

# ECOTECH

100% GERMAN ENGINEERED 

ECOTECH ADVANCE PIPING SYSTEM | CATALOGUE



HOT AND COLD PPR & PPR-CT PIPING

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## ECOTECH PIPING ADVANTAGES



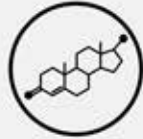
GERMAN-ENGINEERED



GERMAN RAW MATERIALS



ANTI-BACTERIAL



SUPERIOR FORMULATION



HEAVY-DUTY FITTINGS



HOT & COLD APPLICATIONS



COMPLETE RANGE



CHLORINE-RESISTANT



**EUROPEAN DESIGN.** Ecotech (Mega Green) Pipes adapts German-based aesthetics and function ensuring reliability. Its heavy-duty mold and award-winning design allows greater flow rates than typical fittings in the market.



**DOVETAIL GROOVED STRUCTURE.** Ecotech Fittings uses Ecotech Proprietary Dovetail Grooved Structure Technology which is more advanced than typical PPR fittings. It is more heavy-duty and has higher leak-proof performance.



**MULTILAYER TECHNOLOGY.** Ecotech pipes are built with 2 layer of PPR Material to ensure greater durability. The inner layer contains anti-bacterial properties making water safe and clean.

**ENHANCED PERFORMANCE.** It can withstand temperature ranges from  $-20^{\circ}\text{C}$  to  $95^{\circ}\text{C}$  with an operating life of at least 50 years at  $20^{\circ}\text{C}$ . Its pressure tolerance is also higher with upper ranges of up to 1,500 PSI brought about by superior materials and formulation.

## ECOTECH PIPING ADVANTAGES



Borealis Resins

VS



Recycled Resins



KraussMaffei Machines

VS



Non-branded Machines

Higher durability. Higher temperature and pressure tolerance. The pipes are built with the highest grade of resin available in Europe from Borealis and engineered with state-of-the-art German KraussMaffei Machines thus ensuring superior quality and durability compared to typical PPR pipes in the market.

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## ECOTECH PP-RCT PIPING

Ecotech Plus PP-RCT (Polypropylene Random Crystallinity Temperature) is the next generation of PPR piping systems. PPR-CT is a polypropylene random copolymer that, through the addition of special nucleation agents, forms crystallites in a hexagonal beta structure. Combining the new structure and formulation of Ecotech Plus pipes results in a considerably higher strength at higher temperatures.

### HOW IT WORKS

#### Hexagonal Structure of the Polymer

The hexagonal crystalline structure of the PP-RCT pipe enables considerable mechanical resistance even at high temperatures

### PP-R

Alfa - monocline crystalline structure

#### Monoklin



### PP-RCT

Beta-hexagonal crystalline structure

#### Hexagonal

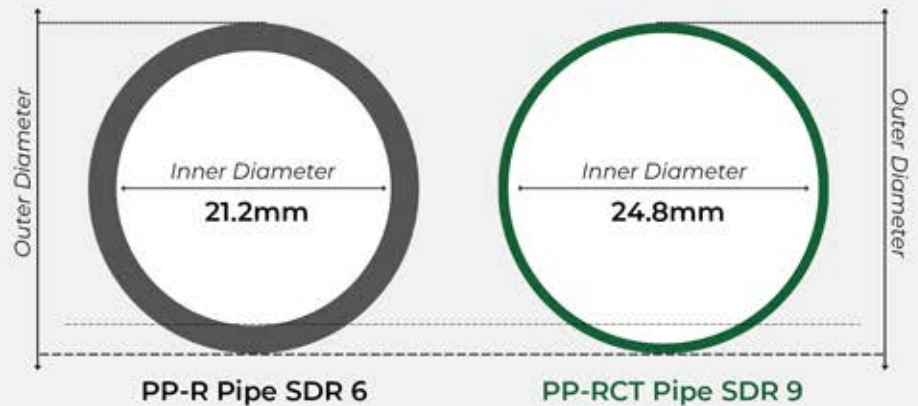


The crystalline structure of PP-RCT is much finer than that of traditional PP-R.

