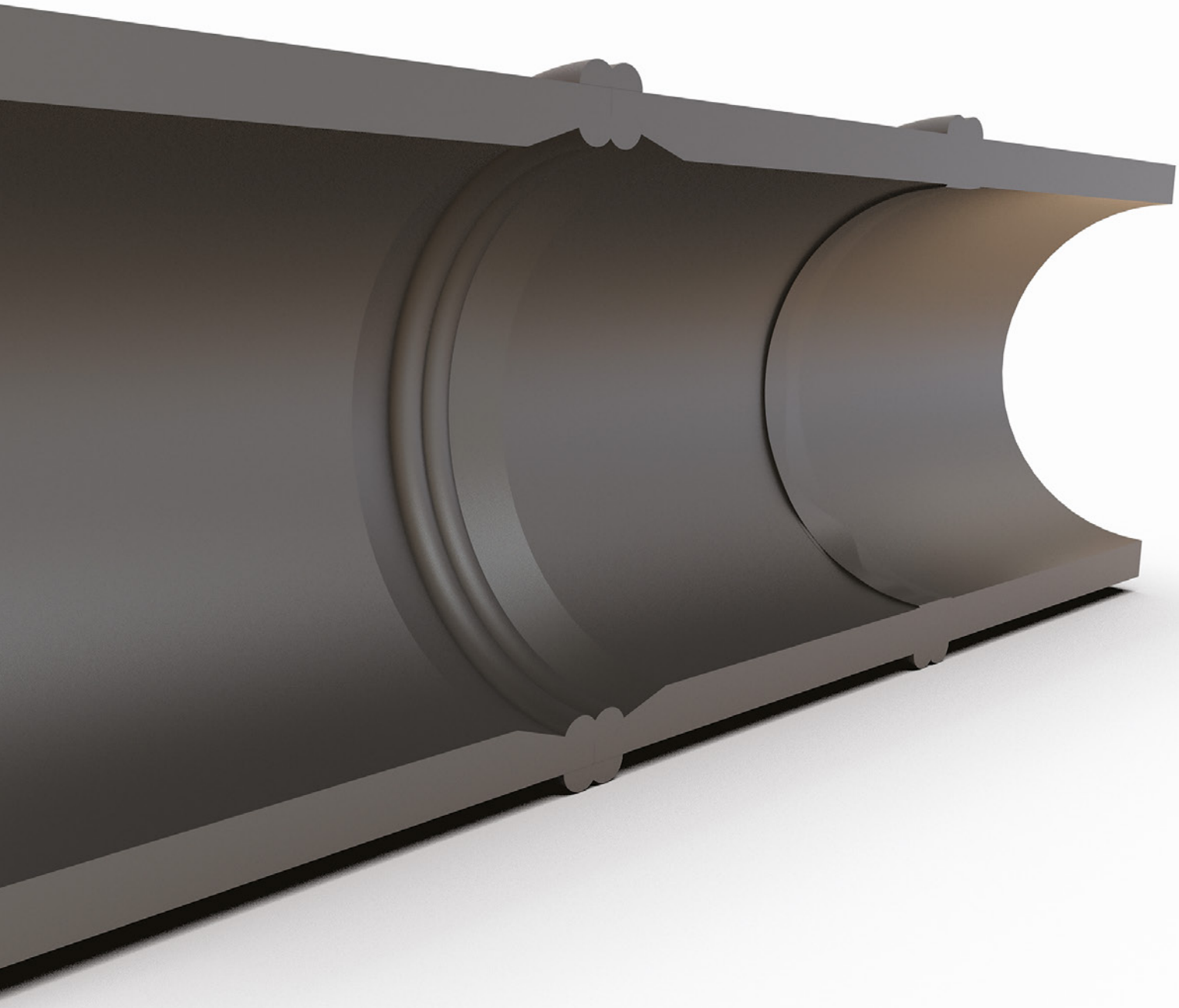
CLEARDUCT PIPE

Innovative electrical cable pipe ducting



CLEARDUCT
BY PEAK PIPE SYSTEMS

PEAK
