

Meersbloem Melden 16
9700 Oudenaarde - Belgium
T : + 32 55 31 83 35
F : + 32 55 31 43 88
www.vergokan.com

Use of the specification text:

- The sign '#' marks a choice. Only one option can be selected. All the text that follows the mark and is marked in red comes with that same option.
- All Vergokan brand names are marked in orange.
- titles marked in green indicate the possibility of multiple choices/options. These are mentioned by information.
- *Eventual remarks are marked in blue*

1 Cable trays Vergokan

Introduction

Cable trays are # non-perforated, # perforated, and manufactured from steel sheet.
Cable trays are to be installed according to the specifications in the AREI (Belgian regulations for Electrical Installations).
All Vergokan products are manufactured in accordance with the ISO 9001 Quality System.
All Vergokan products are CE Certified.
Cable trays are classified according to norm EN 61537.

1.1 Type of cable tray

1.1.1 Description of the system and dimensions

The cable tray consists of a prefabricated element
roll-formed into a U-profile from perforated steel sheet with inward return flanges on the side walls type # KBS, # KBSI
roll-formed into a U-profile from perforated steel sheet with straight side walls type NATO
roll-formed into a U-profile from steel sheet with inward return flanges on the side walls type # KG, # KGI
roll-formed into tapered profile from perforated steel sheet with outward return flanges on the side walls type KBSTi

The side wall height measures #15, #35, #60, #85 #110 mm depending on the type of cable tray, the number of cables, and the load, in compliance with the Vergokan Specifications.

1.1.2 Perforations

Cable tray, type # KBS, # KBSI, # KBSTi is supplied with longitudinal perforations of 7 x 25mm in the side walls. The base of the cable tray is formed with staggered embedded perforations of 7

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x 25 mm and circular perforations along the central axis of 16mm and 19,5mm diameter for the passage of cables.

Cable tray type **NATO** has non-perforated side walls. The base is formed with longitudinal perforations of 7 x 25mm and perpendicular perforations of 7 x 20mm.

Cable tray type # **KG**, # **KGI** is non-perforated apart from two rows of longitudinal perforations of 7x25mm positioned at each end. These perforations enable the cable trays to be joined.

1.1.3 Material thickness

The steel sheet gauge of the cable trays is selected in accordance with the width, loading and support centres required. The maximum permissible load of each gauge of cable tray is tested by Vergokan in accordance with norm NBN EN 61537 part 10.

1.1.4 Compartments

Cable trays shall have a single compartment for LV or ELV cables.

Cable trays type # **KBS**, # **KBSI**, # **KBSTI** shall have two compartments to separate LV cables from ELV cables or data cables. The compartments are formed by installation of a partition.

L-shaped type **SLOS** of the same height as the side wall of the cable tray and attached by means of bolts and nuts fixed through the base of the cable tray.

V shape type **SLIS** for cable trays with 60mm side wall and attached by means of clips type **CL** fixed to the base of the cable tray.

The cable trays # **KGI 60** # **KG 110** shall have two compartments to separate LV cables from ELV or data cables. The compartments are formed by installation of a partition type # **SINI** # **SIN** of the same height as the side wall of the cable tray and point welded to the base of the cable tray.

1.1.5 Accessories

All accessories are factory assembled and delivered as such and are of equal origin and quality as the cable tray.

These accessories are attached to the cable tray by means of bolts and nuts. (for **KBSTI** they can be clicked together)

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BTW/TVA BE 0422.878.131
RPR OUDENAARDE

ING 390-0638604-11
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1.1.6 Covers

The cable trays are closed with covers **type D**, which are attached to the cable trays with clips **type # DCL in stainless steel # DCO in spring steel**. Two clips should be fitted per metre. Covers with a width greater than 400 mm are manufactured with diagonal reinforcements.

1.1.7 Joining of the cable trays

Cable trays **type # KBS, # KG** are attached to one another with a
joiner for fast mounting **type V**, with a length of 200mm by a height of
35mm (**V 35**),
60mm (**V 60**),
85mm (**V 85**),
Joiners fixed with bolts and nuts
V 35*200 with a length of 200mm by 35mm height
V 60*200 with a length of 200mm by 60mm height
V 85*200 with a length of 200mm by 85mm height
V 110*200 with a length of 200mm by 110mm height.
KPW with a length of 400mm by 115mm height, for a cable tray **type KBS 110**
wide span.

