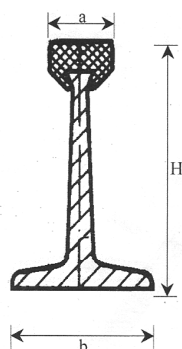


STEEL-COPPERHEAD RAILS

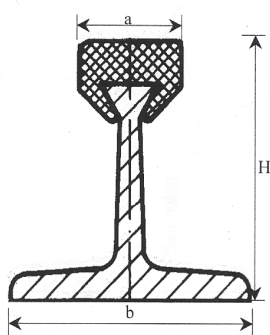


TYPE	COPPER CROSS SECTION Sq mm	STEEL CROSS SECTION Sq mm	EQUIVAL TOTAL COPPER CON- DUCTOR Sq mm	H mm	a mm	b mm	WEIGHT Kg/m	MAX CONTI- NUOUS AMPS
RC20/ 14	14	150	36	31	6.5	20	1.24	220
RC20/ 25	25	150	47	33	8	20	1.34	256
RC20/ 50	50	150	72	34	10	20	1.57	327
RC20/100	100	150	122	38.5	12	20	2.02	444

Standard lengths: 7m

Main application: Conductor system for hoists and monorails, down-shop and cross travel supply for light cranes.

Best applicable collectors: DD1, DD and DA

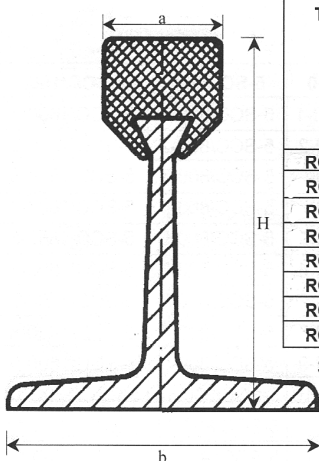


TYPE	COPPER CROSS SECTION Sq mm	STEEL CROSS SECTION Sq mm	EQUIVAL TOTAL COPPER CON- DUCTOR Sq mm	H mm	a mm	b mm	WEIGHT Kg/m	MAX CONTI- NUOUS AMPS
RC35/ 30	30	265	69	32	14.2	35	2.34	320
RC35/ 50	50	265	89	33.1	14.6	35	2.52	410
RC 35/100	100	265	139	36.0	15.3	35	2.97	529
RC 35/150	150	265	189	38.3	17.3	35	3.42	632
RC 35/200	200	265	239	40.8	17.3	35	3.87	724

Standard lengths: 7m

Main application: Conductor system for heavy monorails, down-shop and cross travel supply for medium duty cranes.

Best applicable collectors: SCC/100, SCC/200, SCC/400, SCC/800



TYPE	COPPER CROSS SECTION Sq mm	STEEL CROSS SECTION Sq mm	EQUIVAL TOTAL COPPER CON- DUCTOR Sq mm	H mm	a mm	b mm	WEIGHT Kg/m	MAX CONTI- NUOUS AMPS
RC45/ 50	50	355	102	43.1	14.6	45	3.23	495
RC45/100	100	355	152	46.0	15.3	45	3.68	620
RC45/150	150	355	202	48.3	17.3	45	4.13	728
RC45/200	200	355	252	50.8	17.3	45	4.58	826
RC45/300	300	355	452	56.3	17.6	45	5.48	1000
RC45/400	400	455	452	59.3	19.6	45	6.38	1156
RC45/500	500	355	552	64.3	19.6	45	7.28	1299
RC45/600	600	355	652	65.0	23.2	45	8.18	1432

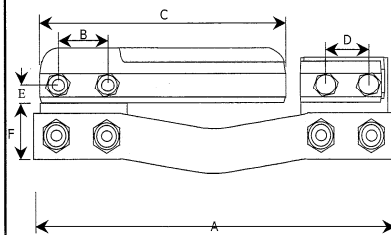
Standard lengths: 7m

Main application: Down-shop and cross travel supply for heavy cranes, loading bridges, coking machinery, rapid transit systems etc.

