

## **ABOUT US**

The advances made in the plastic industry during the past decades are reflected by the present existence of advanced products and sophisticated processes. Plastic products continued to grow with increasing importance in the wide spectrum of today's industries. As a potent approach, a competent team of business developers and researchers of New Products Plastic Factory (NEWPRO), explore the potential of plastic pipe manufacturing industry in Qatar.

New Products Plastic Factory (NEWPRO) in Qatar was formed with the strategy of being not only the Profitable leader in the industry, but also reliable partner of Qatar Government in fulfilling it's social obligations and achieving Qatar vision 2030. It is mandate of the company to continuously generate employment for the Qatari workforce. The factory aims to be responsive and reliable producers of plastic pipe products, perfect to specific needs and provide specialized systems.

Just like any other plastic pipe manufacturing factories, our equipment and raw material are produced from internationally recognized manufacturers and suppliers. Similarly, our wide range of plastic pipes products is manufactured and quality tested in accordance with the international standard such as BS,BS-EN, DIN, NEMA, ASTM and ISO. We treat our customers and suppliers as partners, we recognized our clients long term value and we are driving that value to its limit by providing excellent products services and advices our customer deserve.

Excellence and quality products is our business.



## **VISION**

Our vision is to be a pioneer world class player adding new values to plastic industry world.

**NEWPRO, CREATING NEW VALUES!** 



## **MISSION**

Our mission is to provide a quality products in accordance with the international standards, while keeping the highest value for our stakeholders.



## **FOUNDATION**

New Products Plastic Factory (NEWPRO) was founded in 2008 against the Ministerial decree No. 2377 Dated: 05/02/2008. In 2011 almost 6,000 sq.mtr. of land has obtained from the Ministry of Energy and Industries. The construction of company started and completed by the end of 2016. The other necessary licences and certificate was completely obtained early 2017 as the production started on the spot.

NEWPRO is specialized factory for producing HDPE, PVC, & HDPE Corrugated Pipes & Fittings in various dimensions and local and international standards. NEWPRO is pioneer of producing HDPE Double Wall Corrugated Pipes in Qatar.

## **HDPE PIPES SYSTEM**

HIGH DENSITY POLYETHYLENE are non-toxic, flexible, highly resistant to UV radiation, lightweight, impact resistant and has a design life of 50 years at a specified design temperature and pressure rating of the medium. Abrasion resistance is better than any other rigid thermoplastics and considerably better than steel and other metal pipes, concrete and asbestos cement. Corrosion resistance of PE pipes is excellent and extremely resistant to chemicals, solvents and radioactive waste water. HDPE pipe is strong, durable, flexible and lightweight. It is the best choice with its high quality, cost and performance in terms of concrete and steel pipes.

High Density Polyethylene Pipes, popularly known as HDPE Pipes is a commonly used plastic pipes for varieties of applications such as water mains, gas mains, sewer mains, slurry transfer lines, rural irrigation, fire system supply lines, electrical and communications conduit, and storm water and drainage pipes.

HDPE pipe are produced from 100% high density polyethylene raw material, its high level of impermeability and strong molecular bond make it suitable for high pressure pipelines.

## **ADVANTAGES OF HDPE PIPES**

There are lots of advantages in using HDPE pipes as compared to other pipes.

- > Safety of potable water and long-term reliability.
- > Strong and durable.
- > Resistant to abrasion.
- ➤ Low thermal & electrical conductivity.
- ▶ Low cost of installation and maintenance.
- > Better flow characteristics.
- > Smooth internal and external surface.
- > No corrosion & abrasion, no scale formation.
- > Excellent chemical resistance.
- ➤ Heat-fused joints: Leak free joints, no repairs needed.
- ➤ Long lasting life of minimum 50 years.
- > Zero Maintenance





	HDPE PE 100 PIPE - ACCORDING TO EN 1519-1					
	Pipes for	Soil and Waste disch	arge system			
Series	\$1	2.5	S 16			
DN/OD (mm)	Wall thickness, e (mm)	Min. inside Diameter (Mm)	Wall thickness, e (mm)	Min. inside Diameter (Mm)		
110	4.20	101.60	3.40	103.20		
125	4.80	115.40	3.90	117.20		
160	6.20	147.60	4.90	150.20		
200	7.70	184.60	6.20	187.60		
250	9.60	230.80	7.70	234.60		
315	12.10	290.80	9.70	295.60		

	HDPE PE 100 PIPE - ACCORDING TO BS EN 12666							
	Pipes for Non-pressure Underground Drainage and Sewerage							
SN	4			8	16			
SDR	2	26	2	21	17			
Series	ies S 12.5		S	10	S 8			
DN/OD (mm)	Wall thickness, e (mm)	Min. inside Diameter (Mm)	Wall thickness, Min. inside e (mm) Diameter (Mm)		Wall thickness, e (mm)	Min. inside Diameter (Mm)		
110	4.20	101.60	5.30	99.40	6.60	96.80		
125	4.80	115.40	6.00	113.00	7.40	110.20		
160	6.20	147.60	7.70	144.60	9.50	141.00		
200	7.70	184.60	9.60	180.80	11.90	176.20		
250	9.60	230.80	11.90	226.20	14.80	220.40		
315	12.10	290.80	15.00	285.00	18.70	277.60		
355	13.60	327.80	16.90	321.20	21.10	312.80		
400	15.30	369.40	19.10	361.80	23.70	352.60		

