

# VEICHI

Stock Code: 688698



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# | Product Classification

## 01 Inverters

High, medium and low frequency inverters with excellent performance, rich functions, high reliability and operability, complete in all specifications. Widely applied in different occasions and fields, and widely accepted by customers.



## 02 Servo System

Stable and reliable performance accommodating to all sorts of industrial control devices, helps to raise production efficiency and product quality, and to reduce system cost and enhance market competitiveness.



## 03 Control System

Designed with multiple communication interfaces and control instructions, offering more efficient, more precise and more convenient industrial products and solutions.



## 04 Industrial machines and SLoTs

Integrated solutions from device access to actual application at one stop, equipping companies with valuable industrial data. End-to-end solutions with high reliability and effect realization for extensive use.





# Honorable Certification

Excellent independent research and development abilities and acclamation earned Veichi the titles like Jiangsu provincial-level Enterprise Technology Center, Jiangsu Private-own Technical Enterprise, Specialized and sophisticated enterprises that produce new and unique products Jiangsu Engineering Research Center, Jiangsu New and High-tech Enterprise and Suzhou city-level Gazelle Company (High Growth Enterprise) and the highest level of credits.

Authorized patents for innovative technologies have topped 148 by the end of 12, 2022, including 36 patents for invention.



# Honorable certifications for superb quality



148

Authorized patents

36

Patents for invention

91

Patent for utility models

21

Patent for design

62

Software copyright

# | R & D Capacity



## 01 Talents

We have gathered excellent professional and technical talents in the field of industrial control in China, and our R&D personnel account for 34.17% of the total employees, while technical personnel with bachelor's degree or above account for 90%.

## 02 Ideas

Adhering to the research and development concept of "strive for the better by innovating technologies", Veichi is always committed to providing customers with stable and trustworthy products and technical services.

## 03 Investment

Annual R&D investment in Veichi accounts for about 10% of the revenue. EMC laboratory, safety laboratory, reliability laboratory, product performance testing laboratory and a number of experimental platforms for multiple industrial applications are established successively. By increasing the R&D investment, Veichi is able to maintain its technical advantages in the field of inverters, servo systems and control systems.





## 04 Achievements

By the end of 12, 2022, a total of 148 patents have been granted, including 36 invention patents, mainly in the areas of electrical transmission, industrial control, green energy, industrial automation equipment, etc.

## 05 Partners

The company has established in-depth cooperation with many famous universities and research institutions in China, and has set up "Jiangsu Postdoctoral Innovation Practice Base" and "Jiangsu Postgraduate Workstation" to continuously launch professional products with characteristics.

## 06 Modes

Veichi adopts EDA design concept :theoretical design, simulation verification (thermal simulation, circuit simulation, code simulation) - prototype implementation and IPD (Integrated Product Development) development process for efficient and collaborative development.

# Inverters

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Committed to provide better products for control industry



Veichi's AC series inverters are rich in functions, easy in use, reliable in performance, complete in specifications and suitable in various applications. We have provided more than 188 million sets of AC series inverters and related solutions that have been applied in various fields of industrial automation throughout China and outer world since 2017. In the meantime, we have saved about 216 billion kW/h of electricity and reduced about 2152 tons of carbon dioxide emissions. Both quality and performance of our products have been unanimously recognized by our customers.



Stable and reliable



Well-adapted



Comprehensive power rating

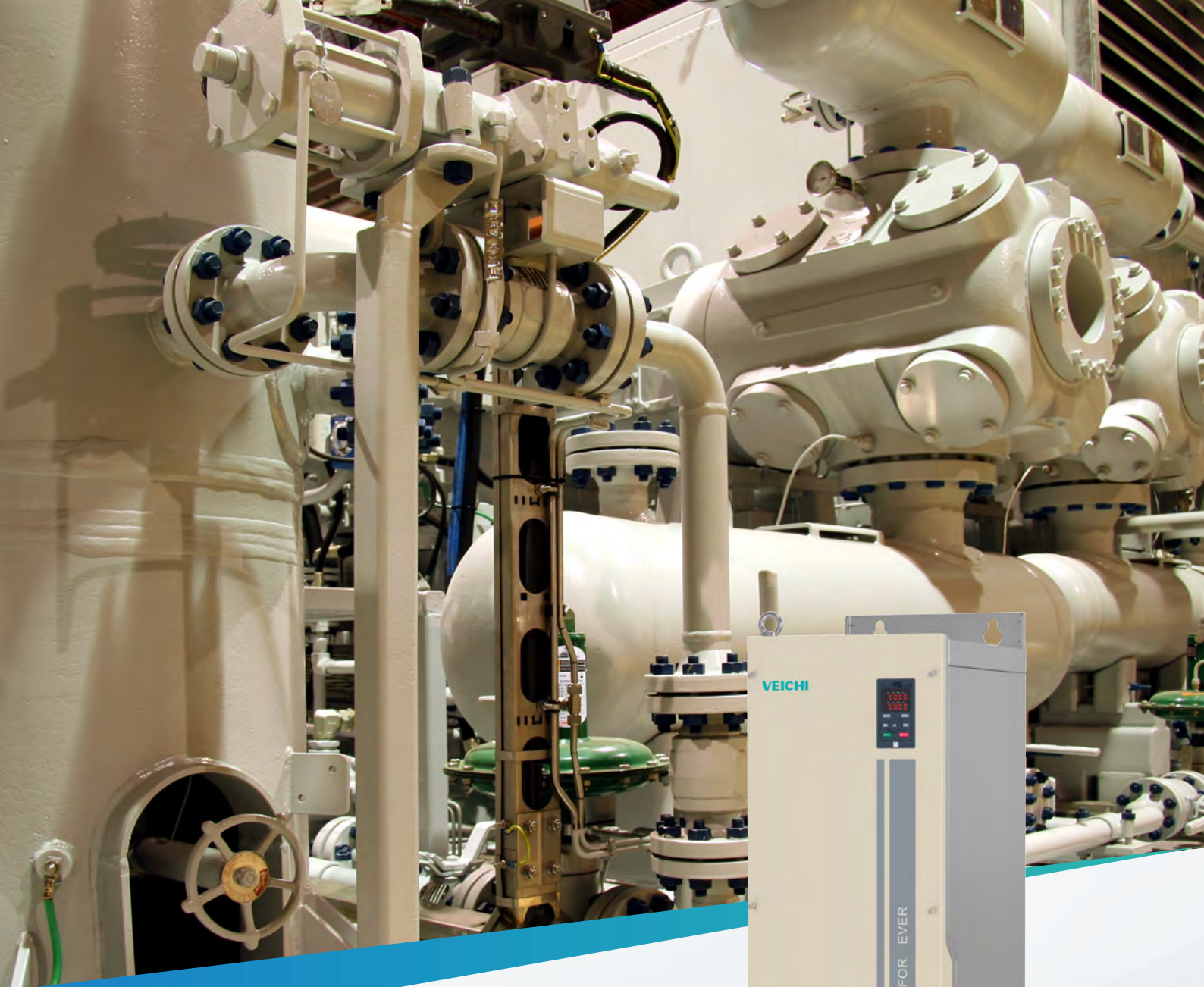


Wide voltage range



Abundant accessories





## AC320-Series and Silicon Carbide High-speed Inverter

Single-phase 220V AC 50Hz/ 60Hz 0.75kW-15kW  
Three-phase 220V AC 50Hz/ 60Hz 0.75kW-220kW  
Three-phase 380V AC 50Hz/ 60Hz 0.75kW-1120kW  
Three-phase 660V AC 50Hz/ 60Hz 22kW-1120kW



High frequency output



New hi-speed PM motor vectoring algorithm



Applicable for high-frequency carrier



High degree of protection



High-efficiency and energy-saving

## Features

High frequency output up to 3000Hz	Higher protection and adaptability	New optimized motor vector control algorithm platform to ensure continuous and stable operation under high-speed & high-carrier	Easy wiring & operation
Optimized circuit design, reduced product failure rate, prolonged service life	Improved efficiency of electric transmission system with high speed and high efficiency permanent magnet motor	High power density and reduced volume & weight for easy arrangement	Outstanding EMC rating & anti-interference performance

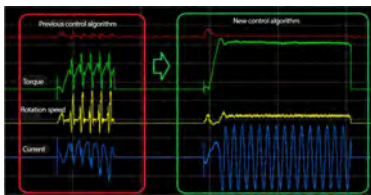
## Description

AC320-Series & silicon carbide-series inverters are applicable for high-speed and high-carrier motors. Both products have excellent resistance to high voltage, high temperature, low loss and such, fully meeting the requirements of high efficiency, compact size and low weight in power electronic systems. Recently developed SiC power device inverter between 380V-480V has been used more in the new energy vehicles, photovoltaic power generation, hydrogen fuel cells, industrial power supply and other fields. As to the AC320 series inverter, except for its usage on high-speed magnetic levitation and permanent magnet high-speed air compressors, it has achieved notable grades on the general inverter market, exhibiting excellent competitiveness and vitality.

## Characteristics

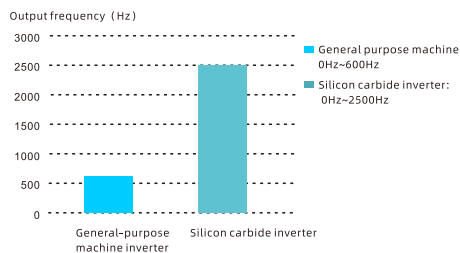
### New hi-speed PM motor vectoring algorithm

New hi-speed PM motor vectoring algorithm enables 200% of the rated torque at 0Hz under open-loop control.



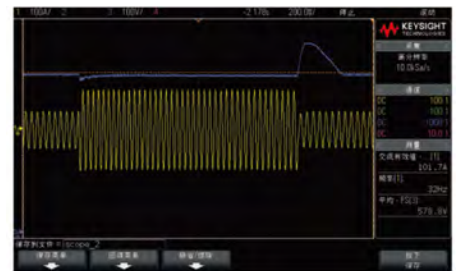
### High frequency output

Excellent space vector pulse width modulation technology leads to motor drive frequency reaching 2500Hz, carrier 20KHz-40KHz.



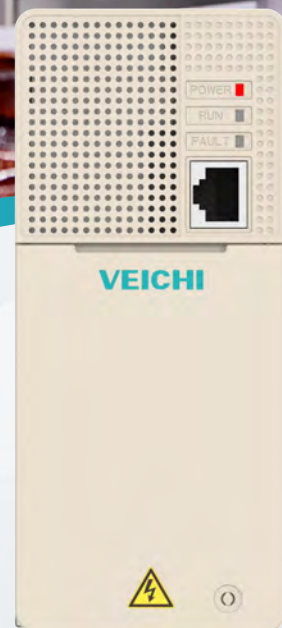
### Accurate decoupling and fast response

Precise decoupling with high-speed motor torque & excitation adds with excellent dynamic response performance.



## Applicable Industries

It can be widely used in magnetic levitation, particular machinery, refrigeration system, chemical industry, biopharmaceutical and other industries.



## AC01 - Series Network Inverter

Single-phase 220V AC 50Hz/60Hz 0.4kW-4kW  
Three-phase 380V AC 50Hz/60Hz 0.75kW-7.5kW



Easy operation &  
application



Compact volume &  
structure



Hardware optimized  
for higher stability

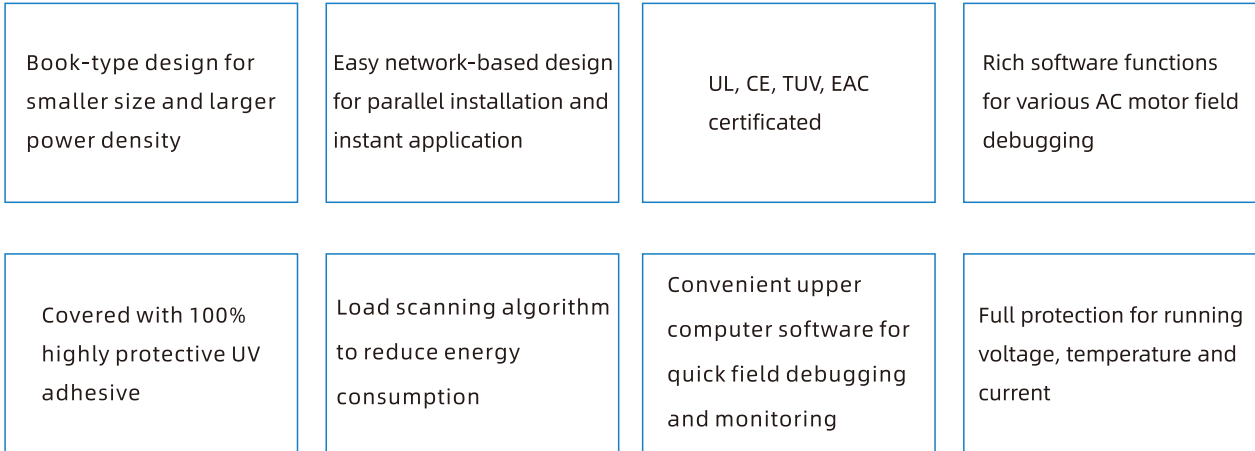


Standard product  
with various  
certificates



Reliable performance  
and rich functions

## Features



## Description

AC01 - Series network inverter is designed especially for food machineries, transmission bands, fans and pumps, and textile machineries, which is of high power and high density and can offer drive with simple speed regulation, reduced energy and improved efficiency. It can also be used for occasions that requires high accuracy like permanent magnet synchronous motors, covering several industries and featuring higher cost performance.