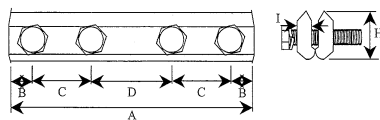
Best applicable collectors: SCC/100, SCC/200, SCC/400, SCC/800

COPPERHEAD RAIL ACCESSORIES

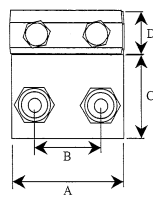
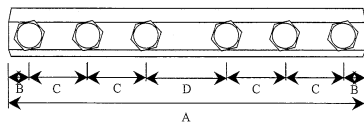
Expansion joint gap = 19mm @ 25° C



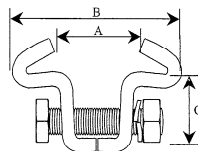
EXPANSION SECTION							
PART NUMBER	A	B	C	D	E	F	No of Leaves
XJ20/14-25	BRAID TYPE						
XJ20/100							
XJ35/50	240	30	160	30	13	43	4
XJ35/150	240	30	160	30	13	43	13
XJ35/200	240	30	160	30	13	43	17
XJ45/200	240	30	160	30	18	50	17
XJ45/1600	240	30	160	30	18	50	50



RIGID JOINTS						
PART NUMBER	A	B	C	D	H	I
RJ20/14-100/4	130	14	30	40	24	4
RJ35/30-200/6	140	16	30	40	25	8
RJ45/50-200/6	185	12	30	40	33	7.5

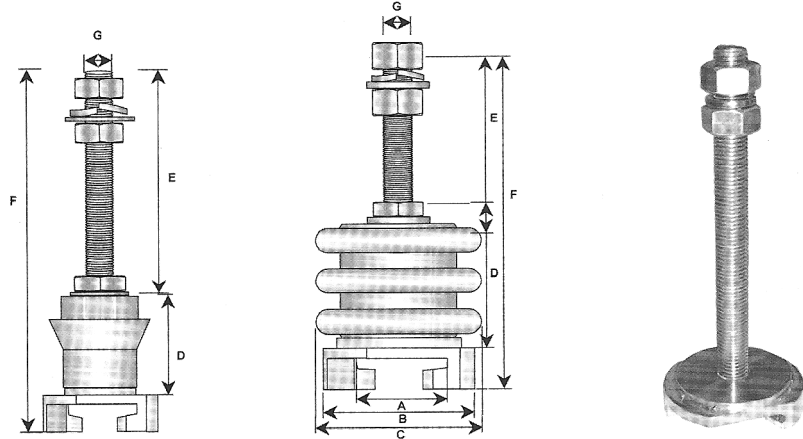


FEEDER CLAMP				
PART NUMBER	A	B	C	D
FC35/30-200	61	30	43	23.5
FC45/50-600	60	30	40	35



LOCATING CLAMPS			
PART NUMBER	A	B	C
LCP20	18	44	24
LCP35	18	44	24

COPPERHEAD RAIL ACCESSORIES



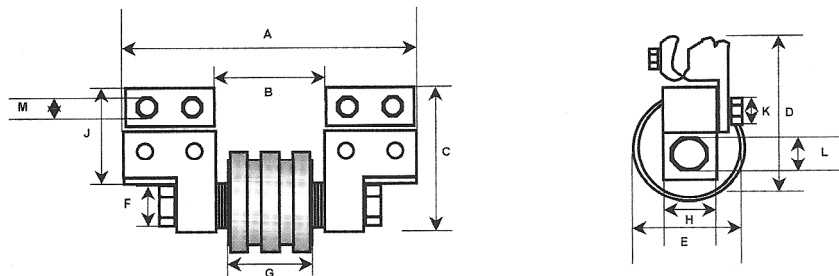
IGP20

IGP35 and IGP45

Earth Rail Support
IGP35E IGP45E

INSULATORS							
PART NUMBER	A	B	C	D	E	F	G
IGP20	22	50	32	69	94	163	M12
IGP35	37	73	80	55	90	180	M16
IGP45	54	87	80	55	90	180	M16

