



PP - R Pipes & Fittings Series

Product Catalogue

What is PP - R?

PP-R is a thermoplastic polyolefin that is easy to process into pipes & fittings with superior chemical and physical properties. They are best carriers of potable water (Both hot and cold) in domestic as well as in industrial application in terms of quality and price. PP-R pipes & fittings are ideal when long term performance is required under adverse conditions without deviations in standards.

Product Overview

- Material: Polypropylene Random Copolymer
- Pressure Rating: 13.2 bar at 80 °C (For years of service = 1)
- Size ranges of PP-R pipes: From 20mm to 160mm
- Size ranges of PP-R fittings: From 20mm to 160mm
- Standard: DIN 8077-2008, DIN 8078-2008, ISO 15874
- Colour: Green
- Connection of PP-R fittings: Socket fusion joint, electro fusion joint or transition joint

Advantage

Resistance to abrasion and corrosion:

- No corrosion by acid and alkaline fluids with pH levels between 1 and 14
- High chemical resistance
- Excellent ESCR - Longer life
- High abrasion resistance => high flow velocities are possible

High internal pressure resistance:

- Minimum 50 Years lifetime at 60° or 70° C and 10 bar maximum pressure

No negative influence on water quality

- Compliance with the international standards on the use of plastic materials for the transportation of drinking water
- Prevents UV Passage - Prevents growth of bacteria and algae

Very smooth surface of pipes and fittings

- No limestone or other deposits
- Head loss/pressure drop reduced to a minimum

Welding capacity

- 100% homogeneous connections, guaranteed leak-tight, long lasting system
- Fast and easy installation

Threaded insert fittings

- Watertight assemblies with other metal elements in the installation

Silence sound absorption

- Considerable noise reduction in comparison to metal

Low specific weight

- Easy transport and handling
- Lowest density compared to conventional metal pipes

Energy saving

- Low heat conductivity of PP-R leads to 10-20% energy saving

Reduced condensation

- Low heat conductivity reduces the condensation of water on the outer surface of cold water pipes

Applications

- Hot and cold potable water piping networks in residential and commercial buildings
- Heating systems
- Chilled water networks in air-conditioning systems as an effective light-weight and corrosion free substitute for steel pipes
- Transporting a wide range of chemicals in the industry
- Piping networks for rainwater utilization systems and swimming pool facilities
- Compressed air installations and other industrial applications

Physical Properties of PP-R material

Technical Specifications	Test Method	Unit	Value
Density	DIN EN ISO 1183	g/cm ³	≈ 0,91
Melt flow index MFR 230 °C at 2.16 kg/cm ³	ISO 1133	g/10 min	0.2-0.45
Mean co-efficient of linear thermal expansion in the temperature range 0 °C to 110 °C	DIN 53752	K ⁻¹	≈ 1,5 × 10 ⁻⁴
Thermal conductivity	DIN 52612-1	W K ⁻¹ m ⁻¹	≈ 0,23
Surface resistivity	DIN IEC 60093	Ω	> 1012

Properties	Test Method	Unit	Value
Yield stress	ISO 527	MPa	23
Elongation at yield	ISO 527	%	> 10
Vicat softening temperature	ISO 306/A	°C	132
Heat deflection temperature	DSC	°C	140 - 150
Relative dielectric constant at 1 MHz	DIN 53483	-	2.3

Dimension Requirements

PP - R Pipes S5/PN10/SDR 11 (Cold Water)

Outside Ø mm	Wall thickness in mm (Minimum)
20	1.9
25	2.3
32	2.9
40	3.7
50	4.6
63	5.8
75	6.8
90	8.2
110	10.0
125	11.4
140	12.7
160	14.6

PP - R Pipes S 2.5/PN20/SDR 6 (Hot Water)

Outside Ø mm	Wall thickness in mm (Minimum)
20	3.4
25	4.2
32	5.4
40	6.7
50	8.3
63	10.5
75	12.5
90	15.0
110	18.3
125	20.8
140	23.3
160	26.6





PP-R Pipes & Fittings Series

Socket



Size (mm)

16	90
20	110
25	160
32	
40	
50	
63	
75	

Elbow 45°



Size (mm)

