.49	17.72	17.24	16
20"	19.685 (500mm)	22.83	0.39	55.12	10.24	0.35	21.46	19.69	19.21	20

Also Available in Compact Version - Consult Factory For Details



## Volume Flow Controller - Socket



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

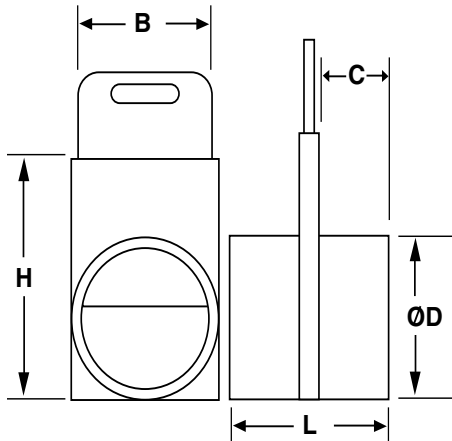
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	H in	L in	L1 in	L2 in	L3 in	S in
4"	4.331 (110mm)	4.33	2.80	15.75	1.57	12.60	2.87	0.12
4½"	4.921 (125mm)	4.92	3.11	15.75	1.57	12.60	2.87	0.12
5"	5.512 (140mm)	5.51	3.39	15.75	1.57	12.60	2.87	0.12
6"	6.299 (160mm)	6.30	3.78	20.87	1.57	17.72	2.87	0.16
7"	7.087 (180mm)	7.09	4.17	23.23	1.97	19.29	3.35	0.16
8"	7.874 (200mm)	7.87	4.57	24.02	1.97	20.08	3.35	0.16
9"	8.858 (225mm)	8.86	5.08	31.50	1.97	27.56	3.35	0.16
10"	9.843 (250mm)	9.84	5.55	31.50	1.97	27.56	3.35	0.16
11"	11.024 (280mm)	11.02	6.14	33.86	1.97	18.11	3.35	0.16
12"	12.402 (315mm)	12.40	6.85	33.86	1.97	29.92	3.35	0.16
14"	13.976 (355mm)	13.98	7.99	45.28	1.97	41.34	7.87	0.16
16"	15.748 (400mm)	15.75	8.86	47.24	1.97	43.31	7.87	0.16
18"	17.717 (450mm)	17.72	10.20	54.72	2.76	49.21	9.84	0.20
20"	19.685 (500mm)	19.69	11.18	60.63	2.76	55.12	11.02	0.20

Also Available in Compact Version - Consult Factory For Details



## Blastgates



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

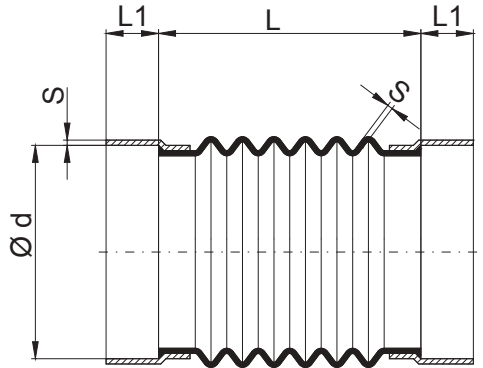
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	C in	D in	B in	H in	L in	Weight lbs
4"	4.331 (110mm)	3.00	4.33	7.50	9.00	6.75	2.65
6"	6.299 (160mm)	3.00	6.30	9.63	11.13	6.75	3.53
8"	7.874 (200mm)	3.00	7.87	11.63	13.13	6.75	5.29
10"	9.843 (250mm)	3.00	9.84	13.75	15.25	6.75	7.06
12"	12.402 (315mm)	3.00	12.40	15.75	17.25	6.75	9.70
14"	13.976 (355mm)	3.00	13.98	17.00	18.50	6.75	14.11
16"	15.748 (400mm)	3.00	15.75	19.00	20.50	6.75	17.64



