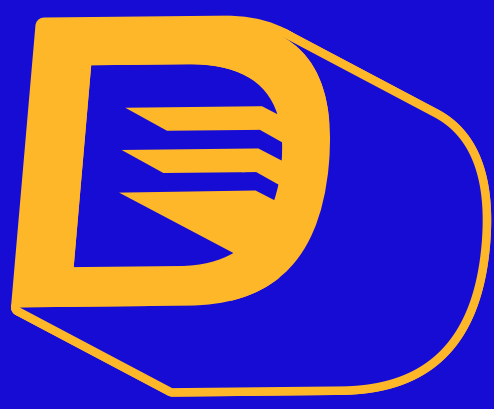




**Electri
Distro**

LVA Series - Aluminum Busway System

Technical Specifications

www.electridistro.com

Table of contents

System Overview



Tap to jump
to section!

Features

Electrical Properties

- Aluminum Resistance & Grounding Capacity
- Aluminum Short-Circuit Performance
- Full-Load Voltage Drop

Physical Dimensions & Weight

Aluminum Straight Feeder

Plug-In Feeder Guidelines

- Standard Length
- Tap-Off Access Layout
- Outlet Spacing

System Accesories

Joints, Elbows, Tees and Covers

Tap-Off Boxes & Connections

- Connecting Busway to Power Sources
- Connecting Loads to Busway

Mounting Config. & Clearance

- Ceiling (Trapeze Mount)
- Wall-Mounted (Brackets)
- Vertical Riser (Spring Hangers, Clamps)
- Plug-In Box Clearance

System Overview

Aluminum Busway

Ampacity Range

250–5000
Amperes

System Frequency

50Hz^{OR} 60Hz

Rated Operating Voltage

Up to 690v

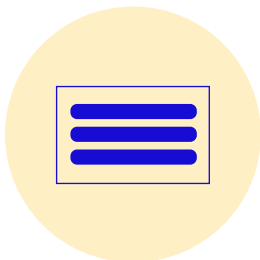
Rated Insulation Voltage

Up to 1000v

IP Protection Ratings

IP54–IP65–IP66
depending on configuration.

Conductor Configurations



3
PHASE 3
WIRE

L1 + L2 + L3 + Ground Via
Housing or Internal Bar
0% Neutral



3
PHASE 4
WIRE

L1 + L2 + L3 + Ground Via
Housing or Internal Bar
100% Neutral (Standard)



3
PHASE 5
WIRE

L1 + L2 + L3 + Ground Via
Housing or Internal Bar
200% Neutral



Dual-Layer Housing

Maximizes heat dissipation and supports up to IP66 protection.



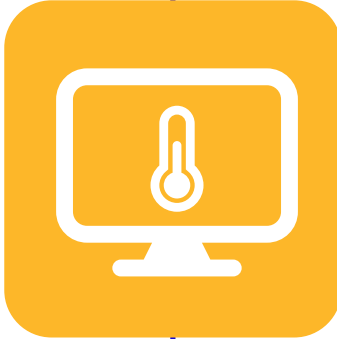
Plug-in Flexibility

Pre-sealed, dust-proof outlets ready for future load expansions.



Halogen-Free Insulation

Class H Epoxy or Polyester Resin; flame-retardant & mechanically robust.



Smart Monitoring

SCADA integration and remote temperature monitoring.



Precise Manufacturing

High-speed sawing ensures smooth, accurate cuts with perfect joint alignment.



Compact Tap Off Boxes

Supports up to 400A (aluminum) with breakers, fuses, and optional locks.



Bridge-Type Joint

±8mm flexibility, Belleville spring washers, & phase-error-proof assembly.



Sandwich Construction

Flat-laid conductors reduce heat and save space (125mm width).

Electrical Properties

Aluminum Resistance & Grounding Capacity

at 20 Degrees Celsius

Rated Current (amp)	Internal Resistance (μΩ/m)	Housing Resistance (μΩ/m)	Deck	Internal Ground Area (mm²)	Housing Ground Area (mm²)
250	291.7	22.88	1	120	1563
400	233.3	22.01	1	150	1623
630	179.5	20.83	1	195	1713
800	147.7	19.84	1	240	1803
1000	112.2	18.29	1	315	1953
1250	83.9	16.48	1	420	2163
1350	83.9	16.48	1	420	2163
1600	61.7	14.44	1	570	2463
2000 S	58.4	12.36	1	690	2730
2000 D	56.1	9.59	2	630	3662
2500	42.0	8.60	2	840	4082
3200	30.9	7.50	2	1140	4682
4000	25.5	6.80	2	1380	5162
5000	22.3	6.20	2	1710	5822

Aluminum Short-Circuit Performance

1 Second Test Duration

Rated Current (amp)	Withstand Capacity (kAmp)
250 → 400	15
630 → 800	30
1000 → 1350	50
1600	65
2000 S/D → 2500	80
3200 → 5000	120

Values are certified under IEC 61439-6. Higher withstand values enhance safety and thermal performance in critical applications.

Full-Load Voltage Drop

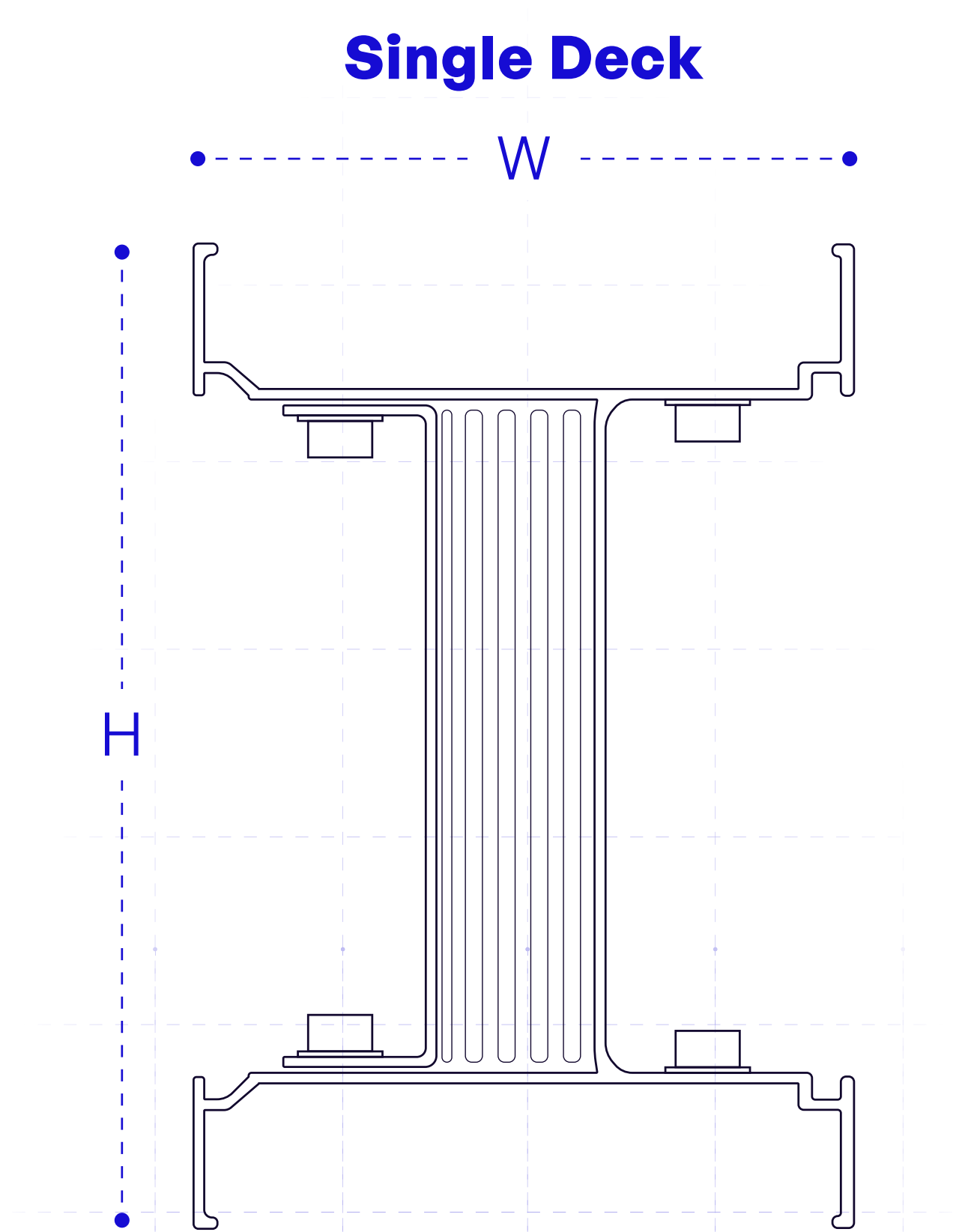
60Hz, 20°C, Power Factor = 1

Rated Current (A)	Resistance (μΩ/M)	Reactance (μΩ/M)	Impedance (μΩ/M)	Voltage Drop (V/M)
250	0.188	0.028	0.171	0.063
400	0.150	0.026	0.152	0.080
630	0.115	0.024	0.131	0.101
800	0.061	0.021	0.108	0.106
1000	0.046	0.018	0.086	0.101
1250	0.034	0.015	0.062	0.094
1350	0.034	0.015	0.062	0.094
1600	0.025	0.012	0.049	0.089
2000 S	0.023	0.011	0.045	0.100
2000 D	0.023	0.011	0.045	0.100
2500	0.017	0.008	0.031	0.094
3200	0.013	0.007	0.024	0.083
4000	0.010	0.003	0.015	0.088
5000	0.014	0.003	0.015	0.103

Note: For 50 Hertz regions, contact ElectriDistro to receive an adjusted voltage drop and reactance table. In the table above, the load distribution coefficient k=1. In specific project, the k value varies with the branch number of the BTS.

Physical Dimensions & Weight

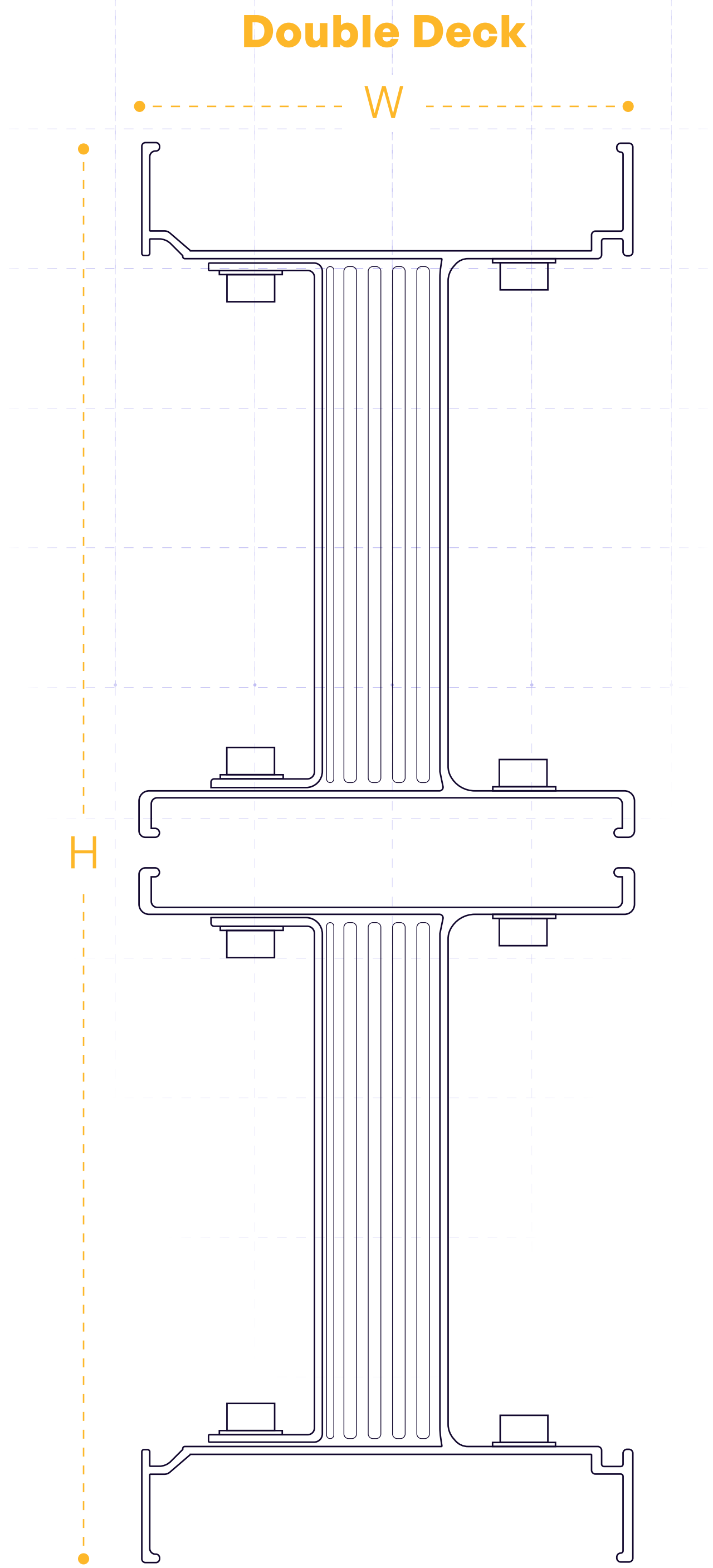
Aluminum Straight Feeder **Single Deck**



CURRENT	DIMENSIONS		KG PER METER	
	W	H	4WIRE*	5WIRE**
250	125	103	6.8	7.2
400	125	113	7.5	7.9
630	125	128	8.8	9.3
800	125	143	9.8	10.4
1000	125	168	11.8	12.7
1250	125	203	14.6	15.7
1350	125	203	14.6	15.7
1600	125	253	18.3	19.8
2000 S	125	293	19.7	21.5

*100%N **100%N, 50%PE

Aluminum Straight Feeder **Double Deck**



CURRENT	DIMENSIONS		KG PER METER	
	W	H	4WIRE*	5WIRE**
2000 D	125	322	22.6	24.3
2500	125	392	28.7	31
3200	125	492	36.2	39.4
4000	125	572	44.7	48.9
5000	125	685	50.1	53.4

