NSPB-MV

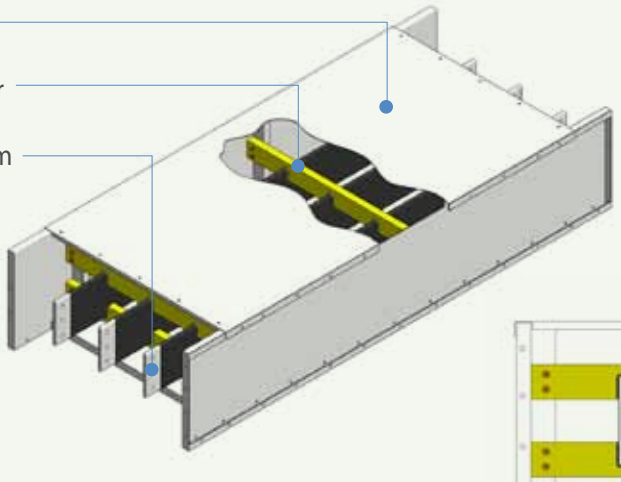
Contents

Basic Structure

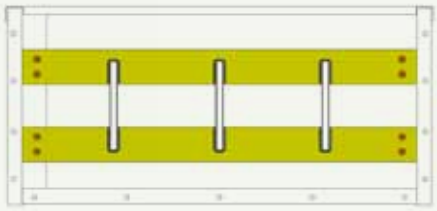
The NSPB-MV uses epoxy insulating material (thermal class 130 C) to separate the phases, and secure them using high strength epoxy. It can be applied to 1000V or less, or between 800A and 4000A.

Structure (Vertical)

- Al / STS / SPCC
- Supporting Insulater
- Copper or Aluminum

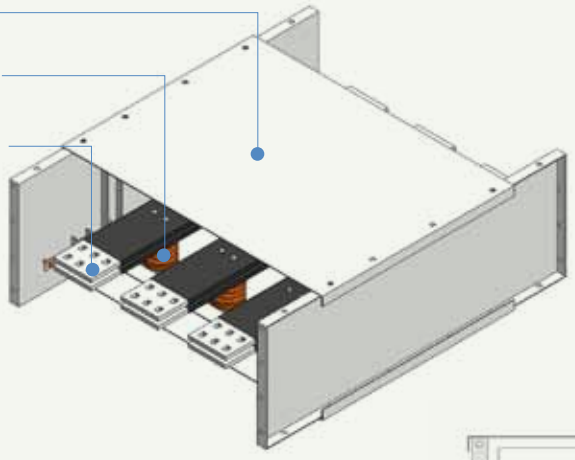


Sectional View

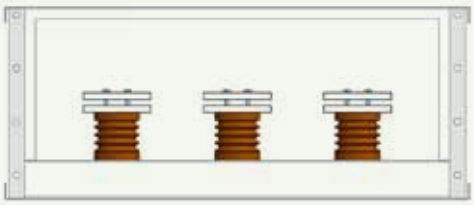


Structure (Horizontal)

