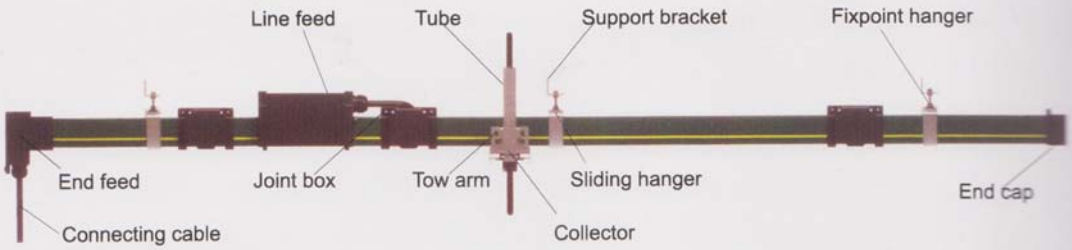
KOMAY
MOBILE ELECTRIFICATION SYSTEM

General

Powerail Enclosed conductor rail system is a powerail, protected from contact (IP23), For indoor and outdoor plants.
They are conductor lines in a rigid greeen PVC housingwith different copper cross sections for rated currents of 35 - 240A.
The current collectors, running in ball bearings, are guided by the housing.
The main is transferred by spring-stored carbon brushes.
Type HFP-P: not include Sealing strip, with factory-mounted flat copper band and boited-operated plug connectors.
Type HFP-R: Curves for R≥800mm, with factory- mounted flat copper band and screw connectors.
Approved and listed by:CCC, ISO9001 and CE.

System photo



Technical data

Electrical properties:		Mechanical properties:	
max.current	see page 3	Flexible strength	75N/mm^2±10%
max.voltage	600V	Tensile strength	40N/mm^2±10%
Dielectric strength	30-40KV/mm	Temperature range:	
Spec.resistance	5 × 10^{15}Ohm × cm	Standard Housing	-30℃ up to+70℃
Surface resistivity	10^{15}Ohm × cm	High Temp. Housing	-20℃ up to+115℃
Leakage resistance	CTI600-2,7	Low Temp. Housing	-40℃ up to+80℃
Combustibility:			
flame retardant			
self extinguishing	class B1-no flaming particles, self-extinguishing		

Resistance to chemicals: +45℃

Gasoline	Sulphuric acid 50 %
Mineral Oil	Caustic soda 25 % & 50 %
Grease	Hydro-chloric acid, concentrated

Housing

Color green, plastic housing for 3-4 conductors.Standard section 4 m.
Other sections are available
The groud conductor is identified by international color code.
Phase reversing prevented by design of the collector and housing.

Couplings

Through plastic joint caps.

Feed Sets

Line feeds or end feeds

End caps

The open ends of the powerail are closed by end caps for HFF.

Hangers

Standard brackets for powerail attachment to crane girders are available.
Powerail with sliding and fixpoint hangers.
Standard distance between suspension points for indoor and outdoor
Installations:1200 mm.

Expansion during temperature fluctuation

The Expansion sections are required to compensate the different expansions between copper conductors and steel- or concrete structures,in varying temperatures without interrupting electrical power.Expansion joints are used when the Powerail length between feeds,curves,switches or other fix points is exceeding 20 m.Install one expansion joint every 100m.

Anti-condensation sections

These sections are used for transfer of the Powerail to outdoor areas to avoid condensation,The Powerail is not separated electrically.

Contact sections and switches

Powerail for working areas and transfer applications see page 16 and 17.

Sectionalizing

Available as air gap version(5mm),where the collector carbon bridges the gap, e.g.for mains.Also availoable as insulating piece version(35mm),In this case the insulating piece is longer than the carbon and each Powerail section can be separated electrically,e.g.for control.

Collectors

The current collectors are made of re-inforced polyester fiberglass,for high strength and light weight. Spring loaded carbon brushes maintain uniform contact.Connecting cables and hinged or fldxible towing arms inclused.Double collectors for transfer applications and higher cmperage.

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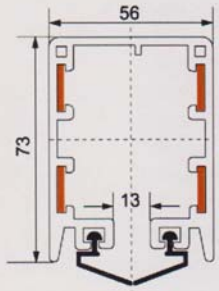
TYPES · TECHNICAL DATA · ORDER NUMBERS



Conductor code
HFP56=Powerail enclosed conductor
4=poles
n=conductor cross section(mm2)
m=continuous ampere capacity

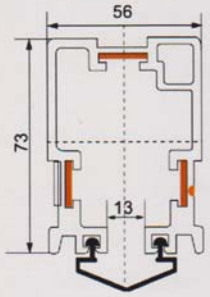
Width for copper
①=14.5mm
②=17.6mm
③=21.0mm

Length
4m is standard length, other lengths are available, but not be exceeding 6m.

