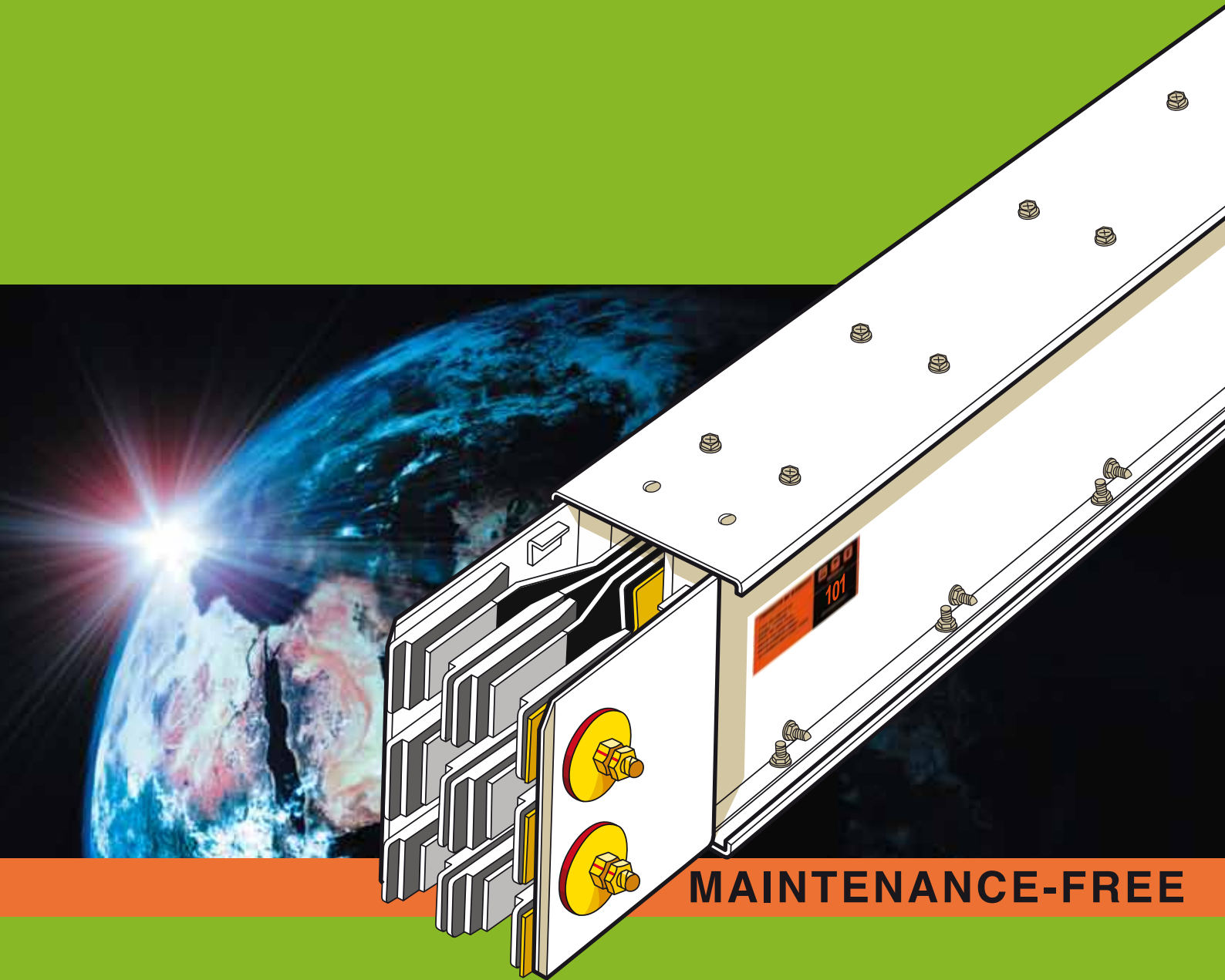




**TRANSLITE™**  
**MF BUSDUCT**



**MAINTENANCE-FREE**

**ENGINEERED TO SERVE  
THE WORLD OF TOMORROW**

*Manufactured by Multi-B Sdn Bhd*



Multi-B Sdn Bhd  
Registered to ISO 9001:2008  
Certificate No. 463439 QM08

062



**CORPORATE VISION**  
*A Global Leader of sustainable  
 Power Distribution Systems  
 for the World of Tomorrow.*



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## MULTI-B SDN BHD: AN INTRODUCTION

Multi-B Sdn Bhd started manufacturing Translite Busducts in 1993, with Japanese technical collaboration. Through innovation and continuous research and development, we have not only made an excellent product better but also established Translite as a leader of electrical power distribution systems in today's competitive global market.

The key to this success is our single-minded desire to excel in the business we are in, plus a determination to build a strong brand name for Translite Busduct. Achieving the ISO 9001:2008 Quality Award and voted the top SME 'Enterprise 50' 2009 and the Golden Bull Award for excellence is a reflection of this corporate culture and commitment to quality and entrepreneurship.



***Our fully integrated  
manufacturing complex in  
Bukit Beruntung.***

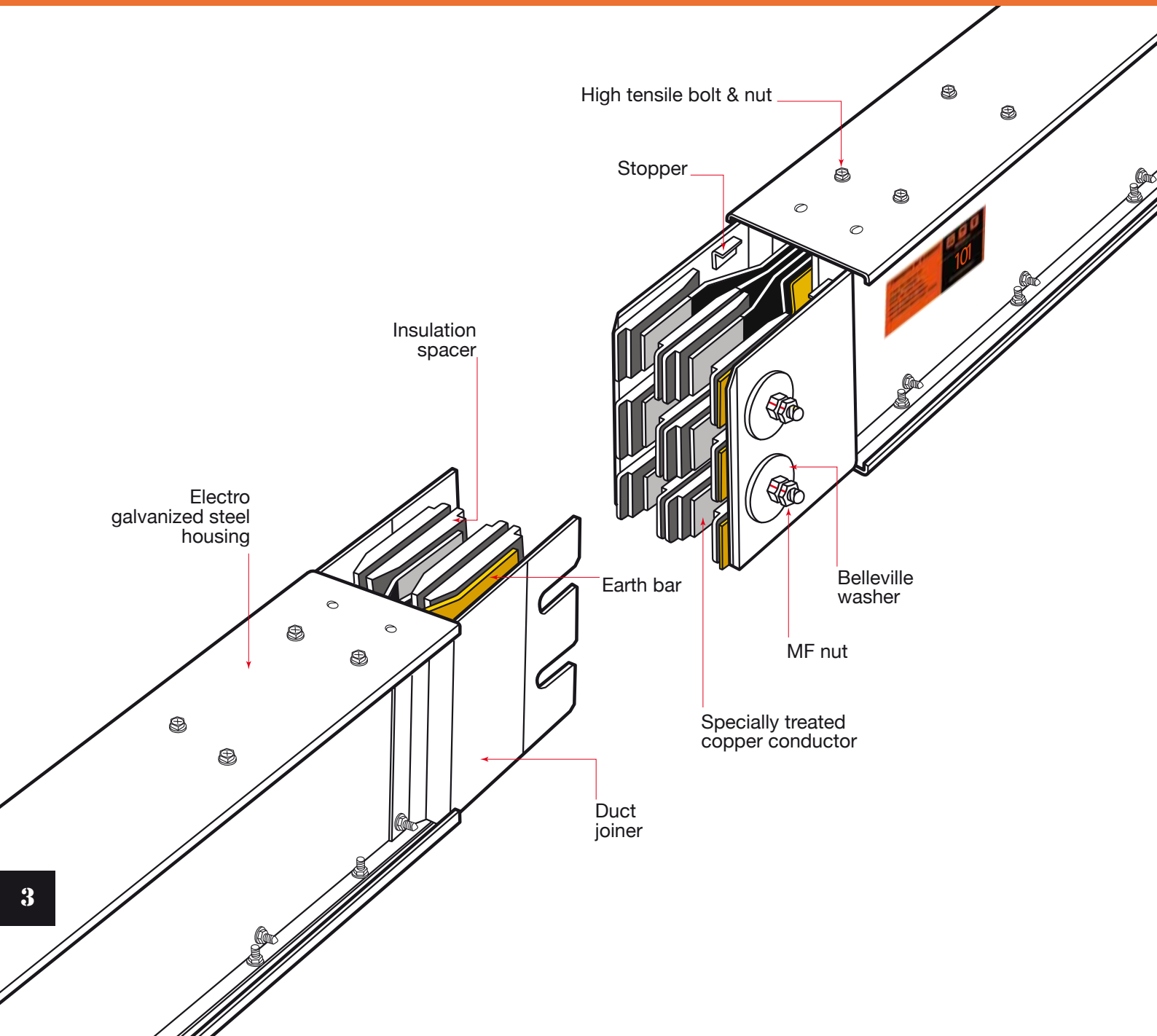




## ENGINEERED TO SERVE THE WORLD OF TOMORROW

Multi-B Sdn Bhd manufactures Translite low voltage power distribution system, designed for high rise buildings such as Condominiums, Institutions of Higher Learning, Commercial and Office Complexes, Hotels, Hospitals, Airport Terminals, Military Installations and other High Security Facilities.

Translite MF Busduct system comprises a compatible line of feeder and plug-in busducts and accessories. Translite MF Busduct is available in standard 3-meter length with ratings of 600 Amp to 6000 Amp. It comes with aluminium, or copper conductors.



## DESIGN: SAFETY IS THE KEY

In any mission critical environment, safety is the key between success and failure. Any breakdown of infrastructure facility, such as electrical power distribution, could result in system malfunctions, financial losses or even endanger human lives. It is therefore crucial that the right type of power distribution system be installed to meet the exact and high standards of the industry.

Safety is the hallmark of Translite MF Busduct. It is therefore not surprising that our busducts are still operating in many installations after nearly two decades.



*The single most important advantage of Translite Busduct System is it's simple design and flexibility to accommodate relocation or expansion of busduct route.*

## BUSDUCT HOUSING: MECHANICAL STRENGTH

Translite MF busducts are built to last. The compact, fully enclosed sandwich-type busduct housing is made from electro galvanized or galvanized steel sheet to provide mechanical strength and protection for the load carrying conductors, plus efficient heat dissipation.

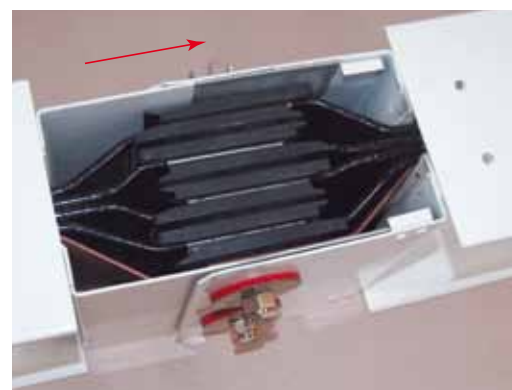
The scratch-proof epoxy finish exterior not only prevents rusting, it can also withstand rough handling during on-site assembly as well as enduring the tough rigors of life-time operation.



***Translite galvanized steel housing is far superior in mechanical strength. In the unlikely event of a short circuit the totally enclosed, non ventilated busduct design restricts fire hazard to the effected section without jeopardizing other sections of the busduct run.***

## JOINTING: EASY TO INSTALL

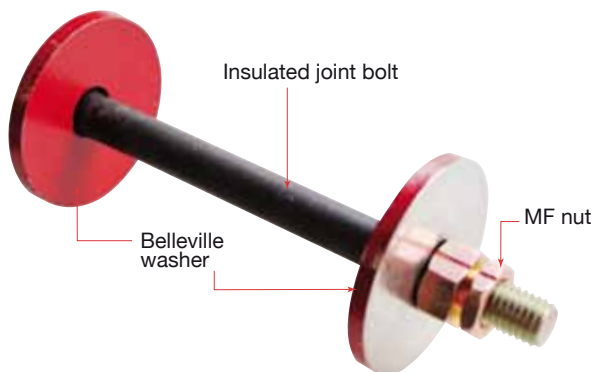
The busduct conductors are joined by slighting the two duct sections together. The Translite unique jointing system provides a simple and effective way to join the busducts. The pre-measured stoppers allow the overlapping duct joiners to be correctly joined together with minimum effort. No cumbersome joint blocks or specialized installers are required.



*The copper or aluminium conductor is insulated with 4 layers of 125-micron polyester film.*



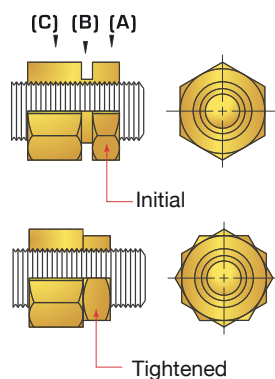
## MF NUT: MAINTENANCE FREE



The busduct sections are joined and secured with insulated high-tension bolts and maintenance-free (MF) nuts with Belleville washers.

The cup-shaped washers provide an even clamping force on the joint surface. Fast and accurate torque is achieved through a double headed MF nut.

When the specified torque is achieved, the neck 'B' of the MF nut will shear off allowing the outer nut to act as a lock (See diagram).



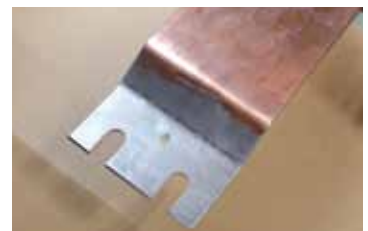
## INSULATION: FAIL-SAFE OPERATION

Safety is at the heart of Translite Busduct design. The copper conductor is of 99.99% purity. The copper or aluminium conductor is insulated with 4 layers of 125-micron polyester film that can withstand temperature rise of 150°C. The overlapping films also act as an airtight seal to guard against dust and moisture infiltrations.



## CONDUCTOR: SUPERIOR CONDUCTIVITY

The busbar joint ends are flashed with a specially formulated alloy solution. Unlike tin or silver plating, our surface treatment will not peel or blister, thus eliminating potential fire hazard. The process also allows the bus bars to bond into a seamless length when tightened.



***The Busduct conductor joint ends are treated with a special alloy solution that will not blister or peel, thus eliminating potential short circuit and fire hazard.***



***All finished components are subject to stringent dielectric strength test before delivery.***

## RESEARCH & DEVELOPMENT: QUEST FOR EXCELLENCE

R&D plays an important role in our quest for excellence. With the latest computer technology our team of highly trained personnel strive to improve and upgrade our products and designs.

In addition to providing training to our workforce. New technology and material are constantly introduced to keep us ahead of the competitions.



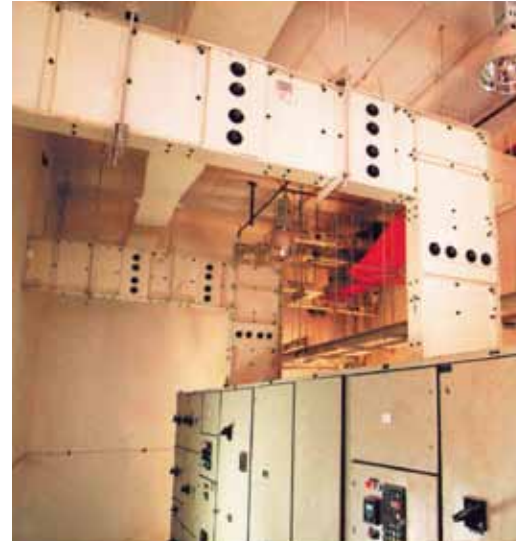
***With the latest computer technology, we strive to improve and upgrade our products and designs.***

## CUSTOMER SUPPORT SERVICE: THE TRANSLITE DIFFERENCE

At Multi-B, we do not just make busducts. Our philosophy is to supply a functioning power distribution system that meets customers' satisfaction - that is the Translite difference!

We provide:

\* Inspection of installed system prior to commissioning.

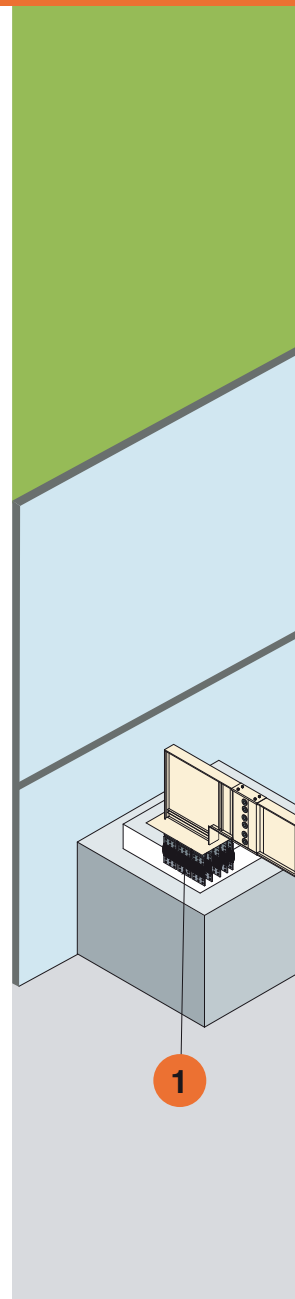


## INSTALLATION LAYOUT

The Translite MF Busduct System is recommended for electrical power transmission and distribution in high rise buildings and complexes. It is available in different IP protections ranging from IP42 to IP68 (Refer to page 62 for details).

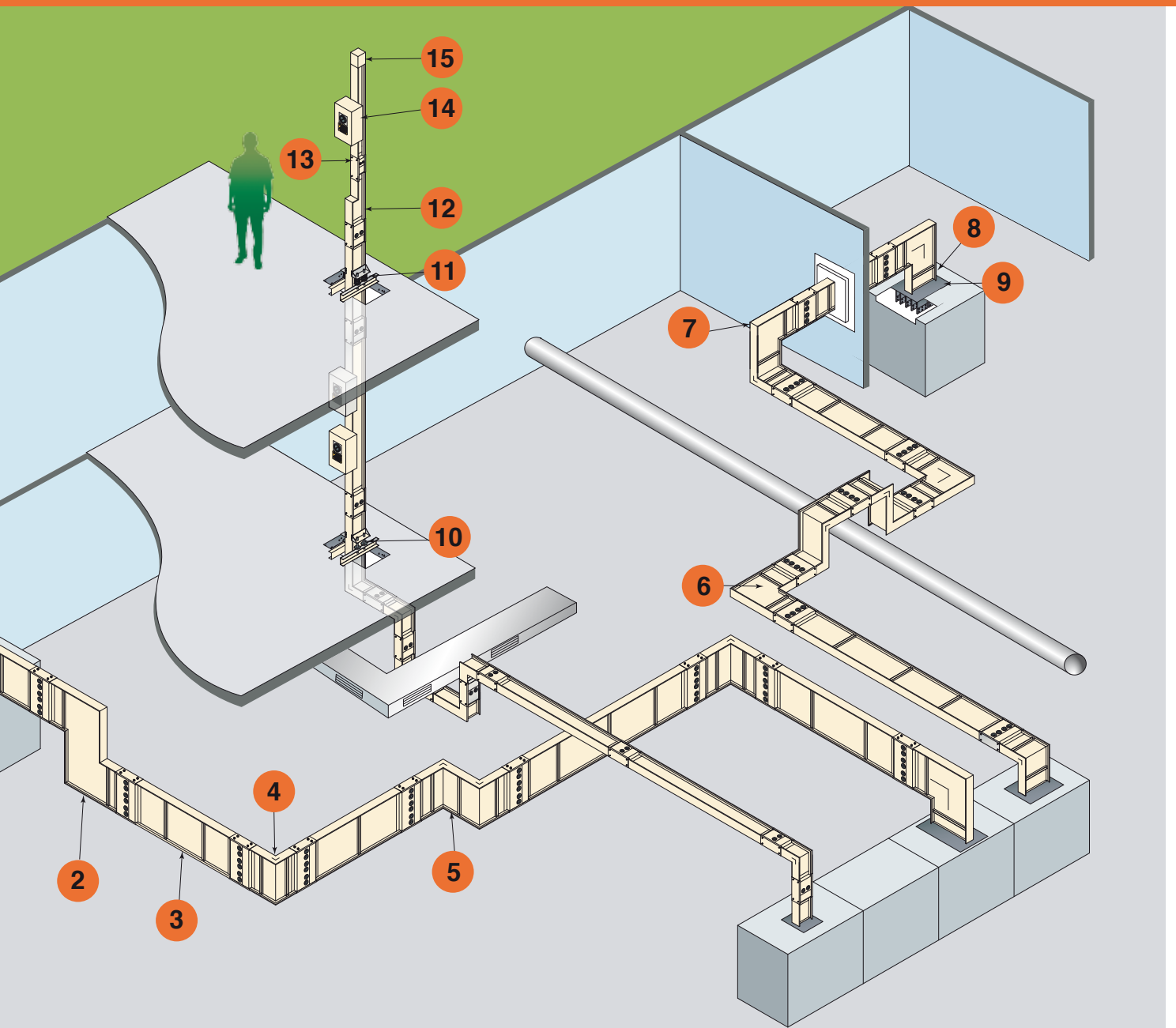
Before installation, the busduct route and position must be determined and ensured absence of any obstacles.

1. Flexible Coupling
2. Vertical Offset
3. Feeder
4. Horizontal Elbow
5. Horizontal Offset
6. Vertical Elbow
7. Combination Elbow
8. Flanged End
9. Flanged End Plate
10. Rigid Vertical Hanger
11. Spring Vertical Hanger
12. Reducer
13. Joint Cover
14. Plug-in Unit
15. End Closer





*Translite busduct is available from 600 Amp to 6000 Amp.*



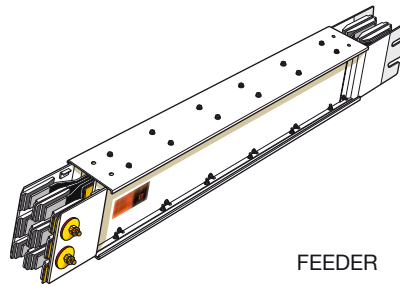
## MULTIPLE COMPONENTS: FLEXIBILITY

Translite MF Busduct comprises a range of Feeders, Plug-ins, complete with Elbows, Offsets, Flanged Ends, together with other components and accessories. All these components are compatible and are available with copper or aluminium conductors.

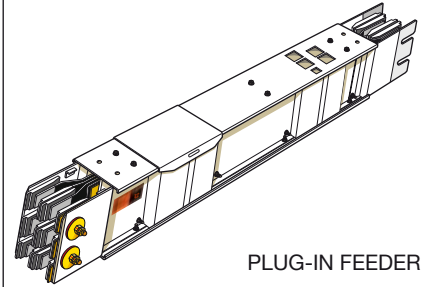
### COMPONENTS



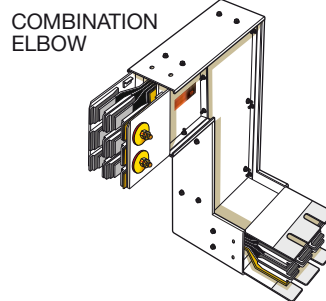
FLEXIBLE COUPLING PLATE



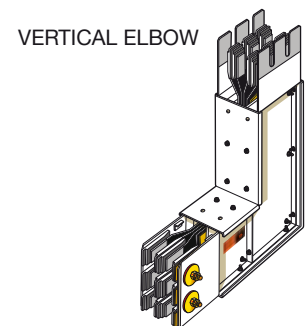
FEEDER



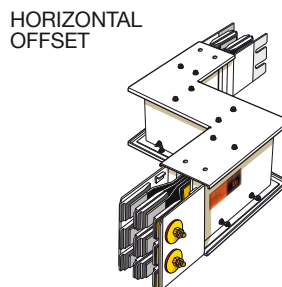
PLUG-IN FEEDER



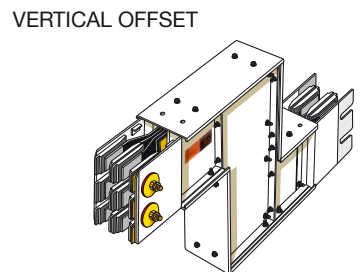
COMBINATION ELBOW



VERTICAL ELBOW



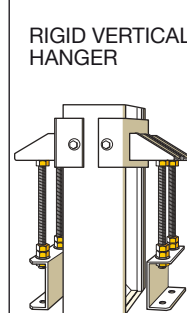
HORIZONTAL OFFSET



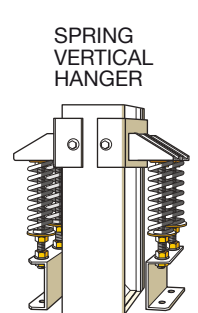
VERTICAL OFFSET



FLANGED END



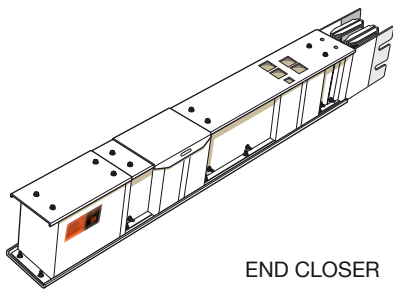
RIGID VERTICAL HANGER



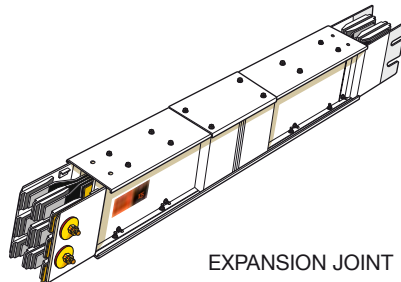
SPRING VERTICAL HANGER



***Our production process is fully computerized to ensure precision and consistency.***

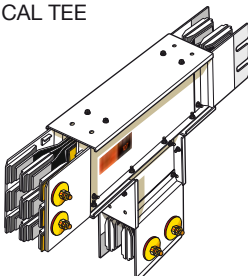


END CLOSER

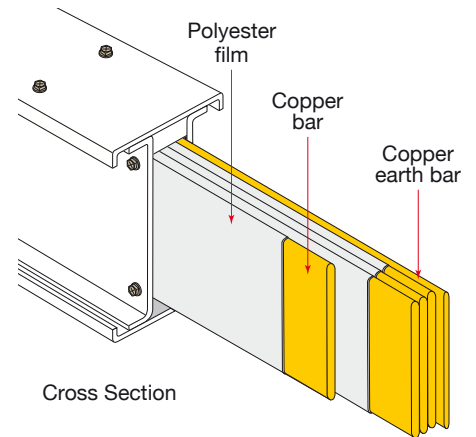
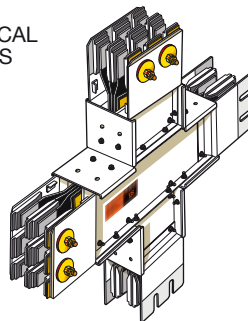


EXPANSION JOINT

VERTICAL TEE

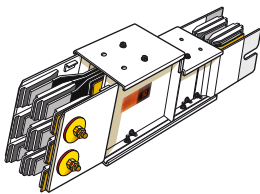


VERTICAL CROSS

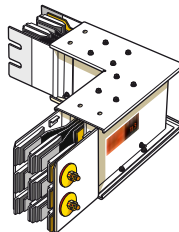


***Translite Busduct conductors are insulated with 4 layers of 125 micron polyester film that has a dielectric strength of 155KV/500 micron. This multi-layer insulation has proven more effective in protecting the conductors against short circuit than other forms of insulation.***

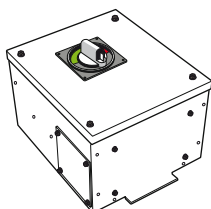
REDUCER



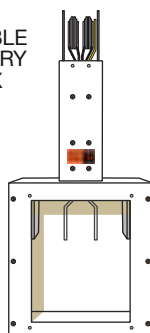
HORIZONTAL ELBOW



PLUG IN UNIT



CABLE ENTRY BOX

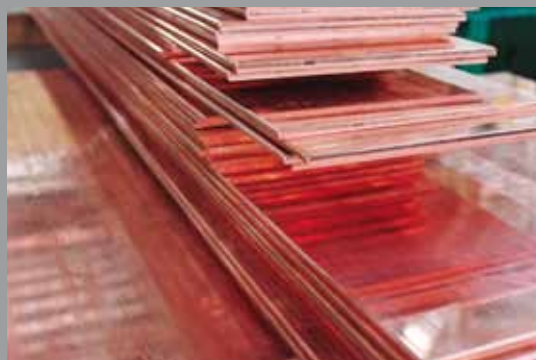


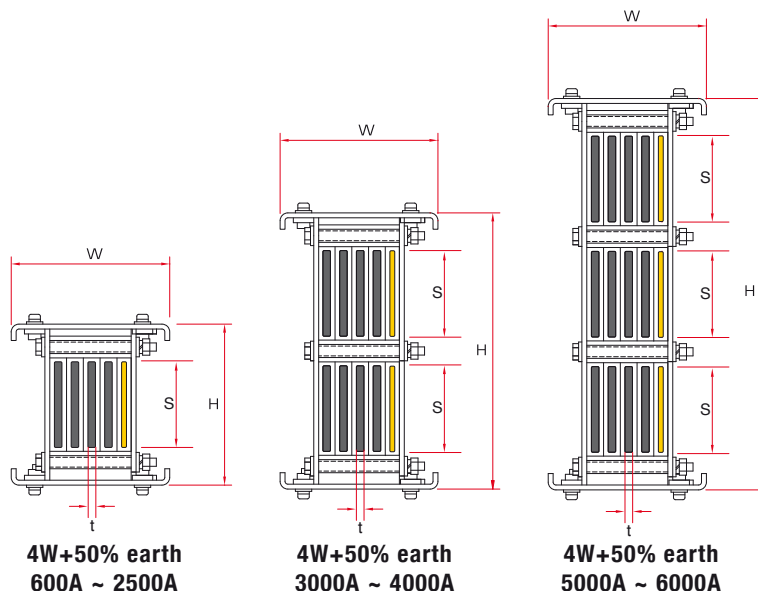
## COMPONENTS SPECIFICATIONS AND TECHNICAL DATA



