

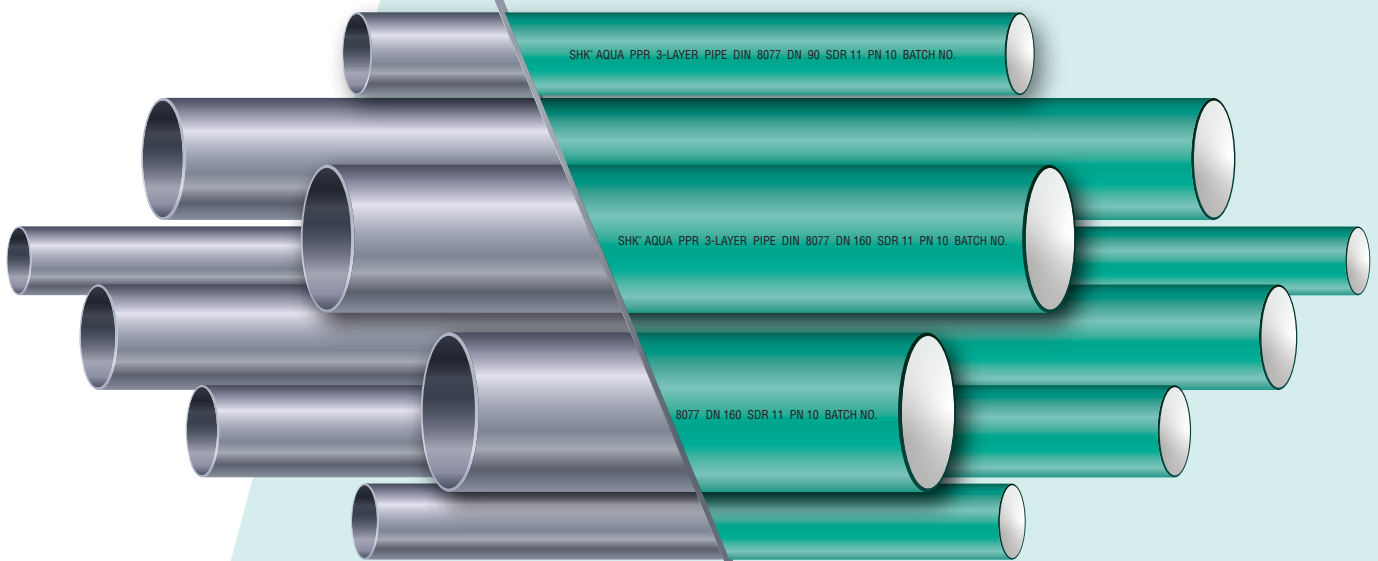
# SHK<sup>®</sup>

## PPR Pipes & Fittings

MANUFACTURERS OF PPR-C PIPES AND FITTING

### Future of HVAC Applications

From Conventional Metal Pipes To **SHK<sup>®</sup> Aqua - PPR-C Pipes**



SIZES: 20 MM TO 400 MM (OD)  
PRESSURE RATINGS: PN10, PN16 & PN20





## FEATURES OF PPR-C PIPES AND FITTINGS

- Wide Operating Temperature range: (-8) to 95 Degree Celsius
- Lighter in weight
- Longer Service Life
- No Leakage Chances
- Clean Water/ Liquid Food Supply (CFTRI Approved)
- Very low Thermal Conductivity (0.23 W/mK)
- No Electrical Conductivity
- Anti-Corrosive
- UV Stabilized Outermost Layer
- Negligible Heat Loss

## Applications of PPRC Pipes

- Hot/Cold Water Supply
- Chemical Plants
- Cooling Towers
- Chillers/Radiant Heating and Cooling/Data Center Cooling/AHU's/Condensor
- Pharmaceutical Industries
- Effluent/ Water Treatment Plants
- RO Drinking Water Plant
- Solar Water Heater
- Hotels, Hospitals & Commercial Malls
- Compressed Air Supply
- Vacuum Air/Nitrogen Air Supply