*100%N **100%N, 50%PE

Plug-In Feeder Guidelines

Standard Length

Standard Length

3000mm

Minimum Feeder Length

720mm

Outlet Spacing

360mm

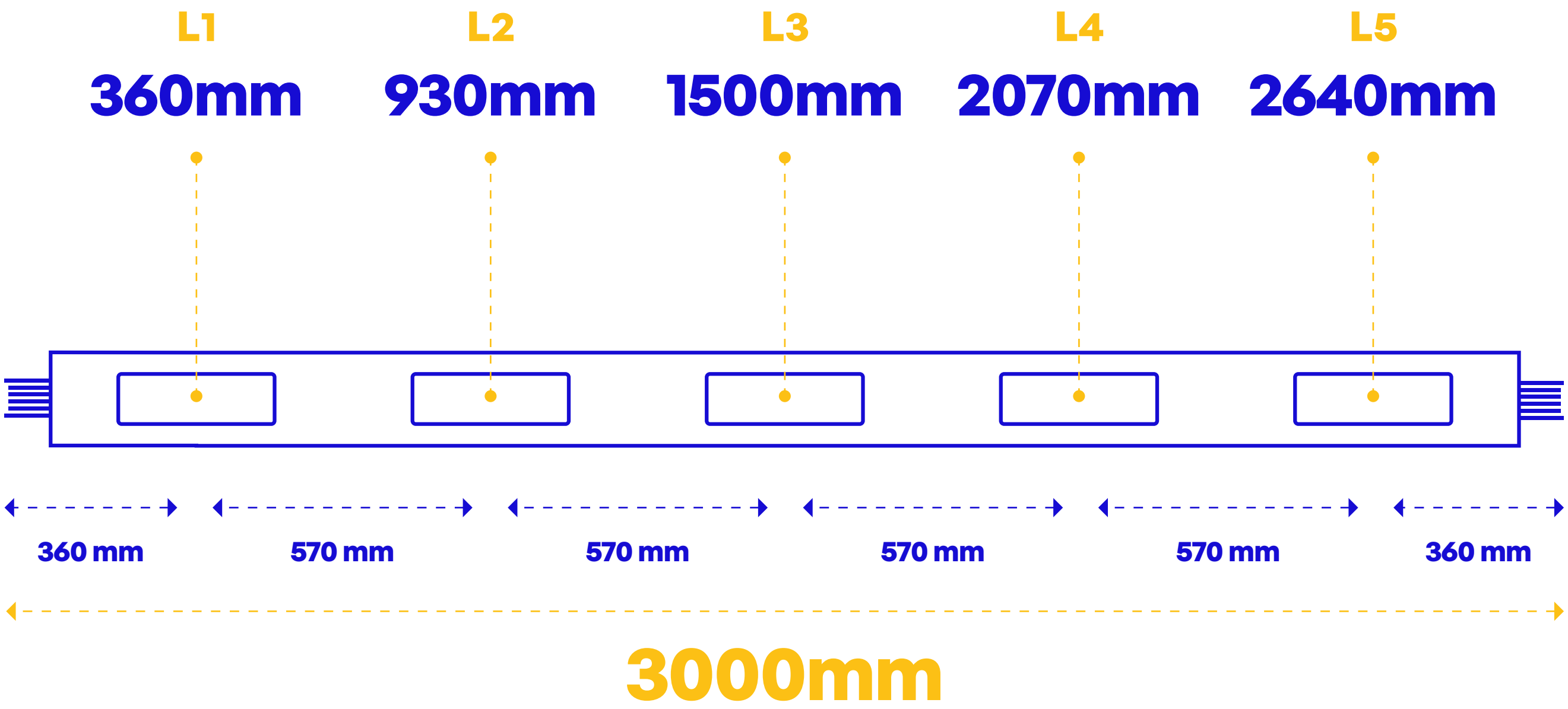
FROM THE CENTER OF A PLUG OUTLET
TO THE END OF THE FEEDER

570mm

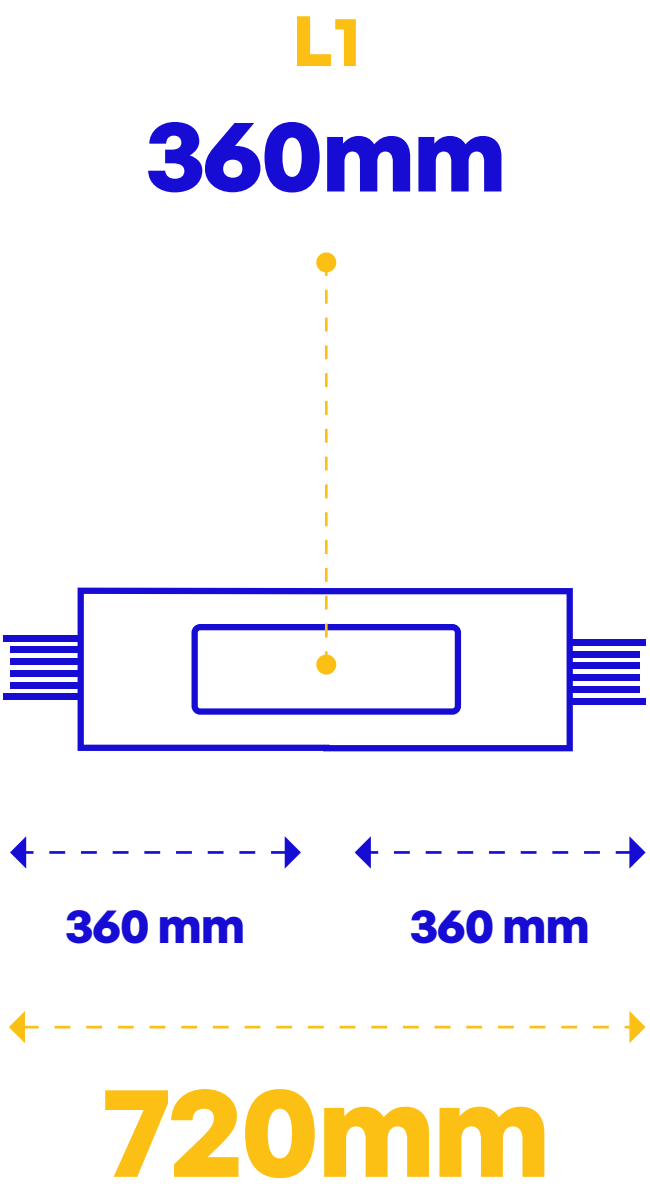
BETWEEN CENTERS OF TWO
ADJACENT OUTLETS

Tap-Off Access Layout

Standard Length Sizes and Spacing



Minimum Length Sizes and Spacing

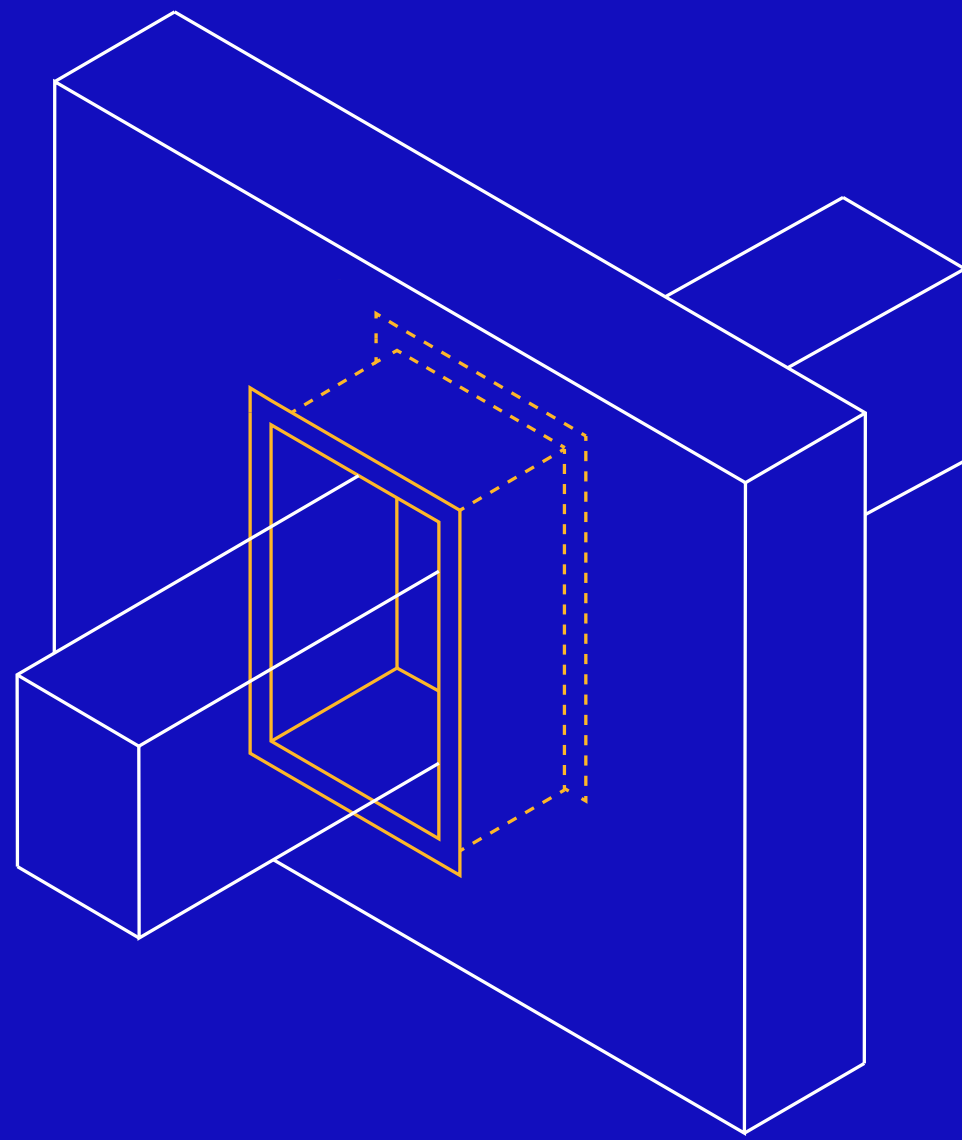


DESIGN NOTE

EACH OUTLET INCLUDES BASE PLATE AND SOCKET COVER FOR ENVIRONMENTAL PROTECTION.

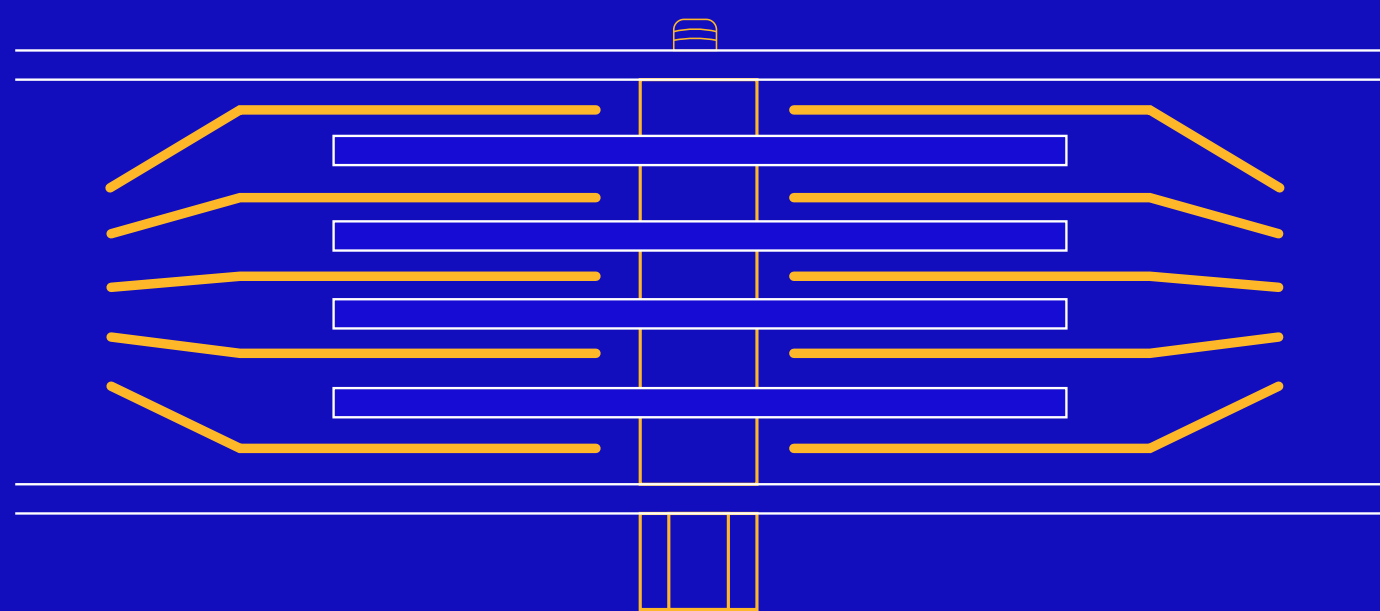
System Accessories & Layout Adaptation

All fittings maintain system IP rating and mechanical integrity.



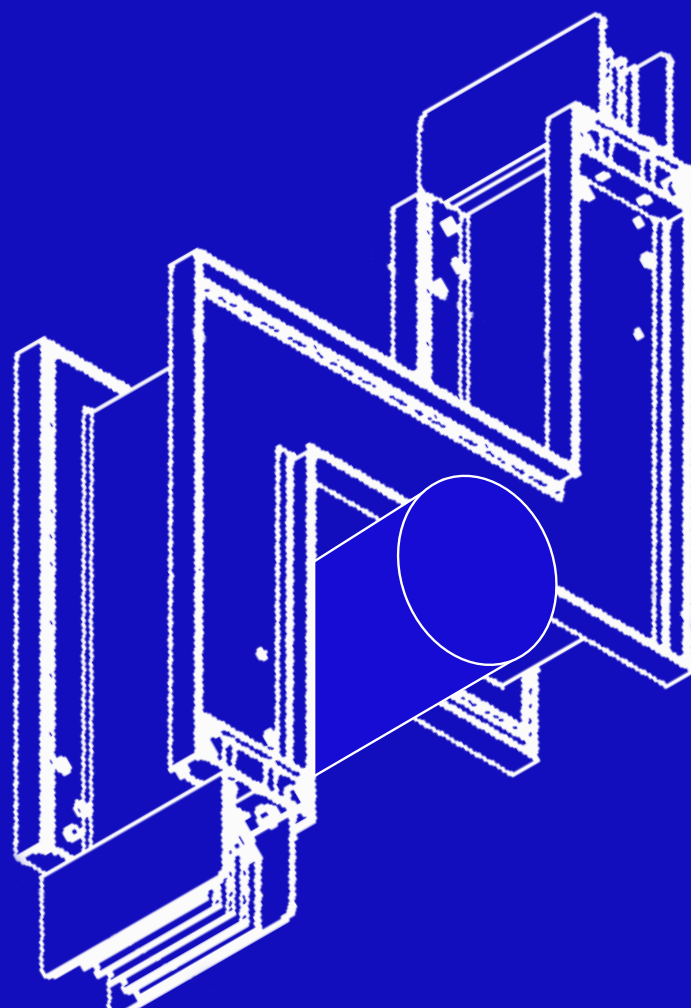
Wall Flange

Entry or exit through structural barriers.



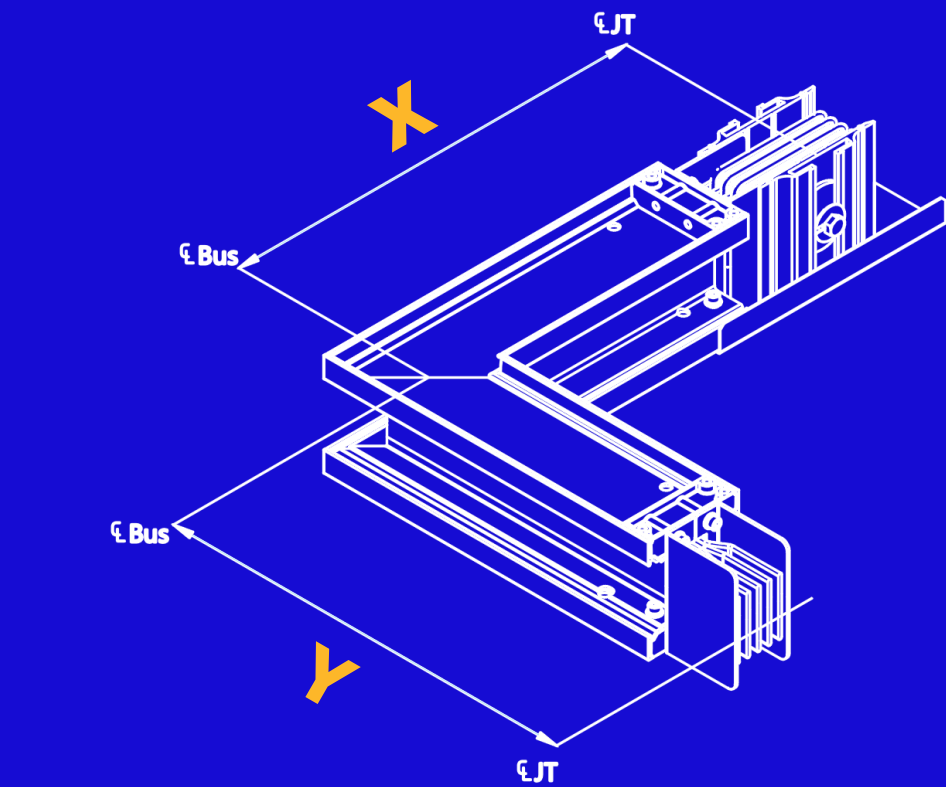
Bridge Joint

Connects two sections of busway with $\pm 8\text{mm}$ flexibility & phase error-proof assembly.



