

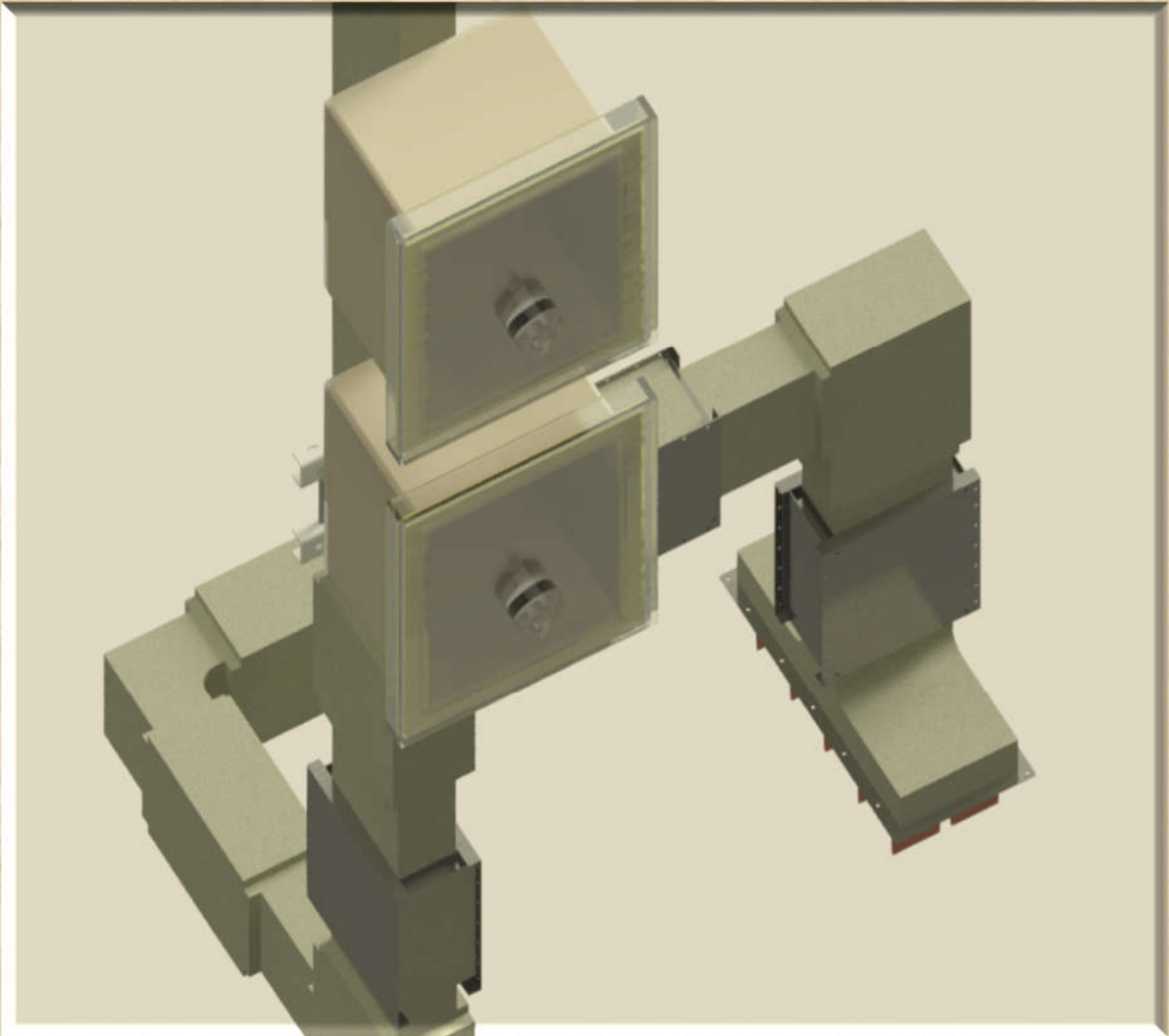


YACR

First Egyptian Cast Resin Busway

Technical data sheet

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For the first time an Egyptian product that provide a real IP68, by manufacturing a Cast Resin Busway to implement the idea of creating a better energy transfer by providing a reliable Busway, with many features to be introduced to the Egyptian market throw a patriot product.

