



HDPE Spiral Self Pipes for Non-Pressure (Gravitational) Systems



HDPE SPIRAL SELF PIPES FOR NON-PRESSURE (GRAVITATIONAL) SYSTEMS

PRODUCT IDENTITY

Product Name	DİZAYN SPIRAL PIPE
Raw Material	HDPE 100
Product Color	Black
Production Standard	TS 12132, TS EN 13476-3

PRODUCT SPECIFICATIONS

Production Range	Ø500 - Ø3600 mm
Ring Stiffness	SR2 - SR64
Pressure Class	Gravitational Flow (test pressure: 0,5 bar)
Pipe Length	5,8 – 6- 11,8 – 12 – 13,5 meters (Customized lengths can also be produced by Mobile (on-site) Manufacturing method. Please contact with us for customized lengths.)

QUALITY CERTIFICATES OF DİZAYN GROUP



Turkey



Russia

3.1 Dizayn Spiral Pipe

Dizayn Group has launched its new versatile product, Dizayn Spiral Pipe, yielded by its R&D efforts kicked off 7 years.

Recently, the Ministry of Energy has proclaimed myriad of projects aimed at extending the hydroelectric energy nationwide. In hydroelectric power plants, water supply lines stand among the vital components of the system. Correct water supply is the crucial factor that is directly decision on the plant's capacity. Pushing and exceeding the limits of fluid engineering through extraordinary methods and launching highly prestigious projects in this field, our company has developed an unparalleled alternative for the sake of seamless water supply in HPP projects. Particularly the solutions against common problems to be offered by our new product that may employed in transferring water to the turbine in HPP projects may be summarized as follows:

Choosing plastic pipes to sewage projects will undoubtedly present lots of crucial advantages such as securing 100% water tightness and ultimately bringing the losses down to zero. Excessive pipe diameters reaching 2-3 meters in sewage projects add to transport costs and naturally inflate the overall project expenditure, therefore they are unfavorable. To avoid the exorbitant transport costs due to huge volume of pipes employed in sewage projects where only one pipe can fit in the truck, our company has developed the on-site manufacturing method based upon its state-of-the-art technology.

Thanks to this newly-developed technology, the manufacturing yard is erected on the territory of the power plant and the resulting on-site manufacturing process clears the transport costs. Under this technology, when water supply lines are designed with plastic pipes, competitive costs can be produced compared to traditional systems.

Another factor that makes is impossible to employ large-diameter HDPE pipes in sewage projects is that maximum length of pipe is limited meters in current manufacturing methods. As the pipes are manufactured by widening on the drum, the pipe length is limited to the drum length. In existing systems, as the manufacturing plant cannot be relocated, maximum manufacturing length is merely limited to the maximum truck length due to transport restrictions. The new technology developed by Dizayn Group eliminates such a length restriction in manufacturing. The pipes can be manufactured in any length desired. Hence, also a reduction is achieved in the number of joints.

With plenty of advantages, primarily the chemical strength, plastics offer a long service life. Thanks to the Spiral Pipes manufactured of polythene raw material, maintenance costs for sewage lines in plants are minimized.

As Spiral piping offers a quite low wall roughness coefficient, that fluid can be transported in smaller pipes compared to concrete and other systems, allowing a less excavation volume.

The pipes are joined by means of a specially developed EF welding system. This special joining method guarantees a reliable weld and 100% tightness.

Also thanks to their high ring stiffness, Spiral pipe offers a high strength to any kind of aerth load under the ground or in areas receiving musch traffic load, allowing the transfer of gravity fluids such as wastewaters.

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3.2 Dizayn Spiral Pipe Advantages

Leak Tightness

Dizayn Spiral Pipe is designed as a flexible structure to minimise the effects of ground movement and deformation and prevent leakage from the pipeline or attenuation structure.

Flexibility

Dizayn is unique in its ability to produce large diameter pipe and attenuation solutions to match your exact requirements and site conditions. The flexibility of our manufacturing process enables you to specify exact stiffness requirements and utilise a value engineered solution that is neither under nor over specified.

Unique, patented electro-fusion joint

Dizayn offers the only large diameter plastic pipe solution with integral electro-fusion jointing. Electro-fusion wire is connected to the socket end of the pipe during manufacture and supplied with a unique barcode containing the settings and installation parameters for the pipe.

Fast Jointing

In comparison with other large diameter systems, Dizayn Spiral Pipe can be handled, jointed and installed much quicker, resulting in time and cost savings on-site.

Less joints, less leakage

Dizayn Spiral Pipe is available in standard lengths of 6 meters even according to customer request. With less joints, Dizayn Spiral Pipe significantly reduces the potential for leakage. Dizayn Spiral Pipe offers flexibility in specifying a joint that is appropriate for the project.

Safety and health for human benefits

Electro-fusion jointing offers improved health and safety benefits over traditional jointing methods reducing the need to work within confined spaces. On-site, Dizayn Spiral Pipes can also be jointed at the side of the trench before being craned into position, reducing health and safety risks during installation.

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3.2.1 Dizayn Spiral Pipe - Facts

- Fabricated tanks and manholes to any size
- Available for sewage systems, power plants and sea discharge projects
- Light weight for ease of handling and installation combined with high stiffness and durability
- 100% recyclable after used life
- Ideal for use as large-scale attenuation system
- Strong yet flexible design
- Able to withstand ground movement without leakage
- Superior hydraulic performance achieved through smooth bore
- Up to 3600mm diameter
- Durable materials
- Excellent resistance to sulphate and chemical attack
- Longer pipe lengths for improved pipeline integrity and fewer joints
- Unique patented electro-fusion jointing system
- Excellent load bearing capability

