FURUTEC®

i-DC

DATA CENTRE BUSDUCT SYSTEM

FT(i-DC)@2025/04 – 23.04.2025

Company Overview

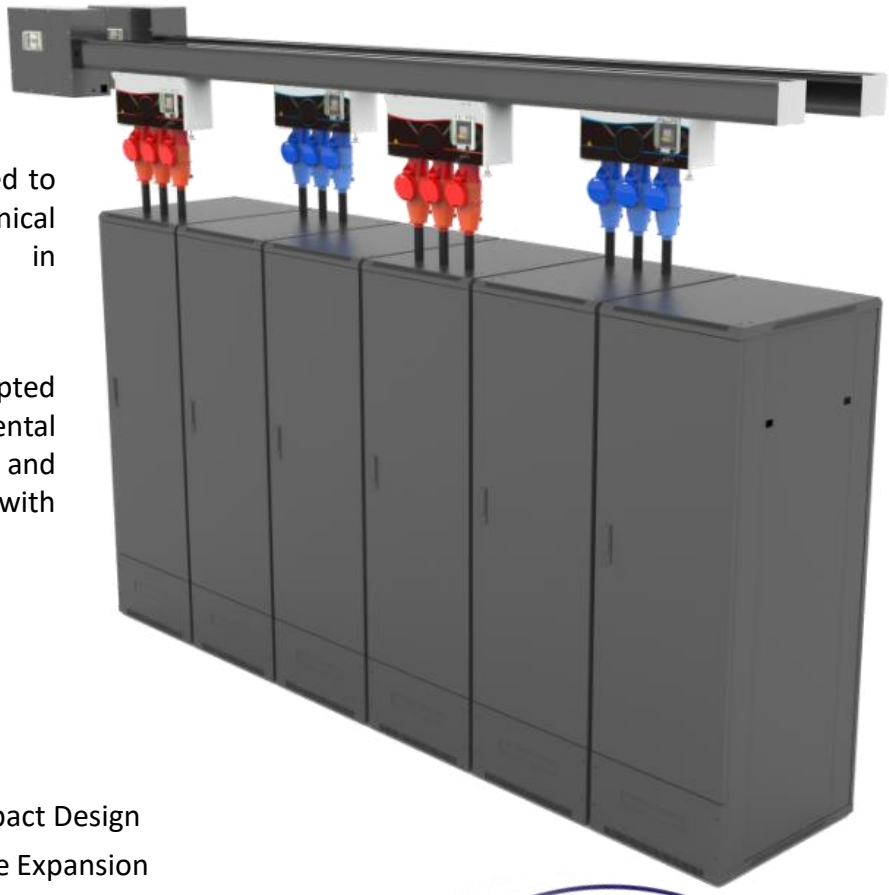
Since its inception in 1995 in Penang, Malaysia, Furutec Electrical has been at the forefront of innovation in busduct system manufacturing.

With over 30 years of expertise in manufacturing, research and development, Furutec Electrical provides a comprehensive range of busduct systems tailored to diverse applications and industries.

Our relentless commitment to excellence is powered by significant investments in R&D and state-of-the-art testing facilities, ensuring every product meets and exceeds international standards.

Furutec busduct solutions have been globally accepted in various prestigious projects across ASEAN, Asia Pacific, Middle East and beyond, cementing our reputation as a global player. Partnering with regional distributors and business partners, we are proud to bring innovative, reliable, and sustainable power distribution systems to the world.

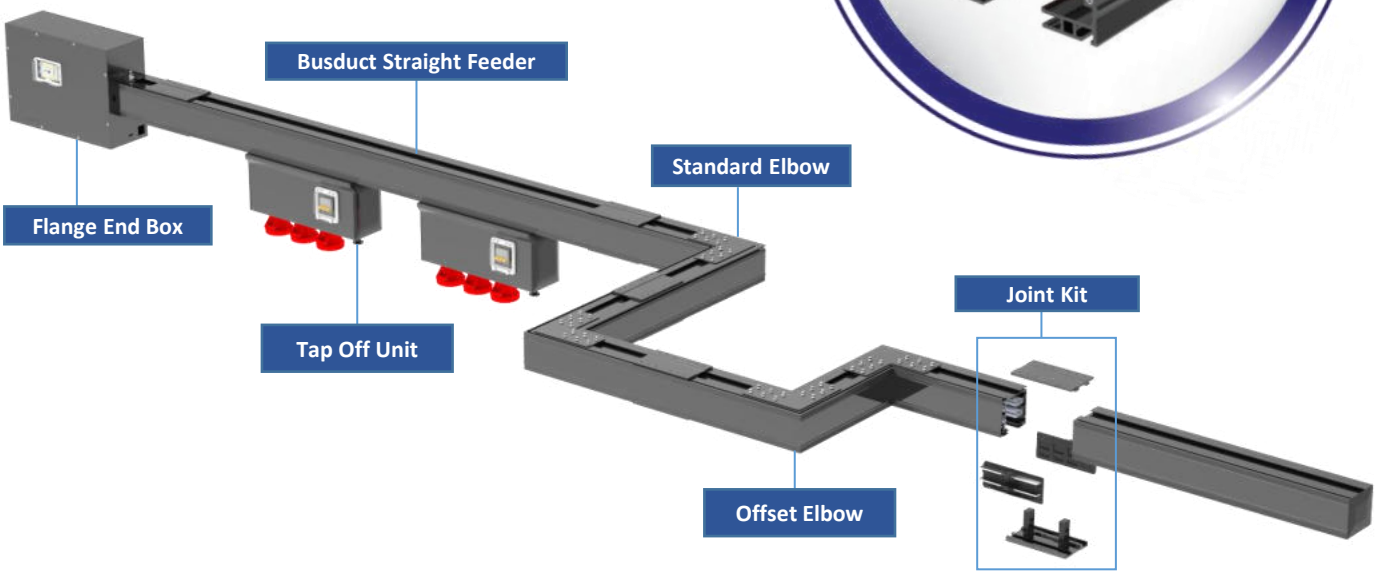
Engineered for Data Centre Application



Furutec i-DC busduct is engineered to meet the stringent technical specification and requirement in mission-critical data centres.

It ensures reliable and uninterrupted service while reducing environmental impact by minimizing cabling and waste commonly associated with conventional retrofits.