### WITH COPPER CONDUCTORS

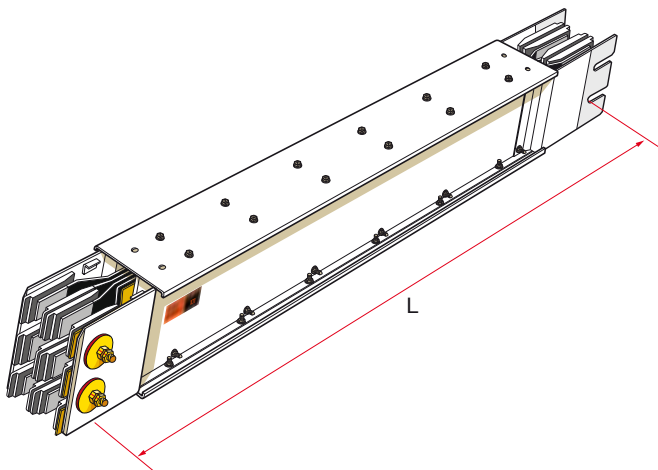
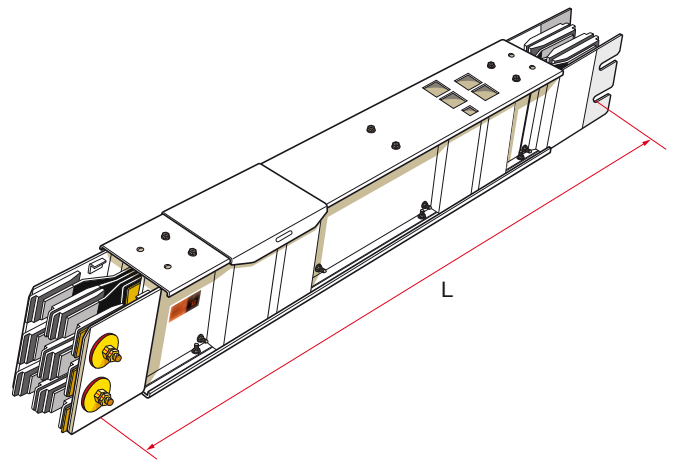
*Translite busduct copper conductors are certified 99.99% pure. Temperature Rise (8.2.1) Test by KEMA has proven the high quality of our conductors (refer to KEMA test certification on pages 28–40).*



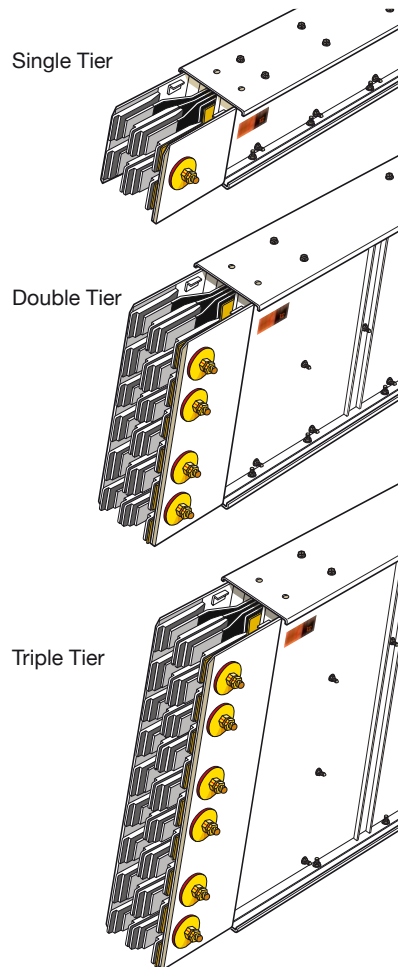


## CROSS SECTION

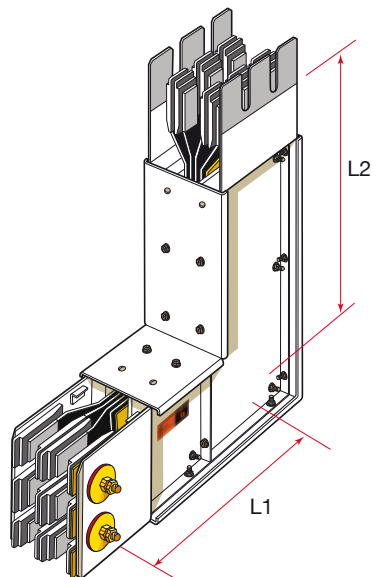
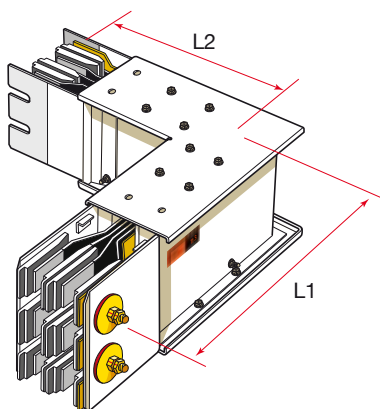
| Type     | Rating in Amps | Dimensions (mm) |     | Conductor Cross Section (mm²) | Dimensions (m) |     |         |     | Weight |     |         |
|----------|----------------|-----------------|-----|-------------------------------|----------------|-----|---------|-----|--------|-----|---------|
|          |                | t               | s   |                               | W              |     |         | H   | (kg/m) |     |         |
|          |                |                 |     |                               | 3W             | 4W  | 4W+50%E |     | 3W     | 4W  | 4W+50%E |
| TMFC600  | 600            | 6               | 40  | 240                           | 130            | 130 | 170     | 100 | 16     | 19  | 22      |
| TMFC800  | 800            | 6               | 55  | 330                           | 130            | 130 | 170     | 115 | 18     | 22  | 25      |
| TMFC1000 | 1000           | 6               | 75  | 450                           | 130            | 130 | 170     | 135 | 21     | 27  | 31      |
| TMFC1200 | 1200           | 6               | 90  | 540                           | 130            | 130 | 170     | 150 | 26     | 31  | 35      |
| TMFC1600 | 1600           | 6               | 120 | 720                           | 130            | 130 | 170     | 180 | 31     | 39  | 44      |
| TMFC2000 | 2000           | 6               | 160 | 960                           | 130            | 130 | 170     | 220 | 40     | 50  | 59      |
| TMFC2500 | 2500           | 6               | 200 | 1200                          | 130            | 130 | 170     | 260 | 48     | 61  | 69      |
| TMFC3000 | 3000           | 6               | 120 | 1440                          | 130            | 130 | 170     | 325 | 68     | 80  | 86      |
| TMFC3500 | 3500           | 6               | 140 | 1680                          | 130            | 130 | 170     | 365 | 74     | 83  | 92      |
| TMFC4000 | 4000           | 6               | 160 | 1920                          | 130            | 130 | 170     | 405 | 92     | 109 | 120     |
| TMFC4500 | 4500           | 6               | 175 | 2100                          | 130            | 130 | 170     | 435 | 102    | 118 | 134     |
| TMFC5000 | 5000           | 6               | 140 | 2520                          | 130            | 130 | 170     | 530 | 115    | 137 | 148     |
| TMFC6000 | 6000           | 6               | 160 | 2880                          | 130            | 130 | 170     | 590 | 122    | 148 | 161     |


**FEEDER**

**PLUG-IN FEEDER**

| Rating in Amps     | L (mm)  |          |
|--------------------|---------|----------|
|                    | Minimum | Standard |
| <b>SINGLE TIER</b> |         |          |
| 600                | 390     | 3000     |
| 800                | 390     | 3000     |
| 1000               | 390     | 3000     |
| 1200               | 390     | 3000     |
| 1600               | 390     | 3000     |
| 2000               | 390     | 3000     |
| 2500               | 390     | 3000     |
| <b>DOUBLE TIER</b> |         |          |
| 3000               | 500     | 3000     |
| 3500               | 500     | 3000     |
| 4000               | 500     | 3000     |
| 4500               | 500     | 3000     |
| <b>TRIPLE TIER</b> |         |          |
| 5000               | 500     | 3000     |
| 6000               | 500     | 3000     |



| Maximum Length     |                   |         |         |
|--------------------|-------------------|---------|---------|
| Rating in Amps     | Dimensions L (mm) |         |         |
|                    | 1 P.I.H           | 2 P.I.H | 3 P.I.H |
| <b>SINGLE TIER</b> |                   |         |         |
| 600                | 2990              | 2980    | 2970    |
| 800                | 2990              | 2980    | 2970    |
| 1000               | 2990              | 2980    | 2970    |
| 1200               | 2990              | 2980    | 2970    |
| 1600               | 2990              | 2980    | 2970    |
| 2000               | 2990              | 2980    | 2970    |
| 2500               | 2990              | 2980    | 2970    |
| <b>DOUBLE TIER</b> |                   |         |         |
| 3000               | 2990              | 2980    | 2970    |
| 3500               | 2990              | 2980    | 2970    |
| 4000               | 2990              | 2980    | 2970    |
| 4500               | 2990              | 2980    | 2970    |
| <b>TRIPLE TIER</b> |                   |         |         |
| 5000               | 2990              | 2980    | 2970    |
| 6000               | 2990              | 2980    | 2970    |



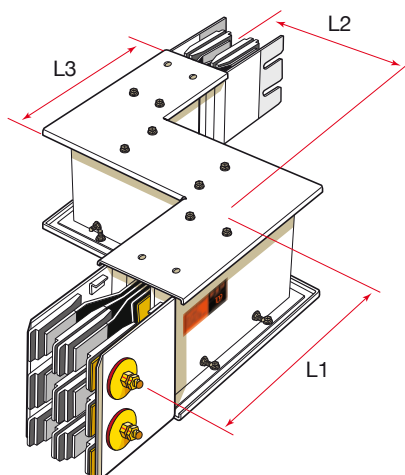
## HORIZONTAL ELBOW

## VERTICAL ELBOW

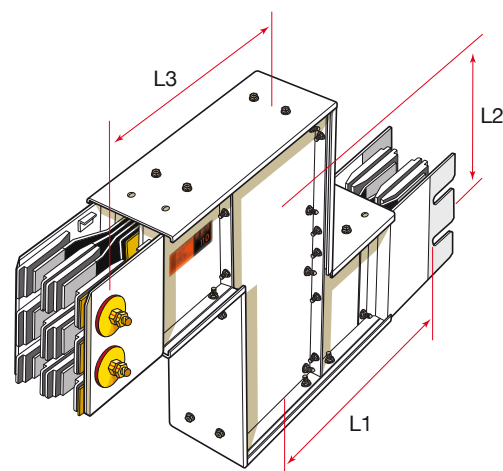
| Minimum Length     |                   |     |
|--------------------|-------------------|-----|
| Rating in Amps     | Dimensions L (mm) |     |
|                    | L1                | L2  |
| <b>SINGLE TIER</b> |                   |     |
| 600                | 265               | 265 |
| 800                | 265               | 265 |
| 1000               | 265               | 265 |
| 1200               | 265               | 265 |
| 1600               | 265               | 265 |
| 2000               | 265               | 265 |
| 2500               | 265               | 265 |
| <b>DOUBLE TIER</b> |                   |     |
| 3000               | 265               | 265 |
| 3500               | 265               | 265 |
| 4000               | 265               | 265 |
| 4500               | 265               | 265 |
| <b>TRIPLE TIER</b> |                   |     |
| 5000               | 265               | 265 |
| 6000               | 265               | 265 |

| Minimum Length     |                   |     |
|--------------------|-------------------|-----|
| Rating in Amps     | Dimensions L (mm) |     |
|                    | L1                | L2  |
| <b>SINGLE TIER</b> |                   |     |
| 600                | 295               | 295 |
| 800                | 300               | 300 |
| 1000               | 310               | 310 |
| 1200               | 320               | 320 |
| 1600               | 340               | 340 |
| 2000               | 355               | 355 |
| 2500               | 380               | 380 |
| <b>DOUBLE TIER</b> |                   |     |
| 3000               | 405               | 405 |
| 3500               | 445               | 445 |
| 4000               | 445               | 445 |
| 4500               | 460               | 460 |
| <b>TRIPLE TIER</b> |                   |     |
| 5000               | 510               | 510 |
| 6000               | 540               | 540 |

**Note:** All dimensions are subject to change without prior notice.



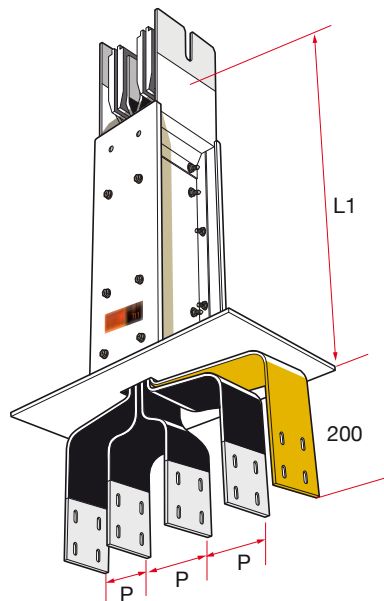
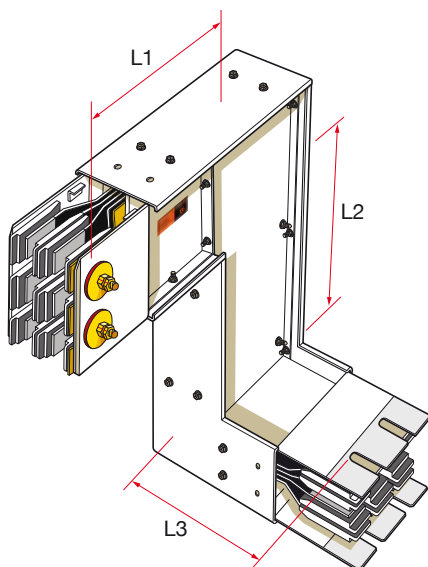
## HORIZONTAL OFFSET



## VERTICAL OFFSET

| Maximum Length       |                   |     |     |
|----------------------|-------------------|-----|-----|
| Rating<br>in<br>Amps | Dimensions L (mm) |     |     |
|                      | L1                | L2  | L3  |
| <b>SINGLE TIER</b>   |                   |     |     |
| 600                  | 265               | 190 | 265 |
| 800                  | 265               | 190 | 265 |
| 1000                 | 265               | 190 | 265 |
| 1200                 | 265               | 190 | 265 |
| 1600                 | 265               | 190 | 265 |
| 2000                 | 265               | 190 | 265 |
| 2500                 | 265               | 190 | 265 |
| <b>DOUBLE TIER</b>   |                   |     |     |
| 3000                 | 265               | 190 | 265 |
| 3500                 | 265               | 190 | 265 |
| 4000                 | 265               | 190 | 265 |
| 4500                 | 265               | 190 | 265 |
| <b>TRIPLE TIER</b>   |                   |     |     |
| 5000                 | 265               | 190 | 265 |
| 6000                 | 265               | 190 | 265 |

| Maximum Length       |                   |     |     |
|----------------------|-------------------|-----|-----|
| Rating<br>in<br>Amps | Dimensions L (mm) |     |     |
|                      | L1                | L2  | L3  |
| <b>SINGLE TIER</b>   |                   |     |     |
| 600                  | 295               | 225 | 295 |
| 800                  | 300               | 240 | 300 |
| 1000                 | 310               | 260 | 310 |
| 1200                 | 320               | 275 | 320 |
| 1600                 | 340               | 310 | 340 |
| 2000                 | 355               | 345 | 355 |
| 2500                 | 380               | 385 | 380 |
| <b>DOUBLE TIER</b>   |                   |     |     |
| 3000                 | 405               | 448 | 405 |
| 3500                 | 445               | 450 | 445 |
| 4000                 | 445               | 530 | 445 |
| 4500                 | 460               | 565 | 460 |
| <b>TRIPLE TIER</b>   |                   |     |     |
| 5000                 | 510               | 655 | 510 |
| 6000                 | 540               | 715 | 540 |



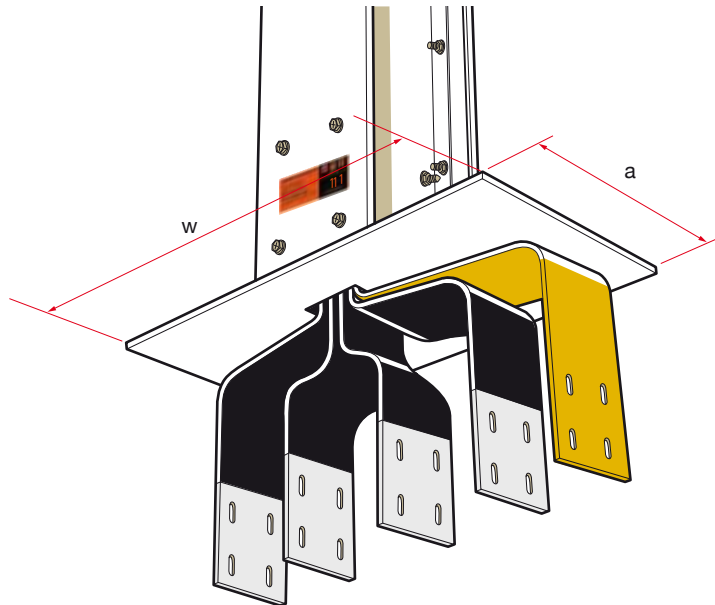
## COMBINATION ELBOW

## FLANGED END

| Maximum Length     |                   |     |     |
|--------------------|-------------------|-----|-----|
| Rating in Amps     | Dimensions L (mm) |     |     |
|                    | L1                | L2  | L3  |
| <b>SINGLE TIER</b> |                   |     |     |
| 600                | 295               | 200 | 265 |
| 800                | 300               | 205 | 265 |
| 1000               | 310               | 215 | 265 |
| 1200               | 320               | 225 | 265 |
| 1600               | 340               | 240 | 265 |
| 2000               | 355               | 260 | 265 |
| 2500               | 380               | 280 | 265 |
| <b>DOUBLE TIER</b> |                   |     |     |
| 3000               | 405               | 310 | 350 |
| 3500               | 445               | 350 | 350 |
| 4000               | 445               | 350 | 350 |
| 4500               | 445               | 365 | 350 |
| <b>TRIPLE TIER</b> |                   |     |     |
| 5000               | 510               | 415 | 400 |
| 6000               | 540               | 445 | 400 |

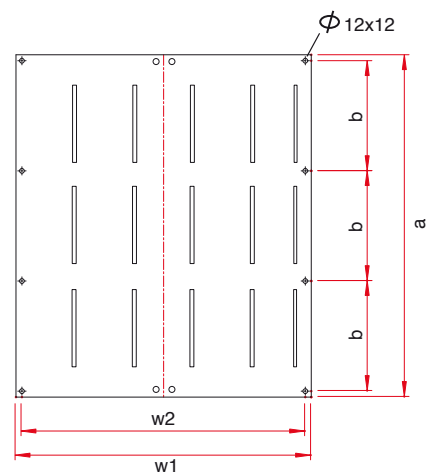
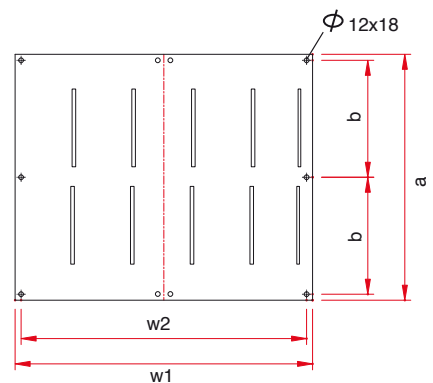
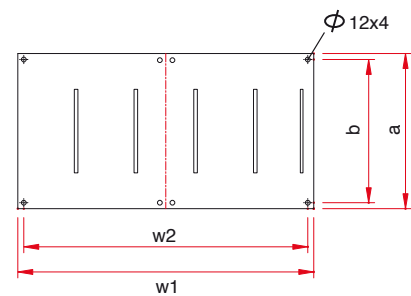
| Maximum Length     |                   |           |
|--------------------|-------------------|-----------|
| Rating in Amps     | Dimensions L (mm) |           |
|                    | L1                | Pitch (P) |
| <b>SINGLE TIER</b> |                   |           |
| 600                | 265               | 100       |
| 800                | 265               | 100       |
| 1000               | 265               | 100       |
| 1200               | 265               | 100       |
| 1600               | 265               | 100       |
| 2000               | 265               | 100       |
| 2500               | 265               | 100       |
| <b>DOUBLE TIER</b> |                   |           |
| 3000               | 265               | 130       |
| 3500               | 265               | 130       |
| 4000               | 265               | 130       |
| 4500               | 265               | 130       |
| <b>TRIPLE TIER</b> |                   |           |
| 5000               | 265               | 130       |
| 6000               | 265               | 130       |

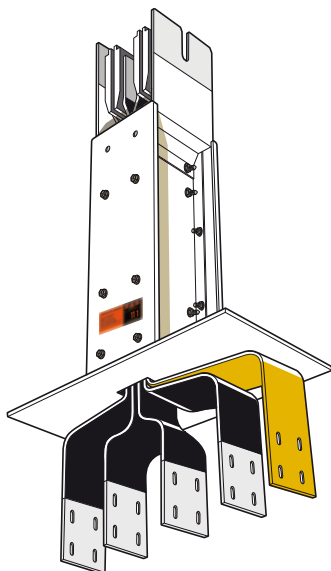
**Note:** All dimensions are subject to change without prior notice.



## FLANGED END PLATE

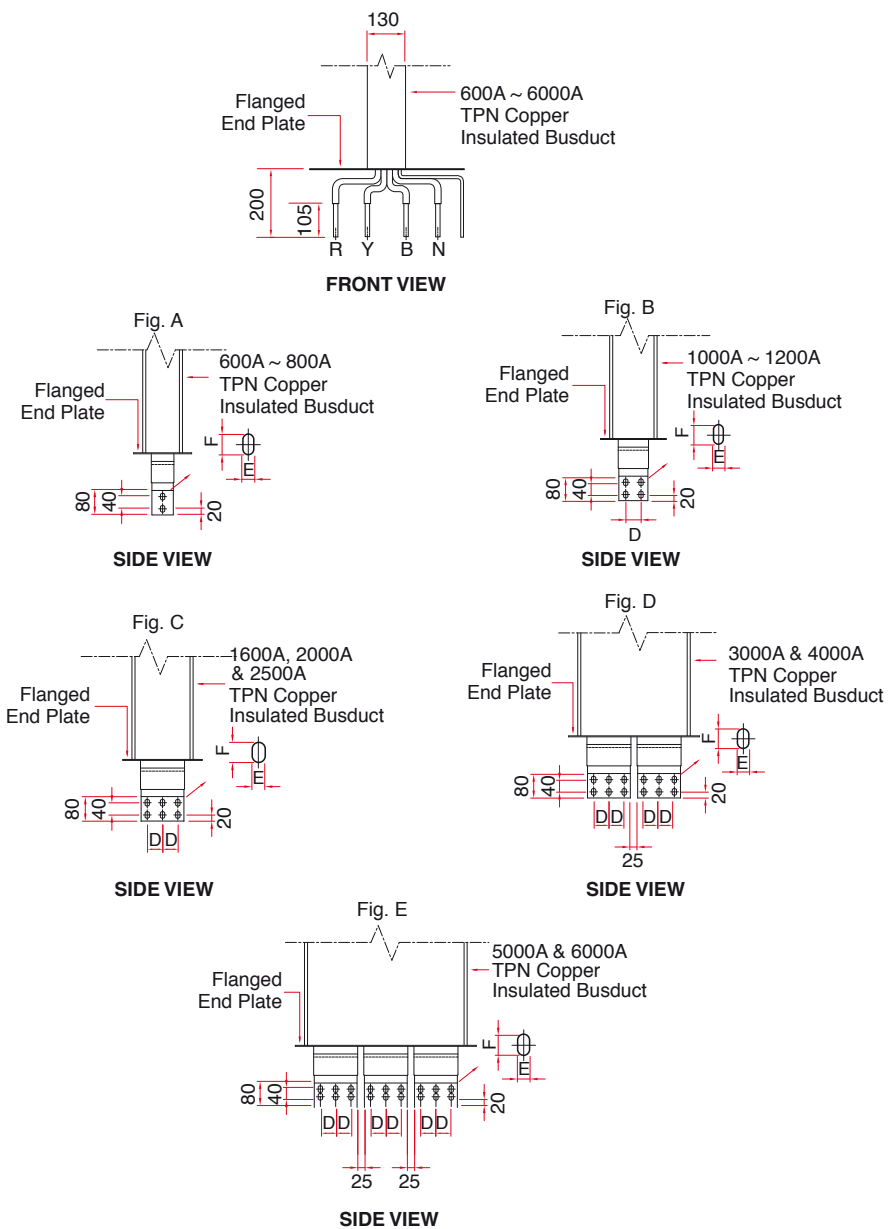
| Flanged End Plate    |                 |     |     |     |         |     |     |     |         |     |
|----------------------|-----------------|-----|-----|-----|---------|-----|-----|-----|---------|-----|
| Rating<br>in<br>Amps | Dimensions (mm) |     |     |     |         |     |     |     |         |     |
|                      | a               | b   | 3W  |     | 3W+50%E |     | 4W  |     | 4W+50%E |     |
|                      |                 |     | w1  | w2  | w1      | w2  | w1  | w2  | w1      | w2  |
| SINGLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 600                  | 160             | 130 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 800                  | 175             | 145 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1000                 | 195             | 165 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1200                 | 210             | 180 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1600                 | 240             | 210 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 2000                 | 280             | 250 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 2500                 | 320             | 290 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| DOUBLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 3000                 | 406             | 188 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 3500                 | 445             | 208 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 4000                 | 485             | 286 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 4500                 | 515             | 243 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| TRIPLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 5000                 | 610             | 193 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 6000                 | 670             | 213 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |



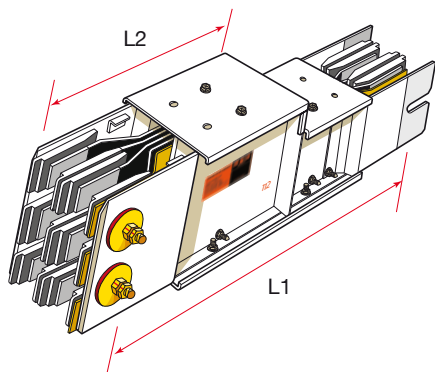


## FLANGED END

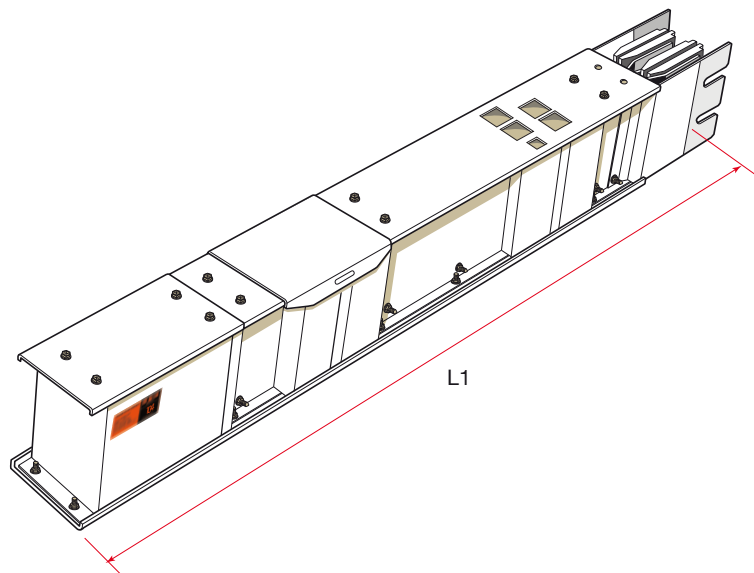
| Rating<br>in<br>Amps | Maximum Length  |    |    | Fig. |
|----------------------|-----------------|----|----|------|
|                      | Dimensions (mm) |    |    |      |
|                      | D               | E  | F  |      |
| SINGLE TIER          |                 |    |    |      |
| 600                  | -               | 11 | 20 | A    |
| 800                  | -               | 11 | 20 | A    |
| 1000                 | 40              | 11 | 20 | B    |
| 1200                 | 40              | 11 | 20 | B    |
| 1600                 | 50              | 11 | 20 | C    |
| 2000                 | 60              | 14 | 22 | C    |
| 2500                 | 70              | 14 | 22 | C    |
| DOUBLE TIER          |                 |    |    |      |
| 3000                 | 40              | 14 | 22 | D    |
| 3500                 | 50              | 14 | 22 | D    |
| 4000                 | 60              | 14 | 22 | D    |
| 4500                 | 70              | 14 | 22 | D    |
| TRIPLE TIER          |                 |    |    |      |
| 5000                 | 50              | 14 | 22 | E    |
| 6000                 | 60              | 14 | 22 | F    |



