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Promising Reliability, For Now and Tomorrow

آتی آتی ایل
پاکستان میں سب سے اچھے



PPRC

PIPES & FITTINGS



Manufactured according to
INTERNATIONAL STANDARDS:

DIN 16962
DIN 8077
DIN 8078



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Company Profile

International Industries Limited (IIL) is Pakistan's largest manufacturer and exporter of steel, stainless steel & plastic pipes.

With over 50 years of pipe manufacturing experience, IIL is proud to introduce its line of high quality PPRC pipes & fittings, which are manufactured in IIL's state-of-the-art facilities according to the highest international quality standards and using only the highest quality raw materials.

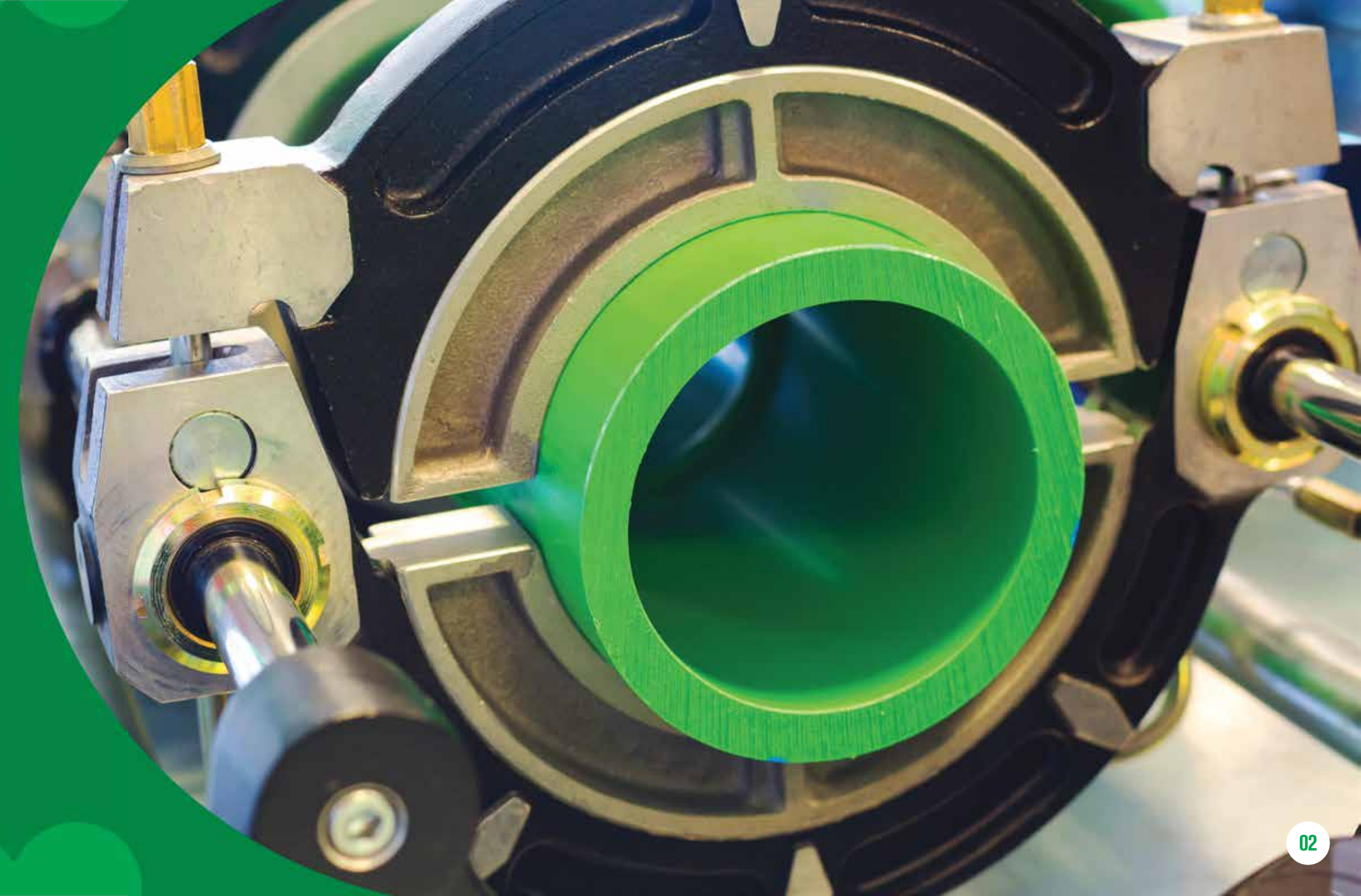
IIL PPRC pipes and fittings are made from 100% food grade raw materials according to DIN 8077/78 and DIN 16962 standards which provide a 50 year warranty. Comprehensive testing has shown that IIL's PPRC pipe can withstand greater pressure than any other PPRC pipe in Pakistan.

Therefore, IIL's PPRC pipes and fittings provide a comprehensive, versatile & reliable system for delivery of hot & cold water and other fluids in residential, commercial and industrial settings.

IIL is a proud recipient of numerous awards and accolades, including the FPCCI Export Performance Award, Management Association of Pakistan's Corporate Excellence Award and the Karachi Stock Exchange's Top 25 Companies Award for more than 10 years consecutively.

With an unshakeable focus on quality, IIL has the following certifications: ISO 9001, ISO 14001, OHSAS 18001, UL, PSOCA and ILAC.

Backed by highly skilled, internationally trained technical and commercial sales teams, as well as an extensive sales and distribution network, IIL PPRC pipes & fittings are durable, reliable and cost effective piping solution of the highest quality. For further information please visit our website, www.iil.com.pk





Quality: Our Hallmark

III is a company firmly committed to quality. By adhering to globally recognized standards and regulations, III ensures that each of its products stands up to the quality expectations of its valued clients.