Curves
R=0.8m

Support spacing
for straight runs 1.2m.

Type	Poles	Conductor cross section	Max.current	Leakage-distance	Max.Voltage	Resistance	Weight	Order-NO.
HFP56-4-8/35①	4	8	35	35	600	1.944	2.09	560814
HFP56-4-10/50①	4	10	50	35	600	1.656	2.16	561014
HFP56-4-12/65①	4	12	65	35	600	1.321	2.23	561214
HFP56-4-15/80①	4	15	80	35	600	1.137	2.30	561514
HFP56-4-20/100②	4	20	100	33	600	1.011	2.43	562024
HFP56-4-25/120②	4	25	120	33	600	0.713	2.56	562524
HFP56-4-35/140②	4	35	140	33	600	0.522	2.95	563524
HFP56-4-50/170②	4	50	170	33	600	0.337	3.25	565024
HFP56-4-70/210②	4	70	210	33	600	0.265	3.85	567024
HFP56-4-80/240③	4	80	240	30	600	0.223	4.16	568034



Conductor code
HFP56=Powerail enclosed conductor
3=poles
n=conductor cross section(mm2)
m=continuous ampere capacity

Width for copper
①=14.5mm
②=17.6mm

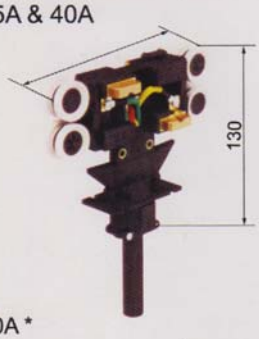
Length
4m is standard length, other lengths are available, but not be exceeding 6m.

Support spacing
for straight runs 1.2m.

Type	Poles	Conductor cross section	Max.current	Leakage-distance	Max.Voltage	Resistance	Weight	Order-NO.
HFP56-4-8/35①	3	10	50	45	600	1.656	1.95	561013
HFP56-4-10/50①	3	15	80	45	600	1.137	2.13	561513
HFP56-4-12/65①	3	20	100	45	600	1.011	2.24	562023
HFP56-4-15/80①	3	25	120	45	600	0.713	2.37	562523
HFP56-4-20/100②	3	35	140	45	600	0.522	2.63	563523
HFP56-4-25/120②	3	50	170	45	600	0.337	3.02	565023

Collector for 4 poles powerail

25A & 40A

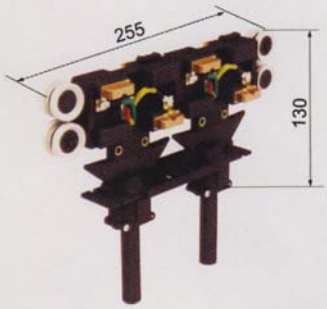


Collector 25A&40A are used for curves (R>800).
Collector 60A are used for curves (R>1600).
Collector 25A is used for 35A-50A.
Collector 40A is used for 65A-120A.
max. speed 150 m/min.
Also for powerails with sealing strip up to 110 m/min.

Connecting cable

25 A, 2.5mm^2 /core×4
40 A, 4.0 mm^2/core×3 +2.5 mm2/core×1
60 A, 4.0 mm^2/core×6 +2.5 mm2/core×2
0.8 m long,longer cables on request.

60A *

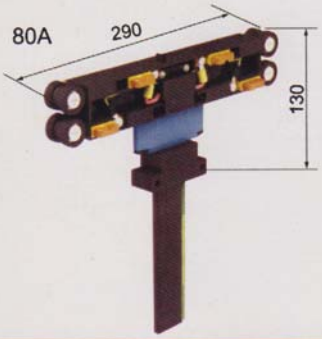


3 pcs or more collcetors could parallel connect,but only for straight powerail

Type	weight kg	poles	Power rating	Order-No.
56JD-4/25	0.49	4	25A	563125
56JD-4/40	0.52	4	40A	563140
56JD-4/60	0.99	4	60A	563160

Collector 80A is used for 140A-240A.
max. speed 135m/min.
Also for powerails with sealing strip up to 100 m/ min.

80A



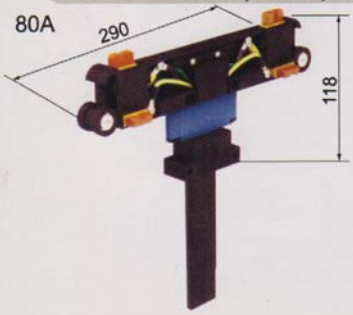
Connecting cable

1 m long, longer cables on request.

Type	weight kg	poles	Power rating	Order-No.
56JD-4/80	1.23	4	80A	563180

Collector for 3 poles powerail

80A



Collector 80A are used for curves (R>2500)
Collector 80A is used for 140A-240A.
max. speed 135 m/min.
Also for powerails with sealing strip up to 100 m/ min.

