# Integrated Power Structures

Powerex, a world leader in power semiconductor manufacturing, offers a complete array of Standard and Application Specific Integrated Power Structures.

Standard Rectifier / Thyristor Assemblies

Powerex has developed a wide lineup of standard air or liquid cooled rectifier / thyristor assemblies in all common circuit configurations utilizing either discrete disk or isolated baseplate power semiconductors. A range of standard extrusions or copper chill blocks and clamps are used to produce a comprehensive range of assemblies rated from 100 to 6000A DC output in air cooled and 400 to 15,000A DC output when liquid cooled.
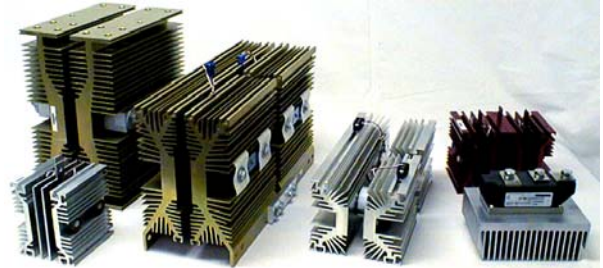
Engineered Solutions

When standard assemblies are not sufficient, the Powerex engineering team is prepared to design and manufacture power semiconductor assemblies to specific application requirements. These engineered solutions provide the optimum solution to electrical, thermal, or mechanical challenges. Beyond a heatsink engineered for the thermal requirements of the application; fuses, thermal sensors, terminal blocks, insulators, bus bars, snubbers, fans, and gate drive circuits can also be integrated into definite purpose assembly designs.
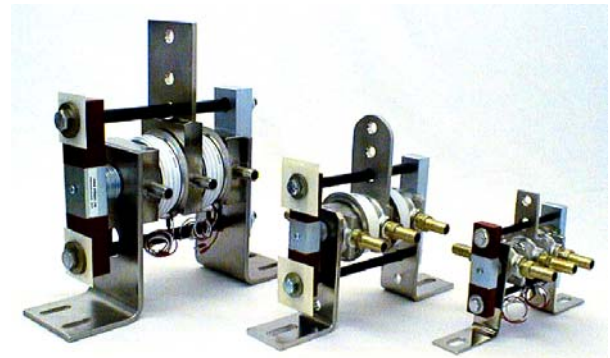
IGBT Assemblies

Powerex also produces assemblies integrating IGBT or IPM modules including the POW-R-PAK family of configurable power assemblies. The POW-R-PAK features a high performance IGBT inverter bridge with gate drive, fault detection, low inductance bus, DC link capacitor bank, and output current measurement, with an integral air or liquid cooled heatsink. The POW-R-PAK may be used as a converter, chopper, half or full bridge in a variety of power conversion applications from 25 to 1500 kW.
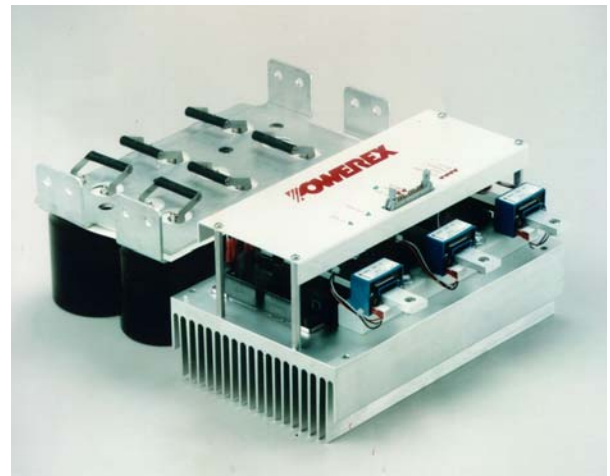
/OWEREX

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Internet: www.pwrx.com

POWEREX

Powerex Assembly Design Guide

Please fill out form and fax it back to the attention of Kelly Bandieramonte (724)925-4393

Company Name: _____

Contact: _____

Address: _____

City: _____   **State:** _____   **Zip:** _____

Fax: _____

Phone: _____

E-mail: _____

Application: _____

Voltage:

      Max Voltage: _____   **Vrms**

      Max Transient: _____   **V**

      Safety Factor _____   **%**

Current:

      Nominal Output Current

      _____ **Average**

      _____ **RMS**

      _____ **Peak**

      Duty Cycle: _____ **%**

      Overload Current _____

      Pulse Width _____

      Duration _____

Cooling Method:

☐ **Air**

      Ambient Temp. _____ **degrees C**

      Airflow _____ **CFM**

☐ **Liquid**

      Max Liquid Temp. _____ **degrees C**

      Flow Rate _____ **CPM**

Mechanical:

      Max   **Length** _____

                Width _____

                Height _____

      Mounting Method:

      ☐ **Insulated**

      ☐ **Non-Insulated**

Waveform: _____

_____

Other Comments: _____

_____

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