AL-RAJHI PIPES
الأنابيب الراجحي

SYMBOL OF QUALITY

UPVC PIPES & FITTINGS

For Cable Ducts, Electrical Conduicts, Drainage, Sewarage, Irrigation and Water Supply

UPVC
CPVC
AL-RAJHI
The Most Trusted and Reliable PVC Pipes Supplier
HDPE
PPR

CONSISTENT TO INTERNATIONAL STANDARDS

www.ALRAJHIPIPES.com

INFO@ALRAJHIPIPES.COM

TABLE OF CONTENTS

AL-RAJHI
الراجحي

ABOUT US

Being environmentally conscious, Al-Rajhi Pipes looks to produce products that care for the future. In order to keep standards high, we obtained certification from various agencies and follow all procedures and process needed to fulfill the quality management system.

OUR MISSION

Al-Rajhi Pipes aims to be the leading producer and supplier of top quality polyvinyl chloride (uPVC) in the Middle East.We focus on the development,manufacturing and distribution of our pipes to clients that are looking for suitable price.

OUR VISION

Our vision is to provide our clients with sustainable uPVC pipes at appropriate price in order for us to build. a better tomorrow.

APPLICATIONS OF AL-RAJHI UPVC PIPES

Water supplies

Non-toxic uPVC pipes will not affect the taste, color, or smell of drinking water.They will never corrode and are therefore extremely sanitary. Deposits and scales will not build up inside as in the case for conventional steel pipes. Their strength is greater than asbestos pipes.

Irrigation Systems

AL-RAJHI uPVC pipes are ideal for agricultural irrigation and sprinkler systems.Non-corrosive AL-RAJHI uPVC pipes are perfect for carrying water which contains chemical fertilizers and insects inhibitors. In thick wall and large diameter AL-RAJHI uPVC pipes liquids can be transported under high pressure which is convenient for the management of large farms.

Industry

Resistant to most chemicals, AL-RAJHI uPVC pipes have an important role to play in industrial plants. Light, non-corrosive and easy to assemble they allow more complex piping work that with steel or cast-iron pipes.

Solid, Waste & Drainage System

Waste line for corrosive gases, ventilation for office buildings and factories; drainage systems for private homes and elevated highways - these are a few of the many possibilities for AL-RAJHI uPVC pipes. A full line of uPVC fittings is available to assure easy installation.

Mining

AL-RAJHI uPVC pipes particularly are well-suited for draining corrosive liquids found in mines. They make an ideal vent line for pits because they are easily installed in hard to reach places.

Electrical & Telecommunications Cables

AL-RAJHI uPVC pipes form in an integral insulator, hence there is an ever-increasing demand for them as electrical conduit. To facilitate work, a full line of fittings is available and fabricated from the same material as the pipes.

AL-RAJHI uPVC pipes for Casing and Screen

Engineering difficulties and the probability of adverse chemical reactions make it impractical to overcome corrosion and encrustation through the use of protective coating, chemical treatment or cathodic protection. Thus AL-RAJHI non-corrosion PVC for water well easing and screens rapidly received approval by the appropriate ministry consultants and engineers.

GENERAL ADVANTAGES OF UPVC PIPES

Al-Rajhi uPVC pipes provide numerous advantages in various applications. These pipes are highly durable, offering excellent resistance to corrosion, chemicals, and UV rays. They are lightweight,making them easy to handle and install. Additionally, Al-Rajhi uPVC pipes require minimal maintenance, ensuring long-term reliability and cost-effectiveness. Their superior performance and adherence to international standards make them a preferred choice for plumbing, drainage, and irrigation systems.

NON-CORROSION

ALRAJHIPIPES uPVC pipes resist corrosion caused by acid, alkalis, oils, salts, moistureand the media inside and outside the pipe. It is particularly reliable for resistance to the severe climatic and soil conditions in Saudi Arabia.

SANITARY

ALRAJHIPIPES uPVC pipes are entirely non-toxic. It will not affect the taste,smell or colour of water or liquid not react with any liquid to cause a precipitant.

LOW FLOW LOSS

ALRAJHIPIPES uPVC pipes have a mirror-smooth surface which minimize resistance and impede the build-up of deposits and corrosive scales.

MECHANICAL STRENGTH

ALRAJHIPIPES uPVC pipes have great tensile strength yet they are flexible enough to withstand displacement in the pipe line. They will not dent or flatten under pressure.

LIGHT WEIGHT

ALRAJHIPIPES uPVC pipes are incredibly light. Their specific weight is one fifth of steel pipe. This cuts down transportation costs and facilitates the installation of pipes and reduces its cost.

EASE OF INSTALLATION

ALRAJHIPIPES uPVC pipes are quick and easy to install, with a complete range of fittings, using solvent cement or rubber joints. Joints are leakproof. uPVC pipes can be cut easily for installation.

FIRE RESISTANCE

ALRAJHIPIPES uPVC pipes will not support combustion. In the event of fire,flames are unable to travel along the pipe. It is self extinguishing.

INSULATOR

ALRAJHIPIPES uPVC pipe are ideal for electric conduits. Because uPVC itself is an integral insulator, it eliminates the possibility of electrolytic corrosion which so often destroys underground piping.

TECHNICAL SPECIFICATIONS & INTERNATIONAL STANDARDS

DIN	8062, 19531, 19532, 19534
ASTM	1785, D-2241, F-512
BS	3505, 3506, 5481, 4660, 4514, 5255, 2665, 6099
EN	1452
NEMA	TC-2, TC-6, TC-8V
SASO	14

Range of Production

Pipes from ALRAJHIPIPES are supplied according to SASO and or DIN Standards from 20mm, up to800mmoutside diameter in various pressure classes.

uPVC pipes are available with solvent weld Socket joints for diameters less than 63mm. Sizes of outsidediameter 63mm and larger are available with both mechanical rubber ring joints or solvent weld Socketjoints.

Pipes will be supplied in accordance with ASTM are ranging from 1/2 inch up to 8 inches in various pressure(SCH40, SCH 80) with white and gray colour.

ASTM Pipes are available with plain spigot and Solvent Cement joints only.ALRAJHIPIPES pipes are produced in 6 meters standard length (other lengths are available on request),standardcolours are grey, white and black (other colours are available on request).

GENERAL PROPERTIES

Material Technical Data

Properties	Unit	uPVC	Test Method
Physical Properties			
Specific Gravity (Compound)	g/cm^3	1.4 - 1.42	ASTM D 792
Water Absorption (24 H Boiling Water)	mg/cm^2	< 4	ISO 2508
Water Absorption (24 H at 23 °C)	% weight gain	0.05	ASTM D 570
Flammability	N/A	Self extinguishing	-
Resistance To Burning	Sec	< 5	ASTM D 635
Vicat Softening Temperature (VST 5 Kgf)	°C	> 80	ISO 306
Thermal Conductivity	$W k^{-1} m^{-1}$	0.15	DIN 52612-1
Co-Efficient Of Thermal Linear Expansion	mm/mm °C	$0.8x10^{-4}$	ASTM D 696
Specific Heat	Cal/g °C	0.25	-
Mechanical Properties			
Tensile Strength @ 23 °C Minimum	Mpa	50	ASTM D 638
Tensile Modulus Of Elasticity @ 23 °C	Mpa	3000	ASTM D638
Compressive Strength @ 23 °C	Mpa	65	ASTM D 695
Flexural Strength @ 23 °C	Mpa	89	ASTM D 790
Poisson's Ratio @ 23 °C	-	0.38	-
Izod Impact Strength (Notched) @ 23 °C	J/m ft.lbs/in.	53 1.0	ASTM D 256
Hardness Strength @ 23 °C	Durometer "D" R°Ckwell "R"	80 110	ASTM D 2240 ASTM D 785
Electrical Properties			
Volume Resistivity @ 23 °C	Ohm/cm	$3x10^{15}$	ASTM D 257
Surface Resistivity	Ohm	> 10^{1}₂	DIN IEC60093
Power Factor@ 60 HZ	%	1.255	ASTM D 150
Dielectric Strength	Volts / mm	1400	ASTM D 147
Dielectric Constant 60Hz @ 30 °F	-	3.70	ASTM D 150

Above mentioned values may varied according to compounds and products*

Allowable working pressure for pipes made of UPVC conveying water

Safety factor C = 2.5

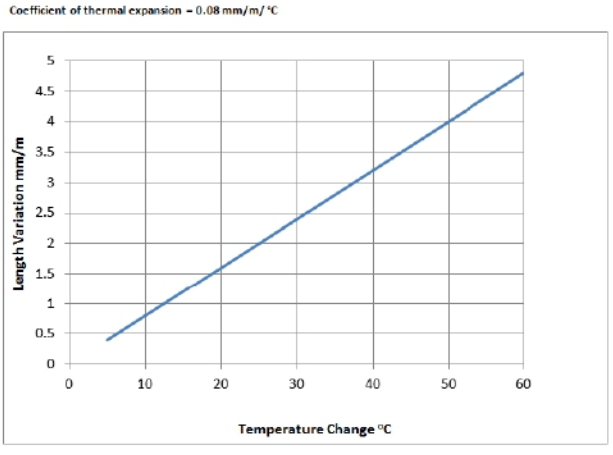
Temperature °C	Years of Service	Pipe Series S			
		25	16.7	10	6.3
		Standard dimension ratio (SDR)			
		51	34.4	21	13.6
		Class 2	Class 3	Class 4	Class 5
		Allowable working pressure (bar)			
10	5	5.2	7.8	13	20.9
	10	5.1	7.6	12.7	20.4
	25	4.9	7.4	12.3	19.7
	50	4.8	7.2	12.0	19.3
	100	4.7	7.1	11.8	18.8
20	5	4.4	6.6	11.0	17.5
	10	4.3	6.4	10.7	17.1
	25	4.1	6.2	10.3	16.4
	50	4.0	6.0	10.0	16.0
	100	3.9	5.8	9.7	15.6
30	5	3.5	5.3	8.8	14.1
	10	3.4	5.1	8.6	13.7
	25	3.3	4.9	8.2	13.2
	50	3.2	4.8	8.0	12.7
40	5	2.7	4.1	6.8	10.8
	10	2.6	3.9	6.5	10.4
	25	2.5	3.7	6.2	9.9
	50	2.4	3.6	6.0	9.6
50	5	1.9	2.9	4.8	7.6
	10	1.8	2.7	4.6	7.3
	25	1.7	2.6	4.3	6.9
60	5	1.2	1.8	3.0	4.8
	10	1.1	1.7	2.8	5.4
	25	1.1	1.6	2.6	4.2

Thermal de-rating factors for UPVC pressure pipes and fittings

Maximum service temperature (°C)	Multiply working pressure at (20 °C) by these factors
20	1
25	0.9
30	0.8
35	0.7
40	0.6

UPVC pipe length variation due to temperature change (°C)

Temperature Change (°C)	Length Variation mm/meter
5	0.4
10	0.8
15	1.2
20	1.6
25	2.0
30	2.4
35	2.8
40	3.2
45	3.6
50	4.0
55	4.4
60	4.8



Quality Control Testing

Al-Rajhi Plastics is equipped with a testing laboratory having a fully trained staff for evalution of raw materials and finished pipes

In order to maintain uniform quality level, all our routine control tests are carried out as per SAS, and DIN Standards.