Offset

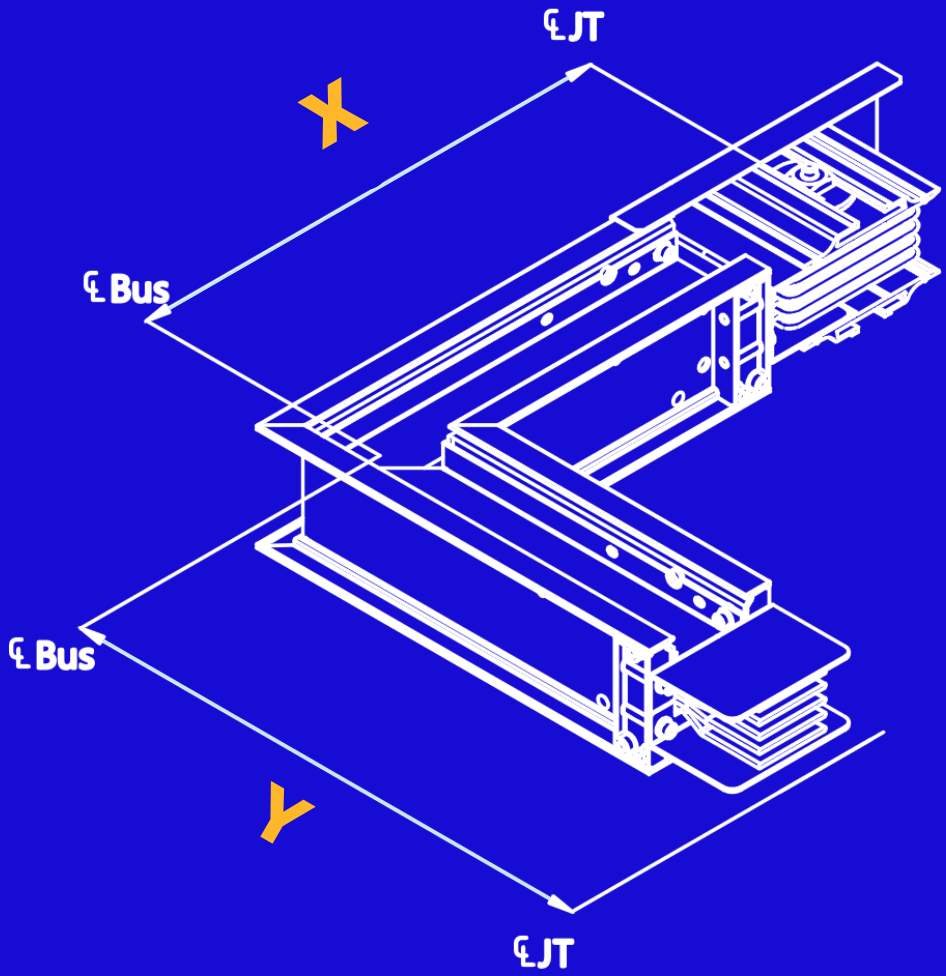
Bridges over small obstacles or obstructions.



Edgewise Elbow

90-degree turns in vertical orientation.

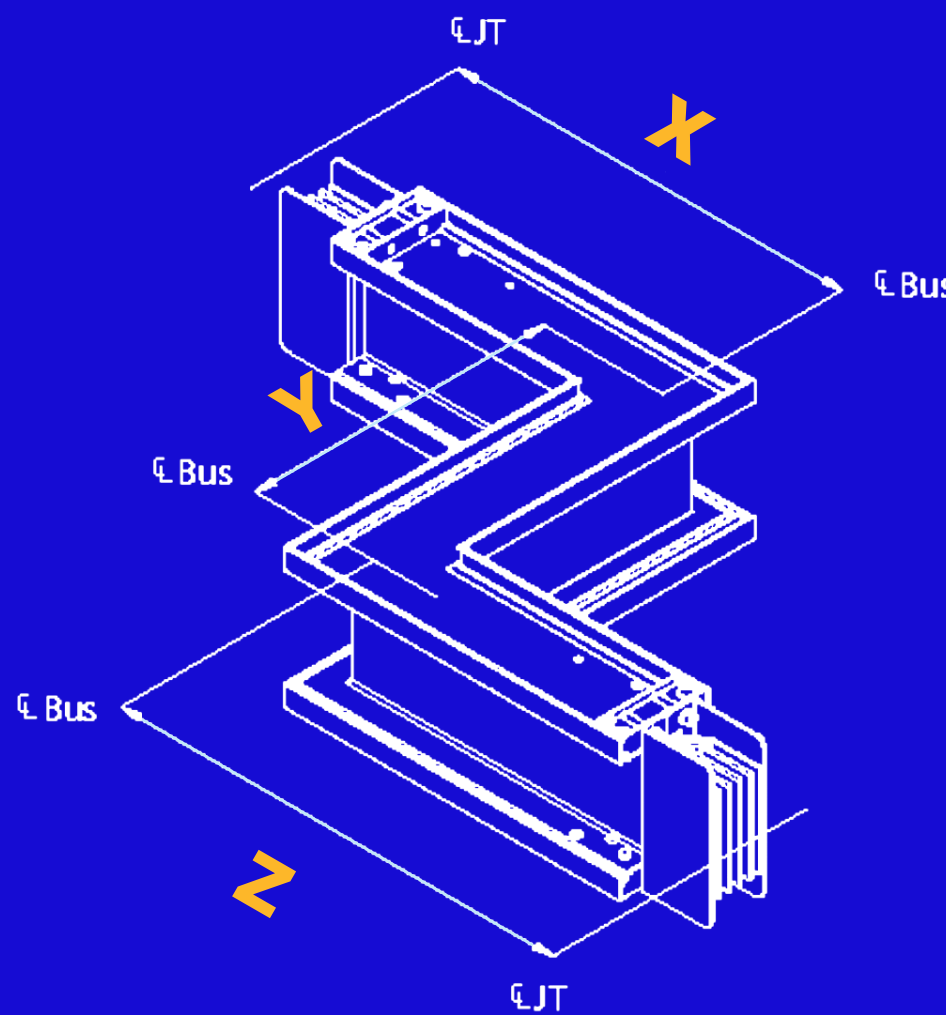
RATED CURRENT (A)	MIN. SIZE (MM)		STANDARD SIZE (MM)	
	X	Y	X	Y
250-5000	341	341	450	450



Flatwise Elbow

90-degree turns in horizontal orientation.

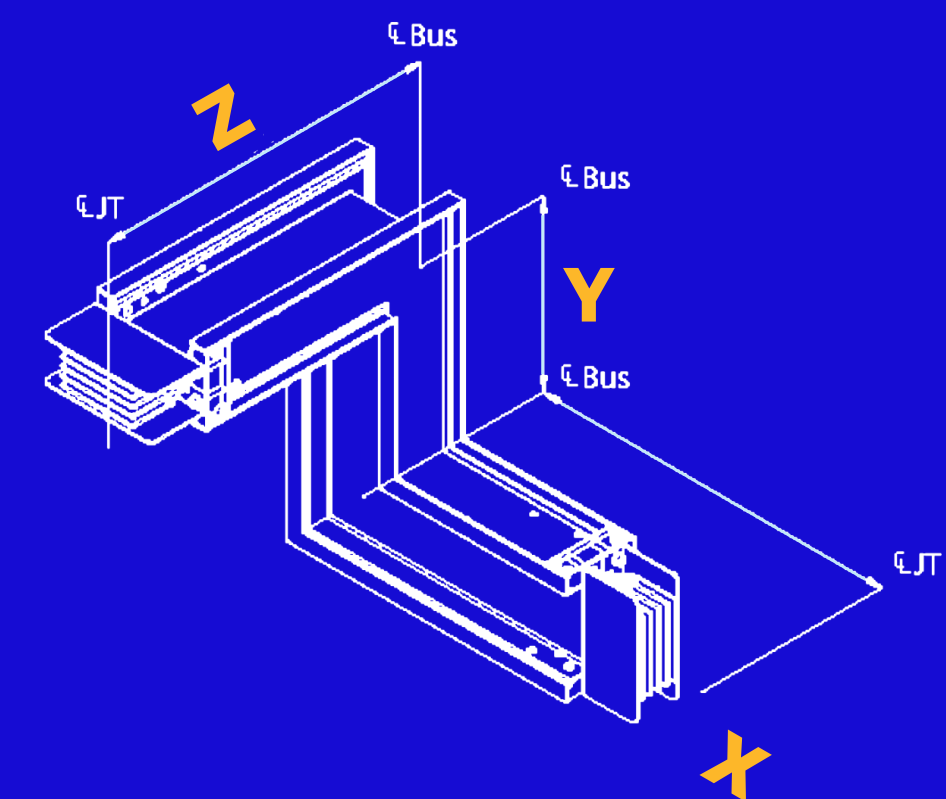
RATED CURRENT (A)	MIN. SIZE (MM)		STANDARD SIZE (MM)	
	X	Y	X	Y
250	341	341	450	450
400	351	351	450	450
630	366	366	450	450
800	381	381	450	450
1000	406	406	450	450
1250	441	441	500	500
1350	441	441	500	500
1600	491	491	500	500
2000 (S)	530	530	600	600
2000 (D)	560	560	850	850
2500	630	630	850	850
3200	730	730	850	850
4000	810	810	850	850
5000	950	950	1000	1000

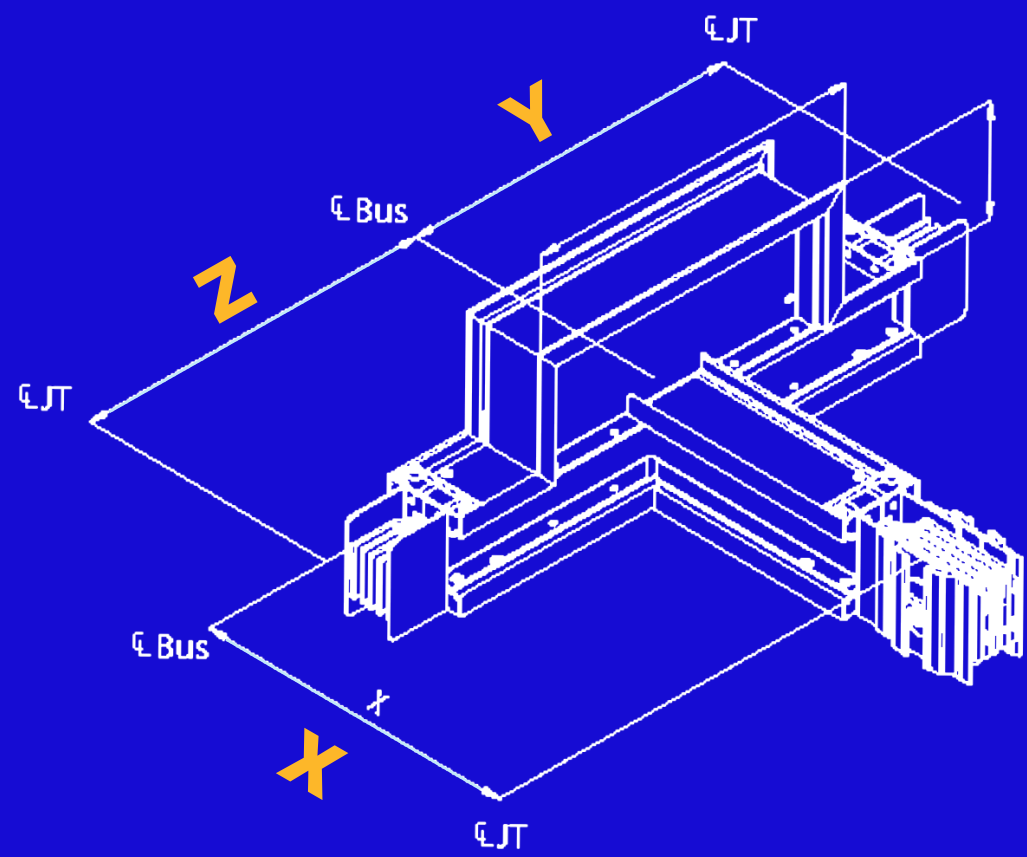


Combination Elbow

Branching in horizontal or vertical planes.

RATED CURRENT (A)	MIN. SIZE (MM)			STANDARD SIZE (MM)		
	X	Y	Z	X	Y	Z
250-400	363	411	411	400	500	500
630	363	426	426	400	500	500
800	363	436	436	400	500	500
1000	363	461	461	400	500	500
1250-1350	363	496	496	400	600	600
1600	363	531	531	400	600	600
2000 (S)	363	571	571	400	600	600
2000 (D)	363	581	581	400	600	600
2500	363	660	660	400	900	900
3200	363	740	740	400	900	900
4000	363	840	840	400	900	900
5000	363	950	950	400	1000	1000

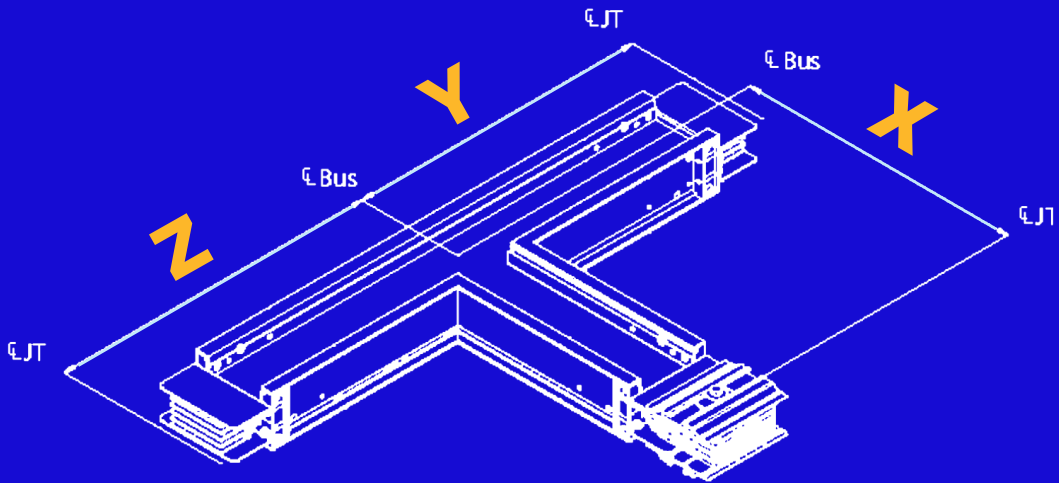




Edgewise Tee

Branching in horizontal or vertical planes.

