

# 90 KVA GROUND POWER UNIT



**90 kVA Bridge Mount GPU With Active Front End**



**PTI's 90kVA Ground Power Unit (GPU) offers active front end technology that uses an insulated-gate bipolar transistor (IGBT) as an electronic switch which combines high efficiency and fast switching. Since the current required to control an IGBT is very small, it can be switched much more quickly than a power transistor. Our units are also stoutly constructed, but simple in design, allowing for easy maintenance.**

## ACTIVE FRONT END FEATURES

- Active front end (AFE) guarantees low stressing of the line supply
- Regenerative feedback into the line supply (4-quadrant operation)
- Sinusoidal line currents – low harmonics are fed back into the line supply
- Bidirectional power exchange between AC mains and DC bus bar
- Frequency and phase-rotation detection with auto-locking feature
- No commutation faults when the power fails in regenerative operation
- Enhance power distribution network by providing a leading PF (VAR support) or harmonic compensation

- Line supply voltage fluctuations are compensated
- Selectable power factor
- Operating costs are simultaneously reduced due to lower reactive power and losses

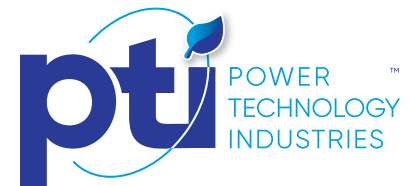
## GPU FEATURES

- Precisely regulates the line current to be a pure, balanced, three-phase sinusoid
- Multilevel inverter technology to improve efficiency in AC-DC-AC conversion
- 400% overload capability
- Independent phase regulation for balanced and optimized power delivery with line-drop compensation
- 10.1" LCD touchscreen display with standalone push-buttons for easy-to-use control

- Remote access and monitoring domestically or international
- Building management system interface compatibility

## CONNECTIVITY

- Wi-Fi & ethernet communication connectivity
- Cellular connectivity: 3G | 4G | LTE | LTE-M
- Modbus BMS Interface – RS485 RTU & TCP/IP



**PTechIndustries.com**

**+1 (888) 704-7703**

**Sales@PTechIndustries.com**

# SPECIFICATIONS

## 90 KVA GPU

### INPUT

Input Voltage	400-480 V Nominal $\pm$ 10%, Three-Phase, Imbalance $\leq$ 5%, THD $\leq$ 8%
Input Frequency	45-65 Hz
Inrush Current	137-114 A
Protection	Overload, Short-Circuit, Temperature
Input Current Distortion	< 5%, IEEE-519 Compliant

### OUTPUT

Output Voltage	115/200 V $\pm$ 0.5%
Voltage Quality	THD $\leq$ 2%, Phase-Angle Symmetry $\pm$ 1° for 30% Unbalanced Load
Output Frequency	400 Hz $\pm$ 0.001%
Output Power	90 kVA Continuous
Overload Capacity	125% - 600s, 150% - 60s, 200% - 30s, 300% - 10s, 400% - 1s
Output Power Factor	0.7 lagging to 0.95 Leading
Protection	Overload, Short-Circuit, Interlock, Temperature

### ENVIRONMENTAL

Enclosure	NEMA 3R (IP 22)
Ambient Temperature Range	Operating: -40°C to +50°C (-40°F to +122°F)
Humidity	0% - 100%
Altitude	Up to 3,000 Meters w/o Derating

### MONITORING + CONTROLS

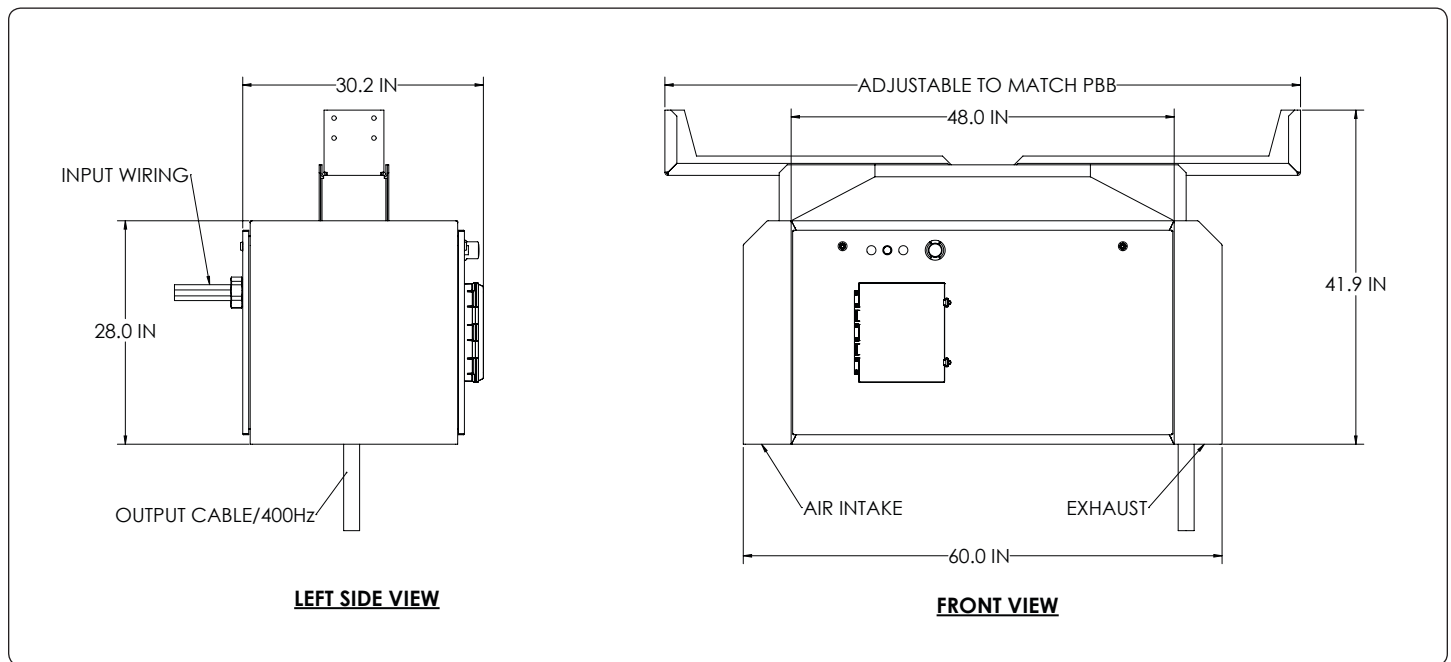
Display	10.1" TFT Display with Touchscreen
Controls	Touchscreen Interface with Standalone Push Buttons (Start   Stop   E-Stop   Output)
Monitoring	Three-Phase Input / Output Voltage, Current, and Frequency with Graphical Charts. Power Factor, Load Percentage, Fault History, and Hour Meter

### MECHANICAL

Cabinet / Frame	Steel Frame/Enclosure/Cabinet
Weight	1126 lbs
Dimensions	See Drawing Below
Finish	Paint to Customer Specification



2019 Pending



NOTE: Specifications are subject to change without notice.  
Please refer to website for the latest specifications.  
One-year warranty.  
Rev 09/18

