

■ AC Power for  
Business-Critical Continuity™

# Chloride 80-NET from 60 to 500 kW

*Secure Power For Mission Critical Applications*



**CHLORIDE**

  
**EMERSON**  
Network Power



**Emerson Network Power**, a division of Emerson, is a global company that combines technology with design to supply innovative solutions for the benefit of its customers.

Emerson Network Power is the leader in the “**business-critical continuity**” field, thanks to the company’s products and services.

Emerson Network Power’s broad technology base and global expertise support a full spectrum of enterprise-wide solutions for today’s vital business needs.



Regardless of your size, you can’t afford for your critical business systems to go down and you can’t waste time recovering your IT infrastructure after a disruption.

**Leave that to us**, the experts in *business-critical continuity*: from grid to chip, from the biggest to the smallest data centers, we are ready to serve your needs with the solutions we have developed.

More standardization, so you don’t need further budget allocations to install it. More simplification so you don’t need to be a specialist to get the best for your business. More support, so while you are enjoying doing business, we are protecting you.

**That’s why we can say we OptimizeIT!**







# Chloride 80-NET From 60 To 500 kW

**Maximized active power, high efficiency and complete compatibility for modern, mission critical IT loads.**

### Features and Performance

- Transformer-free design
- Full IGBT double conversion technology
- Full input Power Factor Correction (PFC) and excellent input performances:
  - PF > 0.99
  - THDi < 3%
- Automatic output power upgrade up to +10%
- High conversion efficiency (certified up to 98%)
- Hi-tech user interface for monitoring system status and performance
- Full galvanic isolation as standard built-in option.

### Chloride 80-NET 60 - 500 kW Performances

Chloride 80-NET features a transformer-free design with full IGBT double conversion technology allowing it to provide extraordinary savings on installation and running costs, while at the same time providing first class load protection.

Chloride 80-NET also features a full IGBT rectifier allowing for reductions in the size of gen sets, circuit protection, cabling and transformers.

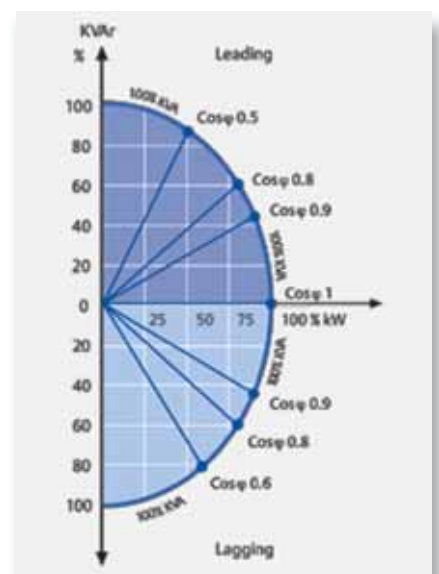
### Flexibility And Compatibility

Chloride 80-NET can be fully adapted to meet diverse requirements in terms of battery backup time, power, redundancy and harmonic control.

Maximum flexibility is also ensured from:

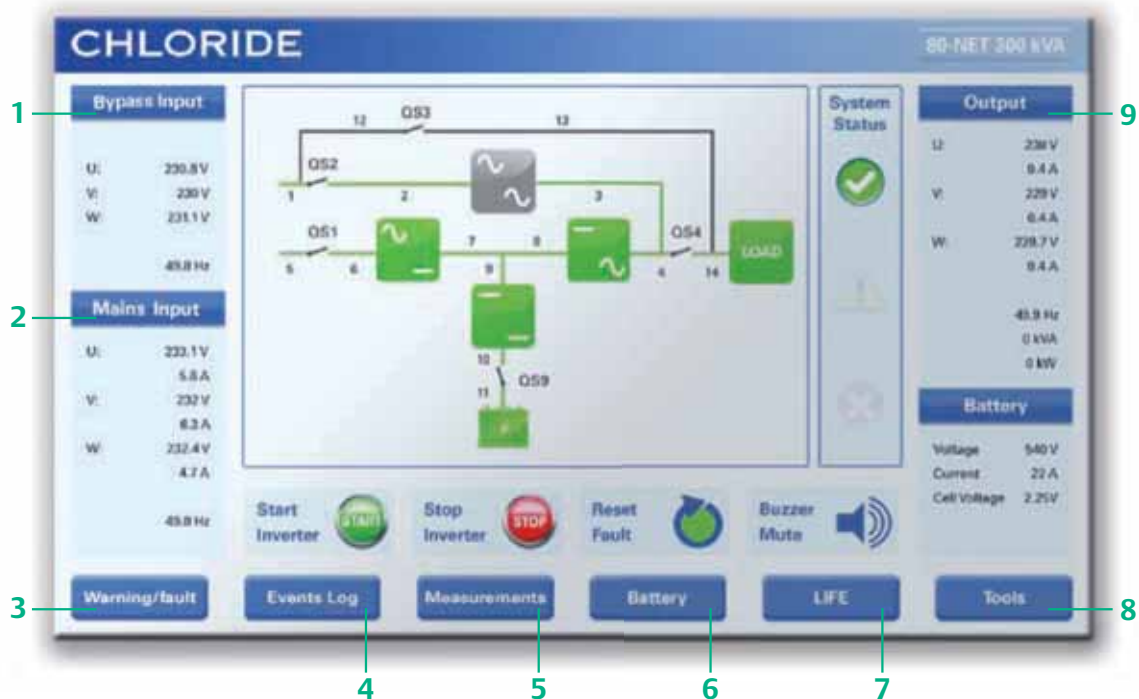
- Output Power Factor 1
- Output Power Factor diagram symmetrical respect to zero

- Permanent 100% kVA - no derating with any load (lagging or leading)
- Optimum space/power ratio
- Full compatibility with static transfer switches
- Wide range of standard options including: Isolation transformer (integrated in UPS cabinet), System Bypass Switch and Synchronization Module (MBSM).





## User Interface



### 1. Bypass Input

Voltage, and frequency measurements.

### 2. Mains Input

Current, voltage and frequency values of the three input phases.

### 3. Warning/fault

Alerts of anomalies on bypass, rectifier, inverter, booster/charger, battery and load.

### 4. Events log

Date and time of important UPS events, alarms and other warnings.

### 5. Measurements

Voltage, current and frequency values of each internal functional block.

### 6. Battery

Status/values including temperature, cell voltage, capacity run time and testing.

### 7. LIFE

Status of the Chloride LIFE®.net connections and calls.

### 8. Tools

LCD settings and language selection.

### 9. Output

Voltage, current, frequency, and battery measurements.

# Sustainability And Environment

## Advanced digital technology and maximum energy savings for increased performance and optimized TCO.

Chloride 80-NET's control platform incorporates double DSP and a micro-controller, allowing it to provide the most powerful control in the UPS industry. Together with the patented Vector Control technology it enables an increased performance of power converters and real time control of output power quality.

This combination of technology provides the following benefits:

- Zero impact on upstream equipment
- Perfect compatibility with generators
- Enhanced performance for specific unbalanced load conditions
- Perfect load sharing for parallel configurations
- Enhanced fault clearing capacity (up to 300% of the inverter nominal current)
- Intelligent double conversion for maximum reliability and highest energy savings.

## Maximum Energy Savings

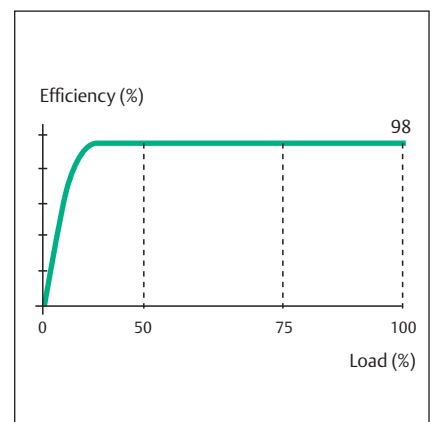
As a result of the transformer-free architecture and intelligent double conversion technology, Chloride 80-NET can achieve optimum efficiency values in all operating conditions, making it capable of reducing running costs also at partial load.

