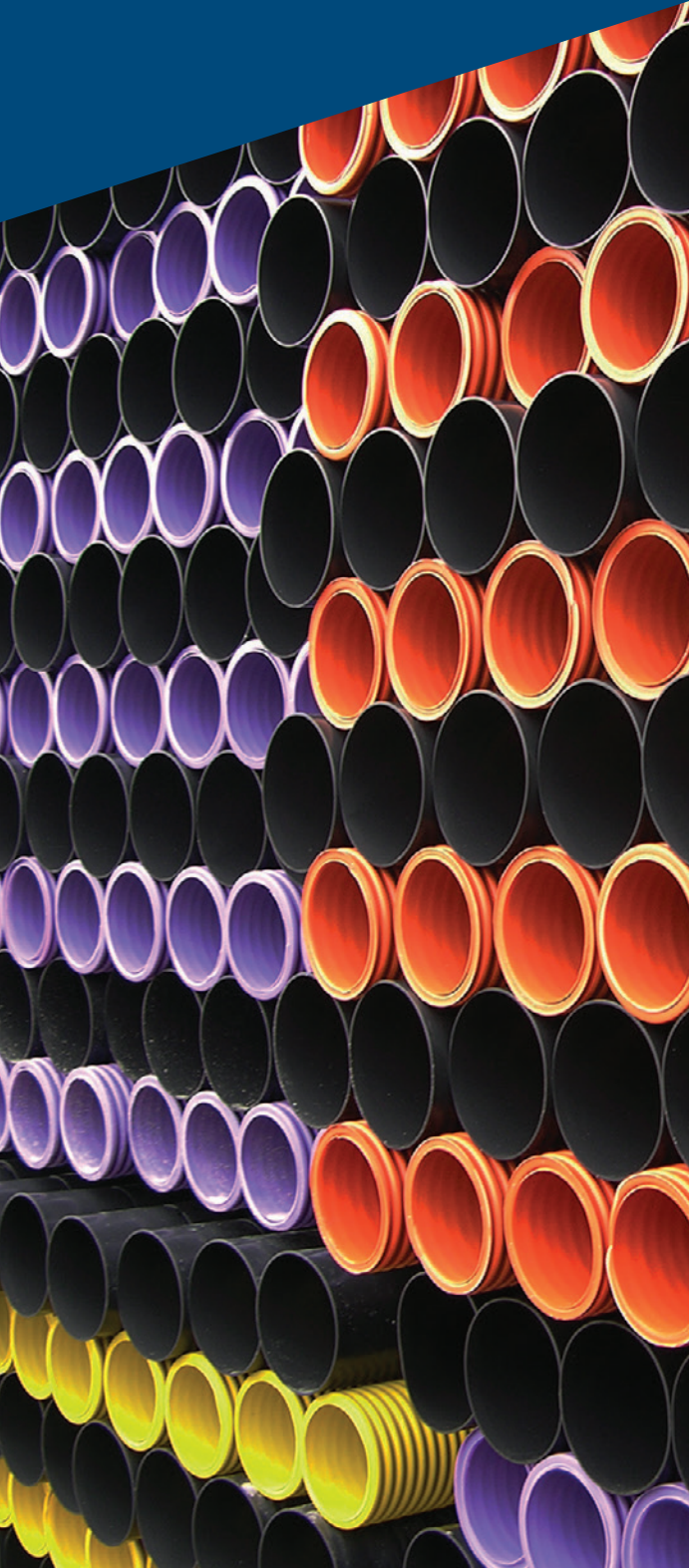




CIVILS

Quality Plastic Solutions



CorriDuct

Technical Specifications



CorriDuct Tech Specifications

Introduction

CorriDuct is a twin wall high density polyethylene pipe manufactured from a blended polyethylene by a twin extrusion process.

Two high density polyethylene walls are extruded simultaneously, one inside the other, and heat-welded together in one continuous process. The outer wall is corrugated and the inner wall is smooth finished.

It is a combination of the corrugations, and the heat-welding of the two walls, that give CorriDuct its excellent structural strength.

