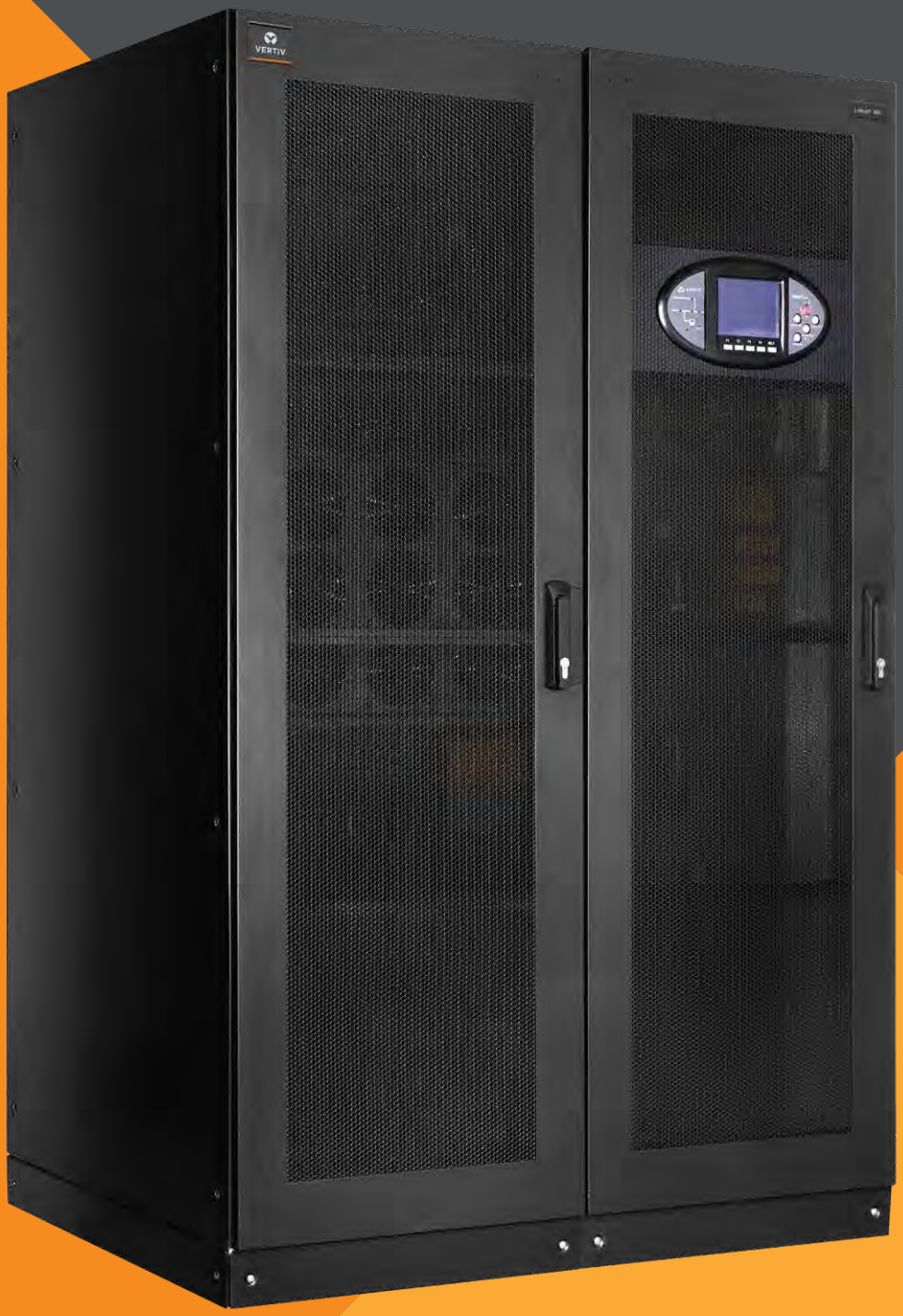
ИБП Liebert NX (250-1000 кВА) - брошюра на продукцию. Юниджет

