



**SERV ARABIA Co.**

# HDPE

## Pipes & Fittings Catalog



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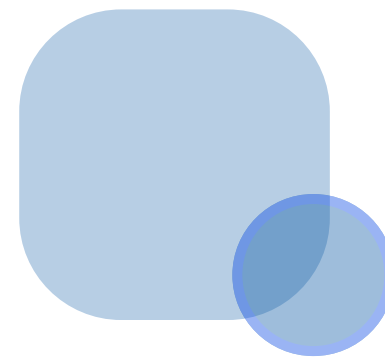


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# OVERVIEW



HDPE pipes have become a preferred choice across water, industrial, and infrastructure projects thanks to their exceptional durability, flexibility, and long service life. They outperform traditional steel and concrete systems in abrasion resistance, maintain consistent flow due to their smooth inner surface, are lightweight for easier handling, and offer reliable leak-free joints through advanced fusion technologies.



01

## Exceptional Performance & Safety

HDPE offers superior abrasion resistance—even outperforming X-52 grade steel in demanding slurry applications—while remaining completely non-toxic and odorless, making it ideal for potable water and industrial use.

02

## Flexible, Efficient & Cost-Saving Installation

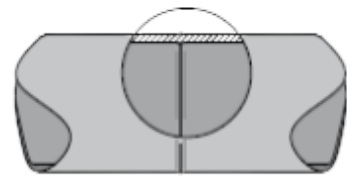
Its excellent flexibility allows routing over, under, and around obstacles with fewer fittings, reduced installation effort, and lower overall project cost, while maintaining reliable hydraulic performance.

03

## Long Service Life with Reliable Leak-Free Joints

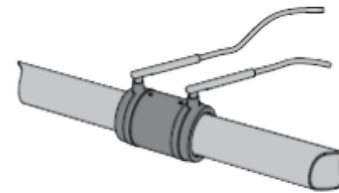
Designed for durability with proven 50+ years of service capability, HDPE resists UV degradation and forms strong, virtually leak-proof fusion joints (butt fusion/electrofusion), ensuring long-term integrity and operational reliability.

# HDPE PIPE—JOINTING METHODS & INSTALLATION



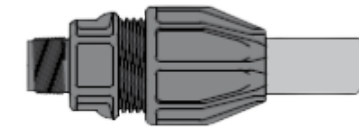
## Buttwelding

Ends of HDPE pipes are heated and fused together to form a single continuous pipe. The joint becomes as strong as the pipe itself, ensuring excellent long-term reliability.



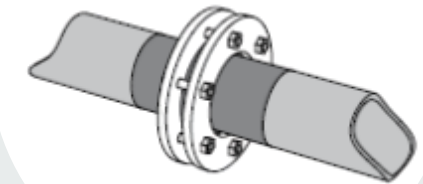
## Electrofusion

Uses specialized fittings with built-in heating coils to weld pipes together. Ideal for confined spaces, repairs, and applications where precise, leak-free joints are critical.



## Compression

A mechanical jointing method using threaded or clamp-style fittings. Fast, simple, and installation-friendly with no welding equipment required — ideal for smaller sizes and maintenance works.



## Flange

HDPE pipe ends are fitted with flanges and bolted together, allowing detachable joints. Perfect for pumps, valves, steel pipeline transitions, and locations requiring frequent dismantling.

# HDPE APPLICATIONS

HDPE pipes are widely used across water supply, sewage, irrigation, industrial, and marine applications due to their exceptional durability, corrosion resistance, lightweight nature, and flexibility. They deliver reliable performance in harsh environments, withstand high pressures, handle abrasive and chemical media effectively, and provide long service life with minimal maintenance, making them a trusted choice for modern infrastructure and industrial projects.



## Water, Wastewater & Irrigation Infrastructure

Widely used for potable water supply, sewage, stormwater drainage, wastewater treatment networks, and agricultural irrigation systems due to its corrosion resistance, leak-free performance, and long service life.



## Industrial & Chemical Fluid Handling

Ideal for transporting corrosive chemicals, industrial effluents, abrasive slurries, and process media in sectors such as petrochemicals, mining, power plants, and manufacturing, ensuring safe and reliable operations.



## Marine, Subsurface & Specialized Applications

Trusted for seawater intake lines, desalination projects, underwater pipelines, dredging systems, aquaculture networks, and specialized environments where durability, flexibility, and resistance to harsh conditions are critical.