إختبارت الجودة

لقد زود مصنع بلاستيك الراجحي بمختبرات على أعلى المستويات الفنية تحت إشراف مجموعة من المختصين من ذوي الخبرة ليؤكدوا أفضل مستويات الجودة بدءاً من المواد الأولية وانتهاء بالأنابيب الجاهزة للاستعمال.

إن هذه المجموعة تعمل وبكل كفاءة لتبقى أنابيب الوطنية بجودتها المميزة و المطابقة بمواصفاتها لنظام المواصفات السعودية المتفق مع نظام المواصفات الألماني

AL-RAJHI الراجحي

UPVC DRAINAGE AND SEWERAGE PIPES

UPVC pipe according to DIN 8062, ISO 161-1

Class		Class 1		Class 2		Class 3		Class 4	
Nominal Pressure in Bars		2 BAR		4 BAR		6 BAR		10 BAR	
Nom-OD (mm)	Tolerance on Nom-OD (mm)	Nom-wall thickness (mm)	Nom- wt. kg/m	Nom-wall thickness (mm)	Nom- wt. kg/m	Nom-wall thickness (mm)	Nom-wt. kg/m	Nom-wall thickness (mm)	Nom-wt. kg/m
25	+.0.2							1.5	0.174
32	+.0.2							1.8	0.264
40	+.0.2					1.8	0.334	1.9	0.350
50	+.0.2					1.8	0.422	2.4	0.552
63	+.0.2					1.9	0.563	3.0	0.854
75	+.0.3			1.8	0.642	2.2	0.782	3.6	1.22
90	+.0.3			1.8	0.774	2.7	1.13	4.3	1.75
110	+.0.3	1.8	0.950	2.2	1.16	3.2	1.64	5.3	2.61
125	+.0.3	1.8	1.08	2.5	1.48	3.7	2.13	6.0	3.64
140	+.0.4	1.8	1.21	2.8	1.84	4.1	2.65	6.7	4.18
160	+.0.4	1.8	1.39	3.2	2.41	4.7	3.44	7.7	5.47
180	+.0.4	1.8	1.57	3.6	3.02	5.3	4.37	8.6	6.88
200	+.0.4	1.8	1.74	4.0	3.70	5.9	5.37	9.6	8.51
225	+.0.5	1.8	1.96	4.5	4.70	6.6	6.76	10.8	10.8
250	+.0.5	2.0	2.40	4.9	5.65	7.3	8.31	11.9	13.2
280	+.0.6	2.3	3.11	5.5	7.11	8.2	10.4	13.4	16.6
315	+.0.6	2.5	3.78	6.2	9.02	9.2	13.2	15.0	20.9
355	+.0.7	2.9	4.88	7.0	11.4	10.4	16.7	16.9	26.5
400	+.0.7	3.2	6.10	7.9	14.5	11.7	21.1	19.1	33.7
450	+.0.8	3.6	7.65	8.9	18.3	13.2	26.8	21.5	42.7
500	+.0.9	4.0	9.38	9.8	22.4	14.6	32.9	23.9	52.6
560	+.1.0	4.2	11.8	11.0	28.1	16.4	41.4	26.7	65.8
630	+.1.1	2.0	14.7	12.4	35.7	18.4	52.2	30.0	83.2
710	+.1.2	5.7	18.9	14.0	45.3	20.7	66.1		
800	+.1.3	6.4	23.9	15.7	57.2	23.3	83.9		

Length : **6 meters (Other lengths are available on request).**
Colour : **Grey.**
Socket Type **Rubber joint (R/J) type supplied from sizes 63mm up to 800mm. Solvent Cement (SC/J) type supplied from sizes 20mm up to 800mm.**

Country Standard

UPVC Sewer Pipes (Gravity) According to DIN 19534.

Applications : Sewerage Pipe Underground

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness (mm)		Insertion Depth (mm)	Weight kg/m
	(D)	Tolerance	(S)	Tolerance		
110	110	0.3	3.0	0.5 +	115	1.63
125	125	0.3	3.0	0.5 +	120	1.870
160	160	0.4	3.6	0.6 +	132	2.650
200	200	0.4	4.5	0.7 +	145	4.120
250	250	0.5	6.1	0.9 +	160	7.00
315	315	0.6	7.7	1.0 +	180	11.110
400	400	0.7	9.8	1.2 +	200	17.800
500	500	0.9	12.2	1.5 +	250	27.649
600	630	1.1	15.4	1.8 +	300	43.944

LENGTH : 6 meters (Other lengths are available on request.)
COLOUR : Golden Brown.
SOCKET TYPE: Solvent cement (SC/J) type, Rubber Joint (R/J) type.

Country Standard

UPVC Drain Pipes According to DIN 19531.

Applications : Waste & Soil discharge systems inside buildings

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
40	40.0	40.2	1.8	2.2	0.381
50	50.0	50.2	1.8	2.2	0.481
75	75.0	75.3	1.8	2.2	0.642
110	110.0	110.3	2.2	2.7	1.160
125	125.0	125.3	2.5	3.0	1.480
160	160.0	160.4	3.2	3.8	2.410

LENGTH : 6 meters (Other lengths are available on request).
COLOUR : Grey.
SOCKET TYPE: Solvent cement (SC/J) type, Rubber Joint (R/J) type

Country Standard

UPVC Underground Sewer Pipe (Gravity) According to BS 5481

Applications : Gravity Sewerage Underground

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
200 (8")	200.0	200.6	4.9	5.6	4.50
250 (10")	250.0	250.7	6.1	7.0	7.01
315 (12")	315.0	315.9	7.7	8.7	11.07
400 (16")	400.0	401.0	9.8	11.0	17.83

LENGTH : 5.8 & 6 meters (Other lengths are available on request).
COLOUR : Golden Brown.
SOCKET TYPE: Solvent cement (SC/J) type, Rubber Joint (R/J) type

Country Standard

UPVC Underground Drainage & Sewerage Pipes according to BS 4660

Applications : Drainage Under Gardens, Fields, Driveways & Roads

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
110 (4")	110.0	110.4	3.2	3.8	1.64
160 (6")	160.0	160.6	4.1	4.8	3.04

LENGTH : 5.8 & 6 meters (Other lengths are available on request).
COLOUR : Golden Brown.
SOCKET TYPE: Solvent cement (SC/J) type, Rubber Joint (R/J) type

Country Standard

UPVC Aboveground Soil & Ventilating Pipes according to BS 4514

Applications : Soil & Ventilating Pipes Aboveground

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
82 (3")	82.4	82.8	3.2	3.8	1.21
110 (4")	110.0	110.4	3.2	3.8	1.64
160 (6")	160.0	160.6	3.3	3.9	2.47

LENGTH : 5.8 & 6 meters (Other lengths are available on request).
COLOUR : Golden Brown.
SOCKET TYPE Solvent cement (SC/J) type, Rubber Joint (R/J) type Non standard lengths & colours available on request.

Country Standard

UPVC Aboveground Waste Pipes according to BS 5255

Applications : Waste Aboveground

Nominal Size	Outside Diameter mm		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
32 (1 1/4")	36.15	36.45	1.8	2.2	0.301
40 (1 1/2")	42.75	43.05	1.9	2.3	0.376
50 (2")	55.75	56.05	2.0	2.4	0.519

Nominal Size	)Outside Diameter)mm		)Wall Thickness)mm		Weight kg/m
	Min	Max	Min	Max	
("4/1 1) 32	36.15	36.45	1.8	2.2	0.301
("2/1 1) 40	42.75	43.05	2.3	2.8	0.452
("2) 50	55.75	56.05	2.4	2.9	0.620

Note: Table (b) for waste pipes - Cold water

LENGTH : 4, 5.8 & 6 meters (Other lengths are available on request).
COLOUR : Grey.
SOCKET TYPE Solvent cement (SC/J) type, Rubber Joint (R/J) type
Non standard lengths & colours available on request.

Country Standard 

UPVC Drain, Waste, Vent Pipes According to ASTM D 2665.

Applications : Drain, Waste, Vent (DWV)

Nominal Size (inch)	Outside Diameter (mm)		Wall Thickness (mm)		Weight kg/m
	Min	Max	Min	Max	
11/4	42.03	42.29	3.56	4.07	0.65
1 1/2	48.11	48.41	3.68	4.19	0.77
2	60.18	60.48	3.91	4.42	1.04
3	88.7	89.1	5.49	6.15	2.14
4	114.07	114.53	6.02	6.73	3.05
6	168.0	168.56	7.11	7.97	5.37
8	218.7	219.46	8.18	9.17	8.11

LENGTH : 5.8 & 6 meters (Other lengths are available on request).
COLOUR : White.
SOCKET TYPE Plain, Solvent cement (SC/J)
Non standard lengths & colours available on request.

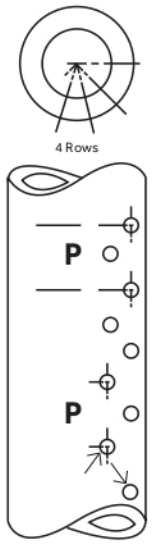
Country Standard 

AL-RAJHI perforated or slotted uPVC pipes are supplied upon request depending on the size and class of the pipes. Below given

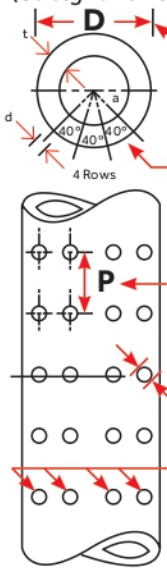
PERFORATED PIPES

figures is a general configuration which may vary as per clients requirements.

(Staggered Rows)



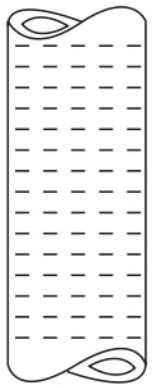
(Straight Rows)



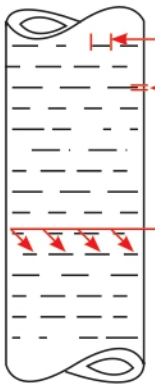
Range of sizes	75 mm to 500 mm
Angular pitch of holes	40° for 3 or 4 rows 40°, 80° or 120° for 2 rows
Longitudinal pitch of holes (LP)	50 mm to 200 mm
Hole Diameter	6 mm to 13 mm
Number of rows	1 to 6

B) SLOTTED PIPE

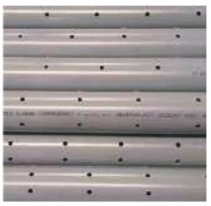
(Straight Slots)



(Staggered Slots)



Slot length	Depends on the size
Slot width	1, 1 1/2, 2 & 3 mm
No. of Rows	4, 6 & 8 (but according to the size)
Slot Angle (Sector)	Recommended by **AL-RAJHI PIPES**



For further details please refer to National Marketing Technical Sales Department

AL-RAJHI الراجحي

UPVC ELECTRICAL AND TELECOMMUNICATION DUCT

UPVC Electrical Conduits according to DIN 8062

Applications: Electrical installations.

