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PRODUCT CATALOGUE

SHENZHEN INVT ELECTRIC CO., LTD.

invt PRODUCT CATALOGUE

Company Profile

SHENZHEN INVT ELECTRIC CO., LTD, which was established in 2002, is a National Hi-Tech Company and the first China Drive Engineering Centre, principally engaged in the R&D, manufacturing and marketing of low, medium and high voltage inverters in the fields of electric drive and industrial control.

Has set up over 30 representative offices nationwide, INVT has cooperated with hundreds of Distributors at home and abroad, with its diversified users in over 50 countries and regions.

The main products includes general-purpose inverters & special-purpose inverters, Servo drive, brake unit and RBU which are broadly applied to the various industries, municipal engineering, construction material, plastic cement, oil, mechanic, chemical industry, metallurgy, textile, printing, machine tool and mining etc.

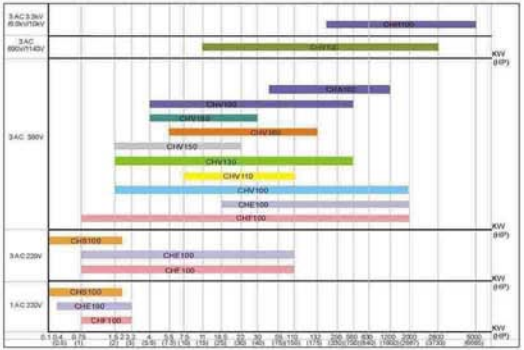
Our self-developed products cover a wide range including CHA/CHV/CHE/CHF/CHH, voltage level from 220V to 10KV and power rating from 0.4KW to 7100KW.

With the mastering of mature vector control technology and special inverter control technology in various industries, as well as breakthrough of four-quadrant control technology, INVT has been keeping ranking the top among national inverter manufacturers.

INVT always aim to be your mutual benefit partner and professional drive solution provider.

Contents

No.	Symbol	Meaning
1	V	Close loop vector control
	E	Sensorless vector control
	F	V/F control ,sensorless vector control
	A	Four-quadrant
	H	High voltage
	S	Servo drive
2	1	First generation
3	0	Universal type
	1	Energy saving
	3	Synchronous control
	5	High speed
	6	Water supply
	8	Elevator
	9	Crane
4	045G	45kW Constant torque load
5	055P	55kW Variable torque load
6	S2	1 AC 220V
	2	3 AC 220V
	4	3 AC 380V~480V
	5	3 AC 525V
	6	3 AC 690V
	12	3 AC 1140V



CHE100
SERIES SENSORLESS VECTOR CONTROL INVERTER

1 AC 220V~230V ± 15% 0.4kW~2.2kW
3 AC 220V~230V ± 15% 0.75kW~15kW
3 AC 380V~480V ± 15% 0.75kW~15kW

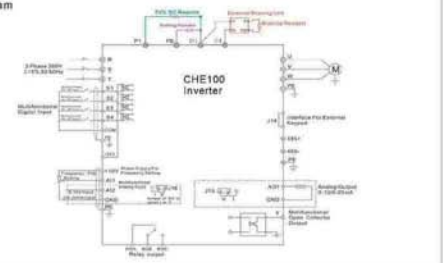
Features

- Sensorless vector control (SVC), V/F Control.
- Achieve excellent sensorless vector control based on DSP platform.
- Static and rotation motor parameters autotuning ensure excellent vector control.
- Overload capacity: 60s with 150% of rated current, 10s with 180% of rated current.
- Starting torque: 150% of rated torque at 0.5Hz (SVC)
- Independent duct design
- Speed adjusting range: 1:100 (SVC)
- Speed accuracy: ↑ 0.5% of maximum speed (SVC)
- Carrier frequency: 0.5kHz~15.0kHz
- Torque control function: provide multiple torque setting source.
- PID control function
- Multi-step speed control function: 8 steps speed can be set.
- Traverse control function
- None-Stop when instantaneous power off.
- Speed trace function: start running motor smoothly.
- QUICK/JOG key: user defined shortcut key can be realized.
- Automatic voltage regulation (AVR) function.
- Support local and remote operation panel at same time to make commissioning more convenient.
- Offer RS485 communication which support standard modbus RTU and ASCII protocol.
- Up to 24 fault protections.
- Built-in braking unit (up to 15kW)

Typical Application

Textile, printing & dyeing, chemical fibers, paper making, wire-drawing, manipulator, solid warehouse, oxygen making machine, machine tools, air-compressor, ceramic machine

Wiring Diagram



CHF100A
SERIES HIGH PERFORMANCE UNIVERSAL FREQUENCY INVERTER

1 AC 220V~230V ± 15% 0.75kW~2.2kW
3 AC 220V~230V ± 15% 0.75kW~110kW
3 AC 380V~480V ± 15% 1.5kW~2000kW

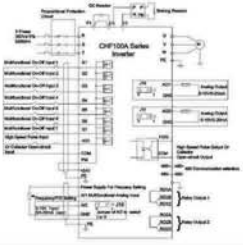
Features

- Input frequency range: 47~63Hz
- Output voltage range: 0~rated input voltage
- Output frequency range: 0~400Hz
- Control mode: V/F control, Sensorless vector control
- Torque control with Sensorless vector control
- Support PNP, NPN
- Overload capacity 60s with 150% of rated current, 10s with 180% of rated current.
- Speed adjusting Range: 1:100
- Carrier frequency: 0.5kHz~15.0kHz
- Frequency reference source: keypad, analog input, HDI, serial communication,multi-step speed, simple PLC and PID.
- PID control function
- Simple PLC, multi-steps speed control function: 16 steps speed can be set.
- Traverse control function.
- Length and time control function
- None-Stop when instantaneous power off.
- Speed trace function: start running motor smoothly.
- QUICK/JOG Key: user defined shortcut key can be realized.
- Automatic voltage regulation function (AVR): automatically keep the output voltage stable when input voltage fluctuating
- Offer RS485 communication which support standard Modbus RTU
- Simple water supply control: drive 1 variable speed pump and 2 fixed speed pump.
- Drive larger variable torque load directly.
- Built-in DC reactor above 18.5kW to improve power factor and efficiency.
- Built-in braking unit(up to 15kW).
- Up to 23 fault protections: Protection for over current, over voltage, under voltage, over temperature, phase failure, over load etc.
- Total 8 terminals, The terminal 8 can support HDI

Typical Application

Pumps and fans, extruder, automatic production line, air conditioner, water supply, food machine, blender, packing machine, medicine machine, conveyor, blowmolding machine, oil pump, fountain.

