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الهيئة السعودية للمواصفات والمقاييس والجودة
Saudi Standards, Metrology and Quality Org.



Made in Oman

صُنِعَ فِي عُمان
Made in OMAN



PLASTIC PIPES AND PRODUCTS MANUFACTURING

صناعة الانابيب والمنتجات البلاستيكية

Oman Therm Manufacturing & Trading Company is one of Oman's leading manufacturers and suppliers of plastic pipe systems under of Ezdihar Al Safa Trading ,is meeting the needs of the construction, civil, agricultural, industrial and petrochemical industries, primarily in the Middle east, but also supplying GCC Countries ,Asia and Africa.

To date Muna Noor's divisions deliver large-scale and bespoke uPVC, HDPE, DWC and Multi-layer HDPE pipes, fittings, electro fusion welding solutions, complete irrigation systems, Water control systems, Water Pumps and Motors and a multiplicity of valves and controls for water.

As an ISO 9001:2008 certified company, our primary commitment is to deliver quality products and services to clients. Oman Therm quality and success has also been recognised by financial industry leaders in the region



OMAN THERM

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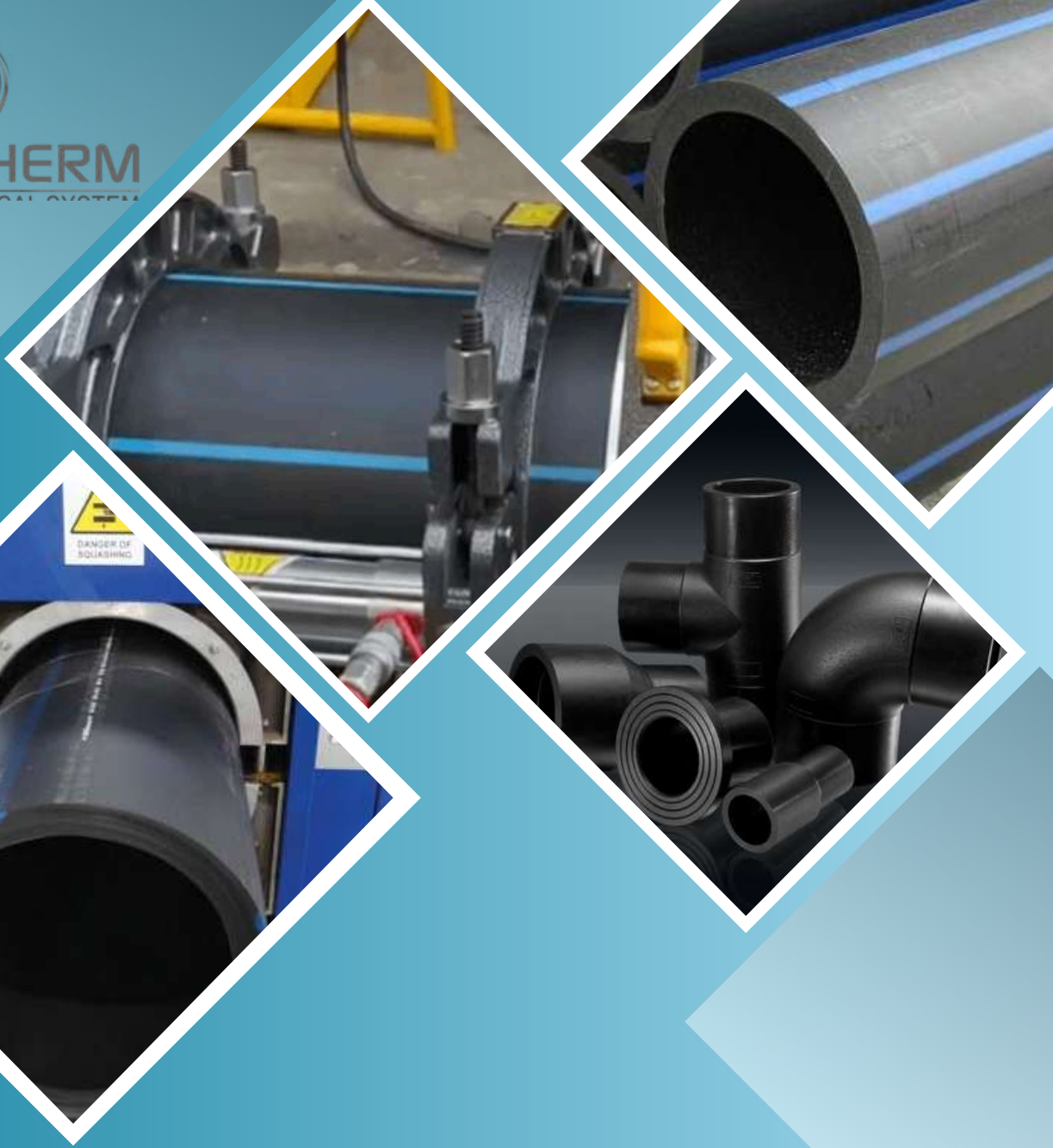
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HDPE PIPES

HIGH DENSITY POLYETHYLENE

MANUFACTURING STANDARDS

DIN 8074

Polyethylene (PE) - Pipes PE 80, PE 100 - Dimensions

Polyethylene (PE) - Pipes PE 80, PE 100 - general quality requirements, testing

DIN 8075

ISO 4427

Plastic piping systems - Polyethylene (PE) pipes and fittings for water supply

Plastic piping systems for the supply of gaseous fuels - Polyethylene (PE)

ISO 4437

**AWWA
C906**

Polyethylene (PE) Pressure Pipe and Fittings, 4 In. thru 65 In. (100 mm Through 1650 mm), for Waterworks

Plastics piping systems for water supply, and for drainage and sewerage under pressure. Polyethylene (PE)

EN 122101

**SASO
ISO 4427**

Plastics piping systems - Polyethylene (PE) pipes and fittings for water supply

RAW MATERIAL

Material Data Sheet

Material Data Sheet of High Density Polyethylen

Property	PE 100	PE 80	Unit	Test Method
Density (Compound)	959	956	Kg/m ³	ISO 1183
Melt Flow Rate (MFR) 190 °C / 2.16 kg	< 0.1	< 0.1	g/10 min	ISO 1133
Melt Flow Rate (MFR) 190 °C / 5.0 kg	0.25	0.3	g/10 min	ISO 1133
Tensile Stress at Yield 50mm/min	25	22	Mpa	ISO 527-2
Elongation at Break	>600	>600	%	ISO 527-2
Tensile Modulus 50mm/min	900	800	Mpa	ISO 527-2
Charpy Impact Notched at (0 °C)	16	14	Kj/m ²	ISO 179/1eA
Hardness, Shore D	60	59	-	ISO 868
Carbon Black Content	2 - 2.5	2 - 2.5	%	ASTM D 1603
Carbon Black Dispersion	≤ Grade 3	≤ Grade 3	-	ISO 18553
Brittleness Temperature	< - 70	< - 70	°C	ASTM D 746
ESCR (10% Lgepal), F50	>10000	>10000	h	ASTM D 1693-A
Thermal Stability (210 °C)	>20	>20	min	EN 728
Total Volatiles	≤ 350	≤ 350	mg/kg	EN 12009
Water Content	≤ 300	≤ 300	mg/kg	EN 12118
Coefficient of Linear Thermal Expansion	2.0 x 10 ⁻⁴	2.0 x 10 ⁻⁴	mm/mm/°C	ASTM D 696
Thermal Conductivity	0.41	0.41	W/km	DIN 52612

MINIMUM REQUIRED STRENGTH: MRS

Material Designation	MRS Mpa
PE 100	10.0
PE 80	8.0
PE 63	6.3

WATER QUALITY

Our HDPE pipes are suitable for drinking water. Due to the high quality of our HDPE pipes. It has no effect on water taste, odor, appearance of water and growth of aquatic micro-organisms.

UV RESISTANCE

HDPE 80 and HDPE 100 materials are compounded with special additional including UV stabilizers, which protect the pipe from degradation caused by intensive ultra violet light. For specific applications, such as pipework above the ground, where it is known that the pipe will be subjected to UV light, the material can be compounded with carbon black which provides additional long-term protection.

WHY HDPE PIPES?

CHEMICAL RESISTANCE:

Our HDPE pipes are generally resistant to the chemicals commonly used for water treatment and disinfection. Our HDPE pipes have excellent resistance to naturally occurring chemicals found in the soil. For industrial purposes our HDPE 100 pipes have excellent resistance to different media.

Maximum Operating Temperature for PE 100 in different media:

Medium		Maximum operating temperature °C PE
Sulphuric Acid	30%	60
Hydrochloric Acid	20%	60
Phosphoric Acid	85%	60
Nitric Acid	30%	40
Chromic Acid	20%	20
Hydrofluoric Acid	40%	40
Formic Acid	50%	40
Caustic Soda Solution	30%	60
Acetone	Technical Grade	40
Ethanol	96%	60

DESIGN

LIFETIME:

HDPE Material has a 50 year life time at 20 °C, but for example PE 100 has actual strength greater than the design strength and hence the expected resulting service lifetimes are greatly in excess of the nominal 50-year requirement when the pipe is operating within its design envelope.

Allowable Working Pressure for Pipes Made of PE 100, Conveying water

Temperature C	Years of service	Pipe series (S)						
		20	12.5	8.3	8	6.3	5	4
		Standard dimension ratio (SDR)						
		41	26	17.6	17	13.6	11	9
Allowable working pressure (Bar)								
10	5	5.0	7.9	11.9	12.5	15.8	19.9	25.1
	10	4.9	7.7	11.7	12.3	15.5	19.5	24.6
	25	4.8	7.6	11.5	12.0	15.2	19.1	24.1
	50	4.7	7.5	11.3	11.9	15.0	18.9	23.8
	100	4.6	7.3	11.1	11.7	14.7	18.5	23.3
20	5	4.2	6.6	10.0	10.5	13.3	16.7	21.0
	10	4.1	6.5	9.9	10.4	13.1	16.5	20.8
	25	4.0	6.4	9.7	10.1	12.8	16.1	20.3
	50	4.0	6.3	9.6	10.0	12.5	16.0	20.0
	100	3.9	6.1	9.4	9.8	12.3	15.5	19.5
30	5	3.5	5.6	8.5	8.9	11.2	14.1	17.8
	10	3.5	5.5	8.3	8.8	11.0	13.9	17.5
	25	3.4	5.4	8.2	8.6	10.9	13.7	17.3
	50	3.4	5.4	8.1	8.5	10.7	13.5	17.0
40	5	3.0	4.8	7.3	7.6	9.6	12.1	15.3
	10	3.0	4.7	7.1	7.5	9.5	11.9	15.0
	25	2.9	4.6	7.0	7.4	9.3	11.7	14.8
	50	2.9	4.6	6.9	7.3	9.1	11.5	14.5
50	5	2.6	4.2	6.3	6.6	8.3	10.5	13.3
	10	2.6	4.1	6.2	6.5	8.2	10.3	13.0
	15	2.6	4.1	6.2	6.5	8.2	10.3	13.0
60	5	2.3	3.6	5.5	5.7	7.2	9.1	11.5
70	2	2.1	3.3	5.0	5.2	6.6	8.3	10.5

Safety factor C = 1.25

Reference DIN 8074: 2011-12

Allowable Working Pressure for Pipes Made of PE80, (S) Conveying Water

Temperature ℃	Years of service	Pipe series (S)										
		25	20	16	12,5	10.5	10	8.3	8	6.3	5	4
		Standar Dimension Ratio (SDR)										
		51	41	33	26	22	21	17.6	17	13.6	11	9
		Allowable Working Pressure (bar)										
10	5	3.2	4.0	5.1	6.4	7.7	8.1	9.7	10.1	12.8	16.1	20.3
	10	3.1	4.0	5.0	6.3	7.6	8.0	9.5	10.0	12.6	15.9	20.0
	25	3.1	3.9	4.9	6.1	7.4	7.8	9.3	9.8	12.3	15.5	19.5
	50	3.0	3.8	4.7	6.0	7.2	7.6	9.1	9.5	12.0	15.1	19.0
	100	2.9	3.7	4.7	5.9	7.2	7.5	8.9	9.4	11.8	14.9	18.8
20	5	2.7	3.4	4.2	5.4	6.5	6.8	8.1	8.5	10.7	13.5	17.0
	10	2.6	3.3	4.1	5.2	6.3	6.6	7.9	8.3	10.4	13.1	16.5
	25	2.5	3.2	4.1	5.1	6.2	6.5	7.7	8.1	10.3	12.9	16.3
	50	2.5	3.2	4.0	5.0	6.0	6.4	7.4	8.0	10.0	12.5	16.0
	100	2.4	3.1	3.9	4.9	5.9	6.2	7.4	7.8	9.8	12.3	15.5
30	5	2.2	2.8	3.5	4.5	5.4	5.7	6.8	7.1	9.0	11.3	14.3
	10	2.2	2.8	3.5	4.4	5.3	5.6	6.7	7.0	8.8	11.1	14.0
	25	2.1	2.7	3.4	4.3	5.2	5.5	6.5	6.9	8.7	10.9	13.8
	50	2.1	2.7	3.4	4.2	5.1	5.4	6.4	6.7	8.5	10.7	13.5
40	5	1.9	2.4	3.0	3.8	4.7	4.9	5.8	6.1	7.7	9.7	12.3
	10	1.9	2.4	3.0	3.8	4.6	4.8	5.7	6.0	7.6	9.5	12.0
	25	1.8	2.3	2.9	3.7	4.5	4.7	5.6	5.9	7.4	9.3	11.8
	50	1.8	2.3	2.9	3.6	4.4	4.6	5.5	5.7	7.2	9.1	11.5
50	5	1.6	2.1	2.6	3.3	4.0	4.2	5.0	5.2	6.6	8.3	10.5
	10	1.6	2.0	2.5	3.2	3.9	4.1	4.9	5.1	6.4	8.1	10.2
	15	1.6	2.0	2.5	3.2	3.9	4.1	4.9	5.1	6.4	8.1	10.2
60	5	1.4	1.8	2.3	2.9	3.5	3.7	4.4	4.6	5.8	7.3	9.2
70	2	1.3	1.6	2.0	2.6	3.1	3.3	3.9	4.1	5.2	6.5	8.2