Nominal OD (mm)	Class 2		Class 3	
	Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
40	-	-	1.8	0.334
50	-	-	1.8	0.422
63	-	-	1.9	0.562
75	1.8	0.642	2.2	0.782
90	1.8	0.774	2.7	1.13
110	2.2	1.16	3.2	1.64
125	2.5	1.48	3.7	2.13
140	2.8	1.84	4.1	2.65
160	3.2	2.41	4.7	3.44
200	4.0	3.70	5.9	5.37
225	4.5	4.70	6.6	6.76
250	4.9	5.65	7.3	8.31
280	5.5	7.11	8.2	10.4
315	6.2	9.02	9.2	13.2
400	7.9	14.5	11.7	21.1

Length : 6 meters (Other lengths are available on request).
Colour : Grey.
Socket Type: Solvent cement (SC/J) type.

Country Standard 

UPVC Electrical Conduits according to BS 6099

Applications: Electrical installations.

Nominal Size (mm)	Minimum Inside Diameter (mm)			Maximum Wall Thickness mm			Weight kg/m		
	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy
16	13.7	13.0	12.2	1.15	1.5	1.9	0.080	0.100	0.125
20	17.4	16.9	15.8	1.3	1.55	2.1	0.120	0.140	0.180
25	22.1	21.9	20.6	1.45	1.8	2.2	0.165	0.200	0.240
32	28.6	27.8	26.6	1.7	2.1	2.7	0.245	0.296	0.370
40	35.8	35.4	34.4	2.1	2.3	2.8	0.352	0.406	0.485
50	45.1	44.3	43.2	2.45	2.85	3.4	0.540	0.622	0.707
63	57.0	-	-	3.0	-	-	0.830	-	-

Length : 3 meters (Other lengths are available on request).
Colour : Black/White.
Socket Type : Plain, Solvent cement (SC/J) type

Country Standard 

UPVC Electrical Conduits & Tubing according to NEMA TC-2

EPT Electrical plastic tubing for encasement in concrete, EPC 40 Electrical plastic conduit for direcburial underground, EPC 80 Electrical plastic conduit for heavy duty.

Nominal Size inch	Outside diameter (mm)		Wall Thickness (mm)						Weight kg/m		
			EPT		EPC 40		EPC 80		EPT	EPC 40	EPC 80
	min	max	min	max	min	max	min	max			
1/2	21.24	21.44	1.52	2.03	2.77	3.28	3.73	4.24	0.155	0.24	0.3
3/4	26.57	26.77	1.52	2.03	2.87	3.38	3.91	4.24	0.197	0.33	0.43
1	33.27	33.53	1.52	2.03	3.38	3.89	4.55	5.08	0.25	0.48	0.61
11/4	42.03	42.29	1.78	2.29	3.56	4.07	4.85	5.44	0.365	0.65	0.87
11/2	48.11	48.41	2.03	2.54	3.68	4.19	5.08	5.69	0.47	0.77	1.03
2	60.17	60.47	2.54	3.05	3.91	4.42	5.54	6.2	0.717	1.04	1.43
21/2	72.84	73.2	2.79	3.30	5.16	5.77	7.01	7.85	0.952	1.57	2.2
3	88.70	89.1	3.18	3.68	5.49	6.15	7.62	8.53	1.31	2.14	2.91
4	114.1	114.5	3.81	4.32	6.02	6.73	8.56	9.58	2.0	3.05	4.26
5	141.05	141.55	-	-	6.22	7.347	9.52	10.67	- 4.18		6.42
6	168.0	168.56	-	-	7.11	7.98	10.97	12.29	- 5.37		8.13
8	218.7	219.46	-	-	8.18	9.17	12.7	14.22	- 8.11		12.4

UPVC Electrical Conduits & Tubing according to NEMA TC-6 & ASTM F 512

Applications: Type EB for encased burial in concrete, Type DB for direct burial without concrete.

Nominal Size (inch)	Outside Diameter (mm)	PVC type EB 20		PVC type DB 60	
		Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
2	60.17	1.52	0.465	1.52	0.465
3	88.7	1.55	0.703	2.34	1.000
4	114.1	2.08	1.170	3.07	1.650
5	141.05	2.62	1.170	3.86	2.50
6	168.0	3.18	2.530	4.62	3.570

PVC Electrical Conduits & Tubing according to NEMA TC-8 & ASTM F 512

Applications: Type EB for encased burial in concrete, Type DB for direct burial without concrete.

Nominal Size (inch)	Outside Diameter (mm)	PVC type EB 35		PVC type DB 120	
		Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
1	33.27	-	-	1.52	0.251
11/2	48.11	-	-	1.52	0.369
2	60.17	1.52	0.465	1.96	0.576
3	88.7	1.93	0.847	3.00	1.250
4	114.1	2.54	1.390	3.91	2.050
5	141.05	3.2	2.09	4.85	3.12
6	168.0	3.86	3.020	5.77	4.420

Length : **5.8 & 6 meters (Other lengths are available on request).**
Colour : **Grey.**
Socket Type: Solvent cement (SC/J) type

Country Standard

AL-RAJHI الراجحي

AL-RAJHI UPVC PRESSURE PIPES

UPVC pipes according to (SASO 14, DIN 8062, DIN 19532, ISO 161)

Class		Class 1		Class 2		Class 3		Class 4		Class 5	
Nominal Pressure in Bars		2 BAR		4 BAR		6 BAR		10 BAR		16 BAR	
Nom-OD mm	Tolerance on Nom-OD mm	Nom-thick of wall mm	Nom-wt. kg/m	Nom thick of wall mm	Nom-wt. kg/m	Nom-thick of wall mm	Nom-wt. kg/m	Nom-thick wall mm	Nom-wt. kg/m	Nom-thick of wall mm	Nom-wt. kg/m
20	+0.2									1.5	0.137
25	+0.2							1.5	0.174	1.9	0.212
32	+0.2							1.8	0.264	2.4	0.342
40	+0.2					1.8	0.334	1.9	0.350	3.0	0.525
50	+0.2					1.8	0.422	2.4	0.552	3.7	0.809
63	+0.2					1.9	0.562	3.0	0.854	4.7	1.29
75	+0.3			1.8	0.642	2.2	0.782	3.6	1.22	5.6	1.82
90	+0.3			1.8	0.774	2.7	1.13	4.3	1.75	6.7	2.61
110	+0.3	1.8	0.950	2.2	1.16	3.2	1.64	5.3	2.61	8.2	3.90
125	+0.3	1.8	1.08	2.5	1.48	3.7	2.13	6.0	3.64	9.3	5.01
140	+0.4	1.8	1.21	2.8	1.84	4.1	2.65	6.7	4.18	10.4	6.27
160	+0.4	1.8	1.39	3.2	2.41	4.7	3.44	7.7	5.47	11.9	8.17
180	+0.4	1.8	1.57	3.6	3.02	5.3	4.37	8.6	6.88	13.4	10.4
200	+0.4	1.8	1.74	4.0	3.70	5.9	5.37	9.6	8.51	14.9	12.8
225	+0.5	1.8	1.96	4.5	4.70	6.6	6.76	10.8	10.8	16.7	16.1
250	+0.5	2.0	2.40	4.9	5.65	7.3	8.31	11.9	13.2	18.6	19.9
280	+0.6	2.3	3.11	5.5	7.11	8.2	10.4	13.4	16.6	20.8	24.9
315	+0.6	2.5	3.78	6.2	9.02	9.2	13.2	15.0	20.9	23.4	31.5
355	+0.7	2.9	4.88	7.0	11.4	10.4	16.7	16.9	26.5	26.3	39.9
400	+0.7	3.2	6.10	7.9	14.5	11.7	21.1	19.1	33.7	29.7	50.8
450	+0.8	3.6	7.65	8.9	18.3	13.2	26.8	21.5	42.7	33,1	
500	+0.9	4.0	9.38	9.8	22.4	14.6	32.9	23.9	52.6	36.8	
560	+1.0	4.2	11.8	11.0	28.1	16.4	41.4	26.7	65.8		
630	+1.1	2.5	14.7	12.4	35.7	18.4	52.2	30.0	83.2		
710	+1.2	5.7	18.9	14.0	45.3	20.7	66.1				
800	+1.3	6.4	23.9	15.7	57.2	23.3	83.9				

Length : **6 meters (Other lengths are available on request.)**
Colour : **Grey.**
Socket Type **Rubber joint (R/J) type supplied from sizes 63mm up to 800mm.**
Solvent Cement (SC/J) type supplied from sizes 20mm up to 800mm.

Country Standard 

UPVC Pipes According to ASTM D - 1785, Schedule 40 & Schedule 80

Nominal Size Inch.	O.D. (mm)		Schedule 40				Schedule 80			
	min	max	Wall Thickness (mm) min	Wall Thickness (mm) max	Nominal Weight (kg/m)	PSI	Wall Thickness (mm) min	Wall Thickness (mm) max	Nominal Weight (kg/m)	PSI
1/2	21.24	21.44	2.77	3.28	0.24	600	3.73	4.24	0.3	850
3/4	26.57	26.77	2.87	3.38	0.33	480	3.91	4.42	0.43	690
1	33.27	33.53	3.38	3.89	0.48	450	4.55	5.08	0.61	630
11/4	42.03	42.29	3.56	4.07	0.65	370	4.85	5.44	0.87	520
11/2	48.11	48.41	3.68	4.19	0.77	330	5.08	5.69	1.03	470
2	60.17	60.47	3.91	4.42	1.04	280	5.54	6.2	1.43	400
21/2	72.84	73.2	5.16	5.77	1.57	300	7.01	7.85	2.2	420
3	88.7	89.1	5.49	6.15	2.14	260	7.62	8.53	2.91	370
4	114.1	114.5	6.02	6.73	3.05	220	8.56	9.58	4.26	320
5	141.05	141.55	6.22	7.347	4.18	190	9.52	10.67	6.42	290
6	168	168.56	7.11	7.98	5.37	180	10.97	12.29	8.13	280
8	218.7	219.46	8.18	9.17	8.11	160	12.7	14.22	12.4	250

Length : **6 meters (Other lengths are available on request.)**
Colour : **Schedule 40- White, Schedule 80 - Grey**
Socket Type: Plain, solvent cement (SC/J)

Country Standard

UPVC Pressure-rated Pipes According to ASTM D 2241

Nominal Size Inch.	O.D. (mm)		Wall Thickness (mm)											
			Standard Diameter Ratio (SDR)											
	min	max	41 W.P: 6.9 Bar		32.5 W.P: 8.6 Bar		26 W.P: 11 Bar		21 W.P: 13.8 Bar		17 W.P: 17.2 Bar		13.5 W.P: 21.7 Bar	
			min	max	min	max	min	max	min	max	min	max	min	max
1/2	21.24	21.44											1.57	2.08
3/4	26.57	26.77							1.52	2.03	1.57	2.08	1.98	2.49
1	33.27	33.53					1.52	2.03	1.60	2.11	1.96	2.46	2.46	2.97
11/4	42.03	42.29			1.52	2.03	1.63	2.13	2.01	2.52	2.49	3.00	3.12	3.63
11/2	48.11	48.41			1.52	2.03	1.85	2.36	2.29	2.80	2.84	3.35	3.58	4.09
2	60.17	60.47			1.85	2.36	2.31	2.82	2.87	3.38	3.56	4.06	4.47	4.98
3	88.70	89.10	2.16	2.67	2.74	3.25	3.43	3.94	4.24	4.75	5.23	5.87	6.58	7.37
4	114.07	114.53	2.80	3.30	3.51	4.01	4.39	4.90	5.44	6.10	6.73	7.54	8.46	9.47
6	168.00	168.56	4.11	4.62	5.18	5.79	6.48	7.26	8.03	9.00	9.91	11.10	12.47	13.97
8	218.70	219.46	5.33	5.97	6.73	7.54	8.43	9.45	10.41	11.66	12.90	14.45		

Note: The maximum pressure rating given above is based on water at 73 °F/23 °C and for unthreaded pipes.

