

CUSTOMER INSTALLATION INSTRUCTIONS

Reliability by Design.

IN0035 (R5) LV Transformer Rear Tank Mount Frame Installation
Instructions
26 Jan 2026

1 Purpose

The purpose of this document is to provide guidelines for the installation of the Hiko Power Engineering range of pre-assembled rear tank mount LV frames.

In addition to these instructions, installation must comply with any other relevant general or site specific: regulations, standards, and environmental and safety requirements, including safe work practices, as specified in local and/or national work instructions or codes.

2 Scope

The range of LV Frames and Transformers covered by these instructions includes:

- All rear tank mount LV frames
- ETEL Minipad Transformers
- ABB Minisub Transformers
- Other Transformers with similar rear mount attachment points which will fit the bracket.

LV Frame components supplied consist of:

- Complete Frame Assembly with Mounting Clips loosely attached.
- Transformer Tank Mount Brackets (x2), length to suit Frame size.
- Vertical Bracket Hitachi (ABB) for Tank Mount, length to suit frame size
 - Required for Hitachi (ABB) Tx only
- Tank Mount Mounting Bolts and Washers Kit. Includes M10 bolts and washers
- Cables (supplied if requested)

This work instruction assumes all installation work will be undertaken by appropriately trained and qualified installers of the LV frame product.

3 Important Safety Information

- Wear appropriate personal protective equipment.
- Ensure all electrical components are isolated before making connections.
Do not work on an energised system
- Complete a risk assessment prior to commencing site work.
- Adhere to this work instruction for the installation of the Tank Mount LV Frame.

4 LV Frame Technical Information

Tabulated below is dimensional, approximate weight and cable data for the range of pre-assembled rear tank mount LV frames.

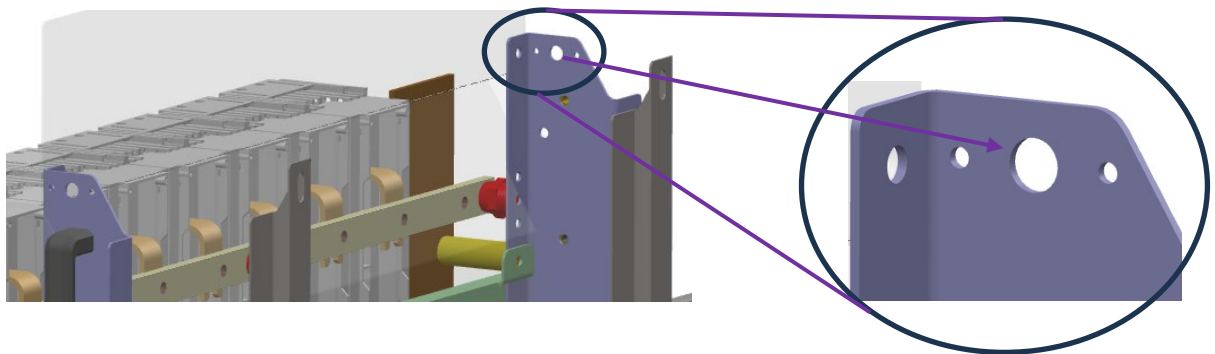
LV Frame Product No.	Approximate Weight (fully populated)	Approx. Frame External Dimensions (mm)				Tank Mount Bracket Minimum Length (mm)	
		Depth incl. Bracket	Width	Height	Height w Feet	Length	Hole Ctrs
LVFAEB6XXXXXRx	80 kg	425	680	920	940-1015	800	600
LVFAEB7XXXXXRx	90 kg	425	780	920	940-1015	900	600
LVFAEB8XXXXXRx	100 kg	425	880	920	940-1015	1000	600
LVFAEB9XXXXXRx	110 kg	425	980	920	940-1015	1150	600

5 LV Information for Handling

Upon unboxing, inspect product for damage prior to installation. The LV frame includes lifting eye and handles for ease of handling and transport. Note that the LV frame may be unstable when unbolted from the pallet.