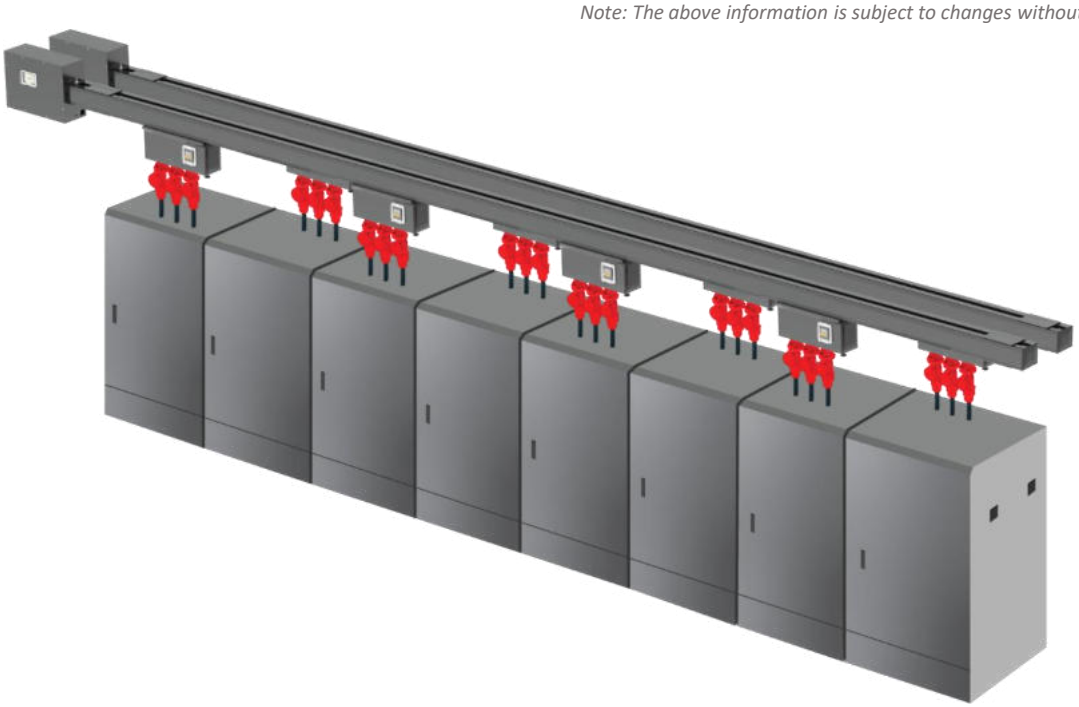
- Compliant with IEC 61439-6
- Space-Efficient Modular & Compact Design
- Flexibility & Scalability for Future Expansion
- Quick Installation & Lower Installation Cost
- Maintenance-Free
- Eco-Friendly & Reusable
- Customizable Tap Off Units
- Safe Live Installation of Tap Off Units
- Integrated with Branch Circuit Power Monitoring



Technical Data

Description	Specification & Standards
Product Model	i-DC
Rated Current of Busduct	250A, 400A, 630A, 800A
Rated Current of TOU	16A, 32A, 63A, 100A
Compliance Standard	IEC 61439-6 & IEC 61439-1
Rated Operational Voltage	1000V
Rated Impulse Voltage	8kV
System Frequency	50/60Hz
System Configuration	3P4W (comprising L_1, L_2, L_3, Neutral, Aluminium Housing Ground) 3P4W+E (comprising L_1, L_2, L_3, Neutral, Copper Earth) *Note: oversized neutral is optional*
Degree of Protection	IP40 / IP54
Mechanical Impact	IK10
Conductor Material	Copper
Busduct Housing Material	Extruded Aluminium-Alloy

Note: The above information is subject to changes without prior notice



Power Monitoring Solution

Furutec i-DC busduct system integrated with cutting-edge power monitoring solution delivers an advanced, seamless and intelligent approach to power distribution and management, aligning with the needs of modern data centres.

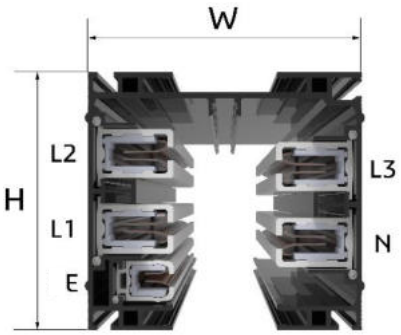
This system enables real-time monitoring of critical electrical parameters, including voltage, current, power factor and energy consumption. By providing actionable insights into energy usage and identifying potential issues before they escalate, it significantly enhances operational efficiency.

Moreover, the integration boosts system safety, minimizes the risk of failures, and helps prevent costly downtimes, ensuring uninterrupted performance in mission-critical environments and applications.

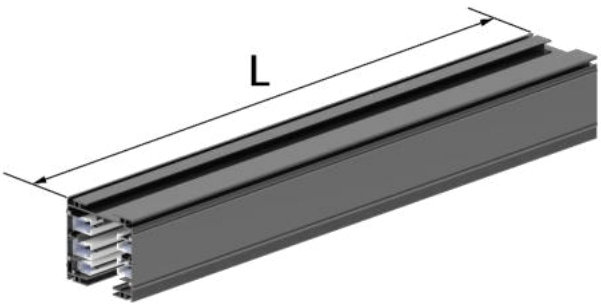
- Intuitive & User-friendly Interface (HMI)
- Scalability & Customization
- Seamless Integration with BMS
- Real-time Monitoring and Data Analysis
- Proactive Fault Detection & Early Warning Alerts
- Minimized Downtime
- Remove Accessibility
- Operational Cost Reduction

Physical Data

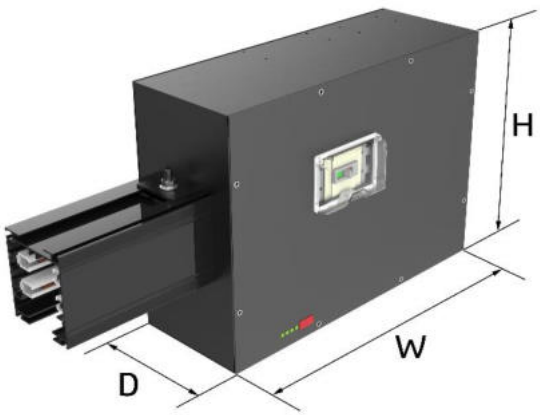
Busduct Cross Sectional View						
Busduct Rating	3P4W (Aluminium Housing Ground)			3P4W+E (Copper Earth)		
	H (mm)	W (mm)	Weight (kg/meter)	H (mm)	W (mm)	Weight (kg/meter)
250A	133	121	9.1	133	121	10.1
400A	134	142	14.4	134	142	15.4
630A	134	178	20.5	134	178	22.4
800A	134	178	22.6	134	178	24.5