SDR: Standard Dimension ratio: DN/e
DN: Nominal diameter or Outside diameter

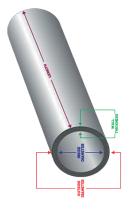
e: Wall thickness SN: Nominal stiffness

Colour of the pipe : Black

**Length: 12 Mtr or as per customer requirments** 

		Max Weight/Mtr	0.134	0.202	0.331	0.514	0.798	1.27	1.78	2.57	3.82	4.92	6.18	8.04	10.20	12.60	15.90	19.60	24.60
	PN 20 SDR 9	Min. Inside Diameter (mm)	15.40	19.00	24.80	31.00	38.80	48.80	58.20	69.80	85.40	97.00	108.60	124.20	139.80	155.20	174.60	194.20	217.40
		Wall Thickness Diameter (mm)	2.3	м	3.6	4.5	5.60	7.10	8.40	10.10	12.30	14.00	15.70	17.90	20.10	22.40	25.20	27.90	31.30
SO 4437		Max Weight/Mtr	0.118	0.173	0.282	0.434	0.573	1.08	1.48	2.14	3.18	4.12	5.13	6.74	8.51	10.50	13.30	16.30	20.50
TO QCS & ISO 4427 EN 1519-1 BSEN 12666 ISO 4437	PN 16 SDR 11	Min. Inside Diameter (mm)	16	20.4	26	32.6	40.8	51.4	61.4	73.6	06	102.2	114.6	130.8	147.2	163.6	184	204.6	229.2
-1 BSEI		Wall Thickness Diameter (mm)	2	2.3	3	3.7	4.6	5.8	6.8	8.20	10.00	11.40	12.70	14.60	16.40	18.20	20.50	22.70	25.40
7 EN 1519		Max Weight/Mtr	:	ł	0.198	0.299	0.458	0.73	1.03	1.47	2.19	2.79	3.50	4.57	5.77	7.12	9.03	11.10	13.90
ISO 442	PN 10 SDR 17	Min. Inside Diameter (mm)		ł	28.00	35.20	44.00	55.40	66.00	79.20	96.80	110.20	123.40	141.00	158.60	176.20	198.20	220.40	242.80
QCS &		Wall Thickness Diameter (mm)	-	1	2	2.4	3.00	3.80	4.50	5.40	09'9	7.40	8.30	9.50	10.70	06.11	13.40	14.80	18.60
		Max Weight/Mtr		+	-	0.251	0.378	0.586	0.836	1.2	1.79	2.29	2.86	3.75	4.71	5.84	7.37	9.02	11.4
ACCORD	PN 8 SDR 21	Min. Inside Diameter (mm)	:	ł	ł	36	45.2	57	67.8	81.4	93.4	113	126.6	144.6	162.8	180.8	203.4	226.2	253.2
PIPE - ,		Wall Thickness Diameter (mm)	-	1	1	2	2.4	3	3.6	4.3	5.3	9	6.7	7.70	8.60	9.6	10.8	11.9	13.4
HDPE PE100 PIPE - ACCORDING		Max Weight/Mtr	-	1	1	0.229	0.317	0.50	0.68	0.99	1.45	1.86	2.35	3.08	3.83	4.74	5.96	7.38	9.20
HDP	PN 6 SDR 26	Min. Inside Diameter (mm)	:	ł	1	36.40	46.00	58.00	69.20	83.00	101.60	115.40	129.20	147.60	166.20	184.60	207.80	230.80	258.60
		Wall Thickness Diameter (mm)	-	ŀ	1	1.8	2	2.50	2.90	3.50	4.20	4.80	5.40	6.20	06.9	7.70	8.60	9.60	10.70
	Size	DN/OD (mm)	23	25	32	40	50	63	75	90	110	125	140	160	180	200	225	250	280

		Max Weight/Mtr	31.10	39.50	50.10	63.40	01.87	00'86	:		1
00 140	PN 20 SDR 9	Min. Inside Diameter (mm)	244.60	275.60	310.60	349.40	388.40	435.00	:	:	ł
		Wall Thickness Diameter (mm)	35.20	39.70	44.70	50.30	55.80	62.50	1		1
SO 4437		Max Weight/Mtr	25.90	32.90	41.70	52.80	65.20	81.70	103.00	131	1
TO QCS & ISO 4427 EN 1519-1 BSEN 12666 ISO 4437	PN 16 SDR 11	Min. Inside Diameter (mm)	257.8	290.6	327.4	368.2	409.2	458.4	515.6	581	1
-1 BSE		Wall Thickness Diameter (mm)	28.60	32.20	36.30	40.90	45.40	50.80	57.20	64.5	1
7 EN 1519		Max Weight/Mtr	17.60	22.40	28.30	35.80	44.20	55.40	70.20	89.00	113.00
ISO 4427	ISO 4427 PN 10 SDR 17	Min. Inside Diameter (mm)	277.60	312.80	352.60	396.60	440.60	493.60	555.20	625.80	705.20
QCS &		Wall Thickness Diameter (mm)	18.70	21.10	23.70	26.70	29.70	33.20	37.40	42.10	47.40
		Max Weight/Mtr	14.30	18.20	23.10	29.30	36.10	45.20	57.00	72.80	92.00
HDPE PE100 PIPE - ACCORDING	PN 8 SDR 21	Min. Inside Diameter (mm)	285	321.2	361.8	407	452.2	506.6	570	642.2	723.8
PIPE -		Wall Thickness Diameter (mm)	15.00	16.90	19.10	21.50	23.90	26.70	30.00	33.90	38.10.
E PE100		Max Weight/Mtr	11.70	14.80	18.80	28.70	29.20	36.80	46.4	58	7.4.7
HDP	PN 6 SDR 26	Min. Inside Diameter (mm)	290.80	327.80	369.40	415.60	461.80	517.20	581.80	655.60	738.80
		Wall Thickness Diameter (mm)	12.10	13.60	15.30	17.20	01.61	21.40	24.10	27.2	30.6
	Size	(mm)	315	355	400	450	200	260	029	710	800



SDR: Standard Dimension ratio: DN/e

DN: Nominal diameter or Outside diameter e: Wall thickness

PN: Nominal pressure or working pressure in bar

pipe: Black or Black with blue stripes Length: 12 Mtr or as per customer requirments

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## METHODS OF HDPE PIPES JOINTING/WELDING

High Density Polyethylene pipes and fittings are connected to each other by ButtWelding, Electrofusion Welding or mechanical fittings. Pipes made from materials other than polyethylene can be connected by compression fittings, flanges or other suitable adapters made for the purpose.

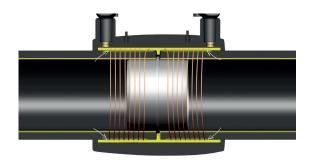
Currently, two methods are used in joining HDPE pipes:

- » Electrofusion (EF) welding
- » Butt Welding



### **ELECTROFUSION WELDING**

In the electrofusion welding process, welding is done with heating resistors inside the fusion fitting. Once the pipes are placed in the electro fusion fittings, the ends of the welding machine are connected to the resistors of the electro fusion fitting and heating them. So, HDPE pipe will be connected with the electrofusion fitting. Electrofusion welding is more advantageous when it is necessary to weld in where welding machine can not fit.







## **BUTT WELDING**

The Butt welding method is the most common welding method currently used for joining HDPE pipes and fittings. The pipe joining method is a process in which the two ends of the pipes to be heated and welded by using a butt welding machine and the both ends are pushed toward each other by pressure under a certain temperature. In terms of welding cost, the butt welding is cheaper than the electrofusion welding.





## **HDPE PERFORATED PIPES**

A perforated pipe is designed with small slots or holes to allow water to exit or enter easily. This type of pipe is frequently used for underground drainage systems and other uses due to its ability to absorb and drain water.

## WE ARE PRODUCING 3 TYPE OF PERFORATED PIPES ACCORDING TO QCS 2014

- » Half perforated
- » ¾ perforated
- » Fully perforated





## HDPE DOUBLE WALL CORRUGATED PIPES

High-density polyethylene (HDPE) is a versatile material and has some ideal characteristics for use in underground structures. HDPE pipe is relatively lightweight allowing for easier and less costly transportation and installation costs. It is not brittle and therefore not susceptible to cracking during pipe handling and installation activities. Once formed into a pipe, HDPE has a smooth surface, which is resistant to abrasion, corrosion and chemical scouring. The smooth surface provides excellent pipeline flow characteristics. HDPE pipe is structurally strong and has the ability to support large loads. HDPE has the ability to relax under stress. This characteristic provides advantages for underground structures and also helps define limitations of use. As HDPE pipe is loaded, the pipe relaxes immediately, and over time, allows the load to be transferred to the adjacent soil. This characteristic allows the pipe to off-load points of local stress. Stress relaxation may result in slight pipe reformation over time to accommodate in place loading conditions. Such re-formations are believed to cause long-term structural stability. New products plastic factory manufacturing HDPE Double Wall Corrugated pipes sizes from 110mm to 500mm as per EN 13476.HDPE Corrugated Double Wall Pipes are produced as SN 4 and SN 8 with smooth inner surface and profile/corrugation on outer surface. The product supplied is flexible double wall corrugated PE pipe manufactured in the continues co extrusion process.