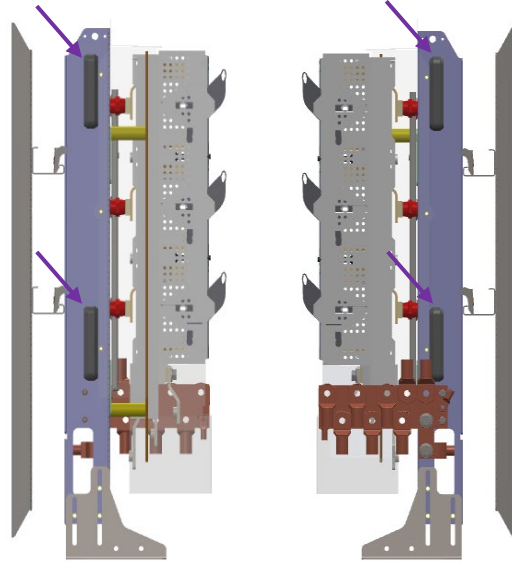
Lifting Eye

A 13mm hole located on top of each leg intended to be used in conjunction with up to a 12mm D-shackle. The D-shackles must have a minimum working load limit of 200kg (0.22 Tonnes). It is required to use a spreader bar to safely lift the LV frame for transport.

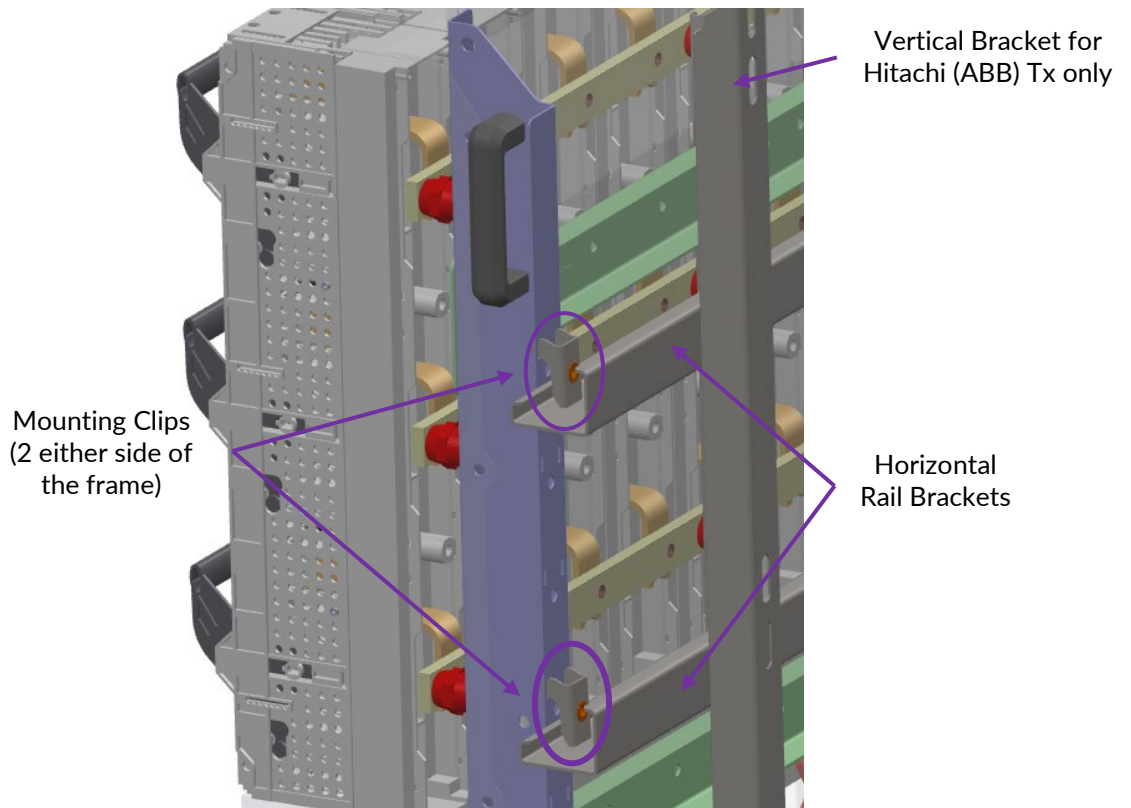


Carrying Handles

Each LV frame is fitted with two carrying handles on either side of the frames for ease of handling.