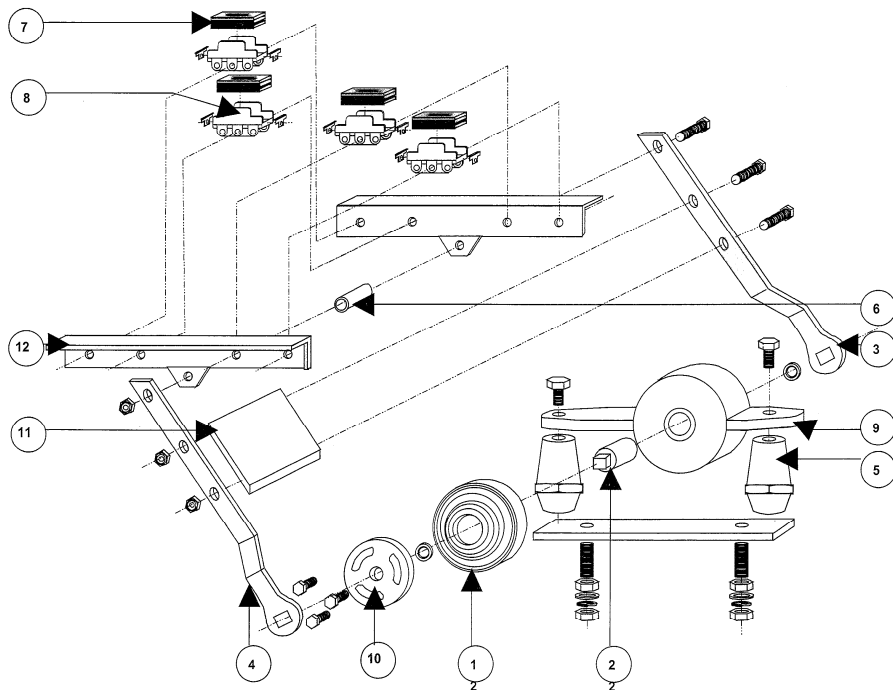
High heat to 550°C ceramic insulators							
IGP35HT	37	73	80	55	90	180	
IGP45HT	54	87	80	55	90	180	



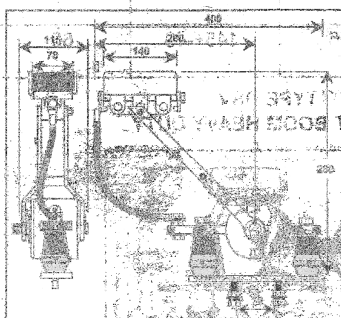
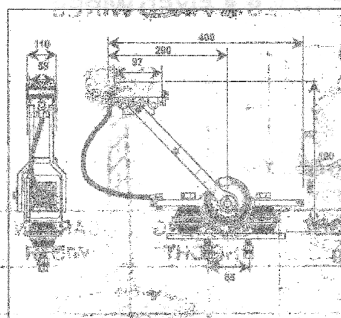
HOSPITAL BAY INSULATOR													
Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M
HBI/35	190	70	100	120	80	36	55	35	120	62	M10	M16	M8
HBI/45	200	76	105	130	80	32	50	40		74	M10	M16	M10

Rail gap = 10 mm

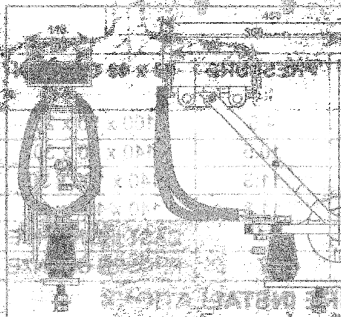
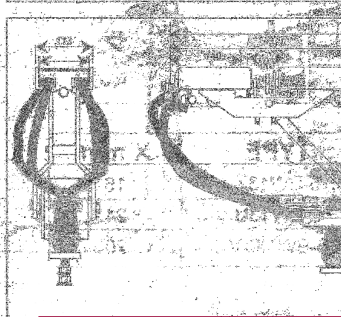
CURRENT COLLECTORS



NR	DESCRIPTION	SCC/100	SCC/200	SCC/400	SCC/800	SCC/1600
1	Collector spring	SCC/100-1	SCC/200-1	SCC/400-1	SCC/800-1	SCC/1600-1
2	Spring bolt	SCC/100-2	SCC/200-2	SCC/400-2	SCC/800-2	SCC/1600-2
3	Lever with thread	SCC/100-3	SCC/200-3	SCC/400-3	SCC/800-3	SCC/1600-3
4	Lever with boring	SCC/100-4	SCC/200-4	SCC/400-4	SCC/800-4	SCC/1600-4
5	Insulators	SCC/100-5	SCC/200-5	SCC/400-5	SCC/800-5	SCC/1600-5
6	Spacer tubes (set)	SCC/100-6	SCC/200-6	SCC/400-6	SCC/800-6	SCC/1600-6
7	Carbon brush	SCC/100-7	SCC/200-7	SCC/400-7	SCC/800-7	SCC/1600-7
8	Carbon holder	SCC/100-8	SCC/200-8	SCC/400-8	SCC/800-8	SCC/1600-8
9	Spring housing	SCC/100-9	SCC/200-9	SCC/400-9	SCC/800-9	SCC/1600-9
10	Spring housing lid	SCC/100-10	SCC/200-10	SCC/400-10	SCC/800-10	SCC/1600-10
11	Spacer block				SCC/800-11	SCC/1600-11
12	Support bracket				SCC/800-12	SCC/1600-12
13	Leads	SCC/100-13	SCC/200-13	SCC/400-13	SCC/800-13	SCC/1600-13