Length : **6 meters (Other lengths are available on request.)**
Colour : **White**
Socket Type: Plain, solvent cement (SC/J).

Country Standard

UPVC Pipes According to BS 3505 / 3506

Applications: Water supply, irrigation systems, industrial use.

Nominal Size Inch.	O.D. (mm)		Wall Thickness (mm)													
			Class B		Class C		Class D		Class E		Class O		Class 6		Class 7	
	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max
3/8	17.0	17.3							1.5	1.9			2.3	2.8	3.2	3.8
1/2	21.2	21.5							1.7	2.1			2.8	3.3	3.7	4.3
3/4	26.6	26.9							1.9	2.5			2.9	3.4	3.9	4.5
1	33.4	33.7							2.2	2.7			3.4	4.0	4.5	5.2
11/4	42.1	42.4					2.2	2.7	2.7	3.2			3.6	4.2	4.8	5.5
11/2	48.1	48.4					2.5	3.0	3.1	3.7	1.8	2.2	3.7	4.3	5.1	5.9
2	60.2	60.5			2.5	3.0	3.1	3.7	3.9	4.5	1.8	2.2			5.5	6.3
21/2	75.0	75.3			3.0	3.5	3.9	4.5	4.8	5.5	1.8	2.2				
3	88.7	89.1	2.9	3.4	3.5	4.1	4.6	5.3	5.7	6.6	1.8	2.2				
4	114.1	114.5	3.4	4.0	4.5	5.2	6.0	6.9	7.3	8.4	2.3	2.8				
5	140.0	140.4	3.8	4.4	5.5	6.4	7.3	8.4	9.0	10.4	2.6	3.1				
6	168.0	168.5	4.5	5.2	6.6	7.6	8.8	10.2	10.8	12.5	3.1	3.7				
8	218.8	219.4	5.3	6.1	7.8	9.0	10.3	11.9	12.6	14.5	3.1	3.7				

Note: Classes B,C,D and E are to BS 3505/3506. Classes O, 6 and 7 are to BS 3506 / 1969. Classes 6 and 7 equivalent to ASTMD -1785, SCH 40 and SCH 80 respectively.

Length : **6 meters (Other lengths are available on request.)**
Colour : **Dark Grey except class O which is grey.**
Socket Type: Plain, solvent cement (SC/J)

Country Standard

Pressure ratings for working pressure at 20 °C

Class
B 6.0 bar
C 9.0 bar
D 12.0 bar
E 15.0 bar

For higher working temperatures, the pressure rating should be reduced.

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C-PVC PIPES

FOR HOT AND COLD WATER

Manufacturing Standards

ASTM F441 American Society for Testing & Material

DIN 8079 German Standard

GENERAL PROPERTIES

MATERIAL

Chlorinated Polyvinyl Chloride (CPVC)

GENERAL PROPERTIES	
a. Specific Gravity	1.56 gm/cm^3
b. Water Absorption	7 gm/cm^2
c. Flammability	will not support combustion

THERMAL PROPERTIES	
a. Softening Point	93°C
b. Coefficient of Linear Expansion	5.3 x 10^{-5} °C

MECHANICAL PROPERTIES	
a. Ultimate Tensile Strenght	575 kgf/cm^2
b. Flexural Strenght	1018 kgf/cm^2
c. Impact Strenght	11 joules

ELECTRICAL PROPERTIES	
a. Volume Resistivity	10^{14} ohm/cm
b. Surface Resistivity	10^{12} ohm/cm
c. Power Factor (at 10 cycles)	3.0

CPVC is a non-conductor of electricity and also non-subject to galvanic or electrolytic attack. Electrical equipments should not be earthened to (CPVC) pipes.

COLOUR	Dusty Grey and Light Ivory

Al-Rajhi Pipes is a leading supplier of CPVC pipes and fittings in the Gulf region, offering a comprehensive range of sizes that comply with the ASTM F441 and DIN 8079 standards. With a strong commitment to quality and excellence, Al-Rajhi Pipes provides reliable CPVC piping solutions for various applications. In addition to their wide selection of pipes, they also supply high-quality CPVC fittings, ensuring a complete and integrated piping system. With their dedication to customer satisfaction and extensive distribution network, Al-Rajhi Pipes is the trusted source for CPVC pipes and fittings across the Guf region.

What is cPVC?

Chlorinated Polyvinyl Chloride (CPVC) is chlorinated Pvc and has become an important engineering thermoplastic due to its relatively low cost, high heat distortion temperature, chemical inertness, and outstanding mechanical,dielectric, flame and smoke properties.

CPVC supplied by Al-RAJHI. A full range of CPVC pipes are produced according to American Standards (ASTM F441) and Metric Standards (DIN 8079 / 8080).

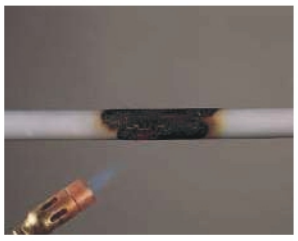
Benefits of CPVC

CPVC is the most superior plastic alternative to Polypropylene, PEX, Polyethylene and other plastic and much more superior to metal alternatives with respect to.

- Heat resistance up to 90°C
- Chemical resistance over a broad temperature range
- Long term proven service performance of more than 50 years
- Lower installed cost
- Suitable for potable water and can be produced with NSF or WRAS approved grade
- Does not sustain burning.

CPVC advantage over Polypropylene

- Same flow rate with smaller pipe size
- Ease of installation (overhead lines, confined spaces)
- No need for expensive electrical tools and source
- Lower thermal expansion
- Wider support spacing, less “looping” of pipe
- Less heat loss
- Chemical resistance to acids and alkalis
- Low bacteria build up
- No oxygen permeation to corrode metal components
- Low flame spread
- Low smoke generation
- Self-extinguishing
- No flaming drips.



CPVC
- initially when torch is applied

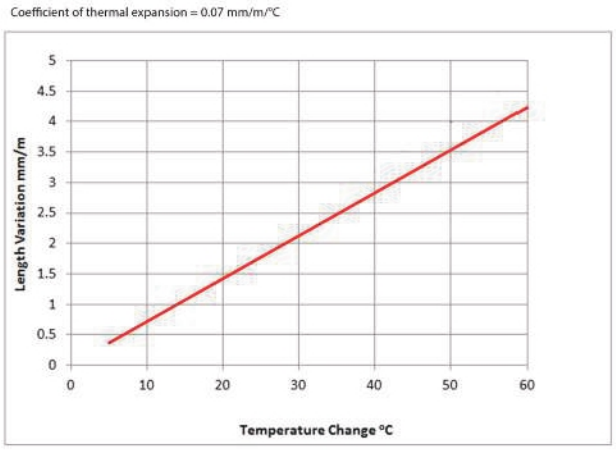
Other Plastics
- initially when torch is applied

CPVC
- After torch is removed

Other Plastics
- After torch is removed

CPVC pipe length variation due to temperature change (°C)

Temperature Change (°C)	Length Variation mm/meter
5	0.35
10	0.7
15	1.05
20	1.4
25	1.75
30	2.1
35	2.45
40	2.8
45	3.15
50	3.5
55	3.85
60	4.2



CPVC pipes according to ASTM F 441

Nominal Size inch	Outside diameter (mm)		Schedule 80 Minimum Wall Thickness		Normal Weight kg/m	Water Pressure Rating	
	Inch	mm	Inch	mm		Psi	Bar
1/4	0.540	13.7	0.119	3.02	0.230	1130	77.8
1/2	0.840	21.34	0.147	3.73	0.337	850	58.6
3/4	1.050	26.67	0.154	3.91	0.457	690	47.6
1	1.315	33.40	0.179	4.55	0.671	630	43.4
11/4	1.660	42.20	0.191	4.85	0.928	520	35.9
11/2	1.900	48.30	0.200	5.08	1.13	470	32.4
2	25.375	60.33	0.218	5.54	1.56	400	27.6
3	3.500	88.9	0.300	7.62	2.9	370	25.5
4	4.500	114.3	0.337	9.52	4.3	320	22.1
6	6.625	168.3	0.432	10.97	8.1	280	19.3

pressure rating applies for Water at 23 °C and for unthreaded pipes

CPVC Pipes according to DIN 8079

Nominal Size mm	Pressure Rating at 20 °C					
	PN16		PN20		PN25	
	Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
16	1.2	0.100	1.5	0.118	1.8	0.136
20	1.5	0.151	1.9	0.183	2.3	0.217
25	1.9	0.234	2.3	0.379	2.8	0.326
32	2.4	0.379	3.0	0.455	3.6	0.534
40	3.0	0.582	3.7	0.701	4.5	0.830
50	3.7	0.896	4.6	1.090	5.6	1.290
63	4.7	1.430	5.8	1.720	7.0	2.020
75	5.6	2.020	6.9	2.420	8.4	2.880
90	6.7	2.880	8.2	3.460	10.0	4.100
110	8.2	4.310	10.0	5.130	12.3	6.160

Length: 5.8 and 6 meters | Colour: Beige
Socket Type: Plain *Non standard lengths and colour are available on request.