A comprehensive quality assurance and control system is employed throughout the production process; from production planning and specification to raw material inventory control, all the way through packing, storage and shipping.

Only the highest quality, 100% food grade raw materials are used to manufacture our pipes and fittings on state-of-the-art machinery by fully trained and skilled professionals in an environment of continuous improvement and R&D.

Furthermore, our in-house testing & quality control labs ensure that the dimensional, physical and chemical elements of our products meet and exceed the most stringent of global quality standards.



Standards & Regulations:

ILL manufactures its products under strict control using the following standards & regulations:

DIN 8076: Standard for testing metal threaded joints.

DIN 8077: Polypropylene (PP) pipe dimensions.

DIN 8078: Polypropylene (PP) pipes; general quality requirements and testing.

DIN 16962: Pipe joints and pipework parts for pressure pipes made of polypropylene.

DIN 2999: Standards for fittings with threaded metallic inserts.

DIN 16928: Installation, pipes and fittings connection.

DIN 4109: Noise control in buildings.

DIN 1988: DUGW code of Practice. Drinking water supply systems ; materials; components; appliances; design and installation.

DIN 4140: Insulation of service installations.

DVS 2207: Welding of thermoplastic pipes and fittings.

BS 6920: Suitability of non-metallic products for use in contact with water, intended for human consumption, with regard to their effect on the quality of the water.

OHSAS 18001: British standard for Health and Safety Management System.

ISO 9001:2008: Quality Management System.

ISO 14001:2004: Environment Management System.

PSQCA: Pakistan Standards & Quality Control Authority.





IIL PPRC Pipes & Fittings Applications

- Hot & cold water applications in virtually all types of buildings
 - o Residences & apartments
 - o Factories and industrial buildings
 - o Commercial buildings/plazas
 - o Hospitals
 - o Hotels & offices
 - o School buildings
- Rain drainage and collection systems
- Indoor/outdoor swimming pools, gyms, saunas etc.
- Water filtration systems
- Hot water networks for boilers, heat generator mains & radiator connections

Salient Features of IIL PPRC

- The only comprehensive system in true pressure performance in Pakistan
- Made from 100% food grade, prime resin and highest quality brass
- Safe for use in drinking water transmission
- Durable and highly resistant to aggressive elements (can be used in extreme temperatures)
- Corrosion and abrasion resistant – even against highly acidic and alkaline substances
- Smooth internal surface eliminates chances of encrustation and ensures smooth flow of fluid
- On-site hydro testers guarantee pressure rating of pipes
- Flexible – can be used in seismic areas
- Environmentally friendly and recyclable
- Protective end-caps on each pipe
- Light & easy to transport
- Dedicated customer care center (0800-01919, pprc@iil.com.pk)

Advantages of IIL PPRC System

1. Simple Installation:

IIL PPRC Pipes and Fittings includes a complete system of pipes and fittings that can be joined by fusion welding using IIL PPRC welding machines and socket molds. The pipes are easily assembled on site using the instructions and techniques recommended in this catalogue.

2. Pressure Stability:

According to DIN Standards, IIL PPRC Pipes and Fittings are tested in 3 standard pressure / temperature / time combinations, or other combinations according to DIN Standard tables. The following table signifies the standard tests:

Condition	Required	Typical Value of PP-R	Test Method
20°C	16 MPa	1 hr	ISO 1167
95°C	3.5 MPa	1,000 hrs	ISO 1167
110°C	1.9 MPa	8,760 hrs	ISO 1167

3. Chemical and Corrosion Resistance:

Due to the properties of polypropylene materials, and the brass grade with chromium protection, IIL PPRC pipes and fittings are corrosion and chemical resistant, especially as compared to metallic pipes.

4. Environmentally Friendly:

IIL PPRC Pipes and Fittings are completely environmentally friendly. Polypropylene (PP-R) contains no toxic materials that may be hazardous to the environment. Moreover, PP-R emits no waste in its production process. PP-R is commonly and completely recyclable, and can be recycled to be used in other grade products multiple times.

5. Flow Properties:

Due to the smooth internal diameters of the pipes as well as the accurate alignment of transition parts of system components, there is little pressure drop in the IIL PPRC system compared to other traditional piping systems.

6. Sound Properties:

A significant advantage of IIL PPRC Pipes and Fittings system is the low noise generated by the network of pipes and fittings throughout the building as compared with the other piping systems. This is due to the properties of the polypropylene material in dampening the sound, in addition to the thickness of pipes and fitting. Following IIL PPRC guidelines further reduces the noise levels and improves the system.

7. Hygienic Properties:

IIL PPRC system demonstrates exceptional hygienic properties. Neither taste nor smell nor any toxicity is experienced in the installed systems. Moreover, and due to the food grade coloring of full system components, bacterial growth is virtually illuminated due to the opaqueness of the components, preventing sunlight penetration which enhances bacterial growth.

8. Service Life:

The service life of IIL PPRC Pipes and Fittings depend on the pressure, temperature and pipe pressure rating. Table A3 details the relationship between pressure, temperature and service life.