By using the Resin mix to build the Busway, optimally using the best of the Resin characteristics, **uniquely** creating a product that has the following features:

- Real IP68, thanks to the idea of pouring the resin mix over the conductor.
- IK10, using the great mechanical characteristics of the Resin mix.
- Antibacterial, antifungal and all the other requirement for high hygiene application.
- Harsh environment resistance, especially at sea front areas, stormy desert areas, highly polluted locations, chemical industries, and any outdoor conditions.
- Extremely, low probability of short circuit.
- Maintenance free.
- Fire retardant, self-extinguishing, highly resistant to fire, water, moisture & chemicals.

Cast Resin Busway will serve the best in the following industries and locations:

1. All the outdoor application.
2. Oil & Gas plants & facilities (onshore/ offshore).
3. Chemical Facilities.
4. Harsh environment location, for example (sea front buildings and outdoors, desert camps, desert located facilities, etc.)
5. High Hygiene locations and facilities, like (Medicine storage and manufacturing facilities, Hospitals, food and beverage factories, etc.)
6. Industrial areas where it requires high protection against fine corrosive particles like cement & fertilizers industries.
7. Underground tunnels.
8. Electrical room in large ships and sea vessels.

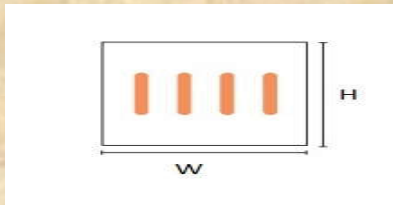
Also, it can be used in regular Busway applications, thanks to the flexible and smart design of **YACR**, providing many options to fit your applications.



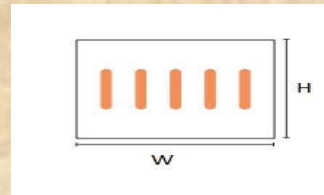
Offering the following:

Material	Cu or Al	Available Configurations	
Operating Voltage	Up to 1000Vac	Cu	4W
Current	500A - 6000A		5W
BIL	12 KV		4W + Al PE (=4.5W)
Frequency	50/60 Hz	Al	4W
IP	68		5W
IK	10	Manufactured to complying to the IEC 61439-1&6	
Altitude	>2000m		
Ambient Temp	from -15 to 50 C ⁰		
Humidity	0 - 100%		

Technical Data



Four Wires System



Five Wires System

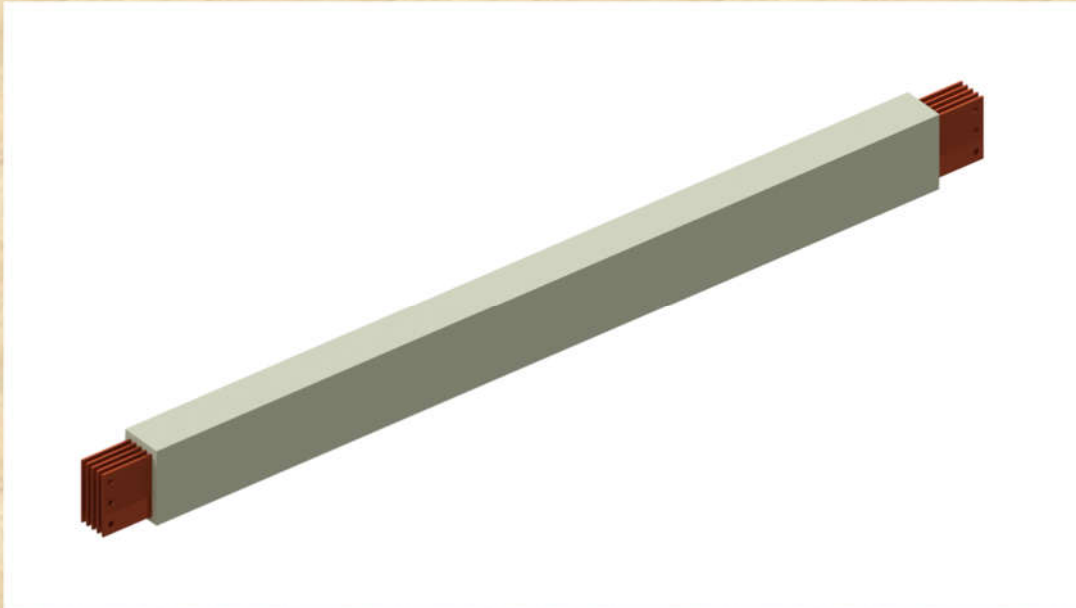
Copper Conductors														
General Data						5 Wires Configuration			4.5 Wires Configuration			4 Wires Configuration		
Range Group	Amp	R 20C° μΩ	R 95C° μΩ	X 50Hz μΩ	I _{sc} (KA) 1 sec	H mm	W mm	Kg/m	H mm	W mm	Kg/m	H mm	W mm	Kg/m
Z Range	500	121.6	158.3	123.0	20	50	100	15.1	50	100	14.2	50	83	12.4
	630	91.2	118.8	94.0	30	60	100	18.8	60	100	17.6	60	83	15.4
	800	60.8	79.2	75.0	40	80	100	26.2	80	100	24.4	80	83	21.5
	1000	45.6	59.4	63.0	50	100	100	33.6	100	100	31.2	100	83	27.5
	1250	36.5	47.5	48.0	60	120	100	41.1	120	100	38.0	120	83	33.6
	1600	30.4	39.6	38.0	65	140	100	48.5	140	100	44.8	140	83	39.6
Y Range	1800	25.3	33.0	34.50	70	160	100	56.6	160	100	52.1	160	83	46.3
	2000	22.8	29.7	29.00	80	200	100	67.3	200	100	62.3	200	83	55.0
	2500	18.2	23.8	23.00	85	240	100	82.1	240	100	75.9	240	83	67.1
	3200	15.2	19.8	20.00	100	280	100	89.0	280	100	81.6	280	83	72.8
X Range	4000	11.4	14.8	15.3	100	400	100	134.6	400	100	124.6	400	83	110.0
	5000	9.1	11.9	13.5	100	480	100	164.2	480	100	151.8	480	83	134.2
	6000	7.6	9.9	12.0	100	560	100	193.9	560	100	179.0	560	83	158.5