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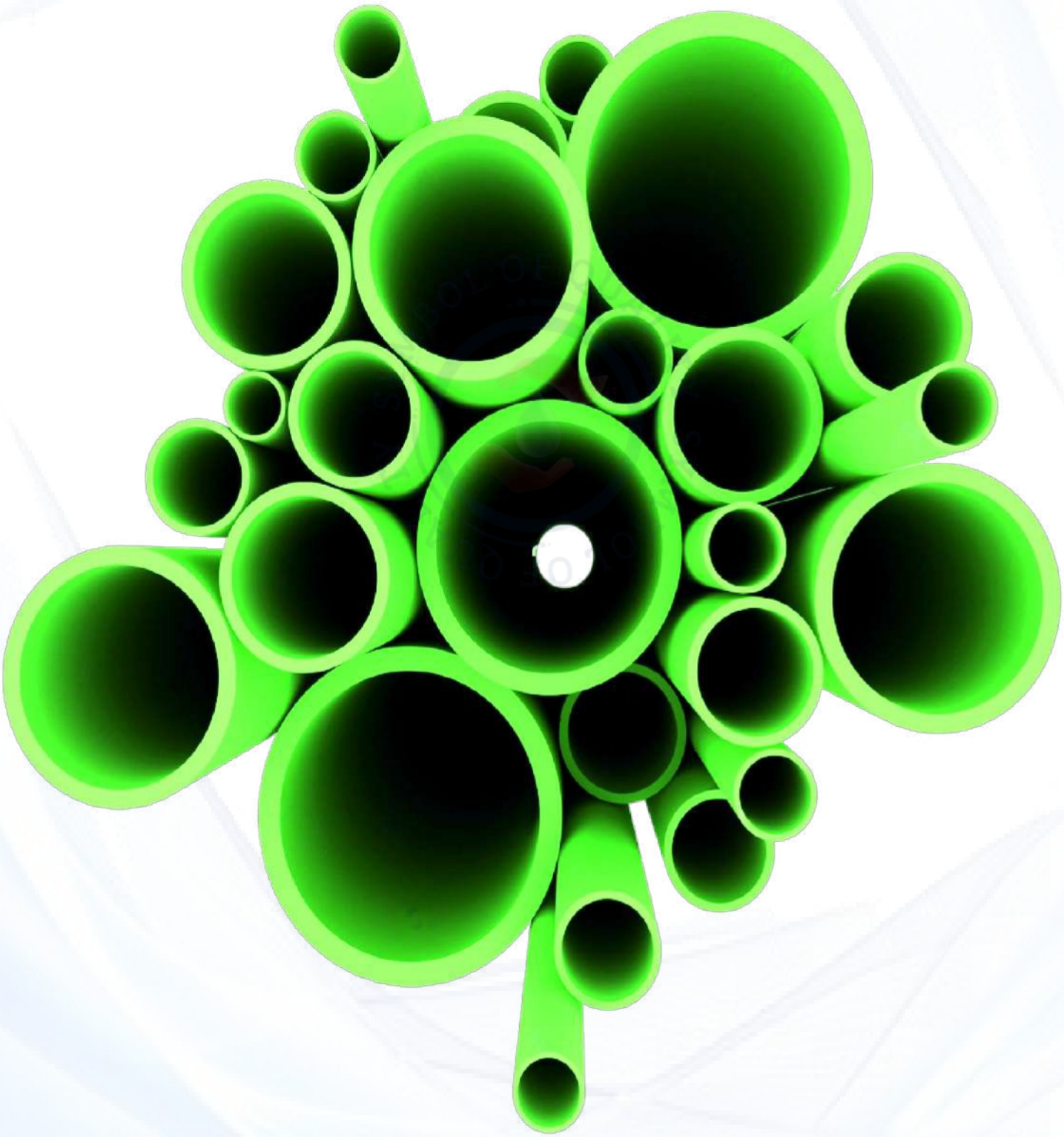
PPR PIPES



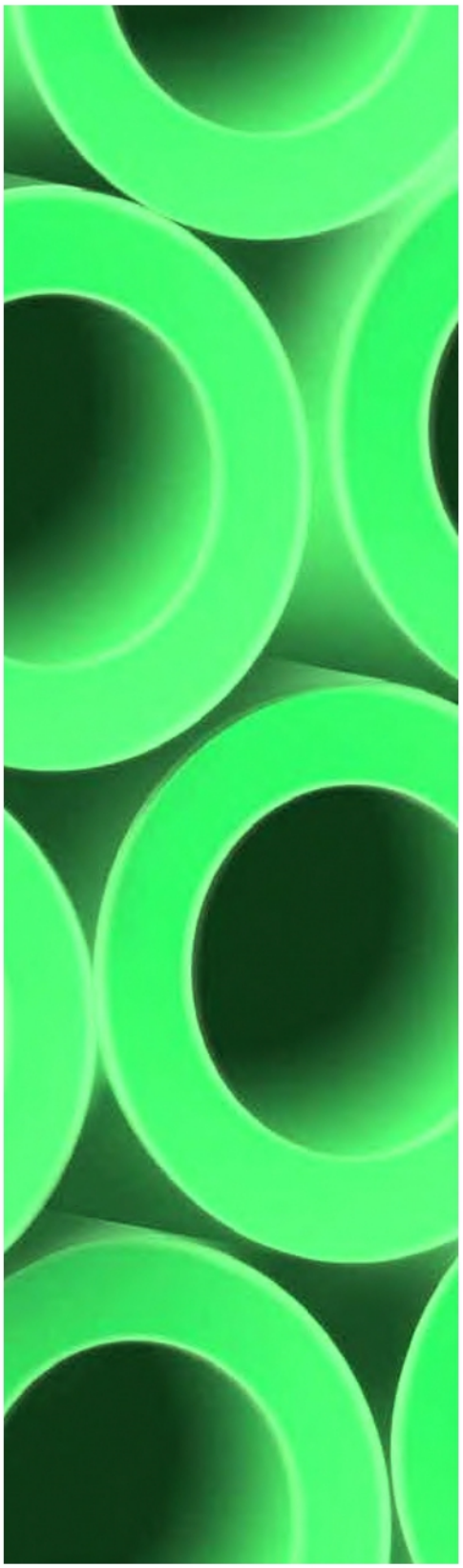
PPR GENERAL PROPERTIES

Mechanical & Thermal Properties of PPR

Properties	Unit	Value	Test Method
Density	g/cm^3	0.90	ISO 1183
Melt Flow Index 230°C/2.16kg	g/10min	0.20 -0.45	ISO 1133
Flexural modulus (2mm/min)@23deg.	MPa	800	ISO 178
Tensile Modulus (1mm/min)	MPa	850	ISO 527
Tensile strain at Yield (50mm/min)	%	13.50	ISO 527 -2
Tensile stress at Yield (50mm/min)	MPa	25	ISO 527 -2
Thermal conductivity (10-60deg.)	W/m.K	0.24	DIN 52612
Coefficient of Thermal Expansion(0deg- 110deg)	m/Mk	$1.5\text{-}1.8x10^{-4}$	DIN 53752
VICAT softening Temperature (VST/A/50)	°C	130	ISO 306
VICAT softening Temperature (VST/B/50)	°C	69	ISO 306

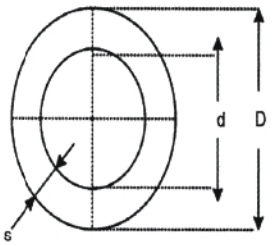
PPR PIPES: DIN 8077 / 8078

Nominal Size (mm)	Outside Diameter (mm)		WALL THICKESS (S) (MM) Pipe Series 2.5 SDR 6 / PN 20	
	MIN.	MAX.	MIN.	MAX.
20	20.0	20.3	3.40	4.00
25	25.0	25.3	4.20	4.90
32	32.0	32.3	5.40	6.20
40	40.0	40.4	6.70	7.60
50	50.0	50.5	8.30	9.40
63	63.0	63.6	10.50	11.80
75	75.0	75.7	12.50	14.00
90	90.0	90.9	15.00	16.80
110	110.0	110.9	18.30	20.40

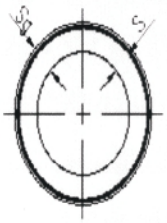


Al-Rajhi PPR - PIPES

Nominal pressure - **Class 2/8 bar**
Std : dimension ratio - **6**
Std : Reference KTP **SASO-ISO**
standard colour **15874**
Green

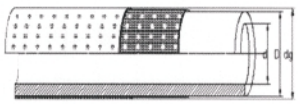


PIPE SIZE	OUTSIDE DIAMETER (D) mm	WALL THICKNESS (S) mm	INTERNAL DIAMETER (d) mm	WEIGHT Kg/m
20 mm	20.0	3.40-4.00	13.20	0.172
25 mm	25.0	4.20-4.90	16.60	0.266
32 mm	32.0	5.40-6.20	21.20	0.434
40 mm	40.0	6.70-7.60	26.60	0.671
50 mm	50.0	8.30-9.40	33.40	1.040
S3 mm	63.0	10.50-11.80	42.00	1.650
75 mm	75.0	12.50-14.00	50.00	2.340
90 mm	90.0	15.00-16.70	60.00	3.360
110 mm	110.0	18.30-20.40	73.40	5.010
125 mm	125.0	20.80-23.10	83.40	6.470
160 mm	160.0	26.60-29.40	106.70	10.60

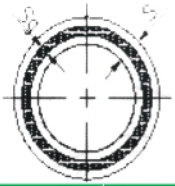


AL-RAJHI PPR - Black Pipes

ISO 15874

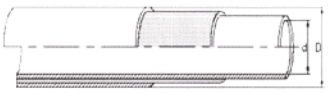


PIPE SIZE	NOMINAL DIAMETER (D)in mm	OUTER DIAMETER (dg) in mm	INTERNAL DIAMETER (d) in mm	NOMINAL THICKNESS (S) in mm	TOTAL THICKNESS (Sg) in mm
Ø 20	20.00	21.80	13.20	3.40-4.00	4.30-4.90
Ø 25	25.00	27.00	16.60	4.20-4.90	5.20-5.90
Ø 32	32.00	34.00	21.20	5.40-6.20	6.40-7.20
Ø 40	40.00	42.20	26.60	6.70-7.60	7.80-8.70
Ø 50	50.00	52.20	33.40	8.30-9.40	9.40-10.50
Ø 63	63.00	65.40	42.00	10.50-11.80	11.70-13.00

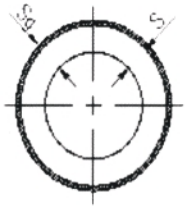


PPR - FG Pipe

DIN 8077/8078 DIN 53769

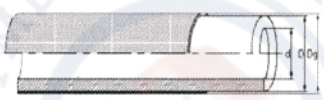


PIPE SIZE	NOMINAL DIAMETER (D)in mm	INTERNAL DIAMETER (d) in mm	NOMINAL THICKNESS (S) in mm	FG THICKNESS (Sg) in mm
Ø 20	20.00	13.20	3.40-4.00	1.33
Ø 25	25.00	16.60	4.20-4.90	1.40
Ø 32	32.00	21.20	5.40-6.20	1.80
Ø 40	40.00	26.60	6.70-7.60	2.23
Ø 50	50.00	33.40	8.30-9.40	2.76
Ø 63	63.00	42.00	10.50-11.80	2.43

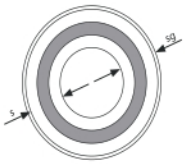


PPR - PE PIPE

DIN 8077/8078, ISO 15874

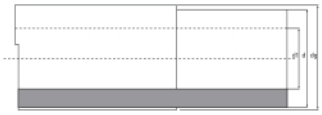


PIPE SIZE	NOMINAL DIAMETER (D)in mm	OUTER DIAMETER (Dg) in mm	INTERNAL DIAMETER (d) in mm	NOMINAL THICKNESS (S) in mm	TOTAL THICKNESS (Sg) in mm
Ø 20	20.00	21.80	13.20	3.40-4.00	4.30-4.90
Ø 25	25.00	27.00	16.60	4.20-4.90	5.20-5.90
Ø 32	32.00	34.00	21.20	5.40-6.20	6.40-7.20
Ø 40	40.00	42.20	26.60	6.70-7.60	7.80-8.70
Ø 50	50.00	52.20	33.40	8.30-9.40	9.40-10.50
Ø 63	63.00	65.40	42.00	10.50-11.80	11.70-13.00
Ø 75	75.00	77.40	50.00	12.50-14.00	13.70.15.50
Ø 90	90.00	93.00	60.00	15.00-16.80	16.50-18.30
Ø 110	110.00	113.60	73.40	18.30-20.40	20.20-22.00

