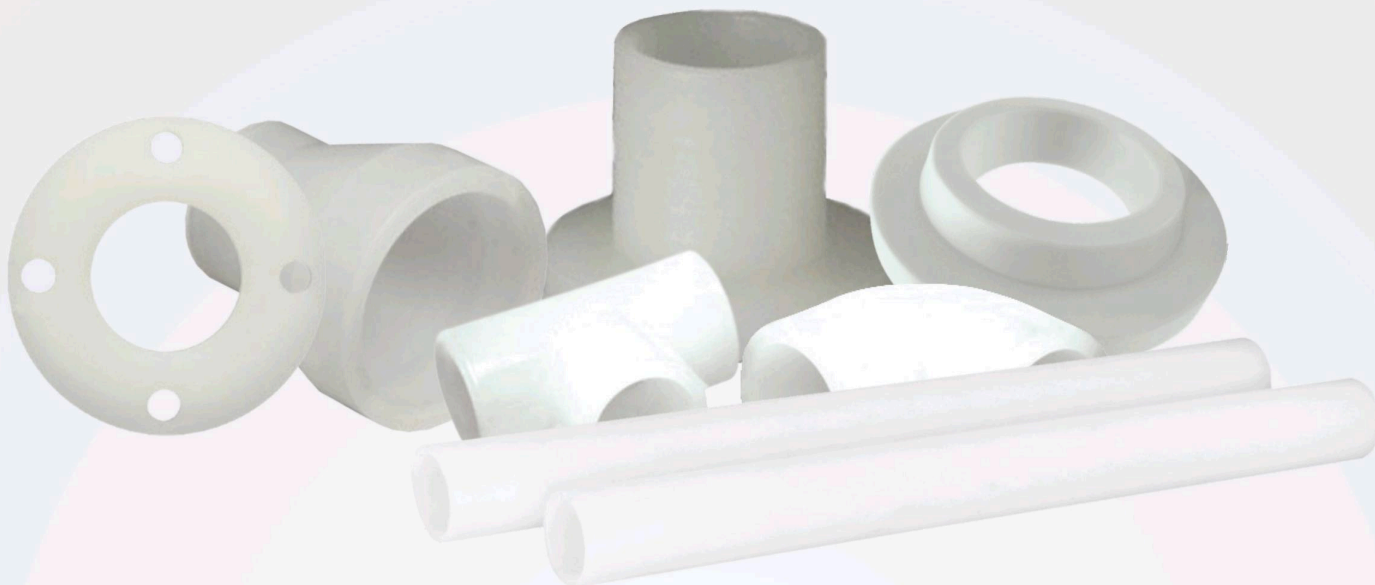




PVDF



PVDF

Polyvinylidene Fluoride (PVDF) is a tough engineering thermoplastic that offers a unique balance of performance properties. Polyvinylidene fluoride (PVDF), the homopolymer of 1, 1-difluoroethylene, is a tough engineering thermoplastic. The unique structure of alternating methylene and difluoromethylene units along the chain create a polymer material having high crystallinity combined with a high polarity resulting in a sharp melting point. Thus PVDF has the characteristic stability of fluoropoly-mers when exposed to harsh thermal, chemical and ultraviolet environments while retaining the properties of a conventional thermoplastic material.

resins are a series of PVDF-based copolymers similar to homopolymer resins in purity and chemical resistance, but having additional chemical compatibility in high pH solutions, increased impact strength at ambient and low temperatures, and increased clarity.

Suitable for the delivery of pharmaceutical grade purified water (PW) and DI water, using hot water, steam chemical or ozone sanitisation. Due to its excellent chemical resistance it is widely used in chemical distribution systems.

PVDF pipes, fittings and mountings from ASVA Piping Systems are sold under the ASVA brand.

WHY USE PVDF ?