6 LV Frame Installation



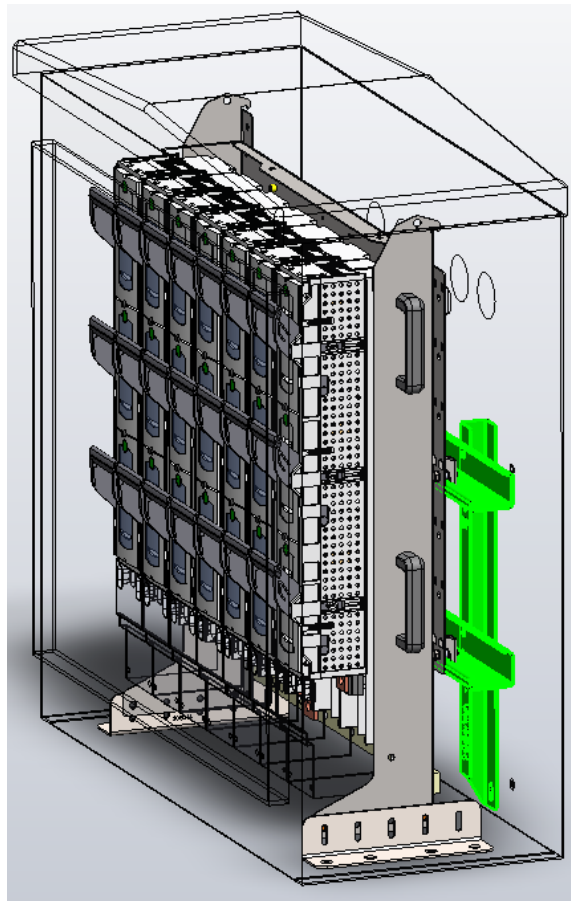
1. To install the frame into the appropriate transformer
 - a. For Hitachi (ABB) Transformers, proceed to Step 2
 - b. For all other Transformers, proceed to Step 3

Socket Sizes for Bolts Used

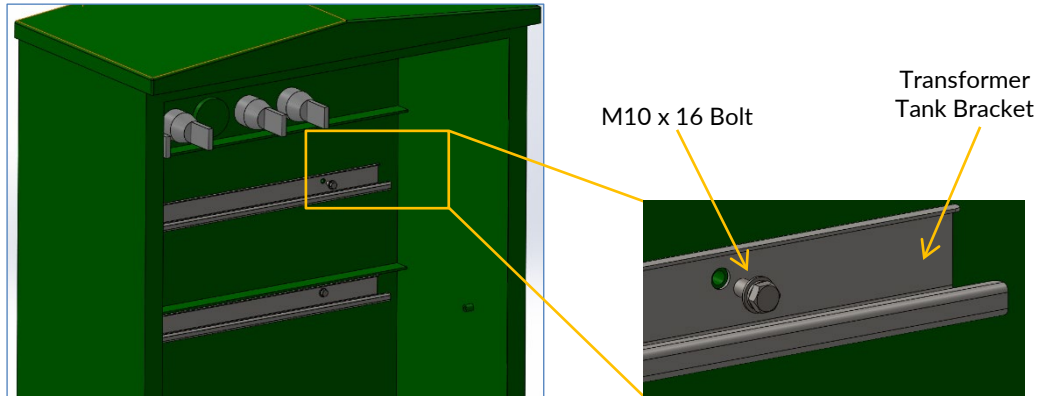
M8 Bolt	M10 Bolt	M12 Bolt
13mm socket	17mm socket	19mm socket

2. For Hitachi (ABB) Transformers, align the Vertical Bracket on the transformer cubicle mounting holes and install by bolting the bracket onto the transformer with the M10x16 bolts, spring and flat washers provided.

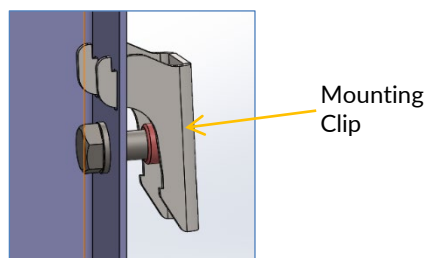
Mount the Horizontal Bracket to the installed Vertical Bracket using the M10x20 bolt, spring washer and flat washer provided.