Double Wall Corrugated Pipes used in sewerage projects, industrial waste transportation, storm water drainage and drainage waters transportation project. Corrugated Pipe thanks to its flexible structure demonstrate compliance with the underground motion. Corrugated Pipes provide many years of trouble-free operation in infrastructure projects. Corrugated pipes ensures a longer life of the filling being laid solid ground.

Corrugated Pipes have superior corrosion resistance, provide ease transportation because of lightness. By combining the floor seals are completed quickly. Due to the sealing properties do not spread sewage into the groundwater. Corrugated Pipes are usually produced in 6 m lengths







## ADVANTAGES OF HDPE DOUBLE WALL CORRUGATED PIPES:

Newpro Corrugated Drainage Pipe is high-strength due to high rib strength, corrosion resistance due to polyethylene, full sealing feature, 50 years life, corrosion-resistant organic compound, smooth inner surface, Light weight, easy to transport, economical and saved time to laying of pipes. With its more economical, stronger and more reliable structure. It would not be broken by being affected situations such as impact, traffic load, earthquake, landslides. Pipes made from Polyethylene material has high resistance to corrosion.

## HDPE DOUBLE WALL CORRUGATED PIPES ARE MAINLY USED IN:

- » Drainage projects
- » Sewage pipeline projects
- » Storm water discharge projects
- » Sub-roadway waste water carriage projects
- » Power cable protection projects
- » Waste water discharge pipeline projects and storm water discharge projects as perforated pipe - slotted pipe

HDPE DOUBLE WALL CORRUGATED PIPES ACCORDING TO BS EN 13476						
Size	SI	N 4	SN 8			
DN/ OD (mm)	Inside diameter (mm)	Weight/ Mtr (Kg)	Inside diameter (mm)	Weight/ Mtr (Kg)		
110	94.00	0.75	94.00	1.02		
160	138.00	1.60	138.00	2.10		
200	174.00	2.00	174.00	2.43		
250	215.00	3.00	215.00	4.05		
315	273.00	5.20	273.00	5.54		
400	342.00	6.00	342.00	10.01		
500	428.00	13.00	428.00	15.10		

Length: 6 mtr or 50/100 mtr roll.

Colour of pipe: As per customer requirments.

## METHODS OF HDPE CORRUGATED PIPES JOINTING

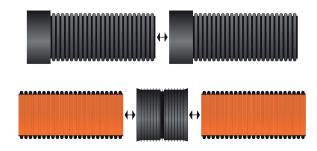
NEWPRO HDPE corrugated pipes have one side socket (Female) and other side pipe end (male). For connection, the pipe end and the inside socket (female) must be cleaned and then the appropriate gasket should be placed on the pipe end and then lubricated with soap or other materials.

It is imperative that the joint be assembled properly to ensure that the product performs to expectations. The steps that must be followed to obtain a quality joint are provided below.

- » Lowerpipe into trench by hand, or use nylon straps and excavating equipment.
- » Begin by inspecting the socket and remove any foreign matter.
- » Use a clean rag or brush to lubricate bell of pipe lubricant.
- » Clean spigot end of pipe.
- » Remove protective wrap from gasket.
- » Using clean rag or brush, lubricate exposed gasket with pipe lubricant.
- » Do not allow lubricated section to touch dirt or backfill. Foreign matter could adhere to surface and compromise joint integrity.
- » Place spigot into bell and align.
- » Note: Always push spigot end into bell, not bell end onto spigot.
- » Assemble joint using one of the following methods. For smaller diameters, pipe may be joined manually.
- » For all methods, ensure bell and spigot are adequately "homed" for proper installation and tight joining seal. If no homing mark is present, measure the depth of the socket and use a crayon or other material to place a homing mark on appropriate corrugation of the spigot end.







### **BAR & BLOCK METHOD**

- » Place installation stub into socket end of pipe.
- » Place wooden block horizontally across end of installation stub.
- » With a bar, push against wooden block until pipe is fully inserted into bell.

## **BACKHOE METHOD**

- » Place installation stub into bell end of pipe.
- » Place wooden block horizontally across installation stub.
- » Carefully push back of backhoe bucket against block until pipe is fully inserted into bell.

## **BACKHOE AND SLING METHOD**

- » Wrap nylon sling around pipe. Pipe 36" (900mm) or larger should be picked up at two points approximately 10' (3m) apart.
- » Hook other end of nylon sling to backhoe bucket.
- » Operator should carefully push strap tight toward bell of downstream pipe until spigot is fully inserted into bell.
- » Ensure pipe slides squarely into bell to avoid misalignment.
- » Keep pipe level.







#### INJECTION MOULDED FITTING

Flanged Adaptor (Type A) SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
63	225
75	250
90	280
110	315
125	355
140	400
160	450
180	500
200	

Elbow 90° SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
32	180
40	200
50	225
63	250
75	280
90	315
110	355
125	400
140	450
160	500

**Elbow 45**° SDR 17 PN

SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
40	180
50	200
63	225
75	250
90	280
110	315
125	400
160	

Elbow 11.5° · 22.5° · 30° · SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
40	180
50	200
63	225
75	250
90	280
110	315
125	400
160	

## Equal Tee 90°

SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
32	160
40	180
50	200
63	225
75	250
90	280
110	315
125	355
140	

### **End Cap**

SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
32	160
40	200
50	225
63	250
75	280
90	315
110	355
125	400

# Cross SDR 17 PN 10 SDR 11, PN 16



Nominal Size (mm)					
63	200				
75	250				
90	315				
110	355				
160	400				

#### Reduced Tee 90°

SDR 17 PN 10 SDR 11, PN 16



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Nominal	Size (mm)
63X32	180X160
63X40	200X63
63X50	200X75
75X40	200X90
75X50	200X110
75X63	200X160
90X50	225X63
90X63	225X75
90X75	225X90
110X50	225X110
110X63	225X160
110X75	250X110
110X90	250X160
125X50	315X160
125X63	315X200
125X75	355X160
125X90	355X225
160X125	400X200
180X63	400X315
180X90	500X200
180X110	500X315

#### Flanged Adaptor (Type B) SDR 17 PN 10 SDR 11, PN 16



Nominal Size (mm)		
63	225	
75	250	
90	280	
110	315	
125	355	
140	400	
160	450	
180	500	
200		

