HENAN BINGO PIPELINE CO., LTD.

2021

Professional Innovation Concentration Transcendence

Henan Bingo Pipeline Co., Ltd.

Tel: +86 371 8618 0298

Email: miki@bingopipes.com

Web: www.bingopipes.com

Mobile: +86 15515596408 (WhatsApp/ Wechat/ Viber)

Add: 13th F, Longyu International Building, Zhengzhou Area(Zhengdong), China(Henan) Pilot Free Trade Zone. 450046

Bingo Pipeline upholds high-quality service, excellent products with very competitive prices, delivers qualified and satisfactory products and solutions to every customer, and keep challenging, innovating and developing, keep up with the progress of the times, and use advanced technology, modern management, and rich experience create continuous value for customers.

About Us

Henan Bingo Pipeline Co., Ltd. (Shandong Huaxin Plastic Pipe Co., Ltd.) is a comprehensive solution expert in the pipeline industry that specializes in the research and development, manufacturing, sales, construction, and consulting of plastic pipes and pipe fittings, with more than 20 years of research and development, production and sales experience.

Our company has a modern standard factory building, modern enterprise management mechanism, covering an area of 1.5 million square meters. The total investment is RMB 1.5 billion. We have 1,200 employees, 304 senior and middle-level engineering and technical personnel, 8 laboratory personnel. It is China's "Member Unit of New Energy-saving Building Materials Association" and "Executive Director Unit of China Plastics Processing Association", It is one of the enterprises participating in the compilation of the national standard(GB/T13663) of plastic pipes in China. And has obtained "National Authoritative Inspection-Qualified Products". Passed ISO9001: 2015 Quality Management System Certification, ISO45001: 2018 Occupational Health And Safety Management System Certification, ISO14001: 2015 Environmental Management System Certification, EU CE certification, National Laboratory Accreditation Certification, Xinhua Water Saving Certification, China Environmental Label Certification, etc.

Our company has excellent facilities, the technical force is abundant and ranks among the domestic advanced level in the same industry. It has introduced international high-tech production lines. At present, the company has 320 high-speed pipe extrusion production lines and 150 high-speed injection molding machines. The key components of the production line are all imported from oversea. The equipment has a high degree of automatic production. The production process is fully automated by computer control and strives for perfection. It can produce 60,000 tons of PVC-M high impact pipes, 160,000 tons of PVC-U pipes, 40,000 tons of PPR, PE-RT pipes and fittings, 180,000 tons of HDPE pipes and fittings, and 40,000 tons of double-wall corrugated pipe. Form a complete products supply chain of plastic pipes and fittings, one-stop supply, can meet the various products requirements for different customers, and is one of the largest professional manufacturers of plastic pipes and fittings in northern China.

The high-quality HDPE water supply pipe and fittings produced by our company are widely used in China Water Corporation, large-scale airport construction, water conservancy engineering construction and other projects. HDPE gas pipe fittings are the designated supplier brand of China Resources Gas and ENN Energy. we serve Civil Engineering, Urban Water Supply, Municipal Drainage, Water Conservancy Engineering, Mining, Oil, Gas, Electric Power, Energy, Marine, Communications, Fire Protection, Agricultural Irrigation, Urban Green Irrigation and other industries, with professional knowledge, high-quality products, perfect service system and rich experience. Our products not only occupy a pivotal position in the domestic market, but have been exported to Southeast Asia, Africa, South America, Oceania, Europe, the Middle East and other regions and countries, won a good reputation.

Our Service

Bingo Pipeline is more than just a pipeline system manufacturer integrating R&D, manufacturing and sales. In today's rapidly changing business world, you need more than just a supplier, you need a partner who understands the business, and partner who is flexible and is willing to work with you. Act as your partner, Bingo pipeline takes this responsibility very serious.

PART 01

First of all, we provide a series of products, HDPE/PVC pipe fittings, welding equipment, customized fabricated fittings, flanges and other related products. We will become your complete supply chain system and provide you with a full range of product services.

PART 02

For us, being your partner, we continue to invest our infrastructure, update technology, introduce advanced equipment, improve production and experimental facilities, etc. Our continuous investment is essential to consistently provide customers with the quality and service they deserve and expect.

PART 03

Relying on our sufficient capital advantage, strong production capacity, and advanced inventory distribution system, we always keep a large amount of inventory, which is the key to our distributors, and it is also a part of becoming a good partner. When customers need pipes and fittings, we can deliver them as soon as possible. If there is no stock, we will be able to produce them in the shortest time and ensure the best delivery time.

PART 04

Our sales team focuses on the market, products and customers. We will be friendly and willing to provide each customer with personalized professional services with our profound knowledge and rich industry experience, timely offer quotation and related consulting and design services.

PART 05

We welcome strong overseas customers to become our distributors in local. We will provide them with free product information and extensive market knowledge to build a strong vendor network, and better serve every end user in local.

PART 06

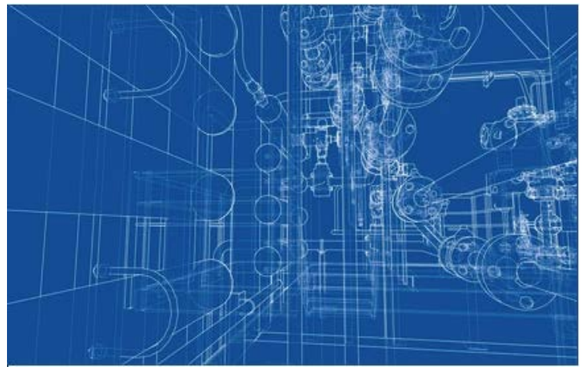
Our professional transportation department will provide customers with secure shipping services in the shortest time, and update the latest news to customers as soon as possible, saving customers' cost and time.

PART 07

We focus on creating ideal pipeline solutions. We have developed a wealth of specialist knowledge from its role in challenging project located around the world, dealing with projects requirements, different installation design and methods. And we will become your best consultant and provider of feasible comprehensive solutions.

PART 08

Customized pipe fitting service. We have experienced welding technicians, and we are capable of offering a wide range of fabricated segments fittings, components or structures, with the high pressure rate fittings to meet unique design specifications and personal-ized complex installation requirements.



PART 09

We have trained a group of personnel with professional welding skills in cooperation with the welding equipment manufacturers. These technicians are experienced and certified by the manufacturer. We can provide welding services and welding training when needed.

PART 10

Installation Service. We have successfully established ourselves as a major player in the field of installation of infrastructural works, potable water pipelines, oil & gas pipelines, fire-fighting pipelines, sewage systems, storm water collection and irrigation projects. Our experienced installation and construction team can provide professional installation to ensure the smooth completion of the project.

PART 11

These are just some of the things that go into being a good partner. It comes down to “caring”. Caring about quality, service and our customers. This is what sets Bingo Pipeline apart.

OUR VALUE — **Our value is to create value for customers.**

OUR VISION — **Total customer satisfaction...always. We strive to exceed the expectations of every customer that experiences our service.**

QC & QA System

In many fields, the quality requirements for plastic pipes and fittings exceed the common standard requirements, which requires manufacturers to have inspection links and quality control mechanisms in the raw materials and production process of pipes and fittings, as well as technical measures that affect product quality.

Bingo Pipeline strictly implements the quality policy of "Quality is Life", strengthens and guarantees product quality, and establishes a strict quality management system, which mainly includes 2 points:

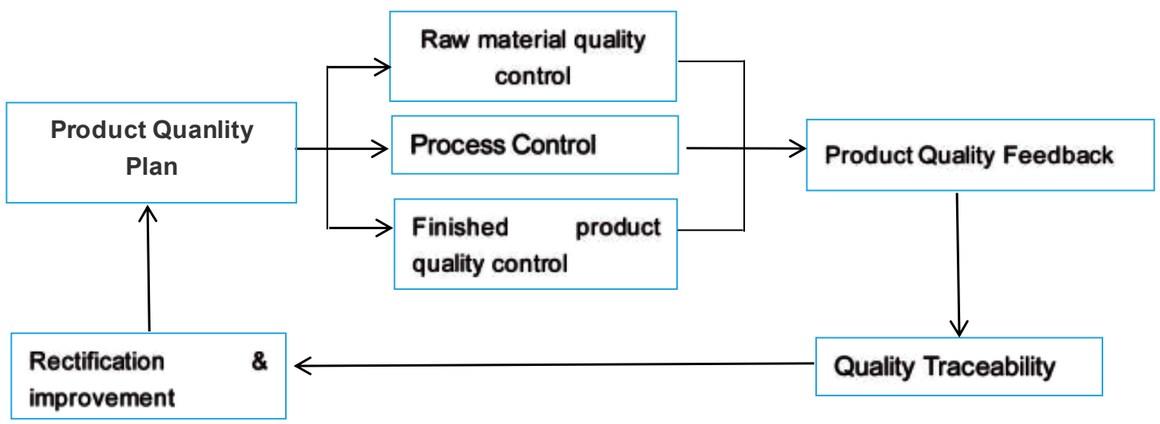
- Quality assurance requirements for raw materials and raw material manufacturers
- Quality Control requirements for the manufacturer of pipes and fittings

★ Qualified raw materials are the first step for us to ensure product quality. As a manufacturer, we have also established a complete quality control system.

High-quality final products can only be obtained by using high-quality raw materials. Therefore, our quality assurance requirements for raw materials and raw material manufacturers mainly include the following parts:

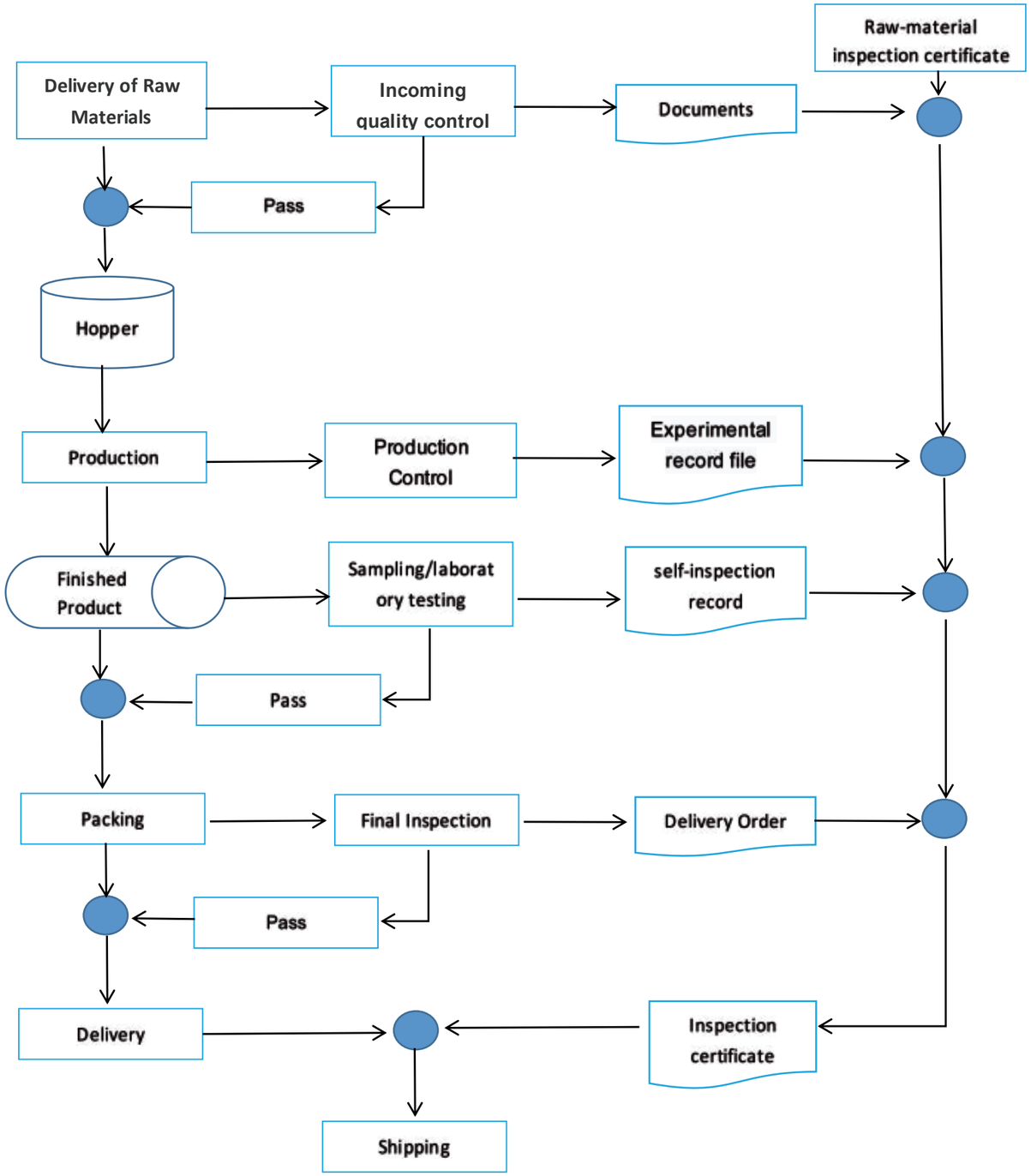
1. Strictly screen the qualifications of raw material suppliers, and all the raw material suppliers we choose have passed the ISO9001 quality management system certification.
2. The raw materials approved by PE100+ Association are selected. PE100+ Association ensures the very highest quality of PE 100 products by continuously monitoring three fundamental properties :

Creep Rupture Strength (CRS)
Stress Crack Resistance (SCR)
Resistance to Rapid Crack Propagation (RCP)



BINGO PIPELINE

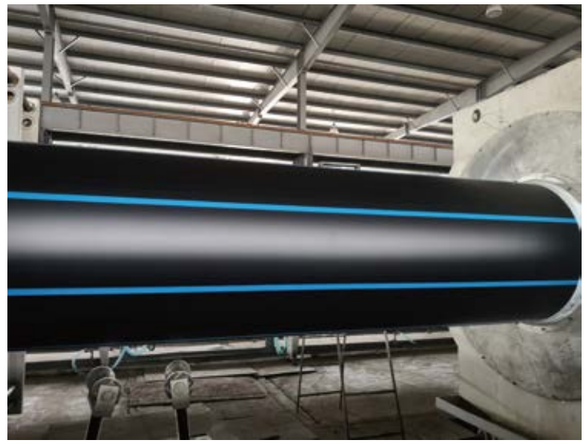
★ Qualified raw materials are the first step for us to ensure product quality. As a manufacturer, we have also established a complete quality control system.



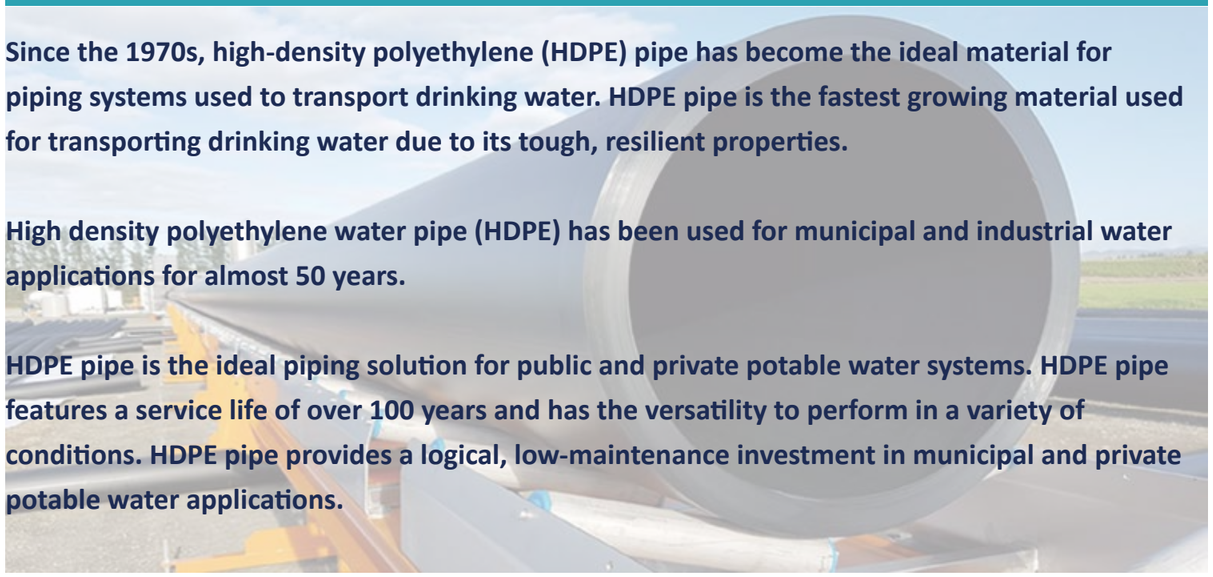
Quality control and inspection system from raw material acceptance to product delivery

Contents

Factory Showing



HDPE PIPE FOR WATER APPLICATIONS



Since the 1970s, high-density polyethylene (HDPE) pipe has become the ideal material for piping systems used to transport drinking water. HDPE pipe is the fastest growing material used for transporting drinking water due to its tough, resilient properties.

High density polyethylene water pipe (HDPE) has been used for municipal and industrial water applications for almost 50 years.

HDPE pipe is the ideal piping solution for public and private potable water systems. HDPE pipe features a service life of over 100 years and has the versatility to perform in a variety of conditions. HDPE pipe provides a logical, low-maintenance investment in municipal and private potable water applications.

Benefits of HDPE Pipes for Water Applications

Beneficial properties of HDPE piping systems include:

Leak-free Fused Joints. Fused joints eliminate potential leak points and reduce installation time. The heat-fused joints are as strong as the pipes themselves, leading to long-term, leak-free operation with little-to-no maintenance required.

Chemical Resistance. In potable water applications, it's essential that chemicals will not leach from the piping material into the water. Studies show that HDPE pipes are safe for potable water applications. Disinfectants such as chlorine and chloramine are approved for use in HDPE pipe. HPDE pipe will not corrode or tuberculate, maintaining flow velocities over the life span of the system.

Durability and Flexibility. Unlike more brittle piping materials such as PVC and ductile iron, HDPE pipe is a more durable and flexible pipe material with a bend radius up to 20 times the pipe diameter. This allows the HDPE pipe to conform to an imperfect installation path without the need to add costly fittings and excessive pipe joints.

Extreme Surge Tolerance. HDPE pipes are the most resistant to surge and fatigue of any potable water piping systems. HDPE pipe can handle occasional surges up to 2 times its' pressure rating, and recurring surges up to 1.5 times its' pressure rating with no risk of stress damage to the pipe. HDPE pipe can handle much higher flow velocities which result in lower pressure surges compared to other potable water piping systems.

Temperature Resistance. HDPE pipe can handle fluid and environmental temperatures ranging from -40°F to 140°F, making HDPE water pipe suitable for use with hot or cold water in many different environments. HDPE pipe can handle repeated freeze/thaw cycles without incurring damage to the pipe.

Installation. HDPE pipe is cheaper to install than other potable water piping systems. With its' narrower trench widths and its ability to be installed with trench-less technologies (directional drilling, pipe bursting, slip-lining, and compression fit lining), making HDPE pipe the most commonly used piping material for trenchless installations. Compared to other installation methods, trench-less installations reduce disturbances to surrounding environments and greatly reduce the amount of construction restoration, leading to a cost savings up to 65%.

Bingo HDPE pipes and fittings for water, supply, for drainage and sewerage under pressure are manufactured in accordance with the different standards:
ISO 4427; GB/T 13663; EN 12201; AS/NZS 4130; DIN8074; GOST 18599; ASTM D3035; ASTM F714; DIPS; IPS, etc.

ISO4427-2 Pipe Series

Dimension in Millimetres

ISO 4427 Pipe Series		S 3.2	S 4	S 5	S 6,3	S 8	S 10	S 12,5	S 16	PE100
ASTM F714 DR		DR 7.4	DR 9	DR 11	DR 13.6	DR 17	DR 21	DR 26	DR 33	
Nominal Pressure PE 100		PN 25 bar	PN 20 bar	PN 16 bar	PN 12,5 bar	PN 10 bar	PN 8 bar	PN 6 bar	PN 5 bar	
Nominal Size DN (mm)	Equiv Size (in)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Min T.W. (mm)	Nominal Size DN (mm)
20	0.79	3.0	2.3	2.0	1.5	1.2	1.0	0.6	0.61	**20**
25	0.98	3.5	3.0	2.3	2.0	1.5	1.2	0.8	0.76	**25**
32	1.26	4.4	3.6	3.0	2.4	2.0	1.5	1.0	0.97	**32**
40	1.57	5.5	4.5	3.7	3.0	2.4	2.0	1.2	1.21	**40**
50	1.97	6.9	5.6	4.6	3.7	3.0	2.4	2.0	1.52	**50**
63	2.48	8.6	7.1	5.8	4.7	3.8	3.0	2.5	1.91	**63**
75	2.95	10.3	8.4	6.8	5.6	4.5	3.6	2.9	2.27	**75**
90	3.54	12.3	10.1	8.2	6.7	5.4	4.3	3.5	2.73	**90**
110	4.33	15.1	12.3	10.0	8.1	6.6	5.3	4.2	3.33	**110**
125	4.92	17.1	14.0	11.4	9.2	7.4	6.0	4.8	3.79	**125**
140	5.51	19.2	15.7	12.7	10.3	8.3	6.7	5.4	4.24	**140**
160	6.30	21.9	17.9	14.6	11.8	9.5	7.7	6.2	4.85	**160**
180	7.09	24.6	20.1	16.4	13.3	10.7	8.6	6.9	5.45	**180**
200	7.87	27.4	22.4	18.2	14.7	11.9	9.6	7.7	6.06	**200**
225	8.86	30.8	25.2	20.5	16.6	13.4	10.8	8.6	6.82	**225**
250	9.84	34.2	27.9	22.7	18.4	14.8	11.9	9.6	7.58	**250**
280	11.02	38.3	31.3	25.4	20.6	16.6	13.4	10.7	8.48	**280**
315	12.40	43.1	35.2	28.6	23.2	18.7	15.0	12.1	9.70	**315**
355	13.98	48.5	39.7	32.2	26.1	21.1	16.9	13.6	10.90	**355**
400	15.75	54.7	44.7	36.3	29.4	23.7	19.1	15.3	12.30	**400**
450	17.72	61.5	50.3	40.9	33.1	26.7	21.5	17.2	13.80	**450**
500	19.69	67.6	55.8	45.4	36.8	29.7	23.9	19.1	15.30	**500**
560	22.05	75.7	62.5	50.8	41.2	33.2	26.7	21.4	17.20	**560**
630	24.80	85.1	70.3	57.2	46.3	37.4	30.0	24.1	19.30	**630**
710	27.95	95.9	79.3	64.5	52.2	42.1	33.9	27.2	21.80	**710**
800	31.50		89.3	72.6	58.8	47.4	38.1	30.6	24.50	**800**
900	35.43			81.7	66.2	53.3	42.9	34.4	27.60	**900**
1000	39.37			90.2	72.5	59.3	47.7	38.2	30.60	**1000**
1200	47.24				88.2	67.9	57.2	45.9	36.70	**1200**
1400	55.12				102.9	82.4	66.7	53.5	42.90	**1400**

This product flyer is intended for reference purposes. It should not be used in place of the advice from a licensed Professional Engineer. Nominal pressure (PN) is based on C = 1,25 and an operating temperature of 20°C. Weight is calculated using DN and Minimum wall plus 6% for use in estimating fluid flow. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in the applicable pipe manufacturing specification. To obtain pressure in psi, multiply bar by 14.5 (1 bar ≈ 14.5 psi).