Table 1 (Basic Data Copper Conductor)

Aluminum Conductors											
General Data						5 Wires Configuration			4 Wires Configuration		
Range Group	Amp	R 20C° μΩ	R 95C° μΩ	X 50Hz μΩ	I _{sc} (KA) 1 sec	H mm	W mm	Kg/m	H mm	W mm	Kg/m
Z Range	500	177.8	231.6	94.0	20	60	100	12.6	60	83	10.4
	630	118.5	154.4	75.0	30	80	100	16.9	80	83	14.0
	800	88.9	115.8	63.0	40	100	100	21.2	100	83	17.6
	1000	71.1	92.6	48.0	45	120	100	25.6	120	83	21.2
	1250	59.3	77.2	38.0	55	140	100	29.9	140	83	24.7
Y Range	1600	44.4	57.9	29.0	65	200	100	42.5	200	83	35.2
	1800	35.6	46.3	26.4	75	240	100	51.1	240	83	42.3
	2000	29.6	38.6	20.0	80	280	100	59.8	280	83	49.5
X Range	2500	23.7	30.9	16.0	85	360	100	76.7	360	83	63.5
	3200	19.8	25.7	14.5	100	420	100	89.6	420	83	74.2
V Range	4000	14.8	19.3	10.5	100	560	100	119.5	560	83	98.9
	5000	11.9	15.4	9.5	100	700	100	149.4	700	83	123.7
	6000	9.9	12.9	8.3	100	840	100	179.3	840	83	148.4

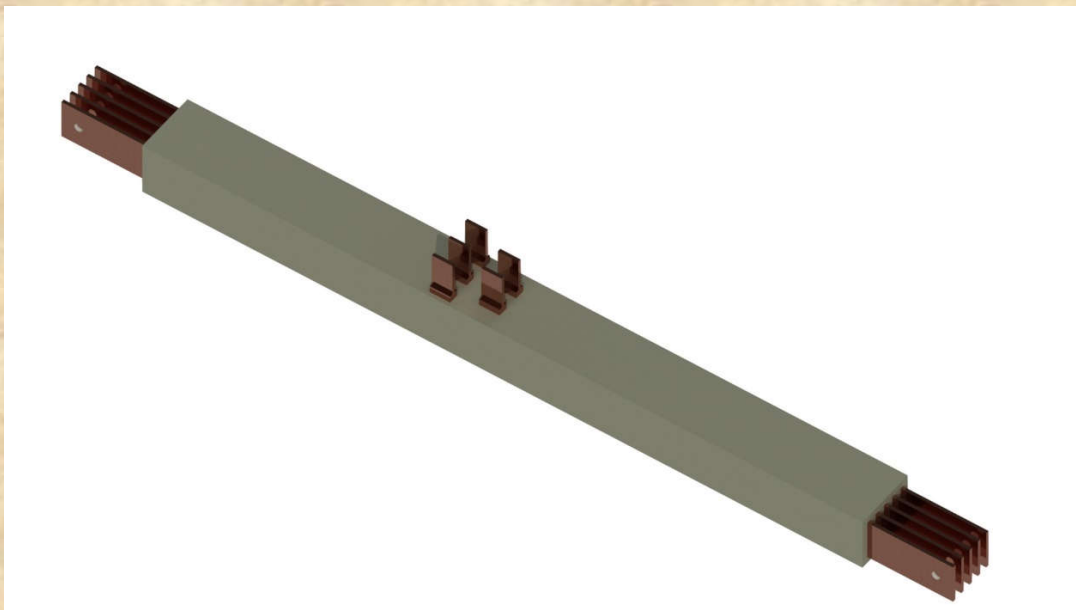
Table 2 (Basic Data Aluminum Conductor)

