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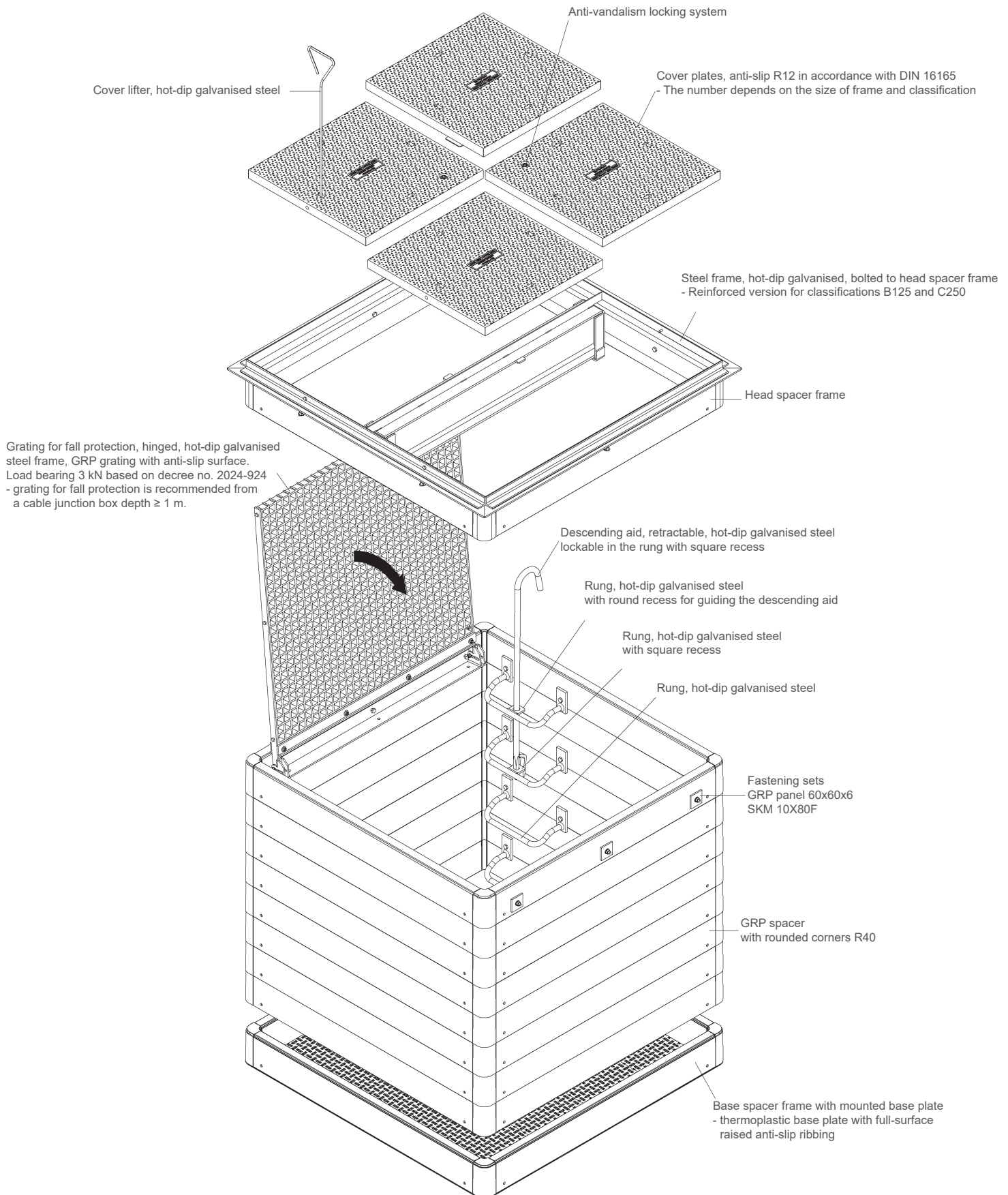
CABLE JUNCTION BOX  
GRP-POLYESTER



APPROVAL  
N° DGOP DTU 023-CHP 076

# CABLE JUNCTION BOX

## System overview



# CABLE JUNCTION BOX

## Structure and components of a sustainable cable distribution box with a dimensionally stable fibre composite material – GRP

### Advantages of the GRP fibre composite

Glass fibre-reinforced polyester has become indispensable as an economical composite material in the industry. This material combines countless advantages. It can withstand extreme conditions such as heat, sunlight, cold or aggressive chemicals without any loss of functionality.