This architecture also allows for reduced energy dissipation (kW) thus significantly minimizing the consumption of the cooling system.

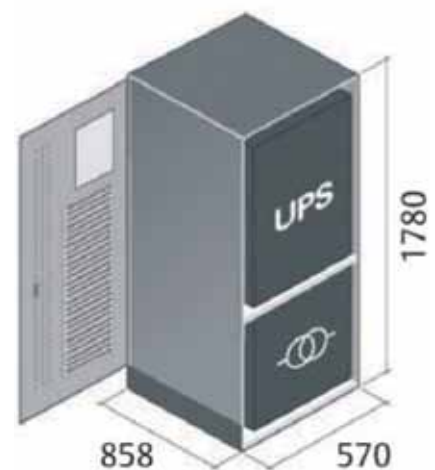
## Full Galvanic Isolation

Chloride 80-NET is the only UPS in its power range that offers integrated full galvanic isolation, meaning that the isolation transformer is housed inside the UPS cabinet. This greatly reduces the footprint thus providing space saving advantages. In addition, the transformer can be connected to the input or to the output of the UPS, providing:

- **Full galvanic isolation for medical and other critical applications**
- **Installation with two independent input sources (with different neutrals)**
- **Installation in distribution without neutral.**



Chloride 80-NET efficiency curve



UPS with isolation transformer



## Respecting The Environment

**Chloride 80-NET respects the highest level of environmental standards as a result of the following features:**

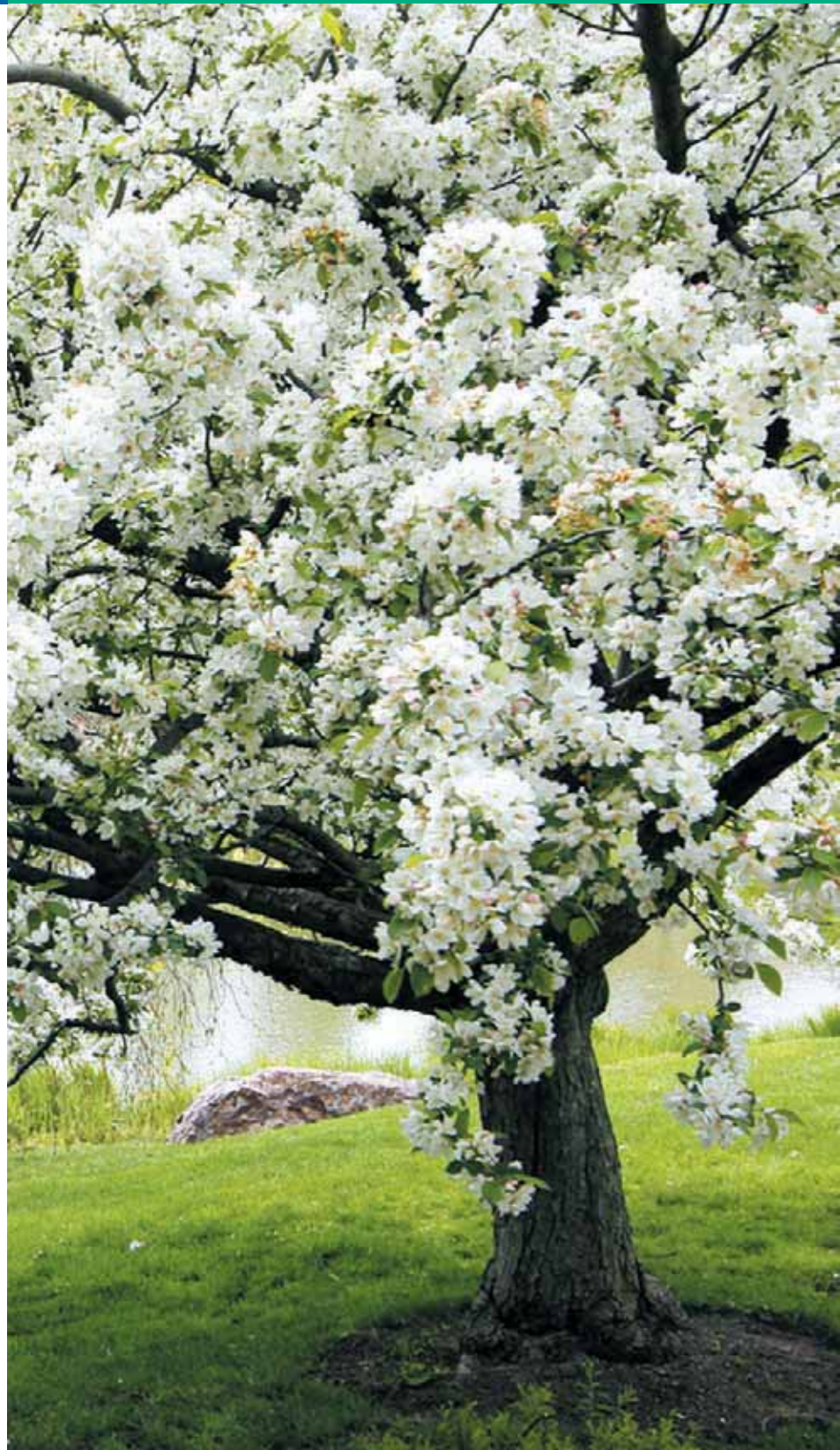
- Premium energy savings
- Most silent UPS in its power range
- Maximized battery life with Advanced Battery Care (ABC).