Straight Length



(Max 2000mm, Min 500mm)

Plug-In Length

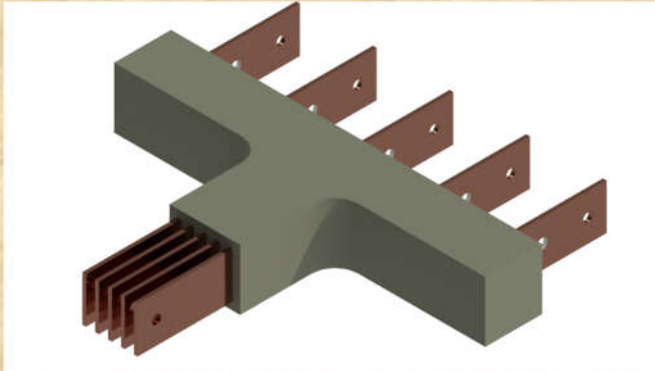


Max length for plug in length is 2000mm

Outlet Range	Max Number of Outlets per 2000mm length
32A up to 250A	3
300 up to 630A	2

(Table-3) Number of outlets available per length

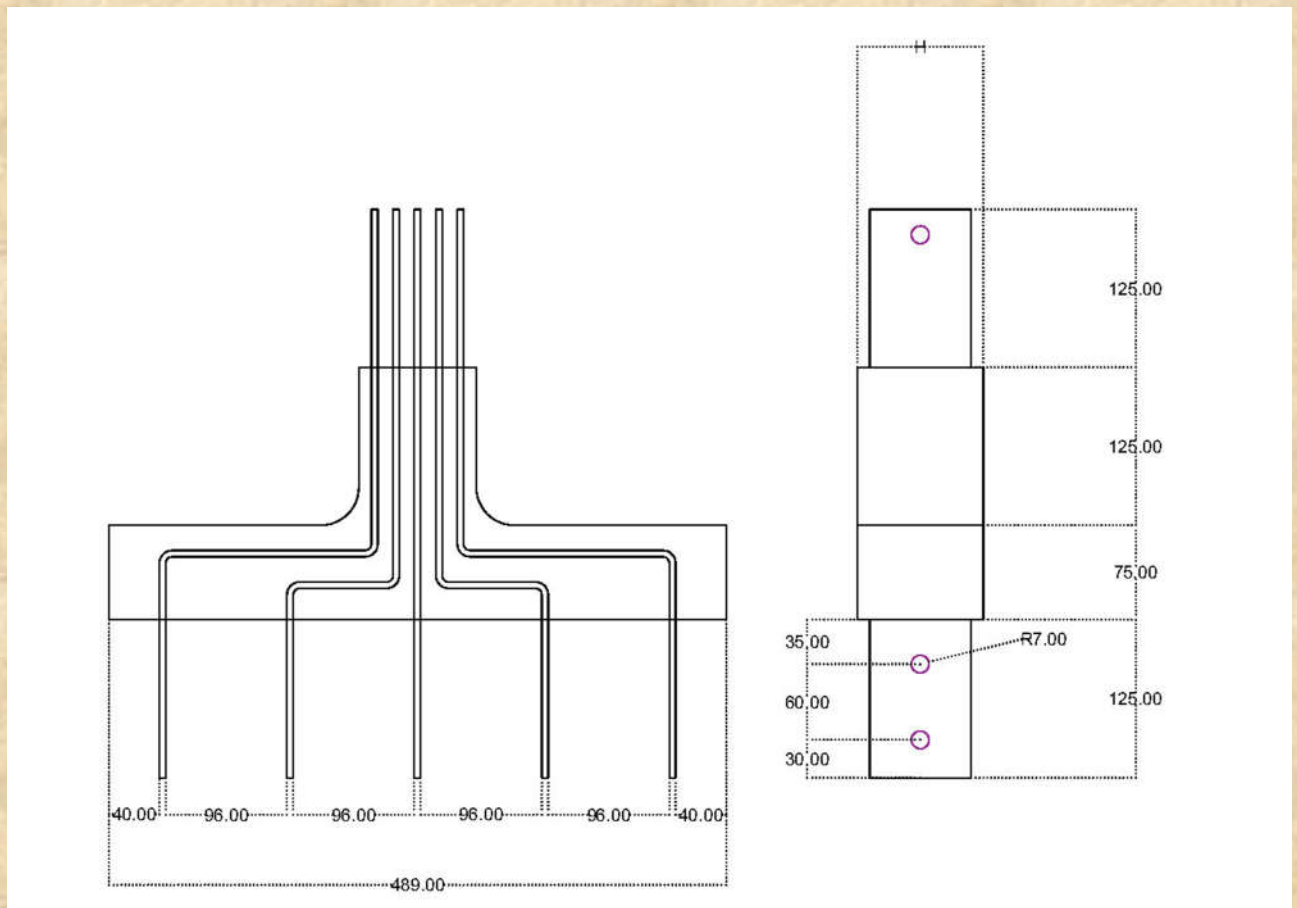
Flanged End



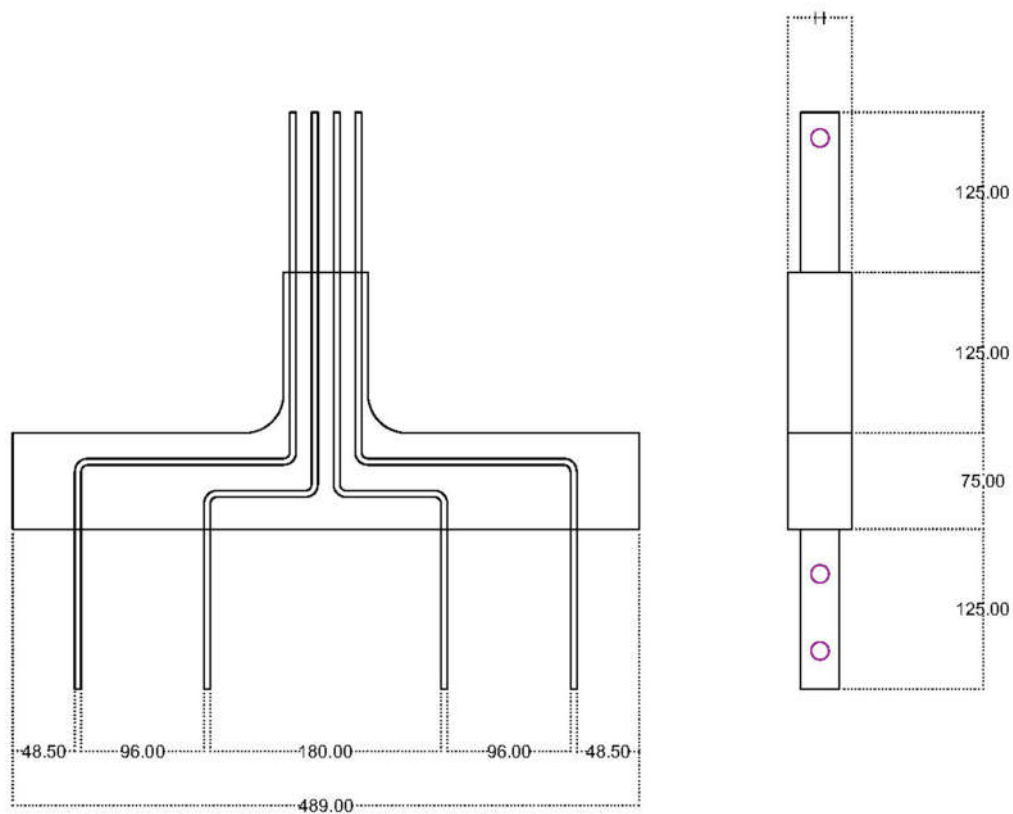
Used for connecting to other equipment (MDB's, TR, Gen, etc.)

