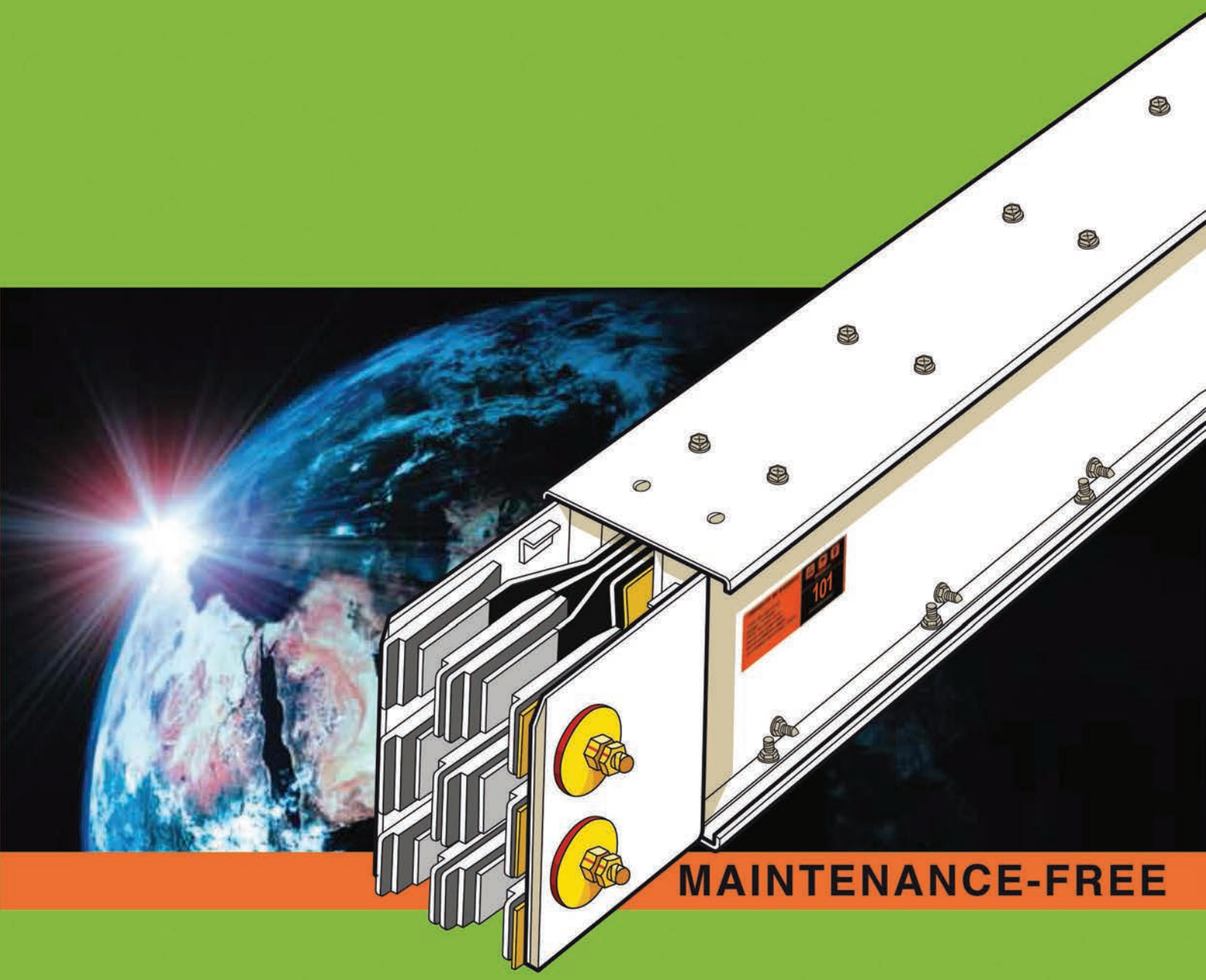
TRANSLITE™
MF BUSDUCT



ENGINEERED TO SERVE THE WORLD OF TOMORROW

Manufactured by Multi-B Sdn Bhd

nqa ISO 9001 Registered

UKAS QUALITY MANAGEMENT

015

TRANSLITE™

CONTENTS

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

Today, we have completed thousands of mega projects worldwide, including Malaysia, Singapore, Indonesia, Thailand, Vietnam, Philippines, Australia, New Zealand, Taiwan, India, Sri Lanka, Bangladesh, Middle East and Hong Kong (China).

MULTI-B SDN BHD: AN INTRODUCTION

Multi-B Sdn Bhd started manufacturing Translite MF 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 MF Busducts. Achieving the ISO 9001: 2015 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.

nqa. ISO 9001 Registered

UKAS QUALITY MANAGEMENT 015

Enterprise 50 Celebrating Malaysia's Enterprising Spirit 2009 CHAMPION

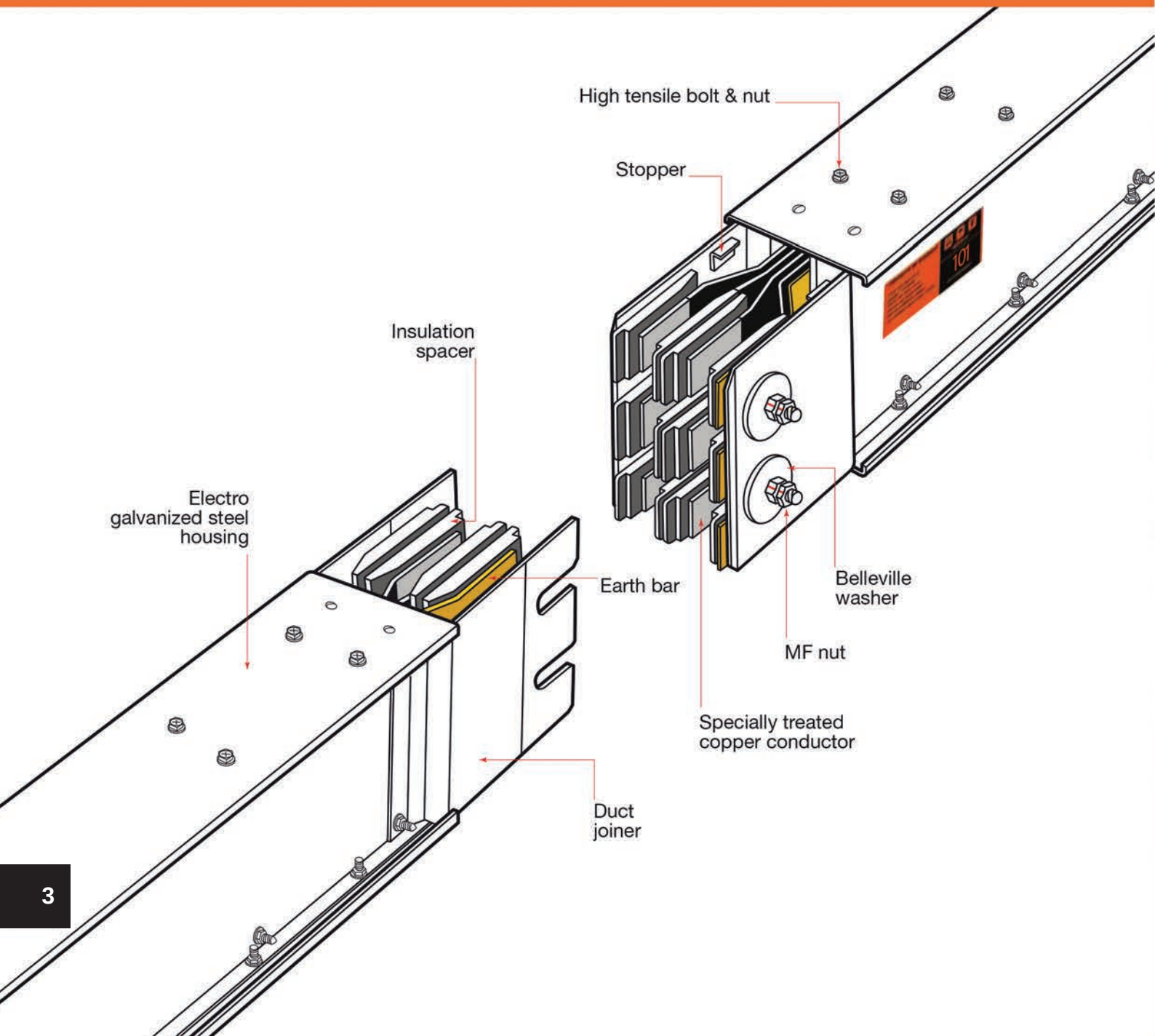
GOLDEN BULL AWARDS 2009 金牛奖 2008 – 2009

TRANSLITE™
MF BUSDUCT

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 MF Busduct System is it's simple design and flexibility to accommodate relocation or expansion of busduct route.

BUSDUCT HOUSING: MECHANICAL STRENGTH

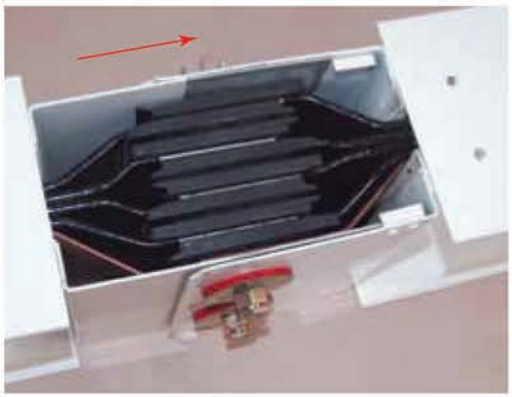
Translite MF busducts are built to last. The compact, fully enclosed sandwich-type busduct housing is made from electro galvanized or galvanized steel sheet to provide mechanical strength and protection for the load carrying conductors, plus efficient heat dissipation.

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

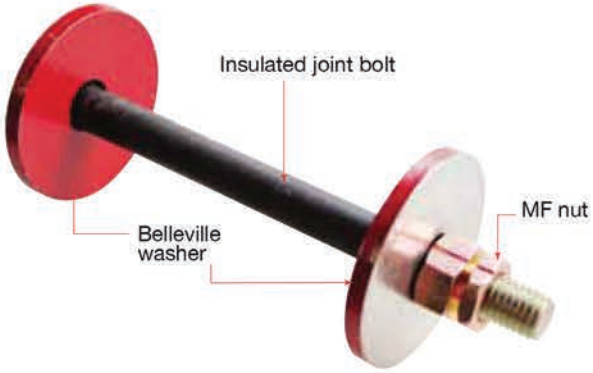
The busduct conductors are joined by slighting the two duct sections together. The Translite unique jointing system provides a simple and effective way to join the busducts. The pre-measured stoppers allow the overlapping duct joiners to be correctly joined together with minimum effort. No cumbersome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



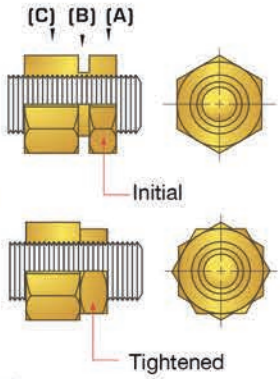
TRANSLITE™
MF BUSDUCT

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 MF Busduct design. The copper or aluminium conductor is insulated with 4 layers of 125-micron polyester film that can withstand temperature rise of 155°C Class F overlapping films also act as an airtight seal to guard against dust and moisture infiltrations.

CONDUCTOR: SUPERIOR CONDUCTIVITY

The copper conductor is 99.98% purity. The busbar joint ends are flashed with a specially formulated alloy solution. Our surface treatment will not peel or blister, thus eliminating potential fire hazard. The process also allows the busbars to bond into a seamless length when tightened.

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.

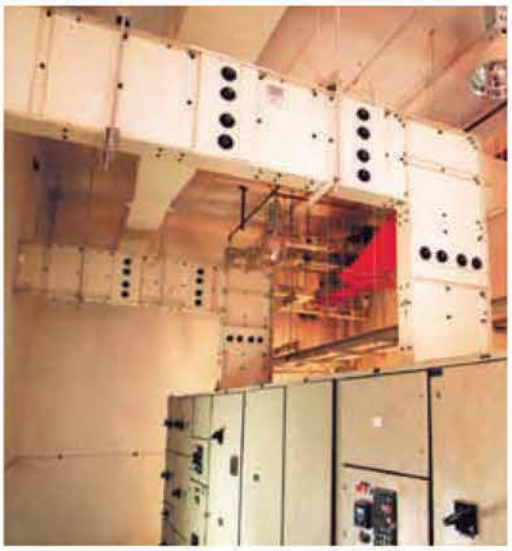
CUSTOMER SUPPORT SERVICE: THE TRANSLITE DIFFERENCE

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.

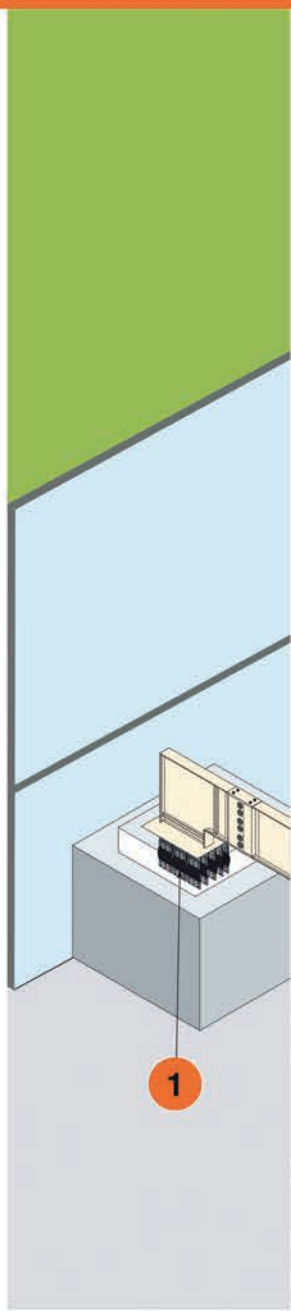
TRANSLITE™
MF BUSDUCT



INSTALLATION LAYOUT

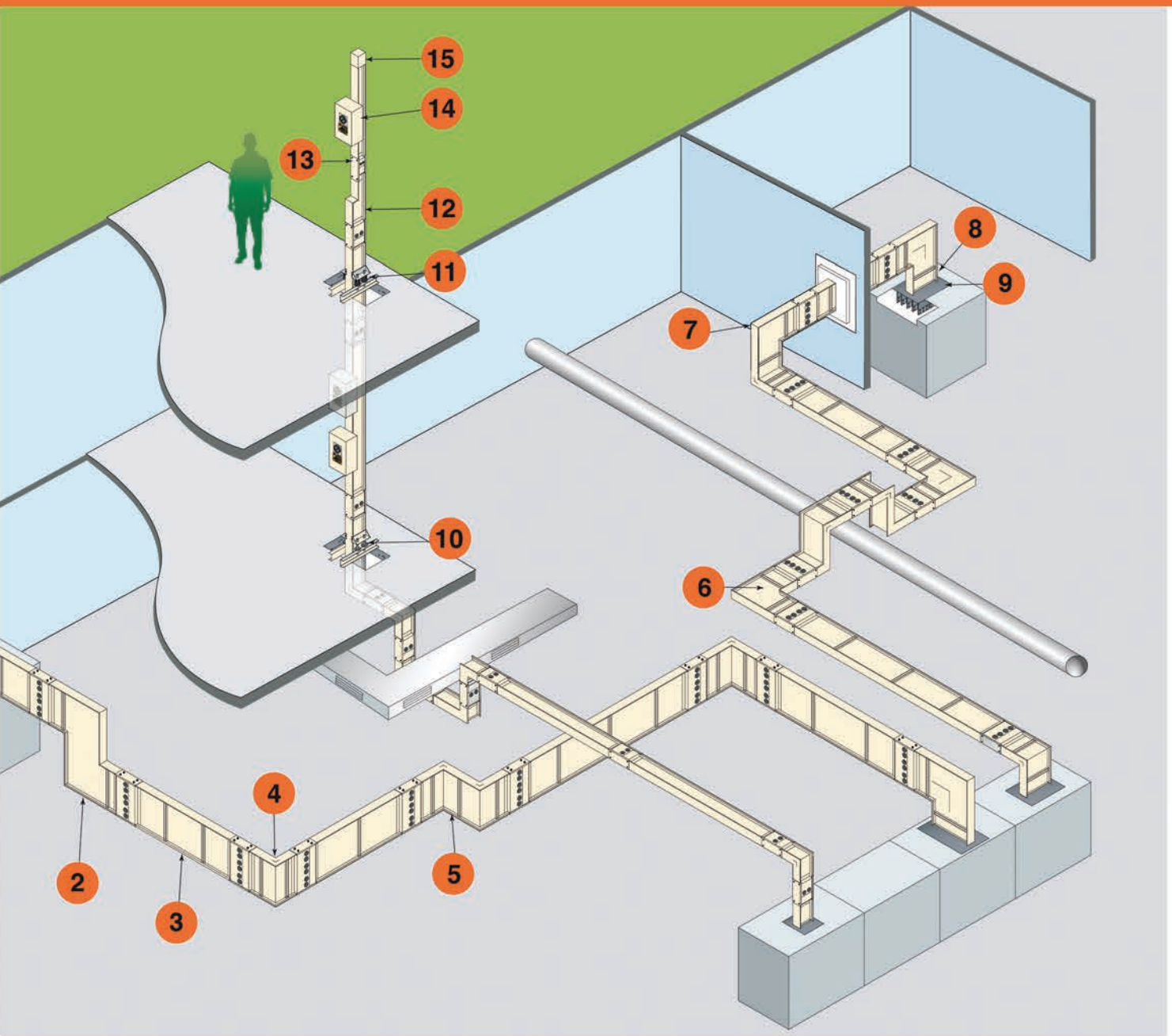
The Translite MF Busduct System is recommended for electrical power transmission and distribution in high rise buildings and complexes. It is available in different IP protections ranging from IP42 to IP68.

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.



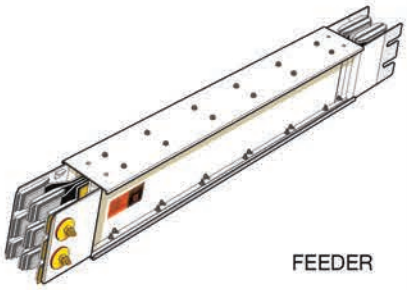
TRANSLITE™
MF BUSDUCT

MULTIPLE COMPONENTS: FLEXIBILITY

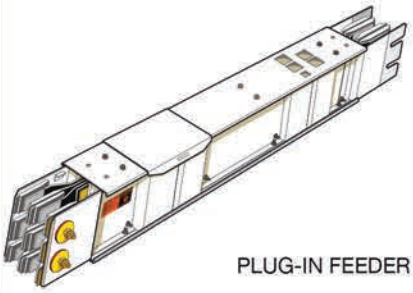
Translite MF Busduct comprises a range of Feeders, Plug-ins, complete with Elbows, Offsets, Flanged Ends, together with other components and accessories. All these components are compatible and are available with copper or aluminium conductors.