## Expansion Joint - Socket - 6 Fold



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

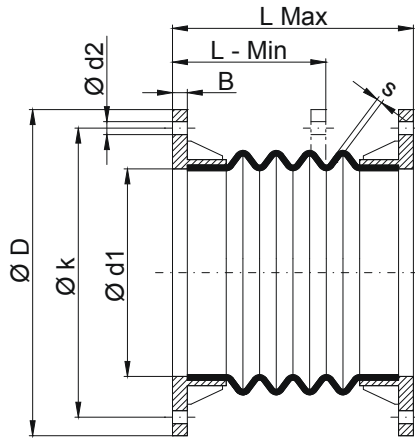
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L Min in	L Max in	L1 in	S in
3"	3.543 (90mm)	3.54	4.33	5.91	1.38	0.12
4"	4.331 (110mm)	4.33	4.33	5.91	1.57	0.12
4½"	4.921 (125mm)	4.92	4.33	5.91	1.57	0.12
5"	5.512 (140mm)	5.51	4.33	5.91	1.57	0.12
6"	6.299 (160mm)	6.30	4.33	5.91	1.57	0.12
7"	7.087 (180mm)	7.09	4.33	5.91	1.57	0.12
8"	7.874 (200mm)	7.87	4.33	5.91	1.97	0.12
9"	8.858 (225mm)	8.86	4.33	5.91	1.97	0.12
10"	9.843 (250mm)	9.84	4.33	5.91	1.97	0.12
11"	11.024 (280mm)	11.02	4.33	5.91	1.97	0.12
12"	12.402 (315mm)	12.40	4.33	5.91	1.97	0.12
14"	13.976 (355mm)	13.98	4.33	5.91	1.57	0.12
16"	15.748 (400mm)	15.75	4.33	5.91	1.77	0.12
18"	17.717 (450mm)	17.72	4.33	5.91	1.77	0.12
20"	19.685 (500mm)	19.69	4.33	5.91	1.97	0.12
22"	22.047 (560mm)	22.05	4.33	5.91	3.94	0.12
24"	24.803 (630mm)	24.80	4.33	5.91	3.94	0.12
28"	27.953 (710mm)	27.95	4.33	5.91	3.94	0.12
32"	31.496 (800mm)	31.50	4.33	5.91	4.92	0.12
34"	35.433 (900mm)	35.43	4.33	5.91	4.92	0.12
39"	39.370 (1000mm)	39.37	4.33	5.91	4.92	0.12
48"	49.213 (1250mm)	49.21	4.33	5.91	4.92	0.12



## Expansion Joint - Flanged - 4 Fold



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

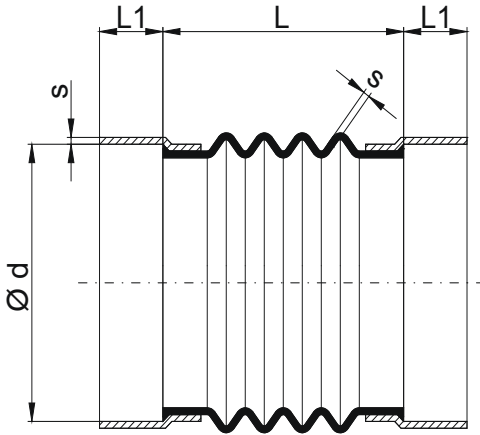
**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	B in	d in	d1 in	d2 in	D in	K in	L-Min in	L-Max in	S in	# Holes	Weight lbs
18"	17.717 (450mm)	0.4	17.7	17.2	0.4	20.9	19.5	4.7	7.1	0.2	16	7.3
20"	19.685 (500mm)	0.4	19.7	19.2	0.4	22.8	21.5	4.7	7.1	0.2	20	8.1
22"	22.047 (560mm)	0.5	22.0	21.6	0.4	27.6	26.0	4.7	7.1	0.2	24	9.2
24"	24.803 (630mm)	0.5	24.8	23.1	0.4	28.7	27.6	4.7	7.1	0.2	24	9.7
28"	27.953 (710mm)	0.5	28.0	24.7	0.4	31.9	30.3	4.7	7.1	0.2	24	9.5
32"	31.496 (800mm)	0.5	31.5	27.0	0.4	35.4	33.9	4.7	7.1	0.2	28	11.2
36"	35.433 (900mm)	0.5	35.4	27.4	0.4	39.4	37.8	4.7	7.1	0.2	32	11.0
39"	39.370 (1000mm)	0.5	39.4	30.9	0.4	43.3	41.7	4.7	7.1	0.2	32	12.8
48"	49.213 (1250mm)	0.5	49.2	34.8	0.4	53.1	51.6	4.7	7.1	0.2	32	14.3