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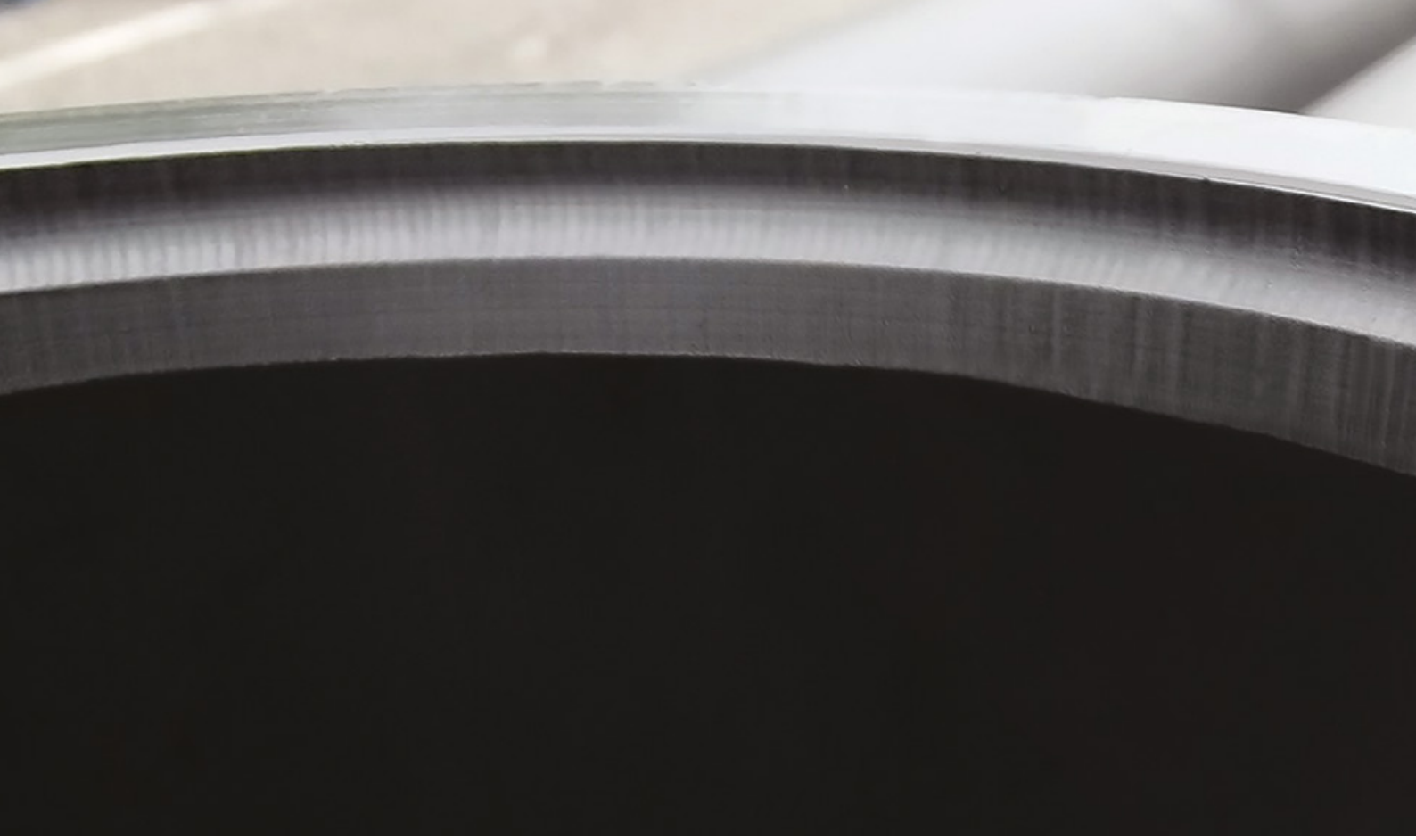
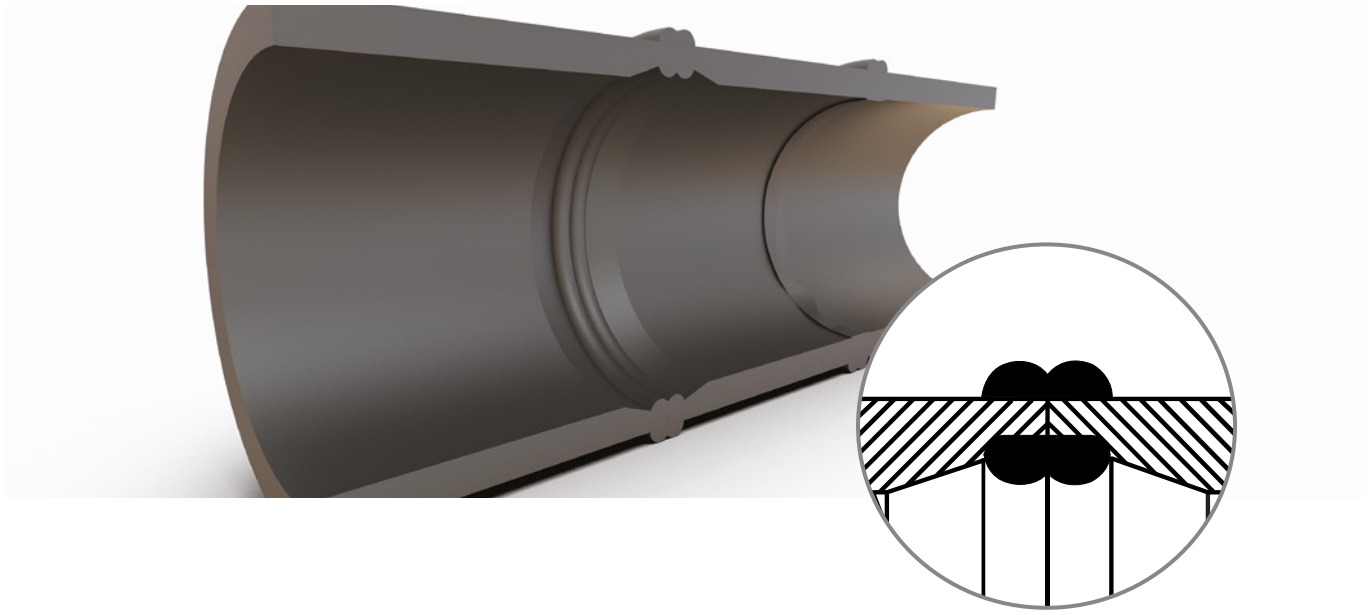


