OptiRoad Inc.

FEP (HDPE Flexible Pipe)
Underground Pipe
for Protecting Power, Telecom Cables

CERTIFIED ISO 9001 CERTIFIED

KS C 8455

OptiRoad – Connect Better Everywhere

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1. What is FEP?

The development of modern industries and the over-concentration of cities is increasing demand for enhancing safety, securing more space and achieving finer views in urban areas, industrial areas and areas next to the roads, which is causing the trend of laying wires and communication cables underground.

Previously all the underground conduits used hume pipe, steel pipe or PVC pipe but these conduit line were all direct tubes. In addition, the pipe lengths are short requiring many connections and they are heavy which meant it has disadvantage of difficulty in building as well as extra cost in construction cost due to labor shortages and loss resulting from delay of working terms.

What solved all the mentioned difficulties was F.E.P. underground pipe.

F.E.P was treated with unique spiral wave and hence overcame weakness of surface strength in the previous polyethylene pipe and the strength was few times higher and had appropriate level of pliability making it efficient in construction.

F.E.P, being flexibility, strong and ease to operate with, it was introduced as the replacement to the previous pipe and have achieved great sales results in advanced countries. Having an outstanding ease of operation and surprisingly cost effectiveness, it will meet all clients' requirements and more.

2. Characteristics of FEP Pipe

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Good Flexibility	Ease of cable lead-in.
Due to its wave treatment, it can be bent with ease and can be used in construction where it needs to avoid obstacles.	Due to the low coefficient of friction and lead-in cable line is already placed in the pipe; cable can be "led-in" with ease. Hence, the distance between manholes can be long.
Strong and Safe	**Light weight**
Due to its wave treatment, the high surface strength can withstand from heavy load from laying under the ground. In addition, its flexibility and its high intensity in internal pressure make it safe in natural disasters such as earthquakes, ground subsidence, etc.	It is made out of PE and hence it is relatively much lighter than copper or hume tubes and it is easy in transportation and installation.
Longer unit length	**Low construction cost**
The unit length is longer, consisting of less connection parts and hence make significant cost saving in human resources in installation and reduction in working terms.	When the above advantages are combined, it will result in a great economic value due to improvements in operation efficiency, reduction in working terms, and reduction in manholes, compared to the previous pipes.
High reliability	**Outstanding corrosion resistance and durability**
As an insulator, it has outstanding insulating properties, making ideal as electric wire pipe.	It is semi-permanent because it has strong chemical resistance against acid, base or oil so it is not damaged by chemicals and does not corrode in sea water or in swampy area.

Usage of FEP

- Golf Course
- Park Development
- Protection to Power Cables
- Protection to Telecom Cables
- School & Sports Facilities
- Apartment Development
- Residential Land Development

3. Specification

Name	Inside Diameter (mm)	External diameter (mm)		Pitch (mm)	Length (m)	Standards (External diameter x width)
		Basic dimensions	Permissible level			
30	30±2.0	40	±2.0	10±0.5	100	1.2×0.55
40	40±2.0	53.5	±2.0	13±0.8	100	1.5×0.6
50	50±2.5	64.5	±2.5	17±1.0	100	1.6×0.65
65	65±2.5	84.5	±2.5	21±1.0	100	1.7×0.7
80	80±3.0	105	±3.0	25±1.0	100	1.8×0.7
100	100±4.0	130	±4.0	30±1.0	60～100	2.0×0.75
125	125±4.0	160	±4.0	38±1.0	50	1.7×1.1
150	150±4.0	188	±4.0	45±1.5	50	1.8×1.2
175	175±4.0	230	±4.0	55±1.5	30	2.3×1.5
200	200±4.0	260	±4.0	60±1.5	30	2.3×1.2