Постоянная ссылка на страницу: https://www.uni-jet.com/catalog/ibp/on-line-ibp/liebert-nx/

VERTIV™

Liebert® NX™

250kVA - 1000kVA
Transformer-free. High Efficiency,
Scalable On-line UPS



Liebert® NX™

250kVA - 1000kVA

Transformer-free. High Efficiency, Scalable On-line UPS

Facility managers continue to face the increasing outlay of energy consumption and the call for greener means of operating the facility. Today, going into energy-efficient options and generating less CO_2 in every possible way can no longer be overlooked .

Introducing the Liebert® NX™ 250-1000kVA, a next generation three phase UPS solution from Vertiv

The Liebert® NX™ delivers the best combination of availability, reliability and energy-efficiency. It presents an industry-leading features such as intelligent energy management that promotes efficient energy measures in the infrastructure and outstanding power protection technology that is designed to use optimum energy, generate less CO_2 and occupy optimum footprint in order to provide significant cost savings.

The Liebert® NX™ is equipped with transformer free design with full IGBT double conversion technology that enables extraordinary savings on installation and operating expense ate same time delivering high quality protection to your critical load.

Liebert® NX™ UPS delivers Efficiency Without compromise

Efficiency Without Compromise provides a path to optimize data center infrastructure around design, operating and management efficiencies - while maintaining or improving availability.

ECO AVAILABILITY
Balancing high levels of availability and efficiency

High DENSITY
Delivering high power in lowest footprint

FLEX CAPACITY
Adapting to IT changes for continuous optimization and design flexibility

INFRASTRUCTURE MANAGEMENT
Improving performance of the IT infrastructure and environment

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Key Features

- Overall efficiency up to 99.3% in Intelligent ECO mode
- Supports smart parallel function
- Input power factor >0.99
- Input current distortion (THDi) <3%
- Excellent generator adaptability
- Widest input voltage & frequency range
- Battery ground fault detection
- Strong 0 .9 output PF loading capacity

Easy Installation

- Suitable for top & bottom cable termination No need for additional space / cabinet
- User friendly multi-lingual intuitive large LCD HMI
- Standard built in LBS function

Maintenance-Free

- Front access
- Low MTTR due to granular design architecture
- Built in static & maintenance bypass
- Standard built-in D class lighting protection
- Longer battery life through smart battery management

Liebert® NX™ application areas:

- IT Loads
- Data Centers
- Manufacturing Industries
- Process Industries
- Telecom

1. **High Efficiency**
   Efficiency up to 95.5% in online mode and up to 99.3% in Intelligent ECO mode deliver remarkable OPEX saving

2. **Advanced IGBT based, multilevel rectifier & inverter technology**
   Supplies clean, stable power to sensitive loads ensuring critical power protection and extended life

3. **Dual source**
   Provide connection to two separate input sources for increased availability

4. **Built-in static and maintenance bypass**
   Enables the UPS unit to transfer the load to utility power, without interruption, in the event of heavy overload or fault.

5. **Standard builtin LBS and parallel function**
   It allows easy expansion of redundant architecture by adding a cable between connection

6. **Compact footprint and front access**
   “Most compact UPS in its range”,optimised footprint allows significant space cost saving with easy to access & commission at site