Busduct Straight Feeder		
Busduct Rating	Minimum Length L (mm)	Standard Length L (mm)
250A ~ 800A	300	3000



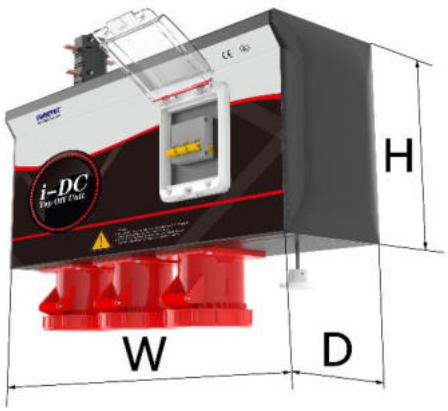
Flange End Box			
Busduct Rating	Dimension (mm)		
	W	D	H
250A	650	250	400
400A	750	250	400
630A	800	280	450
800A	950	300	500



Standard Product: Flange End Box (without MCCB)
Optional Product: Flange End Box (with MCCB)

Tap Off Unit			
Busduct Rating	Dimension (mm)		
	W	D	H
32A	410	150	230
63A	460	150	230
100A	550	150	230

The above dimension of tap off unit varies according to the type and quantity of components incorporated.



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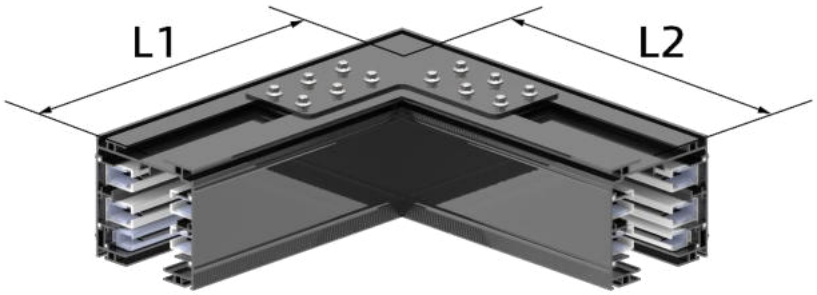
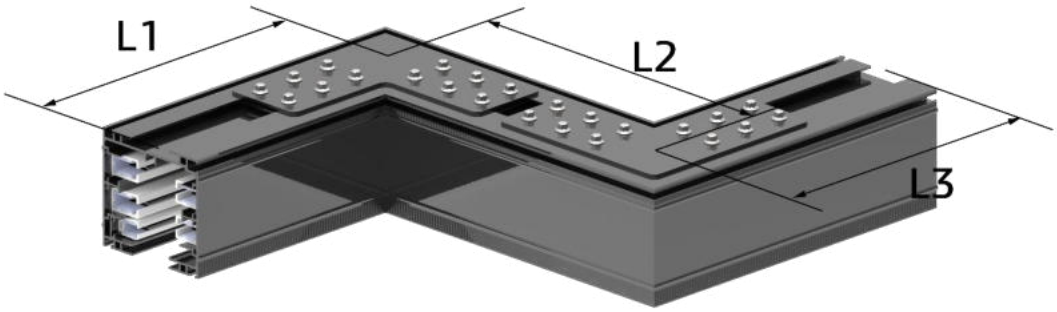


Standard Elbow		
Busduct Rating	Standard Length (mm)	
	L1	L2
250A ~ 800A	300	300



Offset Elbow			
Busduct Rating	Standard Length (mm)		
	L1	L2	L3
250A ~ 800A	300	300	300

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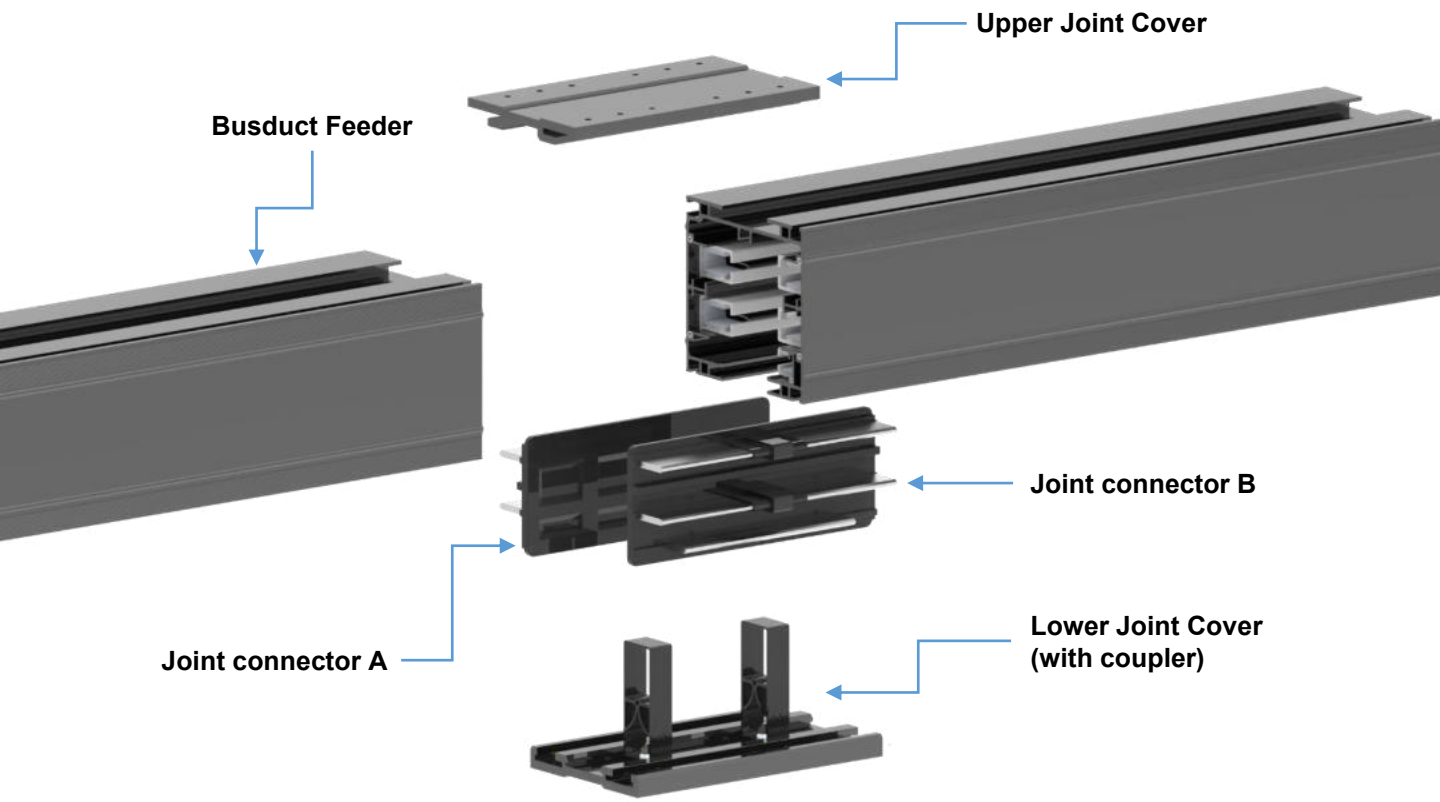
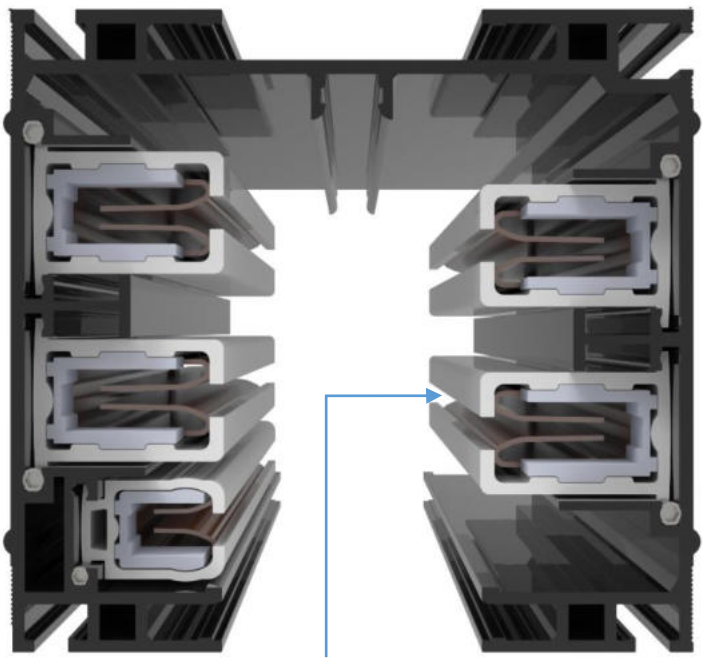
Busduct Joint Section (with Joint Kit)