## Characteristics

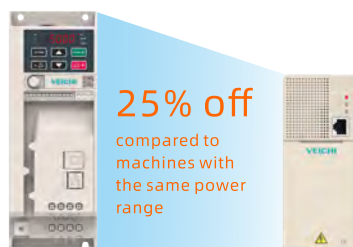
### High reliability

AC01-series products are all produced from fully automated production lines and further processes of tests, aging, packaging all completed automatically. Standard production procedures and quality management, three-anti painting covering 100% auxiliary product core parts together deliver higher performance.



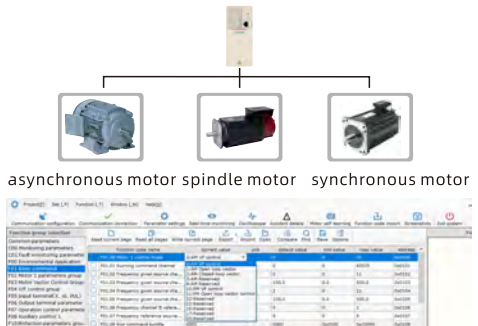
### Smaller size

Brand-new heat dissipation structure on AC01 network inverters with improved circuit saves over 25% of the original volume, thus it's easier to install and assembly.



### Higher software integration

AC01 network inverters boast quick debugging and regulation, that is install and employ. Equipped with drive algorithms of asynchronous motors, permanent magnet synchronous motors, spindle motors and servo motors, it can drive for different fields.



## Applicable Industries

Fans and pumps, logistics, food machineries and textile.



## AC800-series Engineering Inverter for Multi-motors

### Inverter module:

400V level (three-phase power supply) : 2.2kW-500kW  
Grade 690V (three-phase power supply) : 55kW-710kW

### Active rectifier module:

400V level (three-phase power supply) : 64kW-560kW  
690V level (three-phase power supply) : 117kW-639kW

### Active rectifier four quadrant inverter cabinet machine:

400V level (three-phase power supply) : 55kW-2800kW  
690V level (three-phase power supply) : 55kW-5600kW



Excellent control performance



Convenient and quick debugging tools



Modular design, common DC busbar solution



Multiple extension interfaces for all kinds of needs



Multiple fault handling & protections for safety and stability



## Features

ARM+FPGA dual-chip control framework for high-speed and high-precision loop control operations	Open-loop and closed-loop vector control	Multiple communication protocols like Modbus, Profibus-DP, Profinet, CANopen, etc.	Independent standard module design for flexible configuration selection and book-type design for size reduction
Common DC busbar saving energy and user cost, reducing wiring difficulty and consumption, supporting for multi-module parallel machines	AFE active rectifier, effectively reducing the harmonic content of the grid side, "perfect harmonic-free"	Easy debugging and setting, multi-functional keyboard with Bluetooth, parameter copy and recovery	Multiple fault handling and protection means for safety and stability, supporting STD function

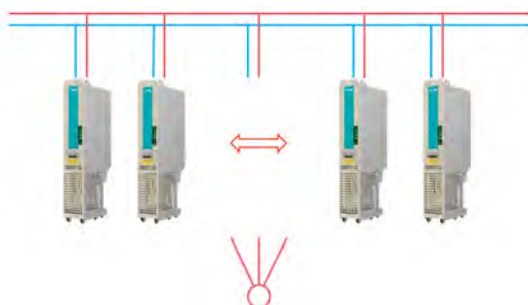
## Description

AC800-series engineering inverter for multi-motors is a high-performance, high-end inverter developed by Veichi after years of technical accumulation, in-depth market research and demand analysis. With excellent control performance, modular design, common DC busbar solution, convenient and quick debugging tools, abundant expansion interfaces, multiple fault handling and protection means etc., it can provide the drive core for energy saving and emission reduction and to meet the diversified inverter needs of industrial enterprises.

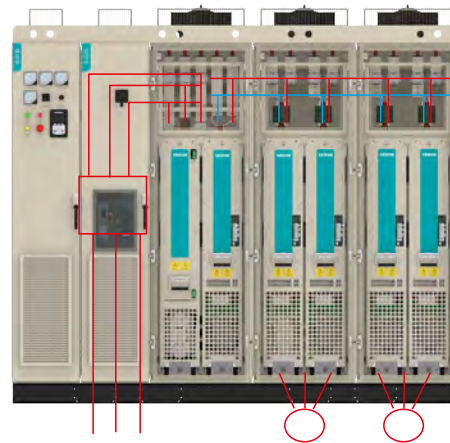
### Modular design



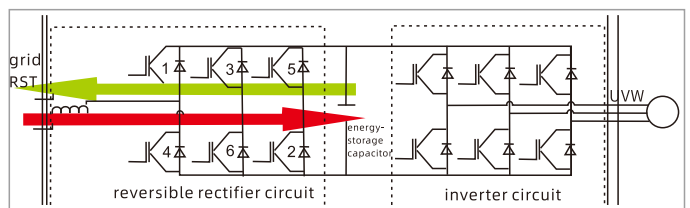
### Parallel high power solutions



### Common DC busbar solutions



### AFE active rectifier quadrant technology





VEICHI

## AC830-Series Four-quadrant Inverter

Cabinet unit :

400V class (three-phase power): 45-355kW

690V class (three-phase power): 45-560kW



AFE active  
rectifier



Super efficient and  
energy-saving drive



High speed and high  
precision loop  
control operation



High-speed drives  
for synchronous,  
asynchronous and  
high-speed motors



Easy and fast  
debugging tools

# Features

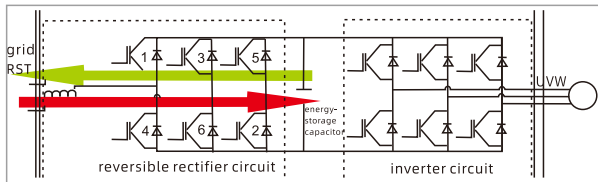
<p>AFE active rectifier, effectively reducing the harmonic content of the grid side, "perfect harmonic-free"</p>	<p>ARM+FPGA dual-chip control structure, high-speed and high-precision loop control operations</p>	<p>Compatible for asynchronous, synchronous and high-speed motor</p>	<p>Easy debugging and setting, multi-functional keyboard with Bluetooth, parameter copy and recovery</p>
<p>Multiple fault handling and protection means for safety and stability</p>	<p>Super-efficient energy-saving</p>	<p>Random carrier technology for a comfortable industrial environment</p>	

# Description

AC830 series four-quadrant cabinet inverter adopts ARM+FPGA dual-chip control structure platform to ensure the excellence of dynamic response and control accuracy of the drive system.

The AFE fully controlled rectifier ensures that the harmonics fed back to the grid do not exceed 5%, and is equipped with a convenient multi-function LCD keyboard with Bluetooth for easy and convenient debugging of handheld devices, and supports parameter copying and recovery.

## AFE active rectifier four-quadrant technology



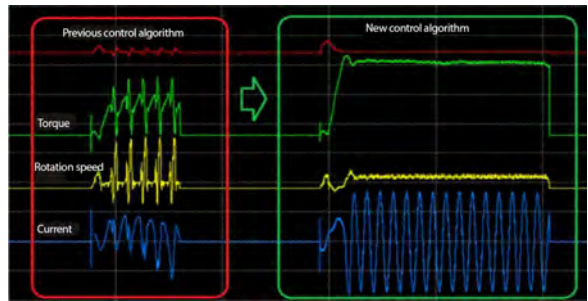
## Performance control and torque tracking

In the large inertia equipments, the remanence voltage is large when shutdown and restart, so the remanence magnitude and phase can be estimated directly and then pre-excited during rotation and acceleration.



## Open-loop and closed-loop vector control

Open-loop vector control , 0.5Hz 150% starting torque  
 Closed-loop vector control , 0Hz 200% starting torque



## Convenient debugging means





## ACH100 Series Medium-voltage Inverter

Three-phase 6kV: 250kW-13000kW  
Three-phase 10kV: 315kW-17000kW



SM and AM , open-loop and closed-loop vector drives supported



Extra high potency



Wide margin, high reliability design



Abundant communication & terminal extension interfaces



Multi-model supply like all-in-one machines & split machine

# Features

Innovative hardware technology and open - loop vector control algorithm bring high reliability, low harmonics and high efficiency

High and low voltage RT bring adaptability of the power grid fluctuation

Optical fiber communication and optical coupling isolation bring strong and weak electrical isolation and higher safety and reliability

Power unit is designed with automatic bypass function

Input by multiple phase shifted rectifier while output by multi-level drive thus drive perfectly without harmonics

Parameter setting in Chinese and fault checking interface are easy for users to operate

Master-slave control and automatic control of the power balance are applicable for multi-electric perfect harmonic-free operator systems, such belt conveyor in mine, etc.

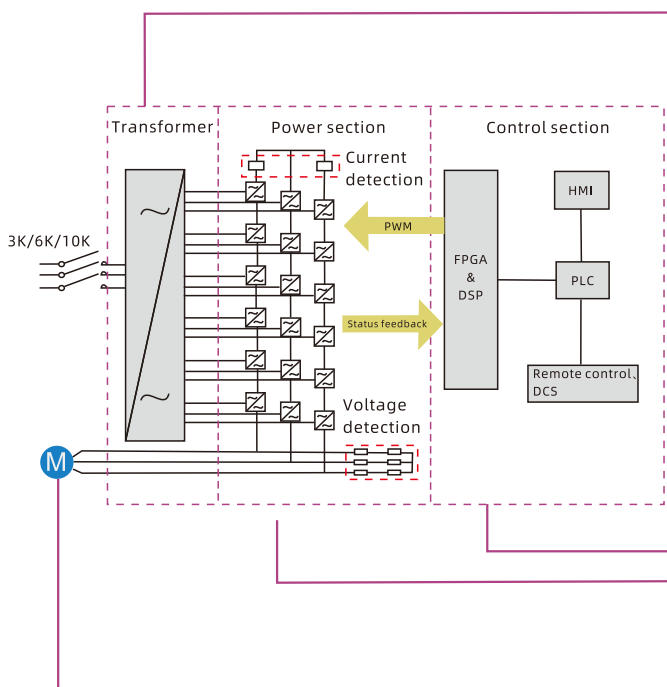
Multiple communication bus expansion is suitable for Modbus TCP/IP, CAN open, Profibus DP and other communication protocols

# Description

ACH100-Series medium voltage inverter speed control system is developed for high - high voltage source-type inverters, with advanced input phase shifting rectification, innovative bridge inverter technology, optimized series superposition technology, DSP + FPGA dual-core control, vector control algorithm, resulting in high control accuracy, fast dynamic response, low frequency output torque, high power factor, low harmonic content, and that input and output current waveforms are close to sinusoidal waveforms, which therefore, is known as "perfect harmonic-free" frequency converters.

ACH100 series medium voltage inverter has the advantages of stable and reliable operation, precise control, easy maintenance, high operating efficiency and convenient operation, which can significantly improve the operating conditions of motors, fans and pumps in industrial and mining enterprises, reduce the system operation and maintenance costs, and ensure that competitiveness is further improved during production so that enterprises can benefit from the application of this inverter.

# Description on high-voltage frequency conversion speed control system



Phase shift rectifier transformer provides an independent isolated power supply for each unit, and phase shift rectification has minimal impact on the power grid. The input current and voltage waveform at 80% load shown in the figure



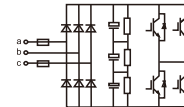
### Introduction to Main control System

- The master control system adopts touch screen + PLC + main control board serial structure to reduce data loop, to balance the pressure of data processing of each module. All data transmission are done by serial communication to enhance anti-panic ability, and ensure long-term stable operation of the system.
- DSP + FPGA combination control is adopted in the master control core part, so the main frequency of 100M DSP enables high-speed data processing and instantaneity in the system. FPGA internal logic clock goes up to 150M, and the modules communicate with no delay basically, the parallel processing of data is to accelerate the logic operation and system protection.
- Human-machine interface all in Chinese is user-friendly for operation and fault status check, and PLC module is designed for on-site electrical control and external communication interface.