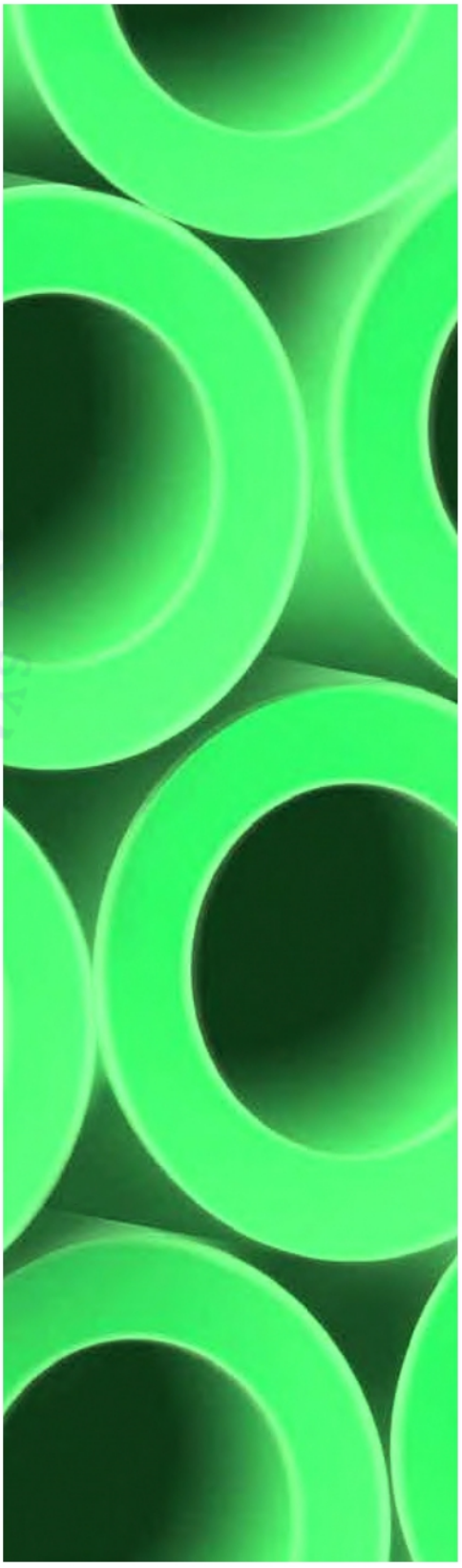


FG- PPR - PE PIPE

DIN 8077/8078, DIN 53769



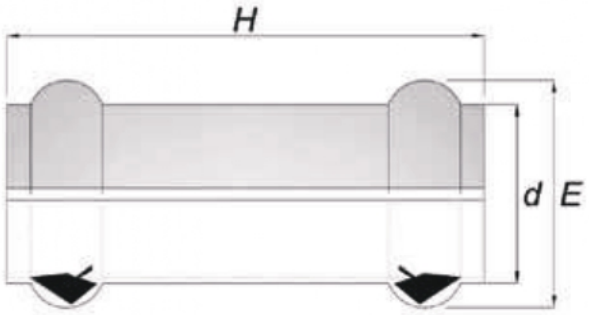
PIPE		DIAMETER	WALL THICKNESS	INTERNAL DIAMETER	TOTAL DIAMETER	TOTAL WALL THICKNESS	WEIGHT	
Dimension	Packing (Pcs./Pack)	d	s	d1	dg	sg	kg/m	kg/4m
		mm	mm	mm	mm	mm		
20mm	25	20.00	3.40	13.20	20.44	3.62	0.195	0.779
25mm	20	25.00	4.20	16.60	25.56	4.48	0.307	1.226
32mm	10	32.00	5.40	21.20	32.48	5.64	0.483	1.932
40mm	8	40.00	6.70	26.60	40.56	6.98	0.762	3.046
50mm	5	50.00	8.30	33.40	50.48	8.54	1.232	4.927
63mm	3	63.00	10.50	42.00	63.48	10.74	1.830	7.320



PVC FABRICATED PRODUCTS

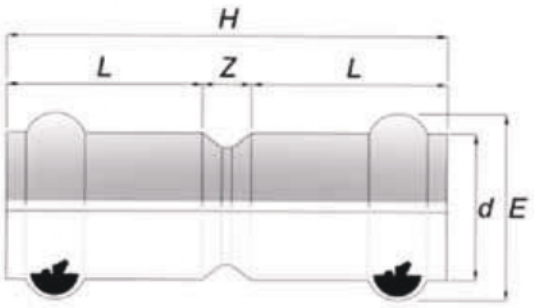
Al-Rajhi is premium supplier all kinds of long bend and repair coupling fittings which are required in the project during installation. All these fittings are combined with Al-Rajhi Pipes under Standards DIN 8062/8061 and it is available with single and double rubber joint at the end.Also available for all kind of pressure rating 6-10 and 16 bar.

Repair Coupling:

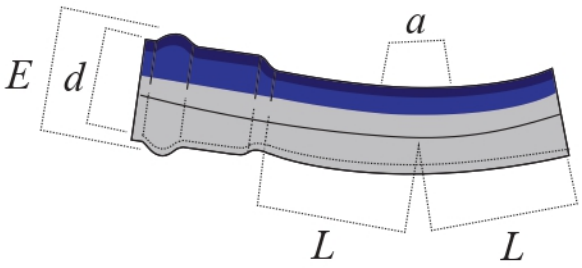


d mm	E mm	H mm
63	86	280
75	102	280
90	120	290
110	144	290
160	202	350
200	248	440
225	277	400
250	304	440
280	342	440
315	382	440

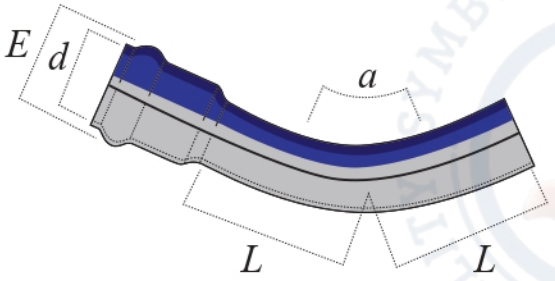
Register Coupling:



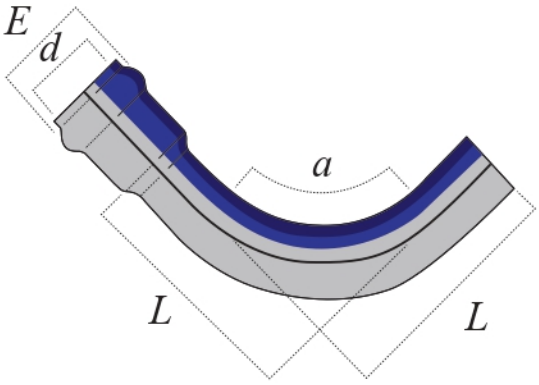
d mm	E mm	H mm	L mm	Z mm
63	86	280	128	30
75	102	280	123	30
90	120	290	133	30
110	144	310	135	35
125	161	330	143	35
140	178	350	158	40
160	202	350	155	40
180	224	380	173	50
200	248	410	185	50
225	277	460	195	55
250	304	460	223	55
280	342	490	220	60
315	382	500	220	60



22° 30' Long Bend			
d mm	L mm	angle	E mm
63	235	22° 1/2	86
75	260	22° 1/2	102
90	292	22° 1/2	120
110	384	22° 1/2	144
125	413	22° 1/2	161
140	430	22° 1/2	178
160	464	22° 1/2	202
180	535	22° 1/2	224
200	530	22° 1/2	240



45° Long Bend			
d mm	L mm	angle	E mm
63	235	45°	86
75	260	45°	102
90	292	45°	120
110	384	45°	144
125	413	45°	161
140	430	45°	178
160	464	45°	202
180	810	45°	224
200	805	45°	240



90° Long Bend			
d mm	L mm	angle	E mm
63	377	90°	86
75	401	90°	102
90	462	90°	120
110	504	90°	144
125	533	90°	161
140	595	90°	178
160	614	90°	202
180	1010	90°	224
200	1155	90°	240

AL-RAJHI الراجحي

FITTINGS

UPVC FITTINGS PROPERTIES

SCHEDULE 40 & 80

PROPERTY	VALUE	REFERENCE
Specific Gravity ± 0.02	1.44	ASTM D-792
Tensil Strength psi @ 73°F.	7100	ASTM D-638
Modulus of Elasticity in tension, psi @ 73°F.	4,000,000	ASTM D-638
Flexular Strength (psi)	12000-14000	ASTM D-790
Izod Impact, Ft. lbs/in, Notch @ 73°F.	0.65	ASTM D-256
Heat Deflection °F @ 264 psi	160	ASTM D-648
Heat Resistance Deg. F.	140	
Thermal Conductivity, BTU/hr/sq.ft/Deg. F/in	1.2	ASTM D-177
Co-efficient of Expansion, in/in, Deg. $Fx10^{-5}$	3	ASTM D-696
Water Absorption, % 24hrs @ 73°F	0.05	ASTM D-570
Cell Classification	12454B	ASTM D-1784
Colour Code	White (Sch. 40)	
	Dark Grey (Sch. 80)	

Jointing

Socket type jointing. For solvent cement use.

Operating Temperature

Maximum service temperature for UPVC schedule 40 and UPVC schedule 80 fittings is 140 Deg. F

Maximum service temperature for CPVC schedule 80 fittings is 210 Deg. F.

Chemical Properties

UPVC and CPVC fittings are resistant to corrosion by ground water, weathering and many chemicals.Further information on chemical resistance is available on request.

CPVC FITTINGS PROPERTIES

SCHEDULE 80

PROPERTY	TEST CONDITION	VALUE	REFERENCE
Specific Gravity	73 °F	1.55	ASTM D-792
Rockwell Hardness	73 °F	117	ASTM D-785
Heat Deflection @ 264 psi	73 °F	214	ASTM D-748
Tensile Strenght (psi)	73 °F	8200	ASTM D-738
Tensile Modulus (psi)	73 °F	430.000	ASTM D-738
Flexural Strenght (psi)	73 °F	15.000	ASTM D-790
Flexural Modulus (psi)	73 °F	438.000	ASTM D-790
Izod Impact, Ft. lbs/In. Notch	73 °F	1.6	ASTM D-756
Water Absorption (24 hrs)	73 °F	0.07+	ASTM D-570
Coefficient of Expansion (F), in./in. x 10^{-5}		3.7	ASTM D-696
Flammability	.062"	V-0	UL-94
Cell Designation		23557B	ASTM D-1784

Jointing

Socket type jointing. For solvent cement use.