EN 12201-2:2011 Pipe Series

(The Specification of the Standard DIN8074/8075, GOST 18599 are same with EN12201)

Dimensions in Millimetres

	SDR6	SDR7.4	SDR9	SDR11	SDR13.6	SDR17	SDR21	SDR26	SDR33	SDR41	
	S2.5	S3.2	S4	S5	S6.3	S8	S10	S12.5	S16	S20	
	Norminal Pressure, PN [a] in Bar										
PE80	PN25	PN20	PN16	PN12.5	PN10	PN8	PN6	PN5	PN4	PN3.2	**PE80**
PE100	PN32	PN25	PN20	PN16	PN12.5	PN10	PN8	PN6	PN5	PN4	**PE100**
Nom. Size DN/OD	Wall Thickness [b]										Nom. Size DN/OD
	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	e_{min}	
16	3.0	2.3	2.0	-		-	-	-	-	-	16
20	3.4	3.0	2.3	2.0	2.0	-	-	-	-	-	20
25	4.2	3.5	3.0	2.3	2.4	-	-	-	-	-	25
32	5.4	4.4	3.6	3.0	3.0	2.0	-	-	-	-	32
40	6.7	5.5	4.5	3.7	3.7	2.4	2.0	-	-	-	40
50	8.3	6.9	5.6	4.6	4.7	3.0	2.4	2.0	-	-	50
63	10.5	8.6	7.1	5.8	5.6	3.8	3.0	2.5	-	-	63
75	12.5	10.3	8.4	6.8	6.7	4.5	3.6	2.9	-	-	75
90	15.0	12.3	10.1	8.2	8.1	5.4	4.3	3.5	-	-	90
110	18.3	15.1	12.3	10.0	9.2	6.6	5.3	4.2	-	-	110
125	20.8	17.1	14.0	11.4	10.3	7.4	6.0	4.8	-	-	125
140	23.3	19.2	15.7	12.7	11.8	8.3	6.7	5.4	-	-	140
160	26.6	21.9	17.9	14.6	13.3	9.5	7.7	6.2	-	-	160
180	29.9	24.6	20.1	16.4	14.7	10.7	8.6	6.9	-	-	180
200	33.2	27.4	22.4	18.2	16.6	11.9	9.6	7.7	-	-	200
225	37.4	30.8	25.2	20.5	18.4	13.4	10.8	8.6	-	-	225
250	41.5	34.2	27.9	22.7	20.6	14.8	11.9	9.6	-	-	250
280	46.5	38.3	31.3	25.4	23.2	16.6	13.4	10.7	-	-	280
315	52.3	43.1	35.9	28.6	26.1	18.7	15.0	12.1	9.7	7.7	315
355	59.0	48.5	39.7	32.2	29.4	21.1	16.9	13.6	10.9	8.7	355
400	-	54.7	44.7	36.6	33.1	23.7	19.1	15.3	12.3	9.8	400
450	-	61.5	50.3	40.9	36.8	26.7	21.5	17.2	13.8	11.0	450
500	-	67.6	55.8	45.4	41.2	29.7	23.9	19.1	15.3	12.3	500
560	-	75.7	62.5	50.8	46.3	33.2	26.7	21.4	17.2	13.7	560
630	-	85.1	70.3	57.2	52.2	37.4	30.0	24.1	19.3	15.4	630
710	-	95.9	79.3	64.5	58.8	41.2	33.9	27.2	21.8	17.4	710
800	-	-	89.3	72.6	66.1	47.4	38.1	30.6	24.5	19.6	800
900	-	-	-	81.7	73.4	53.3	42.9	34.4	27.6	22.0	900
1000	-	-	-	90.8	88.2	59.3	47.7	38.2	30.6	24.5	1000
1200	-	-	-	-	102.9	71.1	57.2	45.9	36.7	29.4	1200
1400	-	-	-	-	117.5	83.0	66.7	53.5	42.9	34.3	1400
1600	-	-	-	-	-	94.8	76.2	61.2	49.0	39.2	1600
1800	-	-	-	-	-	106.6	85.5	68.8	55.1	44.0	1800
2000	-	-	-	-	-	118.4	95.3	76.4	61.2	48.9	2000
2250	-	-	-	-	-	-	107.2	86.0	70.0	55.0	2250
2500	-	-	-	-	-	-	119.1	95.6	77.7	61.2	2500

a PN Values are based on C=1.25.

b Tolerance in accordance with grade V of ISO11922-7

Standard Dimension Ratios (SDRs) for AS/NZS 4130: 2009 Pipe Series

Dimensions in Millimetres

PE80	Mean Outside diameter (D_m)		Maximum out of roundness	PN25	PN20	PN16	PN12.5	PN10	PN8	PN6.3	PN4	PN3.2
PE100				-	SDR7.4	SDR9	SDR11	SDR13.6	SDR17	SDR21	SDR26	SDR41	-
Nom. Size DN/OD				Wall Thickness(T)									
	Min.	Max.		Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	
16	16	16.3	1.2	2.2	1.8	1.6		-	-	-	-	-	
20	20	20.3	1.2	2.8	2.3	1.9	1.6	-	-	-	-	-	
25	25	25.3	1.2	3.5	2.8	2.3	1.9	1.6		-	-	-	
32	32	32.3	1.3	4.4	3.6	2.9	2.4	1.9	1.6	-	-	-	
40	40	40.4	1.4	5.5	4.5	3.7	3.0	2.4	1.9	-	-	-	
50	50	50.5	1.4	6.9	5.6	4.6	3.7	3.0	2.4	2.0	-	-	
63	63	63.6	1.5	8.6	7.1	5.8	4.7	3.8	3.0	2.4	-	-	
75	75	75.7	1.6	10.3	8.4	6.8	5.5	4.5	3.6	2.9	2.3	-	
90	90	90.9	1.8	12.3	10.1	8.2	6.6	5.4	4.3	3.5	2.8	-	
110	110	111.0	2.2	15.1	12.3	10.0	8.1	6.6	5.3	4.3	3.4	2.7	
125	125	126.2	2.5	17.1	14.0	11.4	9.2	7.4	6.0	4.8	3.9	3.1	
140	140	141.3	2.8	19.2	15.7	12.7	10.3	8.3	6.7	5.4	4.3	3.5	
160	160	161.5	3.2	21.9	17.9	14.6	11.8	9.5	7.7	6.2	4.9	4.0	
180	180	181.7	3.6	24.6	20.1	16.4	13.3	10.7	8.6	6.9	5.5	4.4	
200	200	201.8	4.0	27.4	22.4	18.2	14.7	11.9	9.6	7.7	6.2	4.9	
225	225	227.1	4.5	30.8	25.2	20.5	16.6	13.4	10.8	8.6	6.9	5.5	
250	250	252.3	5.0	34.2	27.9	22.7	18.4	14.8	11.9	9.6	7.7	6.2	
280	280	282.6	9.8	38.3	31.3	25.4	20.6	16.6	13.4	10.7	8.6	6.9	
315	315	317.9	11.1	43.1	35.9	28.6	23.2	18.7	15.0	12.1	9.7	7.7	
355	355	358.2	12.5	48.5	39.7	32.2	26.1	21.1	16.9	13.6	10.9	8.7	
400	400	403.6	14.0	54.7	44.7	36.6	29.4	23.7	19.1	15.3	12.3	9.8	
450	450	454.1	15.6	61.5	50.3	40.9	33.1	26.7	21.5	17.2	13.8	11.0	
500	500	504.5	17.5	67.6	55.8	45.4	36.8	29.6	23.9	19.1	15.3	12.3	
560	560	565.0	19.6	75.7	62.5	50.8	41.2	33.2	26.7	21.4	17.2	13.7	
630	630	635.7	22.1	85.1	70.3	57.2	46.3	37.3	30.0	24.1	19.3	15.4	
710	710	716.4	24.9	95.9	79.3	64.5	52.2	41.2	33.9	27.2	21.8	17.4	
800	800	807.2	28.0	-	89.3	72.6	58.8	47.4	38.1	30.6	24.5	19.6	
900	900	908.1	31.5	-	-	81.7	66.1	53.3	42.9	34.4	27.6	22.0	
1000	1000	1009.0	35.0	-	-	90.2	73.4	59.3	47.7	38.2	30.6	24.5	
1200	1200	1210.0	42.0	-	-	-	88.2	67.9	57.2	45.9	36.7	29.4	
1400	1400	1410.0	49.0	-	-	-	102.9	82.4	66.7	53.2	42.9	34.4	
1600	1600	1610.2	56.0	-	-	-	117.6	91.4	76.2	61.3	49.0	39.3	
1800	1800	1816.2	-	-	-	-	-	105.9	85.5	69.1	54.5	43.8	
2000	2000	2018.0	-	-	-	-	-	117.6	95.2	76.9	60.6	48.8	

AS/NZS 4130: 2009 Pipe Series are classified in terms of the nominal pressure rating (PN). The number used to describe PN is 10 times the value of the maximum allowable operating pressure (MAOP) at 20°C based on C = 1.25 and given in megapascals.

Iron Pipe Size (IPS) and Dimension Data

ASTM D-3035-03, Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter.

ASTM F-714-03, Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter.

Dimensions in Inch

PRESSURE RATING 3408			DR7.3 255 PSI	DR9 200 PSI	DR11 160 PSI	DR13.5 128 PSI	DR17 100 PSI	DR21 80 PSI	DR26 65 PSI	DR32.5 50 PSI	Pressure Rate
PRESSURE RATING 4710			DR7.3 320 PSI	DR9 252 PSI	DR11 202 PSI	DR 13.5 160 PSI	DR17 125 PSI	DR 21 100 PSI	DR26 80 PSI	DR 32.5 63 PSI	
IPS Pipe Size (In)	Nominal OD (in)	Nominal OD (mm)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	Minimum Wall (in)	IPS Pipe Size (In)
1/2	0.840	21.34	0.120	0.093	0.076	0.062	0.062	0.062	0.062	0.062	1/2
3/4"	1.050	26.67	0.150	0.117	0.095	0.078	0.062	0.062	0.062	0.062	3/4"
1"	1.315	33.40	0.188	0.146	0.120	0.097	0.077	0.062	0.062	0.062	1"
1 1/4"	1.660	42.16	0.227	0.184	0.151	0.123	0.098	0.079	0.064	0.062	1 1/4"
1 1/2"	1.900	48.26	0.260	0.211	0.173	0.141	0.112	0.090	0.073	0.062	1 1/2"
2"	2.375	60.33	0.325	0.264	0.216	0.176	0.140	0.113	0.091	0.073	2"
3"	3.500	88.90	0.479	0.389	0.318	0.259	0.206	0.167	0.135	0.108	3"
4"	4.500	114.30	0.616	0.500	0.409	0.333	0.265	0.214	0.173	0.138	4"
5"	5.563	141.30	0.762	0.618	0.506	0.412	0.327	0.265	0.214	0.171	5"
6"	6.625	168.28	0.908	0.736	0.602	0.491	0.390	0.315	0.255	0.204	6"
8"	8.625	219.08	1.182	0.958	0.784	0.639	0.507	0.411	0.332	0.265	8"
10"	10.750	273.05	1.473	1.194	0.977	0.796	0.632	0.512	0.413	0.331	10"
12"	12.750	323.85	1.747	1.417	1.159	0.944	0.750	0.607	0.490	0.392	12"
14"	14	355.60	1.918	1.556	1.273	1.037	0.824	0.667	0.538	0.431	14"
16"	16	406.40	2.192	1.778	1.455	1.185	0.941	0.762	0.615	0.492	16"
18"	18	457.20	2.466	2.000	1.636	1.333	1.059	0.857	0.692	0.554	18"
20"	20	508.00	2.740	2.222	1.818	1.481	1.176	0.952	0.769	0.615	20"
22"	22	558.80	3.014	2.444	2.000	1.630	1.294	1.048	0.846	0.677	22"
24"	24	609.60	3.288	2.667	2.182	1.778	1.412	1.143	0.923	0.738	24"
26"	26	660.40		2.889	2.364	1.926	1.529	1.238	1.000	0.800	26"
28"	28	711.20		3.111	2.545	2.074	1.647	1.333	1.077	0.862	28"
30"	30	762.00		3.333	2.727	2.222	1.765	1.429	1.154	0.923	30"
32"	32	812.80			2.909	2.370	1.882	1.524	1.231	0.985	32"
34"	34	863.60			3.091	2.519	2.000	1.619	1.308	1.046	34"
36"	36	914.40			3.273	2.667	2.118	1.714	1.385	1.108	36"
42"	42	1066.80				3.111	2.471	2.000	1.615	1.292	42"
48"	48	1219.20					2.824	2.286	1.846	1.477	48"
54"	54	1371.60						2.571	2.077	1.662	54"
63"	63	1600.20						3.000	2.423	1.938	63"
65"	65	1651.00						3.095	2.500	2.000	65"

Pressure Ratings are calculated using 0.63 design factor for HDS at 73°F as listed in PPI TR-4 for PE 4710 materials. HDPE can accomodate up to 1.5 times the pipe pressure rating for a recurring surge and up to 2.0 times the pipe pressure rating for an occasional surge. Temperature, Chemical, and Environmental use considerations may require use of additional design factors.

BINGO PIPELINE

Ductile Iron Pipe Size (DIPS) and Dimension Data

PE4710 (PE3408)

Dimensions in Inch

Pressure Rating		335 psi DR 7.0		250 psi DR 9.0		200 psi DR 11.0		160 psi DR 13.5		PE4710 (PE3408)
Nominal Pipe Size	DIPS OD (in)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Nominal Pipe Size
4"	4.800	0.686	3.87	0.533	3.13	0.436	2.62	0.356	2.18	4"
6"	6.900	0.986	8.00	0.767	6.47	0.627	5.42	0.511	4.50	6"
8"	9.050	1.293	13.76	1.006	11.13	0.823	9.32	0.670	7.75	8"
10"	11.100	1.586	20.70	1.233	16.74	1.009	14.03	0.822	11.66	10"
12"	13.200	1.886	29.27	1.467	23.67	1.200	19.84	0.978	16.48	12"
14"	15.300	2.186	39.33	1.700	31.80	1.391	26.65	1.133	22.15	14"
16"	17.400	2.486	50.87	1.933	41.13	1.582	34.47	1.289	28.64	16"
18"	19.500	2.786	63.89	2.167	51.66	1.773	43.29	1.444	35.97	18"
20"	21.600			2.400	63.38	1.964	53.12	1.600	44.14	20"
24"	25.800			2.867	90.43	2.345	75.78	1.911	62.97	24"
30"	32.000					2.909	116.58	2.370	96.87	30"
36"	38.300					3.482	167.01	2.837	138.77	36"
42"	44.500							3.296	187.33	42"
Pressure Rating		**125 psi DR 17.0**		**100 psi DR 21.0**		**80 psi DR 26.0**		**63 psi DR 32.5**		**PE4710 (PE3408)**
Nominal Pipe Size	DIPS OD (in)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Minimum Wall (in)	Weight (lbs/ft)	Nominal Pipe Size
4"	4.800	0.282	1.76	0.229	1.45					4"
6"	6.900	0.406	3.64	0.329	2.99	0.265	2.43	0.212	1.96	6"
8"	9.050	0.532	6.26	0.431	5.13	0.348	4.19	0.278	3.37	8"
10"	11.100	0.653	9.42	0.529	7.73	0.427	6.30	0.342	5.09	10"
12"	13.200	0.776	13.31	0.629	10.93	0.508	8.91	0.406	7.19	12"
14"	15.300	0.900	17.89	0.729	14.68	0.588	11.96	0.471	9.66	14"
16"	17.400	1.024	23.15	0.829	18.98	0.669	15.48	0.535	12.48	16"
18"	19.500	1.147	29.07	0.929	23.84	0.750	19.44	0.600	15.69	18"
20"	21.600	1.271	35.68	1.029	29.25	0.831	23.86	0.665	19.26	20"
24"	25.800	1.518	50.89	1.229	41.73	0.992	34.03	0.794	27.46	24"
30"	32.000	1.882	78.26	1.524	64.18	1.231	52.37	0.985	42.26	30"
36"	38.300	2.253	112.13	1.824	91.93	1.473	75.00	1.178	60.49	36"
42"	44.500	2.618	151.39	2.119	124.09	1.712	101.28	1.369	81.68	42"

Pressure Ratings are calculated using 0.63 design factor for HDS at 73°F as listed in PPI TR-4 for PE 4710 materials. HDPE can accomodate up to 1.5 times the pipe pressure rating for a recurring surge and up to 2.0 times the pipe pressure rating for an occasional surge. Temperature, Chemical, and Environmental use considerations may require use of additional design factors.

This size and dimension chart is intended for reference purposes. It should not be used in place of the advice from a licensed Professional Engineer. Pipe weights are calculated in accordance with PPI TR-7. Average inside diameter is calculated using DIPS OD and Minimum wall plus 6% for use in estimating fluid flows. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimension and tolerances in the applicable pipe manufacturing specification.

ISO 8772: 2006 Plastics piping systems for non-pressure underground drainage and sewerage — Polyethylene (PE)

Dimensions in Millimetres

PE100	-		SN2		SN4		SN8	
Nominal Size DN (mm)	SDR41		SDR33		SDR26		SD21	
	Thickness (mm)	Weight (kg/m)	Thickness (mm)	Weight (kg/m)	Thickness (mm)	Weight (kg/m)	Thickness (mm)	Weight (kg/m)
110	2.7	0.86	3.3	1.18	4.2	1.45	5.3	1.80
125	3.0	1.11	3.8	1.53	4.8	1.87	6.0	2.31
160	3.9	1.82	4.9	2.46	6.2	3.09	7.7	3.77
200	4.9	2.84	6.2	3.89	7.7	4.76	9.6	5.86
250	6.1	4.44	7.7	6.00	9.6	7.40	11.9	9.05
315	7.7	7.04	9.7	9.49	12.1	11.74	15.0	14.38
355	8.7	8.95	10.9	12.00	13.6	14.83	16.9	18.63
400	9.8	11.36	12.3	15.27	15.3	18.80	19.1	23.69
450	11.0	14.37	13.8	19.22	17.2	24.27	21.5	29.88
500	12.2	17.75	15.3	23.70	19.1	29.93	23.9	36.79
630	15.4	28.17	19.3	38.49	24.1	47.57	30.0	58.47
800	19.5	45.43	24.5	61.87	30.6	76.54	38.1	94.32
1000	24.4	70.98	30.6	96.49	38.2	119.73	47.7	147.44
1200	29.3	102.21	36.7	138.77	45.9	172.04	57.2	212.02
1400	34.1	139.12	42.9	173.67	53.5	226.20	66.7	279.24
1600	39.0	181.71	49.0	226.71	62.1	284.89	76.2	346.37
1800	43.9	229.98	54.5	283.77	69.1	356.78	85.7	438.25
2000	48.8	283.93	60.6	350.58	76.9	441.15	95.2	540.93

ISO 8772:2006 specifies the requirements for polyethylene (PE) pipes, fittings and piping systems intended for use for non-pressure underground drainage and sewerage for the conveyance of soil and waste discharge of domestic and industrial origin, as well as surface water.
It covers buried pipework, as well as piping systems buried within the building structure.
In the case of industrial discharge, it is necessary that the chemical and temperature resistance be taken into account, but this will need to be done separately.
ISO 8772:2006 is applicable to PE pipes with or without an integral socket.

Standard Diameters

Standard specifications for PE pipe allow the pipe to be made to either controlled inside diameters or, to controlled outside diameters. The inside diameter system, applicable to small diameter sizes only, is intended for use with insert type fittings for which the pipe must have a predicable inside diameter, independent of pipe wall thickness. And the outside diameter systems are intended for use with fittings that require a predictable outside diameter, also independent of wall thickness.

Polyethylene Pipes have different standards for different countries. We list some of the most reputable and common international standards for water applications for your options. And some standards are not list could be customized accordingly.

Applications of the HDPE pipes for water

High Density Polyethylene (HDPE) Solid Wall Pipe has been used in Potable Water applications since the '60's, except portable water, they are widely used in mining, industrial, wastewater, irrigation, drainage, power and communications, leachate collecting, aquaculture fish farming cage, dredging, and marine applications,etc.

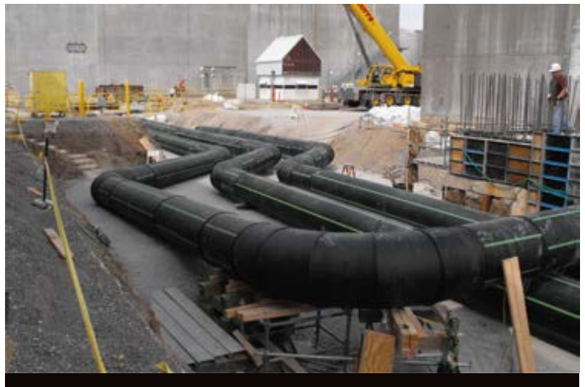
Portable Water

Mining

Industrial

Irrigation

Wastewater



Drainage

Fire Fighting

Power

Communications

Aquaculture Fish Farming

Dredging

Marine

Due to the distinctive advantages of the HDPE pipe, they are not limited to above mentioned applications only. Its useful application are diverse, and engineers unanimously selected high-density polyethylene pipe as their choice for replacing major arteries in the water supply system, HDPE pipe and fittings are quickly becoming the material of choice among engineers, contractors and customers for a wide variety of industry applications, especially for the transmission of some corrosive medium, including corrosive wastes, de-watering, process waterlines, submarine pipelines, landfill reclamation, metals extraction, so many specifying applications. Bingo Pipeline could provide completed solutions to you.