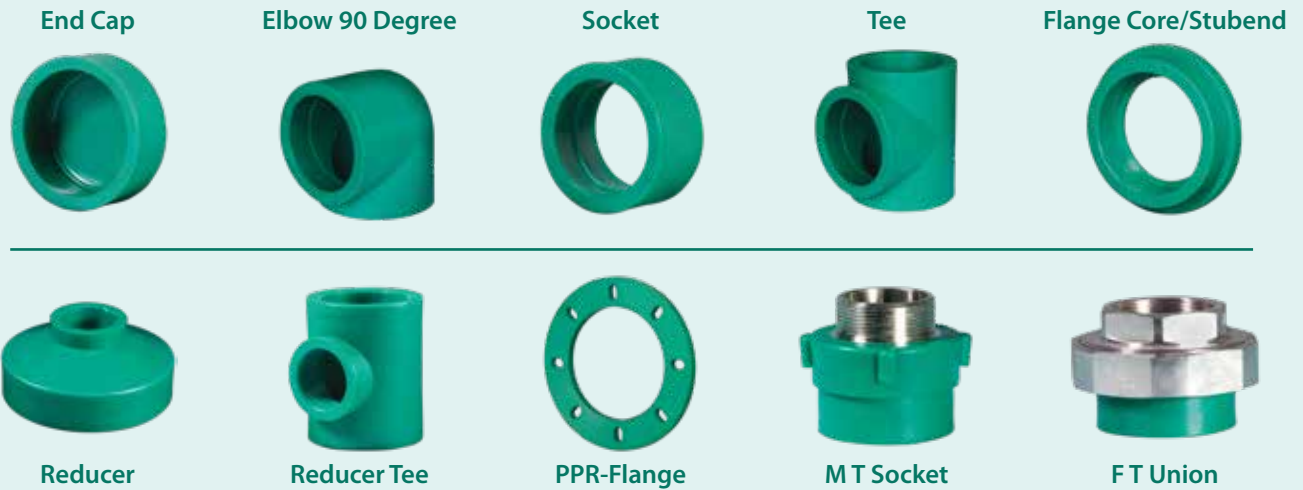
## COMPARISON OF PPR-C PIPES WITH METAL PIPES (SPECIFIC TO HVAC APPLICATION)

| Sr. No. | SPECIFICATION        | COMPARISION   |  |
|---------|----------------------|---|--|
|         |                      | MS Pipes  | PPR Pipes  |
| 1       | Service Life         | 3 - 5 Years   | 50 Years   |
| 2       | Food Grade           | Poor due to corrosion issues                              | Hygienic, CFTRI approved - can supply clean wataer and liquid food |
| 3       | Leakage              | High chances  | Negligible chance due to Scket Fusion based welding                |
| 4       | Heat Loss            | High  | Negligible   |
| 5       | Thermal Conductivity | Very High (45 W/mK)                                       | Low (0.23 W/mK)  |
| 6       | Maintenance Cost     | High after 3-4 years                                      | Negligible upto 10 years   |
| 7       | Corrosion Resistance | Nil   | Excellent  |
| 8       | Friction             | Very High   | Negligible due to smooth layer                                     |
| 9       | Weight               | Very heavy  | Very light   |
| 10      | Painting Cost        | Additionally high for painting the pipes as per standards | None   |

# Advantages of Using PPRC Pipes

## over MS Pipes for HVAC (Chilling Plant/Cooling Tower) Application

- (i) Overall Project Cost gets economical by 15-20%
- (ii) Insulation Requirement In PPR: ½ to 1/3rd of MS Pipes
- (ii) Transportation cost decreases by 1/4th of MS Pipes
- (iv) Material Handling becomes quite easy compared to MS Pipes
- (v) Negligible Pressure drop even after years of service and so desired flow rate can be obtained.



## Welding Process



### Cutting

- Cut the pipe at right angle to its axis using burr-free cutter
- Ensure the pipe is free from burrs or cutting chips
- Clean the pipe & fitting perfectly before welding
- Mark welding depth at the end of pipe



### Heating

- Mount the suitable Dies (Socket & Punch) on heating element of welding machine according to the diameter of pipe & fitting to be welded
- Connect the welding machine to 220 Volts A.C. power supply
- Select 260° C temperature on the welding machine hermostat
- After reaching required temperature, insert the pipe & fitting in the Dies (i.e. Socket & Punch respectively) by exerting light pressure
- Heat both pipe & fitting as per the size and time given in the following table



### Welding

- After heating, quickly insert pipe into the fitting by exerting light pressure
- Any misalignment should be corrected immediately after insertion to avoid any stress in the weld. This type of connection ensures perfect sealing even under the hard working conditions.

Note :

1. Avoid air draughts during welding to avoid stress in the welds.
2. During site welding, keep the welding set at a right angle to the pipe and fitting in order to avoid partial welding.



