Jointing Method

Heat Fusion

Jointing of Polydex premium pipes is carried out by a method called 'heat fusion' (socket fusion or butt fusion). This is done by means of welding machine. The pipes from outside and fittings from inside are joined together by heat fusion method.

- Polydex pipe sizes from 20mm to 110mm are joined through **'socket fusion'**
- Polydex pipe sizes from 160mm to 250mm are joined through **'butt fusion'**

Welding - Guidelines

1. Cut the pipe at the right angle with a cutter.
2. Chamfers should be given to the outer ends of the pipe by a knife or a chamfering tool.
3. Mark off welding depth at the pipe end.
4. Always clean the pipe & fitting, free of dust, grease burs/chips.
5. Required operating temperature of the welding machine is approximately 260°C.
6. Simultaneously heating the male and female parts to be joint together as per recommended heating time.
7. Push the pipe end into the fitting and ensure its alignment of assembly within the specified time period.
8. After welding heater and matrixes of the machine should be cleaned for the next use.

In order to achieve a proper joint

It is necessary to not exceed appropriate heating times for individual pipe diameters and to set a welding temperature of 260 °C

Welding PP-RCT — **Table for polyfusion welding**

D [mm]	20	25	32	40	50	63	75	90	110	125
Heating time [s]	5	7	8	12	18	24	30	40	50	60

Do not unnecessarily prolong the pipe heating time!

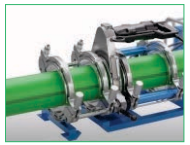
Butt welding process

We recommend using a special cutter for plastic pipes. Butt welding is one way of coupling plastic piping systems and its components together. Butt welding is a process in which two pipe ends or a pipe end and a fitting are coupled by pressing the melted contact surfaces together. Butt welding can be performed only with welding equipment specifically designed for such purpose and only by appropriately qualified staff.

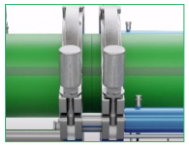
Butt welding is not suitable for coupling pipes and fittings of different size (the diameter and wall thickness must be the same) or different MFI value.

In order to achieve more solid welds, we recommend using welding machines with hydraulic jaws.

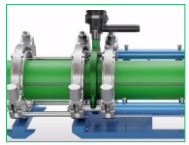
Detailed welding equipment manuals including welding charts are provided by the manufacturer/supplier of the welding equipment.



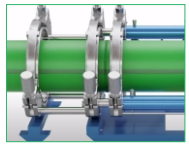
Planing the pipe ends



Properly prepared for welding



Heating with the heating plate



Cooling the weld seam

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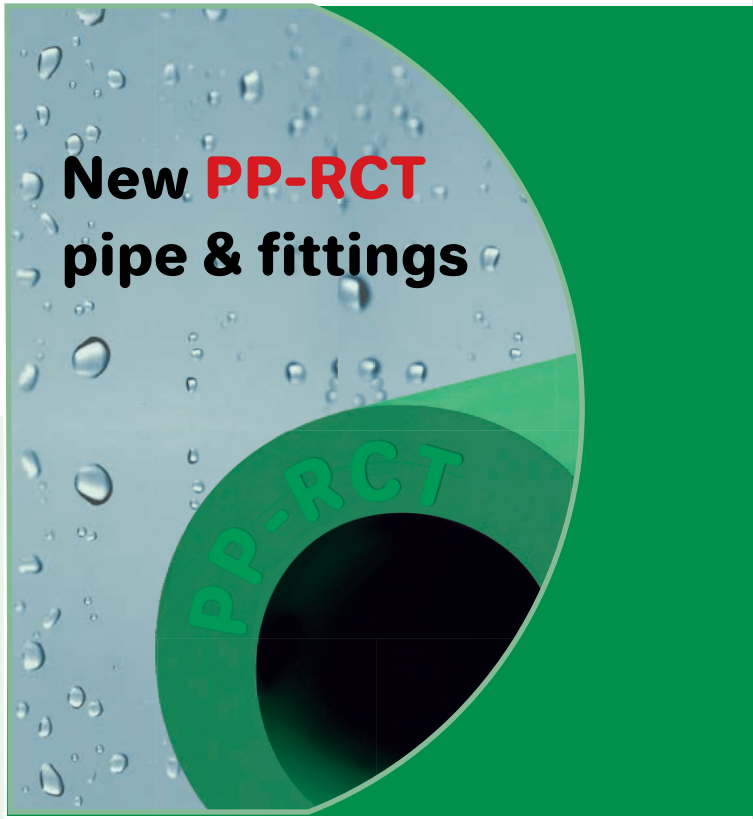
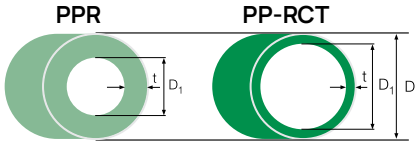
POLYDEX PREMIUM