Wiring Diagram



CHV 100

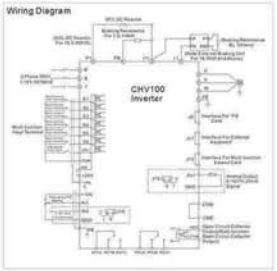
SERIES CLOSE LOOP VECTOR CONTROL FREQUENCY INVERTER/DRIVE

3 AC 220V~230V ± 15% 1.5kW~110kW
3 AC 380V~480V ± 15% 1.5kW~2000kW
3 AC 660V~690V ± 15% 11kW~2800kW
3 AC 1140V ± 15% 45kW~2800kW

Features

- Control mode:Sensorless vector control (SVC), Vector control with PG (VC), V/F control.
- Dual-CPU control platform;16bit DSP: current vector control algorithm; 32 bit ARM: application control.
- Static and rotation motor parameters autotuning ensure excellent vector control.
- Achieve high accuracy close-loop speed control and torque control.
- External LCD panel can monitor three parameters at the same time. Chinese/English is selectable.
- Overload capacity: 60s with 150% of rated current, 10s with 180% of rated current.
- Starting torque: 150% of rated torque at 0.5Hz (SVC); 180% of rated torque at 0Hz(VC).
- Speed adjusting range: 1:100 (SVC); 1:1000 (VC).
- Speed accuracy: ≤ 0.5% of maximum speed (SVC); ≤ 0.02% of maximum speed (VC)
- Carrier frequency: 1.0kHz~16.0kHz
- Frequency reference source: keypad, analog input, HDI, serial communication, multi-step speed, simple PLC and PID. The combination of multi-modes and the switch between different mode can be realized.
- Torque control function: provide multiple torque setting source.
- PID Control Function
- Simple PLC or multi-steps speed control: 16 steps speed can be set.
- Traverse control function
- Length and time control
- Offer RS485 communication which support standard modbus RTU and ASCII protocol.
- Built-in DC reactor above 18.5kW to improve power factor and efficiency.
- Built-in braking unit.
- Non-stop function while instantaneous power off.
- Speed trace function: start running motor smoothly.
- QUICK/JOG function: user defined shortcut key can be realized.
- Automatic voltage regulation (AVR): automatically keep the output voltage stable when input voltage fluctuating
- Up to 29 fault protections. Protection for over current, over voltage, under voltage, over temperature, phase failure, over load etc.

Wiring Diagram



Typical Application

Printing machine, dying machine, paper machine, wind and unwind, high accuracy machine tool, cutting machine, steel rolling, metal, wire machine, drawbench, position control, zero speed servo control

Option card

Option Card	Picture	Description
CHV100-COM		Offer RS232 and RS 485 dual physical communication interface, built-in Modbus RTU and ASCII protocol
CHV100-ASYPG		Permit both push-and-pull input and open collector input, offer frequency division output, frequency division factor can be selected by dial switch, connect to the encoder by soft wire.
CHV100-I/O		Offer more input/output terminals to enhance inverter external function, RS 485 port is available

CHV110

SERIES ENERGY SAVING CABINET

3 AC 220V~230V ± 15% 7.5kW~110kW
3 AC 380V~480V ± 15% 7.5kW~110kW

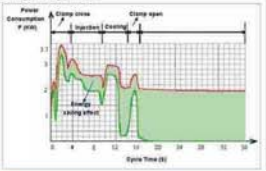
Features

- Sensorless vector control (SVC), V/F control.
- Frequency source:compare pressure and flow signals output.
- Fast current limiting function, with an instantaneous impulse current as high as 300%.
- Overload capability up to 30s with150% of rated current.
- Automatical reset and power failure reset function.
- Integrate bypass system to ensure system work properly and do not affect production.
- Multiple signal inputs: 0~1A, 0~10V, 4~20mA, 0~20mA.
- Larger torque at low frequency
- RS485 communication function.
- Unique PVM optimized design for efficient operation with energy-saving efficiency as high as 25% to 60%.
- Full range protection such as phase failure, overvoltage, undervoltage and overcurrent
- Independent air duct design, providing better heat dissipation effect.
- Preventing electrostatic dust from causing damage to electronic components.
- Compact size,dust-proof.
- Built-in DC reactor (18.5kW~75kW).
- Speed trace function:start running motor smoothly.
- Strong anti-jamming capability.
- Injection molding card.

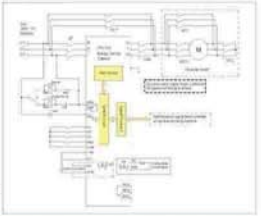
Typical Application

Injection molding machine, air compressor, air conditioner.

Energy saving principle



Wiring Diagram



Model Number	Power range	Output rated current(A)	Dimension A*B*C(mm)
CHV110-7R5G-4	7.5	17	300*660*250
CHV110-011G-4	11	25	
CHV110-015G-4	15	32	
CHV110-018G-4	18.5	37	350*946*270
CHV110-022G-4	22	45	
CHV110-030G-4	30	60	
CHV110-037G-4	37	75	380*935*285
CHV110-045G-4	45	90	
CHV110-055G-4	55	110	
CHV110-075G-4	75	150	540*1030*360
CHV110-090G-4	90	176	600*1170*380
CHV110-110G-4	110	210	

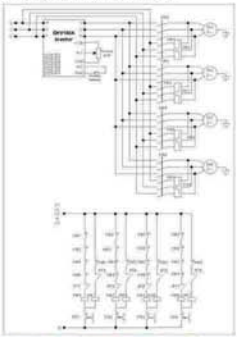
CHV160A

SERIES SPECIAL INVERTER FOR MULTI-PUMPS WATER SUPPLY 3 phase 380V~460V ± 15% 5.5kW~132kW

Features

- Optimized water supply control function;
- Can control 3 pumps without water supply card, and maximum 9 pumps with water supply card;
- Built-in clock chip inside of control modular with power supply to making timing pressure control more convenient;
- PID control;
- Control normal pump, dormant pump and dredge pump to 6 different automatically according to pressure feedback, store specific rated current separately;
- Energy saving function: Stop automatically when flow is smaller;
- Timing switchover function: Prevent pump from rust, balance every pump lifetime;
- Build-in RS485 serial port, adopt standard Modbus protocol;
- Liquid level detection and control;
- LCD keypad; Parameter download and upload, English version;
- None-stop function while instantaneous failure;
- Speed trace function: smoothly start the running motor.