## Expansion Joint - Socket - 4 Fold



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

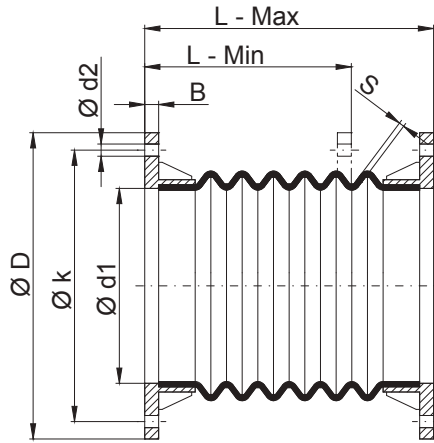
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L Min in	L Max in	L1 in	S in
18"	17.717 (450mm)	17.72	3.54	5.91	1.77	0.24
20"	19.685 (500mm)	19.69	3.54	5.91	1.97	0.24
22"	22.047 (560mm)	22.05	3.54	5.91	3.94	0.24
24"	24.803 (630mm)	24.80	3.54	5.91	3.94	0.24
28"	27.953 (710mm)	27.95	3.54	5.91	3.94	0.24
32"	31.496 (800mm)	31.50	3.54	5.91	4.92	0.24
34"	35.433 (900mm)	35.43	3.54	5.91	4.92	0.24
39"	39.370 (1000mm)	39.37	3.54	5.91	4.92	0.24
48"	49.213 (1250mm)	49.21	3.54	5.91	4.92	0.24



