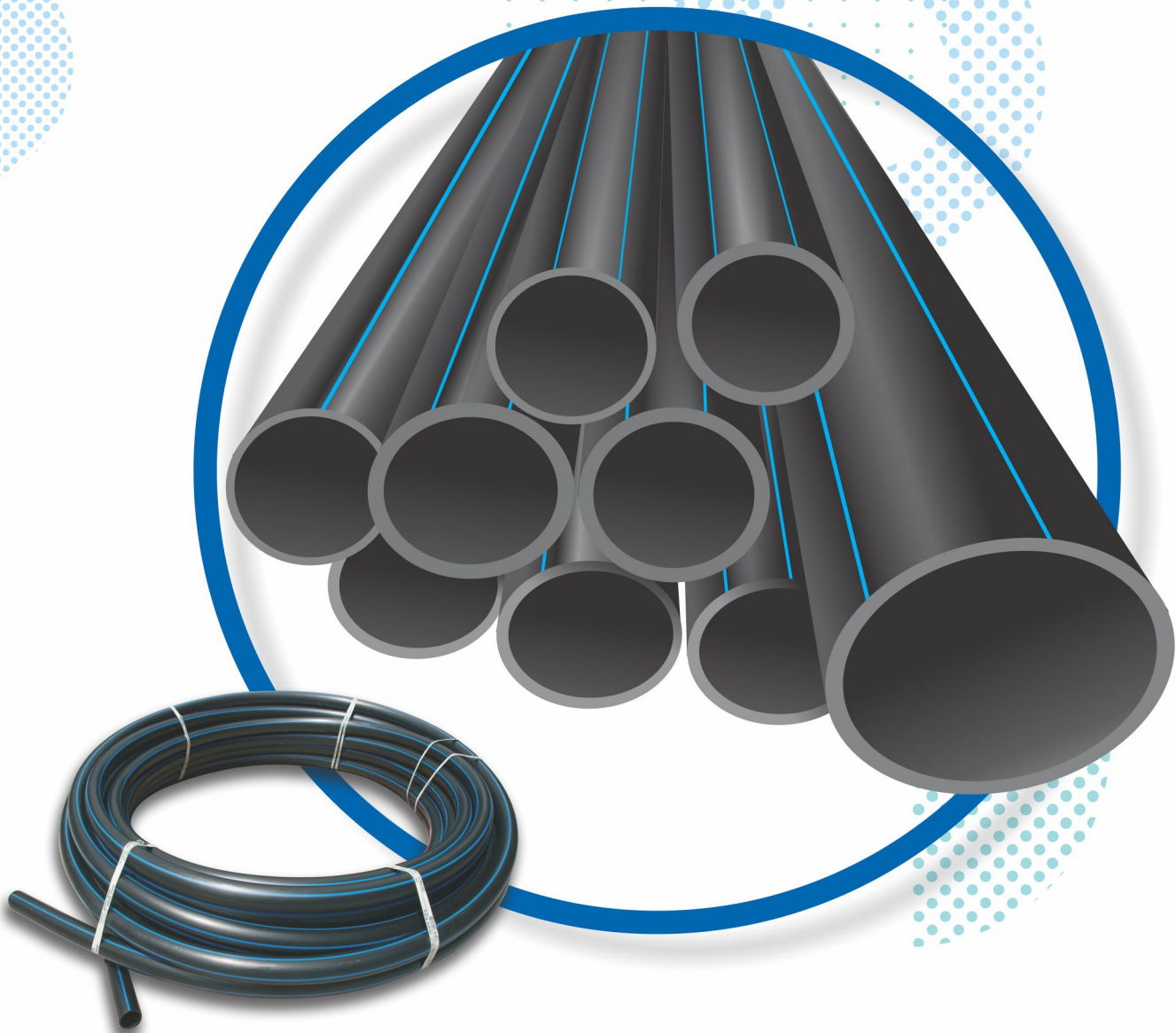


DUTRON®

**HDPE
PIPES & FITTINGS**

Spreading Joy
Enhancing Lives



Economical, Durable & Stronger

A better substitute to conventional pipes for longer life

IS : 4984 IS : 14333
 
CM/L-7023350 CM/L-7276783

The DUTRON Group

Dutron Group is one of the leading plastic pipe processors in India for the last 5 decades with a wide range of plastic pipe products to suit almost all applications like Agriculture, Construction, Industrial Plumbing, Marine, etc.

The DUTRON Products

- DUTRON Kanaflex Suction & Delivery Hose
- DUTRON Braided PVC Hose
- DUTRON Flat Delivery Hose
- DUTRON uPVC Agricultural Pipes & Fittings
- DUTRON CPVC Pipes & Fittings
- DUTRON SWR Pipes & Fittings
- DUTRON uPVC Hiflo Plumbing System
- DUTRON Casing Pipes
- DUTRON Sprinkler System
- DUTRON HDPE Sheets
- DUTRON Water Tanks
- DUTRON DWC Pipes
- DUTRON HDPE Pipes manufactured in high-tech state-of-the-art machineries. The plant was setup using technology from Wavin Overseas BV, Netherlands, the largest plastic pipe processors in Europe.