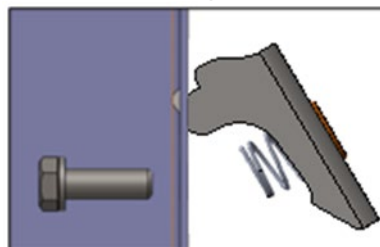
3. For other Transformers, bolt the Horizontal Bracket to the Transformer using M10x16 bolt, spring washer and flat washer provided. A flat and spring washer should be used. If the bolt is too long, an additional flat washer can be used.



4. At this stage the Cables can be fitted to the Transformer Bushing tails.
5. Loosen the Bracket Mounting Clip bolt until the Mounting Clip is open enough to fit over the Tank Bracket as shown below.



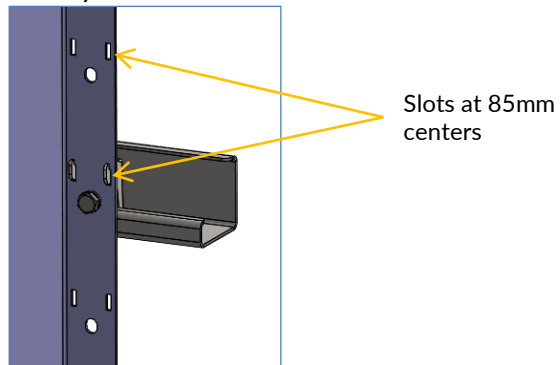
6. The Mounting Clip should be in the correct location for the Transformer height, but if a different height is desired, the Clips can be moved up or down as shown below.
 - a. Remove the M8 bolt and rotate the Clip until it is free of the Leg slot.



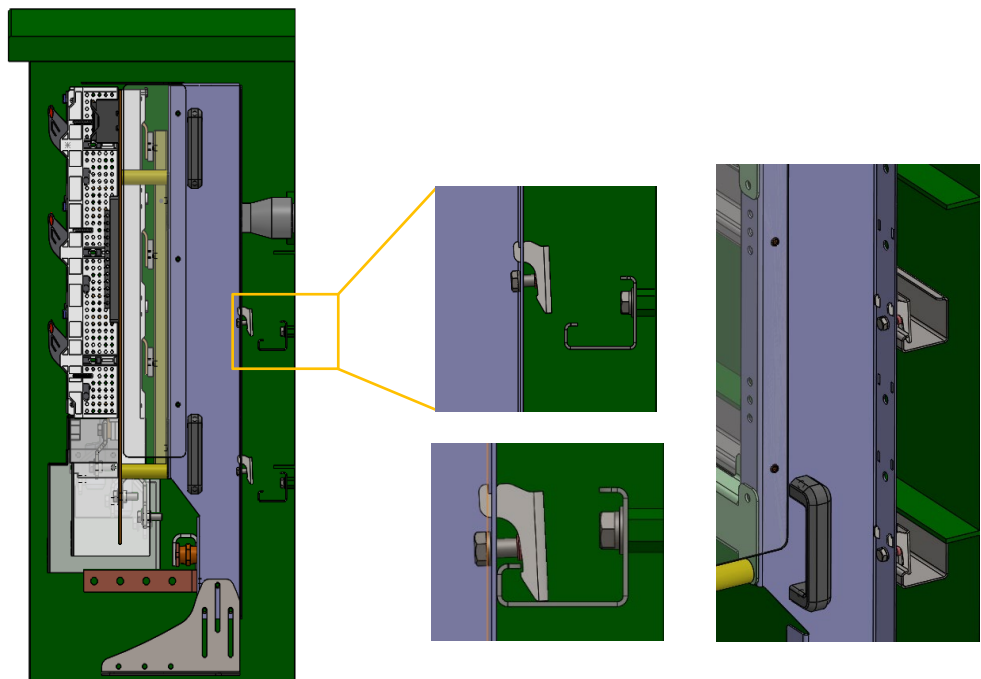
Note: there's a spring that goes onto the clip to support latching onto the leg. The clip will still latch onto the rail if the spring is accidentally removed.

- b. Move the Clips up or down to the required position and place back in the slot, in the reverse order of the removal procedure.