HDPE PIPES DIMENSIONAL CHART AS PER ISO 4427 - PE100



PN	PN4		PN5		PN6		PN8		PN10		PN12.5		PN16		PN20		PN25	
SDR	SDR41		SDR33		SDR 26		SDR 21		SDR17		SDR 13.6		SDR11		SDR9		SDR7	
	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m	S(mm)	Kg/m
20									-	-			2.00	0.112	2.30	0.133	3.00	0.154
25									-	-	2.00	0.152	2.30	0.171	3.00	0.220	3.50	0.240
32									2.00	0.187	2.40	0.232	3.00	0.272	3.60	0.327	4.40	0.386
40							2.00	0.239	2.40	0.295	3.00	0.356	3.70	0.430	4.50	0.509	5.50	0.600
50					2.00	0.314	2.40	0.359	3.00	0.453	3.70	0.549	4.60	0.666	5.60	0.788	6.90	0.936
63			2.00	0.399	2.50	0.494	3.00	0.565	3.80	0.721	4.70	0.873	5.80	1.050	7.10	1.260	8.60	1.470
75			2.30	0.551	2.90	0.675	3.60	0.807	4.50	1.020	5.60	1.240	6.80	1.470	8.40	1.760	10.30	2.090
90	2.30	0.643	2.80	0.791	3.50	0.078	4.30	1.160	5.40	1.460	6.70	1.770	8.20	2.120	10.10	2.540	12.30	3.000
110	2.70	0.943	3.40	1.17	4.20	1.430	5.30	1.740	6.60	2.170	8.10	2.620	10.00	3.140	12.30	3.780	15.10	4.490
125	3.10	1.230	3.90	1.51	4.80	1.840	6.00	2.200	7.40	2.760	9.20	3.370	11.40	4.080	14.00	4.870	17.10	5.770
140	3.50	1.540	4.30	1.88	5.40	2.320	6.70	2.800	8.30	3.460	10.30	4.220	12.70	5.080	15.70	6.110	19.20	7.250
160	4.00	2.000	4.90	2.42	6.20	3.040	7.70	3.680	9.50	4.520	11.80	5.500	14.60	6.670	17.90	7.960	21.90	9.440
180	4.40	2.490	5.50	3.07	6.90	3.790	8.60	4.630	10.70	5.710	13.30	6.980	16.40	8.420	20.10	10.100	24.60	11.900
200	4.90	3.050	6.20	3.84	7.70	4.690	9.60	5.730	11.90	7.050	14.70	8.560	18.20	10.400	22.40	12.400	27.40	14.800
225	5.50	3.860	6.90	4.77	8.60	5.890	10.80	7.260	13.40	8.930	16.60	10.900	20.50	13.100	25.20	15.800	30.80	18.600
250	6.20	4.830	7.70	5.92	9.60	7.300	11.90	8.900	14.80	11.000	18.40	13.400	22.70	16.200	27.90	19.400	34.20	23.000
280	6.90	5.980	8.60	7.4	10.70	9.100	13.40	11.220	16.60	13.700	20.60	16.800	25.40	20.300	31.30	24.300	38.30	28.900
315	7.70	7.520	9.70	9.37	12.10	11.600	15.00	14.130	18.70	17.400	23.20	21.200	28.60	25.600	35.20	30.800	43.10	36.500
355	8.70	9.550	10.90	11.8	13.60	14.600	16.90	17.940	21.10	22.100	26.10	26.900	32.20	32.500	39.70	39.100	48.50	46.300
400	9.80	12.100	12.30	15.1	15.30	18.600	19.10	22.840	23.70	28.000	29.40	34.100	36.30	41.300	44.70	49.600	54.70	58.800
450	11.00	15.300	13.80	19	17.20	23.500	21.50	28.900	26.70	35.400	33.10	43.200	40.90	52.300	50.30	62.700	61.50	74.400
500	12.30	19.000	15.30	23.4	19.10	28.900	23.90	35.700	29.70	43.800	36.80	53.300	45.40	64.5000	55.80	77.300	68.3	91.800
560	13.70	23.600	17.20	29.4	21.40	36.200	26.70	44.700	33.20	54.800	41.20	66.900	50.80	81.800	62.50	97.000		
600	15.40	29.900	19.30	37.1	24.10	45.900	30.00	56.500	37.40	69.400	46.30	84.600	57.20	102.000	70.30	125.000		
710	17.40	38.000	21.80	47.2	27.20	58.400	33.90	72.000	42.10	88.000	52.20	107.000	64.50	130.000	79.30	160.000		
800	19.60	48.100	24.50	59.7	30.60	73.900	38.10	91.200	47.40	112.000	58.80	136.000	72.60	166.000	89.30	202.000		
900	22.00	60.900	27.60	75.6	34.40	93.400	42.90	115.000	53.30	141.000	66.10	173.000	81.70	210.000				
1000	24.50	75.200	30.60	93.1	38.20	115.000	47.70	143.000	59.30	175.000	73.50	215.000	90.80	259.000				
1200	29.40	108.000	36.70	134	45.90	166.000	57.20	205.000	71.70	262.000	88.20	304.000	109.10	375.000				
1400	34.30	147.000	42.90	183	53.50	226.000	66.70	279.000	83.00	345.000	102.80	421.000	-	-				
1600	9.20	192.000	49.00	238	61.20	295.000	76.20	365.000	94.80	453.000	117.50	552.000	-	-				
1800	44.00	246.000	55.10	306	68.80	379.000	85.80	467.000	106.60	573.000								
2000	48.90	303.000	61.20	378	76.40	467.000	95.30	577.000	118.50	707.000			-	-				