**Note:** All dimensions are subject to change without prior notice.



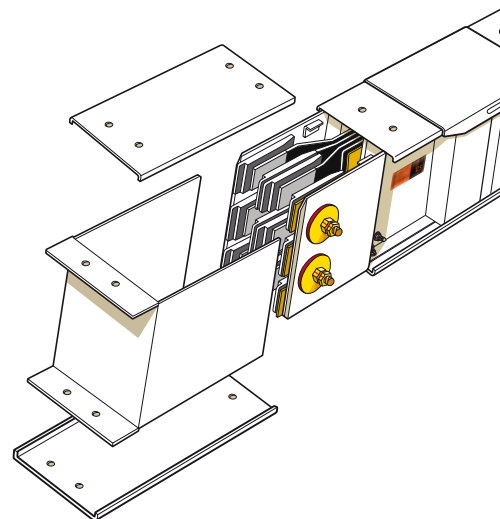
## REDUCER

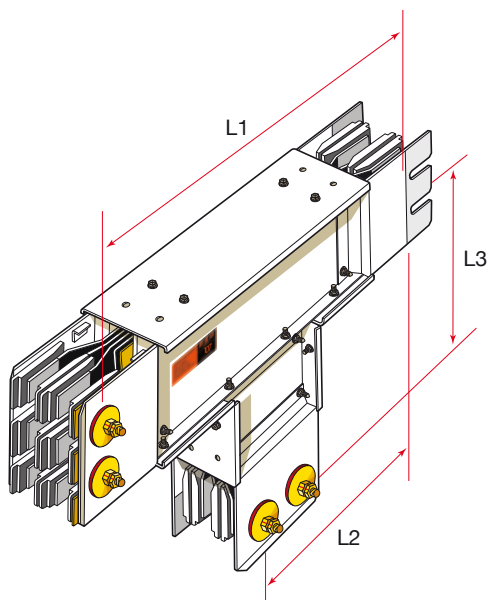


## END CLOSER

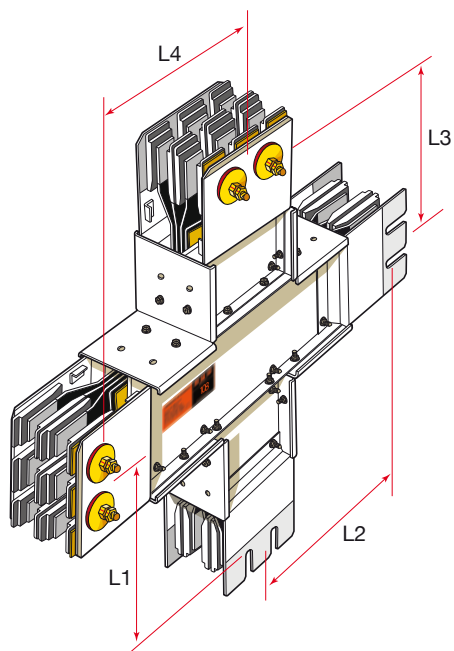
| Maximum Length |                 |     |
|----------------|-----------------|-----|
| Rating in Amps | Dimensions (mm) |     |
|                | L1              | L2  |
| 800            | 490             | 245 |
| 1000           | 490             | 245 |
| 1200           | 490             | 245 |
| 1600           | 490             | 245 |
| 2000           | 490             | 245 |
| 2500           | 490             | 245 |
| 3000           | 670             | 335 |
| 3500           | 750             | 375 |
| 4000           | 750             | 375 |
| 4500           | 750             | 375 |
| 5000           | 990             | 495 |
| 6000           | 1070            | 535 |

| Maximum Length |                 |
|----------------|-----------------|
| Rating in Amps | Dimensions (mm) |
|                | L1              |
| 800            | 245             |
| 1000           | 245             |
| 1200           | 245             |
| 1600           | 245             |
| 2000           | 245             |
| 2500           | 245             |
| 3000           | 335             |
| 3500           | 375             |
| 4000           | 375             |
| 4500           | 375             |
| 5000           | 495             |
| 6000           | 535             |





**VERTICAL TEE**

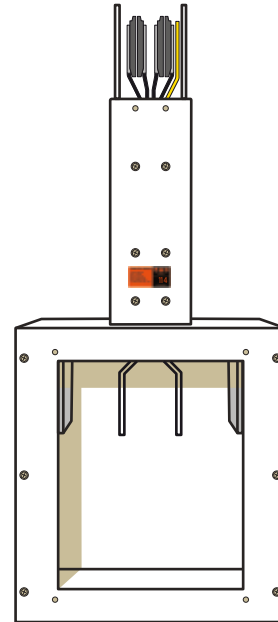


**VERTICAL CROSS**

| Maximum Length     |                 |     |     |
|--------------------|-----------------|-----|-----|
| Rating in Amps     | Dimensions (mm) |     |     |
|                    | L1              | L2  | L3  |
| <b>SINGLE TIER</b> |                 |     |     |
| 600                | 590             | 295 | 295 |
| 800                | 600             | 300 | 300 |
| 1000               | 620             | 310 | 310 |
| 1200               | 640             | 320 | 320 |
| 1600               | 670             | 340 | 340 |
| 2000               | 710             | 355 | 355 |
| 2500               | 750             | 375 | 380 |
| <b>DOUBLE TIER</b> |                 |     |     |
| 3000               | 810             | 405 | 405 |
| 3500               | 890             | 445 | 445 |
| 4000               | 890             | 445 | 445 |
| 4500               | 920             | 460 | 460 |
| <b>TRIPLE TIER</b> |                 |     |     |
| 5000               | 1020            | 510 | 510 |
| 6000               | 1080            | 540 | 540 |

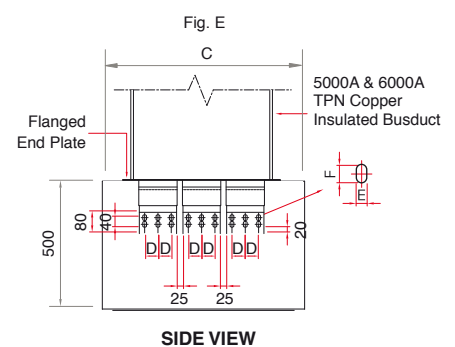
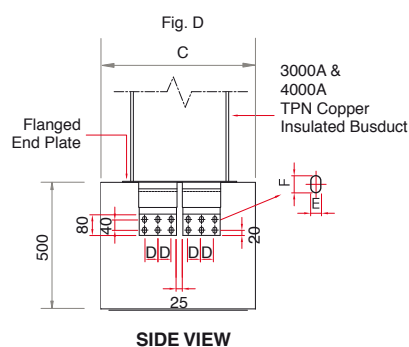
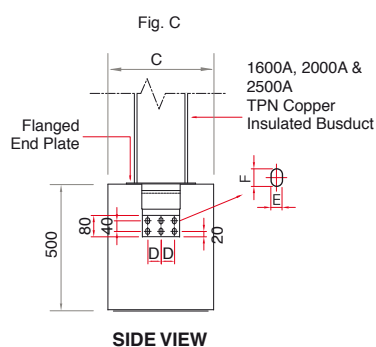
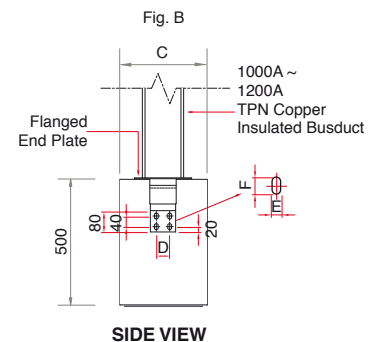
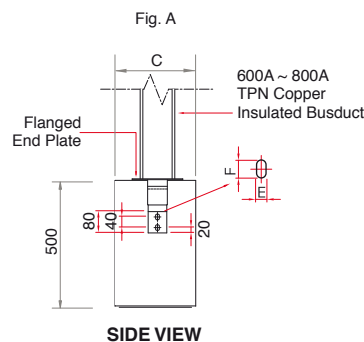
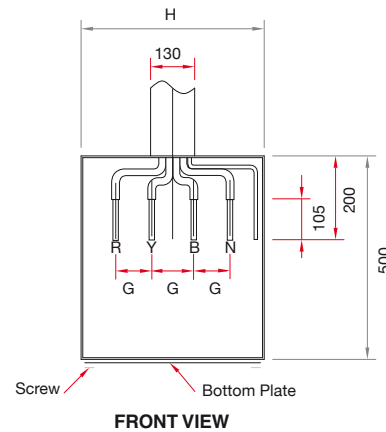
| Maximum Length     |                 |     |     |     |
|--------------------|-----------------|-----|-----|-----|
| Rating in Amps     | Dimensions (mm) |     |     |     |
|                    | L1              | L2  | L3  | L4  |
| <b>SINGLE TIER</b> |                 |     |     |     |
| 600                | 295             | 295 | 295 | 295 |
| 800                | 300             | 300 | 300 | 300 |
| 1000               | 310             | 310 | 310 | 310 |
| 1200               | 320             | 320 | 320 | 320 |
| 1600               | 340             | 340 | 340 | 340 |
| 2000               | 355             | 355 | 355 | 355 |
| 2500               | 380             | 380 | 380 | 380 |
| <b>DOUBLE TIER</b> |                 |     |     |     |
| 3000               | 404             | 404 | 404 | 404 |
| 3500               | 445             | 445 | 445 | 445 |
| 4000               | 445             | 445 | 445 | 445 |
| 4500               | 460             | 460 | 460 | 460 |
| <b>TRIPLE TIER</b> |                 |     |     |     |
| 5000               | 510             | 510 | 510 | 510 |
| 6000               | 540             | 540 | 540 | 540 |

**Note:** All dimensions are subject to change without prior notice.

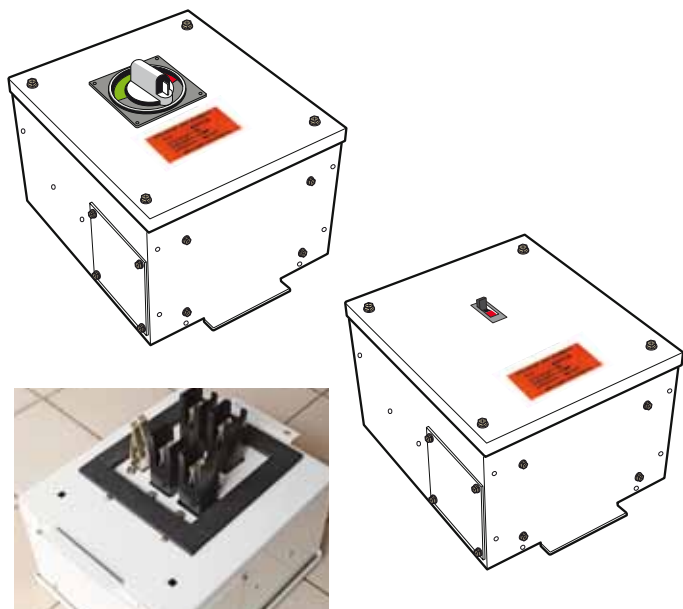


## CABLE ENTRY BOX

| Rating<br>in<br>Amps | Dimensions (mm) |    |    |    |     |     | Fig. |
|----------------------|-----------------|----|----|----|-----|-----|------|
|                      | C               | D  | E  | F  | G   | H   |      |
| SINGLE TIER          |                 |    |    |    |     |     |      |
| 600                  | 210             | -  | 11 | 20 | 100 | 450 | A    |
| 800                  | 210             | -  | 11 | 20 | 100 | 450 | A    |
| 1000                 | 230             | 40 | 11 | 20 | 100 | 450 | B    |
| 1200                 | 245             | 40 | 11 | 20 | 100 | 450 | B    |
| 1600                 | 285             | 40 | 11 | 20 | 100 | 450 | C    |
| 2000                 | 315             | 60 | 14 | 22 | 100 | 450 | C    |
| 2500                 | 355             | 70 | 14 | 22 | 100 | 450 | C    |
| DOUBLE TIER          |                 |    |    |    |     |     |      |
| 3000                 | 415             | 40 | 14 | 22 | 130 | 540 | D    |
| 3500                 | 535             | 40 | 14 | 22 | 130 | 540 | D    |
| 4000                 | 535             | 60 | 14 | 22 | 130 | 540 | D    |
| 4500                 | 535             | 60 | 14 | 22 | 130 | 540 | D    |
| TRIPLE TIER          |                 |    |    |    |     |     |      |
| 5000                 | 615             | 50 | 14 | 22 | 130 | 540 | E    |
| 6000                 | 690             | 60 | 14 | 22 | 130 | 540 | E    |



**Note:** All dimensions are subject to change without prior notice.



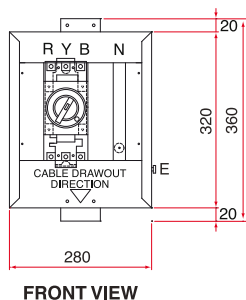
## Plug-in Unit

| Circuit Breaker | Dimensions (mm) |     |     |     | Breaking capacity (kA) symmetrical r.m.s. |        |        |
|-----------------|-----------------|-----|-----|-----|-------------------------------------------|--------|--------|
|                 | L               | W   | S   | H   | AC220V                                    | AC415V | AC550V |
| 16A-100A        | 320             | 280 | 120 | 210 | As per requirements                       |        |        |
| 125A-250A       | 400             | 310 | 150 | 210 |                                           |        |        |
| 300A-400A       | 485             | 320 | 165 | 285 |                                           |        |        |
| 600A            | 810             | 325 | 340 | 290 |                                           |        |        |

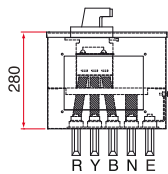
## Tap-off Unit

| Circuit Breaker | Dimensions (mm) |     |     |     | Breaking capacity (kA) symmetrical r.m.s. |        |        |
|-----------------|-----------------|-----|-----|-----|-------------------------------------------|--------|--------|
|                 | L               | W   | S   | H   | AC220V                                    | AC415V | AC550V |
| 800A            | 850             | 360 | 335 | 300 | As per requirements                       |        |        |
| 1000A           | 850             | 360 | 335 | 300 |                                           |        |        |
| 1200A           | 850             | 360 | 250 | 300 |                                           |        |        |
| 1600A           | 1150            | 360 | 375 | 300 |                                           |        |        |
| 2000A           | 1150            | 500 | 375 | 400 |                                           |        |        |

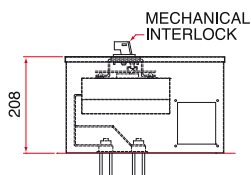
## PLUG-IN UNIT



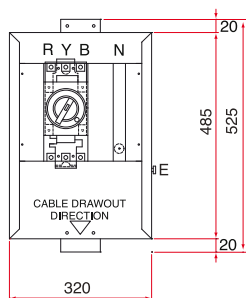
FRONT VIEW



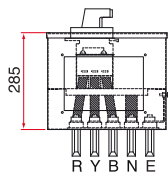
TOP VIEW



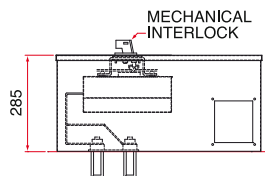
SIDE VIEW



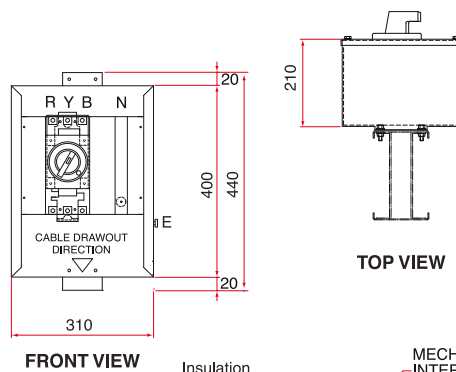
FRONT VIEW



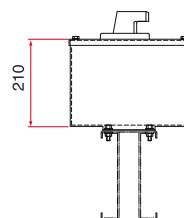
TOP VIEW



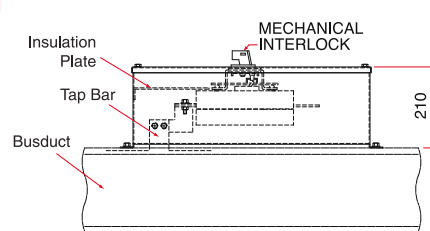
SIDE VIEW



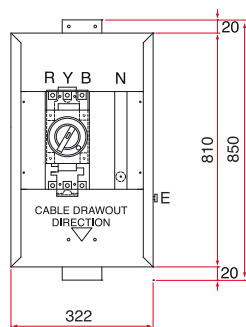
FRONT VIEW



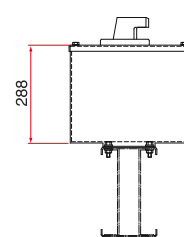
TOP VIEW



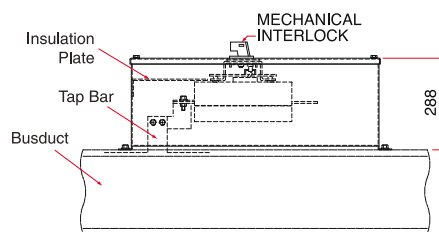
SIDE VIEW



FRONT VIEW



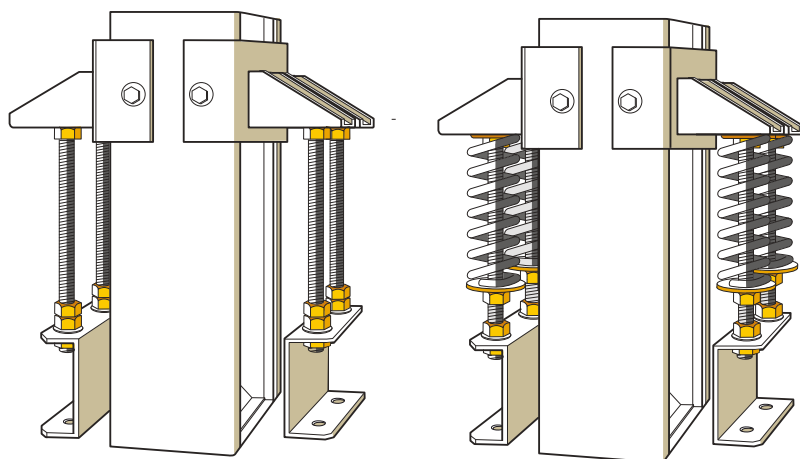
TOP VIEW



SIDE VIEW

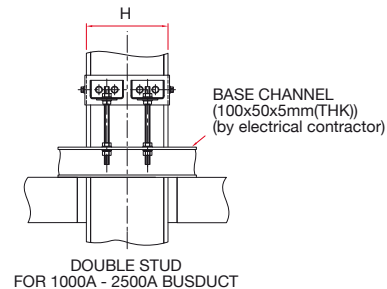
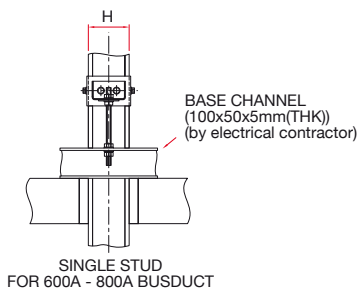
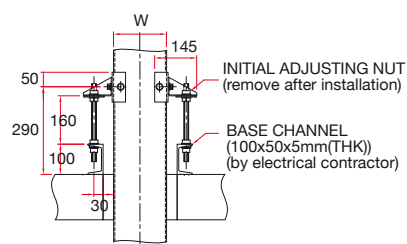
**Note:** All dimensions are subject to change without prior notice.

| Rating in Amps | H (mm) |         | W (mm) |         |
|----------------|--------|---------|--------|---------|
|                | 3W/4W  | 4W+50%E | 3W/4W  | 4W+50%E |
| 600            | 100    | 100     | 130    | 170     |
| 800            | 115    | 115     | 130    | 170     |
| 1000           | 135    | 135     | 130    | 170     |
| 1200           | 150    | 150     | 130    | 170     |
| 1600           | 180    | 180     | 130    | 170     |
| 2000           | 220    | 220     | 130    | 170     |
| 2500           | 260    | 260     | 130    | 170     |
| 3000           | 325    | 325     | 130    | 170     |
| 3500           | 365    | 365     | 130    | 170     |
| 4000           | 405    | 405     | 130    | 170     |
| 4500           | 435    | 435     | 130    | 170     |
| 5000           | 530    | 530     | 130    | 170     |
| 6000           | 590    | 590     | 130    | 170     |

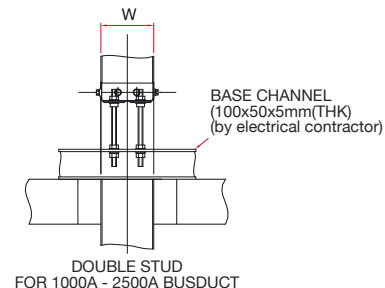
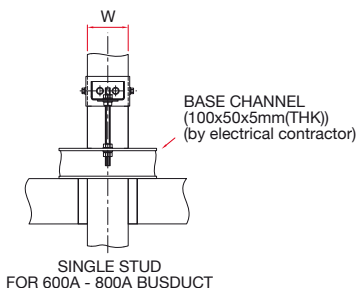
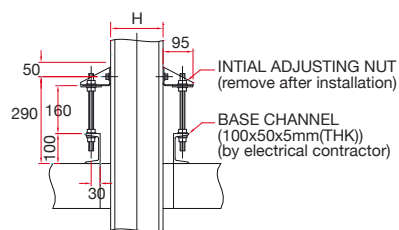


## VERTICAL HANGER

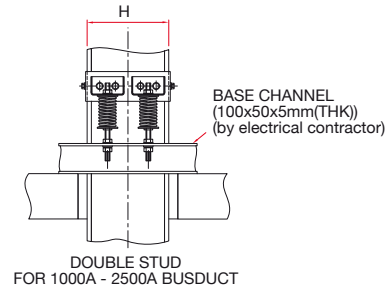
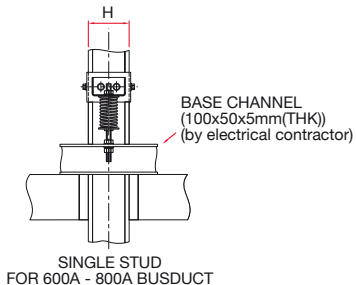
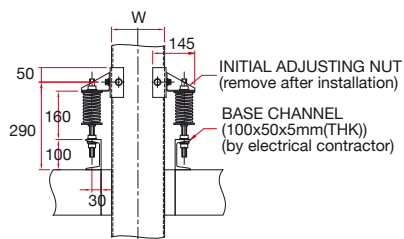
### Rigid Side Type



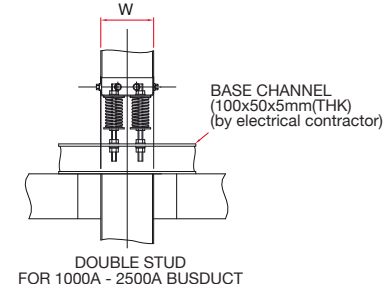
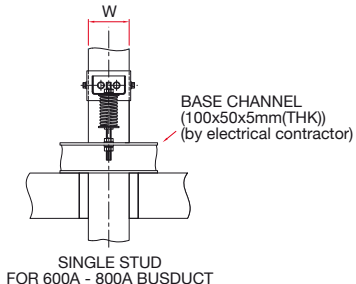
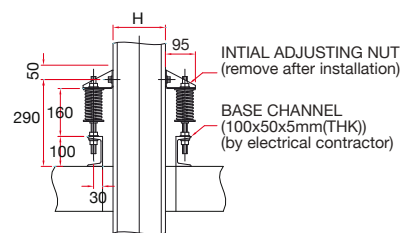
### Rigid Front Type



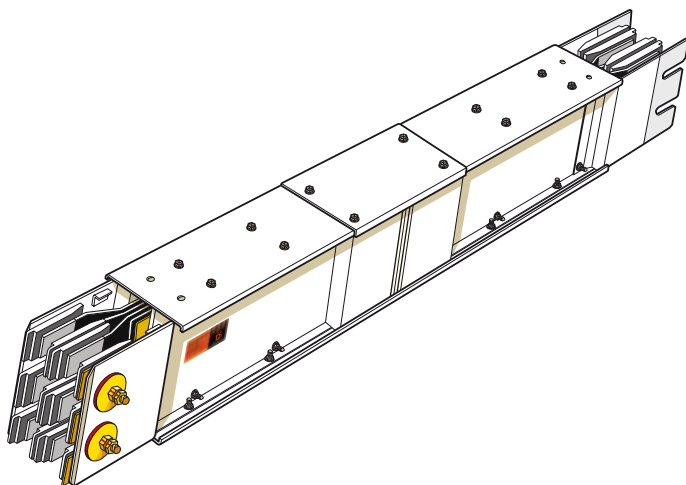
### Spring Side Type



### Spring Front Type



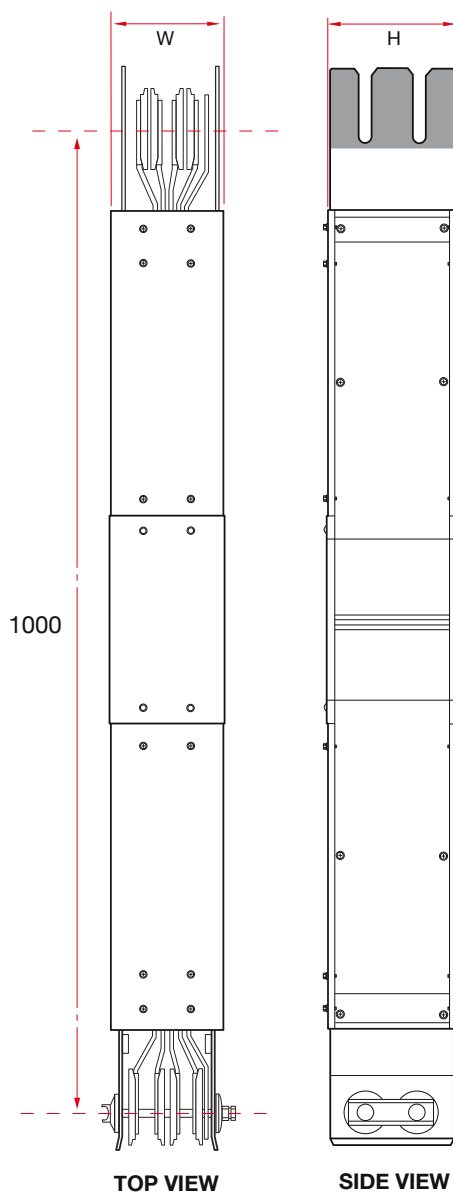
**Note:** All dimensions are subject to change without prior notice.