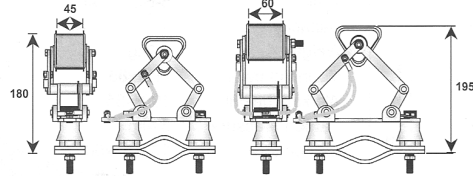


Type 100152
 Capacity 400A
 Weight 11.2kg
 Motor 1044x110
 Voltage 220V
 Size 7kg
 Dimensions 2x140x80x50
 Available in bronze shoe to

[illegible][illegible]

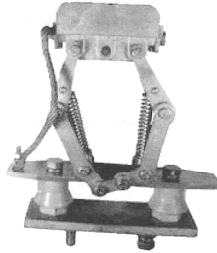
CURRENT COLLECTORS

CURRENT COLLECTORS FOR COPPERHEAD RAILS & FIXED WIRES

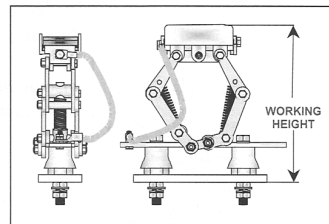


TYPE	CAPACITY A	PICK UP SHOES		WIDTH mm	WEIGHT kg	WORKING HEIGHT	CARBON WIDTH
		Material	Dimensions mm				
DD1	60	Graphite carbon	Δ60x48	95	1.85	150+-25	45
DD	100	Graphite carbon	Δ60x65	105	2.56	145+-40	60

TYPE DA PANTOGRAPH MEDIUM DUTY

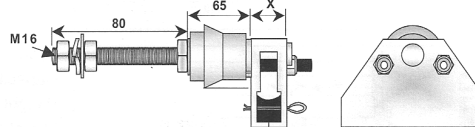
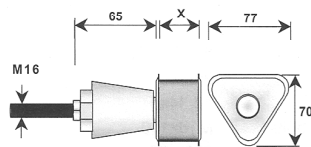


TYPE DSV SHORT BOOM HEAVY DUTY



TYPE	AMP	MASS kg	MOUNTING BOLTS Dia x centres	WORK HEIGHT mm	PRESSURE kg	59 x 48 CARBON
DA1	100	3.5	M12 x 85	200 +- 30	4.5	100 x 50 x 20
DA2	200	8.5	M16 x 70	260 +- 45	10.5	140 x 80 x 30
DA4	400	9	M16 x 110	290 +- 55	11.3	140 x 100 x 30
DA8	800	12	M16 x 110	290 +- 55	11.3	140 x 100 x 30
DSV CI	100	12	M16 x 70	280 +- 60	7	CAST IRON SHOE
DSV PH	400	13	M16 x 70	280 +- 60	7	PHOSPH BRONZE

CURRENT COLLECTORS FOR LOOSE WIRE INSTALLATIONS



5-BWT2	
CARBON TYPE	X mm
A	19.05
B	22.22
C	25.4
D	28.57
E	31.75

TYPE	X mm
5-BW13Z	16
5-BW13U	24
5-BW13XV	20

5.4 INSTALLATION OF COPPERHEAD RAIL

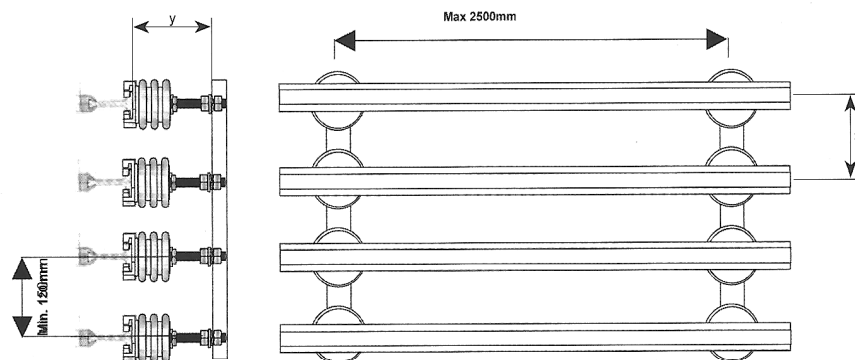


Fig. A

1. Install mounting brackets to I beam or girder, either vertically as Fig. A or horizontally with copper cap facing downwards

Mounting Bracket Spacing:	RC20 Rail and high temperature sections	2 meter
	RC35 + 45 Rail	2.5 meter

Rail Spacing 'X':	to 550V	150 mm
	over	250 mm

Check alignment: 90° to mounting face and parallelity of the bracket spacing.

