POWER DISTRIBUTION | TOP EXIT | EASY INSTALLATION

POWER PROTECTION

Liebert®

Top-Exit
Precision Power Center

AFFORDABLE, PACKAGED POWER MANAGEMENT FOR NETWORKS

Liebert's Top-Exit Precision Power Center (PPC) takes packaged power systems to new heights...literally. By placing the input and output conduit connections at the top of the unit, the Top-Exit PPC brings the benefits of computer room packaged power systems to non-raised floor applications. What's more, the unit retains the normal bottom output cable exit for easy relocation and expansion flexibility.

In a single cabinet, the PPC combines distribution, computer-grade grounding, isolation, and power monitoring, providing the protection your vital computer equipment demands.

- **Proven Design.** The Liebert PPC design delivers proven performance in thousands of installations.
- **Computer-Grade Grounding.** The PPC automatically establishes a single point ground.
- **Non-linear Load Compatible.** Oversized neutral components; K20 transformer option.
- **Monitoring.** Built-in metering and alarm annunciation with communication to Liebert centralized monitoring.
- **Space Savings.** Compact single cabinet conserves valuable floorspace.
- **Easy Installation.** Single input cable connection reduces installation time and cost.
- **Factory Tested.** Fully assembled and checked at the factory to assure reliable and consistent performance.
- **UL Listed as a Complete System.** Meets safety requirements for fast, hassle-free inspection and building code approvals.

FLEXIBLE, SPACE SAVING, TOP-EXIT PACKAGED POWER DISTRIBUTION FOR A VARIETY OF NON-RAISED FLOOR APPLICATIONS:

- OFFICE AREAS
- LANS
- LABORATORIES
- HIGH TECH MANUFACTURING SITES
- MEDICAL IMAGING SUITES
- GROUPED WORKSTATIONS

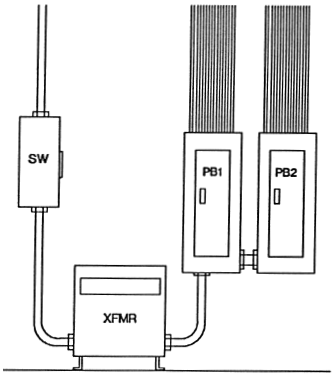
ISO 9001 CERTIFIED COMPANY

EFFECTIVE POWER DISTRIBUTION IN LESS SPACE

The packaged system approach of the Top-Exit PPC is convenient and space-saving, reducing installation time and cost compared to a conventional approach using multiple interconnected components. The PPC is built on a proven system design, and unlike the one-of-a-kind built-up approach constructed at the site, the PPC undergoes thorough factory testing and is UL listed as a complete system.

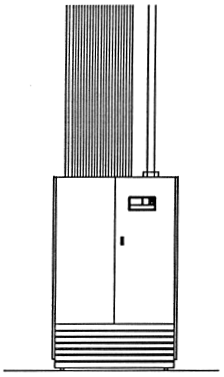
Power Quality Improvement. Precision Power Centers (PPCs) offer higher quality electrical power for a variety of reasons:

- PPCs are designed to be compatible with non-linear loads of modern electronic systems.
- The main input breaker with low voltage shunt trip accessory provides primary transformer overcurrent protection, a power disconnecting means, and a method to interface with shutdown controls.
- A double-shielded isolation transformer located close to the load provides superior noise attenuation.
- Supplemental transformer protection is provided by temperature sensors in each winding to alarm abnormally high winding temperature or shutdown unit before insulation damage.
- Single-Point ground meets major manufacturers' recommendations and the requirements of the National Electric Code.
- One or more, individually enclosed 42 pole output panelboards with panelboard main breaker and individual isolated neutral and ground busbars distribute power to the sensitive load.
- At least 42 output conduit landings are provided for each output panelboard to accommodate the large number of dedicated branch circuits recommended for sensitive electronic loads.
- Oversized neutral components safely withstand neutral currents of at least 1.73 times full load currents.
- System shutdown controls, including manual restart, overtemp shutdown, and emergency power off, are included.



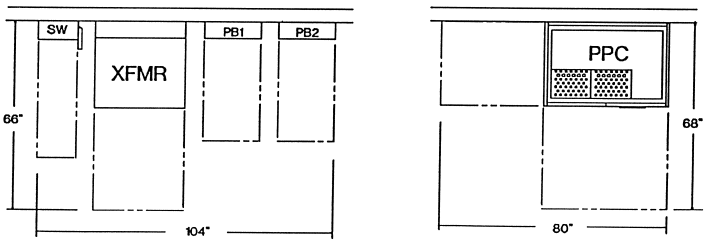
Conventional System

A conventional power distribution system constructed at the site typically requires more wiring and connection materials, more components, and greater service clearance. The result is a longer installation time and a larger installed footprint.



Top Exit PPC

The Liebert packaged approach combines power grounding, isolation and distribution in an easily installed system. A single power connection to the building wiring simplifies hook-up and reduces installation time. A choice of service access allows greater location flexibility and smaller installed footprint.



Conventional System = 47.7 Sq. Ft.

PPC = 37.8 Sq. Ft.