Material

High Density Polyethylene PE100

MRS= 10Mpa

Os = 8Mpa (MRS / c)

c = 1.25

Notes

PN - Nominal Pressure (Bar)

Wt - Pipe Weight (Kg/M)

S - Wall Thickness (mm)

Da - Nominal Outside Dia (mm)

SDR - Std Dimensional Ratio (Da/s)

MRS - Minimum Required Strength (Mpa)

Os - Hydrostatic Design Stress @20C

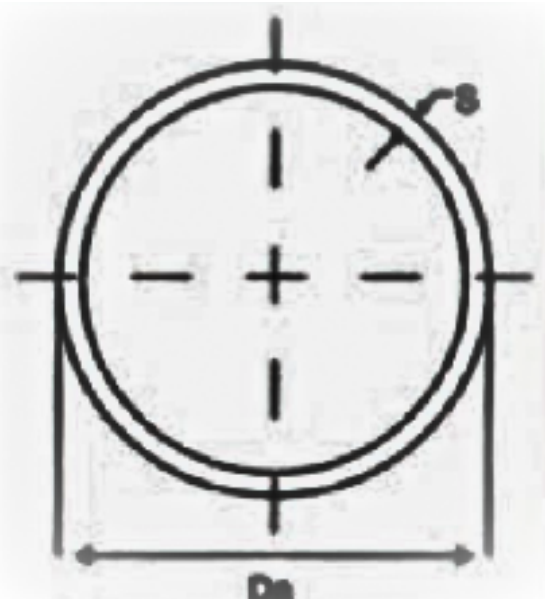
C - Design Factor 1.25 for water

Color

Black

Dimensions

DIN 8074 / 8075



- Weight may vary according to polymer density. The mass has been calculated taking average density as 0.95 g/cm3. For other densities, the mass shall be established by linear interpolation, taking the wall thickness as the nominal size plus half the tolerance specified.