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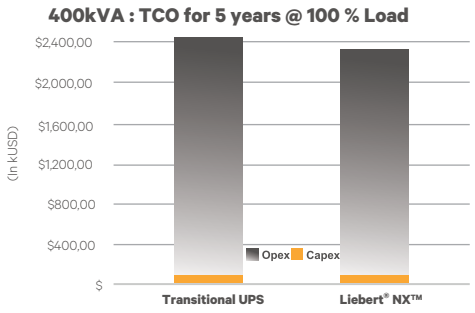
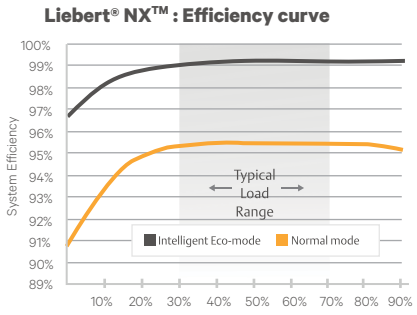
High Efficiency and Minimum Total Cost of Ownership (TCO)

Driven by advanced transformer free design and 6th generation DSP control technology, delivers high efficiency at partial and rated loads (up to 99.3% in Intelligent ECO mode). This level of efficiency can significantly reduces the TCO level of the UPS during its life cycle.

The Liebert® NX™ powered by the advanced intelligent core which continuously monitor the input parameters of utility to decide the best operating mode of operation. Intelligent core accords first priority to source reliability followed by energy efficiency and so on, in order to deliver the best performance at minimum TCO.





*Assumed Average capex

*Opex calculated consider Brand A Avg η@ 93% and Liebert® NX™ η@ 95.3%

Typical Saving Chart

*All figures in USD

Rating (kVA)	Brand A Avg. @93%	Liebert NX Avg. @95.3%	Annual Energy Cost Saving	Annual Air Con. Saving	Total Annual Saving	Saving @10Years
250	$211,935	$206,820	$5,114	$2,192	$7,307	$73,070
300	$254,322	$248,184	$6,137	$2,630	$8,768	$87,684
400	$339,096	$330 ,912	$8,183	$3,507	$11,691	$116,912
500	$423 ,870	$413,641	$10,229	$4,384	$14,614	$146,140
600	$508,645	$496,369	$12,275	$5,261	$17,536	$175,368
800	$678,193	$661,825	$16,367	$7,014	$23,382	$233,824
1000	$847,741	$827,282	$20,459	$8,768	$29,228	$292,280

*Note: Calculation Based on 0.9PF and $ 0.10/kWHr

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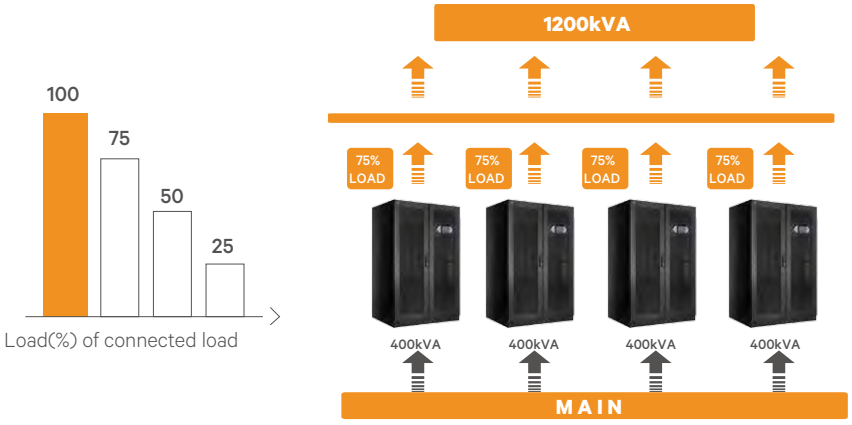
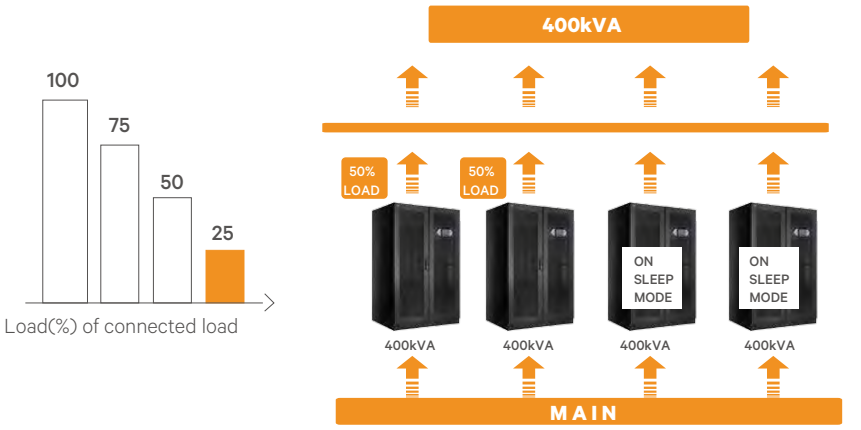
Scenario 1 - Full capacity in (n+1) configuration



