



Vault Series True On-Line Uninterruptible Power Supplies

700VA to 3000VA



Tower Models



1U & 2U Rack-Tower Models



**3-YEAR
LIMITED WARRANTY**

Description

The Vault series is our latest, state-of-the art range. Featuring true on-line, double-conversion technology with power factor correction, they are ideal for the most critical and sensitive applications where the best level of power protection is required. Connected equipment is not only immune to even the slightest power fluctuations, but is also protected from other power anomalies such as spikes, surges, noise, extended under- and over-voltages, harmonics and frequency variations.

An extremely wide input voltage tolerance (up to +/- 40%) and an output voltage regulation of within +/- 2% make the Vault one of the most flexible and technologically-advanced UPS's on the market. Aside from the traditional Tower form-factor, they're also available in 1U or 2U Rack-Tower configurations.

Usual features such as UPS & power-monitoring software, integral auto-bypass, 'hot-swappable' batteries, various communication options, extended run-time capability, cold-start, advanced battery management and microprocessor control, are all standard. However, a host of unique features and options bring some exclusivity to the series. They include a High Efficiency & Free-run mode, an EPO (Emergency Power Off) port and load segmentation control.

The units also feature a unique, user-friendly and interactive, multi-function LCD panel that not only displays various UPS and related parameters, but allows the user to check, test and change settings such as output voltage, input and bypass modes from the front panel while the unit is on line. Matching external battery packs allow for extended backup-time applications.

We go the *d i s t a n c e* for you.

Features & Benefits

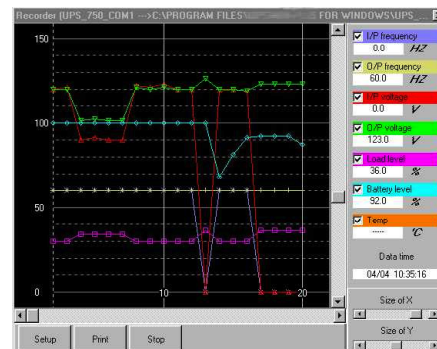
- True on-line double conversion topology
- True sine-wave output with less than 3% THD
- Output voltage regulation to within +/- 2%
- Multi-function, interactive control panel & LCD display
- High Efficiency (HE) & Free-run mode
- EPO (Emergency Power Off) port
- Power monitoring & UPS control software
- RS-232 & USB communication interface
- Input power factor correction & bypass mode
- "Cold Start" power-up & 'Gen-Set compatibility' mode
- External battery pack connector (for matching EBP's)
- Optional SNMP & AS-400 dry-contact card slot
- "Hot-swappable" battery modules
- 50/60Hz frequency auto-sensing (or free-run)
- Overload & short-circuit protection
- LED indicators & programmable audible alarms
- AC and network (RJ-45) surge protection
- Remaining back-up time & battery charge display
- Automatic & manual self-test and diagnostic modes
- Low-profile (1U & 2U) rack-tower configuration



Vault RT Rear (2U) 700 - 3000VA

Power Monitoring & UPS Control Software

1. Advises on UPS status & monitors power disturbances
2. Indicates battery level, utilized capacity, voltage, frequency
3. Allows manual or automatic controlled shutdown
4. Allows the auto test sequence to be initiated
5. Provides real-time graphic displays of the above



UPS Software - PQ Data Screen

Applications

- Medical & healthcare equipment
- High-end and high-density servers & workstations
- Wireless, cellular & telecommunications equipment
- Networking, VoIP & data-processing equipment
- Process control and automatic test stations
- OEM (Original Equipment Manufacturer)
- Lab, test and measurement equipment
- Commercial & industrial automation
- Security and banking systems
- Lighting controls

Agency Standards & Compliance

- UL 1778, cUL Listed, CE on 220V models
- FCC Compliant
- ISO 9001 Certified



Warranty

- 3-year warranty on parts & labor, 2-year on battery (Optional extension to 6 years)
- Connected equipment warranty: \$100,000 all models
Please see complete warranty for details

Back-Up Times for Standard Models (In Minutes)

Configuration VA/Watts	Tower and 2U 19" Rack-Tower Models					1U 19" Rack-Tower Models	
	700VA	1000VA	1500VA	2000VA	3000VA	700VA	1000VA
250/175	28	39	60	89	100	21	29
500/350	12	16	30	49	67	9	12
700/490	7	9	17	35	48	5	7
1000/700	-----	5	11	19	32	-----	4
1250/875	-----	-----	9	14	23	-----	-----
1500/1050	-----	-----	6	11	17	-----	-----
1750/1225	-----	-----	-----	8	13	-----	-----
2000/1400	-----	-----	-----	5	10	-----	-----
2500/1750	-----	-----	-----	-----	7	-----	-----
3000/2100	-----	-----	-----	-----	5	-----	-----