**TEES**

Sizes – 20mm to 315mm  
SDR – SDR17, SDR11



**TEE REDUCERS**

Sizes – 250x160 to 25x20mm  
SDR – SDR17, SDR11



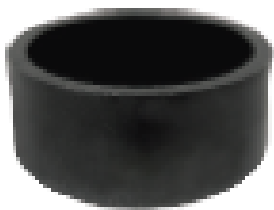
**REDUCERS**

Sizes – 250x160 to 25x20mm  
SDR – SDR17, SDR11



**ELBOW 90 DEGREES**

Sizes – 20mm to 315mm  
SDR – SDR17, SDR11



**END CAPS**

Sizes – 20mm to 315mm  
SDR – SDR17, SDR11



**STUB ENDS**

Sizes – 20mm to 315mm  
SDR – SDR17, SDR11



**MALE TRANSITION COUPLING**

Sizes – 20x1/2" to 110x4"  
SDR – 11



**FEMALE TRANSITION COUPLING**

Sizes – 20x1/2" to 110x4"  
SDR – 11

## HDPE BUTTFUSION FABRICATED FITTINGS – PE100



### TEES

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### TEE REDUCERS

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### ELBOW 45 DEGREES

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### ELBOW 90 DEGREES

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### END CAPS

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### STUB ENDS

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### REDUCER

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



### CROSS TEE

Sizes – 315mm & above  
SDR – 7, 9, 11, 17, 26, 33



## HDPE ELECTROFUSION FITTINGS – PE100



**COUPLERS**  
ISO 4437/EN 1555/AS 4129

Sizes – 20mm to 500mm



**ELBOW 90 DEGREES**  
ISO 4437/EN 1555/AS 4129

Sizes – 20mm to 315mm



**ELBOW 45 DEGREES**  
ISO 4437/EN 1555/AS 4129

Sizes – 20mm to 315mm



**END CAPS**  
ISO 4437/EN 1555/AS 4129

Sizes – 20mm to 315mm



**EQUAL TEE**  
ISO 4437/EN 1555/AS 4129

Sizes – 20mm to 500mm



**REDUCING TEE**  
ISO 4437/EN 1555/AS 4129

Sizes – 315x250mm to 25x20mm



**REDUCER**  
ISO 4437/EN 1555/AS 4129

Sizes – 315x250mm to 25x20mm



**STUB END**  
ISO 4437/EN 1555/AS 4129

Sizes – 63mm to 315mm

## HDPE ELECTROFUSION FITTINGS – PE100



**TAPPING TEE**  
**ISO 4437/EN 1555/AS 4129**

Sizes – 315x160mm to 40x20mm



**BRANCH SADDLE**  
**ISO 4437/EN 1555/AS 4129**

Sizes – 315x160mm to 63x32mm



**STOPPER SADDLE**  
**ISO 4437/EN 1555/AS 4129**

Sizes – 315x160mm to 90x20mm



**REPAIR SADDLE**  
**ISO 4437/EN 1555/AS 4129**

Sizes – 315mm to 40mm



**TAPPING TEE WITH VALVE**  
**ISO 4437/EN 1555/AS 4129**

Sizes – 315x63mm to 63x20mm



**STANDARD BALL VALVE**  
**ISO 4437/EN1555**

Sizes – 400mm to 63mm



**VALVE WITH SINGLE PURGE**  
**ISO 4437/EN1555**

Sizes – 400mm to 63mm



**VALVE WITH EXTENDED STERN**  
**ISO 4437/EN1555**

Sizes – 400mm to 63mm

FLANGES & BACKING RINGS



**Drilling Standards**  
DIN 2501, DIN 2576—PN10  
DIN 2577 & ANSI B 16.6 (#150) – PN16  
BS10 TAB D, TAB E , TAB F, EN 1092-1

**Compatible with**  
HDPE , PPH, U-PVC, C-PVC, ABS  
AND IPS (USA) PIPING SYSTEMS



**FLANGES STEEL REINFORCED**

SLIP ON TYPE .  
PIPE BORE SIZES AND  
THREADED  
SIZES AVAILABLE ON  
REQUEST.

RANGE :  
20mm TO 1000mm



**BLIND FLANGES**

Available in PE and  
Steel

RANGE :  
20mm to 1000mm



**CS & SS FLANGES**

SLIP ON TYPE .  
PIPE BORE SIZES AND  
THREADED  
SIZES AVAILABLE ON  
REQUEST.

RANGE :  
20mm TO 1600 mm



**WELDNECK & PUDDLE FLANGE**

BUTT WELD TYPE –  
SPECIAL  
APPLICATIONS AND  
FOR WALL STOPS /  
TANK CONNECTIONS

RANGE :  
20mm TO 800 mm

**SPACERS**

FOR USE WITH BUTTERFLY  
VALVES . CAN ALSO  
BE FLANGED TYPE WITH  
OR WITHOUT GROOVES.  
CAN BE CUSTOMISED

RANGE :  
20 TO 1000mm ( 1/2" TO  
40" )



# HDPE FABRICATION & INSTALLATION SOLUTIONS

## Why Serv Arabia

Trusted expertise backed by quality, safety and reliability.

- Certified welders & skilled technicians
- Advanced welding equipment
- Compliance with international standards
- Fast execution with minimal downtime
- Long-term performance assurance



### On-Site Installation

Professional execution by trained and certified teams, ensuring reliable performance in every project.

What we do

- HDPE pipeline laying, alignment & jointing
- Butt fusion, electrofusion, compression & flange connections
- Above-ground & underground pipeline works
- Pressure testing, commissioning & maintenance



### Custom HDPE Fabrication

Precision-engineered components built to match specific project demands — reducing site work and improving efficiency.

Capabilities

- Custom fittings & fabricated spool assemblies
- Flanged connections, manifolds & headers
- Specialized industrial, marine & utility components

Potable Water Irrigation Firefighting Telecom Sewage & Drainage



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