Installed Footprint Comparison

ALL-IN-ONE POWER SYSTEM AT AN AFFORDABLE PRICE

DESIRABLE FEATURES	*CONVENTIONAL BUILT-UP SYSTEMS*	*LIEBERT PACKAGED POWER SYSTEM*
Proven System Design	**No.** Each site is a one-of-a-kind installation. "Design" depends on engineer and installer.	**Yes!** Liebert power systems are complete, proven-design, factory tested to ensure consistent performance.
Agency Approved	**Not as a system.** Although listed components may be used, site-fabricated distribution is subject to acceptance by local inspecting authorities.	**Yes!** UL listing as a complete system is an assurance of safety and provides fast, hassle-free inspections and building code approvals.
Computer-Grade Grounding	**Difficult.** Since site-fabricated distribution seldom includes an isolation transformer close to the load, a local single-point ground system which minimizes common mode disturbances is difficult to establish.	**Yes!** The isolation transformer automatically establishes a local single-point ground for the electronic load. Plus, the double shielded transformer provides superior noise rejection.
Monitoring	**Seldom.** Some add-on monitoring systems are available, but monitoring also depends on the installing electrician and available information.	**Yes!** Built-in power parameter monitoring, alarm, and control capabilities are standard in packaged power systems.
Easy Installation	**No.** Various components must be mounted and connected together with increased installation time and floorspace.	**Yes!** A complete power system in a single, free-standing enclosure with a single input connection. What's more, the unit can be easily relocated to protect your investment.

Comprehensive Power Monitoring. Monitors and displays all input and output voltages; output currents; kVA; kW; power factor; frequency; and percent load. Alarms are also provided for out-of-spec conditions to alert operating personnel.

The integral power monitoring panel provides comprehensive metering and alarms for system power parameters. Monitoring features include: • True RMS Measurements • Autoscan of all parameters • Adjustable alarm thresholds • Programmable custom alarms • Battery-backed alarm memory • Summary alarm contact

Central Monitoring Interface to Liebert's SiteScan centralized monitoring equipment, allows single point monitoring and alarm of power conditions. These microprocessor-based systems provide historical data on power conditions for future requirement planning and troubleshooting.

Optional System Enhancements. A host of options enable you to design the Liebert packaged power system to your exact needs:

- Optional Transient Voltage Surge Suppression (TVSS) is available for increased protection from damaging voltage surges. Very short interconnecting wiring provides superior surge clamping performance.
- Optional K20 Transformer safely withstands high harmonic currents associated with electronic loads without derating.
- Optional Dual-Output Transformer with two three-phase outputs, phase-shifted by 30° provides cancellation of harmonic load currents.

Liebert Customer Service & Support. One call to 1-800-LIEBERT puts you in touch with a qualified service representative 24 hours a day. Service engineers are factory trained and equipped with the tools and knowledge to respond to any service problem quickly.

Liebert®

Specifications

kVA	Model	Input Volts*	MICB Amps	Panelboards** No.	Panelboards** Poles	Dimensions** Inches Width	Depth	Height	Weight lbs.	Heat Output BTU/Hr
15	PPA015C	480	20	1	42	32	32	68	600	2,500
	PPC015C	208	60	1	42	32	32	68	600	2,500
30	PPA030C	480	50	1	42	32	32	68	750	4,600
	PPC030C	208	110	1	42	32	32	68	750	4,600
50	PPA050C	480	80	2	84	44	32	68	900	6,200
	PPC050C	208	200	2	84	44	32	68	900	6,200
75	PPA075C	480	125	2	84	44	32	68	1100	8,150
	PPC075C	208	300	2	84	44	32	68	1100	8,150
100	PPA100C	480	175	2	84	44	32	68	1325	9,900
	PPC100C	208	400	2	84	44	32	68	1325	9,900
125	PPA125C	480	200	2	84	44	32	68	1500	11,500
	PPC125C	208	500	2	84	44	32	68	1500	11,500
150	PPA150C	480	250	2	84	44	32	68	1750	12,500
	PPC150C	208	600	2	84	44	32	68	1750	12,500

The standard output voltage is 208/120 volts, 60Hz. Other voltages and frequencies are available upon request.

* Consult factory for other available capacities or voltages not shown.

** Standard number of panelboards as shown. Additional panelboards are optional and increase unit width as follows: 84 pole units are 44" wide; 126 pole units are 62" wide.

General Specifications

kVA: 15-150, 3-phase

INPUT
3-phase, 3 wire plus ground 208, 240, 480, or 600 volts; 60 Hz. 208, 380, or 415; 50 Hz.

OUTPUT
3-phase, 4 wire plus ground 120/208 volts; 60 Hz. 120/208, 220/380, or 240/415 volts; 50 Hz.

Transformer: Double-shielded, all copper windings. Class H insulation.

Voltage Adjustments: -10% to +5% of nominal in 2.5% increments.

Noise Attenuation: 120 dB

Efficiency: 97% minimum

Ground: Single-point reference on separately derived system.

Shielding: Electrostatic

Distribution: Individually protected 225 Amp panelboards with plug-in or bolt-on breakers.

Cooling System: Convection

Monitored Parameters: Input and output voltages; Output, neutral and ground currents; Output power; Power factor; Percent load; and Frequency.

Alarm Conditions: Output over- and under-voltages; output overload; neutral and ground over currents; transformer over temperature; frequency deviation; phase sequence error; phase loss; and five user-specified alarm conditions.

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SL-20426 (9/95) Printed in U.S.A.