## Expansion Joint - Flanged - 6 Fold



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

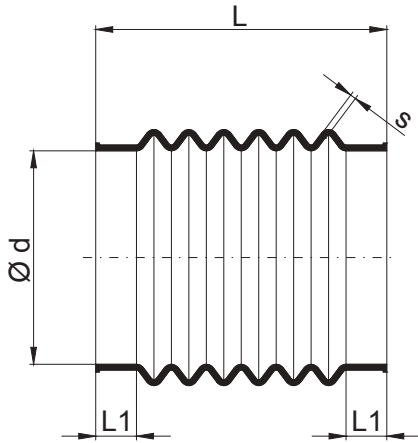
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	B in	d in	d1 in	d2 in	D in	K in	L-Min in	L-Max in	S in	# Holes	Weight lbs
3"	3.543 (90mm)	0.31	3.54	3.54	0.28	4.72	3.94	5.12	6.69	0.12	4	1.10
4"	4.331 (110mm)	0.31	4.33	4.13	0.28	5.31	4.53	5.12	6.69	0.12	4	1.32
4½"	4.921 (125mm)	0.31	4.92	4.72	0.28	5.91	5.12	5.12	6.69	0.12	4	1.54
5"	5.512 (140mm)	0.31	5.51	5.51	0.28	6.69	5.91	5.12	6.69	0.12	4	1.98
6"	6.299 (160mm)	0.31	6.30	6.10	0.28	7.28	6.50	5.12	6.69	0.12	8	2.42
7"	7.087 (180mm)	0.31	7.09	6.50	0.28	7.87	6.89	5.12	6.69	0.12	8	2.64
8"	7.874 (200mm)	0.31	7.87	7.09	0.28	9.06	7.87	5.12	6.69	0.12	8	2.86
9"	8.858 (225mm)	0.31	8.86	8.86	0.28	9.84	8.66	5.12	6.69	0.12	8	3.08
10"	9.843 (250mm)	0.31	9.84	9.06	0.28	10.63	9.45	5.12	6.69	0.12	8	3.30
11"	11.024 (280mm)	0.31	11.02	9.65	0.28	11.61	10.43	5.12	6.69	0.12	8	4.62
12"	12.402 (315mm)	0.31	12.40	11.02	0.28	12.60	11.42	5.12	6.69	0.12	12	5.28
14"	13.976 (355mm)	0.39	13.98	12.20	0.35	14.17	12.80	5.12	6.69	0.12	12	5.72
16"	15.748 (400mm)	0.39	15.75	13.39	0.35	15.55	13.78	5.12	6.69	0.12	12	6.38
18"	17.717 (450mm)	0.39	17.72	17.24	0.35	20.87	19.49	5.12	6.69	0.12	16	7.26
20"	19.685 (500mm)	0.39	19.69	19.21	0.35	22.83	21.46	5.12	6.69	0.12	20	8.14
22"	22.047 (560mm)	0.47	22.05	21.57	0.43	27.56	25.98	5.12	6.69	0.12	24	9.24
24"	24.803 (630mm)	0.47	24.80	23.15	0.43	28.74	27.56	5.12	6.69	0.12	24	9.68
28"	27.953 (710mm)	0.47	27.95	24.72	0.43	31.89	30.31	5.12	6.69	0.12	24	9.46
32"	31.496 (800mm)	0.47	31.50	26.97	0.43	35.43	33.86	5.12	6.69	0.12	28	11.22
36"	35.433 (900mm)	0.47	35.43	27.36	0.43	39.37	37.80	5.12	6.69	0.12	32	11.00
39"	39.370 (1000mm)	0.47	39.37	30.91	0.43	43.31	41.73	5.12	6.69	0.12	32	12.76
48"	49.213 (1250mm)	0.47	49.21	34.84	0.43	53.15	51.57	5.12	6.69	0.12	32	14.30



## Expansion Joint - Clip Band



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

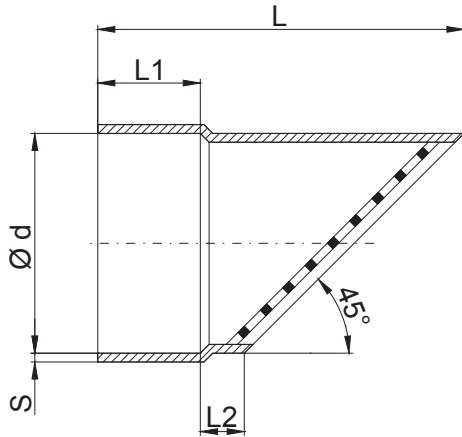
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L min in	L Max in	L1 in	S in
4"	4.331 (110mm)	4.33	4.33	5.91	0.83	0.12
4½"	4.921 (125mm)	4.92	4.33	5.91	0.83	0.12
5"	5.512 (140mm)	5.51	4.33	5.91	0.83	0.12
6"	6.299 (160mm)	6.30	4.33	5.91	0.83	0.12
7"	7.087 (180mm)	7.09	4.33	5.91	0.83	0.12
8"	7.874 (200mm)	7.87	4.33	5.91	0.83	0.12
9"	8.858 (225mm)	8.86	4.33	5.91	0.83	0.12
10"	9.843 (250mm)	9.84	4.33	5.91	0.83	0.12
11"	11.024 (280mm)	11.02	4.33	5.91	0.83	0.12
12"	12.402 (315mm)	12.40	4.33	5.91	0.83	0.12
14"	13.976 (355mm)	13.98	4.33	5.91	0.83	0.12
16"	15.748 (400mm)	15.75	4.33	5.91	0.83	0.12
18"	17.717 (450mm)	17.72	4.33	5.91	0.83	0.12
20"	19.685 (500mm)	19.69	4.33	5.91	0.83	0.12
22"	22.047 (560mm)	22.05	4.33	5.91	0.83	0.12
24"	24.803 (630mm)	24.80	4.33	5.91	0.83	0.12
28"	27.953 (710mm)	27.95	4.33	5.91	0.83	0.12
32"	31.496 (800mm)	31.50	4.33	5.91	0.83	0.12
36"	35.433 (900mm)	35.43	4.33	5.91	0.83	0.12
39"	39.370 (1000mm)	39.37	4.33	5.91	0.83	0.12
48"	49.213 (1250mm)	49.21	4.33	5.91	0.83	0.12
54"	55.118 (1400mm)	55.12	4.33	5.91	0.83	0.12