- Al / STS / SPCC
- Supporting Insulater
- Copper or Aluminum

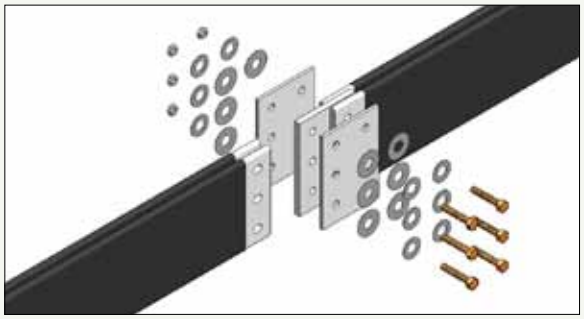


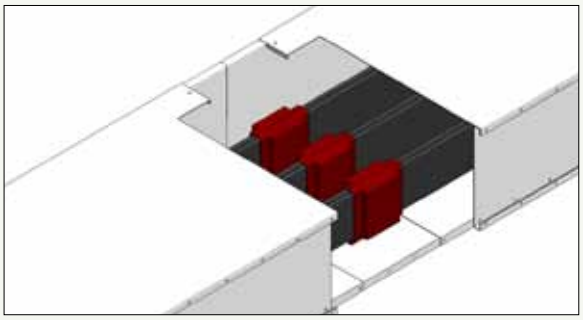
Sectional View



도체 절연 및 접속

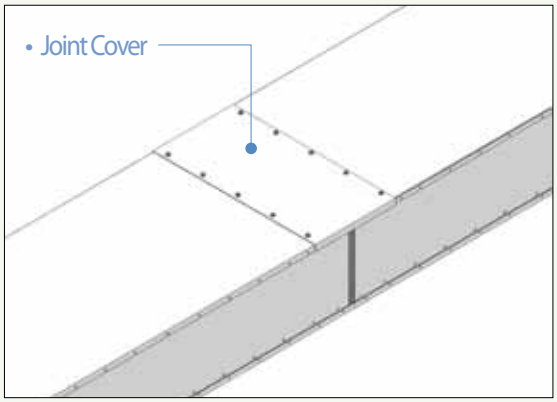
The conductors come with standard epoxy coating insulation. Tube insulation is also available on request. Use joint plates to connect the parts, and cover them with boots as shown in the image below.



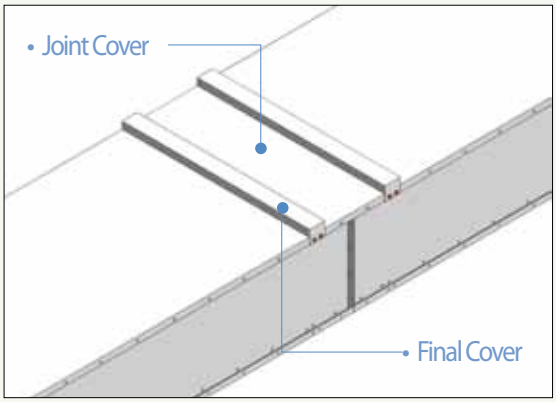


Joint Covers

For indoor installation, applying joint covers are sufficient; however, for outdoor installation, final covers should be applied additionally on top of the joint covers. (Please contact our design team for further information.)

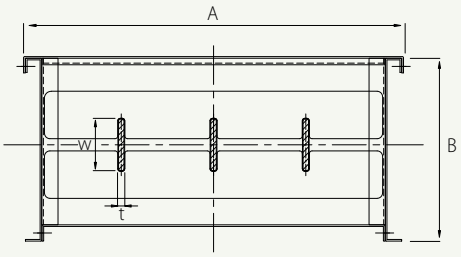


Indoor

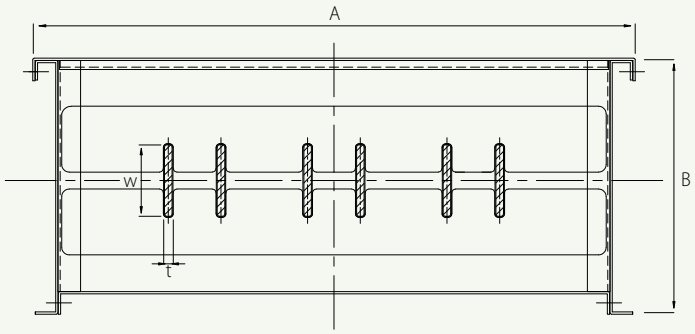


Outdoor

Feeder (Alignment of the Conductors : Vertical)



NM-1-1



NM-1-2

~ 4.76kV (IEC : ~7.2kV)

Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	70	572	320	6.35*41	NM1-1
	1000	6	70	572	320		
	1250	6	95	572	345		
	1600	10	95	590	345		
	2000	10	135	590	385		
	2500	12	170	590	420		
	3200	12	240	590	490		
	4000	12	200	800	500		NM1-2

~ 15kV (IEC : ~12kV)

