

Easily Installable and Removable Electrical Supply Rail

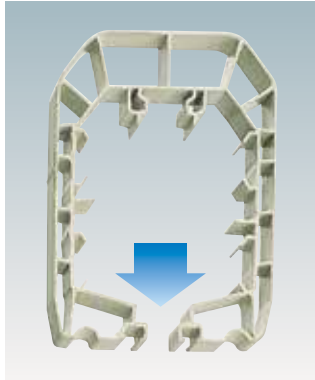
KITO TD Rail



Easy-to-use Simple-design KITO TD Rail

Light-weight, Tough TD Rail

The cell-shaped cross-section structure of the casing of the KITO TD rail helps secure high rigidity. Light-weight, touch design allows up to a 5-pole conductor to pass through.



Innovation is also aesthetic.

KITO TD rail offers ergonomics without forgoing aesthetics. Elegant lines, harmonious colours, and coordinated elements result in a product which is both dynamic and smart, all combining to make this rail an aesthetically successful innovation.

Secure, Simple Rail Joint

Our original special-purpose connection bolt is used for the joint of the KITO TD rail, allowing easy installation of the rail by a firm tightening torque even if no torque wrench is used. With a 2-step-structure head, this special-purpose connection bolt separates the 1st-step bolt head upon reaching a specified torque, securely connecting the TD rail.



Degree of protection: choose high performance.

KITO TD rail makes the user's choice simpler by offering a complete range of accessories, all ensuring protection of the line against rain (IP23), thanks to an integrated watertight system.

Users : security and reliability.

As well as complying with standards and regulations in force, TD rail stands out for its hard-wearing qualities and ease of maintenance, thanks to the use of toolfree fitting of accessories.

Standard Specifications

Material used	Self-extinguishing vinyl chloride resin (PVC)
Rated voltage	750V
Rated current	4P,5P-60A, 4P-100A
Ambient temperature	-20°C~+55°C
Ambient humidity	90%RH or less (No condensation)
Applicable standards	JIS C8373 (The verification test referred to JIS C8373 has been executed.) EN60439-2, EN60204-32
Protection grade	IP23

It is not possible to use for the special environment such as clean room and food relative.

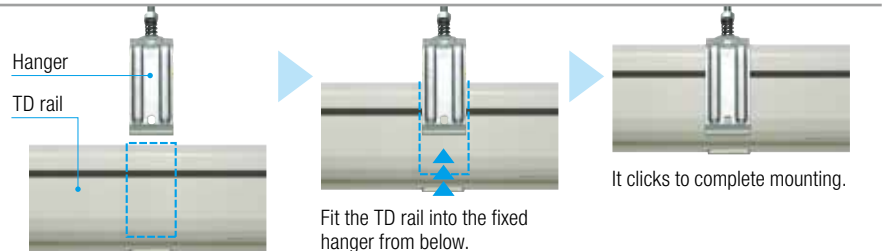
Systematized Simple Joint Structure with Fewer Component Parts.
Allowing Quick and Easy Installation.



Accessories quickly fitted and removed.

For easier fitting and maintenance, the main accessories have been designed for simpler, quicker, tool-free installation. The feeding box and covering flange are clipped on manually. However, they cannot be removed without the use of a tool, in accordance with regulations.

How Easy to Mount to a Hanger!