		IIL PPRC Pipe PN10*	IIL PPRC Pipe PN16	IIL PPRC Pipe PN20	IIL PPRC Pipe PN25*
		Standard Dimension Ratio (SDR)			
Temperature	Years of Service	11	7.4	6	5
°C	Allowable Operating Pressure (Bar)				
10	1	21.1	33.4	42.1	53.0
	5	19.8	31.5	39.7	49.9
	10	19.3	30.7	38.6	48.7
	25	18.7	29.7	37.4	47.0
	50	18.2	28.9	36.4	45.9
	100	17.8	28.2	35.5	44.7
20	1	18.0	28.5	35.9	45.2
	5	16.9	26.8	33.7	42.5
	10	16.4	26.1	32.8	41.4
	25	15.9	25.2	31.7	39.9
	50	15.4	24.5	30.9	38.9
	100	15.0	23.9	30.1	37.8

		IIL PPRC Pipe PN10*	IIL PPRC Pipe PN16	IIL PPRC Pipe PN20	IIL PPRC Pipe PN25*
		Standard Dimension Ratio (SDR)			
Temperature	Years of Service	11	7.4	6	5
°C		Allowable Operating Pressure (Bar)			
30	1	15.3	24.2	30.7	38.5
	5	14.3	22.7	28.6	36.0
	10	13.9	22.1	27.8	35.0
	25	13.4	21.3	26.8	33.8
	50	13.0	20.7	26.1	32.9
	100	12.7	20.1	25.4	31.9
40	1	13.0	20.6	25.9	32.6
	5	12.1	19.2	24.2	30.5
	10	11.8	18.7	23.5	29.6
	25	11.3	18.0	22.6	28.5
	50	11.0	17.4	22.0	27.7
	100	10.7	16.9	21.4	26.9
50	1	11.0	17.4	21.9	27.6
	5	10.2	16.2	20.4	25.7
	10	9.9	15.7	19.8	25.0
	25	9.5	15.1	19.0	24.0
	50	9.2	14.7	18.5	23.3
	100	9.0	14.2	17.9	22.6
60	1	9.2	14.7	18.5	23.3
	5	8.6	13.6	17.2	21.6
	10	8.3	13.2	16.6	21.0
	25	8.0	12.7	16.0	20.1
	50	7.7	12.3	15.5	19.5

		IIL PPRC Pipe PN10*	IIL PPRC Pipe PN16	IIL PPRC Pipe PN20	IIL PPRC Pipe PN25*
		Standard Dimension Ratio (SDR)			
Temperature	Years of Service	11	7.4	6	5
°C		Allowable Operating Pressure (Bar)			
70	1	7.8	12.3	15.5	19.6
	5	7.2	11.4	14.4	18.1
	10	7.0	11.1	13.9	17.5
	25	6.0	9.6	12.1	15.2
	50	5.1	8.1	10.2	12.8
80	1	6.5	10.3	13.0	16.4
	5	5.7	9.1	11.5	14.5
	10	4.8	7.7	9.7	12.2
	25	3.9	6.2	7.8	9.8
95	1	4.6	7.3	9.2	11.6
	5	3.1	4.9	6.2	7.8

Material Specifications (PPRC)

Properties		Test Method	Unit	Data
Density		ASTM D792	g/cm ³	0.91
Melt Index	230°C, 2.16kg	ASTM D1238	g/10min	0.25
	190°C, 5.0kg			0.45
Tensile Strength	yield point	ASTM D638	kg/cm ²	270
	break point			230
Elongation		ASTM D638	%	>400
Flexural Modulus		ASTM D 790	kg/cm ²	8,500
Izod Impact Stenght	23°C	ASTM D256	kg.cm/cm	30
	0°C			8
	-20°C			3
Vicat Softening Point		ASTM D1525	°C	130
Melting Temperature		HS Method	°C	141
Surface Resistance		HS Method	Ω	>10 ¹³
Mean Coefficient of Linear Thermal Expansion (0°C - 110°C)		Dilatometer	K ⁻¹	1.5*10 ⁻⁴

Note: The data expressed above are empirical

Welding

IIL PPRC System can be easily welded together using IIL welding machines and tools in a quick and convenient manner by fusing the fitting sockets into the pipes with heating and applying quick manual pressure. The following guidelines are given to illustrate how this can be done in a thorough and professional manner, to result in a reliable network that will yield years of trouble free service.

Step 1.

Cut Pipe into the required length using a cutter, mark the welding depth on the pipe, ensure that the indicator light on the welding tool signals that the tools is hot enough (260 °C) for welding.



Step 2.

Push the pipe and fitting into the welding adaptors, applying even strength on both ends. Do not twist or turn the pipe and fitting while pushing. Wait until heating time is reached.



Step 3.

When the heating time is reached, remove both pipe and fitting together without twisting or turning while pulling out of the welding adaptor. Immediately push both pipe and fitting together until the depth is reached. It is possible to adjust the joints angle by more than 5 degrees during this time. Joint is now completed.



Fusion Time Table

The Table below provides the necessary information for a good welding joint for various IIL PPRC Pipe sizes.

Pipe Diameter (mm)	Weld Depth (mm)	Heating Time (sec)	Welding Time (sec)	Cooling Time (min)
16	11.5	4	3	2
20	13	5	3	2
25	15	7	4	2
32	16.5	8	6	4
40	18	12	6	4
50	20	18	6	4
63	24	24	8	6
75	26	30	8	6
90	30	40	8	6
110	32.5	50	10	8

Note:

1. Heating time start when both pipe and fitting is pushed into correct depth.
2. Welding time begins when joints are connected.
3. Cooling time is taken for the joint to be completely cured.

*Warning:

Never reduce cooling time by pouring water or by other means.

Installation Guidelines

Proper clamping of IIL PPRC system in the installations is critical in ensuring a problem-free service life. The installation usually is comprised of fixed and sliding clamps, which will allow the pipe network to flex and bend without affecting the integrity of the network.

Fixed Clamps:

Used where clamps hold the pipes in a fixed position.

Sliding Clamps:

Used where the pipe is allowed to slide for linear expansion.