Wiring diagram for four variable speed pumps



Typical Application

Water supply of fire protection,central air-conditioning system,cycle cooling water, industrial boiler,oil transportation pump,water and sewage treatment

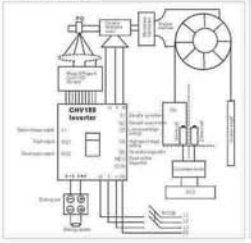
CHV180

SERIES SPECIAL INVERTER FOR ELEVATOR 3 AC 380V~480V ± 15% 4kW~30kW

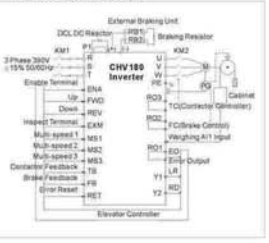
Features

- Control structure:DSP+32bit MCU.
- Maximum speed reach to 4m/s
- Two types speed control mode:multi-speed and analog speed control
- Special function for maintenance
- External EPS ensure elevator emergency running
- Three forced deceleration for up and down to prevent crashing to bottom and proof.
- Separated PI parameter for high speed and low speed
- Holding torque, contactor control.
- Start torque compensation.
- PG card synchronous PG card, asynchronous PG card.
- Starting weight up function.
- Energy saving function with RBU unit.
- S curve accelerate/decelerate function to make elevator work smoothly
- Running function: inspection running, emergency running, forced elevator running.
- More than 30 kinds of protection.
- Support Modbus.

Elevator Control Layout



Elevator control wiring diagram



Typical Application

Elevator,lift.

Option Card	Picture	Description
CHV180-SYPG		Used for asynchronous motor with incremental rotary encoder
CHV180-ASYPG		Used for synchronous motor with SinCos encoder or UVW encoder.

CHV130
SERIES SPECIAL INVERTER FOR SYNCHRONOUS CONTROL

3 AC 380V~480V ±15% 1.5kW-560kW

Features

CHV130 Series:

- Simatic platform.
- Multi-level speed synchronous function.
- Speed difference or pressure sensor feedback synchronous rolling winding control.
- Multi-driver with load balance function.
- Constant line speed re-rolling control without external control circuit.
- Pre-drive, tension taper rolling control function.
- Logic terminals output warning for analog input and internal process value.Continuous annealing function.
- Built-in wire twisting machine control function.
- Drawbench function without PLC.
- Built-in zero position transfering function, up/down function, on/off function, taper control and braking function module.

Typical Application

Wire drawing machine, Metallurgy, Winding/unwinding control, printing machine, dyeing machine, paper machine.

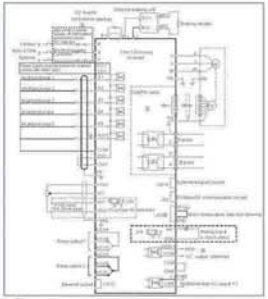
CHV190
SERIES SPECIAL FREQUENCY INVERTER FOR CRANE

3 AC 380V~480V ±15% 4kW-560kW

Features

- Internal brake control and monitor function.
- Separated power supply for control circuit and power circuit.
- Speed increasing function for light load or without load can realize faster speed for sky-hook to improve the efficiency.
- Master-slave function for speed synchronization can realize speed equilibrium to keep two crane in the same steps.
- Master-slave function for power equilibrium make two motors balance to lift one load through one reduction gear box.
- Flexible multi-control mode: manual, remote control, potentiometer control, grader remote control, grader manual control, communication.
- The second motor control and switch function can decrease the system cost.
- Support Profibus-DP and Modbus.
- Rope slack detection function.
- LCD parameters copy and download function to reserve setting.
- Speed monitor, fast stop and overspeed protection.
- Pre-excitation, starting torque compensation.
- Better close-loop vector control.
- Sensorless vector control technology achieve 0.5% control precise.
- Support dynamic braking and regenerative braking.
- Plenty of external ports and strong protections.

Model Number	Rated Power (kW)	Rated Input Current (A)	Rated Output Current (A)	Dimension W*H*D(mm)
3AC 380V ±15%				
CHV190-0040-4	4	10	9	160*256*173
CHV190-5R5G-4	5.5	15	13	
CHV190-7R5G-4	7.5	20	17	
CHV190-011G-4	11	26	25	220*320*180
CHV190-015G-4	15	35	32	
CHV190-018G-4	18.5	38	37	
CHV190-022G-4	22	46	45	290*467*215
CHV190-030G-4	30	62	60	
CHV190-037G-4	37	76	75	
CHV190-045G-4	45	90	90	375*577*270
CHV190-055G-4	55	105	110	
CHV190-075G-4	75	140	150	
CHV190-090G-4	90	160	176	465*732*330
CHV190-110G-4	110	210	210	
CHV190-132G-4	132	240	250	
CHV190-160G-4	160	290	300	492*1275*394
CHV190-185G-4	185	330	340	
CHV190-200G-4	200	370	380	
CHV190-220G-4	220	410	415	750*1358*402
CHV190-250G-4	250	460	470	
CHV190-280G-4	280	500	520	
CHV190-300G-4	300	580	600	750*1670*402
CHV190-315G-4	315	580	600	
CHV190-350G-4	350	620	640	
CHV190-400G-4	400	670	690	1200*1950*502
CHV190-500G-4	500	835	860	



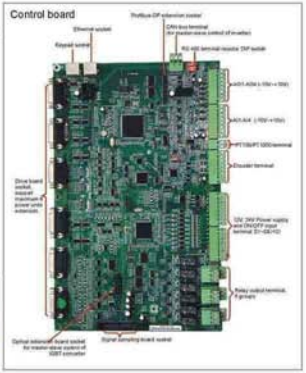
CHA100
SERIES FOUR QUADRANT VECTOR INVERTER

Chassis 3 AC 380V~440V 37kW~110kW
Cabinet 3 AC 380V~440V 132kW~1200kW

Features

- Three kinds control mode: sensorless vector control, vector control with PG, V/F control.
- Less current harmonics in the grid side, fundamental waveform power factor is close to 1(full load).
- Sine wave regenerative braking unit to save energy and protect environment.
- Special function for lifting application: logic control when power on, brake control, pre-excitation,overspeed protection, compensation of starting torque and so on.
- Support Profibus-DP and Modbus.
- Master-slave function can realize the power equilibrium and speed synchronization.
- The second motor control and switch function can decrease the system cost.
- Double protection of system and unit ,sequential control when power on, gate control and automatically parameters saving before faulty.

