

UTECH

TOTAL SOLUTION FOR THE RAISED FLOOR

APPLICATIONS OF CABLE
MANAGEMENT SYSTEMS

TRAY SUPPORT STRUCTURES

TRAYS AND ACCESSORIES



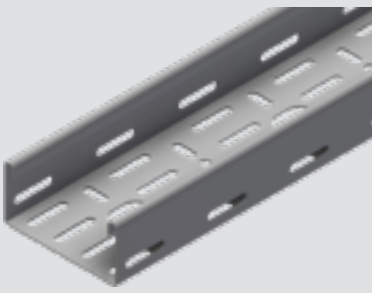

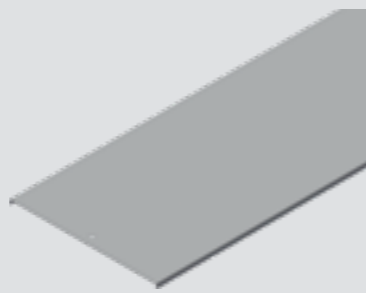
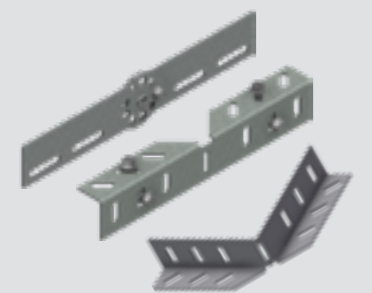
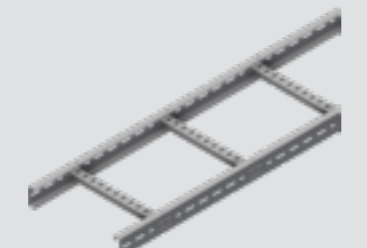
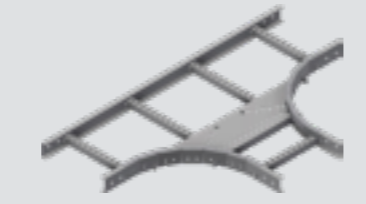
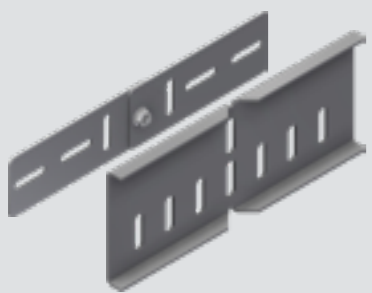


THE SCOPE OF APPLICATION OF CABLE MANAGEMENT SYSTEMS IN THE RAISED FLOORS

- Laying of power cables in the raised floor space.
- Laying of control cables in the raised floor space.

ADVANTAGES OF UTECH SOLUTIONS FOR CABLE ROUTING IN RAISED FLOOR SPACE:

- Single structure for the entire construction: control cabinets, floor frame and cable management systems.
- Minimal set of elements for maximum system flexibility. Complete versatility of the kit to eliminate any future inconsistencies.
- UTECH engineers develop detailed technical solutions and take into account all individual features of your project.

MAIN ELEMENTS USED

<p>SPB-RF CABLE TRAYS</p> <p>Height 50; 75; 100 Width 50 – 600</p>  <p>See section «Cable trays»</p>	<p>CABLE TRAY ACCESSORIES SPB-RF</p> <p>Height 50; 75; 100 Width 50 – 600</p>  <p>See section «Cable trays»</p>	<p>COVERS FOR SPB-RF CABLE TRAYS</p> <p>Thickness 2 mm Width 150; 300; 450; 600; 750; 900</p>  <p>See section «Cable trays»</p>
<p>HI-HO/HI-VE JOINTS</p> <p>Thickness 0,7 и 1 mm Width 50 – 600</p>  <p>See section «Cable trays»</p>	<p>LOE CABLE LADDERS</p> <p>Height 55; 75; 100 Width 200; 300; 400; 600</p>  <p>See section «LOE»</p>	<p>LADDER ACCESSORIES LOE</p> <p>Height 55; 75; 100 Width 200; 300; 400; 600</p>  <p>See section «LOE»</p>
<p>HI-HO/HI-VE HINGES</p> <p>Simple and convenient solution for non-standard radii</p>  <p>See section «LOE»</p>	<p>TAPE CLAMP</p> <p>Provides short-circuit protection up to 135 kA</p>  <p>See section «Clamps»</p>	<p>CA-50 BRACKETS</p> <p>Lengths from 180 to 530 mm</p>  <p>See section «Cable support elements»</p>

