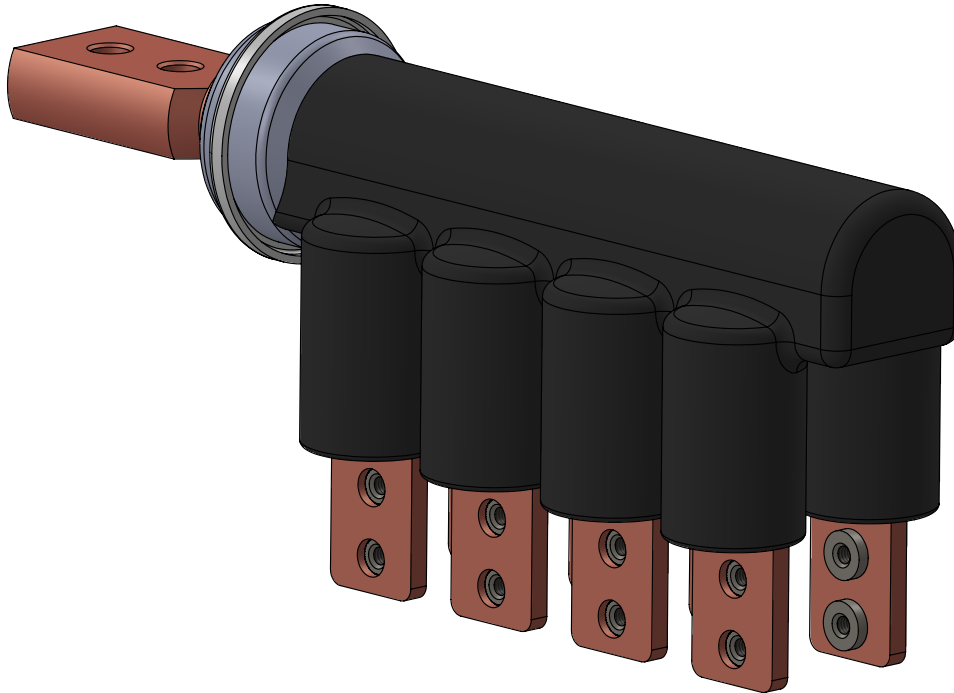


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Installation Instructions

Secondary Bushing with Integral Sealing Legs



Applicable Current Ratings

4500A

Applicable Voltage Ratings

480V

Applicable Catalog Code

SB2500



WARNING

- System must be de-energized during installation or future operation of this product or its components.
- Do not touch or move energized connectors or components by hand.
- Excess distortion of the assembled connector may result in its failure.
- Failure to follow these instructions will result in damage to the connector and serious or fatal injury.
- This product should only be installed and/or operated by trained personnel in accordance with normal and safe work procedures.
- Variations in equipment or configuration or work procedures may not be covered in these instructions.
- Please contact Richards Manufacturing for any additional questions.

Suggested Welding Guide for Epoxy Bushings and Wells

NOTE: The following data are suggested recommendations for welding Bushings. Because of the many variations in transformer design and the various techniques used, the following is intended as a guide only. The most important factor is that heat be kept to a minimum. Excessive heating of the epoxy can affect the integrity of the bushing.

Suggested Welding Processes

- Inert Gas, Tungsten-Arc Welding (TIG)
- Short-Arc Welding (Metal Inert-Gas, MIG)

NOTE: Both of the above processes are fast and, therefore, create minimum heat.

