Supreme®
People who know plastics best

Total Piping Solution

75 YEARS OF EXCELLENCE

# POLYETHYLENE Piping System

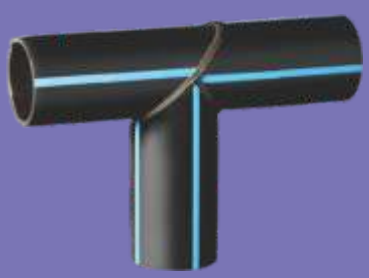
*... The next generation piping*

IS:4984

CM/L-7789412

The Supreme Industries Ltd. is an acknowledged leader of India's plastic industry. It is credited with pioneering several path breaking products and has gained a valuable experience in providing innovative and cost effective piping solutions. The Company has been a trend setter and a torch bearer in the transition from conventional to advanced plastic piping products in the country. The Company's objective is to meet the growing needs of its clientele in water and waste management and in infrastructure sector through a specially designed high performance range of piping products. The innovative product portfolio offered by Supreme is extensive in nature and applications. With its range of over 7500 products, the most comprehensive in the piping industry, Supreme caters to almost every conceivable need and application in piping.

Supreme offers complete range of Polyethylene (PE) pipes up to 800mm sizes for water supply, drainage, irrigation, bore well application and infrastructure projects. Supreme PE pipes are user friendly, simple and easy to fit and equipped with many outstanding features that assures long term system performance and low maintenance cost.



***Jeevan bhar ka saath...***

Supreme®
People who know plastics best

# Polyethylene Piping System

## The system

Supreme polyethylene pipes are a safe, long lasting and cost effective solution for potable water supply, irrigation, bore well application, drainage, sewerage and infrastructure projects. Supreme HDPE pipes are manufactured from virgin raw material with the help of state- of- the- art manufacturing facilities. The plant is equipped with R and D facilities and stringent tests are carried out on raw material and finished goods to ensure the quality as per the national and international standards. Being a pioneer in bringing innovative piping products for varied applications, continuous improvement is a regular phenomenon. All these activities are carried out with the help of experts in the field of Polymer. Supreme strongly believes in providing uncompromising quality products and services to delight the customers.

The pipes and fittings are available in complete range from 20 to 800mm sizes. The pipes are available in PN 2.5 to PN 16 pressure class in PE 63, PE 80 and PE 100 grades. Supreme PE pipes are manufactured according to IS:4984 and ISO:4427. Supreme PE pipes are tested by WRc-NSF, UK, that endorses its suitability for potable water.

## Features and benefits

- High reliability and proven service performance
- Resistance to low temperature
- High impact resistance
- Abrasion resistance
- Excellent flow characteristics
- Excellent chemical and corrosion resistance
- Excellent weld-ability
- Excellent UV resistance
- Wide variety of installation methods
- Easy, quick and economical installation
- Long service life
- Excellent water hammer resistance
- Ideal in shifting soil condition and earthquake prone areas

## Pipes

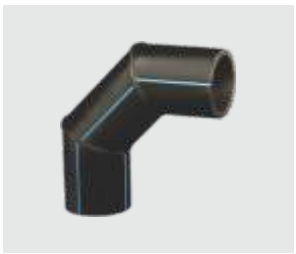
Size range - 20 to 800mm

Pressure class - PN 2.5 to PN 16

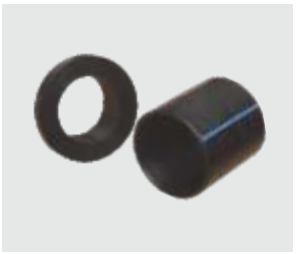
Grades - PE 63, PE 80, PE 100.

## Fittings

All the compatible fittings will be made available in handmade form to cater system requirements.





## Standards

| Application | Grade | Applicable standard |
|---|---|---|
| Potable water mains, house connections | PE 63, PE 80 and PE 100 | IS:4984, ISO:4427, DIN 8074/75, AS/NZS 4130 |
| Rural and agricultural pipes | PE 63 and PE 80 | IS:14151 (P-1) |
| Column pipes for submersible pumps in coil form | PE 63 and PE 80 | IS:4984 |
| Sprinkler and drip irrigation | PE 63 and above grade | IS:14151 Part - 1 and 2 |
| Sewerage/subsoil drainage | PE 80 and 100 | IS:14333 |
| Coal handling in mines | PE 80 and 100 | IS:4984, IS:14333 |
| Industrial applications | PE 63, 80 PE 100 | IS:4984, IS:14333 |
| ID Pipes for submersible pump | PE 63, PE 80 | Company standard |