Here are a few convincing properties and advantages of choosing GRP for your building project:

- **Low weight** – GRP is extremely light compared to other materials. For example, a cable distribution box made of GRP is 10 times lighter than a cable distribution box made of concrete. This is ideal for transport and handling and therefore helps to minimise transport and installation costs. The assembly of a GRP cable distribution box can be set up and assembled without lifting equipment.
- **Resistance** – this includes, among other things:
  - **UV and weather resistance**, sunlight, wind, rain, snow and salt water do not affect this material
  - **High temperature** (-80°C to +130°C) guarantees dimensional stability
  - **Corrosion-resistant** GRP cannot rust and is therefore ideal for outdoor use
  - **Chemical resistance** to a wide range of acids and alkalis
  - **thermally and electrically insulating**, GRP composites have low thermal conductivity and are electrically non-conductive.
- **High strength** – despite its comparatively low weight, GRP can impress with its high strength and stability.
- **halogen-free**
- **Easy processing** – processing this material is similar to that of wood. Simple sawing, sanding or repairing can be carried out easily on the construction site.
- The GRP material is characterised, among other things, by its **exceptional service life**.
- **Life circle assessment** – GRP is 100 % recyclable.

### Mechanical properties

<b>Shock resistance</b>	At least class IK10 · <b>Standard DIN EN 62262</b> , with a mass of 5 kg
<b>Absorption of water</b>	Moisture absorption · <b>ISO 62 &lt; 0.3%</b>
<b>Flammability</b>	No flame propagation after a burner flame has been applied for 60 seconds. According to SNCF specification.
<b>Toxicity of smoke</b>	· <b>ITC &lt;0.05</b> (Conventional Toxicity Index, 100 times lower than tolerated)
<b>Fatigue tests</b>	· <b>I&amp;P-TL N°4319</b> (25 kN compression at 3 Hz with 5500 cycles)
<b>Thermal ageing tests</b>	Material after 5500 cycles <b>from -30 bis +70°C</b> visually and mechanically unchanged
<b>Bending and compressive strength tests</b>	· <b>I&amp;P-TL N°4319</b> · <b>Standard DIN EN 124-1</b> · Resistance class <b>C250, B125, A15</b>
<b>Physical and chemical properties</b>	The cable distribution box is resistant to weedkillers, isooctane, petroleum and mineral oil. · <b>DIN EN ISO 175</b> · <b>DIN EN ISO 14125</b> (mechanical bending test).
<b>UV</b>	No change in properties due to ultraviolet rays · <b>ISO 4582</b> (determination of colour change) · <b>ISO 4892-2</b> (artificial ageing) · <b>ISO 527-5</b> (mechanical test after ageing)

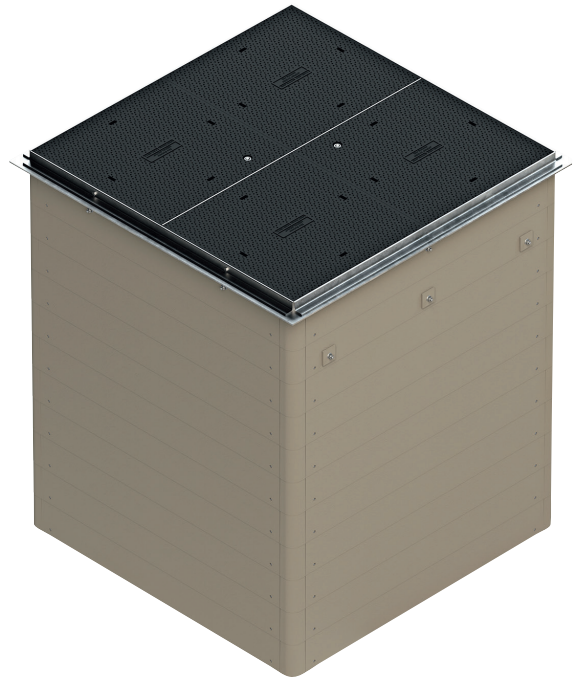
## Quick and easy assembly of the components for a smooth installation

The cable distribution boxes developed by the Niedax Group are characterised by their high mechanical strength and low weight. In combination with a complete modular design, a high degree of functionality and ease of assembly is achieved.

Thanks to our wide range of products, we can offer you a solution for your construction project that is customised to your technical requirements.

## Areas of application for modular GRP cable distribution boxes

The cable distribution boxes from the Niedax Group are used to accommodate cables. They are used by railway and telecommunication companies.