4. Installation

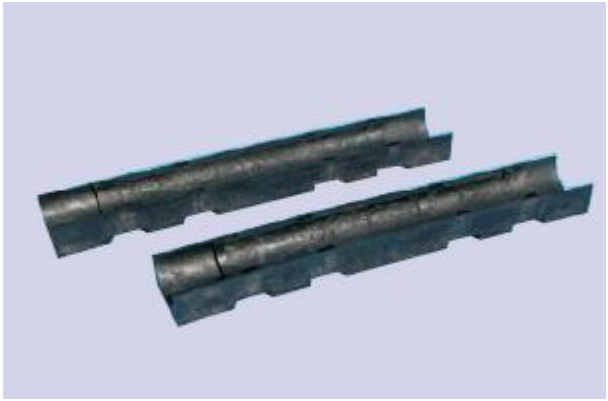
4. Installation

4. Installation

4. Installation

●差し込みピン（2本/m）

4. Installation



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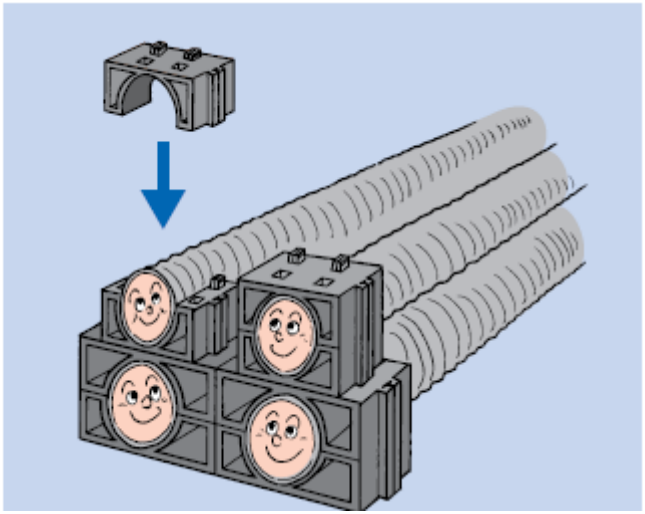

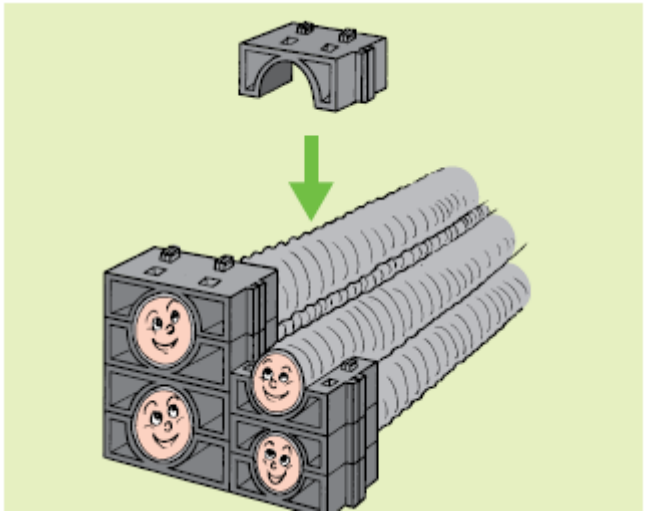

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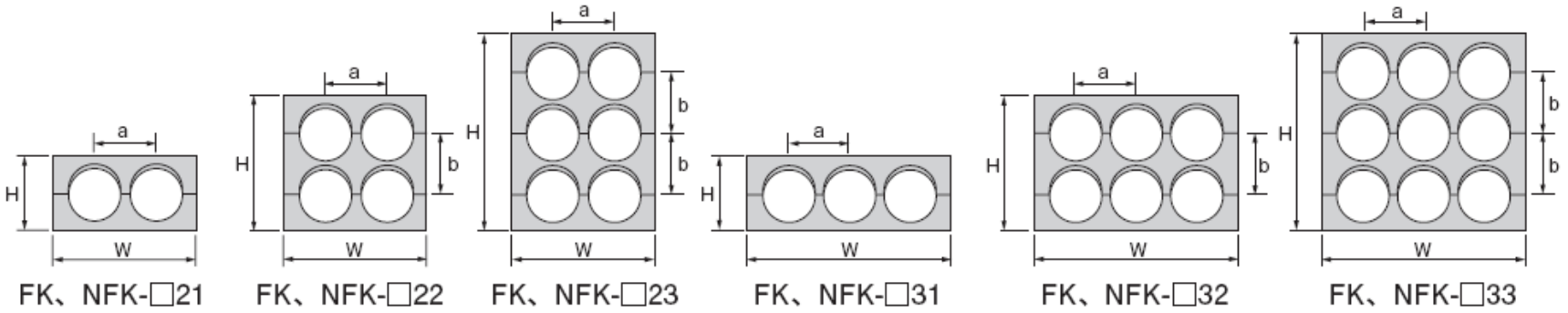