## Bird Mesh Grille w/ Plastic Screen



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

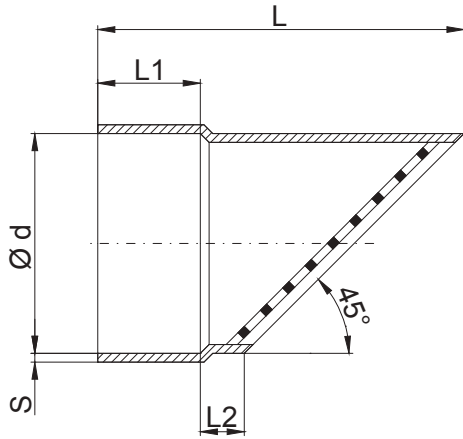
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	4.25	1.38	0.39	0.12	0.44
2½"	2.953 (75mm)	2.95	5.12	1.38	0.79	0.12	0.44
3"	3.543 (90mm)	3.54	5.91	1.38	0.98	0.12	0.44
4"	4.331 (110mm)	4.33	6.89	1.57	0.98	0.12	0.66
4½"	4.921 (125mm)	4.92	7.87	1.57	1.38	0.12	0.66
5"	5.512 (140mm)	5.51	8.46	1.57	1.38	0.12	0.66
6"	6.299 (160mm)	6.30	9.25	1.57	1.38	0.12	0.44
7"	7.087 (180mm)	7.09	10.43	1.97	1.38	0.12	0.66
8"	7.874 (200mm)	7.87	11.22	1.97	1.38	0.12	0.88
9"	8.858 (225mm)	8.86	12.40	1.97	1.57	0.14	1.10
10"	9.843 (250mm)	9.84	13.39	1.97	1.57	0.14	1.32
11"	11.024 (280mm)	11.02	14.57	1.97	1.57	0.16	1.76
12"	12.402 (315mm)	12.40	16.34	1.97	1.97	0.20	2.86
14"	13.976 (355mm)	13.98	17.91	1.97	1.97	0.20	3.52
16"	15.748 (400mm)	15.75	20.08	2.36	1.97	0.24	5.28
18"	17.717 (450mm)	17.72	22.83	2.76	2.36	0.24	6.60
20"	19.685 (500mm)	19.69	24.80	2.76	2.36	0.20	10.34
24"	24.803 (630mm)	24.80	29.92	2.76	2.36	0.39	18.92