Cable trays **type NATO** are attached to one another with a joiner **type V 15*200**.

One end of the cable trays **type # KBSI, # KGI** is slightly narrowed over a length of 50mm. This end is inserted into the end of next cable tray. The trays are fixed together where they overlap by means of # a fast locking clip **type KBV** # bolts and nuts.

The taper shape of the cable trays **type KBSTI**, enables it to overlap. The special perforations in the end of the tray allow one end to hook into the next automatically locking them together with a short pull. No additional materials are necessary for fixing the trays together. When attaching shorter lengths, the cable tray can overlap randomly and is joined using bolts and nuts.

1.1.8 Distribution boxes

Distribution and mounting boxes are fixed to mounting plates that are attached using clips or bolts and nuts to the side wall of the cable tray.

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1.2 Mounting of the Cable tray

The Cable tray system is:

- # Hung from structural ceiling, steel structure on threaded rod suspended by means of:
 - # Ceiling bracket type PB, SDBG, adjustable for light inclining roof construction type PBR
 - # Open suspension bracket type COMEGA, OBZ, CCLTI to which cables are loaded from the side
 - # double suspension type OBG, BG, DR, were cables are bundled.
- # Suspended from structural ceilings using ceiling profiles type HSLECL, HSLDCL, HSME, HSMU 50, HSMD, HSIZ, for inclining roof constructions type SKP, SKIPN and wall brackets type WS, KCL, WKS, WK, WKM, WKZ, HKI, HKIZ and adjustable brackets type WKSS
For combination brackets and ceiling profiles - please consult Vergokan documentation - Chapter 5
- # Suspended from structural ceilings using brackets type COMEGA, OBZ, CCLTI
- # Mounted on wall brackets type LOMEGA, WS, KCL, WKS, WK, WKM, WKZ, HKI, HKIZ and adjustable brackets type WKSS
- # Mounted under raised floor using floor brackets type VMB.
- # Mounted against the wall on profiles type DR, L, Z, MP.
- # Mounted against the wall on multifunctional brackets type VS 41.

1.3 Materials and surface treatments

The cable trays are fabricated from steel and treated against corrosion that is suitable for their function and the environment in which they are installed.

The cable trays type KBS, KBSI, KG, KGI, KBSTI, NATO are fabricated from continuously hot dipped pre-galvanised steel sheet, otherwise called Sendzimir galvanised. The galvanisation complies with norms EN 10 143 and EN 10 346.

The cable trays are fabricated from steel sheet. After fabrication, they are hot dip galvanised, complying with norm EN ISO 1461. During this process, after a series of preparatory treatments of the steel in which impurities are removed from the metal, the cable tray is immersed in a heated bath of pure liquid zinc.

The cable trays are fabricated from steel sheet and coated according to norm EN ISO 12944 with a thermosetting powder coating (GSB ST663 certified). During this process, after a series of chemical preparatory treatments of the steel, the powder is applied to the steel electro statically by means of air guns with a high negative voltage. Afterwards the coating is cured in a muffle oven.

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The cable trays are fabricated from steel sheet and treated with a duplex coating complying with the Belgian Practice Guideline for duplex BPR 1197. This means that after the hot dip galvanising (complying with norm EN ISO 1461) the trays are coated according to norm EN ISO 12944 with a thermosetting powder coating (GSB ST663 certified).

In order to be suitable for coating, the hot dipped galvanised steel is, immediately after galvanizing, treated to remove impurities and imperfections.

After this, the galvanized steel receives a preliminary treatment to prepare for coating, involving removal of the zinc salts by immersing the steel in a chemical bath.

After preliminary treatment, the powder is applied electro statically by means of air guns with high negative voltage. Afterwards the coating is cured in a muffle oven.

The cable trays type **INOXKBSI**, **INOXKG**, are fabricated from stainless steel type

AISI Inox 316 L / V4A.

AISI Inox 304 / V2A.

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