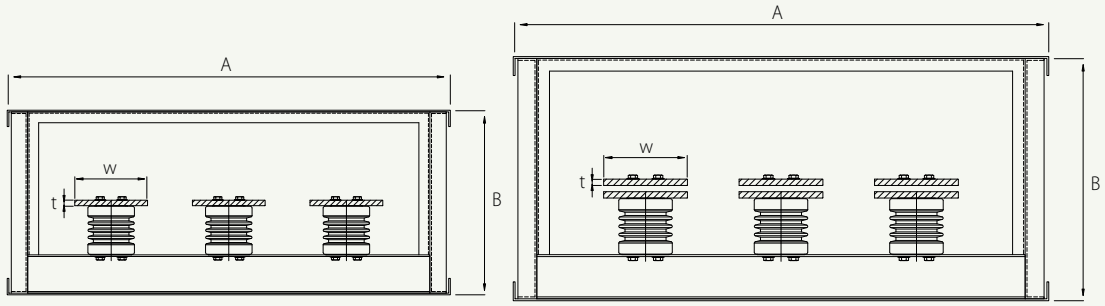
Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	65	632	315	6.35*41	NM1-1
	1000	6	65	632	315		
	1250	6	75	632	325		
	1600	10	80	650	330		
	2000	10	115	650	365		
	2500	12	145	650	395		
	3200	12	200	632	450		
	4000	12	180	860	480		NM1-2

~ 27kV (IEC : ~24kV)

Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	65	692	315	6.35*41	NM1-1
	1000	6	65	692	315		
	1250	6	70	692	320		
	1600	10	75	710	325		
	2000	10	105	710	355		
	2500	12	125	710	375		
	3200	12	180	710	430		
	4000	12	165	920	465		NM1-2

The standards of the conductors are only for reference, and they can be adjusted according to the installation environment, or on request. (For using aluminum conductors, please contact our design team for further information.)

Feeder (Alignment of the Conductors : Horizontal)



NM-2-1 NM-2-2

~ 4.76kV (IEC : ~7.2kV)

Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	50	670	330	6.35*41	NM2-1
	1000	6	65	715	330		
	1250	10	65	715	335		
	1600	10	100	820	335		
	2000	10	125	895	335		
	2500	10	110	850	355		NM2-2
	3200	13	125	895	360		
	4000	15	150	970	370		

~ 15kV (IEC : ~12kV)

Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	50	870	340	6.35*41	NM2-1
	1000	6	60	900	340		
	1250	10	55	885	345		
	1600	10	85	975	345		
	2000	10	110	1050	345		
	2500	10	95	1005	365		NM2-2
	3200	13	115	1065	370		
	4000	15	135	1125	380		

~ 27kV (IEC : ~24kV)

Ampere(A)		Dimension (mm)				Earth bar [mm]	Fig.
		t	W	A	B		
CU	800	6	50	1150	570	6.35*41	NM2-1
	1000	6	60	1180	570		
	1250	10	50	1150	575		
	1600	10	80	1240	575		
	2000	10	100	1300	575		
	2500	10	85	1255	595		NM2-2
	3200	13	100	1300	605		
	4000	15	125	1375	610		

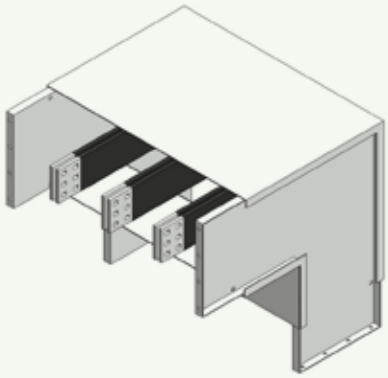
The standards of the conductors are only for reference, and they can be adjusted according to the installation environment, or on request. (For using aluminum conductors, please contact our design team for further information.)

Fittings

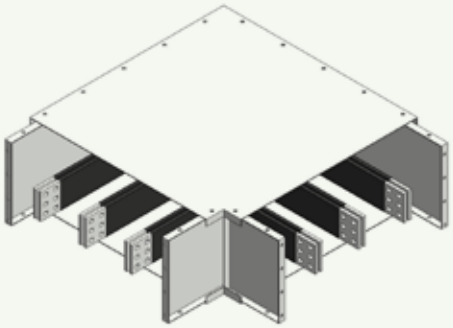
LS C&S NSPB has a wide range of fittings to satisfy any layout of buildings. Elbow angles other than ninety degrees are also available. Offsets or tees can be applied where the standard elbows are not feasible. (Please contact our design team for detailed information about the product size.)