Control board



Model No.		Output power rating (kw)	Capacity(KVA)	Input current (A)	Output current (A)	carrier frequency(KHz)	Power unit number	Dimension W*H*D(mm)		
								Power incoming cabinet	IGBT converter cabinet	IGBT inverter cabinet
3 phase 440V	CHA100-200-4	300	216	320	380	1 ~ 8	1C+1C	600*2300*600	800*2300*600	800*2300*600
	CHA100-400-4	400	420	640	760		2C+2C	1200*2300*600	1000*2300*600	1000*2300*600
	CHA100-600-4	600	630	960	1140		3C+3C			
	CHA100-800-4	800	840	1280	1520		4C+4C	1600*2300*600	2*800*2300*600	2*800*2300*600
	CHA100-1000-4	1000	1050	1600	1900		5C+5C		(1000+600)*2300*600	(1000+600)*2300*600
	CHA100-1200-4	1200	1260	1920	2280		6C+6C	2400*2300*600	3*800*2300*600	3*800*2300*600

Note: 1. Power rating unit: 6C+6C means IGBT converter is consist of 6 pcs C type power unit,IGBT inverter is also consist of 6 pcs C type power unit

Model No.	Rated input Parameters		Rated output Parameters		Output (kW)	Capacity(KVA)	Carrier frequency (kHz)	Cabinet		
	voltage(V)	current (A)	voltage (V)	current (A)						
PU-2000-4	440V AC	3804 AC	660V DC	3204 DC	200	210	1 ~ 4	D		
	660V DC	535A DC	440V AC	3804 AC						

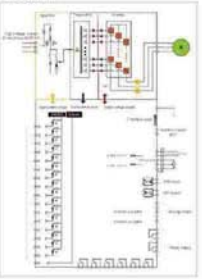
CHH100
SERIES HIGH VOLTAGE FREQUENCY INVERTER

3 AC 3.3KV ± 10% 200kW~2800kW
3 AC 6.6KV ± 10% 185kW~5000kW
3 AC 10KV ± 10% 220kW~7100kW

Features

- High integrated techology and completely digital control system, good anti interference ability.
- Control system power supply redundant design.
- Multi-monitor for power units
- Power unit bypass function
- Standard RS485 terminal to communicate with DCS.
- More than 30 kinds of protection for inverter and motor.
- Full parameters record, temperature and DC bus of each power unit can be monitored and indicated.
- High efficiency > 96%, power factor > 0.96, low harmonic design<2%.
- DSP control system optimize modulated waveform to ensure perfect waveform without harmonics.
- Better energy saving function, self-regulation for voltage when detecting light load to save energy.
- Big voltage, current margin design, adopt 1700V IGBT, twice voltage margin, twice current margin
- System and power unit bypass function, inverter can auto switch between power frequency and variable frequency, and also inverter bypass failed power unit with derating
- Speed trace function
- Wide voltage fluctuation range ± 15%.
- Adopt back-in-front-out wiring for power unit.

Wire diagram:



Typical Application

Power plant, water supply, cement, iron & steel, petrochemical, oil & gas

Voltage	Model No.	Rated power (kW)	Rated capacity(kVA)	Rated current (A)	Motor power(kW)	Dimension(W*H *D)(mm)	Weight(kg)
3.3kV	CHH100-0200-3.3	200	250	45	250	3100*2950*1200	2100
	CHH100-0250-3.3	250	315	56	250	3100*2950*1200	2355
	CHH100-0315-3.3	315	400	70	315	3100*2950*1200	2480
	CHH100-0400-3.3	400	500	88	400	3100*2950*1200	2645
	CHH100-0500-3.3	500	600	105	500	3300*2950*1200	3160
	CHH100-0630-3.3	630	750	140	630	3500*2950*1200	3660
	CHH100-0800-3.3	800	960	173	800	3500*2950*1200	3960
	CHH100-0900-3.3	900	1100	196	900	3500*2950*1200	4187
	CHH100-1000-3.3	1000	1200	215	1000	3500*2950*1200	4387
	CHH100-1250-3.3	1250	1500	280	1250	3700*2950*1200	4997
	CHH100-1400-3.3	1400	1700	308	1400	3700*2950*1200	5370
	CHH100-1600-3.3	1600	1900	348	1600	3900*2950*1200	5750
	CHH100-1800-3.3	1800	2000	393	1800	3900*2950*1200	6080
	CHH100-2000-3.3	2000	2700	430	2000	3900*2950*1200	6440
	CHH100-2240-3.3	2240	3000	488	2240	3900*2950*1200	6720
	CHH100-2500-3.3	2500	3300	561	2200	4100*2950*1500	7100
	CHH100-2800-3.3	2800	3700	608	2800		