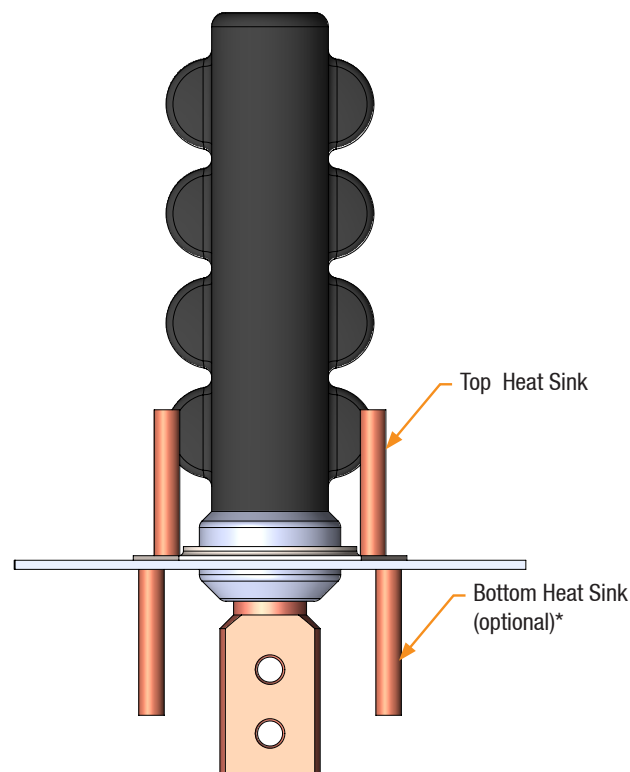
Materials

Bare stainless steel wire is used with either process. No. 308 is recommended for welding to stainless steel tanks, No. 309 is recommended for welding to carbon steel tanks

Welding Instructions

To minimize heat flow to the epoxy, the use of copper heat sinks is recommended. The following suggestions are offered:

- Water Cooled (Helical coil - top and bottom)
- Recommended Configuration

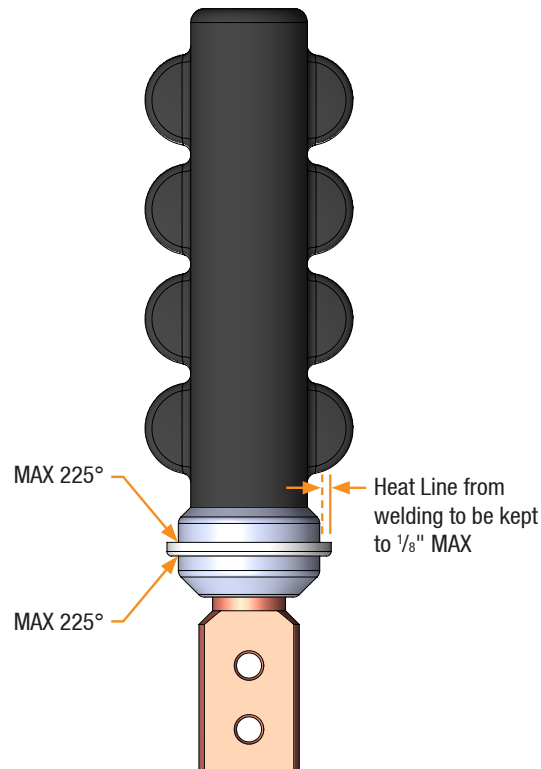


***NOTE:** Bottom heat sink is optional if top heat sink is completely effective. If bottom heat sink is used it should have a larger ID than top heat sink to allow heat to be absorbed by bottom sink rather than flow into top of tank.

- Non-water cooled heat sinks must not be left on too long since heat will flow back into bushing. Air cool bushings/wells after removal of heat sink.
- Copper heat sinks are preferred. Aluminum heat sinks make it more difficult to weld, thus increasing weld time and temperature.
- Venting of heat sinks should be provided.
- Do NOT thread heat sink to bushing or bushing well stud. Expansion due to heat may affect threads and prevent removal of heat sink.

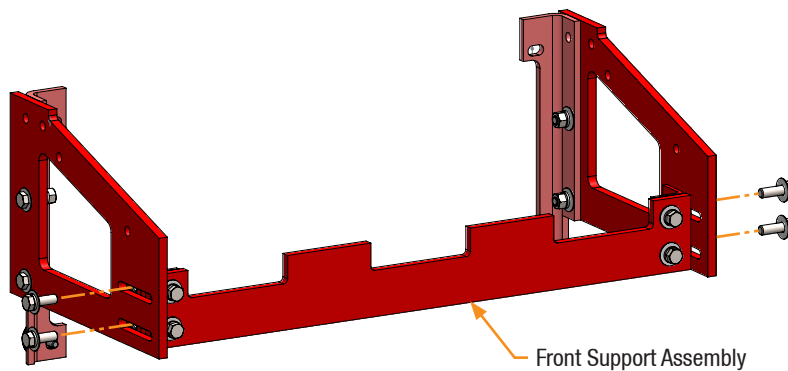
Recommended Procedures

- A. Keep heat to a minimum. Visible heat line should not be greater than 1/8" from weld, 3/16" from OD of flange.
- B. All surfaces (tank and bushing) should be kept clean. Contamination such as paint, grease, etc., will extend welding time, thus raising the temperature and will affect the integrity of the bushing.
- C. Minimize air currents in welding area which will disturb the gas atmosphere.
- D. Handling techniques before and after welding should be watched to minimize forces applied to heated stud and flange.
- E. No torque should be applied to epoxy when making any bus bar connection.
- F. Temperature at points indicated by arrows must not exceed 225 °F.
- G. Weld all three bushings on the transformer and proceed with support frame assembly. Support frame assembly should be performed immediately after welding bushings to ensure proper support during transportation and handling of transformer.