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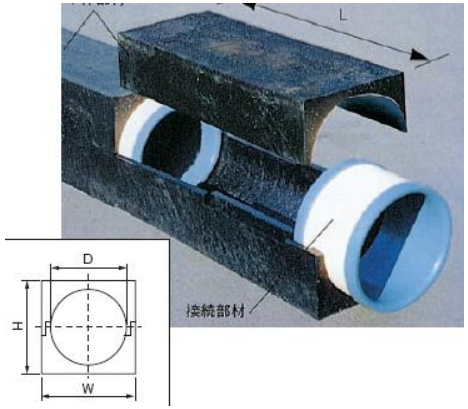

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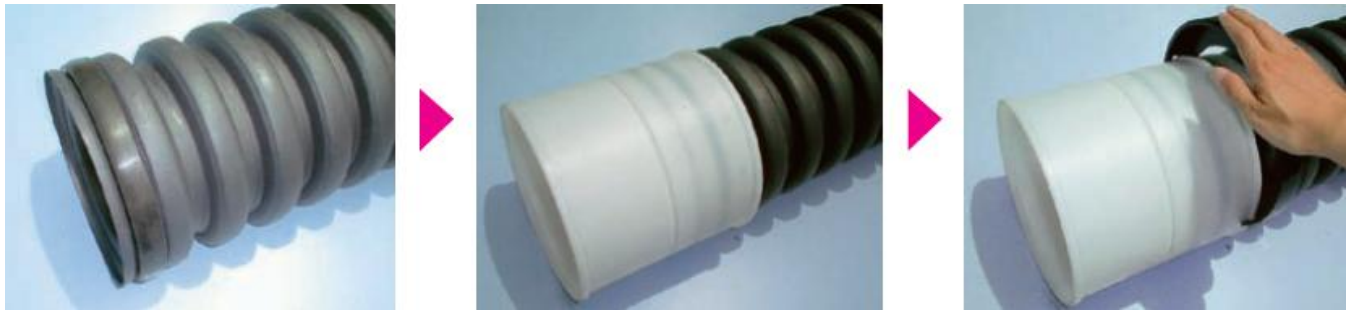

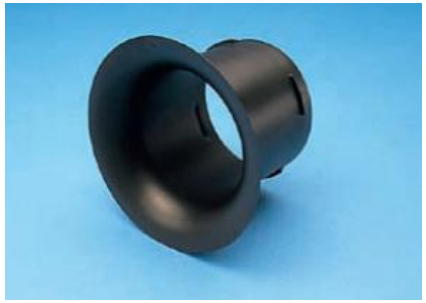

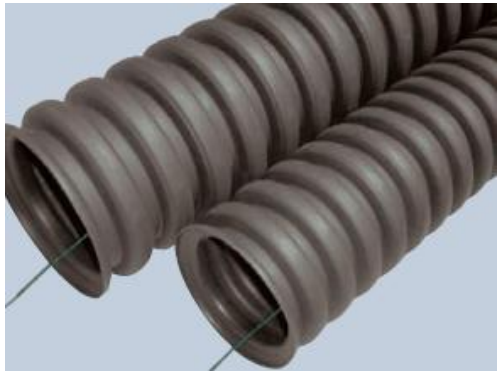

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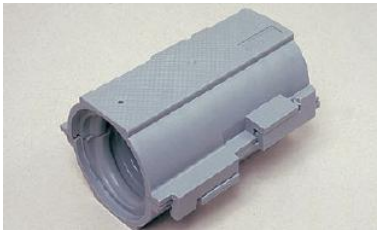

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