

# EPS 7000



## The EPS 7000. . . the **no compromise** solution

Over 95% of the Fortune 100 companies realize that MGE offers the best solution when it comes to critical power protection. The EPS 7000 has unparalleled reliability and performance with time tested architecture and one of the smallest footprints in the industry.

With over 10,000 installations worldwide, we listened to our customer feedback to engineer the high output power, fault tolerant architecture and redundant paralleling logic on the EPS 7000.

**We encourage you** to look at our robust EPS 7000 design for the best innovative technology in the three phase UPS marketplace.

## MGE UPS SYSTEMS

### EPS 7000

- 300 kVA/270 kW
- 400 kVA/360 kW
- 500 kVA/450 kW

### EPS 7000 Advantages:

- ▶ **High output power factor** matches all load profiles (.9 pf)
- ▶ **Small footprint** affords highest power density
- ▶ **Fault tolerant architecture** safely manages fault conditions
- ▶ **Redundant paralleling logic** located in each UPS module
- ▶ **Front only access** eliminates costly rear access space requirements
- ▶ **High energy efficiency** results in significant operating cost savings
- ▶ **Digital Power Quality Management** regulates output voltage under all conditions
- ▶ **Load surge management** logic controls output voltage even under 100% step loads
- ▶ **Robust overload capacity** handles up to 15 times nominal current
- ▶ **Solid state output static switch** eliminates mechanical contactors
- ▶ **Advanced battery management** optimizes battery life
- ▶ **Generator friendly technology** for close UPS to generator sizing ratios
- ▶ **Graphical User Interface** simplifies user operation
- ▶ **Network based power management** interfaces safely with any IT network

**M G E**  
UPS SYSTEMS

## Electrical Characteristics

Power Rating	300kVA/270kW	400kVA/360kW	500kVA/450kW	300kVA/270kW	400kVA/360kW	500kVA/450kW
Input/Output Voltage (V)	480/480	480/480	480/480	600/600	600/600	600/600
Nominal Input Current (A)	371	508	656	322	441	569
Maximum Input Current (A)	543	688	840	466	586	711
Nominal Bypass Current (A)	361	481	601	289	385	481
UPS Output Current (A)	361	481	601	289	385	481
Input CB Frame Size/Trip (A)	1200/1000	1200/1000	1200/1000	1200/800	1200/800	1200/800
Maintenance Bypass Frame Size/Trip (A)	1200/800	1200/800	1200/800	1200/700	1200/700	1200/700
DC Breaker Frame Size/Trip (A)	1200/700	1200/100	1200/1200	1200/700	1200/1000	1200/1200
System Efficiency (100%-50% load)	94%	94%	93%	94%	94%	93%
Full Load Heat Rejection (BTUs)	59400	78100	110750	65000	86000	112000

### Standard Features

- ▶ IGBT/PWM inverter
- ▶ Low kVAR solid state input filter
- ▶ K-20 output transformer
- ▶ Redundant fans
- ▶ High capacity static transfer switch
- ▶ Advanced battery management system
- ▶ Detailed metering system
- ▶ Fault current management circuitry
- ▶ Two stage input current limit
- ▶ Serial and dry contact interface
- ▶ Integrated paralleling intelligence
- ▶ Local and remote E.P.O circuit

### Main (Rectifier) Input

- ▶ Voltage: 480 VAC,  $\pm 10\%$ , 3 phase, 3 wires and ground
- ▶ Frequency: 60 Hz  $\pm 5\%$
- ▶ Power Factor: 0.90 lagging minimum with full load and nominal input voltage.
- ▶ THDI: 7 % THDI at full load
- ▶ Reactive Current (kVAR): less than 15% of nominal input current
- ▶ Inrush Magnetization: up to 600% nominal current for less than one cycle
- ▶ Rectifier Walk-in: 0 to 100% over a 10 second period

### Bypass Source Input

- ▶ Voltage: must match rectifier input,  $\pm 10\%$
- ▶ Phase: 3 phase, 3 or 4 wires plus ground (4 wire and ground on 208 systems)
- ▶ Frequency: allowable 60 Hz,  $\pm$  up to 1.0 Hz (selectable)