COMPONENTS

FLEXIBLE COUPLING PLATE

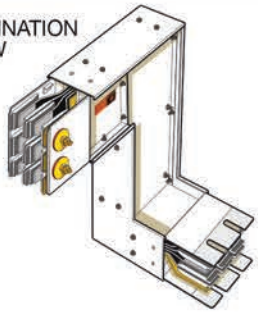


FEEDER

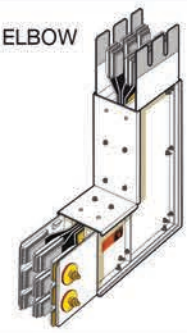


PLUG-IN FEEDER

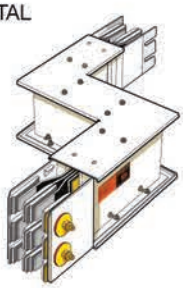
COMBINATION ELBOW



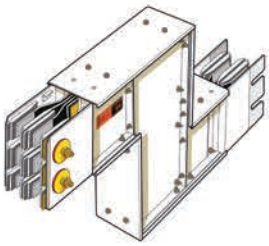
VERTICAL ELBOW



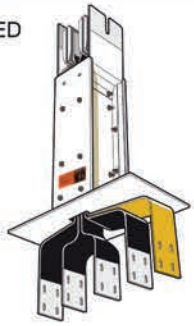
HORIZONTAL OFFSET



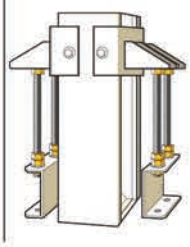
VERTICAL OFFSET



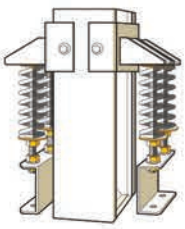
FLANGED END



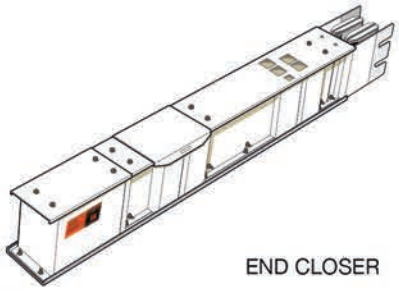
RIGID VERTICAL HANGER



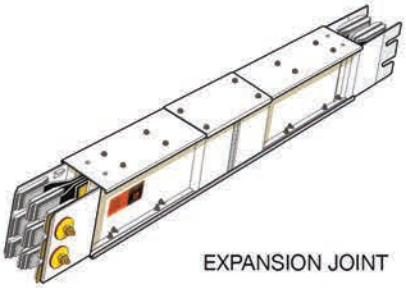
SPRING VERTICAL HANGER



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

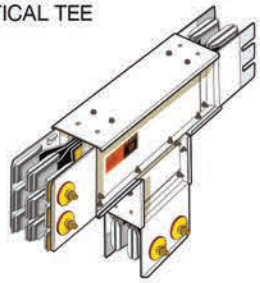


END CLOSER

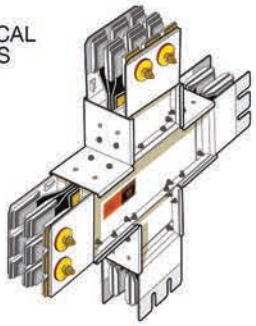


EXPANSION JOINT

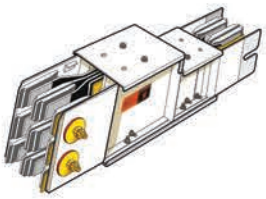
VERTICAL TEE



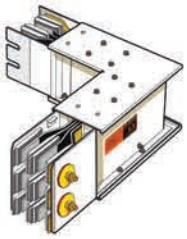
VERTICAL CROSS



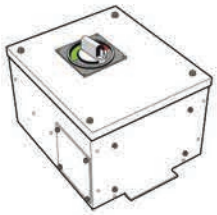
REDUCER



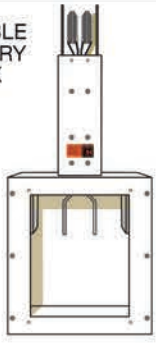
HORIZONTAL ELBOW

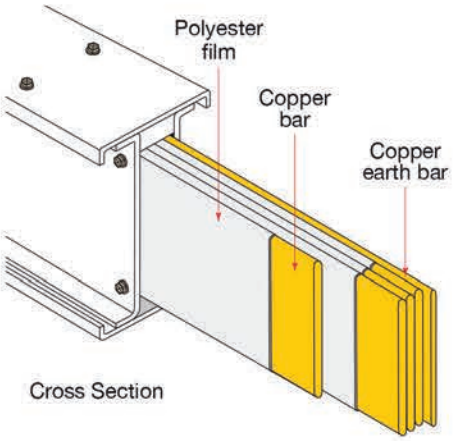


PLUG IN UNIT



CABLE ENTRY BOX





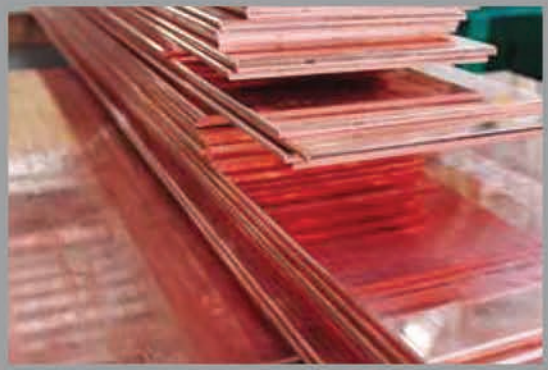
Translite Busduct conductors are insulated with 4 layers of 125 micron polyester film that has a dielectric strength of 155KV/500 micron. This multi-layer insulation has proven more effective in protecting the conductors against short circuit than other forms of insulation.

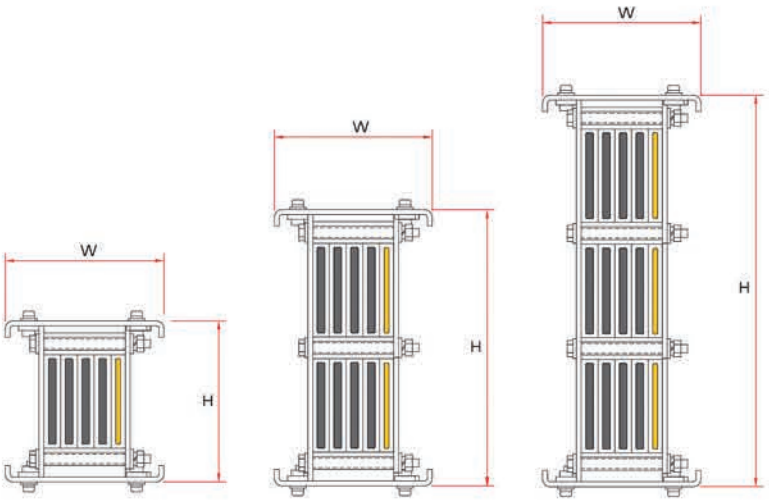
TRANSLITE™
MF BUSDUCT

COMPONENTS SPECIFICATIONS AND TECHNICAL DATA

WITH COPPER CONDUCTORS

Translite MF Busduct copper conductors are certified 99.98% purity. Temperature Rise Test by KEMA has proven the high quality of our conductors.





4W+50% earth
600A ~ 2500A

4W+50% earth
3000A ~ 4000A

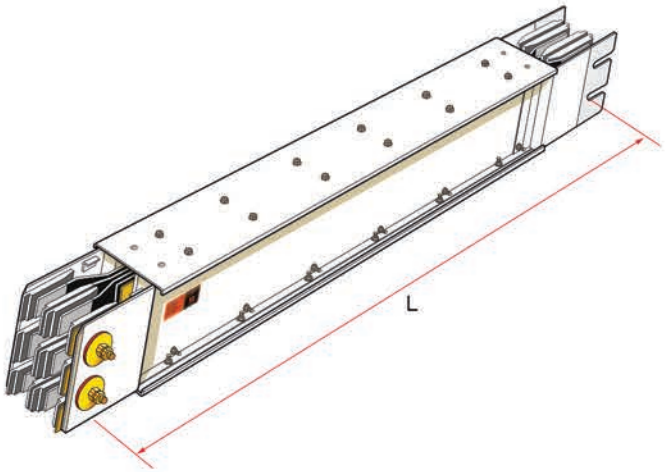
4W+50% earth
5000A ~ 6000A

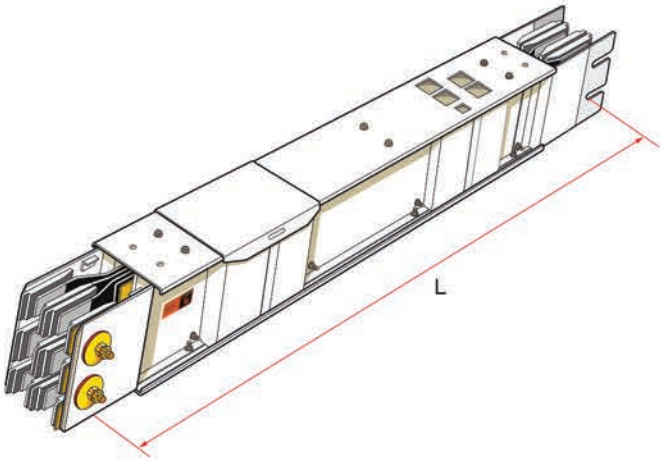
CROSS SECTION

Type	Rating in Amps	Dimensions (mm)				Weight (kg/m)		
		W			H			
		3W	4W	4W+50%E		3W	4W	4W+50%E
TMFC600	600	130	130	170	100	16	19	22
TMFC800	800	130	130	170	115	18	22	25
TMFC1000	1000	130	130	170	135	21	27	31
TMFC1200	1200	130	130	170	150	26	31	35
TMFC1600	1600	130	130	170	180	31	39	44
TMFC2000	2000	130	130	170	220	40	50	59
TMFC2500	2500	130	130	170	260	48	61	69
TMFC3000	3000	130	130	170	325	68	80	86
TMFC3500	3500	130	130	170	365	74	83	92
TMFC4000	4000	130	130	170	405	92	109	120
TMFC4500	4500	130	130	170	435	102	118	134
TMFC5000	5000	130	130	170	530	115	137	148
TMFC6000	6000	130	130	170	590	122	148	161

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

TRANSLITE™
MF BUSDUCT

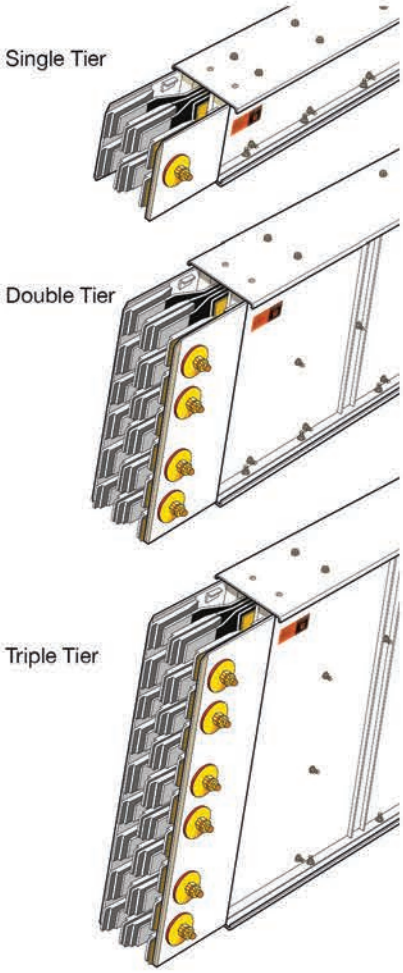




FEEDER

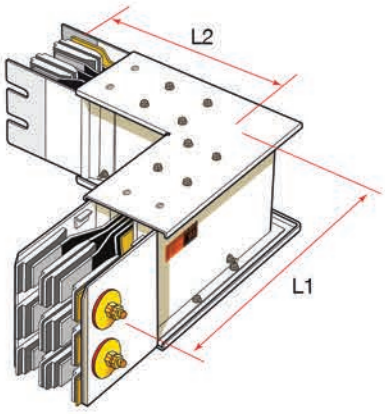
PLUG-IN FEEDER

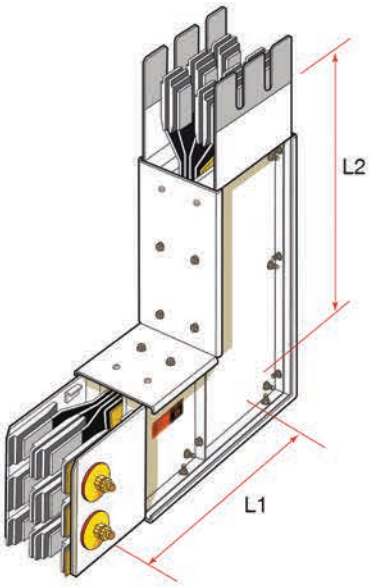
Rating in Amps	L (mm)	
	Minimum	Standard
SINGLE TIER		
600	390	3000
800	390	3000
1000	390	3000
1200	390	3000
1600	390	3000
2000	390	3000
2500	390	3000
DOUBLE TIER		
3000	500	3000
3500	500	3000
4000	500	3000
4500	500	3000
TRIPLE TIER		
5000	500	3000
6000	500	3000



Maximum Length			
Rating in Amps	Dimensions L (mm)		
	1 P.I.H	2 P.I.H	3 P.I.H
SINGLE TIER			
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
DOUBLE TIER			
3000	2990	2980	2970
3500	2990	2980	2970
4000	2990	2980	2970
4500	2990	2980	2970
TRIPLE TIER			
5000	2990	2980	2970
6000	2990	2980	2970

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





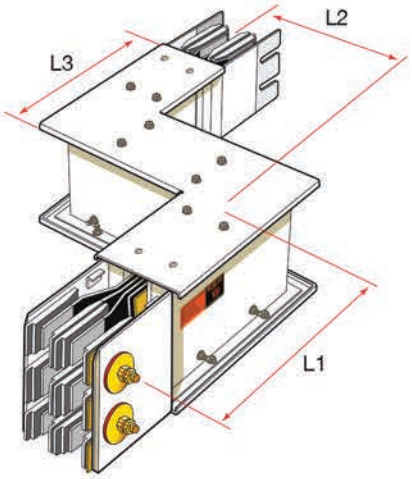
HORIZONTAL ELBOW

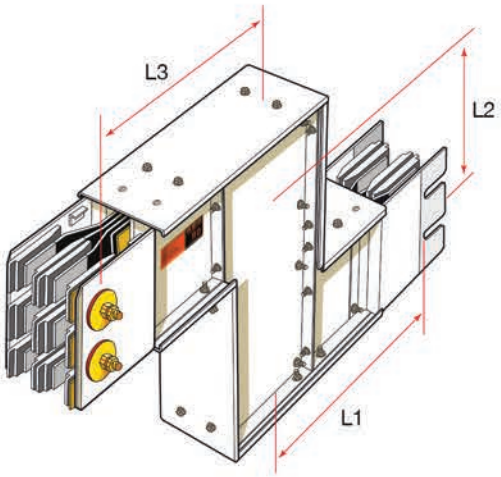
Minimum Length		
Rating in Amps	Dimensions L (mm)	
	L1	L2
SINGLE TIER		
600	265	265
800	265	265
1000	265	265
1200	265	265
1600	265	265
2000	265	265
2500	265	265
DOUBLE TIER		
3000	265	265
3500	265	265
4000	265	265
4500	265	265
TRIPLE TIER		
5000	265	265
6000	265	265

VERTICAL ELBOW

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

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





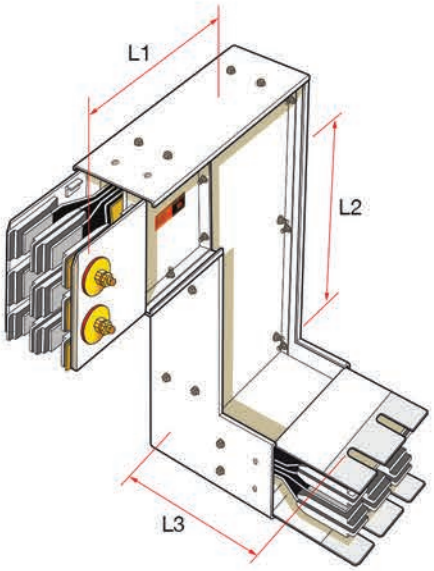
HORIZONTAL OFFSET

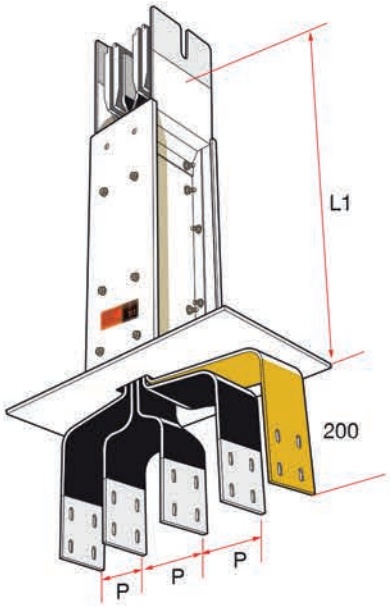
Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
600	265	190	265
800	265	190	265
1000	265	190	265
1200	265	190	265
1600	265	190	265
2000	265	190	265
2500	265	190	265
DOUBLE TIER			
3000	265	190	265
3500	265	190	265
4000	265	190	265
4500	265	190	265
TRIPLE TIER			
5000	265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

VERTICAL OFFSET

Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
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
DOUBLE TIER			
3000	405	448	405
3500	445	490	445
4000	445	530	445
4500	460	565	460
TRIPLE TIER			
5000	510	655	510
6000	540	715	540

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





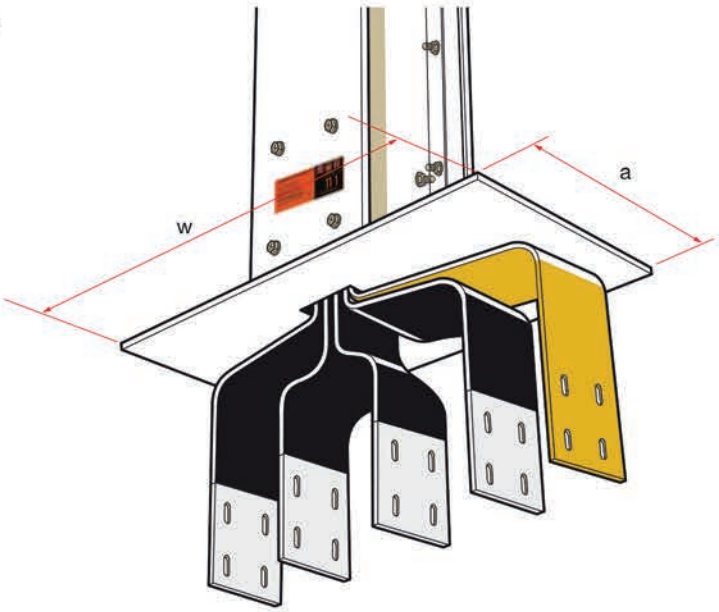
COMBINATION ELBOW FLANGED END

Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
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
DOUBLE TIER			
3000	405	310	350
3500	445	330	350
4000	445	350	350
4500	445	365	350
TRIPLE TIER			
5000	510	415	400
6000	540	445	400