DUTRON[®]
HDPE
PIPES & FITTINGS



Most Advanced System in Quality Assurance

Range

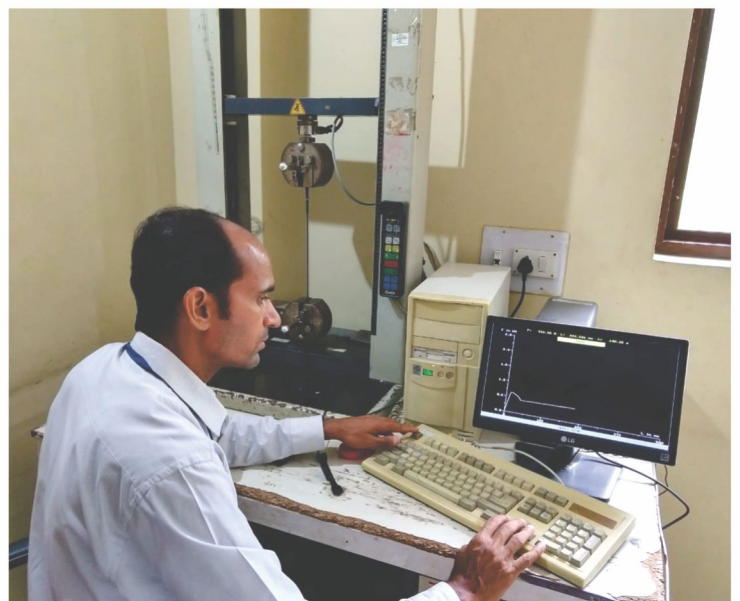
20 mm OD to 710 mm OD in all pressure classes

Specifications

HDPE PIPES IS 4984 : 2016
IS 14333 : 1996
ISO 4427
ASTM D3350 / F714 and D3035

Quality Assurance

Well equipped laboratory with totally computerized international standard testing machines for carrying out quality checks from raw material to finished goods. This ensures our valued customers, HDPE pipes of International Standards.



Advantages of Dutron HDPE Pipes over Traditional Pipes

- **Light Weight**
Helps easy handling and speedy installation of pipes.
- **Flexibility**
Pipes up to 110 mm dia can be supplied in coil form which makes laying of pipe much faster and economical.
- **Toughness and Flexural Strength**
Due to excellent impact resistance, it can withstand various loads like earth movement, traffic load etc. It can be safely used for low temperature up to -40°C.
- **Smooth Inner Surface**
This reduce frictional losses and hence saves energy.
- **Chemical Resistance**
Excellent resistance to most corrosive chemicals, acids and alkalis.
- **Abrasion Resistance**
Capable of conveying abrasive materials like slurry, sand, boiler ash, ores, food grains, cola, etc.
- **Thermal Conductivity**
 $11-12.4 \times 10^{-4}$ Cal/Sec. cm.°C.
- **Electrical Properties**
Dielectric strength 800 kV/cm²
- **Service Life**
Almost maintenance free for decades.



Classification of Pipe Material

Material Grade	MRS (Min. Required Strength) of material in Mpa at 20°C – 50 Years	Min. allowable Hydrostatic Design Stress in Mpa	
		At 20°C	At 30°C
PE 63	6.3	5.0	4.0
PE 80	8.0	6.3	5.0
PE 100	10.0	8.0	6.3



Applications

HDPE - An engineering plastic most ideal for effluent treatment plants and chemical handling has been accepted worldwide as an economical, efficient and easy to handle replacement to conventional piping's like MS, CI, CS, SS, Spun pipes, AC pipes and concrete reinforced pipes for almost all applications.

Industrial Applications

- Conveying corrosive effluents of chemical and other process industries like petrochemical, paper, dye-stuffs, rayon and fertilizers.
- Conveying acids, alkalies and other corrosive chemicals.
- Sewage handling and solid waste management pipelines.
- Cross country water management pipelines.
- Underwater pipelines.
- Cable conduit lines.
- On-shore and off-shore pipelines for dredging operation.
- DM-RODM plants.
- Air conditioning and ducting.
- Supply of compressed air in mines, factories and construction sites, de-watering of mines, sand stoying and filling, transportation of abrasive slurry, mineral ores, concentrates, tailing, slimes and paper pulp.
- Chilled water circulation.
- Handling edible oil, fruit juices, pulps, milk and other food materials.
- Treated radioactive waste

Gas Distribution

For carrying natural gas, bio-etc. for domestic and industrial purposes.

Potable Water Supply

Water supply in rural and urban areas even in sub-zero temperature.

Project Execution on Turn-key basis

Dutron's project division render services for design, cost estimation, installation, testing and commissioning of projects of any size, anywhere and at any time. Our efficient welding teams are equipped with fully automatic imported butt fusion welding machines and trained operators for carrying out HDPE pipe welding and laying under leadership of qualified engineers.

Dutron has vast experience in handling various projects like portable water lines, ETP and CETP, dredging lines both on-shore and off-shore, de-watering lines for mines, under-water pipelines, DM-RODM Plants, chemical and pharmaceutical process lines, brine pumping lines for salt works, distillery units, natural gas distribution network and cable conduit lines.