HDPE PIPES FOR NATURAL GAS & OIL APPLICATIONS

PE and HDPE pipe has been used in the oil and gas exploration industry for years. It is the best choice in nation's natural gas network, for a wide range of oil & gas gathering and distribution applications. And it has grown dramatically in recent years mainly due to its' ability to withstand demanding service conditions over a long period of time.

HDPE pipe is the ideal piping solution for oil & gas gathering applications due to its resistance to a wide variety of chemicals in gathering operations and natural gas transmission. HDPE pipe can handle a wide variety of fluids and gases common to oil and gas applications including the transport of crude oil, multi-phase fluids, process water, water slurry and brine (saltwater) solutions to and from fracking sites.

Benefits of the HDPE Pipes for Gas & Oil Applications

HDPE PE4710/PE100 pipe provides many advantages over metallic pipe, other plastic pipe, or tanker trucking of process water/oil & gas when investing in your oil & gas gathering piping system. Some of the benefits of PE4710/PE100 pipe include:

- **Chemical Resistance.** HDPE pipe resists UV degradation, doesn't rust and won't corrode over time. This makes the piping material ideal for outdoor applications or applications that include constant contact with water, H2S gas, and other fluids. Polyethylene is resistant to damage caused by contact with salts, alkalis, and most acids. PE4710 pipe can also handle a wide variety of organic solvents and pH ranges.

- **Cost-Effective.** While carbon steel and composite pipe are common in oil & gas applications, they are expensive. Carbon steel has a high upfront cost due to the weight of the material, transportation costs, and coatings. HDPE PE4710/PE100 pipe is rapidly becoming the material of choice for safe, cost effective piping for high temperature oil & gas gathering systems.

• **Leak-free joints.** HDPE pipes are heat fused together to create a monolithic leak-free pipe system. The heat fused joints are as strong as the pipe itself. This leak-free system reduces the chance of environmental impacts due to loss of containment of oils, gases, or produced water.

• **Flow Rate.** HDPE pipe's low coefficient of friction allows for a very high flow rate. Not only does the smooth surface increase flow, but it reduces drag and turbulent flow. This results into more efficient pumping and reduces pumping cost in your system.

• **Temperature Resistance.** HDPE pipe has a long-term temperature resistance of up to 140°F, but it can temporarily manage temperatures of up to 180°F without damage.

• **Impact resistant.** HDPE is resistant to impact. High resistance feature of HDPE makes it favourable choice for large industrial projects.

Applications of the HDPE pipes for Oil & Gas

Oil

Petroleum

Natural Gas

LPG(Gaseous)

High density polyethylene pipe (HDPE) delivers exceptional value, unwavering reliability and remarkable advantages over conventional types of piping. They are often used above applications, except that they are the best choice for Flow & Gathering Lines for Oilfields, Petroleum Products Lines, compressed compressed air, Coal Seam Gas (CSG) gathering and transmission of oil and gas mixtures.

Proper Specification of HDPE pipe for Oil & Gas applications

When specifying a polyethylene pipe for oil and gas applications it is critical to specify the qualified materials and to ensure that the pipe is sourced from a manufacturer that has a demonstrated capability to produce pipe that meets or exceeds industry standards.

HDPE pipe should be manufactured to the requirements of the following industry standards: ISO4437, EN1555, AS/NZS 4130, ASTM D2513, etc..

ISO4437-2: Plastics piping systems for the supply of gaseous fuels-Polyethylene (PE) Part 2: Pipes

Dimensions in Millimetres

Nominal Outside diameter d_n (mm)	Maximum out of roundness for straight pipes	Minimum Wall Thickness e_{min} [a]						
		SDR9	SDR11[b]	SDR13.6	SDR17[b]	SDR17.6[c]	SDR21	SDR26
16	1.2	3.0	2.3[d]					
20	1.2	3.0	2.3[d]					
25	1.2	3.0	2.3[d]	2.3[d]				
32	1.3	3.6	3.0	2.4[d]	2.3[d]	2.3[d]		
40	1.4	4.5	3.7	3.0	2.4[d]	2.3[d]	2.3[d]	
50	1.4	5.6	4.6	3.7	3.0	2.9	2.4[d]	2.3[d]
63	1.5	7.1	5.8	4.7	3.8	3.6	3.0	2.5[d]
75	1.6	8.4	6.8	5.6	4.5	4.3	3.6	2.9[d]
90	1.8	10.1	8.2	6.7	5.4	5.2	4.3	3.5
110	2.2	12.3	10.0	8.1	6.6	6.3	5.3	4.2
125	2.5	14.0	11.4	9.2	7.4	7.1	6.0	4.8
140	2.8	15.7	12.7	10.3	8.3	8.0	6.7	5.4
160	3.2	17.9	14.6	11.8	9.5	9.1	7.7	6.2
180	3.6	20.1	16.4	13.3	10.7	10.3	8.6	2.9
200	4.0	22.4	18.2	14.7	11.9	11.4	9.6	7.7
225	4.5	25.2	20.5	16.6	13.4	12.8	10.8	8.6
250	5.0	27.9	22.7	18.4	14.8	14.2	11.9	9.6
280	9.8	31.2	25.4	20.6	16.6	15.9	13.4	10.7
315	11.1	35.2	28.6	23.2	18.7	17.9	15.0	12.1
355	12.5	39.7	32.2	26.1	21.1	20.2	16.9	13.6
400	14.0	44.7	36.3	29.4	23.7	22.8	19.1	15.3
450	15.6	50.3	40.9	33.1	26.7	25.6	21.5	17.2
500	17.5	55.8	45.4	36.8	29.7	28.4	23.9	19.1
560	19.6	62.5	50.8	41.2	33.2	31.9	26.7	21.4
630	22.1	70.3	57.2	46.3	37.4	35.8	30.0	24.1

a $e_{min}=e_n$

b Preferred series.

c SDR17.6 series can be removed at the next revision of this Internation Standard.

d Minimum wall thickness values greater than limits of 2.3mm, 2.4mm, 2.5mm and 2.9mm can be imposed for practical reasons in accordance with national requirements. See maunfacturer's files or national specification for advice.

AS/NZS 4130 Series Pipes -Gas(Nominal Outside Diameter Series)

Dimensions in Millimetres

Nominal Out-side diameter DN (mm)	Mean Outside Diameter Dm		Maximum out of roundness	Minimum Wall Thickness(T)											
				SDR9		SDR11		SDR13.6		SDR17		SDR21		SDR26	
	Min.	Max.		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16	16	16.3	1.2	3.0	3.4	3.0	3.4	3.0	3.4	2.4	2.8	2.4	2.8	2.5	2.9
20	20	20.3	1.2	3.0	3.4	3.0	3.4	3.0	3.4	2.4	2.8	2.4	2.8	2.5	2.9
25	25	25.3	1.2	3.0	3.4	3.0	3.4	3.0	3.4	2.4	2.8	2.4	2.8	2.5	2.9
32	32	32.3	1.3	3.6	3.4	3.0	3.4	3.0	3.4	2.4	2.8	2.4	2.8	2.5	2.9
40	40	40.4	1.4	4.5	4.2	3.7	4.2	3.0	3.4	2.4	2.8	2.4	2.8	2.5	2.9
50	50	50.4	1.4	5.6	5.2	4.6	5.2	3.7	4.2	3.0	3.4	2.4	2.8	2.5	2.9
63	63	63.4	1.5	7.1	6.5	5.8	6.5	4.7	5.3	3.8	4.3	3.0	3.4	2.5	2.9
75	75	75.5	1.6	8.4	7.6	6.8	7.6	5.6	6.2	4.5	5.1	3.6	4.1	2.9	3.3
90	90	90.6	1.8	10.1	9.2	8.2	9.2	6.6	7.4	5.4	6.1	4.3	4.9	3.5	4.0
110	110	110.7	2.2	12.3	11.1	10.0	11.1	8.1	9.1	6.6	7.4	5.3	6.0	4.2	4.8
125	125	125.8	2.5	14.0	12.7	11.4	12.7	9.2	10.3	7.4	8.3	6.0	6.7	4.8	5.4
140	140	140.9	2.8	15.7	14.1	12.7	14.1	10.3	11.5	8.3	9.3	6.7	7.5	5.4	6.1
160	160	161.0	3.2	17.9	16.2	14.6	16.2	11.8	13.1	9.5	10.6	7.7	8.6	6.2	7.0
180	180	181.1	3.6	20.1	18.2	16.4	18.2	13.3	14.8	10.7	11.9	8.6	9.6	6.9	7.7
200	200	201.2	4.0	22.4	20.2	18.2	20.2	14.7	16.3	11.9	13.2	9.6	10.7	7.7	8.6
225	225	226.4	4.5	25.2	22.7	20.5	22.7	16.6	18.4	13.4	14.9	10.8	12.0	8.6	9.6
250	250	251.5	5.0	27.9	25.1	22.7	25.1	18.4	20.4	14.8	16.4	11.9	13.2	9.6	10.7
280	280	282.6	9.8	31.2	28.1	25.4	28.1	20.6	22.8	16.6	18.4	13.4	14.9	10.7	11.9
315	315	317.9	11.1	35.2	31.6	28.6	31.6	23.2	25.7	18.7	20.7	15.0	16.6	12.1	13.5
355	355	358.2	12.5	39.7	35.6	32.2	35.6	26.1	28.9	21.1	23.4	16.9	18.7	13.6	15.1
400	400	403.6	14.0	44.7	40.1	36.3	40.1	29.4	32.5	23.7	26.2	19.1	21.2	15.3	17.0
450	450	454.1	15.6	50.3	45.1	41.0	45.1	33.1	36.6	26.7	29.5	21.5	23.8	17.2	19.1
500	500	504.5	17.5	55.8	50.1	45.5	50.1	36.8	40.6	29.7	32.8	23.9	26.4	19.1	21.2
560	560	565.0	19.6	62.5	56.2	51.0	56.2	41.2	45.5	33.2	36.7	26.7	29.5	21.4	23.7
630	630	635.7	22.1	70.3	63.1	57.3	63.1	46.3	51.1	37.4	41.3	30.0	33.1	24.1	26.7

1. The pipes series is based on ISO sizes.
2. In the interest of pipe serviceability and irrespective of the calculated wall thickness, this Standard does not provide for a wall thickness of less than 2.4mm for SDR26, SDR21 and SDR17, and 3.0mm for SDR13.6, SDR11 and SDR9.

EN1555-2: Plastics piping systems for the supply of gaseous fuels-Polyethylene (PE) Part 2: Pipes

Safety Factor: C=2.0 Dimensions in Millimetres

Nominal Out-side Diameter DN/OD	Mean Outside Diameter dem		Maximum out of roundness for straight pipes [bc]	PE80 Material		PE100 Material			
				SDR11/ PN4 Bar		SDR17.6/ PN4 Bar		SDR11/ PN10 Bar	
	Min.	Max. [a]		T.(mm)	Weight (kg/m)	T.(mm)	Weight (kg/m)	T.(mm)	Weight (kg/m)
16	16	16.3	1.2	-	-	-	-	-	-
20	20	20.3	1.2	2.3	0.12	2.3	0.13	3.0	0.16
25	25	25.3	1.2	2.3	0.15	2.3	0.17	3.0	0.21
32	32	32.3	1.3	2.9	0.27	2.3	0.22	3.0	0.28
40	40	40.4	1.4	3.7	0.43	2.3	0.28	3.7	0.43
50	50	50.4	1.4	4.6	0.67	2.9	0.44	4.6	0.67
63	63	63.4	1.5	5.8	1.05	3.9	0.69	5.8	1.06
75	75	75.5	1.6	6.8	1.47	4.3	0.98	6.8	1.48
90	90	90.6	1.8	8.2	2.12	5.2	1.39	8.2	2.13
110	110	110.7	2.2	10.0	3.14	6.3	2.08	10.0	3.18
125	125	125.8	2.5	11.4	4.08	7.1	2.67	11.4	4.11
140	140	140.9	2.8	12.7	5.08	8.0	3.36	12.7	5.14
160	160	161.0	3.2	14.6	6.67	9.1	4.35	14.6	6.81
180	180	181.1	3.6	16.4	8.42	10.3	5.56	16.4	8.49
200	200	201.2	4.0	18.2	10.40	11.4	6.79	18.2	10.50
225	225	226.4	4.5	20.5	13.10	12.8	8.60	20.5	13.26
250	250	251.5	5.0	22.7	16.20	14.2	10.63	22.7	16.37
280	280	282.6	9.8	25.4	20.30	15.9	13.29	25.4	20.43
315	315	317.9	11.1	28.6	25.60	17.9	61.82	28.6	25.90
355	355	358.2	12.5	32.2	32.50	20.2	21.41	32.2	32.85
400	400	403.6	14.0	36.3	41.30	22.8	27.20	36.3	41.80
450	450	454.1	15.6	40.9	52.30	25.6	34.40	40.9	52.96
500	500	504.5	17.5	45.4	64.50	28.4	42.45	45.4	66.15
560	560	565.0	19.6	50.8	80.80	31.9	53.20	50.8	81.53
630	630	633.8	22.1	57.2	102.00	35.8	67.35	57.2	103.30

Max. [a] Grade B according to ISO11922-1
Maximum out of roundness for straight pipes [bc]
measurement of out-of-roundness shall be made at the point of manufacturing.
If other values for the out-of- roundness than those given in this table are necessary(eg coiled pipes), they shall be agreed between the manufacturer and the end user.
Ohter size on request.
Color: Black with yellow lines or Yellow.

ASTM D2513 “Standard Specification Polyethylene (PE) Gas Pressure Pipe, Tubing and Fitting

IPS HDPE Gas Distribution Pipe

Dimensions in Inch

PRESSURE RATING 4710			DR7	DR9	DR11	DR11 .5	DR 13.5	DR17	DR 21	DR26	DR 32.5	
Design Factor(DF)=0.4			125psi	125psi	125psi	122psi	102psi	80psi	64psi	NA	NA	
Design Factor(DF)=0.32			125psi	125psi	102psi	98psi	82psi	64psi	51psi	41psi	33psi	
IPS Pipe Size (In)	Nominal OD (in)	Nominal OD (mm)	Min.Wall (in)	Min.Wall (in)	Min.Wall (in)	Min.Wall (in)	Min. Wall (in)	Min.Wall (in)	Min.Wall (in)	Min.Wall (in)	Min.Wall (in)	IPS Pipe Size (In)
1⁄2	0.840	21.336	0.120	0.093	0.076	0.073	0.062	-	-	-	-	1⁄2
3/4"	1.050	26.670	0.150	0.117	0.095	0.091	0.078	0.062	-	-	-	3/4"
1"	1.315	33.401	0.188	0.146	0.120	0.114	0.097	0.077	-	-	-	1"
1 1/4"	1.660	42.164	0.237	0.184	0.151	0.144	0.123	0.098	-	-	-	1 1/4"
1 1/2"	1.900	48.260	0.271	0.211	0.173	0.165	0.141	0.112	-	-	-	1 1/2"
2"	2.375	60.325	0.339	0.264	0.216	0.207	0.176	0.140	0.113	-	-	2"
3"	3.500	88.900	0.500	0.389	0.318	0.304	0.259	0.206	0.167	-	-	3"
4"	4.500	114.300	0.643	0.500	0.409	0.391	0.333	0.265	0.214	0.173	0.138	4"
5"	5.563	141.300	-	0.618	0.506	-	0.412	0.327	0.265	-	-	5"
6"	6.625	168.275	0.946	0.736	0.602	0.576	0.491	0.390	0.315	0.255	0.204	6"
8"	8.625	219.075	1.232	0.958	0.784	0.750	0.639	0.507	0.411	0.332	0.265	8"
10"	10.750	273.050	1.536	1.194	0.977	0.935	0.796	0.632	0.512	0.413	0.331	10"
12"	12.750	323.850	1.821	1.417	1.159	1.109	0.944	0.750	0.607	0.490	0.392	12"
PRESSURE RATING 4710		DF=0.32	100psi	100psi	100psi	100psi	82psi	64psi	51psi	41psi	33psi	
14"	14	355.60	2.000	1.556	1.273	1.217	1.037	0.824	0.667	0.538	0.431	14"
16"	16	406.40	2.286	1.778	1.455	1.391	1.185	0.941	0.762	0.615	0.492	16"
18"	18	457.20	2.571	2.000	1.636	1.565	1.333	1.059	0.857	0.692	0.554	18"
20"	20	508.00	2.857	2.222	1.818	1.739	1.481	1.176	0.952	0.769	0.615	20"
22"	22	558.80	3.143	2.444	2.000	1.913	1.630	1.294	1.048	0.846	0.677	22"
24"	24	609.60	3.429	2.667	2.182	2.087	1.778	1.412	1.143	0.923	0.738	24"

Product Standard: ASTM D2513

Pipe Compound: ASTM D3350 PPI PE 4710/PE100 (Virgin Material Only)

PE4710/PE100 gas distribution pipe is manufactured in accordance with ASTM D 2513 for the underground distribution of natural gas, gaseous LPG, and yard gas.

Design Factor (DF) of 0.4 may be used for 12” and smaller PE4710 pipe produced. The maximum operating pressure for PE3408/PE4710/PE100 gas distribution pipe 12” and smaller is 125psig and 100psig for pipe larger than 12”, and 100psi for all pipe sizes.

High quality HDPE pipe requires that all PE materials used in gas distribution service meet a minimum of at least 100 hours for two tests before failure when tested per ASTM F1473. Bingo Pipeline gas products are tested to over twenty times these minimum testing requirements.
The charts below show material physical properties, ASTM test methods for the property, and nominal values for Performance Pipe materials used for gas pipe.

PE4710-PE100 / (PE3408) Typical Physical Property Pipe Data Sheet			
Property	**Unit**	**Test Procedure**	**Typical Value**
Material Designation		PPI TR-4	PE4710 PE100
Cell Classification		ASTM D3350	445574C YGH041T
Pipe Properties			
Density	gms / cm^3	ASTM D1505	0.961 (black)
Melt Index (MI) Condition 190/2.16	gms / 10 minutes	ASTM D1238	0.08
Melt Index (HLMI) Condition 190/21.6	gms / 10 minutes	ASTM D1238	7.5
Hydrostatic Design Basis, (73°F)	psi	ASTM D2837	1,600
Hydrostatic Design Basis, (140°F)	psi	ASTM D2837	1,000
Minimum Required Strength	Mpa (psi)	ISO 9080	>10 (>1450)
Rapid Crack Propagation Critical Pressure (Pc), 0°C (32°F)(1)	Bar (psi)	ISO 13477	>12 bar (>174)
Color; UV Stabilizer	%	ASTM D3350	Min. 2% Carbon Black UV stabilized 10 years
Pipe Test Category		ASTM D2513	CEE
Material Properties			
Flexural Modulus @2% strain	psi	ASTM D790	>150,000
Tensile Strength at Yield	psi	ASTM D638 (Type IV)	>3,500
Elongation at Break 2 in/min., Type IV bar	%	ASTM D638	>800
Hardness	Shore D	ASTM D2240	65
PENT	hrs	ASTM F1473	>2,000
Manufactured to ASTM D2513 for pipe. Fittings comply with ASTM D2513 and ASTM D3261.			
Thermal Properties			
Vicat Softening Temperature	°F	ASTM D1525	255
Brittleness Temperature	°F	ASTM D746	-180
Thermal Expansion	in / in / °F	ASTM D696	1.0×10^{-4}

(1) Determination made using Small-Scale Steady state. Pc calculated in accordance with ISO 13477

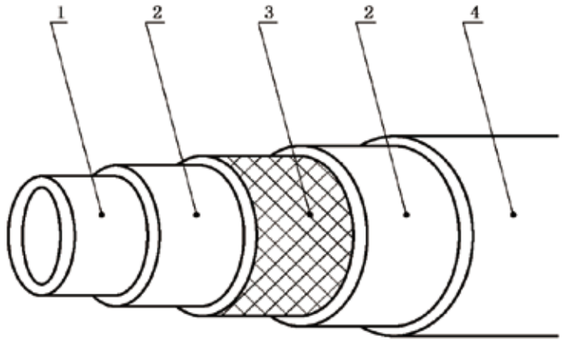
(2) NOTICE: This data sheet provides typical physical property information for polyethylene resins used to manufacture Bingo polyethylene piping products. It is intended for comparing polyethylene piping resins. It is not a product specification, and it does not establish minimum or maximum values or manufacturing tolerances for resins or for piping products. Some of these typical physical property values were determined using compression molded plaques. Values obtained from tests of specimens taken from piping products can vary from these typical values. This data sheet may be changed from time to time without notice. Contact Bingo Pipeline to determine if you have the most recent edition.

STEEL WIRE REINFORCED THERMOPLASTICS(PE) COMPOSITE PIPE(SRTP) & FITTING

Steel wire reinforced thermoplastics(PE) composite pipe and fitting (SRTP) is a composite pipe with high strength through plastic steel mesh skeleton and thermoplastic polyethylene as raw materials, steel wire winding net as the skeleton reinforcement of polyethylene plastic pipe with excellent performance, which is widely used in oil fields, power plants, chemicals, petrochemical enterprises, portable water, municipal gas, seawater pipelines and other fields.

