

# AC Power Portfolio

## Three-Phase UPS

10 KVA to 1600 KVA



# Three-Phase UPS Portfolio

- Transformer free modular
- Transformer free monolithic



Liebert®  
Trinergy™ Cube



Highest efficiency, Trinergy™ Control, Dynamic Online mode, Circular Redundancy

200, 400, 600, 800, 1000, 1200, 1400, 1600 kVA

400, 800, 1200, 1600, 2000, 2400, ... 3400 kVA

Liebert® APM



Hot scalable, Hot swappable, 150 kW UPS up to 2.4 MW  
High efficiency, ECO mode

30, 60, 90, 120, 150, 180, 210, 240, 270, 300 kVA

50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600 kVA



Liebert® EXL S1



Distributed and Centralized Static Switch  
High efficiency, Dynamic Online mode, ECO mode, Intelligent Paralleling, 80-NET compatible

100, 120, 160, 200, 300, 400, 500, 600, 800, 1000, 1200 kVA

Liebert® EXS

10, 15, 20, 30, 40, 60, 80 kVA



Integrated batteries, flexible design  
 High efficiency, ECO mode

Liebert® EXM

80, 100, 120, 160, 200 kVA



Maintenance and full switch version  
High efficiency, ECO mode

Liebert® ITA2

10-20 kVA



Flexible power protection for rack or tower installation

High efficiency, ECO mode

Liebert® ITA

30-40 kVA



Flexible power protection for rack or tower installation

10 20 40 120 160 200 300 400 600 1200 3400

# Vertiv™ LIFE™ Services

Remote Diagnostic and Preventive Monitoring.



## Uptime Assurance

24x7 alarm monitoring; Early warning



## Proactive Analysis

Data trend analysis; Recommended actions



## Comprehensive Report



## Minimized TCO

Extended equipment life



## First Time Fix

Remote troubleshooting before going on site  
Required parts identified before going on site

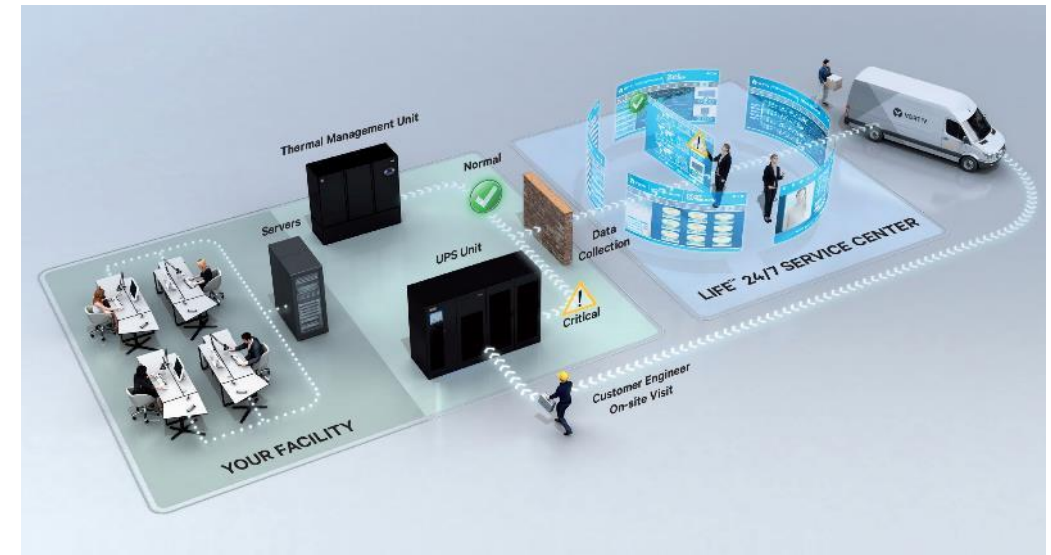


## Fast Incident Response

Real time call in case of emergency



**10,000+** UPS remotely monitored



# Liebert® ITA 30-40 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 95% Efficient in Online Mode (Double conversion)</li><li>• Up to 98.5% Efficient in ECO Mode</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 30 &amp; 40 kVA</li><li>• Output PF of 0.9</li><li>• 3/3 phase configurability</li><li>• Parallelable up to 4* units</li><li>• Integrated Parallel function</li><li>• Highest power density</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Unity Card compatible</li><li>• IS-Relay Card compatible</li><li>• SIC SNMP and MODBUS card support</li><li>• Intellislot option available</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• 12% more active power than conventional UPS</li><li>• High Battery Charger Current 13 A (10-40 kVA) and 25 A (60 kVA)</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Light Weight</li><li>• Small Footprint</li><li>• Rear Cable Entry</li><li>• Input PF &gt;99%, THDi ≤4%(Linear full load) &amp; THDi ≤6% for non-linear full load</li></ul>