16
20
25
32
40
50
63

Reducing Socket



Size (mm)

20X16	63X20	90X20	160X63
25X20	63X25	90X25	160X75
32X20	63X32	90X32	160X90
32X25	63X40	90X40	160X110
40X20	63X50	90X50	
40X25	75X20	90X63	
40X32	75X25	90X75	
50X20	75X32	110X50	
50X25	75X40	110X63	
50X32	75X50	110X75	
50X40	75X63	110X90	

Elbow 90°



Size (mm)

16
20
25
32
40
50
63
75
90
110



Equal Tee



- Size (mm)**
- 16
 - 20
 - 25
 - 32
 - 40
 - 50
 - 63
 - 75
 - 90
 - 110

Cross



- Size (mm)**
- 20x20x20x20
 - 25x25x25x25
 - 32x32x32x32
 - 40x40x40x40
 - 50x50x50x50
 - 63x63x63x63

Reducing Tee



- Size (mm)**
- | | |
|-------|-------|
| 20X16 | 63X20 |
| 25X20 | 63X25 |
| 32X20 | 63X32 |
| 32X25 | 63X40 |
| 40X20 | 63X50 |
| 40X25 | |
| 40X32 | |
| 50X20 | |
| 50X25 | |

Pipe End Caps



- Size (mm)**
- 20
 - 25
 - 32
 - 40
 - 50
 - 63



Step Over Bend

**Size (mm)**

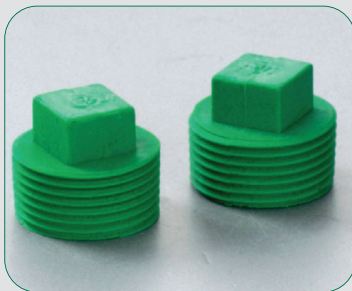
Φ16
Φ20
Φ25
Φ32

Bypass Bend

**Size (mm)**

Φ20
Φ25
Φ32

Plug

**Size (inches)**

1/2
1/4
1

PP-R Union

**Size (mm)**

Φ20
Φ25
Φ32
Φ40
Φ50
Φ63



Female Socket



Size (mm x inch)

16x1/2	40x1/4
20x1/2	50x1/4
20x3/4	25x1/4
25x1/2	63x1/2
25x3/4	63x2
25x1F	75x1/2
32x1/2	32x3/4
32x3/4	
32x1	
40x1	

Female Elbow 90°



Size (mm x inch)

16x1/2	75x1-1/2
20x1/2	90x3
20x3/4	110x4
25x1/2	
25x3/4	
25x1	
32x1/2	
32x3/4	
32x1	
40x1	

Male Socket



Size (mm x inch)

16x1/2M	40x1-1/4
20x1/2M	50x1-1/4
20x3/4M	50x1-1/2
25x1/2M	60x2
25x1M	75x1-1/2
32x3/4M	75x1-1/2
32x1M	
40x15	

Male Elbow 90°



Size (mm x inch)

16x1/2	75x1-1/2
20x1/2	90x3
20x3/4	110x4
25x1/2	
25x3/4	
25x1	
32x1/2	
32x3/4	
32x1	
40x1	



Female Seated Elbow



Size (mm x inch)

16x1/2
20x1/2
25x1/2
25x3/4

Male Seated Elbow



Size (mm x inch)

16x1/2
20x1/2
25x1/2
25x3/4

Female Tee



Size (mm x inch)

16x1/2	75x1-1/2
20x1/2	90x3
20x3/4	110x4
25x1/2	
25x3/4	
25x1	
32x1/2	
32x3/4	
32x1	
40x1-1/4	
40x1-1/2	
63x2	

Male Tee



Size (mm x inch)

16x1/2	75x1-1/2
20x1/2	90x3
20x3/4	110x4
25x1/2	
25x3/4	
25x1	
32x1/2	
32x3/4	
32x1	
40x1-1/4	
40x1-1/2	
63x2	



Female Union



Size (mm x inch)

Φ 16x1/2
 Φ 20x3/4
 Φ 25x1/2
 Φ 25x3/4
 Φ 25x1
 Φ 32x1
 Φ 40x1-1/4
 Φ 50x1-1/2
 Φ 63x2