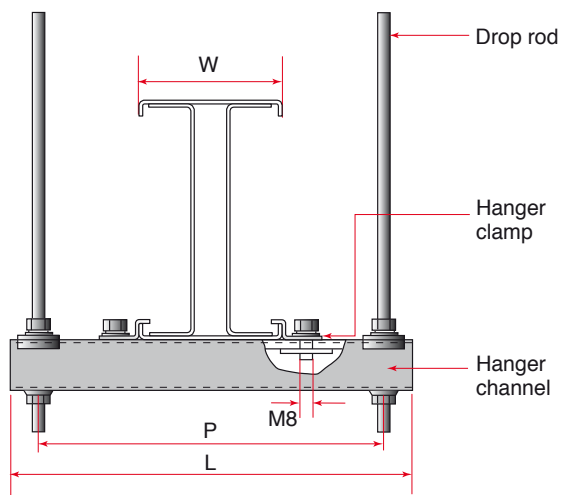
## EXPANSION JOINT

### Copper Conductors

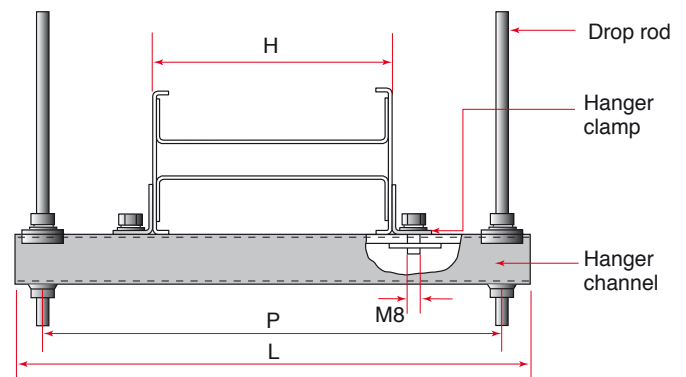
| Rating in Amps | Dimensions (mm) |     |         |     |
|----------------|-----------------|-----|---------|-----|
|                | W               |     |         | H   |
|                | 3W              | 4W  | 4W+50%E |     |
| 600            | 130             | 130 | 170     | 100 |
| 800            | 130             | 130 | 170     | 115 |
| 1000           | 130             | 130 | 170     | 135 |
| 1200           | 130             | 130 | 170     | 150 |
| 1600           | 130             | 130 | 170     | 180 |
| 2000           | 130             | 130 | 170     | 220 |
| 2500           | 130             | 130 | 170     | 260 |
| 3000           | 130             | 130 | 170     | 325 |
| 3500           | 130             | 130 | 170     | 365 |
| 4000           | 130             | 130 | 170     | 405 |
| 4500           | 130             | 130 | 170     | 435 |
| 5000           | 130             | 130 | 170     | 530 |
| 6000           | 130             | 130 | 170     | 590 |



**Note:** All dimensions are subject to change without prior notice.



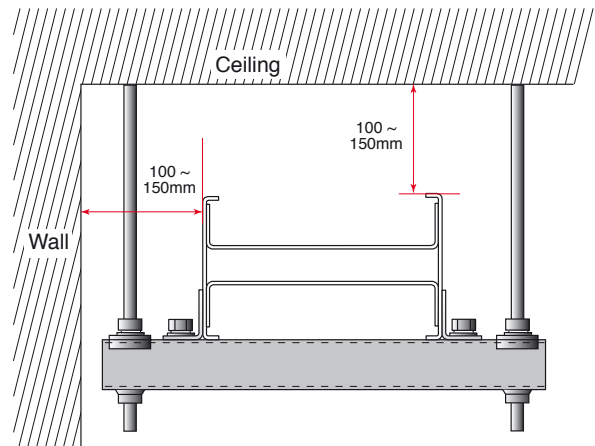
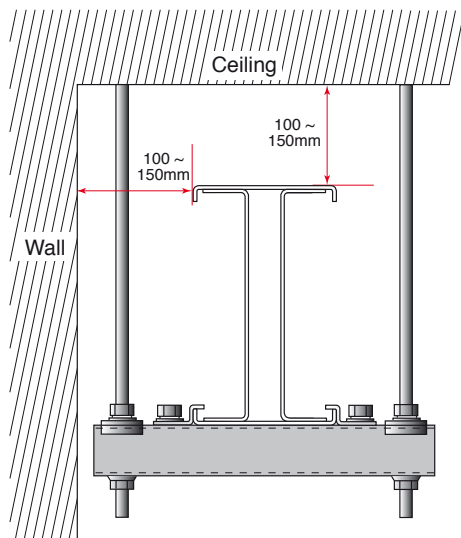
### EDGEWISE HANGER



### FLATWISE HANGER

| Rating in Amps | Dimensions(mm) |     |
|----------------|----------------|-----|
|                | L              | P   |
| 600 ~ 1200     | 350            | 300 |
| 1500 ~ 2500    | 500            | 450 |
| 3000 ~ 3500    | 650            | 600 |
| 4000 ~ 4500    | 750            | 700 |
| 5000 ~ 6000    | 850            | 800 |

For installation, a clearance of 100–150 mm from the wall and ceiling is required.  
Hangers are not included in the busduct system.



## TECHNICAL DATA

### IMPEDANCE

#### Copper Conductors

(Unit:  $10^{-5}\Omega/m$ )

| Rating<br>in<br>Amps | Conductor<br>(mm) | 3Ø 50 Hz        |      |                         | 3Ø 50 Hz        |      |                         | D.C.            |
|----------------------|-------------------|-----------------|------|-------------------------|-----------------|------|-------------------------|-----------------|
|                      |                   | R <sub>AC</sub> | X    | $\sqrt{R_{AC}^2 + X^2}$ | R <sub>AC</sub> | X    | $\sqrt{R_{AC}^2 + X^2}$ | R <sub>DC</sub> |
| 600                  | 6 x 40            | 9.30            | 4.11 | 10.17                   | 9.48            | 4.93 | 10.69                   | 9.45            |
| 800                  | 6 x 55            | 6.37            | 3.69 | 7.36                    | 6.5             | 4.43 | 7.87                    | 6.87            |
| 1000                 | 6 x 75            | 4.68            | 3.09 | 5.61                    | 4.77            | 3.71 | 6.04                    | 5.04            |
| 1200                 | 6 x 90            | 3.51            | 2.80 | 4.49                    | 3.58            | 3.36 | 4.91                    | 4.20            |
| 1600                 | 6 x 120           | 3.08            | 1.94 | 3.64                    | 3.14            | 2.33 | 3.91                    | 3.15            |
| 2000                 | 6 x 160           | 2.64            | 2.75 | 3.81                    | 2.69            | 0.33 | 2.71                    | 2.50            |
| 2500                 | 6 x 200           | 2.24            | 0.22 | 2.25                    | 2.28            | 0.27 | 2.30                    | 1.89            |
| 3000                 | 6 x 120           | 1.58            | 1.62 | 2.26                    | 1.61            | 1.94 | 2.52                    | 1.58            |
| 3500                 | 6 x 140           | 1.35            | 1.39 | 1.94                    | 1.39            | 1.72 | 2.21                    | 1.42            |
| 4000                 | 6 x 160           | 1.18            | 0.77 | 1.41                    | 1.2             | 0.92 | 1.51                    | 1.25            |
| 4500                 | 6 x 175           | 1.03            | 0.68 | 1.23                    | 1.07            | 0.82 | 1.35                    | 2.25            |
| 5000                 | 6 x 140           | 0.88            | 0.57 | 1.05                    | 0.9             | 0.68 | 1.13                    | 0.78            |
| 6000                 | 6 x 160           | 0.78            | 0.48 | 0.91                    | 0.8             | 0.58 | 0.99                    | 0.83            |

### VOLTAGE DROP

#### Line to Line with Copper Conductors

(Unit: Volt/100m)

| Rating<br>in<br>Amps | Conductor<br>(mm) | 3Ø 50 Hz Power factor % |      |      |      |      |      | 3Ø 60 Hz Power factor % |      |      |      |      |      |
|----------------------|-------------------|-------------------------|------|------|------|------|------|-------------------------|------|------|------|------|------|
|                      |                   | 100                     | 95   | 90   | 85   | 80   | 75   | 100                     | 95   | 90   | 85   | 80   | 75   |
| 600                  | 6 x 40            | 9.7                     | 10.5 | 10.6 | 10.5 | 10.3 | 10.1 | 9.9                     | 11.0 | 11.1 | 11.1 | 11.0 | 10.8 |
| 800                  | 6 x 55            | 8.8                     | 10.0 | 10.2 | 10.2 | 10.1 | 10.0 | 9.0                     | 10.5 | 10.8 | 10.9 | 10.9 | 10.8 |
| 1000                 | 6 x 75            | 8.1                     | 9.4  | 9.6  | 9.7  | 9.7  | 9.6  | 8.3                     | 9.9  | 10.2 | 10.4 | 10.5 | 10.4 |
| 1200                 | 6 x 90            | 7.3                     | 8.7  | 9.1  | 9.3  | 9.3  | 9.3  | 7.4                     | 9.2  | 9.7  | 10.0 | 10.1 | 10.2 |
| 1600                 | 6 x 120           | 8.5                     | 9.8  | 10.0 | 10.1 | 10.1 | 10.0 | 8.7                     | 10.3 | 10.6 | 10.8 | 10.8 | 10.8 |
| 2000                 | 6 x 160           | 9.2                     | 11.7 | 12.4 | 12.8 | 13.0 | 13.2 | 9.3                     | 12.4 | 13.4 | 13.9 | 14.3 | 14.6 |
| 2500                 | 6 x 200           | 9.7                     | 9.5  | 9.2  | 8.8  | 8.4  | 7.9  | 9.9                     | 9.7  | 9.4  | 9.0  | 8.6  | 8.2  |
| 3000                 | 6 x 120           | 8.2                     | 10.4 | 11.0 | 11.4 | 11.6 | 11.7 | 8.4                     | 11.1 | 11.9 | 12.4 | 12.7 | 12.9 |
| 3500                 | 6 x 140           | 8.2                     | 10.4 | 11.0 | 11.4 | 11.6 | 11.7 | 8.4                     | 11.3 | 12.1 | 12.7 | 13.0 | 13.2 |
| 4000                 | 6 x 160           | 8.2                     | 9.4  | 9.7  | 9.8  | 9.7  | 9.7  | 8.3                     | 9.9  | 10.3 | 10.4 | 10.5 | 10.5 |
| 4500                 | 6 x 175           | 8.0                     | 9.3  | 9.5  | 9.6  | 9.6  | 9.5  | 8.3                     | 9.9  | 10.3 | 10.5 | 10.5 | 10.5 |
| 5000                 | 6 x 140           | 7.6                     | 8.8  | 9.0  | 9.1  | 9.1  | 9.0  | 7.8                     | 9.2  | 9.6  | 9.7  | 9.8  | 9.7  |
| 6000                 | 6 x 160           | 8.1                     | 9.2  | 9.4  | 9.5  | 9.4  | 9.3  | 8.3                     | 9.8  | 10.1 | 10.2 | 10.3 | 10.2 |

**Note:** All dimensions are subject to change without prior notice.

## QUALITY: FULLY TESTED AND CERTIFIED

Manufactured under stringent quality control and incorporating proven advanced power distribution technology, Translite MF Busduct is fully type-tested and certified by KEMA, LOVAG, ASTA and SIRIM in compliance to international standards such as IEC60439-2, BS EN 439, JIS (Japan).

## 14 STRINGENT TYPE TEST CATEGORIES

- |                                                                         |       |
|-------------------------------------------------------------------------|-------|
| 1. Verification of temperature-rise limit                               | KEMA  |
| 2. Verification of dielectric properties                                | KEMA  |
| 3. Verification of short-circuit strength                               | KEMA  |
| 4. Verification of the effectiveness of the protective circuit          | KEMA  |
| 5. Verification of clearances and creepage distance                     | KEMA  |
| 6. Verification of the degree of protection                             | KEMA  |
| 7. Verification of electrical characteristics of busbar trunking system | KEMA  |
| 8. Verification of structural strength                                  | KEMA  |
| 9. Verification of crushing resistance                                  | KEMA  |
| 10. Verification of resistance of insulating material to abnormal heat  | KEMA  |
| 11. Verification of resistance to flame propagation                     | LOVAG |
| 12. Verification of fire resistance in building penetration             | KEMA  |
| 13. Verification of Temperature Rise Limit on the Plug-in Unit          | KEMA  |
| 14. Verification of Dielectric Properties on the Plug-in Unit           | KEMA  |

**KEMA Quality**

# TEST CERTIFICATE

No. 2127303.100

Issued to: MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product:

MULTI-B

Trade name:

Translite MF Busduct 600 A

Type/Model:

Ue 1000 V, Ui 1000 V, In 600 A, Iow 30 kA ~ 1.0 s

Ratings:

MULTI-B SDN BHD

Manufactured by:

Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject:

Type tests

Requirements:

IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13.

Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.01-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Amhem, March 1, 2010

F.S. Strikwerda  
Certification Manager

**KEMA Quality**

## ATTESTATION OF CONFORMITY

No. 2135170.01A

Issued to: MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product: low-voltage busbar trunking system

Trade name: MULTI-B

Type/Model: Translite MF Busduct 600 A ~ 6000 A

Ratings: 600 A ~ 6000 A

Manufactured by:

MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject:

Verification of fire resistance in building penetration

Requirements: IEC 60439-2, 3<sup>rd</sup> ed. 2000-03, Clauses: 8.2.15

This Attestation is granted on account of an examination by KEMA Quality, the results of which are laid down in a report no. 2135170.01-QUA/INC dated October 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality is not the responsibility of KEMA Quality.

KEMA Quality B.V.  
Amhem, October 1, 2010

H.R.M. Berends  
Certification Manager

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T +31 26 356 2000 F +31 26 352 5800 www.kemaquality.com Company registration 30685396

a DEKRA company

**KEMA Quality**

# TEST CERTIFICATE

Issued to:

MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product:

Low-voltage busbar trunking system, tap-off unit

Trade name:

MULTI-B

Type/Model:

Tap-off unit IBO type 3P40CA

Ratings:

In 400 A

Manufactured by:

MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject:

Type tests

Requirements:

IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1 and 8.2.2

Remarks:

Tap-off unit tested in combination with Translite MF Busduct 800A

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in report no. 2145881.01-INC, dated 18 August, 2011.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Amhem, 18 August, 2011

Number: 2145881.100

DEKRA Certification B.V.

H.R.M. Berends  
Certification Manager

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All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification

DEKRA Certification B.V., Utrechtseweg 310, 6812 AR Amhem, P.O. Box 5185, 6802 ED Amhem, The Netherlands  
T +31 26 356 2000 F +31 26 352 5800 www.dekra-certification.com Company registration 30685396

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**KEMA Quality**

# TEST CERTIFICATE

No. 2127303.110

Issued to: MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product:

Low-voltage busbar trunking system (Range, straight lengths and joints)

Trade name:

MULTI-B

Type/Model:

Translite MF Busduct 6000 A

Ratings:

Ue 1000 V, Ui 1000 V, In 6000 A, Iow 100 kA ~ 1.0 s

Manufactured by:

MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject:

Type tests

Requirements:

IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.11-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Amhem, March 1, 2010

F.S. Strikwerda  
Certification Manager

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## TEST CERTIFICATE

No. 2127303.108

Issued to:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)  
Trade name: MULTI-B  
Type/Model: Transile MF Busduct 5000 A  
Ratings: Ue 1000 V, Ui 1000 V, In 5000 A, low 100 kA – 1.0 s

Manufactured by:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject: Type tests

Requirements: IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.8, 8.2.10, 8.2.12, 8.2.13

### Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.10-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Arnhem, March 1, 2010

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Certification Manager

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## TEST CERTIFICATE

No. 2127303.106

Issued to:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)  
Trade name: MULTI-B  
Type/Model: Transile MF Busduct 4000 A  
Ratings: Ue 1000 V, Ui 1000 V, In 4000 A, low 90 kA – 1.0 s

Manufactured by:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject: Type tests

Requirements: IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.8, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

### Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.09-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Arnhem, March 1, 2010

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Certification Manager

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KEMA Quality

## TEST CERTIFICATE

No. 2127303.107

Issued to:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)  
Trade name: MULTI-B  
Type/Model: Transile MF Busduct 3000 A  
Ratings: Ue 1000 V, Ui 1000 V, In 3000 A, low 80 kA – 1.0 s

Manufactured by:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject: Type tests

Requirements: IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.8, 8.2.10, 8.2.12 and 8.2.13

### Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.08-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Arnhem, March 1, 2010

F.S. Strikwerda  
Certification Manager

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## TEST CERTIFICATE

No. 2127303.106

Issued to:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)  
Trade name: MULTI-B  
Type/Model: Transile MF Busduct 2500 A  
Ratings: Ue 1000 V, Ui 1000 V, In 2500 A, low 75 kA – 1.0 s

Manufactured by:  
MULTI-B SDN BHD  
Lot 53, Jalan Jasmine 2  
Bandar Bukit Beruntung  
48300 Serendah, Selangor  
Malaysia

Subject: Type tests

Requirements: IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08  
Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.8, 8.2.10, 8.2.12 and 8.2.13

### Remarks:

This Test Certificate is granted on account of an examination by KEMA Quality B.V., the results of which are laid down in report no. 2127303.07-QUA/INC, issued on March 1, 2010.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
Arnhem, March 1, 2010

F.S. Strikwerda  
Certification Manager

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## TEST CERTIFICATE

No. 2127303.105

Issued to: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)

Trade name: **MULTI-B**

Type/Model: **Translite MF Busduct 2000 A**

Rating: **Ue 1000 V, Ui 1000 V, In 2000 A, low 60 kA - 1.0 s**

Manufactured by: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

Subject: **Type tests**

Requirements: **IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08**  
 Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks: This Test Certificate is granted on account of an examination by KEMA Quality B.V. of results of the examination of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality

## TEST CERTIFICATE

No. 2127303.104

Issued to: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)

Trade name: **MULTI-B**

Type/Model: **Translite MF Busduct 1600 A**

Rating: **Ue 1000 V, Ui 1000 V, In 1600 A, low 60 kA - 1.0 s**

Manufactured by: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

Subject: **Type tests**

Requirements: **IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08**  
 Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks: This Test Certificate is granted on account of an examination by KEMA Quality B.V. of results of the examination of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.  
 Amhem, March 1, 2010

F.S. Stekwerdt  
 Certification Manager

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KEMA Quality

## TEST CERTIFICATE

No. 2127303.103

Issued to: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)

Trade name: **MULTI-B**

Type/Model: **Translite MF Busduct 800 A**

Rating: **Ue 1000 V, Ui 1000 V, In 800 A, low 40 kA - 1.0 s**

Manufactured by: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

Subject: **Type tests**

Requirements: **IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08**  
 Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks: This Test Certificate is granted on account of an examination by KEMA Quality B.V. of results of the examination of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

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KEMA Quality

## TEST CERTIFICATE

No. 2127303.102

Issued to: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)

Trade name: **MULTI-B**

Type/Model: **Translite MF Busduct 1000 A**

Rating: **Ue 1000 V, Ui 1000 V, In 1000 A, low 40 kA - 1.0 s**

Manufactured by: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

Subject: **Type tests**

Requirements: **IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08**  
 Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks: This Test Certificate is granted on account of an examination by KEMA Quality B.V. of results of the examination of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

KEMA Quality B.V.

F.S. Stekwerdt

Certification Manager

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KEMA Quality B.V. Lindehofweg 310, 6812 AR Amhem, P.O. Box 5185, 6802 ED Amhem, The Netherlands  
 T +31 26 336 2000 F +31 26 336 2003 www.kemaquality.com Company registration 09065109

KEMA Quality

## TEST CERTIFICATE

No. 2127303.101

Issued to: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

For the product: Low-voltage busbar trunking system (flange, straight lengths and joints)

Trade name: **MULTI-B**

Type/Model: **Translite MF Busduct 800 A**

Rating: **Ue 1000 V, Ui 1000 V, In 800 A, low 40 kA - 1.0 s**

Manufactured by: **MULTI-B SDN BHD**  
 Lot 53, Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 48300 Serendah, Selangor  
 Malaysia

Subject: **Type tests**

Requirements: **IEC 60439-2, 3<sup>rd</sup> ed. 2000-03 and Amendment A1 2005-08**  
 Clauses: 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.7, 8.2.9, 8.2.10, 8.2.12 and 8.2.13

Remarks: This Test Certificate is granted on account of an examination by KEMA Quality B.V. of results of the examination of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by KEMA Quality B.V. is not the responsibility of KEMA Quality B.V.

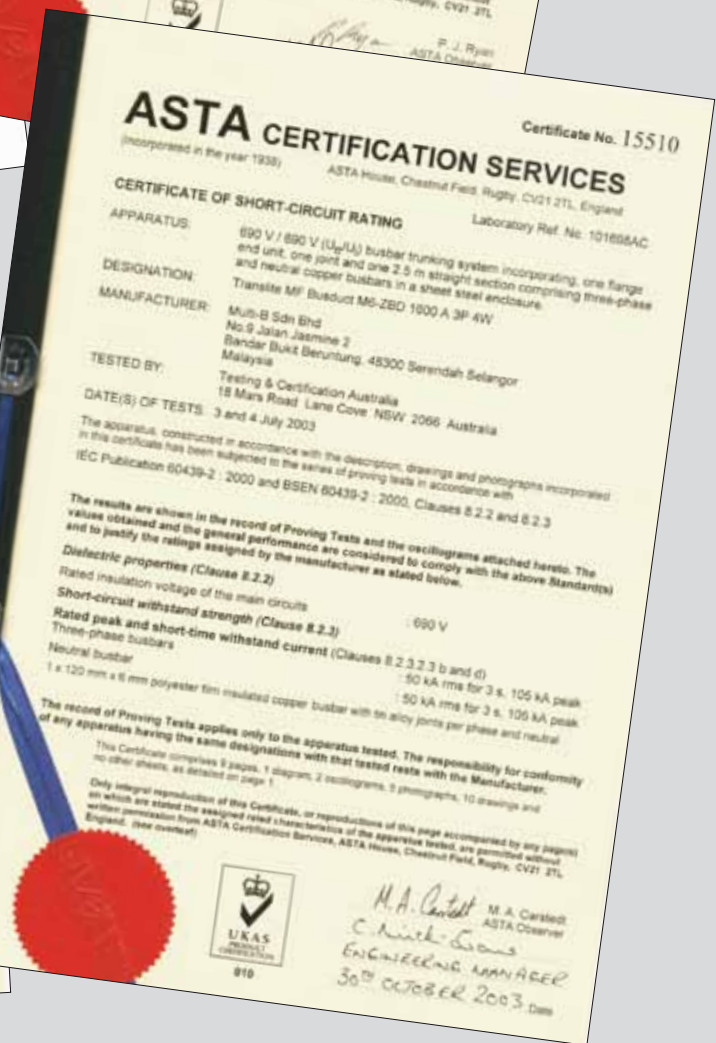
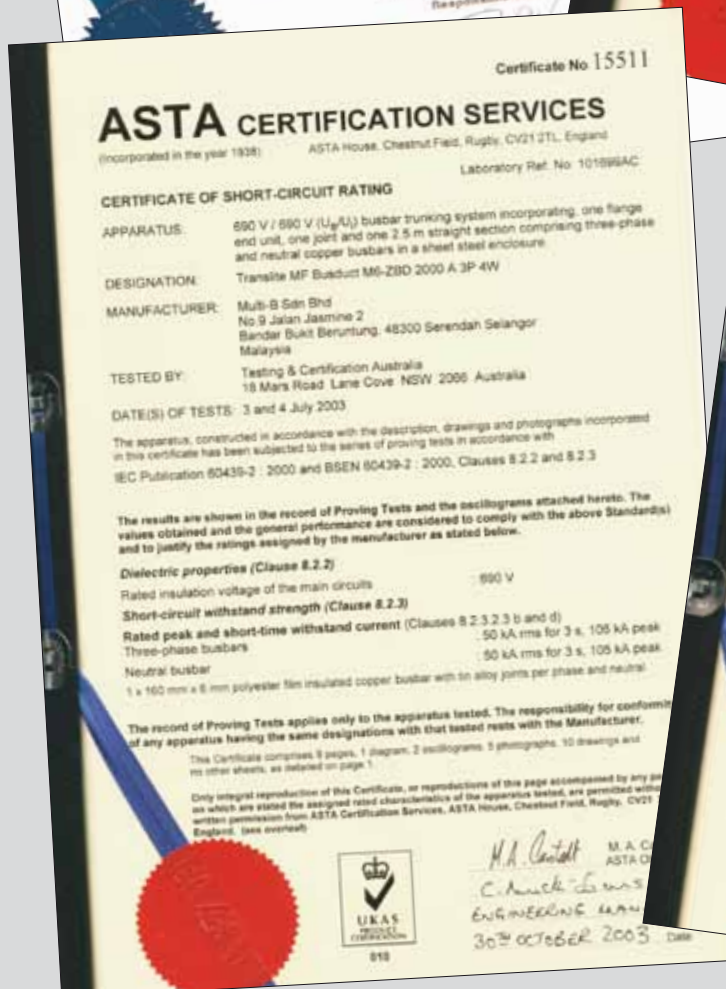
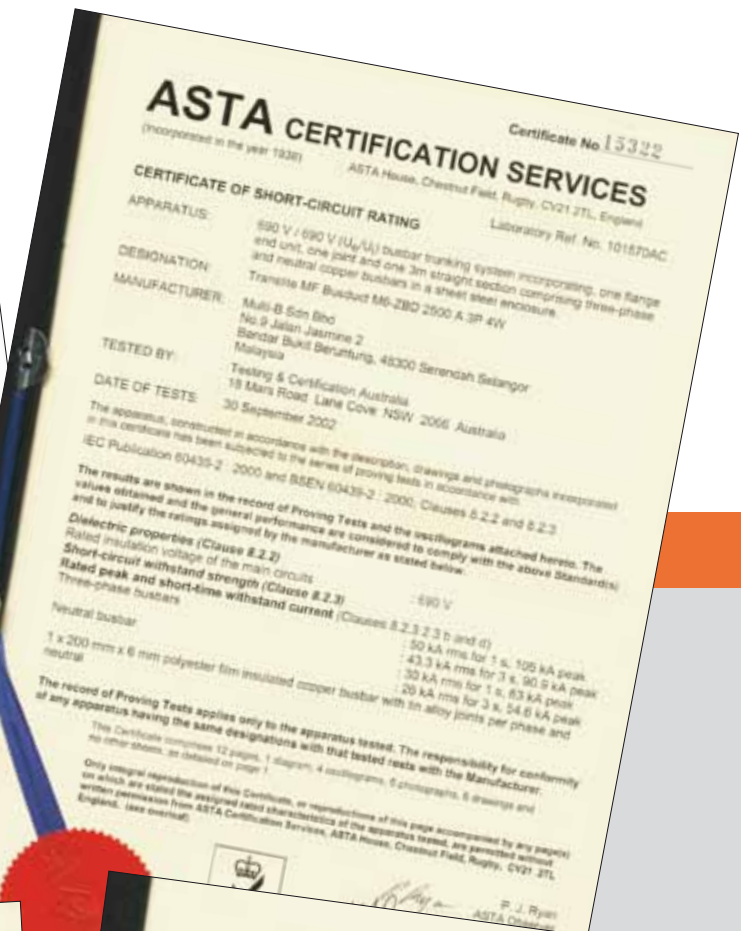
KEMA Quality B.V.  
 Amhem, March 1, 2010

F.S. Stekwerdt  
 Certification Manager

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DEKRA company

DEKRA company



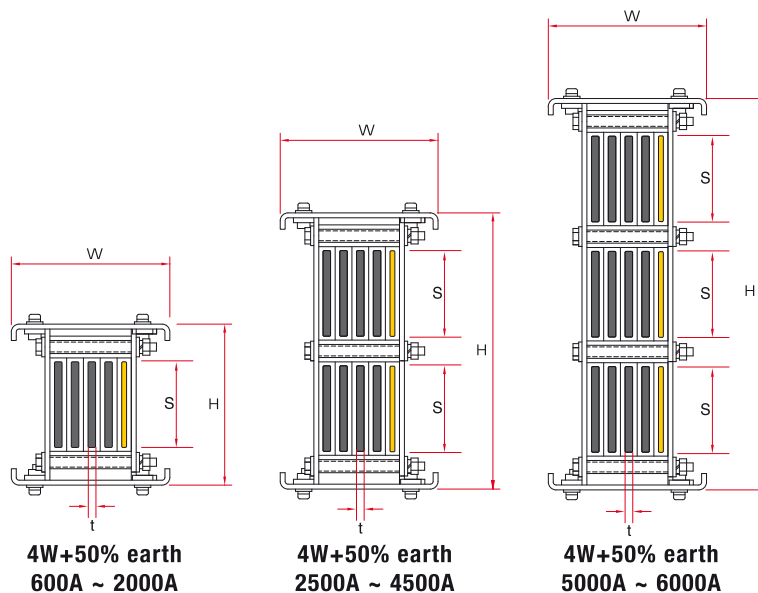
## COMPONENTS SPECIFICATIONS AND TECHNICAL DATA