Elbow (Alignment of the Conductors : Vertical)

Vertical

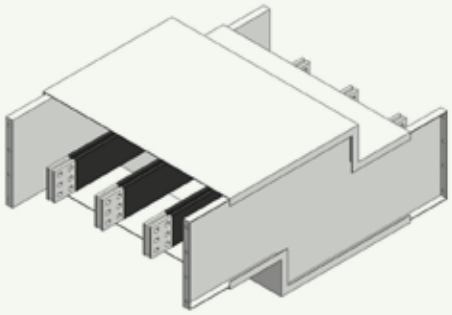


Horizontal

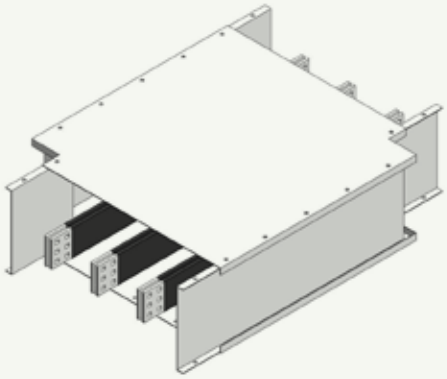


Offset (Alignment of the Conductors : Vertical)

Vertical

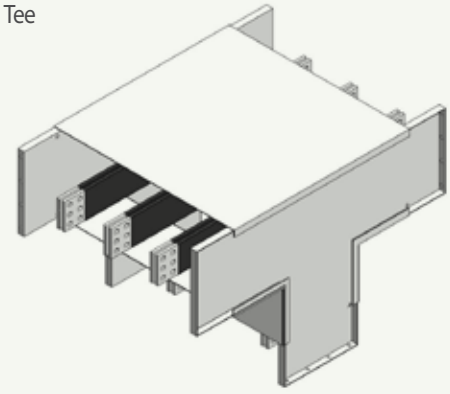


Horizontal

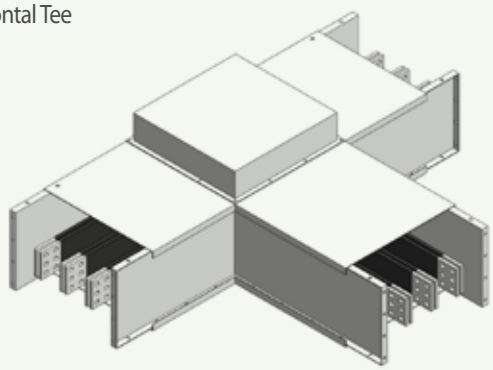


Tee (Alignment of the Conductors : Vertical)

Vertical Tee

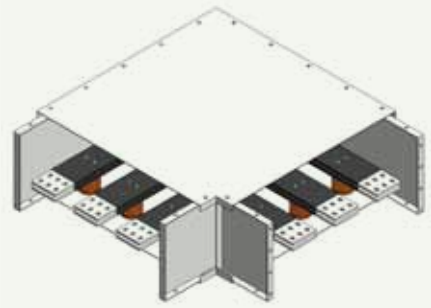


Horizontal Tee

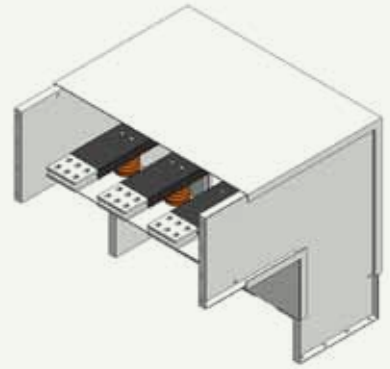


Elbow (Alignment of the Conductors: Vertical)