Male Union



Size (mm x inch)

Φ 16x1/2
 Φ 20x3/4
 Φ 25x1/2
 Φ 25x3/4
 Φ 25x1
 Φ 32x1
 Φ 40x1-1/4
 Φ 50x1-1/2
 Φ 63x2

Union



Size (mm)

Φ 20
 Φ 25
 Φ 32

Stop Valve (Concealed Valve)



Size (mm)

Φ 20
 Φ 25
 Φ 32



Stop Valve (Concealed Valve)



Size (mm)

Φ20
Φ25
Φ32

Stop Valve (Concealed Valve)



Size (mm)

Φ20
Φ25
Φ32

Heavy Stop Valve (Gate Valve)



Size (mm)

Φ20
Φ25
Φ32
Φ40
Φ50
Φ63

PP-R Ball Valve



Size (mm)

Φ20
Φ25
Φ32
Φ40
Φ50
Φ63

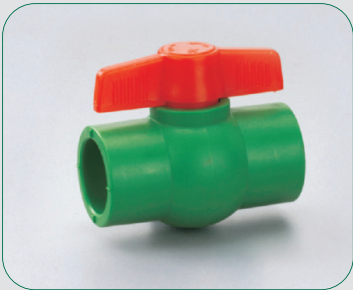


PP-R Ball Valve



Size (mm)
Φ20
Φ25
Φ32
Φ40
Φ50
Φ63

PP-R Ball Valve



Size (mm)
Φ20
Φ25
Φ32
Φ40
Φ50
Φ63

Stop Valve



Size (mm x inch)
Φ20X1/2
Φ25X3/4

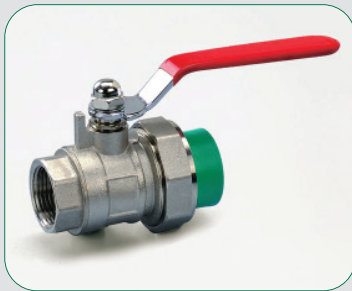
Stop Valve (Male / Female)



Size (mm x inch)
Φ20X1/2
Φ25X3/4



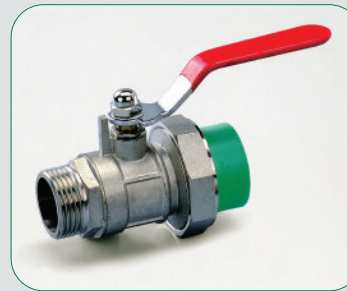
Female Union Ball Valve



Size (mm x inch)

Φ20X1/2
 Φ25X3/4
 Φ32X1
 Φ50X1-1/2
 Φ63X2

Male Union Ball Valve



Size (mm x inch)

Φ20X1/2
 Φ25X3/4
 Φ32X1
 Φ50X1-1/2
 Φ63X2

Double Union Ball Valve



Size (mm)

Φ20
 Φ25
 Φ32
 Φ40
 Φ50
 Φ63

PP-R Ball Valve

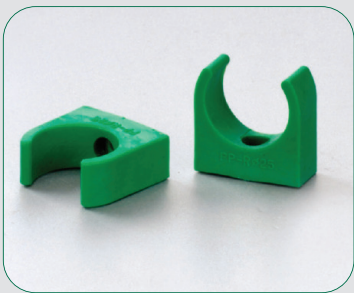


Size (mm)

Φ20
 Φ25
 Φ32



Pipe Clip



- Size (mm)**
Φ20
Φ25
Φ32
Φ40

Clamp



- Size (mm)**
Φ20
Φ25
Φ32
Φ40
Φ50
Φ63
Φ75
Φ90
Φ110

Cutter (Pipe Scissor)



- Size (mm)**
Φ16-40
Φ16-110

Welding Machine



- Size (mm)**
Φ20-63
Φ75-110



Double Female Elbow



Size (mm x inch)
Φ20X1/2

PP-R Cutters



Size (mm)
Φ14-63

Flange Set (PP-R)



Size (mm)
Φ32
Φ40
Φ50
Φ63
Φ90
Φ110
Φ160



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