The schematic diagram of the main loop of the power unit is shown below. It is mainly composed of the rectifier bridge, electrolytic capacitor and IGBT. The unique double-sided frequency doubling drive technology is adopted to greatly reduce the heat of the IGBT and make the system run more stably. Modular structure eases further installation and maintenance.

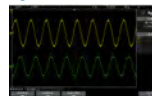


Unit-driven waveform



Output voltage waveform of the unit

Power unit series stacked output perfect sine wave, output waveform at 80% load, as shown in the figure



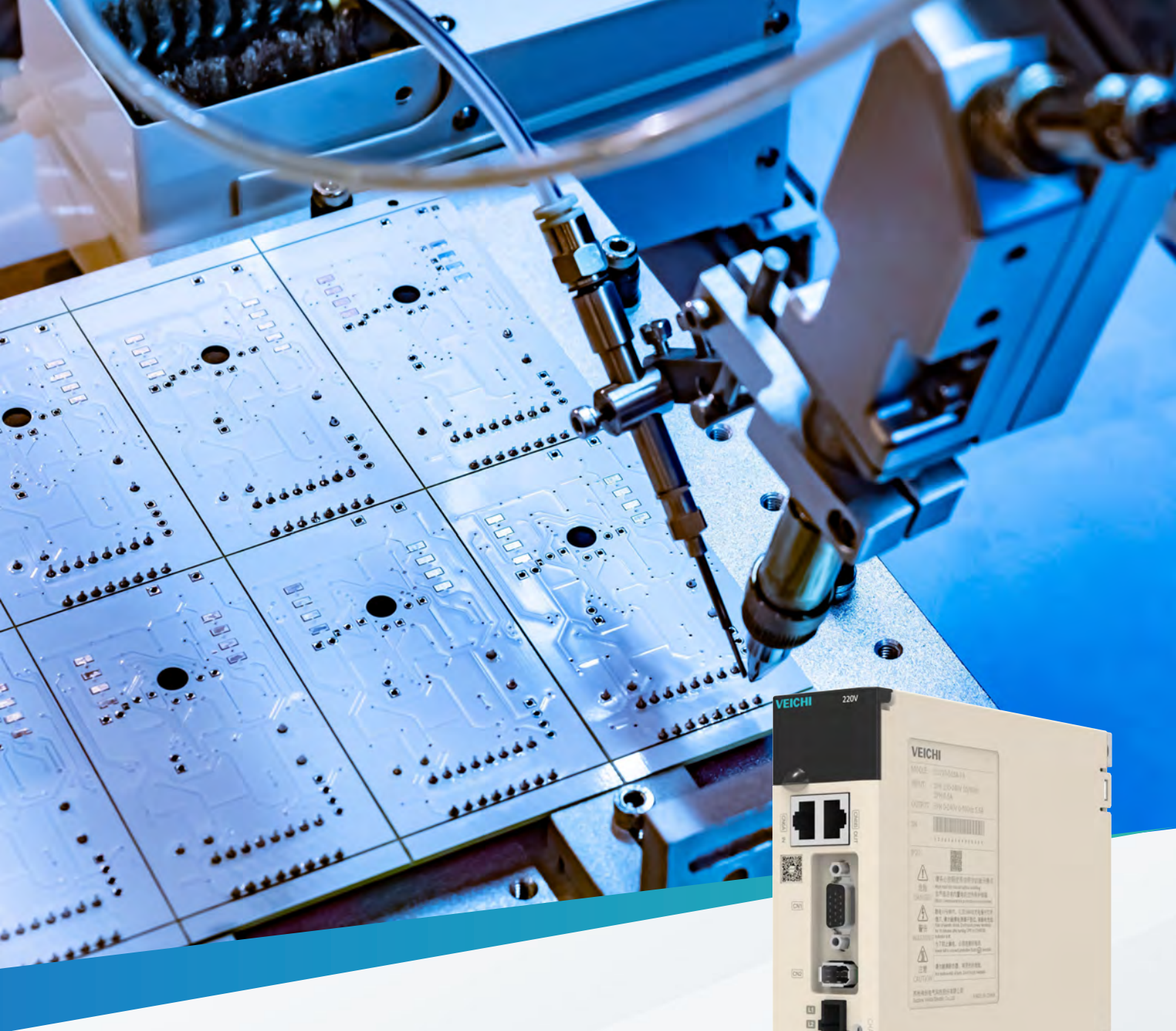
# Servo System

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faster and preciser , better products for Made in China 2025 initiative







## SD710-Series General-purpose Servo System



debugging and  
upgrading of upper  
computer



copy of drive  
parameters



automatic parameter  
tuning



structural upgrade  
for smaller size



compatible with 17bit  
and 23bit absolute  
encoders



## Features

Together with 23bit motor, the loop bandwidth can reach 3kHz, and thus can be adapted to different high and mid-day requirements

Micro USB interface & RS485 communication as standard, while CANopen communication & EtherCAT communication as optional

Widely used in 3C, woodworking, packaging, printing, logistics, food, textile, medical electronics, environmental protection and other industries

Step-by-step installation guide for easier operation

Debugging software with drive parameters copy function to eliminate the tedious parameters setting the same model

Hardware & structural upgrades and smaller size

Absolute encoder with power-cut position memory ensures 3+ battery life; Different resolution encoders ensures all kinds of applications

Intelligent control runs with the different mechanical structures to complete to achieve automatic setting of a variety of complex loop parameters without human work

## Characteristics

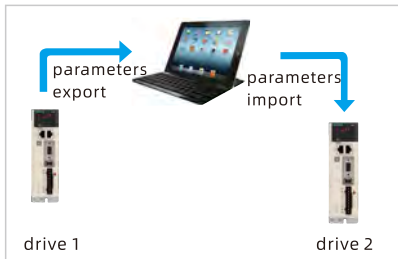
### Debugging and upgrading of upper computer

Step-by-step installation guide for easier operation



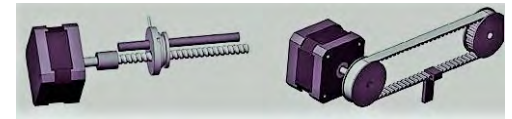
### Copy of drive parameters

The debugging software enables copy function of drive parameters, eliminating the tedious setting parameters of the same model



### Automatic parameter turning

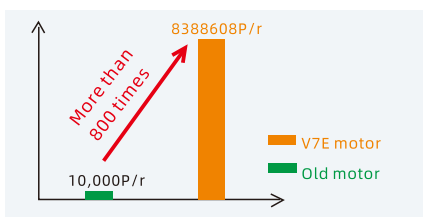
1. Runs according to different mechanical structures
2. Completes the automatic setting of various complex loop parameters
3. Enables automatic setting according to mechanical conditions, without manual operation
4. Enables position setting time up to 10ms



differentiated handling for lead screw, synchronous belt, rigid body and other mechanical structures

### Compatible with 17/23 bit resolution encoder

Absolute encoder with power-cut position memory for 3+ battery life; Different resolution encoders for all kinds of applications.



### Hardware & structure upgrade and smaller size

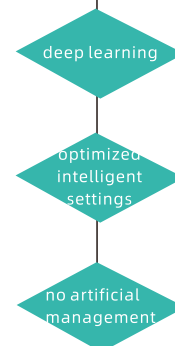
Hardware and structural upgrades, together with SRS models, reduce 30% of the whole volume.



SD710

SD700

### Intelligent setting



## Applicable Industries

Used in packaging machines, 3C electronics, woodworking, engraving machines and other industries.



## SD500-Series Spindle Servo System



Standard dual encoder interface, fully closed-loop vector control



Self-adjusting optimal loop parameters



Precise positioning and speed regulation



Sensitive load responsiveness



Large low-frequency torque, wide speed range

## Features

Open-loop, closed-loop vector control and MIII bus communication are supported, synchronous and asynchronous drives are integrated

Accurate speed and position control are supported with a positioning accuracy reaching of  $\pm 1$  pulse

Powerful self-learning is developed that motor parameters, encoder, system inertia and speed loop parameters are all self-adjusting

Wider constant torque output platform and stronger weak magnetic acceleration is developed

Multi-stage quasi-stop position reduces rigid tapping error to  $\pm 2\%$

Easy one-key operation for zero position is developed

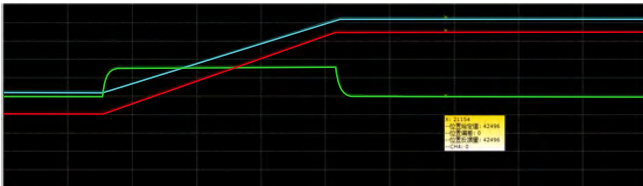
Strong current limiting and overload capacity for the hardware leads to adaptability to all kinds of harsh working conditions

Eighty kinds of fault protection for comprehensive product safety are developed

## Characteristics

### Highly accurate position deviation control

Position control deviations down to 0 pulses

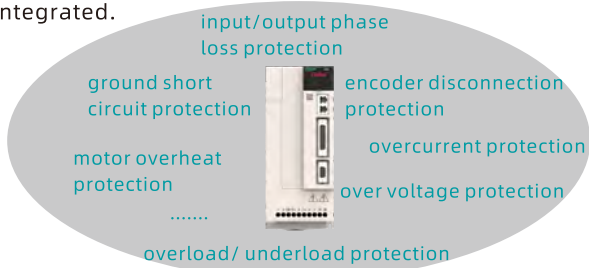


### Improved interfaces

Six-way switch + one-way High-speed input switch	Two-way encoder input + one-way differential output with arbitrary frequency division	Two-way collector output + two-way relay output	Equipped with 5V, 10V, 24V external power supply	One-way bipolar analog input + one-way unipolar analog input + one-way analog output
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### Improved protection

Short-circuit protection to ground, input/output phase failure protection, encoder disconnection protection, over-current protection, over-voltage protection, overload/light load protection, motor overheating protection and others are integrated.