CALCULATION AND DESIGN FEATURES

WHEN DESIGNING CABLE MANAGEMENT SYSTEMS AS PART OF RAISED FLOORS, THE REQUIREMENTS OF REQUIREMENTS FOR ELECTRICAL INSTALLATIONS AND COP 76.13330-2016 ARE TAKEN INTO ACCOUNT. TRAYS ARE SELECTED BASED ON THE SAFE WORKING LOAD. LOAD IS CALCULATED SIMILARLY TO THE SOLUTIONS FOR CABLE TRESTLES.

In cable constructions, the height, width of aisles, and distance between constructions and cables should be at least those given in Table 2.3.1. Compared to the distances given in the table, local narrowing of aisles up to 800 mm or reduction of height up to 1.5 m at the length of 1.0 m with a corresponding reduction of the vertical distance between cables is allowed.

TABLE 2.3.1 (REQUIREMENTS FOR ELECTRICAL INSTALLATIONS)

Distance	Min dimensions, mm, when routing	
	In tunnels, galleries, cable floors and trestles	In cable ducts and raised floors
Clear height	1800	Limited to 1,200 mm
Horizontal clearance between structures when they are double-sided (aisle width)	1000	300 at depths up to 0.6 m; 450 for depths over 0.6 up to 0.9 m; 600 at depths over 0.9 m
Horizontal clearance from the structure to the wall in the case of a one-sided arrangement (aisle width)	900	To же
Vertically between horizontal structures*: for power cables with voltage:		
up to 10 kV	200	150
20–35 kV	250	200
110 kV and above	300**	250
for control and communication cables, as well as power cables with cross-sections up to 3 × 25 mm ² with voltage up to 1 kV	100	
Between support structures (brackets) along the length of the structure	800-1000	
Vertical and horizontal clearance between single power cables up to 35 kV ***	Not less than cable diameter	
Horizontally between control and communication cables ***	Not standardised	
Horizontal clearance between cables with a voltage of 110 kV and above	100	Not less than cable diameter

When selecting cable trays, the following rules should be taken into account:

- use rounded head bolts to avoid abrasion of the cable;
- the bracket should be at least 50 mm longer than the tray width;
- as a rule, it is recommended to lay wires and cables on the trays from above. In case the cable route is laid by pulling the cable, the horizontal load should be taken into account, the value of which is calculated by the formula:

$$F = P \times k,$$

where

P – weight of the cable section, kg,

k – sliding friction coefficient.

LIST OF FREQUENTLY USED ITEMS

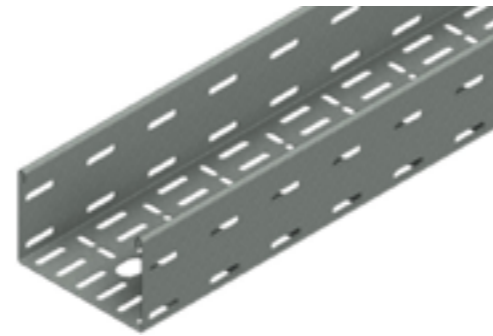
PERFORATED CABLE TRAY SPB-RF50

Item No.	Name	Weight, kg/m
3851075	Cable tray OS SPB-RF50 CT-100-3000-0.7 PG	0,90
3850184	Cable tray OS SPB-RF50 CT-100-3000-0.7 PG	1,12
3853579	Cable tray OS SPB-RF50 CT-150-3000-0.7 PG	1,34
3850185	Cable tray OS SPB-RF50 CT-200-3000-0.7 PG	1,56
3850186	Cable tray OS SPB-RF50-CT-300-3000-0.7 PG	2,24
3848760	Cable tray OS SPB-RF50 CT-400-3000-0.7 PG	2,72
3848761	Cable tray OS SPB-RF50 CT-500-3000-0.7 PG	3,25
3848762	Cable tray OS SPB-RF50 CT-600-3000-0.7 PG	3,78