Recommended Clamping Distances:

Difference in Temperature ΔT (K)	Pipe Diameter \varnothing (mm)								
	20	25	32	40	50	63	75	90	110
0	85	105	125	140	165	190	205	220	250
20	60	75	90	100	120	140	150	160	180
30	60	75	90	100	120	140	150	160	180
40	60	70	80	90	110	130	140	150	170
50	60	70	80	90	110	130	140	150	170
60	55	65	75	85	100	115	125	140	160
70	50	60	75	80	95	105	115	125	140

Linear Expansion

It is always advised to take linear expansion into account the design of the piping network.

The Linear expansion of IIL Pipes depends on the difference of operating and installation temperatures.

$$\Delta T (K) = T_{\text{operating Temperature}} - T_{\text{installation temperature}}$$

Linear Expansion (ΔL) is calculated as follows:

$$\Delta L = \Delta T \times L \times \alpha$$

L=Length of Pipe

α =Coefficient of Expansion

The following table gives the expansion (mm) in different length and temperature difference.

Pipe Length (m)	Difference in Temperature T (K)														
	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
0.1	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68	0.75	0.83	0.90	0.98	1.05	1.13	1.20
0.2	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50	1.65	1.80	1.95	2.10	2.25	2.40
0.3	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.48	2.70	2.93	3.15	3.38	3.60
0.4	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.30	3.60	3.90	4.20	4.50	4.80
0.5	0.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38	3.75	4.13	4.50	4.88	5.25	5.63	6.00
0.6	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50	4.95	5.40	5.85	6.30	6.75	7.20
0.7	1.05	1.58	2.10	2.63	3.15	3.68	4.20	4.73	5.25	5.78	6.30	6.83	7.35	7.88	8.40
0.8	1.20	1.80	2.40	3.00	3.60	4.20	4.80	5.40	6.00	6.60	7.20	7.80	8.40	9.00	9.60
0.9	1.35	2.03	2.70	3.38	4.05	4.73	5.40	6.08	6.75	7.43	8.10	8.78	9.45	10.13	10.80
1.0	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00	9.75	10.50	11.25	12.00
2.0	3.00	4.50	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00
3.0	4.50	6.75	9.00	11.25	13.50	15.75	18.00	20.25	22.50	24.75	27.00	29.25	31.50	33.75	36.00
4.0	6.00	9.00	12.00	15.00	18.00	21.00	24.00	27.00	30.00	33.00	36.00	39.00	42.00	45.00	48.00
5.0	7.5	11.3	15.0	18.8	22.5	26.3	30.0	33.8	37.5	41.3	45.0	48.8	52.5	56.3	60.0
6.0	9.0	13.5	18.0	22.5	27.0	31.5	36.0	40.5	45.0	49.5	54.0	58.5	63.0	67.5	72.0
7.0	10.5	15.8	21.0	26.3	31.5	36.8	42.0	47.3	52.5	57.8	63.0	68.3	73.5	78.8	84.0
8.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0
9.0	13.5	20.3	27.0	33.8	40.5	47.3	54.0	60.8	67.5	74.3	81.0	87.8	94.5	101.3	108.0
10.0	15.0	22.5	30.0	37.5	45.0	52.5	60.0	67.5	75.0	82.5	90.0	97.5	105.0	112.5	120.0
15.0	22.5	33.8	45.0	56.3	67.5	78.8	90.0	101.3	112.5	123.8	135.0	146.3	157.5	168.8	180.0
20.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0	150.0	165.0	180.0	195.0	210.0	225.0	240.0
25.0	37.5	56.3	75.0	93.8	112.5	131.3	150.0	168.8	187.5	206.3	225.0	243.8	262.5	281.3	300.0
40.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0	300.0	330.0	360.0	390.0	420.0	450.0	480.0
45.0	67.5	101.3	135.0	168.8	202.5	236.3	270.0	303.8	337.5	371.3	405.0	438.8	472.5	506.3	540.0
50.0	75.0	112.5	150.0	187.5	225.0	262.5	300.0	337.5	375.0	412.5	450.0	487.5	525.0	562.5	600.0

Adapting Network to Linear Expansion

Bend System

Linear expansion is compensated by providing change in direction in the piping network as shown in figure.

FC= Fixed Clamping

SC= Siding Clamp

Bend Length L_{BL} is calculated as per the formula stated below

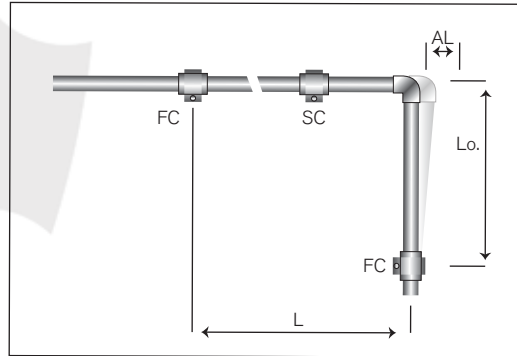
$$L_{BL} = K \times d \times \Delta L$$

where ΔL =Linear Expansion in mm

d =Outside Pipe Diameter in mm

K =Material Specific Constant (15)

The Bend Length (L_{BL}) value can be taken from the following table considering the installed pipe diameter and determined linear expansion.