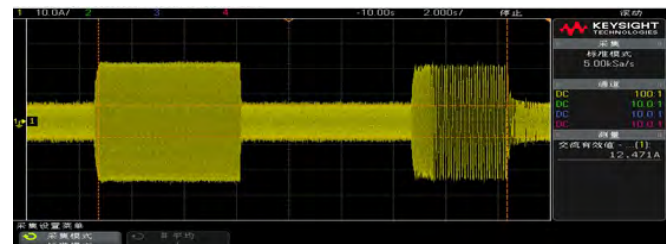
### Powerful functions

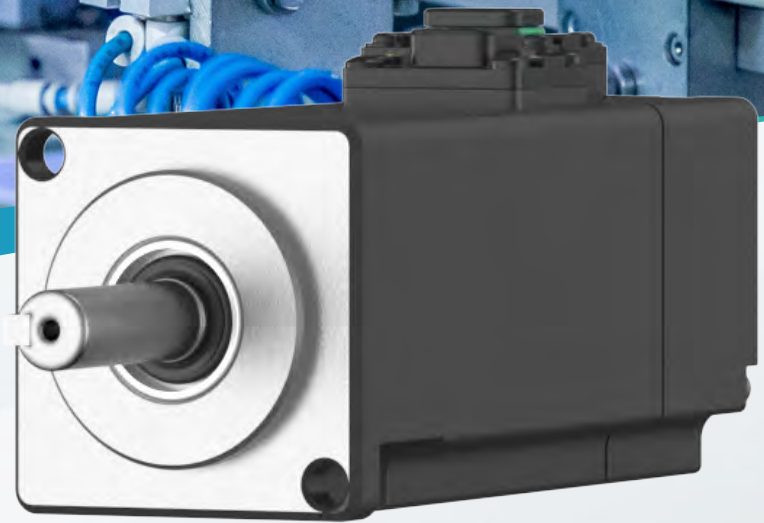
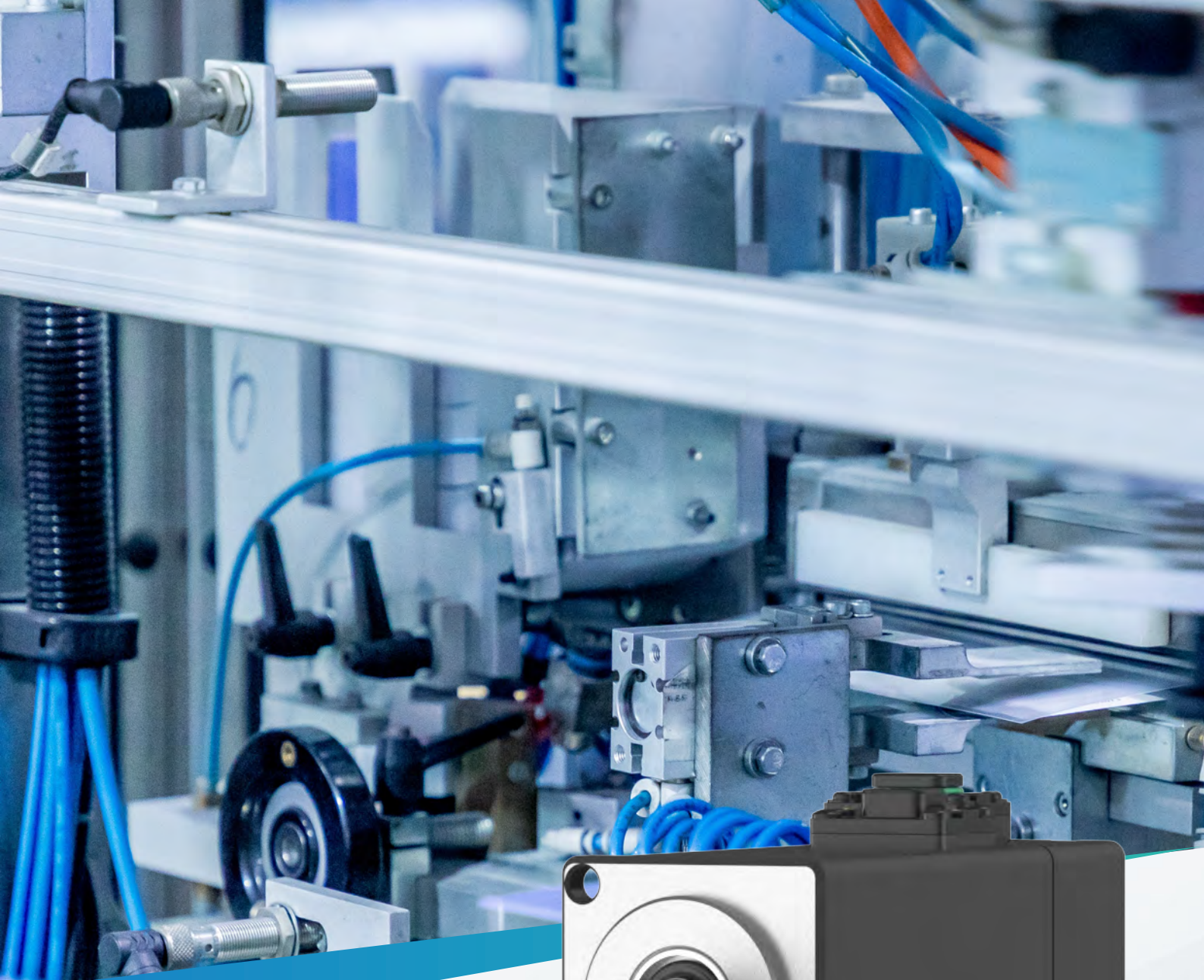
Position, speed and torque control; asynchronous motor / synchronous motor, V / F, open-loop & closed-loop vector control; multiple-pulses positioning method; inertia recognition, self-tuning loop parameters; 8 index quasi-stop control; position swing; one-key setting for zero point; PID control and all other functions meet a variety of needs



### Superior system performance

Superior current vector control algorithm	outstanding frequency conversion & energy saving control
Wide range of speed regulation & low speed pulsation at ultra-high speed	Accurate torque control & stable power output
Safe and reliable hardware	Large low frequency torque & stable speed
Fast position control response & high accuracy	Satisfactory load dynamic & static response control





## V7U-Series Motor



UL international  
certificate



Low temperature  
rise



High performance



Strong protection



Compact body

## Features

Fully upgraded hardware protection and anti-interference

Qualified for the US UL certificate and European Union CE certificate

Insulation grade up to F

Overload capacity up to 3~4 times

Low loss silicon steel sheet adopted for higher efficiency

Precise dynamic balance for faster response

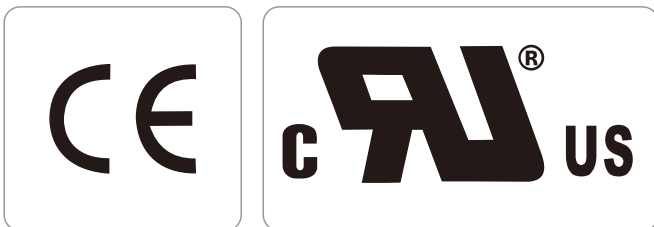
Lower temperature rise

Smaller size and lighter with 20% volume off compared to previous products

## Characteristics

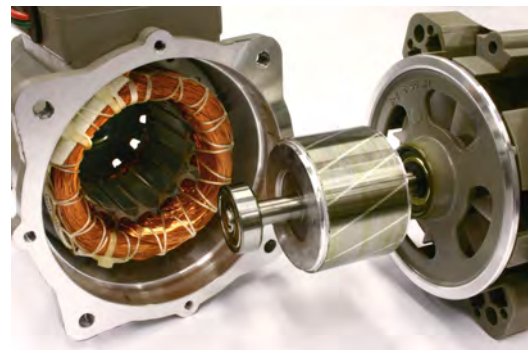
### Full series with the CE & UL certificate

Models of V7U -Series all have certified by CE & UL that all of the parts inside have met the according requirements .



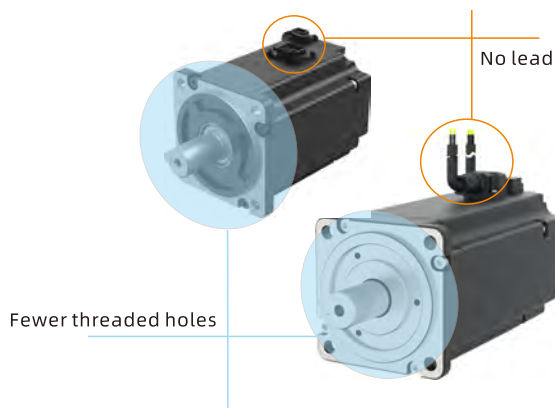
### Insulation grade F

V7U -Series motors allow for 155°C maximum and winding temperature rise is limited up to 100(k), taking on stronger temperature resistance and longer service life.



### No lead outside for tidier look

V7U-Series motors looks tidier since they are designed with terminal wiring without the lead outside and with integrated end caps without that many perforations.



### V7E characteristics maintained

Developed on the same platform with high mechanized process as V7E-series motors, V7U motors feature low temperature rise and compact size.



# Control System

---

Beautiful shape, excellent performance, high quality, precise control brought by correct choice



Novel structure design



Flexible extensions



Multiple position & motion control functions



Convenient application



Mainstream industrial bus solutions





## VC3-Series PLC



User programs supported up to 64K steps



High-speed eight-way pulse input & output at 200khz



Convenient firmware upgrade

**CAN**open

CAN open supported



Right expansion module IO & Special module supported



## Features

CAN open communication  
(301 / 402 protocol)

Eight-way pulse input &  
output at 200khz &  
multiple positioning  
methods

8-way pulse input at  
200Khz;8-way of IO  
external interrupt  
function

15 expansion  
modules max

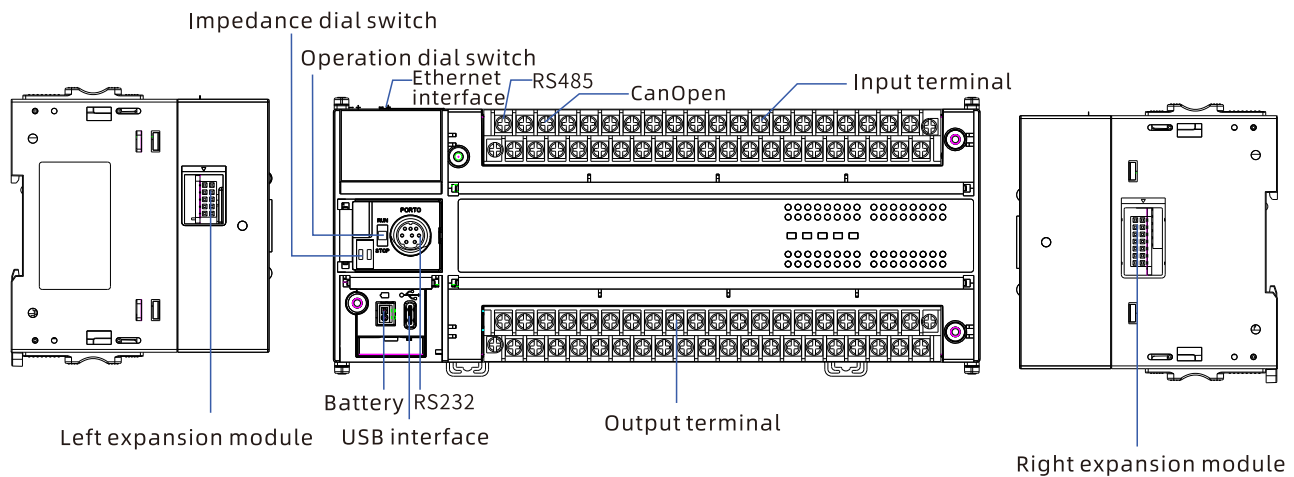
Ethernet ModbusTCP &  
Program upload\  
download supported

USB communication  
supported making  
debugging more  
convenient and fast

Compact structure but  
powerful, showing a very  
high cost performance

impact structure with  
powerful functions,  
together gaining a high  
capacity-price ratio

## Port Description



## Specifications

Designation	Parameter
Program data capacity	64K
Basic instruction execution duration	0.065us
Serial port communication	One-way for RS232, and one way for Rs485
CAN communication	CAN open (301/402 protocol)
Ethernet	Modbus TCP & upload\download
High-speed input	High-sepad eight-way input at 200khz
High-speed output	High-speed eight-way onput at 200khz
Extension Modules	15 extensions max
Programming Languages	LD/SFC supported
USB	Upload/download and firmware upgrade
Positioning	Multi-positioning modes



## VI20-Series Touch Screen



High-definition & high-brightness LCD display with a maximum viewing angle of 170°



300+ protocols local parsing, MQTT supported



VPN and routing, digital storage supported



PLC remote download & data configuration



Historical data search

## Features

High-definition and high-brightness LCD display with a maximum viewing angle of 170°	Edge computing with strong embedded runtime software, i.e. edge computing software	Flink IOT expansion module supported through which field device data can be remotely configured	Cloud platform FlexCloud supported based on the B/5 structure of the powerful SAAS platform
Expansion module card slot for: FLink, FLink-2G(-A), FLink-4G(-A), FLink-4G(-C), Flink-WiFi(-A)	Map monitoring	Data report	Mobile APP

## Description

Veichi V120-series products, a new generation of IoT HMI, housed with industrial ABS plastic thus low cost, adopts highly reliable new mold, more practical downward wire exit and redesigned elegant appearance. And there are products with higher resolution models for your choice.

With the optional FLink IoT module, IoT HMI can be upgraded immediately and customers can enjoy the complete industrial IoT cloud platform service.