Vertical

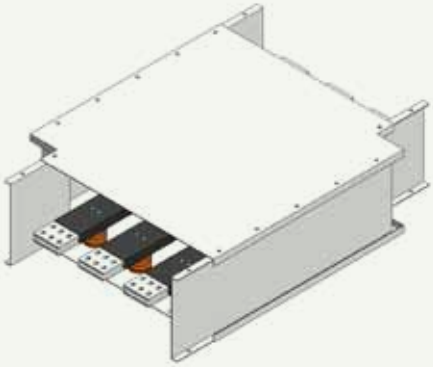


Horizontal

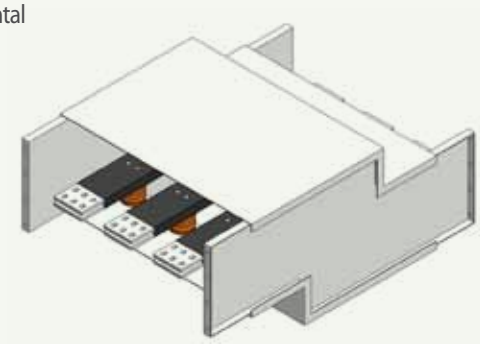


Offset (Alignment of the Conductors : Vertical)

Vertical

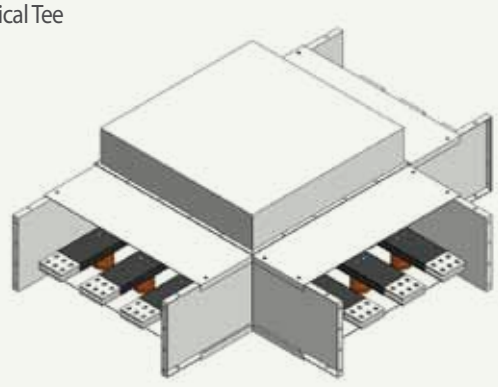


Horizontal

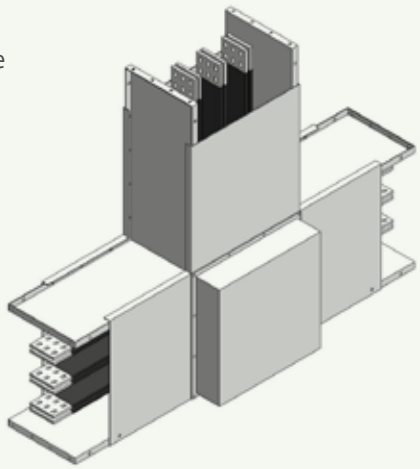


Tee (Alignment of the Conductors : Vertical)