Pipe Diameter (mm)	Linear Expansion (mm)											
	10	20	30	40	50	60	70	80	90	100	110	120
	Bend Length (mm)											
20	0.21	0.30	0.37	0.42	0.47	0.52	0.56	0.60	0.64	0.67	0.70	0.73
25	0.24	0.34	0.41	0.47	0.53	0.58	0.63	0.67	0.71	0.75	0.79	0.82
32	0.27	0.38	0.46	0.54	0.60	0.66	0.71	0.76	0.80	0.85	0.89	0.93
40	0.30	0.42	0.52	0.60	0.67	0.73	0.79	0.85	0.90	0.95	0.99	1.04
50	0.34	0.47	0.58	0.67	0.75	0.82	0.89	0.95	1.01	1.06	1.11	1.16
63	0.38	0.53	0.65	0.75	0.84	0.92	1.00	1.06	1.13	1.19	1.25	1.30
75	0.41	0.58	0.71	0.82	0.92	1.01	1.09	1.16	1.23	1.30	1.36	1.42
90	0.45	0.64	0.78	0.90	1.01	1.10	1.19	1.27	1.35	1.42	1.49	1.56
110	0.50	0.70	0.86	0.99	1.11	1.22	1.32	1.41	1.49	1.57	1.65	1.72

Expansion Loop System

A loop is created as shown in figure.

(W_{EL}) and (L_{BL}) of expansion loop are calculated as per the formula stated below.

$$W_{EL} = 2 \times L + SL \text{ and } L_{BL} = K \times d \times \Delta L$$

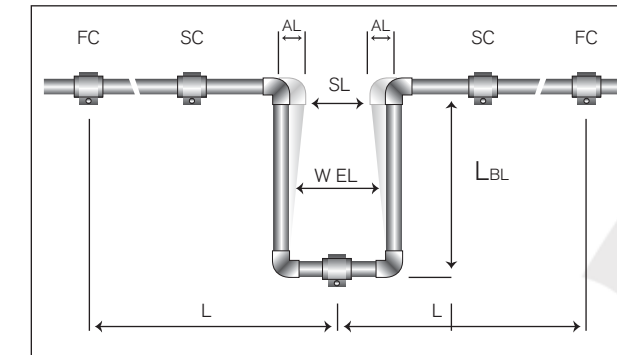
where ΔL =Linear Expansion in mm

SL =Safety Length (150 mm)

d =Outside Pipe Diameter in mm

K =Material Specific Constant (15)

III recommends using a safety length (SL) of 150 mm and a minimum width of expansion loop (W_{EL}) of 200 mm.



IIL PPRC Pipe

Solid Pipe SDR11 (PN10)

Pipe Series: SDR 11
 Material: PP-R 80
 Pressure Rating: PN 10
 Standard: DIN 8077/78
 Color: Green (for other colors please enquire)
 Delivery: Standard 4m Lengths (also available in 6m lengths)

Applications:

Drainage water and low pressure cold water supply. Life expectancy depends upon permissible working pressure.

Size x Thickness / Packing

S. No.	Item Code	Size	Pcs/Pouch
1	PP20-4-PN10/G1	20x1.9 mm	25
2	PP25-4-PN10/G1	25x2.3 mm	25
3	PP32-4-PN10/G1	32x2.9 mm	20
4	PP40-4-PN10/G1	40x3.7 mm	15
5	PP50-4-PN10/G1	50x5.3 mm	10
6	PP63-4-PN10/G1	63x5.8 mm	5
7	PP75-4-PN10/G1	75x6.8 mm	3
8	PP90-4-PN10/G1	90x8.2 mm	2
9	PP110-4-PN10/G1	110x10.0 mm	1



IIL PPRC Pipe

Solid Pipe SDR 7.4 (PN 16)

Pipe Series: SDR 7.4
 Material: PP-R 80
 Pressure Rating: PN 16
 Standard: DIN 8077/78
 Color: Green. (for other colors please enquire)
 Delivery: Standard 4m Lengths (also available in 6m lengths)

Applications:

Potable cold water supply, indoor installations; air conditioning & rainwater drainage. Life expectancy depends upon permissible working pressure.

Size x Thickness / Packing

S. No.	Item Code	Size	Pcs/Pouch
1	PP20-4-PN16/G1	20x2.8 mm	25
2	PP25-4-PN16/G1	25x3.5 mm	25
3	PP32-4-PN16/G1	32x4.4 mm	20
4	PP40-4-PN16/G1	40x5.5 mm	15
5	PP50-4-PN16/G1	50x6.9 mm	10
6	PP63-4-PN16/G1	63x8.6 mm	5
7	PP75-4-PN16/G1	75x10.3 mm	3
8	PP90-4-PN16/G1	90x12.3 mm	2
9	PP110-4-PN16/G1	110x15.1 mm	1



IIL PPRC Pipe

Solid Pipe SDR 6 (PN 20)

Pipe Series: SDR 6
 Material: PP-R 80
 Pressure Rating: PN 20
 Standard: DIN 8077/78
 Color: Green. (for other colors please enquire)
 Delivery: Standard 4m Lengths (also available in 6m lengths)

Applications:

Potable cold & hot water supply, indoor installations & central heating systems. Life expectancy depends upon permissible working pressure.

Size x Thickness / Packing

S. No.	Item Code	Size	Pcs/Pouch
1	PP20-4-PN20/G1	20x3.4 mm	25
2	PP25-4-PN20/G1	25x4.2 mm	25
3	PP32-4-PN20/G1	32x5.4 mm	20
4	PP40-4-PN20/G1	40x6.7 mm	15
5	PP50-4-PN20/G1	50x8.3 mm	10
6	PP63-4-PN20/G1	63x10.5 mm	5
7	PP75-4-PN20/G1	75x12.5 mm	3
8	PP90-4-PN20/G1	90x15 mm	2
9	PP110-4-PN20/G1	110x18.3 mm	1



IIL PPRC Pipe

Solid Pipe SDR 5 (PN 25*)

Pipe Series: SDR 5
 Material: PP-R 80
 Pressure Rating: PN 25
 Standard: DIN 8077/78
 Color: Green. (for other colors please enquire)
 Delivery: Standard 4m Lengths (also available in 6m lengths)

Applications:

Potable cold & hot water supply, indoor installations & central heating systems. Life expectancy depends upon permissible working pressure.

