

UDP In-Ground Distribution Boxes

Secure, watertight underground distribution link switches and services up to 400 A



The Hiko UDP uses industry standard fusegear / switchgear and Langmatz structural pits to provide a safe, robust, reliable, flexible and future-proof solution for underground urban distribution reticulation and service supplies up to 400 A.

Langmatz pits are made in Germany and are engineered for a lifetime of over 40 years. Their use of structural foamed polycarbonate (SFPC) in a honeycomb modular design delivers outstanding performance under dynamic and static load conditions. The SFPC material is extremely strong, heat resistant, flame retardant and resistant to solvents including petrol, diesel and oil. It has been shown by independent testing to be completely non-toxic to ground water.

The UDP is available with lids rated to AS3996 Class B for footpaths and driveways right up to Class E for application in carriageways.

Installation is facilitated by the SFPC pit elements, which can be easily separated into layers and reconnected if required, and by the provision of tool-free conduit knock-outs and an adjustable lid height.

The design of the pit eliminates the need for a concrete vault or collar, reducing time and cost on site.

Fusegear / switchgear is housed horizontally under a watertight composite "bell" which allows continuous operation even in flood conditions. Monitoring equipment can also be accommodated. In some configurations, the "bell" is hinged allowing fusegear / switchgear to be lifted up vertically for inspection and operation.

No special tools or spare parts are required.

The Hiko UDP takes asset lifecycle management to the next level: it future proofs the LV network and eliminates the risks associated with above ground pillars.

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Mechanical specifications

Specification	Test method	Requirement
Lid load class	AS 3996	Up to Class E400 (40 tonnes)
Transfer of vertical loads to ground base	DIN 1054:2005-01	min 200 kN/m ²
Transfer of adjacent static and dynamic loads to ground base	DIN FB 101	Load class 2 (96 kN with area 40x40 cm using set up RStO road class)
Active ground pressure (transfer of vertical loads to pit elements)	DIN 4085	Ground types V1 to V3 acc to ATV-DVWK-A 127

Materials

Component	Material
Lid, bell	Composite
Frame	Hot dip galvanised steel (≥ 70 µm)
Fixings	Stainless steel 304 (1.4301)
Structural pit elements	Structural foamed polycarbonate (PC/PBT blend with 6% GRP)
Base, dowel pins	Polypropylene, polycarbonate

Structural pit element material properties

Specification	Test method	Requirement
Density	ISO 1183	0.95 – 1.25 g/cm ³
Water absorption	DIN 53495	< 0.5 %
Hardness	ISO 2039/1	90 MPa
Tensile strain at break	ISO 527	38 MPa
Elongation at break	ISO 527	12 %
Elastic modulus	ISO 527	2,000 MPa
Notched impact strength	DIN 53453	6 kJ/m ² (20°C), 4 kJ/m ² (-20°C)
Vicat softening temperature	ISO 306	110°C (B50 method)
Flammability	(Surface flame)	Self-extinguishing after flame is withdrawn
Groundwater compatibility	(Independent Test)	Non-toxic (no leaching of heavy metals, phenol, polycyclic aromatic hydrocarbons or BTEX)

Configurations and Dimensions (mm)

Hiko Code	Typical Configurations				Internal Length (mm)	Internal Width (mm)	Nominal Depth (mm)	Typical Weights (kg)				
	63/100 A	160 A	250 A	400 A				Total (exc cable tails)	Head Frame	Lid(s)	Switchgear Assembly	Cable Tails (mm ²)
UDP03_ _ _ _	2x 3P or 6x 1P	1x 3P			550	250	600	62	18	10	5	25-70
UDP04_ _ _ _	2x 3P or 6x 1P	2x 3P	1x 3P		800	250	600	80	22	12	8	25-95
UDP05_ _ _ _			1x 3P		400	400	700	110	18	15	30	150-240
UDP07_ _ _ _			3x 3P	3x 3P	800	400	700	160	25	15	50	95-240
UDP10_ _ _ _				6x 3P	800	800	700	300	40	2x 50	150	150-240

Options

Service fuses up to 100 A or Weber-EFEN DIN-type horizontal disconnectors 160 A or 250 A
 Lid type (composite, steel, steel with concrete fill / paveable) Locking and latching arrangements.
 Other literature available on request. Type test reports, drawings, technical data sheets, installation instructions, O&M guidelines

For more information contact your Hiko Power Engineering representative.
 Hiko Power Engineering reserve the right to amend product details without
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