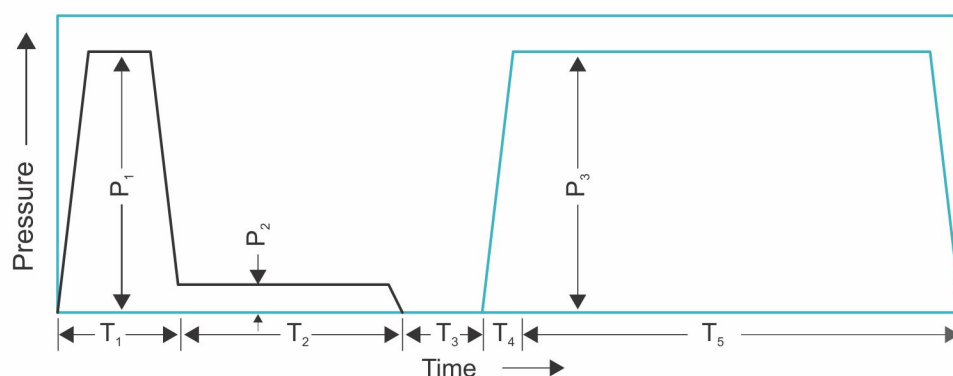


Butt Fusion Welding

Basic procedure is to face pipe ends and temperature is raised to 190-210°C by means of hot plate (mirror) placed between them. The molten joint surfaces are then brought together with a firm, constant pressure and then allowed to cool. Thus, both the faces join together to form a perfectly homogeneous joint. To avoid the manual error, Dutron uses imported fully automatic Butt Fusion welding machines that ensure excellent quality of joints.

Dutron does not recommend manual welding, since it carries risk of human errors like uneven temperature, welding pressure variation, mis-alignment of joint surfaces etc. which would lead to joint breakage & leakage thereafter.

Butt – Fusion Welding Cycle



T1 = Initial heating time
T2 = Release pressure time
T3 = Change over time
T4 = Welding pressure built-up time
T5 = Cooling time

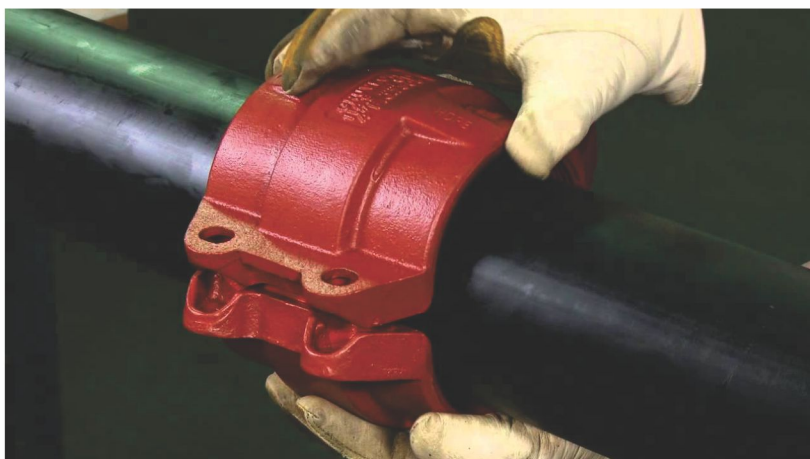
P1 = Initial pressure
P2 = Release pressure
P3 = Welding pressure

Pipe Support Distance Chart for Ground HDPE Pipelines (Mtrs.)

Pipe Dia mm Temp. °C	90	110	125/140	160/180	200/225	250	315	355	400	450
20	1.0	1.2	1.4	1.5	1.6	1.8	2.1	2.3	2.5	2.5
30	1.0	1.1	1.3	1.4	1.5	1.7	1.9	2.0	2.1	2.3
40	0.9	1.0	1.1	1.3	1.4	1.5	1.7	1.8	1.9	2.0
50	0.8	0.9	1.0	1.2	1.3	1.4	1.6	1.7	1.8	1.9

Note: Above distance between two supports are for PN 2.5 & PN 4 class.

For PN 6 and PN 10 class pipes, distance to be multiplied by 1.1 and 1.25 respectively.



Welding Procedure

- Set welding mirror temperature between 190 and 210°C
- Clamp pipes to be welded in both fixtures of the machine
- Make both surfaces parallel to each other
- Insert mirror between both pipes
- Apply initial pressure according to pipe size and pressure class as per standard data sheet as for type of M/C
- Release pressure as per the standard data for specified time interval
- Remove welding mirror
- Press two surfaces towards each other and apply welding pressure as per standard data sheet
- Cool down the welded joint for giving cooling time



Testing of the Pipe

Testing shall be carried out after the completion of whole length or in parts. Testing shall be carried out with 1.5 time the working pressure. Both the open ends of the pipe under testing shall be plugged either by providing caps or by sluice valve. If necessary, both the ends shall be properly anchored. Number of plug points with ferrule of required diameters shall be provided to serve as injection points, air relief points, etc. The pressure shall be applied by means of a manually operated hand force pump or hydraulic pressure pump and the pressure shall be maintained for half an hour. In case the trench is already back filled, the pressure shall be maintained for at least an hour. While undergoing the test, the pipes shall be stuck with a small hammer to detect any leakage through the hair cracks. For pipe laid on steep gradients or on vertical walls, the test shall be carried out at the lower end of the pipe.

