



## UDP In-Ground Distribution Box

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

DS0033 R3 UDP In-ground Distribution Box Datasheet 06/2024

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

The Hiko UDP uses industry standard fusegear / switchgear and 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.

Hiko uses pits made from Langmatz in Germany which 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. 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 EFEN fusegear / switchgear used by Hiko 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.

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

No special tools or spare parts are required.

## 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 <sup>2</sup>
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	Cast iron, galvanized steel or composite, cast aluminium, paved
Bell	Composite
Head frame	Hot dip galvanised steel (≥ 70 µm) or stainless steel 304
Fixings	Stainless steel 304
Structural pit elements	Structural foamed polycarbonate (PC/PBT blend with 6% GRP)

## Structural Pit Element Material Properties

Specification	Test Method	Requirement
Density	ISO 1183	0.95 - 1.25 g/cm <sup>3</sup>
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 <sup>2</sup> (20°C), 4 kJ/m <sup>2</sup> (-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 & Dimensions

Hiko Code	Typical Configurations				Internal Length (mm)	Internal Width (mm)	Nominal Depth (mm)	Total*	Typical Weights (kg)			Cable Tails (mm <sup>2</sup> )
	63/100 A	160 A	250 A	400 A					Head Frame	Lid(s)	Switchgear Assembly	
UDP03xx	2x 3P or 6x 1P	1x 3P			550	250	600	62	18	10	5	25-70
UDP04xx	2x 3P or 6x 1P	2x 3P	1x 3P		800	250	600	80	22	12	8	25-95
UDP05xx				1x 3P	400	400	700	110	18	15	30	150-240
UDP07xx			3x 3P	3x 3P	800	400	700	160	25	15	50	95-240
UDP10xx				6x 3P	800	800	700	300	40	2x 50	150	150-240

\*Excluding cable tails

### Options

Service fuses up to 100 A or Weber-EFEN DIN-type horizontal disconnectors 160 A or 250 A  
Locking and latching arrangements.

### Other literature available on request

Reports, drawings, technical data sheets, installation instructions, O&M guidelines