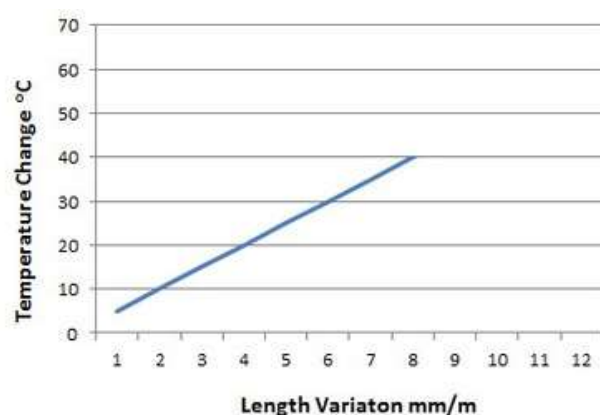
Safety factor C = 1.25

Reference DIN 8074: 2011-12

HDPE pipe length variation due to temperature change (°C)

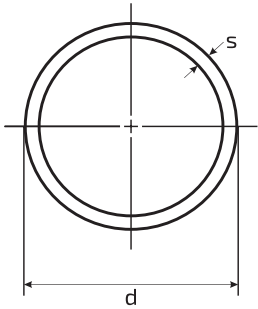
Temperature Change (°C)	Length Variation mm/meter
5	1
10	2
15	3
20	4
25	5
30	6
35	7
40	8

mm/m/ °C 0.2 = Coefficient of thermal expansion



PRESSURE

Maximum Sustained Temperature, (°C)	Multiply working pressure at (20 °C) by these factors
20	1
25	0.92
30	0.84
35	0.78
40	0.72



Maximum operating pressure (MOP) = $20 \times \text{MRS}$ where C is design safety factor
 $C \times (\text{SDR}-1)$

STANDARD DIMENSION: SDR

Relationship between the admissible nominal pressure PN, SDR and Performance classes PE 80, PE 100 (for water 20 °C, 50 years service Life and C = 1.25).

Nominal Pressure PN (Bar)	SDR PE 80	SDR PE 100
3.2	41	-
4	33	41
5	26	33
6	22	-
6.3	21	26
8	17	21
10	13.6	17
12.5	11	13.6
16	9	11
20	7.4	9
25	6	7.4



QUALITY CONTROL

HDPE pipes manufactured by OMAN THERM PIPES are subjected to the following quality program:

RAW MATERIAL INSPECTION

- Density
- Melt Flow Rate (MFR)
- Volatile Content
- Moisture Content
- Carbon Black Content
- Carbon Black Dispersion
- Oxidation Induction Time (OIT)

IN PROCESS INSPECTION

All visual inspection and dimension measurements are conducted during pipe manufacturing.

LABORATORY TESTING

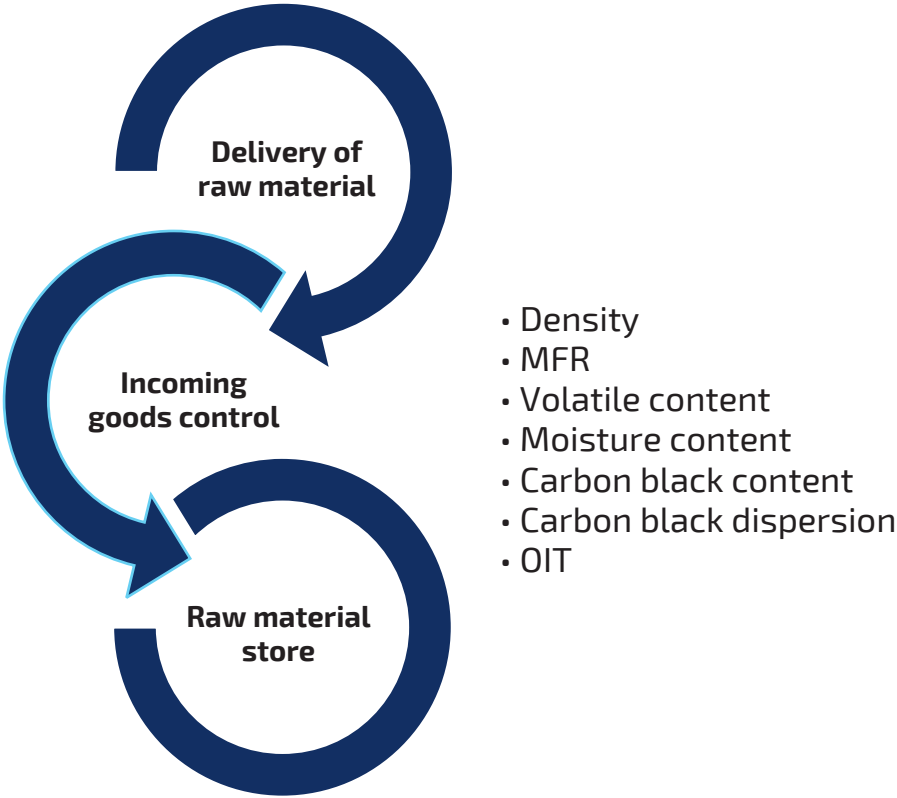
All physical and mechanical properties of product are conducted

- Hydrostatic Strength
- Melt Flow Rate
- Longitudinal Reversion Test
- Tensile Properties
- Oxidation Induction Time

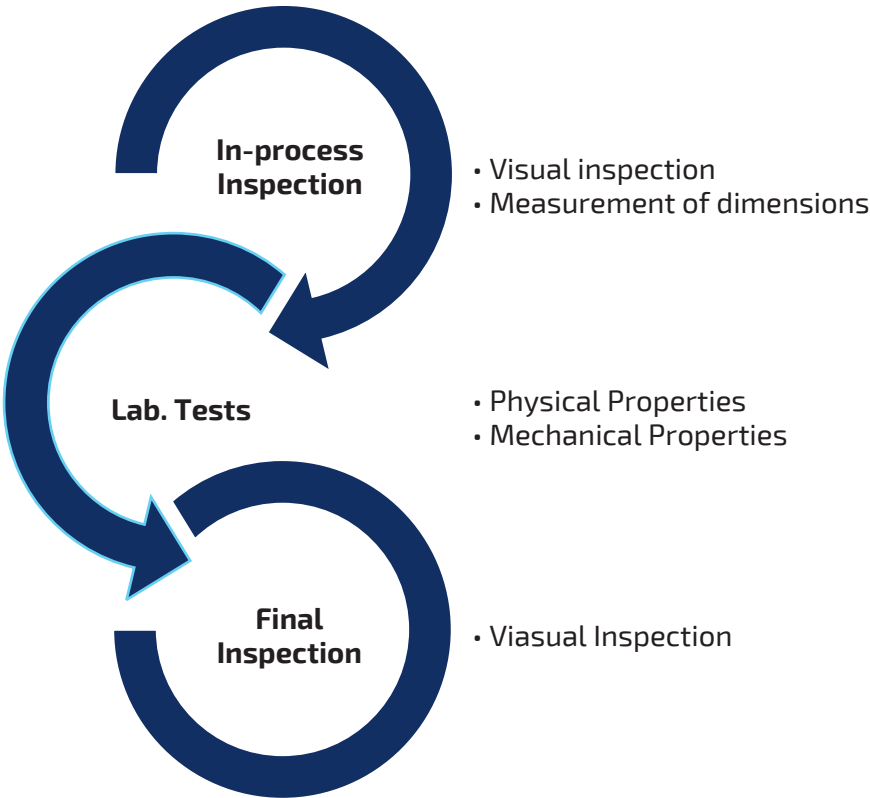
FINAL INSPECTION

Final inspection conducted to pipes dispatching to the customer to be sure that they are free from visual physical damages:

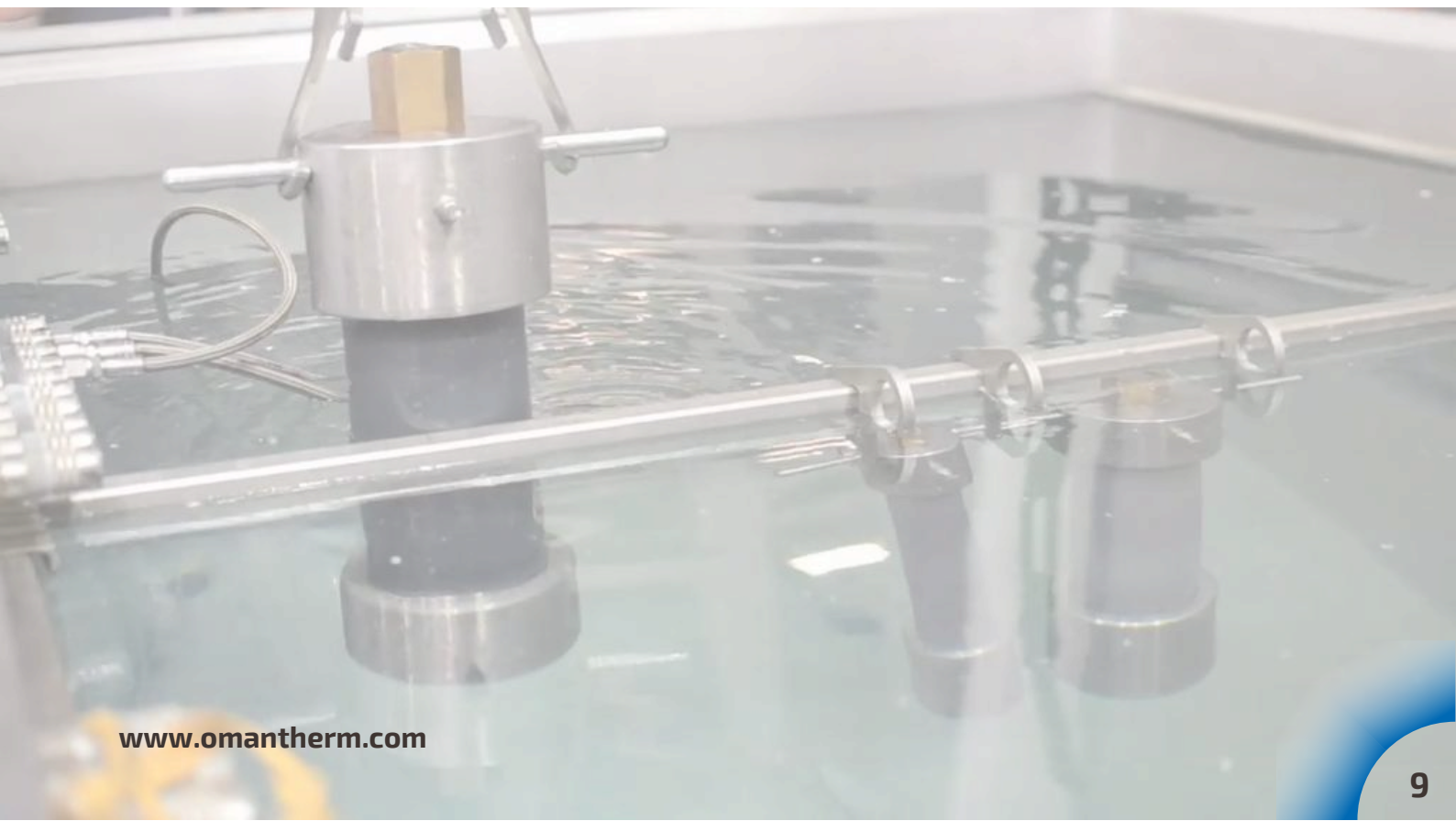
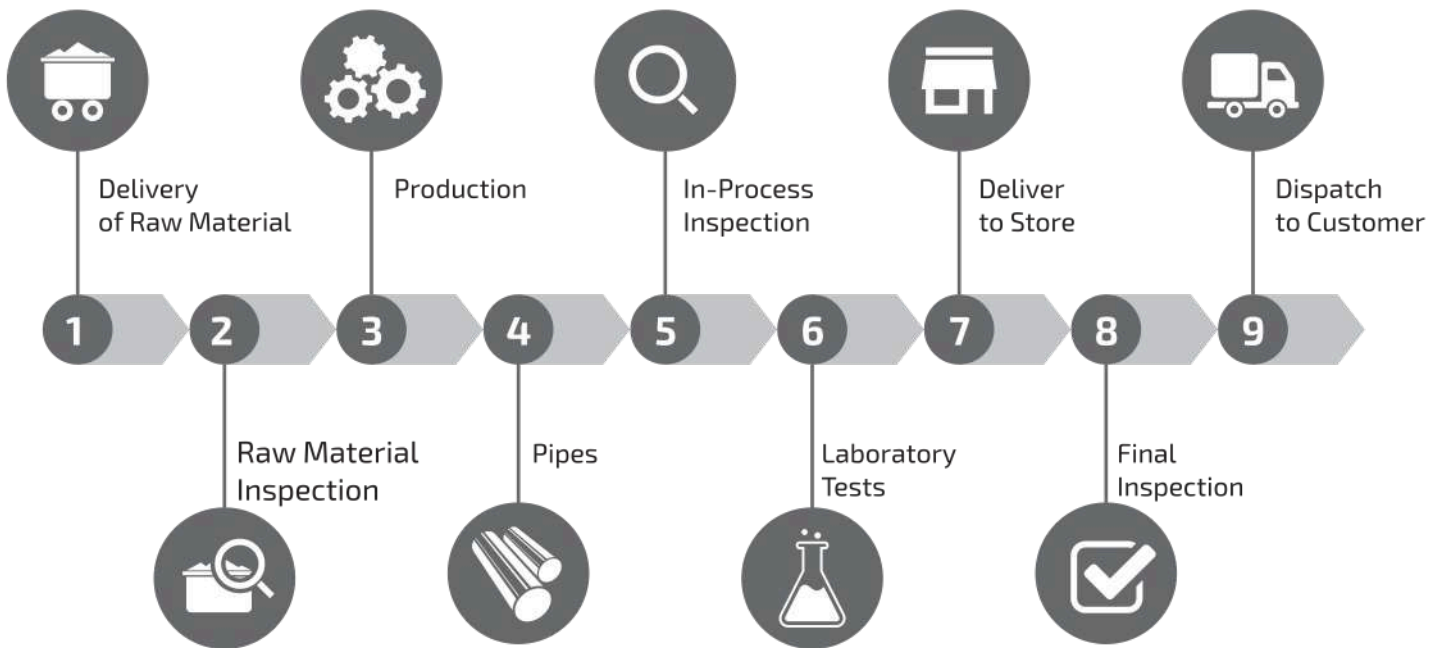
Raw Material Inspection Process



Final Product Inspection Process



PRODUCTION FLOW CHART



A close-up photograph of several large, black, cylindrical pipes stacked together. A bright blue laser line is projected across the pipes, creating a sharp contrast. The lighting is soft, highlighting the smooth texture of the pipes.