CHH100
SERIES HIGH VOLTAGE FREQUENCY INVERTER

3 AC 3.3KV 200kW~2800kW
3 AC 6.6KV 155kW~5000kW
3 AC 10KV 220kW~7100kW

Voltage	Model No.	Rated power (kW)	Rated capacity(kVA)	Rated current (A)	Motor power(kW)	Dimension W*H*D(mm)	Weight (kg)
6.6kV	CHH100-0185-6	185	236	22	185	3600*2660*1200	2620
	CHH100-0200-6	200	255	23	200	3600*2660*1200	2660
	CHH100-0220-6	220	280	25	220	3600*2660*1200	2680
	CHH100-0250-6	250	315	28	250	3600*2660*1200	2780
	CHH100-0280-6	280	360	31	280	3600*2660*1200	2950
	CHH100-0315-6	315	400	35	315	3600*2660*1200	2905
	CHH100-0355-6	355	440	39	355	4100*2660*1200	3140
	CHH100-0400-6	400	500	45	400	4100*2660*1200	3210
	CHH100-0450-6	450	560	50	450	4100*2660*1200	3300
	CHH100-0500-6	500	600	56	500	4100*2660*1200	3450
	CHH100-0560-6	560	690	63	560	4100*2660*1200	3560
	CHH100-0630-6	630	750	70	630	4300*2660*1200	3750
	CHH100-0710-6	710	880	79	710	4300*2660*1200	3895
	CHH100-0800-6	800	980	89	800	4300*2660*1200	4050
	CHH100-0900-6	900	1100	99	900	4700*2660*1200	4900
	CHH100-1000-6	1000	1250	110	1000	4700*2660*1200	5030
	CHH100-1120-6	1120	1370	123	1120	4900*2660*1200	5290
	CHH100-1250-6	1250	1500	138	1250	4900*2660*1200	5510
	CHH100-1400-6	1400	1700	153	1400	4900*2660*1200	5730
	CHH100-1600-6	1600	1900	173	1600	5100*2660*1200	6110
	CHH100-1800-6	1800	2150	206	1800	5100*2660*1200	6474
	CHH100-2000-6	2000	2400	214	2000	5100*2660*1200	6854
	CHH100-2240-6	2240	2700	244	2240	5100*2660*1200	7134
	CHH100-2500-6	2500	3000	263	2500		
	CHH100-2800-6	2800	3300	303	2800		
	CHH100-3150-6	3150	3700	339	3150		
	CHH100-3550-6	3550	4500	400	3550		
	CHH100-4000-6	4000	5000	450	4000		
	CHH100-4500-6	4500	5600	507	4500		
	CHH100-5000-6	5000	6200	556	5000		

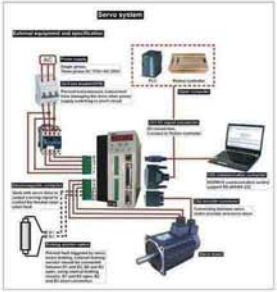
Voltage	Model No.	Rated power (kW)	Rated capacity(kVA)	Rated current (A)	Motor power(kW)	Dimension W*H*D(mm)	Weight (kg)
10kV	CHH100-0220-10	220	295	17	220	4900*2660*1200	3380
	CHH100-0250-10	250	330	19	250	4900*2660*1200	3470
	CHH100-0280-10	280	360	21	280	4900*2660*1200	3490
	CHH100-0315-10	315	400	24	315	4900*2660*1200	3550
	CHH100-0355-10	355	450	27	355	4900*2660*1200	3600
	CHH100-0400-10	400	500	30	400	5100*2660*1200	3790
	CHH100-0450-10	450	570	33	450	5100*2660*1200	3850
	CHH100-0500-10	500	630	37	500	5100*2660*1200	3950
	CHH100-0560-10	560	710	41	560	5300*2660*1200	4295
	CHH100-0630-10	630	800	46	630	5300*2660*1200	4445
	CHH100-0710-10	710	870	51	710	5300*2660*1200	4575
	CHH100-0800-10	800	980	57	800	5300*2660*1200	4775
	CHH100-0900-10	900	1100	64	900	5500*2660*1200	4985
	CHH100-1000-10	1000	1200	71	1000	5500*2660*1200	5125
	CHH100-1120-10	1120	1370	79	1120	5500*2660*1200	5345
	CHH100-1250-10	1250	1500	88	1250	5500*2660*1200	5625
	CHH100-1400-10	1400	1700	98	1400	5500*2660*1200	5875
	CHH100-1600-10	1600	1900	112	1600	5100*2660*1200	7080
	CHH100-1800-10	1800	2200	127	1800	6300*2660*1500	7200
	CHH100-2000-10	2000	2400	141	2000	5300*2660*1500	7800
	CHH100-2240-10	2240	2700	157	2240	6300*2660*1500	8000
	CHH100-2500-10	2500	3000	175	2500	6500*2660*1500	8400
	CHH100-2800-10	2800	3600	205	2800	6500*2660*1500	8860
	CHH100-3150-10	3150	4000	230	3150	6500*2660*1500	9501
	CHH100-3550-10	3550	4500	260	3550	6500*2660*1500	10201
	CHH100-4000-10	4000	5000	290	4000		
	CHH100-4500-10	4500	5600	326	4500		
	CHH100-5000-10	5000	6300	362	5000		
	CHH100-5600-10	5600	7000	408	5600		
	CHH100-6300-10	6300	8000	456	6300		
	CHH100-7100-10	7100	9000	512	7100		

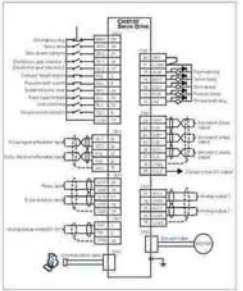
CHS100
SERIES SERVO DRIVE

1 AC 220V ± 15% 0.1kW~2kW
3 AC 220V ± 15% 0.1kW~2kW

Features

- Control methods: sine waveform PWM control with vector control, 32bit DSP+FPGA.
- Parameter setting mode: manual control parameter setting, also can be set by the communication with PC, has anti-vibration and filter functions.
- Control mode: position mode, speed mode, torque mode.
- Maximum input pulse frequency: 500kpps(differential), 200kpps(OC).
- Encoder resolution:1/10000,10000 feedback pulses each circle.
- Encoder feedback pulse frequency range:0~10MHz.
- Pulse amplifier range: electronics gear, A/B:A=1~65535,B=1~65535, 1/50<A/B<500.
- Position accuracy: 0.072° (2 feedback pulses).
- Speed control,maximum frequency response: 300MHz.
- Speed adjusting range: 1:5000.
- Speed vibration rate: ≤ ±0.1%.
- Communication: RS485/232, Modbus.