PERFORATED CABLE TRAY SPB-RF100

Item No.	Name	Weight, kg/m
3850436	Cable tray OS SPB-RF100 CT-100-3000-0.7 PG	1,64
3853581	Cable tray OS SPB-RF100 CT-150-3000-0.7 PG	1,86
3850437	Cable tray OS SPB-RF100 CT-200-3000-0.7 PG	2,08
3850442	Cable tray OS SPB-RF100 CT-300-3000-0.7 PG	2,78
3850439	Cable tray OS SPB-RF100 CT-400-3000-0.7 PG	3,26
3850440	Cable tray OS SPB-RF100 CT-500-3000-0.7 PG	3,79
3850441	Cable tray OS SPB-RF100 CT-600-3000-0.7 PG	4,32



INTERNAL BUTT CONNECTOR

For securing the inside of the cable tray.
Two connectors are recommended per connection.

Item No.	Name	Weight, kg/m
3858355	Connector OS SPB-RF50 SC-IN PT PG	0,21
3858356	Connector OS SPB-RF100 SC PG	0,41

2 M6 × 12 locking bolts and nuts to be ordered separately.



VERTICAL HINGE

Item No.	Name	Weight, kg/m
3858477	Hinge OS SPB-RF50 HI-VE PG	0,2
3859519	Hinge OS SPB-RF100 HI-VE HDG	1,10

4 M6 × 12 locking bolts and nuts to be ordered separately.



HORIZONTAL HINGE

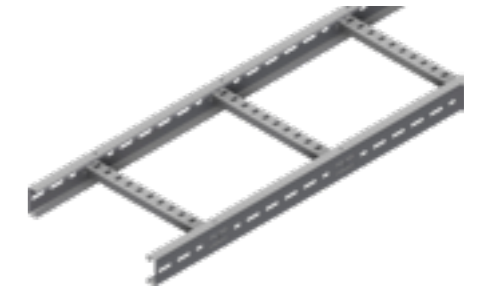
Item No.	Name	Weight, kg/m
3859520	Hinge OS SPB-RF100 HI-HO HDG	0,50
3858478	Hinge OS SPB-RF50 SA-HO-FX PG	0,2

4 M6 × 12 locking bolts and nuts to be ordered separately.



CABLE LADDER LOE55 3 M LONG

Item No.	Name	Weight, kg/m
3858748	Ladder OS LOE55-M CL-200-3000 HDG	3,33
3858749	Ladder OS LOE55-M CL-300-3000 HDG	3,60
3858750	Ladder OS LOE55-M CL-400-3000 HDG	3,87
3858751	Ladder OS LOE55-M CL-500-3000 HDG	4,13
3858752	Ladder OS LOE55-M CL-600-3000 HDG	4,40



EXTERNAL JOINT CONNECTOR LOE55

Joint connector for mounting on the outside of the LOE cable ladder.
Two connectors are required per connection.

Item No.	Name	Weight, kg/m
3858841	Connector OS LOE55 SC HDG	0,21

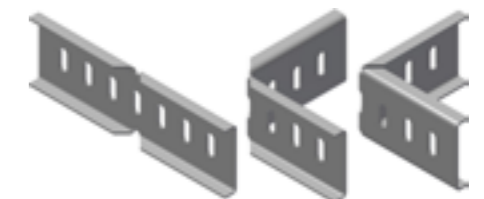
4 M6 × 12 locking bolts and nuts to be ordered separately.



HORIZONTAL BUTT CONNECTOR

Item No.	Name	Weight, kg/m
3859533	Connector OS LOE55 HI-HO HDG	0,22

4 M6 × 12 locking bolts and nuts to be ordered separately.



VERTICAL HINGE

Item No.	Name	Weight, kg/m
3859532	Hinge OS LOE55 HI-VE HDG	0,27

2 M6 × 12 locking bolts and nuts to be ordered separately.



CA-50 BRACKETS

Item No.	Name	Weight, kg/m
3847420	Bracket OS CA-50-180 HDG	0,56
3860119	Bracket OS CA-50-250 HDG	0,76
3860120	Bracket OS CA-50-330 HDG	0,90
3860121	Bracket OS CA-50-430 HDG	1,10
3860122	Bracket OS CA-50-530 HDG	1,40