Exceptional Chemical Resistance
UV Resistant, and Abrasion Resistant
Meets UL 94 V-0
Has FDA, USDA and USP VI Approval
Easily Machined and Fabricated

Advantages

- Outstanding mechanical properties, even at high temperatures
- Long service life, even under intensely corrosive conditions
- Very pure material by implementing without additives
- Secure jointing by high-quality welding technology
- Smooth inner surface

IMPORTANT PROPERTIES OF PVDF

- Mechanical strength and toughness
- High thermal stability
- High dielectric strength
- Readily melt processable
- Exceptional outdoor weather resistance due to its total inertness to UV radiation
- Low permeability to most gases and liquids
- Low flame and smoke characteristics
- High abrasion resistance
- Very low creep
- High purity
- Resistance to most chemicals and solvents
- Resistance to nuclear radiation
- Resistance to fungi
- Very smooth surfaces can be obtained

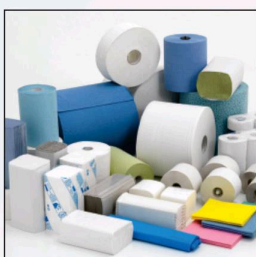
PVDF PRODUCT GUIDE



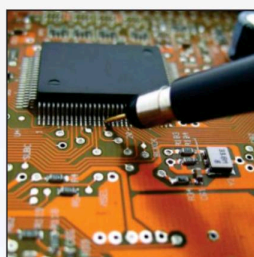
- CHEMICAL INDUSTRY:-
 - Bromine Handling
 - Specialty Chemicals
 - Insecticides Plants
 - Chloro Alkali Plant



- HIGH PURITY APPLICATIONS:-
 - Deionized Water Handling
 - Electrolytic Ozonation Cells
 - Ultra Pure Water Piping



- PAPER & PULP INDUSTRY:-
 - Bleach Washer Lines
 - Sodium Hypochlorite Generation
 - Chlorine Supply System



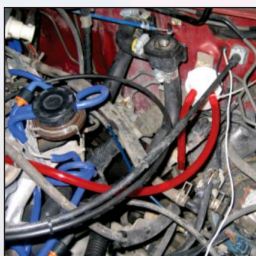
- ELECTRICAL, ELECTRONIC, SEMICONDUCTORS INDUSTRY:-
 - Jacketing for Plenum
 - Fire Resistant Tubing



- NUCLEAR POWER INDUSTRY:-
 - Nuclear Waste Processing



- PHARMACEUTICAL INDUSTRY:-
 - Sterilized Containers
 - Non Toxic Applications
 - Food Grade Piping



- AUTOMOTIVE INDUSTRY:-
 - Wiring Harnesses
 - Fuel Lines
 - Other Moulded Parts Lining and Coating

Application

- High Purity Fluid Processing Systems
- Fluid Sensors
- Manifolds And Valves
- Chemical Processing And Storage Parts
- Liquid Chromatography Components
- Bearings And Bushings
- Di Water Systems
- Microelectronics
- Life Science

TECHNICAL SPECIFICATION

PVDF has the characteristic properties of high resistance to chemical attack intrinsic to all fluoropolymers based on the very high strength of the carbon - fluorine atom bond.