## Applications of HDPE Pipes

| Water supply systems | Industrial | Environmental protection | Agriculture | Other |
|---|---|---|---|---|
| Transportation and distribution system | Effluents, chemicals and treated/untreated water disposal | Underground drainage and sewerage application/ rehabilitation of existing sewer | Column piping for submersible and jet pumps | Transportation of chemicals, solids, gas and oils |
| House service connection e.g. municipal water bodies, SEZ's, layout's, etc. | As hydro transport system for handling and conveyance of iron, coal and cement slurry in mines | Effluent and waste treatment plants | Suction and delivery pipes | Underwater pipelines/ desalination plants |
| | For conveyance of edible oil, fruit pulps, juices, milks and other food materials | Dust suppression piping systems in cement industry | Sprinkler irrigation system | |
| | As a ventilation and air conditioning duct | Sand slurry disposal pipes in dredging. | Lift irrigation | |
| | | De-gassing pipes in water effluent marine outfalls | Insecticide spraying | |





## Dimensions and pressure rating chart for HDPE pipes (PE 63) as per IS:4984

| OD | PN 2.5 | | PN 4 | | PN 6 | | PN 8 | | PN 10 | | PN 12.5 | | PN 16 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | 2.3 | 2.8 | 2.8 | 3.3 | 3.4 | 4.0 |
| 25 | - | - | - | - | - | - | 2.3 | 2.8 | 2.8 | 3.3 | 3.4 | 4.0 | 4.2 | 4.9 |
| 32 | - | - | - | - | 2.3 | 2.8 | 3.0 | 3.5 | 3.6 | 4.2 | 4.4 | 5.1 | 5.4 | 6.2 |
| 40 | - | - | 2.0 | 2.4 | 2.8 | 3.3 | 3.7 | 4.3 | 4.5 | 5.2 | 5.5 | 6.3 | 6.7 | 7.6 |
| 50 | - | - | 2.4 | 2.9 | 3.5 | 4.1 | 4.6 | 5.3 | 5.6 | 6.4 | 6.8 | 7.7 | 8.4 | 9.5 |
| 63 | 2.0 | 2.4 | 3.0 | 3.5 | 4.4 | 5.1 | 5.8 | 6.6 | 7.0 | 7.9 | 8.6 | 9.7 | 10.5 | 11.8 |
| 75 | 2.3 | 2.8 | 3.6 | 4.2 | 5.3 | 6.1 | 6.9 | 7.8 | 8.4 | 9.5 | 10.2 | 11.5 | 12.5 | 14.0 |
| 90 | 2.8 | 3.3 | 4.3 | 5.0 | 6.3 | 7.2 | 8.2 | 9.3 | 10.0 | 11.2 | 12.2 | 13.7 | 15.0 | 16.7 |
| 110 | 3.4 | 4.0 | 5.3 | 6.1 | 7.7 | 8.7 | 10.0 | 11.2 | 12.3 | 13.8 | 14.9 | 16.6 | 18.4 | 20.5 |
| 125 | 3.8 | 4.4 | 6.0 | 6.8 | 8.8 | 9.8 | 11.4 | 12.8 | 13.9 | 15.5 | 16.9 | 18.8 | 20.9 | 23.2 |
| 140 | 4.3 | 5.0 | 6.7 | 7.6 | 9.8 | 11.0 | 12.8 | 14.3 | 15.6 | 17.4 | 19.0 | 21.1 | 23.4 | 26.0 |
| 160 | 4.9 | 5.6 | 7.7 | 8.7 | 11.2 | 12.6 | 14.6 | 16.3 | 17.8 | 19.8 | 21.7 | 21.4 | 26.7 | 29.6 |
| 180 | 5.5 | 6.3 | 8.6 | 9.7 | 12.6 | 14.1 | 16.4 | 18.3 | 20.0 | 22.2 | 24.4 | 27.1 | 30.0 | 33.2 |
| 200 | 6.1 | 7.0 | 9.6 | 10.8 | 14.0 | 15.6 | 18.2 | 20.63 | 22.3 | 24.8 | 27.1 | 30.4 | 33.4 | 37.0 |
| 225 | 3.9 | 7.8 | 10.8 | 12.4 | 15.7 | 17.5 | 20.5 | 22.8 | 25.0 | 27.7 | 30.5 | 33.8 | 37.5 | 41.5 |
| 250 | 7.6 | 8.6 | 12.0 | 13.4 | 17.5 | 19.5 | 22.8 | 25.3 | 27.8 | 30.8 | 33.8 | 37.4 | 41.4 | 46.1 |
| 280 | 8.5 | 9.6 | 12.4 | 15.0 | 19.6 | 21.8 | 25.8 | 28.3 | 31.2 | 34.6 | 37.9 | 41.9 | 46.7 | 51.6 |
| 315 | 9.6 | 10.8 | 15.0 | 16.7 | 22.0 | 24.4 | 28.7 | 31.8 | 35.0 | 38.7 | 42.6 | 14.1 | 52.5 | 58.0 |
| 355 | 10.8 | 12.1 | 17.0 | 18.9 | 24.8 | 27.5 | 32.3 | 35.8 | 39.5 | 43.7 | 48.0 | 53.0 | 59.2 | 65.4 |
| 400 | 12.2 | 14.3 | 19.1 | 22.2 | 28.0 | 32.4 | 36.4 | 42.1 | 44.5 | 51.4 | 54.1 | 62.5 | - | - |
| 450 | 13.7 | 16.0 | 21.5 | 25.0 | 31.4 | 36.4 | 41.0 | 47.4 | 50.0 | 57.7 | - | - | - | - |
| 500 | 15.2 | 17.7 | 23.9 | 27.7 | 34.9 | 40.0 | 45.5 | 52.6 | 55.6 | 64.2 | - | - | - | - |
| 560 | 17.0 | 19.8 | 26.7 | 31.0 | 39.1 | 45.2 | 51.0 | 58.9 | - | - | - | - | - | - |
| 630 | 19.1 | 22.2 | 30.0 | 34.7 | 44.0 | 50.8 | 57.3 | 66.1 | - | - | - | - | - | - |
| 710 | 21.6 | 25.1 | 33.9 | 39.2 | 49.6 | 57.3 | - | - | | - | - | - | - | - |
| 800 | 24.3 | 28.2 | 38.1 | 44.1 | 55.9 | 64.5 | - | - | | - | - | - | - | - |