**35%** increase in volume flow rate vs. standard PPR pipes

**30%** cost savings with lower pipe size requirements

**SAME** outside diameter, **LARGER** inner diameter.



## ECOTECH SIZE STANDARDS COMPLIANCE

Based on DIN 8077: 2008-09

Nominal Inside Diameter Required
15.00mm (1/2")
20.0mm (3/4")
25.0mm (1")
32.0mm (1 1/4")
40.0mm (1 1/2")
50.0mm (2")

PP-R SDR 6		
O.D.	Thk	I.D.
20.0	3.4	13.2
25.0	4.2	16.6
32.0	5.4	21.2
40.0	6.7	26.6
50.0	8.3	33.4
63.0	10.5	42.0

PP-RCT SDR 9		
O.D.	Thk	I.D.
20.0	2.3	15.4
25.0	2.8	19.4
32.0	3.6	24.8
40.0	4.5	31.0
50.0	5.6	38.8
63.0	7.1	48.8

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## ECOTECH PPR-CT ADVANTAGES

### PP-RCT

### PP-R

WALL THICKNESS

High Inner Diameter  
**MORE FLOW**

Low inner diameter  
**LESS FLOW**

PRESSURE DROP

Socket Fusion  
**LEAST PRESSURE DROP**

Socket Fusion  
**MORE PRESSURE DROP**

INSULATION

Sandwich Glass Reinforcement  
**NEEDS LESS INSULATION**

No Reinforcement  
**NEEDS MORE INSULATION**

THERMAL EXPANSION

Sandwich Glass Fiber  
**LESS THERMAL EXPANSION**

No Glass Fiber  
**MORE EXPANSION  
MORE ENERGY LOSS**

UV RESISTANCE

Black UV Treated Layer  
**GOOD UV RESISTANCE**

Not permitted  
**IN DIRECT SUNLIGHT**

LIFE IN HIGH TEMPERATURE

Long Life  
**30 to 40 YEARS**

Short Life  
**20 to 30 YEARS**

INTERNATIONALLY CERTIFIED




## ECOTECH PPR-CT SPECIFICATION HIGHLIGHTS

The base material is a polypropylene (PPR-CT) with its typical quality characteristics (EN ISO 15874). All materials are subject to natural ageing. Even PPR-CT is subject to this law of nature. Temperature and stress dependent "creep curves" indicate the long service life to be expected.

**Thanks to special technical know-how, ECOTECH is particularly impact-resistant at temperatures down to -5°C.**

Density	0,91 g/cm <sup>3</sup>
Melting Point	~ 140°C
Tensile Strength	40 N/mm <sup>2</sup>
Elongation at Break	800%
E Modulus (20°C)	800 N/mm <sup>2</sup>
Spec. Heat	2 kJ/kg K
Thermal Conductivity	0.24 W/mK
Spec. Thermal Expansion	0.14 mm/mK

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## ECOTECH PPR RANGES

### Product Colors

#### Ecotech Plus PPR-CT Pipe



##### Sizes

- 20mm x 2.3 x 4 mtr
- 25mm x 2.8 x 4 mtr
- 32mm x 3.6 x 4 mtr
- 40mm x 4.5 x 4 mtr
- 50mm x 5.6 x 4 mtr
- 63mm x 7.1 x 4 mtr
- 75mm x 8.4 x 4 mtr
- 90mm x 10.1 x 4 mtr
- 110mm x 12.3 x 4 mtr
- 160mm x 17.8 x 4 mtr

#### Multi Layer PN 20



##### Sizes

- 20mm x 3.4 x 4 mtr
- 25mm x 4.2 x 4 mtr
- 32mm x 5.4 x 4 mtr
- 40mm x 6.7 x 4 mtr
- 50mm x 8.3 x 4 mtr
- 63mm x 10.5 x 4 mtr
- 75mm x 12.5 x 4 mtr
- 90mm x 15.0 x 4 mtr
- 110mm x 18.3 x 4 mtr
- 160mm x 26.6 x 4 mtr