Vertical Tee



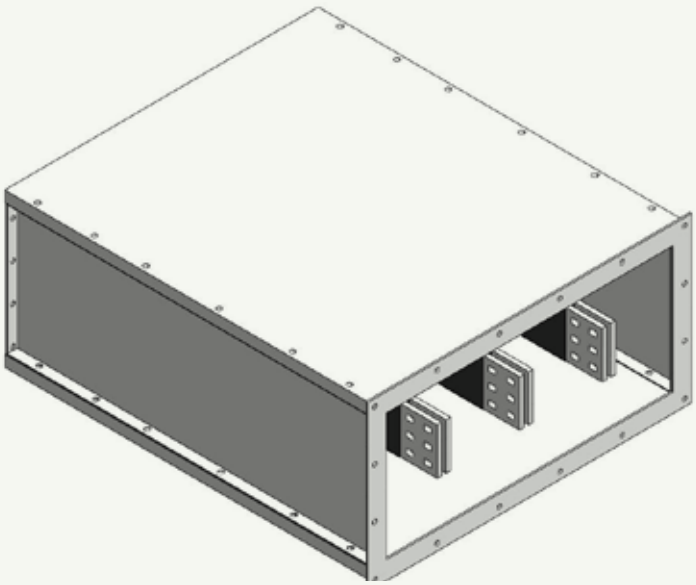
Horizontal Tee



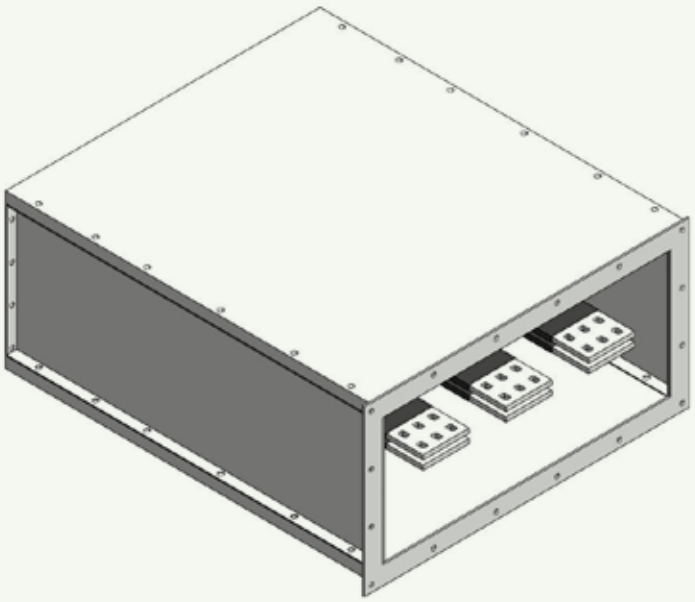
Flanged End

The flanged end is used at a transformer or at a low-tension panel.
(Please, contact our design team for further information including the size and capacity.)

Vertically Aligned



Horizontally Aligned

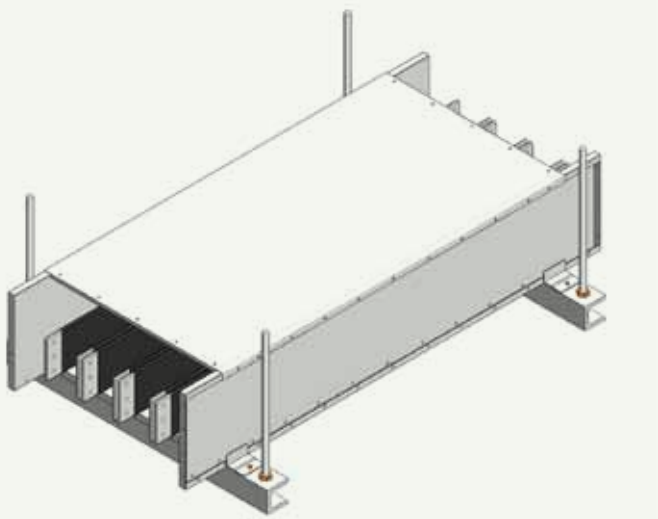


Hangers

LS C&S NSPB can be installed using horizontal hangers, vertical hangers and wall brackets according to the installation environment. (Please contact our design team for detailed information about installation.)

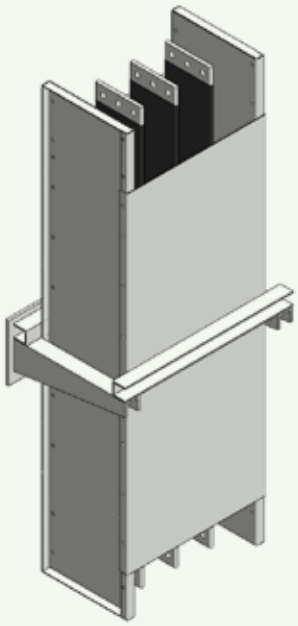
Horizontal Hangers

For horizontal installation, the NSPB requires two or more supports for each product.



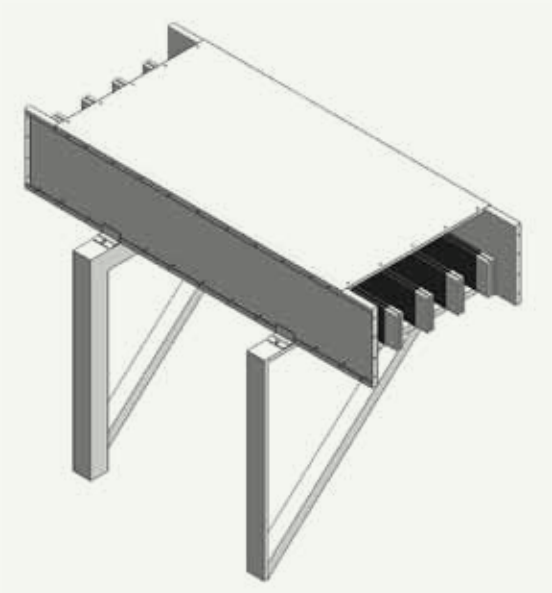
Vertical Hangers

An additional reinforcement design provides stability for the vertical loading of the vertical feeders.



