



VERTIV™



PRASA

Liebert®

RG

40 – 250kVA

Green Power UPS Solution for  
Regenerative Load Applications



For the regulated power requirement, most of the CNC machines depend upon various power conditioners. However, these power conditioners are not sufficient to address the critical power requirement of CNC machine. The Liebert® RG UPS offers regulated power, along with continuity and it also addresses the regenerative braking issues, thanks to its revolutionary design.

In the operation of CNC machine, whenever regenerative braking occurs (faster deceleration of the motor speed or speed reversal) momentarily, the motor acts as a generator. This causes the current to flow in reverse direction, that is back to the utility lines, through the power conditioner.

For the conventional UPS, this regenerative power will increase its DC bus voltage which causes the UPS tripping due to DC over voltage condition. In some cases it might damage the DC capacitors. Liebert® RG UPS allows this regenerative power to flow back smoothly to the utility without causing any interruptions or damages to the UPS as well as other connected load.

Liebert® RG UPS guarantees continuous, reliable and trouble free operation of CNC machine. Thereby decreasing the production losses, and increasing profitability.

## APPLICATIONS

- Double conversion online UPS
- Four quadrant IGBT PWM rectifiers
- Suitable for Regenerative Load
- Unity power factor
- Low input THDi
- State of the art digital control
- In-built isolation transformers
- Advance communication capabilities
- Compliance to international standards Telecommunication



## Technical Specifications

SPECIFICATIONS	
<b>Rating</b>	40, 60, 80, 120, 160, 200, 250kVA
<b>INPUT</b>	
Rectifier Design	Four Quadrant IGBT based PWM rectifier
Nominal Voltage	415V AC (-20% to + 15%) 3Ph & N
Nominal Frequency	50Hz (±10%) (60Hz optional)
Input Power Factor	≥ 0.99
Input Current Harmonics	≤ 3% <sup>(1)</sup>
<b>BATTERY</b>	
Battery Voltage	576V DC
<b>OUTPUT</b>	
Inverter Design	IGBT based PWM with Digital control
Voltage	400V AC (380/415, selectable) 3Ph & N
Regulation	±1% for balanced load, ±2% for 100% unbalanced load
Phase Displacement	<1° for balanced load, <2° for 100% unbalanced load
Frequency	50Hz (±0.1Hz) in free running mode, (±2.5Hz) in synchronous mode (60Hz optional)
Waveform	True Sinewave
Total Harmonic Distortion	<2% on linear load & <5% on non-linear load (Ref. IEC 62040-3)
Crest Factor	3:1
Overload Capacity	125% for 10min; 150% for 60sec. (Inverse time characteristics)
Dynamic Reponse	Complies to IEC 62040-3, Class 1
Duty	Continuous
<b>ENVIRONMENTAL</b>	
Operating Temperature	0 to 40°C
Relative Humidity	Up to 90% (non condensing)
Altitude	< 1000 meter, above sea level (without derating)
<b>PHYSICAL</b>	
Enclosure Protection	IP - 20
Cooling	Forced air
Colour	RAL 7021
Cable Entry	Bottom
<b>TESTING STANDARDS</b>	IEC 62040-3

  

Rating (in kVA)	40	60	80	120	160	200	250
Acoustic Noise <sup>(2)</sup>	<64 dBA	<68 dBA		<70 dBA		<72 dBA	
Overall Efficiency <sup>(3)</sup>	upto 90%	upto 91%			upto 92%		
Width (in mm) <sup>(4)</sup>	600	1000	1000	1200	1400	1400	R-1000 & I-1400
Depth (in mm)	900	900	900	900	1000	1000	1000
Height (in mm)	1335	1750	1750	1850	2000	2000	2000
Approx. Weith (in kg)	500	875	875	950	1300	1300	R-800 & I-1050

(1) At nominal input voltage & at 50 to 100% load condition

(2) Acoustic Noise measure @ 1.0 meter (Ref. ISO 3746)

(3) For Tolerance see IEC 60146-1-1

(4) R - Rectifier, I-Inverter cubicle

Specification subject to change without prior notice



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**Prasa Infocom & Power Solutions Pvt. Ltd.**

 [www.prasa-pl.com](http://www.prasa-pl.com)  [enquiry@prasa-pl.com](mailto:enquiry@prasa-pl.com)

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