HOT & COLD WATER SUPPLY



THE PREMIUM HOT & COLD WATER PIPE SYSTEM IN PP-RCT



Explanatory notes:

t = wall thickness
D = external diameter
D1 = internal diameter

DADEX

Introduction

Polydex Premium is designed for transport of hot and cold water. It is also used for the distribution of compressed air. Polydex Premium is the first complete PP piping system in Pakistan that conforms to international quality and standard. In order to take advantage of its chemical resistance and other system properties and use of system for transport of other liquids, gaseous or solid - an individual assessment of any such case would be needed.

Polydex Premium pipe system is available with high quality PP-RCT pipes and fittings. The PP-RCT is the new 4th generation material and fittings made with PP-RCT have slimmer wall thickness. The symbols used for PP-RCT indicate the fact that these are random copolymers (R=random), with modified crystalline structure (C=crystalline). In addition, PP-RCT is characterized by improved long-term hydrostatic strength, particularly at elevated temperature (T=temperature).

Material

Polydex Premium pipes and fittings are manufactured from PP-RCT material which is 100% certified food-grade material. Its resistance to high temperatures has made Polydex Premium PP-RCT a popular piping system recommended for domestic, commercial buildings and industrial usage. The physical and chemical properties of PP-RCT make it a superior and safe piping system for supply of potable water and other fluids. Polydex Premium PP-RCT pipes and fittings are supplied in green colour.

Standards & Specifications

Polydex Premium PP-RCT pipe system conforms to following international standards:

Pipes EN ISO 15874 / DIN 8077-8078
Fittings EN ISO 15874

Complete range of fittings is available. Special fittings could be arranged, such as flange connections and short by-pass bends.

Available Range

Polydex Premium PP-RCT piping system is manufactured in the metric sizes of 20mm, 25mm, 32mm, 40mm, 50mm, 63mm, 75mm, 90mm, 110mm, 125mm, 160mm, 200mm and 250mm.

Features & Benefits

- The premium Hot & Cold water pipe system for use in buildings and chilled water applications.
- Includes PP-RCT, the new 4th generation material.
- Resistance to corrosion & abrasion.
- Welding capability.
- Easy to handle and transport.
- Reduce head loss.
- Low electrical and heat conductivity.
- Environment friendly.

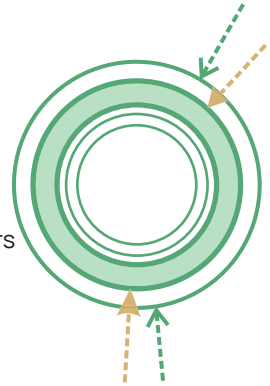
Fields of Application

Polydex Premium PP-RCT is a plumbing & mechanical hot & cold-water pressure piping distribution system. It is designed for a wide range of applications, such as residential, commercial, HVAC and industrial. Its chemical resistant composition and the high pressure & temperature performance rating, makes the system suitable for a wide range of applications. Some of those most common field of applications are:

Hot & cold potable water plumbing distribution, for residential and commercial

Chilled water and condenser water for cooling towers, data centers, supercomputers

Hydronic distribution to radiators, convectors, fan coils, chilled beams, etc.



Industrial and process piping for applications such as chemical processes, high-purity pharmaceuticals, and semiconductor manufacturing.

Geothermal heating and cooling systems

Reclaimed water collection and distribution

Ship building industry

Irrigation

Available Fittings

Complete range of PP-RCT fittings is available. Special fittings could be made available on demand such as flange connections and short by-pass bends.