Note: the vertical gap between sets of Mounting Clips must match the Bracket spacing which is nominally 255mm



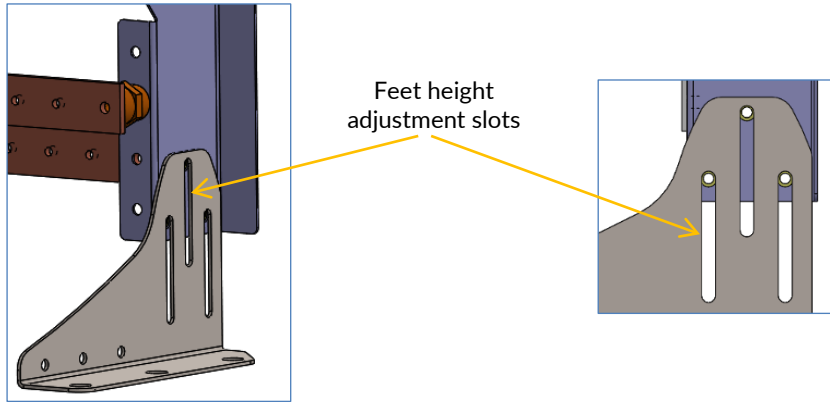
7. Lift the Frame into place and hook onto the Tank Bracket as shown below.



8. Once the four Mounting Clips are in place, the M8 Stainless bolts can be tightened. The maximum torque of **10Nm** should not be exceeded.

It is recommended to avoid using impact driver as it could exceed the 10Nm maximum torque.

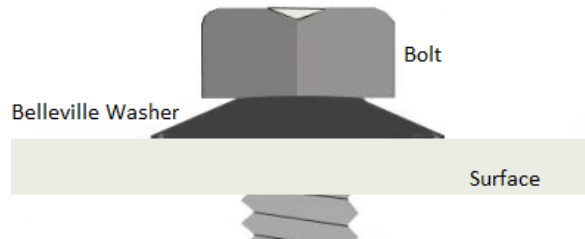
- The LV frame is now securely installed on the tank. The feet can be removed or the height of the feet can be adjusted and bolted down if required.



7 LV Disconnect Installation Summary

1. Disconnect bolts are required to be torqued in two key locations:
 - a. Disconnect bolts fastening to the busbar
 - b. Outgoing terminal bolts of the disconnect with cable fitted. If no cable is fitted onto the outgoing terminal bolt, only finger tight is required.

Note: Ensure the Belleville washers are right way around when re-fastening the bolts.