## Dimensions and pressure rating chart for HDPE pipes (PE 80) as per IS:4984

| OD | PN 2.5 | | PN 4 | | PN 6 | | PN 8 | | PN 10 | | PN 12.5 | | PN 16 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | - | - | 2.3 | 2.8 | 2.8 | 3.3 |
| 25 | - | - | - | - | - | - | - | - | 2.3 | 2.8 | 2.8 | 3.3 | 3.5 | 4.1 |
| 32 | - | - | - | - | - | - | 2.4 | 2.9 | 3.0 | 3.5 | 3.6 | 4.2 | 4.5 | 5.2 |
| 40 | - | - | - | - | 2.3 | 2.8 | 3.0 | 3.5 | 3.7 | 4.3 | 4.5 | 5.2 | 5.6 | 6.4 |
| 50 | - | - | 2.3 | 2.8 | 2.9 | 3.4 | 3.8 | 4.4 | 4.6 | 5.3 | 5.6 | 6.4 | 6.9 | 7.8 |
| 63 | - | - | 2.5 | 3.0 | 3.6 | 4.2 | 4.7 | 5.4 | 5.8 | 6.6 | 7.0 | 7.9 | 8.9 | 9.8 |
| 75 | - | - | 2.9 | 3.4 | 4.3 | 5.0 | 5.6 | 6.4 | 6.9 | 7.8 | 8.4 | 9.5 | 10.4 | 11.7 |
| 90 | 2.3 | 2.8 | 3.5 | 4.1 | 5.1 | 5.9 | 6.7 | 7.6 | 8.2 | 9.3 | 10.0 | 11.2 | 12.5 | 14.0 |
| 110 | 2.7 | 3.2 | 4.3 | 5.0 | 6.3 | 7.2 | 8.2 | 9.0 | 10.0 | 11.2 | 12.3 | 13.8 | 15.2 | 17.0 |
| 125 | 3.1 | 3.7 | 4.9 | 5.6 | 7.1 | 8.1 | 9.3 | 10.5 | 11.4 | 12.8 | 13.9 | 15.5 | 17.3 | 19.3 |
| 140 | 3.5 | 4.1 | 5.4 | 6.2 | 8.0 | 9.0 | 10.4 | 11.7 | 12.8 | 14.3 | 15.6 | 17.4 | 19.4 | 21.6 |
| 160 | 4.0 | 4.6 | 6.2 | 7.1 | 9.1 | 10.3 | 11.9 | 13.3 | 14.6 | 16.3 | 17.8 | 19.8 | 22.1 | 24.6 |
| 180 | 4.4 | 5.1 | 7.0 | 7.9 | 10.2 | 11.5 | 13.4 | 15.0 | 16.4 | 18.3 | 20.0 | 22.2 | 24.9 | 27.6 |
| 200 | 4.9 | 5.6 | 7.7 | 8.7 | 11.4 | 12.8 | 14.9 | 16.6 | 18.2 | 20.3 | 22.3 | 24.8 | 27.6 | 30.6 |
| 225 | 5.5 | 6.3 | 8.7 | 9.8 | 12.8 | 14.3 | 16.7 | 18.6 | 20.5 | 22.8 | 25.0 | 27.7 | 31.1 | 34.5 |
| 250 | 6.1 | 7.0 | 9.7 | 10.9 | 14.2 | 15.9 | 18.6 | 20.7 | 22.8 | 25.3 | 27.8 | 30.8 | 34.5 | 38.2 |
| 280 | 6.9 | 7.8 | 10.8 | 12.1 | 15.9 | 17.7 | 20.8 | 23.1 | 25.5 | 28.3 | 31.2 | 34.6 | 38.7 | 42.5 |
| 315 | 7.7 | 8.7 | 12.2 | 13.7 | 17.9 | 19.9 | 23.4 | 26.0 | 28.7 | 31.8 | 35.0 | 38.7 | 43.5 | 48.1 |
| 355 | 8.7 | 9.8 | 13.7 | 15.3 | 20.1 | 22.4 | 26.3 | 29.2 | 32.3 | 35.8 | 39.5 | 43.7 | 49.0 | 54.1 |
| 400 | 9.8 | 11.5 | 15.4 | 18.0 | 22.7 | 26.4 | 29.7 | 34.4 | 36.4 | 42.1 | 44.5 | 51.4 | 55.2 | 63.7 |
| 450 | 11.0 | 12.9 | 17.4 | 20.3 | 25.5 | 29.6 | 33.4 | 38.7 | 41.0 | 47.4 | 50.0 | 27.7 | - | - |
| 500 | 12.2 | 14.3 | 19.3 | 22.4 | 28.4 | 32.9 | 37.1 | 42.9 | 45.5 | 52.6 | 55.6 | 64.2 | - | - |
| 560 | 13.7 | 16.0 | 21.6 | 25.1 | 31.7 | 36.7 | 41.5 | 48.0 | 51.0 | 58.9 | - | - | - | - |
| 630 | 15.4 | 18.0 | 24.3 | 28.2 | 35.7 | 41.3 | 46.7 | 54.0 | 57.3 | 66.1 | - | - | - | - |
| 710 | 17.4 | 20.3 | 27.4 | 31.8 | 40.2 | 46.5 | 52.6 | 60.7 | - | - | - | - | - | - |
| 800 | 19.6 | 22.8 | 30.8 | 35.7 | 45.3 | 52.3 | - | - | - | - | - | - | - | - |