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

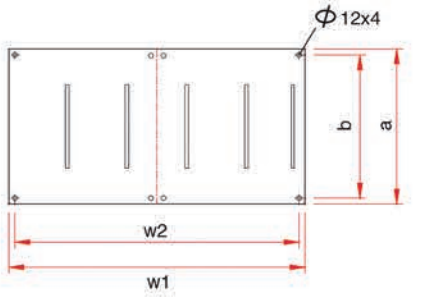
Note: *All dimensions are subject to change without prior notice.*

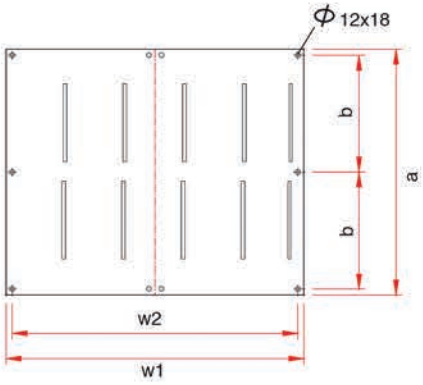
TRANSLITE™
MF BUSDUCT

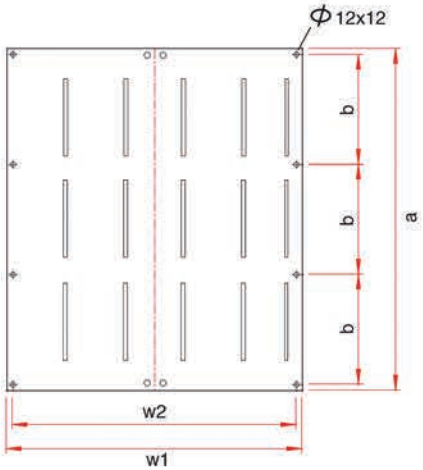


FLANGED END PLATE

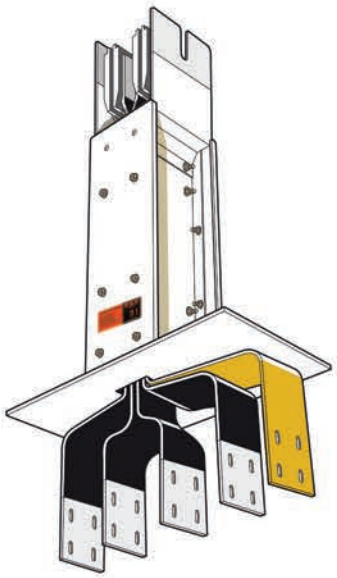
Flanged End Plate										
Rating in Amps	Dimensions (mm)									
	a	b	3W		3W+50%E		4W		4W+50%E	
			w1	w2	w1	w2	w1	w2	w1	w2
SINGLE TIER										
600	160	130	300	270	380	350	400	370	480	450
800	175	145	300	270	380	350	400	370	480	450
1000	195	165	300	270	380	350	400	370	480	450
1200	210	180	300	270	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	405	188	360	330	440	410	490	460	570	540
3500	445	208	360	330	440	410	490	460	570	540
4000	485	228	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





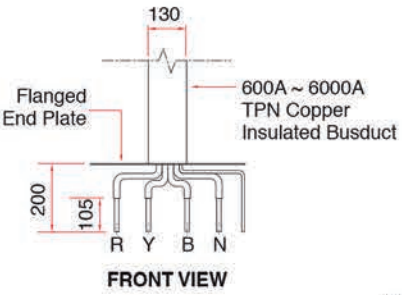


Note: *All dimensions are subject to change without prior notice.*

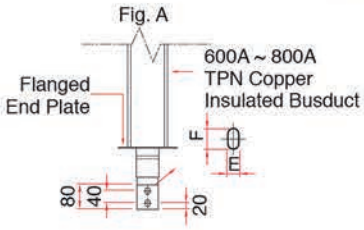


FLANGED END

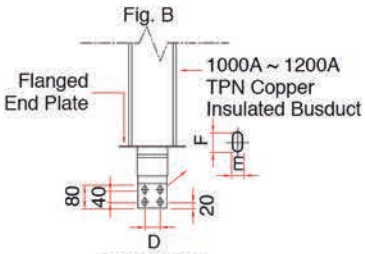
Rating in Amps	Maximum Length Dimensions (mm)			Fig.
	D	E	F	
SINGLE TIER				
600	-	11	20	A
800	-	11	20	A
1000	40	11	20	B
1200	40	11	20	B
1600	40	11	20	C
2000	60	14	22	C
2500	70	14	22	C
DOUBLE TIER				
3000	40	14	22	D
3500	50	14	22	D
4000	60	14	22	D
4500	60	14	22	D
TRIPLE TIER				
5000	50	14	22	E
6000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



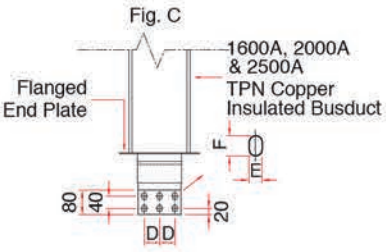
FRONT VIEW



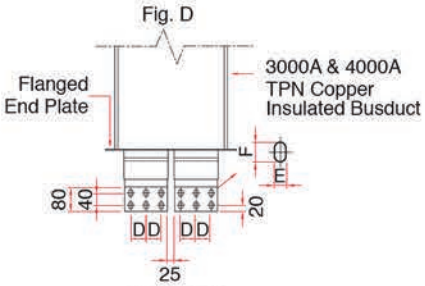
SIDE VIEW



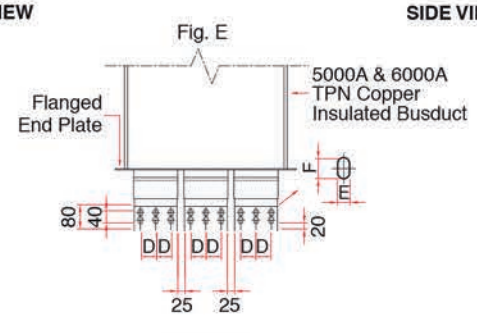
SIDE VIEW



SIDE VIEW



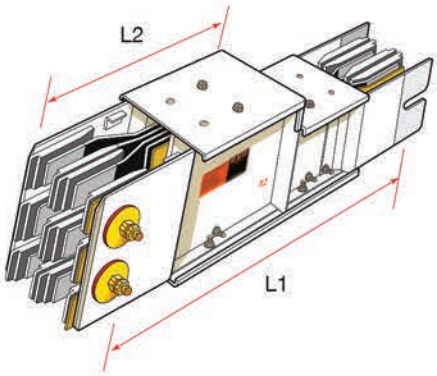
SIDE VIEW

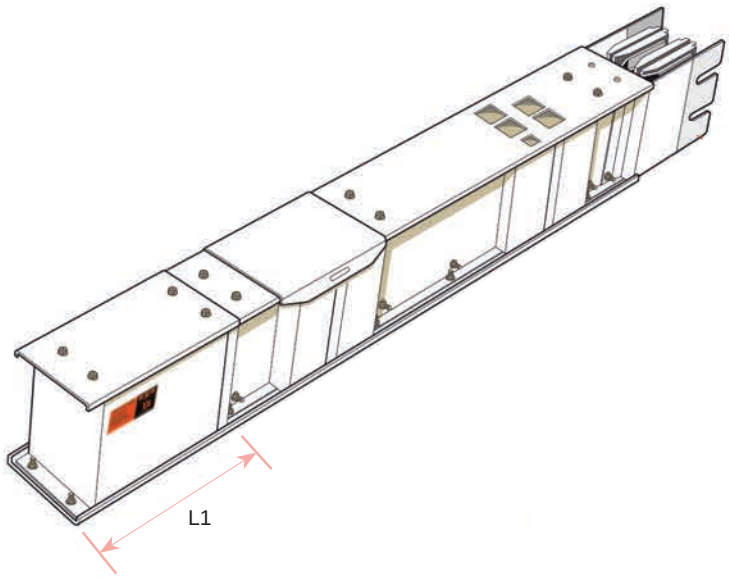


SIDE VIEW

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

TRANSLITE™
MF BUSDUCT



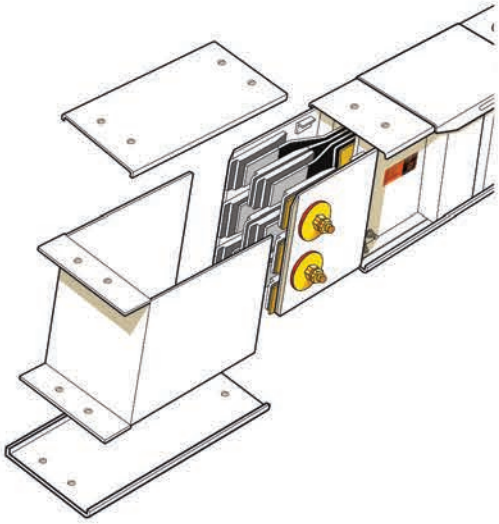


REDUCER

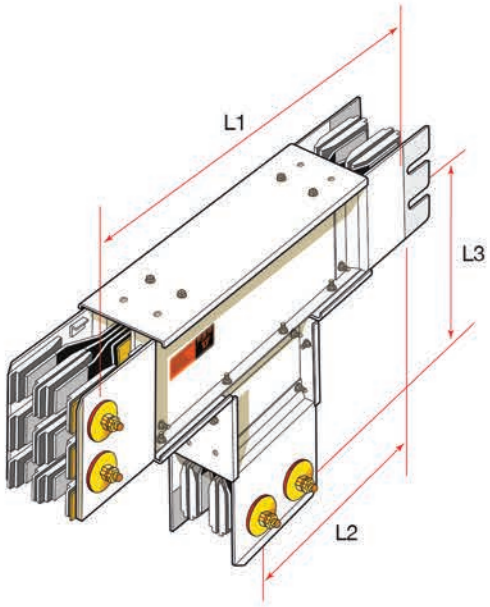
Maximum Length		
Rating in Amps	Dimensions (mm)	
	L1	L2
600	490	245
800	490	245
1000	490	245
1200	490	245
1600	490	245
2000	490	245
2500	490	245
3000	670	335
3500	750	375
4000	750	375
4500	750	375
5000	990	495
6000	1070	535

END CLOSER

Maximum Length	
Rating in Amps	Dimensions (mm)
	L1
600	245
800	245
1000	245
1200	245
1600	245
2000	245
2500	245
3000	335
3500	375
4000	375
4500	375
5000	495
6000	535

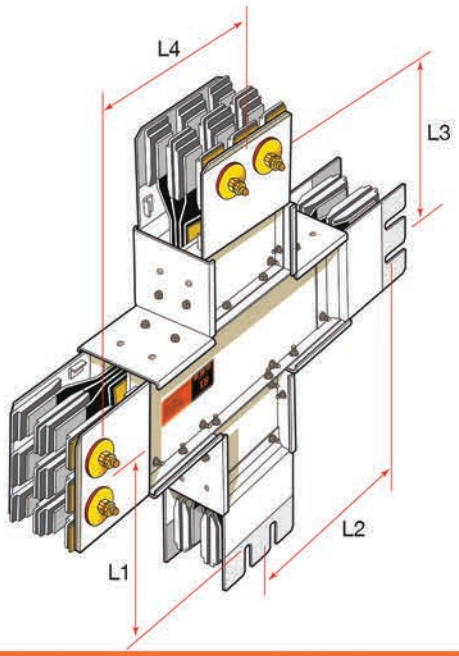


Note: *All dimensions are subject to change without prior notice.*



VERTICAL TEE

Maximum Length			
Rating in Amps	Dimensions (mm)		
	L1	L2	L3
SINGLE TIER			
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
DOUBLE TIER			
3000	810	405	405
3500	890	445	445
4000	890	445	445
4500	920	460	460
TRIPLE TIER			
5000	1020	510	510
6000	1080	540	540

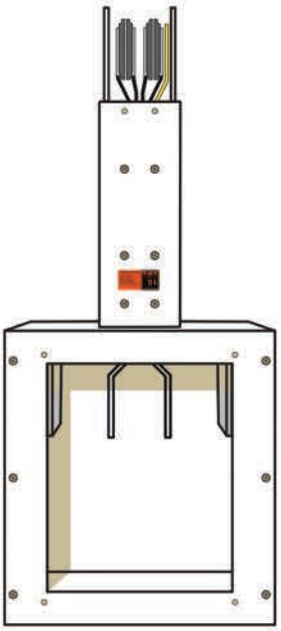


VERTICAL CROSS

Maximum Length				
Rating in Amps	Dimensions (mm)			
	L1	L2	L3	L4
SINGLE TIER				
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
DOUBLE TIER				
3000	404	404	404	404
3500	445	445	445	445
4000	445	445	445	445
4500	460	460	460	460
TRIPLE TIER				
5000	510	510	510	510
6000	540	540	540	540

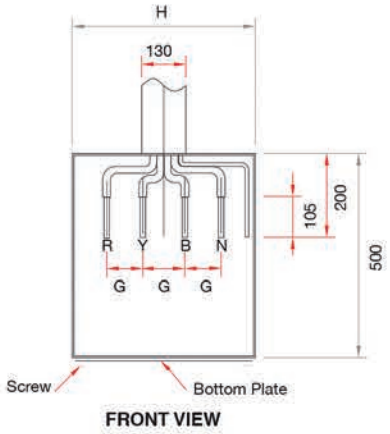
Note: *All dimensions are subject to change without prior notice.*

TRANSLITE™
MF BUSDUCT



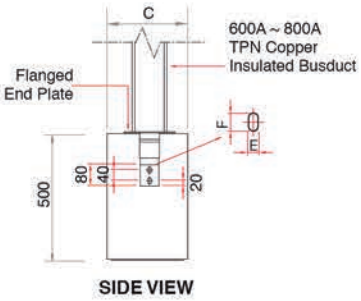
CABLE ENTRY BOX

Rating in 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



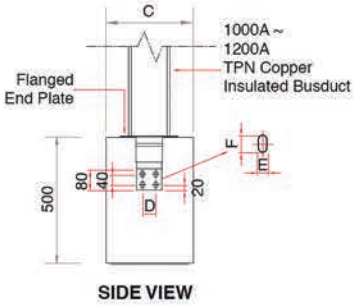
FRONT VIEW

Fig. A



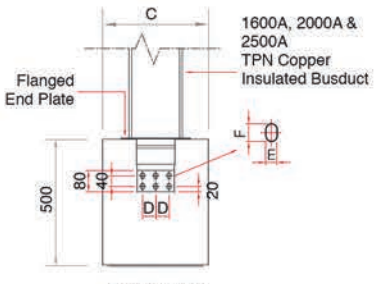
SIDE VIEW

Fig. B



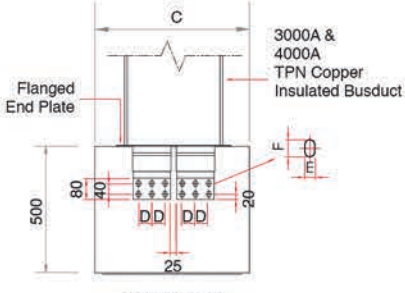
SIDE VIEW

Fig. C



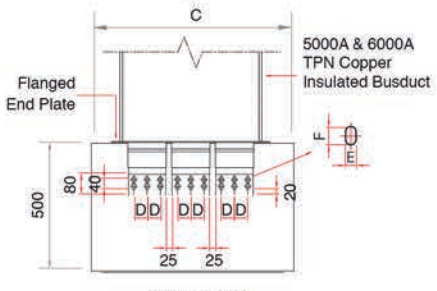
SIDE VIEW

Fig. D



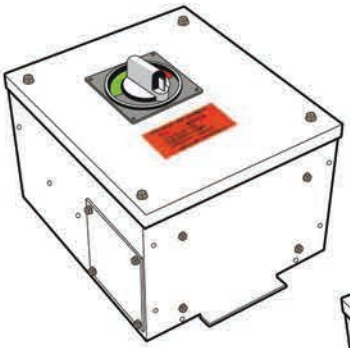
SIDE VIEW

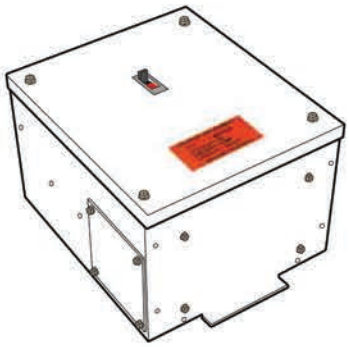
Fig. E



SIDE VIEW

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





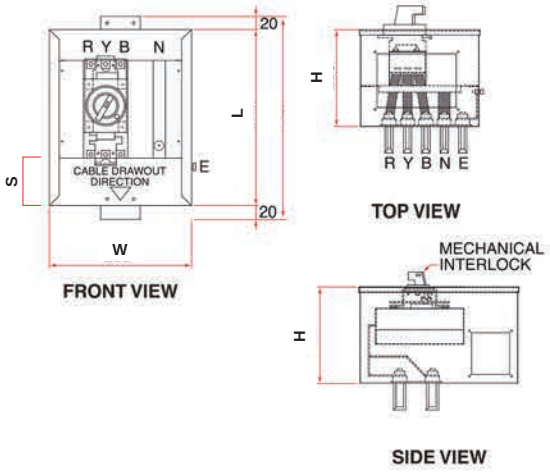
Plug-in Unit

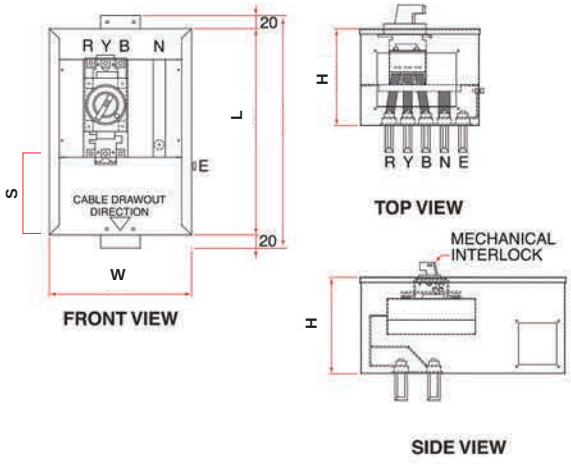
Circuit Breaker	Dimensions (mm)				Breaking capacity (kA) symmetrical r.m.s.		
	L	W	S	H	AC220V	AC415V	AC550V
16A-100A	320	280	120	210	As per requirements		
125A-250A	400	310	150	210			
300A-400A	485	320	165	285			
600A	810	325	340	290			