#### Eccentric Reducer

SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
90X50	225X160
90X63	225X180
90X75	225X200
110X50	250X140
110X63	250X160
110X75	250X180
110X90	250X200
125X63	250X225
125X75	315X225
125X90	315X250
125X110	355X200
160X90	355X225
160X110	355X250
160X125	355X315
160X140	400X200
180X90	400X225
180X110	400X250
225X110	400X315
225X125	400X355
225X140	

#### Concentric Reducer Long Spigot SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
32X20	125X63
32X25	125X90
40X25	200X75
40X32	200X90
50X25	225X200
90X50	250X90
90X63	250X110
90X75	250X160
110X50	250X180
110X63	250X200
50X32	315X160
50X40	315X200
63X25	315X250
63X40	355X250
75X50	355X315
75X63	400X160
90X63	400X200
90X75	400X250
110X75	400X315
110X90	



### **ELECTROFUSION FITTINGS**

#### Electrofusion Reduced Tee 90°

SDR 17 PN 10 SDR 11, PN 16



Nominal Size (mm)		
75X63	160X75	
90X63	160X90	
90X75	160X110	
110X63	200X63	
110X75	200X75	
110X90	200X90	
160X63		

## Electrofusion Equal Tee 90°

SDR 17 PN 10 SDR 11, PN 16



#### Nominal Size (mm)

63X63	
75X75	
90X90	
160X160	
200x200	

#### Electrpfusion Flange

SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)		
63	200	
75	225	
90	250	
110	315	
125	355	
160	400	

#### Electrpfusion Coupler

SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)		
20	125	
25	160	
32	180	
40	200	
50	225	
63	250	
75	315	
90	355	
110	400	

#### Electrpfusion Cup

SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)		
40	160	
50	200	
63	225	
75	250	
90	315	
110	355	
125	400	

#### Electrofusion Elbow 90°

SDR 17 PN 10 SDR 11, PN 16



Nominal Size (mm)		
63		
75		
90		
110		
125		
160		
200		

#### Tapping Tee With Rotatable

SDR 17 PN 10 SDR 11, PN 16



Nominal	Size (mm)
63X25	110X40
63X32	110X50
63X40	160X32
63X63	160X40
90X25	160X50
90X32	160X63
90X50	200X32
90X63	200X40
110X32	200X63





### **FABRICATED FITTING**

#### **Fabricated** Equal Tee 90°

SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)				
90	250			
110	280			
125	315			
140	355			
160	400			
180	450			
200	500			
225				

## Fabricated **Equal Tee** 45°, 60° SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)			
90	250		
110	280		
125	315		
140	355		
160	400		
180	450		
200	500		
225			

#### **Fabricated** Elbow 90°

SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)				
90	250			
110	280			
125	315			
140	355			
160	400			
180	450			
200	500			
225				

#### **Fabricated** Cross 90°

SDR 17 PN 10 SDR 11, PN 16





Nominal	Nominal Size (mm)				
90	250				
110	280				
125	315				
140	355				
160	400				
180	450				
200	500				
225					

## **Fabricated Equal Tee** 45°, 60°

SDR 17 PN 10 SDR 11, PN 16





Nominal	Size (mm)
315X125	560X200
315X110	560X110
315X63	560X90
355X160	630X250
355X90	630X200
355X75	630X180
400X160	630X160
400X110	710X280
400X90	710X225
450X200	710X180
450X180	710X90
450X125	800X315
450X110	800X280
500X180	800X225
500X160	800X160
500X125	900X400
500X63	900X250
560X225	900X160

## **Fabricated** Elbow

**45°, 60°** SDR 17 PN 10 SDR 11, PN 16





Nominal Size (mm)				
90	250			
110	280			
125	315			
140	355			
160	400			
180	450			
200	500			
225				





## TECHNICAL DATA OF NEW PRODUCT PLASTIC FACTORY FACTORY UPVC Pipes

#### **PHYSICAL PROPERTIES**

	Properties at 20_C	Unit	Values	Method of Evaluation
1	Specific Gravity at 23_C		Values	ASTM D 792
2	Flammability	not support	1.43	ASTM D 635
3	Resistance of burning	Sec.	< 30	BS 4607 PART 2.70
4	Softening PT. (VSP 5kgf)	_C	82	BS 2782 - 1976
5	Shore Hardness		81	ASTM D 2240-75
6	Thermal Conductivity	W/m-k	0.17	BS 874-1973
7	Specific Heat	Cal/g_C	0.25	

#### **MECHANICAL PROPERTIES**

	Properties at 20_C	Unit	Values	Method of Evaluation
1	Tensile Strength 20_C	Kg/cm2	481-550	AISO R 257
2	Modulus of Elasticity	MN/m	3000	ASTM - 1784
3	Compressive Strength	Kp/cm	668	BS 4607 PART 2:70
4	Flexural Strength	Kp/cm	950	ASTM D 790
5	Elongation at Break	%	> 80	ISO R 527
6	Yield Stress	Kp/cm	> 400	ISO R 527
7	Resistance to Heat	mm	<2	BS 4607 PART 2:7073

#### **CHEMICAL PROPERTIES**

	Properties at 20_C	Unit	Values	Method of Evaluation
1	TResist to Sulphuric Acid	g/45cm	-0.13 +3.19	
2	Resist to Methylene Chloride	%	<3	ISO 2508/81
3	Resist. Water Absortion	.mg/cm	<2.0	ISO 2508/81 & DIN 8061

#### **TOXICITY PROPERTIES**

	Properties at 20_C	Unit	Values	Method of Evaluation
1	Pb Toxicity	.mg/L	<0.3	
2	Sn Toxicity	=	<0.02	
3	Zn Toxicity	=	<0.01	

#### **MECHANICAL PROPERTIES**

	Properties at 20_C	Unit	Values	Method of Evaluation
1	Volume Resistively	.mg/L	1014	
2	Surface Resistance	.ohm	1012	DIN 53482
3	Power Factor at 10 HERTZ		3	
4	Dielectric strength	V/mil	1400	BS 4607
5	Insulation Resistance	M. ohm	1.1x105	BS 4607

## **SEWERAGE/DRAINAGE NON-PRESSURE UPVC PIPES**

Due to in demand of supply for the sewerage/drainage non-pressure uPVC pipes in Qatar, we manufacture now this type of pipes in accordance to both British, Dutch & American standards as follows.