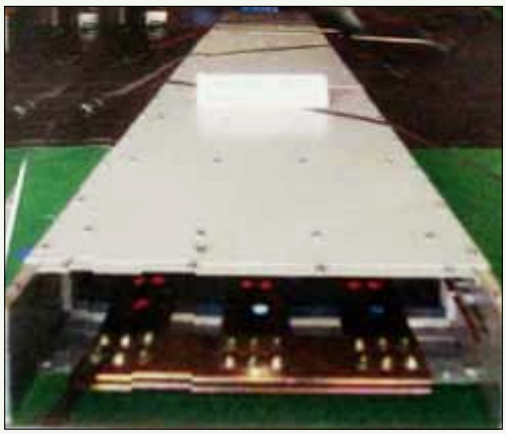
Wall Bracket

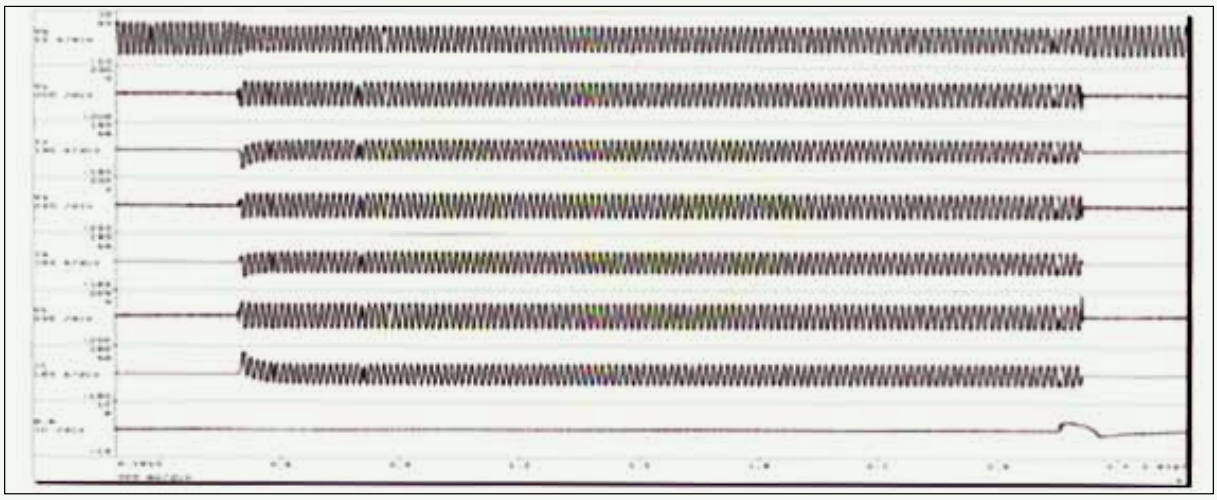
Once the angles and the channels are applied on walls, they need to be fixed with bolts.



Technical Data

The short circuit strength of the LS C&S NSPB can be adjusted and produced in accordance with the request and specifics of the clients.





Rated continuos current (A)	Short-circuit withstand current	
	(kA_{rms}), 2sec.	(kA_{peak})
800~1000	40(50)	104(130)
1250~2000 2500~4000	50(65)	130(170)

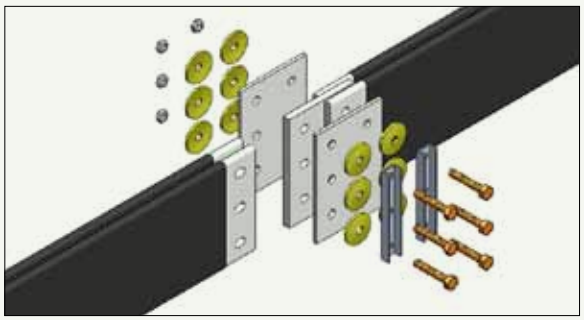
Rated Max. voltage (kV_{rms})	Power frequency withstand voltage (kV_{rms}), 60Hz	Impulse withstand 1.2x50μs (kV_{peak})
0.635 and 4.76	19	60
15	36	95
27	60	125

* The numbers shown in the parenthesis of the short circuit current is the value of reinforcement products (optional).