# Liebert® EXS 10-60 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 96.2% Efficient in Double Conversion Mode</li><li>• Up to 99% Efficient in ECO Mode</li><li>• 3-Level T-Free Inverter/Rectifier</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 10, 15, 20, 30, 40, 60 kVA</li><li>• Unity Output PF</li><li>• 3/1 configuration available (10-20kVA)</li><li>• Parallelable up to 4 units</li><li>• Integrated Parallel and Dual Bus function</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Unity Card compatible</li><li>• IS-Relay Card compatible</li><li>• Supported by LIFE™ Services</li><li>• Dual intellislot option available</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Leading Power Factor Support (0.5 leading - 0.5 lagging)</li><li>• Battery Charger Current 13 A (10-40 kVA) and 25 A (60 kVA)</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Light Weight</li><li>• Small Footprint</li><li>• Integrated Runtime Option</li><li>• Top Cable Entry</li><li>• Input PF &gt;99%, THDi ≤3%</li></ul>



# Liebert® EXM 80-200 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 96% Efficient in Double Conversion Mode</li><li>• Up to 99% Efficient in ECO Mode</li><li>• 3-Level T-Free Inverter/Rectifier</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 80-200 kVA/kW</li><li>• Unity Output PF up to 30°C</li><li>• Distributed Parallel System</li><li>• Parallelable up to 4 units</li><li>• Integrated Dual Bus function</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Unity Card compatible</li><li>• IS-Relay Card compatible</li><li>• Supported by LIFE™ Services</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Leading Power Factor Support (0.8 leading - 0.7 lagging)</li><li>• Battery Charger Power 12-18-24-30 kW</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Light Weight</li><li>• Optional Front-Top Ventilation</li><li>• Bottom Cable Entry</li><li>• Input PF &gt;99%, THDi ≤3%</li><li>• Galvanic Transformer Option</li></ul>



# Liebert® EXL S1 300-1200 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 99% efficiency without sacrificing availability with Dynamic Online mode</li><li>• Up to 96,8% Efficient in Double Conversion Mode</li><li>• Over 99% Efficient in ECO Mode</li><li>• 3-Level Inverter/Rectifier</li><li>• Intelligent Paralleling Mode for Maximum Energy Saving with Fast Transfer</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 300-1200 kVA/kW</li><li>• Unity Output PF up to 35°C</li><li>• Centralized and Distributed Parallel Systems</li><li>• Parallelable up to 8 units</li><li>• Backward Compatible with 80-NET</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Large, Intuitive 10.4" Full Color touchscreen HMI</li><li>• Unity Card compatible</li><li>• Trellis Ready</li><li>• Natively supported by LIFE™ Services</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Short Circuit Withstand up to 100kA</li><li>• Leading Power Factor Support (Symmetrical Output PF)</li><li>• Seismic Compliant</li><li>• Family proven track record (10000+ units)</li><li>• 6 nines - Reliability figure from field</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Small Footprint, Light Weight</li><li>• Top and Bottom Cable Entry</li><li>• Input PF &gt;99%, THDi ≤3%</li><li>• 400V, 480V, 3- and 4-wire design</li></ul>





# Liebert® Trinergy™ Cube 200-3400 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 99% efficiency without sacrificing availability with Dynamic Online mode</li><li>• Up to 96.8% efficient in Double Conversion Mode</li><li>• Over 99% efficient in ECO Mode</li><li>• Up to 98.5% average operating Efficiency</li><li>• 3-Level Inverter/Rectifier</li><li>• Circular Redundancy Mode for Maximum Energy Saving with Fast Transfer</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 200-3400 kVA/kW</li><li>• Unity Output PF up to 55°C</li><li>• Single Module and Distributed Parallel Systems</li><li>• Parallelable up to 8 units</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Large, Intuitive 12" Full Color touchscreen HMI</li><li>• Trellis Ready</li><li>• Natively supported by LIFE™ Services</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• N+1 internal redundancy</li><li>• Hot scalability and hot maintenance</li><li>• Short Circuit Withstand 100kA standard</li><li>• Leading Power Factor Support (Symmetrical Output PF)</li><li>• Seismic Certified</li><li>• Family proven track record (700+ MW)</li><li>• 6 nines - Reliability figure from field</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Top and Bottom Cable Entry</li><li>• Input PF &gt;99%, THDi ≤3%</li><li>• 400V, 3- and 4-wire design</li></ul>