ABC allows the 80-NET series to maximize the running time of the battery by up to 50% and includes the following main battery care features:

- Ambient temperature compensated battery charger
- Automatic battery test (can be set by user at selectable intervals)
- Time compensated end of discharge voltage
- Exact determination of remaining battery life thanks to sophisticated algorithms able to analyze real operating conditions such as temperature, discharge/charging cycles and discharge depth.



the green grid<sup>SM</sup>  
member





# Chloride LIFE<sup>®</sup>.net 24/7 Remote Diagnostic System

**Chloride LIFE<sup>®</sup>.net ensures that your critical power protection system is maintained in an optimum state of readiness at all times.**

Chloride LIFE<sup>®</sup>.net remote diagnostic and monitoring system provides early warning of UPS and single module alarm conditions and out of tolerances. This allows effective proactive maintenance and fast incident response, giving customers complete security and peace of mind.

## Maximize Availability

### Pre-Emptive Maintenance

Chloride LIFE<sup>®</sup>.net provides early warning of more than 150 separate parameters allowing real-time diagnosis and swift identification and resolution of operating anomalies.

## Minimize Downtime

### Immediate Identification of Problems

Should an emergency condition arise, an engineer in the 24/7 manned service center carries out an immediate fault analysis and instigates appropriate corrective action.

## Reduce Operating Costs

### Superior Asset Management

Through comprehensive data collection and analysis, Chloride LIFE<sup>®</sup>.net's detailed reporting system provides valuable information on power and equipment trends, over any selected period of time.

### Connectivity And Tracking

**Interactive control, connectivity and Chloride LIFE<sup>®</sup>.net remote monitoring and diagnostics allow for real time tracking and fast intervention.**

### Communication

Chloride 80-NET features a hi-tech, 15 language user interface, for closely controlling and monitoring the system status and performance.

The UPS offers the following standard communication features:

- Voltage-free contact ports
- Digital inputs and outputs
- Two serial ports and LAN connection
- Two internal slots for Chloride LIFE<sup>®</sup>.net and connectivity options.

### Hardware Connectivity

**Chloride ManageUPS NET** ensures the monitoring and control of the networked UPS, through the TCP/IP protocol.

Two different options permit:

- The integration of Chloride UPS with Building Monitoring and Automation Systems via MODBUS RTU, MODBUS/TCP or JBUS protocols



- The monitoring of environmental conditions where the UPS systems are installed.