Type	weight kg	poles	Power rating	Order-No.
56JD-4/40	0.85	3	80A	568033

Connecting cable

80 A, (6.0 mm^2×2/core)×3
1 m long, longer cables on request.

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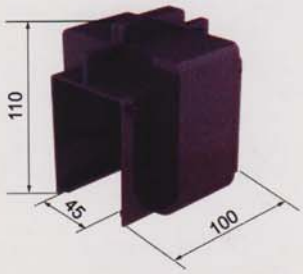
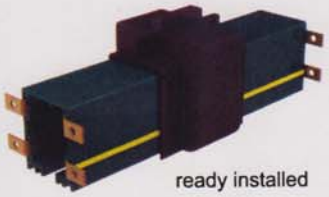
JOINTING BOX • HANGERS

JOINTING BOX
be used with screw joints



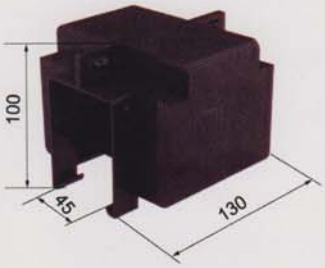


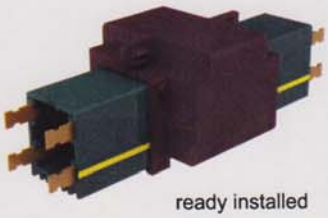
ready installed

Type	Weight kg	Material	Order-No.
56LJ/45	0.091	ABS	563401

self locking,and installed is very essy.

JOINTING BOX
be used with bolted joints



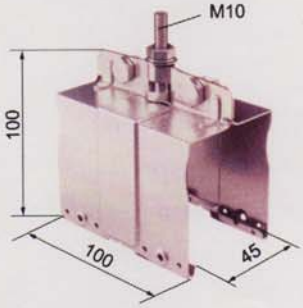


ready installed

Type	Weight kg	Material	Order-No.
56LJ-5	0.156	ABS	563405

self locking,and installed is very essy.

ANCHOR HANGER*
be used without any joints system



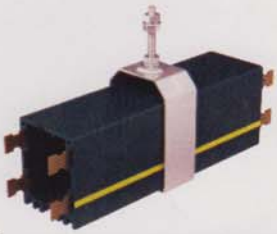
ready installed

Type	Weight kg	Material	Order-No.
56LJ-5	0.251	galvanized	563408

could be used for jointing box

HANGERS

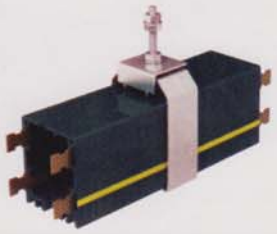
Sliding hanger



Sliding hanger at powerail section

Type	Weight kg	Material	Order-No.
56DJ/2	0.186	galvanized	563911

Fixpoint hanger



Fixpoint hanger at powerail section

Type	Weight kg	Material	Order-No.
56DJ/1	0.212	galvanized	563901

WITH BOLTED JOINTS & PLUG-IN JOINTS

Bolted joints

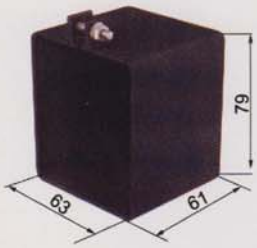
Plug-in joints

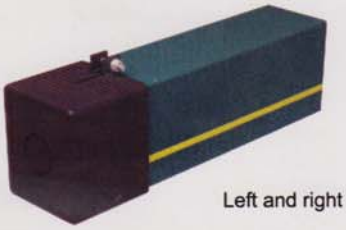
Type	Weight kg	Material	Order-No.
56JT-80A	0.042	galvanized&copper	560001
56JT-120A	0.049		560002
56JT-140A	0.053		560003
56JT-170A	0.058		560005
56JT-210A	0.065		560006
56JT-240A	0.085		560008

ready installed

Caution!
Tighten the setscrews with max.2 Nm to avoiddeforming the clip of the bolted joint.

END CAP





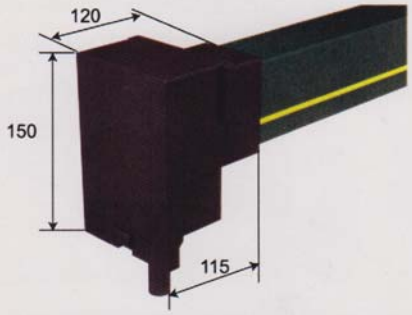
Left and right version

End cap ready installed

Type	Weight kg	Material	Order-No.
56DM	0.071	ABS	563701

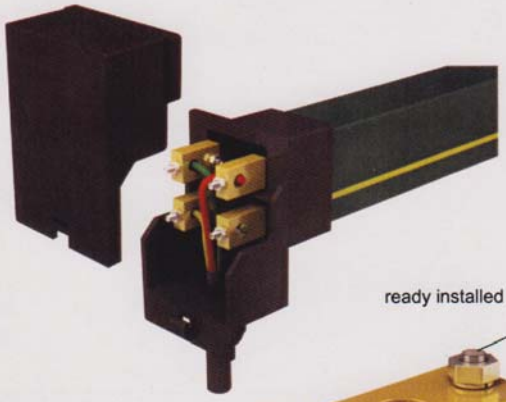
End feed

Be used for 35A-240A.