## Bird Mesh Grille w/ Stainless Steel Screen



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

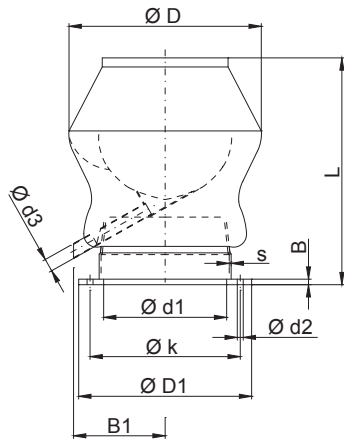
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	L in	L1 in	L2 in	S in	Weight lbs
2"	2.480 (63mm)	2.48	4.25	1.38	0.39	0.12	0.44
2½"	2.953 (75mm)	2.95	5.12	1.38	0.79	0.12	0.44
3"	3.543 (90mm)	3.54	5.91	1.38	0.98	0.12	0.44
4"	4.331 (110mm)	4.33	6.89	1.57	0.98	0.12	0.66
4½"	4.921 (125mm)	4.92	7.87	1.57	1.38	0.12	0.66
5"	5.512 (140mm)	5.51	8.46	1.57	1.38	0.12	0.66
6"	6.299 (160mm)	6.30	9.25	1.57	1.38	0.12	0.44
7"	7.087 (180mm)	7.09	10.43	1.97	1.38	0.12	0.66
8"	7.874 (200mm)	7.87	11.22	1.97	1.38	0.12	0.88
9"	8.858 (225mm)	8.86	12.40	1.97	1.57	0.14	1.10
10"	9.843 (250mm)	9.84	13.39	1.97	1.57	0.14	1.32
11"	11.024 (280mm)	11.02	14.57	1.97	1.57	0.16	1.76
12"	12.402 (315mm)	12.40	16.34	1.97	1.97	0.20	2.86
14"	13.976 (355mm)	13.98	17.91	1.97	1.97	0.20	3.52
16"	15.748 (400mm)	15.75	20.08	2.36	1.97	0.24	5.28
18"	17.717 (450mm)	17.72	22.83	2.76	2.36	0.24	6.60
20"	19.685 (500mm)	19.69	24.80	2.76	2.36	0.20	10.34
24"	24.803 (630mm)	24.80	29.92	2.76	2.36	0.39	18.92



## Deflector Cowl - Flanged



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

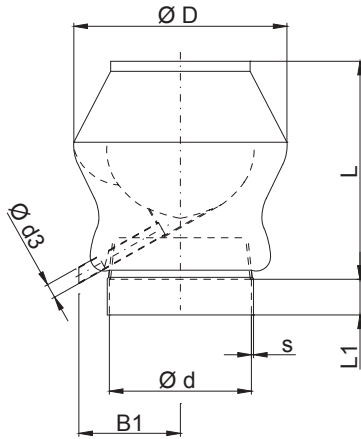
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	D in	L in	S in	B1 in	d3 in	D1 in	B in	k in	d1 in	d2 in	# Holes	Weight lbs
4"	4.331 (110mm)	4.33	6.69	8.46	0.12	3.15	0.63	6.69	0.31	5.91	4.37	0.28	4	1.32
4½"	4.921 (125mm)	4.92	7.28	9.45	0.12	3.54	0.79	7.28	0.31	6.50	4.96	0.28	8	1.54
5"	5.512 (140mm)	5.51	7.87	10.24	0.12	3.94	0.79	7.87	0.31	6.89	5.55	0.28	8	1.76
6"	6.299 (160mm)	6.30	9.06	11.42	0.12	4.53	0.98	9.06	0.31	7.87	6.34	0.28	8	2.20
7"	7.087 (180mm)	7.09	9.84	12.20	0.12	5.12	0.98	9.84	0.31	8.66	7.13	0.28	8	3.74
8"	7.874 (200mm)	7.87	10.63	13.39	0.12	5.91	0.98	10.63	0.31	9.45	7.91	0.28	8	3.96
9"	8.858 (225mm)	8.86	11.61	15.16	0.12	6.14	0.98	11.61	0.31	10.43	8.90	0.28	8	5.72
10"	9.843 (250mm)	9.84	12.60	16.54	0.12	7.28	1.26	12.60	0.39	11.42	9.88	0.28	12	6.16
11"	11.024 (280mm)	11.02	14.17	18.31	0.12	8.07	1.26	14.17	0.39	12.80	11.06	0.35	12	7.48
12"	12.402 (315mm)	12.40	15.55	20.28	0.12	9.25	1.57	15.55	0.39	13.78	12.44	0.35	12	10.56
14"	13.976 (355mm)	13.98	17.01	22.64	0.16	10.24	1.57	17.01	0.39	15.75	14.02	0.35	12	14.52
16"	15.748 (400mm)	15.75	18.90	25.00	0.16	11.42	1.97	18.90	0.39	17.52	15.79	0.35	16	16.28
32"	31.496 (800mm)	31.50	50.98	62.40	0.31	17.72	2.95	35.43	0.47	33.86	31.50	0.43	28	0.00
36"	35.433 (900mm)	35.43	55.12	68.90	0.31	19.69	2.95	39.37	0.47	37.80	35.43	0.43	32	0.00
39"	39.370 (1000mm)	39.37	68.90	90.55	0.39	21.65	2.95	43.31	0.47	41.73	39.37	0.43	32	0.00
48"	49.213 (1250mm)	49.21	81.69	98.43	0.39	26.57	2.95	53.15	0.59	51.57	49.21	0.43	32	0.00
54"	55.118 (1400mm)	55.12	91.93	110.24	0.47	29.53	2.95	59.06	0.59	54.33	55.12	0.43	32	0.00