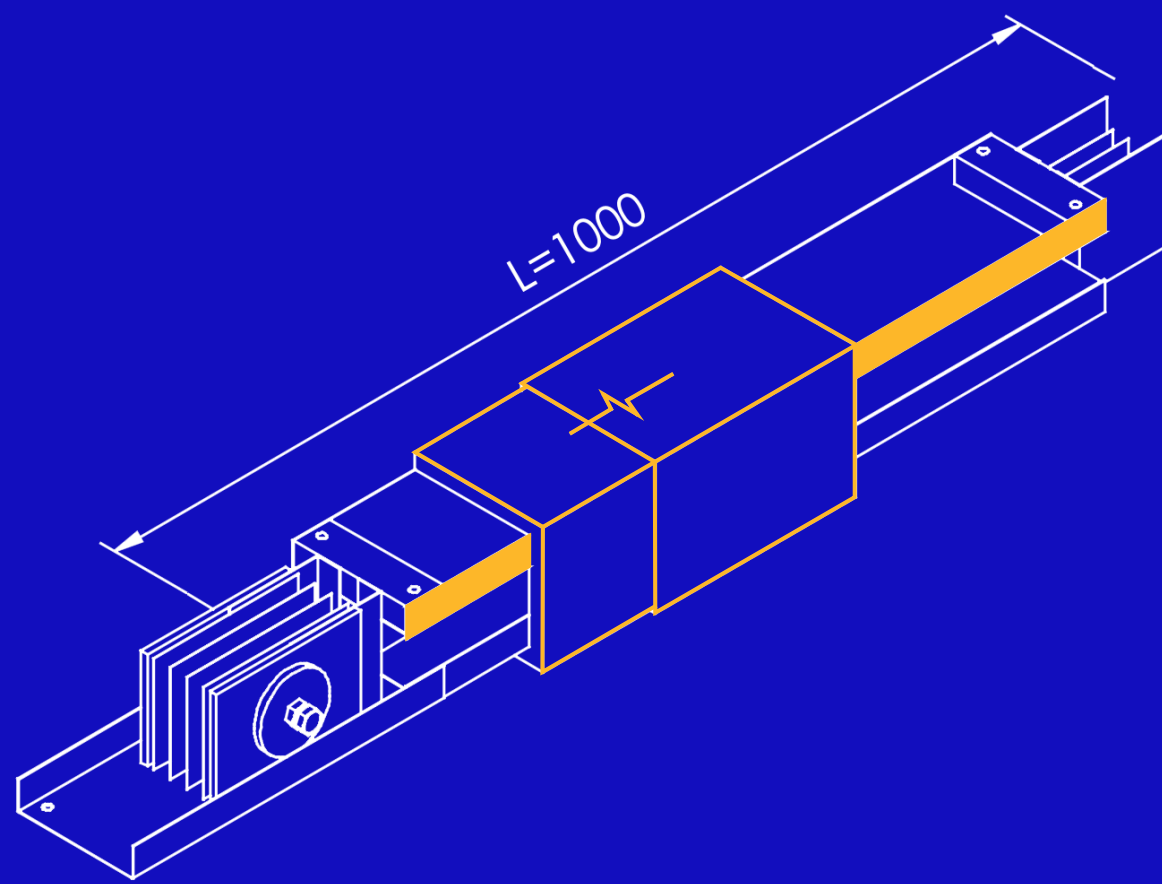
RATED CURRENT (A)	MIN. SIZE (MM)			STANDARD SIZE (MM)		
	X	Y	Z	X	Y	Z
250-400	363	411	411	400	500	500
630	363	426	426	400	500	500
800	363	436	436	400	500	500
1000	363	461	461	400	500	500
1250-1350	363	496	496	400	600	600
1600	363	531	531	400	600	600
2000 (S)	363	571	571	400	600	600
2000 (D)	363	581	581	400	600	600
2500	363	660	660	400	900	900
3200	363	740	740	400	900	900
4000	363	840	840	400	900	900
5000	363	950	950	400	1000	1000



Flatwise Tee

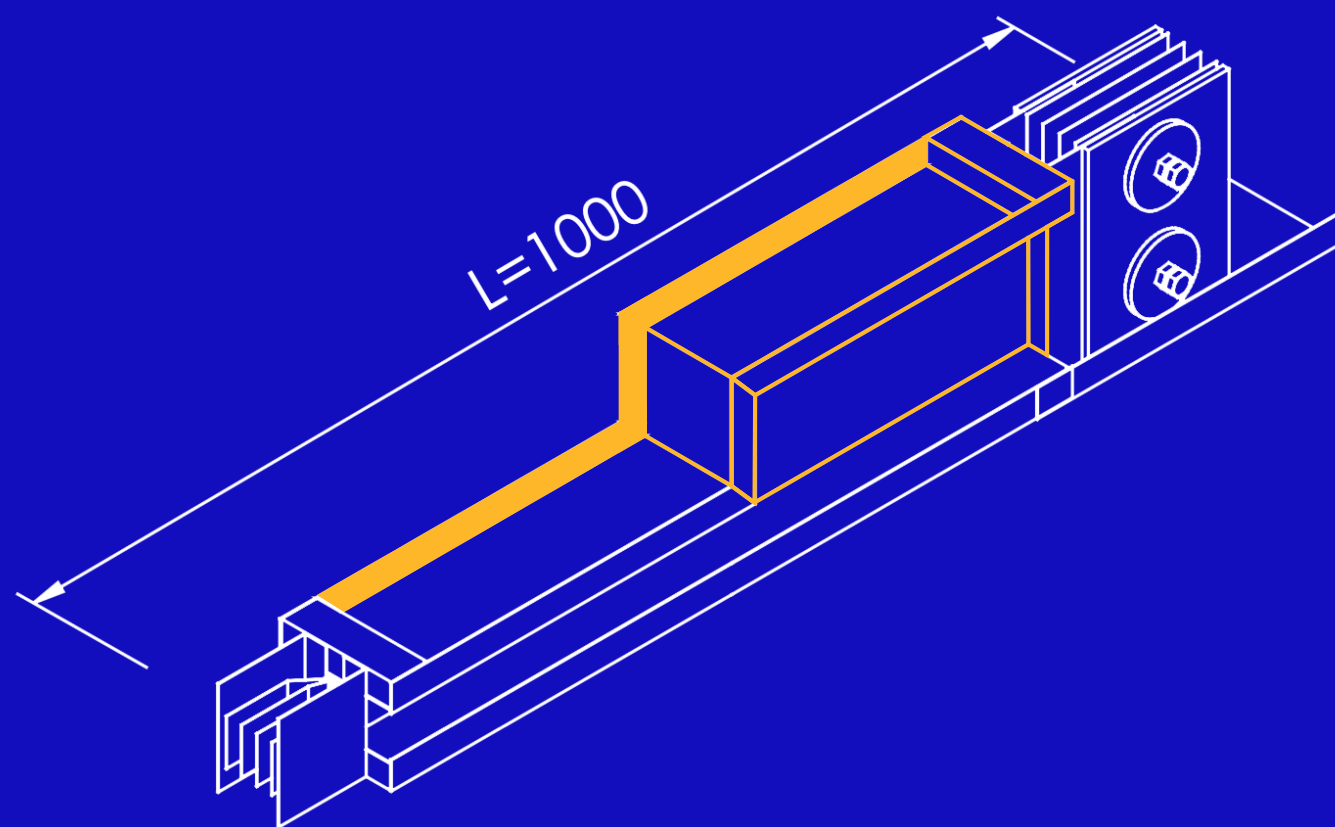
Branching in horizontal or vertical planes.

RATED CURRENT (A)	MIN. SIZE (MM)			STANDARD SIZE (MM)		
	X	Y	Z	X	Y	Z
250	341	290	290	450	350	350
400	351	295	295	450	350	350
630	366	302	302	450	350	350
800	381	310	310	450	350	350
1000	406	322	322	450	350	350
1250-1350	441	340	340	500	400	400
1600	491	365	365	500	400	400
2000 (S)	530	400	400	850	550	550
2000 (D)	560	399	399	850	550	550
2500	630	434	434	850	550	550
3200	730	484	484	850	550	550
4000	810	524	524	850	550	550
5000	950	950	950	1000	1000	1000



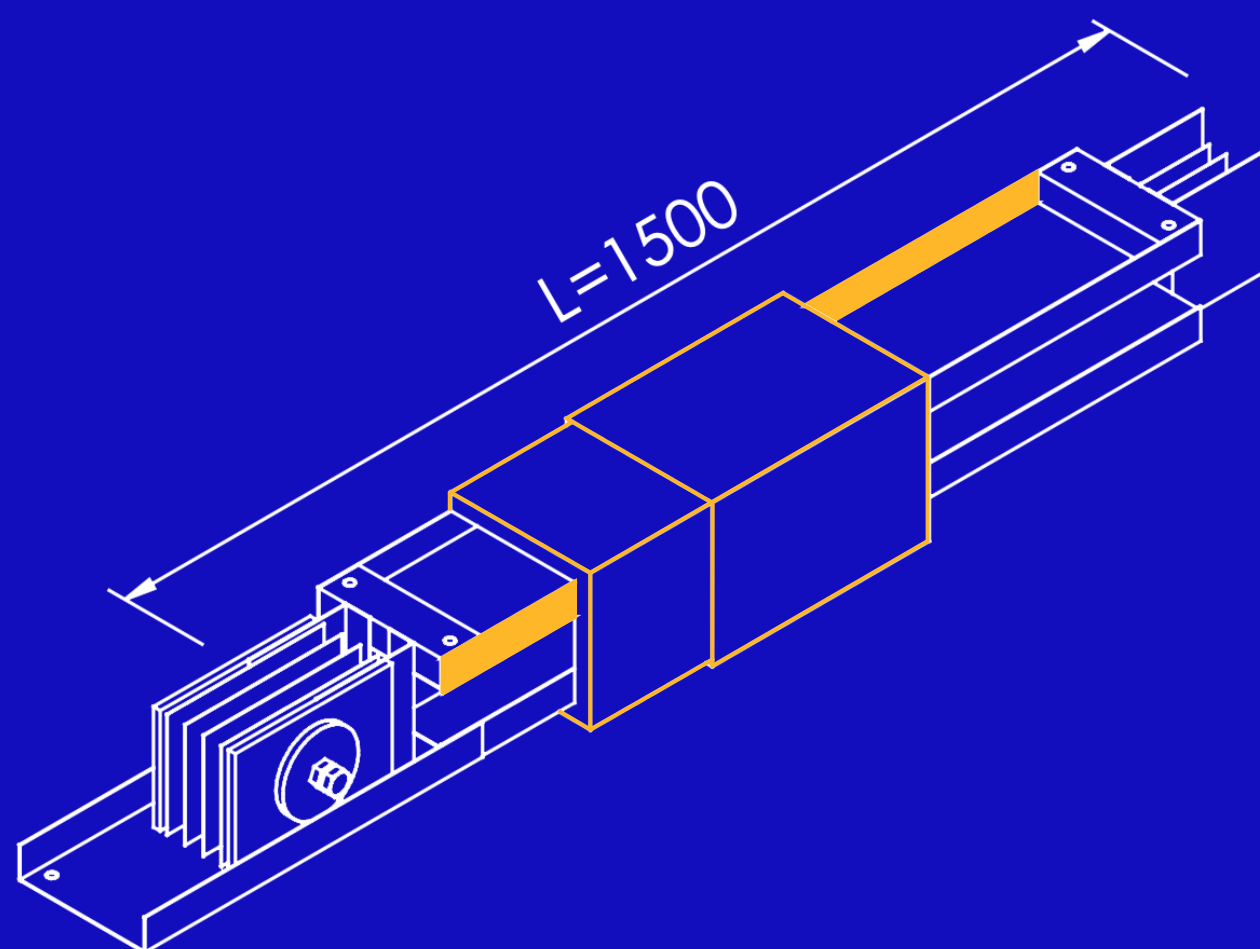
Expansion Joint

Compensates for thermal expansion. Typically installed every 60 meters of linear busway.



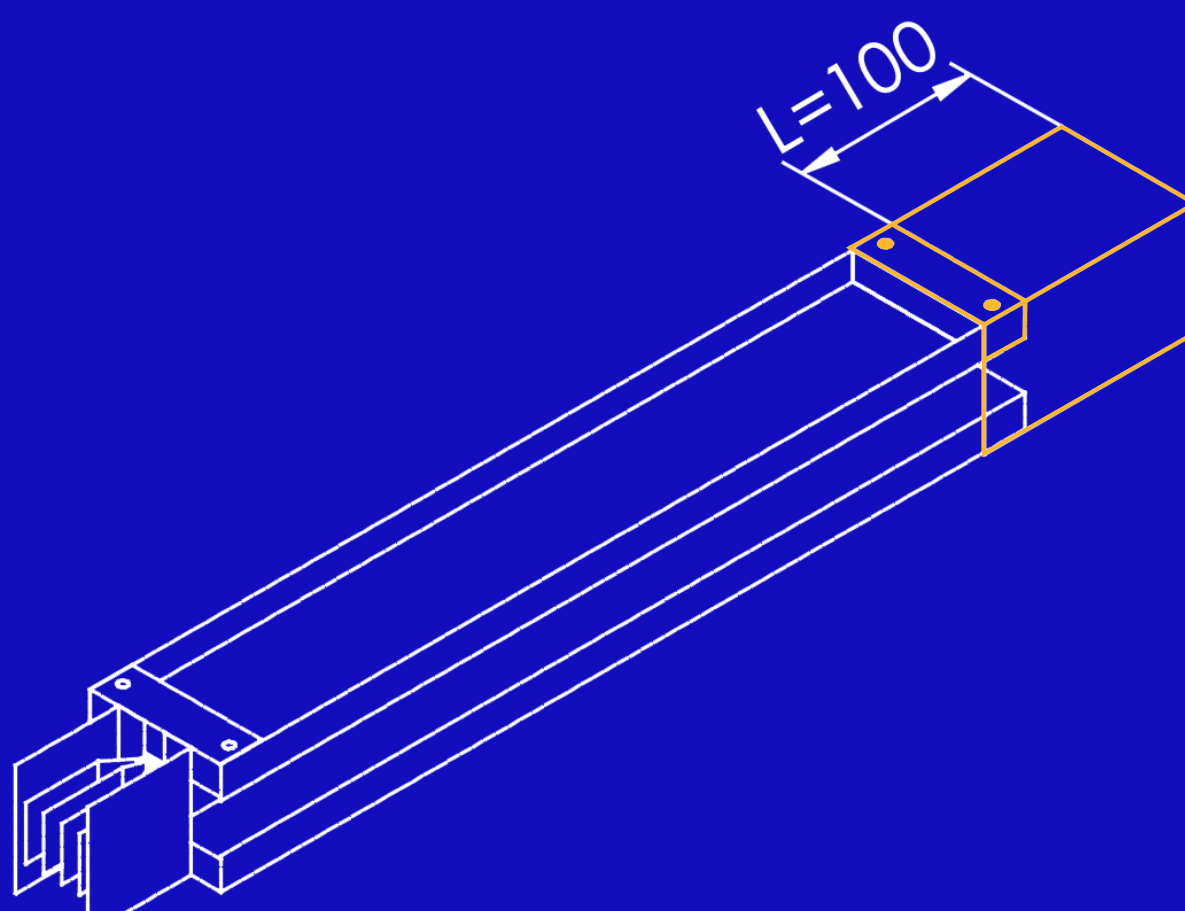
Reducer

Connects sections with different ampacities. Ensures efficient transition to final load size.



Transposition joint

Changes the phase sequence of the busway. Minimum length is 1500 mm. Custom configurations available.

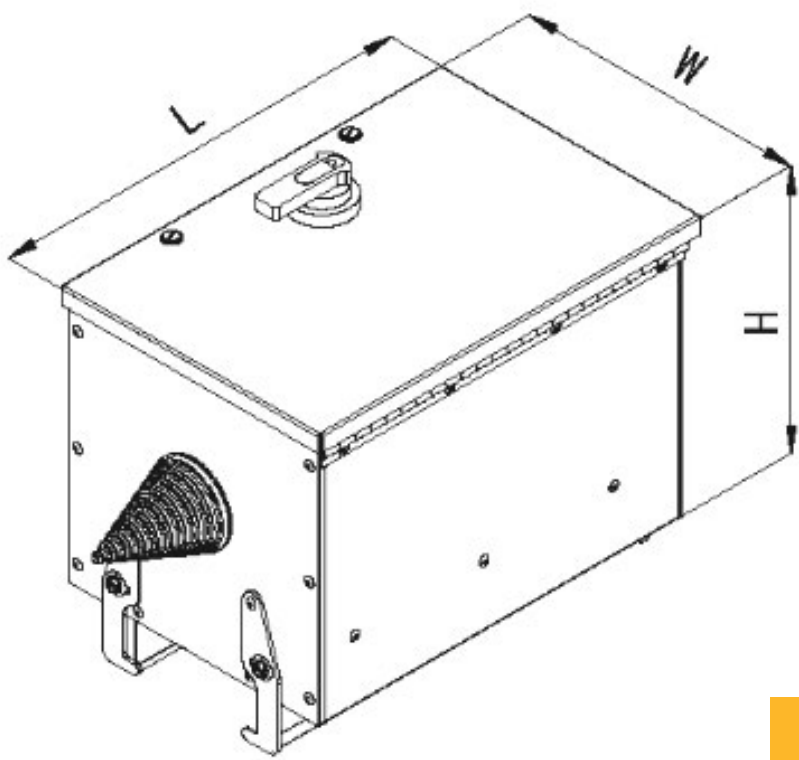


Terminal cover

Protects the end of the busway from damage and environmental exposure.