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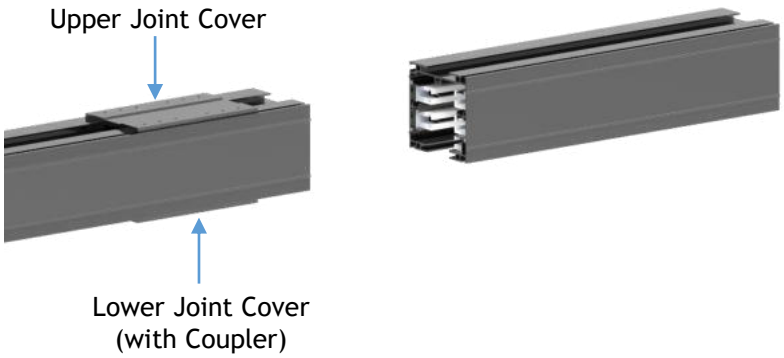
Installation of Busduct Joint Section (with Joint Kit)



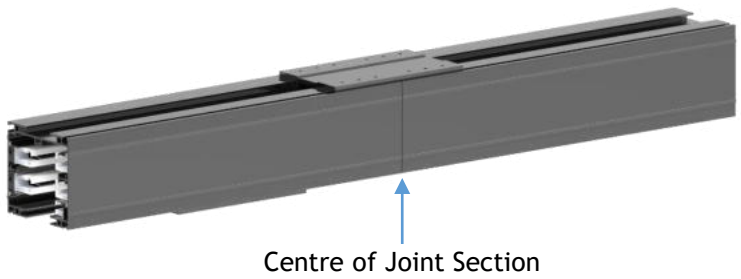
Step 1:

Install the Upper Joint Cover and Lower Joint Cover (with coupler) at the upper and lower rail path respectively on one of the busduct feeders.

Step 2:

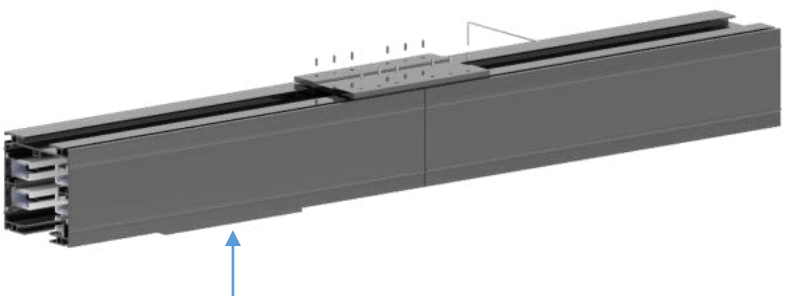
Align both busduct feeders to be connected and ensure that their phase orientations are matched.

Slide the Upper Joint Cover to the centre of the joint section



Step 3:

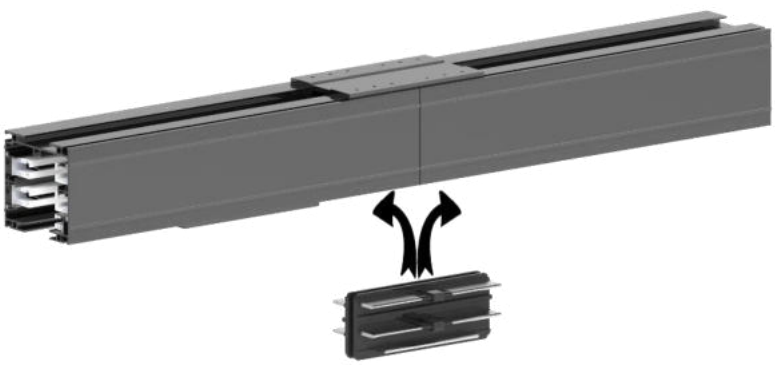
Tighten all 12pcs screws of the Upper Joint Cover securely.



Step 4:

Begin to install the joint kit by inserting both Joint Connector A & B into the copper channel of the busduct feeder.

Ensure that the Joint Connectors are placed at the centre of the joint section and inserted into the correct copper channel by matching the phase orientation.



