



*Coaxial Dynamics*

A CDI INDUSTRIES, INC. COMPANY  
SPECIALISTS IN RF TEST EQUIPMENT & COMPONENTS

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## INSTALLATION-OPERATION-MAINTENANCE 2500, 3000, 5000 and 6000 Watt Oil Loads

**General:** The 84000 Series of Coaxial Load Resistors are designed to dissipate 2500, 3000, 5000 or 6000 Watts, (depending on the Model), of RF power from DC to 1000 MHz. With characteristic impedance of 50 ohms, the VSWR does not exceed 1.10:1. Therefore, with this low reflection coefficient, these loads are very useful for tuning transmitters, reject loads on filters, fourth arm terminations on power combiners, etc. The 84000 Series can come equipped with connectors ranging from Type "N" Quick Match to 3-1/8".

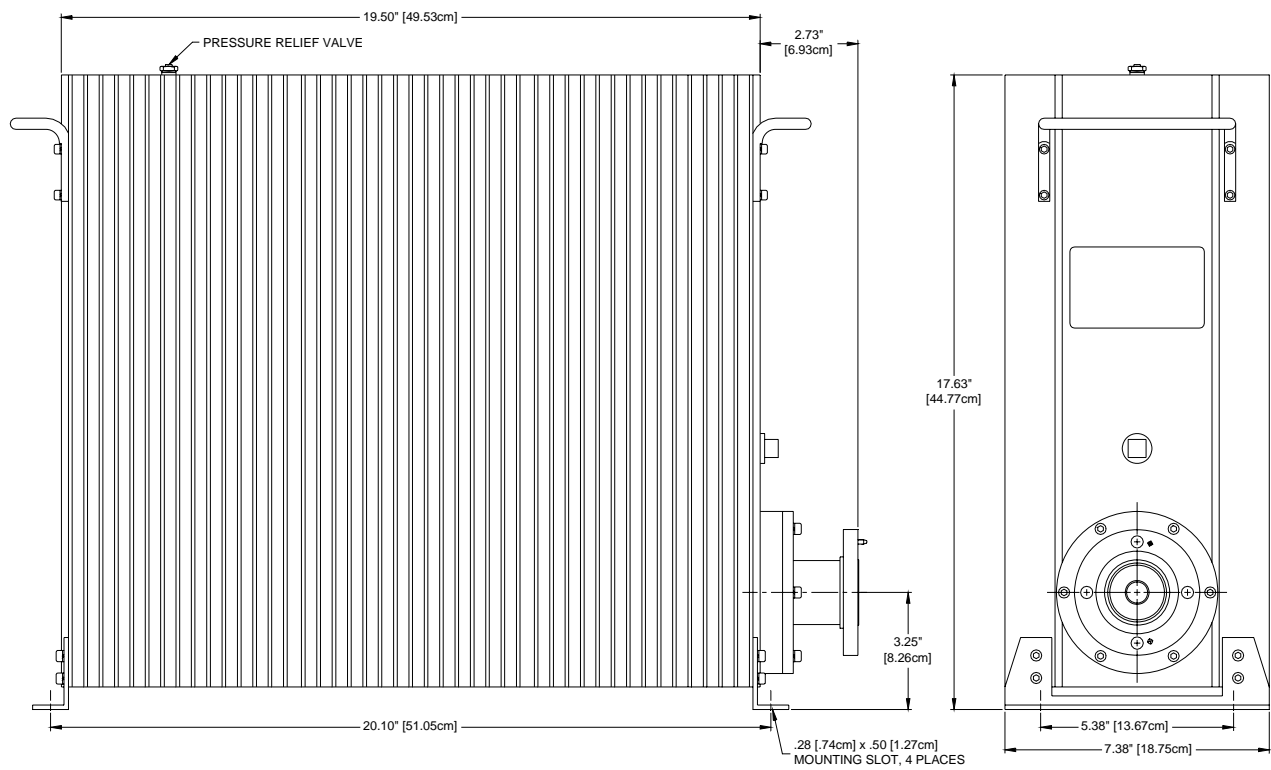
**Installation:** The 84000 Series must be operated in a horizontal position with the breather valve in the top position only. Prior to applying power, remove the red hex-shipping plug and install the breather valve supplied. Provide ample clearance around the load (at least 12 inches on all sides and above) for proper air circulation. For mounting or hanging the load, there are four 9/32" diameter x 1/2" long slotted holes in a 5-3/8" x 20-1/8" rectangular configuration. **WARNING: DO NOT USE HANDLES FOR MOUNTING OR HANGING.**

**Blower Assembly (5000 and 6000 watts only):** The blower assembly comes fully wired and installed from the factory; no special wiring needs to be done. **The blower must be operated manually** unless it was assembled and wired at the factory for automatic operation with the optional normally open thermostwitch (CDI P/N 88201). **Do not apply more than 1250 watts to the load with out activating the blower.** When assembled at the factory, the blower will cycle on and off as required, in the automatic mode, or it may be turned on manually.