Schematic Diagram Of Pipe Structure

1. **Internal HDPE plastic**
2. **Special hot melt adhesive**
3. **Hihg strength plastic coatedsteel wire mesh**
4. **External HDPE plastic**



Benefits of the Steel wire reinforced thermoplastics(PE) composite pipe and fittings

- Because the structure of the two materials of steel and plastic is composited, there will be no rapid stress that is difficult to overcome for plastic pipes.
- It has the strength, rigidity and impact resistance of ordinary pure plastic pipes, similar to the low linear expansion coefficient and creep resistance of steel pipes.
- Light weight and convenient installation. The pipeline connection adopts electrofusion joints and flanges, which has strong axial tensile resistance, mature and reliable connection technology, and complete development of pipe fittings varieties and specifications, which can be connected with other various pipelines and valve equipment.
- Double-sided anti-corrosion, with the same anti-corrosion performance as plastic pipes, high temperature and corrosion resistance, and low thermal conductivity.
- Excellent structure, the reinforced frame of the pipe and the inner and outer plastics are mutually contained as a whole, and there is no worry of peeling off the inner and outer plastics from the Steel wire reinforcement.
- The inner wall is smooth and does not scale, and the head loss of the pipe type is 30% lower than that of the steel pipe.
- The overall design of the pipe is based on the service life of 50 years

SPECIFICATION OF STEEL WIRE REINFORCED THERMOPLASTICS(PE) COMPOSITE PIPE(SRTP)

Specification of Steel Wire Reinfored Thermoplastics(PE) Comosite Pipe(SRTP) for Water or Special Fluids

Dimensions in Millimetres

Nominal Diametter		Nominal Pressure(MPa)													
		0.8		1		1.25		1.6		2		2.5		3.5	
OD(mm)		Wall thickneess enmin& enmax(mm)													
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
50	51.2							4.50	5.70	5.00	6.20	5.50	7.00	5.50	7.00
63	64.2							4.50	5.70	5.00	6.20	5.50	7.00	5.50	7.00
75	76.2							5.00	6.20	5.00	6.20	5.50	7.00	6.00	7.50
90	91.4							5.50	7.00	5.50	7.00	5.50	7.00	6.00	7.50
110	111.5			5.50	7.00	5.50	7.00	7.00	8.50	7.00	8.50	7.50	9.00	8.50	10.00
140	141.7			5.50	7.00	5.50	7.00	8.00	9.50	8.50	10.00	9.00	10.50	9.50	11.00
160	162.0			6.00	7.50	6.00	7.50	9.00	10.50	9.50	11.00	10.00	12.00	10.50	12.50
200	202.3			6.00	7.50	6.00	7.50	9.50	11.00	10.50	12.50	11.00	13.00	12.50	14.70
225	227.5			8.00	9.50	8.00	9.50	10.00	12.00	10.50	12.50	11.00	13.00		
250	252.5	8.00	9.50	10.50	12.50	10.50	12.50	12.00	14.20	12.00	14.20	12.50	14.70		
315	317.7	9.50	11.00	11.50	13.50	11.50	13.50	13.00	15.50	13.00	15.50				
355	357.8	10.00	11.80	12.00	14.20	12.00	14.20	14.00	16.50						
400	403.0	10.50	12.50	12.50	14.70	12.50	14.70	15.00	17.80						
450	453.2	11.50	13.50	13.50	16.00	13.50	16.00	16.00	18.80						
500	503.2	12.50	14.70	15.50	18.30	15.50	18.30	18.00	21.00						
560	563.2	17.00	20.00	20.00	23.00										
630	633.2	20.00	23.00	23.00	26.00										

Specification of Steel Wire Reinfored Thermoplastics(PE) Comosite Pipe(SRTP) for Gas

Nominal Diametter		Nominal Pressure(MPa)									
		0.4		0.6		0.8		1		1.25	
OD(mm)		Wall thickneess enmin& enmax(mm)									
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
50	51.2			4.50	5.70	5.00	6.20	5.50	7.00	5.50	7.00
63	64.2			4.50	5.70	5.00	6.20	5.50	7.00	5.50	7.00
75	76.2			5.00	6.20	5.00	6.20	5.50	7.00	6.00	7.50
90	91.4			5.50	7.00	5.50	7.00	5.50	7.00	6.00	7.50
110	111.5	5.50	7.00	7.00	8.50	7.00	8.50	7.50	9.00	8.50	10.00
140	141.7	5.50	7.00	8.00	9.50	8.50	10.00	9.00	10.50	9.50	11.00
160	162.0	6.00	7.50	9.00	10.50	9.50	11.00	10.00	12.00	10.50	12.50
200	202.3	6.00	7.50	9.50	11.00	10.50	12.50	11.00	13.00	12.50	14.70
225	227.5	8.00	9.50	10.00	12.00	10.50	12.50	11.00	13.00		
250	252.5	10.50	12.50	12.00	14.20	12.00	14.20	12.50	14.70		
315	317.7	11.50	13.50	13.00	15.50	13.00	15.50				
355	357.8	12.00	14.20	14.00	16.50						
400	403.0	12.50	14.70	15.00	17.80						
450	453.2	13.50	16.00	16.00	18.80						
500	503.2	15.50	18.30	18.00	21.00						
560	563.2	20.00	23.00								
630	633.2	23.00	26.00								

Note: The products are in accordancew with the standard: CJ/T 189-2007 Steel Wire Reinfored Thermoplastics(PE) Comosite Pipe(SRTP) and Fitting, based on ISO4427 standards for water and ISO4437 for gas supply.
The pipes for water supply are black with the blue stripes or blue.
The pipes for special fluids are black with red strips or red.
The pipes for gas are black with yellow stripes or yellow.
The fittings should be black.

Application of the Steel wire reinforced thermoplastics(PE) composite pipe and fittings

The steel mesh skeleton plastic composite pipeline is a new type of pipeline with excellent performance, which is widely used in oil fields, power plants, petroleum, chemical enterprises, water companies, municipal gas, seawater utilization pipelines and other fields.

Oil and gas fields: oily sewage, gas field sewage, oil and gas mixtures, secondary and tertiary oil recovery and gathering and transportation process pipes.

Chemical industry: acid, alkali, salt manufacturing, petroleum, chemical, fertilizer, pharmaceutical, textile, printing and dyeing, rubber and plastic industries to transport corrosive gas, liquid, solid powder process pipes and discharge pipes.

Shipbuilding: marine sewage pipes, drainage pipes, ballast pipes, ventilation pipes, etc.

Municipal engineering: urban building water supply, drinking water, fire fighting water, heat network back-water, gas, natural gas transmission, highway buried drainage and other channels.

Power engineering: pipelines for process water, return water, water supply, fire fighting water, dust removal, waste residue, etc.

Mining: used for transporting corrosive media and slurry, tailings, ventilation pipes and process pipes in non-ferrous metal smelting.

Agricultural sprinkler irrigation: deep well pipes, water filter pipes, culvert pipes, drainage pipes, irrigation pipes, etc.

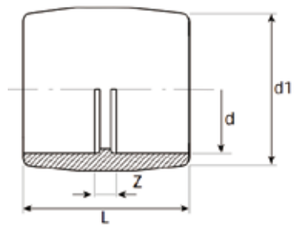
Seawater transportation: seawater transportation in desalination plants, seaside power plants, and seaport cities.

HDPE FITTINGS

Bingo Pipeline provides HDPE fittings together with the HDPE pipes. We keep a variety of on-demand HDPE fittings in stock. Including the Socket fusion fittings, butt fusion fittings, electrofusion fittings, compression fittings, fabricated segments fittings and steel or metal backing rings, all related accessories from the diameter 20mm to 1200mm.

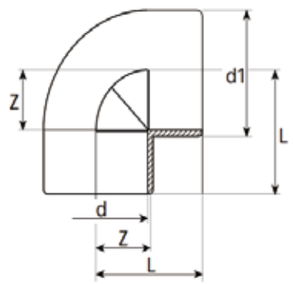
Socket Fusion Fittings

Equal Coupler



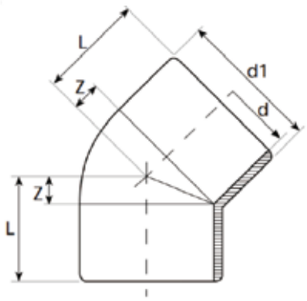
Equal Coupler			
d(mm)	d1(mm)	z(mm)	L(mm)
20	30.5	7	35
25	36	7	39
32	43.5	7	43
40	53.5	8	48
50	66	8	54
63	82	8	62
75	93	8	69.5
90	112	10.5	80.5
110	134.5	14	96

90 Deg Elbow



90 Deg Elbow			
d(mm)	d1(mm)	z(mm)	L(mm)
20	30.5	14	28
25	36	16	32
32	43.5	20	38
40	53.5	24	44
50	66	28	51
63	82	35	62
75	92.5	44.5	75.5
90	110	53	88
110	134	65	106

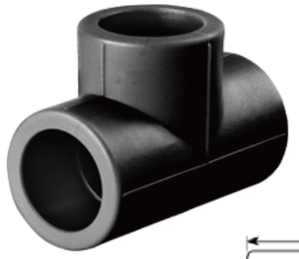
45 Deg Elbow

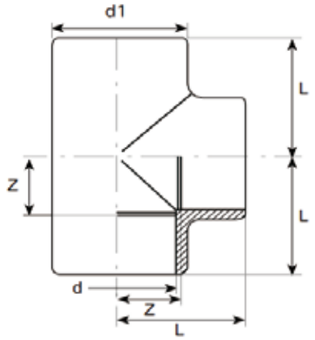


45 Deg Elbow			
d(mm)	d1(mm)	z(mm)	L(mm)
20	30.5	7	21
25	36	8	24
32	43.5	10	28
40	53	13	33
50	64	13	36
63	82	16	43
75	92.5	20	51
90	114	23	58
110	134	27	68

Bingo HDPE pipes and fittings for water supply, for drainage and sewerage under pressure are manufactured in accordance with the different standards:

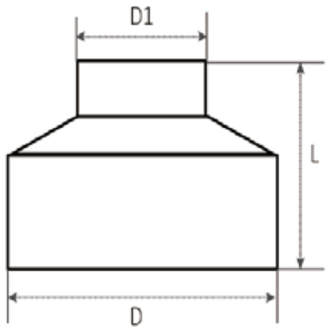
Equal Tee





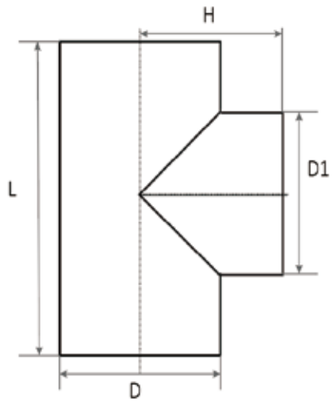
Equal Tee			
d(mm)	d1(mm)	z(mm)	L(mm)
20	30.5	14	28
25	36	16	32
32	43.5	20	38
40	53.5	24	44
50	66	28	51
63	82	35	62
75	92.5	44.5	75.5
90	110	53	88
110	134	65	106

Reducing Coupler



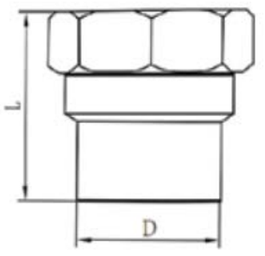
Reducing Coupler			
Size(mm)	D(mm)	D1(mm)	L (mm)
25 x 20	33	27	38
32 x 20	42	27	43
32 x 25	42	33	44
40 x 20	51	28	44
40 x 25	51	33	44
40 x 32	51	41	44
50 x 20	61	28	48
50 x 25	61	34	48
50 x 32	61	42	48
50 x 40	61	51	48
63 x 20	76	28	57
63 x 25	76	34	57
63 x 32	76	42	57
63 x 40	76	51	57
63 x 50	76	62	58
75 x 25	87	32	65
75 x 32	87	41	64
75 x 40	87	50	67
75 x 50	87	60	68
75 x 63	87	75	68
90 x 40	104	50	63
90 x 50	104	60	63
90 x 63	104	76	71
90 x 75	104	87	71
110 x 50	127	60	70
110 x 63	127	76	74
110 x 75	127	87	76
110 x 90	127	104	77

Reducing Tee



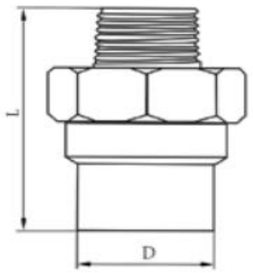
Reducing Tee				
Size	D (mm)	L (mm)	D1 (mm)	H (mm)
25 x 20	33	58	27	31
32 x 20	42	63	27	33
32 x 25	42	69	33	36
40 x 20	50	59	26	36
40 x 25	50	65	30	38
40 x 32	50	70	41	40
50 x 20	61	68	26	42
50 x 25	61	77	34	45
50 x 32	61	83	42	45
50 x 40	61	91	50	46
63 x 20	77	70	26	48
63 x 25	77	76	31	50
63 x 32	77	82	41	52
63 x 40	77	91	50	53
63 x 50	77	100	61	58
75 x 20	87	80	29	56
75 x 25	87	87	34	58
75 x 32	87	91	40	57
75 x 40	87	100	50	62
75 x 50	87	112	61	65
75 x 63	87	130	76	67
90 x 40	105	132	70	70
90 x 50	107	120	61	70
90 x 63	107	147	76	80
90 x 75	107	151	90	81
110 x 40	132	136	48	77
110 x 50	132	137	60	88
110 x 63	132	159	76	100
110 x 75	132	161	90	101
110 x 90	132	177	107	91

Female Threaded Coupling



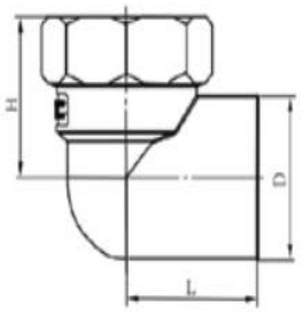
Female Threaded Coupling		
Size	D (mm)	L (mm)
20 x ½"	27	41
20 x ¾"	27	43
25 x ½"	33	44
25 x ¾"	33	46
32 x ½"	41	39
32 x ¾"	41	43
32 x 1"	41	50
40 x 1¼"	50	52
50 x 1½"	60	54
63 x 2"	77	64
75 x 2½"	90	70
90 x 3"	108	82
110 x 4"	131	85

Male Threaded Coupling



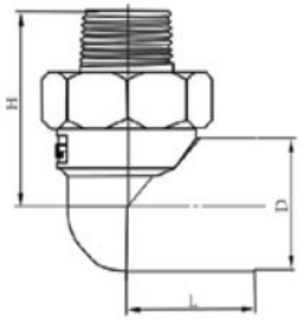
Male Threaded Coupling		
Size	D (mm)	L (mm)
20 x ½"	27	58
20 x ¾"	27	55
25 x ½"	33	58
25 x ¾"	33	60
32 x ½"	41	52
32 x ¾"	41	55
32 x 1"	41	65
40 x 1¼"	51	70
50 x 1½"	60	72
63 x 2"	76	83
75 x 2½"	90	94
90 x 3"	107	105
110 x 4"	131	115

Female Threaded Elbow



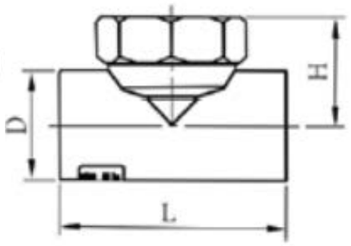
Female Threaded Elbow			
Size	D (mm)	H (mm)	L (mm)
20 x ½"	27	32	32
20 x ¾"	27	32	30
25 x ½"	33	34	33
25 x ¾"	33	36	35
32 x ½"	41	39	30
32 x ¾"	41	39	35
32 x 1"	41	40	36
40 x 1¼"	50	47	45
50 x 1½"	63	54	52
63 x 2"	77	67	61

Male Threaded Elbow



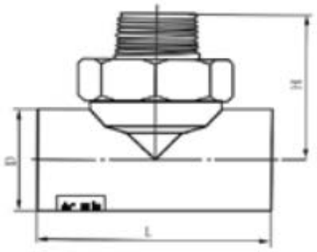
Male Threaded Elbow			
Size	D (mm)	H (mm)	L (mm)
20 x ½"	27	46	32
20 x ¾"	27	46	32
25 x ½"	33	48	33
25 x ¾"	33	48	35
32 x ½"	41	51	31
32 x ¾"	41	52	34
32 x 1"	41	55	36
40 x 1¼"	50	67	45
50 x 1½"	63	69	52
63 x 2"	77	79	61

Female Threaded Tee



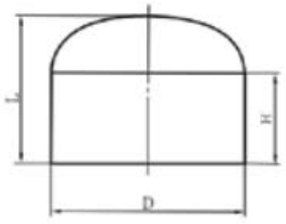
Female Threaded Tee			
Size	D (mm)	H (mm)	L (mm)
20 x ½"	27	31	51
25 x ½"	33	33	58
25 x ¾"	33	34	60
32 x ½"	41	37	61
32 x 3/4"	41	40	67
32 x 1"	41	41	72

Male Threaded Tee



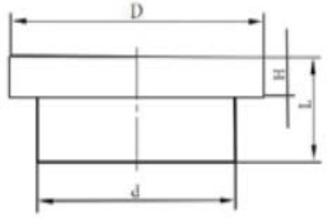
Male Threaded Tee			
Size	D (mm)	H (mm)	L (mm)
20 x ½"	27	45	52
25 x ½"	33	47	58
25 x ¾"	33	48	60
32 x ½"	41	51	61
32 x 3/4"	41	52	67
32 x 1"	41	55	72

End Cap



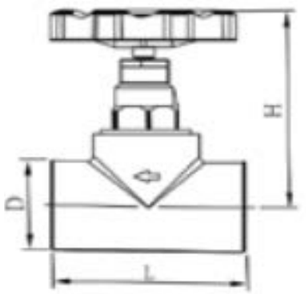
End Cap			
Size	D (mm)	H (mm)	L (mm)
20	27	18	20
25	33	20	23
32	42	23	25
40	51	27	28
50	63	29	31
63	76	31	41
75	91	32	51
90	108	51	69
110	126	45	59

StubStub End (Flange Adapter)



StubStub End (Flange Adapter)				
Size	D (mm)	d (mm)	H (mm)	L (mm)
50	85	63	30	14
63	98	78	34	14
75	121	94	40	15
90	125	110	44	17
110	160	126	50	20

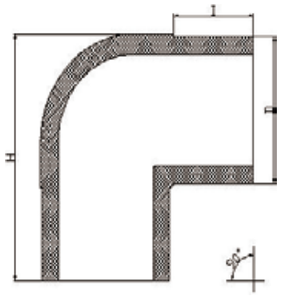
Stop Valve

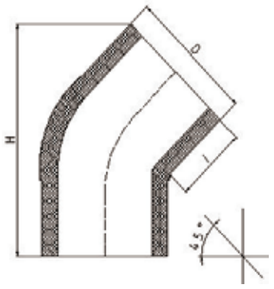


Stop Valve			
Size	D (mm)	H (mm)	L (mm)
20	28	56	54
25	34	73	61
32	43	80	63
40	51	85	60
50	63	96	68
63	75	115	74

Butt Fusion Fittings

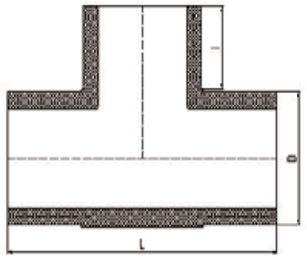
90°& 45°Elbow





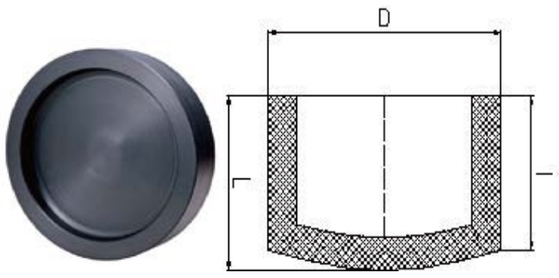
90°ELBOW			45°ELBOW		
D(mm)	I(mm)	H(mm)	D(mm)	I(mm)	H(mm)
63	65	128	63	64	168
75	65	140	75	63	180
90	65	155	90	63	190
110	65	175	110	63	196
125	70	195	125	66	215
140	75	215	140	74	242
160	75	240	160	79	260
180	85	275	180	79	295
200	100	305	200	80	300
225	108	340	225	108	360
250	108	365	250	100	365
280	112	400	280	108	400
315	112	430	315	100	405
355	100	460	355	100	430
400	100	510	400	101	472
450	150	610	450	125	552
500	150	660	500	125	593
560	155	720	560	125	635
630	158	800	630	125	695
710	170	900	710	170	830
800	170	990	800	170	900

TEE



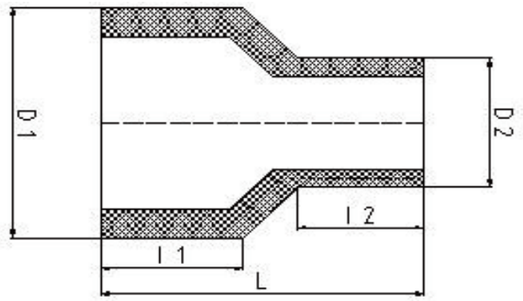
TEE		
D(mm)	I(mm)	L(mm)
63	65	204
75	65	215
90	65	230
110	65	254
125	70	275
140	70	290
160	75	324
180	110	420
200	110	420
225	115	470
250	115	485
280	115	516
315	115	562
355	100	580
400	110	640
450	145	625
500	145	820
560	160	900
630	165	975
710	210	1140
800	230	1260

CAP

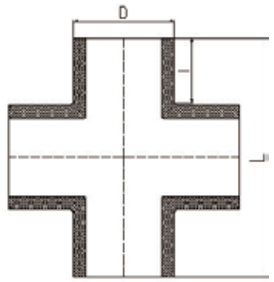


CAP		
D(mm)	I(mm)	L(mm)
63	43	52
75	44	54
90	64	73
110	60	73
125	80	88
140	83	90
160	69	85
180	80	95
200	75	90
225	70	85
250	102	115
280	110	128
315	105	128
355	110	135
400	102	130
450	110	135
500	110	135
560	110	140
630	110	140
710	120	150
800	120	150
900	120	150
1000	120	150
1200	150	190

REDUCER COUPLING



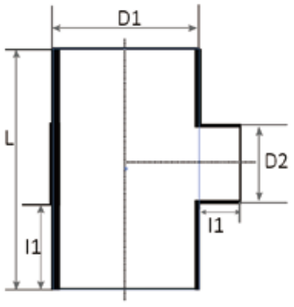
CROSS



CROSS			
D	I	L	SDR
63	60	184	11
75	65	203	11
90	75	240	11
110	80	260	13.6
125	85	295	13.6
160	80	330	13.6
200	115	440	13.6
225	115	460	13.6
250	120	493	13.6
315	120	558	17
355	140	640	17
400	140	685	17
450	140	740	17
500	150	810	17
560	150	875	17
630	160	960	17
710	210	1140	17
800	235	1280	17

REDUCER COUPLING				
D1(mm)	D2(mm)	I1(mm)	I2(mm)	L(mm)
160	140	70	70	145
180	110	70	70	153
180	160	70	80	156
200	63	70	70	142
200	75	70	70	142
200	90	70	70	157
200	110	70	70	153
200	125	70	70	154
200	140	70	70	154
200	160	70	80	159
225	110	70	70	156
225	160	70	80	162
225	200	70	80	155
250	110	70	70	160
250	125	70	70	157
250	160	70	80	163
250	200	70	80	159
250	225	70	80	155
280	110	80	70	150
280	160	80	80	160
280	200	80	80	160
280	250	80	80	168
315	110	80	70	181
315	125	80	70	180
315	160	80	80	184
315	180	80	80	181
315	200	80	80	178
315	225	80	80	174
315	250	80	80	171
315	280	80	90	180
355	110	80	70	180
355	160	80	80	183
355	200	80	80	177
355	250	80	80	170
355	315	80	90	179
400	110	90	70	205
400	160	90	80	208
400	200	90	80	202
400	225	90	80	198
400	250	90	80	193
400	280	90	90	199
400	315	90	95	200
400	355	90	95	194
450	315	85	90	175
450	400	85	100	185
500	200	90	80	170
500	250	90	80	170
500	315	90	90	180
500	355	90	90	180
500	400	90	100	190
500	450	90	100	190
560	400	90	100	190
560	500	90	100	190
630	315	90	90	180
630	400	90	100	190
630	500	90	100	190
630	560	90	100	190