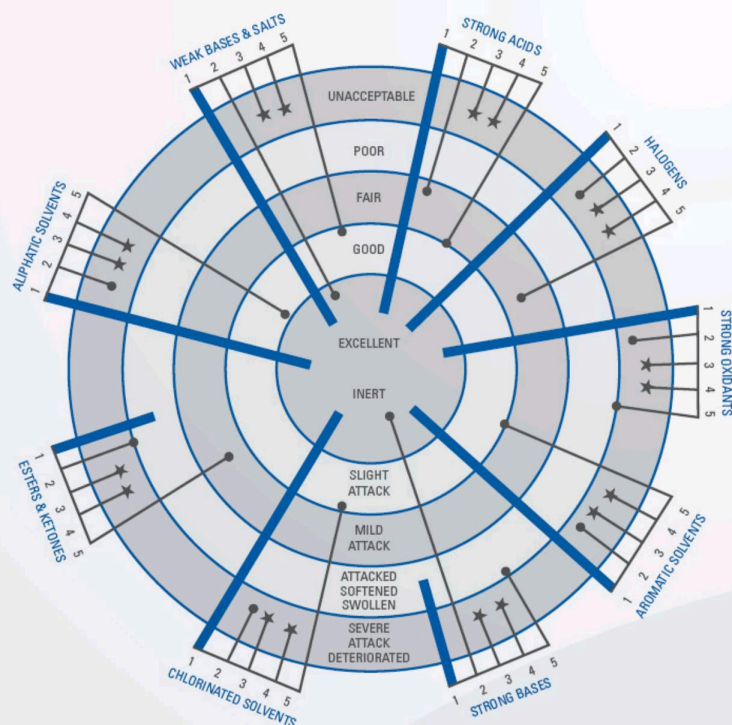
As such it resists concentrated acids, strong oxidizing agents, the elements chlorine and bromine, halogenated as well as non-polar solvents to name just a few.

Chemical inertia combined with high material strength and virtually unlimited possibilities to construct chemical process units makes PVDF a material of choice for applications such as piping systems consisting of tubes, fittings and valves, pumps and filter systems up to large storage tanks, distillation columns and entire reactor units.

PVDF has outstanding barrier properties which allows a better protection of the environment. The construction of chemical process equipment makes use of a multitude of materials to cope with specific corrosion problems. PVDF has the advantage of absolute suppression of corrosion, even under varying process conditions, when compared to stainless steel.

Chemical Resistance

Homopolymer Resin vs. Other Well-Known Plastics at 93°C (200°F)



1. Polyvinylidene fluoride – Type I
2. Polypropylene
3. Polyvinylidene chloride
4. Polyvinyl chloride* – Type I
5. Polyester (glass fiber reinforced)

Typical Chemicals Handled PVDF

- | | |
|-----------------------|---------------------|
| • Chlorine | • Bromine (Gaseous) |
| • Methyl Chloroform | • Bromine Water |
| • Hydrochloric Acid | • Hydrobromic Acid |
| • Salt Water | • Bromobenzene |
| • Chlorobenzene | • Brominated Salts |
| • Sodium Hypochlorite | • Iodine |
| • Hot Sugars | • Salicylic Acid |
| • Sulfuric Acid <98% | • <50% Acetic Acid |
| • Chlorinated Salts | • Methyl Alcohol |
| • Phosphoric Acid | • Chromic Acid |
| • Hydrofluoric Acid | • Nitric Acid |



PVDF PIPES

AVAILABLE M.O.C.:

PVDF

STANDARD ISO 10931:05

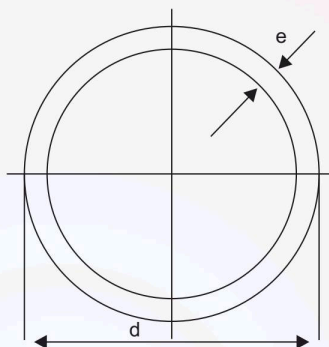
Pipe Length 5Mtr.

Color : Natural



PN 10/SDR 33		PN 16/SDR 21	
d	e	d	e
16		16	1.9
20		20	1.9
25		25	1.9
32		32	2.4
40		40	2.4
50		50	3.0
63	2.0	63	3.0
75	2.3	75	3.6
90	2.8	90	4.3
110	3.4	110	5.3
125	3.9	125	6.0
140	4.3	140	6.7
160	4.9	160	7.7
180	5.5		
200	6.2		