HDPE PIPES FOR WATER

Water Line

HDPE Pipe Technical Data as per ISO 4427:

Pipe Sizes & Corresponding Wall Thickness at Different SDRs is as follows: SD-PEPW

SDR	Outside Diameter		SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4	
PN for PE 100			PN4		PN5		PN6		PN8		PN10		PN12.5		PN16		PN20		PN25	
Nominal Size			Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
L	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
16	16	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7
20	20	20.3	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4
25	25	25.3	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4	3.5	4.0
32	32	32.3	-	-	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.6	4.1	4.4	5.0
40	40	40.4	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.5	3.7	4.2	4.5	5.1	5.5	6.2
50	50	50.4	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.9	7.7
63	63	63.4	-	-	-	-	2.5	2.9	3.0	3.4	3.8	4.3	4.7	5.3	5.8	6.5	7.1	8.0	8.6	9.6
75	75	75.5	-	-	-	-	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.8	7.6	8.4	9.4	10.3	11.5
90	90	90.6	-	-	-	-	3.5	4.0	4.3	4.9	5.4	6.1	6.7	7.5	8.2	9.2	10.1	11.3	12.3	13.7
110	110	110.7	-	-	-	-	4.2	4.8	5.3	6.0	6.6	7.4	8.1	9.1	10.0	11.1	12.3	13.7	15.1	16.8
125	125	125.8	-	-	-	-	4.8	5.4	6.0	6.7	7.4	8.3	9.2	10.3	11.4	12.7	14.0	15.6	17.1	19.0
140	140	140.9	-	-	-	-	5.4	6.1	6.7	7.5	8.3	9.3	10.3	11.5	12.7	14.1	15.7	17.4	19.2	21.3
160	160	161.0	-	-	-	-	6.2	7.0	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.9	19.8	21.9	24.2
180	180	181.1	-	-	-	-	6.9	7.7	8.6	9.6	10.7	11.9	13.3	14.8	16.4	18.2	20.1	22.3	24.6	27.2
200	200	201.2	-	-	-	-	7.7	8.6	9.6	10.7	11.9	13.2	14.7	16.3	18.2	20.2	22.4	24.8	27.4	30.3
225	225	226.4	-	-	-	-	8.6	9.6	10.8	12.0	13.4	14.9	16.6	18.4	20.5	22.7	25.2	27.9	30.8	34.0
250	250	251.5	-	-	-	-	9.6	10.7	11.9	13.2	14.8	16.4	18.4	20.4	22.7	25.1	27.9	30.8	34.2	37.8
280	280	281.7	-	-	-	-	10.7	11.9	13.4	14.9	16.6	18.4	20.6	22.8	25.4	28.1	31.3	34.6	38.3	42.3
315	315	316.9	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	43.1	47.6
355	355	357.2	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	39.7	43.8	48.5	53.5
400	400	402.4	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	54.7	60.3
450	450	452.7	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	50.3	55.5	61.5	67.8
500	500	503.0	12.3	13.7	15.3	17	19.1	21.2	23.9	26.4	29.7	32.8	36.8	40.6	45.4	50.1	55.8	61.5	68.2	75.4
560	560	563.4	13.7	15.2	17.2	19.1	21.4	23.7	26.7	29.5	34.3	37.8	41.2	46.1	50.8	56.0	62.5	68.9	-	-
630	630	633.8	15.4	17.1	19.3	21.4	24.1	26.7	30.0	33.1	37.4	41.3	46.3	51.1	57.2	63.1	70.3	77.5	-	-

NOTE:

Refer to EQM & WRAS certificates for more information. PN values are based on C=1.25. Tolerances in accordance with grade V of ISO 11922-1:1997. The calculated value of e-min (ISO 4085:1998) is rounded up to the nearest value of either 2.0, 2.3 or 3.0. This is to satisfy certain national requirements. For practical reasons a wall thickness of 3.00 mm is recommended for Electro-Fusion jointing and lining applications. Upto 110mm OMAN THERM pipes are also available in coils. Please contact us for more information.

Water Line

HDPE Pipe Technical Data as per ANSI/AWWA C906:

Pipe Sizes & Corresponding Wall Thickness at Different DRs is as follows:

SD-PEPW

DR	Outside Diameter		DR 11		DR 9		DR 7.3		DR 7	
PC for PE 4710/ PE 100			PC200		PC250		PC317		PC335	
Pressure in Bar			13.79		17.23		21.85		23.09	
Nominal Size			Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
L Inch	Min Inch	Max Inch	Min Inch	Max Inch	Min Inch	Max Inch	Min Inch	Max Inch	Min Inch	Max Inch
4	4.480	4.520	0.409	0.458	0.500	0.560	0.625	0.700	0.643	0.720
6	6.600	6.660	0.602	0.674	0.736	0.825	0.920	1.031	0.946	1.060
8	8.590	8.660	0.784	0.878	0.958	1.073	1.198	1.342	1.228	1.376
10	10.700	10.800	0.977	1.094	1.194	1.337	1.473	1.650	1.536	1.720
12	12.690	12.810	1.159	1.298	1.417	1.587	1.747	1.957	1.821	2.039
14	13.940	14.060	1.273	1.426	1.556	1.743	1.918	2.148	2.000	2.240
16	15.930	16.071	1.455	1.630	1.778	1.992	2.192	2.455	2.286	2.560
18	17.920	18.081	1.636	1.832	2.000	2.240	2.466	2.762	2.571	2.879
20	19.910	20.090	1.818	2.036	2.222	2.489	2.740	3.069	2.857	3.200
22	21.900	22.099	2.000	2.240	2.444	2.737	3.014	3.376	3.143	3.520
24	23.890	24.108	2.182	2.444	2.667	2.987	3.288	3.683	3.429	3.841
26	25.880	26.117	2.364	2.648	2.889	3.236	3.562	3.989	3.714	4.160
28	27.870	28.126	2.545	2.850	3.111	3.484	3.836	4.296	-	-
30	29.860	30.135	2.727	3.054	3.333	3.733	-	-	-	-
32	31.860	32.144	2.909	3.258	3.556	3.983	-	-	-	-
34	33.850	34.153	3.091	3.462	3.778	4.231	-	-	-	-
36	35.840	36.162	3.273	3.666	-	-	-	-	-	-
42	41.810	42.189	3.818	4.276	-	-	-	-	-	-

NOTE:

Refer to EQM And WRAS certificates for more information.
Please contact us for more information.



Water Line

HDPE Pipe Selection (Bore Size):

Design Engineers choose OMAN THERM PE 100 piping system, as the system provides larger bore size because of its lower wall thickness. Moreover, at the same working pressure, designers can opt for lower SDR level pipe than in PE 80 piping system.

Bore Size of PE 100 as per ISO 4427 & AWWA C906:

SD-PEPW

Pipe Size mm	ISO 4427 - PE 100				Pipe Size Inch	AWWA C906 - PE 100			
	SDR 17 PN10 mm	SDR 11 PN16 mm	SDR 9 PN20 mm	SDR 7.4 PN25 mm		DR11 PC200 Inch	DR 9 PC250 Inch	DR 7.3 PC317 Inch	DR 7 PC335 Inch
50	44.0	40.8	38.8	36.2	4	3.66	2.66	1.41	0.13
63	55.4	51.4	48.8	45.8	6	5.40	3.92	2.08	0.19
75	66.0	61.4	58.2	54.4	8	7.02	5.11	2.71	0.25
90	79.2	73.6	69.8	65.4	10	8.75	6.36	3.41	0.34
110	96.8	90.0	85.4	79.8	12	10.37	7.54	4.04	0.40
125	110.2	102.2	97.0	90.8	14	11.39	8.28	4.45	0.45
140	123.4	114.6	108.6	101.6	16	13.02	9.46	5.08	0.51
160	141.0	130.8	124.2	116.2	18	14.65	10.65	5.72	0.57
180	158.6	147.2	139.8	130.8	20	16.27	11.83	6.35	0.64
200	176.2	163.6	155.2	145.2	22	17.90	13.01	6.98	0.70
225	198.2	184.0	174.6	163.4	24	19.53	14.19	7.62	0.76
250	220.4	204.6	194.2	181.6	26	21.15	15.37	8.25	0.82
280	246.8	229.2	217.4	203.4	-	-	-	-	-
315	277.6	257.8	244.6	228.8	-	-	-	-	-

NOTE:

For installation instructions please refer to our technical guidelines.



HDPE Pipe Technical Data as per BS EN 1519-1:

OMAN THERM also provides an effective and economic alternative to cast iron and other traditional systems for drainage applications. The OMAN THERM HDPE drainage system is a total solution for all types of drainage requirements, soil and waste include above and below ground, and chemical waste applications. The exceptional performance is the result of versatile characteristics of OMAN THERM HDPE, which make the system fit for long term solution as compared to cast iron and other traditional systems. Its Corrosion resistance and ability to withstand in different temperature makes it suitable to use in chemical and greasy kitchen waste applications.

What makes OMAN THERM HDPE Piping System a great alternative solution? ü Corrosion & Abrasion resistance ü Chemical resistance ü Impact resistance ü Heat Resistance ü Low weight, flexible and Easy to install ü Ideal for prefabrication and recyclable.

Areas of application

OMAN THERM HDPE Drainage Pipe is suitable for Laboratories, Factories, Hotels and Domestic/ Commercial/Industrial buildings.

OMAN THERM HDPE Drainage pipes are manufactured in accordance with the European standard BS EN 1519-1 which supersedes the German standards DIN 19535-1 and DIN 19535-2.

Dimensions of HDPE drainage pipes according to BS EN 1519-1:

SD -PEPD

Nominal Outside Diameter	Outside Diameter		Wall Thickness S 16		Wall Thickness S 12.5	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
mm	mm	mm	mm	mm	mm	mm
32	32.0	32.0	3.0	3.5	3.0	3.5
40	40.0	40.4	3.0	3.5	3.0	3.5
50	50.0	50.5	3.0	3.5	3.0	3.5
56	56.0	56.5	3.0	3.5	3.0	3.5
63	63.0	63.6	3.0	3.5	3.0	3.5
75	75.0	75.7	3.0	3.5	3.0	3.5
80	80.0	80.9	3.0	3.5	3.1	3.6
90	90.0	90.9	3.0	3.5	3.5	4.1
100	100.0	100.9	3.2	3.8	3.9	4.4
110	110.0	111.0	3.4	4.0	4.2	4.9
125	125.0	126.2	3.9	4.5	4.9	5.5
160	160.0	161.5	4.9	5.6	6.2	7.1
200	200.0	201.8	6.2	7.1	7.7	9.7
250	250.0	252.3	7.7	9.7	9.6	10.8
315	315.0	317.9	9.7	10.9	12.1	13.6

NOTE:

Series 16 (S 16) is suitable for application area inside buildings and outside buildings fixed on the wall. Series 12.5 (S 12.5) is suitable for application area under and within 1 metre from the building where the pipes and fittings are buried underground and connected to the soil and waste discharge system of the building.



Gas Line

HDPE Pipe Technical Data as per ISO 4437:

OMAN THERM Polyethylene is the right choice for your Gas application due to its characteristics such as strength, flexibility, inertness, light weight and ease of maintenance and installation. OMAN THERM HDPE pipes are maintenance free with a design life of over 50 years under normal operating conditions. OMAN THERM manufactures HDPE pipes for GAS service as per ISO 4437 standards which undergo rigorous quality checks throughout the entire production process to ensure their reliability and effectiveness for gas transportation. The preferred series of pipes are SDR 11 and SDR 17 for gas applications. Pipes are available in coils in order to reduce the number of joints to make a cost effective choice for contractors and clients. Pipes are also available in straight lengths of 6 or 12 meters. The jointing can be done by Butt-Fusion or Electro-Fusion methods, providing a completely homogeneous leak free system.