Left and right version

Type	Weight kg	Material	Order-No.
56DG	0.225	ABS	564685

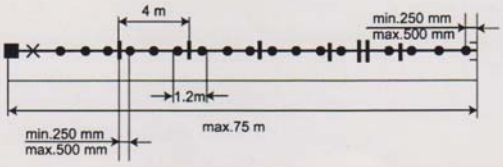


ready installed

Symbols

- Powerail
- Runway
- Jointing materia
- Fixpoint hanger
- Sliding hanger
- End cap
- End feed
- Line feed
- Lsolating assembly

Each sliding hanger can be converted to a fixpoint hanger.



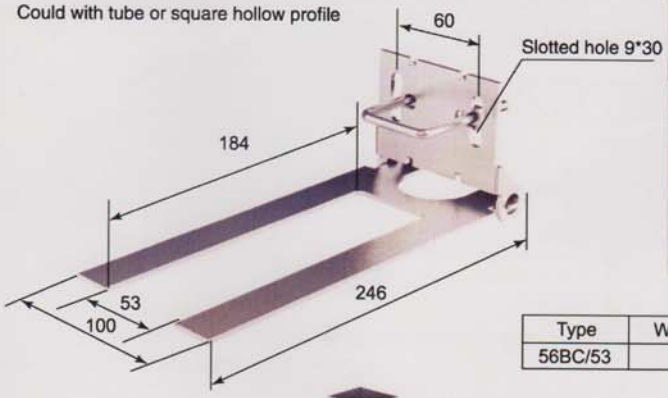
End feeding joints

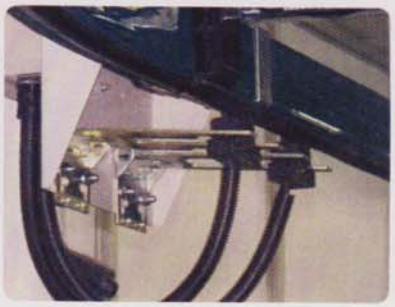
Type	Weight kg	Material	Order-No.
56EJ-1	0.056	brass	560009

SUPPORT BRACKET

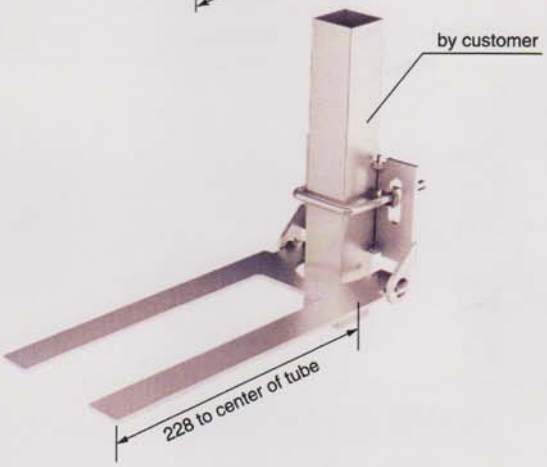
Type	Schematic	Materail	Order-NO.
56ZJ-11	———	Angle steel	560011
56ZJ-21	⌐¬	Flat steel	560021
56ZJ-31	———	C-Track	560031

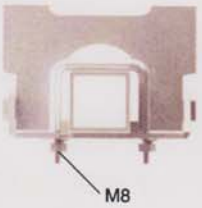
Tow arm



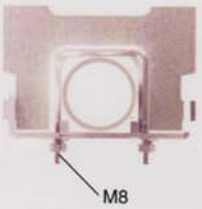


Type	Weight kg	Material	Order-No.
56BC/53	0.53	galvanized	565053





with square hollow profile
(without adapter plate)



withe tube(for assembly
enclosed adapter plate)

Maintenance

--Afer installation, Make sure that the sliding hangers are straight (in a perpendicular position) after nuts have been tightened to guarantee free sliding of the powerail . The powerail must be installed exactly straight and parallel to the machinery track.

--Before running the powerail. Check the system for easy running of the current collector trolleys. i. e. there may be no resistance by an excessively narrow slot or pull by the connectiong cable.

--Every 3 up to max. 12 months. depending on the frequency of operation and travel distance, check the carbon brushes and mechanical components for wear and replace them if necessary.