#### Software Connectivity

**Chloride MopUPS Professional** provides the safe shutdown of the operating system in the event of an interruption to the load. This includes event logging and gives notifications via e-mail.

**Chloride ManageUPS CIO** software provides a central management system for critical power infrastructures distributed within a building, campus or wide area network environment.



Hardware Connectivity

# Flexibility And Security

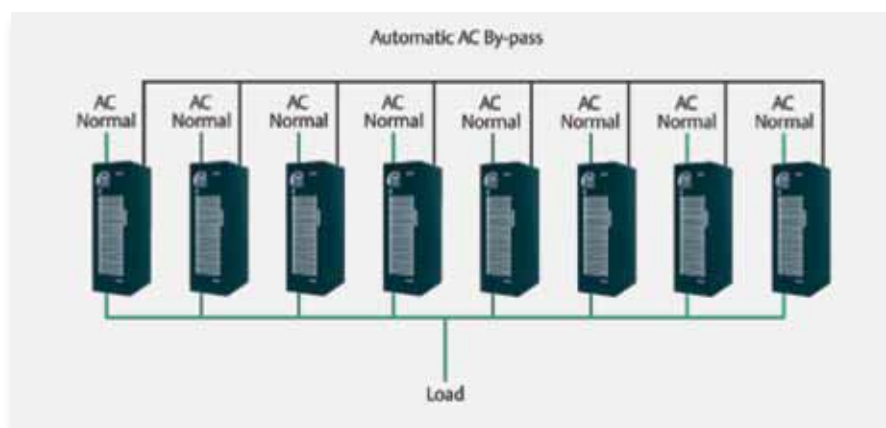
**Customize and adapt your system to achieve maximum reliability, flexibility and performance.**

## Parallel Ready

Chloride 80-NET can be connected with up to eight units in parallel. A single Chloride 80-NET unit can be upgraded to parallel via easy to modify software settings that allow the system to be customized for the requested configuration.

Chloride 80-NET's self configuring, hot plug parallel feature means that the system automatically detects when new units have been added without the need for stopping the system. This simplified parallel process provides maximum flexibility in terms of scalability for capacity and redundancy.

The Loop CAN BUS connection, used to connect the paralleled UPS, also allows for unprecedented reliability, perfect load sharing and fast detection of any variation in status of the UPS system.