All system working and sharing load @ 75% of its capacity

Scenario 2 -DCM mode with reduced load



Only 2 system working and sharingthe load @ 50% ensuring highest efficiency operating band

Dynamic Capacity Modulation

Liebert® NX™ can be operated in single or in parallel system operation to improve the power availability, and to increase the system capacity and redundancy.

- In a 1+N system , if the load is much less than the connected UPS units, one or more UPS units will turn to sleep mode.
- Customer Benefit : Improves efficiency without compromising availability
- Load profiling (weekly or monthly) to learn the off-peak times and adaptive ly schedule modules to take off-line
- Track each modules off-line hours and schedule other modules to be off-line to distribute the operating hours to all modules

This Scalable architecture keeps the purchasing and operating expense exceptionally low.

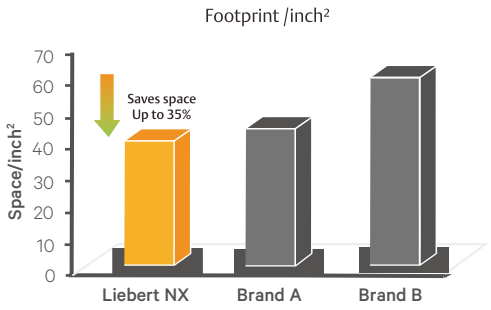
Compact foot print

Scores of market survey have shown that the issue of space requirements in deploying IT infrastructure is very crucial parameter.

Liebert® NX™ bring a new paradigm to the field of power protection with truly compact high power UPS . It delivers maximum power by deploying the smallest footprint available in the industry in its power range

Liebert® NX™ 400kVA delivers extremely high power density with 250 kVA/m2 ,thanks to its advanced gradual design which sequentially not only saves space but also optimizes UPS weight & MTTR.

Effectively, Liebert® NX™ 400kVA saves up to 35% space compared to its nearest competitor .



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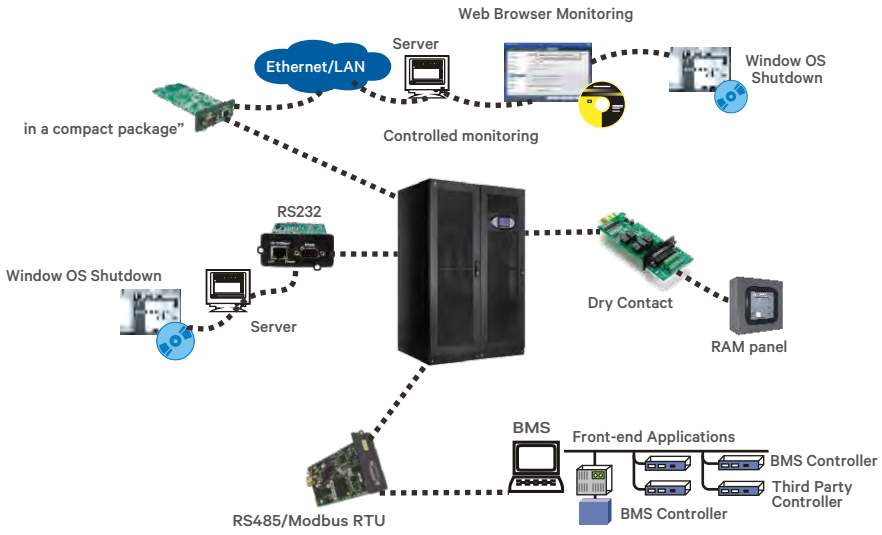
Communication Option

Liebert® NX™ is equipped with aray of interface options that enable users to monitor event notification, status, indication , control & firmware up-gradation locally & remotely.