## Dimensions and pressure rating chart for HDPE pipes (PE 100) as per IS:4984

| OD | PN 6 | | PN 8 | | PN 10 | | PN 12.5 | | PN 16 | |
|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | 2.3 | 2.8 |
| 25 | - | - | - | - | - | - | 2.3 | 2.8 | 2.9 | 3.4 |
| 32 | - | - | - | - | 2.4 | 2.9 | 2.9 | 3.4 | 3.7 | 4.3 |
| 40 | - | - | 2.4 | 2.9 | 3.0 | 3.5 | 3.7 | 4.3 | 4.6 | 5.3 |
| 50 | 2.3 | 2.8 | 3.0 | 3.5 | 3.7 | 4.3 | 4.6 | 5.3 | 5.7 | 6.5 |
| 63 | 2.9 | 3.4 | 3.8 | 4.4 | 4.7 | 5.4 | 5.7 | 6.5 | 7.1 | 8.1 |
| 75 | 3.5 | 4.1 | 4.5 | 5.2 | 5.6 | 6.4 | 6.8 | 7.7 | 8.5 | 9.6 |
| 90 | 4.1 | 4.8 | 5.4 | 6.2 | 6.7 | 7.6 | 8.2 | 9.5 | 10.2 | 11.5 |
| 110 | 5.0 | 5.7 | 6.6 | 7.5 | 8.1 | 9.2 | 10.0 | 11.2 | 12.4 | 13.9 |
| 125 | 5.7 | 6.5 | 7.2 | 8.5 | 9.2 | 10.4 | 11.3 | 12.7 | 14.1 | 15.8 |
| 140 | 6.4 | 7.3 | 8.4 | 9.5 | 10.3 | 11.6 | 12.7 | 14.2 | 15.8 | 17.6 |
| 160 | 7.3 | 8.3 | 9.6 | 10.8 | 11.8 | 13.2 | 14.5 | 16.2 | 18.1 | 20.2 |
| 180 | 8.2 | 9.3 | 10.8 | 12.1 | 13.3 | 14.9 | 16.3 | 18.2 | 20.3 | 22.6 |
| 200 | 9.1 | 10.3 | 12.0 | 13.4 | 14.8 | 16.5 | 18.1 | 20.2 | 22.6 | 25.1 |
| 225 | 10.3 | 11.6 | 13.5 | 15.1 | 16.6 | 18.5 | 20.4 | 22.7 | 25.4 | 28.2 |
| 250 | 11.4 | 12.8 | 15.0 | 16.7 | 18.4 | 20.5 | 22.6 | 25.1 | 28.2 | 31.3 |
| 280 | 12.8 | 14.3 | 16.8 | 18.7 | 20.6 | 22.9 | 25.3 | 28.1 | 31.6 | 35.0 |
| 315 | 14.4 | 16.1 | 18.9 | 21.0 | 23.2 | 25.8 | 28.5 | 31.6 | 35.5 | 39.3 |
| 355 | 16.2 | 18.1 | 21.2 | 23.6 | 26.2 | 29.1 | 32.1 | 35.6 | 40.0 | 44.2 |
| 400 | 18.2 | 21.2 | 23.9 | 27.7 | 29.5 | 34.2 | 36.2 | 41.9 | 45.1 | 52.1 |
| 450 | 20.2 | 23.8 | 26.9 | 31.2 | 33.1 | 38.3 | 40.7 | 47.1 | 50.8 | 58.7 |
| 500 | 22.8 | 26.5 | 29.9 | 34.6 | 36.8 | 42.6 | 45.2 | 52.2 | 56.4 | 65.1 |
| 560 | 25.5 | 29.6 | 33.5 | 38.8 | 41.2 | 47.6 | 50.6 | 58.4 | - | - |
| 630 | 28.7 | 33.3 | 37.7 | 43.6 | 46.4 | 53.6 | 56.9 | 65.7 | - | - |
| 710 | 32.3 | 37.4 | 42.4 | 49.0 | 52.3 | 60.4 | - | - | - | - |