Any pipe or joints showing the slightest leakage shall be replaced or redone, as required and then tested again. No pipe installation shall be accepted unless the leakage is less than 230 liters/day/km per 25mm dia. of the pipe of 3.66 m length, for a working pressure of 10 Kg/m². For other lengths and diameters of pipe the above shall be proportionate.



Pipe Dimensions

IS 4984 : 2016 – Material Grade PE 63

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

SDR	SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6	
PE 63	PN 2		PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16	
Size mm (OD)	Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16															1.8	2.1	2.2	2.5	2.7	3.1
20													1.9	2.2	2.3	2.6	2.7	3.1	3.4	3.8
25											1.9	2.2	2.3	2.6	2.8	3.2	3.4	3.8	4.2	4.7
32									1.9	2.2	2.4	2.7	2.9	3.3	3.6	4.1	4.4	4.9	5.4	6.0
40							1.9	2.2	2.4	2.7	3.0	3.4	3.7	4.2	4.5	5.1	5.4	6.0	6.7	7.5
50					2.0	2.3	2.4	2.7	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.8	7.6	8.4	9.3
63					2.5	2.9	3.0	3.4	3.7	4.2	4.7	5.3	5.8	6.5	7.0	7.8	8.6	9.6	10.5	11.7
75	1.9	2.2	2.3	2.6	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.9	7.7	8.4	9.3	10.2	11.3	12.5	13.9
90	2.2	2.5	2.8	3.2	3.5	4.0	4.3	4.8	5.3	5.9	6.7	7.5	8.2	9.1	10.0	11.1	12.2	13.5	15.0	16.6
110	2.7	3.1	3.4	3.8	4.3	4.8	5.3	6.0	6.5	7.3	8.1	9.0	10.0	11.1	12.3	13.6	14.9	16.5	18.4	20.3
125	3.1	3.5	3.8	4.3	4.8	5.4	6.0	6.7	7.4	8.2	9.2	10.2	11.4	12.7	13.9	15.4	16.9	18.7	20.9	23.1
140	3.5	4.0	4.3	4.8	5.4	6.0	6.7	7.5	8.3	9.2	10.3	11.4	12.8	14.2	15.6	17.3	19.0	21.0	23.4	25.8
160	3.9	4.4	4.9	5.5	6.2	6.9	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.8	19.7	21.7	24.0	26.7	29.5
180	4.4	4.9	5.5	6.2	6.8	7.8	8.6	9.6	10.6	11.8	13.3	14.7	16.4	18.1	20.0	22.1	24.4	26.9	30.0	33.1
200	4.9	5.5	6.1	6.8	7.7	8.6	9.6	10.7	11.8	13.1	14.7	16.3	18.2	20.1	22.3	24.6	27.1	29.9	33.4	36.8
225	5.5	6.2	6.9	7.7	8.7	9.7	10.8	12.0	13.3	14.7	16.6	18.4	20.5	22.7	25.0	27.6	30.5	33.7	37.5	41.4
250	6.1	6.8	7.6	8.5	9.7	10.8	12.0	13.3	14.7	16.3	18.4	20.3	22.8	25.2	27.8	30.7	33.8	37.3	41.7	46.0
280	6.9	7.7	8.5	9.5	10.8	12.0	13.4	14.8	16.5	18.3	20.6	22.8	25.5	28.2	31.2	34.4	37.9	41.8	46.7	51.5
315	7.7	8.6	9.6	10.7	12.2	13.5	15.0	16.6	18.6	20.6	23.2	25.6	28.7	31.7	35.0	38.6	42.6	47.0	52.5	57.9
355	8.7	9.7	10.8	12.0	13.7	15.2	16.9	18.7	20.9	23.1	26.1	28.8	32.3	35.6	39.5	43.6	48.0	52.9	59.2	65.2
400	9.8	10.9	12.2	13.5	15.4	17.0	19.1	21.1	23.6	26.1	29.5	32.6	36.4	40.1	44.5	49.1	54.1	59.6	66.7	73.5
450	11.0	12.2	13.7	15.2	17.3	19.1	21.5	23.9	26.5	29.3	33.1	36.5	40.9	45.1	50.0	55.1	60.9	67.1	75.0	82.6
500	12.2	13.5	15.2	16.8	19.3	21.3	23.9	26.4	29.5	32.6	36.8	40.6	45.5	50.2	55.6	61.3	67.6	74.5	83.4	91.8
560	13.7	15.2	17.0	18.8	21.6	23.9	26.7	29.5	33.0	36.4	41.2	45.4	50.9	56.1	62.3	68.6	75.7	83.4	93.4	102.8
630	15.4	17.0	19.1	21.1	24.3	26.8	30.0	33.1	37.1	40.9	46.4	51.1	57.3	63.1	70.0	77.1	85.2	93.8	105.0	115.6
710	17.3	19.1	21.6	23.9	27.3	30.1	33.9	37.4	41.8	46.1	52.2	57.5	64.6	71.2	78.9	86.9	96.0	105.7	118.4	130.3