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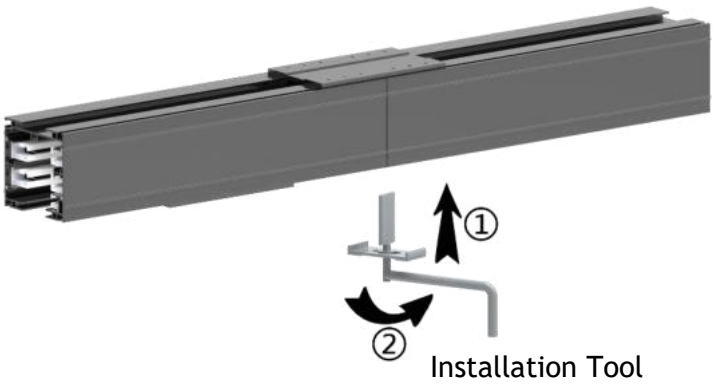
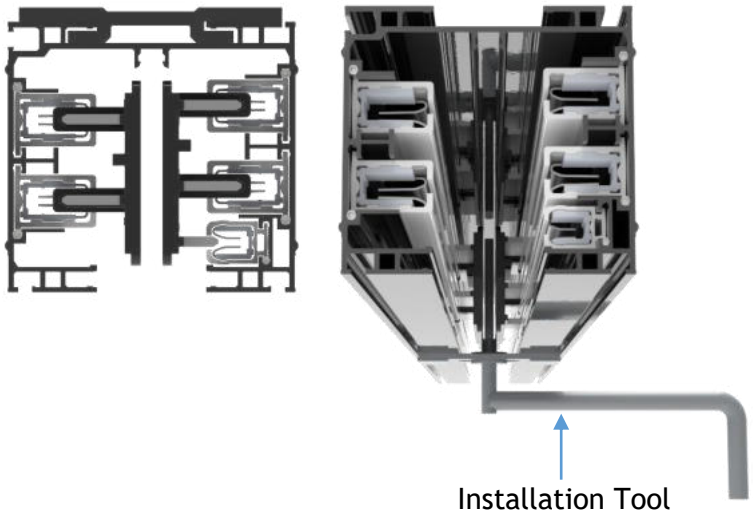
Installation of Busduct Joint Section (with Joint Kit)



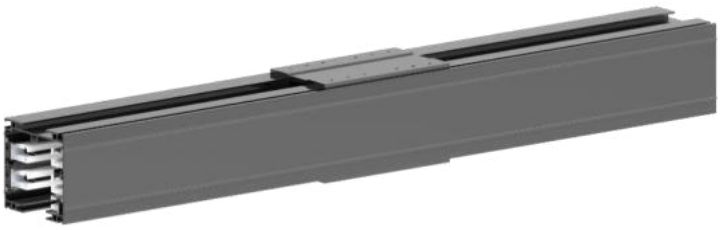
Step 5:

Place the Installation Tool into the gap between joint connector A & B at the joint section.



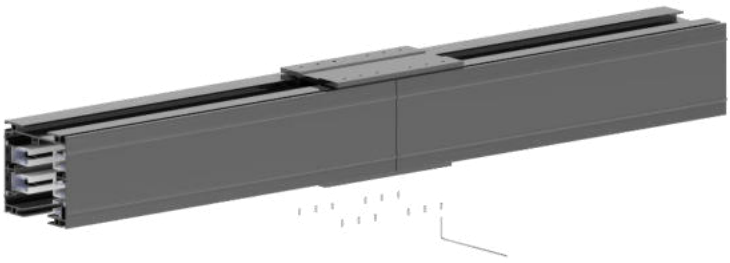
Step 6:

Rotate the Installation Tool until the copper blade of joint connector A & B is firmly fixed into copper channel of busduct feeder.



Step 7:

Slide the Lower Joint Cover (with coupler) to the centre of the joint section.



Step 8:

Tighten all 12pcs screws of the Lower Joint Cover (with coupler) securely to complete the busduct joint section.

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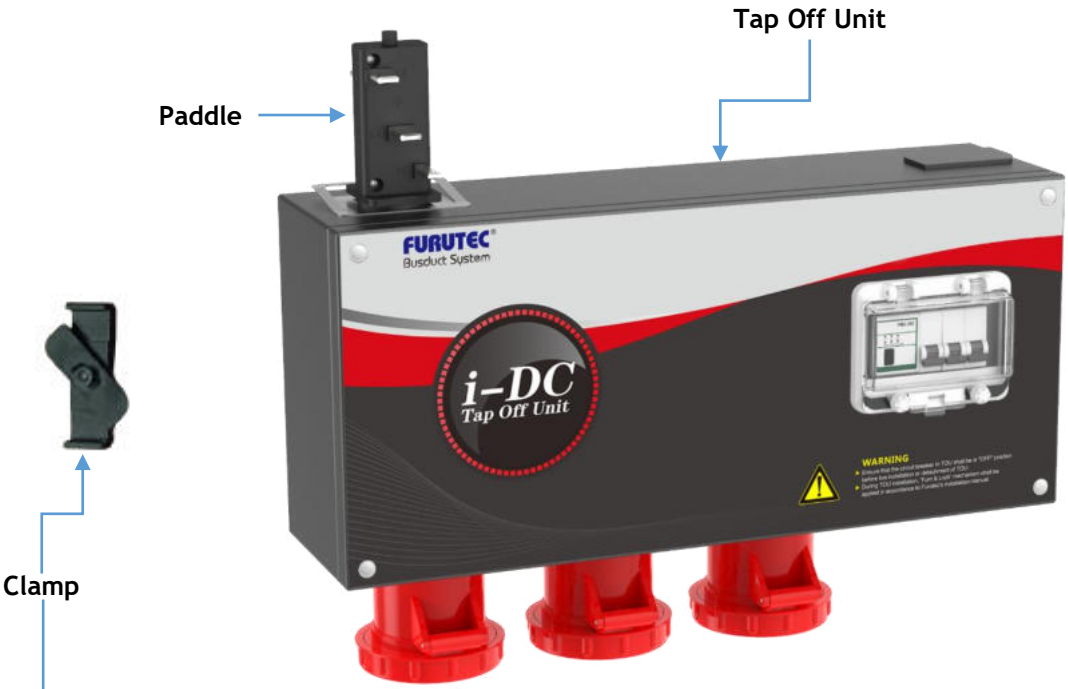
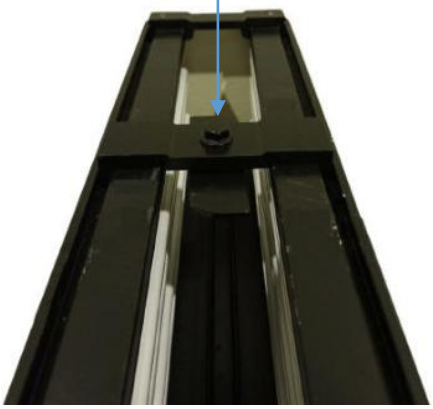
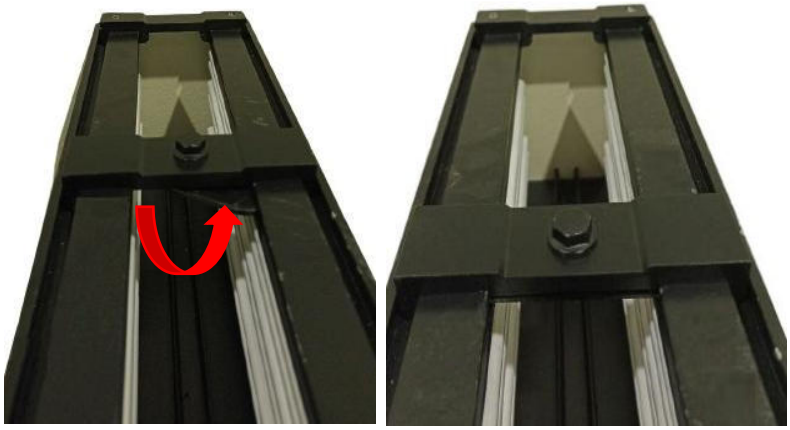
Installation of Tap Off Unit (TOU)