Pipe Sizes & Corresponding Wall Thickness as per ISO 4437:

SD -PEPG

Nominal Outside Diameter	PE 100 Gas Pipe Product Data Sheet - ISO 4437	
	10 Bar SDR 11	6.25 Bar SDR 17
	Minimum Wall Thickness	
mm	mm	
16	3.0	2.3
20	3.0	2.3
25	3.0	2.3
32	3.0	2.3
40	3.7	2.4
50	4.6	3.0
63	5.8	3.8
75	6.8	4.5
90	8.2	5.4
110	10.0	6.6
125	11.4	7.4
140	12.7	8.3
160	14.6	9.5
180	16.4	10.7
200	18.2	11.9
225	20.5	13.4
250	22.7	14.8
280	25.4	16.6
315	28.6	18.7
355	32.3	21.1
400	36.4	23.7
450	40.9	26.7



NOTE:

SDR 11 & SDR 17 are the series commonly used. Other SDRs are also available upon request. Wall thickness is according to ISO 11922-1. Pipes are available in coils up to 110mm. PE 100 Minimum Required Strength (MRS) is 10 Mpa. PE 80 is also available upon request.

Please contact us for more information.

H D P E

fittings complying

ISO 4427 standards



Oman Therm fittings are available in molded & segmented. They are manufactured as per ISO standards which are FM and WRAS approved, applicable for fire, water & gas applications.

NOTE: Please contact us for more information.

HDPE COMPRESSION FITTINGS



COMPRESSION FITTINGS



STRAIGHT COUPLER

1. 20 mm x 20 mm
2. 25 mm x 25 mm
3. 32 mm x 32 mm
4. 50 mm x 50 mm
5. 63 mm x 63 mm
6. 75 mm x 75 mm
7. 90 mm x 90 mm
8. 110 mm x 110 mm



MALE THREADED ADAPTOR

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 1/2"
4. 25 mm x 3/4"
5. 25 mm x 1"
6. 32 mm x 3/4"
7. 32 mm x 1"
8. 50 mm x 1 1/2"
9. 63 mm x 2"
10. 75 mm x 2 1/2"
11. 90 mm x 3"
12. 110 mm x 4"



MALE THREADED BEND

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 1/2"
4. 25 mm x 3/4"
5. 25 mm x 1"
6. 32 mm x 3/4"
7. 32 mm x 1"
8. 50 mm x 1 1/2"
9. 63 mm x 2"
10. 90 mm x 3"



MALE THREADED TEE

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 3/4"
4. 25 mm x 1"
5. 32 mm x 3/4"
6. 32 mm x 1"
7. 50 mm x 1 1/2"
8. 63 mm x 2"
9. 90 mm x 3"



REDUCING TEE

1. 25 mm x 20 mm
2. 32 mm x 20 mm
3. 32 mm x 25 mm
4. 50 mm x 32 mm
5. 63 mm x 50 mm
6. 90 mm x 63 mm



REDUCING COUPLER

1. 25 mm x 20 mm
2. 32 mm x 20 mm
3. 32 mm x 25 mm
4. 50 mm x 32 mm
5. 63 mm x 50 mm
6. 90 mm x 63 mm
7. 110 mm x 90 mm



FEMALE THREADED ADAPTOR

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 1/2"
4. 25 mm x 3/4"
5. 25 mm x 1"
6. 32 mm x 3/4"
7. 32 mm x 1"
8. 50 mm x 1 1/2"
9. 63 mm x 2"
10. 75 mm x 2 1/2"
11. 90 mm x 3"
12. 110 mm x 4"



FEMALE THREADED BEND

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 3/4"
4. 25 mm x 1"
5. 32 mm x 3/4"
6. 32 mm x 1"
7. 50 mm x 1 1/2"
8. 63 mm x 2"
9. 90 mm x 3"
10. 110 mm x 4"



FEMALE THREADED TEE

1. 20 mm x 1/2"
2. 20 mm x 3/4"
3. 25 mm x 1/2"
4. 25 mm x 3/4"
5. 32 mm x 3/4"
6. 32 mm x 1"
7. 50 mm x 1 1/2"
8. 63 mm x 2"
9. 90 mm x 3"
10. 110 mm x 4"



TAPPING SADDLE

1. 32 mm x 3/4"
2. 32 mm x 1"
3. 50 mm x 3/4"
4. 50 mm x 1"
5. 63 mm x 3/4"
6. 63 mm x 1"
7. 90 mm x 3/4"
8. 90 mm x 1"
9. 90 mm x 2"
10. 110 mm x 3/4"
11. 110 mm x 1"
12. 110 mm x 2"
13. 160 mm x 3/4"
14. 160 mm x 1"
15. 160 mm x 2"
16. 225 mm x 3/4"
17. 225 mm x 1"
18. 225 mm x 2"
19. 250 mm x 3/4"
20. 250 mm x 1"
21. 250 mm x 2"



END CAP COUPLING

1. 20 mm x 20 mm
2. 25 mm x 25 mm
3. 32 mm x 32 mm
4. 50 mm x 50 mm
5. 63 mm x 63 mm
6. 75 mm x 75 mm
7. 90 mm x 90 mm
8. 110 mm x 110 mm



FLANGE ADAPTOR

1. 90 x 3"
2. 110 x 4"



EQUAL BEND

1. 20 mm x 20 mm
2. 25 mm x 25 mm
3. 32 mm x 32 mm
4. 50 mm x 50 mm
5. 63 mm x 63 mm
6. 90 mm x 90 mm
7. 110 mm x 110 mm



EQUAL TEE

1. 20 mm x 20 mm
2. 25 mm x 20 mm
3. 32 mm x 32 mm
4. 50 mm x 50 mm
5. 63 mm x 63 mm
6. 75 mm x 75 mm
7. 90 mm x 90 mm
8. 110 mm x 110 mm



HDPE BUTT WELDING FITTINGS

HDPE BUTT WELDING FITTINGS



Elbow 90°

PE 100

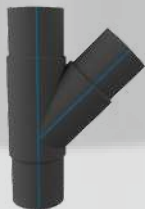
d (mm)	kg	z (mm)	L (mm)	e (mm)
20	-	-	-	-
25	-	-	-	-
32	-	-	-	-
40	-	-	-	-
50	-	-	-	-
63	0.26125	-	-	-
75	0.39235	115	65	5.8
90	0.6688	130	72	6.8
110	1.08775	150	81	8.2
125	1.52855	165	86	10.0
140	2.160	180	93	11.4
160	2.945	202	92	12.7
180	4.10305	210	103	14.6
200	5.44632	232	107	16.4
225	7.391	253	117	18.2
250	10.5364	270	122	20.5
280	5	292	130	22.7
315	14.5217	320	140	25.4
355	20.862	370	150	28.6
400	-	-	-	-
450	-	-	-	-
500	-	-	-	-
560	-	-	-	-
630	-	-	-	-



Elbow 45°

PE 100

d (mm)	k g	z (mm)	L (mm)	e (mm)
20	-	-	-	-
25	-	-	-	-
32	-	-	-	-
40	-	-	-	-
50	0.285	95	65	5.8
63	0.3287	105	72	6.8
75	0.5491	120	81	8.2
90	0.8844	130	86	10.0
110	5.12217	140	93	11.4
125	1.52	164	92	12.7
140	2.33795	162	103	14.6
160	3.11885	186	107	16.4
180	4.15245	185	117	18.2
200	5.71235	200	122	20.5
225	8.11395	220	130	22.7
250	10.3778	226	140	25.4
280	14.0771	246	150	28.6
315	-	-	-	-
355	-	-	-	-
400	-	-	-	-
450	-	-	-	-
500	-	-	-	-
560	-	-	-	-
630	-	-	-	-



Tee 45°, Equal

PE 100

d (mm)	kg	z (mm)	z1 (mm)	L (mm)	e (mm)
63	0.475	255	158	63	5.8
75	0.76	301	190	70	6.8
90	1.235	368	234	79	8.2
110	1.71	395	260	82	10.0



Tee 90°

PE 100

d (mm)	kg	z (mm)	z1 (mm)	L (mm)	e (mm)
20	-	-	-	-	-
25	-	-	-	-	-
32	-	-	-	-	-
40	-	-	-	-	-
50	0.399	-	-	-	-
63	0.5738	230	115	65	5.8
75	0.97945	264	132	72	6.8
90	1.5466	300	150	81	8.2
110	1.995	330	165	86	10.0
125	3.02	366	183	93	11.4
140	4.104	396	196	92	12.7
160	5.681	420	210	103	14.6
180	8.075	460	230	107	16.4
200	10.925	500	250	117	18.2
225	13.9726	540	270	122	20.5
250	17.7365	575	288	130	22.7
280	24.8425	615	308	140	25.4
315	37.81	695	346	150	28.6
355	40.3702	818	410	165	32.3
400	5	910	455	180	36.4
450	73.435	970	485	195	40.9
500	95.95	1060	530	215	45.6

HDPE BUTT WELDING FITTINGS

Tee Reducer 90°

PE 100

d x d (mm)	kg -	z (mm) -	z1 (mm) -	L (mm) -	L1 (mm) -	e (mm) -	e1 (mm) -
50x20	-	-	-	-	-	-	-
50x25	-	-	-	-	-	-	-
50x32	-	-	-	-	-	-	-
50x40	-	-	-	-	-	-	-
*63 x 32	0.3591	230	145	65	53	5.8	3.0
*63 x 40	0.6811	230	145	65	57	5.8	3.7
63 x 50	0.2811	215	103	63	56	5.8	4.6
75 x 32	0.4711	256	108	70	46	6.9	3.0
75 x 40	0.7361	264	180	72	57	6.8	3.7
75 x 50	0.5111	253	108	70	56	6.9	4.6
75 x 63	0.5411	255	117	70	63	6.9	5.8
90 x 50	0.8011	280	117	79	55	8.2	4.6
90 x 63	0.7561	269	136	79	64	8.2	5.8
90 x 75	0.7741	272	138	73	70	8.2	6.9
110 x 63	1.2481	309	156	84	65	10.0	5.8
110 x 75	1.2251	309	151	82	70	10.0	6.9
110 x 90	1.2561	321	162	85	79	10.0	8.2
125 x 63	2.8311	366	225	92	61	11.4	5.8
*125 x 75	2.3701	366	225	92	72	11.4	6.9
125 x 90	1.7031	335	170	90	83	11.4	8.2
125 x 110	1.8411	341	170	88	82	11.4	10.0
140 x 75	4.0311	396	230	92	70	12.7	6.8
140 x 90	4.0761	396	235	92	79	12.7	8.2
140 x 110	3.5811	396	240	92	82	12.7	10.0
140 x 125	4.1511	396	240	92	90	12.7	11.4
160 x 63	2.6611	340	176	98	65	14.6	5.8
160 x 75	2.8071	340	180	98	74	14.6	6.9
160 x 90	3.7561	410	180	98	79	14.6	8.2
160 x 110	3.2811	420	265	98	82	14.6	10.0
*160 x 125	4.4461	420	265	102	92	14.6	11.4
160 x 140	5.8761	420	270	102	96	14.6	12.7
180 x 90	4.0811	420	202	136	98	16.4	8.2
180 x 110	4.3601	-	-	-	-	16.4	10.0
*180 x 125	6.4611	460	285	107	92	16.4	11.4
180 x 140	9.0511	460	295	107	110	16.4	12.7
180 x 160	4.3601	411	205	102	94	16.4	14.6
200 x 63	9.7111	500	190	122	63	18.2	5.8
200 x 90	9.7111	503	215	120	81	18.2	8.2
200 x 110	8.1311	503	218	120	84	18.2	10.0
*200 x 125	10.5511	500	295	117	92	18.2	11.4
200 x 140	9.7111	500	310	117	110	18.2	12.7
200 x 160	10.8811	503	236	120	101	18.2	14.6
200 x 180	6.4811	441	310	117	110	18.2	16.4
225 x 75	9.7111	441	227	119	75	20.5	6.9
225 x 90	9.7611	441	225	119	79	20.5	8.2
225 x 110	10.8811	540	237	118	83	20.5	10.0
*225 x 125	14.5551	540	320	122	92	20.5	11.4
225 x 140	10.2011	540	335	122	110	20.5	12.7
225 x 160	9.3561	543	320	120	106	20.5	14.6
225 x 180	14.9061	540	277	132	132	20.5	16.4
225 x 200	9.7111	586	340	122	117	20.5	18.2
250 x 110	9.7111	586	245	132	85	22.7	10.0
250 x 160	18.8711	576	264	132	101	22.7	14.6
250 x 180	18.259	576	350	130	105	22.7	16.4
250 x 200	18.7055	576	360	130	112	22.7	18.2
250 x 225	23.294	576	390	130	120	22.7	20.5
280 x 200	23.5172	616	410	139	112	25.4	18.2
280 x 225	5	616	420	139	120	25.4	20.5
280 x 250	23.9495	616	420	139	130	25.4	22.7
315 x 110	14.535	695	277	150	82	28.6	10.0
315 x 160	15.77	695	296	150	102	28.6	14.6
315 x 200	32.2525	690	470	150	134	28.6	18.2
315 x 225	19.475	650	335	170	145	28.6	20.5
315 x 250	20.9	695	325	150	130	28.6	22.7
315 x 280	33.2025	690	480	150	139	28.6	25.4
355 x 250	46.455	818	165	130	139	32.3	25.7
355 x 280	46.835	818	480	165	139	32.3	25.4
355 x 315	47.2055	818	480	165	150	32.3	28.6