## Specifications

	Model	VI20-043S-F	VI20-070S-F	VI20-070S-FE	VI20-101S-F	VI20-101S-FE	VI20-156S-FE	
Hardware parameters	Display screen	4.3" 16:9 TFT LCD screen	7" 16:9 TFT LCD screen		10.1" 16:9 TFT LCD screen		15.6" 16:9 TFT LCD screen	
	Resolution	800×480	1024×600		1920×1080		65K	
	Color	16 bits	24 bits		65K		250 cd/m <sup>2</sup>	
	Brightness	250 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>		400 cd/m <sup>2</sup>		250 cd/m <sup>2</sup>	
	Backlight	LED						
	LCD life	50000 hours						
	Touch screen	4-wire industrial resistive touch screen						
	CPU	720MHz ARM	600MHz ARM Cortex-A8				1G ARM Cortex-A8	
	Memory	64MB RAM+128MB Flash	128M Flash + 128M DDR3				256MB FLASH+ 512MB DDR3	
	RTC	With	Built-in real-time clock					
	SD card	Without					Micro SD (TF) card	
	Ethernet	Without	Without	1 channel 10M/100M adaptive	Without	1 channel 10M/100M adaptive	2 channel 10M/100M adaptive	
	USB port	One Type-C OTG interface	One USB Slave 2.0 port; One USB Host 2.0 port					
	Program download method	USB Slave/U Disk (adapter cable required)	USB Slave/U Disk	USB Slave/U Disk/Ethernet	USB Slave/U Disk	USB Slave/U Disk/Ethernet	USB Slave/U Disk/Ethernet	
	Serial communication interface	COM1: RS232/RS485/RS422 COM3: RS232	COM1:RS232/RS485/RS422 COM2:RS485 COM3:RS232	COM1:RS232/RS485/RS422 COM2:RS485 COM3:RS232	COM1: RS232/RS485/RS422 COM3: RS232	COM1:RS232/RS485/RS422 COM2:RS485 COM3:RS232	COM1/ COM3: RS232/RS485/RS422; COM2: RS485/RS422	
LCD viewing angle (T/B/L/R)	80°/80°/80°/80°		85°/85°/85°/85°					



## Solar Pumping Inverter



Beautiful and unique look



SiOT



MPPT+ multiple protection

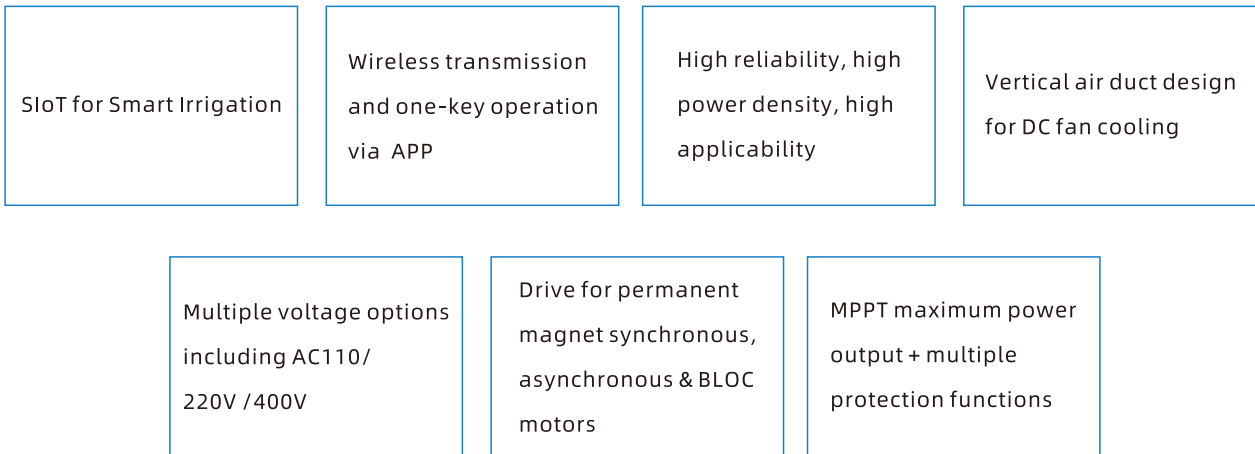


Drives a wide range of machines



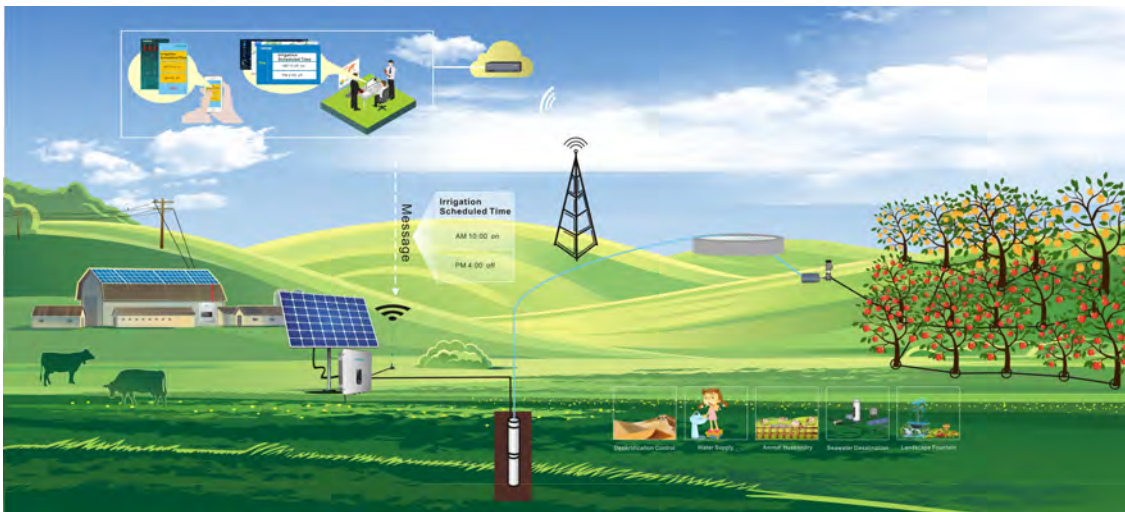
Superior performance, multi-functional

## Features



## Characteristics

Automatical run set by LoT



Photovoltaic pump IOT topology diagram





## S200-Series Construction Hoist-specific Integrated Machine



Built-in load limiter



Built-in clock control chip



Contracting brake-specific logic control



Voice module



Remote monitoring module

## Features

Smooth operation without vibration and slippage during frequent pointing operation or arbitrary operation

HMI human-machine interaction & Visual control: display of the floor, running direction, running speed, weight, etc.; self-diagnosis for faults and easier maintenance

Optimized structure, greatly saving installation space; a variety of inlet and outlet ways, while meeting the needs of different users

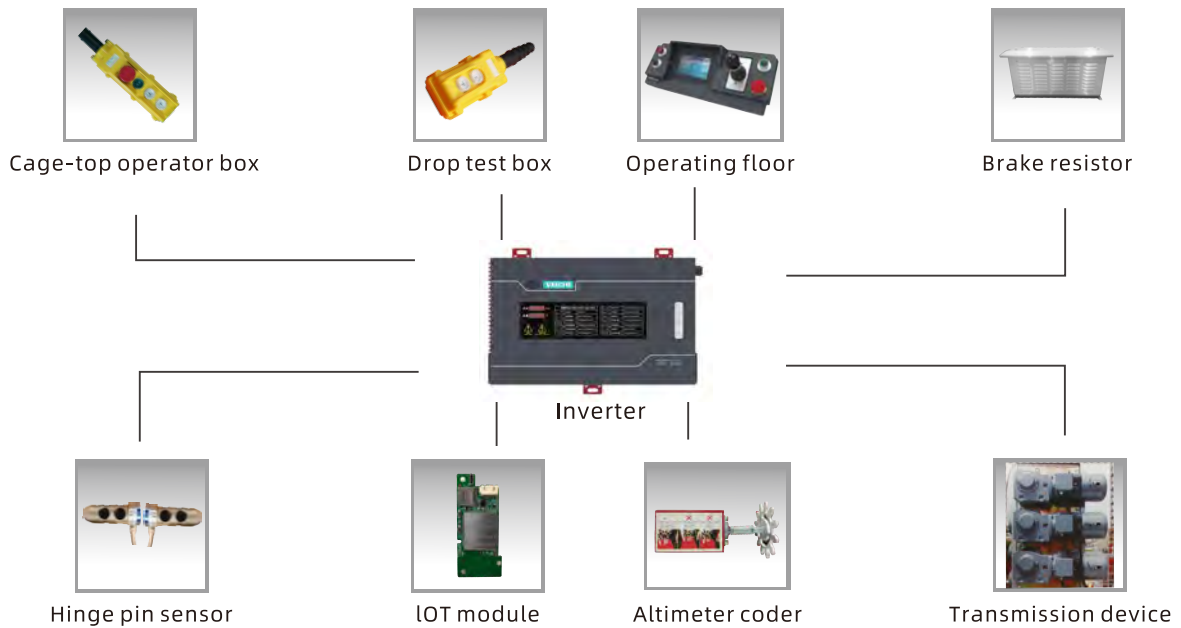
Full range of torque verification enabling emergency stop in case of abnormality to improve the safety and reliability of the equipment

Independent upper and lower deceleration limit interface without any interference enabling quick entering in the high-speed gear, to enhance the efficiency of equipment transport

Soft limit protection with accurate feedback of real-time position through height encoder ensuring no rapid hoisting or falling even when the upper and lower limits fail

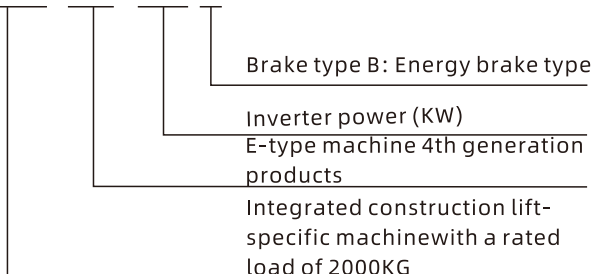
Spare industrial frequency control board port ensuring industrial / variable dual mode operation easily and thus 24 hours of non-stop operation

## System Composition



## Naming Rules

**S200-E4-037B**



## Model Specification

Model	Motor power	Rated input voltage	Rated output current (A)	Remarks
S200-C4/E4-037B	37KW	Three-phase 380V	75	11KW*3
S200-C4/E4-045B	45KW		90	13KW*3
S200E-055-B	55KW		120	15KW*3
S200E-075-B	75KW		150	18.5KW*3



## Systematic Solutions for Intelligent (unmanned) Construction Hoist



Real-time operation at request without any man work



Current floor display on floor call saving waiting



Voice broadcast of floors and opening/closing the door



Wire-less Lora for long distance, 2-5 km in city



Stainless steel housing with IPX3 waterproof



## Features

Anti-pinch of feeder's door to activate light curtain and stop closing the door once human detected	Supervisory camera monitoring number of people and banning drive from start once overpopulation detected	Auto full-load non-stop activated once loading rate reaching 85% during which outer calls will be ignored and machine will direct to target floor	Voice note of opening/ closing door of cage, floor reaching, floor door closing
Manual, semi-auto, auto modes supported in the control system	HMI inside the cage real-time recording of fault information and floor debugging	Energy feedback integrated adopted for safety and energy-saving	Timeout protection of motor so opening & closing will be counted down until feedback signal of completion or it will stop output to avoid mechanism damage

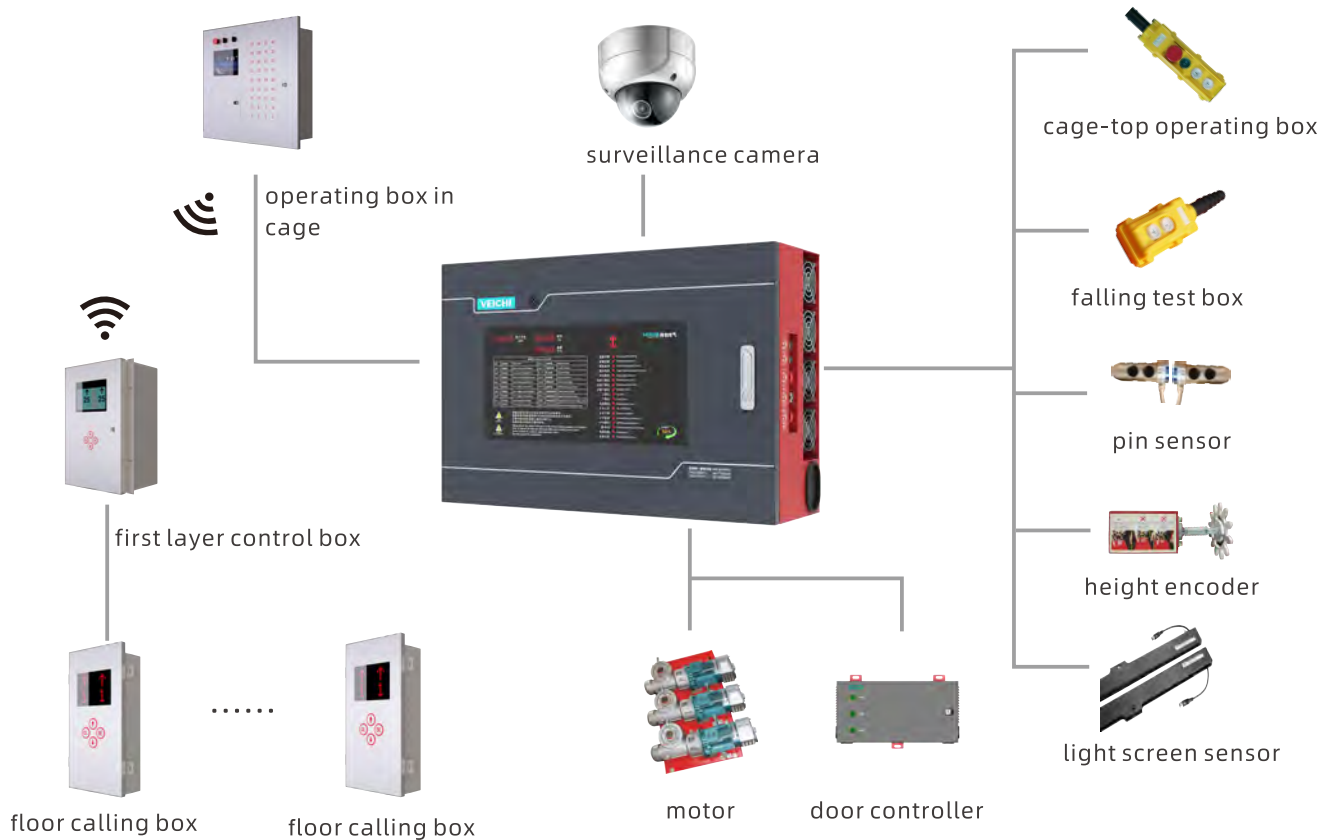
## Auto regulation

Left and right cages are auto regulated. The closer cage to the same direction will take the landing call signal. And the cage during unloading will not take the call so the other one will take all of the floor calls.