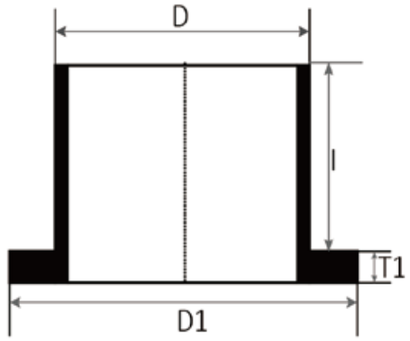
REDUCER TEE



REDUCER TEE									
D1	D2	I1	I2	L	D1	D2	I1	I2	L
75	**50**	62	62	190	400	110	110	80	355
75	**63**	64	64	203	**400**	**160**	110	120	402
90	**50**	75	61	212	**400**	**200**	110	120	443
90	**63**	64	63	203	**400**	**225**	120	120	510
90	**75**	66	63	218	**400**	**250**	110	120	493
110	**50**	64	65	191	**400**	**280**	120	140	545
110	**63**	65	62	204	**400**	**315**	110	120	556
110	**75**	63	63	215	**400**	**355**	120	160	628
110	**90**	64	64	230	**450**	**110**	160	90	436
125	**63**	75	70	212	**450**	**160**	160	125	485
125	**75**	75	70	226	**450**	**200**	160	125	532
125	**90**	75	70	240	**450**	**250**	160	125	582
125	**110**	75	70	263	**450**	**315**	160	125	556
140	**63**	75	70	213	**450**	**400**	160	160	569
140	**75**	75	70	226	**500**	**110**	160	160	430
140	**90**	75	70	240	**500**	**160**	160	90	488
140	**110**	75	70	260	**500**	**200**	160	125	520
140	**125**	75	75	278	**500**	**250**	160	125	568
160	**63**	80	70	225	**500**	**315**	160	125	640
160	**75**	80	70	234	**500**	**355**	150	160	700
160	**90**	75	70	254	**500**	**400**	150	160	700
160	**110**	75	80	273	**500**	**450**	150	160	780
160	**125**	80	80	283	**560**	**110**	170	90	508
160	**140**	80	80	298	**560**	**160**	170	125	507
180	**90**	110	80	312	**560**	**200**	170	125	545
180	**110**	110	80	330	**560**	**250**	170	125	590
180	**160**	110	110	382	**560**	**315**	170	125	660
200	**63**	110	70	280	**560**	**400**	170	160	740
200	**75**	110	70	282	**560**	**450**	170	160	796
200	**90**	110	70	301	**560**	**500**	170	160	840
200	**110**	110	70	320	**630**	**110**	170	90	459
200	**125**	95	80	250	**630**	**160**	170	125	503
200	**140**	95	80	368	**630**	**200**	170	125	540
200	**160**	110	110	371	**630**	**225**	170	125	586
200	**180**	110	110	400	**630**	**250**	170	125	586
225	**110**	110	85	356	**630**	**315**	170	125	665
225	**160**	115	110	387	**630**	**400**	170	160	750
225	**200**	115	110	425	**630**	**450**	170	160	797
250	**110**	110	80	338	**630**	**500**	170	160	845
250	**125**	110	80	345	**710**	**110**	210	160	530
250	**160**	115	110	396	**710**	**160**	210	160	585
250	**200**	115	110	434	**710**	**200**	210	160	630
250	**225**	115	110	460	**710**	**250**	190	160	630
280	**110**	120	115	348	**710**	**315**	195	160	710
280	**160**	120	115	400	**710**	**400**	195	175	790
280	**200**	120	115	436	**710**	**500**	195	200	890
280	**250**	120	115	490	**710**	**630**	195	210	1020
315	**110**	120	80	357	**800**	**110**	230	160	590
315	**160**	120	120	408	**800**	**160**	210	160	590
315	**200**	120	120	445	**800**	**200**	210	160	630
315	**225**	110	120	472	**800**	**250**	230	160	720
315	**250**	120	120	496	**800**	**315**	230	160	800
315	**280**	120	120	525	**800**	**355**	230	180	850
355	**110**	110	80	333	**800**	**400**	230	180	850
355	**160**	110	110	381	**800**	**500**	195	210	1020
355	**200**	110	110	420	**800**	**630**	230	210	1100
355	**250**	110	110	470	**800**	**710**	195	210	1100
355	**315**	110	110	538					

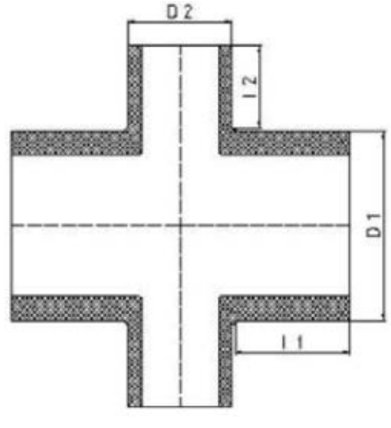
BINGO PIPELINE

STUB END



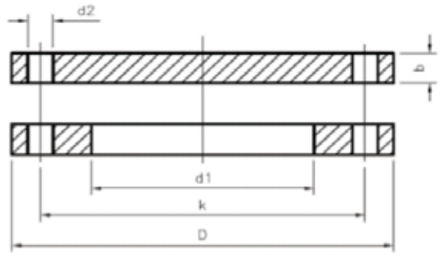
STUB END			
D(mm)	I(mm)	D1(mm)	T1(mm)
63	78	94	9
75	79	108	10
90	81	124	12
110	80	149	14
125	90	160	15
140	88	179	16
160	95	210	18
180	95	219	20
200	94	263	22
225	105	269	25
250	171	319	27
280	172	325	30
315	173	370	33
355	173	427	37
400	172	480	41
450	165	515	46
500	215	575	51
560	120	630	57
630	209	690	64
710	247	800	71
800	255	900	79
900	265	998	89
1000	258	1100	97
1200	230	1300	118

REDUCER CROSS



REDUCER CROSS				
D1	D2	I1	I2	L
90	63	85	75	240
110	63	80	75	225
125	75	110	80	295
225	160	110	110	380
315	200	120	110	445
355	200	140	120	485
400	200	140	120	490
450	200	140	120	490
450	315	140	130	605
500	110	150	140	420
500	160	150	140	470
500	200	150	140	510
500	250	150	140	565
500	315	150	140	625
560	200	150	140	515
560	315	150	140	625
630	200	160	140	530
630	315	160	140	660
710	200	210	160	630
710	315	210	160	745
800	200	210	160	630
800	400	220	180	845

FLANGES AND BLIND FLANGES ACCORDING TO STANDARD ANSI B16.5 /150 PSI AND 300 PSI



DIAMETER PIPE		NORMA ANSI B16.5 150 PSI						NORMA ANSI B16.5 300 PSI				
		DIMENSIONS				BOLTS		DIMENSIONS			BOLTS	
NOMINAL	EQUIVALENTE	D	k	d1	b	N°	d2	D	k	b	N°	d2
mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
20	1/2	88.9	60.3	32	10	4	15.9	95.3	66.6	14.2	4	15.75
25	3/4	98.6	69.8	38	11	4	15.9	117.4	82.6	15.7	4	19.05
32	1	108.0	79.4	45	13	4	15.9	124.0	88.9	17.5	4	19.05
40	1 1/4	117.3	88.9	55	14	4	15.9	133.4	98.6	19.1	4	19.05
50	1 1/2	127.0	98.4	66	16	4	15.9	155.5	114.3	20.6	4	19.05
63	2	152.4	120.8	78	17	4	19.1	165.1	127.0	22.4	8	19.05
75	2 1/2	177.8	139.7	92	21	4	19.1	180.5	149.4	25.4	8	22.35
90	3	190.5	152.4	108	22	4	19.1	209.6	168.2	28.4	8	22.35
110	4	228.6	190.5	128	22	8	19.1	254.0	200.2	31.8	8	22.35
125	5	254.0	215.9	135	22	8	22.2	279.4	235.0	35.1	8	22.35
140	5 1/2	254.0	215.9	158	22	8	22.2	279.4	235.0	35.1	8	22.35
160	6	279.4	241.3	178	24	8	22.2	317.5	269.8	36.6	12	22.35
180	6	279.4	241.3	188	24	8	22.2	317.5	269.8	36.6	12	22.35
200	8	342.9	298.4	235	27	8	22.2	371.0	330.2	41.1	12	25.40
225	8	342.9	298.4	238	27	8	22.2	381.0	330.2	41.1	12	25.40
250	10	406.4	362.0	288	29	12	25.4	444.5	387.4	47.8	16	28.45
280	10	406.4	362.0	294	29	12	25.4	444.5	387.4	47.8	16	28.45
315	12	482.6	431.8	338	30	12	25.4	520.7	450.9	50.8	16	31.75
355	14	533.4	476.2	376	33	12	28.6	584.2	514.4	53.8	20	31.75
400	16	596.9	539.7	430	35	16	28.6	647.7	571.5	57.2	20	35.05
450	18	635.0	577.8	497	38	16	31.7	711.2	628.7	60.5	24	35.05
500	20	698.5	635.0	533	41	20	31.7	774.7	685.8	63.5	24	35.05
560	22	748.0	692.2	585	44	20	34.9	838.2	742.9	65.0	24	38.10
630	24	812.0	749.3	645	46	20	34.9	914.4	812.8	68.4	24	41.15
710	28	927.0	864.0	740	50	28	34.9	1035.1	939.8	79.5	28	50.80
800	32	1,060.0	977.9	843	56	28	41.3	1092.2	997.0	82.6	28	50.80
900	36	1,168.0	1,086.0	947	59	32	41.3	1270.0	1168.4	87.9	32	57.15
1000	40	1,289.0	1,200.1	1050	62	36	41.3	1378.0	1276.4	92.2	36	57.15
1200	48	1,511.0	1,422.0	1260	69	44	41.3	1651.0	1543.1	114.3	40	57.15

Note: EN1092, BS4504, ISO7005, AS2129, BS 10, ANSI B16.5, ASBS1123 Standards with metal, steel, stainless steel different material are available.
All the HDPE butt fusion fittings are available in PN10, PN12.5 and PN16, other pressure rate and diameter could be customized.

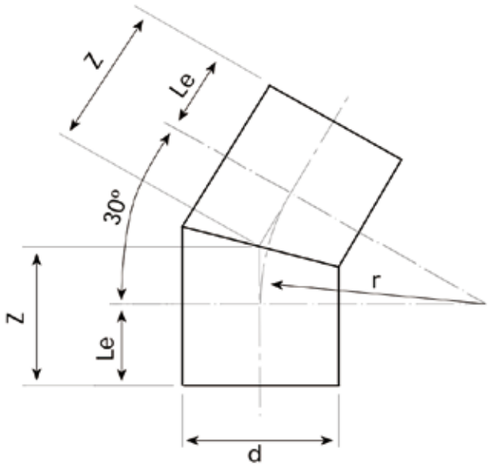
HDPE FABRICATED FITTINGS

Fabricates segments PE fittings are made by the HDPE pipes according to international standards DIN 16963 or other specifications to meet the specific demands of the customer. Fabricated fittings are suitable for butt-fusion and electro- fusion joints, and it could be connected by the flanges.

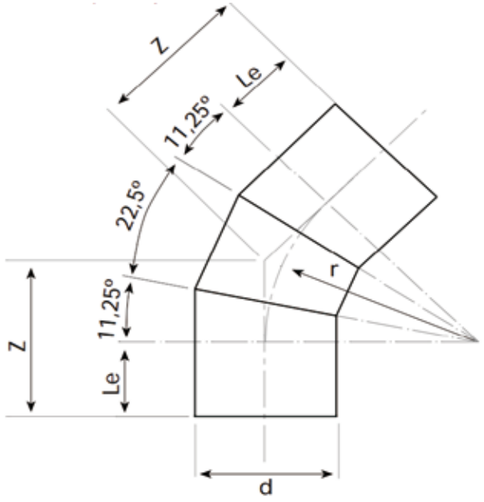
Our fabricated HDPE fittings include fabricated elbows by short radius with 45 deg, 30deg, 60 deg 90 deg, 22.5, deg, 11.25 deg elbows and other customized non-traditional angles (degree elbows) as clients' requirement, fabricated tees, fabricated reducing tees, fabricated sweep bends by R1.5D, R3D, lateral 45 deg tees, and other fabricated fittings as requirements from 50mm to 1600mm. All these fabricated fittings are produced and test in accordance with the standard DIN16963.

ELBOW 45 °(± 2 °) AND ELBOW 30 °(± 2 °)

ELBOW 30 °



ELBOW 45 °



Diameter d	Diameter	Le min	L min	Z1 min	Z2 min
mm	inch	mm	mm	mm	mm
90	3	135	100	156	136
110	4	165	150	218	194
125	5	188	150	228	200
140	5 1/2	210	150	237	206
160	6	240	150	249	214
180	6	270	150	262	222
200	8	300	150	274	230
225	8	338	150	290	241
250	10	375	250	412	350
280	10	420	250	424	362
315	12	473	300	498	428
355	14	533	300	520	443
400	16	600	300	548	461
450	18	675	300	580	481
500	20	750	350	665	551
560	22	840	350	698	575
630	24	945	350	741	603
710	28	1065	350	792	636
800	32	1200	350	847	672
900	36	1350	400	960	762
1000	40	1500	400	1022	802
1200 (²)	48	1800	400	1146	882
1400 (²)	54	2100	400	1270	963
1600 (²)	64	2400	400	1394	1043

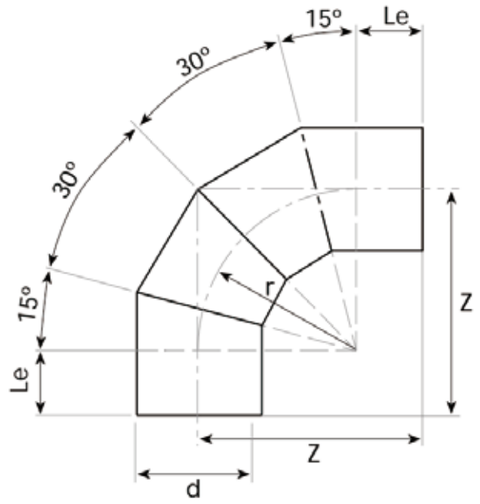
1) r=1.5d
2) Values not covered by DIN16963 standard

NOTES:

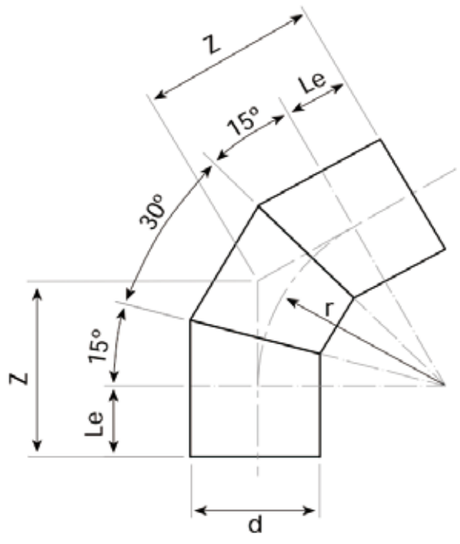
- Can be manufactured in all PN nominal pressures
- Other dimensions and configurations on request
- For the calculation of resistances, 0.8 PN must be considered

ELBOW 90 °(± 2 °) AND ELBOW 60°(± 2 °)

ELBOW 90 °



ELBOW 60 °



Diameter d	Diameter	r (¹)	Le min	Z min 90°	Z min 60°
mm	inch	mm	mm	mm	mm
90	3	135	100	235	178
110	4	165	150	315	245
125	5	188	150	338	258
140	5 1/2	210	150	360	271
160	6	240	150	440	288
180	6	270	150	470	305
200	8	300	150	500	323
225	8	338	150	538	345
250	10	375	250	625	466
280	10	420	250	670	492
315	12	473	300	773	576
355	14	533	300	833	608
400	16	600	300	900	646
450	18	675	300	975	689
500	20	750	350	1100	783
560	22	840	350	1190	835
630	24	945	350	1295	896
710	28	1065	350	1415	965
800	32	1200	350	1550	1043
900	36	1350	400	1750	1179
1000	40	1500	400	1900	1266
1200 (²)	48	1800	400	2200	1439
1400 (²)	54	2100	400	2500	1612
1600 (²)	64	2400	400	2800	1786

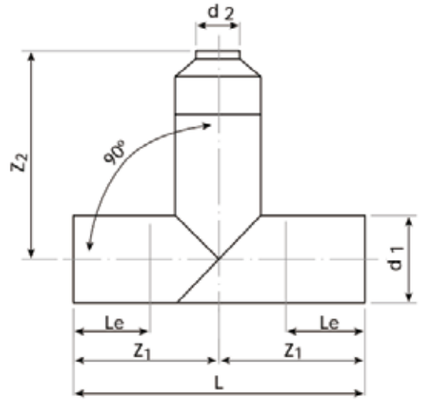
1) r=1.5d
2) Values not covered by DIN16963 standard

NOTES:

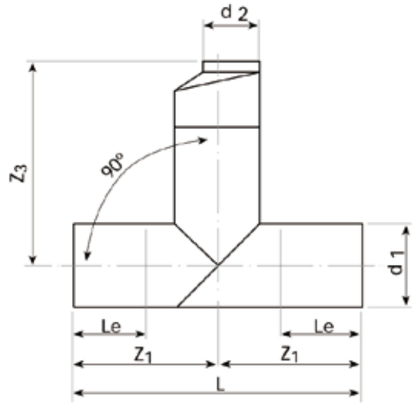
- Can be manufactured in all PN nominal pressures
- Other dimensions and configurations on request
- For the calculation of resistances, 0.8 PN must be considered

TEE 90 ° (± 2 °) WITH CONCENTRIC / ECCENTRIC REDUCTION

CONCENTRIC TEE



ECCENTRIC TEE



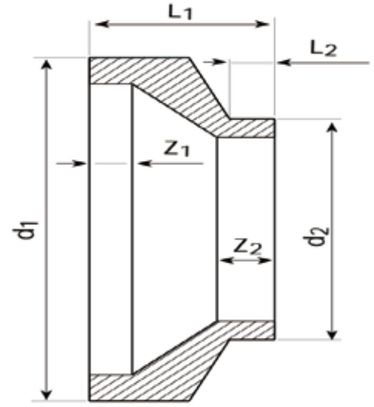
Diameter d1	Diameter	Diameter d2	Le min	L min	Z1 min	Z2 min	Z3 min
mm	inch	mm	mm	mm	mm	mm	mm
110	4	63-90	150	610	305	365	375
125	5	63-110	150	630	315	415	425
140	5 1/2	75-125	150	640	320	420	430
160	6	90-140	150	660	330	430	440
180	6	90-160	150	680	340	445	455
200	8	110-180	150	700	350	455	465
225	8	125-200	150	730	365	470	480
250	10	125-225	250	1150	575	680	690
280	10	140-250	250	1180	590	695	705
315	12	160-280	300	1320	660	785	810
355	14	180-315	300	1360	680	805	825
400	16	200-355	300	1400	700	830	850
450	18	225-400	300	1450	725	855	875
500	20	250-450	350	1600	800	930	950
560	22	280-500	350	1660	830	960	980
630	24	315-580	350	1730	865	1005	1025
710	28	355-560	350	1810	905	1055	1075
800	32	400-710	350	1900	950	1120	1145
900	36	450-800	400	2100	1050	1245	1295
1000	40	500-900	400	2200	1100	1295	1345
1200 (1)	48	630-1000	400	2400	1200	1420	1450
1400 (1)	54	710-1200	400	2600	1300	1500	1585
1600 (1)	64	800-1400	400	2800	1400	1700	1710
1) Values not covered by DIN16963 standard							

NOTES:

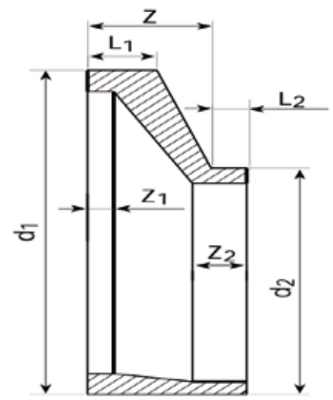
- Can be manufactured in all PN nominal pressures
- Other dimensions and configurations on request
- For the calculation of resistances, 0.8 PN must be considered

REDUCTIONS FOR THERMOFUION WELDING

REDUCTION CONCENTRIC



REDUCTION ECCENTRIC



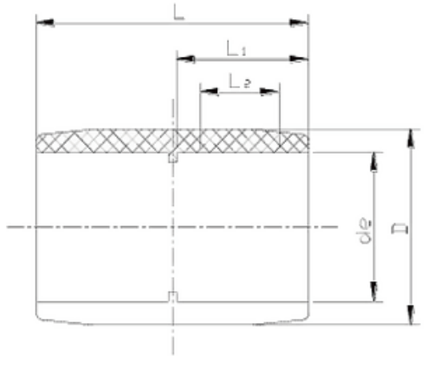
Diameter d1	Diameter	Diameter d2	REDUCTION CONCENTRIC				REDUCTION ECCENTRIC				
			L1	L2	Z1	Z2	L1	L2	Z1	Z2	Z
mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
110	4	63-90	60	10	10	20	40	10	10	20	60
125	5	63-110	100	10	10	20	66	10	10	20	100
140	5 1/2	75-125	100	10	10	20	66	10	10	20	100
160	6	90-140	100	10	10	20	66	10	10	20	100
180	6	90-160	105	15	15	30	70	15	15	30	105
200	8	110-180	105	15	15	30	70	15	15	30	105
225	8	125-200	105	15	15	30	70	15	15	30	105
250	10	125-225	105	15	15	30	70	15	15	30	105
280	10	140-250	105	15	15	30	70	15	15	30	105
315	12	160-280	125	15	15	30	83	15	15	30	125
355	14	180-315	125	15	15	30	83	15	15	30	125
400 (1)	16	200-355	130	20	20	40	86	20	20	40	130
450 (1)	18	225-400	130	20	20	40	86	20	20	40	130
500 (1)	20	250-450	130	20	20	40	86	20	20	40	130
560 (1)	22	280-500	130	20	20	40	86	20	20	40	130
630 (1)	24	315-580	140	20	20	40	93	20	20	40	140
710 (1)	28	355-560	150	20	20	40	100	20	20	40	150
800 (1)	32	400-710	170	25	25	50	113	25	25	50	170
900 (1)	36	450-800	195	25	25	50	146	25	25	50	220
1000 (1)	40	500-900	195	25	25	50	146	25	25	50	220
1200 (1)	48	630-1000	220	30	30	60	146	30	30	60	220
1400 (1)	54	710-1200	250	35	35	70	166	45	45	70	250
1600 (1)	64	800-1400	300	45	45	90	183	45	45	90	275
1) Values not covered by DIN16963 standard											

NOTES: Can be manufactured in all PN nominal pressures
Other dimensions and configurations on request
For the calculation of resistances, 0.8 PN must be considered

HDPE ELECTROFUION FITTINGS

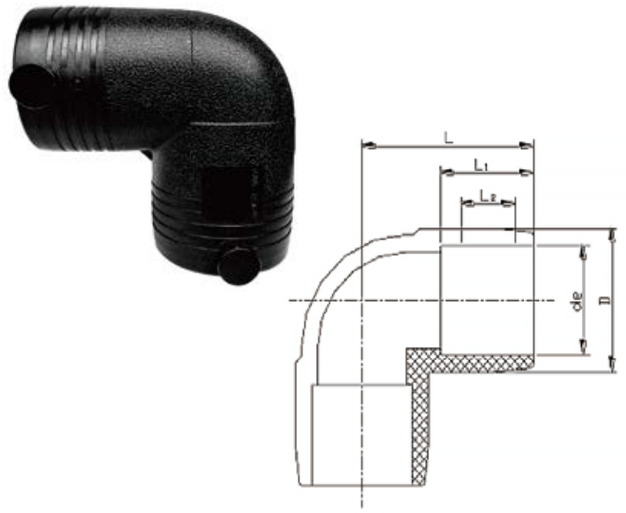
Electrofusion is most commonly used for jointing pipes up to 250mm diameter but there is no technical upper limit. It is nevertheless most commonly used for smaller diameter pipes because the cost of fittings increases with diameter. Electrofusion is equally suited to both coiled and straight pipe lengths, and can be used to joint pipes of different nominal diameters and SDR's using suitable fittings.