Tap-Off Boxes & Connections

Connecting Loads to Busway

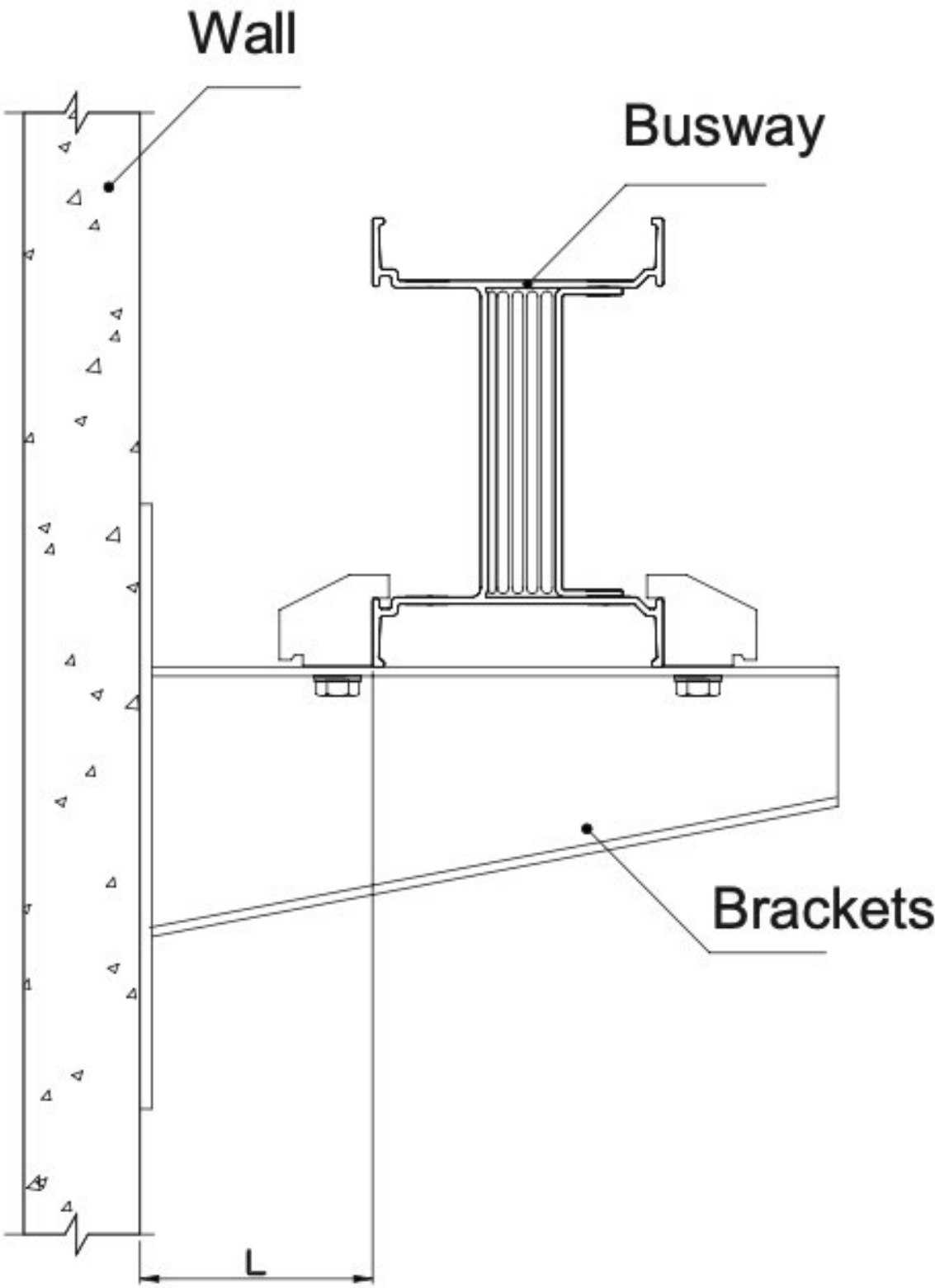


Tap-Off Box

- **Protection Options:** Breakers or fuses, 3P or 4P
- **Accessories Available:** External handle, locking system, indicator windows
- **Ingress Protection:** Up to IP54

CURRENT RATING (A)		LENGTH (MM)	WIDTH (MM)	HEIGHT (MM)
100		360	250	250
160		400	250	250
250		520	270	270
400		650	310	310
630		800	340	340
800	(Branch bolted-on type)	1200	420	420

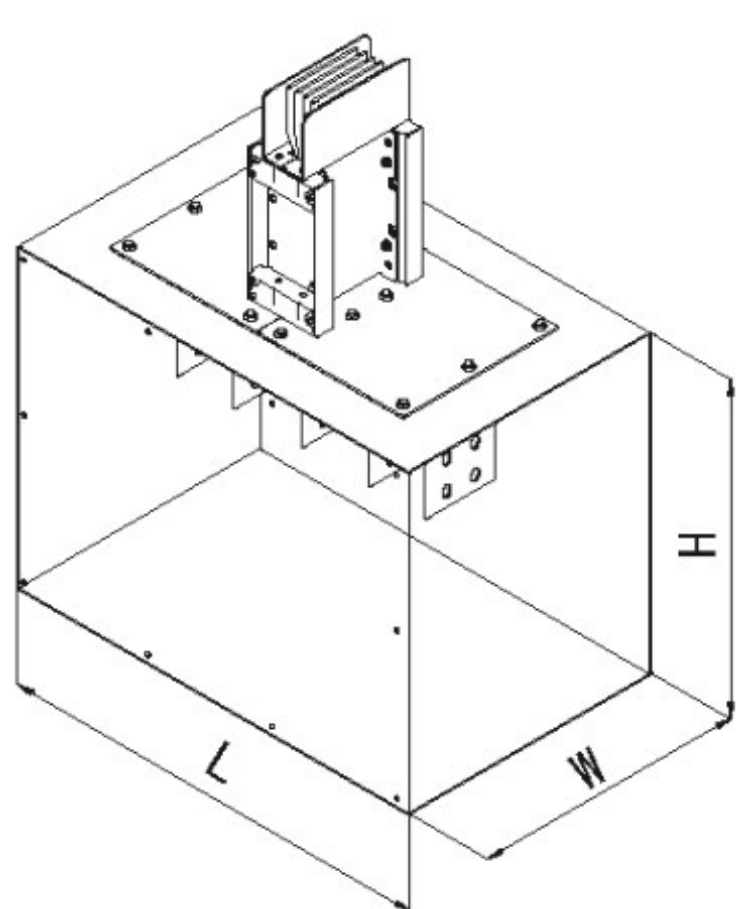
Plug-In Box Clearance Requirements



TAP-OFF AMPACITY (AMP)	CLEARANCE (MM)
100	150
160	175
250	195
400	210
630	230
800	260
1000	300

Recommended Fasteners:
M10 Bolts, Steel Channel Hangers, Vertical Clamps

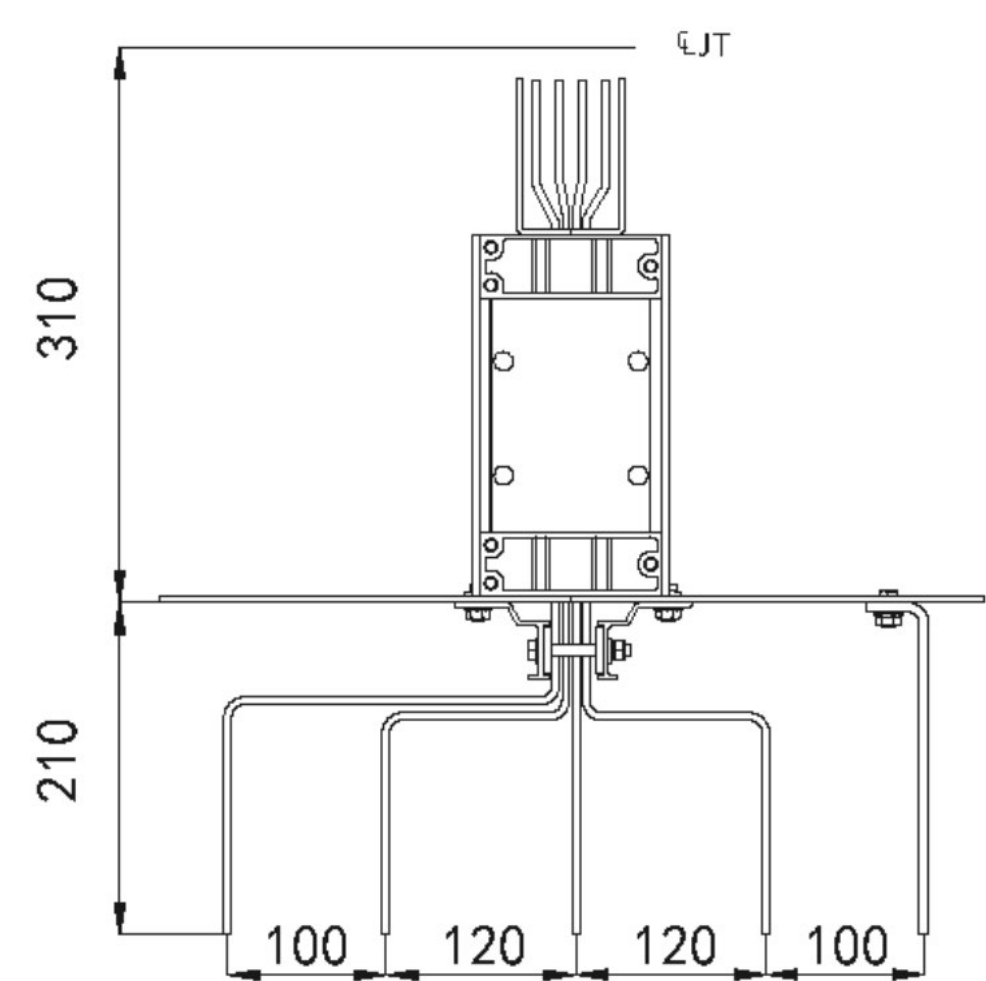
Connecting Busway to Power Sources



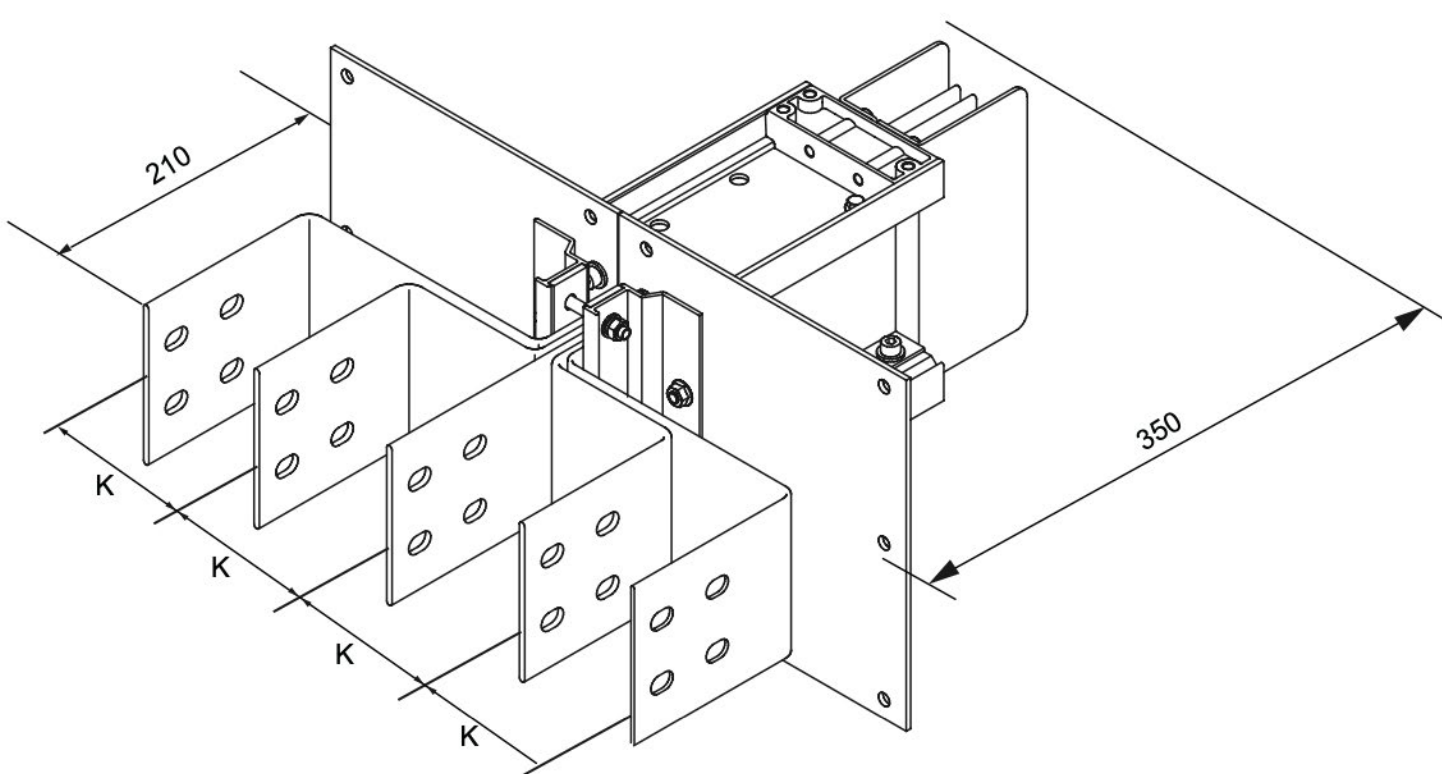
Flanged Ends

Flanged ends and end tap box can be used in connection with any type of switchgear cabinets and transformers. Flanged end busbar spacing can be customized on specific application.