CorriDuct is suitable for the protection of electricity, gas and water supply services, street lighting cables and fibre optic cabling for television and telecommunications.

CorriDuct is manufactured to two different specifications depending on the application.

- BS EN 61386-24 : 2010
Conduit systems for electrical installations.
- ENATS 12-24 - Class 2
Technical specification for plastic ducts for buried electric cables.

Dimensions

CorriDuct is currently available in four sizes: 50/63 , 94/110 , 100/118 & 150/178.

CORRIDUCT SIZES			
NOMINAL SIZE	INSIDE DIAMETER	OUTSIDE DIAMETER	PIPE LENGTH
50mm	50mm	63mm	6m
94mm	94mm	110mm	6m
100mm	100mm	118mm	6m
150mm	150mm	178mm	6m

COILED CORRIDUCT SIZES			
NOMINAL SIZE	INSIDE DIAMETER	OUTSIDE DIAMETER	COIL LENGTH
50mm	50mm	63mm	50m
94mm	94mm	110mm	50m

Split Ducting

Any of the CorriDuct sizes listed are available as either a single split or double split duct on request.

Structural Strength

CorriDuct is manufactured in two different classes with regard to structural strength.

- Type 750N, compression strength at 23°C when tested in accordance BS EN 61386-24:2010, normal duty impact resistance.
- Type 450N, compression strength at 50°C when tested in accordance with section 10 of ENATS 12-24 Class 2.

Colours & Marking

CorriDuct is manufactured in black with other colours available on request.

Standard markings - Electrical Cable Duct in accordance with above standards or to individual customer specification upon request.

CORRIDUCT COLOUR CODE		
COLOUR	APPLICATION	
	Black	Marked Electric
	Red	Electricity / Power
	Orange	Street Lighting / Traffic Signals
	Purple	Motorway Communication / Street Lighting (Scotland)
	Yellow	Gas
	Blue	Water
	Green	CCTV
	Grey	Telecommunications

Cover Depths

Minimum Cover Depths:

- 0.6m for non trafficked green areas
- 0.75m to finished surface for trafficked areas as per series 500 of the the MCDHW Vol. 1 and Vol. 3.

In certain circumstances lower minimum cover levels may be allowed. e.g. installation with rigid pavement, concrete surround etc. Please contact JFC for more information.

Maximum Cover Depths:

The normal cover depth for CorriDuct is up to 6 meters when installed in accordance with series 500 of the MCDHW Volume 1.

The actual maximum allowable cover level is dependent on the following installation parameters and is often in excess of 6 meters:

- The native soil stiffness
- The duct bed and surround stiffness
- The size of the trench.
- The density of the overburden.
- Hydrostatic loading.
- Factor of safety.
- Maximum allowable deflection limit.

For specific site conditions JFC can calculate the maximum duct deflection based on the above parameters.

Installation

CorriDuct is to be installed in accordance with national guidelines and local specifications.

Trench Preparation:

The trench width is generally between OD+200mm and OD+300mm. The trench should provide for a minimum of 100mm duct bed and local soft spots must be removed and replaced with hardcore. The duct must sit evenly on the bed and must be free of voids under the duct. The trench should not be excavated too far in advance of duct installation. All trenches are to be excavated in accordance

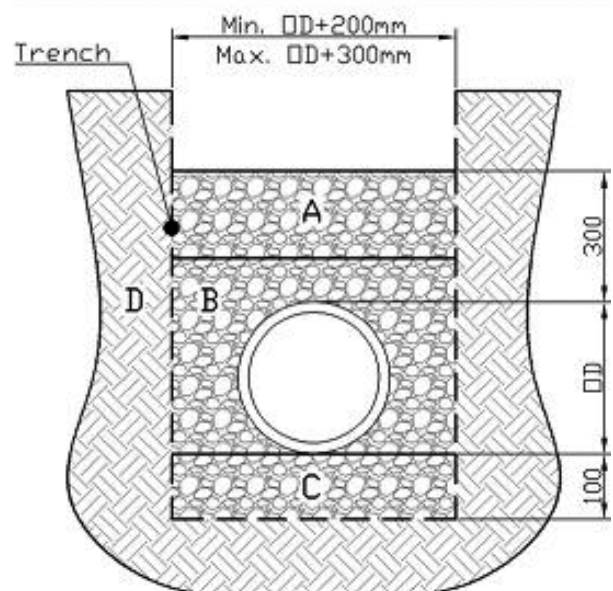
with national health and safety guidelines along with local building regulations.