Step 1:

Install the clamp to the busduct feeder adjacent to where tap off unit will be installed.



Step 2:

Turn the clamp (bottom plate) until it is locked to the busduct feeder

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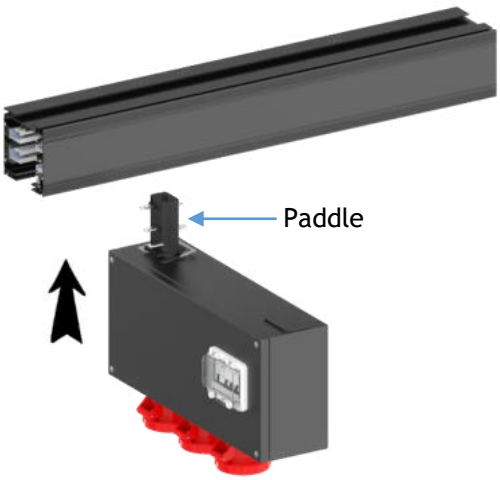
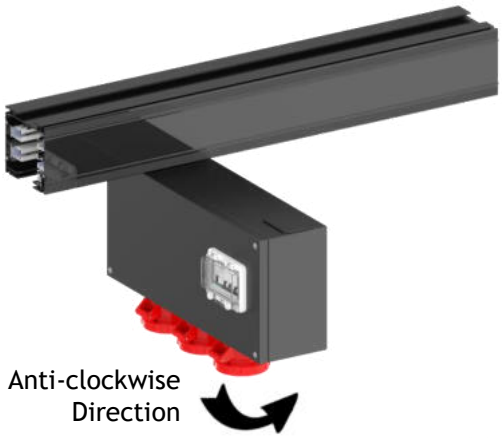
Installation of Tap Off Unit (TOU)



Step 3:

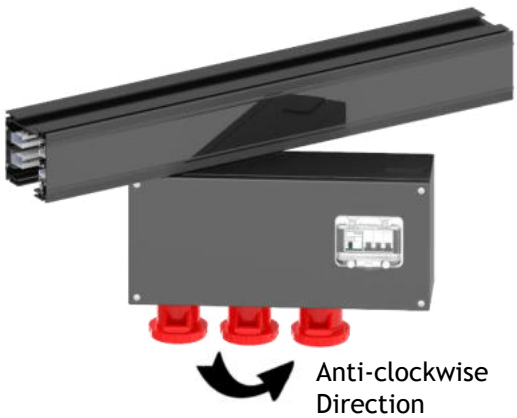
Ensure that the position of tap off unit is placed correctly as illustrated in the picture.

Guide the paddle into the access slot of the busduct feeder.



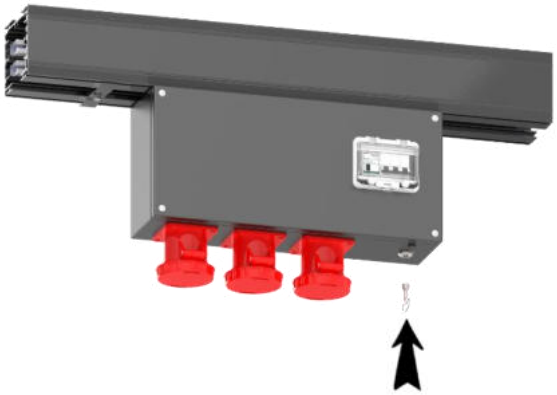
Step 4:

Turn the tap off unit anti-clockwise direction until the paddle's copper blade is fully attached to the copper channel.



Step 5:

Ensure that the tap off unit is turned until its position is in parallel to the busduct feeder.



Step 6:

Secure the tap-off unit onto the busduct feeder by locking it with the provided key, ensuring it is firmly fastened.

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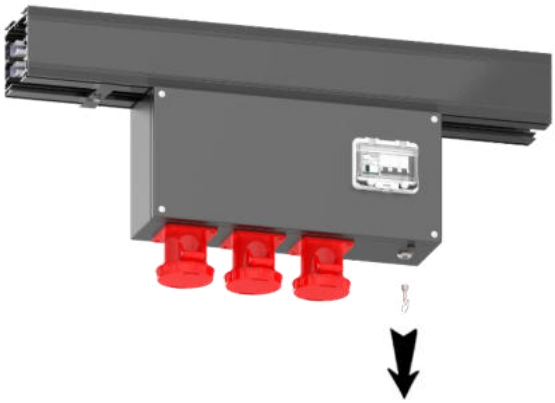
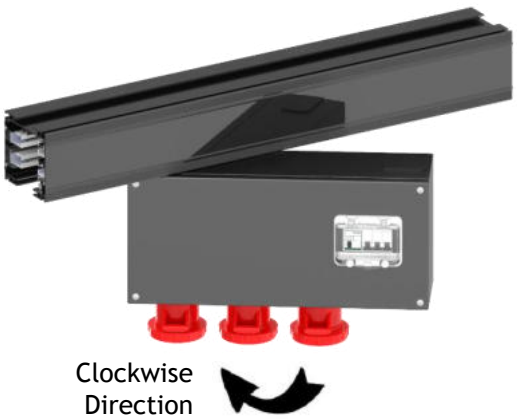
Detachment of Installed Tap Off Unit (TOU)



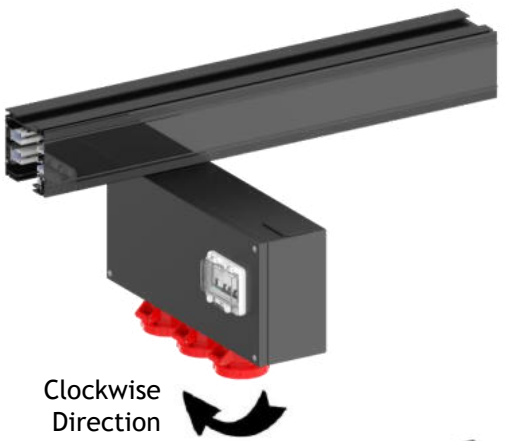
Step 1:

Unlock the tap-off unit from the busduct feeder using the provided key.