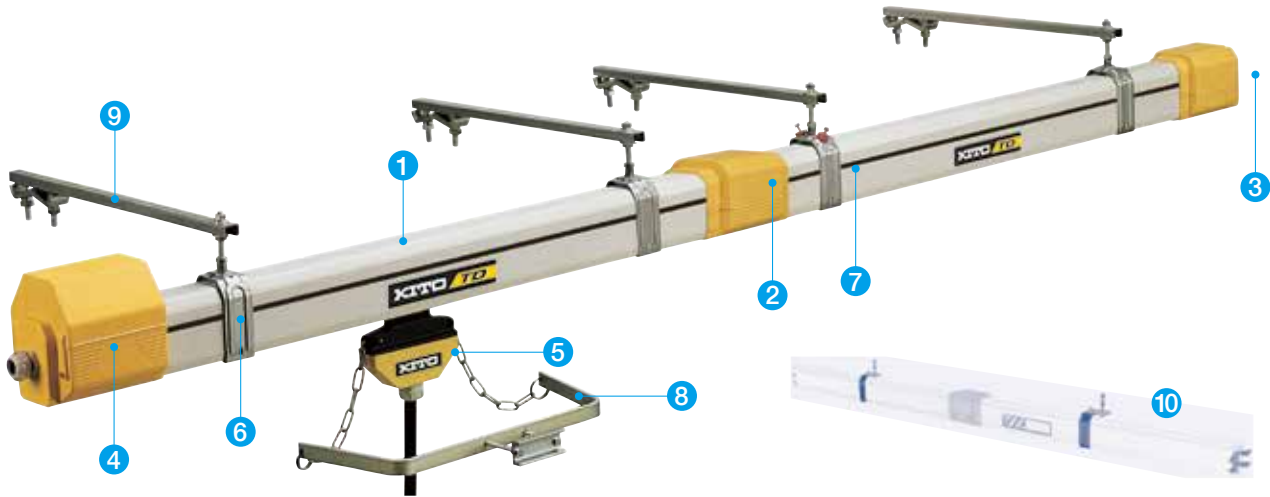


Installers : simplicity and flexibility.

Thanks to its limited number of parts, the systematic use of easily removed connections, and rapidly fitted accessories (without tools), TD rail offers installers a system which is simple and quick to set up, whatever the location.



Configuration of KITO TD Rail



1 KITO TD Rail



- Self-extinguishing vinyl chloride resin (PVC)
- 4P,5P-60A, 4P-100A
- Rated voltage: 750V

Model	Standard length (m)	Poles-Rating	Mass (kg/m)
ME4604KTB	4	4P-60A	1.8
ME4603KTB	3		
ME4602KTB	2		
ME4601KTB	1		
ME4104KTB	4	4P-100A	2.0
ME4103KTB	3		
ME4102KTB	2		
ME4101KTB	1		
ME5604KTB	4	5P-60A	1.9
ME5603KTB	3		
ME5602KTB	2		
ME5601KTB	1		

2 Covering Flange

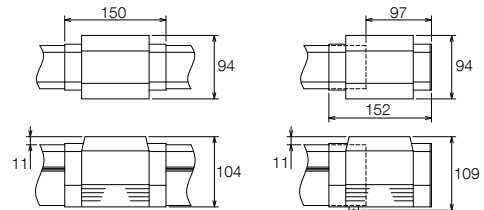


- Self-extinguishing plastic
- Used to cover the joint of the TD rail. (Covering Flange)
- Mounted to the end of the TD rail. (End Cap)

3 End Cap



Model	Type	Mass (kg)
ME2000	common	0.2
ME2400	common	0.3



Covering Flange

End Cap

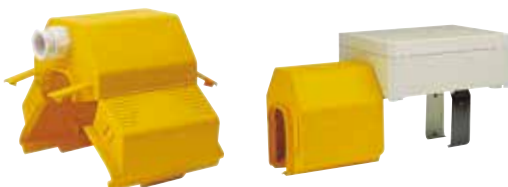
4-1 End-line Feed Box



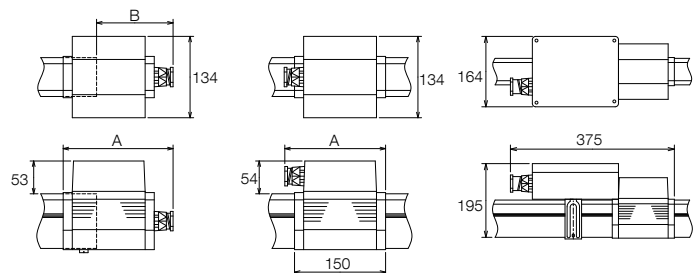
- Self-extinguishing plastic
- Used for supplying the electricity to the TD rail from the end.

Model	Cable connector	Applicable cable O.D. (mm)	Poles	Mass (kg)	Dimensions (mm)	
					A	B
ME1200B	M25	13~19	—	0.4	181	126
ME1230B	M32	15~25			183	128
ME1250B	M40	21~32			186	132
ME1300B	M25	13~19	4P	0.3	169	—
ME1330B	M32	15~25			170	
ME1332B	M40	21~32			5P	

4-2 In-line Feed Box



- Self-extinguishing plastic
- Used for supplying the electricity to halfway the TD rail line.