Size x Thickness / Packing

S. No.	Item Code	Size	Pcs/Pouch
1	PP20-4-PN25/G1	20x4.1 mm	25
2	PP25-4-PN25/G1	25x5.1 mm	25
3	PP32-4-PN25/G1	32x6.5 mm	20
4	PP40-4-PN25/G1	40x8.1 mm	15
5	PP50-4-PN25/G1	50x10.1 mm	10
6	PP63-4-PN25/G1	63x12.7 mm	5
7	PP75-4-PN25/G1	75x15.1 mm	3
8	PP90-4-PN25/G1	90x18.1 mm	2
9	PP110-4-PN25/G1	110x22.1 mm	1



Fittings & Accessories



Socket (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-S/G1	20mm	250
2	PF25-S/G1	25mm	180
3	PF32-S/G1	32mm	150
4	PF40-S/G1	40mm	45
5	PF50-S/G1	50mm	24
6	PF63-S/G1	63mm	15
7	PF75-S/G1	75mm	12
8	PF90-S/G1	90mm	6
9	PF110-S/G1	110mm	4

End Cap (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-EC/G1	20mm	400
2	PF25-EC/G1	25mm	250
3	PF32-EC/G1	32mm	150
4	PF40-EC/G1	40mm	80
5	PF50-EC/G1	50mm	45
6	PF63-EC/G1	63mm	25
7	PF75-EC/G1	75mm	15
8	PF90-EC/G1	90mm	10
9	PF110-EC/G1	110mm	6

Fittings & Accessories



Reducer Socket (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF25M-RS20/G1	25mm x 20mm	250
2	PF32M-RS20/G1	32mm x 20mm	150
3	PF32M-RS25/G1	32mm x 25mm	150
4	PF40M-RS20/G1	40mm x 20mm	120
5	PF40M-RS25/G1	40mm x 25mm	120
6	PF40M-RS32/G1	40mm x 32mm	100
7	PF50M-RS25/G1	50mm x 25mm	50
8	PF50M-RS32/G1	50mm x 32mm	50
9	PF50M-RS40/G1	50mm x 40mm	50
10	PF63M-RS25/G1	63mm x 25mm	20
11	PF63M-RS32/G1	63mm x 32mm	20

S. No.	Item Code	Size	Pcs/Carton
12	PF63M-RS40/G1	63mm x 40mm	20
13	PF63M-RS50/G1	63mm x 50mm	20
14	PF75M-RS40/G1	75mm x 40mm	18
15	PF75M-RS50/G1	75mm x 50mm	18
16	PF75M-RS63/G1	75mm x 63mm	18
17	PF90M-RS50/G1	90mm x 50mm	12
18	PF90M-RS63/G1	90mm x 63mm	12
19	PF90M-RS75/G1	90mm x 75mm	12
20	PF110M-RS63/G1	110mm x 63mm	8
21	PF110M-RS75/G1	110mm x 75mm	8
22	PF110M-RS90/G1	110mm x 90mm	6

Fittings & Accessories



Tee (Equal) (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-T/G1	20mm	150
2	PF25-T/G1	25mm	80
3	PF32-T/G1	32mm	45
4	PF40-T/G1	40mm	20
5	PF50-T/G1	50mm	14
6	PF63-T/G1	63mm	6
7	PF75-T/G1	75mm	3
8	PF90-T/G1	90mm	3
9	PF110-T/G1	110mm	1



3D Tee (Equal) (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF25-3DT/G1	25mm x 25mm x 25mm	60

Fittings & Accessories



Reducing Tee (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF25-RT2020/G1	25mm x 20mm x 20mm	90
2	PF20-RT2525/G1	20mm x 25mm x 25mm	90
3	PF32-RT2525/G1	32mm x 25mm x 25mm	60
4	PF25-RT3225/G1	25mm x 32mm x 25mm	60
5	PF20-RT3232/G1	20mm x 32mm x 32mm	60
6	PF25-RT3232/G1	25mm x 32mm x 32mm	60
7	PF32-RT3225/G1	32mm x 32mm x 25mm	45
8	PF20-RT4040/G1	20mm x 40mm x 40mm	20
9	PF25-RT4040/G1	25mm x 40mm x 40mm	20
10	PF32-RT4040/G1	32mm x 40mm x 40mm	20
11	PF20-RT5050/G1	20mm x 50mm x 50mm	15
12	PF25-RT5050/G1	25mm x 50mm x 50mm	15
13	PF32-RT5050/G1	32mm x 50mm x 50mm	14
14	PF40-RT5050/G1	40mm x 50mm x 50mm	14
15	PF25-RT6363/G1	25mm x 63mm x 63mm	8

S. No.	Item Code	Size	Pcs/Carton
16	PF32-RT6363/G1	32mm x 63mm x 63mm	8
17	PF40-RT6363/G1	40mm x 63mm x 63mm	8
18	PF50-RT6363/G1	50mm x 63mm x 63mm	6
19	PF32-RT7575/G1	32mm x 75mm x 75mm	4
20	PF40-RT7575/G1	40mm x 75mm x 75mm	4
21	PF50-RT7575/G1	50mm x 75mm x 75mm	4
22	PF63-RT7575/G1	63mm x 75mm x 75mm	4
23	PF40-RT9090/G1	40mm x 90mm x 90mm	3
24	PF50-RT9090/G1	50mm x 90mm x 90mm	3
25	PF63-RT9090/G1	63mm x 90mm x 90mm	3
26	PF75-RT9090/G1	75mm x 90mm x 90mm	3
27	PF50-RT110110/G1	50mm x 110mm x 110mm	1
28	PF63-RT110110/G1	63mm x 110mm x 110mm	1
29	PF75-RT110110/G1	75mm x 110mm x 110mm	1
30	PF90-RT110110/G1	90mm x 110mm x 110mm	1