BS EN 1329 (Formerly BS 5255) Soil & Waste (Above Ground Drainage)				
Nomin	al Size	Mean Outside Diameter	Wall Thickness	
INCH	mm	mm mm		
1 1/4	32	36.15 2.0		
1 1/2	40	42.75 2.0		
2	50	55.75	2.0	
The Standard Length 4.0 Meters				
The Standard Co	The Standard Color Light Gray in Color.			
The Socket Type Solvent Weld Socket Type				

BS EN 1329 (Formerly BS 5255) Soil & Waste (Above Ground Drainage)							
Nomin	Nominal Size Mean Outside Diameter Wall Thickness						
INCH	mm mm mm						
3	82	82.4	3.2				
4	110	110.0	3.2				
6	160	160.0	3.2				
The Standard Le	The Standard Length 3">4.0 Meters, 4 & 6"->5.8 Meters.						
The Standard Co	The Standard Color Light Gray in Color.						
The Socket Type	The Socket Type Solvent Weld Socket Type						

BS EN 1401-1 (Formerly BS 4660) Sewer & Drainage (Underground)							
Nominal Size DN/OD	Nominal Outside Dia.	SN2 SDR 51 <sup>b</sup>				SN8 SDR 34	
	⁴n	e <b>min</b>	em.max	<sup>e</sup> min	em.max	emin	em.max
110	110	-	-	3.2	3.8	3.2	3.8
125	125	-	-	3.2	3.8	3.7	4.3
160	160	3.2	3.8	4.0	4.6	4.7	5.4
200	200	3.9	4.5	4.9	5.6	5.9	6.7
250	250	4.9	5.6	6.2	7.1	7.3	8.3
315	315	6.2	7.1	7.7	8.7	9.2	10.4
(355)	355	7.0	7.9	8.7	9.8	10.4	11.7
400	400	7.9	8.9	9.8	11.0	11.7	13.1
(450)	450	8.8	9.9	11.0	12.3	13.2	14.8
500	500	9.8	11.0	12.3	13.8	14.6	16.3
630	630	12.3	13.8	15.4	17.2	18.4	20.5
Color golden br	Color golden brown or red						
Length 5.8 and	6 Meter						
Socket Rubber	Socket Rubber Ring Seal						
Solvent or plain	n ends						

BS 5481 Gravity Sewerage uPVC Pipes						
Nominal Size	Nominal Size Mean Outside Diameter Wall Thickness					
mm	mm	mm				
200	200.00 4.9					
250	250.00	6.1				
The Standard Length	5.8 & 6.0 Meters.					
The Standard Color	Red (Golden Brown)					
The Socket Type	Solvent Weld & Rubber Ring Seal Socket	Solvent Weld & Rubber Ring Seal Socket Type				

## **NEWPRO Pressure uPVC Pipes**

NEWPRO manufactures this pressure pipes for the wide used in the plumped water supply system, irrigation and industrial purposes. These pipes are manufactured in accordance to the following:

## 1. British Standards:

	BS EN 1401-1 (Formerly BS 4660) Sewer & Drainage (Underground)						
Nominal Size	Outside Diameter	Wall Thickness (mm)					
(inch)	(mm)	Class B (6 Bar)	Class C (9 Bar)	Class D (12 Bar)	Class E (15 Bar)		
1/2"	21.1				1.7		
3 /4"	26.6				1.9		
ן"	33.4				2.2		
11 /4"	42.1			2.2	2.7		
11 /2"	48.1			2.5	3.1		
2"	60.2		2.5	3.1	3.9		
21/2"	75.0		3.0	3.9	4.8		
3"	88.7	2.9	3.5	4.6	5.7		
4"	114.1	3.4	4.5	6.0	7.3		
6"	168.0	4.5	6.6	8.8	10.8		
8"	218.8	5.3	7.8	10.3	12.6		
10"	272.6		9.7	12.8	15.7		
12"	323.4		11.5	15.2	18.7		
14"	355.0		12.6	16.7	20.5		
16"	405.9		14.5	19.0	23.4		
18"	456.7		16.3	21.4			
20"	507.5		18.1				
24"	609.1		21.7				
The Standard Le	The Standard Length 5.0, & 6.0 Meters						
The Standard Co	olor	Dark Gray					
The Socket Type		Solvent Weld Socket	Туре				
		Rubber ring socket f	or sizes 4", 6" & 8" Clas	ss D & E.			

## 2. German DIN Standards:

ominal Size	Outside Diameter	Wall Thickness (mm)					
(mm)	(mm)	Class 2 (4 Bar)	Class 3 (6 Bar)	Class 4 (10 Bar)	Class 5 (16 Bar		
40	40		1.8	1.8	3.0		
50	50		1.8	1.8	3.7		
63	63		1.9	1.9	4.7		
75	75	1.8	2.2	2.2	5.6		
90	90	1.8	2.7	2.7	6.7		
110	110	2.2	3.2	3.2	8.2		
160	160	3.2	4.7	4.7	11.9		
200	200	4.0	5.9	5.9	14.9		
225	225	4.5	6.6	6.6	16.7		
250	250	4.9	7.3	7.3	18.6		
280	280	5.5	8.2	8.2	20.8		
315	315	6.2	9.2	9.2	23.4		
355		7.0	10.4	10.4	26.3		
400		7.9	11.7	11.7	29.7		
450		8.9	13.2	13.2			
500		9.8	14.6	14.6			
560		11.0	16.4	16.4			
630		12.4	18.4	18.4			
710		14.0	20.7	20.7			
800		15.7	23.3	23.3			
The Standard	Length	5.0, & <mark>6</mark> .0 Meters					

## 3. ASTN Standards:

ASTM D 1785 (Schedule Series) Pressure uPVC Pipes						
Nominal Size	Outside Diameter	Wall Thickness (mm)				
(inch)	(mm)	Schedule 40	Schedule 60			
1/2"	21.24	2.77	3.73			
3/4"	26.57	2.87	3.91			
ן"	33.27	3.38	4.55			
11/4"	42.03	3.56	4.85			
11/2"	48.11	3.68	5.08			
2"	60.17	3.91	5.54			
3"	88.70	5.49	7.62			
4"	114.07	6.02	8.56			
6"	168.00	7.11	10.97			
8"	218.70	8.18	12.70			
The Standard Le	The Standard Length 4.0, 5.8 & 6.0 Meters.					
The Standard Color For SCH. 40 = White & for SCH 80 Dark Gray.			y.			
The Socket Type	•	Solvent Weld				

ASTM D 2241 (SDR - Series) Pressure uPVC Pipes								
Nominal Size	Outside		Wall Thickness (mm)					
(mm)	Diameter (mm)	SDR 41	SDR 32.5	SDR 26	SDR 21	SDR 17	SDR 13.5	
1/2"	21.24						1.57	
3/4"	26.57				1.52	1.57	1.98	
1"	33.27			1.52	1.60	1.96	2.46	
11/4"	42.03		1.52	1.63	2.01	2.49	3.12	
11/2"	48.11		1.52	1.85	2.29	2.84	3.58	
2"	60.17		1.85	2.31	2.87	3.56	4.47	
3"	88.70	2.16	2.74	3.43	4.24	5.23	6.58	
4"	114.07	2.80	3.51	4.39	5.44	6.73	8.46	
6"	168.00	4.11	5.18	6.48	8.03	9.91	12.47	
8"	218.70	5.33	6.73	8.43	10.41	12.90		
			The Standard Length 5.8 or 6.0 Meters.			rs.		
SDR =	Outside Diameter		Th	e Standard Co	lor	White		
	Wall Thickness		Th	e Socket Type		Solvent Weld S	Socket	

ASTM 2279 (PVC) SEWER PIPES						
Nominal Size	Outside Diameter(mm) Wall Thickness(mm)					
mm	mm	mm				
2"	57.15	1.80				
3"	72.55	1.80				
4"	107.6	1.90				
6"	159.39	2.60				
The Standard Length	The Standard Length 5.8 Meters.					
The Standard Color	Grey					
The Socket Type	Solvent Weld					









## **NEWPRO uPVC Electrical Conduit & Cable Ducts**

NEWPRO has a variety of electrical conduits and cable ducts which are manufactured in accordance to British Standards, European Standards, Qatar Telecommunication (QTEL), Electricity (Kahrama) and Water Service Company.