EF Coupler



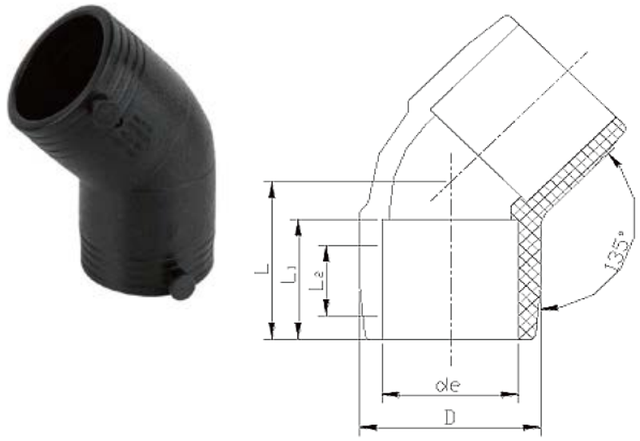
de	D	L	L_1	L_2
mm	mm	mm	mm	mm
50	65	95	45	20
63	80	110	50	20
75	95	120	55	30
90	110	135	65	35
110	140	155	75	40
140	170	170	80	40
160	200	195	95	45
200	250	220	105	50
225	270	230	110	55
250	296	240	115	65
315	373	285	135	80
355	420	290	140	90
400	473	315	150	100
450	535	320	155	100
500	595	330	160	100
560	665	340	160	140
630	710	420	200	180

EF elbow 90 °



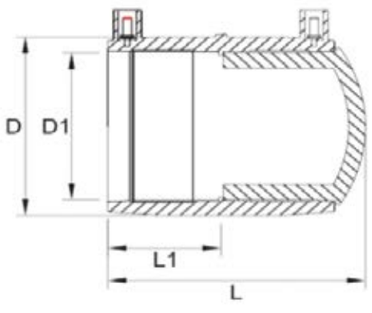
de	D	L	L_1	L_2
mm	mm	mm	mm	mm
50	65	85	45	20
63	80	85	50	20
75	95	100	55	30
90	110	120	65	35
110	140	145	75	40
140	170	170	80	40
160	200	190	95	45
200	250	225	105	50
225	270	250	110	55
250	296	245	115	65
315	373	285	135	80
355	420	355	140	90
400	473	385	150	100
450	535	425	155	100
500	665	455	160	100

EF elbow 45 °



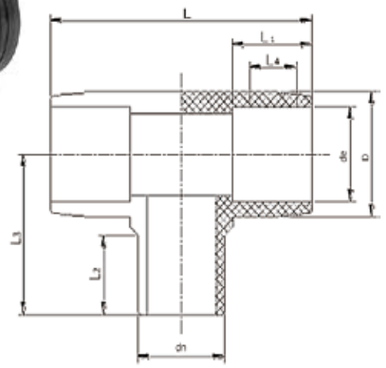
de	D	L	L_1	L_2
mm	mm	mm	mm	mm
50	65	82	45	20
63	80	85	50	20
75	95	85	55	30
90	110	100	65	35
110	140	113	80	40
140	170	125	80	40
160	200	150	105	45
200	250	170	120	50
225	270	175	110	55
250	292	210	115	65
315	366	235	135	80
355	420	250	140	90
400	473	275	150	100
450	535	295	150	100
500	595	310	160	100

EF End Cap



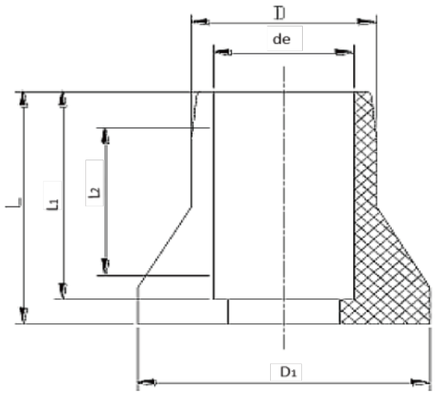
Size	L	L1	D	D1
mm	mm	mm	mm	mm
20	82	37.5	29	20
25	82	37.5	33.5	25
32	84	37.5	43	32
40	97	44	51.5	40
50	101	44	61.5	50
63	115	49	77	63
75	125	61	100	75
90	133	60	110	90
110	164	70	133	110
125	175	75	151	125
140	236	89	176	140
160	202	86	195	160
180	214	91	220	180
200	215	92	243	200
225	222	109	276	225
250	220	108	301	250

EF Equal Tee



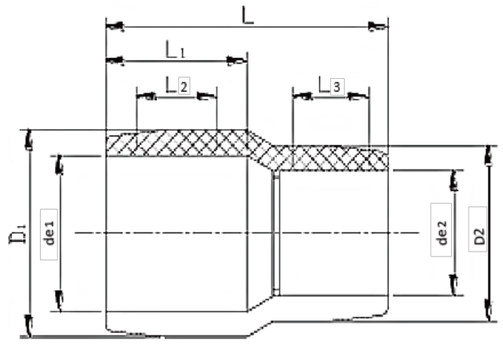
de	D	dn	L	L_1	L_2	L_3	L_4
mm	mm	mm	mm	mm	mm	mm	mm
50	65	50	150	45	45	90	20
63	80	63	175	50	55	105	20
75	95	75	205	55	60	120	30
90	110	90	230	65	70	140	35
110	140	110	265	75	75	160	40
140	170	140	320	80	80	180	40
160	200	160	365	95	100	215	45
200	250	200	435	105	110	250	50
225	270	225	460	110	110	255	55
250	292	250	485	125	140	285	65
315	366	315	575	140	145	350	80
355	420	355	660	140	140	375	90
400	473	400	740	150	150	425	100
450	535	450	785	155	155	460	100
500	595	500	845	160	160	490	100

EF Stub End



de	D	D_1	L	L_1	L_2
mm	mm	mm	mm	mm	mm
50	65	90	115	115	40
63	80	105	120	110	40
75	95	125	130	125	70
90	110	140	145	140	70
110	140	160	150	140	75
140	165	190	155	145	80
160	190	215	160	150	85
200	235	270	180	165	95
225	255	315	175	160	60
250	280	325	130	110	60
315	350	380	135	115	60
355	380	450	170	155	60
400	435	495	160	140	65
450	480	560	190	180	100
500	540	580	230	210	120
560	610	650	240	220	130
630	680	750	270	250	150

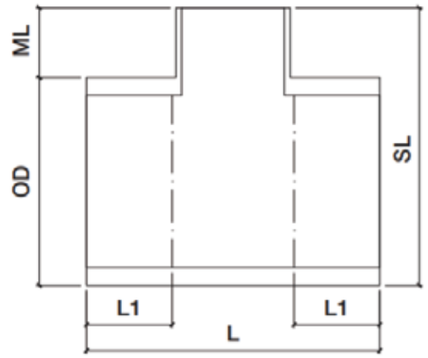
EF Reducing Coupler



de_1	de_2	D_1	D_2	L	L_1	L_2	L_3
mm	mm	mm	mm	mm	mm	mm	mm
63	**50**	80	65	120	50	30	20
75	**50**	95	65	135	55	35	25
	63		80	135	55	35	25
90	**50**	110	65	155	65	40	20
	63		80	155	65	40	25
	75		95	175	65	40	30
90	**50**	140	65	160	75	50	20
	63		80	160	75	50	25
	75		95	165	75	50	30
	90		110	175	75	50	40
140	**90**	160	110	190	90	55	40
	110		110				40
160	**90**	200	110	230	75	70	35
	110		140	230	95	70	40
200	**110**	250	140	290	105	55	75
	160		200	250	105	60	60
225	**110**	260	140	260	115	50	60
	140		140				65
	160		200				70
	200		250				80
250	**110**	296	140	280	120	50	60
	140		160				65
	160		200				70
	200		250				80
	225		260				85
315	**110**	373	140	310	140	70	70
	140		160				70
	160		200				70
	200		250				75
	225		260				75
	250		296				80

de_1	de_2	D_1	D_2	L	L_1	L_2	L_3
mm	mm	mm	mm	mm	mm	mm	mm
355	**110**	420	140	330	150	80	70
	140		160				70
	160		200				70
	200		250				75
	225		260				75
	250		296				80
	315		373				90
400	**110**	468	140	340	160	85	70
	140		160				70
	160		200				70
	200		250				75
	225		260				75
	250		296				80
	315		373				90
	355		420				95
450	**110**	535	140	360	170	90	70
	140		160				70
	160		200				70
	200		250				75
	225		260				75
	250		296				80
	315		373				90
	355		420				95
	400		473				100
500	**110**	590	140	350	180	100	70
	140		160				70
	160		200				70
	200		250				75
	225		260				75
	250		296				80
	315		373				90
	355		420				95
	400		473				100
	450		535				110

EF Reducing Tee



Size	OD	L1	L	ML	SL
mm	mm	mm	mm	mm	mm
32*20	44.0	47.6	116.0	58.0	102.0
32*25	44.0	48.2	122.0	59.0	103.0
40*20	57.0	50.0	120.0	58.0	115.0
40*25	57.0	50.0	125.0	59.0	175.0
40*32	57.0	49.0	129.0	77.0	134.0
50*20	67.0	55.0	135.0	58.0	125.0
50*25	67.0	55.0	135.0	59.0	126.0
50*32	67.0	55.0	142.2	77.0	144.0
50*40	67.0	55.0	149.0	73.0	140.0
63*20	82.0	63.0	154.0	58.0	140.0
63*25	82.0	63.0	159.8	59.0	141.0
63*32	82.0	63.0	165.5	77.0	159.0
63*40	82.0	63.0	172.5	73.0	155.0
63*50	82.0	87.5	175.0	55.0	137.0
75*40	98.0	70.0	186.3	73.0	171.0
75*50	98.0	79.0	209.5	69.0	167.0
75*63	98.0	100.0	200.0	63.0	161.0
90*40	117.0	79.0	230.0	73.0	190.0
90*50	117.0	82.0	218.0	69.0	186.0
90*63	117.0	112.5	225.0	63.0	180.0
90*75	117.0	112.5	225.0	70.0	187.0
110*50	142.0	82.0	250.0	69.0	211.0
110*63	142.0	124.0	248.0	63.0	205.0
110*75	142.0	124.0	248.0	70.0	215.0
110*90	142.0	124.0	248.0	79.0	221.0
125*63	160.0	135.0	270.0	63.0	223.0
125*75	160.0	135.0	270.0	70.0	230.0

Size	OD	L1	L	ML	SL
mm	mm	mm	mm	mm	mm
125*90	160.0	135.0	270.0	79.0	239.0
125*110	160.0	135.0	270.0	82.0	242.0
160*50	193.0	98.0	249.0	69.0	232.0
160*63	195.0	155.0	310.0	63.0	232.0
160*75	195.0	155.0	310.0	70.0	258.0
160*90	195.0	155.0	310.0	79.0	265.0
160*110	195.0	155.0	310.0	82.0	274.0
160*125	195.0	155.0	310.0	87.0	277.0
180*160	216.0	105.0	352.0	98.0	287.0
200*50	240.5	112.0	308.0	69.0	314.0
200*63	240.5	112.0	308.0	63.0	309.0
200*75	240.5	112.0	308.0	70.0	303.0
200*90	240.5	112.0	308.0	79.0	310.0
200*110	240.5	112.0	365.0	82.0	319.0
200*160	240.5	112.0	365.0	98.0	322.0
250*50	240.5	112.0	338.0	69.0	338.0
250*63	296.0	129.0	338.0	63.0	365.0
250*75	296.0	129.0	338.0	70.0	356.0
250*90	296.0	129.0	338.0	79.0	366.0
250*110	296.0	129.0	338.0	82.0	375.0
250*160	296.0	129.0	430.0	98.0	378.0
250*200	296.0	129.0	430.0	128.0	394.0
315*90	380.0	150.0	440.0	79.0	459.0
315*110	380.0	150.0	440.0	82.0	462.0
315*160	380.0	150.0	440.0	98.0	478.0
315*200	380.0	150.0	514.0	128.0	508.0
315*250	380.0	150.0	514.0	154.0	534.0

All the EF fittings comply to BS EN 12201-3 and are PN10 and PN16 rated. The Electrofusion Fittings system comes in sizes from 20mm to 630mm or more large diameter and is manufactured using PE100 materials. We provide the fully automatic electric fusion welding machine, cuttings tools and manual scraper, Scanner for barcode reading, data transfer software for welding machine together with our electrofusion fittings. The electrofusion weling machine could be used for HDPE EF fittings and PPR EF fittings to meet different clients' demands. All the fittings could be regular type and bar code type for water supply and gas transmission.

PVC PIPES

PVC Pipe is a product of modern technology that offers reliable and durable service to a variety of users including contractors, engineers, operators, industries, utilities, and irrigation districts. A number of performance advantages means PVC Pipes now replace many traditional materials.

We manufacturer a series of PVC pipes fittings, including U PVC, M PVC, O PVC and C PVC pipes and fittings ranging from the diameter from DN20 to DN630mm, in accordance with different standard, used for so many applications.

- **Portable water supply**
- **Principal water mains**
- **Principal pressure sewer mains**
- **Industrial process lines**
- **Effluent pipelines for industrial and waste**
- **Irrigation and turf water systems**
- **Industrial effluent disposal**
- **Acids, alkalies and aggressive chemicals**
- **Slurry lines in mining**
- **Buried underground cable protection pipes**

Benefits of PVC Pipes And Fittings

- **Manufactured from quality raw material.**
- **Easy handling, transportation & installation.**
- **Excellent chemical resistance.**
- **Non conductive.**
- **Ease of use.**
- **Better flow for optimum yields.**
- **Selfit jointing ensures leak proof jointing system for optimum results.**
- **Manufactured on most sophisticated machines to ensure a superior product every time.**
- **High strength & durability.**
- **Non reactive with acidic and alkali substances in water. They are ideal for drain water discharge as well as most of the chemicals.**
- **UV stabilized and hence suitable for outdoor applications.**
- **Manufactured under highest quality standards which ensures reliability of the product.**
- **Long operational life estimated to be around 100 years.**

End Type Of PVC Pipe

Plain End

SCJ End

RRJ End

Applications of PVC Pipes and Fittings

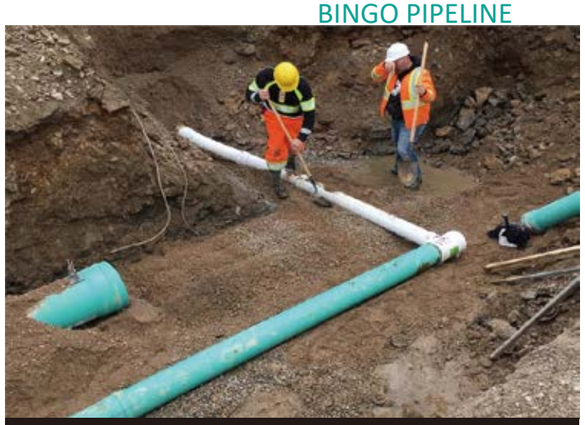
Industry

Chemical

Irrigation

Drainage

Drinking Water



Wastewater

Vegetable Cultivation

Cable Protection

Specification of PVC Pipes

DIN 8061/62 :2009 : PVC-U Pressure Pipes (SF=2.5)

Dimensions in millimetres

Wall Thickmess (mm)																				
SF	2.5		2.5		2.5		2.5		2.5		2.5		2.5		2.5		2.5		2.5	
PN	1.6		4		5		6		8		10		12.5		16		20		25	
S	S 63		S 25		S 20		S 16.7		S 12.5		S 10		S 8		S 6.3		S 5		S 4	
SDR	SDR 127		SDR 51		SDR 41		SDR 34.4		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9	
Nominal Outside Diameter dn(mm)	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	1.6	1.5	1.9	1.8	2.2
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.9	1.9	2.3	2.3	2.8
25	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.9	1.9	2.3	2.3	2.8	2.8	3.3
32	-	-	-	-	-	-	-	-	-	-	1.6	2	1.9	2.3	2.4	2.9	2.9	3.4	3.6	4.2
40	-	-	-	-	-	-	-	-	1.6	2	1.9	2.3	2.4	2.9	3	3.5	3.7	4.3	4.5	5.2
50	-	-	-	-	-	-	1.5	1.9	2	2.4	2.4	2.9	3	3.5	3.7	4.3	4.6	5.3	5.6	6.4
63	-	-	-	-	1.6	2	1.9	2.3	2.5	3	3	3.5	3.8	4.4	4.7	5.4	5.8	6.6	7	7.9
75	-	-	1.5	1.9	1.9	2.3	2.2	2.7	2.9	3.4	3.6	4.2	4.5	5.2	5.6	6.4	6.8	7.7	8.4	9.5
90	-	-	1.8	2.2	2.2	2.7	2.7	3.2	3.5	4.1	4.3	5	5.4	6.2	6.7	7.6	8.2	9.3	10.1	11.4
110	1.8	2.2	2.2	2.7	2.7	3.2	3.2	3.8	4.2	4.9	5.3	6.1	6.6	7.5	8.1	9.2	10	11.2	12.3	13.8
125	1.8	2.2	2.5	3	3.1	3.7	3.7	4.3	4.8	5.5	6	6.8	7.4	8.4	9.2	10.4	11.4	12.8	14	15.6
140	1.8	2.2	2.8	3.3	3.5	4.1	4.1	4.8	5.4	6.2	6.7	7.6	8.3	9.4	10.3	11.6	12.7	14.2	15.7	17.5
160	1.8	2.2	3.2	3.8	4	4.6	4.7	5.4	6.2	7.1	7.7	8.7	9.5	10.7	11.8	13.2	14.6	16.3	17.9	19.9
180	1.8	2.2	3.6	4.2	4.4	5.1	5.3	6.1	6.9	7.8	8.6	9.7	10.7	12	13.3	14.9	16.4	18.3	20.1	22.4
200	1.8	2.2	3.9	4.5	4.9	5.6	5.9	6.7	7.7	8.7	9.6	10.8	11.9	13.3	14.7	16.4	18.2	20.3	22.4	24.9
225	1.8	2.2	4.4	5.1	5.5	6.3	6.6	7.5	8.6	9.7	10.8	12.1	13.4	15	16.6	18.5	20.5	22.8	25.2	28
250	2	2.4	4.9	5.6	6.2	7.1	7.3	8.3	9.6	10.8	11.9	13.3	14.8	16.5	18.4	20.5	22.7	25.2	27.9	30.9
280	2.2	2.7	5.5	6.3	6.9	7.8	8.2	9.3	12	13.4	13.4	15	16.6	18.5	20.6	22.9	25.4	28.2	31.3	34.7
315	2.5	3	6.2	7.1	7.7	8.7	9.2	10.4	13.5	15.1	15	16.7	18.7	20.8	23.2	25.8	28.6	31.7	-	-
355	2.8	3.3	7	7.9	8.7	9.8	10.4	11.7	15.2	17	16.9	18.8	21.1	23.5	26.1	29	-	-	-	-
400	3.2	3.8	7.9	8.9	9.8	11	11.7	13.1	17.1	19.1	19.1	21.3	23.7	26.3	29.4	32.6	-	-	-	-
450	3.6	4.2	8.8	9.9	11	12.3	13.2	14.8	19.2	21.4	21.5	23.9	26.7	29.6	-	-	-	-	-	-
500	4	4.6	9.8	11	12.3	13.8	14.6	16.3	21.4	23.8	23.9	26.5	29.7	32.9	-	-	-	-	-	-
560	4.4	5.1	11	12.3	13.7	15.3	16.4	18.3	23.9	26.5	26.7	29.6	-	-	-	-	-	-	-	-
630	5	5.7	12.3	13.8	15.4	17.2	18.4	20.5	26.9	29.8	30	33.2	-	-	-	-	-	-	-	-
710	5.6	6.4	13.9	15.5	17.4	19.4	20.7	23	30.3	33.6	-	-	-	-	-	-	-	-	-	-
800	6.3	7.2	15.7	17.5	19.6	21.8	23.3	25.9	-	-	-	-	-	-	-	-	-	-	-	-
900	7.1	8.1	17.6	19.6	22	24.4	26.3	29.2	-	-	-	-	-	-	-	-	-	-	-	-
1000	7.9	8.9	19.6	21.8	24.5	27.2	29.2	32.4	-	-	-	-	-	-	-	-	-	-	-	-
1200	9.5	10.7	23.5	26.1	29.4	32.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1400	11.1	12.5	27.4	30.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1600	12.6	14.1	31.3	34.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: S = pipe series, SF = safety factor2.5, PN = working pressure at 20℃ for 50 years of service

Suitable for water supply , sewerage and ducting applications.