Sidefill

CorriDuct is to be backfilled as described in the MCDHW, Volume 1, Series 500. Sidefill material is dependent on specification but is normally a small (10mm) single size aggregate. The duct surround material must fully support the duct. Compaction may be required depending on ground conditions and sidefill material used. If compaction is required the compaction equipment must not come in contact with the duct. The sidefill material should extend to 100mm over the crown of the duct.

Backfill

Backfill is to continue to a minimum of 300mm above the crown of the duct with suitable material as per specification. The material should be free of any stone particles greater than 50mm. Compaction should not be carried out until a minimum cover of 300mm is achieved. Compaction equipment should be sized so as not to exert any undue stress in the duct. Further backfill to the required level should be carried out in layers no greater than 300mm.



Typical Installation Details

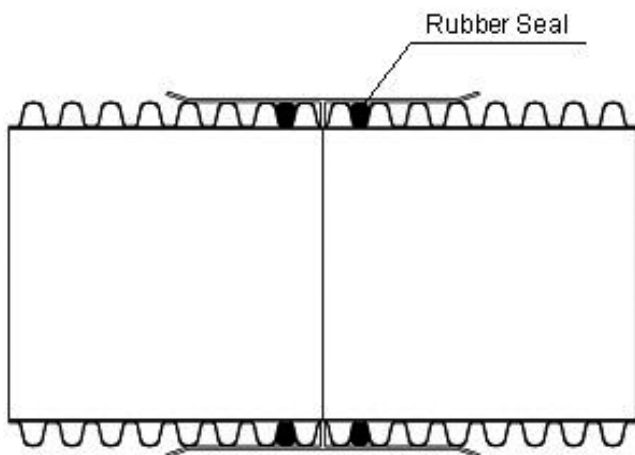
A = Backfill B = Sidefill C = Bed
D = Earth OD = Outside Diameter of Duct

Joining

CorriDuct is manufactured in 6 meter lengths and is joined with straight couplers. The duct is pushed into the coupler unit and sits against the shoulder in the coupler. Seals providing a watertight joint are available on request.

JFC recommends the following procedure for joining CorriDuct:

- Cut the duct square to the required length with a conventional handsaw.
- Clean the end of the duct and accompanying coupler / fitting.
- Offer the coupler up to the duct.
- Push the coupler onto the duct until it seats against the shoulder on the inside of the coupler.
- Ensure coupler is butted fully against the duct.
- If using rubber seals for a watertight joint use pipe lubricant with the seals as detailed in the diagram below.



Typical Watertight Joint Detail

Transportation, Handling & Storage

General

Handling should be done carefully and in accordance with national health and safety guidelines. Dragging of ducts and fittings must be avoided. HDPE ducts and fittings become slippery in wet or in cold weather and extra precautions may be necessary.

CORRIDUCT SIZES		
NOMINAL SIZE	NO. OF STICKS PER PALLET	NO. OF COILS PER PALLET
50/63mm	N/A	8
94/110mm	100	4
100/118mm	81	N/A
150/178mm	33	N/A

Storage

All materials should be carefully inspected at the time of delivery and any defects should be notified and reported immediately. All duct stacks should be made on firm, flat ground to support the weight of the ducts and lifting equipment. For safety ducts and fittings should be transported and stored in their packaging.

Delivery vehicles should be provided with a clean, flat bed, free from sharp objects. Care must be taken to prevent slippage or excessive bowing of the ducts. Tie the load well to prevent rubbing. Use nylon straps, not chains or ropes.

The stacking height for ducts should be limited to not more than 3 meters. Ducts should be not be stored in open areas subject to high winds.

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