Parallel configuration of power extension and redundancy

## Servicing And Security

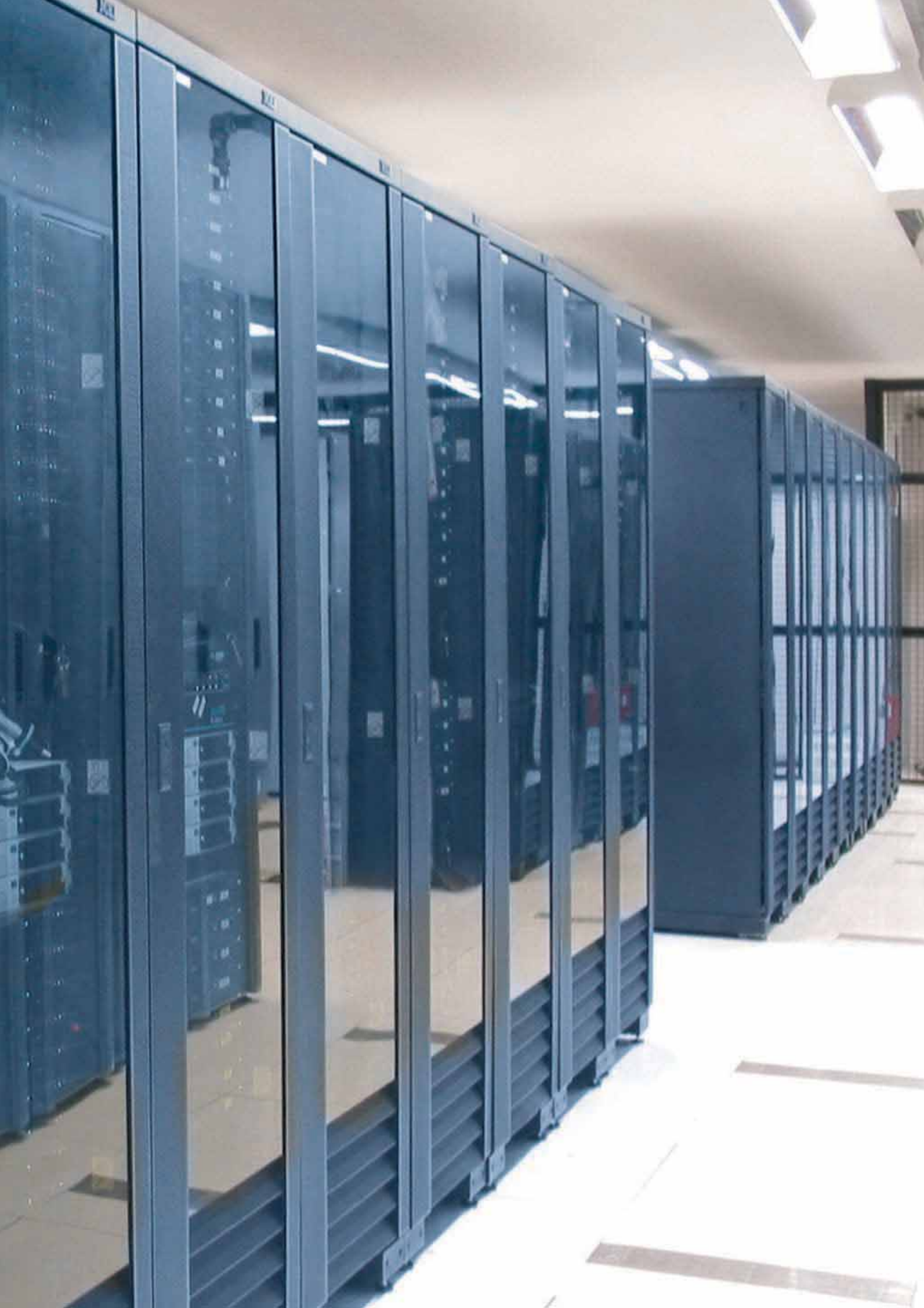
The Chloride 80-NET's modular drawer-design allows modules to be removed easily by extracting the drawers from the front of the UPS.

This architecture considerably minimizes the time needed for repairs and optimizes installation and serviceability.

Each UPS will be equipped with an ID card, including all UPS working parameters. This card, univocally related to the UPS, shortens UPS "off time" in the case that the control board needs to be replaced.