Fittings & Accessories



Cross (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-CR/G1	20mm	90
2	PF25-CR/G1	25mm	60
3	PF32-CR/G1	32mm	30



Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-E90/G1	20mm	200
2	PF25-E90/G1	25mm	120
3	PF32-E90/G1	32mm	60
4	PF40-E90/G1	40mm	40
5	PF50-E90/G1	50mm	20
6	PF63-E90/G1	63mm	10
7	PF75-E90/G1	75mm	4
8	PF90-E90/G1	90mm	3
9	PF110-E90/G1	110mm	2

Fittings & Accessories



Reducer Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF32-25RE90/G1	32mm x 25mm	60
2	PF40-25RE90/G1	40mm x 25mm	60
3	PF40-32RE90/G1	40mm x 32mm	40



3D Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF25-3DE90/G1	25mm x 25mm x 25mm	40

Elbow 45° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-E45/G1	20mm	200
2	PF25-E45/G1	25mm	150
3	PF32-E45/G1	32mm	80
4	PF40-E45/G1	40mm	45
5	PF50-E45/G1	50mm	20
6	PF63-E45/G1	63mm	14
7	PF75-E45/G1	75mm	5
8	PF90-E45/G1	90mm	4
9	PF110-E45/G1	110mm	2

Fittings & Accessories



Socketed Over Bridge Bow (PPRC Fitting PN 20)

Over Bridge Bow (PPRC Fitting PN 20)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-OBBS/G1	20mm	90
2	PF25-OBBS/G1	25mm	40
3	PF32-OBBS/G1	32mm	20
4	PF40-OBBS/G1	40mm	16

S. No.	Item Code	Size	Pcs/Carton
1	PF20-OBB-PN20/G1	20mm	20
2	PF25-OBB-PN20/G1	25mm	20
3	PF32-OBB-PN20/G1	32mm	15

Fittings & Accessories



Plastic Clamp

Pressure Test Plug (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-BRK/G1	20mm	400
2	PF25-BRK/G1	25mm	300
3	PF32-BRK/G1	32mm	300
4	PF40-BRK/G1	40mm	150

S. No.	Item Code	Size	Pcs/Carton
1	PF1/2-EP/G1	1/2"	600
2	PF3/4-EP/G1	3/4"	400
3	PF1-EP/G1	1"	200
4	PF1 1/4-EP/G1	1 1/4"	120

Fittings & Accessories



Male Transition Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-EM-1/2/G1	20mm x 1/2"	90
2	PF25-EM-1/2/G1	25mm x 1/2"	70
3	PF25-EM-3/4/G1	25mm x 3/4"	60
4	PF32-EM-1/2/G1	32mm x 1/2"	45
5	PF32-EM-3/4/G1	32mm x 3/4"	45
6	PF32-EM-1/G1	32mm x 1"	40
7	PF40-EM-11/4H/G1	40mm x 1 1/4"	15
8	PF50-EM-11/2H/G1	50mm x 1 1/2"	12
9	PF63-EM-2H/G1	63mm x 2"	4



Female Transition Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-EF-1/2/G1	20mm x 1/2"	90
2	PF25-EF-1/2/G1	25mm x 1/2"	80
3	PF25-EF-3/4/G1	25mm x 3/4"	60
4	PF32-EF-1/2/G1	32mm x 1/2"	60
5	PF32-EF-3/4/G1	32mm x 3/4"	60
6	PF32-EF-1/G1	32mm x 1"	50
7	PF40-EF-11/4H/G1	40mm x 1 1/4"	20
8	PF50-EF-11/2H/G1	50mm x 1 1/2"	12
9	PF63-EF-2H/G1	63mm x 2"	6

Fittings & Accessories



Male Transition Tee (PPRC Fitting PN 25)

Female Transition Tee (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-TM-1/2/G1	20mm x 1/2"	50
2	PF25-TM-1/2/G1	25mm x 1/2"	60
3	PF25-TM-3/4/G1	25mm x 3/4"	50
4	PF32-TM-1/2/G1	32mm x 1/2"	40
5	PF32-TM-3/4/G1	32mm x 3/4"	70
6	PF32-TM-1/G1	32mm x 1"	20
7	PF40-TM-1H/G1	40mm x 1 1/4"	15
8	PF50-TM-11/2H/G1	50mm x 1 1/2"	6
9	PF63-TM-2H/G1	63mm x 2"	4

S. No.	Item Code	Size	Pcs/Carton
1	PF20-TF-1/2/G1	20mm x 1/2"	70
2	PF25-TF-1/2/G1	25mm x 1/2"	60
3	PF25-TF-3/4/G1	25mm x 3/4"	60
4	PF32-TF-1/2/G1	32mm x 1/2"	40
5	PF32-TF-3/4/G1	32mm x 3/4"	90
6	PF32-TF-1/G1	32mm x 1"	30
7	PF40-TF-11/4H/G1	40mm x 1 1/4"	20
8	PF50-TF-11/2H/G1	50mm x 1 1/2"	10
9	PF63-TF-2H/G1	63mm x 2"	6

Fittings & Accessories



Male Transition Socket (PPRC Fitting PN 25)