### WITH ALUMINIUM CONDUCTORS

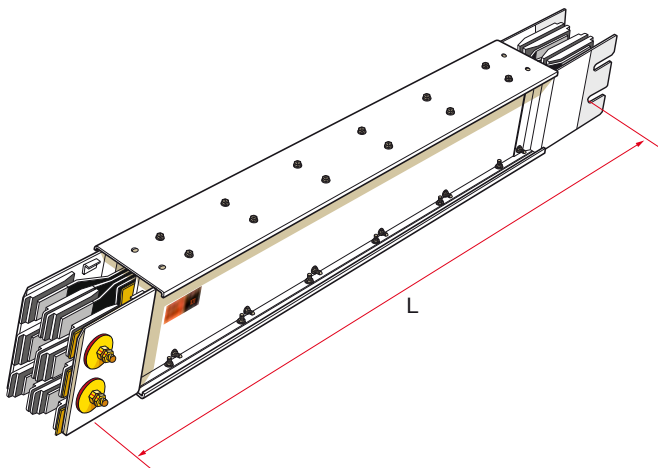
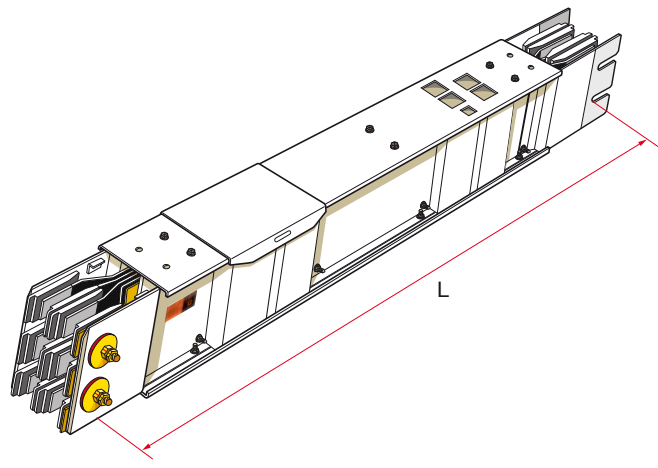
*High quality  
Aluminium conductors.*



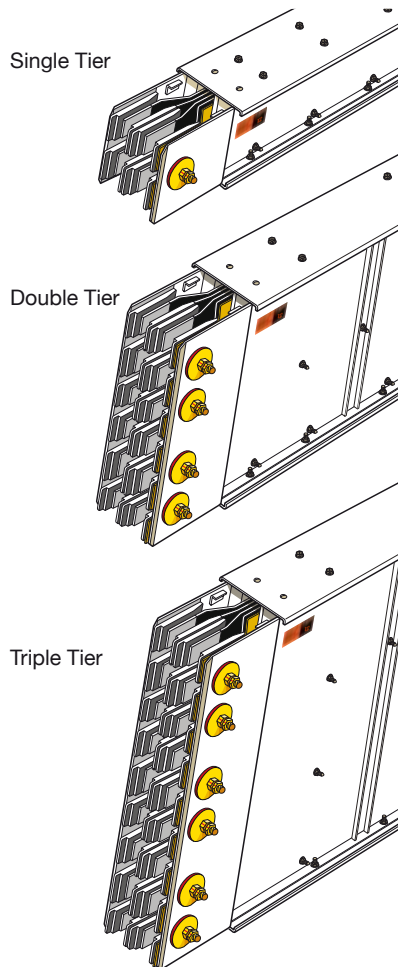


## CROSS SECTION

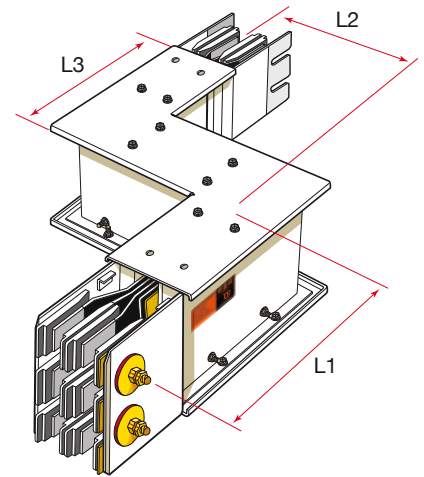
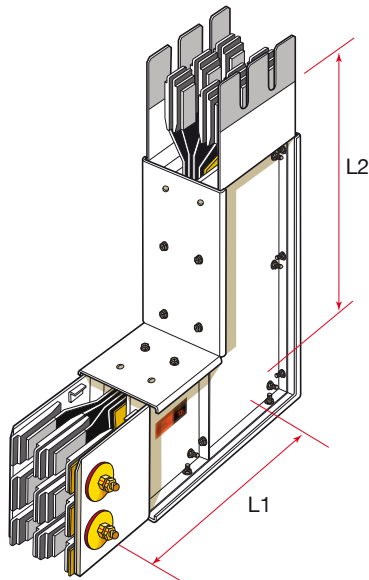
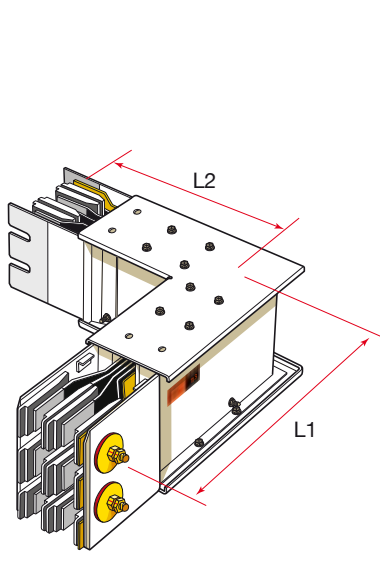
| Type     | Rating in Amps | Dimensions (mm) |     | Conductor Cross Section (mm²) | Dimensions (m) |     |         |     | Weight (kg/m) |     |         |
|----------|----------------|-----------------|-----|-------------------------------|----------------|-----|---------|-----|---------------|-----|---------|
|          |                |                 |     |                               | W              |     |         | H   |               |     |         |
|          |                | t               | s   |                               | 3W             | 4W  | 4W+50%E |     | 3W            | 4W  | 4W+50%E |
| TMFA600  | 600            | 6               | 50  | 300                           | 130            | 130 | 170     | 110 | 11            | 13  | 15      |
| TMFA800  | 800            | 6               | 75  | 450                           | 130            | 130 | 170     | 135 | 13            | 15  | 19      |
| TMFA1000 | 1000           | 6               | 100 | 600                           | 130            | 130 | 170     | 160 | 16            | 18  | 22      |
| TMFA1200 | 1200           | 6               | 120 | 720                           | 130            | 130 | 170     | 180 | 18            | 21  | 24      |
| TMFA1600 | 1600           | 6               | 160 | 960                           | 130            | 130 | 170     | 220 | 22            | 26  | 27      |
| TMFA2000 | 2000           | 6               | 200 | 1200                          | 130            | 130 | 170     | 260 | 26            | 30  | 31      |
| TMFA2500 | 2500           | 6               | 125 | 1500                          | 130            | 130 | 170     | 335 | 33            | 36  | 38      |
| TMFA3000 | 3000           | 6               | 140 | 1680                          | 130            | 130 | 170     | 365 | 32            | 39  | 41      |
| TMFA3500 | 3500           | 6               | 175 | 2100                          | 130            | 130 | 170     | 435 | 36            | 45  | 53      |
| TMFA4000 | 4000           | 6               | 200 | 2400                          | 130            | 130 | 170     | 485 | 45            | 55  | 57      |
| TMFA4500 | 4500           | 6               | 230 | 2760                          | 130            | 130 | 170     | 545 | 54            | 62  | 70      |
| TMFA5000 | 5000           | 6               | 200 | 3600                          | 130            | 130 | 170     | 710 | 71            | 75  | 77      |
| TMFA6000 | 6000           | 6               | 230 | 4140                          | 130            | 130 | 170     | 800 | 80            | 100 | 102     |


**FEEDER**

**PLUG-IN FEEDER**

| Rating in Amps     | L (mm)  |          |
|--------------------|---------|----------|
|                    | Minimum | Standard |
| <b>SINGLE TIER</b> |         |          |
| 600                | 390     | 3000     |
| 800                | 390     | 3000     |
| 1000               | 390     | 3000     |
| 1200               | 390     | 3000     |
| 1600               | 390     | 3000     |
| 2000               | 390     | 3000     |
| <b>DOUBLE TIER</b> |         |          |
| 2500               | 390     | 3000     |
| 3000               | 500     | 3000     |
| 3500               | 500     | 3000     |
| 4000               | 500     | 3000     |
| 4500               | 500     | 3000     |
| <b>TRIPLE TIER</b> |         |          |
| 5000               | 500     | 3000     |
| 6000               | 500     | 3000     |



| Maximum Length     |                   |         |         |
|--------------------|-------------------|---------|---------|
| Rating in Amps     | Dimensions L (mm) |         |         |
|                    | 1 P.I.H           | 2 P.I.H | 3 P.I.H |
| <b>SINGLE TIER</b> |                   |         |         |
| 600                | 2990              | 2980    | 2970    |
| 800                | 2990              | 2980    | 2970    |
| 1000               | 2990              | 2980    | 2970    |
| 1200               | 2990              | 2980    | 2970    |
| 1600               | 2990              | 2980    | 2970    |
| 2000               | 2990              | 2980    | 2970    |
| <b>DOUBLE TIER</b> |                   |         |         |
| 2500               | 2990              | 2980    | 2970    |
| 3000               | 2990              | 2980    | 2970    |
| 3500               | 2990              | 2980    | 2970    |
| 4000               | 2990              | 2980    | 2970    |
| 4500               | 2990              | 2980    | 2970    |
| <b>TRIPLE TIER</b> |                   |         |         |
| 5000               | 2990              | 2980    | 2970    |
| 6000               | 2990              | 2980    | 2970    |



## HORIZONTAL ELBOW

## VERTICAL ELBOW

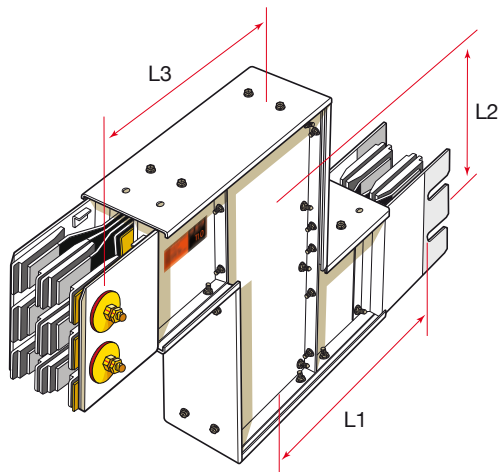
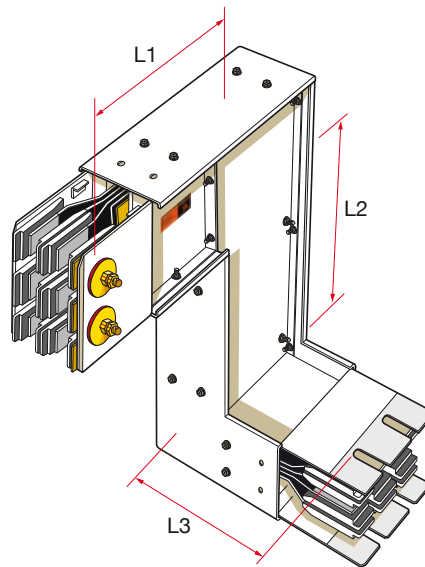
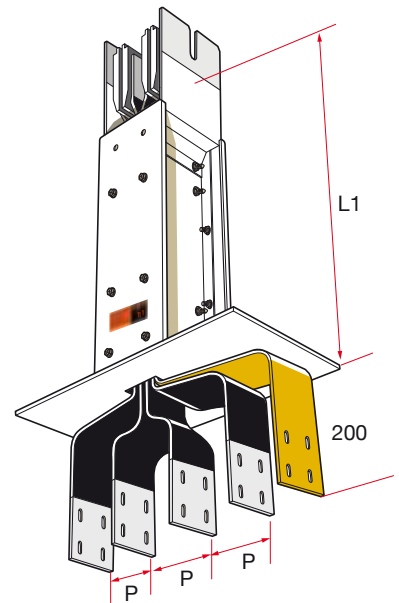
## HORIZONTAL OFFSET

| Minimum Length     |                   |     |
|--------------------|-------------------|-----|
| Rating in Amps     | Dimensions L (mm) |     |
|                    | L1                | L2  |
| <b>SINGLE TIER</b> |                   |     |
| 600                | 265               | 265 |
| 800                | 265               | 265 |
| 1000               | 265               | 265 |
| 1200               | 265               | 265 |
| 1600               | 265               | 265 |
| 2000               | 265               | 265 |
| <b>DOUBLE TIER</b> |                   |     |
| 2500               | 265               | 265 |
| 3000               | 265               | 265 |
| 3500               | 265               | 265 |
| 4000               | 265               | 265 |
| 4500               | 265               | 265 |
| <b>TRIPLE TIER</b> |                   |     |
| 5000               | 265               | 265 |
| 6000               | 265               | 265 |

| Minimum Length     |                   |     |
|--------------------|-------------------|-----|
| Rating in Amps     | Dimensions L (mm) |     |
|                    | L1                | L2  |
| <b>SINGLE TIER</b> |                   |     |
| 600                | 295               | 295 |
| 800                | 300               | 300 |
| 1000               | 310               | 310 |
| 1200               | 320               | 320 |
| 1600               | 340               | 340 |
| 2000               | 355               | 355 |
| <b>DOUBLE TIER</b> |                   |     |
| 2500               | 380               | 380 |
| 3000               | 405               | 405 |
| 3500               | 445               | 445 |
| 4000               | 445               | 445 |
| 4500               | 460               | 460 |
| <b>TRIPLE TIER</b> |                   |     |
| 5000               | 510               | 510 |
| 6000               | 540               | 540 |

| Maximum Length     |                   |     |     |
|--------------------|-------------------|-----|-----|
| Rating in Amps     | Dimensions L (mm) |     |     |
|                    | L1                | L2  | L3  |
| <b>SINGLE TIER</b> |                   |     |     |
| 600                | 265               | 190 | 265 |
| 800                | 265               | 190 | 265 |
| 1000               | 265               | 190 | 265 |
| 1200               | 265               | 190 | 265 |
| 1600               | 265               | 190 | 265 |
| 2000               | 265               | 190 | 265 |
| <b>DOUBLE TIER</b> |                   |     |     |
| 2500               | 265               | 190 | 265 |
| 3000               | 265               | 190 | 265 |
| 3500               | 265               | 190 | 265 |
| 4000               | 265               | 190 | 265 |
| 4500               | 265               | 190 | 265 |
| <b>TRIPLE TIER</b> |                   |     |     |
| 5000               | 265               | 190 | 265 |
| 6000               | 265               | 190 | 265 |

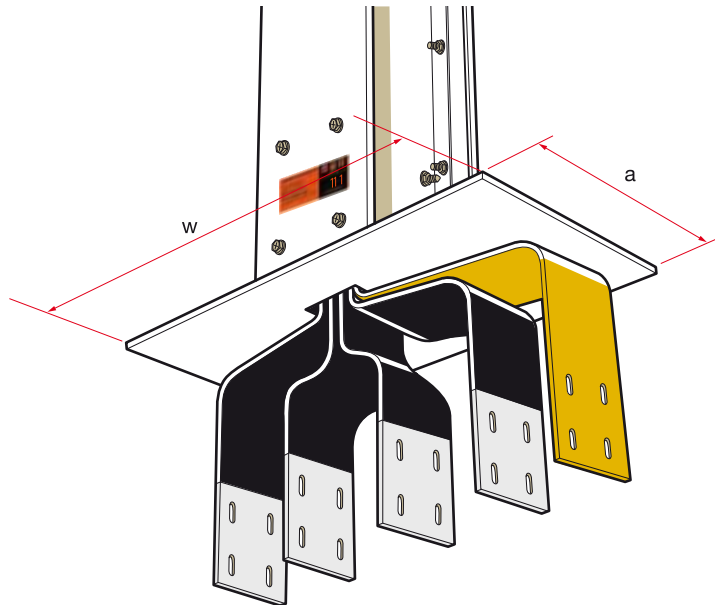
**Note:** All dimensions are subject to change without prior notice.


**VERTICAL OFFSET**

**COMBINATION ELBOW**

**FLANGED END**

| Maximum Length     |                   |     |     |
|--------------------|-------------------|-----|-----|
| Rating in Amps     | Dimensions L (mm) |     |     |
|                    | L1                | L2  | L3  |
| <b>SINGLE TIER</b> |                   |     |     |
| 600                | 295               | 225 | 295 |
| 800                | 300               | 240 | 300 |
| 1000               | 310               | 260 | 310 |
| 1200               | 320               | 275 | 320 |
| 1600               | 345               | 325 | 345 |
| 2000               | 360               | 360 | 360 |
| <b>DOUBLE TIER</b> |                   |     |     |
| 2500               | 390               | 415 | 390 |
| 3000               | 425               | 490 | 425 |
| 3500               | 460               | 560 | 460 |
| 4000               | 485               | 610 | 485 |
| 4500               | 515               | 670 | 515 |
| <b>TRIPLE TIER</b> |                   |     |     |
| 5000               | 560               | 760 | 560 |
| 6000               | 600               | 835 | 600 |

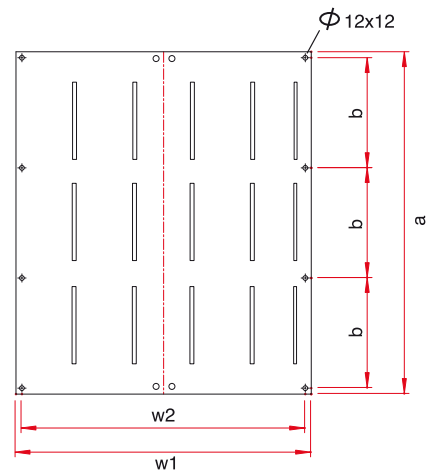
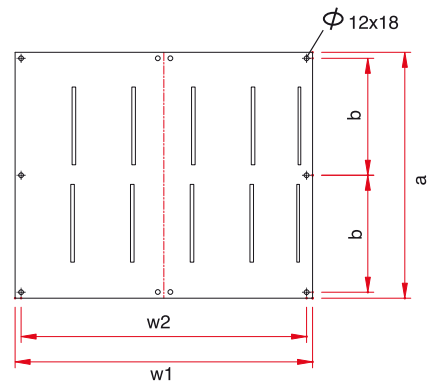
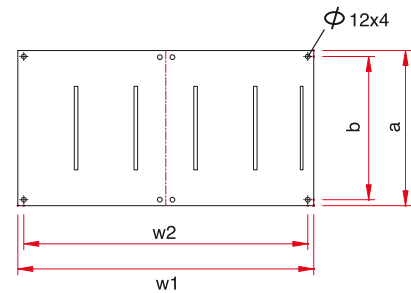
| Maximum Length     |                   |     |     |
|--------------------|-------------------|-----|-----|
| Rating in Amps     | Dimensions L (mm) |     |     |
|                    | L1                | L2  | L3  |
| <b>SINGLE TIER</b> |                   |     |     |
| 600                | 295               | 200 | 265 |
| 800                | 300               | 205 | 265 |
| 1000               | 310               | 215 | 265 |
| 1200               | 320               | 225 | 265 |
| 1600               | 345               | 250 | 265 |
| 2000               | 360               | 265 | 265 |
| <b>DOUBLE TIER</b> |                   |     |     |
| 2500               | 390               | 295 | 265 |
| 3000               | 425               | 330 | 265 |
| 3500               | 460               | 365 | 265 |
| 4000               | 485               | 390 | 265 |
| 4500               | 515               | 420 | 265 |
| <b>TRIPLE TIER</b> |                   |     |     |
| 5000               | 560               | 465 | 265 |
| 6000               | 600               | 505 | 265 |

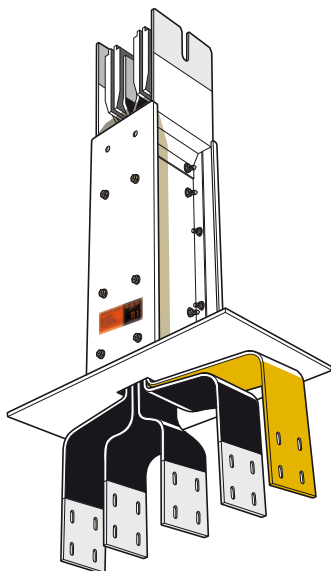
| Maximum Length     |                   |           |
|--------------------|-------------------|-----------|
| Rating in Amps     | Dimensions L (mm) |           |
|                    | L1                | Pitch (P) |
| <b>SINGLE TIER</b> |                   |           |
| 600                | 265               | 100       |
| 800                | 265               | 100       |
| 1000               | 265               | 100       |
| 1200               | 265               | 100       |
| 1600               | 265               | 100       |
| 2000               | 265               | 100       |
| <b>DOUBLE TIER</b> |                   |           |
| 2500               | 265               | 100       |
| 3000               | 265               | 130       |
| 3500               | 265               | 130       |
| 4000               | 265               | 130       |
| 4500               | 265               | 130       |
| <b>TRIPLE TIER</b> |                   |           |
| 5000               | 265               | 130       |
| 6000               | 265               | 130       |



## FLANGED END PLATE

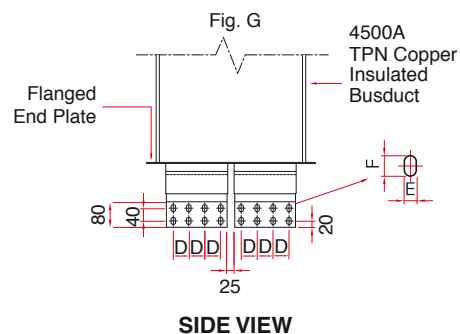
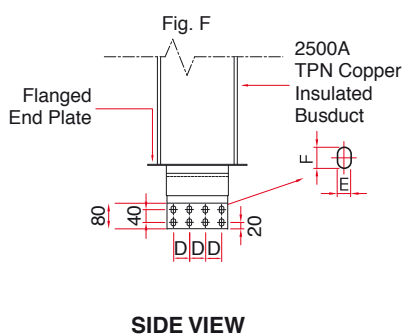
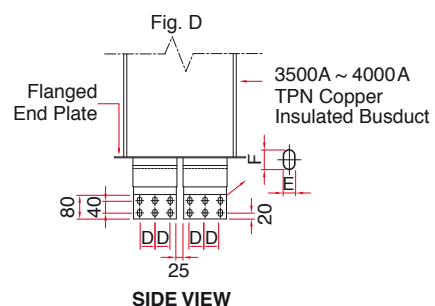
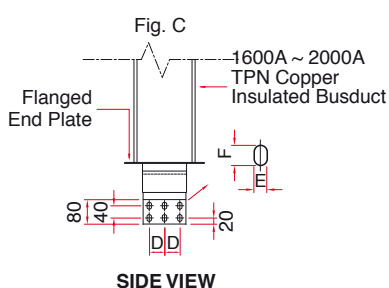
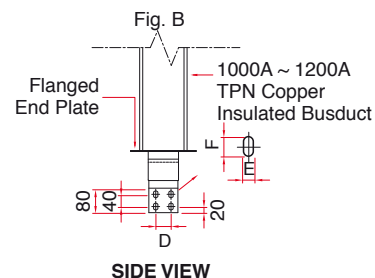
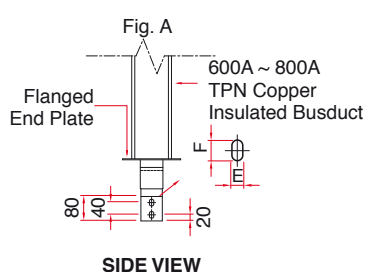
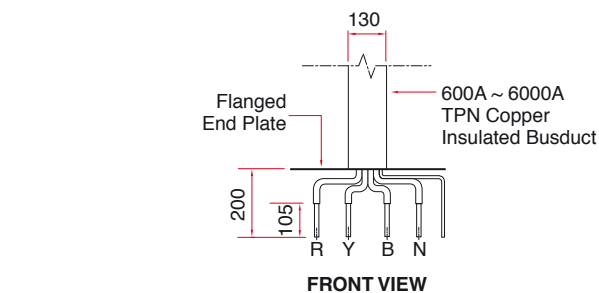
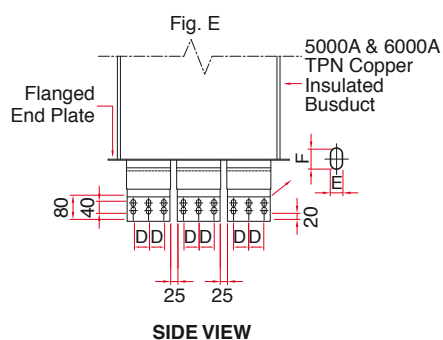
| Flanged End Plate    |                 |     |     |     |         |     |     |     |         |     |
|----------------------|-----------------|-----|-----|-----|---------|-----|-----|-----|---------|-----|
| Rating<br>in<br>Amps | Dimensions (mm) |     |     |     |         |     |     |     |         |     |
|                      | a               | b   | 3W  |     | 3W+50%E |     | 4W  |     | 4W+50%E |     |
|                      |                 |     | w1  | w2  | w1      | w2  | w1  | w2  | w1      | w2  |
| SINGLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 600                  | 170             | 140 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 800                  | 195             | 165 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1000                 | 220             | 190 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1200                 | 240             | 210 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 1600                 | 280             | 250 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 2000                 | 320             | 290 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| DOUBLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 2500                 | 395             | 183 | 300 | 270 | 380     | 350 | 400 | 370 | 480     | 450 |
| 3000                 | 425             | 198 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 3500                 | 495             | 233 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 4000                 | 485             | 258 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 4500                 | 515             | 288 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| TRIPLE TIER          |                 |     |     |     |         |     |     |     |         |     |
| 5000                 | 770             | 222 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |
| 6000                 | 860             | 247 | 360 | 330 | 440     | 410 | 490 | 460 | 570     | 540 |



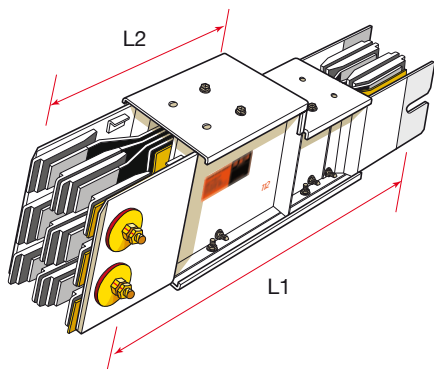
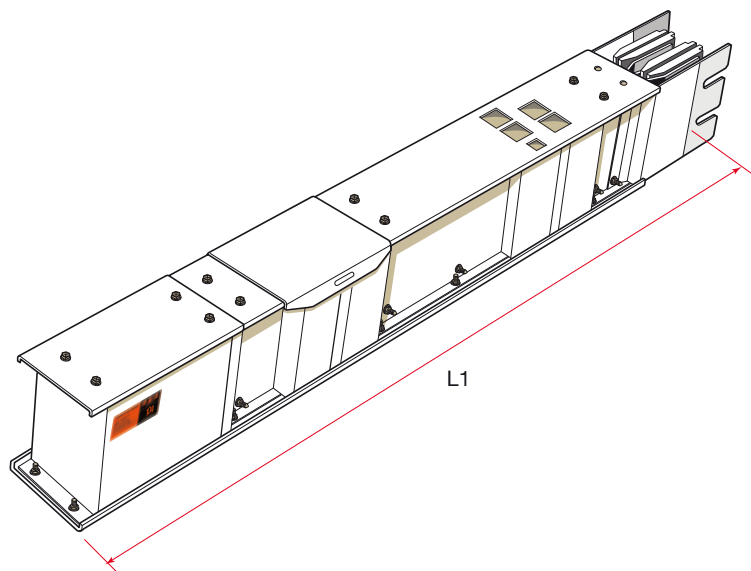


## FLANGED END

| Rating<br>in<br>Amps | Maximum Length  |    |    | Fig. |
|----------------------|-----------------|----|----|------|
|                      | Dimensions (mm) |    |    |      |
|                      | D               | E  | F  |      |
| SINGLE TIER          |                 |    |    |      |
| 600                  | -               | 11 | 20 | A    |
| 800                  | 40              | 11 | 20 | B    |
| 1000                 | 50              | 11 | 20 | B    |
| 1200                 | 70              | 11 | 20 | B    |
| 1600                 | 50              | 11 | 20 | C    |
| 2000                 | 70              | 14 | 22 | C    |
| DOUBLE TIER          |                 |    |    |      |
| 2500                 | 50              | 14 | 22 | F    |
| 3000                 | 50              | 14 | 22 | D    |
| 3500                 | 60              | 14 | 22 | D    |
| 4000                 | 70              | 14 | 22 | D    |
| 4500                 | 60              | 14 | 22 | G    |
| TRIPLE TIER          |                 |    |    |      |
| 5000                 | 70              | 14 | 22 | E    |
| 6000                 | 60              | 14 | 22 | E    |

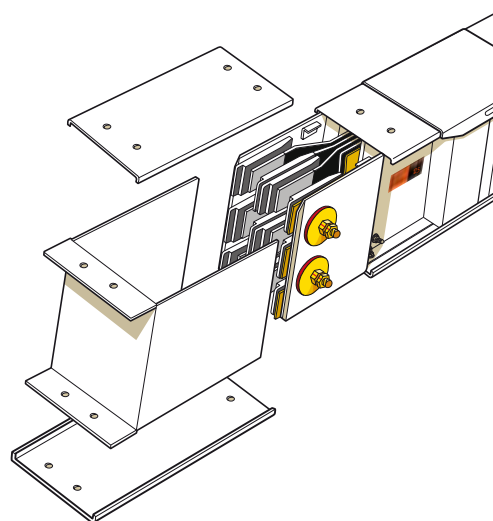


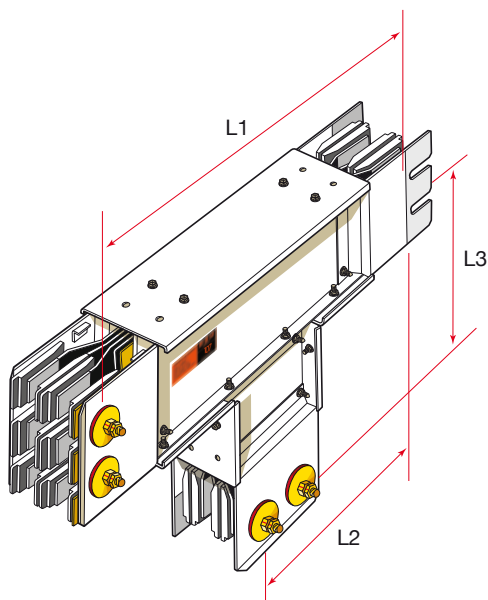
**Note:** All dimensions are subject to change without prior notice.