ID card



# Chloride 80-NET Specifications

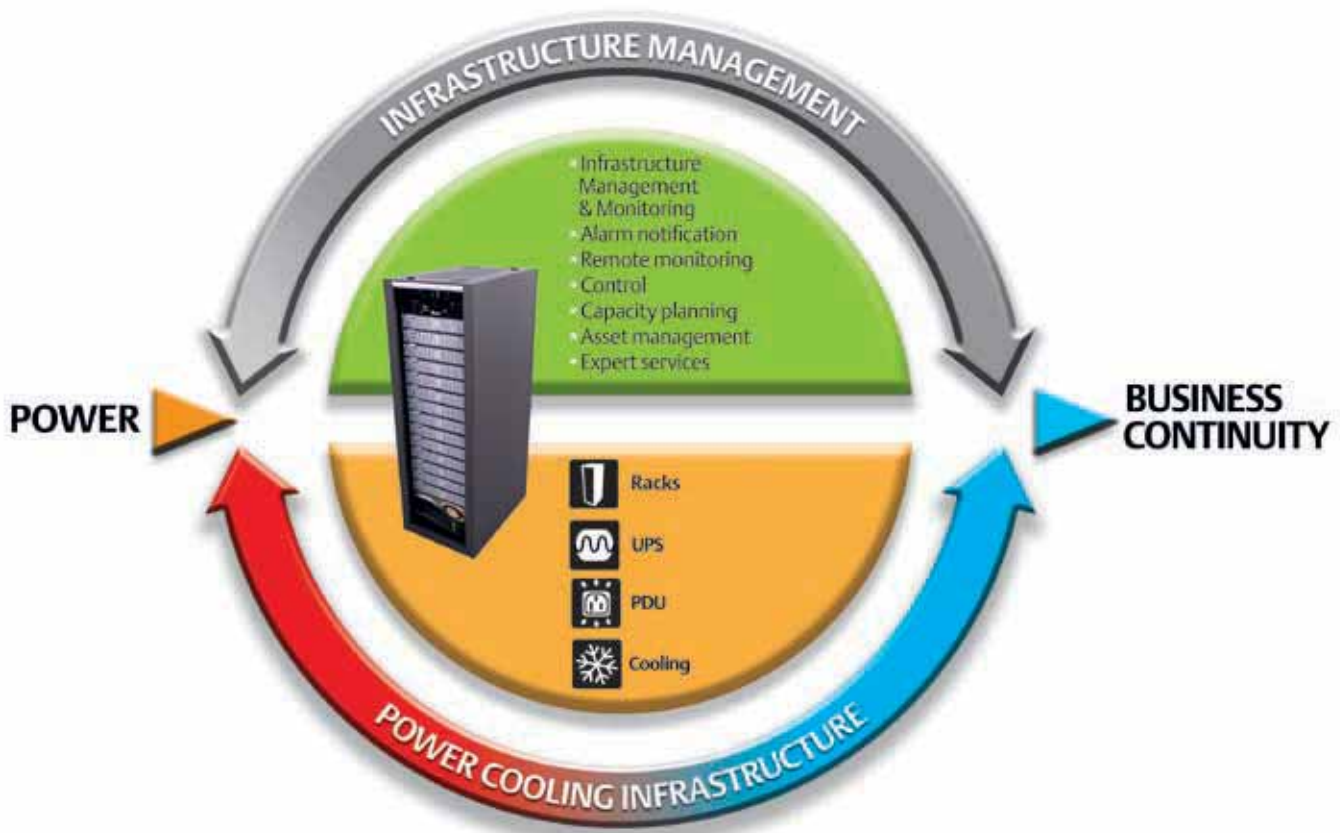
Technical Characteristics				
Rating (from 60 - 120 kVA)	60	80	100	120
Output active power at 40° C (kW)	60	80	100	120
Apparent nominal output power at 40° C (kVA)	60	80	100	120
Apparent nominal output power at 25° C (kVA)	66	88	110	132
Input				
Nominal primary mains input voltage/voltage range (V)*	400 (250 to 460), three phase + neutral			
Nominal bypass input voltage/voltage tolerance (V)	400 ± 10% (380 V, 415 V selectable) three phase + neutral			
Nominal input frequency/frequency tolerance (Hz)	50 ± 10% (60 Hz selectable)			
Input current distortion (THDi) (%)	<3			
Primary input Power Factor	>0.99			
Output				
Nominal output voltage (V)	400 (380 V, 415 V selectable) three phase + neutral			
Output voltage stability by load variation 0 - 100% (%)	± 1			
- static	Complies with IEC/EN 62040-3, Class 1			
- dynamic				
Nominal output frequency (Hz)	50 (60 Hz selectable)			
Output frequency variation (%)	± 1 (2, 3, 4 selectable)			
- with mains synchronization	± 0.1			
- with internal reference				
Inverter overload capacity	125% for 10 min., 150% for 1 min.			
Compatibility with loads	Any power factor (leading or lagging) up to 1 without output derating; crest factor up to 3:1			
Automatic adjustment of nominal output power with temperature	110% at 25°C, 100% at 40°C			
General				
Classification according to IEC/EN 62040-3	VFI - SS - 111			
Operating temperature (°C)	0 - 40			
Relative humidity (without condensation at 20°C)	<95%			
Protection level	IP 20			
Frame Color	RAL 7016			
Noise at 1 m (dBA)*	62	62	65	65
AC/AC efficiency (%)*	up to 98%			
Parallel configuration	up to 8 units			
Dimensions And Weight				
Height (mm)	1780			
Width (mm)	570	570	845	845
Depth (mm)	858			
UPS weight (kg)	270	270	380	380