| 800 | 36.4 | 42.1 | 47.8 | 55.2 | 58.9 | 68.0 | - | - | - | - |

## Dimensions and pressure rating chart for HDPE pipes (PE 100) as per ISO:4427

| OD | PN 4 (SDR 41) | | PN 6 (SDR 26) | | PN 8 (SDR 21) | | PN 10 (SDR 17) | | PN 12.5 (SDR 13.6) | | PN 16 (SDR 11) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | - | - | 2.0 | 2.3 |
| 25 | - | - | - | - | - | - | - | - | 2.0 | 2.3 | 2.3 | 2.7 |
| 32 | - | - | - | - | - | - | 2.0 | 2.3 | 2.4 | 2.8 | 3.0 | 3.4 |
| 40 | - | - | - | - | 2.0 | 2.3 | 2.4 | 2.8 | 3.0 | 3.5 | 3.7 | 4.2 |
| 50 | - | - | 2.0 | 2.3 | 2.4 | 2.8 | 3.0 | 3.4 | 3.7 | 4.2 | 4.6 | 5.2 |
| 63 | - | - | 2.5 | 2.9 | 3.0 | 3.4 | 3.8 | 4.3 | 4.7 | 5.3 | 5.8 | 6.5 |
| 75 | - | - | 2.9 | 3.3 | 3.6 | 4.1 | 4.5 | 5.1 | 5.6 | 6.3 | 6.8 | 7.6 |
| 90 | - | - | 3.5 | 4.0 | 4.3 | 4.9 | 5.4 | 6.1 | 6.7 | 7.5 | 8.2 | 9.2 |
| 110 | - | - | 4.2 | 4.8 | 5.3 | 6.0 | 6.6 | 7.4 | 8.1 | 9.1 | 10.0 | 11.1 |
| 125 | - | - | 4.8 | 5.4 | 6.0 | 6.7 | 7.4 | 8.3 | 9.2 | 10.3 | 11.4 | 12.7 |
| 140 | - | - | 5.4 | 6.1 | 6.7 | 7.5 | 8.3 | 9.3 | 10.3 | 11.5 | 12.7 | 14.1 |
| 160 | - | - | 6.2 | 7.0 | 7.7 | 8.6 | 9.5 | 10.6 | 11.8 | 13.1 | 14.6 | 16.2 |
| 180 | - | - | 6.9 | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.3 | 14.3 | 16.4 | 18.2 |
| 200 | - | - | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.2 | 14.7 | 16.3 | 18.2 | 20.2 |
| 225 | - | - | 8.6 | 9.6 | 10.8 | 12.0 | 13.4 | 14.9 | 16.6 | 18.4 | 20.5 | 22.7 |
| 250 | - | - | 9.6 | 10.7 | 11.9 | 13.2 | 14.8 | 16.4 | 18.4 | 20.4 | 22.7 | 25.1 |
| 280 | - | - | 10.7 | 11.9 | 13.4 | 14.9 | 16.6 | 18.4 | 20.6 | 22.8 | 25.4 | 28.1 |
| 315 | 7.7 | 8.6 | 12.1 | 13.5 | 15.0 | 16.6 | 18.7 | 20.7 | 23.2 | 25.7 | 28.6 | 31.6 |
| 355 | 8.7 | 9.7 | 13.6 | 15.1 | 16.9 | 18.7 | 21.1 | 23.4 | 26.1 | 28.9 | 32.2 | 35.6 |
| 400 | 9.8 | 10.9 | 15.3 | 17.0 | 19.1 | 21.2 | 23.7 | 26.2 | 29.4 | 32.5 | 36.3 | 40.1 |
| 450 | 11.0 | 12.2 | 17.2 | 19.1 | 21.5 | 23.8 | 26.7 | 29.5 | 33.1 | 36.6 | 40.9 | 45.1 |