120V Models**GENERAL**

Rated Capacity: 700VA, 1000 VA, 1500 VA, 2000 VA, 3000 VA with a power factor of 0.7
Technology: True on-line, double conversion topology with integral automatic bypass

INPUT

Phase: Single phase plus ground
Bypass Voltage: 96 - 138 VAC (user selectable)
Input Voltage range: 60 / 70 / 80VAC - 144 VAC
(60V @ 40%, 70V @ 70%, 80V @ 100% load)
Frequency: 50 / 60 Hz Auto sensing
AC Frequency range: 45 - 65 Hz
Synchronization range: ± 3 Hz
Input Current: 700VA - 5.8A, 1000VA - 8.2A, 1500VA - 12.4A, 2000VA - 16.5A
3000 VA - 24.7A
Input Power factor: 0.97

OUTPUT

Output Voltage: 100 / 110 / 115 / 120 / 127 VAC (user selectable)
Voltage regulation: $\pm 2\%$
Voltage distortion: $< 5\%$ THD with non-linear loads, $< 3\%$ THD with linear loads
Frequency regulation: ± 0.25 Hz (while on battery or in free run mode)
Dynamic response: $\pm 9\%$ max from 100% to 20 % or from 20% to 100 % linear load
Overload capacity: 100 - 125% for 1 min, 125 - 150% for 10 sec
Efficiency (HE Mode): Greater than 95%
Efficiency (On-line Mode): Greater than 86%
Crest Factor: 3 : 1

230V Models**GENERAL**

Rated power: 700VA, 1000 VA, 1500 VA, 2000 VA, 3000 VA with a power factor of 0.7
Technology: True on-line, double conversion topology with integral automatic bypass

INPUT

Phase: Single phase plus ground
Bypass Voltage: 184 - 265 VAC (user selectable)
Input Voltage range: 120 / 140 / 160 VAC - 276 VAC
(120V @ 40%, 140V @ 70%, 160V @ 100% load)
Frequency: 50 / 60 Hz Auto-sensing
AC Frequency range: 45 - 65 Hz
Synchronization range: ± 3 Hz
Input Current: 700VA - 3A, 1000VA - 4A, 1500VA - 5.7A, 2000VA - 7.7A, 3000VA - 12A
Input Power factor: 0.97

OUTPUT

Output Voltage: 208 / 220 / 230 / 240 VAC (user selectable)
Voltage regulation: $\pm 2\%$
Voltage distortion: $< 5\%$ THD with non-linear loads, $< 3\%$ THD with linear loads
Frequency regulation: ± 0.25 Hz (while on battery or in free run mode)
Dynamic response: $\pm 9\%$ max from 100% to 20 % or from 20% to 100 % linear load
Overload capacity: 100 - 125% for 1 min, 125 - 150% for 10 sec
Efficiency (HE Mode): Greater than 95%
Efficiency (On-line Mode): Greater than 86%
Crest Factor: 3 : 1

All Models**ENVIRONMENTAL**

Ambient temperature range:	+32 °F to +104°F	(+0 °C to +40 °C)
Optimum temperature range:	+59 °F to +77°F	(+15 °C to +25 °C)
Storage temperature:	+5 °F to +122°F	(-15 °C to +50 °C)
Cooling:	Forced air cooling	
Humidity:	0-95%, non-condensing	
Elevation:	10,000 feet max (operation), 45,000 feet (storage)	
Audible noise:	< 45 db normal and battery mode (700-1000 VA models)	
	< 50 db normal and battery mode (1500-3000 VA models)	

STANDARDS

Safety:	EN50091-1-1
Emissions:	EN50091-2 class B
Immunity:	EN50091-2
Conformity:	UL 1778, cUL 107.1, 107.2, CE
Transient Immunity (120V):	Per IEEE 62.41 (formerly IEEE 587)
Transient Immunity (230V):	Per IEEE C 61000-4-5 level 3

MODEL & PART NUMBER DESIGNATION

120V Tower Models:	VTWE-0700-01, VTWE-1000-01, VTWE-1500-01, VTWE-2000-01, VTWE-3000-01
230V Tower Models:	VTWE-0700-02, VTWE-1000-02, VTWE-1500-02, VTWE-2000-02, VTWE-3000-02
120V Rack-Tower Models (1U):	VRME-0700-01, VRME-1000-01
230V Rack-Tower Models (1U):	VRME-0700-02, VRME-1000-02
120V Rack-Tower Models (2U):	VRTE-0700-01, VRTE-1000-01, VRTE-1500-01, VRTE-2000-01, VRTE-3000-01
230V Rack-Tower Models (2U):	VRTE-0700-02, VRTE-1000-02, VRTE-1500-02, VRTE-2000-02, VRTE-3000-02