BS EN 561386 / BS EN 50086 / Formely BS 6099							
Nominal Size	ı	nside Diametei	r	Wall 1	Wall Thickness (mm)		
(mm)	Light	Medium	Heavy	Light	Medium	Heavy	
20	17.4	16.9	15.8	1.4	1.6	1.8	
25	22.1	21.9	20.6	1.6	1.8	1.9	
32	28.6	27.8	26.6	1.7	2.1	2.5	
40	36.6	35.8	35.0	1.7	2.1	2.5	
50	45.1	44.3	43.2	2.45	2.85	3.2	
The Standa	The Standard Length All conduits are 2.9 meters in Length						
The Standa	The Standard Color All conduits are White or Black in color.						

## **NEWPRO uPVC Electrical Cable Duct Pipes**

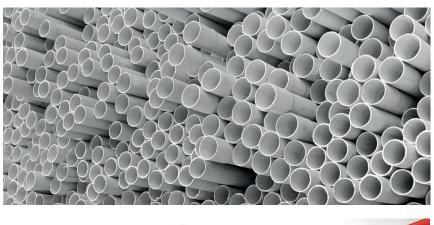
Newpro manufacturing uPVC electrical cable duct pipes as per KAHRAMAA and QCS specification								
Size (mm)	Outside Diameter (mm) Wall Thickness (mm)							
110	110.00 - 110.30	2.40						
160	<mark>160.00 - 160</mark> .40	3.60						
The Standard Length	As per customer <mark>requirmm</mark> ents							
The Standard Color	Black							

## **NEWPRO uPVC Cable Duct Nema TC-2 Pipes**

Newpro manufacturing uPVC high voltage cable duct pipes as per NEMA TC-2 specification						
Size (Inch)	DN (mm)	Outside Diameter	Wall Thio	ckness		
Size (inch)	DN (IIIII)	(mm)	EPC - 40	EPC - 80		
1/2"	16.00	21.34	2.77	3.73		
3/4	21.00	26.67	2.87	3.91		
ייך	27.0000	33.4 as	3.38	4.55		
1/4	31.00	42.16	3.56	4.85		
1/2"	45.00	48.26	3.68	5.08		
2"	53.00	60.32	3.91	5.54		
3"	78.00	88.9	5.49	7.62		
4"	103.00	114.3	6.02	8.56		
6"	155.00	168.28	7.11	10.97		
The Standard Leng	The Standard Length As per customer requirmments					
The Standard Color	The Standard Color Grey / Blue					

Qatar Telecommunication (Ooredoo) Standard							
Duct No	Outside Diameter (mm)	Inside Diameter (mm)	Socket Lenght (mm)	Duck Lenght	Wall Thickness		
54D	96.5	90.0	100.0	5.9	3.25		
56D	56.5	50.0	70.0	3.90	3.25		
Standard Color All ducts & bends are black							
Socket Type All ducts & bends are solvent weld type							

NEWPRO DUCTS (According to QCS 2010 and 2014)			
Nominal Size (Inch)	Outside Diameter (mm)	Wall Thickness(mm)	Standard Lenght (meters)
2"	55.75	2.0	4.0
3"	82.4	2.2	4.0
4"	110.0	2.4	5.8
6"	160.0	2.6	5.8
4"	110.0	3.2	5.8
6"	160.0	4.7	5.8
6"	160.0	3.6	5.8
8"	200.0	4.0	5.8
8"	200.0	4.9	5.8
10"	250.0	4.9	5.8
10"	250.0	6.1	5.8
12"	315.0	7.7	5.8
12"	315.0	9.2	5.8
Standard Color	Standard Color Red, Grey and Black		
Socket Type	All pipes are solvent or rubber socke	et.	

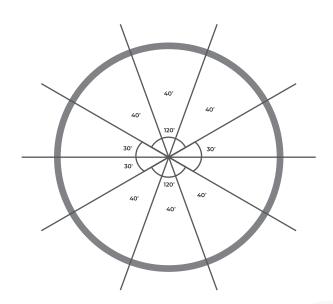


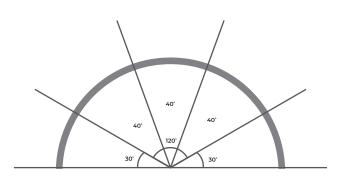






## **Perforated Piping System**



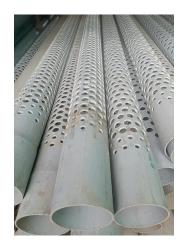


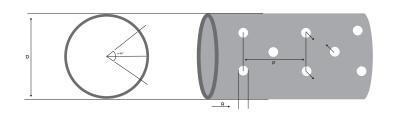
## Fully Perforated Pipe

## Half Perforated Pipe

Outside Diameter (mm)	Wall Thickness (mm)	Joint Type
110	3.2	SCI
160	4.1	SCI
200	4.9	SCJ or RS
250	6.1	SCJ or RS
315	7.7	SCJ or RS

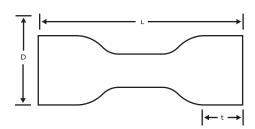
Perforated Pipe Data		
Hole Size (R)	8mm or as required	
Hole Spacing (P)	200mm or 250mm along piping axis drawing	
Number of Raws	1 to 4 as	
Raw Spacing	mentioned in the	
	40° separation between adjacent rows 1200 between outside raw if all four rows are used	
Color	Red or grey	





Double Coupling			
Size	Length	"ID"	
90	190 mm	90mm	
110	1 mtr	110mm	
160	1 mtr	168mm	
It is used to connect two spigot ended ducts straight through			



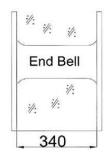


Bell Mouth Fabricated			
Trade Size	Length	"OD"	Thickness
2	340mm	50mm	2.5mm
4	340mm	110mm	2.4mm
6	340mm	160mm	3.6mm
8	340mm	200mm	4.0mm
10	340mm	250mm	4.9mm





Bell To Bell End Fabricated			
Trade Size		"OD"	Thickness
2	340mm	50mm	2.5mm
4	340mm	110mm	2.4mm
6	340mm	160mm	3.6mm
8	340mm	200mm	4.0mm
10	340mm	250mm	4.9mm





Note: Also available with various sizes in case of request by contractor.