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# Polyethylene Piping System

## Dimensions and pressure rating chart for HDPE pipes (PE 80 ) as per ISO:4427

| OD | PN 5 (SDR 26) | | PN 6 (SDR 21) | | PN 8 (SDR 17) | | PN 10 (SDR 13.6) | | PN 12.5 (SDR 11) | | PN 16 (SDR 9) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | 2.00 | 2.30 | 2.30 | 2.70 |
| 25 | - | - | - | - | - | - | 2.00 | 2.30 | 2.30 | 2.70 | 3.00 | 3.40 |
| 32 | - | - | - | - | 2.00 | 2.30 | 2.40 | 2.80 | 3.00 | 3.40 | 3.60 | 4.10 |
| 40 | - | - | 2.00 | 2.30 | 2.40 | 2.80 | 3.00 | 3.50 | 3.70 | 4.20 | 4.50 | 5.10 |
| 50 | 2.00 | 2.30 | 2.40 | 2.80 | 3.00 | 3.40 | 3.70 | 4.20 | 4.60 | 5.20 | 5.60 | 6.30 |
| 63 | 2.50 | 2.90 | 3.00 | 3.40 | 3.80 | 4.30 | 4.70 | 5.30 | 5.80 | 6.50 | 7.10 | 8.00 |
| 75 | 2.90 | 3.30 | 3.60 | 4.10 | 4.50 | 5.10 | 5.60 | 6.30 | 6.80 | 7.60 | 8.40 | 9.40 |
| 90 | 3.50 | 4.00 | 4.30 | 4.90 | 5.40 | 6.10 | 6.70 | 7.50 | 8.20 | 9.20 | 10.10 | 11.30 |
| 110 | 4.20 | 4.80 | 5.30 | 6.00 | 6.60 | 7.40 | 8.10 | 9.10 | 10.00 | 11.10 | 12.30 | 13.70 |
| 125 | 4.80 | 5.40 | 6.00 | 6.70 | 7.40 | 8.30 | 9.20 | 10.30 | 11.40 | 12.70 | 14.00 | 15.60 |
| 140 | 5.40 | 6.10 | 6.70 | 7.50 | 8.30 | 9.30 | 10.30 | 11.50 | 12.70 | 14.10 | 15.70 | 17.40 |
| 160 | 6.20 | 7.00 | 7.70 | 8.60 | 9.50 | 10.60 | 11.80 | 13.10 | 14.60 | 16.20 | 17.90 | 19.80 |

Note: Blue MDPE Pipes (PE80) for drinking water purpose are also made available in SDR 21, SDR11 and SDR 9 in 20 to160mm sizes.