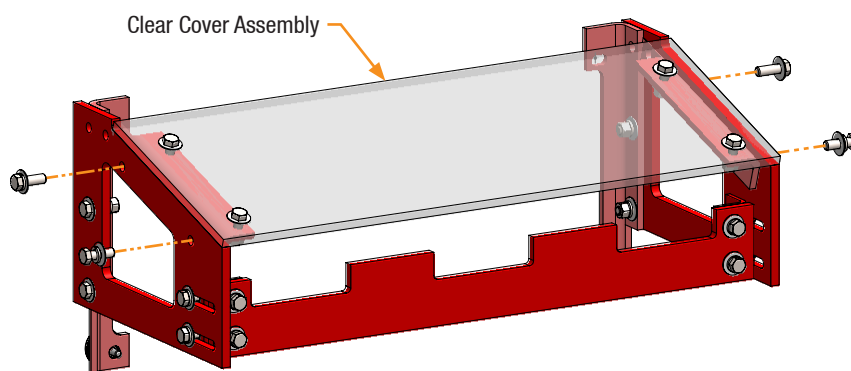


Support Frame Assembly

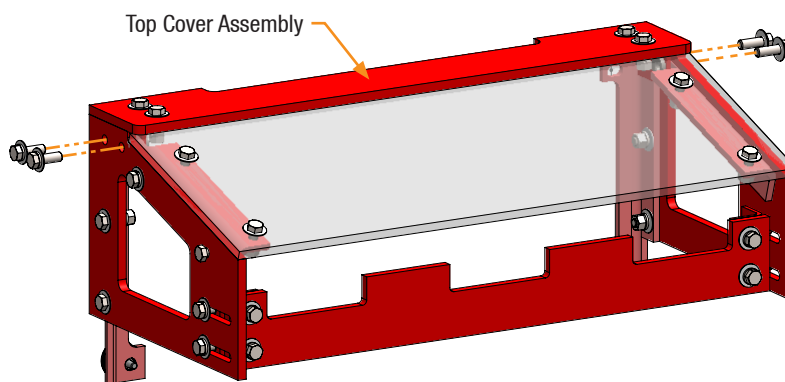
- A. Install supplied hardware through slots as shown below and hand tighten bolts (leave loose for adjustment).



- B. Install Clear Cover Assembly using the supplied hardware as shown below.

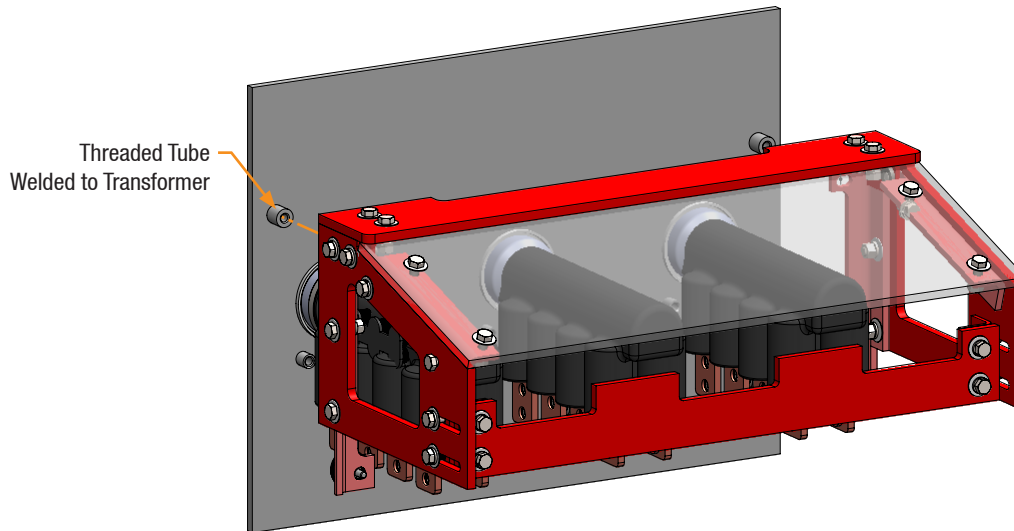


- C. Install Top Cover Assembly using the supplied hardware as shown below.