## **NEWPRO uPVC Bends and Collars**









Bend 30°

Bend 45°

Bend 90°

Collar

DIA	Wall Thickness	Bend 30°	Bend 45°	Bend 90°	Collar
55 mm	2.2 mm	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
82 mm	2.2 mm	<b>/</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
110 mm	2.4 mm	<b>/</b>	<b>&gt; \</b>	<b>✓</b>	<b>✓</b>
160 mm	2.6 mm	<b>/</b>		<b>✓</b>	<b>✓</b>
160 mm	3.6 mm	<b>/</b>		<b>✓</b>	<b>✓</b>
56.5 mm	3.25 mm	<b>/</b>		<b>/</b>	<b>✓</b>
96.5 mm	3.25 mm	<b>/</b>	<b>/</b>	<b>✓</b>	<b>✓</b>

## **Technical Specifications and installation instructions**

NEWPRO Conduit and trunkings are light weight, user friendly, easy to handle and does not call for on- site handling equipment due to its versatile design and features. NEWPRO cable management products are non- conductive, non-corrosive, complies with relevant specifications, codes of practice and regulations for Electrical Equipment Buildings (IEE publication).

Installation should be undertaken by proficient personnel with due for safety and environment interests to achieve optimum benefits of cable management. Following instructions are intended to be a guide for the installation of NEWPRO products.

### **Conduit Systems**

#### Choice of Conduits and Installation

## The choice of conduit and fittings is subject to kind

of work being executed and the specifications required.

Appropriate gauge conduit is selected for surface

fixing and suitable conduit is selected for surface fixing and suitable conduit is chosen for concealed installations. Conduit used in surface installations should be secured using saddles/spacer bar saddles. Distancing between supports shall be 1.5 meters for horizontal run and 1.75 meters for vertical run for the conduit sizes of 20 and 25mm diameter. For 32 and 38mm diameter conduits, saddle

support shall be 1.75 horizontal and 2.0 meter vertical is recommended. 2.0 meter horizontal and vertical distancing is suggested for 50mm diameter conduit. In surface fixing, whenever mounting boxes/bends are used, conduit shall be secured with spacer bar saddle within 20cms on either side of fitting to give a firm support for installation. Where conduits are to be embedded in concrete, securing of conduits

with reinforcing/formwork is desired to avert displacing of conduits while read-mix concrete pouring and subsequent vibrating of concrete mix.

#### **Joint and Couplers**

Conduits have a tendency for expansion/contraction at changing ambient temperature. For facilitating this phenomenon, recommended for it's using expansion couplers for every 6- meter ruin avert conduit kinking and buckling. Expansion couplers are installed with the solvent cement applied on short spout of expansion coupler and pushing conduit firmly into notching. Use appropriate water resistant lubricating sealant on the other end and position conduit at midpoint of long spout for aiding expansion and contraction in the saddles.

Joining of conduit into various fittings viz., couplings, adaptors, junction boxes, bends and mounting boxes are easily joined by using Comat solvent welding cement. Due care need to be taken for proper surface preparation of components. Cut conduit to required length using fine toothed hacksaw or pipe cutter and remove al burrs and loose dust. Apply evenly a layer of solvent cement to the pipe and fitting with a quarter turn to evenly spread the solvent. cement wiping off any excess. cement from the components

#### **Method of Bending**

### All NEWPRO conduits of different gauges under 25mm OD size can be easily bent cold by using designated bending spring. Ensure using of correct size and gauge. Insert the spring into desired position, grip the conduit on either sides and exert force by hand, or place the conduit across the knee and continue bending slowly but progressively until bend is slightly beyond the angle required. Now, allow the conduit to recover back to the desired position. To remove the spring from conduit, twist it in anti-clockwise direction while rotating the conduit clockwise simultaneously pulling them slowly apart. Bending of conduits above 25mm size shall be carried out with hot bending technique. Insert proper size of spring into the conduit as explained above and immerse bending portion in boiling water or use a radiant heat source. When the conduit softens, used a suitable former and continue holding until bend is set to required angle.

#### **Cable Carrying Capacity**

Size of the conduit is explicitly governed by IEE publication to ensure accommodating maximum number of cables of the same size, or different sizes for complying with the requirement of regulations. This is necessitated to make certain the number of cables drawn into conduit or a wiring system shall be such that no damages caused to the cables and conduits while carrying out the installation

## **uPVC Piping System**

## Flange

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
90	160	
110	200	
110	250	
125	315	

160

Y Tripple Socket 45° Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
75X50	125X90	
90X63	125X110	
110X63	160X110	
110X75	160X125	
110X90		

## Coupling

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
50	125	
63	160	
75	200	
90	250	
110	315	

Cap Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
40	110	
50	125	
63	160	
75	200	
90		

# Tee 45° Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
63	125	
75	160	
90	200	
110	250	

## Reducing Tee 45°

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)	
90X63	125X110
110X63	160X110

200X110

110X90

## Reducing Tee 90°

Light Gray: EN1329 Orange: EN1401



ı	Nominal Size (mm)
	90X63
	110X63
	160X110

## U Trap Light Gray: EN1329



Nominal Size (mm)		
63	110X110	
90	125X110	
110	125	

## Cross 45°

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)
110X110X110X110
110X90X90X110
110X63X63X110

#### Elbow Double Soket 45°

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)	
63	160
75	200
90	250
110	315

#### Reducer

Light Gray: EN1329 Orange: EN1401



Nominal Size (mm)		
63X25	110X90	
63X32	125X63	
63X40	125X110	
63X50	160X110	
75X63	160X125	
90X63	200X160	
90X75	250X200	
110X63	315X250	
110X75		

Light Gray: EN1329 Orange: EN1401



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

#### Elbow 45°

Light Gray: EN1329 Orange: EN1401



Nominal	Size (mm)
25	110
32	125
45	160
50	200
63	250
75	315
90	400

#### Tee 90°

Orange: EN1401



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

## Above Ground Drainage Waste BS 5255 Fittings





Size (inch)

Elbow 45°



Size (inch)

Branch 90°



Size (inch)	
1 ½"	2"

Branch 45°



Size (inch)	
1 1/2"	2"

Socket



Size (inch)	
1 ½"	2"

## Above Ground Drainage Soil BS 4514 Fittings

Elbow 90°



Size (inch)

Elbow 45°



Size (inch)

3" 4" 6"

Branch 90°



Size (inch)				
3"	4"	6"		

Branch 45°



Size (inch)			
3"	4"	6"	

Socket



Size (inch)			
3"	4"	6"	

Trapped Floor Gully



Size (inch)

**End Cap** 



Size (inch)
4" 6"



## **Underground Drainage System BS 4660 Fittings**

Elbow 90°



4" 6"

Branch 90°



Size (inch)

4" 6"

Branch 45°



Size (inch)
4" 6"

Elbow 45°



4" 6"

P Trapped Gully



Size (inch)

End Cap



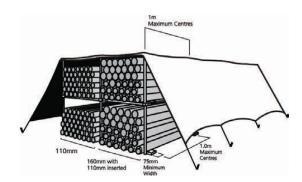
Size (inch)

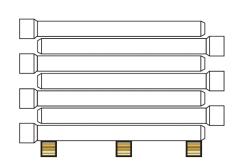
## NEWPRO Factory U P.V.C Pipes Transport Handling and Storage