## Dimensions and pressure rating chart for HDPE pipes as per AS/NZS 4130

| OD | SDR 41 | | SDR 33 | | SDR 26 | | SDR 21 | | SDR 17 | | SDR 13.6 | | SDR 11 | | SDR 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 20 | - | - | - | - | - | - | - | - | - | - | 1.6 | 1.9 | 1.9 | 2.2 | 2.3 | 2.7 |
| 25 | - | - | - | - | - | - | - | - | 1.6 | 1.9 | 1.9 | 2.2 | 2.3 | 2.7 | 2.8 | 3.2 |
| 32 | - | - | - | - | - | - | 1.6 | 1.9 | 1.9 | 2.2 | 2.4 | 2.8 | 2.9 | 3.4 | 3.6 | 4.1 |
| 40 | - | - | - | - | - | - | 1.9 | 2.2 | 2.4 | 2.8 | 3.0 | 3.4 | 3.7 | 4.2 | 4.5 | 5.1 |
| 50 | - | - | - | - | - | - | 2.4 | 2.8 | 3.0 | 3.4 | 3.7 | 4.2 | 4.6 | 5.2 | 5.6 | 6.3 |
| 63 | - | - | - | - | 2.4 | 2.8 | 3.0 | 3.4 | 3.8 | 4.3 | 4.7 | 5.3 | 5.8 | 6.5 | 7.1 | 8.0 |
| 75 | - | - | 2.3 | 2.7 | 2.9 | 3.3 | 3.6 | 4.1 | 4.5 | 5.1 | 5.5 | 6.2 | 6.8 | 7.6 | 8.4 | 9.4 |
| 90 | - | - | 2.8 | 3.2 | 3.5 | 4.0 | 4.3 | 4.9 | 5.4 | 6.1 | 6.6 | 7.4 | 8.2 | 9.2 | 10.1 | 11.3 |
| 110 | 2.7 | 3.1 | 3.4 | 3.9 | 4.3 | 4.9 | 5.3 | 6.0 | 6.6 | 7.4 | 8.1 | 9.1 | 10.0 | 11.1 | 12.3 | 13.7 |
| 125 | 3.1 | 3.6 | 3.9 | 4.4 | 4.8 | 5.4 | 6.0 | 6.7 | 7.4 | 8.3 | 9.2 | 10.3 | 11.4 | 12.7 | 14.0 | 15.5 |
| 140 | 3.5 | 4.0 | 4.3 | 4.9 | 5.4 | 6.1 | 6.7 | 7.5 | 8.3 | 9.3 | 10.3 | 11.5 | 12.7 | 14.1 | 15.7 | 17.4 |
| 160 | 4.0 | 4.5 | 4.9 | 5.5 | 6.2 | 7.0 | 7.7 | 8.6 | 9.5 | 10.6 | 11.8 | 13.1 | 14.6 | 16.2 | 17.9 | 19.8 |
| 180 | 4.4 | 5.0 | 5.5 | 6.2 | 6.9 | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.3 | 14.8 | 16.4 | 18.2 | 20.1 | 22.3 |
| 200 | 4.9 | 5.5 | 6.2 | 7.0 | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.2 | 14.7 | 16.3 | 18.2 | 20.2 | 22.4 | 24.8 |
| 225 | 5.5 | 6.2 | 6.9 | 7.7 | 8.6 | 9.6 | 10.8 | 12.0 | 13.4 | 14.9 | 16.6 | 18.4 | 20.5 | 22.7 | 25.1 | 27.8 |
| 250 | 6.2 | 7.0 | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.2 | 14.8 | 16.4 | 18.4 | 20.4 | 22.7 | 25.1 | 27.9 | 30.8 |
| 280 | 6.9 | 7.7 | 8.6 | 9.6 | 10.7 | 11.9 | 13.4 | 14.9 | 16.6 | 18.4 | 20.6 | 22.8 | 25.4 | 28.1 | 31.3 | 34.6 |
| 315 | 7.7 | 8.6 | 9.7 | 10.8 | 12.1 | 13.5 | 15.0 | 16.6 | 18.7 | 20.7 | 23.2 | 25.7 | 28.6 | 31.6 | 35.2 | 38.9 |
| 355 | 8.7 | 9.7 | 10.9 | 12.1 | 13.6 | 15.1 | 16.9 | 18.7 | 21.1 | 23.4 | 26.1 | 28.9 | 32.2 | 35.6 | 39.6 | 43.7 |
| 400 | 9.8 | 10.9 | 12.3 | 13.7 | 15.3 | 17.0 | 19.1 | 21.2 | 23.7 | 26.2 | 29.4 | 32.5 | 36.3 | 40.1 | 44.7 | 49.3 |
| 450 | 11.0 | 12.2 | 13.8 | 15.3 | 17.2 | 19.1 | 21.5 | 23.8 | 26.7 | 29.5 | 33.1 | 36.6 | 40.9 | 45.1 | 50.2 | 55.4 |

- **SDR -** Standard Dimension Ratio
- Pipes are available in PE 80 and PE 100 grade with different pressure classes.

