HIP PETROHEMIJA

PE PIPES AND FITTINGS

FABRICATED FITTINGS

Fabricated fittings are produced by injection moulding and by butt welding of segmented parts of the series SDR 17 pipes. The advantage of these fittings is their economical production and easy installation by butt welding which provides a high safety level. They are used for water distribution of up to 10 bar pressures. A special feature of fabricated fittings is economical manufacture of separable pipelines for the transportation of ash, sand and the like.

Standard groups of fabricated fittings are: Stub Flanges with backing ring and gasket, Elbows of 30º, 40°, 60° and 90°, Equal-Tees, Reducer Tees, Cross Branches, Spigot Reducers and End Caps for pipes of up to 250 mm in diameter.

Equal-Tees

Equal-Tees Branches or Equal-Tees of the same diameter are produced in the same dimensions as pipes: 20, 25, 32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225 and 250 mm.

Reducing-Tees

Reducing-Tees or branches with reducers (t) are made in a number of combinations displayed in the table below.

Outer Pipe Diameter (mm)	Outer Reducer Diameter														
	20	25	32	40	50	63	75	90	110	125	140	160	180	200	225
25	t + r														
32	t + r	t + r													
40	t + r	t + r	t + r												
50	t	t + r	t + r	t + r											
63			t + r	t + r	t + r										
75					t + r	t + r									
90						t + r	t + r								
110						t + r	t + r	t + r							
125							t + r	t + r	t + r						
140								t + r	t + r	t + r					
160								t + r	t + r	t + r	t + r				
180								t	t	t + r	t + r	t + r			
200									t	t	t + r	t + r	t + r		
225									t	t	t	t + r	t + r	t + r	
250									t	t	t	t	t + r	t + r	t + r

Reducer Couplers

The production programme of the Reducer Couplers (r) is shown in the table above.

Elbows 90°, 60°, 45° and 30°

Elbows are made with angles of 90°, 60°, 45° and 30° and in dimensions of 20, 25, 32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225 and 250 mm.

Cross Branches

Cross Branches are made in the following dimensions 20, 25, 32,40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225 and 250 mm.

End Caps

The production programme includes the following dimensions: 20, 25, 32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225 and 250 mm.

Stub Flanges

The production programme includes the following dimensions of stub flanges with backing rings and gaskets: 25, 32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225 and 250 mm.

In addition to the standard ones, fabricated fittings can also be made according to customers requests, like lateral pieces, hydrants and non-standard jointing elements, for attaching to existing network and connecting the pipelines.

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Handling Polyethylene Pipes

Transportation

Transportation means for polyethylene pipes should be selected based on criteria that straight pipes and those in coils do not get damaged or deformed during transportation. It is necessary that pipes be laid in their entire length during transportation. A special attention should be paid whilst loading and unloading, so as not to scratch the pipes against the vehicle surfaces.
Fittings are individually packed in transparent packages, for protection purposes. For easier transportation and handling during storage, several units are packed together in a cardboard box.

Warehousing

Petroplast pipes can be stored in the open air for up to one year. For storage periods longer than a year, protection against UV radiation should be provided. Straight pipes should be stored horizontally on a flat surface without any sharp objects underneath and up to one meter in height.
Coiled pipes should be stored vertically or stacked one upon the other, taking care not to deform the pipes.
The pipes should be closed on their ends in order to prevent contamination of the inside.
The pipes must not be stored near heated surfaces. Care should be taken not no get the pipes in contact with fuels, solvents and similar matters.

Pipes Laying

Polyethylene pipes can be laid under ground, above ground and under water. For underground laying the depth of the channel is within the range of 0.8 up to 1m, depending on the terrain configuration. In case of intersection of the pipeline with a line of communication, the depth is adjusted accordingly. If a protective pipe is used, the laying depth can go up to two meters. In case of channel laying, the coil should be unwound at least 24 hours in advance.
In case of outside temperatures around 0°C, heating with hot air is highly recommended.
Also, for laying purposes, the coefficient of linear thermal expansion should be taken into consideration which in case of polyethylene is $2x10^{-4}$ $°C^{-1}$ or 0.2 mm per each meter of pipe length, at 1°C change in temperature.
When the route direction is changed, the minimum allowed bending diameters for different temperatures should be taken into consideration:

Rmin. = 50 d at 0°C
Rmin. = 35 d at 10°C
Rmin. = 20 d at 20°C

Jointing of Polyethylene Pipes

Polyethylene pipes are jointed using separable connection (metal couplers, PE and PP couplers, flanges) or inseparable (fixed) connection – by welding. It is strongly recommended that activities of pipe laying be entrusted to experts specialized in these jobs.

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