**REDUCER**

**END CLOSER**

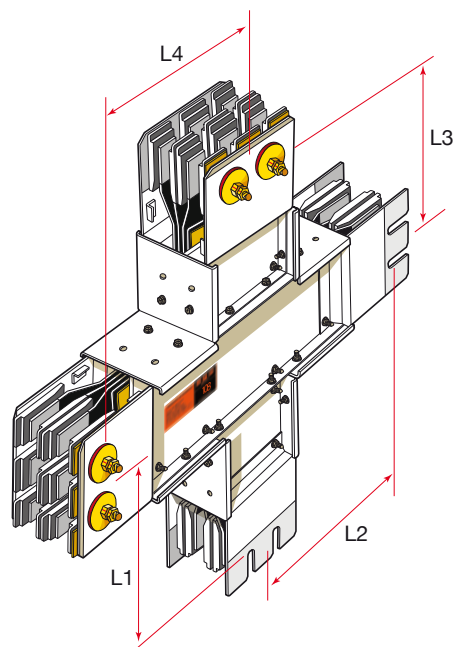
| Maximum Length |                 |     |
|----------------|-----------------|-----|
| Rating in Amps | Dimensions (mm) |     |
|                | L1              | L2  |
| 800            | 490             | 245 |
| 1000           | 490             | 245 |
| 1200           | 490             | 245 |
| 1600           | 490             | 245 |
| 2000           | 490             | 245 |
| 2500           | 490             | 245 |
| 3000           | 710             | 355 |
| 3500           | 780             | 390 |
| 4000           | 830             | 415 |
| 4500           | 890             | 445 |
| 5000           | 1130            | 565 |
| 6000           | 1230            | 615 |

| Maximum Length |                 |
|----------------|-----------------|
| Rating in Amps | Dimensions (mm) |
|                | L1              |
| 800            | 245             |
| 1000           | 245             |
| 1200           | 245             |
| 1600           | 245             |
| 2000           | 245             |
| 2500           | 245             |
| 3000           | 335             |
| 3500           | 375             |
| 4000           | 375             |
| 4500           | 375             |
| 5000           | 495             |
| 6000           | 535             |





**VERTICAL TEE**

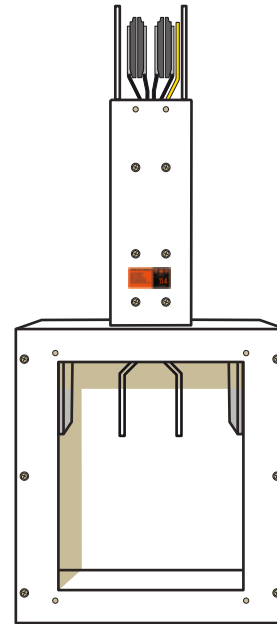


**VERTICAL CROSS**

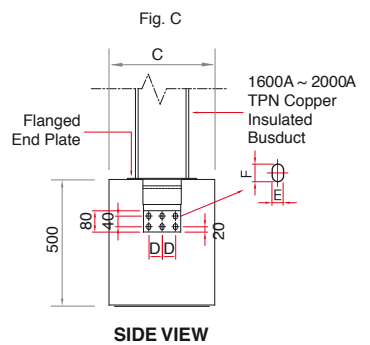
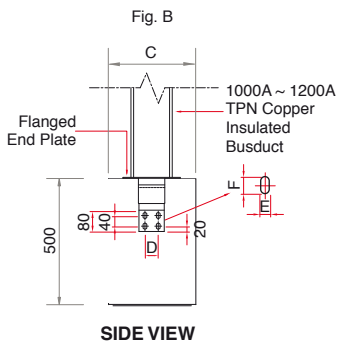
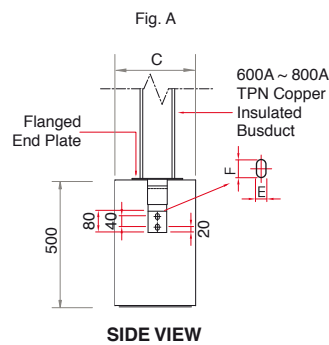
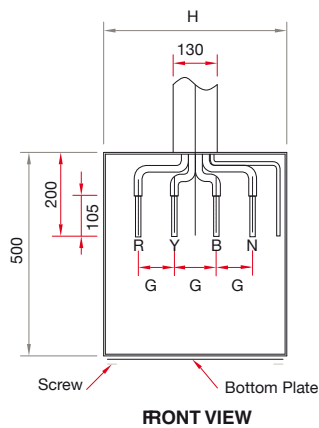
| Maximum Length     |                 |     |     |
|--------------------|-----------------|-----|-----|
| Rating in Amps     | Dimensions (mm) |     |     |
|                    | L1              | L2  | L3  |
| <b>SINGLE TIER</b> |                 |     |     |
| 600                | 590             | 295 | 295 |
| 800                | 600             | 300 | 300 |
| 1000               | 620             | 310 | 310 |
| 1200               | 640             | 320 | 320 |
| 1600               | 690             | 345 | 345 |
| 2000               | 720             | 360 | 360 |
| <b>DOUBLE TIER</b> |                 |     |     |
| 2500               | 780             | 390 | 390 |
| 3000               | 850             | 425 | 425 |
| 3500               | 920             | 460 | 460 |
| 4000               | 970             | 485 | 485 |
| 4500               | 1030            | 515 | 515 |
| <b>TRIPLE TIER</b> |                 |     |     |
| 5000               | 1120            | 560 | 560 |
| 6000               | 1200            | 600 | 600 |

| Maximum Length     |                 |     |     |     |
|--------------------|-----------------|-----|-----|-----|
| Rating in Amps     | Dimensions (mm) |     |     |     |
|                    | L1              | L2  | L3  | L4  |
| <b>SINGLE TIER</b> |                 |     |     |     |
| 600                | 295             | 295 | 295 | 295 |
| 800                | 300             | 300 | 300 | 300 |
| 1000               | 310             | 310 | 310 | 310 |
| 1200               | 320             | 320 | 320 | 320 |
| 1600               | 345             | 345 | 345 | 345 |
| 2000               | 360             | 360 | 360 | 360 |
| <b>DOUBLE TIER</b> |                 |     |     |     |
| 2500               | 390             | 390 | 390 | 390 |
| 3000               | 425             | 425 | 425 | 425 |
| 3500               | 460             | 460 | 460 | 460 |
| 4000               | 485             | 485 | 485 | 485 |
| 4500               | 515             | 515 | 515 | 515 |
| <b>TRIPLE TIER</b> |                 |     |     |     |
| 5000               | 560             | 560 | 560 | 560 |
| 6000               | 600             | 600 | 600 | 600 |

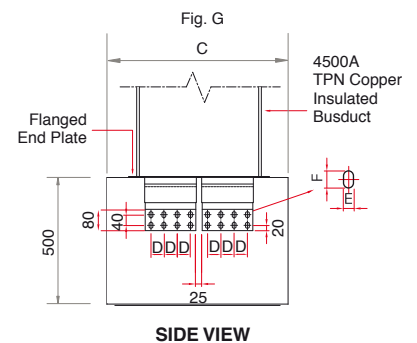
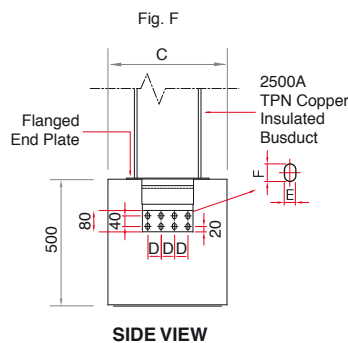
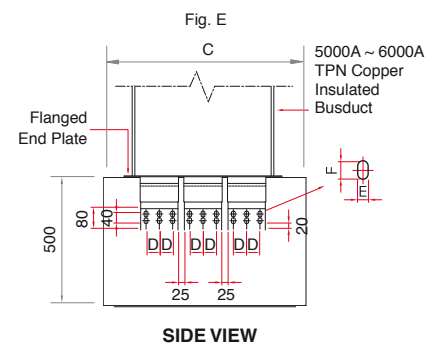
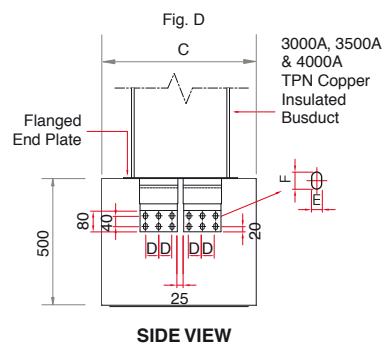
**Note:** All dimensions are subject to change without prior notice.

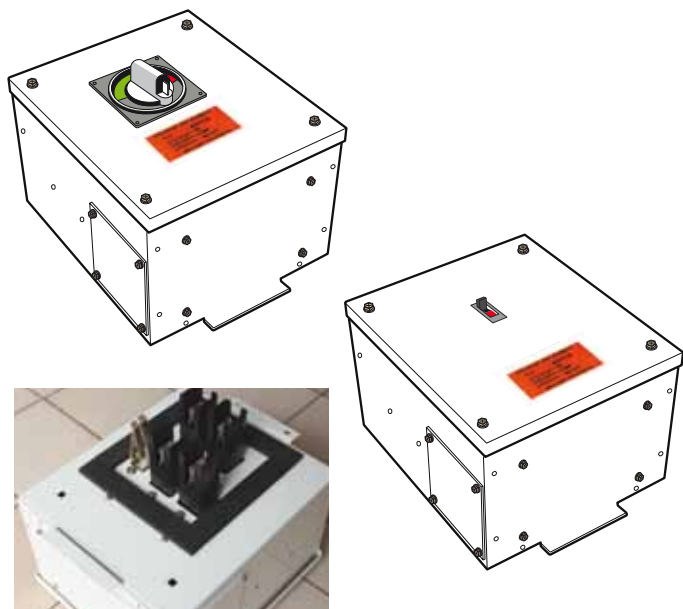


## CABLE ENTRY BOX



| Rating in Amps | Dimensions (mm) |    |    |    |     |     | Fig. |
|----------------|-----------------|----|----|----|-----|-----|------|
|                | C               | D  | E  | F  | G   | H   |      |
| SINGLE TIER    |                 |    |    |    |     |     |      |
| 600            | 220             | -  | 11 | 20 | 100 | 450 | A    |
| 800            | 220             | 40 | 11 | 20 | 100 | 450 | A    |
| 1000           | 255             | 50 | 11 | 20 | 100 | 450 | B    |
| 1200           | 275             | 70 | 11 | 20 | 100 | 450 | B    |
| 1600           | 325             | 50 | 11 | 20 | 100 | 450 | C    |
| 2000           | 355             | 70 | 14 | 22 | 100 | 450 | C    |
| DOUBLE TIER    |                 |    |    |    |     |     |      |
| 2500           | 405             | 50 | 14 | 22 | 100 | 450 | F    |
| 3000           | 485             | 50 | 14 | 22 | 130 | 540 | D    |
| 3500           | 535             | 60 | 14 | 22 | 130 | 540 | D    |
| 4000           | 585             | 70 | 14 | 22 | 130 | 540 | D    |
| 4500           | 645             | 60 | 14 | 22 | 130 | 540 | G    |
| TRIPLE TIER    |                 |    |    |    |     |     |      |
| 5000           | 810             | 70 | 14 | 22 | 130 | 540 | E    |
| 6000           | 900             | 60 | 14 | 22 | 130 | 540 | E    |





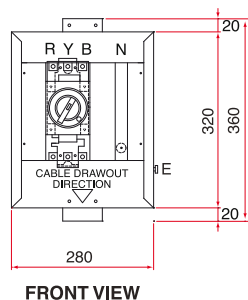
## Plug-in Unit

| Circuit Breaker | Dimensions (mm) |     |     |     | Breaking capacity (kA) symmetrical r.m.s. |        |        |
|-----------------|-----------------|-----|-----|-----|-------------------------------------------|--------|--------|
|                 | L               | W   | S   | H   | AC220V                                    | AC415V | AC550V |
| 16A-100A        | 320             | 280 | 120 | 210 | As per requirements                       |        |        |
| 125A-250A       | 400             | 310 | 150 | 210 |                                           |        |        |
| 300A-400A       | 485             | 320 | 165 | 285 |                                           |        |        |
| 600A            | 810             | 325 | 340 | 290 |                                           |        |        |

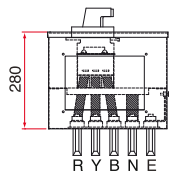
## Tap-off Unit

| Circuit Breaker | Dimensions (mm) |     |     |     | Breaking capacity (kA) symmetrical r.m.s. |        |        |
|-----------------|-----------------|-----|-----|-----|-------------------------------------------|--------|--------|
|                 | L               | W   | S   | H   | AC220V                                    | AC415V | AC550V |
| 800A            | 850             | 360 | 335 | 300 | As per requirements                       |        |        |
| 1000A           | 850             | 360 | 335 | 300 |                                           |        |        |
| 1200A           | 850             | 360 | 250 | 300 |                                           |        |        |
| 1600A           | 1150            | 360 | 375 | 300 |                                           |        |        |
| 2000A           | 1150            | 500 | 375 | 400 |                                           |        |        |

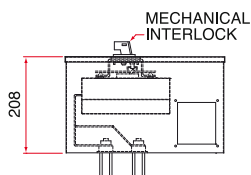
## PLUG-IN UNIT



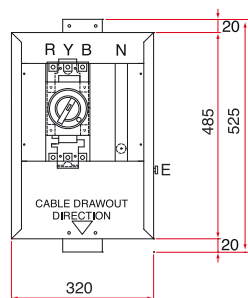
FRONT VIEW



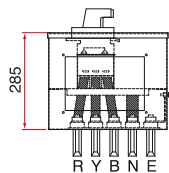
TOP VIEW



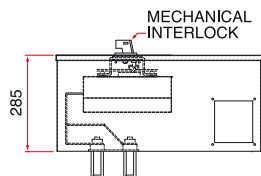
SIDE VIEW



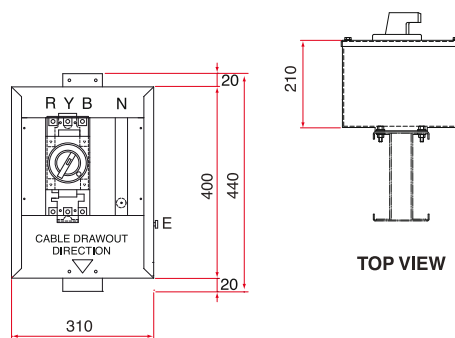
FRONT VIEW



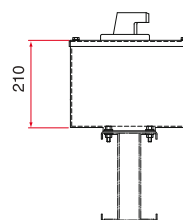
TOP VIEW



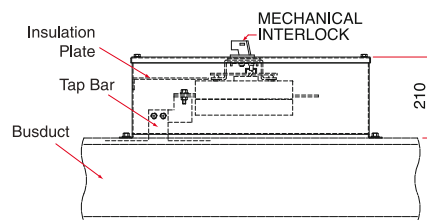
SIDE VIEW



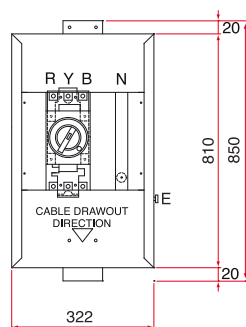
FRONT VIEW



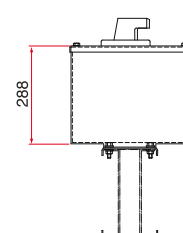
TOP VIEW



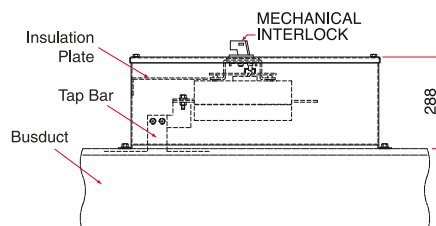
SIDE VIEW



FRONT VIEW



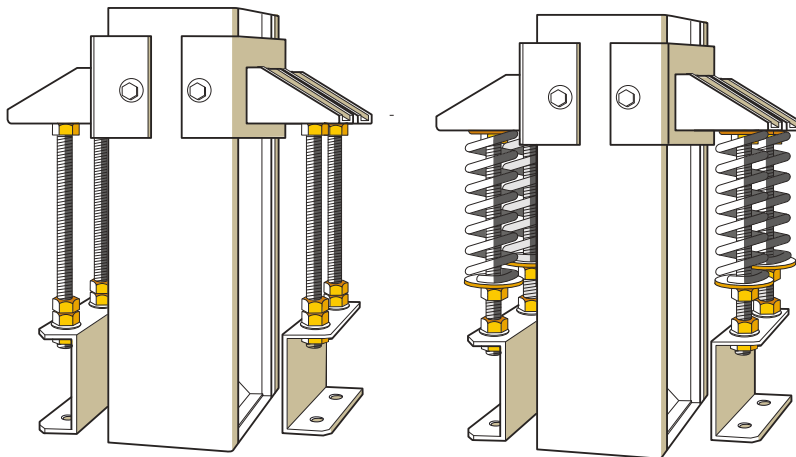
TOP VIEW



SIDE VIEW

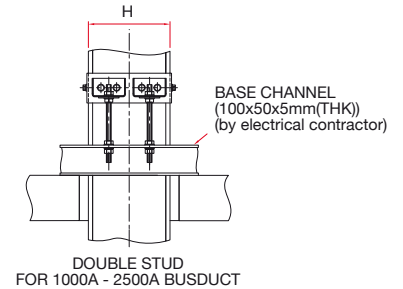
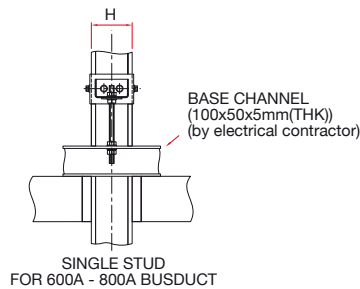
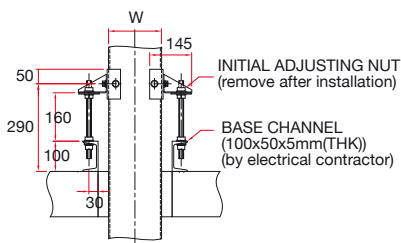
**Note:** All dimensions are subject to change without prior notice.

| Rating<br>in<br>Amps | H (mm) |         | W (mm) |         |
|----------------------|--------|---------|--------|---------|
|                      | 3W/4W  | 4W+50%E | 3W/4W  | 4W+50%E |
| 600                  | 130    | 170     | 110    | 110     |
| 800                  | 130    | 170     | 135    | 135     |
| 1000                 | 130    | 170     | 160    | 160     |
| 1200                 | 130    | 170     | 180    | 180     |
| 1600                 | 130    | 170     | 220    | 220     |
| 2000                 | 130    | 170     | 260    | 260     |
| 2500                 | 130    | 170     | 335    | 335     |
| 3000                 | 130    | 170     | 365    | 365     |
| 3500                 | 130    | 170     | 435    | 435     |
| 4000                 | 130    | 170     | 485    | 485     |
| 4500                 | 130    | 170     | 545    | 545     |
| 5000                 | 130    | 170     | 710    | 710     |
| 6000                 | 130    | 170     | 800    | 800     |

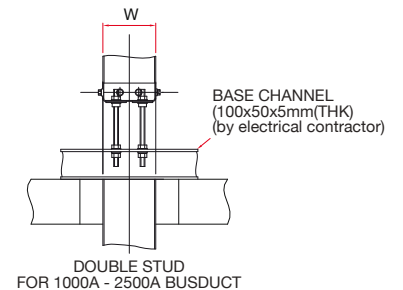
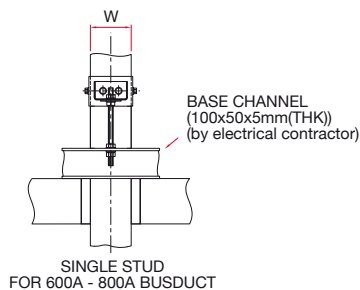
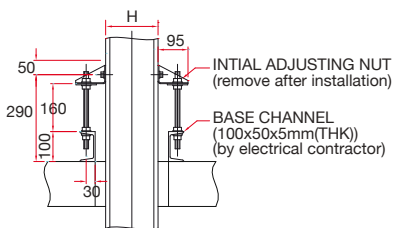


## VERTICAL HANGER

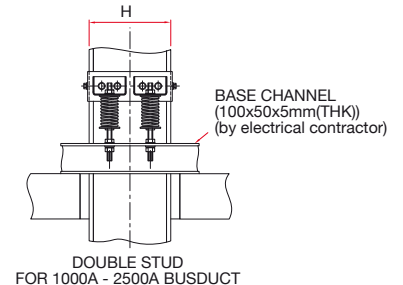
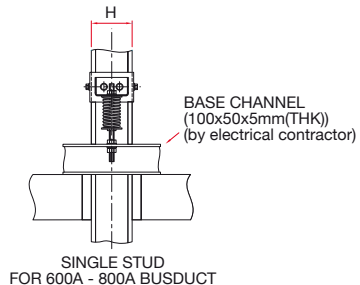
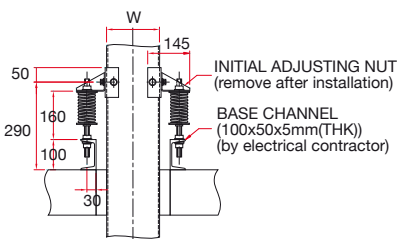
### Rigid Side Type



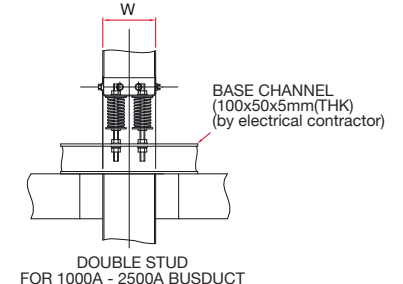
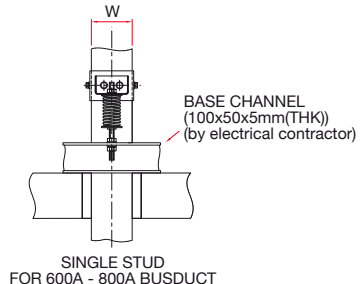
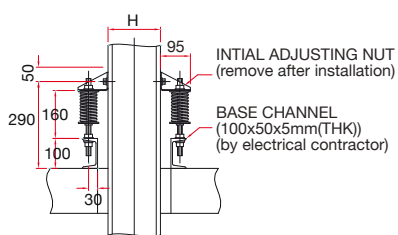
### Rigid Front Type



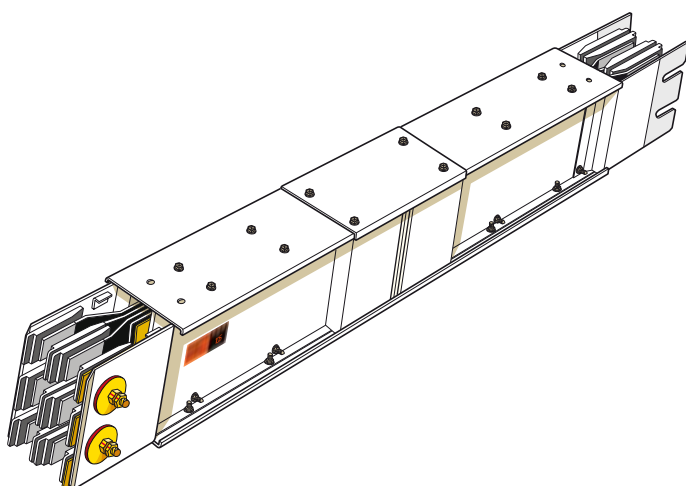
### Spring Side Type



### Spring Front Type

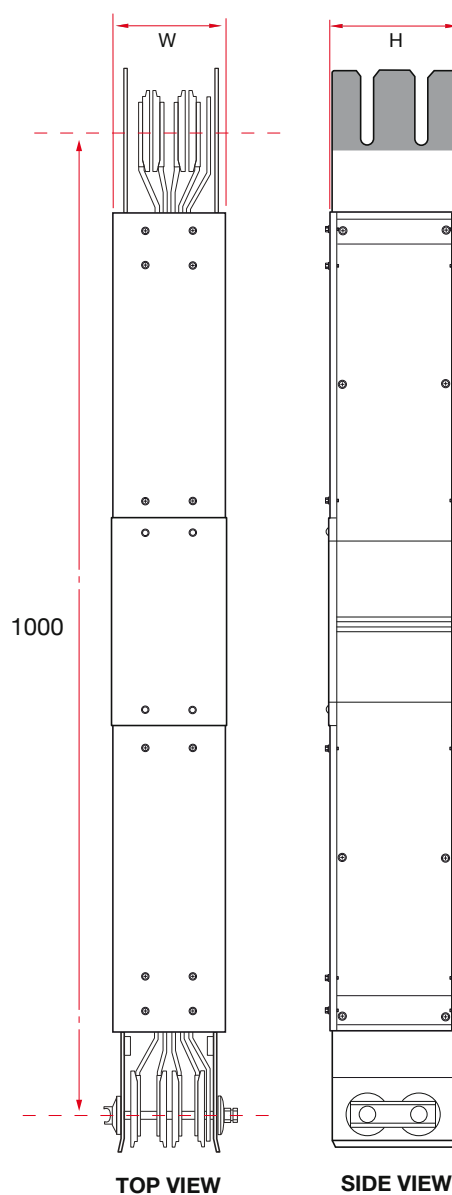


**Note:** All dimensions are subject to change without prior notice.

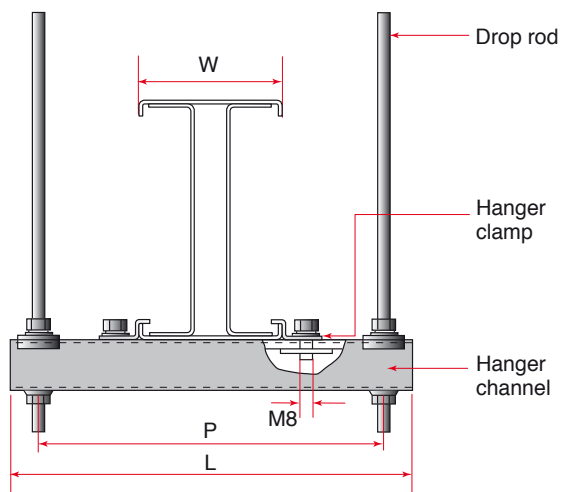


## EXPANSION JOINT

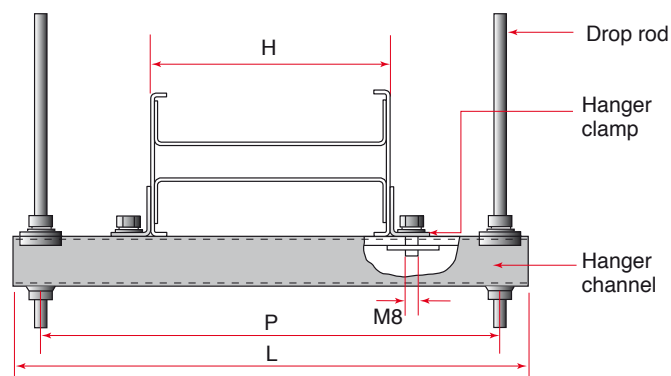
| Rating<br>in<br>Amps | Dimensions (mm) |     |         |     |
|----------------------|-----------------|-----|---------|-----|
|                      | W               |     |         | H   |
|                      | 3W              | 4W  | 4W+50%E |     |
| 600                  | 130             | 130 | 170     | 100 |
| 800                  | 130             | 130 | 170     | 115 |
| 1000                 | 130             | 130 | 170     | 135 |
| 1200                 | 130             | 130 | 170     | 150 |
| 1600                 | 130             | 130 | 170     | 200 |
| 2000                 | 130             | 130 | 170     | 235 |
| 2500                 | 130             | 130 | 170     | 290 |
| 3000                 | 130             | 130 | 170     | 365 |
| 3500                 | 130             | 130 | 170     | 435 |
| 4000                 | 130             | 130 | 170     | 485 |
| 4500                 | 130             | 130 | 170     | 545 |
| 5000                 | 130             | 130 | 170     | 635 |
| 6000                 | 130             | 130 | 170     | 710 |



**Note:** All dimensions are subject to change without prior notice.



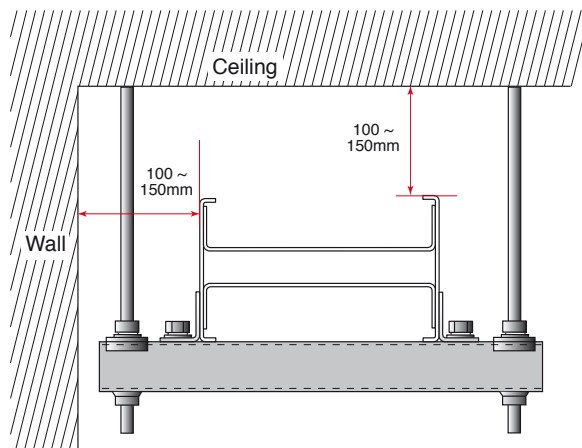
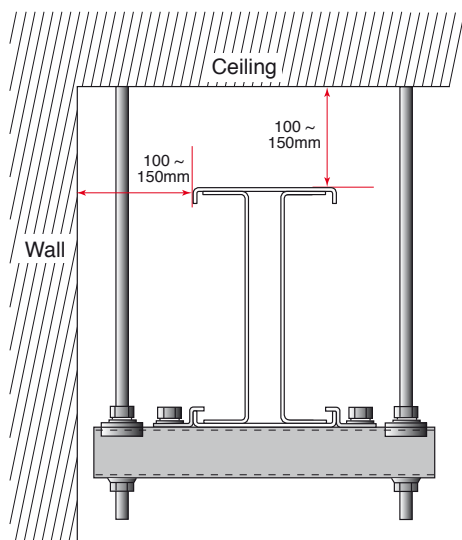
## EDGEWISE HANGER



## FLATWISE HANGER

| Rating in Amps | Dimensions(mm) |     |
|----------------|----------------|-----|
|                | L              | P   |
| 600 ~ 1200     | 350            | 300 |
| 1500 ~ 2500    | 500            | 450 |
| 3000 ~ 3500    | 650            | 600 |
| 4000 ~ 4500    | 750            | 700 |
| 5000 ~ 6000    | 850            | 800 |

For installation, a clearance of 100–150 mm from the wall and ceiling is required.  
Hangers are not included in the busduct system.