HDPE BUTT WELDING FITTINGS

Tee Reducer 90°

PE 100

d x d (mm)	kg	z (mm)	L (mm)	L1 (mm)	e (mm)	e1 (mm)
32x25	-	-	-	-	-	-
40x32	-	-	-	-	-	-
50x25	-	-	-	-	-	-
50x32	-	-	-	-	-	-
50x40	-	-	-	-	-	-
63 x 32	0.10355	150	65	53	5,8	3,0
63 x 40	0.1235	150	65	57	5,8	3,7
63 x 50	0.1235	150	65	63	5,8	4,6
75 x 40	0.1691	170	72	57	6,8	3,7
75 x 50	0.18145	170	72	63	6,8	4,6
75 x 63	0.1197	170	72	65	6,8	5,8
90 x 50	0.27645	190	81	63	8,2	4,6
90 x 63	0.30115	190	81	65	8,2	5,8
90 x 75	0.33725	190	81	70	8,2	6,8
110 x 63	0.44555	205	86	65	10,0	5,8
110 x 75	0.47215	205	86	70	10,0	6,8
110 x 90	0.52915	205	86	81	10,0	8,2
125 x 63	0.55005	200	87	63	11,4	5,8
125 x 75	0.627	215	92	72	11,4	6,8
125 x 90	0.69825	215	92	81	11,4	8,2
125 x 110	0.77805	215	92	86	11,4	10,0
140 x 75	0.532	230	110	70	12,7	6,8
140 x 90	0.6555	230	110	79	12,7	8,2
140 x 110	0.779	230	110	82	12,7	10,0
140 x 125	0.9386	235	110	90	12,7	11,4
160 x 90	1.007	248	120	79	14,6	8,2
160 x 110	1.2331	245	102	86	14,6	10,0
160 x 125	1.33285	245	102	92	14,6	11,4
160 x 140	1.2825	260	120	110	14,6	12,7
180 x 90	1.4535	245	105	79	16,4	8,2
180 x 125	1.634	255	107	92	16,4	11,4
180 x 110	1.634	270	105	82	16,4	10,0
180 x 140	1.881	270	120	110	116,4	12,7
180 x 160	1.881	255	107	102	16,4	14,6
200 x 140	2.1945	275	120	110	18,2	12,7
200 x 160	2.2515	265	117	102	18,2	14,6
200 x 180	2.54695	265	117	107	18,2	16,4
225 x 140	2.755	295	130	110	20,5	12,7
225 x 160	2.9621	280	122	102	20,5	14,6
225 x 180	3.11315	280	122	107	20,5	16,4
225 x 200	3.3611	280	122	117	20,5	18,2
250 x 160	2.26575	290	130	100	22,7	14,6
250 x 180	3.8475	295	130	105	22,7	16,4
250 x 200	2.26575	302	130	112	22,7	18,2
250 x 225	2.26575	332	130	120	22,7	20,5
280 x 200	6.5075	333	140	112	25,4	18,2
280 x 225	5.7855	335	140	120	25,4	20,5
280 x 250	2.26575	340	140	130	25,4	22,7
315 x 200	2.26575	380	180	134	28,6	18,2
315 x 225	7.4005	365	150	120	28,6	20,5
315 x 250	2.26575	365	150	130	28,6	22,7
315 x 280	8.36	365	150	139	28,6	25,4
355 x 250	8.645	390	165	130	32,3	22,7
355 x 280	9.025	390	165	139	32,3	25,4
355 x 315	9.405	390	165	150	32,3	28,6
400 x 280	9.899	415	180	139	36,4	25,4
400 x 315	10.5735	415	180	150	36,4	28,6
400 x 355	11.02	420	180	165	36,4	32,3
450 x 280	15.39	389	195	139	40,9	25,4
450 x 315	15.865	390	195	150	40,9	28,6
450 x 355	16.625	393	195	164	40,9	32,3
450 x 400	17.575	395	195	179	40,9	36,4
500 x 315	20.805	422	212	150	45,5	28,6
500 x 355	21.47	424	212	164	45,5	32,3
500 x 400	22.42	426	212	179	45,5	36,4
500 x 450	23.845	428	212	195	45,5	40,9
560 x 355	28.595	459	230	164	50,9	32,3
560 x 400	29.45	461	230	179	50,9	36,4
560 x 450	30.78	463	230	195	50,9	40,9
560 x 500	32.395	466	230	212	50,9	45,5
630 x 400	39.805	502	250	179	57,3	36,4
630 x 450	40.945	503	250	195	57,3	40,9
630 x 500	42.465	506	250	212	57,3	45,5
630 x 560	44.46	506	250	230	57,3	50,9

HDPE BUTT WELDING FITTINGS



End Cap

PE 100

d (mm)	kg	z (mm)	e (mm)
20	0.00855	52	3.0
25	0.01235	52	3.0
32	0.01615	54	3.0
40	0.02945	57	3.7
50	0.0475	57	3.7
63	0.08075	65	5.8
75	0.13775	80	6.8
90	0.228	90	8.2
110	0.36765	98	10.0
125	0.5187	105	11.4
140	0.79325	136	12.7
160	0.9747	192	14.6
180	1.30055	120	16.4
200	1.74705	60	18.2
225	2.375	60	20.5
250	3.73065	32	22.7
280	5.0768	16	25.4
315	6.8172	16	28.6

Backing Flange PP-V for Butt Fusion Systems Metric

d (mm)	kg	inch	DN (mm)	P N
63	0.361	-	65	16
75	0.456	-	72	16
90	0.494	-	81	16
110	0.646	-	86	16
125	0.722	-	93	16
140	0.76	-	92	16
160	1.14	6	103	16
180	1.14	-	107	16
200	1.33	8	117	16
225	1.33	9	122	16
250	1.615	-	130	16
280	1.615	-	140	16
315	2.28	-	150	16

Flange Adaptor LS, PE 100 Combined Jointing Face: Flat and Serrated

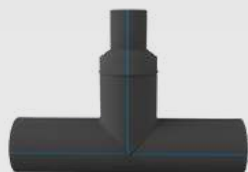
DN (mm)	d (mm)	kg	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)
40	-	-	-	-	-	-	-	-	-	-
50	63	0.1653	75	102	-	51	98	69	14	5.8
65	*75	0.285	89	122	66	61	125	89	16	6.8
80	*90	0.418	105	138	78	73	140	103	17	8.2
100	*110	0.65075	125	158	100	90	160	117	18	10.0
100	*125	0.7942	132	158	114	102	170	125	25	11.4
125	*140	1.23025	155	188	127	114	200	147	25	12.7
150	*160	1.5618	175	212	158	130	200	147	25	14.6
150	*180	1.77935	180	212	158	147	200	170	30	16.4
200	*200	2.6201	232	268	203	163	200	128	32	18.2
200	*225	2.8234	235	268	210	184	200	138	32	20.5
250	*250	4.30825	285	320	245	204	219	138	35	22.7
250	*280	4.67875	291	320	265	229	231	144	35	25.4
300	*315	6.07335	335	370	300	257	239	158	35	28.6
-	*400	-	-	-	-	-	-	-	-	-
-	*630	-	-	-	-	-	-	-	-	-



HDPE BUTT WELDING FITTINGS

Segmented Reduced Tee 90°

DE	H (mm)	z (mm)
160	150	460
180	200	580
200	200	600
225	200	625
250	200	650
280	200	680
315	300	915
355	300	955
400	300	1000
500	300	1100
560	350	1260
630	350	1330
710	400	1510
800	400	1600
900	400	1700
1000	400	1800

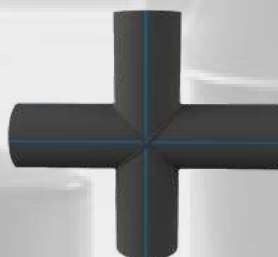
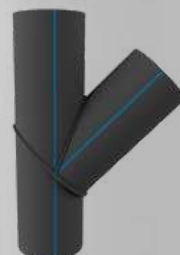


Segmented Bend 90°

DE	H (mm)	z (mm)
110	-	-
125	-	-
140	-	-
160	-	-
180	150	427
200	200	473
225	200	467
250	200	490
280	200	507
315	200	545
355	300	688
400	300	737
450	300	790
500	300	1139
560	300	1164
630	350	1258
710	350	1293
800	400	1397
900	400	1442
1000	400	1505
1000	400	1555

Segmented Tee 45°

DE	H (mm)	z (mm)
110	400	535
125	400	520
140	400	553
160	400	613
180	400	675
200	400	683
225	450	743
250	550	853
280	550	865
315	600	1030
355	600	1047
400	800	1265
450	800	1065
500	1000	1487
560	1000	1582
630	1200	1810



Segmented Cross

DE	H (mm)	z (mm)
110	92	338
125	90	355
140	96	390
160	104	427
180	107	450
200	115	500
225	120	540
250	132	610
280	140	680
315	152	707
355	230	1000
400	230	960
450	230	1040
500	230	1060
560	350	1260
630	350	1330

HDPE BUTT WELDING FITTINGS



Segmented Bend 60°

DE	H (mm)	Z (mm)
110	-	-
125	-	-
140	-	-
160	-	-
180	150	279
200	200	279
225	200	328
250	200	339
280	200	345
315	200	355
355	300	478
400	300	477
450	300	511
500	300	689
560	350	704
630	350	777
710	400	797
800	400	876
900	400	902
1000	400	937
1000	400	965



Segmented Bend 45°

DE	H (mm)	Z (mm)
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	150	273
180	200	323
200	200	322
225	200	333
250	200	338
280	200	349
315	300	470
355	300	470
400	300	502
450	300	636
500	300	647
560	350	715
630	350	729
710	400	801
800	400	820
900	400	846
1000	400	866

Segmented Bend 30°

DE	H (mm)	Z (mm)
63	-	-
75	-	-
90	-	-
110	-	-
125	-	-
140	-	-
160	150	171
180	200	224
200	200	226
225	200	230
250	200	233
280	200	237
315	300	324
355	300	347
400	300	353
450	300	360
500	300	367
560	350	425
630	350	434
710	400	495
800	400	507
900	400	520
1000	400	534





HDPE ELECTRO-FUSION FITTINGS

HDPE ELECTRO-FUSION FITTINGS

Elbow 90°



Size (mm)
20
25
32
40
50
63
75
90
110
125
160
180
200
225
250
315

Elbow 45°



Size (mm)
20
25
32
40
50
63
75
90
110
125
160
180
200
225
250
315

Tee 90°

Size (mm)
20
25
32
40
50
63
75
90
110
125
160
180
200
225
250
315



Tee Reducer 90°



Size (mm)
32x25
50x32
63x32
63x50
160x110
180x125

HDPE ELECTRO-FUSION FITTINGS

Reducer



Size (mm)

25x20
32x20
32x25
40x20
40x25
40x32
50x25
50x32
50x40
63x32
63x40
63x50
75x50
75x63
90x50
90x63
110x63
110x90
125x25
125x90
125x110
160x90
160x110
160x125
225x160

Coupler



Size (mm)

20
25
32
40
50
63
75
90
110
125
140
160
180
200
225
250
280
315
355
400
450
500
560
630

Cap



Size (mm)

33
20
25
32
40
50
63
75
90
110
125
140
160
180
200
225
250
280
315

HDPE BUTT WELDING MACHINES



● UPVC & PVC

PVC PIPES

INTEGRATED SOLUTIONS

Oman Therm is one of the leading companies working in the field of manufacturing and trading of plastic industries, PVC Pipes and Fittings in the Sultanate of Oman.

Oman Therm has achieved a distinguished record of success among its clients, which includes important agencies, financial and international organizations, Arab and leading companies in the fields of industry and trade.

The company has several international cooperating companies for the manufacture of chemicals and other materials.

Product Range:

- UPVC Electrical Conduits and Fittings.
- UPVC Drainage pipes.
- UPVC Casing pipes.
- Soil and Waste Pipes & Fittings.
- UPVC High Pressure pipes & Fittings.
- UPVC Ducts pipes.

Our superior quality UPVC Pipes and Fittings meets the requirements of the following sectors like Residential, Commercial Buildings, Hospitals, Airports, Educational Institute projects and Infrastructure development in GCC, Middle East and Other Countries.

We Oman Therm are constantly upgrading ourselves with the growing technology, experience, quality to meet the ever growing and innovative in Building Materials & Construction

market requirement and challenges of the local and internationally acclaimed companies in the region with stringent quality requirements.

Physical properties of UPVC

PROPERTIES	UNIT	VALUES
Density Tensile	UNIT	1.4-1.46
strength Elongation	Gr/cc Mpa %	45-50
Compressive strength	Mpa Mpa	80-150
Modulus of elasticity	Cal/g/C°	59
Specific Heat Thermal	Kcal/m/h/C°	3000
Conductivity Heat		0.24
Distortion		0.12
Temperature at 18.5kgf/cm ²	C°	70
5kg.VicatSoftening Point	C°	80
Liner Expansion	Mm/m/C°	0.08
Volume Resistivity	Ohm/cm	10 15
Flammability	Self Extinguishing	

PROPERTIES AND FEATURES

Applications of UPVC

With excellent features, PVC pipes have diversified applications and few of which are:

- Cold water plumbing services.
- Drainage installation (Industrial & Domestic).
- Factory Supply Line.
- Mining.
- Chemical Plant installations.
- Irrigation and agriculture use.
- Tube well casing and strainer.
- Paper mill installation alum and pulp carrying.
- Vent and ducting for power & communication cables.