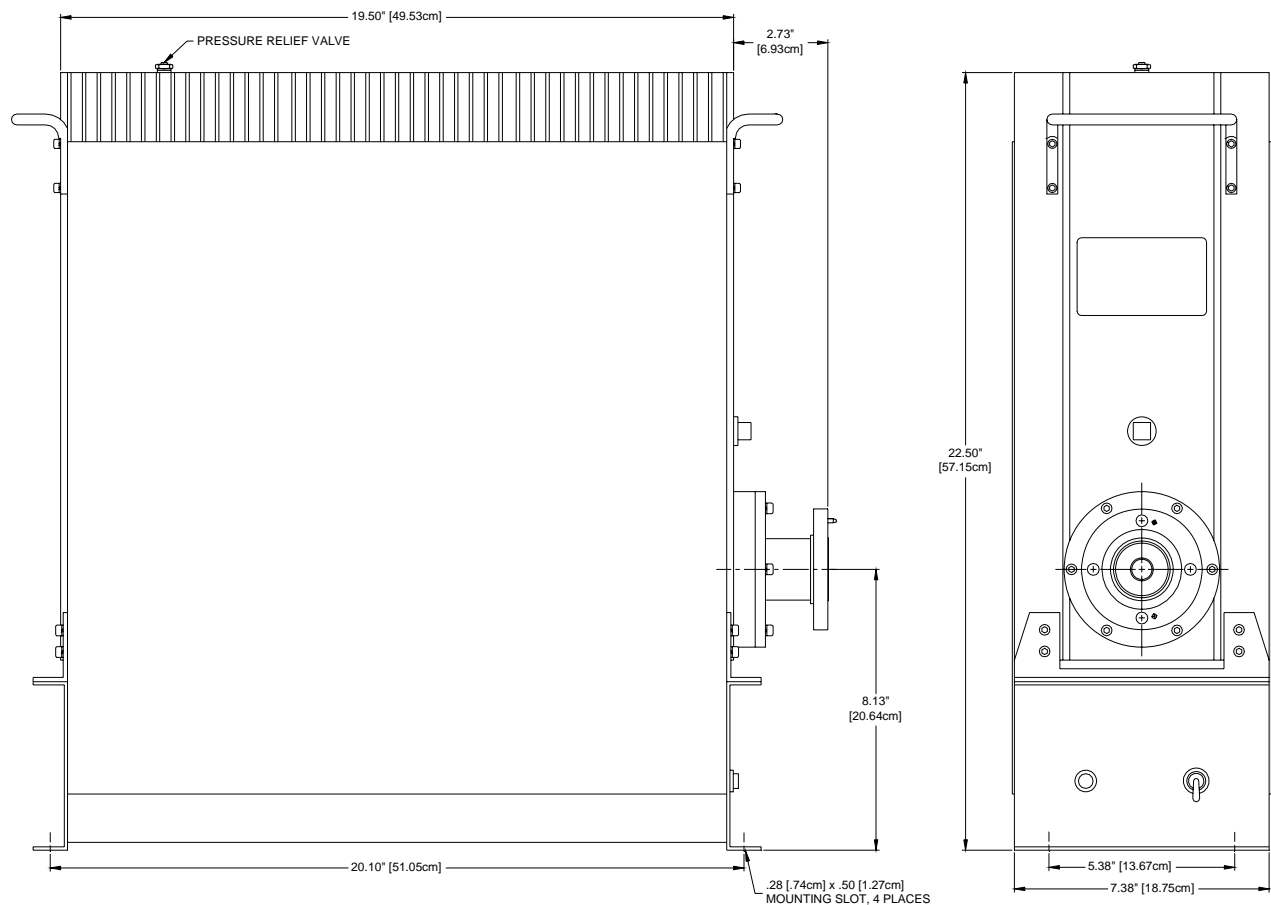
**Transmitter Interlock (optional):** A second normally closed thermostwitch (CDI P/N 88200) may be added to provide connection to transmitter interlocks. This thermostwitch will open and shut down the transmitter if the load coolant temperature remains excessively high and damage to the load is imminent.

**Maintenance:** Very little is required in the way of maintenance. Keep the unit clean and free of dust. Changing the resistor in the field is not recommended, however should it become necessary, remove the breather valve and install the red shipping plug. Stand the unit vertical with the RF connector facing up. Remove the six socket head screws, which hold the RF assembly in place. Carefully lift the assembly straight up allowing the excess oil to drain back into the radiator. Loosen the clamp from the end of the housing and remove the six pan head screws. Carefully pull the housing from the resistor. To install the new resistor, reverse the procedure making sure that the resistor fits securely in the front holder. Inspect the o-ring between the radiator and the RF assembly. If the o-ring is cracked or damaged in any way, it must be replaced. After securing the assembly back in the radiator, return the horizontal position and inspect for any coolant leaks.

**Coolant:** The load is filled at the factory to the correct level with a *special non-toxic dielectric coolant* (CDI P/N 9524) at room temperature. Watch for possible coolant leakage. Small amounts of leakage will not impair operation, but more significant amounts will produce unfavorable effects. If it becomes necessary to add coolant, use only the original factory supplied coolant. The special electrical and thermal characteristics of the coolant are very important for continued proper operation and power handling.



**2500 and 3000 Watt Load (Model 84025-1 shown)**



**5000 and 6000 Watt Load (Model 84050-1 shown)**