IS 4984 : 2016 – Material Grade PE 80

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

SDR	SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6	
PE 80	PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20	
Size mm (OD)	Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16															1.8	2.1	2.2	2.5	2.7	3.1
20													1.9	2.2	2.3	2.6	2.7	3.1	3.4	3.8
25											1.9	2.2	2.3	2.6	2.8	3.2	3.4	3.8	4.2	4.7
32									1.9	2.2	2.4	2.7	2.9	3.3	3.6	4.1	4.4	4.9	5.4	6.0
40							1.9	2.2	2.4	2.7	3.0	3.4	3.7	4.2	4.5	5.1	5.4	6.0	6.7	7.5
50					2.0	2.3	2.4	2.7	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.8	7.6	8.4	9.3
63					2.5	2.9	3.0	3.4	3.7	4.2	4.7	5.3	5.8	6.5	7.0	7.8	8.6	9.6	10.5	11.7
75	1.9	2.2	2.3	2.6	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.9	7.7	8.4	9.3	10.2	11.3	12.5	13.9
90	2.2	2.5	2.8	3.2	3.5	4.0	4.3	4.8	5.3	5.9	6.7	7.5	8.2	9.1	10.0	11.1	12.2	13.5	15.0	16.6
110	2.7	3.1	3.4	3.8	4.3	4.8	5.3	6.0	6.5	7.3	8.1	9.0	10.0	11.1	12.3	13.6	14.9	16.5	18.4	20.3
125	3.1	3.5	3.8	4.3	4.8	5.4	6.0	6.7	7.4	8.2	9.2	10.2	11.4	12.7	13.9	15.4	16.9	18.7	20.9	23.1
140	3.5	4.0	4.3	4.8	5.4	6.0	6.7	7.5	8.3	9.2	10.3	11.4	12.8	14.2	15.6	17.3	19.0	21.0	23.4	25.8
160	3.9	4.4	4.9	5.5	6.2	6.9	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.8	19.7	21.7	24.0	26.7	29.5
180	4.4	4.9	5.5	6.2	6.8	7.8	8.6	9.6	10.6	11.8	13.3	14.7	16.4	18.1	20.0	22.1	24.4	26.9	30.0	33.1
200	4.9	5.5	6.1	6.8	7.7	8.6	9.6	10.7	11.8	13.1	14.7	16.3	18.2	20.1	22.3	24.6	27.1	29.9	33.4	36.8
225	5.5	6.2	6.9	7.7	8.7	9.7	10.8	12.0	13.3	14.7	16.6	18.4	20.5	22.7	25.0	27.6	30.5	33.7	37.5	41.4
250	6.1	6.8	7.6	8.5	9.7	10.8	12.0	13.3	14.7	16.3	18.4	20.3	22.8	25.2	27.8	30.7	33.8	37.3	41.7	46.0
280	6.9	7.7	8.5	9.5	10.8	12.0	13.4	14.8	16.5	18.3	20.6	22.8	25.5	28.2	31.2	34.4	37.9	41.8	46.7	51.5
315	7.7	8.6	9.6	10.7	12.2	13.5	15.0	16.6	18.6	20.6	23.2	25.6	28.7	31.7	35.0	38.6	42.6	47.0	52.5	57.9
355	8.7	9.7	10.8	12.0	13.7	15.2	16.9	18.7	20.9	23.1	26.1	28.8	32.3	35.6	39.5	43.6	48.0	52.9	59.2	65.2
400	9.8	10.9	12.2	13.5	15.4	17.0	19.1	21.1	23.6	26.1	29.5	32.6	36.4	40.1	44.5	49.1	54.1	59.6	66.7	73.5
450	11.0	12.2	13.7	15.2	17.3	19.1	21.5	23.9	26.5	29.3	33.1	36.5	40.9	45.1	50.0	55.1	60.9	67.1	75.0	82.6
500	12.2	13.5	15.2	16.8	19.3	21.3	23.9	26.4	29.5	32.6	36.8	40.6	45.5	50.2	55.6	61.3	67.6	74.5	83.4	91.8
560	13.7	15.2	17.0	18.8	21.6	23.9	26.7	29.5	33.0	36.4	41.2	45.4	50.9	56.1	62.3	68.6	75.7	83.4	93.4	102.8
630	15.4	17.0	19.1	21.1	24.3	26.8	30.0	33.1	37.1	40.9	46.4	51.1	57.3	63.1	70.0	77.1	85.2	93.8	105.0	115.6
710	17.3	19.1	21.6	23.9	27.3	30.1	33.9	37.4	41.8	46.1	52.2	57.5	64.6	71.2	78.9	86.9	96.0	105.7	118.4	130.3