Tap-off Unit

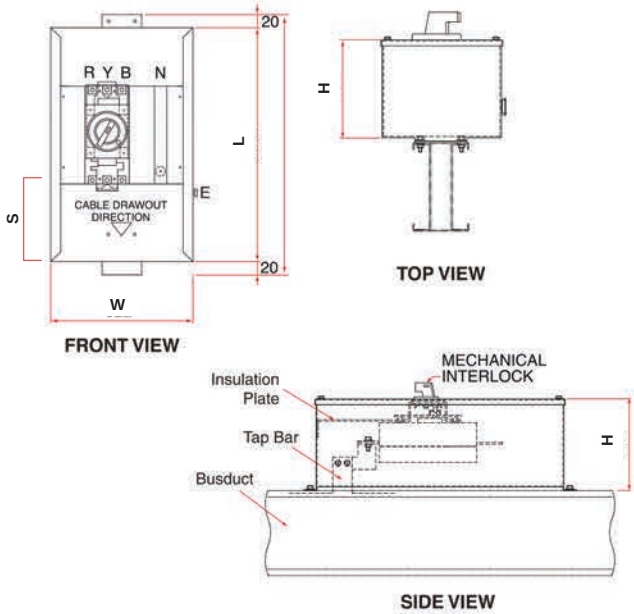
Circuit Breaker	Dimensions (mm)				Breaking capacity (kA) symmetrical r.m.s.		
	L	W	S	H	AC220V	AC415V	AC550V
800A	850	360	335	300	As per requirements		
1000A	850	360	335	300			
1200A	850	360	250	300			
1600A	1150	360	375	300			
2000A	1150	500	375	400			

PLUG-IN UNIT



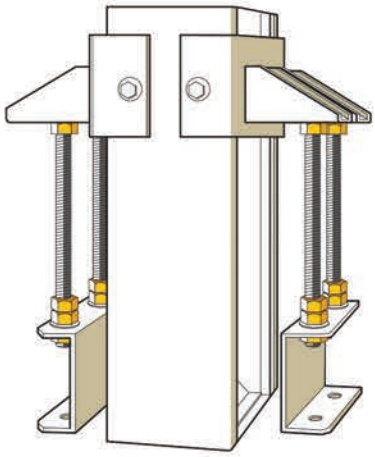


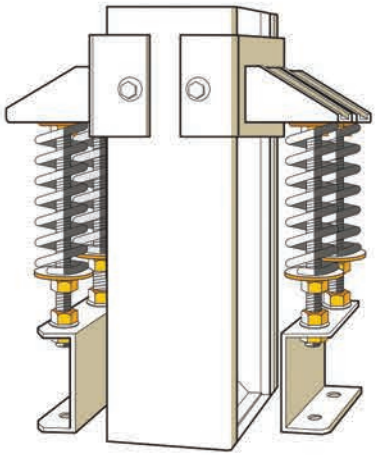
TAP-OFF UNIT



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

TRANSLITE™ MF BUSDUCT

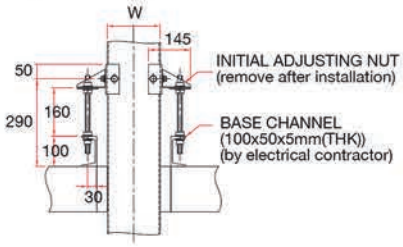


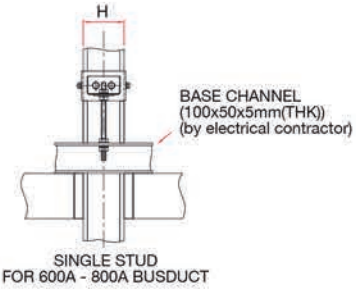


Rating in Amps	H (mm)		W (mm)	
	3W/4W	4W+50%E	3W/4W	4W+50%E
600	100	100	130	170
800	115	115	130	170
1000	135	135	130	170
1200	150	150	130	170
1600	180	180	130	170
2000	220	220	130	170
2500	260	260	130	170
3000	325	325	130	170
3500	365	365	130	170
4000	405	405	130	170
4500	435	435	130	170
5000	530	530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

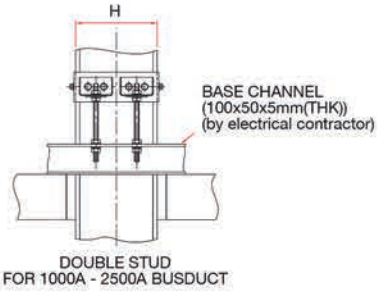
VERTICAL HANGER

Rigid Side Type



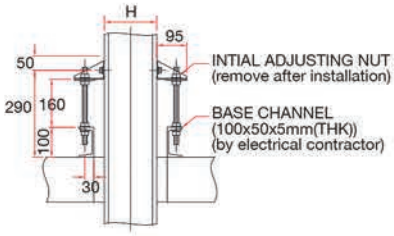


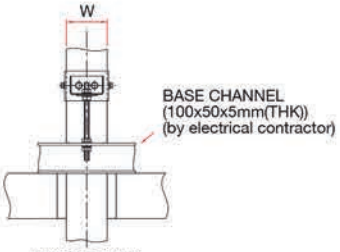
SINGLE STUD
FOR 600A - 800A BUSDUCT



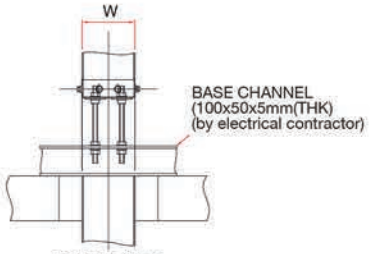
DOUBLE STUD
FOR 1000A - 2500A BUSDUCT

Rigid Front Type



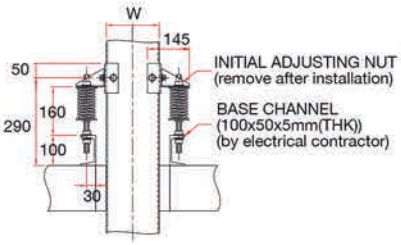


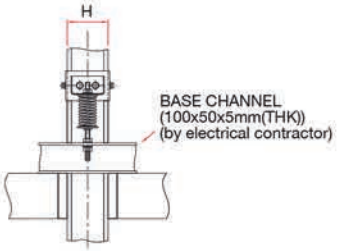
SINGLE STUD
FOR 600A - 800A BUSDUCT



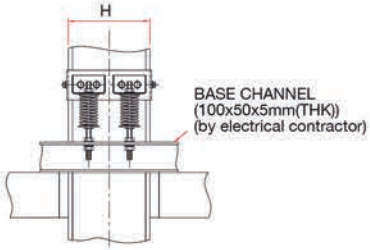
DOUBLE STUD
FOR 1000A - 2500A BUSDUCT

Spring Side Type



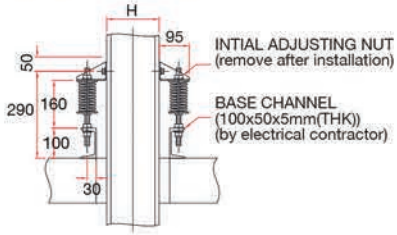


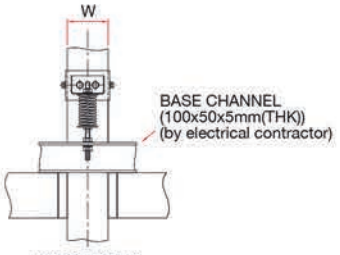
SINGLE STUD
FOR 600A - 800A BUSDUCT



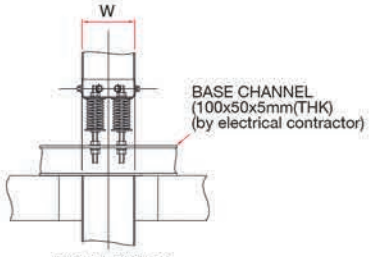
DOUBLE STUD
FOR 1000A - 2500A BUSDUCT

Spring Front Type



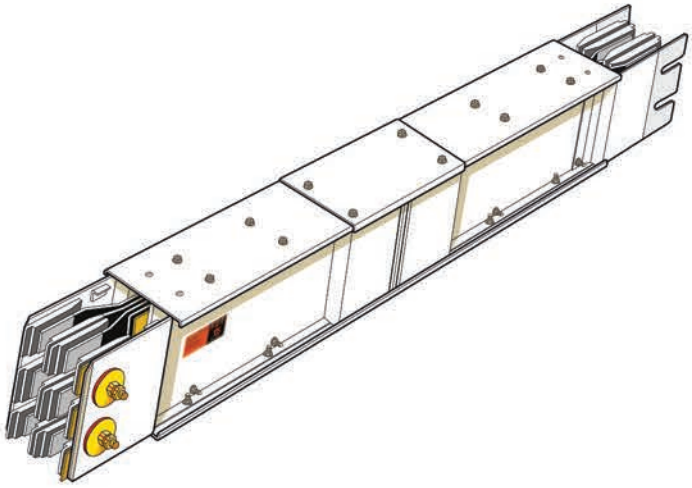


SINGLE STUD
FOR 600A - 800A BUSDUCT



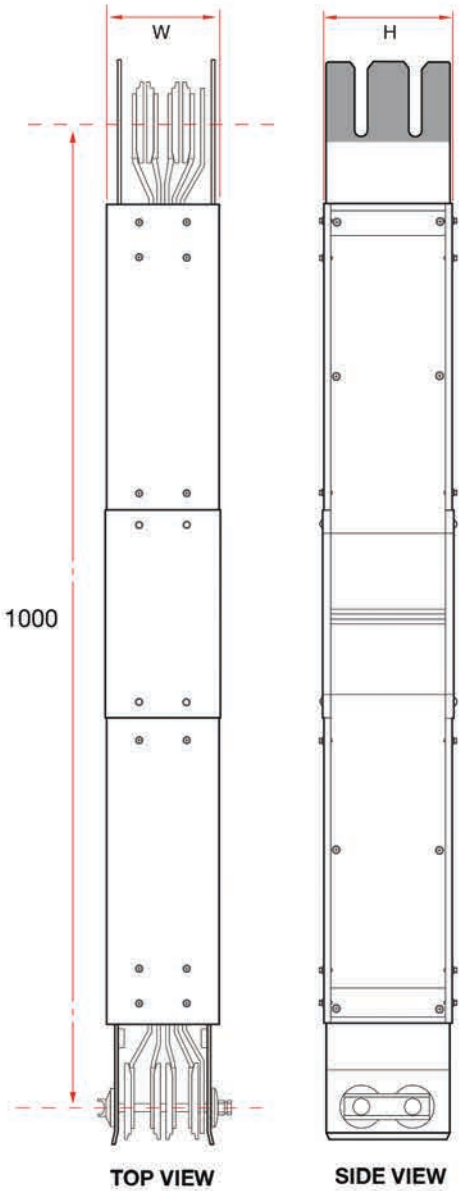
DOUBLE STUD
FOR 1000A - 2500A BUSDUCT

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



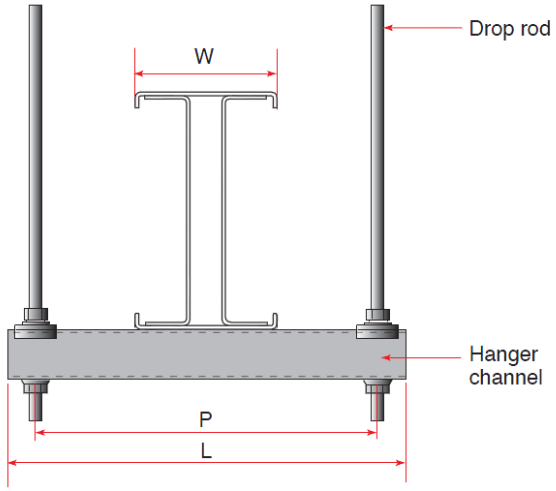
EXPANSION JOINT

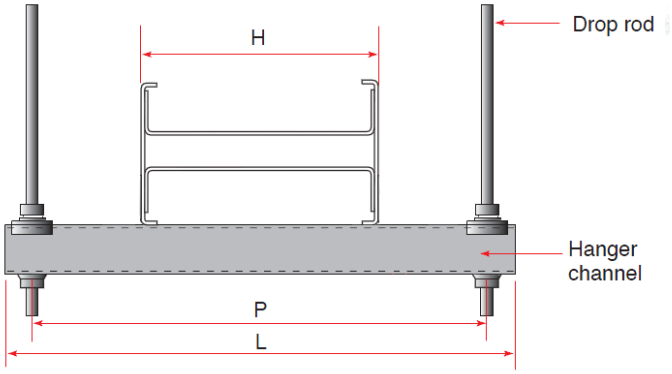
Rating in Amps	Dimensions (mm)			
	W			H
	3W	4W	4W+50%E	
600	130	130	170	100
800	130	130	170	115
1000	130	130	170	135
1200	130	130	170	150
1600	130	130	170	180
2000	130	130	170	220
2500	130	130	170	260
3000	130	130	170	325
3500	130	130	170	365
4000	130	130	170	405
4500	130	130	170	435
5000	130	130	170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



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

TRANSLITE™
MF BUSDUCT



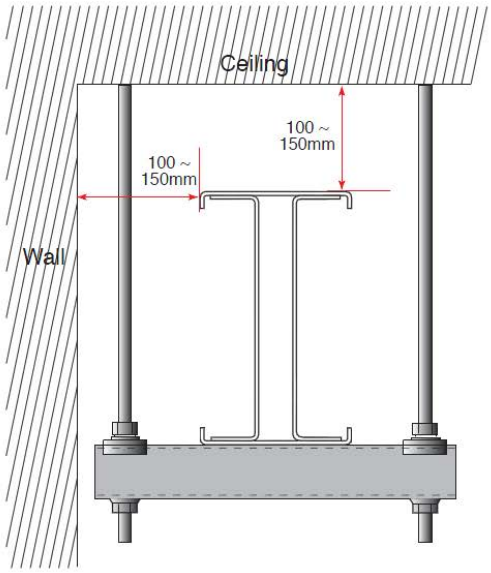


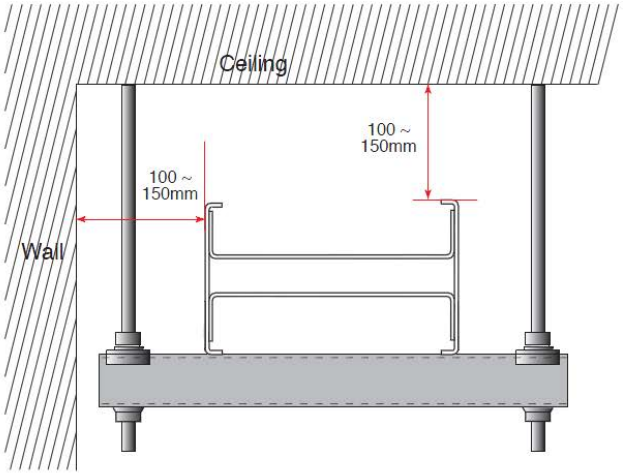
EDGEWISE HANGER

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, it is contractors' scope.





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

IMPEDANCE
Copper Conductors

(Unit : 10^{-5} Ω/m)

Rating in Amps	3Ø 50Hz			3Ø 60Hz			D.C.
	R_{AC}	X	$\sqrt{R_{AC}^2 + X^2}$	R_{AC}	X	$\sqrt{R_{AC}^2 + X^2}$	R_{DC}
600	9.55	4.11	10.39	9.63	4.93	10.81	9.37
800	6.49	3.69	7.46	6.55	4.42	7.90	6.28
1000	4.81	3.09	5.72	4.87	3.72	6.12	4.58
1200	3.58	2.80	4.53	3.65	3.36	4.95	3.37
1600	3.18	1.94	3.72	3.26	2.32	4.00	2.82
2000	2.71	2.75	3.86	2.79	3.32	4.33	2.35
2500	2.28	0.22	2.29	2.35	0.26	2.36	1.90
3000	1.62	1.62	2.28	1.66	1.93	2.54	1.44
3500	1.39	1.39	1.96	1.42	1.67	2.19	1.20
4000	1.22	0.77	1.44	1.25	0.93	1.55	1.03
4500	1.08	0.68	1.28	1.12	0.81	1.38	0.90
5000	0.90	0.57	1.06	0.92	0.67	1.14	0.78
6000	0.79	0.47	0.92	0.82	0.58	1.00	0.67

VOLTAGE DROP
Line to Line with Copper Conductors

(Unit : Volt/100m)

Rating in Amps	3Ø 50Hz Power Factor %						3Ø 60Hz Power Factor %					
	100	95	90	85	80	75	100	95	90	85	80	75
600	9.9	10.8	10.8	10.7	10.5	10.3	10.0	11.1	11.2	11.2	11.1	10.9
800	9.0	10.1	10.3	10.3	10.3	10.1	9.1	10.5	10.8	10.9	10.9	10.9
1000	8.3	9.6	9.8	9.9	9.9	9.8	8.4	10.0	10.4	10.6	10.6	10.6
1200	7.4	8.9	9.2	9.4	9.4	9.4	7.6	9.4	9.9	10.1	10.3	10.3
1600	8.8	10.1	10.3	10.3	10.3	10.2	9.0	10.6	10.9	11.1	11.1	11.0
2000	9.4	11.9	12.6	13.0	13.2	13.3	9.7	12.8	13.7	14.3	14.6	14.9
2500	9.9	9.7	9.3	8.9	8.5	8.0	10.2	10.0	9.7	9.3	8.8	8.4
3000	8.4	10.6	11.2	11.6	11.8	11.9	8.6	11.3	12.1	12.6	12.9	13.1
3500	8.4	10.6	11.2	11.6	11.8	11.9	8.6	11.3	12.2	12.7	13.0	13.2
4000	8.4	9.7	9.9	10.0	10.0	9.9	8.7	10.2	10.6	10.8	10.8	10.8
4500	8.4	9.7	9.9	10.0	10.0	9.9	8.7	10.2	10.6	10.7	10.8	10.7
5000	7.8	9.0	9.2	9.3	9.2	9.1	8.0	9.4	9.7	9.9	9.9	9.9
6000	8.3	9.4	9.6	9.7	9.6	9.5	8.5	10.0	10.3	10.4	10.4	10.4

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

TRANSLITE™
MF BUSDUCT

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 DERKA (KEMA), LOVAG, ASTA and SIRIM in compliance to international standards such as IEC61439-6, BS EN 439, JIS (Japan).

