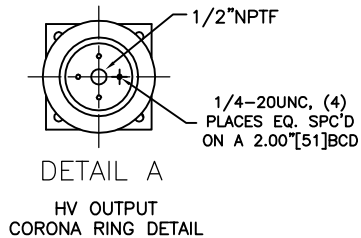
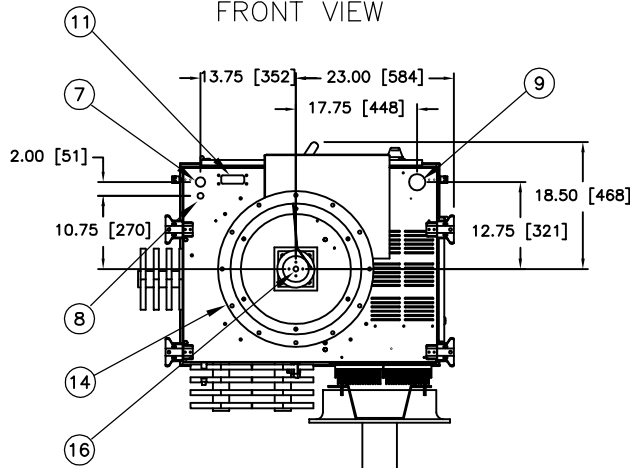
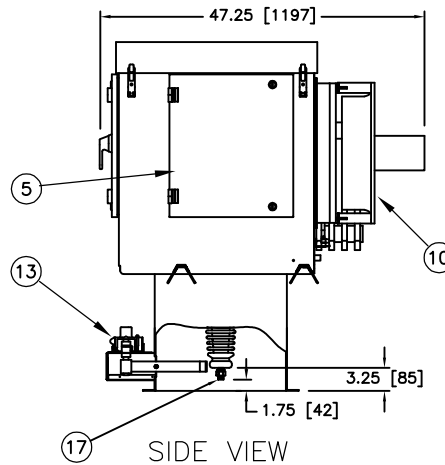
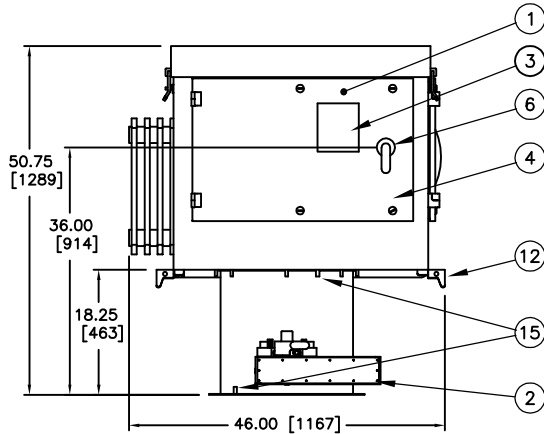




**HF ESP, POWER PLUS SERIES  
21 & 28 kW UNITS WITH BOTTOM EXIT GROUND SWITCH**



- ① POWER PLUS UNIT.
- ② ROUND BOTTOM EXIT GROUND SWITCH.
- ③ RATINGS NAMEPLATE.
- ④ SWITCH GEAR AND CONTROL SECTION WITH HINGED DOOR. ALLOW 33"[838] OF CLEARANCE FROM THIS FACE FOR DOOR SWING.
- ⑤ POWER ELECTRONICS SECTION WITH HINGED DOOR. ALLOW 19"[483] OF CLEARANCE FROM THIS FACE FOR DOOR SWING.
- ⑥ INPUT CIRCUIT BREAKER SWITCH HANDLE WITH INTERLOCK PROVISION INSIDE. FOR ACCEPTABLE INTERLOCK SEE DWG A105798.
- ⑦ 1"[25.4] DIA CONDUIT HOLE FOR 120V CONTROL WIRING.
- ⑧ 1/2"[12.7] DIA CONDUIT HOLE FOR LOW VOLTAGE TRANSDUCER AND COMMUNICATION LINK CONDUIT.
- ⑨ 2"[51] DIA CONDUIT HOLE FOR 3 PHASE POWER AND GROUND.
- ⑩ COOLING FAN FOR IGBT HEAT SINK ASSEMBLY.
- ⑪ EZ SCOPE PORT WITH RJ45 SOCKET FOR GVC DISPLAY CONNECTION AND BNC CONNECTORS FOR MAKING EXTERNAL kV AND mA MEASUREMENTS.
- ⑫ LIFTING HOOKS (4 PLACES).
- ⑬ H.V SWITCH MECHANISM WITH VIEWING WINDOW AND INTERLOCK PROVISIONS. FOR INTERLOCK AND BOLT EXTENSION INFO SEE DWG A105811.
- ⑭ BOTTOM EXIT DUCT FLANGE, 22.63"[575] O.D. X 19.00"[483] ID W/ (12) 0.50"[12.7] DIA HOLES EQ. SPACED ON A 21.44"[545] DIA BOLT CIRCLE. GASKET NOT INCLUDED.
- ⑮ SS GROUND CABLE TO GROUND EACH SECTION, INCLUDING ACCESS COVERS.
- ⑯ HIGH VOLTAGE SEMI-OUTDOOR BUSHING, SEE DETAIL A FOR DETAIL.
- ⑰ OPTIONAL METRIC ADAPTER FOR HV BUSHING CONNECTION. CONVERTS 1/2" NPT TO M20-1.5. SEE DWG A117570.

**NOTES:**

1. POWERPLUS AND SWITCH MUST BE MOUNTED ON A LEVEL SURFACE OR SHIMED TO WITHIN 1/8"[3.2] RISE PER 12"[305] RUN.
2. COLD ROOF MAY NEED TO BE REINFORCED TO ACCEPT THE WEIGHT OF THE POWER PLUS UNIT.
3. MAXIMUM ALLOWABLE DUCT INTERNAL TEMPERATURE: 122°F (50°C). MAXIMUM ALLOWABLE DUCT INTERNAL PRESSURE: 1 PSI (2.04"Hg). THE INSTALLER MUST USE AN ENTRANCE BUSHING IN ROOF TO MEET THESE SPECIFICATIONS.
4. POWERPLUS MUST BE GROUNDED TO THE COLD ROOF BY THE END USER. REFER TO DWG B125481 FOR GROUNDING DETAILS.
5. INTEGRATED AUTO TRANSFORMER OPTION IS NOT AVAILABLE WITH A ROUND GROUND SWITCH. AUTO TRANSFORMER MUST BE SEPARATE.

APPROX WEIGHT WITH GND SWITCH: 1000LBS, 454KG  
 DIELECTRIC FLUID VOLUME: 29gal, 110L  
 FINISH: ENAMEL, ASA 61, APPROX. RAL 7042  
 TANK, SWITCH AND CONTROL ENCLOSURE RATED NEMA 4/IP56  
 ALL DIMENSIONS IN INCHES FOLLOWED BY [mm]

DATA SHEET: ESP21-28RD-B  
 REVISION DATE: 09/12/08  
 APPROVED BY: HH