### Output

- ▶ Voltage: 480, 600VAC (3 Phase, 3 or 4 wires and ground)
- ▶ Power Factor: 0.9 at nominal kVA / up to unity at rated nominal kW
- ▶ Frequency: 60 Hz + 0.1% free running synchronized with bypass (selectable in 0.25 Hz increments)
- ▶ Voltage Regulation:  $\pm 0.5\%$  steady state
- ▶ Transient Response Time:  $\pm 5.0\%$  of the steady state value within 16.67 milliseconds (1 cycle) after a voltage transient
- ▶ Voltage Distortion: 2% L-L (4% L-N) THDI max.
- ▶ Inverter Overload: 125% for 10 min., 150% for 1 min.
- ▶ Unbalanced load: Up to 100% 120°  $\pm 3\%$  maximum angle displacement,  $\pm 2.5\%$  maximum voltage deviation
- ▶ Fault clearing capacity (via bypass source): greater than 1000% for one cycle

### DC Bus

- ▶ Nominal voltage: 480 VDC
- ▶ Float voltage: 545VDC
- ▶ DC Cutoff voltage: 400-420VDC

### Environmental Specifications

- ▶ Acoustical noise level: 75 dBA at 5 feet
- ▶ Operating temperature: 0-40° C
- ▶ Non-operating and Storage: -20° C to 70° C
- ▶ Relative humidity: 0 to 95% (no condensation)
- ▶ Operating Altitude: up to 6,000' at 40° C with no de-rating

### Dimensions and Weights

- ▶ UPS Module: 69" W x 82.00" H x 39.00" D (6,900 lbs)
- ▶ Maintenance Bypass Cabinet: 22.75" x 82.00" H x 39.00" D (540 lbs)
- ▶ Bottom Entry Cabinet: 14.00" x 82.00" H x 39.00" D (190 lbs)
- ▶ Transformer Cabinet: 44.75" x 82.00" H x 39.00" D (3,600 lbs)

### Certifications

- ▶ Certified by UL to UL/ cUL 1778
- ▶ IEEE 587-1980/ANSI C62.41 1980 Standards for Surge Withstand ability
- ▶ Manufactured in accordance with ISO 9001

### Accessories

- ▶ Input Isolation Transformer
- ▶ Output Distribution Panelboard
- ▶ External Maintenance Bypass
- ▶ Bottom Cable Entry System
- ▶ Remote Alarm Status Panel
- ▶ Seismic Anchors
- ▶ SNMP/XML Communications Card(s)
- ▶ Atlas Enterprise Network Power Management Software
- ▶ Graphical User Interface w/ Network Connection
- ▶ Valve Regulated Battery Cabinet
- ▶ Flooded Battery Racks
- ▶ Battery Monitoring Systems
- ▶ Continuous Duty and Overlap System Static Switch Cabinets
- ▶ Critical Bus Synchronization Systems
- ▶ Main Battery Disconnects

## MGE UPS SYSTEMS

USA (headquarters)  
1660 Scenic Avenue  
Costa Mesa, CA 92626  
tel (800) 523-0142  
(714) 557-1636  
fax (714) 557-9788

CANADA  
#9, 2798 Thamesgate Dr.  
Mississauga, ON L4T 4E8  
tel (905) 672-0990  
(877) 672-0990  
fax (905) 672-7667

ARGENTINA  
Thames 91  
1609 San Isidro  
Prov de Buenos Aires  
tel (54) 11-4766-8777  
fax (54) 11-4766-6008

BRAZIL  
Avenida Guido  
Caloi 1985 (GALPAO 23)  
Guarapiranga  
Sao Paulo - SP, CEP 05802  
tel (55) 11-5515-9255  
fax (55) 11-5515-9250

MEXICO  
Ave. Congreso de la  
Union  
#524 Colonia Santa Anita  
Mexico D.F 08300  
tel 525 538 9687  
fax 525 530 7625

www.mgeups.com  
info@mgeups.com

EPS 7000  
Revision 101  
Effective: October 2004