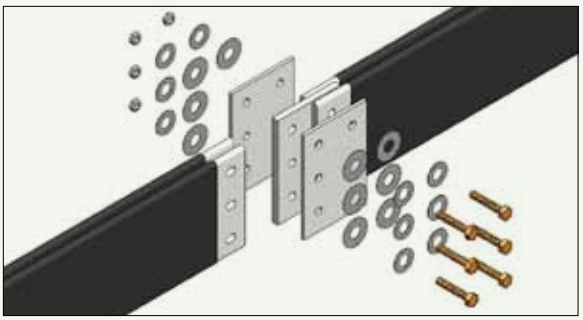
The Joint of NSPB-LV and MV

STEP 1.

- The bus ducts should be aligned at the top and the bottom and the left and the right as well as horizontally and vertically. Make sure that the surface is clear of dust before connecting them.
- Connect the bus ducts by using joint plates and HT bolts as shown in the image. Tighten the bolts until the eye-marking is visible.
- Once they are connected, check for gaps between the bus bars and the joint plates using a feeler gauge.



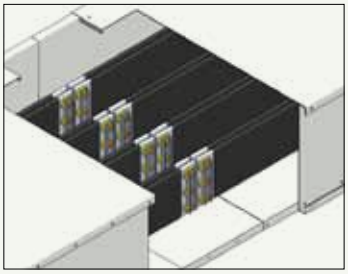
[NSPB-LV]



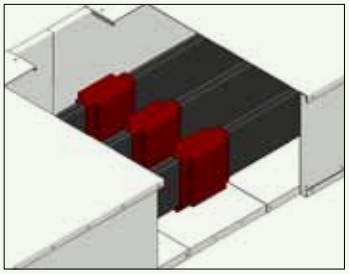
[NSPB-MV]

STEP 2.

- Apply the top and bottom joint covers, and tighten the bolts securely.
- For the NSPB-MV, apply boots additionally after joint plates have been connected as shown in the image.



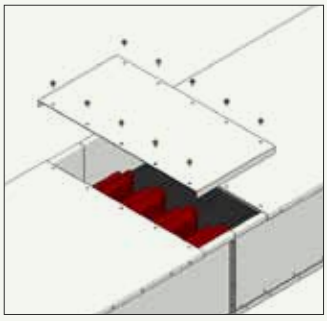
[NSPB - LV]



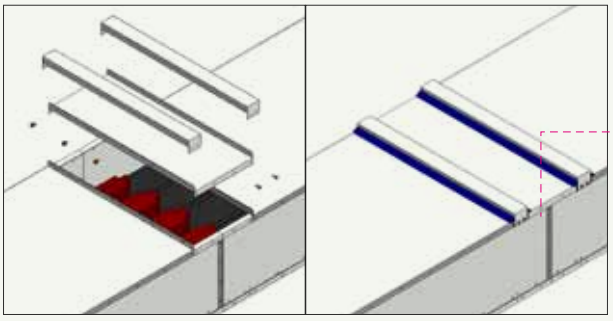
[NSPB - MV]

STEP 3.

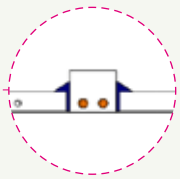
- For outdoor installation, apply the top and bottom joint cover and reinforcement covers. Apply silicone at both sides of the covers as shown in the image. (Torque = 120 kgf·cm)



Indoor Type



Outdoor Type



Silicone Application

Certification & Specification

KERI Certification

KERI Certification

KERI Certification

KERI Certification

KERI Certification

ISO9001

ISO14001

OHSAS18001

Busduct Major References

Steel-making plant and sintering plant of Hyundai Steel Co., Ltd.

Investor : Samsung Engineering
Construction Period : 2008

Korea Gas Corporation Substation 21 in Pyeongtaek

Investor : Korea Gas Corporation
Construction Period : 2010

LG Chem Ltd. Yeosu Plant LDPE

Investor : LGChem Ltd.
Construction Period : 2011

JURONG AROMATIC COMPLEX

Investor : ABB, Singapore
Construction Period : 2012~2013

AKG2 (AL-KHALEEJ GAS) PROJECT PHASE II
Onshore GAS Plant

Investor : Qatar
Construction Period : 2007 ~ 2008

RAS LAFFAN PROJECT PHASE 6 & 7
Onshore LNG Plant

Investor : Qatar
Construction Period : 2006 ~ 2007 Completed