\* Conditions apply

Technical Characteristics					
Rating (from 160 - 500 kVA)	160	200	300	400	500
Output active power at 40° C (kW)	160	200	300	400	500
Apparent nominal output power at 40° C (kVA)	160	200	300	400	500
Apparent nominal output power at 25° C (kVA)	176	220	330	440	550
<b>Input</b>					
Nominal primary mains input voltage/voltage range (V)*	400 (250 to 460), three phase + neutral				
Nominal bypass input voltage/voltage tolerance (V)	400 ± 10% (380 V, 415 V selectable) three phase + neutral				
Nominal input frequency/frequency tolerance (Hz)	50 ± 10% (60 Hz selectable)				
Input current distortion (THDi) (%)	<3				
Primary input Power Factor	>0.99				
<b>Output</b>					
Nominal output voltage (V)	400 (380 V, 415 V selectable) three phase + neutral				
Output voltage stability by load variation 0 - 100% (%) - static - dynamic	± 1 Complies with IEC/EN 62040-3, Class 1				
Nominal output frequency (Hz)	50 (60 Hz selectable)				
Output frequency variation (%) - with mains synchronization - with own reference	± 1 (2, 3, 4 selectable) ± 0.1				
Inverter overload capacity	125% for 10 min., 150% for 1 min.				
Compatibility with loads	Any power factor (leading or lagging) up to 1 without output derating; crest factor up to 3:1				
Automatic adjustment of nominal power with temperature	110% at 25°C, 100% at 40°C				
<b>General</b>					
Classification according to IEC/EN 62040-3	VFI - SS - 111				
Operating temperature (°C)	0 - 40				
Relative humidity (without condensation at 20°C)	<95%				
Protection level	IP 20				
Frame Color	RAL 7016				
Noise at 1 m (dBA)*	67	67	69	70	71
AC/AC efficiency (%)*	up to 98%				
Parallel configuration	up to 8 units				
<b>Dimensions And Weight</b>					
Height (mm)	1800				
Width (mm)	975	975	1675	1675	1900
Depth (mm)	858				
UPS weight (kg)	495	590	1000	1160	1300

\* Conditions apply

## Emerson Network Power Business-Critical Continuity™ Expert



Today's successful businesses depend on adaptable technologies to help them respond quickly to market demands. Your data center must be built on a support infrastructure designed to match the power and cooling needs of rapidly changing IT initiatives such as virtualization and consolidation. Each IT change, move or addition will affect the entire support infrastructure so you need products and support that ensure your IT systems will operate reliably in these environments.

*Get More on line: [www.eu.emersonnetworkpower.com](http://www.eu.emersonnetworkpower.com)*



*More than 35,000 organizations in 70 countries depend on our Business - Critical Continuity™ Promise: your IT infrastructure stays up to support your Business!*

## Ensuring The High Availability Of Mission-Critical Data And Applications.

Emerson Network Power, a business of Emerson (NYSE:EMR), is the global leader in enabling *Business-Critical Continuity™* from grid to chip for telecommunication networks, data centers, health care and industrial facilities. Emerson Network Power provides innovative solutions and expertise in areas including AC and DC power and precision cooling systems, embedded computing and power, integrated racks and enclosures, power switching and controls, infrastructure management, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. Chloride Uninterruptible Power Supply (UPS) systems and critical power protection solutions and services protect against power outages ensuring business continuity for companies in all market segments, visit [www.ChloridePower.com](http://www.ChloridePower.com) for more information on Chloride products and services. Learn more about Emerson Network Power products and services at [www.EmersonNetworkPower.com](http://www.EmersonNetworkPower.com)

For a full list of contacts please visit our website at [www.ChloridePower.com](http://www.ChloridePower.com)

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### Emerson Network Power

*The global leader in enabling Business-Critical Continuity™.*

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

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