End-line Feed Box

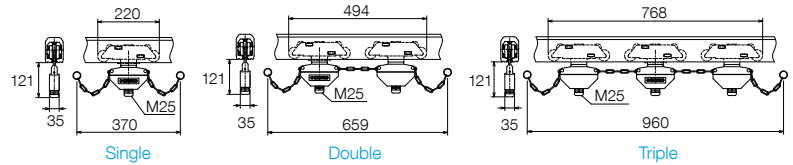
ME1300, ME1330

ME1332, ME1329
In-line Feed Box

5-1 Trolley



Model	Cable connector	Type	Poles-Rating	Mass (kg)
ME3043KTB	M25	Single	4P-35A	0.6
ME4042KTB		Double	4P-35Ax2	1.1
ME5040KTB		Triple	4P-35Ax3	1.6
ME3051KTB		Single	5P-35A	0.6
ME4050KTB		Double	5P-35Ax2	1.1
ME5050KTB		Triple	5P-35Ax3	1.6



- Travels within the TD rail, and provided with a current-collecting brush for receiving the electricity.
- The traveling speed should be 100 m/min. or less.

5-2 Cleaning Trolley



Model	Poles	Mass (kg)
ME4514	4P	0.4
ME4525	5P	

- Used for cleaning the conductor within the TD rail.

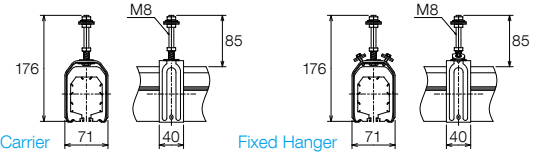
6 Sliding Hanger



7 Fixed Hanger



Model	Type	Mass (kg)
ME1510	common	0.1
ME1500		

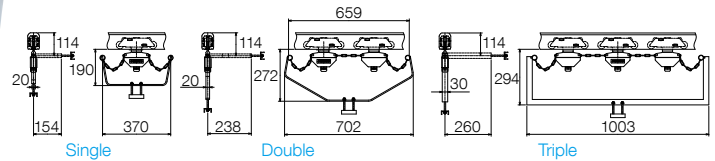


- Used for fixing the TD rail.

8 Carrier

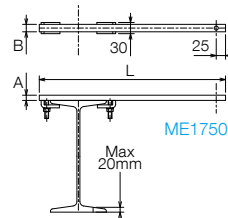


Model	Type	Mass (kg)
ME1600	Single	0.6
ME1610	Double	1.1
ME1630	Triple	2.6



- Used for coupling the trolley and a mobile object (crane or/and hoist).

9 Fixing Bracket



Model	Length (L) (m)	AxB (mm)	Mass (kg)
ME1700	380	15x20	0.5
ME1750	500		0.6
ME1760	600	30x30	1.0
ME1780	850		1.2

- Used for fixing the hanger onto shaped steel, and so on.

10 Introduction Gate



Model	Length (m)	Poles-Rating	Mass (kg)
ME4706KTB	2	4P-60A	4.2
ME4756KTB		5P-60A	4.4
ME4710KTB		4P-100A	4.6

- Self-extinguishing vinyl chloride resin (PVC)
- 4P,5P-60A, 4P-100A
- Used for mounting/dismounting the trolley halfway the line.

Options [Repair Parts]

Current-collecting Brush



Model	Type
ME0022	1
ME1354	Set of 4
ME1355	Set of 5

- Special-purpose current-collecting brush for the trolley
- The current-collecting brush may be partly worn out.
- Replace the current-collecting brush before reaching the wear limit.

Cleaning Brush



Model	Type
ME0118	1
ME1356	Set of 5

- Special cleaning brush for the cleaning trolley
- The cleaning brush may be partly deformed or worn out.
- Replace the cleaning brush when it is deformed or worn out.

Connection Bolts



Model	Type
ME1345	Set of 5

- Special connection bolts used for the TD rail
- When the connection bolts already in place are removed at the time of inspecting the TD rail or the trolley, be sure to replace them with new ones.



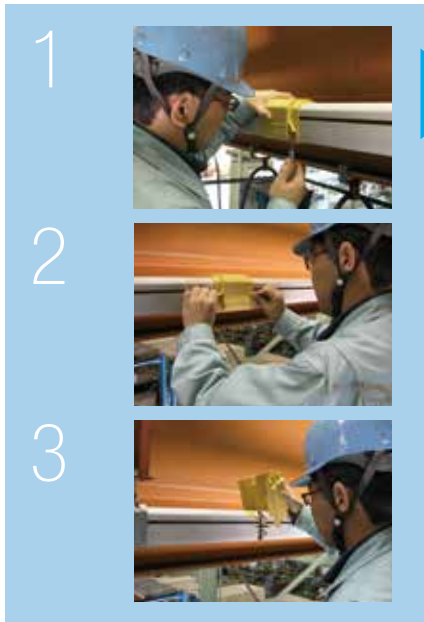
Installation example of traveling electrical supply rail