## Deflector Cowl - Socket



### Material Options:

**PVC** - Polyvinyl Chloride

**HDPE** - Polyethylene

**PP** - Polypropylene

**PPs** - Flame Retardant Polypropylene

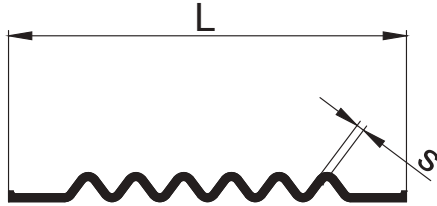
**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

**PVDF** - Polyvinylidene Fluoride

Nom. Size	Actual OD Size	d in	D in	L in	L1 in	S in	B1 in	d3 in	Weight lbs
4"	4.331 (110mm)	4.33	6.69	8.46	1.57	0.12	3.15	0.63	1.10
4½"	4.921 (125mm)	4.92	7.28	9.45	1.57	0.12	3.54	0.79	1.32
5"	5.512 (140mm)	5.51	7.87	10.24	1.57	0.12	3.94	0.79	1.32
6"	6.299 (160mm)	6.30	9.06	11.42	1.57	0.12	4.53	0.98	1.76
7"	7.087 (180mm)	7.09	9.84	12.20	1.97	0.12	5.12	0.98	3.30
8"	7.874 (200mm)	7.87	10.63	13.39	1.97	0.12	5.91	0.98	3.74
9"	8.858 (225mm)	8.86	11.61	15.16	1.97	0.16	6.14	0.98	5.50
10"	9.843 (250mm)	9.84	12.60	16.54	1.97	0.16	7.28	1.26	5.94
11"	11.024 (280mm)	11.02	14.17	18.31	1.97	0.16	8.07	1.26	6.60
12"	12.402 (315mm)	12.40	15.55	20.28	1.97	0.20	9.25	1.57	10.12
14"	13.976 (355mm)	13.98	17.13	22.64	1.97	0.20	10.24	1.57	13.86
16"	15.748 (400mm)	15.75	18.90	25.00	2.36	0.24	11.42	1.97	16.06
32"	31.496 (800mm)	31.50	50.98	62.40	3.15	0.24	17.72	2.95	0.00
36"	35.433 (900mm)	35.43	55.12	68.90	3.94	0.28	19.69	2.95	0.00
39"	39.370 (1000mm)	39.37	68.90	90.55	3.94	0.31	21.65	2.95	0.00
48"	49.213 (1250mm)	49.21	81.69	98.43	4.72	0.39	26.57	2.95	0.00
54"	55.118 (1400mm)	55.12	91.93	110.24	4.72	0.39	29.53	2.95	0.00