OMAN THERM UPVC PIPES & FITTINGS FEATURES

High strength to weight ratio Light weight, Easy to handle and install. Smooth inner surface with lesser friction. Resistant to various alkalis, acids, other chemical and aggressive soils. Variety of colors. Fire Retardant properties. Corrosion and abrasion resistant. Insect and mouse proof. Low thermal conductivity. Shock resistant. Aging resistant. Pressure resistant. Innocuous. Economical and Dependable. Environmental friendly.

www.omantherm.com

Colors and Standards of UPVC Pipes & Fittings

Standards	Color
BS 5255	White
BS 4514-1/ BS EN 1329-1	Grey
BSEN 1401-1/ BS 4660	GoldenBrown
BS STD 3505/3506	Dark Grey
ASTM D 1784 Schedule40/80	Grey/White

PVC-U PRESSURE PIPE

TO BRITISH STANDARDS SPECIFICATION

BS: 3505 / 1986

Standard Length: 6 Metres

Colour: Dark Grey

Socket Type: Solvent Weld

Nominal Size Inch	Wall Thickness							
	Outside Diameter		Class C 9.0 bar (90m head of water)		Class D 12.0 bar (120m head of water)		Class E 15.0 bar (150m head of water)	
	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm	Min mm	Max mm
1/2	21.2	21.5	-	-	-	-	1.7	2.1
3/4	26.6	26.9	-	-	-	-	1.9	2.5
1	33.4	33.7	-	-	-	-	2.2	2.7
1 1/4	42.1	42.4	-	-	2.2	2.7	2.7	3.2
1 1/2	48.1	48.4	-	-	2.5	3.0	3.1	3.7
2	60.2	60.5	2.5	3.0	3.1	3.7	3.9	4.5
3	88.7	89.1	3.5	4.1	4.6	5.3	5.7	6.6
4	114.1	114.5	4.5	5.2	6.0	6.9	7.3	8.4
6	168.0	168.5	6.6	7.6	8.8	10.2	10.8	12.5
8	218.8	219.4	7.8	9.0	10.3	11.9	12.6	14.5
10*	272.6	273.4	9.7	11.2	12.8	14.8	15.7	18.1
12	323.4	324.3	11.5	13.3	15.2	17.5	18.7	21.6

PVC-U PRESSURE PIPES

BS EN ISO 1452-2: 2009

Standard Length: 6 Metres

Colour: Dark Grey

Socket Type: Solvent Weld

Nominal outside Diameter	Outside Diameter		S - 20 (SDR 41) Wall Thickness		S - 16 (SDR 33) Wall Thickness		S - 12.5 (SDR 26) Wall Thickness	
	Min	Max	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
mm	mm	mm	Nominal Pressure PN based on design coefficient C = 2.5					
					6 bar		* 8 bar	
12	12	12.2			- - - -		- - - -	
16	16	16.2			- 1.5		1.5 1.6	
20	20	20.2			1.6 2		2 2.5	
25	25	25.2			2.3		2.9 3.5	
32	32	32.2			2.8			1.9
40	40	40.2				1.9		2
50	50	50.2				2		2.4
63	63	63.3				2.4		3
75	75	75.3				2.8		3.4
90	90	90.3				3.3		4
			Nominal Pressure PN based on design coefficient C = 2.0					
			6 bar		* 8 bar		10 bar	
110	110	110.4	2.7	3.2	3.4 3.9	4	4.2	4.9
125	125	125.4	3.1	3.7	4.3 4.9	4.5	4.8	5.5
140*	140	140.5	3.5	4.1	5.5 6.2	5	5.4	6.2
160	160	160.5	4	4.6	6.9 7.7	5.6	6.2	7.1
180*	180	180.6	4.4	5.1	8.6 9.7	6.3	6.9	7.8
200	200	200.6	4.9	5.6	10.9	7.1	7.7	8.7
225	225	225.7	5.5	6.3	12.3	7.8	8.6	9.7
250	250	250.8	6.2	7.1		8.7	9.6	10.
280	280	280.9	6.9	7.8		9.7	10.7	8
315	315	316	7.7	8.7		10.9	12.1	12
355*	355	356.1	8.7	9.8		12.2	13.6	13.
400*	400	401.2	9.8	11		13.8	15.3	6

PVC-U PRESSURE PIPES

BS EN ISO 1452-2: 2009

Standard Length: 6 Metres

Colour: Dark Grey

Socket Type: Solvent Weld

Nominal Size	Individual Outside Diameter		Wall Thickness PN 9 bar (Class C)		Wall Thickness PN 12 bar (Class D)		Wall Thickness PN 15 bar (Class E)	
Inch	Min	Max	Min (mm)	Max	Min	Max	Min	Max
1/2	21.2	21.5	-	-	-	-	1.7	2.1
3/4	26.6	26.9	-	-	-	-	1.9	2.5
1	33.4	33.7	-	-	-	-	2.2	2.7
1 1/4	42.1	42.4	-	-	2.2	2.7	2.7	3.2
1 1/2	48.1	48.4	-	-	2.5	3.0	3.1	3.7
2	60.2	60.5	2.5	3.0	3.1	3.7	3.9	4.5
3	88.7	89.1	3.5	4.1	4.6	5.3	5.7	6.6
4	114.1	114.5	4.5	5.2	6.0	6.9	7.3	8.4
6	168.0	168.5	6.6	7.6	8.8	10.2	10.8	12.5
8	218.8	219.4	7.8	9.0	10.3	11.9	12.6	14.5
10*	272.6	273.4	9.7	11.2	12.8	14.8	15.7	18.1
12	323.4	324.3	11.5	13.3	15.2	17.5	18.7	21.6

S - 10 (SDR 21) Wall Thickness		S - 8 (SDR 17) Wall Thickness		S - 6.3 (SDR 13.6) Wall Thickness		S - 5 (SDR 11) Wall Thickness	
Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
10 bar		* 12.5 bar		16 bar		* 20 bar	
-	-	-	-	-	-	1.5	1.9
-	-	-	-	-	-	1.5	1.9
-	-	-	-	1.5	1.9	1.9	2.3
-	-	1.5	1.9	1.9	2.3	2.3	2.8
1.6	2	1.9	2.3	2.4	2.9	2.9	3.4
1.9	2.3	2.4	2.9	3	3.5	3.7	4.3
2.4	2.9	3	3.5	3.7	4.3	4.6	5.3
3	3.5	3.8	4.4	4.7	5.4	5.8	6.6
3.6	4.1	4.5	5.2	5.6	6.4	6.8	7.7
4.3	5	5.4	6.2	6.7	7.6	8.2	9.3
* 12.5 bar		16 bar		* 20 bar		* 25 bar	
5.3	6.1	6.6	7.5	8.1	9.2	10	11.3
6	6.8	7.4	8.4	9.2	10.4	11.4	12.8
6.7	7.6	8.3	9.4	10.3	11.6	12.7	14.2
7.7	8.7	9.5	10.7	11.8	13.2	14.6	16.3
8.6	9.7	10.7	12	13.3	14.9	16.4	18.3
9.6	10.8	11.9	13.3	14.7	16.4	18.2	20.3
10.8	12.1	13.4	15	16.6	18.5	-	-
11.9	13.3	14.8	16.5	18.4	20.5	-	-
13.4	15	16.6	18.5	20.6	22.9	-	-
15	16.8	18.7	20.8	23.2	25.8	-	-
16.9	18.8	21.1	23.5	26.1	29	-	-
19.1	21.3	23.7	26.3	29.4	32.6	-	-

UPVC Drainage Pipe System

Drainage Pipe Systems

OMAN THERM products a range of UPVC pipes above and below the ground use made from 100% virgin UPVC materials. It has full range of fittings in solvent weld for all sizes.

The pipes are produced in all major international standards BS EN 1401, BS EN 1329, as well as the previous standards such as BS 5255, BS 4514, BS 4660 and ASTM D2655 40/80 Sch.

General properties of Oman Therm Drain Pipes :

- Fully compliant to the main International Standards
 - Kitemark certified range
 - Tough, impact resistant
 - EPDM rubber rings following EW681 Standard
 - Can be supplied in Solvent Weld or Rubber Ring Joint (from 3" and above)
- Different lengths available 3m, 2.9m, 6m, 5.8m. Other lengths on request.
- Distinctive colour coded system (ie Light Grey, Brown, White, etc.) with full printing at 1m intervals
- Superior chemical and acid resistance
 - Outstanding mechanical properties of tensile strength and resistance to pressure.
 -
 -

BS 5255, BS 4514, BS 4660, BS 5481

Code	Nominal OD mm(inch)	Minimum OD mm	Minimum Wall Thickness mm	Colour
BS 5255 WASTE				
DR-125	36(1 1/4")	36.15	1.8	WH/LG
DR-15	43(1 1/2")	42.75	1.9	"
DR-2(50)*	50(2")	50.00	2.0	"
DR-2(55)	55(2")	55.75	2.0	"
BS 4514 SOIL				
DR-3/LG	82(3")	82.40	3.0	LG
DR-4/LG	110(4")	110.00	3.2	"
DR-6/LG	160(6")	160.00	3.2	"
BS 4660 UNDERGROUND				
DR-4/BR	110(4")	110.00	3.2	BR
DR-6/BR	160(6")	160.00	4.1	"
BS 5481 GRAVITY SEWER				
DR-8/BR	200(8")	200.00	4.9	BR
DR-10/BR	250(10")	250.00	6.1	"
DR-12/BR	315(12")	315.00	7.7	"
DR-16/BR	400(16")	400.00	9.8	"

* Not part of BS 5255. Metric only.

UPVC Drainage pipe system.

The main features of Ezyflo drainage fittings are:

- Strong and resistant to impact
- Easy to install and compatible with National Plastic drainage pipe.
- Fully compliant to the BS standards.
- Resistant to a wide range of chemicals / fluids.
- Smooth bore to give excellent flow characteristics.

Specifications:

Standards	:	BS 5255 - Light Grey; BS 4514 - Light Grey; BS 4660 - Brown
Material	:	100% uPVC
Joints	:	Female solvent weld sockets
Temp Range	:	0°C - 80°C
Tensile Strength	:	(for intermittent discharge) Min. 45 N/mm ²

Characteristics of Pipes BS EN 1329, BS EN 1401

Raw Material

The raw material is 100% virgin PVC-U

Colour

BS EN 1329-1:2000	v	Light Grey
BS EN 1401-1:1998	v	Orange Brown

Chamfering

A 15° chamfer is applied to all spigot ends for rubber ring pipe.

Length

Pipes are normally supplied in 6m overall length.

Pipes can also be supplied in 5.8m overall length to fit inside containers.

Sizes 36, 43 and 56mm are supplied in 4m overall length with plain ends.



Mechanical and Physical Characteristics

Characteristics	Requirement	Test Method
Impact Resistance	TIR ≤ 10%	EN 744
Vicat Softening	≥ 79°C	EN 727
Longitudinal Reversion	≤ 5%	EN 743
Dichloromethane Acid Resistance	No attack	EN 580
Water Tightness of Rubber Ring Joint	No leakage	EN 1277
Elevated Temp. Cycling	No leakage	EN 1055
Long Term Performance of TPE Seals	1. 90 days ≥ 1.3 bar 2. 100 years ≥ 0.6 bar	prEN 1989
Resistance to Internal Pressure	No failure during the test 10.0MPa for 1000 hours, at 60°C	EN 921

BS EN 1329-1:2000

Dimensions in millimeters

Nominal Size DN/OD	Nominal OD	Mean Outside Diameter		Wall Thickness Application Area "B"	
		(dem, min)	(dem, max)	(e, min)	(e, max)
36 (1 1/4")	36	36.2	36.5	3.0	3.5
43 (1 1/2")	43	42.8	43.1	3.0	3.5
56 (2")	56	55.8	56.1	3.0	3.5
82 (3")	82	82.0	82.3	3.0	3.5
110 (4")	110	110.0	110.30	3.2	3.8
160 (6")	160	160.0	160.40	3.2	3.8
200 (8")	200	200.0	200.5	3.9	4.5
250 (10")	250	250.0	250.5	4.9	5.6
315 (12")	315	315.0	315.6	6.2	7.1

N.B. Application area "B" for components intended to be used above ground inside the building or outside building fixed to a wall.

BS EN 1401-1:1998

Dimensions in millimeters

Nominal Size DN/OD	Nominal OD	Mean Outside Diameter		Wall Thickness SN2, SDR 51		Wall Thickness SN4, SDR 41		Wall Thickness SN8, SDR 34	
		(dem, min)	(dem, max)	(e, min)	(e, max)	(e, min)	(e, max)	(e, min)	(e, max)
110 (4")	110	110.0	110.3	-	-	3.2	3.8	3.2	3.8
160 (6")	160	160.0	160.4	3.2	3.8	4.0	4.6	4.7	5.4
200 (8")	200	200.0	200.5	3.9	4.5	4.9	5.6	5.9	6.7
250 (10")	250	250.0	250.5	4.9	5.6	6.2	7.1	7.3	8.3
315 (12")	315	315.0	315.6	6.2	7.1	7.7	8.7	9.2	10.4
400 (16")	400	400.0	400.7	7.9	8.9	9.8	11.0	11.7	13.1

N.B. For Outside the building structure application area "U" SN2 = Ring stiffness of 2 kN/m² SN4 = Ring stiffness of 4 kN/m²

uPVC Electrical Conduit & Duct System

Oman Therm uPVC Electrical Conduit Pipes (BS 6099) & GSO 33/2007

Nominal Size (mm)	min Wall thickness (mm)			Inside Diameter ID mm		
	Light	medium	Heavy	Light	medium	Heavy
16	1.15	1.5	1.9	13.7	13.0	12.2
19	1.2	1.4	2.0	16.6	16.2	15.0
20	1.3	1.5	2.1	17.4	17.0	15.8
25	1.4	1.8	2.2	22.2	21.4	20.6
32	1.9	2.1	2.7	28.2	27.8	26.6
38	1.8	2.45	2.75	34.4	33.1	32.5
50	2.45	2.85	3.4	45.1	44.3	43.2

- Color: Black & white
- Solvent Cement can be used for jointing.
- Standard length 2.9m & 3.0m.