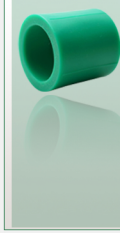
#### Mono Layer PN 20



##### Sizes

- 20mm x 3.4 x 4 mtr
- 25mm x 4.2 x 4 mtr
- 32mm x 5.4 x 4 mtr
- 40mm x 6.7 x 4 mtr
- 50mm x 8.3 x 4 mtr
- 63mm x 10.5 x 4 mtr
- 75mm x 12.5 x 4 mtr
- 90mm x 15.0 x 4 mtr
- 110mm x 18.3 x 4 mtr
- 160mm x 26.6 x 4 mtr

#### Coupling



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### Coupling Reducer



##### Sizes

- 25/20
- 32/20 - 25
- 40/20 - 32
- 50/20 - 40
- 63/20 - 50
- 75/32 - 63
- 90/40 - 75
- 110/50 - 90
- 160/110

#### Elbow 90



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### Elbow 45



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### Elbow Reducer



##### Sizes

- 25/20
- 32/20
- 32/25

#### Tee Equal



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### Tee Unequal



##### Sizes

- 25/20
- 32/20 - 25
- 40/20 - 32
- 50/20 - 40
- 63/20 - 50
- 75/32 - 63
- 90/40 - 75
- 110/50 - 90
- 160/110

#### Coupling Adaptor Female



##### Sizes

- 20 x 1/2"
- 25 x 1/2"
- 25 x 3/4"
- 32 x 1"
- 40 x 1 1/4"
- 50 x 1 1/2"
- 63 x 2"
- 75 x 2 1/2"
- 90 x 3"
- 110 x 4"

#### Coupling Adaptor Male



##### Sizes

- 20x 1/2"
- 25x 1/2"
- 25x 3/4"
- 32x1"
- 40x1 1/4"
- 50x1 1/2"
- 63x2"
- 75x2 1/2"
- 90x3"
- 110x4"

#### Elbow Female Adaptor



##### Sizes

- 20 x 1/2"
- 25 x 1/2"
- 25 x 3/4"
- 32 x 1"
- 40 x 1 1/4"
- 50 x 1 1/2"
- 63 x 2"

#### Elbow Male Adaptor



##### Sizes

- 20 x 1/2"
- 25 x 1/2"
- 25 x 3/4"
- 32 x 1"
- 40 x 1 1/4"
- 50 x 1 1/2"
- 63 x 2"

#### End Cap



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### Threaded Cap



##### Sizes

- 20mm
- 25mm
- 32mm

#### Flange Set



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm
- 160mm

#### PP Union



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm

#### Tee Female Adaptor



##### Sizes

- 20 x 1/2"
- 25 x 1/2"
- 25 x 3/4"
- 32 x 1
- 40 x 1 1/2"
- 63 x 2

#### Tee Male Adaptor



##### Sizes

- 20 x 1/2"
- 25 x 1/2"
- 25 x 3/4"
- 32 x 1
- 40 x 1 1/2"
- 63 x 2

#### Union Patente Female



##### Sizes

- 20 x 1/2"
- 25 x 3/4"
- 32 x 1
- 40 x 1 1/4"
- 50 x 1 1/2"
- 63 x 2

#### Union Patente Male



##### Sizes

- 20 x 1/2"
- 25 x 3/4"
- 32 x 1
- 40 x 1 1/4"
- 50 x 1 1/2"
- 63 x 2

#### Check Valve



##### Sizes

- 20mm
- 25mm
- 32mm

#### Hose Bibb



##### Sizes

- 20mm

#### Ball Valve



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm

#### Double Union Ball Valve



##### Sizes

- 20mm
- 25mm
- 32mm

#### Heavy-duty Stop Valve



##### Sizes

- 20mm
- 25mm
- 32mm
- 40mm
- 50mm
- 63mm
- 75mm
- 90mm
- 110mm

#### High-end Stop Valve



##### Sizes

- 20mm
- 25mm
- 32mm

#### Teflon Tape



##### Sizes

- 20mm
- 25mm
- 32mm

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