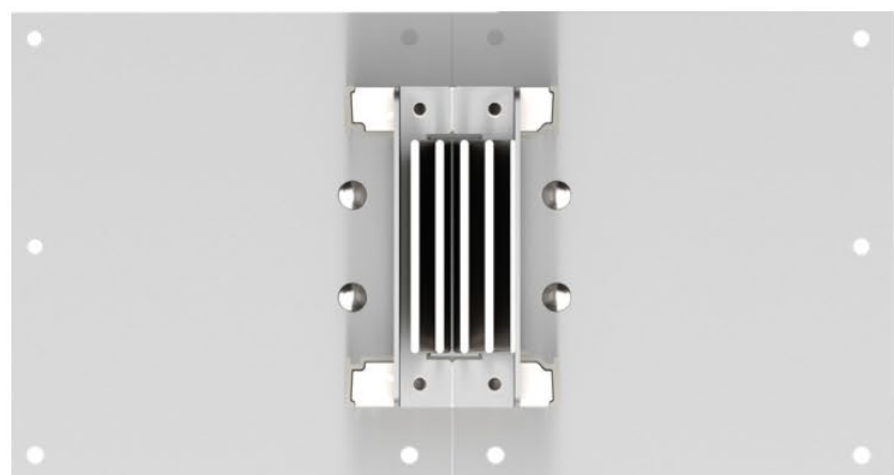
- Compatible with switchgear or transformers
- 3L+N and 3L+N+PE available
- Standard length: L=0.56m
- Nonstandard length: L=0.56 2.00m



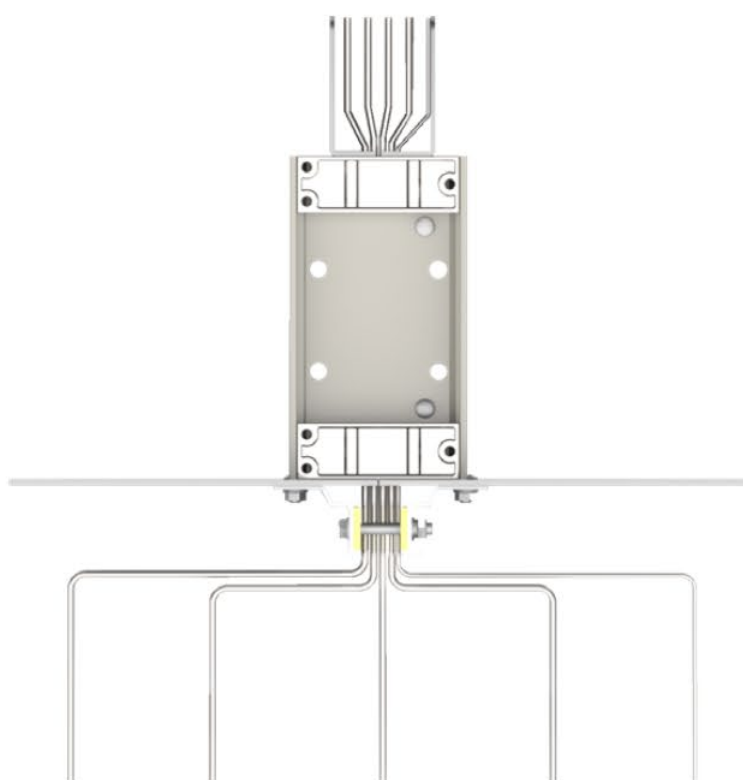
3P+100%N+50% integral housing as PE



3P+100%N+50% internal bar as PE



Top view



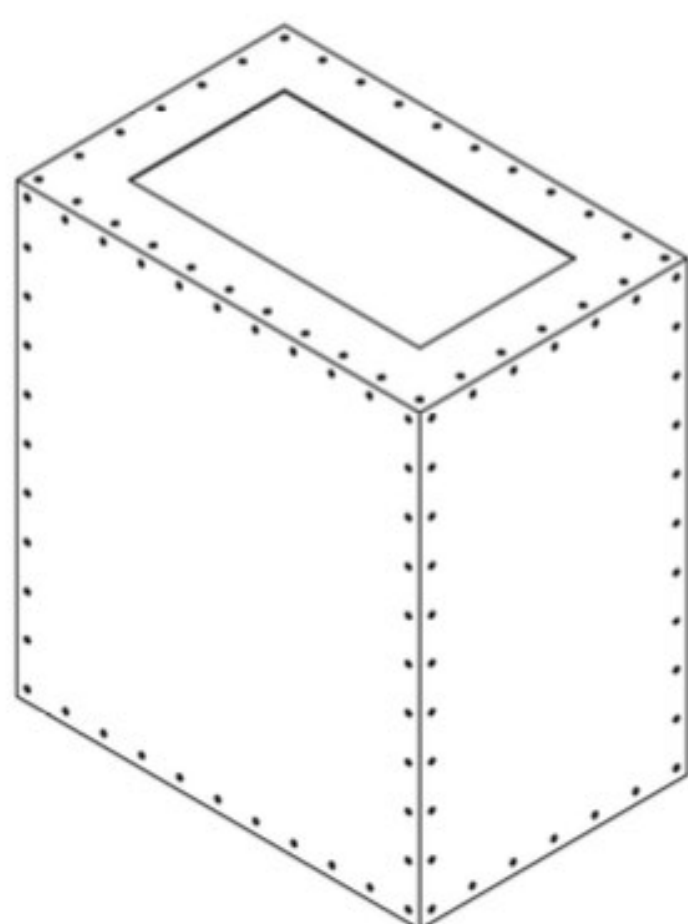
Section view



Section view

NOTE

ALL THE DIMENSIONS PROVIDED ARE FOR STANDARD PRODUCTS. PLEASE CONTACT OUR ENGINEERS FOR CUSTOMIZED DIMENSIONS.



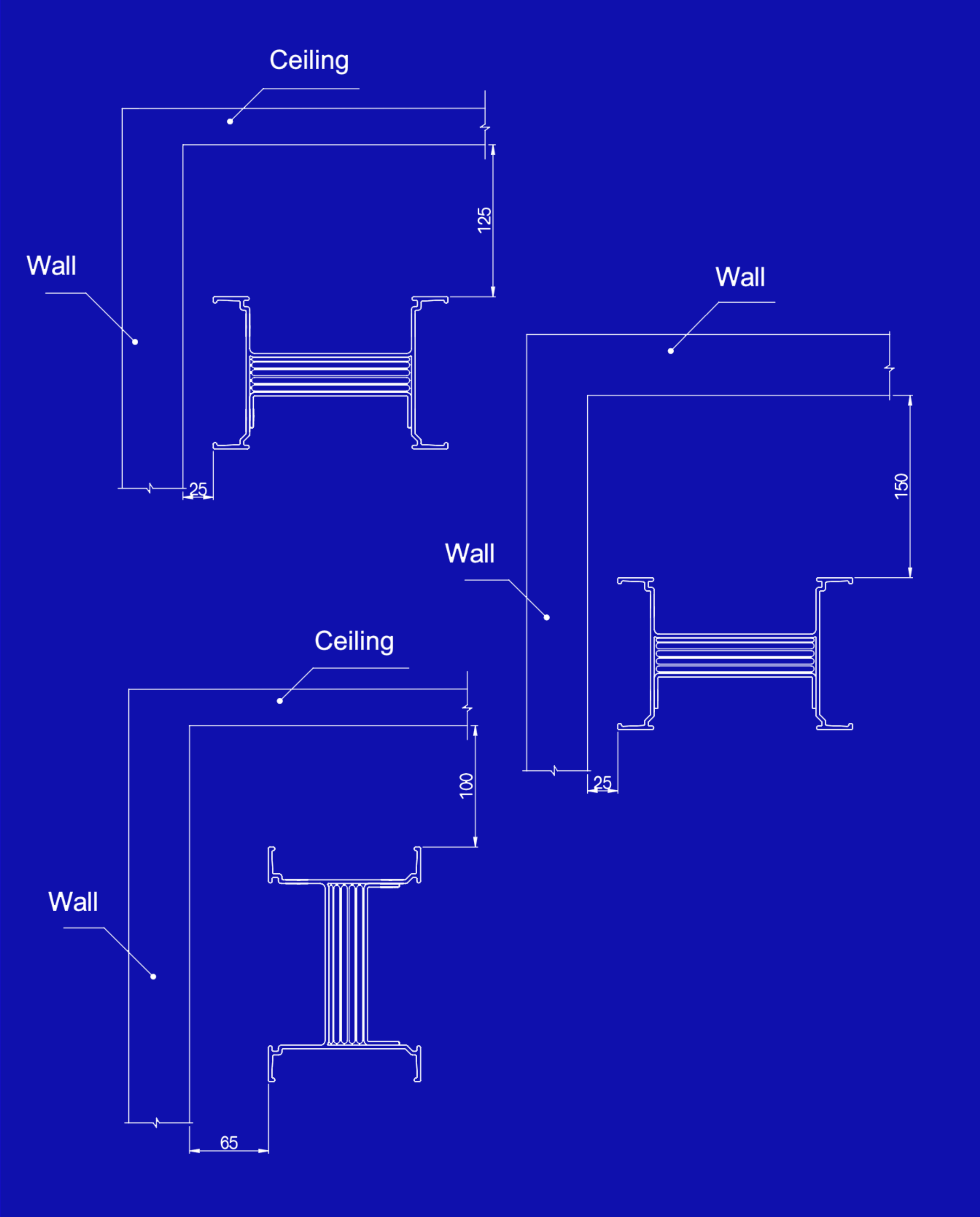
End Tap Box

- **Standard Size:** 1000mm × 1000mm × 1000mm
- **IP Rating:** Up to IP66
- Custom sizes available

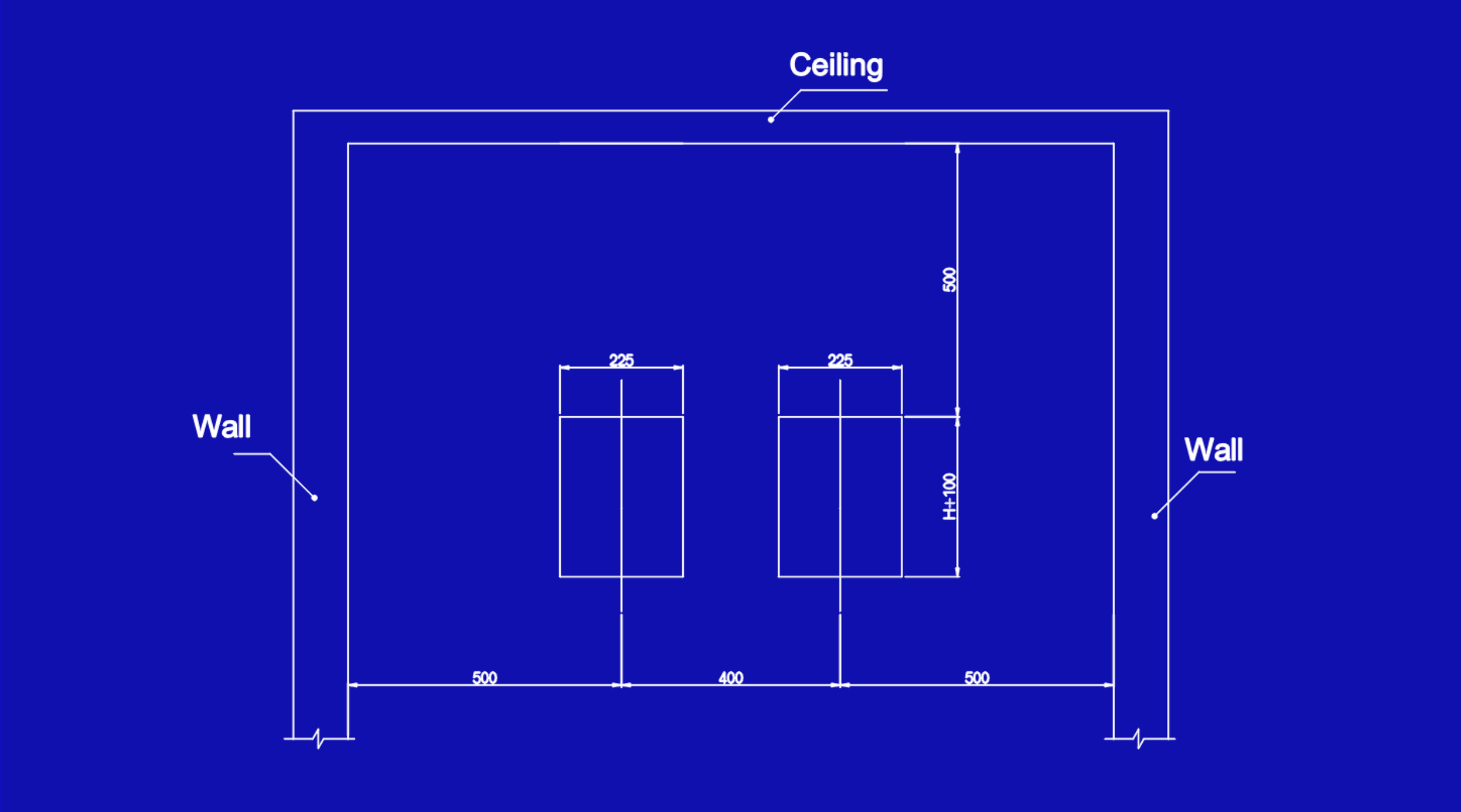
Mounting & Installation

Configurations & Clearances

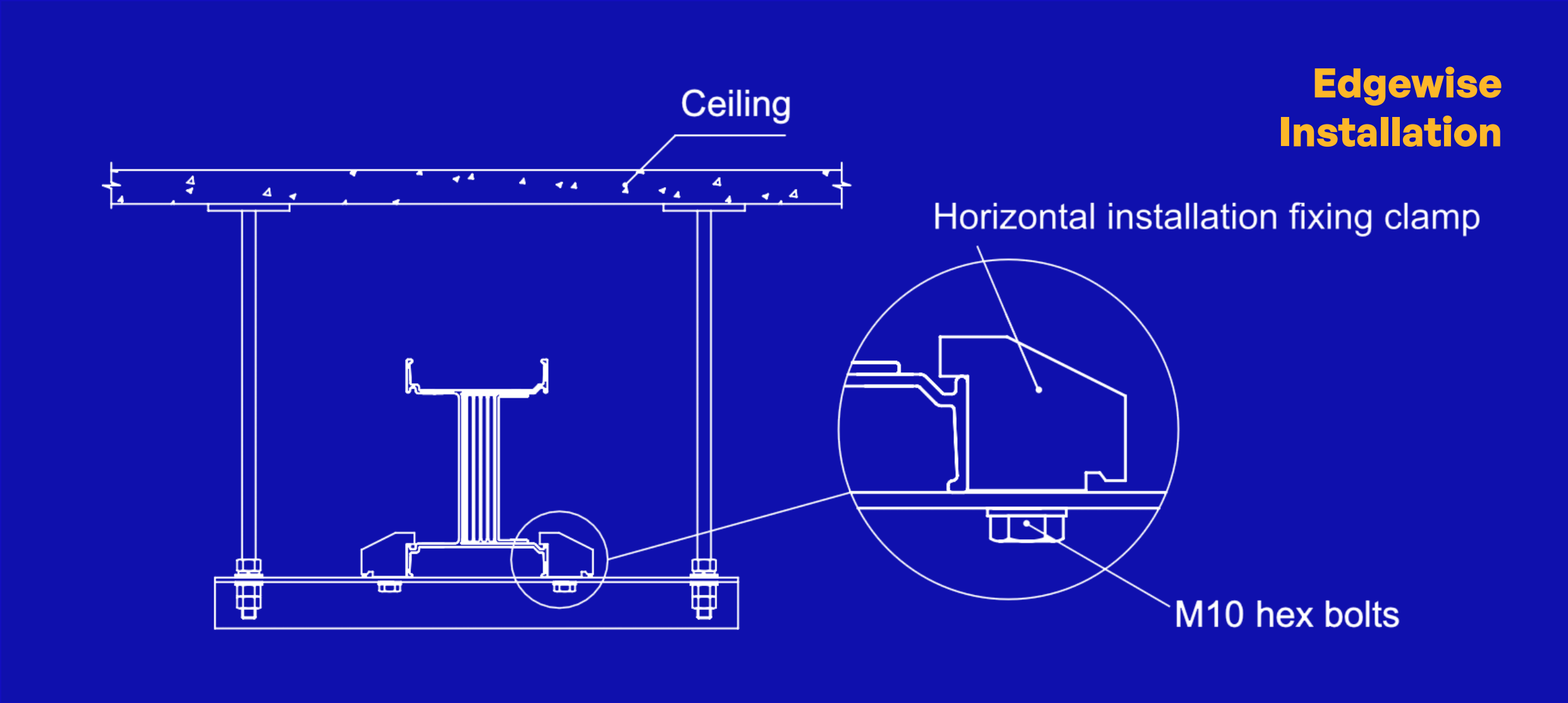
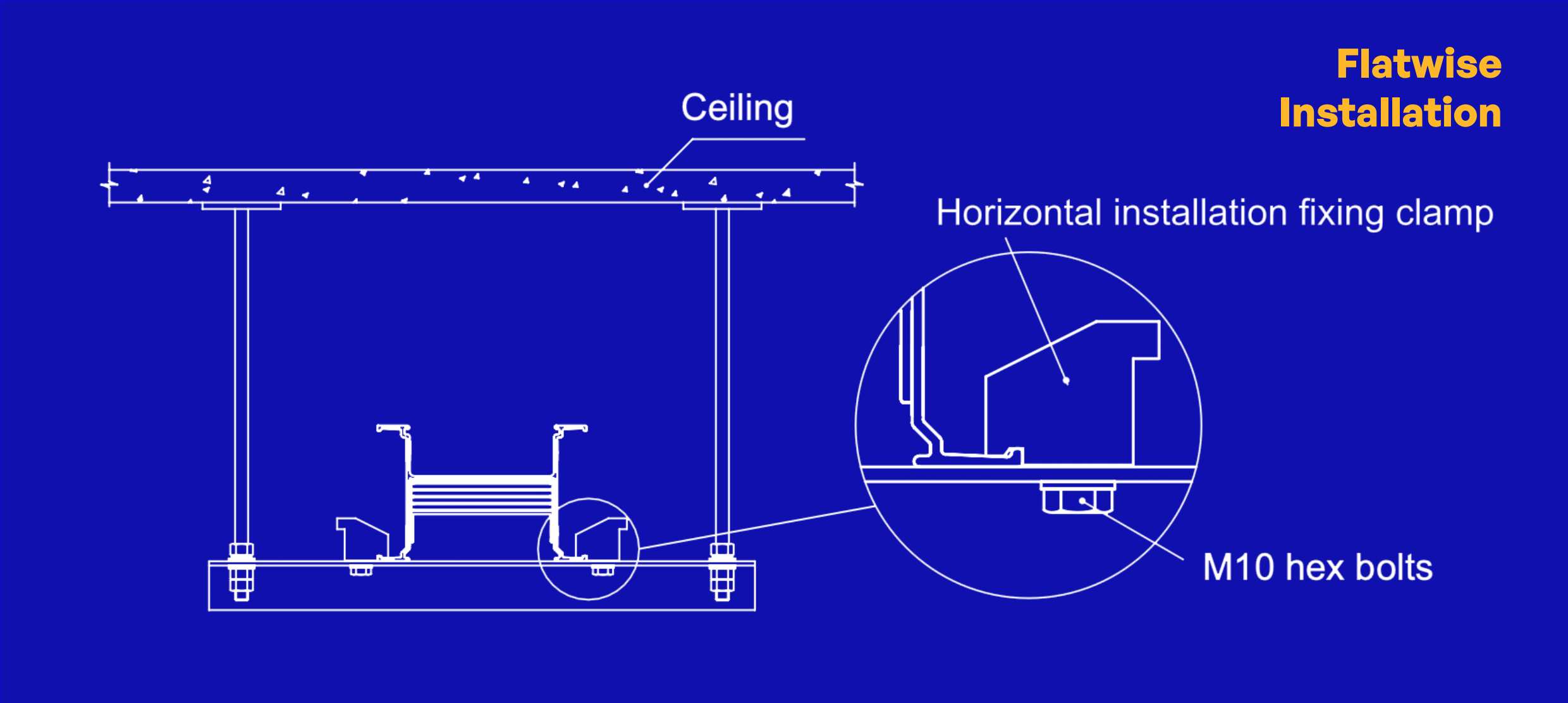
Minimum clearance required for installation