14 STRINGENT TYPE TEST CATEGORIES

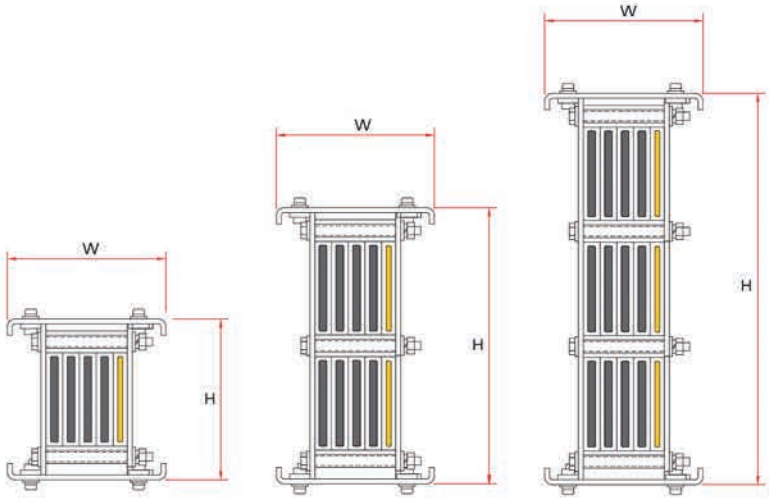
1. Verification of temperature-rise limit
2. Verification of dielectric properties
3. Verification of short-circuit strength
4. Verification of the effectiveness of the protective circuit
5. Verification of clearances and creepage distance
6. Verification of the degree of protection
7. Verification of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

TRANSLITE™
MF BUSDUCT

COMPONENTS SPECIFICATIONS AND TECHNICAL DATA

WITH ALUMINIUM CONDUCTORS

High quality
Aluminium conductors.



4W+50% earth
630A - 2000A

4W+50% earth
2500A ~ 4500A

4W+50% earth
5000A ~ 6000A

CROSS SECTION

Type	Rating in Amps	Dimensions (mm)				Weight (kg/m)		
		W			H			
		3W	4W	4W+50%E		3W	4W	4W+50%E
TMFA630	630	130	130	170	110	11	13	15
TMFA800	800	130	130	170	135	13	15	19
TMFA1000	1000	130	130	170	160	16	18	22
TMFA1250	1250	130	130	170	180	18	21	24
TMFA1600	1600	130	130	170	220	22	26	27
TMFA2000	2000	130	130	170	260	26	30	31
TMFA2500	2500	130	130	170	335	33	36	38
TMFA3000	3000	130	130	170	365	32	39	41
TMFA3500	3500	130	130	170	435	36	45	53
TMFA4000	4000	130	130	170	485	45	55	57
TMFA4500	4500	130	130	170	545	54	62	70
TMFA5000	5000	130	130	170	710	71	75	77
TMFA6000	6000	130	130	170	800	80	100	102

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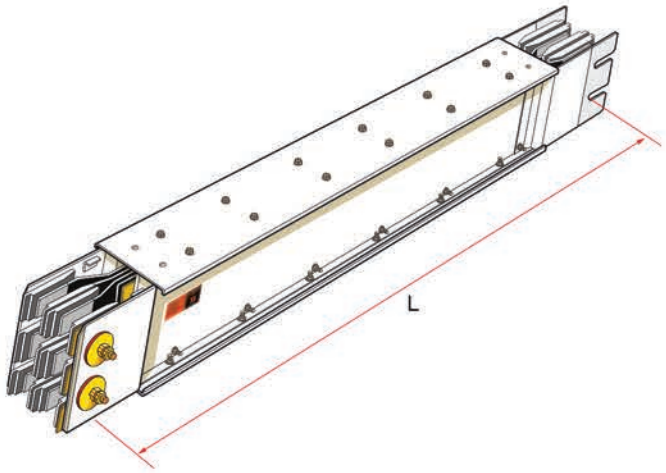
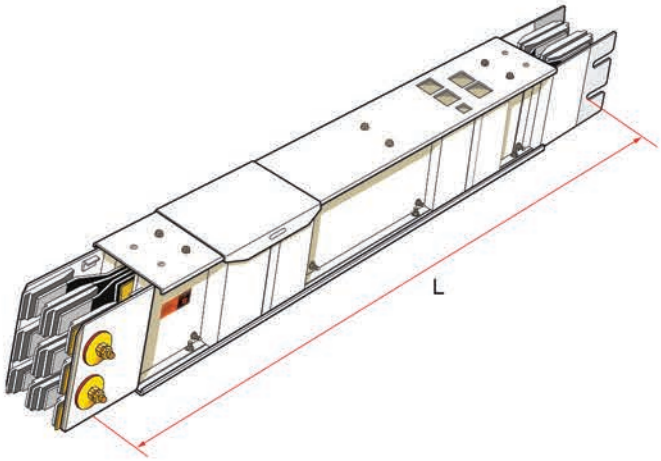
TRANSLITE™
MF BUSDUCT

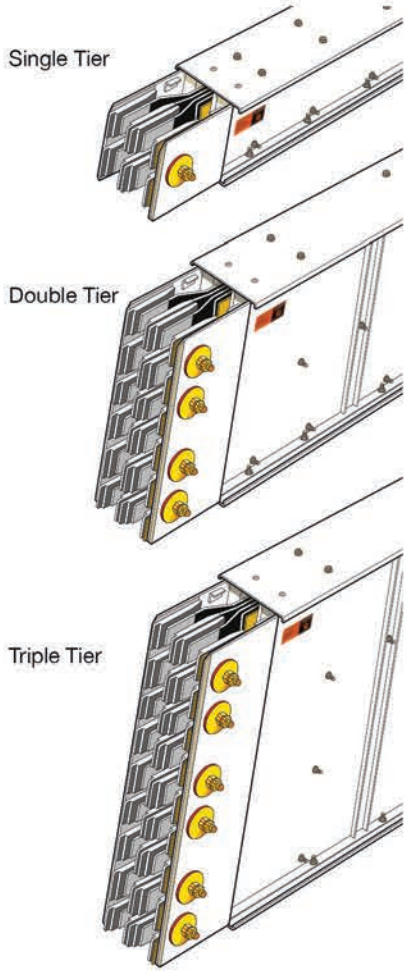




FEEDER

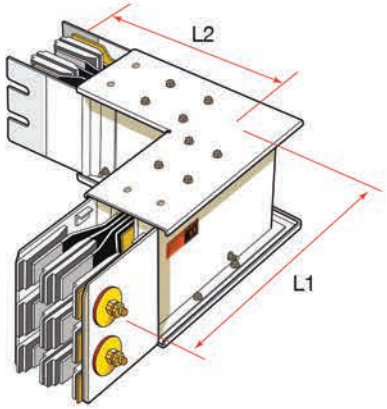
PLUG-IN FEEDER

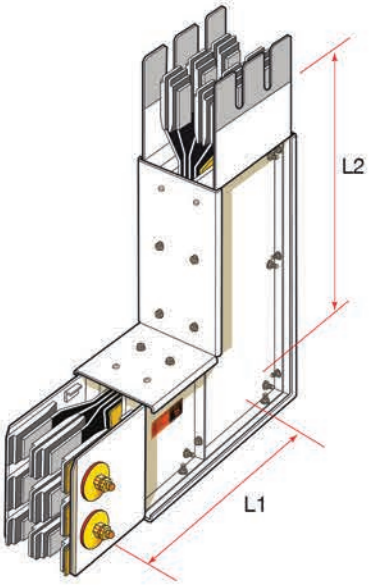
Rating in Amps	L (mm)	
	Minimum	Standard
SINGLE TIER		
630	390	3000
800	390	3000
1000	390	3000
1250	390	3000
1600	390	3000
2000	390	3000
DOUBLE TIER		
2500	390	3000
3000	500	3000
3500	500	3000
4000	500	3000
4500	500	3000
TRIPLE TIER		
5000	500	3000
6000	500	3000

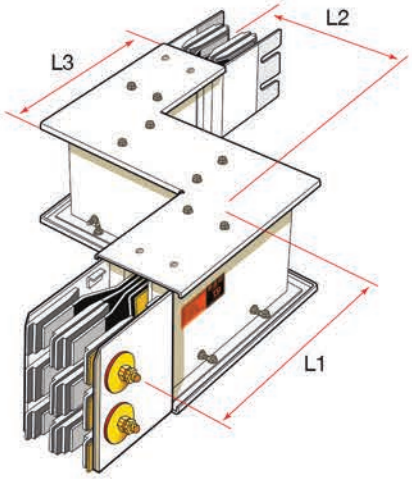


Maximum Length			
Rating in Amps	Dimensions L (mm)		
	1 P.I.H	2 P.I.H	3 P.I.H
SINGLE TIER			
630	2990	2980	2970
800	2990	2980	2970
1000	2990	2980	2970
1250	2990	2980	2970
1600	2990	2980	2970
2000	2990	2980	2970
DOUBLE TIER			
2500	2990	2980	2970
3000	2990	2980	2970
3500	2990	2980	2970
4000	2990	2980	2970
4500	2990	2980	2970
TRIPLE TIER			
5000	2990	2980	2970
6000	2990	2980	2970

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







HORIZONTAL ELBOW

Minimum Length		
Rating in Amps	Dimensions L (mm)	
	L1	L2
SINGLE TIER		
630	265	265
800	265	265
1000	265	265
1250	265	265
1600	265	265
2000	265	265
DOUBLE TIER		
2500	265	265
3000	265	265
3500	265	265
4000	265	265
4500	265	265
TRIPLE TIER		
5000	265	265
6000	265	265

VERTICAL ELBOW

Maximum Length		
Rating in Amps	Dimensions L (mm)	
	L1	L2
SINGLE TIER		
630	295	295
800	310	310
1000	320	320
1250	330	330
1600	350	350
2000	370	370
DOUBLE TIER		
2500	410	410
3000	425	425
3500	460	460
4000	485	485
4500	515	515
TRIPLE TIER		
5000	600	600
6000	650	650

HORIZONTAL OFFSET

Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
630	265	190	265
800	265	190	265
1000	265	190	265
1250	265	190	265
1600	265	190	265
2000	265	190	265
DOUBLE TIER			
2500	265	190	265
3000	265	190	265
3500	265	190	265
4000	265	190	265
4500	265	190	265
TRIPLE TIER			
5000	265	190	265
6000	265	190	265

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

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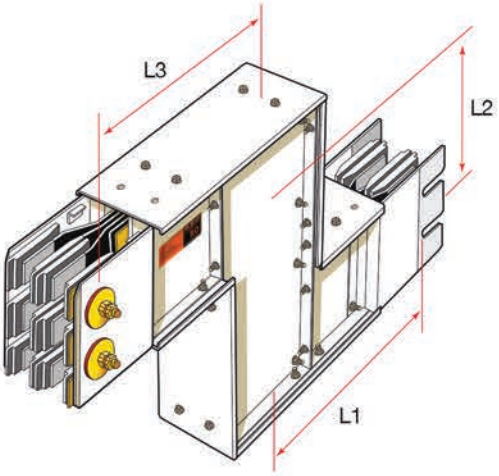

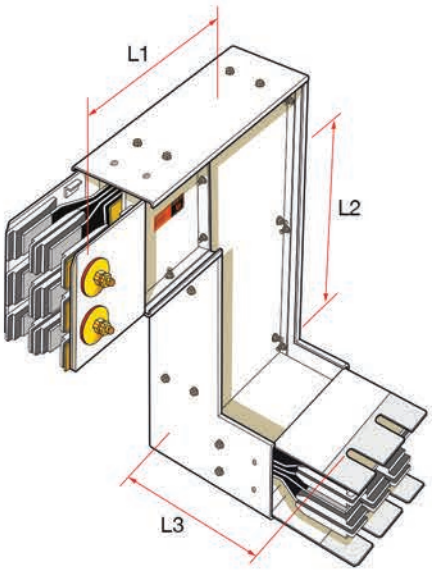

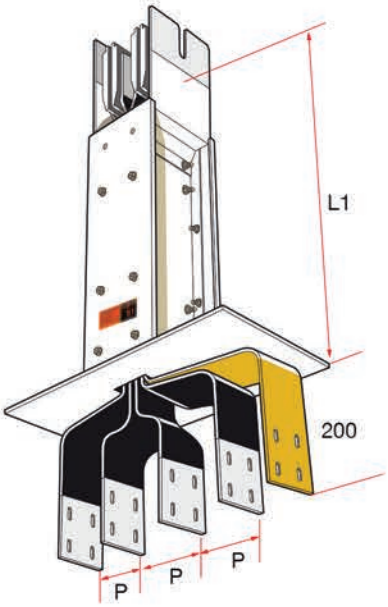

VERTICAL OFFSET

Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
630	295	230	295
800	310	260	310
1000	320	280	320
1250	330	300	330
1600	350	340	350
2000	370	380	370
DOUBLE TIER			
2500	410	460	410
3000	425	490	425
3500	460	560	460
4000	485	610	485
4500	515	670	515
TRIPLE TIER			
5000	600	835	600
6000	650	925	650

COMBINATION ELBOW

Maximum Length			
Rating in Amps	Dimensions L (mm)		
	L1	L2	L3
SINGLE TIER			
630	295	200	265
800	310	215	265
1000	320	225	265
1250	330	235	265
1600	350	255	265
2000	370	275	265
DOUBLE TIER			
2500	410	315	265
3000	425	330	265
3500	460	365	265
4000	485	390	265
4500	515	420	265
TRIPLE TIER			
5000	600	500	265
6000	650	545	265

FLANGED END

Maximum Length		
Rating in Amps	Dimensions L (mm)	
	L1	Pitch (P)
SINGLE TIER		
630	265	100
800	265	100
1000	265	100
1250	265	100
1600	265	100
2000	265	100
DOUBLE TIER		
2500	265	100
3000	265	130
3500	265	130
4000	265	130
4500	265	130
TRIPLE TIER		
5000	265	130
6000	265	130

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

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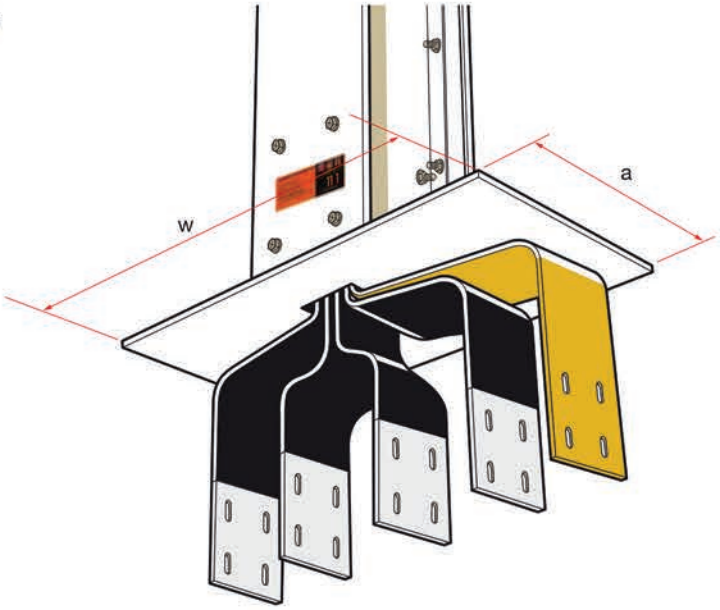
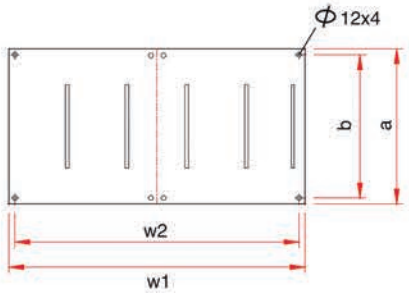
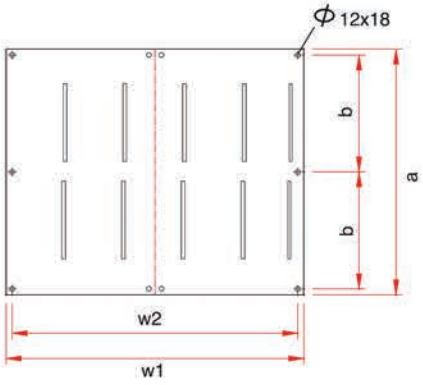
MF BUSDUCT

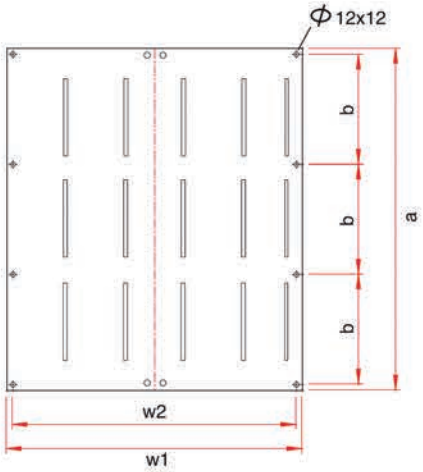


FLANGED END PLATE

Rating in Amps	Flanged End Plate									
	Dimensions (mm)									
	a	b	3W		3W+50%E		4W		4W+50%E	
			w1	w2	w1	w2	w1	w2	w1	w2
SINGLE TIER										
630	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
1250	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	545	258	360	330	440	410	490	460	570	540
4500	605	288	360	330	440	410	490	460	570	540
TRIPLE TIER										
5000	770	246	360	330	440	410	490	460	570	540
6000	860	276	360	330	440	410	490	460	570	540







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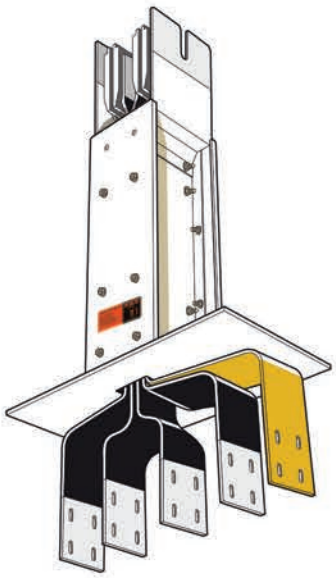
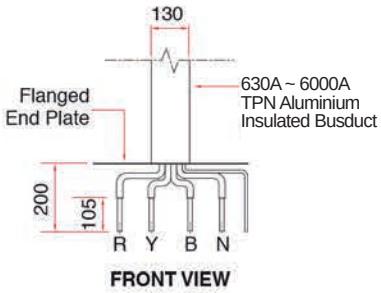
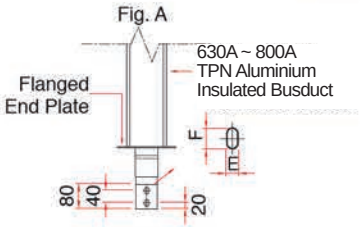


FLANGED END

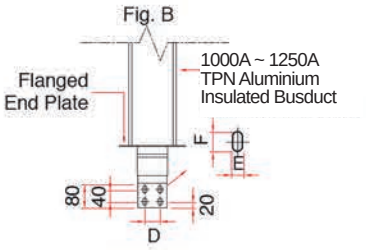
Rating in Amps	Maximum Length Dimensions (mm)			Fig.
	D	E	F	
SINGLE TIER				
630	-	11	20	A
800	40	11	20	B
1000	50	11	20	B
1250	40	11	20	C
1600	60	11	20	C
2000	70	14	22	C
DOUBLE TIER				
2500	70	14	22	F
3000	50	14	22	D
3500	60	14	22	D
4000	70	14	22	D
4500	60	14	22	G
TRIPLE TIER				
5000	70	14	22	E
6000	60	14	22	E