#### **Our factory shown that:**

- 1. Un plasticized u P.V.C pipes are strong but light,
- 2. Its specific gravity being approximately one-fifth that cast iron.
- 3. As a result, these pipes are more easily handled than their metal counterparts.
- 4. Reasonable care, however should be exercised at all times, and when of loading, pipes should be lowered, not dropped to the ground.
- 5. Pipe should be given adequate support at all times.
- 6. Pipes should not be stacked in large piles especially in warm temperature conditions, as the lower layers may distort: resulting in difficulties when joining and for pipe alignment.
- 7. Any pipe with ends prepared for joining (socket and spigot joints, RR joints, etc.) should be stacked in layers with the socket, placed at alternate ends of the stack and with sockets protruding to avoid lop-sided stacks and the Imparting of permanent set to pipes.
- 8. Particularly in the case of Ring pipe, rubber rings should not be exposed to solar radiation for any length of time if they are not coated.
- 9. It is recommended to stock them in a cool and shady place.
- 10. Rubber rings should not come in touch with chemicals, grease, oil and to be stored for too long a time.
- 11. For long-term storage, pipe racks should provide continuous support, but if this is not possible, timber of at least 75 mm bearing width at spacing not greater than 1 m centers for pipe sizes 150 mm and above, should be placed beneath the pipes and at 2 m centers at the side, if the stacks are rectangular.
- 12. These spacing apply to pipe size 160 mm and above.
- 13. Closer supports will be required for sizes below 160 mm.
- 14. In such pipe racks, pipes may be stored not more than seven layers or 1.5 m high, whichever is the lesser, but if different classes of pipe are kept in the same racks, then the thickest classes must always be at the bottom.

#### Non-Exposure To Direct Sunlight





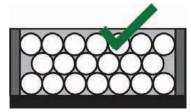
- 15. For temporary storage in the field, where racks are not provided, the ground should be level and free room coarse stones.
- 16. Pipes stored thus should not exceed three layers high and should be staked to prevent movement.
- 17. Stack heights should be reduced i pipes are nested; i. e. pipes stored inside pipes o larger diameters.
- 18. Reductions in height should be proportional to the weight of the nested pipe compared to the weight of the pipes normally contained in such stowage's.
- 19. Since the soundness of any joint depend on the condition of the spigot and the socket, special care must be taken in transit, handling and storage to avoid damage to the ends.
- 20. When loading pipes on the vehicles, care must be taken to avoid their coming into contact with any sharp corners such as cope irons, loose nail-heads, etc., as pipes may be damaged by being rubbed against these during transit whilst in transit pipes shall be well secured over their entire length and not allowed to project unsecured over the tailboard of the lorry.
- 21. Pipes may be off loaded from lorries and or by rolling them gently down timbers, care being taken to ensure that pipes do not fall one upon another nor on any hard or uneven surfaces.
- 22. Fork-lift trucks will have to be used for bundles and large unit loads.





Handling





Recommended Storage

### **EXCAVATION**

- The width of the trench excavation should be kept to a minimum, allowing just sufficient working area for jointing and initial compaction around the pipe. For most purposes, a trench 300mm wider than the diameter of the pipe allows enough room for jointing.
- 2. It is important that the trench is not excavated too far in advance of the pipe laying operation, especially in situations where the trench walls are unstable

#### **BEDDING**

- 1. The quality of the bedding material and its compaction, together with the nature of the undisturbed material of the trench walls are all relevant to the ultimate performance of Duroflo and Ultraflo pressure pipes once installed.
- 2. The trench bed must be free from all stones or sharp projections which are likely to cause damage to the pipe.
- 3. The bottom of the trench should be backslid to a depth of 100mm, with selected bedding material such as free draining coarse sand, gravel or soil of a friable nature.
- 4. The size of soil particles in the bedding material should not exceed 20mm.
- 5. The bedding, onto which the pipe is laid, should be thoroughly compacted to the specified density.
- 6. Reference should be made to SANS 2001 for bedding specifications

## **ANCHORING**

- 1. When an internal hydrostatic pressure is applied to the pipe, unbalanced forces develop at all changes of size and direction in a pipeline.
- 2. Thrust blocks prevent the movement of fittings and must be placed at all changes of direction, valves, stop ends and reducers. Concrete thrust blocks are most commonly used at all anchor points.
- 3. The dimensions of the thrust blocks must be calculated to suit the pipe diameter, pressure and the load bearing capacity of the soil.

## METHODS OF UPVC PIPES JOINTING

#### SOLVENT CEMENT/GLUE JOINTING SYSTEM

This method, otherwise known as a Solvent Weld, is the most popular and requires a low skill capability.

PVC 'solvent cement' or 'glue' is in essence the chemical mixture that when applied to the mating surfaces of the PVC pipe, fitting or valve connections, welds them together by means of a chemical reaction creating what is technically known as an 'homogenous bond' i.e. the two separate surfaces are now chemically fused to become one.

#### **CORRECT JOINING PROCEDURE:**

- » Cut the pipe square and deburr the spigot.
- » Mark the socket depth to the spigot end.
- » Clean dry and degrease the two jointing surfaces.
- » Check the fit before making any cuts or applying any glue.
- » Apply priming fluid to the socket and the spigot ends.
- » Apply an even coat of solvent cement to both the socket and spigot ends.
- » Insert the spigot the full market depth of the socket and HOLD for a minimum of 30 seconds.
- » Clean off any surplus solvent cement.







#### **RUBBER RING JOINING**

Rubber ring joints provide a fluid seal by compressing a rubber ring housed in the socket of a pipe or fitting when the spigot is passed into the socket. The correct jointing rings are supplied with the pipe or fitting.



#### **APPROVALS**

#### **COMMERCIAL REGISTRATION**





#### **OPERATION PERMIT**





#### Certificate of Registration

This is to certify that

#### NEW PRODUCTS PLASTIC FACTORY-NEPRO

BUILDING 283, STREET 2, NEW INDUSTRIAL AREA, ZONE 81, DOHA, QATAR

has been assessed and certified by Vatsin Certification as meeting the requirements of

## ISO 14001 : 2015

(Environmental Management System)

For the following activities

MANUFACTURE AND SUPPLY OF HDPE, HDPE CORRUGATED AND uPVC PIPES, FITTINGS AND ACCESSORIES

#### IAF CODE - 14

#### Certificate No: VC23021579

To verify this certificate please visit at www.vatsincertification.com

Date of Initial Registration: 09-05-2023

Re-Certification Due: 08-05-2026 2nd Surveillance: 08-05-2025

Revision No.: 00 lst Surveillance : 08-05-2024 Certificate Expiry: 08-05-2026









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ISO 45001 : 2018

(Occupational Health & Safety Management System)

For the following activities

MANUFACTURE AND SUPPLY OF HDPE, HDPE CORRUGATED AND uPVC PIPES, FITTINGS AND ACCESSORIES

#### IAF CODE - 14

#### Certificate No: VC23038489

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#### KAHRA MAA APPROVAL









#### **ASHGHAL APPROVAL**