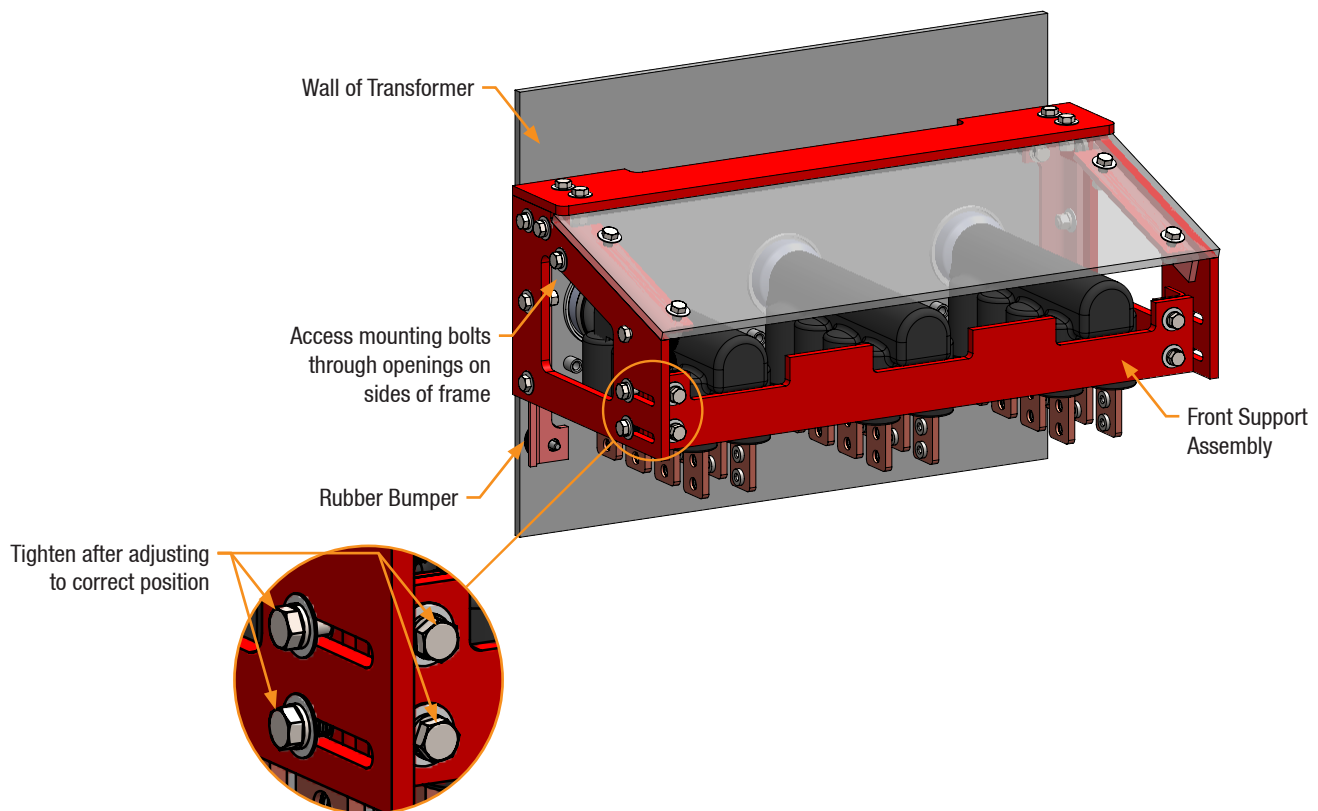


Support Frame Installation

- A. Position the support frame with the transformer such that the mounting locations of the frame align with the threaded tubes welded to the face of the transformer.



- B. Fasten support frame to transformer using supplied hardware. Access to fasten bolts can be achieved via the window cut into the sides of the frame.
 C. Adjust position of Front Support Assembly so it sits against the bottom of the bushings. Tighten all bolts as shown below.
 D. By hand, tighten both rubber bumpers against the wall of the transformer.



Installation Complete