## Expanded WellFlex Roll



### Material Options:

**PVC** - Polyvinyl Chloride

**PP** - Polypropylene

**PPs-EL** - Electrically Conductive Flame Retardant Polypropylene

S in	L in	Length of Roll feet	Corrugations folds	Contraction in - min	Expansion in - max
0.12	5.91	98	6	5.12	6.69
0.24	5.91	49	4	4.72	7.09





**Notes:**





**Notes:**



### **Simtech Process Systems**

47-A Runway Road, Levittown, PA 19057

Phone: 800-800-1908 Fax: 215-547-3410

E-mail: [info@Simtech.com](mailto:info@Simtech.com)

Web site: [www.Simtech.com](http://www.Simtech.com)

### **WARRANTY**

Simtech Process Systems products are warranted to be free from defects in materials and workmanship for one (1) year from date of shipment. No claim shall be permitted under this warranty unless Buyer gives Simtech Process Systems written notice of all respects in which Buyer claims the product to be defective. Notice must be received within ten (10) days from the date which the Buyer discovers, or should have discovered the defect. Buyer shall give Simtech Process Systems a reasonable opportunity to inspect the product after notice has been given. This warranty shall not apply to any products or components, which have been subjected to abnormal use, negligence or accident.

Seller's sole obligation under this warranty shall be limited solely on the repair or replacement, as elected by Simtech Process Systems, of defective or nonconforming material. To the maximum extent permitted by law, Buyer irrevocably waives all claims for money damages relating to the condition, use and performance of the goods purchased. In no event shall Simtech Process Systems liability exceed the purchase price of the product sold by Simtech Process Systems

In no event, whether because of a breach of warranty or representation or any other cause, whether based upon contract, tort, warranty or otherwise, arising out of the performance or nonperformance by seller of its obligations under this agreement or with respect to the products sold pursuant here to; shall seller be liable for lost earnings, income or profits or indirect, incidental, liquidated or consequential damages.

The implied warranties of merchantability and fitness for a particular purpose except as set forth in this warranty, express or implied, are hereby disclaimed and excluded. Nothing shall be construed as an additional warranty unless specifically designated as such in writing and signed by Simtech Process Systems

Simtech Process Systems reserves the right, in its discretion, at any time and from time to time, to make changes to any specification, data or information contained herein.



**WTP / WWTP**

- Chemical Feed Systems
- Chlorination & Fluoridation
- Pressure Regulation



**Chlor-Alkali**

- Chlorine Processing
- Brine Preparation
- Caustic Sodas



**Mining**

- Sulfuric Acid
- Hydrochloric Acid
- Slurry Piping



**Aquatics**

- Natatoriums
- Corrosion-Free Valves
- Valve Automation



**Food and Beverage**

- Dairy
- Brewing
- Chemical Sterilization



**O.E.M. Supplier**

- Valves and Automation
- Controls and Instrumentation
- Custom Fabrication



**Automotive**

- Fume Exhaust
- Washdown Systems
- Process Waste Drainage



**High Purity Water**

- RODI Systems
- pH Control
- Semiconductor Cleaning



**Power / Utilities**

- Demineralization
- Flue Gas Desulphurization
- Nuclear Process Drainage



**Biotech / Pharma**

- RODI High Purity Water
- WFI Systems
- Environmental Containment



**Laboratory Exhaust**

- Corrosive Fume Extraction
- Wet Bench Hoods
- Chemical Box Exhaust



**Pulp and Paper**

- Bleach and Liquor Lines
- Spent Acid and Caustic Lines
- Wet Scrubber Systems



**Chemical Processing**

- Chemical Transfer & Storage
- Metering and Mixing
- Process Fume Extraction



**Life Sciences**

- High Purity RODI Water
- Laboratory Fume Exhaust
- University Facilities



**Steel / Metal Finishing**

- Piping Lines
- Electroplating
- Fume Exhaust



Expertise In  
Engineered Plastics

47A Runway Road  
Levittown, PA 19057  
215-547-0444  
www.Simtech.com