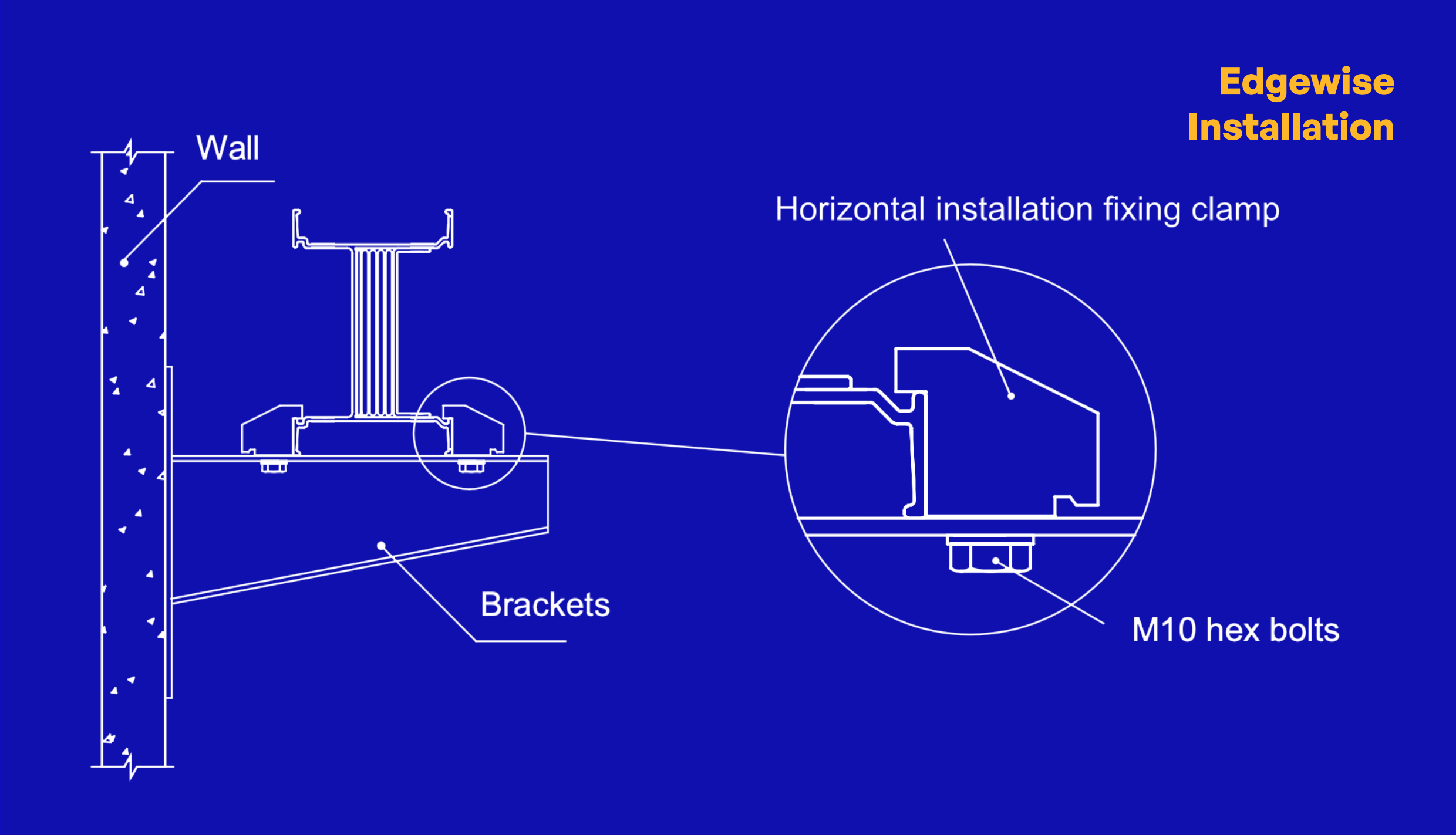
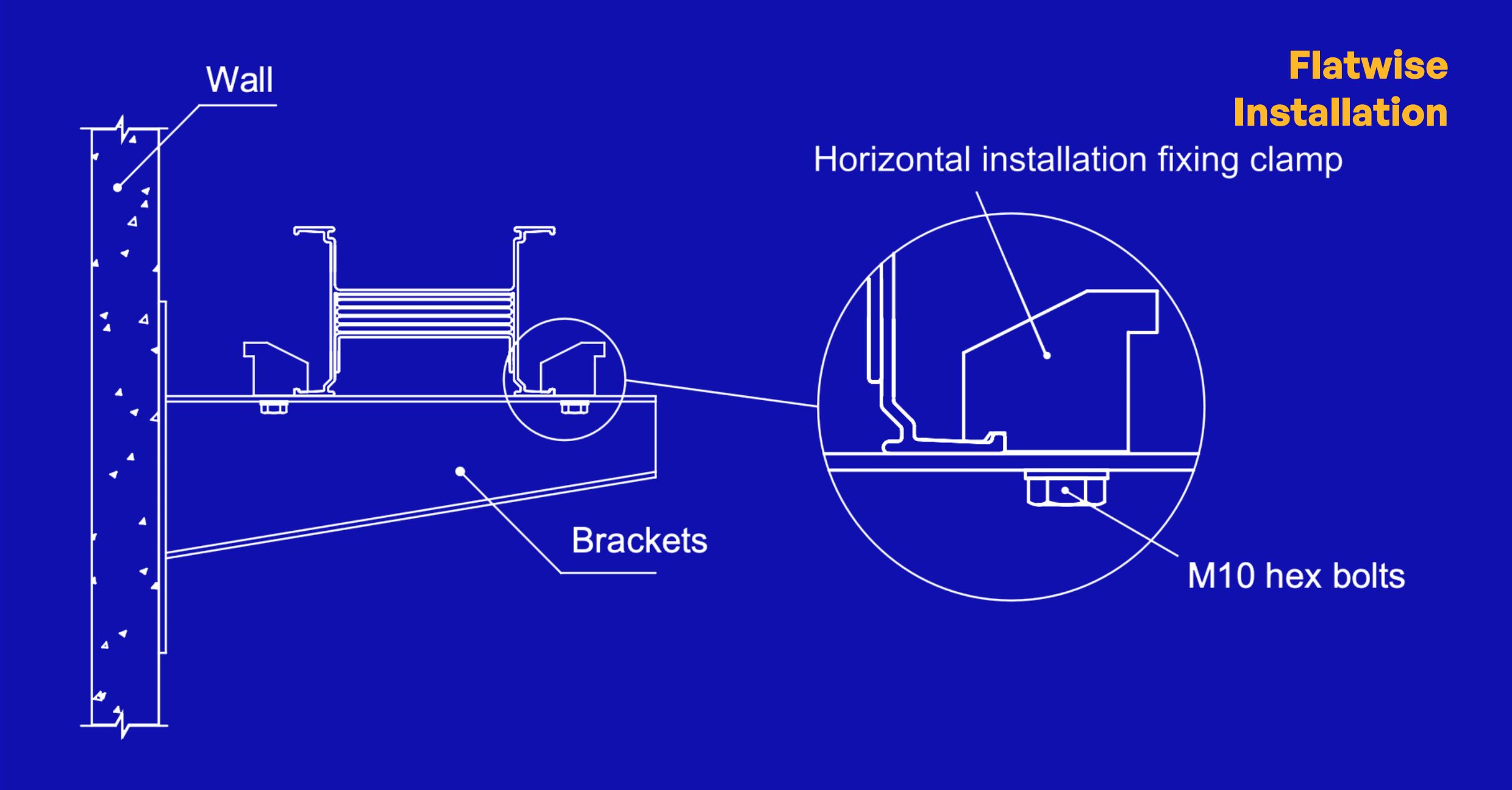
Horizontal wall-through installation



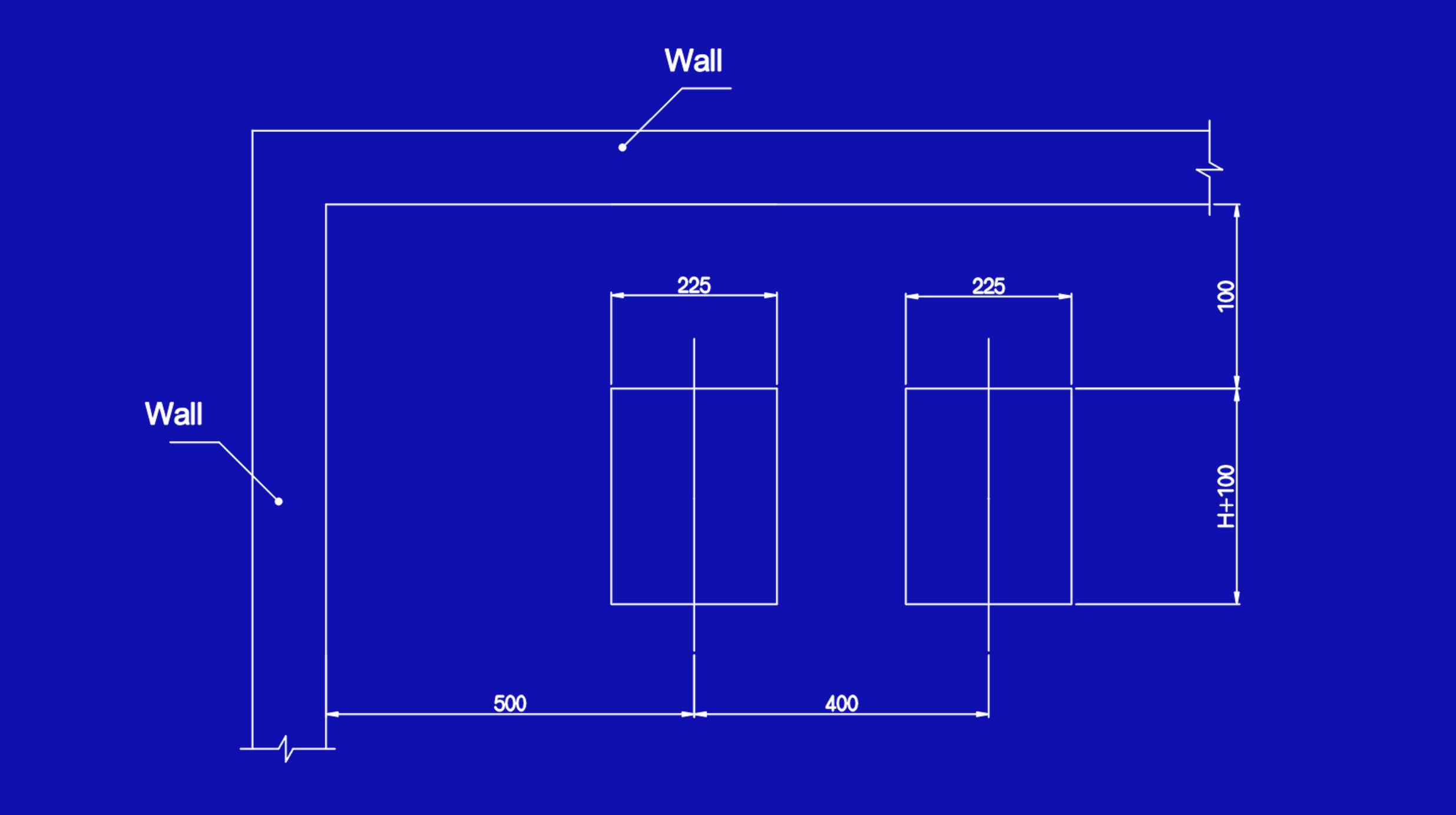
Ceiling (Trapeze Mount)