Note:

Plain pipes and socketing pipes are available as per customer requirements.

Bending of Oman Therm uPVC Electrical Conduit Pipes

To bend circular conduit, insert the appropriate spring. The spring has an "eye" formed on one end, to which a cord should be attached in order to withdraw the spring. The bend is then made by hand or across the knee. Twice the angle required should be bent and the tube then allowed easing back to the desired position. Do not attempt to force the bend back with the spring inserted, as this action will damage the spring. When withdrawing the spring it is suggested that it be twisted in an anti-clockwise direction thus reducing the diameter of the spring and providing easy withdrawal. It is important to use the correct size spring. In cold weather it may be necessary to warm the tube slightly at the point where the bend is to be made. Always saddle the tubing as quickly as possible after bending.

pvc-u Telephone duct din 8061/8062 series 3 Omantal /Ooredoo/OBB

Standard Length: 6 Metres
Colour: Socket Grey/ Black
Type: Solvent Weld

Nominal Size mm	Outside Diameter mm	Wall Thickness mm
50	50.0	1.8
110	110.0	3.2

pvc-u conduits for cables Bs En 61386-24

Standard Length: 3 Metres
Colour: Socket Black
type : Solvent Weld

Pipe Size mm	Outside Diameter mm		Min. inside diameter mm	Wall Thickness N 450		Wall Thickness N 750	
	Min.	Max.		Min	Max	Mi	Ma
50	50	51	37	-	-	n	x
75	75	76.4	56	2.6	3.1	3.0	3.5
90	90	91.7	67	2.9	3.2	-	-
110	110	112	82	3.2	3.8	4.5	5.0
160	160	162.9	12	5.0	6.0	-	-

0

pvc-u Non Pressure Pipe to Bs: 3506 (class B, C, D & E) 1969

Standard Length: 6 Metres
Colour: Socket dark Grey
Type: Solvent Weld

Nominal Size	Outside Diameter		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
			Class B		Class C		Class D		Class E	
Inch	Min/mm	Max/mm	Min/mm	Max/mm	Min/mm	Max/mm	Min/mm	Max/mm	Min/mm	Max/mm
2	60.2	60.5	-	-	2.5	3.0	3.1	3.7	3.9	4.5
3	88.7	89.1	2.9	3.4	3.5	4.1	4.6	5.3	5.7	6.6
4	114.1	114.5	3.4	4.0	4.5	5.2	6.0	6.9	7.3	8.4
6	168.0	168.5	4.5	5.2	6.6	7.6	8.8	10.2	10.8	12.5
8	218.8	219.4	5.3	6.1	7.8	9.0	10.3	11.9	12.6	14.5
10	272.6	273.4	6.6	7.6	9.7	11.2	12.8	14.8	15.7	18.1
12	323.4	324.3	7.8	9.0	11.5	13.3	15.2	17.5	18.7	21.6

pvc-u Conduits

Omani standard 109/1986

Nominal size mm	Outside Diameter mm		Minimum Inside Dia. mm
	Dimension	Tolerance	
16	16	- 0.2	13.0
20	20	- 0.30	16.9
25	25	- 0.3	21.4
32	32	- 0.40	27.8

Standard Length: 3.0 Meters
Colour: Light grey / Dark Black

pvc-u Conduits FOR Cables

Bs En 61386-24

Pipe Size mm	Outside Diameter mm		Min. inside diameter mm	Wall Thickness N 450		Wall Thickness N 750	
	Min.	Max.		Min	Max	Min	Max
50	50	51	37	-	-	3.0	3.5
75	75	76.4	56	2.6	3.1	-	-
90	90	91.7	67	2.9	3.2	-	-
110	110	112	82	3.2	3.8	4.5	5.0
160	160	162.9	12	5.0	6.0	-	-

Standard Length: 6.0 Meters
Colour: Light grey / Dark Black
Type : Solvent Weld



Oman Therm uPVC Casing Pipes

Oman Therm uPVC Casing Pipes are manufactured from state-of-the-art machines and 100% lead free material. Our uPVC Casing Pipes & Ribbed/Plain Screen pipes are stronger, durable, corrosion resistance, therefore they are the best choice for the transportation of hard, salty, sandy and chemical aggressive water in domestic wells, industrial wells, public and mining wells.

Oman Therm uPVC Casing Pipes are manufactured as per IS 12818 and available in CS types and CM type for shallow and medium Borewells

Table 11 : CD Pipes for deep wells upto 400 mtrs depth

Nominal Size - DN (mm)	Pipe size in inches	Outer Diameter		O.D at any point		Mean OD over Connection	Wall Thickness (mm)	
		Min.	Max.	Min.	Max.	Max.	Min.	Max.
100	4"	113.00	113.30	112.90	113.40	125.00	7.00	7.90
115	4.5"	125.00	125.30	124.90	125.40	137.00	7.50	8.50
125	5"	140.00	140.40	139.90	140.50	152.00	8.00	9.00
150	6"	165.00	165.40	164.60	165.60	180.00	9.50	10.70
180	6.5"	180.00	180.50	179.80	180.60	190.00	10.20	11.40
175	7"	200.00	200.50	199.60	200.60	217.00	11.80	13.60
200	8"	225.00	225.50	224.50	225.80	247.00	13.00	14.80
250	10"	280	280.5	279.4	280.8	304	16	17.6
300	12"	330	330.6	329.3	331	359	19	21

Pressure Series

Coupling



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1400
¾"	33.3	700
1"	33.3	460
1½"	48.6	234
2"	60.2	112
3"	88.7	NA

Elbow 90°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	800
¾"	33.3	400
1"	33.3	240
1½"	48.6	116
2"	60.2	54
3"	88.7	NA

Elbow 45°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	900
¾"	33.3	600
1"	33.3	300
1½"	48.6	130
2"	60.2	72
3"	88.7	NA

Tee



Size (inch)	Size (mm)	TDS Qty
½"	21.6	540
¾"	33.3	300
1"	33.3	160
1½"	48.6	72
2"	60.2	44
3"	88.7	NA

Female Tee



Size (inch)	Size (mm)	TDS Qty
½"	21.6	220
¾"	33.3	168
1"	33.3	126
1½"	48.6	50
2"	60.2	32
3"	88.7	NA

Male Adaptor



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1120
¾"	33.3	800
1"	33.3	680
1½"	48.6	234
2"	60.2	144
3"	88.7	NA

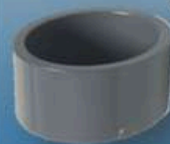
Pressure Series

Female Adaptor



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1080
¾"	33.3	800
1"	33.3	400
1½"	48.6	216
2"	60.2	112
3"	88.7	NA

End Cap



Size (inch)	Size (mm)	TDS Qty
½"	21.6	2000
¾"	33.3	1260
1"	33.3	720
1½"	48.6	348
2"	60.2	216
3"	88.7	NA

Female Elbow 90°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	340
¾"	33.3	180
1"	33.3	196
1½"	48.6	72
2"	60.2	24
3"	88.7	NA

Union



Size (inch)	Size (mm)	TDS Qty
½"	21.6	288
¾"	33.3	240
1"	33.3	128
1½"	48.6	45
2"	60.2	24
3"	88.7	NA

Plastic Ball Valve



Size (inch)	Size (mm)	TDS Qty
½"	21.6	100
¾"	33.3	100
1"	33.3	80
1½"	48.6	50
2"	60.2	24
3"	88.7	NA

Female Union



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1400
¾"	33.3	700
1"	33.3	460
1½"	48.6	234
2"	60.2	112
3"	88.7	NA

UPVC WATER PIPES FITTINGS

Coupling



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1400
¾"	33.3	700
1"	33.3	460
1.1/2"	48.6	234
2"	60.2	112
3"	88.7	NA

Elbow 90°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	800
¾"	33.3	400
1"	33.3	240
1.1/2"	48.6	116
2"	60.2	800
3"	88.7	NA

Elbow 45°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	900
¾"	33.3	600
1"	33.3	300
1.1/2"	48.6	130
2"	60.2	72
3"	88.7	NA

Tee



Size (inch)	Size (mm)	TDS Qty
½"	21.6	540
¾"	33.3	300
1"	33.3	160
1.1/2"	48.6	72
2"	60.2	44
3"	88.7	NA

Female Tee



Size (inch)	Size (mm)	TDS Qty
½"	21.6	540
¾"	33.3	300
1"	33.3	160
1.1/2"	48.6	72
2"	60.2	44
3"	88.7	NA

Male Adaptor



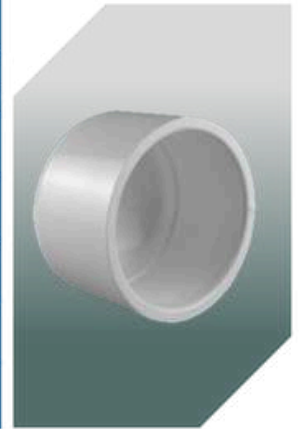
Size (inch)	Size (mm)	TDS Qty
½"	21.6	800
¾"	33.3	400
1"	33.3	240
1.1/2"	48.6	116
2"	60.2	800
3"	88.7	NA

Female Adaptor



Size (inch)	Size (mm)	TDS Qty
½"	21.6	1080
¾"	33.3	800
1"	33.3	400
1.1/2"	48.6	216
2"	60.2	112
3"	88.7	NA

End Cap



Size (inch)	Size (mm)	TDS Qty
½"	21.6	2000
¾"	33.3	1260
1"	33.3	720
1.1/2"	48.6	348
2"	60.2	216
3"	88.7	NA

Female Elbow 90°



Size (inch)	Size (mm)	TDS Qty
½"	21.6	340
¾"	33.3	180
1"	33.3	196
1.1/2"	48.6	72
2"	60.2	24
3"	88.7	NA

Union



Size (inch)	Size (mm)	TDS Qty
½"	21.6	340
¾"	33.3	180
1"	33.3	196
1.1/2"	48.6	72
2"	60.2	24
3"	88.7	NA

Plastic Ball Valve



Size (inch)	Size (mm)	TDS Qty
½"	21.6	32
¾"	33.3	24
1"	33.3	24
1.1/2"	48.6	18
2"	60.2	12
3"	88.7	NA

Female Union



Size (inch)	Size (mm)	TDS Qty
½"	21.6	340
¾"	33.3	180
1"	33.3	196
1.1/2"	48.6	72
2"	60.2	24
3"	88.7	NA

UPVC DRAINAGE AND WASTE PIPES FITTINGS

OMAN THERM UPVC Non-Pressure Fittings for above ground and Under ground Drainage Application Solvent Fix Type.

Available Color : Golden Brown
Light & Dark Grey.

Elbow 90°



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Elbow 45°



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Coupling



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Clean Out



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Downstream Tee



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Plain Cross



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Reducer Bush



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Vent Cap

Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200



Skew Tee



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Reducing Downstream Tee

Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200



Door Elbow



Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200

Door Tee

Size (inch)	Size (mm)
3"	82
4"	110
6"	160
8"	200



UPVC DRAINAGE AND WASTE PIPES FITTINGS

OMAN THERM UPVC Non-Pressure Fittings for above ground and Under ground Drainage Application Solvent Fix Type.

Available Color : White

Elbow 90⁰



Size (inch)	Size (mm)
1½"	42.8
2"	55.8

Elbow 45⁰



Size (inch)	Size (mm)
1½"	42.8
2"	55.8

Coupling



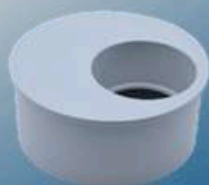
Size (inch)	Size (mm)
1½"	42.8
2"	55.8

Tee



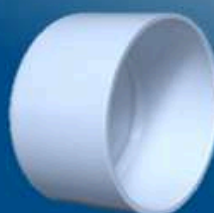
Size (inch)	Size (mm)
1½"	42.8
2"	55.8

Reducer



Size (inch)	Size (mm)
1½"	42.8
2"	55.8

End Cap



Size (inch)	Size (mm)
1½"	42.8
2"	55.8

uPVC Electrical Conduit Fittings & Accessories.

BRITISH STANDARD

BS 4607 PART 3

Standard Coupling

Available in Black Color. White Color upon request.



Size

mm

19

20

25

32

38

50

Note :Available in Black Color. White Color upon request.

❑ Solvent Cement Welding Joints

Joining Equipment and Material

- Cutting Tool
Saw & Miter Box or Pipe Cutter (Ratchet Type, Wheel Type)
- Pipe debarring & beveling tool, file or knife
- Solvent Cement
PVC : 711[to 12"],719[to 24"] : IPS Corp. CPVC : 714[to 12"],729[to 24"] : IPS Corp.
- Primer P-70 : IPS Corp.
- Cleaner
- Cotton Rag
- Square
- Scale
- Felt-tip Pen
- Tape Measure
- Brush
- Insertion Tool (6" and above)
- Container (Metal Cans to Hold Cement or Primer)

1-Cutting①②③

Pipe ends must be cut square.

Check the pipe end with a square to make sure it has been cut squarely.

Note: A diagonal cut reduces bonding area in the most effective and critical part of the joint.

Wheel type cutters are not generally recommended for large diameters since they tend to raise flare at the pipe end.

This flare must be removed with a file or debarring tool, as it will scrape the cement away when pipe is inserted into the fitting.