IS 4984 : 2016 – Material Grade PE 100

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

SDR	SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6	
PE 100	PN 3		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20		-	
Size mm (OD)	Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16															1.8	2.1	2.2	2.5	2.7	3.1
20													1.9	2.2	2.3	2.6	2.7	3.1	3.4	3.8
25											1.9	2.2	2.3	2.6	2.8	3.2	3.4	3.8	4.2	4.7
32									1.9	2.2	2.4	2.7	2.9	3.3	3.6	4.1	4.4	4.9	5.4	6.0
40							1.9	2.2	2.4	2.7	3.0	3.4	3.7	4.2	4.5	5.1	5.4	6.0	6.7	7.5
50					2.0	2.3	2.4	2.7	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.8	7.6	8.4	9.3
63					2.5	2.9	3.0	3.4	3.7	4.2	4.7	5.3	5.8	6.5	7.0	7.8	8.6	9.6	10.5	11.7
75	1.9	2.2	2.3	2.6	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.9	7.7	8.4	9.3	10.2	11.3	12.5	13.9
90	2.2	2.5	2.8	3.2	3.5	4.0	4.3	4.8	5.3	5.9	6.7	7.5	8.2	9.1	10.0	11.1	12.2	13.5	15.0	16.6
110	2.7	3.1	3.4	3.8	4.3	4.8	5.3	6.0	6.5	7.3	8.1	9.0	10.0	11.1	12.3	13.6	14.9	16.5	18.4	20.3
125	3.1	3.5	3.8	4.3	4.8	5.4	6.0	6.7	7.4	8.2	9.2	10.2	11.4	12.7	13.9	15.4	16.9	18.7	20.9	23.1
140	3.5	4.0	4.3	4.8	5.4	6.0	6.7	7.5	8.3	9.2	10.3	11.4	12.8	14.2	15.6	17.3	19.0	21.0	23.4	25.8
160	3.9	4.4	4.9	5.5	6.2	6.9	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.8	19.7	21.7	24.0	26.7	29.5
180	4.4	4.9	5.5	6.2	6.8	7.8	8.6	9.6	10.6	11.8	13.3	14.7	16.4	18.1	20.0	22.1	24.4	26.9	30.0	33.1
200	4.9	5.5	6.1	6.8	7.7	8.6	9.6	10.7	11.8	13.1	14.7	16.3	18.2	20.1	22.3	24.6	27.1	29.9	33.4	36.8
225	5.5	6.2	6.9	7.7	8.7	9.7	10.8	12.0	13.3	14.7	16.6	18.4	20.5	22.7	25.0	27.6	30.5	33.7	37.5	41.4
250	6.1	6.8	7.6	8.5	9.7	10.8	12.0	13.3	14.7	16.3	18.4	20.3	22.8	25.2	27.8	30.7	33.8	37.3	41.7	46.0
280	6.9	7.7	8.5	9.5	10.8	12.0	13.4	14.8	16.5	18.3	20.6	22.8	25.5	28.2	31.2	34.4	37.9	41.8	46.7	51.5
315	7.7	8.6	9.6	10.7	12.2	13.5	15.0	16.6	18.6	20.6	23.2	25.6	28.7	31.7	35.0	38.6	42.6	47.0	52.5	57.9
355	8.7	9.7	10.8	12.0	13.7	15.2	16.9	18.7	20.9	23.1	26.1	28.8	32.3	35.6	39.5	43.6	48.0	52.9	59.2	65.2
400	9.8	10.9	12.2	13.5	15.4	17.0	19.1	21.1	23.6	26.1	29.5	32.6	36.4	40.1	44.5	49.1	54.1	59.6	66.7	73.5
450	11.0	12.2	13.7	15.2	17.3	19.1	21.5	23.9	26.5	29.3	33.1	36.5	40.9	45.1	50.0	55.1	60.9	67.1	75.0	82.6
500	12.2	13.5	15.2	16.8	19.3	21.3	23.9	26.4	29.5	32.6	36.8	40.6	45.5	50.2	55.6	61.3	67.6	74.5	83.4	91.8
560	13.7	15.2	17.0	18.8	21.6	23.9	26.7	29.5	33.0	36.4	41.2	45.4	50.9	56.1	62.3	68.6	75.7	83.4	93.4	102.8
630	15.4	17.0	19.1	21.1	24.3	26.8	30.0	33.1	37.1	40.9	46.4	51.1	57.3	63.1	70.0	77.1	85.2	93.8	105.0	115.6
710	17.3	19.1	21.6	23.9	27.3	30.1	33.9	37.4	41.8	46.1	52.2	57.5	64.6	71.2	78.9	86.9	96.0	105.7	118.4	130.3

IS 14333 : 1996 – Material Grade PE 63

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

[illegible]

Pipe Dimensions

IS 14333 : 1996 – Material Grade PE 80

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

O.D	PN 2.5		PN 4		PN 6		PN 8		PN 10		PN 12.5		PN 16	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
63	—	—	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	9.9	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	24.1	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	20.3	22.3	24.8	27.1	30.1	33.4	37.0
225	6.9	7.8	10.8	12.1	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	41.7	46.1
280	8.5	9.6	13.4	15.0	19.6	21.8	25.5	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	47.1	52.5	58.0
355	10.8	12.1	17.0	18.9	24.8	27.5	32.2	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	40.4	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	—	—	—	—	—	—	—	—
900	27.3	31.6	42.9	49.6	—	—	—	—	—	—	—	—	—	—
1000	30.4	35.2	47.7	55.1	—	—	—	—	—	—	—	—	—	—