CABLE DUCTING

Traditional butt fusion welded ducting requires internal debeading to ensure no internal obstructions are present, which could damage electrical cable sheathing. In order to analyse the quality of debeading, camera surveillance has to be carried out, this is a costly and time consuming process.

ClearDuct cable ducting has been designed as a solution to this issue, by eliminating the need to remove the internal bead. This is achieved through the innovative pipe end design which has been developed and tested by Peak Pipe Systems. By applying a machined profile to the ends of the pipe, the bead is recessed into the pipe wall and away from the internal bore of the pipe once butt welded. This means that the cable will not be damaged once it is pulled through the pipe due to the ‘full bore’ clearance achieved through the entire pipe route.



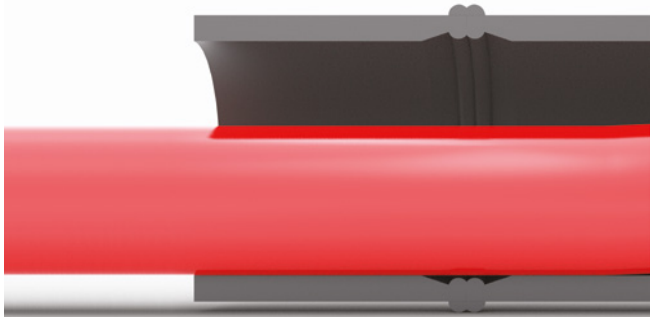
KEY BENEFITS

ClearDuct excels in comparison to traditional butt fused polyethylene ducting. Machined pipe ends enable a specifically designed recess for bead seating, guaranteeing no protrusion of the bead into the internal bore of the pipe.

Along with bespoke high productivity welding parameters which increase on site efficiencies and decreases labour costs ClearDuct offers many key benefits which include:

- Suitable for horizontal directional drilling installation
- No internal debeading required
- Eliminates internal cable obstruction
- Innovative recessed bead seating
- Proven and tested joint integrity
- Bespoke highly productive welding parameters
- Mitigate cable sheath damage
- Totex cost savings

ClearDuct joint



Standard joint

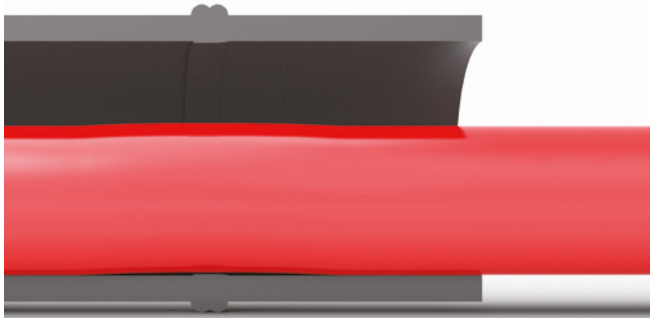


Image illustrates the cable route through the pipe

PATENTED DESIGN

TECHNICAL SPECIFICATION

ClearDuct has been primarily developed to suit HDD (horizontal direction drilling) applications as a solution to mitigate cable sheath damage and efficiently reduce operational site costs.