DIN 8061/62 :2009 : PVC-U Pressure Pipes (SF=2.0)

Dimensions in millimetres

Wall Thickmess (mm)																				
SF	2		2		2		2		2		2		2		2		2		2	
PN	2		5		6		8		10		12.5		16		20		25		32	
S	S 63		S 25		S 20		S 16.7		S 12.5		S 10		S 8		S 6.3		S 5		S 4	
SDR	SDR 127		SDR 51		SDR 41		SDR 34.4		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9	
Nominal Outside Diameter dn(mm)	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.	*e* Min.	e Max.
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	1.6	1.5	1.9	1.8	2.2
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.9	1.9	2.3	2.3	2.8
25	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.9	1.9	2.3	2.3	2.8	2.8	3.3
32	-	-	-	-	-	-	-	-	-	-	1.6	2.0	1.9	2.3	2.4	2.9	2.9	3.4	3.6	4.2
40	-	-	-	-	-	-	-	-	1.6	2.0	1.9	2.3	2.4	2.9	3.0	3.5	3.7	4.3	4.5	5.2
50	-	-	-	-	-	-	1.5	1.9	2.0	2.4	2.4	2.9	3.0	3.5	3.7	4.3	4.6	5.3	5.6	6.4
63	-	-	-	-	1.6	2.0	1.9	2.3	2.5	3.0	3.0	3.5	3.8	4.4	4.7	5.4	5.8	6.6	7.0	7.9
75	-	-	1.5	1.9	1.9	2.3	2.2	2.7	2.9	3.4	3.6	4.2	4.5	5.2	5.6	6.4	6.8	7.7	8.4	9.5
90	-	-	1.8	2.2	2.2	2.7	2.7	3.2	3.5	4.1	4.3	5.0	5.4	6.2	6.7	7.6	8.2	9.3	10.1	11.4
110	1.8	2.2	2.2	2.7	2.7	3.2	3.2	3.8	4.2	4.9	5.3	6.1	6.6	7.5	8.1	9.2	10.0	11.2	12.3	13.8
125	1.8	2.2	2.5	3.0	3.1	3.7	3.7	4.3	4.8	5.5	6.0	6.8	7.4	8.4	9.2	10.4	11.4	12.8	14.0	15.6
140	1.8	2.2	2.8	3.3	3.5	4.1	4.1	4.8	5.4	6.2	6.7	7.6	8.3	9.4	10.3	11.6	12.7	14.2	15.7	17.5
160	1.8	2.2	3.2	3.8	4.0	4.6	4.7	5.4	6.2	7.1	7.7	8.7	9.5	10.7	11.8	13.2	14.6	16.3	17.9	19.9
180	1.8	2.2	3.6	4.2	4.4	5.1	5.3	6.1	6.9	7.8	8.6	9.7	10.7	12.0	13.3	14.9	16.4	18.3	20.1	22.4
200	1.8	2.2	3.9	4.5	4.9	5.6	5.9	6.7	7.7	8.7	9.6	10.8	11.9	13.3	14.7	16.4	18.2	20.3	22.4	24.9
225	1.8	2.2	4.4	5.1	5.5	6.3	6.6	7.5	8.6	9.7	10.8	12.1	13.4	15.0	16.6	18.5	20.5	22.8	25.2	28.0
250	2.0	2.4	4.9	5.6	6.2	7.1	7.3	8.3	9.6	10.8	11.9	13.3	14.8	16.5	18.4	20.5	22.7	25.2	27.9	30.9
280	2.2	2.7	5.5	6.3	6.9	7.8	8.2	9.3	12.0	13.4	13.4	15.0	16.6	18.5	20.6	22.9	25.4	28.2	31.3	34.7
315	2.5	3.0	6.2	7.1	7.7	8.7	9.2	10.4	13.5	15.1	15.0	16.7	18.7	20.8	23.2	25.8	28.6	31.7	-	-
355	2.8	3.3	7.0	7.9	8.7	9.8	10.4	11.7	15.2	17.0	16.9	18.8	21.1	23.5	26.1	29.0	-	-	-	-
400	3.2	3.8	7.9	8.9	9.8	11.0	11.7	13.1	17.1	19.1	19.1	21.3	23.7	26.3	29.4	32.6	-	-	-	-
450	3.6	4.2	8.8	9.9	11.0	12.3	13.2	14.8	19.2	21.4	21.5	23.9	26.7	29.6	-	-	-	-	-	-
500	4.0	4.6	9.8	11.0	12.3	13.8	14.6	16.3	21.4	23.8	23.9	26.5	29.7	32.9	-	-	-	-	-	-
560	4.4	5.1	11.0	12.3	13.7	15.3	16.4	18.3	23.9	26.5	26.7	29.6	-	-	-	-	-	-	-	-
630	5.0	5.7	12.3	13.8	15.4	17.2	18.4	20.5	26.9	29.8	30.0	33.2	-	-	-	-	-	-	-	-
710	5.6	6.4	13.9	15.5	17.4	19.4	20.7	23.0	30.3	33.6	-	-	-	-	-	-	-	-	-	-
800	6.3	7.2	15.7	17.5	19.6	21.8	23.3	25.9	-	-	-	-	-	-	-	-	-	-	-	-
900	7.1	8.1	17.6	19.6	22.0	24.4	26.3	29.2	-	-	-	-	-	-	-	-	-	-	-	-
1000	7.9	8.9	19.6	21.8	24.5	27.2	29.2	32.4	-	-	-	-	-	-	-	-	-	-	-	-
1200	9.5	10.7	23.5	26.1	29.4	32.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1400	11.1	12.5	27.4	30.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1600	12.6	14.1	31.3	34.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: S = pipe series, SF = safety factor 2.0, PN = working pressure at 20℃ for 50 years of service

Suitable for water supply , sewerage and ducting applications.

EN ISO 1452-2 : Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure - Unplasticized poly(vinyl chloride) (PVC-U)

Dimensions in millimetres

Nominal Outside Diameter	Nominal (minimum) Wall Thickness						
	Pipe Series S						
	S 20	S 16	S 12.5	S 10	S 8	S 6.3	S 5
	SDR 41	SDR 33	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 11
	Nominal Pressure PN based on disign coefficient C = 2.5						
mm		PN 6	PN 8	PN 10	PN 12.5	PN 16	PN 20
12	-	-	-	-	-	-	1.5
16	-	-	-	-	-	-	1.5
20	-	-	-	-	-	1.5	1.9
25	-	-	-	-	1.5	1.9	2.3
32	-	-	1.5	1.6	1.9	2.4	2.9
40	-	1.5	1.6	1.9	2.4	3.0	3.7
50	-	1.6	2.0	2.4	3.0	3.7	4.6
63	-	2.0	2.5	3.0	3.8	4.7	5.8
75	-	2.3	2.9	3.6	4.5	5.6	6.8
90	-	2.8	3.5	4.3	5.4	6.7	8.2
DN	Nominal Pressure PN based on disign coefficient C = 2.0 [a]						
mm	PN 6	PN 8	PN 10	PN 12.5	PN 16	PN 20	PN 25
110	2.7	3.4	4.2	5.3	6.6	8.1	10.0
125	3.1	3.9	4.8	6.0	7.4	9.2	11.4
140	3.5	4.3	5.4	6.7	8.3	10.3	12.7
160	4.0	4.9	6.2	7.7	9.5	11.8	14.6
180	4.4	5.5	6.9	8.6	10.7	13.3	16.4
200	4.9	6.2	7.7	9.6	11.9	14.7	18.2
225	5.5	6.9	8.6	10.8	13.4	16.6	-
250	6.2	7.7	9.6	11.9	14.8	18.4	-
280	6.9	8.6	10.7	13.4	16.6	20.6	-
315	7.7	9.7	12.1	15.0	18.7	23.2	-
355	8.7	10.9	13.6	16.9	21.1	26.1	-
400	9.8	12.3	15.3	19.1	23.7	29.4	-
450	11.0	13.8	17.2	21.5	26.7	33.1	-
500	12.3	15.3	19.1	23.9	29.7	36.8	-
560	13.7	17.2	21.4	26.7	-	-	-
630	15.4	19.3	24.1	30.0	-	-	-
710	17.4	21.8	27.2	-	-	-	-
800	19.6	24.5	30.6	-	-	-	-
900	22.0	27.6	-	-	-	-	-
1000	24.5	30.6	-	-	-	-	-

[a] To apply a design coefficient of 2.5 (instead of 2.0) for pipes with normal diameters above 90mm, the next higher pressure rating, PN , shall be chosen.
The nominal wall thickness conform to ISO 4065.
The PN6 values for S 20 and S 16 are calculated with the preferred number 6.3.

ISO 4422-2 Pipes and fittings made of unplasticized poly(vinyl chloride) (PVC-U) for water supply - Specifications

Dimensions in millimetres

Nominal outside diameters (DN) and nominal wall thickness en based on an overall service (design) coefficient of C = 2.5							
Nominal Outside Diameter DN (mm)	Pipe Series S , SDR Series and Nominal Pressure PN Equivalents						
	S 20	S 16.7	S 16	S 12.5	S 10	S 8	S 6.3	S 4
	SDR 41	SDR 34.4	SDR 33	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 9
	PN 5	PN 6	PN 6.3	PN 8	PN 10	PN 12.5	PN 16	PN 25
	Nominal Wall Thickness e_n							
10	-	-	-	-	-	-	-	1.5
12	-	-	-	-	-	-	-	1.5
16	-	-	-	-	-	-	1.5	1.8
20	-	-	-	-	-	-	1.5	2.3
25	-	-	-	-	-	1.5	1.9	2.8
32	-	-	-	-	1.6	1.9	2.4	3.6
40	-	-	1.5	1.6	1.9	2.4	3.0	4.5
50	-	-	1.6	2.0	2.4	3.0	3.7	5.6
63	1.6	1.9	2.0	2.5	3.0	3.8	4.7	7.1
75	1.9	2.2	2.3	2.9	3.6	4.5	5.6	8.4
90	2.2	2.7	2.8	3.5	4.3	5.4	6.7	10.1

Nominal outside diameters (DN) and nominal wall thickness en based on an overall service (design) coefficient of C = 2.0							
Nominal Outside Diameter DN mm	Pipe Series S , SDR Series and Nominal Pressure PN Equivalents						
	S 20	S 16	S 12.5	S 10	S 8	S 6.3	S 5
	SDR 41	SDR 33	SDR 21	SDR 21	SDR 17	SDR 13.6	SDR 11
	PN 6.3	PN 8	PN 10	PN 12.5	PN 16	PN 20	PN 25
	Nominal Wall Thickness e_n						
110	2.7	3.4	4.2	5.3	6.6	8.1	10.0
125	3.1	3.9	4.8	6.0	7.4	9.2	11.4
140	3.5	4.3	5.4	6.7	8.3	10.3	12.7
160	4.0	4.9	6.2	7.7	9.5	11.8	14.6
180	4.4	5.5	6.9	8.6	10.7	13.3	16.4
200	4.9	6.2	7.7	9.6	11.9	14.7	18.2
225	5.5	6.9	8.6	10.8	13.4	16.6	-
250	6.2	7.7	9.6	11.9	14.8	18.4	-
280	6.9	8.6	10.7	13.4	16.6	20.6	-
315	7.7	9.7	12.1	15.0	18.7	23.2	-
355	8.7	10.9	13.6	16.9	21.1	26.1	-
400	9.8	12.3	15.3	19.1	23.7	29.4	-
450	11.0	13.8	17.2	21.5	26.7	33.1	-
500	12.3	15.3	19.1	23.9	29.7	36.8	-
560	13.7	17.2	21.4	26.7	-	-	-
630	15.4	19.3	24.1	30.0	-	-	-
710	17.4	21.8	27.2	-	-	-	-
800	19.6	24.5	30.6	-	-	-	-
900	22.0	27.6	-	-	-	-	-
1000	24.5	30.6	-	-	-	-	-

To apply an overall design (service) coefficient C of 2.5 for pipes with normal diameters in this table, the next higher pressure rating, PN , shall be selected, e.g an S10 series pipes rated at PN 12.5 will be selected for PN10 applications when a C of 2.5 is required.

BS 3505: Specification for unplasticized polyvinyl chloride (PVC-U) pressure pipes for cold potable water*

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)					
			Class C		Class D		Class E	
			9 bar		12 bar		15 bar	
inch	Min	Max	Min	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	114.7	114.5	4.5	5.2	6.0	6.9	7.3	8.4
5	140.0	140.4	5.5	6.4	7.3	8.4	9.0	10.4
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
14	355.0	356.0	12.6	14.5	16.7	19.2	20.5	23.6
16	405.9	406.9	14.5	16.7	19.0	21.9	23.4	27.0
18	456.7	457.7	16.3	18.8	21.4	24.6	-	-
20	507.5	508.5	18.1	20.9	-	-	-	-
24	609.1	610.1	21.7	25.0	-	-	-	-
Pressure ratings for working pressures at 20℃								

BS 3506: Specification for unplasticized PVC pipe for industrial uses*

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)									
			Class O		Class B		Class C		Class D		Class E	
			non pressure		6 bar		9 bar		12 bar		15 bar	
			Individual Value		Individual Value		Individual Value		Individual Value		Individual Value	
inch	Min (mm)	Max (mm)	Min (mm)	Max (mm)	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	1.8	2.2	-		-	-	2.5	3.0	3.1	3.7
2	60.2	60.5	1.8	2.2	-		2.5	3.0	3.1	3.7	3.9	4.5
2 1/2	75.0	75.3	1.8	2.2	-		3.0	3.5	3.9	4.5	4.8	5.5
3	88.7	89.1	1.8	2.2	2.9	3.4	3.5	4.1	4.6	5.3	5.7	6.6
4	114.7	114.5	2.3	2.8	3.4	4.0	4.5	5.2	6.0	6.9	7.3	8.4
5	140.0	140.4	2.6	3.1	3.8	4.4	5.5	6.4	7.3	8.4	9.0	10.4
6	168.0	168.5	3.1	3.7	4.5	5.2	6.6	7.6	8.8	10.2	10.8	12.5
7	193.5	194.0	3.1	3.7	5.2	6.0	7.7	8.9	10.1	11.7	12.4	14.3
8	218.8	219.4	3.1	3.7	5.3	6.1	7.8	9.0	10.3	11.9	12.6	14.5
9	244.1	244.8	3.1	3.7	5.9	6.8	8.7	10.0	11.5	13.3	14.1	16.3
10	272.6	273.4	3.1	3.7	6.6	7.6	9.7	11.2	12.8	14.8	15.7	18.1
12	323.4	324.3	3.1	3.7	7.8	9.0	11.5	13.3	15.2	17.5	18.7	21.6
14	355.0	356.0	3.6	4.2	8.5	9.8	12.6	14.5	16.7	19.2	20.5	23.6
16	405.9	406.9	4.1	4.8	9.7	11.2	14.5	16.7	19.0	21.9	23.4	27.0
18	456.7	457.7	4.6	5.3	11.0	12.7	16.3	18.8	21.4	24.6	-	-
20	507.5	508.5	5.1	5.9	12.2	14.1	18.1	20.9	-	-	-	-
22	558.3	559.3	5.6	6.5	13.4	15.5	19.9	22.9	-	-	-	-
24	609.1	610.1	6.1	7.1	14.6	16.8	21.7	25.0	-	-	-	-

*1 bar=105 N/M2 + Pipes to theses nominal sizes are not normally available from stock.

Note 1 : The Pressure given at the top of the columns for Classes B,C,D and E are the maximum sustained working pressure for which the pipes are suitable and are based on water at a temperature of 20 ℃

ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80*

Dimension In millimeter

Nominal Size	Outside Diameter (mm)			SCH 40			SCH 80		
				Wall Thickness (mm)		Pressure Rating (bar)	Wall Thickness (mm)		Pressure Rating (bar)
inch	Min (mm)	Max (mm)	Max (mm)	Min (mm)	Max (mm)		Min (mm)	Max (mm)	
1/2	21.34	0.01	21.35	2.77	3.28	41.40	3.73	4.24	58.60
3/4	26.67	0.01	26.68	2.87	3.38	33.10	3.91	4.42	47.60
1	33.40	0.13	33.53	3.38	3.89	31.00	4.55	5.08	43.40
1 1/4	42.16	0.13	42.29	3.56	4.07	25.50	4.85	5.43	35.90
1 1/2	48.26	0.15	48.41	3.68	4.19	22.80	5.08	5.69	32.40
2	60.32	0.15	60.47	3.91	4.42	19.30	5.54	6.20	27.60
2 1/2	73.02	0.18	73.20	5.16	5.77	20.70	7.01	7.85	29.00
3	88.90	0.20	89.10	5.49	6.15	17.90	7.62	8.53	25.50
4	114.30	0.23	114.53	6.02	6.73	15.20	8.56	9.58	22.10
5	141.30	0.25	141.55	6.55	7.34	13.10	9.52	10.66	20.00
6	168.28	0.28	168.56	7.11	7.97	12.40	10.97	12.29	19.30
8	219.08	0.38	219.46	8.18	9.17	11.00	12.70	14.22	17.20
10	273.05	0.38	273.43	9.27	10.39	9.70	15.06	16.87	15.90
12	323.85	0.38	324.23	10.31	11.55	9.00	17.45	19.53	15.90
14	355.60	0.38	355.98	11.10	12.45	9.10	19.05	21.34	15.40
16	406.40	0.48	406.88	12.70	14.22	9.10	21.41	23.98	15.40
18	475.20	0.48	475.68	14.27	15.97	9.10	23.80	26.64	15.40
20	508.00	0.58	508.58	15.06	16.86	8.40	26.19	29.34	15.40
24	609.60	0.79	610.39	17.45	19.53	8.40	30.94	34.65	14.70
Pressure rating based on water at 23℃ for unthreaded pipes.									

Dimension In inch

Nominal Size	Outside Diameter (Inch)			SCH 40				SCH 80			
				Wall Thickness (in)		Internal Diameter	Pressure Rating	Wall Thickness (in)		Internal Diameter	Pressure Rating
inch	Min (in)	Max (mm)	Max (in)	Min (in)	Max (in)	ID (in)	(PSI)	Min (in)	Max (in)	ID (in)	(PSI)
1/2	0.840	0.004	0.844	0.109	0.226	0.622	600	0.147	0.167	0.546	850
3/4	1.050	0.004	1.054	0.113	0.233	0.824	480	0.154	0.174	0.742	690
1	1.315	0.005	1.320	0.133	0.268	1.049	450	0.179	0.200	0.957	630
1 1/4	1.660	0.005	1.665	0.140	0.281	1.380	370	0.191	0.214	1.278	520
1 1/2	1.900	0.006	1.906	0.145	0.289	1.610	330	0.200	0.224	1.500	470
2	2.375	0.006	2.381	0.154	0.305	2.067	280	0.218	0.244	1.939	400
2 1/2	2.875	0.007	2.882	0.203	0.398	2.469	300	0.276	0.309	2.323	420
3	3.500	0.008	3.508	0.216	0.424	3.068	260	0.300	0.336	2.900	370
4	4.500	0.009	4.509	0.237	0.464	4.026	220	0.337	0.377	3.826	320
5	5.563	0.010	5.573	0.258	0.289	5.047	190	0.375	0.420	4.813	290
6	6.625	0.011	6.636	0.280	0.550	6.065	180	0.423	0.484	5.779	280
8	8.625	0.015	8.640	0.322	0.632	7.981	160	0.500	0.560	7.625	250
10	10.750	0.015	10.765	0.365	0.717	10.020	140	0.593	0.664	9.564	230
12	12.750	0.015	12.765	0.406	0.797	11.938	130	0.687	0.769	11.376	230
14	14	0.015	14.015	0.437	0.859	13.126	130	0.750	0.840	12.500	220
16	16	0.019	16.019	0.500	0.981	15.000	130	0.843	0.944	14.314	220
18	18	0.019	18.019	0.562	1.101	16.876	130	0.937	1.049	14.126	220
20	20	0.023	20.023	0.593	1.163	18.814	120	1.031	1.155	17.938	220
24	24	0.031	24.031	0.687	1.347	22.626	120	1.218	1.364	21.564	210
Pressure rating based on water at 23℃ for unthreaded pipes.											