Operating Temperature

Maximum service temperature for UPVC schedule 40 and UPVC schedule 80 fittings is 140 Deg. F

Maximum service temperature for CPVC schedule 80 fittings is 210 Deg. F.

Chemical Properties

UPVC and CPVC fittings are resistant to corrosion by ground water, weathering and many chemicals.Further information on chemical resistance is available on request.

PRESSURE RATINGS

Water pressure rating (max) for UPVC schedule 40 fittings at 73 Deg. F.

PIPE SIZE inch	SOCKET FITTINGS (psi)
1/2	600
3/4	480
1	450
1 1/4	370
1 1/2	330
2	280
3	260
4	220
6	180

Water pressure rating (max) for UPVC schedule 80 fittings at 73 Deg. F.

PIPE SIZE inch	SOCKET FITTINGS (psi)
1/2	850
3/4	690
1	630
1 1/4	520
1 1/2	470
2	400

Water pressure rating (max) for CPVC schedule 80 fittings at 73 Deg. F.

PIPE SIZE inch	SOCKET FITTINGS (psi)	THREADED FITTINGS (psi)
1/2	850	420
3/4	690	340
1	630	320
1 1/4	520	260
1 1/2	470	240
2	400	200

ELBOW UPVC

Dimensions mm					KG/PCS
D	H	W	L	A°	
50 mm	92.5	61	28.00	90°	0.111
75 mm	130	88	41.00	87.5°	0.254
110 mm	178	126	51.00	87.5°	0.655
160 mm	252	180	71.00	87.5°	1.465

BS / EN STANDARD

BSEN 1329 / 1401

ELBOW 45°

Nominal Pipe Size inch	C mm	C1 mm	M mm
1 1/2 (43mm)	37.4	28	48
2 (56mm)	42.7	31	61.2
3 (82mm)	76.7	45	94
4 (110mm)	75.7	50.5	119.5
6 (160mm)	122.3	77.5	172

TEE 90°

Nominal Pipe Size inch	C mm	C1 mm	M mm
1 1/2	45.12	22.4	50
2 (56mm)	71.5	31	61.2
3 (82mm)	106.1	45	94
4 (110mm)	131.9	50.5	119.5
6 (160mm)	191.4	77.5	172

WYE 45°

Nominal Pipe Size inch	C mm	C1 mm	D mm	E mm
4 (110 mm)	264	119.5	186.5	136
6 (160 mm)	395	172	272.1	194.6

REDUCING BUSHING

P-TRAP
4" (110mm)

GULLY TRAP
4" x 3" x 1 1/2"

ACCESS CAP

nder Ground - Orange Brown (BSEN - 1401)
aste & Soil - Cement Grey (BSEN - 1329)

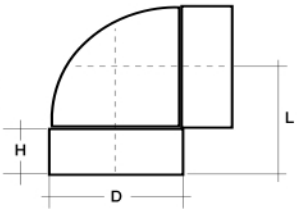
ASTM D-2466 SCHEDULE 40

ASTM STANDARD

AMERICAN SOCIETY FOR TESTING & MATERIALS

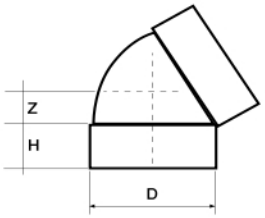
BEND 90°

Size inch	D mm	L mm	H mm
1 1/2	56.7	56.37	29.36
2	69.22	64.29	39.95
3	99.7	94.4	48.13
4	126.8	110.0	51.30
6	180.5	168.5	80.0



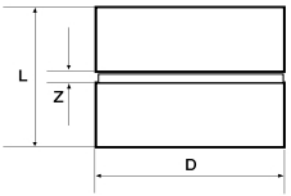
BEND 45°

Size inch	D mm	H mm	Z mm
1 1/2	56.5	32	11
2	69	33	17
3	99.7	48.13	23.53
4	126.8	57.30	25.65
6	180.5	80.00	41.00



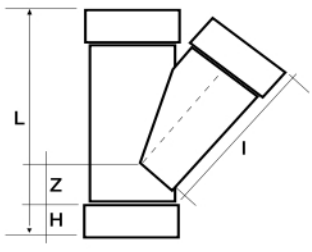
COUPLING

Size inch	D mm	L mm	Z mm
1 1/2	56.7	61.91	3.18
2	69.22	65.07	3.18
3	101.5	100.0	4.76
4	127.8	106.5	4.76
6	184.1	157.4	5.00



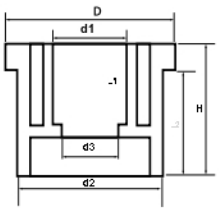
WYE eq. 45°

Size inch	D mm	L mm	I mm	H mm	Z mm
4	126.8	275.6	193.5	51.3	30
6	180.5	410.20	285.52	85.0	40



REDUCER

Size	D	d1	d2	d3	H	L1	L2
4 x 2	125.70	114.30	60.48	55.0	58.50	30.0	52.8
6 x 4	178.40	168.20	114.76	105.0	81.0	56.80	75.40

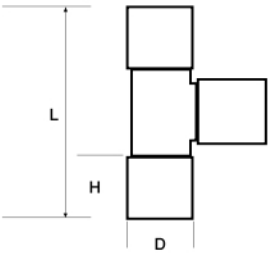


ASTM D-2466 SCHEDULE 40

ASTM STANDARD
AMERICAN SOCIETY FOR TESTING & MATERIALS

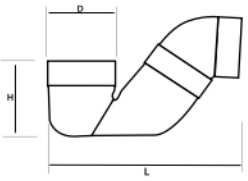
TEE . 90°

Size inch	D mm	L mm	H mm
1 1/2	59.0	121.7	36.0
2	73.20	139.0	38.0
3	99.7	94.4	48.13
4	126.8	220.0	51.3
6	180.5	337.0	80.0



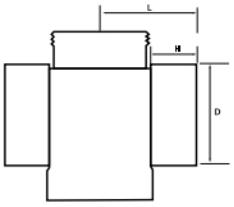
ELBOW 45° + SYPHON + P-TRAP

Size inch	D mm	L mm	H mm
2	68.50	184.0	75.0
3	99.64	267.0	124.0
4	126.80	333.0	151.0



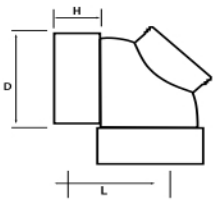
TEE WITH DOOR

Size inch	D mm	L mm	H mm
4	126.80	110.50	57



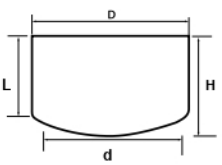
BEND 90° WITH DOOR

Size inch	D mm	L mm	Z mm
4	126.80	108.90	57



END CAP

Size inch	D mm	d mm	L mm	H mm
4	126.80	114.76	60	79.5



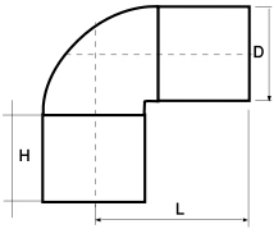
ASTM D-2467 SCHEDULE 80

ASTM STANDARD

AMERICAN SOCIETY FOR TESTING & MATERIALS

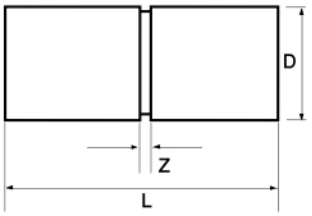
ELBOW 90°

Size inch	D mm	L mm	H mm
1/2	29.85	36.52	23.02
3/4	35.54	41.27	26.19
1	43.56	48.42	29.77
1 1/4	52.93	56.36	32.94



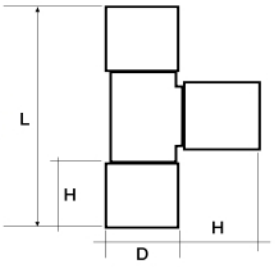
COUPLING

Size inch	D mm	L mm	Z mm
1/2	29.85	45.21	3.18
3/4	35.54	55.56	3.18
1	43.56	62.71	3.18
1 1/4	52.93	69.06	3.18



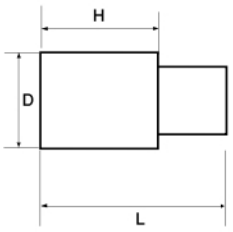
TEE eq. 90°

Size inch	D mm	L mm	H mm
1/2	29.85	73.03	23.02
3/4	35.54	82.55	26.19
1	43.56	96.84	29.77



MALE ADAPTOR

Size inch	D mm	L mm	Z mm
1/2	29.85	47.0	23.02
3/4	35.54	52.5	26.19
1	43.56	61.5	29.72

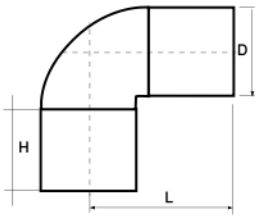


ASTM F-439 SCHEDULE 80 (CPVC)

ASTM STANDARD
AMERICAN SOCIETY FOR TESTING & MATERIALS

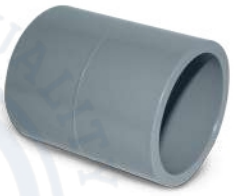
ELBOW 90°

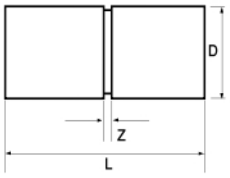
Size inch	D mm	L mm	H mm
1/2	29.85	36.52	23.02
3/4	35.54	41.27	26.19
1	43.56	48.42	29.77
1 1/4	52.93	56.36	32.94



COUPLING

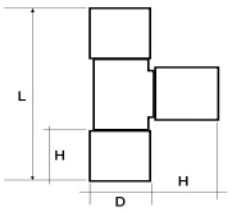
Size inch	D mm	L mm	Z mm
1/2	29.55	45.21	3.18
3/4	35.54	55.56	3.18
1	43.56	62.71	3.18
1 1/4	52.93	69.06	3.18





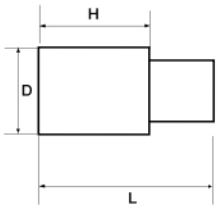
TEE eq. 90°

Size inch	D mm	L mm	H mm
1/2	29.85	73.03	23.02
3/4	35.54	82.55	26.19
1	43.56	96.84	29.77



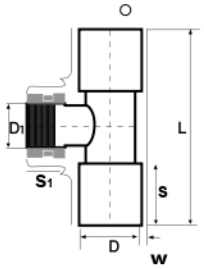
MALE ADAPTOR

Size inch	D mm	L mm	Z mm
1/2	29.85	47.0	23.02
3/4	35.54	52.5	26.19
1	43.56	61.5	29.77



TEE BRASS INSERT 90

Size inch	D mm	D_1 mm	S mm	S_1 mm	L mm	W mm
1/2 X 1/2	21.24	20.10	21.05	14.00	75	3.73
3/4 X 1/2	26.63	20.10	21.05	14.00	80	3.91