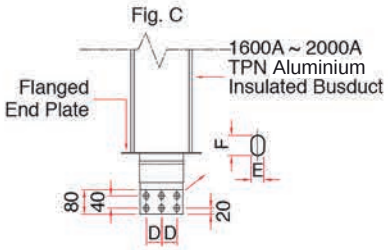
FRONT VIEW



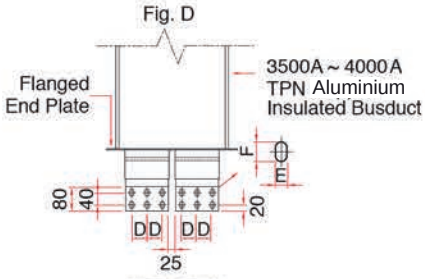
SIDE VIEW



SIDE VIEW



SIDE VIEW



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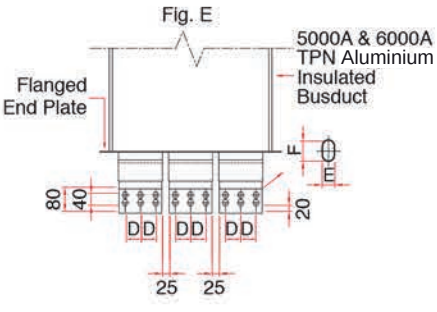
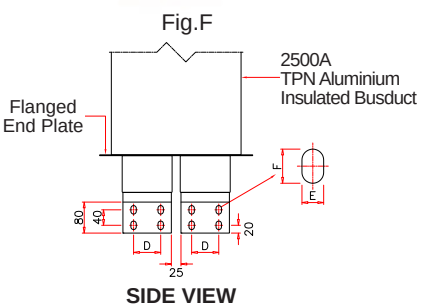
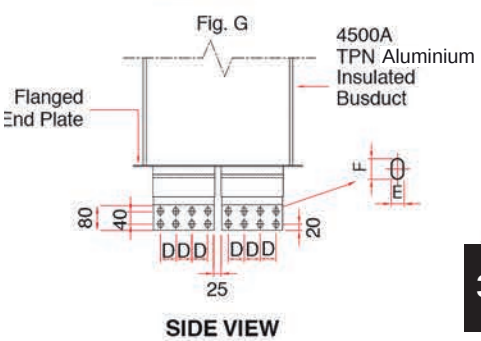


SIDE VIEW



SIDE VIEW



SIDE VIEW

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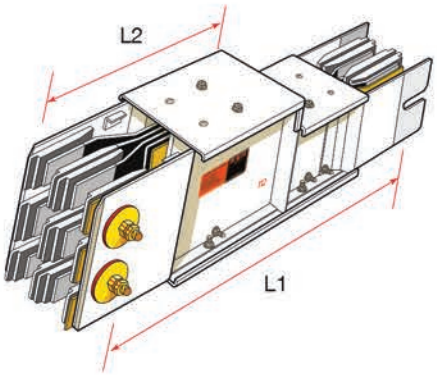
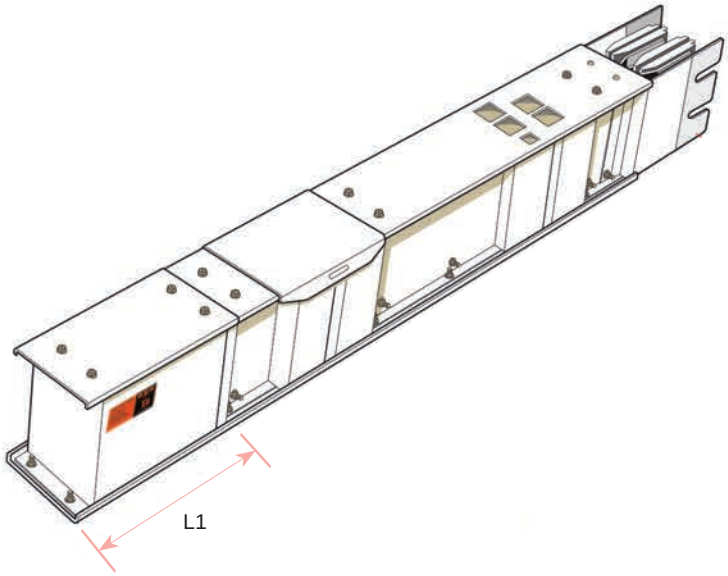
TRANSLITE™
MF BUSDUCT



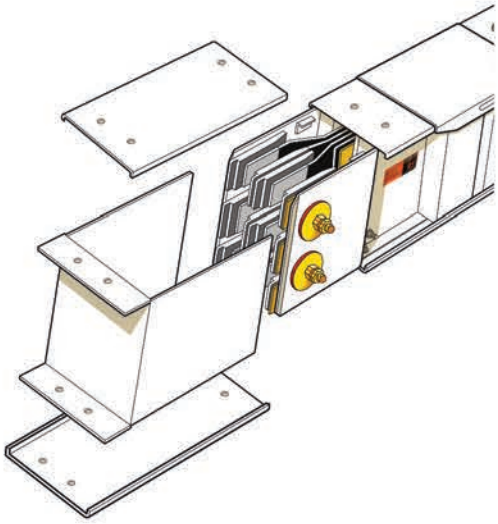


REDUCER

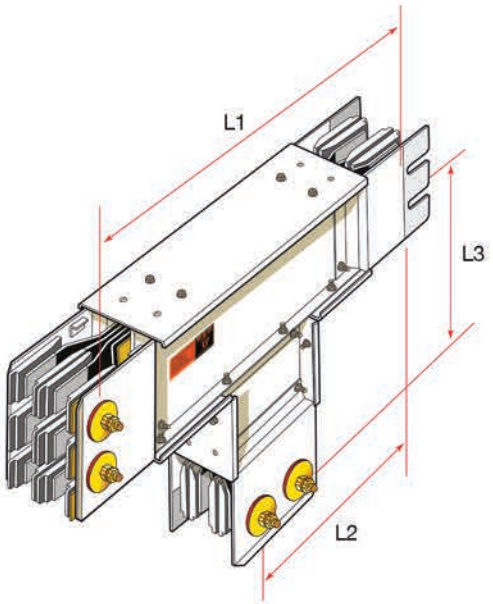
Maximum Length		
Rating in Amps	Dimensions (mm)	
	L1	L2
630	490	245
800	490	245
1000	490	245
1250	490	245
1600	490	245
2000	490	245
2500	490	245
3000	710	355
3500	780	390
4000	830	415
4500	890	445
5000	1130	565
6000	1230	615

END CLOSER

Maximum Length	
Rating in Amps	Dimensions (mm)
	L1
630	245
800	245
1000	245
1250	245
1600	245
2000	245
2500	245
3000	335
3500	375
4000	375
4500	375
5000	495
6000	535

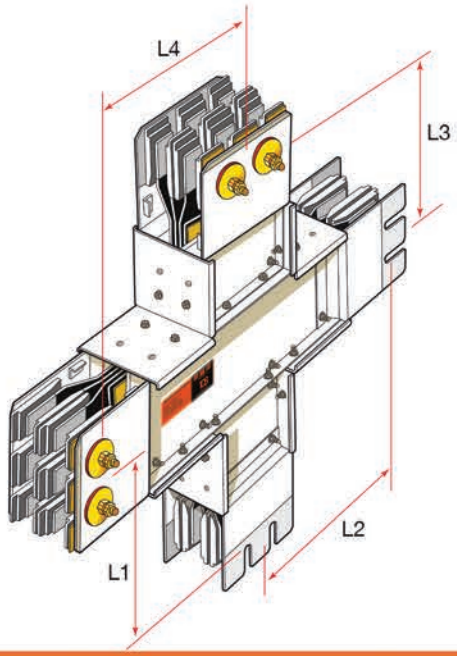


Note: *All dimensions are subject to change without prior notice.*



VERTICAL TEE

Maximum Length			
Rating in Amps	Dimensions (mm)		
	L1	L2	L3
SINGLE TIER			
630	590	295	295
800	620	310	310
1000	640	320	320
1250	660	330	330
1600	700	350	350
2000	740	370	370
DOUBLE TIER			
2500	820	410	410
3000	850	425	425
3500	920	460	460
4000	970	485	485
4500	1030	515	515
TRIPLE TIER			
5000	1200	600	600
6000	1300	650	650

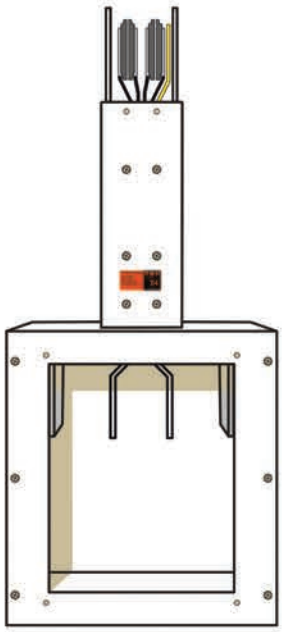


VERTICAL CROSS

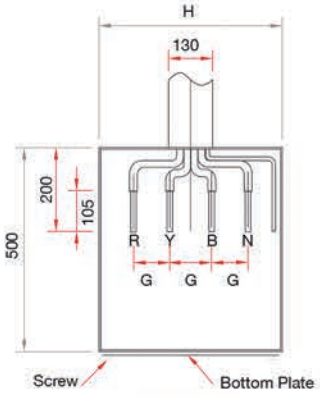
Maximum Length				
Rating in Amps	Dimensions (mm)			
	L1	L2	L3	L4
SINGLE TIER				
630	295	295	295	295
800	310	310	310	310
1000	320	320	320	320
1250	330	330	330	330
1600	350	350	350	350
2000	370	370	370	370
DOUBLE TIER				
2500	410	410	410	410
3000	425	425	425	425
3500	460	460	460	460
4000	485	485	485	485
4500	515	515	515	515
TRIPLE TIER				
5000	600	600	600	600
6000	650	650	650	650

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

TRANSLITE™
MF BUSDUCT

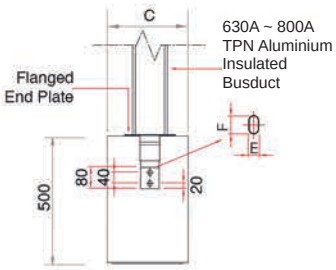


CABLE ENTRY BOX



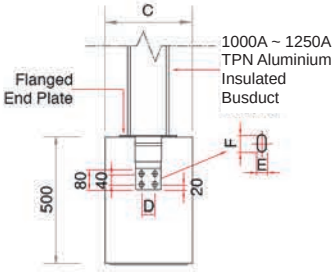
FRONT VIEW

Fig. A



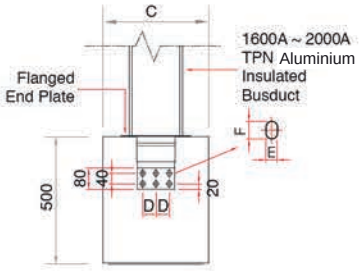
SIDE VIEW

Fig. B



SIDE VIEW

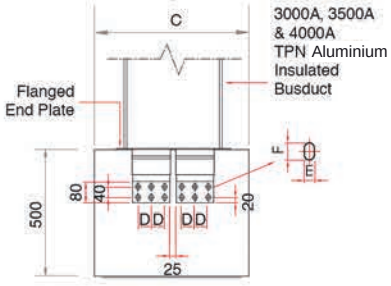
Fig. C



SIDE VIEW

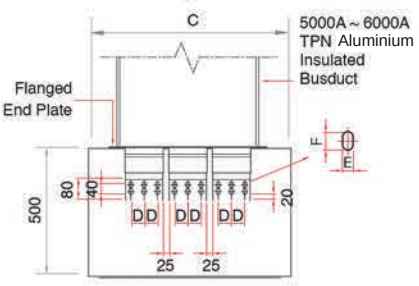
Rating in Amps	Dimensions (mm)						Fig.
	C	D	E	F	G	H	
SINGLE TIER							
630	220	-	11	20	100	450	A
800	220	40	11	20	100	450	A
1000	255	50	11	20	100	450	B
1250	275	40	11	20	100	450	B
1600	325	60	11	20	100	450	C
2000	355	70	14	22	100	450	C
DOUBLE TIER							
2500	405	70	14	22	100	450	F
3000	485	50	14	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

Fig. D



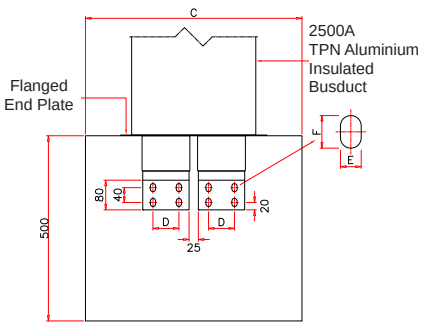
SIDE VIEW

Fig. E



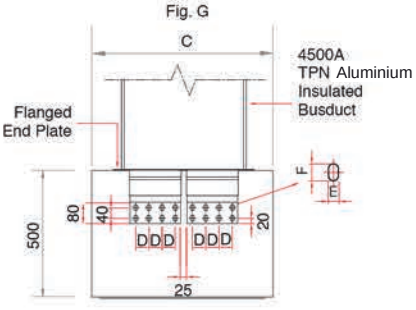
SIDE VIEW

Fig. F



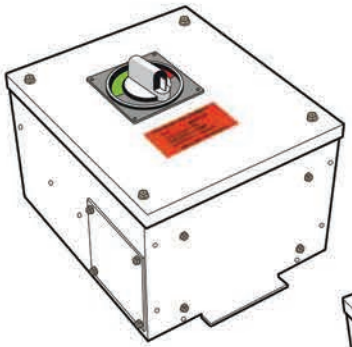
SIDE VIEW

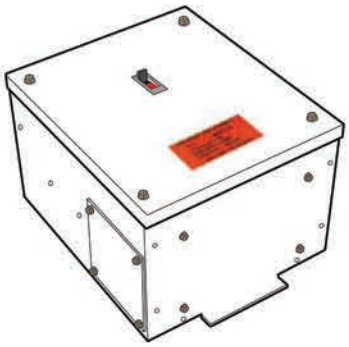
Fig. G

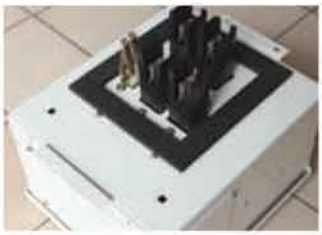


SIDE VIEW

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







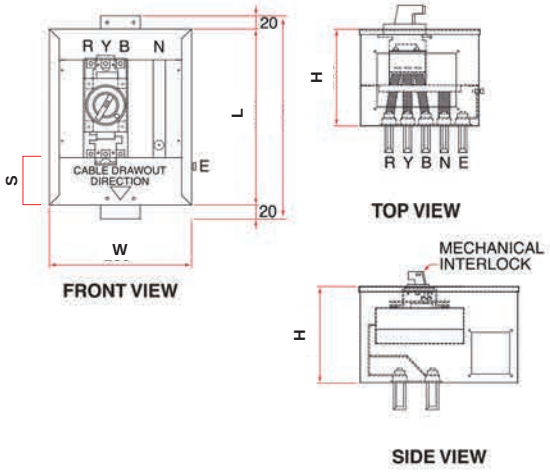
Plug-in Unit

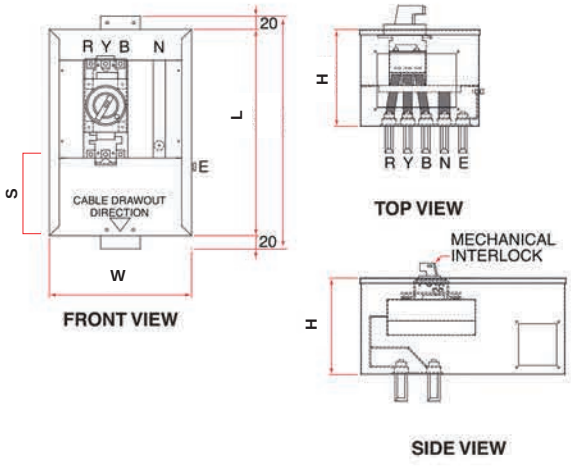
Circuit Breaker	Dimensions (mm)				Breaking capacity (kA) symmetrical r.m.s.		
	L	W	S	H	AC220V	AC415V	AC550V
16A-100A	320	280	120	210	As per requirements		
125A-250A	400	310	150	210			
300A-400A	485	320	165	285			

Tap-off Unit

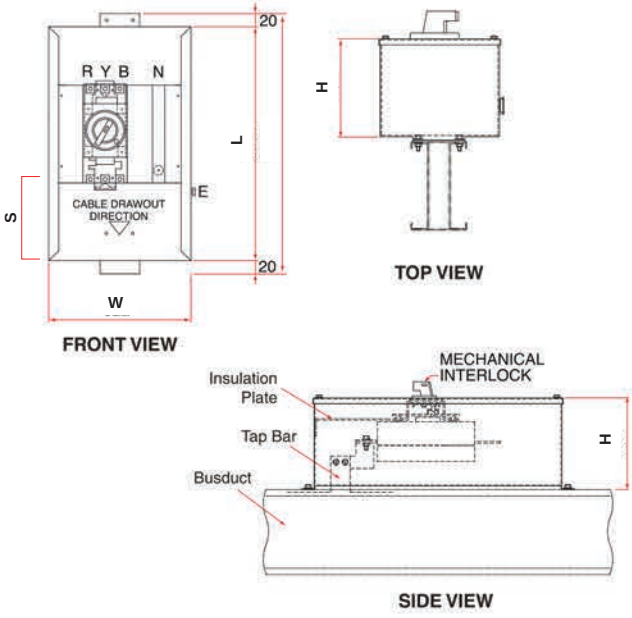
Circuit Breaker	Dimensions (mm)				Breaking capacity (kA) symmetrical r.m.s.		
	L	W	S	H	AC220V	AC415V	AC550V
600A	810	325	340	290	As per requirements		
800A	850	360	335	300			
1000A	850	360	335	300			
1200A	850	360	250	300			
1600A	1150	360	375	300			
2000A	1150	500	375	400			