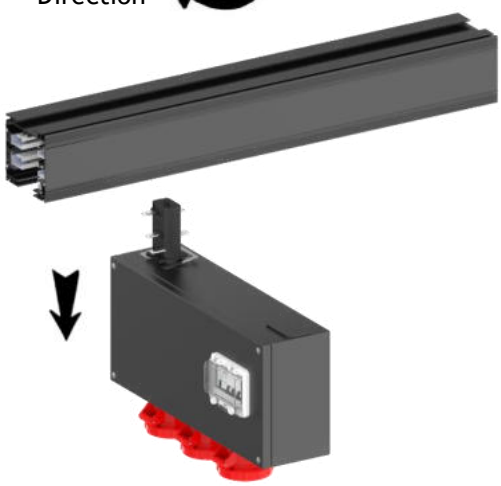
Step 2:

Turn the tap off unit in clockwise direction.



Step 3:

Turn the tap off unit in clockwise direction until it is perpendicular to busduct feeder and the paddle is disengaged from the copper channel of the busduct feeder.



Step 4:

Detach the tap off unit from access slot of the busduct feeder.

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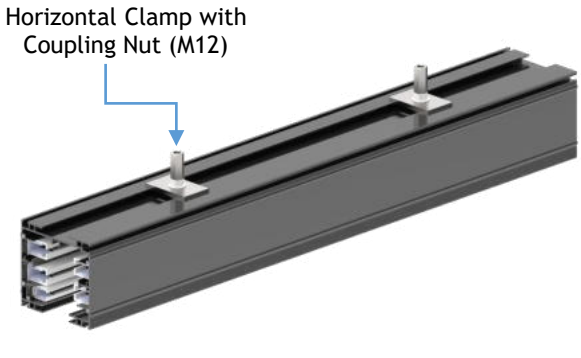
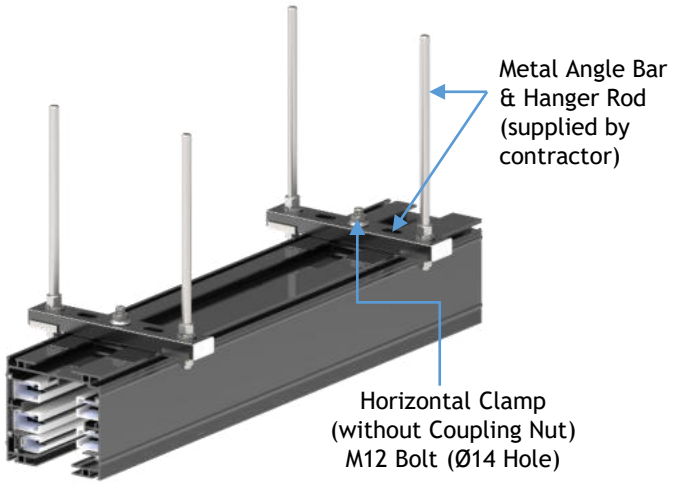
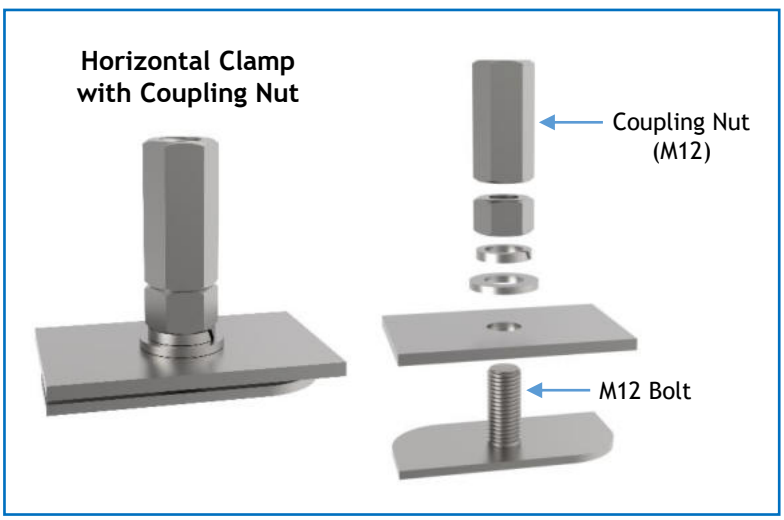
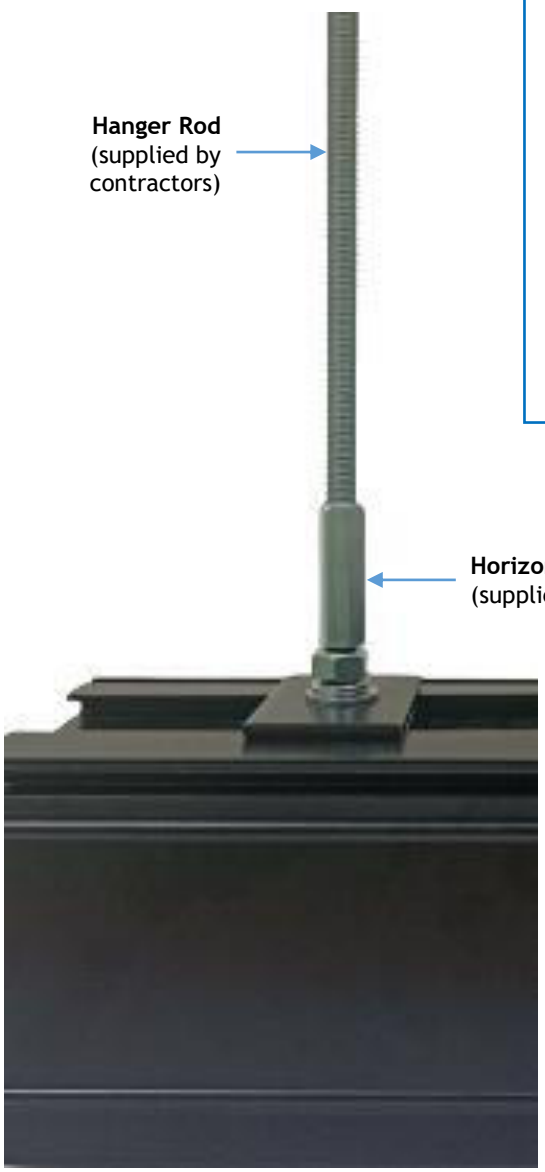
Installation of Horizontal Clamp