### Jointing techniques

Supreme Polyethylene pipes can be jointed by different means, some of the jointing techniques are as given below:

- Butt fusion
- Electro fusion
- Socket fusion
- Compression joint
- Flanged joint
- Coupling joint

### Length and packaging

| **Size range** (mm) | **Coil length** (m) |
|---|---|
| 20 - 50 | 100, 200, 500, 1000 |
| 63 - 75 | 100, 200, 300 |
| 90 -110 | 50, 100, Straight length of 6 - 12m |
| 125 - 800 | Straight length 6 - 12m |

### Water hammer resistance

HDPE can withstand repetitive pressure surges that exceed the static pressure rating of the pipe giving it excellent resistance to water hammer events. In DI pipe, anticipated surge pressures are the highest. Surge pressure in PE is 44% less than in PVC and 81% less than in DI. PE withstands surges up to 150-200 % of design pressure.

**When PE is used, piping system components are subjected to a significantly lower surge.**

Supreme®
People who know plastics best

# Polyethylene Piping System

## Butt-Welding (procedure)

Check the Wall Alignment and Gap

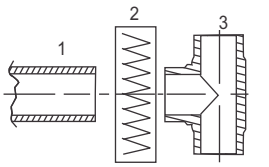
The alignment of the two parts should be checked at the same time. A possible misalignment on the outside must not exceed 10% of the thickness of the wall (Fig 5). If this limit is exceeded, a better clamping position is to be sought by rotating the pipe. In such a case, however, the surface must be re-planed. Important - The welding surfaces must be planed immediately prior to the jointing.

Once it has attained the fusion temperature, position the heating element in the butt-welding machine. Press the parts to be joined against the heating element with the force required for equalization until the entire circumference of each of the jointing faces rests completely against it and a bead has formed. Reduce the equalization pressure almost to zero. The heating time listed in the table below is measured from this moment.

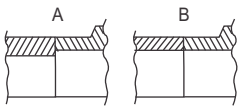
Leave parts in the butt-welding jointing machine at welding pressure until the end of the cooling period. Once the heating period has elapsed, remove the parts from heating element, which should then be removed without touching the jointing surfaces and push the parts together immediately. The change over time must not exceed the value listed in the table. Pay particular attention during jointing that the parts be moved together swiftly until the surface are about to touch. Then they should be moved together so that they are in contact along the entire circumference. Next the pressure should be increased rapidly to the present jointing within the period of time specified in the table below. This pressure must be necessary, especially shortly after the jointing pressure has been attained. (Fig 6) The jointing parts must stay in the welding machine under jointing pressure until the end of the cooling period specified in the table.

## Welding bead checks

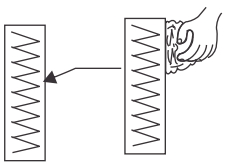
A bead should form around the entire circumference of the pipe. Jointing of two-lip point should be above the pipe circumference means always being positive. (Fig 7)



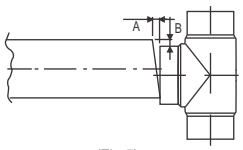
(Fig.1)
1) Pipe 2) Heating tool 3) Fitting



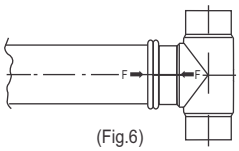
(Fig.2)
A) Incorrect B) Correct


(Fig.3)

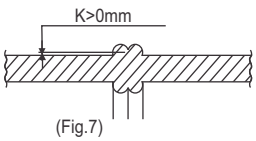

(Fig.4)



(Fig.5)



(Fig.6)



(Fig.7)

| Recommended values for the heated tool butt-welding of pipes and fittings | | | | | |
|---|---|---|---|---|---|
| Wall thickness (mm) | Height of bead (mm) | Heating time (sec) | Changeover time max (sec) | Time to reach full jointing (sec) | Cooling time under joining pressure (min) |
| up to 4.5 | 0.5 | 45 | 5 | 5 | 6 |
| 4.5 -7 | 1.0 | 45-70 | 5-6 | 5-6 | 6-10 |
| 7 - 12 | 1.5 | 70-120 | 6-8 | 6-8 | 10-16 |
| 12-19 | 2.0 | 120-190 | 8-10 | 8-11 | 16-24 |
| 19-26 | 2.5 | 190-260 | 10-12 | 11-14 | 24-32 |
| 26-37 | 3.0 | 260-370 | 12-16 | 14-19 | 32-45 |
| 37-50 | 3.5 | 370-500 | 16-20 | 19-25 | 45-60 |
| 50-70 | 4.0 | 500-700 | 20-25 | 25-35 | 60-80 |



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