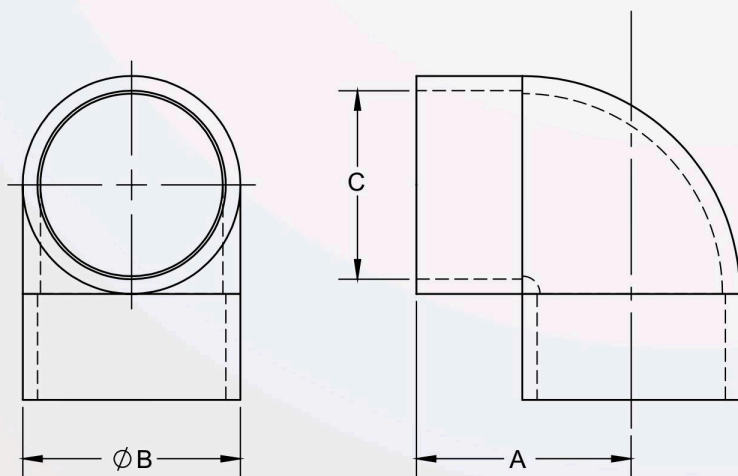
All Dimension are in mm(± 2 mm)



ELBOW 90°

AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

SIZE		A	B	C
IN.	MM			
1/2"	20	25	28	19.5
3/4"	25	27	33	24
1"	32	33	41	31.5
1 1/4"	40	41	52	39
1 1/2"	50	47.5	63	48
2"	63	59	83	61
2 1/2"	75	68	96	71
3"	90	76	118	88
4"	110	96	145	105
6"	160	131	198	156

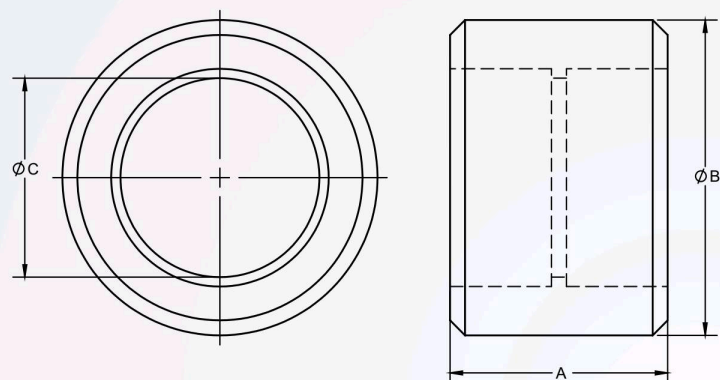
All Dimension are in mm(± 2 mm)



COUPLER/SOCKET

AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

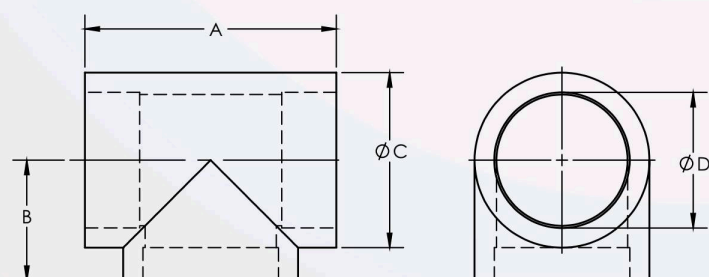
SIZE		A	B	C
IN.	MM			
1/2"	20	32	27	19
3/4"	25	35	33	24
1"	32	38	39	31
1 1/4"	40	44	54	39
1 1/2"	50	50	60	48
2"	63	58	82	61
2 1/2"	75	67	95	73
3"	90	75	119	87
4"	110	87	145	108
6"	160	155	193	158

All Dimension are in mm(± 2 mm)

EQUAL TEE

AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

SIZE		A	B	ØC	ØD
IN.	MM				
1/2"	20	49	26	30	20
3/4"	25	57	30	35	25
1"	32	69	35	42	31
1 1/4"	40	80	40	50	39
1 1/2"	50	97	49	64	48
2"	63	105	57	80	61
2 1/2"	75	140	70	99	73
3"	90	164	81	117	88
4"	110	184	91	140	108
6"	160	261	131	199	155