## Mode selection

- Auto mode** Select via floor calls or the operating box to direct cages to target floor, and feeding doors will be opened or closed automatically;
- Manual mode** Cages will only be maneuvered via operating handle or HIM level floor, floor calls will not function; Manual button operation on the operating box to open/close the feeding doors;
- Semi-auto mode** Similar to the auto mode except that cage door can only be closed via button on the operating box;

## System Composition





## AC70T-Series Hoist-special Inverter



Specialized logical  
brake control



Multi-purpose  
application



Stall protection



Limit stop



IoT expansion port

## Features

Automatic speed boost for light loads or empty hooks with the appropriate operating speeds

Zero speed torque maintained to prevent load slide caused by long mechanical delay of the brake

Two synchronous lifting mechanisms secured by the synchronous control thus safer

Upper limit value set to limit the operation of the inverter, alarm display and lifting device stop set to prevent overload operation

Torque rise value detected and the motor stopped automatically to improve safety when the goods accidentally touch other objects

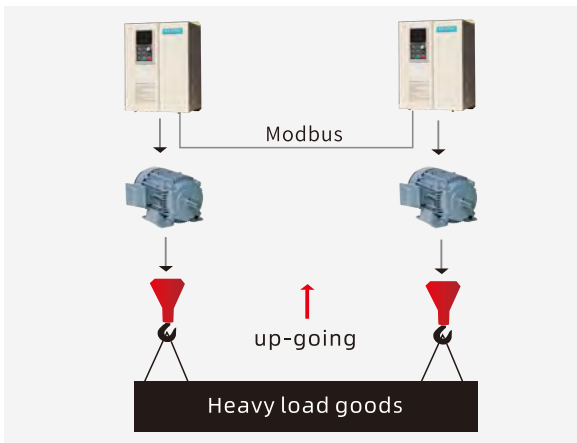
Crane-specific maintenance monitoring for braking occurrence as a basis for maintenance

Decelerate before accelerating to avoid wire overstretch caused by tensile impact and thus raise efficiency

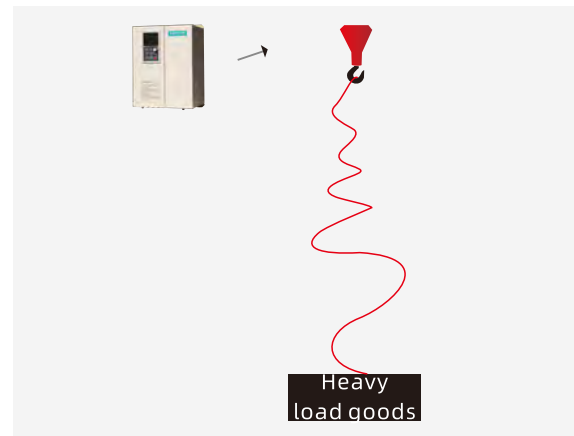
Profibus-DP, Modbus and CANopen are supported to facilitate the communication between inverters, PLC and HMI

## Characteristics

Objects lifted by double lifting mechanisms at the same time ensured synchronous operation with the master and slave speed synchronization control function for safety

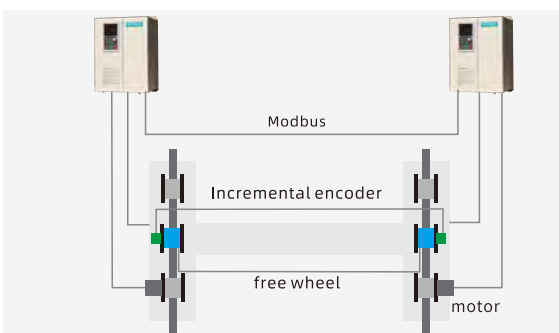


Loose rope detection against unsafe operation caused by light-load high speed function with slack rope of the crane

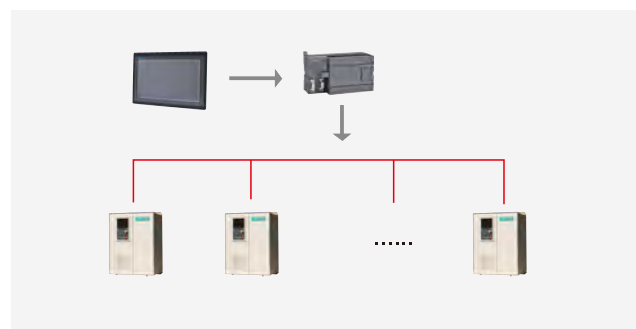


Constant power control

Constant power control, that is speed follows loads, means that maximum speed is calculated based on current load to realize high speed for light load and low speed for heavy load. Secondary hook is canceled for higher stability and efficiency.



Profibus-DP, Modbus and CAN open protocols to facilitate the communication between multiple inverters, PLCs and HMIs





## SD650-Series Electro-hydraulic Servo System



Built-in drive unit



High-performance  
servo control



Super overload  
capability



Super protection  
capability

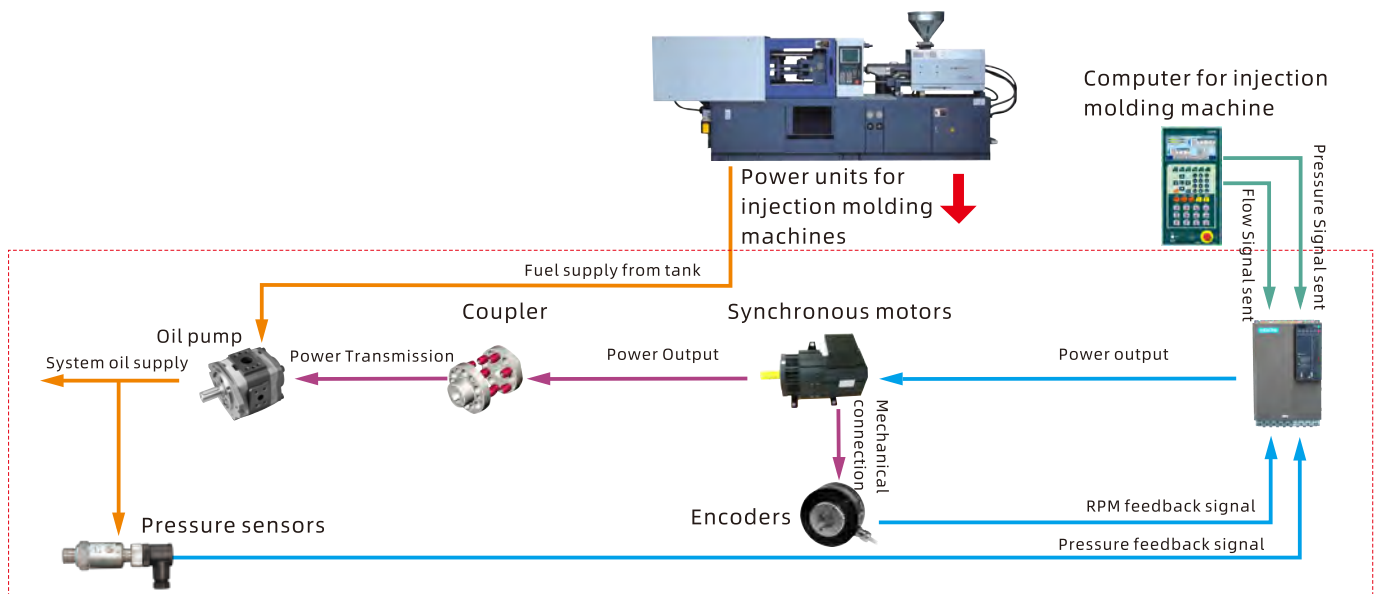


Multiple message  
delivery methods

## Features

Built-in CAN & 485 communication function	Air-cooled and liquid-cooled cooling methods suitable for different environments	Vector, weak magnetic & PID control	0-10V DC/ 4-20 mA for direct analog signal input
Isolated terminal method adopted for safety and efficiency	0Hz: 180% Speed stabilization accuracy : $\pm 0.2\%$ Torque control accuracy : $\pm 2\%$	Phase loss, short circuit, overheating detection and other protection methods	Multiple message delivery methods like Analog, CAN & 485 communication, internal command, etc.

## System Working Principle



## Applicable Industries



Injection molding machine



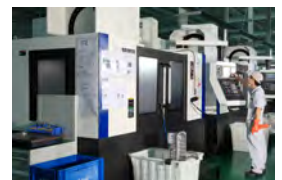
Bending machine



Oil press



Shoe machine



Die Casting Machine



## SD500-Series Machine Tool Spindle Servo System



Standard dual encoder  
Interface with fully closed-loop vector control



Wan wave, sine cosine, Mechatrolink-III bus supported



Inertia recognition with self-tuning of loop parameters



High load responsiveness



Large low-frequency torque with wide speed range

## Features

Feed axis servo supports multiple bus protocols with 23-bit servo motor, providing 3KHz speed zonation frequency

Power head servo supports bus and pulse control up to 6000 rpm for smoother milled planes

Turret servo supports bus-controlled torque limit and I/O control backlash compensation

Turret servo supports receiving turret proximity switch signal to control release or lock of solenoid valves

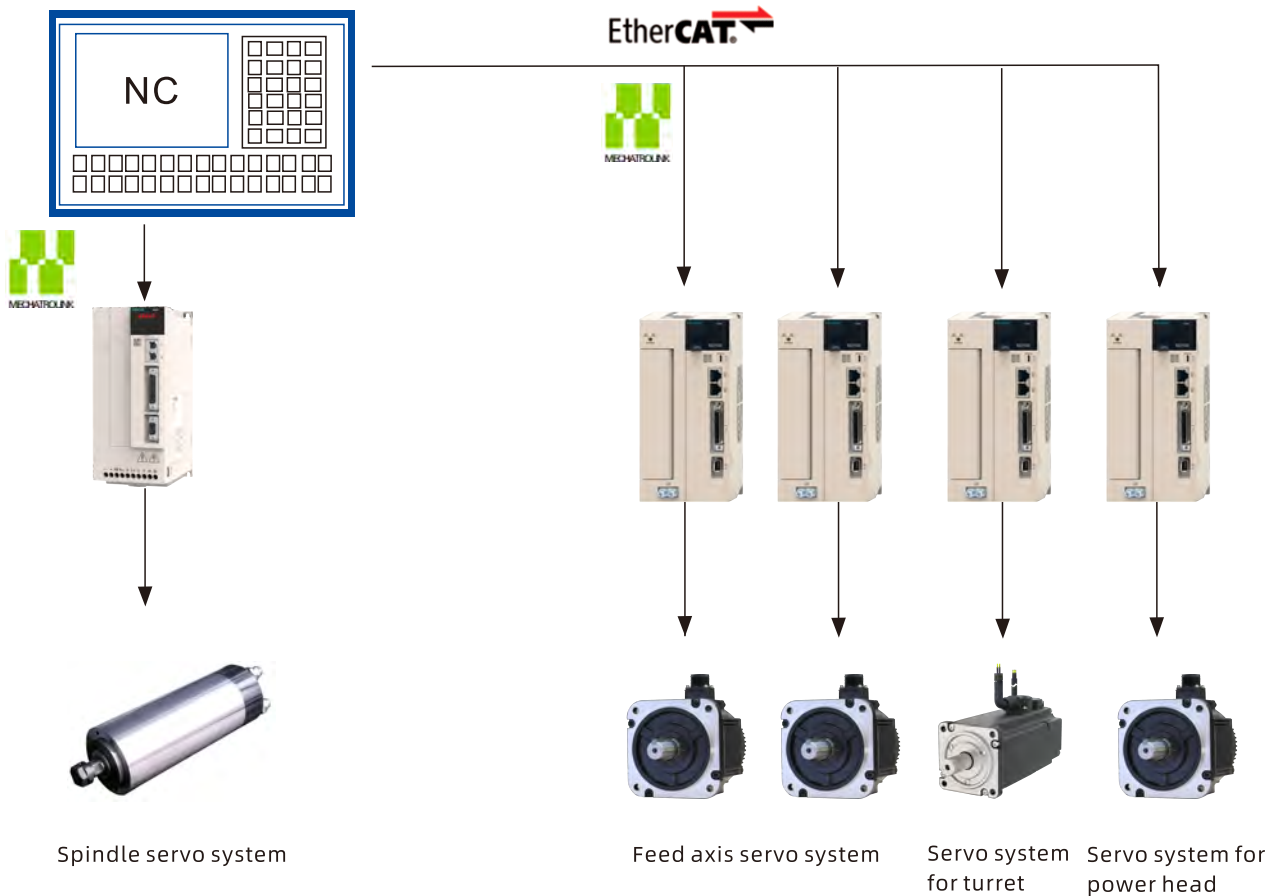
Equipped with double PG as standard, which can achieve accurate speed and position control with a positioning accuracy of  $\pm 1$  pulse