IS 14333 : 1996 – Material Grade PE 100

(All Dimensions in mm) Wall Thickness of pipes for Pressure Rating of

O.D	PN 6		PN 8		PN 10		PN 12.5		PN 16	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
63	3.6	4.2	4.7	5.4	5.8	6.6	7.0	7.9	8.7	9.8
75	4.3	5.0	5.6	6.4	6.9	7.8	8.4	9.5	10.4	11.7
90	5.1	5.9	6.7	7.6	8.2	9.3	10.0	11.2	12.5	14.0
110	6.3	7.2	8.2	9.3	10.0	11.2	12.3	13.8	15.2	17.0
125	7.1	8.1	9.3	10.5	11.4	12.8	13.9	15.5	17.3	19.3
140	8.0	9.0	10.4	11.7	12.8	14.3	15.6	17.4	19.4	21.6
160	9.1	10.3	11.9	13.3	14.6	16.3	17.8	19.8	22.1	24.6
180	10.2	11.5	13.4	15.0	16.4	18.3	20.0	22.2	24.9	27.6
200	11.4	12.8	14.9	16.6	18.2	20.3	22.3	24.8	27.6	30.6
225	12.8	14.3	16.7	18.6	20.5	22.8	25.0	27.7	31.1	34.5
250	14.2	15.9	18.6	20.7	22.8	25.2	27.8	30.8	34.5	38.2
280	15.9	17.7	20.8	23.1	25.2	28.3	31.2	34.6	38.7	42.8
315	17.9	19.9	23.4	26.0	28.7	31.8	35.0	38.7	43.5	48.1
355	20.1	22.4	26.3	29.2	32.3	35.8	39.5	43.7	49.0	54.1
400	22.7	26.4	29.7	34.4	36.4	42.1	44.5	51.4	55.2	63.7
450	25.5	29.6	33.4	38.7	41.0	47.4	50.0	57.7	—	—
500	28.4	32.9	37.1	42.9	45.5	52.6	55.6	64.2	—	—
560	31.7	36.7	41.5	48.0	51.0	58.9	—	—	—	—
630	35.7	41.3	46.7	54.0	57.3	66.1	—	—	—	—
710	40.2	46.5	52.6	60.7	—	—	—	—	—	—
800	45.3	52.3	—	—	—	—	—	—	—	—
900	51.0	58.9	—	—	—	—	—	—	—	—
1000	56.7	65.5	—	—	—	—	—	—	—	—

ISO DP 4427 Design Stress 8.0 N/MM² PE MRS 100

ASTM D3350 - F 714 Table 8 ISO 161

Pipe series	S 8 SDR 17	S 6.3 SDR 13.6	S 5 SDR 11
Nominal pressure PN for 6s 8.0 Mpa	PN 10	PN 12.5	PN 16
O.D. (All Dimension in mm) minimum wall thickness			
32	-	-	3.0
40	-	-	3.7
50	-	-	4.6
63	-	4.7	5.8
75	4.5	5.6	6.8
90	5.4	6.7	8.2
110	6.6	8.1	10.0
125	7.4	9.2	11.4
140	8.3	10.3	12.7
160	9.5	11.8	14.6
180	10.7	13.3	16.4
200	11.9	14.7	18.2
225	13.4	16.6	20.5
250	14.8	18.4	22.7
280	16.6	20.6	25.4
315	18.7	23.2	28.6
355	21.1	26.1	32.2
400	23.7	29.4	36.3
450	26.7	33.1	40.9
500	29.7	36.8	45.4
560	33.2	41.2	50.8
630	37.4	46.2	57.2

DR	41	32.5	26	21	17	11
O.D.	(All Dimension in mm)					
	Wall Thickness of Pipes for Pressure Ratings of					
90	-	-	3.5	4.3	5.3	8.2
110	-	3.4	4.2	5.2	6.5	10.0
160	-	4.9	6.2	7.5	9.4	14.5
200	-	6.2	7.7	9.5	11.8	18.2
250	-	7.7	9.6	11.9	14.7	22.7
280	-	8.6	10.8	13.3	16.5	25.5
315	-	9.7	12.1	15.0	18.5	28.6
355	-	10.9	13.7	16.9	20.9	32.3
400	-	12.3	15.4	19.0	23.5	36.4
450	-	13.8	17.3	21.4	26.5	-
500	-	15.4	19.2	23.8	29.4	-
560	-	17.2	21.5	26.7	32.9	-
630	-	19.4	24.2	30.0	37.1	-

ISO DP 4427 Design Stress 5.0 N/MM² PE MRS 63

ISO DP 4427 Design Stress 6.3 N/MM² PE MRS 80

O.D.	S - 16 (SDR 32)	S - 12.5 (SDR 26)	S - 8 (SDR 17)	S - 5 (SDR 11)	S - 3.2 (SDR 7.5)
	Nominal Pressure PN for 6s 5.0 Mpa				
	PN 3.2	PN 4	PN 6*	PN 10	PN 16
	Min. Wall Thickness in mm				
16	-	-	-	2.0	2.2
20	-	-	-	2.0	2.8
25	-	-	2.0	2.3	3.5
32	-	-	2.0	2.9	4.4
40	-	2.0	2.4	3.7	5.5
50	-	2.0	3.0	4.6	6.9
63	2.0	2.4	3.8	5.8	8.6
75	2.3	2.9	4.5	6.8	10.3
90	2.8	3.5	5.4	8.2	12.3
110	3.4	4.2	6.6	10.0	15.1
125	3.9	4.8	7.4	11.4	17.1
140	4.3	5.4	8.3	12.7	19.2
160	4.9	6.2	9.5	14.6	21.9
180	5.5	6.9	10.7	16.4	24.6
200	6.2	7.7	11.9	18.2	27.3
225	6.9	8.6	13.4	20.5	30.8
250	7.7	9.6	14.8	22.7	34.2
280	8.6	10.7	16.6	25.4	38.3
315	9.7	12.1	18.7	28.6	43.0
355	10.9	13.6	21.2	32.2	48.5
400	12.3	15.3	23.7	36.3	54.7
450	13.8	17.2	26.7	40.9	61.5
500	15.3	19.1	29.6	45.4	-
560	17.2	21.4	33.2	50.8	-
630	19.3	24.1	37.3	57.2	-