2. Secure insulators/rail supports to brackets (in accordance with the mounting instructions) leaving bolts hand tight. For general arrangement see Fig A.
When placing the conductors into the insulators, make sure that the bayonet clamp on the insulator does not lock down tight onto the rail. Check the height settings from the mounting bracket to the insulator head rail seat (dimension 'y') are precisely the same throughout the system. The rail must be able to move through the insulator bayonet clamp to allow for expansion and contraction. Check this after tightening down the insulators. The rail must not be restricted at any point otherwise it may buckle when in operation.
3. Connect the Rails by rigid or expansion joints using the holes provided at the ends of the 7m sections. See Fig. B + C on Pg 46
With longer runs use an expansion joint after every 6 standard lengths of 7 m = 42m intervals. For special heat environment and strong temperature fluctuations reduce these intervals. For gap setting see diagram and example on Pg 48 Fig. D

Provide an extra insulator/rail support either side of the expansion joint - maximum 250 mm either side.

5.4 INSTALLATION OF COPPERHEAD RAIL SYSTEM

Expansion Gap Calculation

The chart shows orientation lines for the different conductor rails, considering 42m expansion joint intervals. For gap setting move the orientation line in parallel up to the point presenting the anticipated maximum ambient temperature. Then connect point of actual ambient temperature during installation to the right until intersecting with the orientation line. Follow the vertical axis downward to read the air gap dimension in mm.

Example:

Ambient temperature 25°C

Air gap F-rail = 19mm
Air gap C-rail = 24mm

Steel rail with copper cap
Solid copper rail

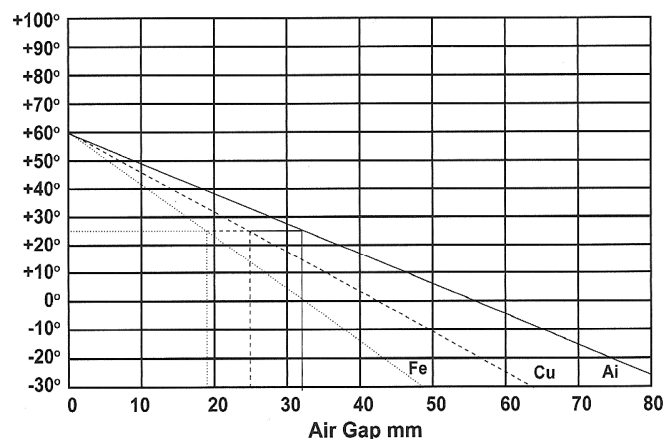
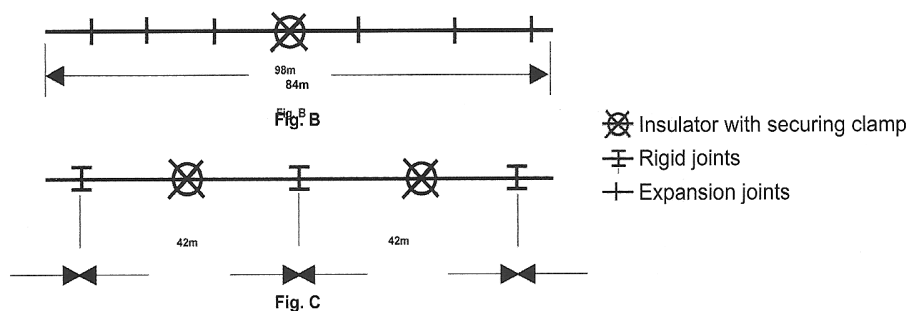


Fig. D



4. Anchor rails for controlled directional movement, by fitting two locating clamps around the centre insulator of the run or in the centre between two expansion joints (see Fig. B + C).
5. Install feeder clamps at feed points. Bolt to web of rail and braze to copperhead. (For improved conductivity). For short systems centerfeed power supply is recommended.