Servo Drive Parameters					Servo Motor Parameters						
Model No.	Capacity (kVA)	Power rating (kW)	Rated current (A)	Dimension W*H*D (mm)	Motor power rating (W)	Rated torque (N.m)	Rated speed (r/min)	Phase current (A)	Torque coefficient KT(N.m/A)	Voltage Constant V1(0.01r/min)	Rotor of Inertia ($10^{-4}(Kg \cdot m^2)$)
CHS100 0R1	0.3	0.1	1.2	60*160*18	100	0.32	3000	1.0	0.32	20	0.17
CHS100 0R2	0.5	0.2	1.8	6	200	0.64	3000	1.5	0.43	28	0.17
CHS100 0R4	0.9	0.4	2.8		400	1.27	3000	2.8	0.45	28	0.302
CHS100 0R7	1.3	0.75	4.3		750	2.4	3000	3.0	0.8	48	2.4
CHS100 1R0	1.7	1.00	5.7	98*160*18	1000	5	2500	5.0	1.0	56	10.8
CHS100 1R5	2.5	1.50	8	8	1500	7.7	2500	7.5	1.03	66	15.3
CHS100 2R0	3.5	2.00	10		2000	10	2500	10	1.0	70	19.4

RBU Regenerative braking unit

- Braking torque: 60s with 100% of rated torque (25% duty cycle), continuously run with 80% of rated torque.
- High power factor:>0.9
- Overload capacity: 30s with 150% of rated current .
- Operation mode: external terminal, keyboard
- Power light display when DC bus voltage more than 50V.

LCD/LED Keypad

- External keypad adopt 128*64 lattice modules.
- Three parameters indication at same time.
- Integerate parameter copy function, upload / download parameters setting for inverter.

DBU Dynamic braking unit 220V~1140V, 55kW~315kW

- High braking capability brake continuously for full load when braking rate is 50%;
- Banks for five minutes for full load when braking rate is 100%;
- Wide voltage range : offer six braking threshold voltage;
- Comprehensive protection function: prevent inverter from short circuit of braking resistor.

HCM

- One host computer control INVT multi-inverter or multi-type inverter
- Optimize communication module, promote communication efficiency
- Compatible, self-indentity INVT CH series inverter.
- Monitor any two inverters at one time.
- Monitor speed adjustable, flexible monitor running inverter
- Alterable and inspectable inverter parameter, use analog oscillograph monitor inverter analog parameter and ports status
- Flexible log function, trace and reserve information between host and inverter
- Flexible control function
- Open configuration

RBU Parameters

Input voltage	Model No.	Rated power (kW)	DC rated current (A)	AC rated current (A)	Dimension W*H*D(mm)
380V	RBU-7-TBS-4	7.5	15	10	320*230*160
	RBU-011-4	11	15	15	
	RBU-015-4	15	26	26	
	RBU-018-4	18.5	32	25	
	RBU-022-4	22	37	30	
	RBU-030-4	30	51	40	377*236*220
	RBU-037-4	37	64	50	
	RBU-045-4	45	77	65	
	RBU-055-4	55	86	75	
	RBU-075-4	75	128	100	
	RBU-090-4	90	150	120	
	RBU-110-4	110	183	146	320*577*261
	RBU-132-4	132	220	176	
	RBU-160-4	160	276	213	
	RBU-185-4	185	308	246	
	RBU-200-4	200	333	298	
	RBU-220-4	220	366	282	
660V	RBU-055-6	55	52	42	320*577*261
	RBU-075-6	75	71	56	
	RBU-090-6	90	86	69	
	RBU-110-6	110	105	84	
	RBU-132-6	132	126	100	
	RBU-160-6	160	152	122	
	RBU-185-6	185	178	140	
	RBU-200-6	200	190	152	
	RBU-220-6	220	209	167	
	RBU-250-6	250	338	190	

DBU Braking unit

No.	S1 selection		220V		540V		690V		1140V	
	50% braking rate	100% braking rate	Braking start value (V)	Braking stop value (V)	Braking start value (V)	Braking stop value (V)	Braking start value (V)	Braking stop value (V)	Braking start value (V)	Braking stop value (V)
0			330	320	640	630	1065	1060	1950	1920
1			350	340	660	640	1100	1080	2000	1970
2			370	360	690	680	1120	1100	2050	2020
3			380	370	700	690	1140	1120	2100	2070
4			390	380	720	700	1160	1140	2150	2120
5			400	390	740	720	1180	1160	2200	2170
6			Reserve	Reserve	Reserve	Reserve	Reserve	Reserve	Reserve	Reserve
7			Parallel operation	Parallel operation	Parallel operation	Parallel operation	Parallel operation	Parallel operation	Parallel operation	Parallel operation

Analogue oscillograph

Main interface with log

Port oscillograph

Main interface with status

Features			Description		
			CHV	CHE	CHF
POWER SUPPLY	Voltage	1 AC	220V ± 15%		
		3 AC	220V/380V/415V/440V/480V/525V/690V/1140V ± 15%		
	Frequency		50/60Hz ± 5%(47~63Hz)		
	Power factor Cos-φ		>0.92		
CONTROL	Power range		1.5~2800kW	0.4~15kW	0.75~2000kW
	Control method		16 bit DSP + 32 bit ARM	16 bit DSP	16 bit DSP
	Control type		SPWM current vector control		SPWM modulation
	Control mode		Sensorless vector control (SVC) Vector cutport with PG(VC) V/F control	Sensorless vector control (SVC) V/F control	V/F control
	Carrier Frequency		1.0k~10.0kHz	0.5k~15kHz	0.5k~15kHz
	Frequency Range		0~400Hz		
	Speed Accuracy		≤0.5% of maximum speed (SVC); ≤0.02% of Maximun speed (VC)		
	Starting torque		150% Nm at 0.5Hz (SVC) 180% Nm at 0 Hz(VC)	150% Nm at 0.5Hz (SVC)	150% Nm at 1 5Hz
	Overload Capacity		150% rated current for 60s 160% rated current for 10s	★CT:150% rated current for 60s 180% rated current for 10s VT:120% rated current for 60s 150% rated current for 10s	CT:150% rated current for 60s 180% rated current for 10s VT:120% rated current for 60s 150% rated current for 10s
	Efficiency			>98% (nominal)	
ADVANCED CONTROL	V/F Curve		Linear, User-defined, Torque stepdown(1.3, 1.7, 2.0 order)	Linear,Torque stepdown(2.0 order)	Linear, User-defined, Torque stepdown(1.3, 1.7, 2.0 order)
	S Curve		Standard	N/A	N/A
	Speed trace		Realize smooth start of rotating motor with big inertia load		
	Length control		Length controlled by preset	N/A	N/A
	Traverse control		0~100% frequency traverse		
	Multi-speed		16	8	16
	Droop control		0~10Hz	N/A	0~10Hz
	Torque control		Standard	Standard	N/A
	LCD		Chinese/English selectable, download and upload parameter		N/A
PERFORMANCE	Speed control	V/F			Speed range 1:100
					Resolution 0.01Hz (Digital)
					Maximun frquency *0.1% (analogue)
		Sensorless Vector control		Speed range 1:100	
				Resolution 0.01Hz (Digital)	
				Maximun frquency *0.1% (analogue)	
		Vector control with PG	Speed range1:1000		
			Resolution 0.01Hz (Digital)		
			Maximun frquency *0.1% (analogue)		
INPUTS	Analog		2 channels (0~10V/0~20mA), 2 channels extendable	2 channels (0~10V/0~20mA)	2 channels (0~10V/0~20mA)
	Digital		4 channels (1 HDI), 4 channels extendable	4 channels	6 channels (1HDI)
OUTPUTS	Analog		1 channel(0/4 ~20mA or 0/2~10V) 1 channel extendable	1 channel(0/4 ~20mA or 0/2~10V)	1 channel(0/4 ~20mA or 0/2~10V)
	Digital		1 channel, 1 channel extendable	1 channel	1 channel
	Relay		2 channels, 1 channel estendable	1 channel	2 channels (<2.2kW only 1)
COMMUNICATION	Serial interface		RS232 or RS485	RS485	RS485
	"Field BUS" Networks		Profibus DP, Modbus RTU		
SAFETY	Protection		IGBT phase fault, Overcurrent, Overvoltage, Undervoltage, Overload, Overheat, External fault, etc		
ENVIRONMENT	Temperature		Operation: -10° C~+40° C, Transportation & Storage: -30° C~+60° C		
	Humidity		<95%, no condensation allowed		
	Altitude		0~1000m without derating, 1000~4000m with derating		
	Cooling Method		Dry clean air		
CERTIFICATE	CE/EUROPE)		CE		