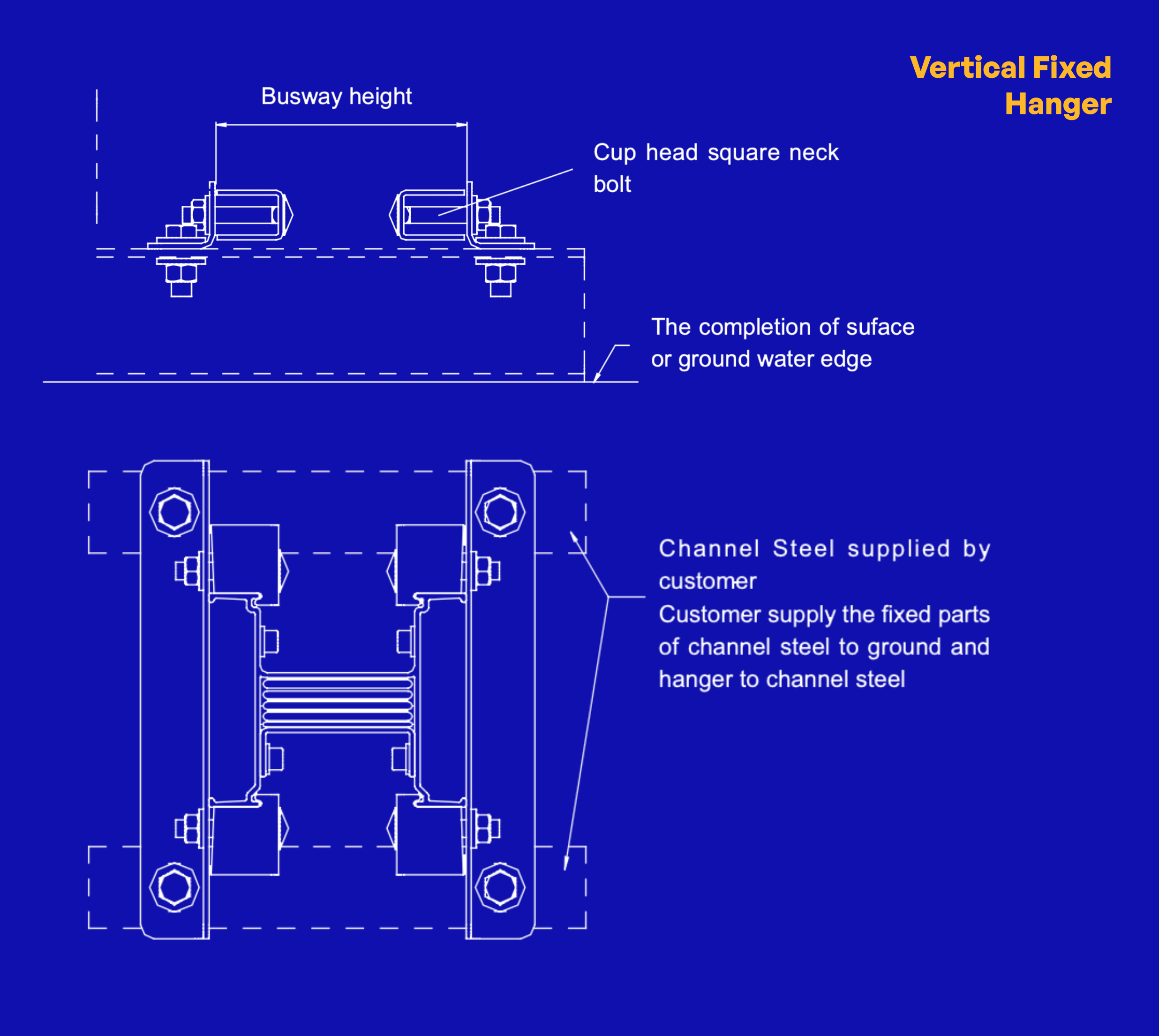
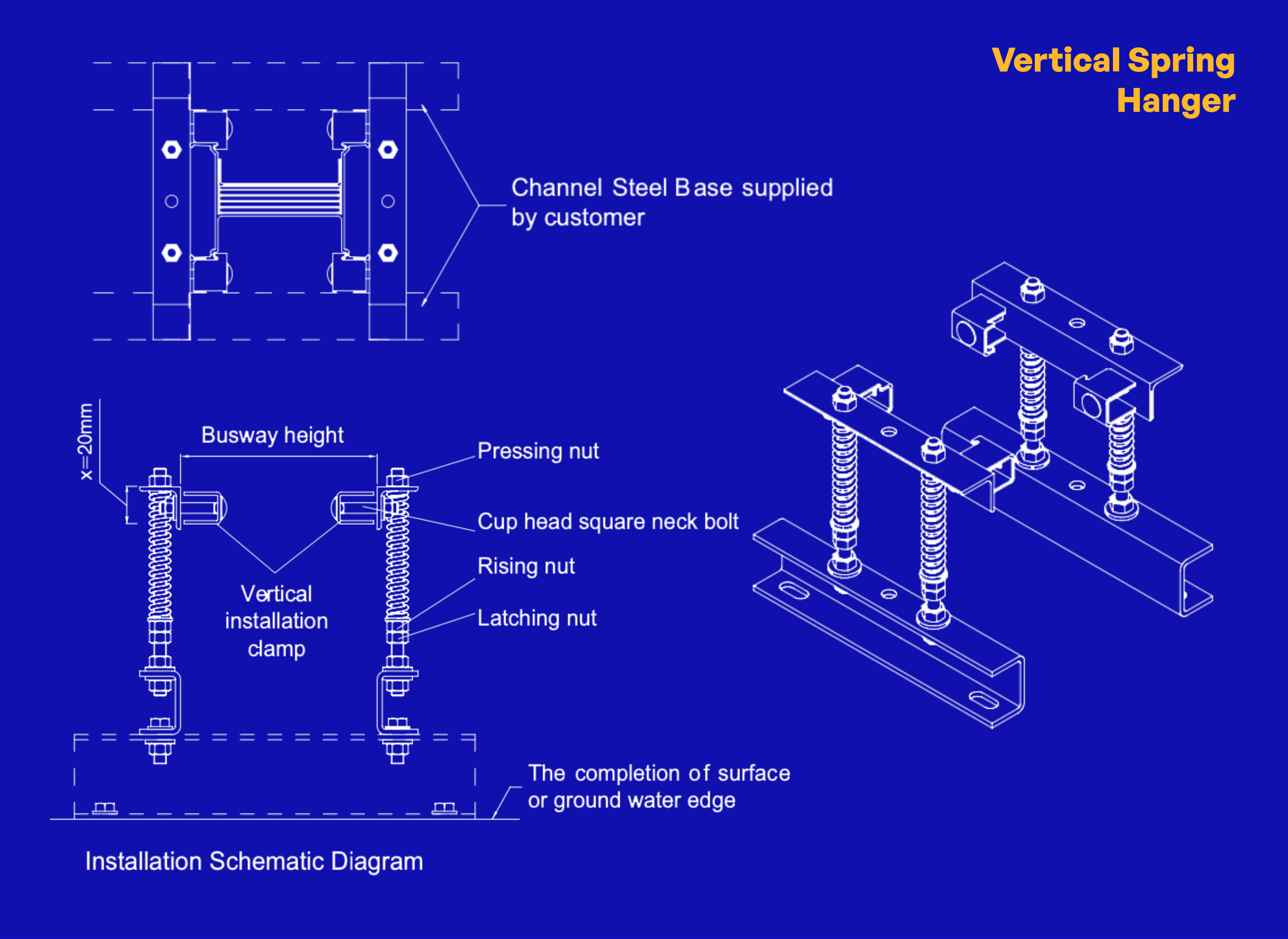
Wall-Mounted (Brackets)

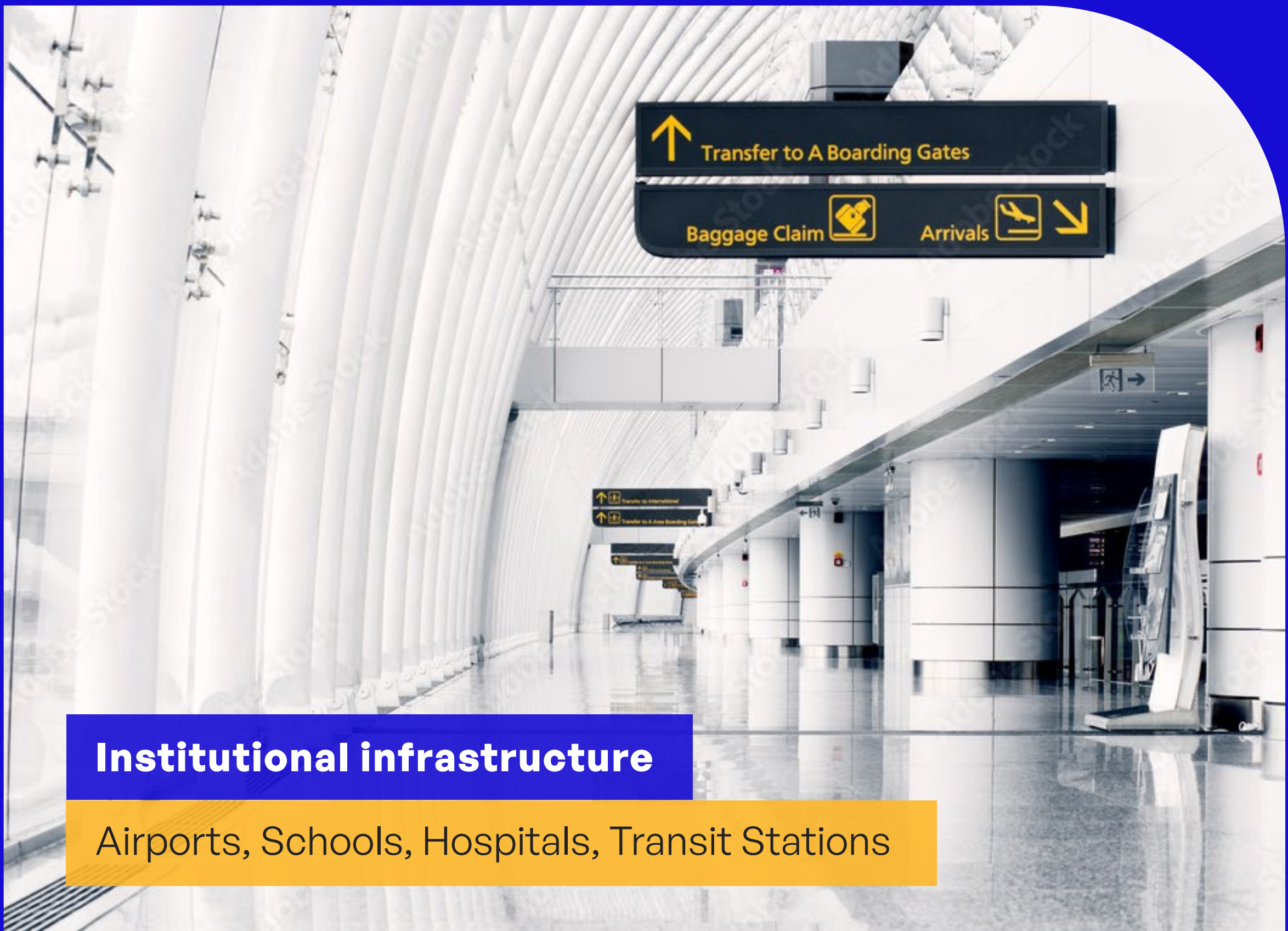


Horizontal wall-through installation



Vertical Riser (Spring Hangers, Clamps)





Institutional infrastructure

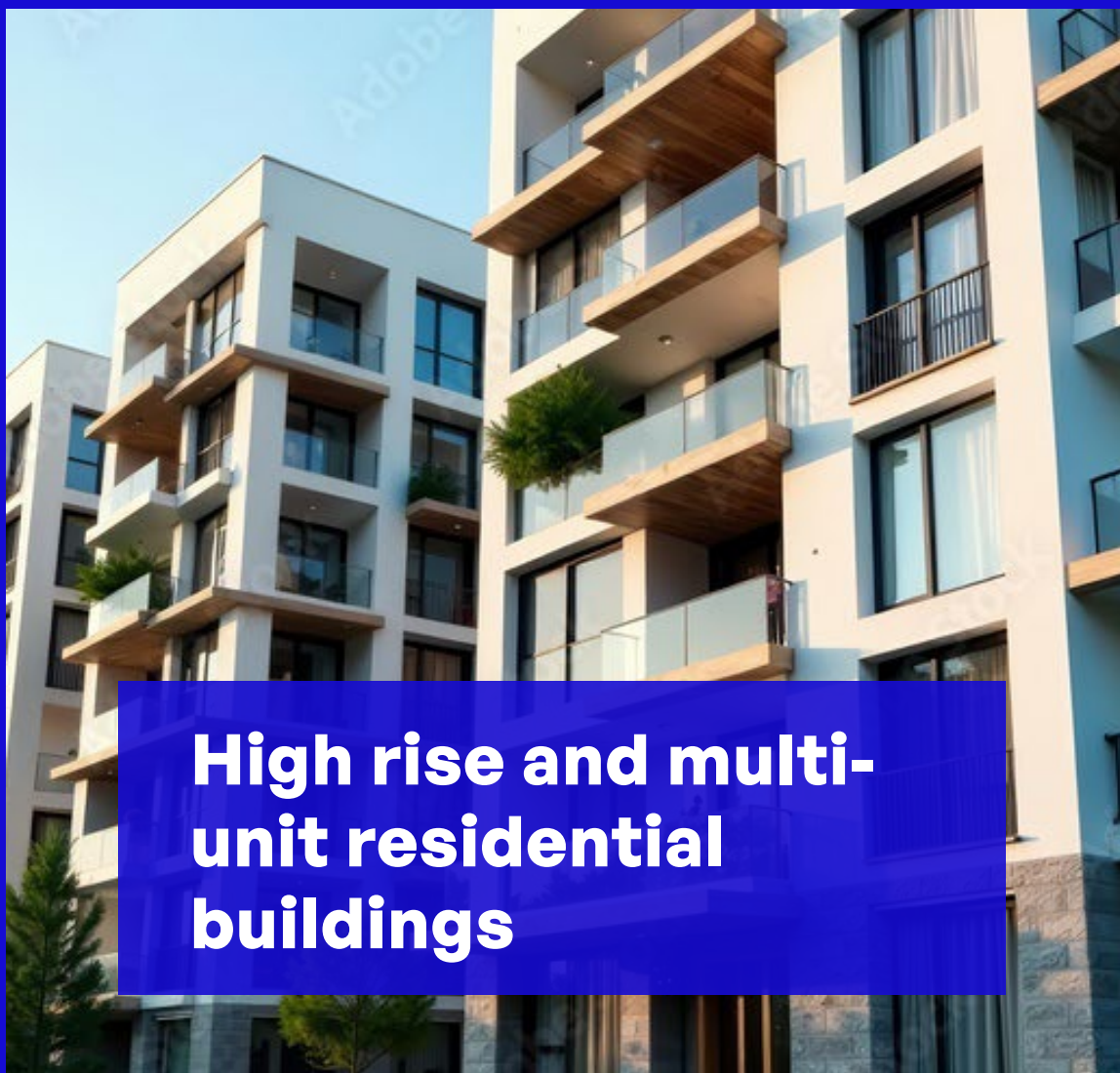
Airports, Schools, Hospitals, Transit Stations



Shopping malls and commercial buildings



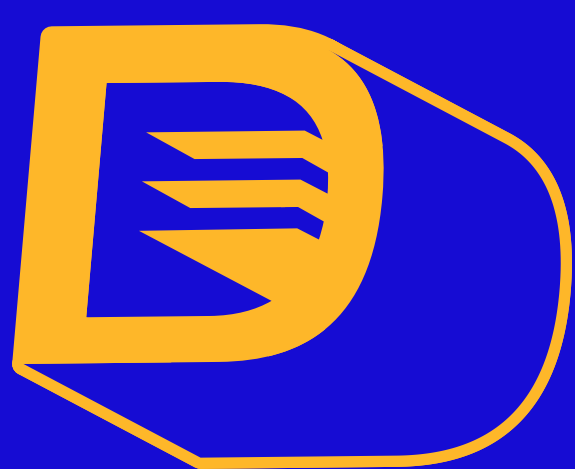
Hotels and hospitality complexes



High rise and multi-unit residential buildings



Warehouses and light industrial facilities



**Electri
Distro**

**CLICK HERE TO
QUOTE YOUR
PROJECT NOW**



WWW.ELECTRIDISTRO.COM