All dimensions are in mm

H in Tables 1&2



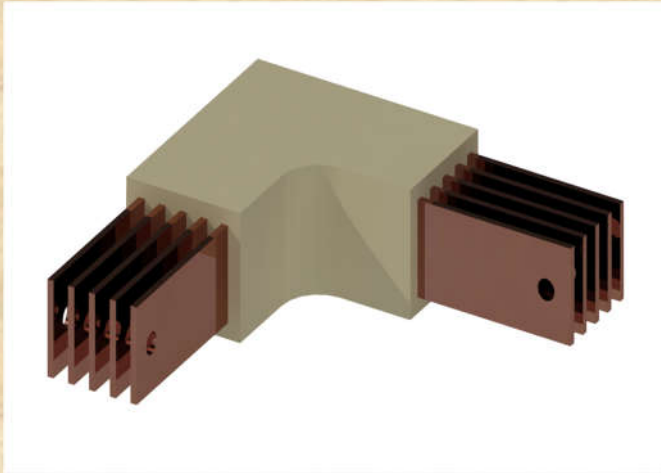
Flanged End for 4.5 & 5 Wires Configuration



Flanged End for 4Wires Configuration

Customized Flanged Ends for different equipment are available.
Please contact the supplier for more details.

Horizontal Elbow



Used for changing direction (Left & Right)

4.5 & 5W Copper H. Elbow		
	Amp	Min
Z Range	500	310
	630	310
	800	310
	1000	310
	1250	310
	1600	310
Y Range	1800	310
	2000	310
	2500	310
	3200	310
X Range	4000	310
	5000	310
	6000	310

Table 4

4W Copper H. Elbow		
	Amp	Min
Z Range	500	300
	630	300
	800	300
	1000	300
	1250	300
	1600	300
Y Range	1800	300
	2000	300
	2500	300
	3200	300
X Range	4000	300
	5000	300
	6000	300

Table 5

5W Aluminium H. Elbow		
	Amp	Min
Z Range	500	310
	630	310
	800	310
	1000	310
	1250	310
	1600	310
Y Range	1800	310
	2000	310
	2500	310
X Range	3200	310
	4000	310
V Range	5000	310
	6000	310

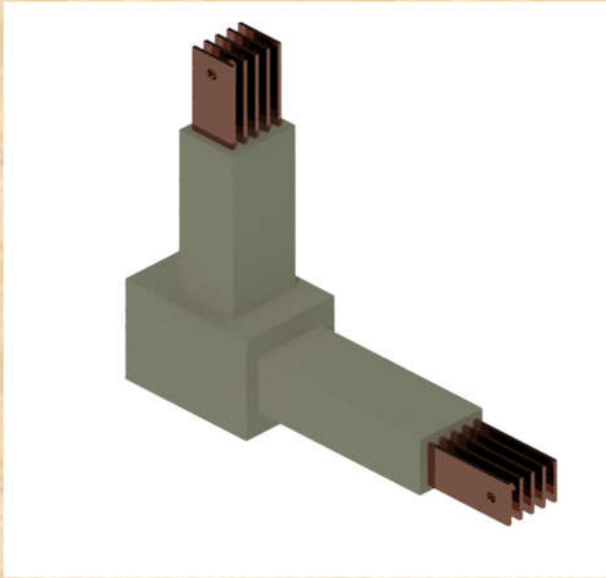
Table 6

4W Aluminium H. Elbow		
	Amp	Min
Z Range	500	300
	630	300
	800	300
	1000	300
	1250	300
	1600	300
Y Range	1800	300
	2000	300
	2500	300
X Range	3200	300
	4000	300
V Range	5000	300
	6000	300

Table 7

* All dimensions are in mm

Vertical Elbow



Used for changing direction (Up & Down)

4, 4.5 & 5W Copper V. Elbow			
	Amp	Min L1	Min L2
Z Range	500	330	450
	630	350	470
	800	370	490
	1000	390	510
	1250	410	530
	1600	410	530
Y Range	1800	450	570
	2000	490	610
	2500	530	650
	3200	530	650
X Range	4000	690	810
	5000	770	890
	6000	770	890

