

DYNATHERM

PP-RCT Polypropylene Pipe System

System Data Sheet



SYSTEM DESCRIPTION

Corroded pipe systems in buildings have traditionally been a problem. Don't compromise on your water supply. Use the best technology and the best material. Pipes and fittings used for progressive sanitary and heating installations are made of polypropylene, the plastic with unbeatable properties.

Corrosion in pipe systems is a challenge that Dynatherm overcomes. Dynatherm PP-RCT pipe system fulfils the requirements of DIN EN ISO 15874 plastic pipeline systems for warm and cold water installation.

Manufactured by Beanninger in Germany, Dynatherm is made of a new generation Polypropylene, called PPRCT, that sets a milestone for the advancement of PP pressure piping systems. Polypropylene Random Copolymer with modified crystalline structure and enhanced Temperature performance (PP-RCT) offers longer life, higher temperature rating and higher flow rates due to larger bores.

Pipes and fittings are jointed using heat fusion methods including Socket, Electro and Butt fusion

DOCUMENTATION

Further documentation on the Dynatherm pipe system is available. Please contact your local distributor for more information.

SYSTEM BENEFITS

Welded system

Secure homogenous welded joints. No glues, chemicals or flame.

Excellent chemical and corrosion resistance.

Durable system with a wide range of applications.

Easy to install

Welding techniques are very simple, Labour saving benefits save more time and money.

Fibre composite pipes.

One of the main benefits of the Dynatherm Polypropylene pipe system is the integrated PP/Glass Fibre Composite reinforcing. Fibre composite reduces the thermal expansion found with plastic pipe by up to 75%.

Corrosion resistant

Dynatherm is a durable, complete plastic system. It does not rust, corrode or break down. No need to have treatment systems.

Suitable for Potable Water

Dynatherm pipe and fittings are tested and certified as suitable for drinking water supply.

Large Injection-molded Fittings

Eliminate fabricated fittings for large diameters. Injection-molded fittings available as standard provide better flow rates and an aesthetically pleasing system.

Smooth bore, free of incrustations

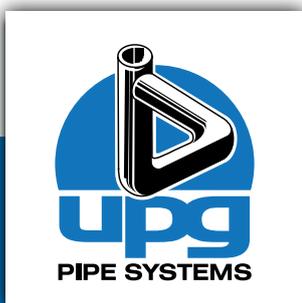
Excellent oxidation resistance due to state-of-the-art additive package. Maintains a smooth internal surface, preventing the build-up of deposits which could restrict flow.

Environmentally Friendly

The process of manufacturing does not release toxins and harmful gases and less energy is required. Installation does not require any chemicals and again, no harmful gasses or fumes are released.

PP-RCT verses PP-R:

- Massive improvements in design strength.
- Reduced wall thickness, giving up to 26% higher flow rates.
- Extended durability at higher temperatures.
- Higher resistance to chemicals
- Longer life



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APPLICATIONS

The Dynatherm PP-RCT system is suitable for a number of different applications including:

- Potable hot and cold water systems up to 70°C, with temperature spikes of up to 110°C.
- Mechanical services water reticulation systems up to 85°C, with temperature spikes of up to 110°C.
- Industrial liquids and gasses.
- Glycol reticulation down to -20°C.
- Building and district heating.
- Geothermal.
- General pressure applications up to 20 Bar (290 PSI).

RANGE

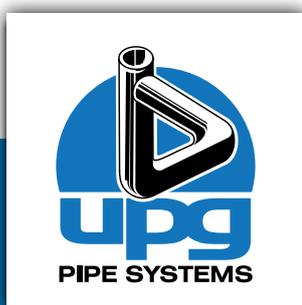
Dynatherm is available in a range of pipe sizes from 20mm to 315mm. The system consists of a large variety of electrofusion, spigot & butt weld fittings including: couplers, elbows, tees, reducers, saddle branches, flanges and valve.

CATEGORY	PRODUCT	DIMENSIONS RANGE (MM)
Pipes	<ul style="list-style-type: none"> • Solid Wall PN16 • Solid Wall PN20 • Fibre Composite PN20 • Fibre Composite PN16 • Fibre Composite PN10 • Aluminum Composite PN20 	20-250 20-125 20-125 20-315 160-250 20-125
Fittings	<ul style="list-style-type: none"> • 45° and 90° Elbows • Long radius Bends • Tees • Weld-in saddles • Threaded saddles • 45° Tee "Y" fittings • Threaded fittings with DZR brass insert 1/2" to 5" • Flanges • Unions in PP, brass and S/S • Threaded outlets and manifolds 	20-315 20-40 20-315 40-315 40-315 32-63 20-125 40-315 20-90 25-63
Couplers	<ul style="list-style-type: none"> • Socket Fusion • Electrofusion 	20-125 20-315
Valves	<ul style="list-style-type: none"> • PP Ball Valves • Angled and Straight seat • Basin mixers and Taps • Butterfly 	20-75 20-40 20-32 50-250
Equipment	<ul style="list-style-type: none"> • Electrofusion welding machines • Butt fusion welding machines • Socket fusion welding machines • Scrapers and other installation tools • Manifolds • Full fabrication service 	
Options	Pre-insulated pipes and fittings	

PRODUCT SPECIFICATIONS

Raw Material Polypropylene (PP-RCT)	Joining method Electrofusion Butt fusion Socket fusion Flange/Threads
Density g/cm³ 0.905	
Tensile strength at yield 23 MPA	Pressure Ratings (Bar/ Temp) Solid Wall SDR11: 18.4 - 20°C 8.1 - 70°C
Flexural modulus 900 MPA	
Melting point 140-150 °C	Solid Wall SDR7.4: 29.2 - 20°C 12.9 - 70°C
Linear thermal expansion Solid Wall - 1.5 x 10 ⁻⁴ Fibre Composite - 0.35 x 10 ⁻⁴ Stabi Pipe - 0.3 x 10 ⁻⁴	Fibre Composite SDR11 18.4 - 20°C 8.1 - 70°C
Thermal conductivity 0.24 W/mK°	Fibre Composite SDR9 22.8 - 20°C 10.2 - 70°C
Pipe Friction Factor 0.007	Applicable Standards DIN 8077/8 ISO 15874 Watermark ÖNORM B 5174 - 2007 03 01 AL RP 01.58 AS/NZS4020

Disclaimer: As always with our technical information, we supply it as a guide in the interest of better understanding of technical properties of our products. It represents the best information available at the time of publication. However, the application of information may involve engineering judgments which cannot be correctly made without intimate knowledge of all the conditions pertaining to a specific installation. We do not act as a consultant in this regard; the responsibility for the use of any information or advice contained herein rests solely with the user. No warranty, expressed or implied, (other than Statutory Warranty) is given as to the information or results obtained by the use thereof, and we will not be held liable for any costs, direct or indirect, that may arise therefrom. The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Neither we, nor our affiliates, shall be liable regardless of the cause or duration, for any errors, inaccuracies, omissions, or other defects in the information contained herein, or for any claims or losses arising therefrom or occasioned thereby. None of the foregoing parties shall be liable for any third-party claims or losses of any nature.



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