PLUG-IN UNIT



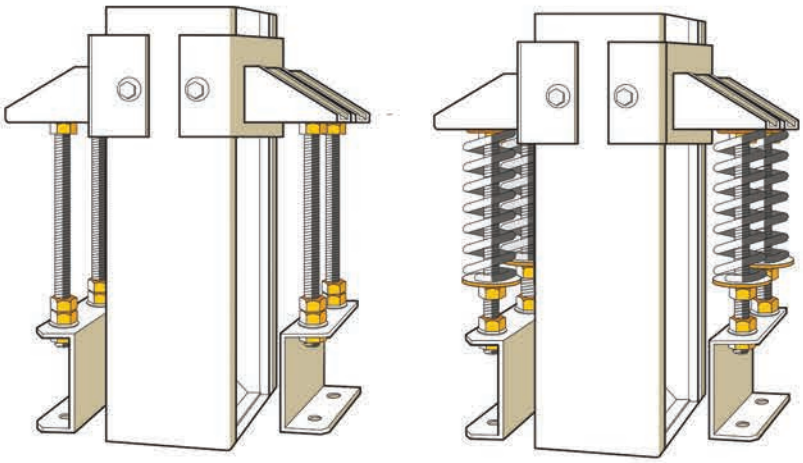


TAP-OFF UNIT



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

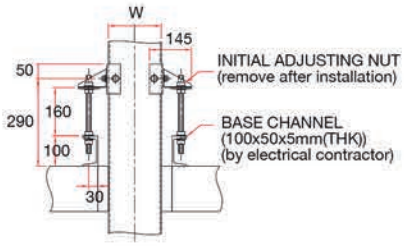
TRANSLITE™ MF BUSDUCT

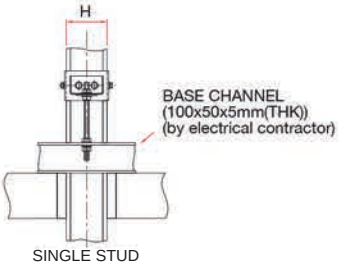


Rating in Amps	H (mm)		W (mm)	
	3W/4W	4W+50%E	3W/4W	4W+50%E
630	130	170	110	110
800	130	170	135	135
1000	130	170	160	160
1250	130	170	180	180
1600	130	170	220	220
2000	130	170	260	260
2500	130	170	335	335
3000	130	170	365	365
3500	130	170	435	435
4000	130	170	485	485
4500	130	170	545	545
5000	130	170	710	710
6000	130	170	800	800

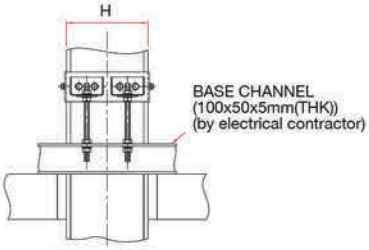
VERTICAL HANGER

Rigid Side Type



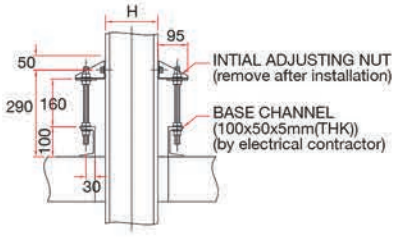


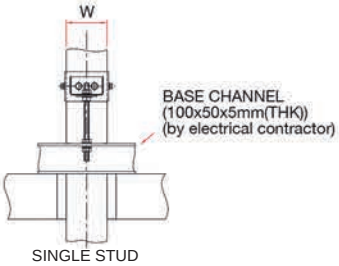
SINGLE STUD
FOR 630A - 800A BUSDUCT



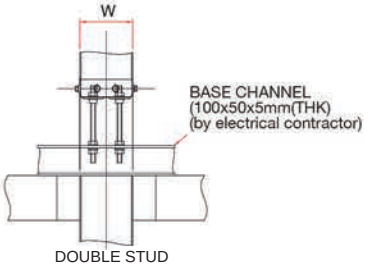
DOUBLE STUD
FOR 1250A - 2500A BUSDUCT

Rigid Front Type



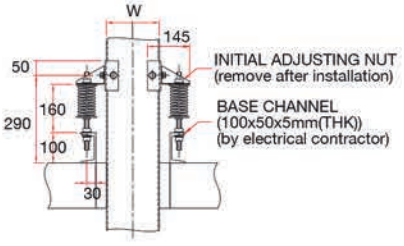


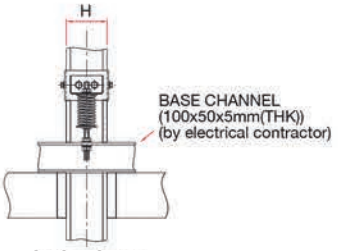
SINGLE STUD
FOR 630A - 800A BUSDUCT



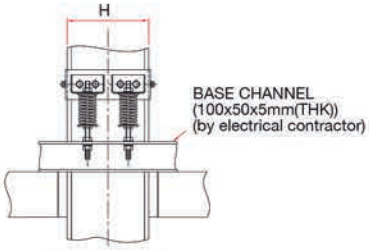
DOUBLE STUD
FOR 1250A - 2500A BUSDUCT

Spring Side Type



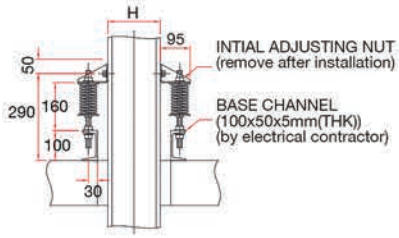


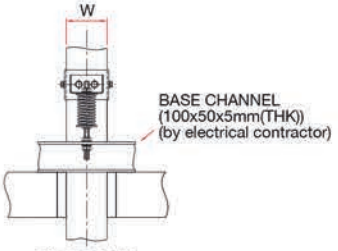
SINGLE STUD
FOR 630A - 800A BUSDUCT



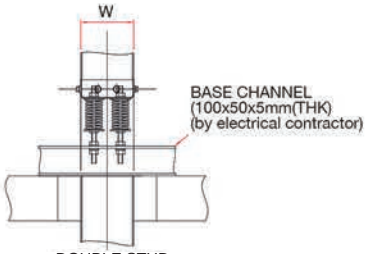
DOUBLE STUD
FOR 1250A - 2500A BUSDUCT

Spring Front Type



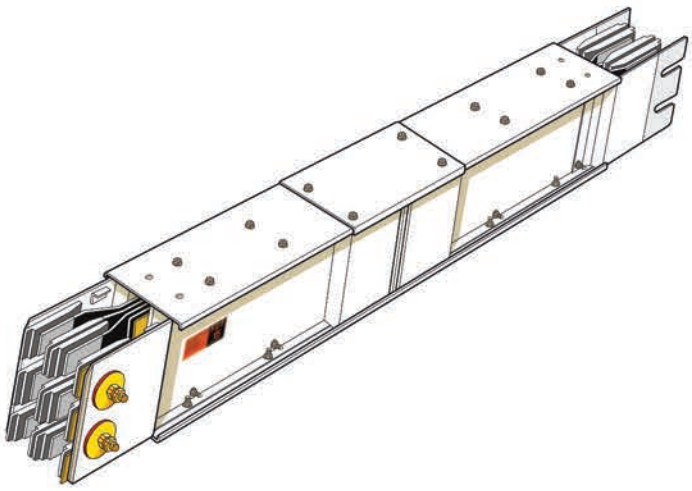


SINGLE STUD
FOR 630A - 1000A BUSDUCT



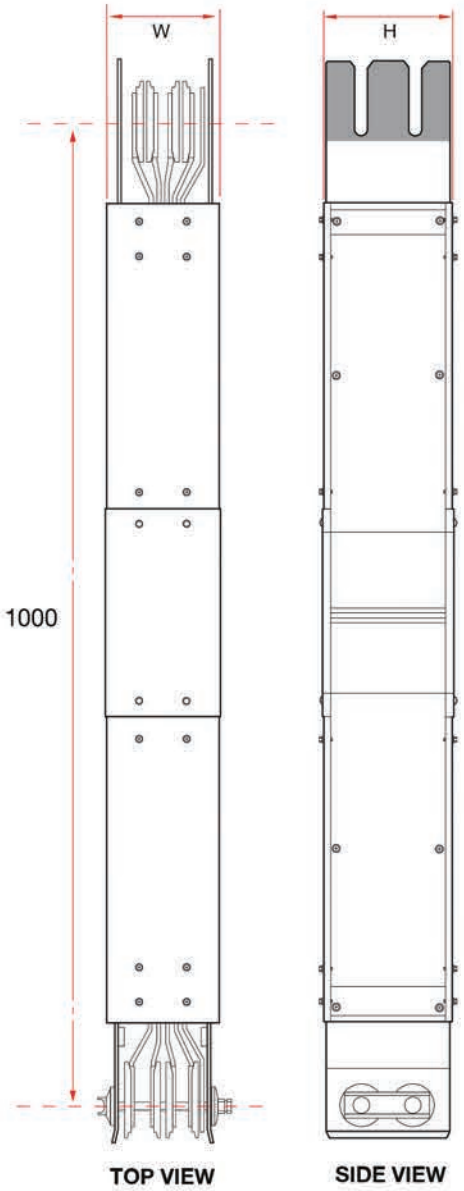
DOUBLE STUD
FOR 1250A - 2500A BUSDUCT

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



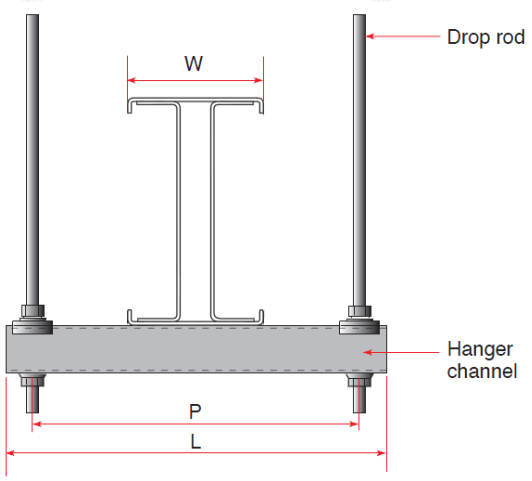
EXPANSION JOINT

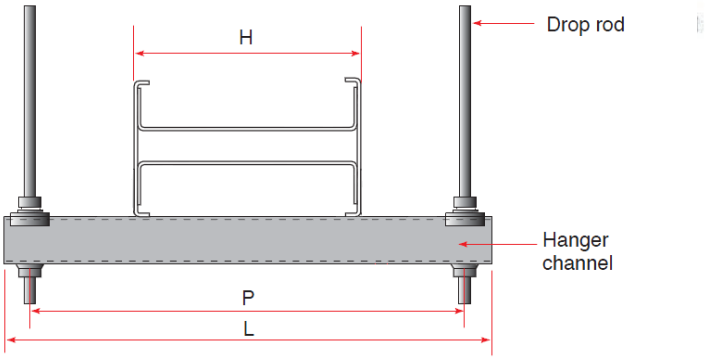
Rating in Amps	Dimensions (mm)			
	W			H
	3W	4W	4W+50%E	
630	130	130	170	100
800	130	130	170	115
1000	130	130	170	135
1250	130	130	170	150
1600	130	130	170	200
2000	130	130	170	235
2500	130	130	170	290
3000	130	130	170	365
3500	130	130	170	435
4000	130	130	170	485
4500	130	130	170	545
5000	130	130	170	635
6000	130	130	170	710



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

TRANSLITE™
MF BUSDUCT



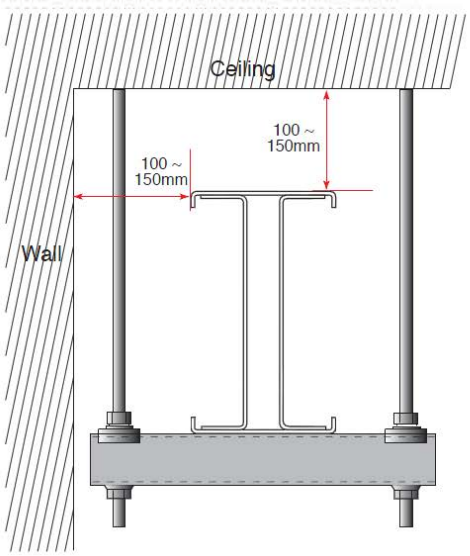


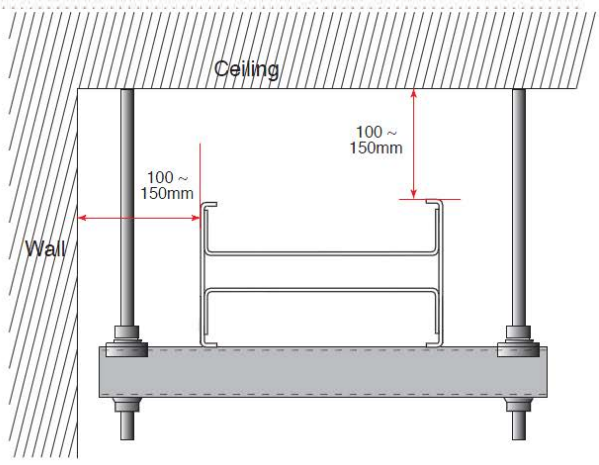
EDGEWISE HANGER

FLATWISE HANGER

Rating in Amps	Dimensions(mm) L	P
630 ~ 1250	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, it is contractors' scope.





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

IMPEDANCE
Aluminium Conductors

(Unit : 10^{-5} Ω/m)

Rating in Amps	3Ø 50Hz			3Ø 60Hz			D.C.
	R_{AC}	X	$\sqrt{R_{AC}^2 + X^2}$	R_{AC}	X	$\sqrt{R_{AC}^2 + X^2}$	R_{DC}
630	13.00	3.94	13.58	13.00	4.73	13.87	12.80
800	8.82	3.97	9.67	8.90	4.78	10.10	8.53
1000	6.44	2.67	6.97	6.50	3.21	7.24	6.14
1250	5.82	2.07	6.17	5.94	2.48	6.43	5.48
1600	4.19	1.76	4.54	4.30	2.11	4.78	3.70
2000	3.60	1.81	4.02	3.70	2.17	4.29	3.12
2500	3.09	1.71	3.53	3.17	2.04	3.76	2.57
3000	2.64	1.48	3.02	2.72	1.77	3.24	2.34
3500	2.26	1.27	2.59	2.32	1.54	2.78	1.95
4000	1.74	0.80	1.91	1.79	0.95	2.02	1.47
4500	1.55	0.71	1.70	1.59	0.85	1.80	1.29
5000	1.32	1.27	1.83	1.35	1.52	2.03	1.15
6000	0.98	0.49	1.10	1.01	0.59	1.17	0.84

VOLTAGE DROP
Line to Line with Aluminium Conductors

(Unit : Volt/100m)

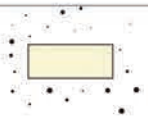
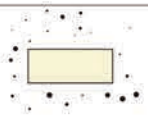
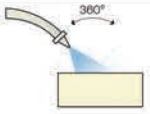
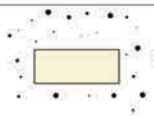
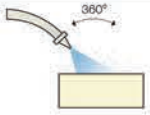
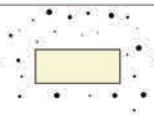
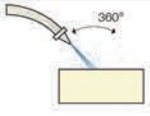
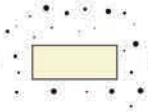
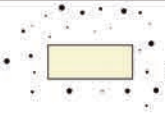
Rating in Amps	3Ø 50Hz Power Factor %						3Ø 60Hz Power Factor %					
	100	95	90	85	80	75	100	95	90	85	80	75
630	13.5	14.1	13.9	13.6	13.3	12.8	13.6	14.4	14.3	14.1	13.8	13.4
800	12.2	13.3	13.4	13.3	13.1	12.8	12.3	13.8	14.0	14.0	13.8	13.6
1000	11.2	12.0	12.1	11.9	11.7	11.4	11.3	12.4	12.6	12.5	12.3	12.1
1250	12.1	12.8	12.8	12.5	12.3	11.9	12.3	13.3	13.4	13.2	13.0	12.7
1600	11.6	12.6	12.6	12.4	12.2	11.9	11.9	13.1	13.3	13.2	13.0	12.8
2000	12.5	13.8	14.0	13.9	13.7	13.5	12.8	14.5	14.8	14.9	14.8	14.6
2500	13.4	15.0	15.3	15.3	15.1	14.9	13.7	15.8	16.2	16.3	16.3	16.1
3000	13.7	15.4	15.7	15.7	15.6	15.4	14.1	16.3	16.7	16.9	16.8	16.7
3500	13.7	15.4	15.7	15.7	15.6	15.4	14.0	16.3	16.7	16.9	16.8	16.7
4000	12.1	13.2	13.3	13.2	13.0	12.7	12.4	13.8	14.0	14.0	13.9	13.7
4500	12.0	13.2	13.3	13.2	13.0	12.7	12.4	13.9	14.1	14.1	13.9	13.7
5000	11.4	14.3	15.1	15.5	15.7	15.8	11.7	15.2	16.3	16.9	17.3	17.5
6000	10.3	11.3	11.5	11.4	11.3	11.1	10.5	12.0	12.2	12.2	12.2	12.0

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

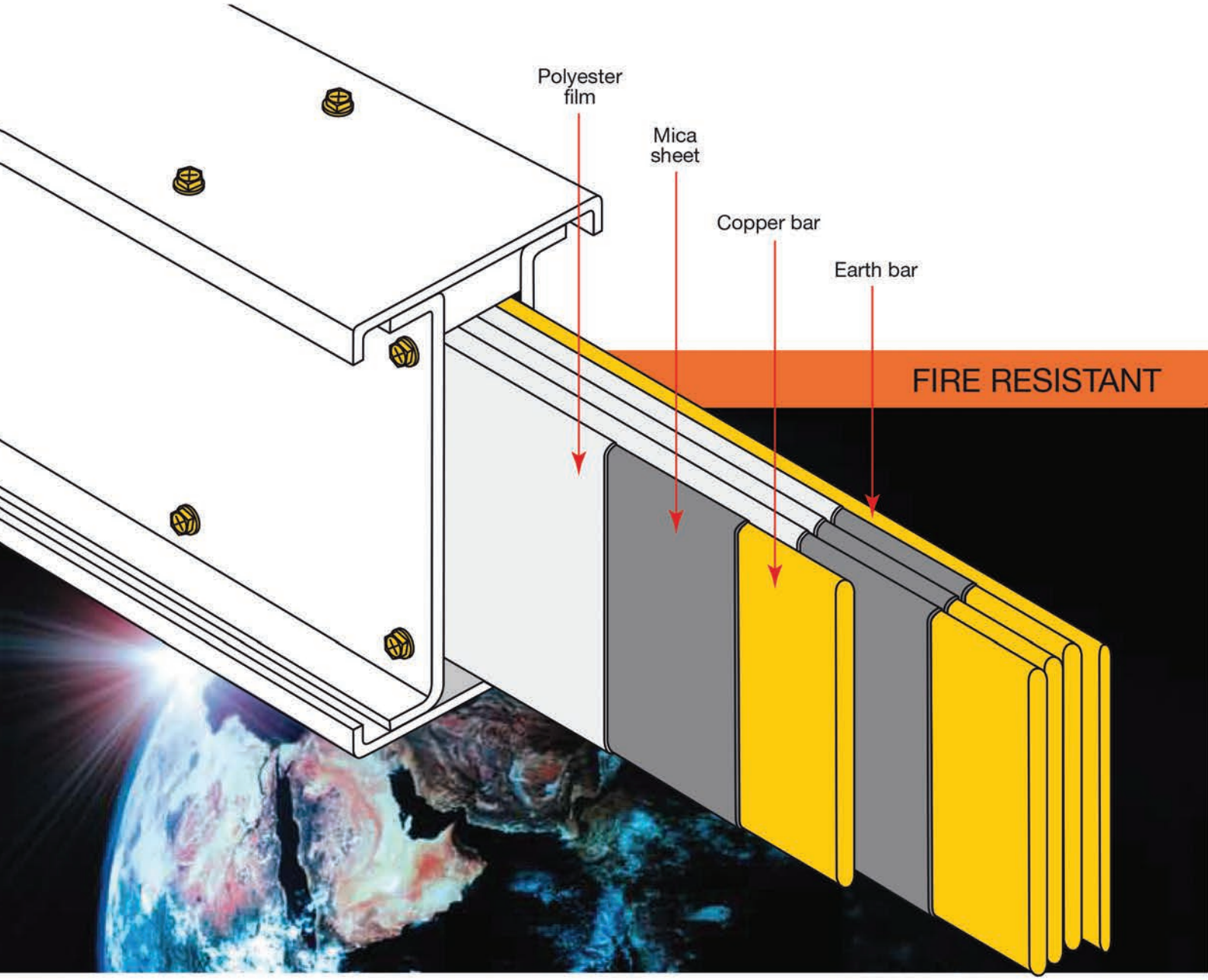
TRANSLITE™
MF BUSDUCT

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.