★CT: Constant torque application, VT: Variable torque application

SELECTION GUIDE

CH□100-□□□G-S2		0R4	0R7	1R5	2R2
Power rating	HP	0.5	1	2	3
	kW	0.4	0.75	1.5	2.2
Current	CT(A)	2.3	4.5	7	10
Weight	kg	1.5		2.5	
Dimension	W*H*D(mm)	115*140*85		140*180*120	

CH□100-□□□G-2		0R7	1R5	2R2	004	5R5	7R5	011	015	018	022	030	037	045	055
Power rating	HP	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75
	kW	0.8	1.5	2.2	4.0	5.5	7.5	11.0	15.0	18.5	22.0	30.0	37.0	45.0	55.0
Current	CT(A)	4.5	7	10	16	20	30	42	55	70	80	110	130	160	200
Weight	kg	2.5		5		8		26		45					
Dimension	W*H*D(mm)	140*180*120		180*250*150		220*320*180		290*467*215		375*577*270					

CH□100-□□□G□□□P-4		0R7	1R5	2R2	004	5R5	7R5	011	015	018	022	030	037	045	055	075	090	110	132	160	185
Power rating	HP	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120	150	175	215	250
	kW	0.8	1.5	2.2	4.0	5.5	7.5	11.0	15.0	18.5	22.0	30.0	37.0	45.0	55.0	75	90	110	132	160	185
Current	CT(A)	2.5	3.7	5	9	13	17	25	32	37	45	60	75	90	110	150	176	210	250	300	340
	VT(A)				13	17	25	32	37	45	60	75	90	110	150	176	210	250	300	340	380
Weight	kg	2.5		5		8		26		45		82		174							
Dimension	W*H*D(mm)	140*180*120		180*250*150		220*320*180		290*467*215		375*577*270		460*755*330		490*1430*366							

CH□100-□□□G□□□P-4		200	220	250	280	315	350	400	500	560	630
Power rating	HP	300	300	333	373	420	467	533	667	747	840
	kW	200	220	250	280	315	350	400	500	560	630
Current	CT(A)	380	415	470	520	600	640	860	950	1100	
	VT(a)	415	470	520	600	640					
Weight	kg	273				800					
Dimension	W*H*D(mm)	750*1616*400				1505*1821*400					

CH□100-□□□G-6		015	022	030	037	045	055	075	090	110	132	160	185	200	220	250	300	315	350	400	500	560	630
Power rating	HP	20	30	40	50	60	75	100	120	150	175	215	250	300	300	333	373	420	467	533	667	747	840
	kW	15	22	30	37	45	55	75	90	110	132	160	185	200	220	250	280	315	350	400	500	560	630
Current	CT(A)	20	28	35	45	52	63	86	98	121	150	175	198	218	240	270	320	350	380	430	540	600	680
Dimension	W*H*D(mm)	290*467*215		375*577*270		378*567.6*337		460*759*336			490*1490*391			750*1670*402			1505*1821.5*400						

CH□100-□□□G-12		037	045	055	075	090	110	132	160	185	200	220	250	280	300	315	350	400	450	500	560	630
Power rating	HP	50	60	75	100	120	150	175	215	250	300	300	333	373	420	467	533	600	667	747	840	
	kW	37	45	55	75	90	110	132	160	185	200	220	250	280	280	315	350	400	450	500	560	630
Current	CT(A)	25	31	38	52	58	73	86	104	115	132	144	162	180	180	208	225	260	300	325	365	400
Dimension	Standard	570*1300*350					800*1750*440							1200*2050*800				1400*2000*1000				
W*H*D(mm)	Explore proof	590*477*198					800*800*310							800*1200*320				1100*900*360				