2. Depending on the size of the disconnect and/or bolts, follow the torque requirements below.

**Torque Requirement for Disconnect Bolts
on the Busbar**

DIN Size	Bolts Size	Torque (Nm)
DIN 2, 3	M12	40
DIN 00	M8	12

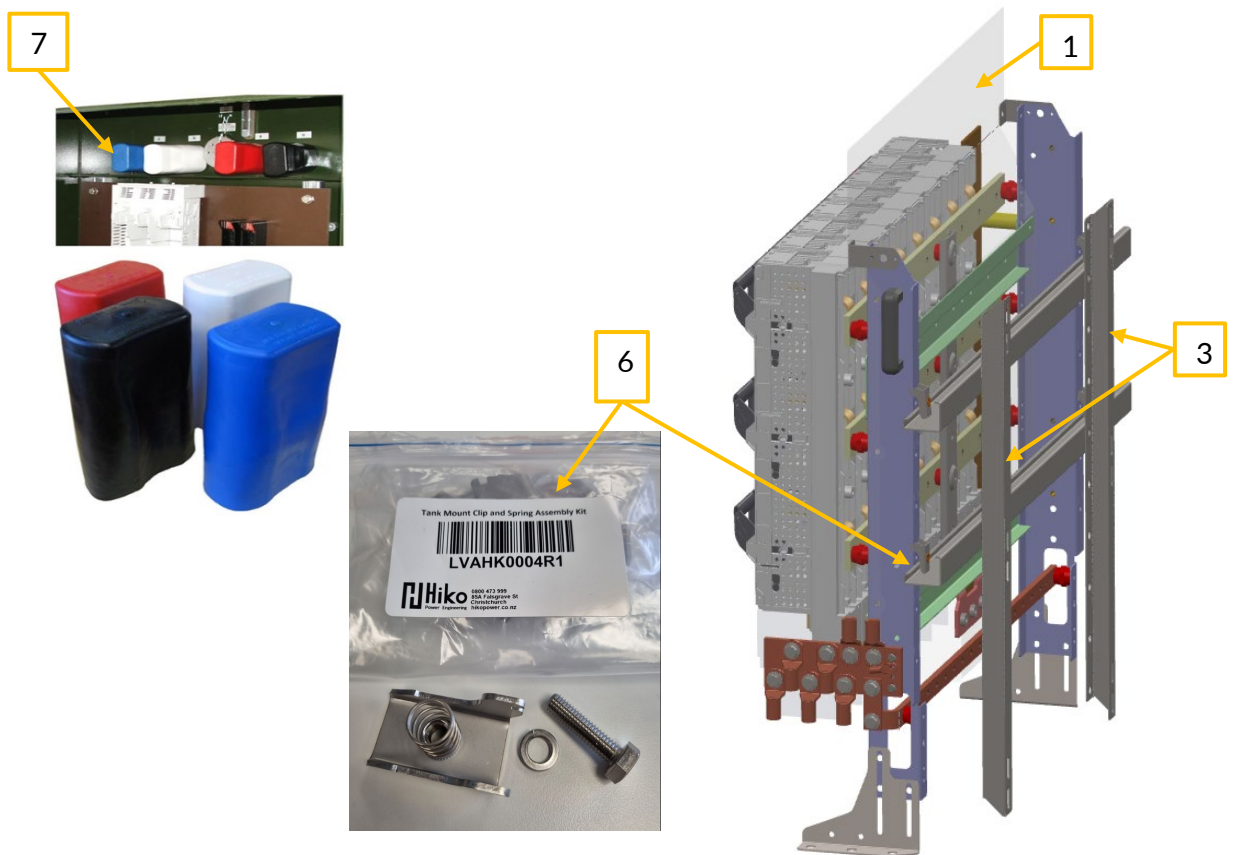
**Torque Requirement for Outgoing Terminal Bolts
of the Disconnect with Cable Fitted**

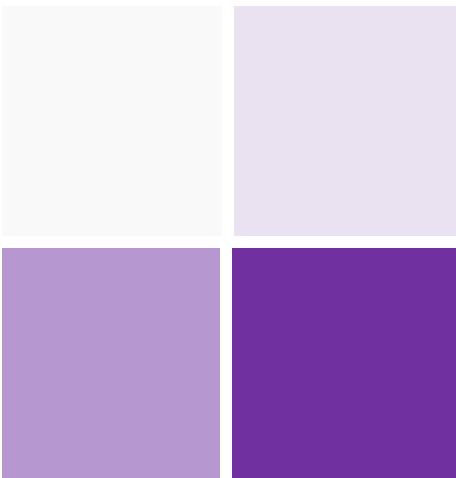
DIN Size	Bolts Size	Torque (Nm)
DIN 2, 3	M12	40
DIN 00	M8	12

3. Spare way cover in place of a disconnect, shall be installed with a nylon bolt M12 x 30 mm.

8 LV Tank Mount Frame Spare Parts List

Item #	Part Description	Part No.	Qty per Frame	Applicable To
1	LV800 Bushing Cover - Common Tank Mount Leg	PC272	1	All LV800 Wide Frames
2	LV900 Bushing Cover - Common Tank Mount Leg	PC273	1	All LV900 Wide Frames
3	940mm Vertical Bracket for 300kVA Hitachi Tx Assembly Kit	LVAHK0006	1	200-300kVA ABB/Hitachi Tx
4	820mm Vertical Bracket for 500kVA Hitachi Tx Assembly Kit	LVAHK0007	1	500kVA ABB/Hitachi Tx
5	950mm Vertical Bracket for 750-1000kVA Hitachi Tx Assembly Kit	LVAHK0008	1	750-1000kVA Hitachi Tx
6	Tank Mount Clip and Spring Assembly Kit (Kit of 4)	LVAHK0004	1	All
7	Low Voltage Boot Caps	HL0004	1	All
8	Tank Mount Mounting Bolts and Washers Kit (Kit of 6)	LVAHK0005	1	All





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