Powerful self-learning for automatic setting motor parameters, encoder, system inertia and speed loop

Hardware current limit and strong overload capacity adaptable to all kinds of harsh working conditions

Eighty kinds of fault protection for comprehensive safety

## CNC Turning and Milling Machine Solution





## AP100-Series Integrated Drive for Air Compressor



Three-in-one design to meet multiple customer needs



IP52 high protection level and strong environmental adaptability



Drive for various synchronous & asynchronous screw compressors



Intelligent Internet of Things for real-time remote monitoring of field applications



Advanced fuzzy PI algorithm



## Features

Integrated air compressor control process for easy wiring and improved reliability

Unique energy-saving vector control algorithm

User-friendly air duct design to enhance heat dissipation and facilitate disassembly, cleaning and maintenance

Intelligent cloud for real-time remote monitoring of air compressors

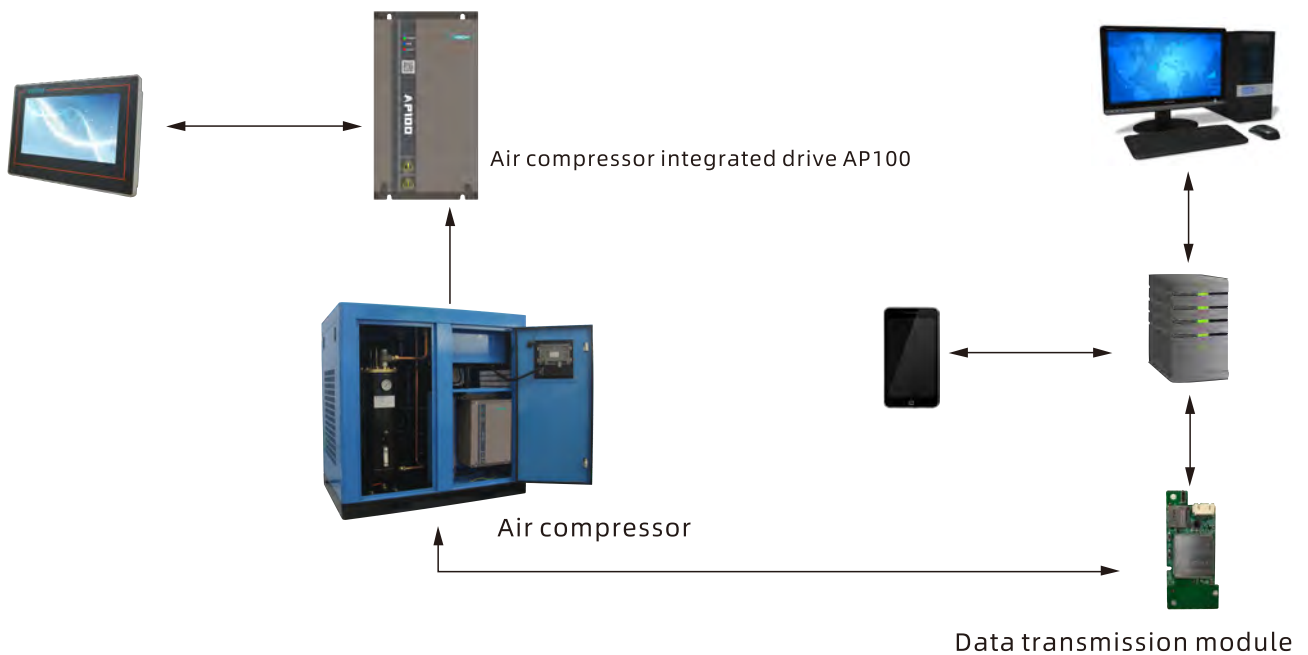
Double pre-determination of motor demagnetization mechanism to maximize the prevention of irreversible demagnetization of the motor

Advanced fuzzy PI control algorithm for voltage stabilization, no overshoot and fast response

Vector control algorithm with up to 600Hz

TL high-performance DSP chip bringing the high execution speed up to 200m, displaying high reliability and high carrier frequency, low temperature rise & low noise

## Solutions for the All-in-one Air Compressor Industry



## Applicable Industries





## Special Drive and Solution for High-speed Centrifugal Turbine



AC320 with forced air cooling  
LC320 with liquid cooling



High frequency output up to 2000Hz



Leading high-speed motor control algorithm



Abundant expansions like IO, communication & GPRS card, etc

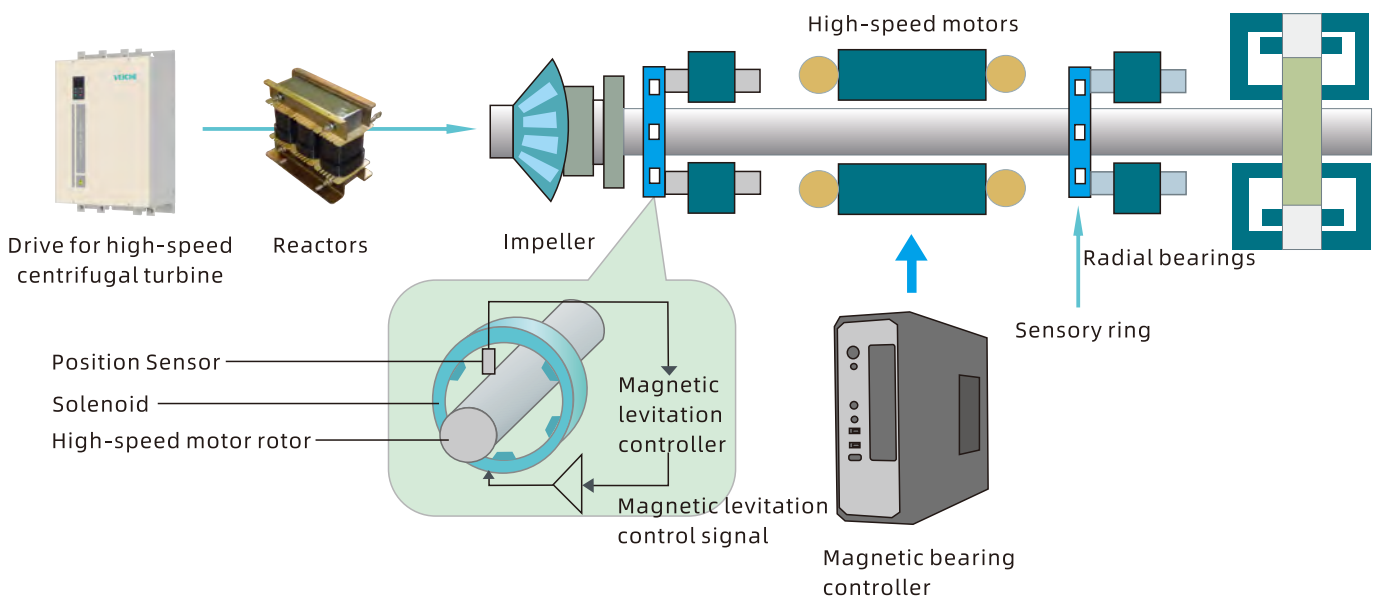


customized SiC power semiconductor supported

## Features

High frequency output with vector control 0-1200Hz and V/F control 0-3000Hz	Full series qualified for high-speed motor and high-carrier, liquid cooling type supports for high carrier without derating	match with high-speed motor redundant component of magnetic levitation, air levitation, ceramics and filmatic bearing to reduce bearing wear	Full control mode for sinusoidal filter drive and sinusoidal filter drive to suppress harmonic wave effective and protect the motor, and thus longer service life
Reliable magnetic levitation motor rotor running with bus voltage maintenance added with energy information feedforward	Strong extension capability for process cards of multiple occasions to replace PLC perfectly	Liquid-cooling type is 40%~70% of air-cooling machine with the same power, IP54 protection for fields with severe air quality	customized SiC power semiconductor inverter supported for high-end and efficient applications