ASTM D2241 : Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)*

Dimension In millimeter

Nominal Size	Outside Diameter (mm)		Wall Thickness (mm)													
			PN 4.3 bar		PN 6.9 bar		PN 8.6 bar		PN 11 bar		PN 13.8 bar		PN 17.2 bar		PN 21.7 bar	
			SDR 64		SDR 41		SDR 32.5		SDR 26		SDR 21		SDR 17		SDR 13.5	
inch	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
1/2	21.24	21.44	-	-	-	-	-	-	-	-	-	-	-	-	1.575	2.083
3/4	26.57	26.77	-	-	-	-	-	-	-	-	1.524	2.032	1.575	2.083	1.981	2.489
1	33.27	33.53	-	-	-	-	-	-	1.524	2.032	1.600	2.108	1.956	2.464	2.464	2.972
1 1/4	42.03	42.29	-	-	-	-	1.524	2.032	1.626	2.134	2.007	2.515	2.489	2.997	3.124	3.632
1 1/2	48.11	48.41	-	-	-	-	1.524	2.032	1.854	3.362	2.286	2.794	2.845	3.353	3.581	4.089
2	60.17	60.47	-	-	-	-	1.854	2.362	2.311	2.819	2.870	3.378	3.556	4.064	4.470	4.978
2 1/2	72.84	73.20	-	-	-	-	2.236	2.743	2.794	3.302	3.480	3.988	4.293	4.801	8.410	6.071
3	88.70	89.10	-	-	2.159	2.667	2.743	3.251	3.429	3.937	4.242	4.750	5.232	5.867	6.579	7.366
3 1/2	101.40	101.80	-	-	2.489	2.997	3.124	3.632	3.912	4.420	4.826	5.410	5.969	6.680	7.518	8.433
4	114.07	114.53	1.778	2.286	2.794	3.302	3.505	4.013	4.394	4.902	5.426	6.096	6.731	7.544	8.458	9.474
5	141.05	141.55	2.210	2.718	3.454	3.962	7.343	4.877	5.436	6.121	6.731	7.544	8.306	9.296	10.465	11.709
6	168.00	168.56	2.642	3.150	4.115	4.623	5.182	5.791	6.477	7.264	8.026	8.992	9.906	11.100	12.471	13.970
8	218.70	219.46	3.429	3.937	5.334	5.969	6.731	7.544	8.433	9.449	10.414	11.659	12.903	14.453	-	-
10	272.67	273.43	4.267	4.775	6.655	7.442	8.407	9.423	10.490	11.760	12.979	14.529	16.053	17.983	-	-
12	323.47	324.23	5.055	5.664	7.899	8.839	9.957	11.151	12.446	13.945	15.392	17.247	19.050	21.336	-	-
14	355.22	355.98	-	-	8.661	9.881	10.922	12.243	13.666	15.291	16.916	18.948	20.904	23.419	-	-
16	405.92	406.88	-	-	9.906	11.303	12.497	13.995	15.521	17.501	19.365	21.666	23.901	26.772	-	-
18	456.72	457.68	-	-	11.151	12.700	14.072	15.748	17.577	19.685	21.768	24.384	26.899	30.124	-	-
20	507.42	508.58	-	-	12.396	14.122	15.621	17.501	19.533	21.869	24.181	27.076	29.870	33.452	-	-
24	608.81	610.39	-	-	14.859	16.942	18.745	20.980	23.444	26.264	29.032	32.512	35.865	40.157	-	-
30	760.96	763.04	-	-	18.593	21.184	23.444	26.264	29.312	32.817	36.271	40.615	44.831	50.216	-	-
36	913.13	915.67	-	-	22.301	25.425	28.143	31.521	35.179	39.396	43.536	48.743	53.797	60.249	-	-

*Suitable for water supply, sewerage and ducting applications

BS EN 1401-1 Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinyl chloride) (PVC-U). Specifications for pipes, fittings and the system

Dimension In millimeter

Outside Diameter (mm)		S 2		S 4		S 8	
		SDR 51		SDR 41		SDR 34	
min	max	e_{min}	e_{max}	e_{min}	e_{max}	e_{min}	e_{max}
110	110.3	-	-	3.2	3.8	3.2	3.8
125	125.3	-	-	3.2	3.8	3.7	4.3
160	160.4	3.2	3.8	4.0	4.6	4.7	5.4
200	200.5	3.9	4.5	4.9	5.6	5.9	6.7
250	250.5	4.9	5.6	6.2	7.1	7.3	8.3
315	315.6	6.2	7.1	7.7	8.7	9.2	10.4
355	355.6	7.0	7.9	8.7	9.8	10.4	11.7
400	400.7	7.0	8.9	9.8	11.0	11.7	13.1
450	450.8	8.8	9.9	11.0	12.3	13.2	14.8
500	500.9	9.8	11.0	12.3	13.8	14.6	16.3
630	631.1	12.3	13.8	15.4	17.2	18.4	20.5
710	711.2	13.9	15.5	17.4	19.4	-	-
800	801.3	15.7	17.5	19.6	21.8	-	-
900	901.5	17.6	19.6	22.0	24.4	-	-
1000	1001.6	19.6	21.8	24.5	27.2	-	-

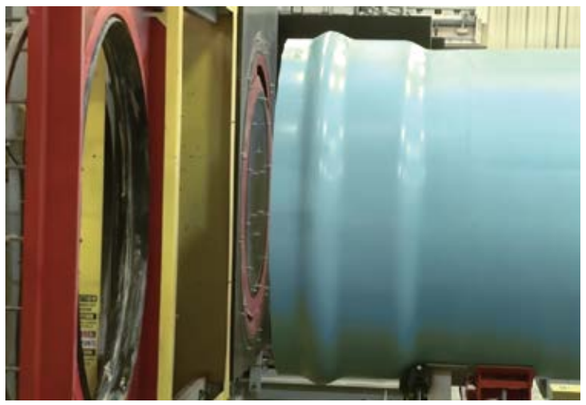
*Pipes to these nominal sizes are not normally available from stock.
SDR 51 is applicable for application area code "U" only

GB/T32018.1-2015 Modified impact resistance poly(vinyl choride)(PVC-M) pipe system for water supply-Pasrt 1: Pipes

Dimension In millimeter

Nominal Outside Diameter d_n(mm)	Pipe Series S and Nominal Pressure PN					Rubber Ring Joints Minimum Socket Depth m_{min}(mm)	Solvent Cement Joints Minimum Socket Depth m_{min}(mm)
	S20	S16	S12.5	S10	S8		
	SDR41	SDR33	SDR26	SDR21	SDR17		
	PN8	PN10	PN12.5	PN16	PN20		
	Nominal Wall Thickness e_n(mm)						
63	2.0	2.0	2.5	3.0	3.8	64.0	37.5
75	2.0	2.3	2.9	3.6	4.5	67.0	43.5
90	2.2	2.8	3.5	4.3	5.4	70.0	51.0
110	2.7	3.4	4.2	5.3	6.6	75.0	61.0
125	3.1	3.9	4.8	6.0	7.4	78.0	68.5
140	3.5	4.3	5.4	6.7	8.3	81.0	76.0
160	4.0	4.9	6.2	7.7	9.5	86.0	86.0
180	4.4	5.5	6.9	8.6	10.7	90.0	96.0
200	4.9	6.2	7.7	9.6	11.9	94.0	106.0
225	5.5	6.9	8.6	10.8	13.4	100.0	118.5
250	6.2	7.7	9.6	11.9	14.8	105.0	-
280	6.9	8.6	10.7	13.4	16.6	112.0	-
315	7.7	9.7	12.1	15.0	18.7	118.0	-
355	8.7	10.9	13.6	16.9	21.1	124.0	-
400	9.8	12.3	15.3	19.1	23.7	130.0	-
450	11.0	13.8	17.2	21.5	26.7	138.0	-
500	12.3	15.3	19.1	23.9	29.7	145.0	-
560	13.7	17.2	21.4	26.7	-	154.0	-
630	15.4	19.3	24.1	30.0	-	165.0	-
710	17.4	21.8	27.2	-	-	177.0	-
800	19.6	24.5	30.6	-	-	190.0	-

1: The minimum required strength of the pipe is not less than 24.5MPa, the nominal wall thickness (en) is determined according to the design stress (as) 16MPa, and the minimum wall thickness of the pipe is 2.0mm.
2: "-" Indicates not recommended.
3: When the length of the pipe is longer than 12 m, the rubber ring joints socket depth m_{min} needs to be designed separately.

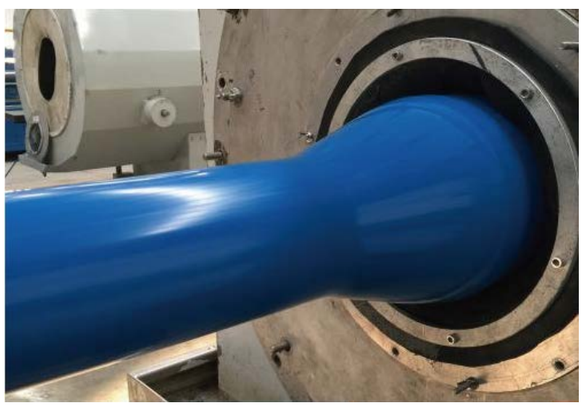


ISO 16422 Pipes and joints made of oriented unplasticized poly(vinyl chloride) (PVC-O) for the conveyance of water under pressure - Specifications

Dimension In millimeter

PVC-O Pipes Specification									
Material Classification	Nominal Pressure PN(C=1. 6), MPa								
400.0	1.0		1.25		1.6		2.0		2.5
450.0		1.25		1.6		2.0		2.5	
500.0	1.25		1.6		2.0		2.5		
Pipe Series S and Standard Size Ratio SDR									
S	25.0	22.4	22.0	18.0	16.0	14.0	12.5	11.2	10.0
SDR	51.0	45.8	41.0	37.0	33.0	29.0	26.0	23.4	21.0
dn(mm)	Nominal wall thickness e_n (mm)								
63			1.6	1.8	2.0	2.2	2.5	2.7	3.0
75	1.5	1.7	1.9	2.1	2.3	2.6	2.9	3.2	3.6
90	1.8	2.0	2.2	2.5	2.8	3.1	3.5	3.9	4.3
110	2.2	2.4	2.7	3.1	3.4	3.8	4.2	4.7	5.3
(125)	2.5	2.8	3.1	3.5	3.9	4.3	4.8	5.1	6.0
(140)	2.8	3.1	3.5	3.9	4.3	4.8	5.4	6.0	6.7
160	3.2	3.5	4.0	4.4	4.9	5.5	6.2	6.9	7.7
(180)	3.6	4.0	4.4	5.0	5.5	6.2	6.9	7.7	8.6
200	3.9	4.4	4.9	5.5	6.2	6.9	7.7	8.6	9.6
225	4.4	5.0	5.5	6.2	6.9	7.7	8.6	9.6	10.8
(250)	4.9	5.5	6.2	6.9	7.7	8.6	9.6	10.7	11.9
(280)	5.5	6.2	6.9	7.7	8.6	9.7	10.7	12.0	13.4
315	6.2	6.9	7.7	8.7	9.7	10. 8	12.1	13.5	15.0
(355)	7.0	7.8	8.7	9.8	10.9	12.2	13.6	15.2	16.9
400	7.9	8.8	9.8	11.0	12.3	13.7	15.3	17.1	19.1
(450)	8.8	9.9	11.0	12.3	13.8	15.4	17.2	19.2	21.5
500	9.8	11.1	12.3	13.7	15.3	17.1	19.1	21.4	23.9
(560)	11.0	12.3	13.7	15.4	17.2	19.2	21.4	23.9	26.7
630	12.3	13.8	15.4	17.3	19.3	21.6	24.1	26.9	30.0

1. The theoretical calculation of ring stiffness of SDR51 and SDR45. 8 series pipes generally does not exceed 4kN/m^2. Measures should be taken during buried construction to avoid pipe buckling instability.
2. The color of the pipe is generally blue.
3. Unusual specifications are in brackets.



ASTM F 441 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe-Schedules 40 and 80

Dimension in inch

Nom. Pipe Size (in.)	O.D. (in.)	Schedule 40 Dimensions(in)				Schedule 80 Dimensions(in)			
		Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P
1/4	0.540	0.344	0.088	0.096	780	0.282	0.119	0.117	1130
3/8	0.675	0.473	0.091	0.128	620	0.403	0.126	0.162	920
1/2	0.840	0.602	0.109	0.190	600	0.526	0.147	0.238	850
3/4	1.050	0.804	0.113	0.253	480	0.722	0.154	0.322	690
1	1.315	1.029	0.133	0.371	450	0.936	0.179	0.473	630
1-1/4	1.660	1.360	0.140	0.502	370	1.255	0.191	0.654	520
1-1/2	1.900	1.590	0.145	0.599	330	1.476	0.200	0.793	470
2	2.375	2.047	0.154	0.803	280	1.913	0.218	1.097	400
2-1/2	2.875	2.445	0.203	1.267	300	2.290	0.276	1.674	420
3	3.500	3.042	0.216	1.660	260	2.864	0.300	2.242	370
3-1/2	4.000	3.521	0.226	1.996	240	3.326	0.318	2.735	350
4	4.500	3.998	0.237	2.363	220	3.786	0.337	3.277	320
5	5.563	5.016	0.258	2.874	190	4.768	0.375	4.078	280
6	6.625	6.031	0.280	4.164	180	5.709	0.432	6.258	280
8	8.625	7.942	0.322	6.268	160	7.565	0.500	9.506	250
10	10.750	9.976	0.365	8.886	140	9.493	0.593	14.095	230
12	12.750	11.889	0.406	11.751	130	11.294	0.687	19.392	230
14	14.000	13.073	0.437	13.916	130	12.410	0.750	23.261	220
16	16.000	14.940	0.500	18.167	130	14.213	0.843	29.891	220
18	18.000	16.809	0.562	22.965	130	16.014	0.937	37.419	220
20	20.000	18.743	0.593	29.976	120	17.814	1.031	45.789	220
24	24.000	22.544	0.687	37.539	120	21.418	1.218	64.959	210

Maximum Operating Pressure is applied to 23°C.

Cable Conduits Of Chlorinated Polyvinyl Chloride(CPVC)-SCJ end

Dimension In millimeter

Specification dn*e_n(mm)	Mean Outside Diameter d_e(mm)		Nominal wall thickness e_n(mm)		Minimum socket length A_{min}(mm)	First stage minimum length of socket B_{min}(mm)	Minimum ID of socket in second stage d_{imin}(mm)
	dn	Limit Deviation	Thickness	Limit Deviation			
110*5.0	110	+0.8	5.0	+0.5	100	60	111.0
139*6.0	139	+0.8	6.0	+0.5	120		140.2
167*6.0	167	+0.8	6.0	+0.5	140		168.5
167*8.0	167	+1.0	8.0	+0.6			
192*6.5	192	+1.0	6.5	+0.5	160		193.8
192*8.5	192	+1.0	8.5	+0.6			
219*7.0	219	+1.0	7.0	+0.5	180		221.0
219*9.5	219	+1.0	9.5	+0.8			

Note: Other specifications can be produced according to customer requirements.
The color is usually orange red.

Other standards and dimensions not listed could be customized according to requirements.

PVC FITTINGS

Bingo Pipeline supplys full ranges of PVC fittings to match our U PVC, M PVC, O PVC, C PVC pipes, duct, from basic to advance pipes and fittings in the markets, plays an important roles in piping industry. These fittings used in a wide range of applications, including hot corrosive liquids, chemical processing, chilled water distribution, chemical drainage, waste water treatment, and plating.

Solvent Cement Joints(SCJ) Type PN10 & PN16

Threaded End Joints Type PN10 & PN16

Rubber Ring Joints(RRJ) Type PN10

PVC VALVES PN10

PP COMPRESSION FITTINGS PN10 & PN16

HDPE WELDING MACHINE

1.Socket Fusion Welding Machine

2.Manual Operation Butt Fusion Welding Machine

3.Hydraulic Semi-Automatic Butt Fusion Welding Machine

4.Hydraulic Automatic Butt Fusion Welding Machine

5.Welding Gun

HDPE/PVC DOUBLE WALL CORRUGATED PIPE

Bingo Pipeline provides the HDPE/ PVC corrugated pipes and fittings from DN110 to DN3000mm produced by the virgin raw material.

HDPE DWC Pipe

Steel Reinforced HDPE DWC Pipe

PVC Corrugated Pipe

Corrugated Pipe Fittings

GEOSYNTHETICS SERIES

Bingo Pipeline not only manufactures HDPE/PVC pipe and fittings, but also supplies various types and specifications of geotextiles, geomembranes, composite geomembranes, waterproof panels, geogrids, waterproof blankets, composite geotechnical drainage nets, geocells, Eco-bags and related products, formed a supply chain system of geosynthetics series, including the anti-seepage, environmental protection, reinforcement, and water-stopping products, providing one-stop supply for customer.

These pipe, fittings and geosynthetics materials are used in applications as critical as the landfills of the world's most populated cities and mines operating in fragile ecosystems. Our products are trusted by the mining industry. They are widely used in oil and gas, water and waste management, civil engineering, infrastructure, aquaculture, agriculture and alternative energy, landfill liners & leachate Ponds, environmental protection system so many fields.

Applications of Geosynthetics

Agriculture

Mining

Ground Improvement

Soil Reinforcement

Aquaculture

Infrastructure

Drainage

Embankment Reinforcement

Products available to suit both temporary and permanent requirements for events and construction projects.

Geosynthetics Category

HDPE/ PE/PP Geomembrane

Woven/Non-Woven Geotextile

Composite Geotextile Drainage Network

Plastic Geogrid

Geotechnical Waterproof Blanket

6.Pleastic Geocell

➧ **Other relevant geosynthetics are not all shown here**.

CERTIFICATES

CERTIFICATE OF QUALITY MANAGEMENT SYSTEM CERTIFICATION

Certificate No.0162B18Q35011R5M
Unified social credit code:91371500746571184C

This is to Certify that the Quality Management System of

SHANDONG HUAXIN PLASTICS STOCK CO., LTD.

is in conformity with
GB/T19001-2016 idt ISO9001:2015 Standard, applies to

PRODUCTION AND SALE OF PLASTIC PIPE MATERIAL AND PIPE FITTING(THE CERTIFICATION SYSTEM DOES NOT INCLUDE BRANCHES WITHIN THE COVERAGE)

REGISTERED ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.
OPERATION ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.(SHANDONG HUAXIN PLASTICS STOCK CO., LTD.)

Date of Initial Issuance Feb. 4, 2004
Date of Re-certification Issuance Dec. 13, 2018
Date of Issuance Jan. 4, 2021
Date of Expiration Dec. 16, 2023

BCC Inc.
President:

BCC Address: Room 1101, Floor 11, Building 1, Guoxingyuan, Xicheng District, Beijing, P.R.C
This certificate is valid within state - specified validities of administrative and qualification licensing.
The effectiveness of this certificate shall be maintained by regular surveillance audit.
The validity of the certificate can be inquired through www.bcc.com.cn or by QR code.
The information of this certificate available for inquiry on CNCA's website: www.cnca.gov.cn

BCC IAF CNAS MANAGEMENT SYSTEM CNAS C010-M

CERTIFICATE OF ENVIRONMENT MANAGEMENT SYSTEM CERTIFICATION

Certificate No.0162B18E33072R4M
Unified social credit code:91371500746571184C

This is to Certify that the Environment Management System of

SHANDONG HUAXIN PLASTICS STOCK CO., LTD.

is in conformity with
GB/T24001-2016 idt ISO14001:2015 Standard, applies to

PRODUCTION AND SALE OF PLASTIC PIPE MATERIAL AND PIPE FITTING(THE CERTIFICATION SYSTEM DOES NOT INCLUDE BRANCHES WITHIN THE COVERAGE)

REGISTERED ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.
OPERATION ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.(SHANDONG HUAXIN PLASTICS STOCK CO., LTD.)

Date of Initial Issuance Nov. 7, 2007
Date of Re-certification Issuance Dec. 13, 2018
Date of Issuance Jan. 4, 2021
Date of Expiration Dec. 16, 2023

BCC Inc.
President:

BCC Address: Room 1101, Floor 11, Building 1, Guoxingyuan, Xicheng District, Beijing, P.R.C
This certificate is valid within state - specified validities of administrative and qualification licensing.
The effectiveness of this certificate shall be maintained by regular surveillance audit.
The validity of the certificate can be inquired through www.bcc.com.cn or by QR code.
The information of this certificate available for inquiry on CNCA's website: www.cnca.gov.cn

BCC IAF CNAS MANAGEMENT SYSTEM CNAS C016-M

CERTIFICATE OF OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION

Certificate No.0162B21S30051R3M
Unified social credit code:91371500746571184C

This is to Certify that the Occupational Health and Safety Management System of

SHANDONG HUAXIN PLASTICS STOCK CO., LTD.

is in conformity with
GB/T 45001-2020 idt ISO 45001:2018 Standard, applies to

PRODUCTION AND SALE OF PLASTIC PIPE MATERIAL AND PIPE FITTING(THE CERTIFICATION SYSTEM DOES NOT INCLUDE BRANCHES WITHIN THE COVERAGE)

REGISTERED ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.
OPERATION ADDRESS:INDUSTRIAL PARK, YANLOU TOWN, YANGGU COUNTY, LIAOCHENG, SHANDONG PROVINCE, P.R.C.(SHANDONG HUAXIN PLASTICS STOCK CO., LTD.)

Date of Initial Issuance Dec. 16, 2010
Date of Re-certification Issuance Dec. 13, 2018
Date of Issuance Jan. 4, 2021
Date of Expiration Dec. 16, 2023

BCC Inc.
President:

BCC Address: Room 1101, Floor 11, Building 1, Guoxingyuan, Xicheng District, Beijing, P.R.C
This certificate is valid within state - specified validities of administrative and qualification licensing.
The effectiveness of this certificate shall be maintained by regular surveillance audit.
The validity of the certificate can be inquired through www.bcc.com.cn or by QR code.
The information of this certificate available for inquiry on CNCA's website: www.cnca.gov.cn

BCC CNAS MANAGEMENT SYSTEM CNAS C016-M

Certificate – Сертификат – 證明書 – Certificat – 증명서 – شهادة

Certificate of Compliance

ECM

No. EC.1282.0B150109.SHP0U34

Certificate's Holder: Shandong Huaxin Plastic Pipe Co., Ltd.
Yanlou Industrial Park, Yanggu County, Shandong Province, China

Certification Mark: CE Type Approved

Product: Water supply with polyethylene pipes and pipe fitting

Model(s): dn20-dn1600mm

Verification to: Standard:
EN ISO 15874-1:2013, EN ISO 15874-2:2013, EN ISO 15874-3:2013

related to Regulation:
R 305/2011 (for the Marketing of Construction Products)

Remark: The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Safety Compliance Mark of ECM, in reference to the above listed Standard(s). The above Certification Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use.
Other relevant Standards and/or Directives have to be observed in case they are applicable.
Whereas the Manufacturer is responsible of the CE certification of the product(s) and not exempted to perform all the necessary activities before placing the product(s) on the market.
The Manufacturer is also responsible to maintain efficient the internal production control to ensure the product(s) are in compliance with the Safety Compliance Mark.
This certificate can be checked for validity at **www.entecerma.org**

Date of issue 09 January 2015
Chief Manager
Tim Mahay

Expiry date 08 January 2020
Deputy Manager
Viola Miller

Ente Certificazione Macchine Srl
Via Ca' Bella, 243 – Loc. Castello di Serravalle – 40053 Valsamoggia (BO) - ITALY
☎ +39 051 6705141 🖷 +39 051 6705156 ✉ info@entecerma.it 🌐 www.entecerma.it

CNAS Laboratory Accreditation Certificate

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L5848)

Test Center of Shandong Huaxin Plastic Pipe Co., Ltd.

(Legal Entity: Shandong Huaxin Plastic Pipe Co., Ltd.)

Yanlou Industrial Zone, Yanggu, Shandong, China

is accredited in accordance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Effective Date：2018-08-30

Expiry Date：2024-09-28

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Laboratory Accreditation Cooperation Mutual Recognition Arrangement (APLAC MRA).
The validity of the certificate can be checked on CNAS website at http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml

Laboratory Showing

This is a corner display of our laboratory. Our laboratory is strictly set up in accordance with the standards and is rated as a national laboratory. All our products are strictly implemented in QC and QA procedures from raw materials to final shipments, strict quality inspection is carried out until each batch of products are all qualified to be shipped.