## About Company

SHK Polymers Industries, an ISO-9001-2015 certified company, as one of the leading thermo processing and manufacturing company, established in the year of 2013. Our SHK brand Polyolefin Pipe product range includes complete range of Polypropylene Random Copolymer (PPR-C) Triple Layer Pipes & Fittings for Hot & Cold water connection of Domestic, PPR Thermal Composite Pipes & Fittings for Industrial Application and PPR Composite Pneumatic Pipes & Fittings for Compressure Air Line Industries. Our products are manufactured of the best quality of raw material procured from the most reliable sources available in the world.

**SHK<sup>®</sup> Thermo**

**SHK<sup>®</sup> Aqua**

**SHK<sup>®</sup> Pneumato**

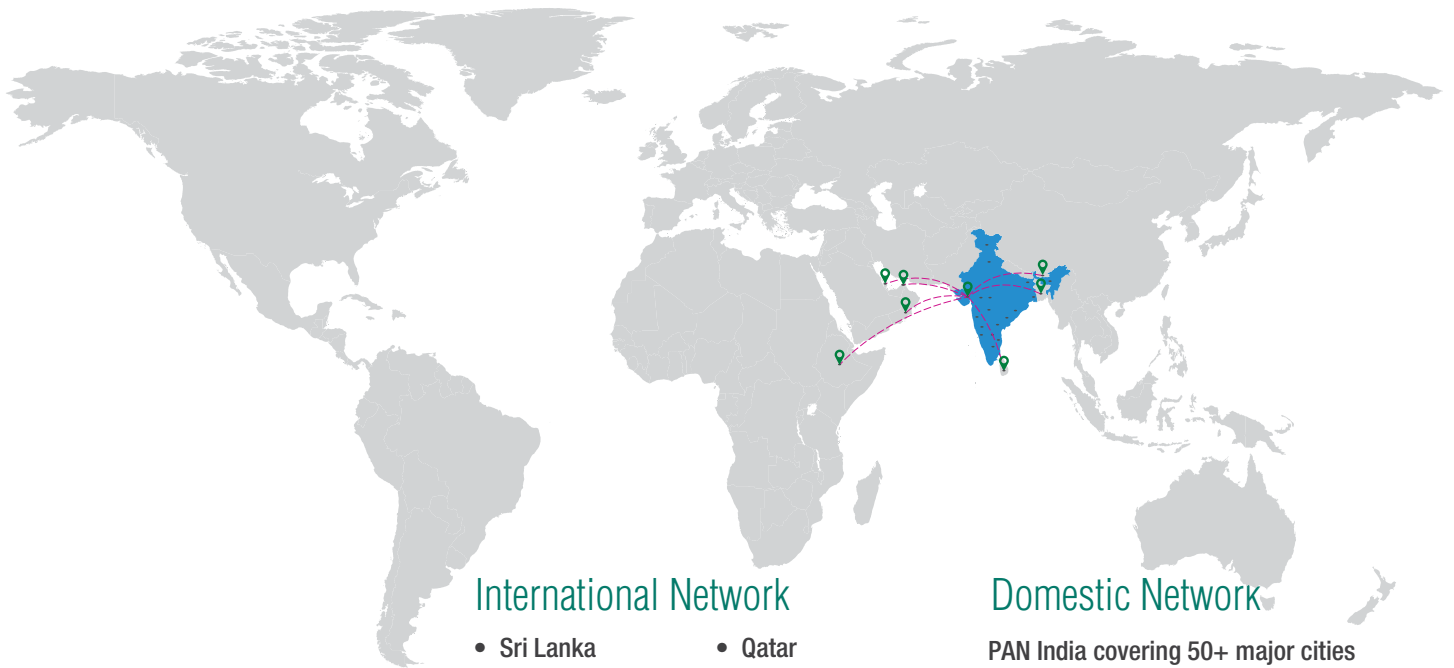
**SHK<sup>®</sup>**  
HDPE Pipes & Fittings

PPR-C Pipes in size : 20 mm to 400 mm

PPR-C Fittings in size : 20 mm to 200 mm (Socket fusion) &  
200 mm to 400 mm (Butt welded)

HDPE Pipes in size : 20 mm to 450 mm

## Our Network



### International Network

- Sri Lanka
- Bangladesh
- Bhutan
- Dubai
- Qatar
- Oman
- Ethiopia

### Domestic Network

PAN India covering 50+ major cities

## SHK POLYMERS INDUSTRIES

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