120V Tower Models

Capacity	700VA / 490 W	1000VA / 700W	1500VA / 1050W	2000VA / 1400W	3000VA / 2100W
Input Connection	Fixed power cord				
Output Connection	6 x NEMA 5-15R			12 x NEMA 5-15R	
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V
Battery Quantity	2	3	3	6	6
Backup time (full load)	7 min	6 min	5 min	6 min	5 min
Recharge time	<4 hours to 90%				
Dimensions ins/mm W x D x H	6 x 16.5 x 9.4 152 x 420 x 238			8.9 x 16.7 x 14.2 225 x 425 x 360	
Weight lbs/kg	29.7 / 13.5	35.7 / 16.2	37.4 / 17	69.5 / 31.6	72.6 / 33

120V 19" Rack-mount Models (2U)

Capacity	700VA / 490 W	1000VA / 700W	1500VA / 1050W	2000VA / 1400W	3000VA / 2100W
Input Connection	Fixed power cord				
Output Connection	6 x NEMA 5-15R			4 x NEMA 5-15R	
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V
Battery Quantity	2	3	3	6	6
Backup time (full load)	7 min	6 min	5 min	6 min	5 min
Recharge time	<4 hours to 90%				
Dimensions ins/mm W x D x H	16.9 x 16.7 x 3.3 428 x 425 x 84			16.9 x 24 x 3.3 428 x 610 x 84	
Weight lbs/kg	32 / 14.6	38 / 17.3	39.8 / 18.1	69.5 / 31.6	72.6 / 33

120V 19" Rack-mount Model (1U)

Capacity	700VA / 490 W	1000VA / 700W
Input Connection	Fixed power cord	
Output Connection	4 x IEC 320 (10A)	
Options	3 x NEMA 5-15R	
Battery Type & Rating	Sealed, lead-acid 7Ah/ 6V	
Battery Quantity	4	
Backup time (full load)	6 min	4 min
Recharge time	<4 hours to 90%	
Dimensions ins/mm W x D x H	16.9 x 16.7 x 1.73 428 x 425 x 44	
Weight lbs/kg	34.1 / 15.5	

230V Tower Models

Capacity	700VA / 490 W	1000VA / 700W	1500VA / 1050W	2000VA / 1400W	3000VA / 2100W
Input Connection	IEC 320 (10A)				IEC 320 (16A)
Output Connection Options	4 x IEC 320 (10A)			8 x IEC 320 (10A), 1 x IEC 320 (16A)	
	4 x NEMA 5-15R			12 x NEMA 5-15R	
	2 x European			6 x European, 1 x IEC 320 (16A)	
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V
Battery Quantity	2	3	3	6	6
Backup time (Full load)	5 min	6 min	5 min	6 min	5 min
Recharge time	<4 hours to 90%				
Dims ins/mm W x D x H	6 x 16.5 x 9.4 152 x 420 x 238			8.9 x 16.7 x 14.2 225 x 425 x 360	
Weight lbs/kg	29.7 / 13.5	35.7 / 16.2	37.4 / 17	69.5 / 31.6	72.6 / 33

230V 19" Rack-mount Models (2U)

Capacity	700VA / 490 W	1000VA / 700W	1500VA / 1050W	2000VA / 1400W	3000VA / 2100W
Input Connection	IEC 320 (10A)				IEC 320 (16A)
Output Connection Options	4 x IEC 320 (10A)			8 x IEC 320 (10A), 1 x IEC 320 (16A)	
	4 x NEMA 5-15R			12 x NEMA 5-15R	
	2 x European			6 x European, 1 x IEC 320 (16A)	
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 9Ah/12V
Battery Quantity	2	3	3	6	6
Backup time (Full load)	5 min	6 min	5 min	6 min	5 min
Recharge time	<4 hours to 90%				
Dimensions ins/mm W x D x H	16.9 x 16.7 x 3.3 428 x 425 x 84			16.9 x 24 x 3.3 428 x 610 x 84	
Weight lbs/kg	32 / 14.6	38 / 17.3	39.8 / 18.1	69.5 / 31.6	72.6 / 33

230V 19" Rack-mount Models (1U)

Capacity	700VA / 490 W	1000VA / 700W
Input Connection	IEC 320 (10A)	
Output Connection	4 x IEC 320 (10A)	
	3 x 5-15R (US)	
Battery Type & Rating	Sealed, Lead-acid 7 Ah/ 6V	
Battery Quantity	4	4
Backup time (Full load)	6 min	4 min
Recharge time	<4 hours to 90%	
Dimensions ins/mm W x D x H	16.9 x 16.7 x 1.73 428 x 425 x 44	
Weight kg	34.1 / 15.5	