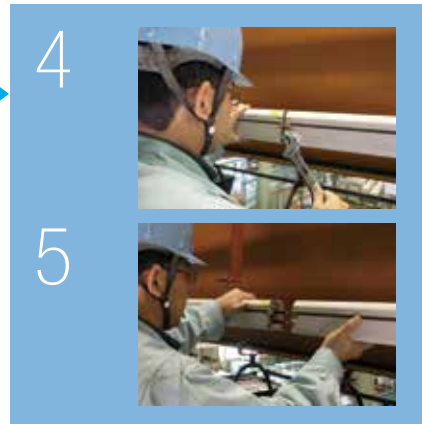
Installation example of traversing electrical supply rail

Inspection of trolley

Remove the joint cover.



Disjoint the TD rail.



Dismount the trolley from the rail.



Replacement of Current-collecting Brush and Inspection of Trolley

When mounting/dismounting the trolley from the TD rail at the time of replacing the current-collecting brush or inspecting the trolley, do so at the end of or halfway the TD rail line. The introduction gate is also available, which allows mounting/dismounting of the trolley halfway the line without disjoining the rail connection.

* The connection bolts cannot be reused. When the TD rail connection is disjoined to mount/dismount the trolley, a connection bolt set (5 pcs., ME1345) is required.



To remove the current-collecting brush, just insert a regular screwdriver and lift it.

Removable Carbons: a TD Rail exclusive.

KITO TD rail has taken maintenance into account from the design stage. So the carbons, the main elements subject to wear, are easily replaced without touching the carriage wiring. They are simply unclipped using a screwdriver.



Point of Selection

When selecting the KITO TD rail, take account of the maximum line installation length, voltage drop, and trolley replacement and inspection methods.

1 Max. Line Installation Length (Lmax)

Lmax = 150 m or less

2 Calculation of Voltage Drop

Voltage drop will be as a rule 2% or less of the standard voltage in the trunk line and the branch circuit, respectively.

$$\Delta U = \sqrt{3} \times Z \times L_t \times I$$

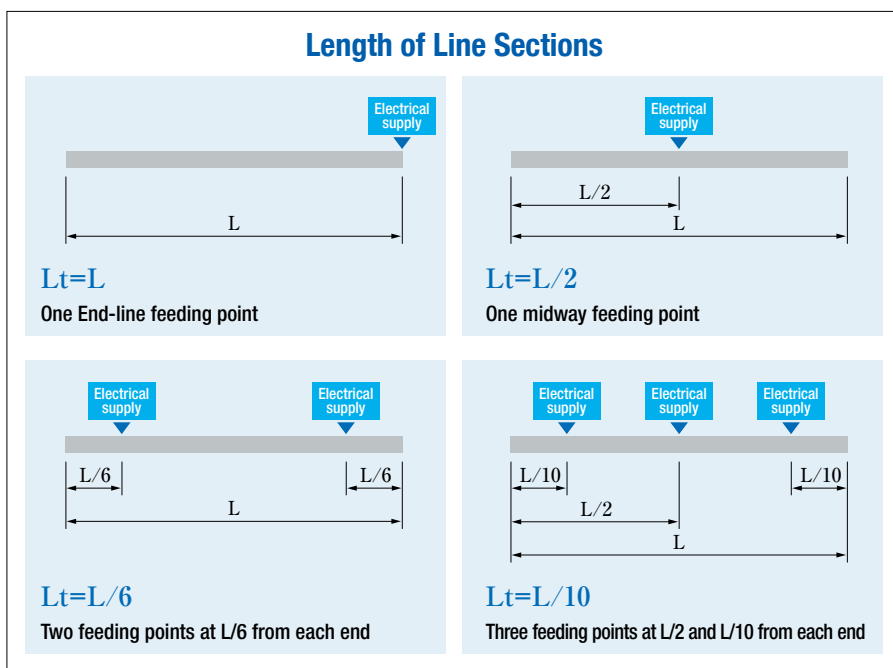
I : current in continuous operation or at start-up, as appropriate (in Amperes)

L_t : length of the section considered (in m) (see figure-1)

Z : line impedance (in Ω/m) (see table-1)

ΔU : voltage drop

[Figure-1] Calculation



[TABLE-1]

Current rating (A)	Impedance (Ω/m) x 10 ⁻³	
	Ambient temperature 20°C	Ambient temperature 35°C
60	1.2	1.26
100	0.77	0.81



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