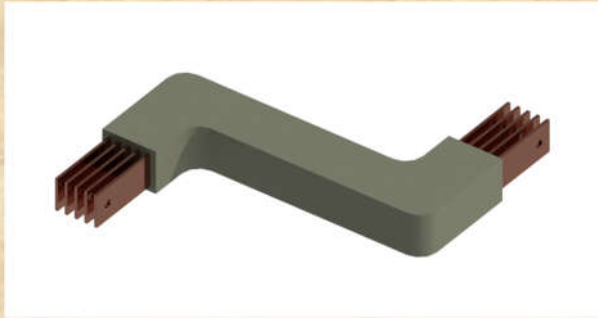
Table 8

4 & 5W Aluminium V. Elbow			
	Amp	Min L1	Min L2
Z Range	500	350	470
	630	370	490
	800	390	510
	1000	410	530
	1250	430	550
	1600	490	610
Y Range	1800	530	650
	2000	570	690
	2500	650	770
X Range	3200	710	830
	4000	850	970
V Range	5000	990	1110
	6000	1130	1250

Table 9

* All dimensions are in mm

Horizontal Offset



Used for Shifting Direction (Left & Right)

4.5 & 5W Copper H. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	310	360	310
	630	310	360	310
	800	310	360	310
	1000	310	360	310
	1250	310	360	310
	1600	310	360	310
Y Range	1800	310	360	310
	2000	310	360	310
	2500	310	360	310
	3200	310	360	310
X Range	4000	310	360	310
	5000	310	360	310
	6000	310	360	310

Table 10

5W Aluminium H. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	310	360	310
	630	310	360	310
	800	310	360	310
	1000	310	360	310
	1250	310	360	310
Y Range	1600	310	360	310
	1800	310	360	310
	2000	310	360	310
X Range	2500	310	360	310
	3200	310	360	310
V Range	4000	310	360	310
	5000	310	360	310
	6000	310	360	310

Table 12

4W Copper H. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	300	347	300
	630	300	347	300
	800	300	347	300
	1000	300	347	300
	1250	300	347	300
	1600	300	347	300
Y Range	1800	300	347	300
	2000	300	347	300
	2500	300	347	300
	3200	300	347	300
X Range	4000	300	347	300
	5000	300	347	300
	6000	300	347	300

Table 11

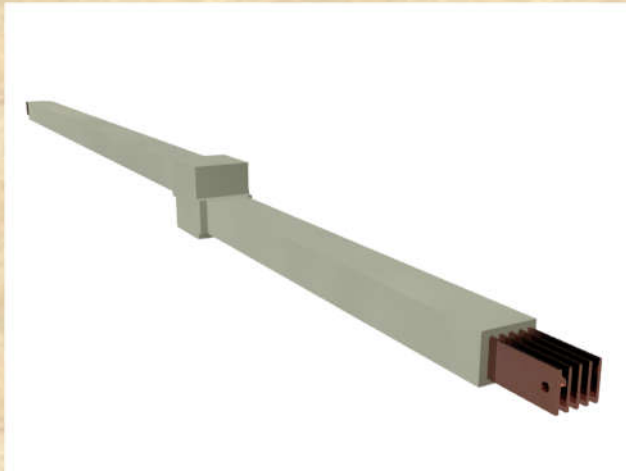
4W Aluminium H. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	300	347	300
	630	300	347	300
	800	300	347	300
	1000	300	347	300
	1250	300	347	300
Y Range	1600	300	347	300
	1800	300	347	300
	2000	300	347	300
X Range	2500	300	347	300
	3200	300	347	300
V Range	4000	300	347	300
	5000	300	347	300
	6000	300	347	300

Table 13



Vertical Offset

Used for Shifting Levels (Up & Down)



Used for Shifting Levels (Up & Down)

4, 4.5 & 5W Copper V. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	400	120	400
	630	400	140	400
	800	400	180	400
	1000	400	220	400
	1250	400	260	400
	1600	400	260	400
Y Range	1800	420	320	420
	2000	460	420	460
	2500	500	500	500
	3200	500	500	500
X Range	4000	620	820	620
	5000	700	980	700
	6000	700	980	700