# Liebert® Hipulse-U 30-500 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 93% Efficient at 100% Load</li><li>• Transformer and SCR based UPS</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• Available in 30, 40, 60,80, 120, 160, 200, 300, 400, 500 kVA</li><li>• Rated at 0.9 output power factor</li><li>• Wide input operating voltage : 290-498 VAC</li><li>• 1+N system: Built in Parallel board</li><li>• Upto 6 UPS parallelable</li><li>• Built-in Dual bus function</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• 2 Independent intellislots to achieve multi channel highway</li><li>• Relay card compatible</li><li>• SNMP Web card compatible</li><li>• MODBUS/ JBUS card compatible</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Handles leading power factor loads without derating under specified conditions</li><li>• Flexi Power walking</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Bottom cable entry</li></ul>



# Liebert® APM 30-150/300 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 96% Efficient in Double Conversion Mode</li><li>• Up to 98% Efficient in ECO Mode</li><li>• 3-Level T-Free Inverter/Rectifier</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 30-150/300 kVA/kW</li><li>• Unity Output PF up to 30°C</li><li>• Distributed Parallel System</li><li>• Parallelable up to 2/4 units</li><li>• Integrated Parallel and Dual Bus function</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Unity Card compatible</li><li>• IS-Relay Card compatible</li><li>• Supported by LIFE™ Services</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Symmetrical Power Factor (0.5 leading - 0.5 lagging)</li><li>• Battery Charger Power 4.5 kW per module</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Integrated Runtime Option</li><li>• Two Cabinet size available</li><li>• Optional Front-Top Ventilation</li><li>• Hot-Swappable modules</li><li>• Input PF &gt;99%, THDi ≤3%</li><li>• Distributed Intelligence</li><li>• N+1 Internal Redundancy</li></ul>



# Liebert® APM 50-250/400/600 kVA

<b>Operational Efficiency</b>	<ul style="list-style-type: none"><li>• Up to 96,3% Efficient in Double Conversion Mode</li><li>• Up to 99% Efficient in ECO Mode</li><li>• 3-Level T-Free Inverter/Rectifier</li></ul>
<b>Capacity Ratings</b>	<ul style="list-style-type: none"><li>• 50-250/400/600 kVA/kW</li><li>• Unity Output PF</li><li>• Distributed Parallel Systems</li><li>• Parallelable up to 4 units</li><li>• Integrated Parallel and Dual Bus function</li></ul>
<b>Information and Control</b>	<ul style="list-style-type: none"><li>• Unity Card compatible</li><li>• IS-Relay Card compatible</li><li>• Supported by LIFE™ Services</li><li>• Compatible with Vertiv monitoring offering</li></ul>
<b>Robust Design</b>	<ul style="list-style-type: none"><li>• Symmetrical Power Factor (0.5 leading - 0.5 lagging)</li><li>• Battery Charger Power 7.5 kW per module</li></ul>
<b>Infrastructure Optimization</b>	<ul style="list-style-type: none"><li>• Two Cabinet size available</li><li>• Hot-Swappable modules</li><li>• Hot-swappable static bypass</li><li>• Input PF &gt;99%, THDi ≤3%</li><li>• Distributed Intelligence</li><li>• N+1 Internal Redundancy</li></ul>





## **GMDT MARINE & INDUSTRIAL ENGINEERING PVT. LTD.**

(AN ISO 9001:2015 CERTIFIED COMPANY)

**Office: 501, JAI HIND – HN SAFAL, Besides New York Tower, Thaltej Cross Roads, S. G. Highway, Ahmedabad, Gujarat , INDIA-380054.**

**Mobile: +91-9909939826 / +91-9427187035**

**Email: [info@gmdtengineering.com](mailto:info@gmdtengineering.com), [gmdt@gmdtengineering.com](mailto:gmdt@gmdtengineering.com)**

**Website: [www.gmdtengineering.com](http://www.gmdtengineering.com)**

