

Chloride CP-70i

DC/AC inverter

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

The Chloride CP-70i is the flagship industrial inverter of Chloride Industrial Power. It combines conservative design topology with proven digital control technology to offer the best performances in any electrical and environmental condition.

The Chloride CP range is designed to meet stringent electrical and mechanical requirements in industrial environments. Each Chloride CP system is based on interchangeable sub-assemblies to allow full customization, in compliance with customer technical specification and with project documentation requirements.

Applications

The Chloride CP-70i DC/AC inverter range is designed for the following applications:

- Oil & Gas Offshore and Onshore
- Refining and Petrochemical Plants
- Conventional Power Generation Plants
- Transmission and Distribution substations
- Transportation (rail, metro)

Benefits

- **Made to Order** DC/AC inverter solutions to exactly fit the industrial application requirements
- **Rugged Solutions** for demanding environments: high temperatures, vibrations, dust, elevation, dripping water and moisture
- **Efficient Maintenance:**
 - Easy front-access to all critical modules
 - Removable ID Card to safeguard the inverter parameters and facilitate control board replacement
- **Smart Access to Inverter Data:**
 - Large color LCD touch-pad for user interface
 - Embedded event logger (up to 2000 events) and capability to export recorded events via USB drive

Key Features

- **Reliability:** Unique design which allows the inverter to continuously operate at full load at 140°F / 40°C
- **Robust Mechanical Design:** The inverter withstands vertical and horizontal acceleration stress tests 0.5g as standard
- **Galvanic Isolation:** Output transformer is included as standard
- **Remote Monitoring Capabilities:** Modbus, Profibus, Ethernet, volt-free contacts, monitoring software

Custom Designed DC/AC Inverters to Supply Critical Industrial Processes

The Chloride CP-70i inverter converts a DC input voltage 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 and enables an active conditioning of the load. The result is improved reliability for the process and enhanced safety for the personnel.

The CP-70i range offers a wide choice of DC input voltages (from 125Vdc to 220Vdc) and of output voltages. It is available from 5kVA to 250kVA in single-phase output configuration, and from 5 kVA to 320 kVA in three-phase output configuration.

The CP-70i range is also available with 400Vdc input. This configuration can be combined with a CP-70R rectifier-charger in order to design specific high ratings double conversion AC UPS systems, up to 500kVA.

To further improve load availability and process reliability, the CP-70i is able to operate in dual parallel configuration, with centralized or distributed reserve line, and can include an AC bus-tie.



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Ratings - Output power⁽¹⁾ (kVA) vs DC input voltage (Vdc)

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

⁽¹⁾ at Power Factor 0.8 Lagging

⁽²⁾ 3-ph Output Only

Technical Data

Input	
DC Voltage	110 / 120 / 220 / 240 (400V on request)
Voltage Tolerance	+18% / -20%
Output	
Available Ratings	See Table (at PF 0.8 Lagging)
AC Voltage	1 x 120V, 1 x 220V ⁽⁴⁾ 3 x 480V, 3 x 208V, 3 x 400V ⁽⁴⁾
Frequency	60Hz
Frequency Stability	
with Internal Oscillator	+/- 0.05%
with Reserve Synchronism	+/-4% (from 1.2 to 6% adjustable)
Voltage Stability (for 0-100% load variation)	
Static	+/-1% (+/-2% for Parallel Systems)
Dynamic	+/-5%
Overload Inverter	
1 minute	150% of Nominal Power
10 minutes	125% of Nominal Power
Short Circuit Clearance	
100 ms	250% (1ph) or 315% (Ph-N; 3ph) of Nominal Current
5 s	175% (1ph) or 220% (Ph-N; 3ph) of Nominal Current
Harmonic Voltage Distortion	
With 100% Linear Load	< 3%
With 100% Non-Linear Load	≤ 5%
Allowable Power Factor	0.5 Lagging to 0.5 Leading
Allowable Crest Factor	up to 3/1
General Data	
Operating Temperature	32 to 140°F / 0 to 40°C ⁽⁴⁾
Storage Temperature	-4 to 158° F / -20 to +70°C
Relative Humidity	<95% non Condensing
Operating Altitude	3200 feet / 1000 m max without Derating ⁽⁴⁾
Cooling	Forced Ventilation
Efficiency	Up to 91% according to Rating
External Protection	NEMA 1/2
Noise (at 3.3 feet in front of the unit)	60 – 75 dB according to Rating
Frame Color	Gray RAL 7035 ⁽⁴⁾
Dimensions	Varying according to Ratings & Options

⁽⁴⁾ other available on request

Standards

Compliance UL 1778, NEMA PE1, ISO 9001 and ISO 14001

Options

Inverter	Dual Configurations Inverter with or without Bypass Line Input / Output Circuit Breakers AC Distribution Earth Fault Monitoring Internal Lighting Space Heater Temperature Monitor Special Cabinet Identification Bypass Transformer Bypass Stabilizer
Mechanical	Top Cable Entry Other Enclosure Colors Various Feet Height Special Keylock Special Gland Plate Lifting Eyes 12 Gauge Panel Thickness
Communication	Front-panel Analog Meters (2.8x2.8 inches, class 1.5) Transducers Additional Volt-Free Contacts Remote Monitoring via Modbus Remote Monitoring via Other Bus PPVIs Monitoring Software Passive or Active Mimic Panel

consult us for any other Requirements.

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