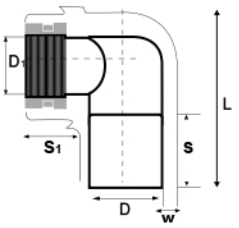
ASTM F-439 SCHEDULE 80 (CPVC)

ASTM STANDARD

AMERICAN SOCIETY FOR TESTING & MATERIALS

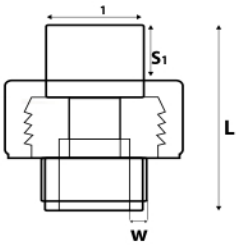
Size inch	D mm	D1 mm	S mm	S1 mm	L mm	W mm
1/2 X 1/2	21.50	18.50	24.00	16.50	60.00	3.73
3/4 X3/4	26.87	24.40	25.00	17.50	70.00	3.91
1 x 1	33.50	30.50	28.00	20.50	80.00	4.55

ELBOW BRASS INSERT 90°



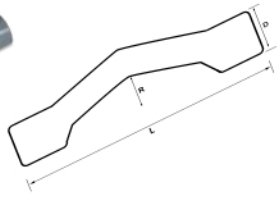
Size inch	D1 mm	S1 mm	W mm	L mm
3/4 X3/4	26.87	25.60	4.00	60
1 x 1	33.66	28.60	4.55	68

UNION



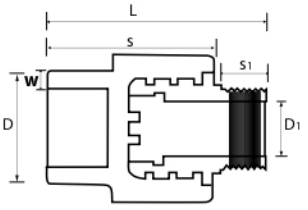
Size inch	D mm	L mm	R mm
3/4x3/4	26.79	163.0	8.0
1x1	33.59	173.0	10.0

CROSS OVER



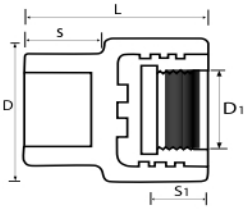
Size inch	D mm	D1 mm	S mm	S1 mm	L mm	W mm
1x1	33.30	33.10	26.60	17.50	51	4.65
3/4 x 3/4	26.60	25.30	20.10	16.50	50.50	4.35
1/2 x 1/2	21.30	21.54	18.25	15.50	43.50	4.00

MALE ADAPTER



Size inch	D mm	D1 mm	S mm	S1 mm	L mm	W mm
1/2 X 1/2	21.54	18.65	23.80	16.26	40	3.95
3/4 X3/4	26.87	18.65	25.20	16.34	45	4.15

FEMALE ADAPTER



DIN STANDARD
DEUTSCHES INSTITUTE FOR NORMUNG

DIN 8063 PN 10

ELBOW WITH DOOR UPVC

Dimensions mm					KG/PCS
D	H	W		A°	
75 mm	130	88	41.00	87.5°	0.300
110 mm	178	126	51.00	87.5°	0.723
160 mm	252	180	71.00	87.5°	1.550
160 mm	252	180	71.00	87.5°	1.465

ELBOW UPVC 45°

Dimensions mm					KG/PCS
D	H	W	L	A°	
50 mm	98.7	61	28.00	45°	0.088
75 mm	136.8	88	41.00	45°	0.200
110 mm	181	126	51.00	45°	0.500
160 mm	260	180	71.00	45°	1.122

SOCKET UPVC

Dimensions mm					KG/PCS
D	H	W	L	A°	
50 mm	60	61	28.00	N/A	0.060
75 mm	87	88	41.00	N/A	0.142
110 mm	108	126	51.00	N/A	0.332
160 mm	150	180	71.00	N/A	0.758

REDUCER SOCKET UPVC

Dimensions mm					KG/PCS
D	H	W	L	A°	
110/50 mm	105	110.1	28.00	N/A	0.191
110/75 mm	117	110.1	41.00	N/A	0.223
160/110 mm	175	160.3	51.00	N/A	0.570

SOCKET WITH DOOR UPVC

Dimensions mm					KG/PCS
D	H	W	L	A°	
50 mm	55	50.1	N/A	N/A	0.057
75 mm	72	75.1	N/A	N/A	0.136
110 mm	87	110.1	N/A	N/A	0.290
160 mm	120	160.3	N/A	N/A	0.509

TEE UPVC

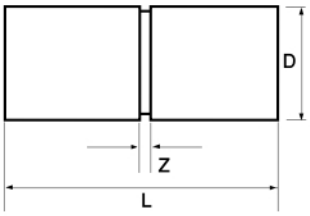
Dimensions mm					KG/PCS
D	H	W		A°	
50 mm	127	61	28.00	87.5°	0.161
75 mm	189	88	41.00	87.5°	0.400
110 mm	248	126	51.00	87.5°	0.958
160 mm	346	180	71.00	87.5°	2.162

THERMAL PPR

DIN STANDARD
DEUTSCHES INSTITUTE FOR NORMUNG

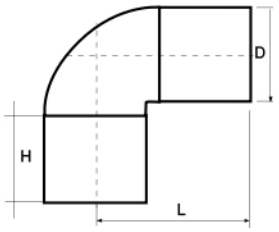
COUPLING

Size mm	D mm	L mm	Z mm
20	29.0	31.0	3.18
25	34.0	37.0	3.18
32	43.0	43.0	3.18
40	52.0	48.0	3.18
50	67.0	53.0	3.18



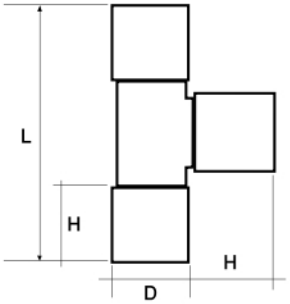
ELBOW 90°

Size mm	D mm	L mm	H mm
20	29.0	40.0	23.02
25	34.0	46.0	26.19
32	43.0	56.0	29.77
40	52.0	67.0	32.94
50	67.0	83.0	



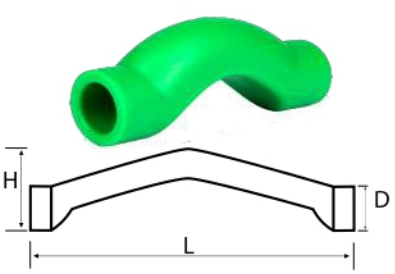
TEE eq. 90°

Size mm	D mm	L mm	H mm
20	29.0	51.0	40.0
25	34.0	58.0	46.0
32	43.0	69.0	56.0
40	52.0	82.0	67.0
50	67.0	99.0	83.0



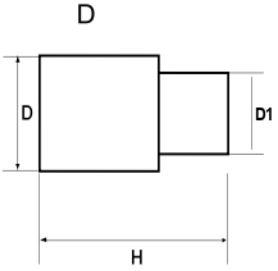
CROSS OVER

Size mm	D mm	H mm	L mm
20	20	50.0	354.0
25	25	55.0	357.0
32	232	64.0	357.0



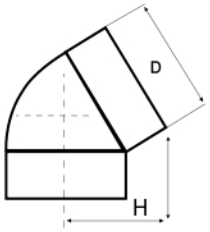
Size mm	D mm	H mm	D1 mm
25x20	34.0	36.50	29.0
32x20	32.0	43.0	29.0
40x25	40.0	48.0	34.0
50x32	50.0	55.0	43.0
50x40	52.0	55.0	50.0

REDUCER



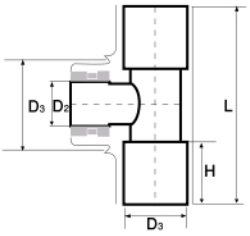
Size mm	D mm	H mm
20	29.0	44.5
25	34.0	50.5
32	43.0	60.0
40	52.0	70.6
50	67.0	86.6

ELBOW 45°



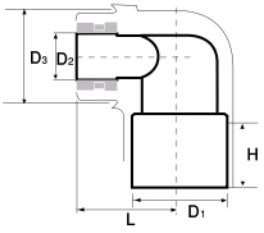
Size inch	D1 mm	D2 mm	D3 mm	H mm	L mm
1/2 X 1/2	30.45	0.5	38	22.45	78
3/4 X 1/2	36.1	0.5	38	22.95	80

TEE BRASS INSERT 90°



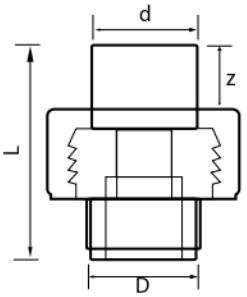
Size inch	D1 mm	D2 mm	D3 mm	H mm	L mm
1/2 X 1/2	30.45	0.5	38	22.45	28
3/4 X 1/2	36.1	0.5	38	22.95	33
1 X 1	43.50	0.5	40	30.45	42

ELBOW BRASS INSERT 90°



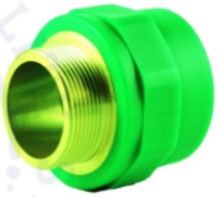
Size mm	d mm	mm	Z mm	L mm
20	19.00	29.00	14.50	48.00
25	24.00	34.00	16.00	55.00
32	31.00	43.00	18.00	72.00
40	39.00	52.00	20.00	75.00
50	49.00	67.00	23.50	86.00

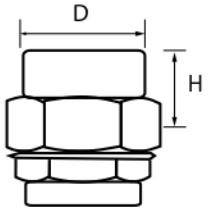
UNION PPR



Size mm	D mm	H mm
20	27.00	22.50
25	33.00	26.00
32	41.00	28.00
40	51.00	36.50
50	65.00	43.00

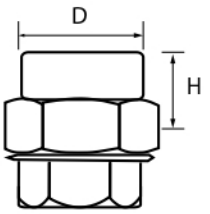
UNION MALE ADAPTER





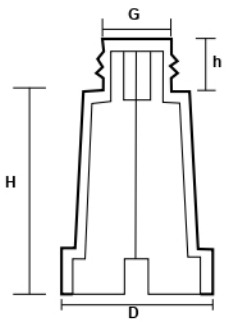
Size mm	D mm	H mm
20	27.0	22.50
25	33.0	26.0
32	41.0	28.0
40	51.0	36.0
50	65.0	43.0

UNION FEMALE THREADED



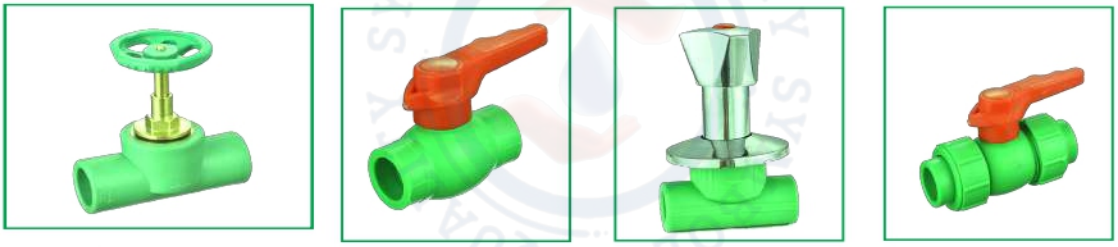
Size inch	G inch	D mm	h mm	H mm
1/2”	1/2”	30.0	13.0	52.0

TEST PLUG



THERMAL PPR

STOP VALVES



END PLUG

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CONSISTENT TO INTERNATIONAL STANDARDS