ClearDuct caters for a standard size range of 90mm through to 280mm in various SDRs. With up to 13.5 metre sticks and 100 metre coils, ClearDuct is suitable for a multitude of installation methods. Different material options can be offered to suit individual project requirements.

Key technical features

- Manufactured in accordance to ISO9001
- Fully automated butt fusion machine with bespoke welding parameters
- Patented design
- Factory prepared ends
- Choice of material grades
- Available in various lengths

Straight sticks

Product Code **06 or 12 (metre lengths)	Outside diameter (mm)	Outside diameter Max (mm)	Available SDR	Ovality (Max) (mm)	SDR11 Wall Thickness Avg (mm)
CDBKN90X**M	90	90.6	11	1.8	8.2
CDBKN110X**M	110	110.7	11	2.2	10.0
CDBKN125X**M	125	125.8	11	2.5	11.4
CDBKN140X**M	140	140.9	11	2.8	12.7
CDBKN160X**M	160	161.0	11	3.2	14.6
CDBKN180X**M	180	181.1	11	3.6	16.4
CDBKN200X**M	200	201.2	11/9	4.0	18.2
CDBKN225X**M	225	226.4	11/9	4.5	20.5
CDBKN250X**M	250	251.5	11/9	5.0	22.7
CDBKN280X**M	280	281.7	11	9.8	25.4

Coiled

Product Code ***050 or 100 (metre lengths)	Outside diameter Min. (mm)	Outside diameter Max (mm)	Available SDR	Ovality (Max) (mm)	SDR11 Wall Thickness Avg (mm)
CDBKN110X***M	110	110.7	11	6.6	10.0
CDBKN125X***M	125	125.8	11	7.5	11.4
CDBKN160X***M	160	161.0	11	9.6	14.6

All dimensions are as measured at 23 +/- 2°C

CASE STUDIES

Hornsea Project One has chosen Peak Pipe Systems innovative ClearDuct HDPE electrical cable ducting for the world's first gigawatt offshore wind farm. Located off the Lincolnshire coast in the East of England the project is set to be completed in 2020. The entire project, once complete, will consist of over 400 wind turbines, cover in excess of 1,564 square kilometres off the North Sea and will be the world's largest offshore wind farm, providing low carbon power to over one million homes.

Hornsea Project ONE

Owner: Ørtsed | Location: Norfolk Coast, North Sea

- Power to 1 million+ homes
- Completion 2020
- 1.2 GW capacity
- 174 turbines

Ensuring the safe and effective transmission of the wind turbines generated electricity is a key part of the project's delivery. ClearDuct, with its patented design*, is an ideal choice for the host conduit piping to house and protect the multi-million-pound high voltage cables which carry the electricity generated by the colossal turbines which will be transmitted to the national grid. Over 30 kilometres of ClearDuct HDPE electrical cable ducting has been supplied due to its unique design which ensures damage to cable sheathing is mitigated and eliminates the potential for cable hotspots and overheating.

The patented machined pipe end design means that the internal fusion bead which is created during the high integrity welding process is recessed into the pipe wall, unlike conventional butt fusion welding. This guarantees no protrusion of the bead into the internal bore of the pipe, leaving cables with an unobstructed insertion path and no potential snagging points.

Bespoke welding parameters have been created resulting in more than a 50% reduced weld cycle time. In turn resulting in vastly increased welding productivity. Allowing double the volume of welds to be achieved in the same time it takes to complete using conventional welding parameters.

*Patent application number GB2555583

Testimonial

Dino Cancellara, Director of GD Hire commented "I used the ClearDuct pipe on the Hornsea wind farm project, it was the first time I had used this product and was very impressed with the presentation and design of the product. It was easy to install and lining up the markings to ensure consistent welding quality was very straightforward.

This product doubled our finished pipe output in a day and the design meant no de-beading is required which also meant production efficiency was improved massively. I would recommend this product for future installs."

Hornsea Project TWO

Owner: Ørtsed | Location: Norfolk Coast, North Sea

Power to 1.3 million homes

Completion 2022

1.4 GW capacity

165 turbines

Beatrice Offshore Wind Farm

Owners: SSE, Copenhagen Infrastructure Partners, Red Rock Power Ltd | Location: Moray Firth, North Sea

Power to 450,000 homes

Completion 2019

588 MW capacity

84 turbines

Download the technical data sheet

Watch the ClearDuct video

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