## Installation

The cable distribution box is supplied completely pre-mounted. On request, it can also be supplied unassembled as a set consisting of spacer frames, steel frame and cover plates. In this case, assembly takes place on site. Please note that the individual spacer frames must be latched together.



1. After excavating the construction pit, a level, load-bearing and seepage-capable foundation pit base must be created, taking into account the soil conditions.



2. Position and align the first pre-mounted spacer frame as a base with mounted floor. Mount each additional spacer frame and latch it evenly to the lower spacer frame.



3. The top is formed by the head spacer frame with pre-mounted steel frame. Position the top over the entire surface of the last spacer frame using a suitable lifting device and latch it in place.



4. Use a hole saw to cut the connections for the empty conduits into the wall of the cable distribution box at the appropriate positions. The base and head spacer frame must not be drilled through.



5. Fill the excavation flush to the top edge of the steel frame and compact with a vibratory rammer.



6. The GRP cover plates are inserted into the frame using a cover lifter.

## GRP Cable Distribution Box

with rounded corners, classification A15

Model No.	Width B outside mm	Length outside L mm	Clear width B1 mm	Clear length L1 mm	EAN code	Weight in kg per 100 pcs.	Smallest packaging unit
<b>KVK 600.600-A15</b>	600	600	500	500	244652	8200	1 pc.
<b>KVK 900.900-A15</b>	900	900	800	800	244669	13400	1 pc.
<b>KVK 1300.1300-A15</b>	1300	1300	1200	1200	244621	23000	1 pc.
<b>KVK 1300.2000-A15</b>	1300	2000	1200	1900	244638	32700	1 pc.
<b>KVK 1300.2600-A15</b>	1300	2600	1200	2500	244645	41300	1 pc.
<b>KVK 700.2100-A15</b>	700	2100	600	2000	244676	27300	1 pc.
<b>KVK 1100.1100-A15</b>	1100	1100	1000	1000	244614	19000	1 pc.

the steel frame is bolted to the head spacer frame and the base plate to the base spacer frame  
Standard depth 600 mm

The PU consists of:

4 spacer frames

1 hot-dip galvanised steel frame

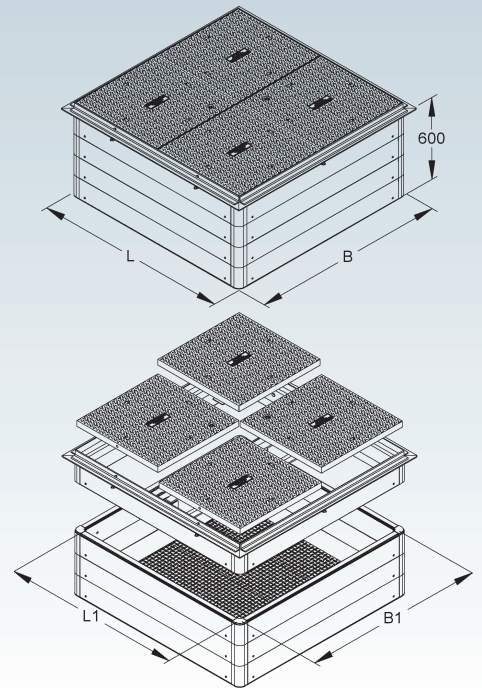
Cover plates, anti-slip R12 in accordance with DIN 16165 - The number depends on the frame size and classification.

1 thermoplastic base plate with full-surface raised anti-slip fluting

Delivery: completely pre-mounted

Other depths, classifications and accessories on request.

On request, also available unassembled.



## Classification according to areas of application in accordance with DIN EN 124

	Class	Test load	Group
	<b>A15</b>	15 kN, corresponds to 1.5 tonnes test load	<b>1</b> Traffic areas used exclusively by pedestrians and cyclists. Also suitable for green areas.
	<b>B125</b>	125 kN, corresponds to 12.5 tonnes test load	<b>2</b> Footpaths, pedestrian zones and comparable areas, car parking areas and car parking decks.
	<b>C250</b>	250 kN, corresponds to 25 tonnes test load	<b>3</b> Kerb areas, car parks and unused verges and similar. Kerb gutters are always group 3.



**F** Steel, hot dip galvanised according to DIN EN ISO 1461 (replacement for DIN 50 976), (connecting elements hot dip galvanised according to DIN EN ISO 10684)

**K23** UP-GF - Glass Fiber Reinforced Polyester, halogen-free

Halogen-free

Without screws

Operating temperature range

Fast install

UV-resistant

Recyclable

Light weight

Load class A15

Load class B125

Load class C250



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