O.D.	S - 10 (SDR 32)	S - 8 (SDR 26)	S - 6.3 (SDR 17)	S - 5 (SDR 11)	S - 4 (SDR 7.5)
	Nominal Pressure PN for 6s 6.3 Mpa				
	PN 6**	PN 8	PN 10	PN 12.5	PN 16
	Min. Wall Thickness in mm				
16	-	-	-	-	2
20	-	-	-	-	2.3
25	-	-	-	2.3	2.8
32	-	-	-	3.0	3.6
40	-	-	-	3.7	4.5
50	-	-	-	4.6	5.6
63	-	-	4.7	5.8	7.1
75	-	4.5	5.6	6.8	8.4
90	4.3	5.4	6.7	8.2	10.1
110	5.3	6.6	8.1	10.0	12.3
125	6.0	7.4	9.2	11.4	14.0
140	6.7	8.3	10.3	12.7	15.7
160	7.7	9.5	11.8	14.6	17.9
180	8.6	10.7	13.3	16.4	20.1
200	9.6	11.9	14.7	18.2	22.4
225	10.8	13.4	16.6	20.5	25.2
250	11.9	14.8	18.4	22.7	27.9
280	13.4	16.6	20.6	25.4	31.3
315	15.0	18.7	23.2	28.6	35.2
355	16.9	21.1	26.1	32.2	39.7
400	19.1	23.7	29.4	36.3	44.7
450	21.5	26.7	33.1	40.9	50.3
500	23.9	29.7	36.8	45.4	55.8
560	26.7	33.2	41.2	50.8	-
630	30.0	37.4	46.3	57.2	-

*Wall thickness is calculated on the basis of PN 6.3 pipe

MRS = Minimum required strength

SDR = Standard dimension ratio

S = Series

HDPE pipe can be produced in other pressure ratings to meet customer special requirement.

Standard length : 5 / 6 / 10 / 12 mtrs.

PN = Normal rating (bar)

Pipes up to diameters 140 mm from PN 6 to 16 pressure classes can also be coiled.

To meet specific customer requirements, pipe can be delivered in longer lengths than the standard indicated above, subject to transport possibilities.

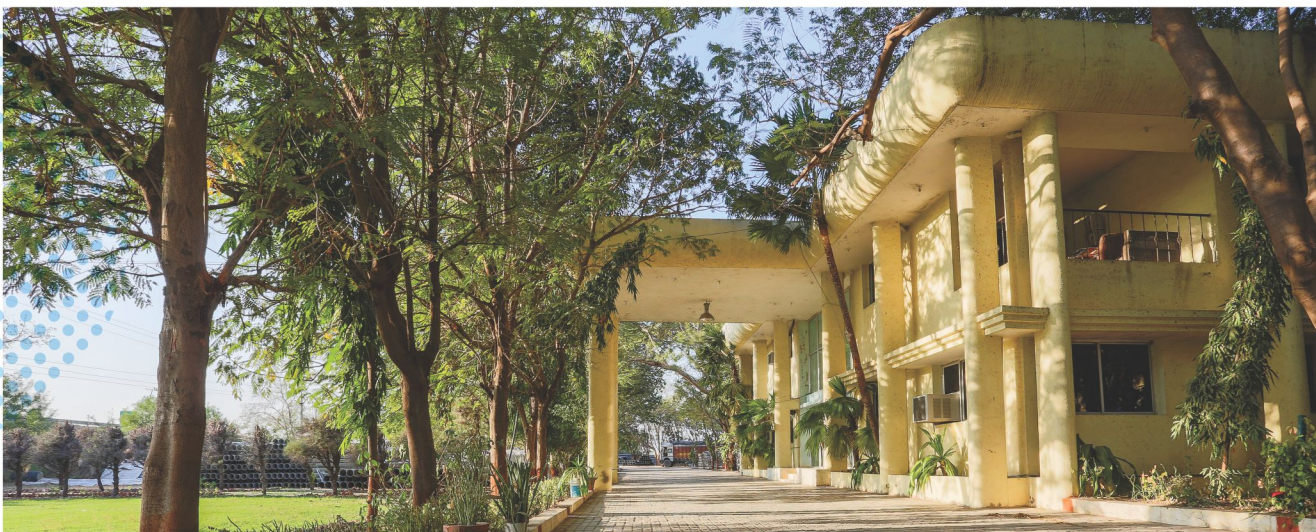
Pipe series is derived by ration 6s/p, where 6s is the design stress at 20°C and p is the nominal pressure rating of the pipes at 20°C.

The nominal pressure (PN) (in bars) is the maximum recommended continuous working pressure of the pipe at 20°C.

**For calculation of the thickness nominal pressure 6.3 bars (0.63 Mpa) is used.

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