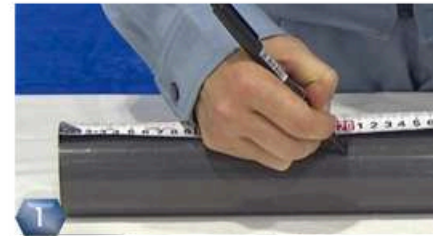
2- Debarring ④⑤

All burrs, chips, filings, etc., should be removed from both around the pipe before joining.

Use a knife, debarring tool or a half-round coarse file.

All pipe ends should be beveled from 45 degrees. Note:

Failure to chamfer the edge of the pipe may remove cement from the fitting socket, causing the joint to leak.



❑ Solvent Cement Welding Joints

3. Inspection, Cleaning ⑥⑦

Visually inspect the inside of the pipe and fitting sockets and remove all dirt, grease or moisture with a clean dry rag. Check pipes and fittings possible damage such as splits or cracks and replace if necessary.

4. Test Dry Fit of the Joint

Check pipe and fittings for dry fit before cementing. The pipe should be inserted to the fitting easily about 1/3 to 2/3 of the socket depth.

5. Depth-Of-Entry Mark ⑧⑨

Measure the socket depth of the fitting and mark this distance on the pipe O.D. ⑩

This reference mark can be used when joining to ensure the pipe is completely bottomed into the fitting during assembly. In addition, draw the line for a guide outside the reference line.

6. Priming ⑩⑪

This process is necessary to penetrate and soften both pipe and fitting socket surfaces for cementing process.

Apply primer to the surface of the pipe and fitting socket. Move quickly without hesitation to the cementing procedure while surfaces are still wet with primer.

7. Application of Solvent Cement ⑫⑬

Apply the solvent cement evenly and quickly around the outside of the pipe at a width a little greater than the depth of the fitting socket while the primer is still wet.

Apply a light coat of cement evenly around the inside of the fitting socket. Avoid paddling.

Apply a second coat of cement to the pipe end.

Installation

NOTE: Read all warnings on primer and cement cans



Bends

Care should be taken not to make bends too tight. Attention is drawn to BS 7671:2001 (Wiring Regulations) 522-08-03. The radius of every bend in a wiring system shall be such that conductors and cables shall not suffer damage.

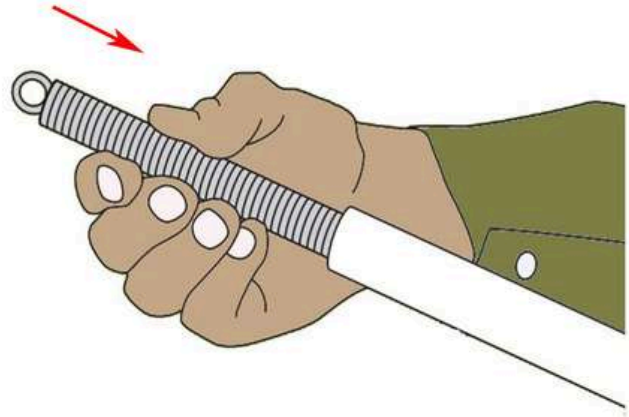
Cold Bending 20-25mm u-PVC Conduit

Cold bending may be carried out on all conduit sizes up to 25mm in diameter using the correct size and gauge of bending spring.

- o Heavy gauge springs carry a green colour-band at the tip.
- o Make sure springs are not damaged in any way as this can fracture or kink the conduit making removal of the spring difficult.
- o In cold weather, warm the conduit by rubbing with a rag before bending.

Procedure

- o Insert the spring to the desired position, grip the conduit on either side of bend and bring slowly together to form the bend. For reference use Oman Therm approved springs.
- o Cold bending of 20mm and 25mm conduit should be done with the correct / undamaged spring inserted and bent over knee to initiate the bend. Springs should remain inserted until the desired angle is achieved. (Under no circumstance should bends be increased or decreased without correct spring inserted). Failure to follow the above procedure could increase possibility of product failure.
- o Do make the bend more acute than necessary to allow for uPVC to 'recover' after bending.
- o To remove the spring, twist anti-clockwise (to reduce its diameter) whilst turning the conduit clockwise and gently pulling the conduit and the spring apart.
- o If spring fails to release, do not pull too hard or damage to the spring may occur.
- o Repeat the removal procedure until they come apart.
- o The conduit should then be fastened into position as quickly as possible to prevent further 'recovery'.

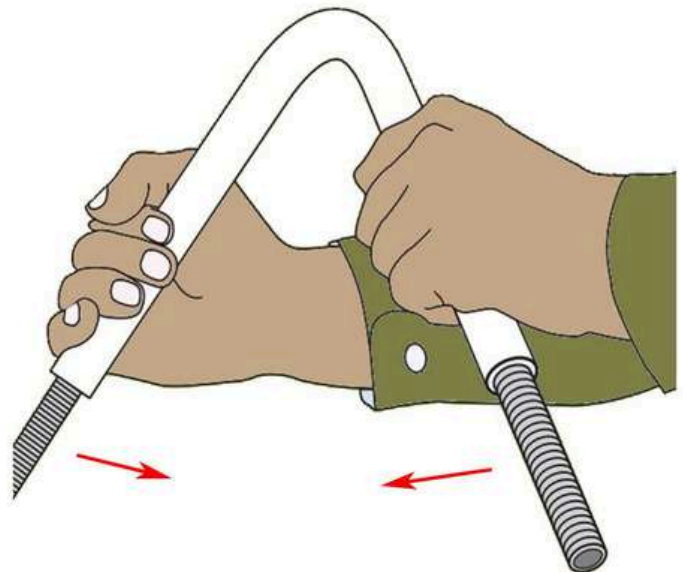


Hot Bending

Hot bending should be carried out on all conduit sizes over 25mm in diameter using the correct size and gauge of bending spring.

Procedure

- o Insert the spring to the desired position as described in 'cold bending' above and commence gently heating the conduit with a hot air torch (not too close and with movement), hot water or by other suitable indirect heating means.
- o Avoid direct application of flame to the conduit.
- o When the conduit is in a pliable state, slowly bend around a suitable form, holding in position until set.
- o To remove the spring, twist anti-clockwise (to reduce its diameter) while turning the conduit clockwise and gently pulling the conduit and the spring apart.
- o If the conduit is bent too fast or on an unstable place (the knee), there is a risk of damage to conduit and spring.
- o Once the bend has been made, it should not be re-bent backwards, but allowed to 'recover' naturally.

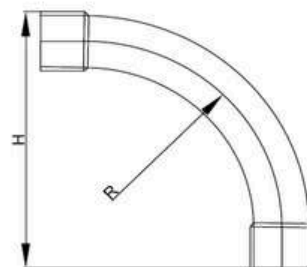


Solvent Cement Joining

For installation in wet or high humidity areas it is mandatory to secure joints with PVC solvent cement.

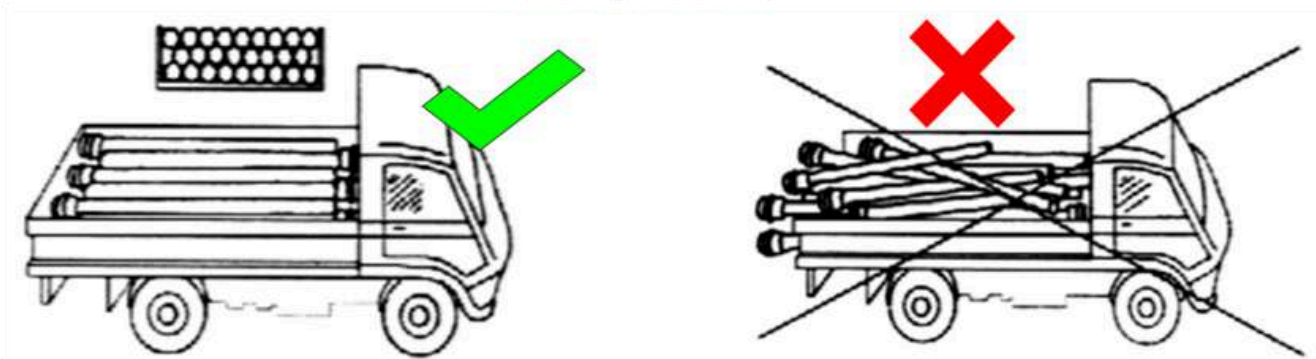
Prefabricated Bends

Outside Diameter (OD) (mm)	Socket Inside (ID) (mm)	Height (H) (mm)	Radius (R) (mm)
20	20	110	52
25	25	160	82
32	32	225	112
38	38	260	142
50	50	325	170

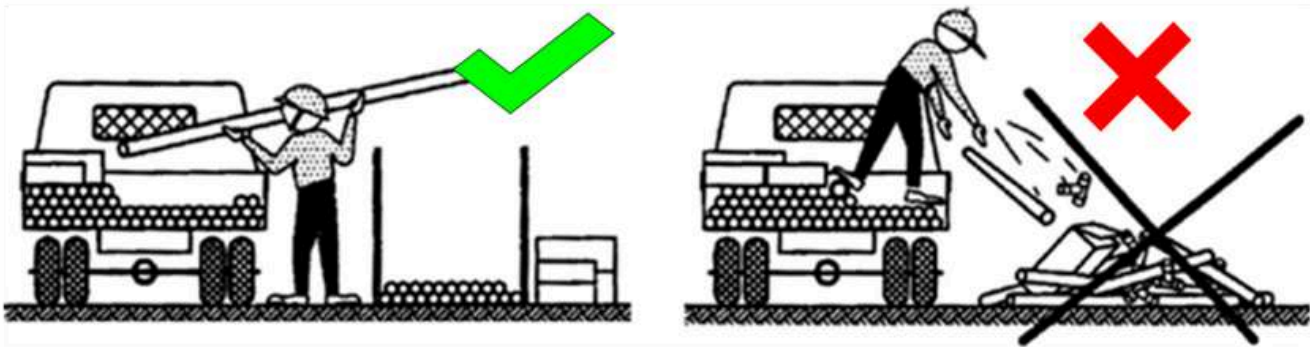


❑ On Site Storage & Handling

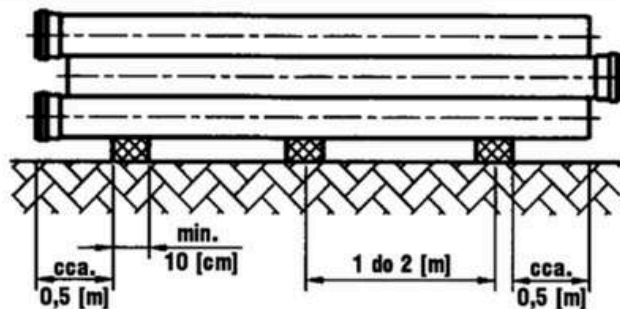
Transportation



Unloading



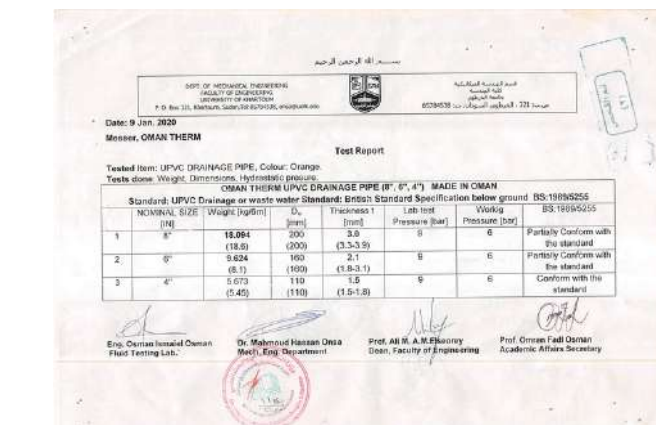
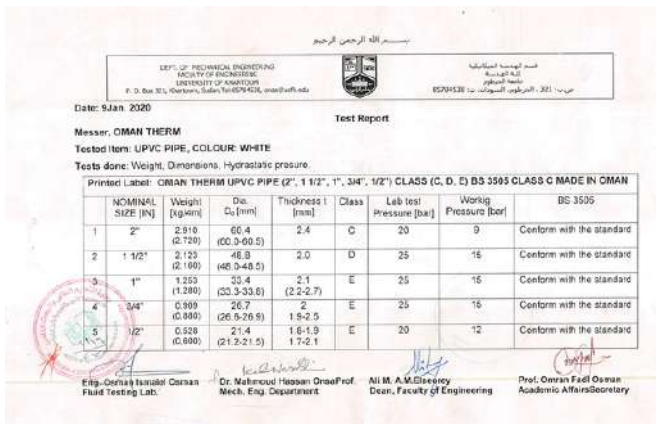
Storage



STORAGE

- The pipes should be kept on a flat surface or on level ground free from stones and sharp objects. Refer (3)
- The maximum stack should be 7 layers high under normal conditions or 1.5 Mtr high & 3.0 Mtr wide and 6 layers high in hot conditions. Refer (5)
- Ideally a stack should contain pipes of the same Diameter. If this is not possible nesting of the smaller pipes inside the larger pipes may be done. The larger diameter pipes should always be kept at the bottom of the stack. Refer(3)
- Direct exposure to sunlight(UV rays) can affect the pipes and fittings, causing discoloration and deterioration in the seal rings.
- It is recommended that the pipes should not be exposed to direct sunlight, it should be covered by opaque tarps sheets. Refer(5)
- While storing socketed pipes, it is recommended that alternate layers should have sockets in the opposite direction. Refer(4)

CERTIFICATES





PLASTIC PIPES & PRODUCTS
MANUFACTURING.



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