Female Transition Socket (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-SM-1/2/G1	20mm x 1/2"	100
2	PF25-SM-1/2/G1	25mm x 1/2"	120
3	PF25-SM-3/4/G1	25mm x 3/4"	90
4	PF32-SM-1/2/G1	32mm x 1/2"	60
5	PF32-SM-3/4/G1	32mm x 3/4"	60
6	PF32-SM-1/G1	32mm x 1"	60
7	PF40-SM-1/G1	40mm x 1"	45
8	PF40-SM-11/4H/G1	40mm x 1 1/4"	15
9	PF50-SM-11/2H/G1	50mm x 1 1/2"	10
10	PF63-SM-2H/G1	63mm x 2"	6
11	PF75-SM-21/2H/G1	75mm x 2 1/2"	4
12	PF90-SM-3H/G1	90mm x 3"	2

S. No.	Item Code	Size	Pcs/Carton
1	PF20-SF-1/2/G1	20mm x 1/2"	150
2	PF25-SF-1/2/G1	25mm x 1/2"	150
3	PF25-SF-3/4/G1	25mm x 3/4"	90
4	PF32-SF-1/2/G1	32mm x 1/2"	90
5	PF32-SF-3/4/G1	32mm x 3/4"	60
6	PF32-SF-1/G1	32mm x 1"	60
7	PF40-SF-1/G1	40mm x 1"	45
8	PF40-SF-11/4H/G1	40mm x 1 1/4"	20
9	PF50-SF-11/2H/G1	50mm x 1 1/2"	15
10	PF63-SF-2H/G1	63mm x 2"	10
11	PF75-SF-21/2H/G1	75mm x 2 1/2"	8
12	PF90-SF-3H/G1	90mm x 3"	4

Fittings & Accessories



Stop Globe Valve w/Body (PPRC Fitting PN 25)

Concealed Valve w/Body (PPRC Fitting PN 25) (Ellipse Model)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-GVA/G1	20mm	16
2	PF25-GVA/G1	25mm	16
3	PF32-GVA/G1	32mm	14
4	PF40-GVA/G1	40mm	10

S. No.	Item Code	Size	Pcs/Carton
1	PF20-CVA/G1	20mm	14
2	PF25-CVA/G1	25mm	14
3	PF32-CVA/G1	32mm	14

Fittings & Accessories



Ball Valve (PPRC Fitting PN 25) (Hot/Cold)

PPRC Plastic Union (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-BV/G1	20mm	30
2	PF25-BV/G1	25mm	20
3	PF32-BV/G1	32mm	12
4	PF40-BV/G1	40mm	12
5	PF50-BV/G1	50mm	6
6	PF63-BV/G1	63mm	2

S. No.	Item Code	Size	Pcs/Carton
1	PF20-PFU/G1	20mm	60
2	PF25-PFU/G1	25mm	45
3	PF32-PFU/G1	32mm	30
4	PF40-PFU/G1	40mm	15

Fittings & Accessories



Wall Mount Female Elbow 90° (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-WEF-1/2/G1	20mm x 1/2"	60
2	PF25-WEF-1/2/G1	25mm x 1/2"	60

Mixer Bracket for Wall Mount Elbow 90°

S. No.	Item Code	Size	Pcs/Carton
1	PF140-MXBR/G1	L=140mm	45

Fittings & Accessories



Union Male Adaptor (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-BMU-1/2/G1	20mm x 1/2"	50
2	PF25-BMU-3/4/G1	25mm x 3/4"	40
3	PF32-BMU-1H/G1	32mm x 1"	30
4	PF40-BMU-11/4H/G1	40mm x 1 1/4"	20
5	PF50-BMU-11/2H/G1	50mm x 1 1/2"	12
6	PF63-BMU-2H/G1	63mm x 2"	6

Union Female Adaptor (PPRC Fitting PN 25)

S. No.	Item Code	Size	Pcs/Carton
1	PF20-BFU-1/2/G1	20mm x 1/2"	50
2	PF25-BFU-3/4/G1	25mm x 3/4"	40
3	PF32-BFU-1H/G1	32mm x 1"	30
4	PF40-BFU-11/4H/G1	40mm x 1 1/4"	20
5	PF50-BFU-11/2H/G1	50mm x 1 1/2"	12
6	PF63-BFU-2H/G1	63mm x 2"	6

Welding Machine (1,500 Watt)

Code	Welding Tools (Molds)	Packing Quantity
PT2063-WELDMC/YL	20/25/32/40/50/63mm	1



Welding Machine (2,000 Watt)

Code	Welding Tools (Molds)	Packing Quantity
PT75110-WELDMC/YL	75/90/110mm	1
PT75160-WELDMC-FX/RD	75/90/110mm	1



Individual Welding Machine Tools (Molds)

Code	Welding Tools (Molds)	Packing Quantity
PT20-WELDTL	20mm	1
PT25-WELDTL	25mm	1
PT32-WELDTL	32mm	1
PT40-WELDTL	40mm	1
PT50-WELDTL	50mm	1
PT63-WELDTL	63mm	1
PT75-WELDTL	75mm	1
PT90-WELDTL	90mm	1
PT110-WELDTL	110mm	1
PT125-WELDTL	125mm	1
PT160-WELDTL	160mm	1

Cutter

Code	Range	Packing Quantity
PT2040-CUTTER/YL	20-40mm	1
PT50110-CUTTER/RD	50-110mm	1



Manual Pressure Testing Device

Code	Description	Packing Quantity
PT-PRESSTEST-PN25/YL	Up to PN25	1



IIL Technical Sales Department

Our technical department, with experienced polymer engineers, is readily available to facilitate any customer inquiries.

We offer free information service, including:

- Project specific advice and guidance by our highly experienced and knowledgeable technical experts
- Selection of the appropriate product
- Information about standards
- Product applications
- Specification assistance (such as equivalents of foreign specifications and trade names)
- Chemical properties of polymers
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