SELECTION GUIDE OF REACTOR AND FILTER

Power	DC reactor		Input reactor		Output reactor		Input filter	Output filter	Braking Unit	Braking Resistor
	Model number	Specification	Model number	Specification	Model number	Specification	Model number	Model number		
0.4KW/1AC 220V	DCL-0003-EIDH	3A/28mH					NFI-010			
0.75KW/1AC 220V	DCL-0003-EIDH	3A/28mH					NFI-010			
1.5KW/1AC 220V	DCL-0006-EIDH	6A/11mH					NFI-010			
2.2KW/1AC 220V	DCL-0006-EIDH	6A/11mH					NFI-010			
0.75KW 380V	DCL-0006-EIDH	3A/28mH	ACL-0003-EISC	2A/7mH	OCL-0003-BSC	3A/2mH	NFI-005	NFO-005		1 * 800 Ω/75W
1.5KW 380V	DCL-0006-EIDH	6A/11mH	ACL-0005-EISC	5A/3.8mH	OCL-0005-BSC	5A/1.5mH	NFI-005	NFO-005	Built-in	1 * 400 Ω/250W
2.2KW 380V	DCL-0006-EIDH	6A/11mH	ACL-0007-EISC	7A/2.5mH	OCL-0007-BSC	7A/1mH	NFI-010	NFO-010		1 * 150 Ω/080W
4KW 380V	DCL-0010-EIDH	12A/6.3mH	ACL-0010-EISC	10A/1.5mH	OCL-0010-BSC	10A/0.6mH	NFI-010	NFO-010	Built-in	1 * 150 Ω/080W
5.5KW 380V	DCL-0023-EIDH	23A/0.6mH	ACL-0015-EISC	15A/1.0mH	OCL-0015-BSC	15A/0.25mH	NFI-020	NFO-020		1 * 100 Ω/520W
7.5KW 380V	DCL-0023-EIDH	23A/0.6mH	ACL-0020-EISC	20A/0.75mH	OCL-0020-BSC	20A/0.13mH	NFI-020	NFO-020	Built-in	1 * 80 Ω/040W
11KW 380V	DCL-0033-EIDH	33A/2mH	ACL-0030-EISC	30A/0.6mH	OCL-0030-BSC	30A/0.067mH	NFI-036	NFO-036		1 * 40 Ω/040W
15KW 380V	DCL-0033-EIDH	33A/2mH	ACL-0040-EISC	40A/0.42mH	OCL-0040-BSC	40A/0.066mH	NFI-036	NFO-036	Built-in	1 * 40 Ω/156W
18.5KW 380V	DCL-0040-EIDH	40A/1.3mH	ACL-0050-EISC	50A/0.35mH	OCL-0050-BSC	50A/0.052mH	NFI-050	NFO-050		1 *20 Ω/6000W
22KW 380V	DCL-0050-EIDH	50A/1.08mH	ACL-0060-EISC	60A/0.28mH	OCL-0060-BSC	60A/0.045mH	NFI-050	NFO-050	1*DBU-055-4	1 *20 Ω/6000W
30KW 380V	DCL-0065-EIDH	65A/0.8mH	ACL-0080-EISH	80A/0.19mH	OCL-0080-BSH	80A/0.032mH	NFI-065	NFO-065		1 *20 Ω/6000W
37KW 380V	DCL-0078-EIDH	78A/0.70mH	ACL-0080-EISH	80A/0.16mH	OCL-0080-BSH	80A/0.03mH	NFI-080	NFO-080		1 *13.6 Ω/9600W
45KW 380V	DCL-0095-EIDH	95A/0.54mH	ACL-0100-EISH	100A/0.13mH	OCL-0100-BSH	120A/0.023mH	NFI-100	NFO-100	1*DBU-055-4	1 *13.6 Ω/9600W
55KW 380V	DCL-0115-EIDH	115A/0.45mH	ACL-0150-EISH	150A/0.10mH	OCL-0150-BSH	150A/0.019mH	NFI-150	NFO-150		1 *13.6 Ω/9600W
75KW 380V	DCL-0160-EIDH	160A/0.39mH	ACL-0200-EISH	200A/0.12mH	OCL-0200-BSH	200A/0.014mH	NFI-150	NFO-150		2 *13.6 Ω/9600W
90KW 380V	DCL-0160-UIDH	160A/0.33mH	ACL-0250-EISH	250A/0.09mH	OCL-0250-BSH	250A/0.011mH	NFI-200	NFO-200	2*DBU-055-4	2 *13.6 Ω/9600W
110KW 380V	DCL-0250-UIDH	250A/0.26mH	ACL-0250-EISH	250A/0.08mH	OCL-0250-BSH	250A/0.011mH	NFI-250	NFO-250		2 *13.6 Ω/9600W
132KW 380V	DCL-0250-UIDH	250A/0.26mH	ACL-0280-EISH	280A/0.06mH	OCL-0280-BSH	280A/0.008mH	NFI-250	NFO-250	1*DBU-160-4	1 * 4 Ω/30000W
160KW 380V	DCL-0340-UIDH	340A/0.18mH	ACL-0330-EISH	330A/0.04mH	OCL-0330-BSH	330A/0.008mH	NFI-300	NFO-300		1 * 4 Ω/30000W
185KW 380V	DCL-0400-UIDH	482A/0.12mH	ACL-0400-EISH	400A/0.04mH	OCL-0400-BSH	400A/0.005mH	NFI-400	NFO-400		1 * 3 Ω/30000W
200KW 380V	DCL-0460-UIDH	460A/0.12mH	ACL-0490-EISH	490A/0.03mH	OCL-0490-BSH	490A/0.004mH	NFI-400	NFO-400	1*DBU-2304	1 * 3 Ω/30000W
220KW 380V	DCL-0460-UIDH	460A/0.12mH	ACL-0490-EISH	490A/0.03mH	OCL-0490-BSH	490A/0.004mH	NFI-600	NFO-600		1 * 3 Ω/30000W
250KW 380V	DCL-0650-UIDH	650A/0.11mH	ACL-0530-EISH	530A	OCL-0530-BSH	530A	NFI-600	NFO-600		2 * 3 Ω/40000W
280KW 380V	DCL-0650-UIDH	650A/0.11mH	ACL-0600-EISH	600A	OCL-0600-BSH	600A	NFI-600	NFO-600	1*DBU-315-4	2 * 3 Ω/40000W
315KW 380V	DCL-0800-UIDH	800A/0.09mH	ACL-0660-EISH	660A/0.02mH	OCL-0660-BSH	660A/0.02mH	NFI-800	NFO-800		2 * 3 Ω/40000W
350KW 380V	DCL-1000-UIDH	1000A/0.08mH	ACL-0800-EISH	800A	OCL-0800-BSH	800A	NFI-800	NFO-800		
400KW 380V	DCL-1000-UIDH	1000A/0.08mH	ACL-0800-EISH	800A	OCL-0800-BSH	800A	NFI-1200	NFO-1200		
500KW 380V			ACL-1250-EISH	1250A	OCL-1250-BSH	1250A	NFI-1200	NFO-1200		
560KW 380V			ACL-1250-EISH	1250A	OCL-1250-BSH	1250A	NFI-1200	NFO-1200		
630KW 380V			ACL-1600-EISH	1600A	OCL-1600-BSH	1600A				