## TECHNICAL DATA

### IMPEDANCE

Aluminium Conductors

(Unit:  $10^{-5}\Omega/\text{m}$ )

| Rating in Amps | Conductor (mm) | 3Ø 50 Hz |      |                         | 3Ø 60 Hz |      |                         | D.C. $R_{DC}$ |
|----------------|----------------|----------|------|-------------------------|----------|------|-------------------------|---------------|
|                |                | $R_{AC}$ | $X$  | $\sqrt{R_{AC}^2 + X^2}$ | $R_{AC}$ | $X$  | $\sqrt{R_{AC}^2 + X^2}$ |               |
| 600            | 6 x 50         | 12.43    | 2.78 | 12.74                   | 12.47    | 3.34 | 12.91                   | 12.25         |
| 800            | 6 x 75         | 8.37     | 2.02 | 8.61                    | 8.45     | 2.43 | 8.79                    | 8.17          |
| 1000           | 6 x 100        | 6.37     | 1.59 | 6.57                    | 6.43     | 1.91 | 6.71                    | 6.12          |
| 1200           | 6 x 120        | 5.22     | 2.67 | 5.86                    | 5.27     | 3.20 | 6.16                    | 5.02          |
| 1600           | 6 x 160        | 3.78     | 1.97 | 4.26                    | 3.82     | 2.36 | 4.49                    | 3.63          |
| 2000           | 6 x 200        | 2.72     | 0.83 | 2.84                    | 2.75     | 0.99 | 2.93                    | 2.61          |
| 2500           | 6 x 125 x 2    | 2.15     | 0.67 | 2.25                    | 2.17     | 0.80 | 2.31                    | 2.07          |
| 3000           | 6 x 140 x 2    | 2.05     | 2.11 | 2.94                    | 2.10     | 2.53 | 3.29                    | 1.71          |
| 3500           | 6 x 175 x 2    | 1.85     | 1.93 | 2.67                    | 1.89     | 2.32 | 2.99                    | 1.48          |
| 4000           | 6 x 200 x 2    | 1.42     | 0.92 | 1.69                    | 1.44     | 1.10 | 1.81                    | 1.12          |
| 4500           | 6 x 230 x 2    | 1.39     | 0.82 | 1.61                    | 1.41     | 0.98 | 1.72                    | 0.97          |
| 5000           | 6 x 200 x 3    | 1.12     | 0.70 | 1.32                    | 1.15     | 0.84 | 1.42                    | 0.89          |
| 6000           | 6 x 230 x 3    | 0.94     | 0.58 | 1.10                    | 0.96     | 0.70 | 1.19                    | 0.74          |

### VOLTAGE DROP

Line to Line with Aluminium Conductors

(Unit: Volt/100m)

| Rating in Amps | Conductor (mm) | 3Ø 50 Hz Power factor % |       |       |       |       |       | 3Ø 60 Hz Power factor % |       |       |       |       |       |
|----------------|----------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|-------|-------|-------|-------|-------|
|                |                | 100                     | 95    | 90    | 85    | 80    | 75    | 100                     | 95    | 90    | 85    | 80    | 75    |
| 600            | 6 x 50         | 12.92                   | 12.79 | 12.35 | 11.86 | 11.34 | 10.79 | 12.96                   | 12.94 | 12.54 | 12.07 | 11.57 | 11.05 |
| 800            | 6 x 75         | 11.60                   | 11.52 | 11.14 | 10.71 | 10.25 | 9.77  | 11.71                   | 11.71 | 11.39 | 10.98 | 10.53 | 10.07 |
| 1000           | 6 x 100        | 11.03                   | 10.98 | 10.62 | 10.22 | 9.78  | 9.33  | 11.14                   | 11.18 | 10.86 | 10.47 | 10.06 | 9.62  |
| 1200           | 6 x 120        | 10.85                   | 11.31 | 11.16 | 10.91 | 10.60 | 10.26 | 10.95                   | 11.61 | 11.53 | 11.33 | 11.07 | 10.76 |
| 1600           | 6 x 160        | 10.48                   | 10.94 | 10.80 | 10.57 | 10.27 | 9.94  | 10.59                   | 11.24 | 11.17 | 10.99 | 10.73 | 10.44 |
| 2000           | 6 x 200        | 9.42                    | 9.47  | 9.20  | 8.88  | 8.53  | 8.16  | 9.53                    | 9.67  | 9.44  | 9.14  | 8.81  | 8.45  |
| 2500           | 6 x 125 x 2    | 9.31                    | 9.37  | 9.11  | 8.80  | 8.45  | 8.09  | 9.40                    | 9.55  | 9.33  | 9.04  | 8.72  | 8.37  |
| 3000           | 6 x 140 x 2    | 10.65                   | 12.10 | 12.35 | 12.39 | 12.32 | 12.18 | 10.91                   | 12.74 | 13.13 | 13.27 | 13.28 | 13.20 |
| 3500           | 6 x 175 x 2    | 11.22                   | 12.76 | 13.04 | 13.09 | 13.03 | 12.88 | 11.46                   | 13.42 | 13.85 | 14.02 | 14.04 | 13.96 |
| 4000           | 6 x 200 x 2    | 9.84                    | 10.50 | 10.46 | 10.30 | 10.08 | 9.81  | 9.98                    | 10.85 | 10.90 | 10.80 | 10.62 | 10.39 |
| 4500           | 6 x 230 x 2    | 10.83                   | 11.44 | 11.36 | 11.15 | 10.88 | 10.57 | 10.99                   | 11.82 | 11.81 | 11.66 | 11.44 | 11.16 |
| 5000           | 6 x 200 x 3    | 9.70                    | 10.31 | 10.26 | 10.09 | 9.86  | 9.59  | 9.96                    | 10.77 | 10.79 | 10.68 | 10.49 | 10.25 |
| 6000           | 6 x 230 x 3    | 9.77                    | 10.37 | 10.31 | 10.14 | 9.90  | 9.63  | 9.98                    | 10.79 | 10.81 | 10.69 | 10.50 | 10.26 |

**Note:** All dimensions are subject to change without prior notice.

Certificate No. 18238.....

**Intertek**

## ASTA CERTIFICATE of Temperature Rise Tests

Laboratory Ref. No: 2011/STL/277

**APPARATUS:** 3200A, 1000V/1000V(Ue/U0), 50Hz. Busway system incorporating three joints each comprising three phase and neutral aluminium busbars with insulating material polyester film with thickness of 500 micron

**DESIGNATION:** Translite MF Busduct

**MANUFACTURER:** Multi B Sdn Bhd.  
Lot 53, Jalan Jasmine 2, Bandar Bukit Beruntung,  
48300 Serendah, Selangor Darul Ehsan,  
Malaysia

**TESTED BY:** Central Power Research Institute, Switchgear Testing & Development Station,  
Govindpura, Bhopal-462 023, Madhya Pradesh, India

**DATE OF TESTS:** 14.3.2011

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

**IEC 60439-2, 2005**

Verification of temperature rise limits (Clause 8.2.1)

Refer to page A for rating

The results are shown in the record of Proving Tests attached hereto. The values obtained for general performance is considered to comply with the above Standard(s) and to justify the rating assigned by the manufacturer as stated on the ratings page(s).

This certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus of the same or other designations rests with the Manufacturer.

This certificate comprises this front sheet, 1 rating page plus 9 other pages as detailed on page 1

Only integral reproductions of this whole certificate or reproductions of this page accompanied by any ratings pages are permitted.  
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England. Contact: [asta@intertek.com](mailto:asta@intertek.com) Tel: +44 (0)1788 578435

UKAS  
CERTIFICATION  
010

P. J. Jones  
2nd August 2011

Certificate No. 18237.....

**Intertek**

## ASTA CERTIFICATE of Temperature Rise Tests

Laboratory Ref. No: 2011/STL/273

**APPARATUS:** 1600A, 1000V/1000V(Ue/U0), 50Hz. Busway system incorporating three joints each comprising three phase and neutral aluminium busbars with insulating material polyester film with thickness of 500 micron

**DESIGNATION:** Translite MF Busduct

**MANUFACTURER:** Multi B Sdn Bhd.  
Lot 53, Jalan Jasmine 2, Bandar Bukit Beruntung,  
48300 Serendah, Selangor Darul Ehsan,  
Malaysia

**TESTED BY:** Central Power Research Institute, Switchgear Testing & Development Station,  
Govindpura, Bhopal-462 023, Madhya Pradesh, India

**DATE OF TESTS:** 12.3.2011

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

**IEC 60439-2, 2005**

Verification of temperature rise limits (Clause 8.2.1)

Refer to page A for rating

The results are shown in the record of Proving Tests attached hereto. The values obtained and the general performance is considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated on the ratings page(s).

This certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with the Manufacturer.

This certificate comprises this front sheet, 1 rating page plus 10 other pages as detailed on page 1

Only integral reproductions of this whole certificate or reproductions of this page accompanied by any ratings pages are permitted.  
Issued by Intertek, Hilton House, Corporation Street, Rugby, CV21 2DN  
England. Contact: [asta@intertek.com](mailto:asta@intertek.com) Tel: +44 (0)1788 578435

UKAS  
CERTIFICATION  
010

P. J. Jones  
2nd August 2011

A. Awasthi  
ASTA Observer  
Certification Manager  
Date

Translite Maintenance Free Busducts adhere to the specifications in the IEC Publication 529 Classification of Degrees of Protection by Enclosure. Our busducts are IP42, IP54, IP55, IP65, IP67 and IP68 certified and can endure some of the harshest conditions. The IP classification comprises two digits - the first digit denotes protection against infiltration of solid objects while the second denotes protection against water.

**Tested by SIRIM Malaysia**

**1. IP 42 TEST REPORT NO. EL 20020361**

**2. IP 55 TEST REPORT NO. 2004EL0858**

**3. IP 67 TEST REPORT NO. 2007EL0314**

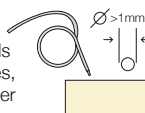
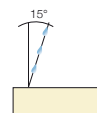
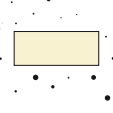
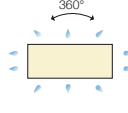
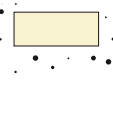
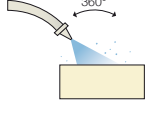
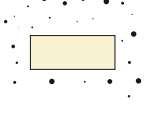
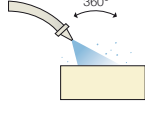
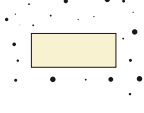
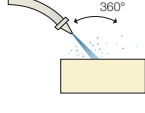
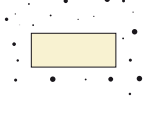
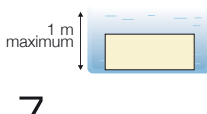
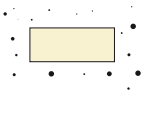
**4. IP 68 TEST REPORT NO. 2005EL0476**

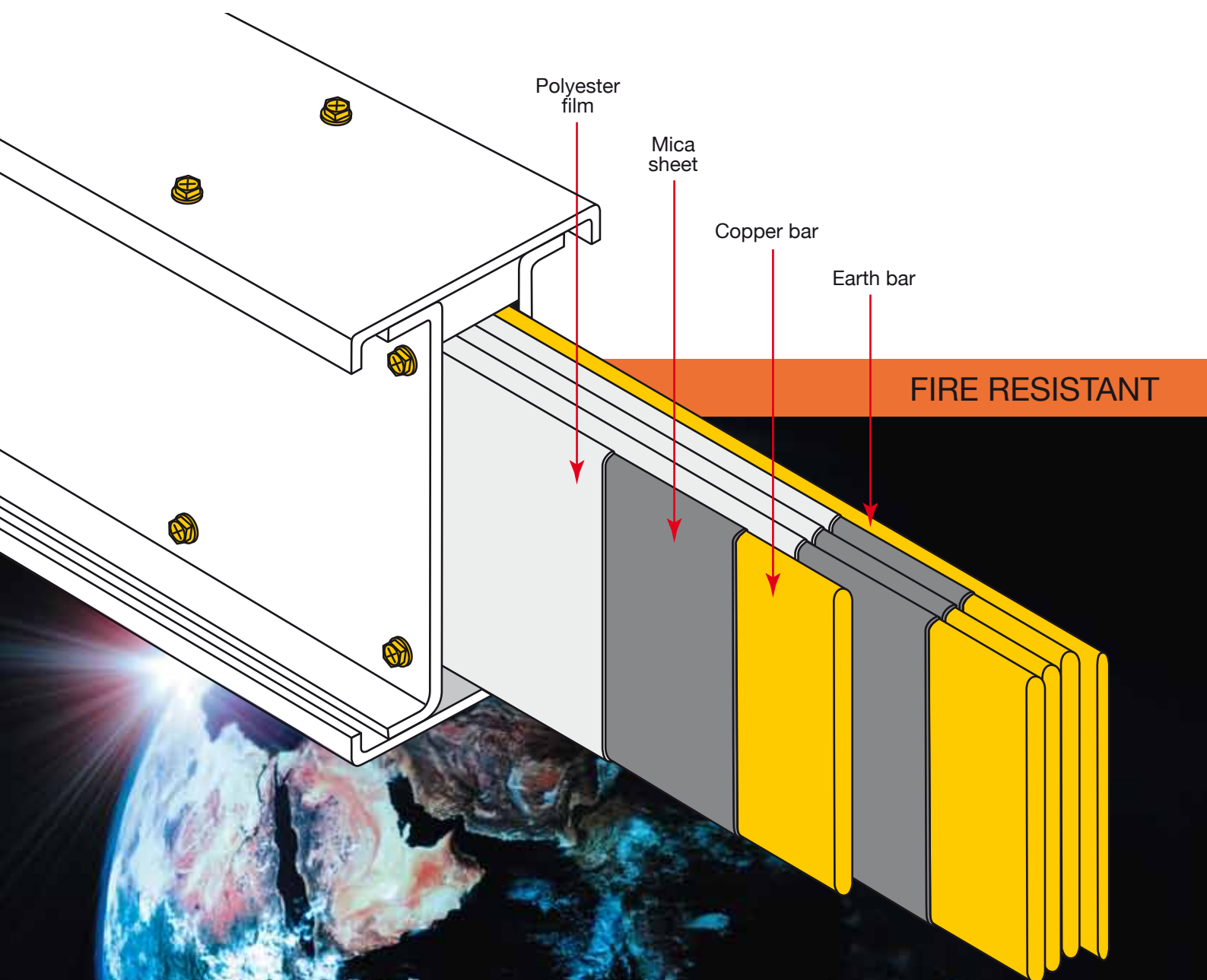
**Tested by PSB Singapore**

**1. IP 54 TEST REPORT NO. 30T0000127/LHL/LST**

**2. IP 65 TEST REPORT NO. 30S0003449/KYM/LST**

## IP SPECIFICATIONS

| PROTECTION AGAINST INFILTRATION OF SOLID OBJECTS |                                                                                                                                                  | PROTECTION AGAINST WATER                                                                                                                                 |  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| With tools and wires, diameter greater than 1 mm | <br>Round foreign bodies, diameter greater than 1 mm           | <br>Drops of water falling at up to 15° from the vertical            |  |
|                                                  | IP figures <b>4</b>                                                                                                                              | <b>2</b>                                                                                                                                                 |  |
| Limited protection                               | <br>Dust deposits (limited infiltration; no harmful deposits) | <br>Projected water from all directions (limited seepage permitted) |  |
|                                                  | IP figures <b>5</b>                                                                                                                              | <b>4</b>                                                                                                                                                 |  |
| Limited protection                               | <br>Dust deposits (limited infiltration; no harmful deposits) | <br>Jets of water (limited seepage permitted)                       |  |
|                                                  | IP figures <b>5</b>                                                                                                                              | <b>5</b>                                                                                                                                                 |  |
| Complete protection                              | <br>Entry of dust                                             | <br>Jets of water (limited seepage permitted)                       |  |
|                                                  | IP figures <b>6</b>                                                                                                                              | <b>5</b>                                                                                                                                                 |  |
| Complete protection                              | <br>Entry of dust                                             | <br>Strong jets of water (limited seepage permitted)                |  |
|                                                  | IP figures <b>6</b>                                                                                                                              | <b>6</b>                                                                                                                                                 |  |
| Complete protection                              | <br>Entry of dust                                             | <br>Effects of immersion between 15 cm and 1 m                       |  |
|                                                  | IP figures <b>6</b>                                                                                                                              | <b>7</b>                                                                                                                                                 |  |
| Complete protection                              | <br>Entry of dust                                             | <br>Long period of immersion under pressure                         |  |
|                                                  | IP figures <b>6</b>                                                                                                                              | <b>8</b>                                                                                                                                                 |  |





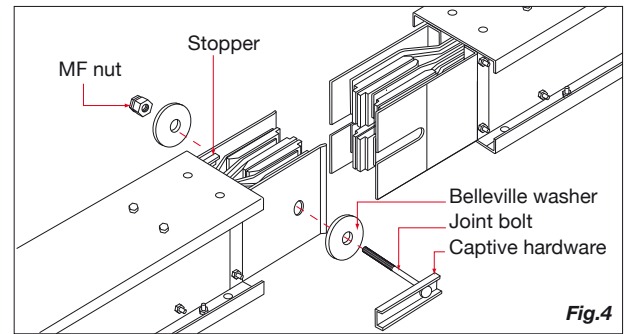


Fig.4

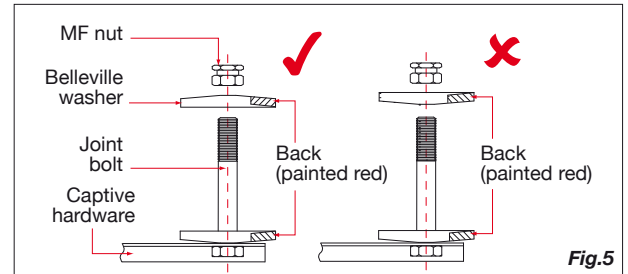


Fig.5

## JOINTING PROCEDURE

The busduct joint is the most important component of the busduct system. Therefore, it is imperative that the joints are installed and secured correctly. Improper jointing will result in power loss and equipment damage.

1. Before jointing, clean the busduct conductors to ensure that they are dust-free.
2. For Ampere rating of 600Amp and 800Amp, temporarily remove the joint bolt. For Ampere rating that is larger than 800Amp, it is not necessary to remove the joint bolt.
3. Align the joint ends and slide them in until the duct joint touch the stopper. (see Fig.4) When re-inserting the joint bolt, make sure the belleville washers are properly installed with the convex side facing out. (see Fig.5)



Set the centre line and level together.



Fit together till the duct joiners touch the stoppers.



Tighten the "MF" nut by special ratchet wrench till the neck part of the nut is broken and locked.



Attach the joint cover with M6 bolt & nut.



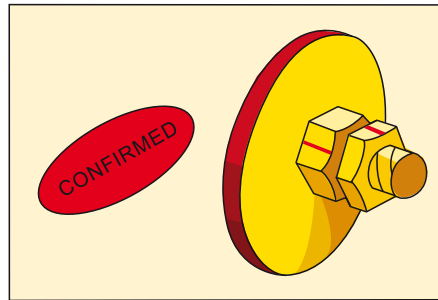
Completed joint.



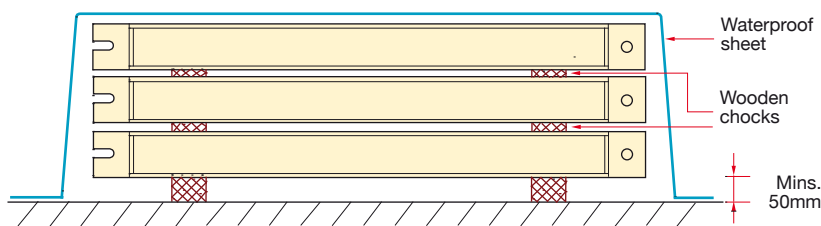
6

## SOME IMPORTANT POINTS TO NOTE:

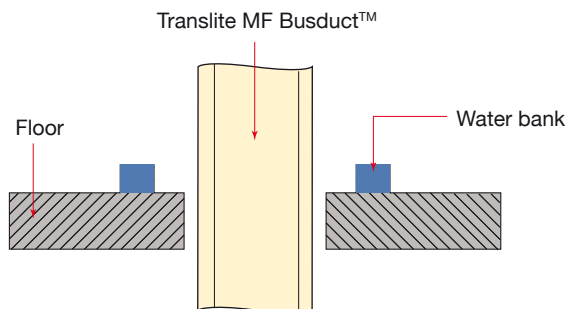
- Keep the busducts dry during storage and installation. Cover busducts with water-proof sheets to protect them from water. (diag. A)
- Provide water banks on the floor around the busducts to keep them from water. (diag. B).
- If necessary, seal the floor opening (diag. C). Never fill it with mortar directly.
- After installation, inspect all joint bolts, place a 'CONFIRMED' sticker near the MF nut.