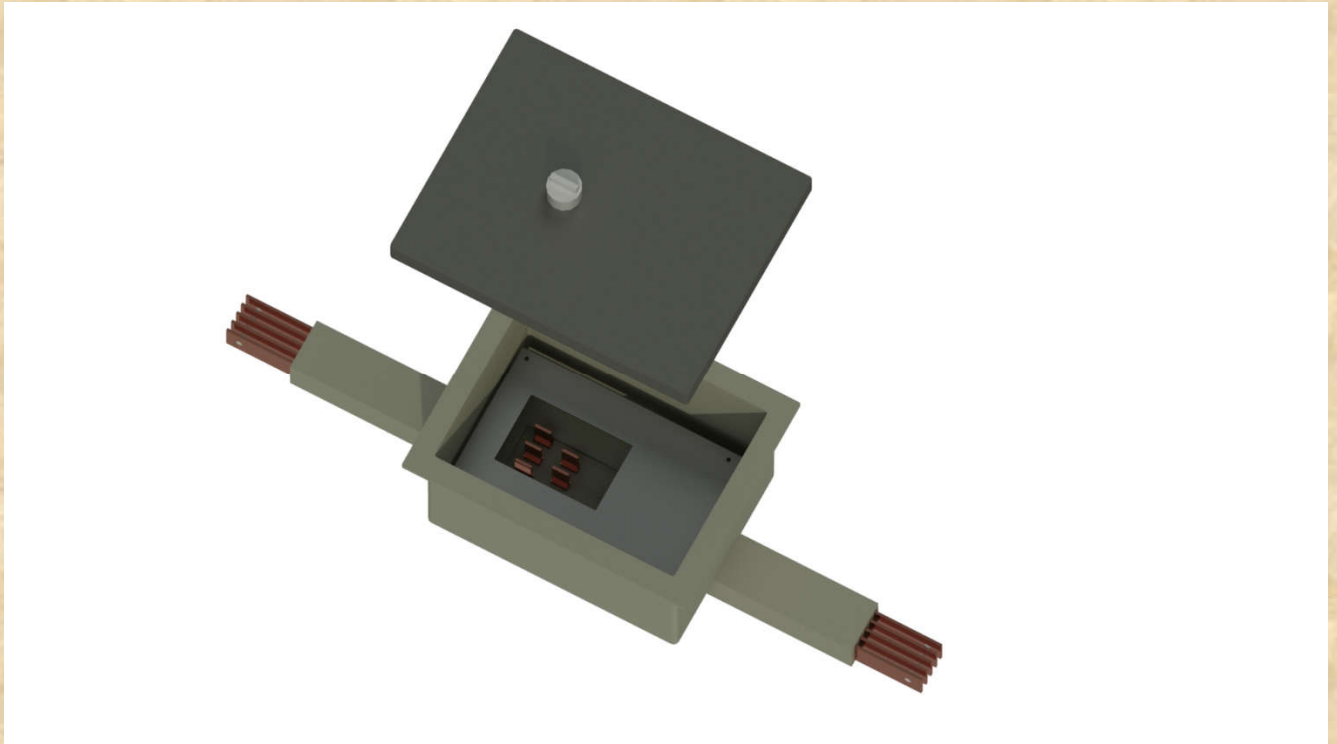
Table 14

4 & 5W Aluminium V. Offset				
	Amp	Min L1	Min L2	Min L3
Z Range	500	400	140	400
	630	400	180	400
	800	400	220	400
	1000	400	260	400
	1250	420	300	420
Y Range	1600	460	420	460
	1800	500	500	500
	2000	540	580	540
X Range	2500	720	740	720
	3200	760	860	760
V Range	4000	880	1140	880
	5000	1000	1420	1000
	6000	1120	1700	1120

Table 15

* All dimensions are in mm

Tap-Off Box



Tap-off Boxes are customizable to meet vast range of requirements.

YACR

Advices you

- 1- Cast Resin is Resistant to Chemical.
- 2- Chemical Exaporated quickly from Cast Resin.
- 3- Cast Resin is Affected by Chemical.

Chemicals	Directly After Contact	After 24 hours	More Than 48 hours
Boric Acid	1	1	1
Hydrochloric Acid 10%	1	3	3
Sulfuric Acid 10%	1	1	1
Citric Acid	1	3	3
Lactic Acid 5%	1	3	3
Formic Acid 10%	3	3	3
Nitric Acid 10%	1	3	3
Acetic Acid 10%	3	3	3
Ethanol	1	1	1
Acatone	1	2	2
Calcium Chloride	1	1	1
Fuel (Diesel)	1	1	1
Ester	1	3	3
Ether	1	2	2
Formalin 37%	3	3	3
Glycerol	1	3	3
Ammonia 10%	1	1	1
Ammonia 30%	1	3	3
Sodium Hydroxide 10%	1	1	1
Sodium Hydroxide 50%	1	3	3
Lubricant	1	1	1
Engine Oil	1	1	1
Pentane	1	1	1
Toluene	1	3	3
Chlorinated Hydrocarbons	3	3	3
Javel Water	1	1	1