IP SPECIFICATIONS

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

TRANSLITE™
MF BUSDUCT (FIRE RATED)



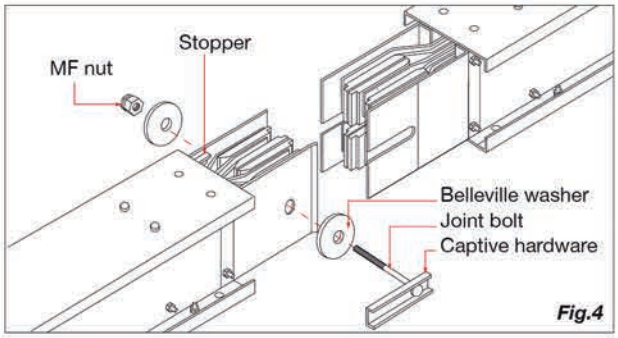


Fig.4

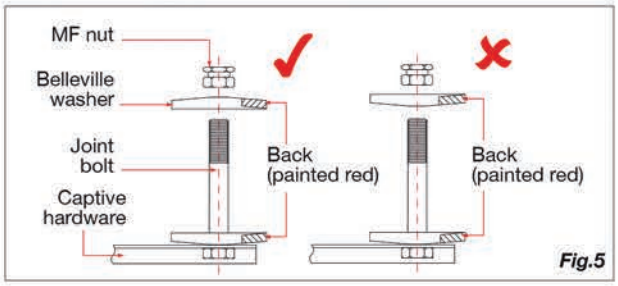


Fig.5

JOINTING PROCEDURE

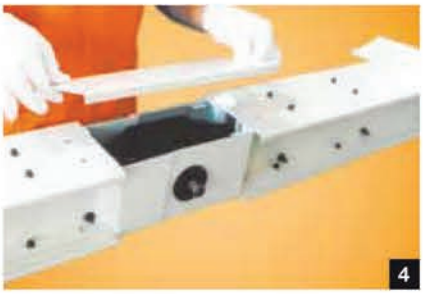
The busduct joint is the most important component of the busduct system. Therefore, it is imperative that the joints are installed and secured correctly. Improper jointing will result in power loss and equipment damage.

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.

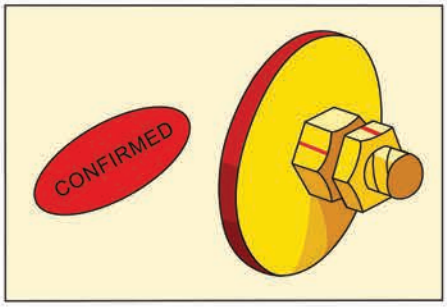


Attach the joint cover with M6 bolt & nut.

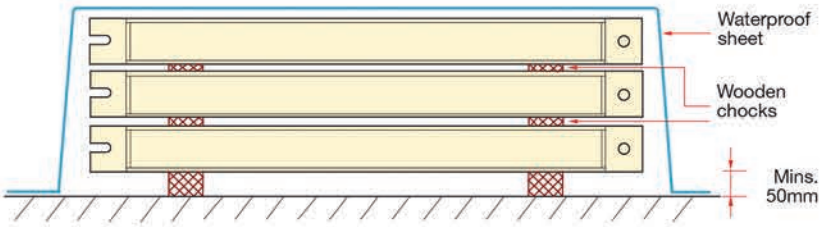
Completed joint.

SOME IMPORTANT POINTS TO NOTE:

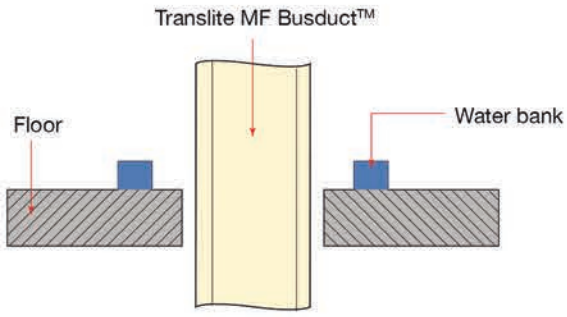
- Keep the busducts dry during storage and installation. Cover busducts with water-proof sheets to protect them from water. (diag. A)
- Provide water banks on the floor around the busducts to keep them from water. (diag. B).
- If necessary, seal the floor opening (diag. C). Never fill it with mortar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



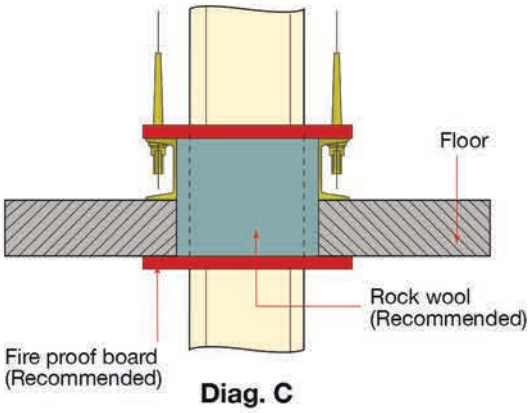
PRECAUTION



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

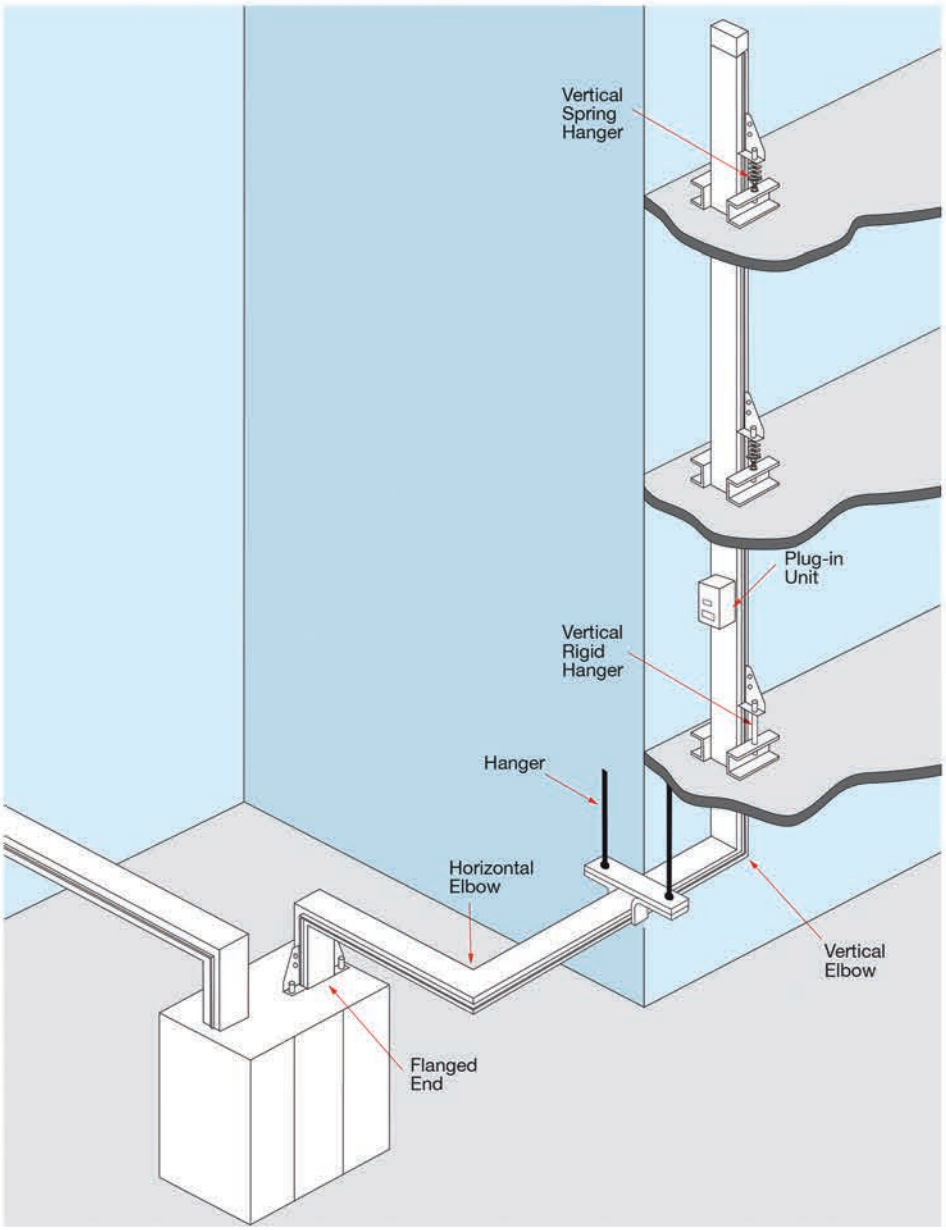
Translite Mini Busduct is designed for easy installation and operation. It is ideal for schools, factories and buildings requiring electrical power less than 600Amp.

As in any mission critical enivronment, 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 hqtechmgr@multib.com.my for assistance.

INSTALLATION LAYOUT

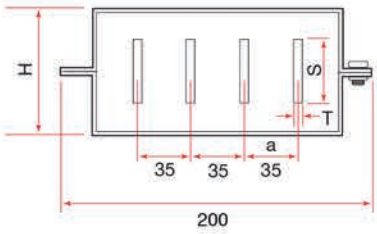


TRANSLITE™
MINI BUSDUCT

Item	Parts	Specification			Weight (kg)
		Pole	Rated voltage	Rated current (A)	
1	Plug-in feeder (Std : L = 2400)	4	AC 500 V	100	20
				200	21
				300	26
2	Feed-in box a : End feed-in (Std : L = 450)			400	33
				200	13.6
				300	14.8
				400	
	b: Centre feed-in (Std : L = 2400)			200	31.5
				300	36.5
				400	43.5
3	End closer	-		200	1.2
				300,400	
4	Hanger	-		200	0.9
				300,400	
5	Plug-in MBD unit	3	AC 500V	Common for all rated current	8.2

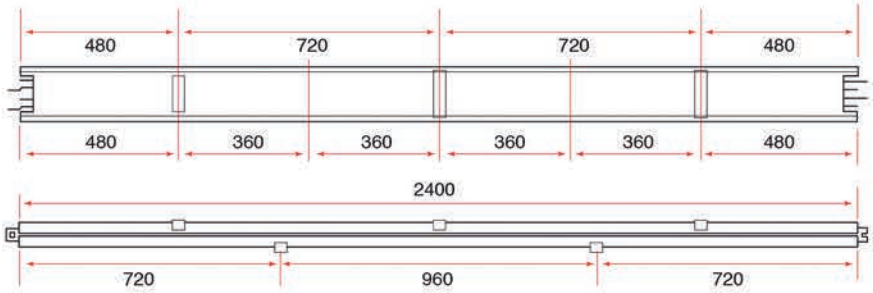
COMPONENTS

CROSS SECTION



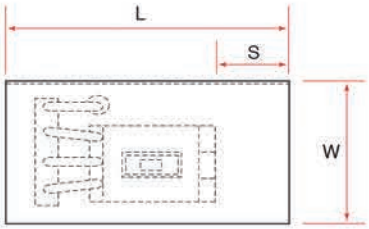
RATING (AMP)	DIMENSION (MM)			
	H	S	T	a
100	65	20	2	35
200	65	25	3	35
300	80	40	3	35
400	80	40	5	35

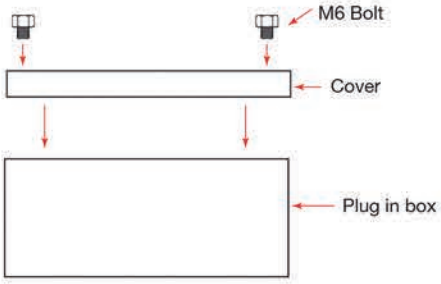
PLUG-IN FEEDER

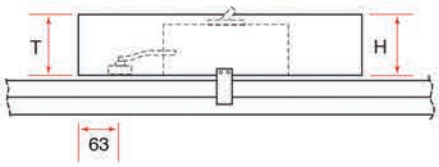


PLUG-IN MBD UNIT

TYPE: MBD - F100 RB
MBD - F225 FB

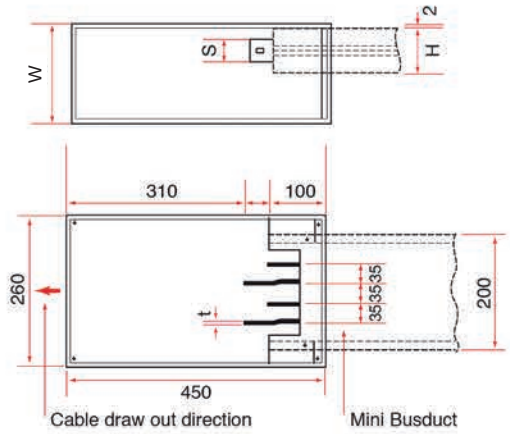






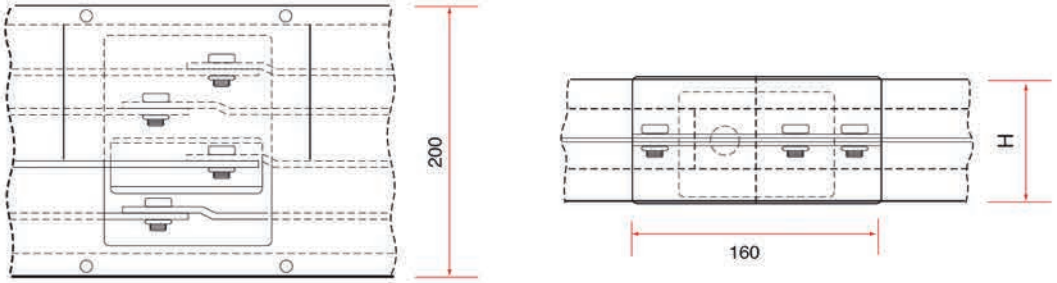
CIRCUIT BREAKER	CIRCUIT BREAKER				
FRAMES	L	W	S	T	H
F100 RB	360	202	100	85	90
F225 FB	400	202	134	105	110

END FEED-IN BOX

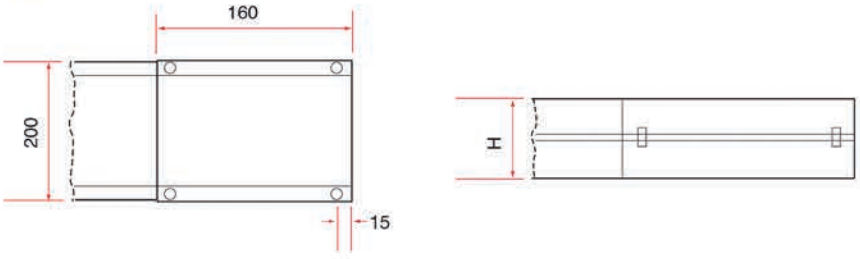


RATING (AMP)	DIMENSION (MM)			
	H	S	t	W
100A	65	20	2	170
200A	65	25	3	170
300A	80	40	3	170
400A	80	40	5	170

JOINT COVER



END CLOSER



TECHNICAL DATA

IMPEDANCE

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

Rating in 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 in 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.

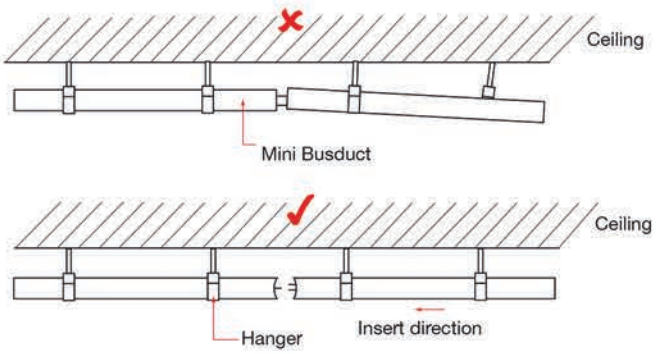


Fig.1

JOINTING PROCEDURE

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

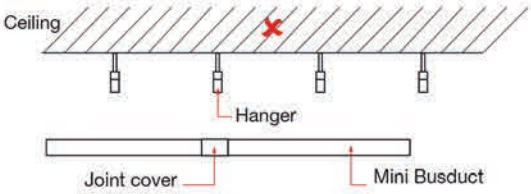


Fig.2

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.

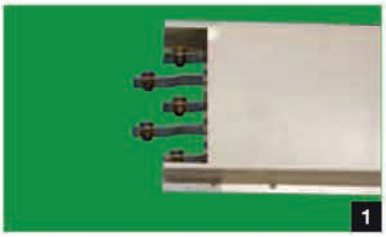
INSPECTION AFTER INSTALLATION

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

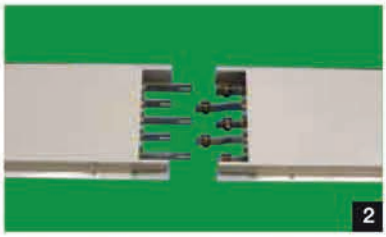
1. All the joint parts housings touch each other without gap and the joint bolts are tightened correctly.
2. The earthing wire is connected to the earth terminal in the feed-in box.

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 5M Ω, refer to Multi-B Sdn. Bhd.



Install the hangers first. Losen 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.

Thighten the M5 bolts (2 pcs.)

Completed end closer joint.

Agent/Marketing Representative

FOR MORE INFORMATION OR CUSTOMER SUPPORT SERVICE:

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Lot 53, Jalan Jasmine 2, Bandar Bukit Beruntung,
48300 Serendah, Selangor Darul Ehsan, Malaysia.
Tel: +603-6028 1818
Fax: +603-6028 4899
Email Address: salessupport@multib.com.my
Website: www.multib.com.my
www.translite.com.my

NOTES

MULTI-B SDN BHD (184908-T)

TRANSLITE™ PROJECT SDN BHD (180744-H)

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