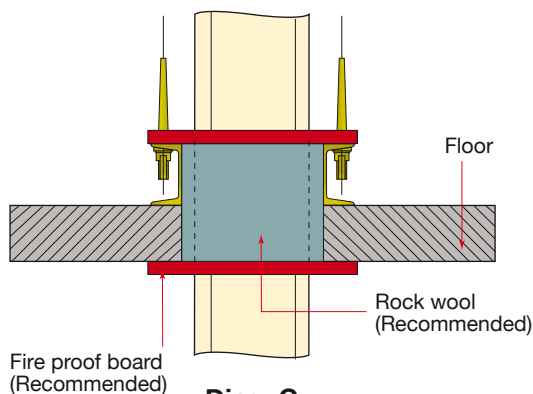
## PRECAUTION



**Diag. A**



**Diag. B**

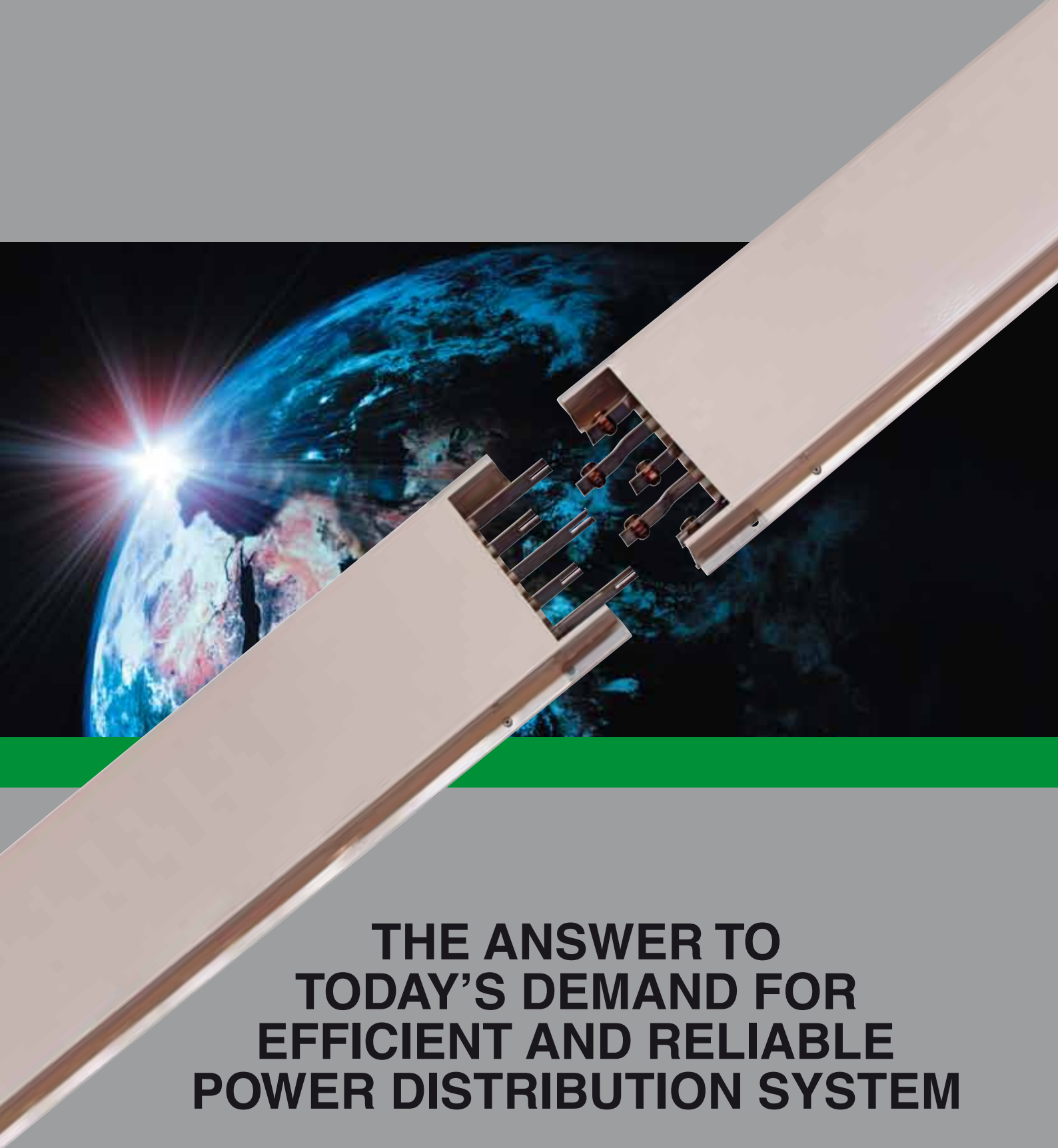


**Diag. C**

**Note:** All dimensions are subject to change without prior notice.



**TRANSLITE™**  
**MINI BUSDUCT**



**THE ANSWER TO  
TODAY'S DEMAND FOR  
EFFICIENT AND RELIABLE  
POWER DISTRIBUTION SYSTEM**

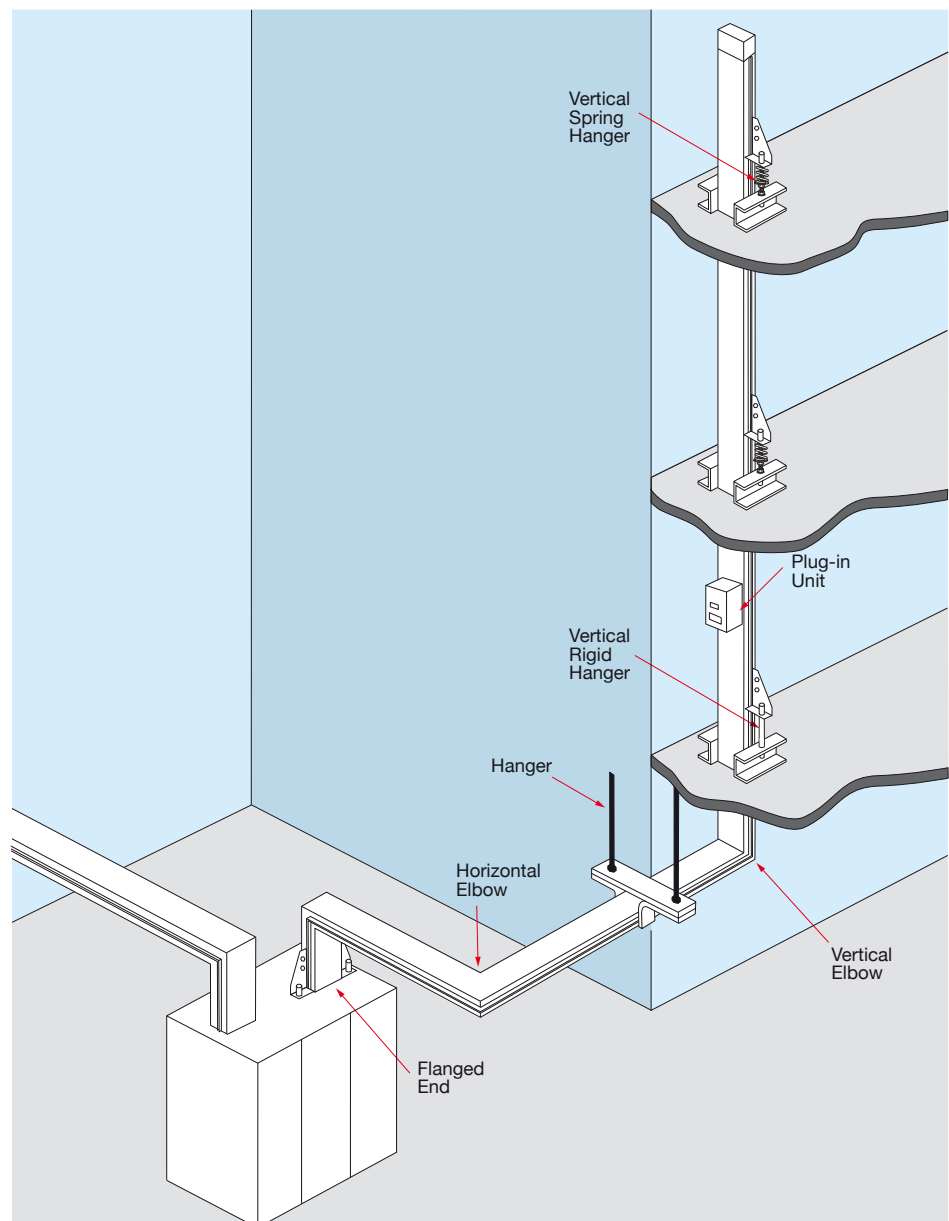
Translite Mini Busduct is designed for easy installation and operation. It is ideal for schools, factories and buildings requiring electrical power less than 600Amp.

As in any mission critical environment, incorrect installation may cause accidents or damages to equipment or machinery, resulting in financial loss.

Before proceeding to install the system, please read instructions carefully and follow the procedures as outlined in this manual.

In case of problem or difficulty related to installation, kindly contact your local agent or Multi-B technical department at [enq@multib.com.my](mailto:enq@multib.com.my) for assistance.

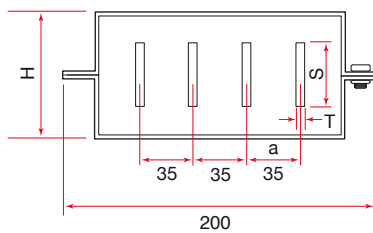
## INSTALLATION LAYOUT



| Item | Parts                                             | Specification |               |                                       | Weight (kg) |      |
|------|---------------------------------------------------|---------------|---------------|---------------------------------------|-------------|------|
|      |                                                   | Pole          | Rated voltage | Rated current (A)                     |             |      |
| 1    | Plug-in feeder<br>(Std : L = 2400)                | 4             | AC 500 V      | 100                                   | 20          |      |
|      |                                                   |               |               | 200                                   | 21          |      |
|      |                                                   |               |               | 300                                   | 26          |      |
| 2    | Feed-in box<br>a : End feed-in<br>(Std : L = 450) |               |               | 400                                   | 33          |      |
|      |                                                   |               |               | 200                                   | 13.6        |      |
|      |                                                   |               |               | 300                                   | 14.8        |      |
|      |                                                   |               |               | 400                                   |             |      |
|      |                                                   |               |               | 200                                   |             | 31.5 |
|      |                                                   |               |               | b: Centre feed-in<br>(Std : L = 2400) | 300         | 36.5 |
| 400  | 43.5                                              |               |               |                                       |             |      |
| 3    | End closer                                        |               |               |                                       | -           | 200  |
|      |                                                   |               |               | 300,400                               |             |      |
| 4    | Hanger                                            | -             | 200           | 0.9                                   |             |      |
|      |                                                   |               | 300,400       |                                       |             |      |
| 5    | Plug-in MBD unit                                  | 3             | AC 500V       | Common for all rated current          | 8.2         |      |

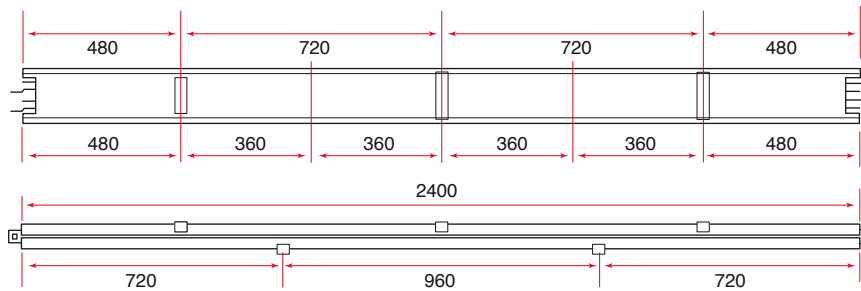
## COMPONENTS

### CROSS SECTION



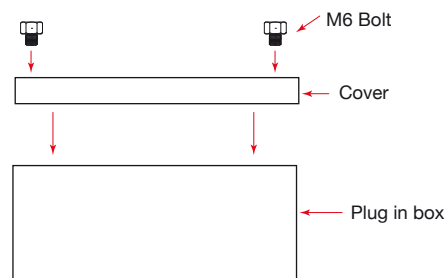
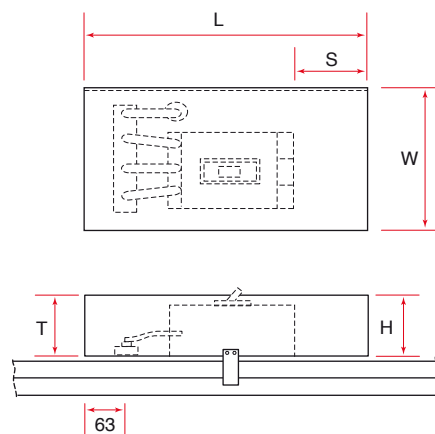
| RATING (AMP) | DIMENSION (MM) |    |   |    |
|--------------|----------------|----|---|----|
|              | H              | S  | T | a  |
| 100          | 65             | 20 | 2 | 35 |
| 200          | 65             | 25 | 3 | 35 |
| 300          | 80             | 40 | 3 | 35 |
| 400          | 80             | 40 | 5 | 35 |

### PLUG-IN FEEDER



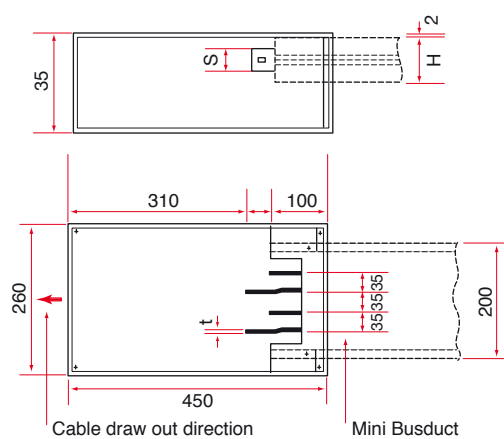
### PLUG-IN MBD UNIT

TYPE: MBD - F100 RB  
 MBD - F225 FB



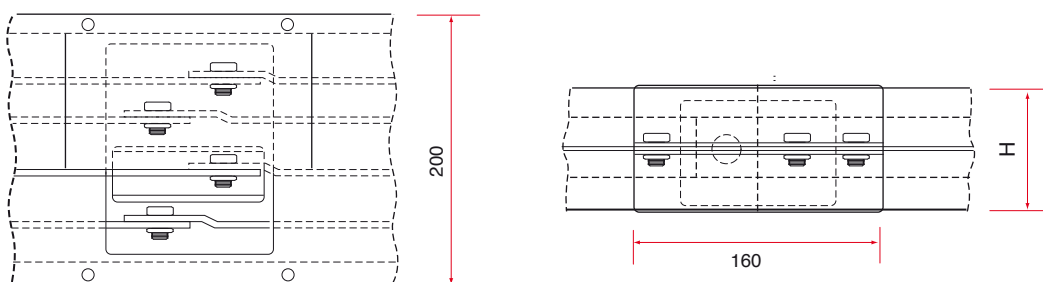
| CIRCUIT BREAKER | CIRCUIT BREAKER |     |     |     |     |
|-----------------|-----------------|-----|-----|-----|-----|
| FRAMES          | L               | W   | S   | T   | H   |
| F100 RB         | 360             | 202 | 100 | 85  | 90  |
| F225 FB         | 400             | 202 | 134 | 105 | 110 |

## END FEED-IN BOX

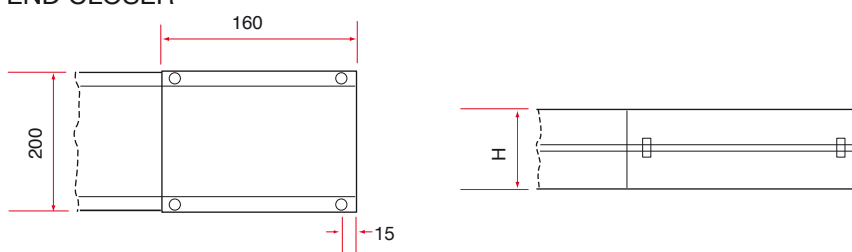


| RATING<br>(AMP) | DIMENSION (MM) |    |   |     |
|-----------------|----------------|----|---|-----|
|                 | H              | S  | t | W   |
| 100A            | 65             | 20 | 2 | 170 |
| 200A            | 65             | 25 | 3 | 170 |
| 300A            | 80             | 40 | 3 | 170 |
| 400A            | 80             | 40 | 5 | 170 |

## JOINT COVER



## END CLOSER



## TECHNICAL DATA

### IMPEDANCE

 (Unit:  $10^{-3}\Omega/\text{m}$ )

| Rating<br>in<br>Amps | 3Ø 50 Hz |       |                         | 3Ø 50 Hz |       |                         |
|----------------------|----------|-------|-------------------------|----------|-------|-------------------------|
|                      | $R_{AC}$ | $X$   | $\sqrt{R_{AC}^2 + X^2}$ | $R_{AC}$ | $X$   | $\sqrt{R_{AC}^2 + X^2}$ |
| 200                  | 0.303    | 0.124 | 0.328                   | 0.304    | 0.149 | 0.338                   |
| 300                  | 0.191    | 0.099 | 0.215                   | 0.191    | 0.119 | 0.225                   |
| 400                  | 0.115    | 0.097 | 5.66                    | 0.116    | 0.116 | 0.164                   |

### VOLTAGE DROP

(Unit: Volt/100m)

| Rating<br>in<br>Amps | 3Ø 50 Hz Power factor % |       |       |       |       | 3Ø 60 Hz Power factor % |       |       |       |       |
|----------------------|-------------------------|-------|-------|-------|-------|-------------------------|-------|-------|-------|-------|
|                      | 100                     | 90    | 80    | 70    | 60    | 100                     | 90    | 80    | 70    | 60    |
| 200                  | 0.105                   | 0.113 | 0.110 | 0.104 | 0.097 | 0.105                   | 0.117 | 0.115 | 0.110 | 0.104 |
| 300                  | 0.099                   | 0.112 | 0.110 | 0.106 | 0.101 | 0.099                   | 0.116 | 0.117 | 0.114 | 0.109 |
| 400                  | 0.080                   | 0.101 | 0.104 | 0.103 | 0.101 | 0.080                   | 0.107 | 0.102 | 0.113 | 0.112 |

## PREPARATIONS

1. Identify the storage place and carriage route before receiving the Mini Busducts. Select a dry place for storage.
2. Install the drop rods, hangers and/or supports before installing the Mini Busducts.
3. Always suspend one Mini Busduct from the ceiling with two hangers.
4. Inspect the Mini Busduct route, and confirm that no obstacle exists.

## PRECAUTIONS

1. When joining the Mini Busduct, fix one Mini Busduct with hangers in advance, then hang another Mini Busduct with hangers. Keep Mini Busduct horizontal, set the Mini Busduct centre line and level together, fit at 180° angle until the ducts touch together. Then tighten the bus bars. Fig. 1.

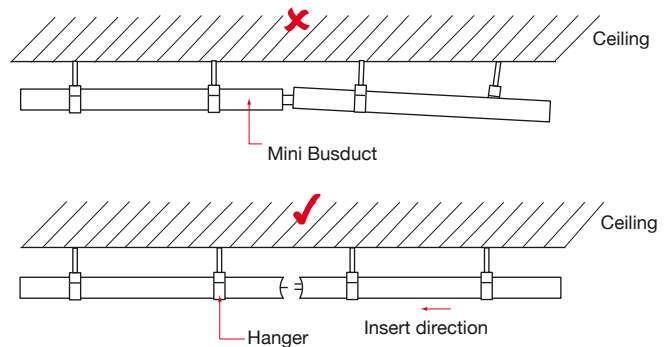
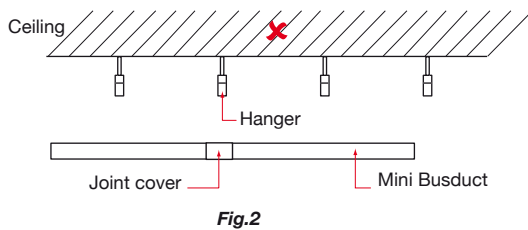


Fig.1

## JOINTING PROCEDURE

2. Do not hang up Mini Busducts after jointing as shown in Fig. 2.



3. If the busducts are not level, rectify it by adjusting the drop rods.

## INSTALLATION TOOLS

You will need the following tools for Mini Busducts installation.

1. (+)(-) screwdriver for joint cover.
2. M10 spanner for hanger.
3. M8 torque wrench for bus bar connection.
4. Other necessary tools.

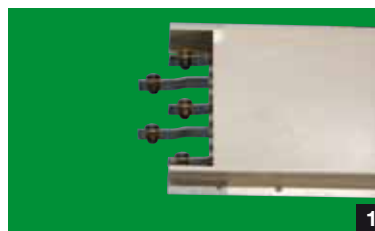
## INSPECTION AFTER INSTALLATION

After installing the Mini Busducts, inspect all the routes and ensure the following:

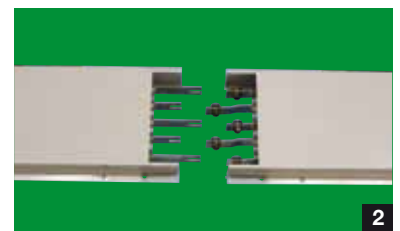
1. All the joint parts housings touch each other without gap and the joint bolts are tightened correctly.
2. The earthing wire is connected to the earth terminal in the feed-in box.

## TEST

After installation, it is recommended that the insulation resistance be measured. Insulation resistance value of the Mini Busduct depends on the route length, circumstance, etc, but usually more than 100MΩ. If it is less than 5MΩ, refer to Multi-B Sdn. Bhd.



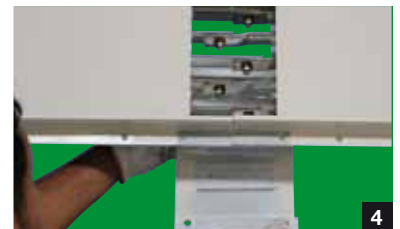
Install the hangers first. Loosen the joint bolts as shown.



Adjust the centre line, level and fit together in a 180° position as shown.



Tighten the joint bolts with the torque wrench. It clicks at the regular torque. (130kgf. cm)



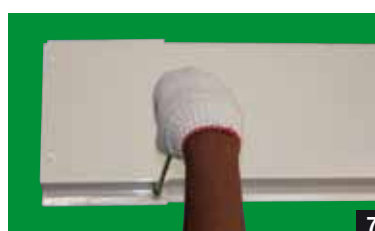
Install the rear joint cover with phase barrier.



Install the front joint cover and tighten the M5 bolts (4 pcs.)



Install the end closer at the end of route.



Tighten the M5 bolts (2 pcs.)



Completed end closer joint.

**TEST REPORT**

Our Ref: 555021418/SYG/YCI  
 Date: 08-10-2002  
 Page: 1 of 29  
 Fax: 67745705

PSB Corporation

NOTE: This Report is issued subject to the "Terms and Conditions Governing Technical Services" set out in the "Request for Technical Services" form. The terms and conditions governing the issue of this report are set out therein.

**Subject**  
 TESTING OF BUSDUCT

**Client**  
 Multi-B Sdn Bhd  
 Lot 53 Jalan Jasmine 2  
 Bandar Bukit Beruntung  
 46300 Serendah  
 Selangor, Malaysia  
 Attn: Mr Chong Hong Wah

**Sample Submission Date**  
 24-09-2002

PSB Testing Your product quality and safety mark

PSB Corporation • Testing Group • 1 Science Park Drive Singapore 118221 • Fax 6775 9725 • Email testing@psbcorp.com • Website www.psbcorp.com

Our Ref : 555021418/SYG/YCI

**Description of Sample**

|                     |          |          |
|---------------------|----------|----------|
| Busduct             | 100A     | 200A     |
| Brand               | MBD 100A | MBD 200A |
| Model No.           |          | TP       |
| Type of the Busduct |          |          |
| Rated Voltage       |          |          |
| Service             |          |          |
| Manufacturer        |          |          |
| Country of Origin   |          |          |

**Method of Test**  
 The assessment detailed in this document was carried out as requested by client.

PSB Corporation

increased of the temperature-rise limits by 10K is permissible if be touched during normal operation.

The limits of the busbar were limited by:-  
 conducting materials,  
 of equipment,  
 limit of the insulating materials is contact with the  
 the conductor on the apparatus connected to it;  
 and surface treatment of the contact material

100A, MBD 200A, MBD 300A, MBD 400A and  
 with IEC 60439-3 : 2000 and BS EN 60439-3 : 2000

**Results (Cont'd)**

| Clause No. | Verification                                   |
|------------|------------------------------------------------|
| 8.2.2      | Test volt<br>Test dur<br>The tes<br>a) B<br>b) |
| 8.2.4.1    |                                                |
| 8.2.6      |                                                |

**SIM YEW GEE**  
 TESTING OFFICER

**YEE CHEONG IN**  
 ASSISTANT VICE PRESIDENT  
 SWITCHGEAR & ACCESSORIES  
 PSB TESTING

Page 6 of 29

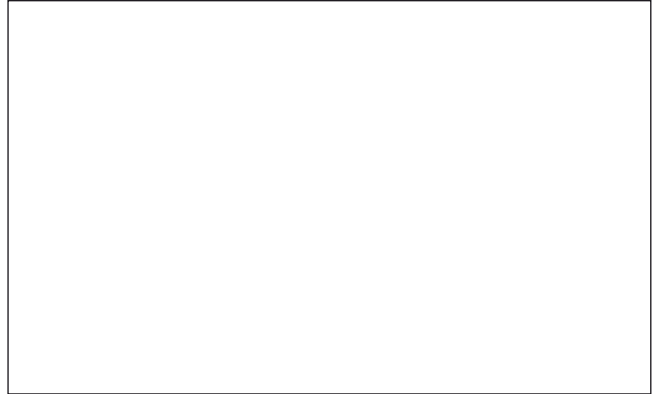
|                                 |            |                      |
|---------------------------------|------------|----------------------|
| 300A                            | 400A       | 600A                 |
| Hitachi Under Licence / Multi-B | MBD 300A   | M6 ZBD 600A          |
| MBD 300A                        | MBD 400A   | TPN Copper Insulated |
| TPN Copper Air Insulated        | 600V, A.C. |                      |

| Results    |                                                                               | Results  |          |          | Results  |             | Results |  | Permissible Limits          |
|------------|-------------------------------------------------------------------------------|----------|----------|----------|----------|-------------|---------|--|-----------------------------|
| Clause No. | Title / Description                                                           | MBD 100A | MBD 200A | MBD 300A | MBD 400A | M6 ZBD 600A |         |  |                             |
| 8.2.1      | Verification of temperature-rise limits                                       | 21.7°C   | 21.2°C   | 20.4°C   | 21.0°C   | 22.3°C      |         |  |                             |
|            | Ambient temperature                                                           |          |          |          |          |             |         |  |                             |
|            | Test length : 2.4m x 3 lengths including two joints                           |          |          |          |          |             |         |  |                             |
|            | Mounting position : supported horizontally at approximately 1m from the floor |          |          |          |          |             |         |  |                             |
|            | Test current (per phase)                                                      |          |          |          |          |             |         |  |                             |
|            | Temperature-rise (K) at :                                                     |          |          |          |          |             |         |  |                             |
|            | a) Centre position of each busbar trunking (from left to the right)           |          |          |          |          |             |         |  |                             |
|            | i) 1 <sup>st</sup> busbar                                                     | 21       | 21       | 46       | 53       | 55          | 49      |  | See Remark 2<br>Maximum 30K |
|            | ii) 2 <sup>nd</sup> busbar                                                    | 21       | 21       | 48       | 55       | 56          | 56      |  |                             |
|            | iii) 3 <sup>rd</sup> busbar                                                   | 11       | 26       | 33       | 34       | 34          | 36      |  |                             |
|            |                                                                               |          |          | 14       | 17       | 18          |         |  |                             |

| Title / Description                                                                                                                       | Results  |          |          | Results  |             | Permissible Limits                         |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|-------------|--------------------------------------------|
|                                                                                                                                           | MBD 100A | MBD 200A | MBD 300A | MBD 400A | M6 ZBD 600A |                                            |
| n of dielectric properties<br>age = 2500V, 50Hz<br>ation = 1 minute<br>t voltage shall be applied :                                       | Complied | Complied | Complied | Complied | Complied    | No puncture or<br>flashover shall<br>occur |
|                                                                                                                                           | Complied | Complied | Complied | Complied | Complied    |                                            |
| etween all live parts and the<br>interconnected exposed conductive<br>parts of the assembly                                               | Complied | Complied | Complied | Complied | Complied    | Maximum 0.1Ω                               |
| Between each pole and all the other<br>poles connected for this test to the<br>interconnected exposed conductive<br>parts of the assembly | < 0.1 Ω  | < 0.1 Ω  | < 0.1 Ω  | < 0.1 Ω  | Complied    |                                            |
| Verification of the effective connection<br>between the exposed conductive parts of<br>the assembly and the protective circuit            | Complied | Complied | Complied | Complied | Complied    |                                            |
| Verification of mechanical operation<br>Number of operation = 50 cycles                                                                   | Complied | Complied | Complied | Complied | Complied    |                                            |

| Results (Cont'd)                                                      |                                                                      | Results  |          |          | Results  |             | Permissible Limits            |
|-----------------------------------------------------------------------|----------------------------------------------------------------------|----------|----------|----------|----------|-------------|-------------------------------|
| Clause No.                                                            | Title / Description                                                  | MBD 100A | MBD 200A | MBD 300A | MBD 400A | M6 ZBD 600A |                               |
| 8.2.10.1                                                              | Verification of the structural strength with normal mechanical loads | Complied | Complied | Complied | Complied | Complied    | No deformation<br>shall occur |
|                                                                       | a) 1 <sup>st</sup> test : one straight trunking unit                 | 23kg     | 25kg     | 30kg     | 35.5kg   | 43kg        |                               |
|                                                                       | Test load                                                            |          |          |          |          |             |                               |
|                                                                       | Test duration = 5 minute                                             |          |          |          |          |             |                               |
| b) 2 <sup>nd</sup> test : two straight trunking units joined together | Test load                                                            |          |          |          |          |             |                               |
|                                                                       | Test duration = 5 minute                                             |          |          |          |          |             |                               |
|                                                                       |                                                                      | 40kg     | 50kg     | 60kg     | 73kg     | 85kg        |                               |
|                                                                       |                                                                      |          |          |          |          |             |                               |

## NOTES



Agent/Marketing Representative

## FOR MORE INFORMATION OR CUSTOMER SUPPORT SERVICE:

### MALAYSIA

Lot 53, Jalan Jasmine 2, Bandar Bukit Beruntung  
48300 Serendah, Selangor, Malaysia  
Tel: +603-60281818 Fax: +603-60284899  
Email: sales@multib.com.my  
Website: www.multib.com.my

### DUBAI

E-LOB Office No. P.O.Box 51091,  
Hamriyah Free Zone - Shj, United Arab Emirates.  
Tel: +974-4374 1687

### QATAR

G02, La Palace, Jawaan Street, Al Saad, Doha.  
(opposite Millennium Hotel)  
Tel: +974-4435 5095

### VIETNAM

5th Floor, ACBR Building, 249 Cong Hoa Street,  
Ward 13, Tan Binh District,  
Ho Chi Minh City, Vietnam.  
Tel: +848-6292 3927 Fax: +848-6292 3928  
Email: vietnamsales@multib.com.my

### PHILIPPINES

No. 7C, 7th Floor, Vernida 1, 120 Amorsolo Street  
Legaspi Village, Makati, Manila, Philippines.  
Tel: 0063-09163 18 5360



Multi-B Sdn Bhd  
Registered to ISO 9001:2008  
Certificate No. 463439 QM08



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## **MULTI-B SDN BHD** (184908-T)

Lot 53, Jalan Jasmine 2, Bandar Bukit Beruntung, 48300 Serendah,  
Selangor Darul Ehsan, Malaysia. Tel: +603-6028 1818 Fax: +603-6028 4899  
Website: <http://www.transliteinc.com> E-mail address: [sales@multib.com.my](mailto:sales@multib.com.my)