

CHLORIDE® CP70i - UL

DC/AC inverter
5 to 250 kVA (1-ph output) / up to 500 kVA (3-ph output)



CHLORIDE® CP RANGE

Customized to user specification
Full portfolio of industrial options

BENEFITS

Unrivalled adaptability to existing site conditions, thanks to the wide input DC voltage range:

- Compatibility with any battery configuration already installed on site
- Optimum operation with DC bus having a wide voltage excursion

Technical and budgetary optimization of the battery: On greenfield or brownfield projects where battery may represent an important part of the system total price, the wide input DC voltage range allows:

- Optimization of the number of battery cells as per the input tolerance of the loads to be secured
- Optimization of the battery capacity and therefore the price, as per the required autonomy

Smart access to inverter data:

- User interface with large, colour touchscreen
- Embedded event logger (up to 2000 events) and capability to export recorded events via USB stick

FEATURES

Reliability: Unique design which allows the UPS to continuously operate for at least 20 years at full load at 104 °F (40 °C)

Robust mechanical design: the system withstands vertical and horizontal acceleration stress tests 0.5g as standard

Galvanic isolation: output transformer is included as standard

Remote monitoring solutions: Modbus, Profibus, Ethernet, IEC61850, volt-free contact, monitoring software

The industrial inverter Chloride® CP70i is a DC/AC converter combining IGBT/PWM technology with proven digital control to offer the best performances under any electrical and environmental conditions.



Range Overview

Chloride® CP70i inverter converts a DC input voltage (from batteries or from a DC bus) into a perfect sinusoidal output voltage to provide power to critical AC loads.

It uses the patented digital Vector Control technology which increases the performances of power components, enables an active conditioning of the load and allows personalized system settings. The result is improved reliability for the process and enhanced safety for the personnel.

Chloride® CP70i range offers a wide choice of DC input voltages (from 125 Vdc to 220 Vdc) and of output voltages. It is available from 5 kVA to 250 kVA in single-phase output configuration, and from 5 kVA to 320 kVA in three-phase output configuration.

Chloride® CP70i inverter is also available with 400 Vdc input. This configuration can be combined with a CP70R rectifier-charger in order to design specific high ratings double conversion AC UPS systems, up to 500 kVA.

To further improve load availability and process reliability, Chloride® CP70i is able to operate in dual parallel configuration, with centralized or distributed reserve line, and can include an AC bus-tie.

Applications

- Oil & Gas, offshore and onshore
- Refining and Petrochemical industries
- Water infrastructures
- Mining
- Rail transport



Example of Chloride® CP70i-60kVA-220Vdc-220Vac 1ph

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Technical Data

RATINGS

OUTPUT POWER⁽¹⁾ (kVA) vs DC INPUT VOLTAGE (Vdc)

125 Vdc	5	10	20	30	40	50	60 ⁽²⁾	80	100	120	160 ⁽²⁾	200 ⁽²⁾	-	-	-	-
220 Vdc	-	10	20	30	40	50	60	80	100	120	160	200	250	320 ⁽²⁾	-	-
400 Vdc	-	-	-	-	-	-	-	80	100	120	160	200	250	320 ⁽²⁾	400 ⁽²⁾	500 ⁽²⁾

INPUT

DC Voltage	125 V	220 V	400 V
Input voltage range	88-156 V	176-305 V	296-507 V

OUTPUT

Available ratings	See table (at PF 0.8 lagging)		
AC voltage	<ul style="list-style-type: none"> Single-phase: 1 x 120 V ; 1 x 220 V⁽³⁾ Three-phase: 3 x 480 V ; 3 x 208 V ; 3 x 400 V⁽³⁾ 		
Frequency	60 Hz (50 Hz)		
Frequency stability	<ul style="list-style-type: none"> With internal oscillator: +/- 0.05 % With reserve synchronism: +/- 3 % (from 1 to 5 % adjustable) 		
Voltage stability (for 0 to 100 % load variation)	<ul style="list-style-type: none"> Static: +/-1 % (+/-2 % for parallel systems) Dynamic: +/- 5 % 		
Inverter overload capability	<ul style="list-style-type: none"> 1 minute: 150 % of nominal power 10 minutes: 125 % of nominal power 		
Short-circuit clearance (in % of nominal current)	<ul style="list-style-type: none"> 1-ph output: 250 % / 100ms - 175 % / 5s 3-ph output: Ph-Ph: 315 % / 100 ms - 220 % / 5 s; Ph-N: 190 % / 100 ms - 135 % / 5 s 		
Harmonic voltage distortion	<ul style="list-style-type: none"> With 100 % linear load: < 3 % With 100 % non-linear load: ≤ 5 % 		
Allowable power factor	0,5 lagging to 0,5 leading ⁽⁴⁾		
Allowable crest factor	Up to 3/1		

GENERAL DATA

Operating temperature	32 to 104 °F ⁽³⁾ / 0 to 40 °C ⁽³⁾
Storage temperature	-4 to 158 °F / -20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	3200 feet / 1000 m, max without derating ⁽³⁾
Cooling	Forced ventilation
Efficiency	Up to 91 %, according to rating
External protection	NEMA 1 ⁽³⁾ / IP 20 ⁽³⁾ as per IEC 60529
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet color	Grey RAL 7032 ⁽³⁾
Dimensions	Varying according to ratings and options

OPTIONS

Consult us for any other requirements, subject to feasibility

Inverter	<ul style="list-style-type: none"> Automatic precharge of capacitors Onther output voltage (1 x 110 to 3 x 690 VAC) Inverter oversizing
Bypass line	<ul style="list-style-type: none"> Bypass isolator(s) Bypass transformer (H class) Bypass stabilizer (servo-controlled) Backfeed protection
System	<ul style="list-style-type: none"> Inverter with or with bypass line Parallel configurations Input / output isolators AC Distribution Earth fault detection or monitoring Internal lighting Anti-condensation heater Cabinet temperature monitor
Mechanical	<ul style="list-style-type: none"> External ingress protection NEMA 2 Top cable entry Specified color of panels Special feet height (7.9 inches or 11.8 inches) Special keylock Non-magnetic gland plate (brass or aluminum) Lifting eyes 12 Gauge side panels thickness Specified cabinet identification (tag, nameplate) Anti-seismic design
Communication	<ul style="list-style-type: none"> Front panel analogue meters (2.8x2.8 inches, class 1.5 or class 1) Transducers 4-20mA Additional volt-free contacts Modbus RTU (RS232 or RS485) Modbus / TCP Profibus IEC61850 protocol PPVis monitoring software Mimic panel on front: <ul style="list-style-type: none"> Passive mimic of the system Active mimic with integrated LEDs Lamp indicator on front panel (0.9 inches diameter)
STANDARDS	
UL 1778, fifth edition 2014	Standard for safety - Uninterruptible power systems
NEMA PE1 2012	Uninterruptible power systems (UPS) – Specification and performance verification

(1) at power factor 0.8 lagging
(2) 3-ph output only
(3) other available on request
(4) derating may apply

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