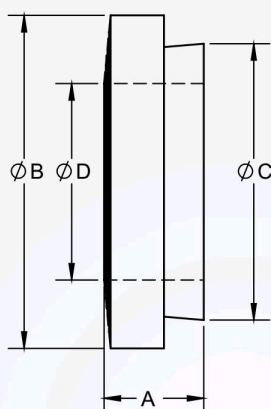
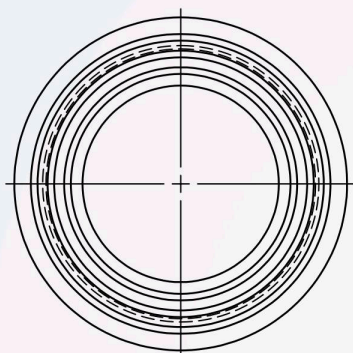
All Dimension are in mm(± 2 mm)



CORE FLANGE

AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

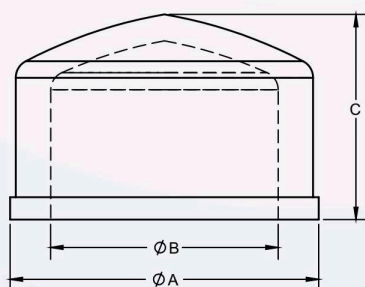
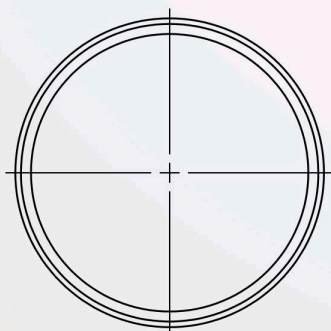
SIZE		A	B	C	D
IN.	MM				
1/2"	20	18	36	27	19.5
3/4"	25	19	50	30	24
1"	32	20	65	43	31
1 1/4"	40	24	77	54	39
1 1/2"	50	27	86	67	48
2"	63	30	100	84	61
2 1/2"	75	38	123	99	74
3"	90	36	130	115	88
4"	110	40	157	137	107
6"	160	52	210	190	154

All Dimension are in mm(± 2 mm)

END CAP

AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

SIZE		A	B	C
IN.	MM			
1/2"	20	29	19	22
3/4"	25	34	24	25
1"	32	45	31	32
1 1/4"	40	55	39	37
1 1/2"	50	73	48	42
2"	63	86	62	53
2 1/2"	75	102	73	52
3"	90	125	88	68
4"	110	151	108	78
6"	160	194	156	86

All Dimension are in mm(± 2 mm)



REDUCER

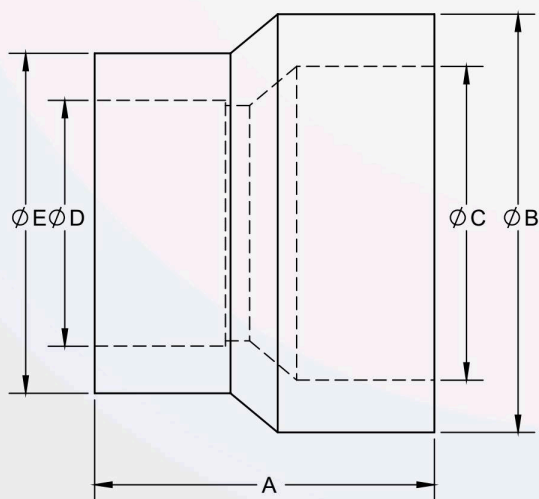
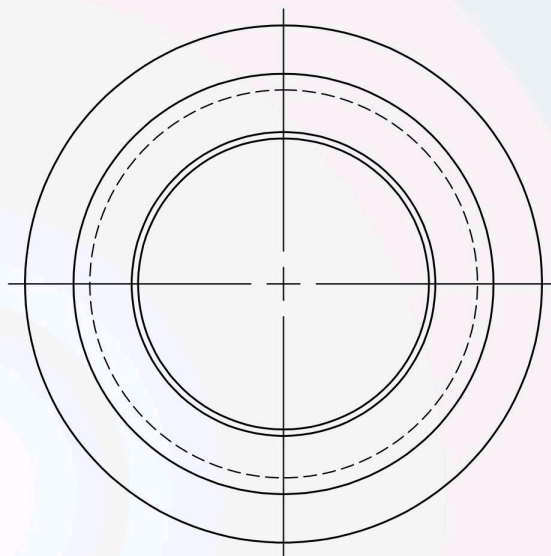
AVAILABLE M.O.C.:

PVDF



DIMENSION TABLE

SIZE MM	A	B	C	D	E
25 x 20	38	35	24	19	29
32 x 20	37	42	31	19	26
32 x 25	38	42	31	24	32
40 x 20	41	52	39	19	27
40 x 25	42	52	38	23	33
40 x 32	43	52	39	31	42
50 x 20	47	65	48	19	28
50 x 25	48	65	48	24	34
50 x 32	49	65	48	31	44
50 x 40	54	65	48	39	51
63 x 20	69	80	61	19	29
63 x 25	69	80	60	24	35
63 x 32	69	80	60	31	42
63 x 40	66	80	60	39	53
63 x 50	66	80	60	49	64

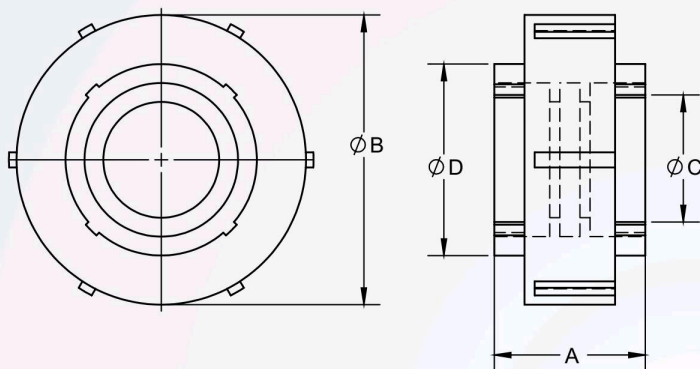


SIZE MM	A	B	C	D	E
75 x 32	65	98	72	30	44
75 x 50	65	98	72	48	65
75 x 63	65	98	72	61	82
90 x 32	71	106	86	31	43
90 x 50	71	106	86	48	65
90 x 63	74	106	86	61	81
90 x 75	73	106	86	71	97
110 x 32	78	141	106	31	43
110 x 50	78	141	106	48	66
110 x 63	80	141	106	60	81
110 x 75	80	141	106	72	98
110 x 90	81	141	106	86	118
160 x 50	98	191	155	48	66
160 x 63	100	191	155	60	81
160 x 90	95	193	157	87	119
160 x 110	98	193	158	107	143

All Dimension are in mm(± 2 mm)

UNION

AVAILABLE M.O.C.:
PVDF



DIMENSION TABLE

SIZE		A	B	C	D
IN.	MM				
1/2"	20	49	49	19	28
3/4"	25	52	61	24	36
1"	32	53	73	31	43
1 1/4"	40	61	85	38	53
1 1/2"	50	62.5	93	49	63
2"	63	65	106	61	76
2 1/2"	75				
3"	90				
4"	110				
6"	160				

All Dimension are in mm(± 2 mm)



PVDF POLL RING

AVAILABLE M.O.C. :
PVDF
Size 1", 1 1/2", 2", 3"

PVDF WELDING RODS

AVAILABLE M.O.C.:
PVDF

SIZE(MM): 3, 4
STD. LENGTH MM: Coils, 1mtr



OUR PRODUCT



Valves



HDPE (PIPE & FITTINGS)



ENGINEERING PRODUCT



PP (PIPE & FITTINGS)



PPH (PIPE & FITTINGS)



ASVA Corporation

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