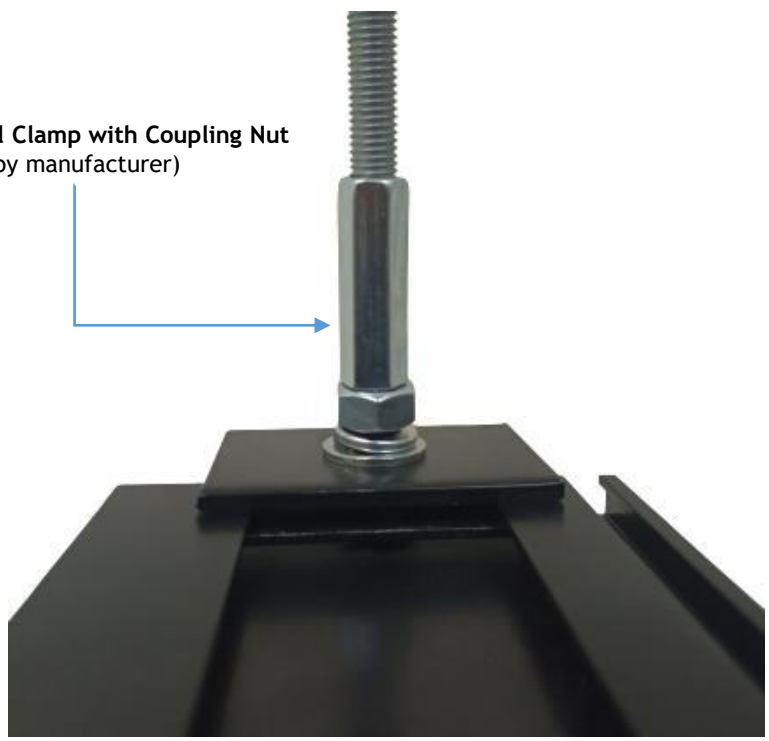




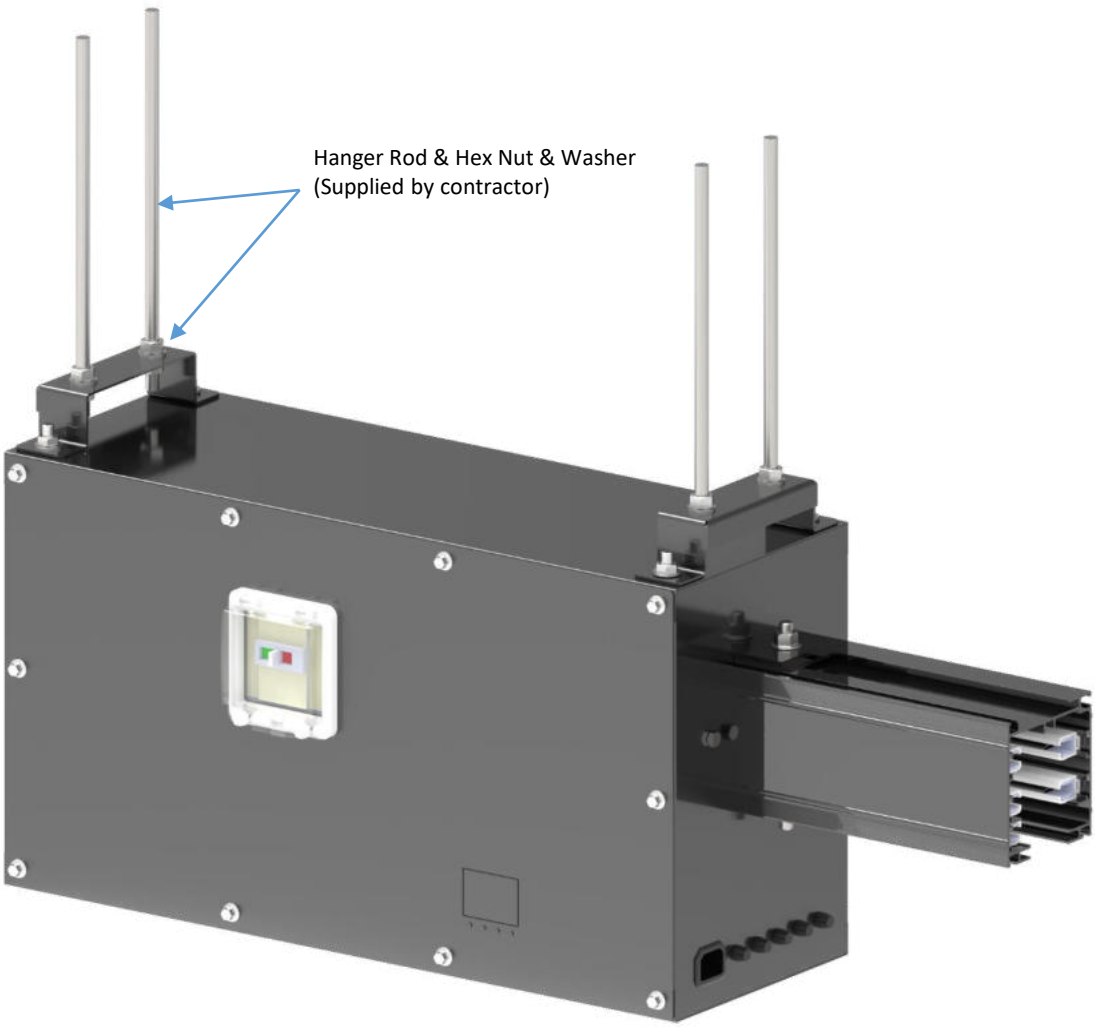
Horizontal Clamp shall be installed in every 1500mm interval along the horizontally-installed busduct system.







Installation of Flange End Box



Flange End Box shall be supported by metal angle bar and hanger rod
(which shall be supplied by contractor)

Recommended Tightening Torque Value

Bolt Size	M12	M6
Torque Value	90Nm	10Nm
Location	Horizontal Clamp	Upper Joint Cover & Lower Joint Cover (with coupler)

FURUTEC®
Busduct System

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