The interfaces Options are:

- RS 232 for maintenance in parameter setting
- Potential free contacts
- RS 485 for MODBUS/JBUS interface
- Ethernet connectivity for LAN/WAN monitoring
- Auto shutdown software
- Remote monitoring & management software



Liebert® NX™ : Customer Value Matrix	Total Cost of Ownership	Highest Availability	Higher Performance & Flexiblity	Improved Manageability	Extra Value Delivered
Ultra High Efficiency	✓				✓
Smallest Footprint	✓		✓		✓
Wide Input Voltage Range	✓	✓	✓		✓
Wide Input Frequency Range	✓	✓	✓		✓
IGBT Rectifier & Inverter		✓	✓		✓
Dual Bus Ready		✓	✓	✓	✓
Top & bottom cable termination	✓		✓		✓
Advanced Microprocessor	✓	✓	✓	✓	✓
Low THDi & THDv (<3%)	✓	✓	✓		✓
High Input & Output PF	✓	✓	✓		✓
Parallel-able		✓	✓		✓
Full Digital Control	✓	✓	✓		✓
Advanced Battery Management System	✓	✓	✓	✓	✓
24X7 Services	✓			✓	✓

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Specifications

Nominal Ratings	250	300	400	500	600	800	1000
Input							
Nominal input voltage	380/400/415Vac, 3-phase 4-wire						
Input voltage range	325 to 478Vac						
Nominal input frequency	50/60Hz						
Input frequency range	40-70Hz						
Input current distortion (THDi)	±3%						
Input power factor	=0.99						
DC Feature							
Number of battery blocks/string	38 to 48 no. for 250-500 ; 40 no. for 600-1000						
DC ripple voltage	±1%						
Output							
Nominal output voltage	380/400/415Vac, 3-phase 4-wire						
Output power factor	0.9						
Voltage regulation	<1 typical (Steady state); <5% typical value(Transient state)						
Transient response time	<20ms						
Phase voltage symmetry with balance load	+/- 1 degree						
Phase voltage symmetry with 100% unbalanced load	+/-1.5 degree						
THDv	<2% (100% linear load); <5% (100% nonlinear load)						
Bypass							
Bypass input voltage	380/400/415Vac, 3-phase 4-wire						
Bypass voltage range	-20% ~ +15%, other values settable through software						
Dimensions and weight							
Width (mm)	1200				2400		3600
Depth x Height (mm)	900 X 1900						
Weight (kg)	850		900	1200	1850	1950	2780
System							
Frequency precision (internal clock)	±0.05%						
System efficiency (in Intelligent ECO mode)	Up to 99%						
General							
Operating temperature	0 ~ 40 °C						
Storage temperature	-25 ~ 70 °C (with battery)						
Relative Humidity	0 ~ 95%, without condensation						
Max operation altitude	=1000m above sea level						
Noise (1m)	<74db			<76db			<80db
IP degree oprtection	IP20						
Standard	Compatible safety standard: C62040-1, UI1778, IEC60950-1, IE Electromagnetic compatibility IEC62040-2, Design and test IEC62040-3						

*250kVA and 500kVA System can be upgraded to 300kVA AND 600kVA to meet higher apparent power @ 0.8 PF while retaining other unchanged,
Please contact VERTIV representative for further details.
Note: Specification are subject to change without any prior notification.

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