## High-speed Motor-specific Drive Solutions



## Aeration and Aeration



Aeration and aeration

Air compression

Heating, ventilation and cooling


MVR steam preparation

Hydrogen cell bus

Cogeneration



## Solutions for Packing Industry



Horizontal  
packaging machine



Vertical packaging  
machine



Tissue paper  
packaging machine

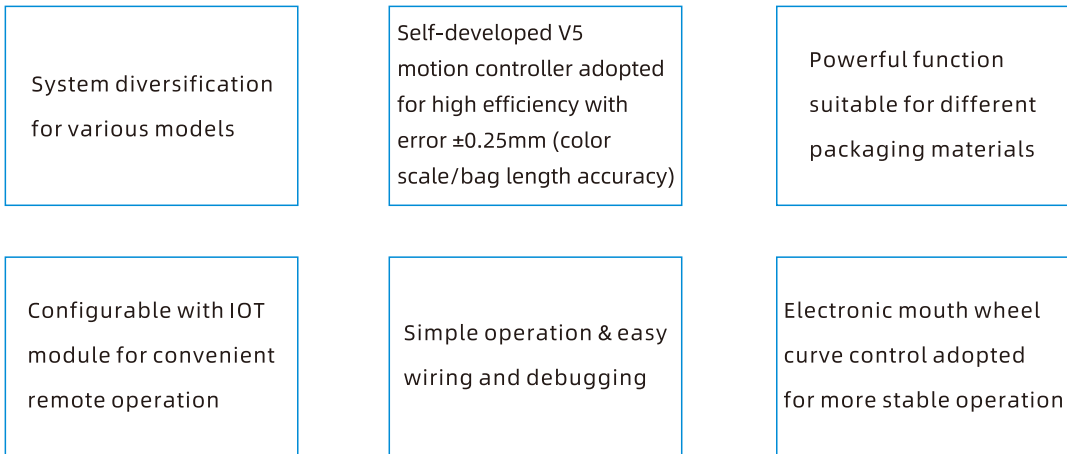


Bag making machine

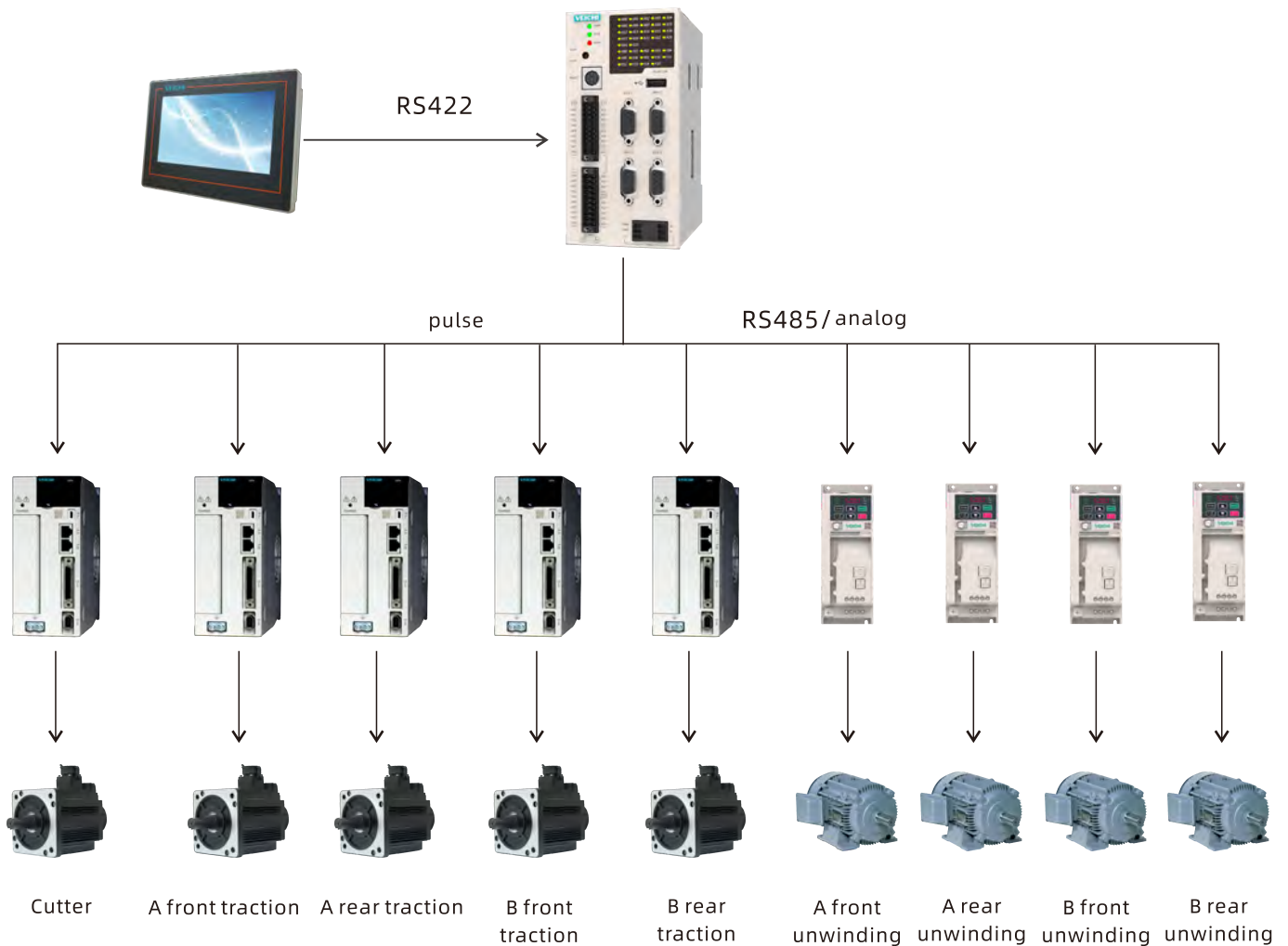


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## Features



## Tri-side-seal Dual-channel Topology





## SD100-Series Low-voltage Servo System

DC 24-70V

Single-shaft drive: 50W-3000W

Dual-shaft drive: 100W-1500W



Energy-saving



Super overload capability



Ultra-high standard



Multiple control modes



Delicate structure

## Features

Double power supply with independent control

Built-in 24V band-type power supply to lower system cost

Multiple communication protocols like CANopen, EtherCAT, Profinet, RS485

Delicate and compact body to save installation space

2 times higher overload capability combined with unique heat dissipation technique for high-temperature environment

Performance certificated internationally to meet international market demands

High-performance, high-precision and high rotation

Standard with 17-bit absolute encoder for more accurate position and stable speed

## Product Description

SD100-Series low-voltage servo system, based on the world-leading algorithm platform, supports single-shaft, dual-shaft and multi-shaft motor algorithm control. They are compact in size, abundant in functions, featuring convenience, flexibility, stability and reliability, widely applied in various occasions with high performance, high accuracy and high speed. Occasions that requires high-end voltage and volume like movable robots (AMR, AGV), service robots, specialized robots, logistics, warehousing and sorting, and medical devices.

### Energy-saving drive

New-generation of energy-saving drive reduces motor heating loss thus raises use ratio by over 10%.

Low-power dissipation mode during stand-by extends battery life by 10% and reduces carbon dioxide emission.

Energy use ratio raised by over

**10%**

Battery life extended by over

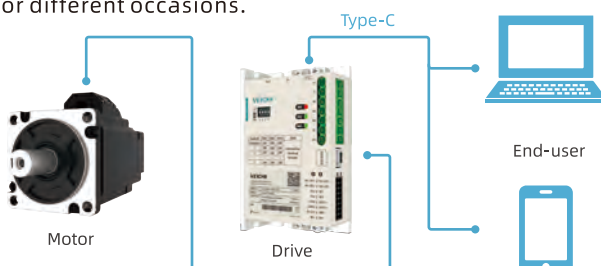
**10%**

### Convenient and user-friendly

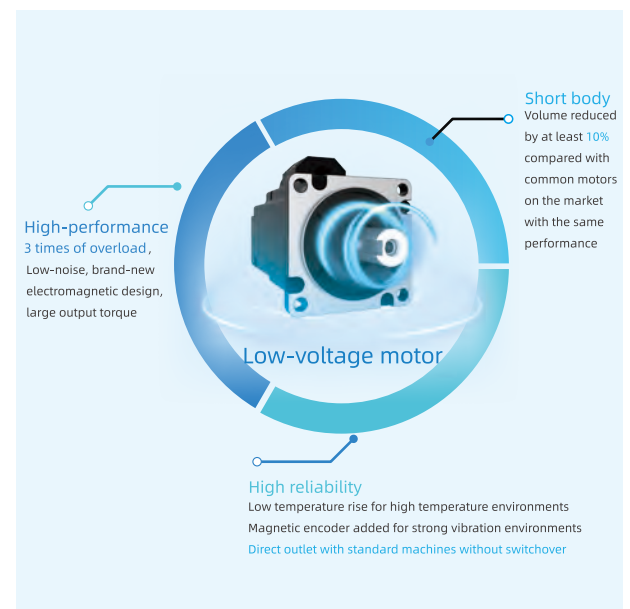
Easy wiring: European terminals and hot plug terminals are used to save wiring.

Easy debugging: Easy upper computer is used for debugging via USB-Type-c data line.

Easy installation: front and side installation are both applicable for different occasions.



### Short body, high-performance & reliability





## AC310 Series Tension Control-specific inveter

Single-phase 220V AC 50Hz/60Hz 0.75kW-1.5kW  
Three-phase 220V AC 50Hz/60Hz 0.75kW-220kW  
Three-phase 380V AC 50Hz/60Hz 0.75kW-1120kW  
Three-phase 660V AC 50Hz/60Hz 22kW-1120kW



Real-time monitoring  
of line speed, current  
coil diameter & output  
torque



High performance  
vector control



Fast dynamic response  
and high output  
torque accuracy



Constant tension by  
line speed feedback



Smooth start-up,  
stable tension at both  
high and low speeds



## Features

High-performance vector control for fast dynamic response, high accuracy of output torque and constant tension during acceleration and deceleration

Automatic adjustment of output torque to ensure constant material tension through wire speed feedback

Built-in dynamic and static friction compensation module to optimize the tension control, with the taper compensation function to achieve the flatness of the winding

Set-up for disconnection detection, pre-drive and shutdown brake signal output function to ensure the stability and reliability of equipment operation

Smooth start for stable tension at both high and low speeds

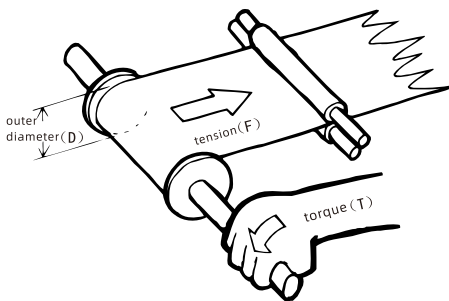
Advanced algorithm adopted for output torque accuracy, real-time monitoring of the running line speed to obtain accurate winding diameter, strong anti-interference ability

Full series of booklet design, DC fan heat dissipation to save space and enhance reliability

## Tension Control Method

- Speed control: Tension position feedback automatically adjusts the PID output speed slip to ensure constant material tension.
- Open-loop tension torque control: the inverter directly controls the motor output torque and output frequency to follow the material line speed automatically without tension feedback signal.
- Closed-loop tension torque control: tension feedback signal needed and is adjusted by built-in PID to form a closed-loop tension control motor output torque, so that the material surface tension is constant.

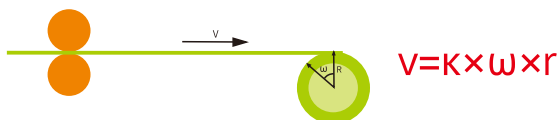
## Basic Principles



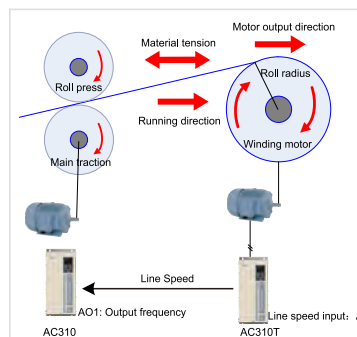
Since: Torque (T) = Tension (F) × Radius (D/2)

$$\text{Therefore: tension (F)} = \frac{\text{Torque (T)}}{\text{Radius (D/2)}} = \frac{2 \times T}{D}$$

## Linear Speed Method

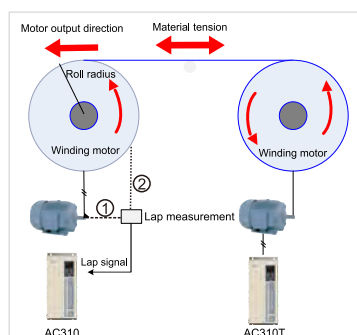


## Common Solutions



### Wire speed method:

The front-end machinery provides the material traction, which determines the material line speed, and the material tension is determined by the AC310 winding. The roll diameter can be calculated from the wire speed given by the traction.



### Application of the thickness method:

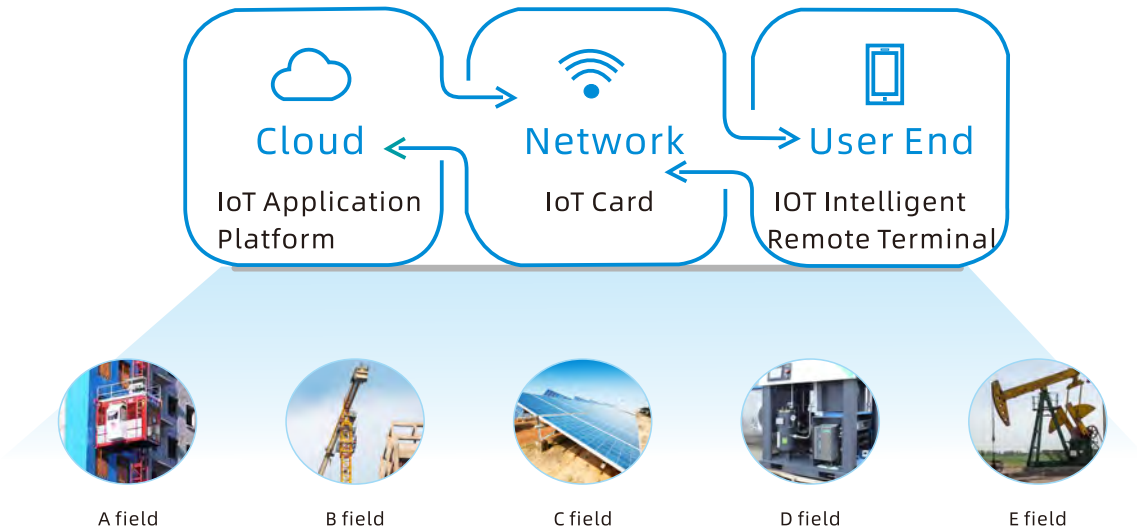
The front end machinery does not provide the traction mechanism to determine the line speed, the material line speed is directly determined by the front kick motor, and the material tension is determined by the AC310 winding.



## Smart IoT

Provide integrated solutions of cloud, network, and user end

-  More stable 4G signal communication and full network access
-  More intelligent IOT terminal for instant use
-  More reliable performance for 24-hour stable operation
-  More efficient trouble shooting and real-time uploading of faults
-  Service upgrades to track device status anytime & anywhere



## Main Features of IOT Platform

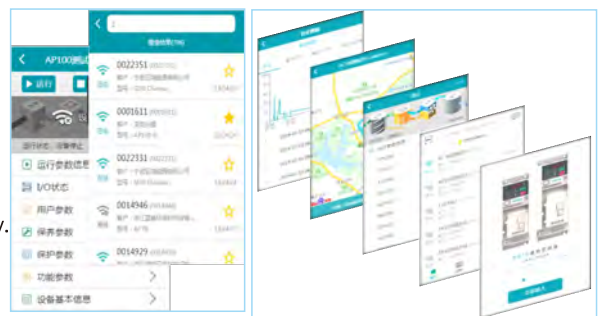


## IOT Card

China Mobile card for domestic users

## Main Features of IOT Intelligent Remote Terminal

- ⊙ Real-time positioning and accuracy depends on the density of surrounding base stations, usually in the range of 2 km.
- ⊙ Anti-demolition (optional) to prevent malicious demolition and destruction, and protect the rights and interests of customers.
- ⊙ Active fault reporting to send notifications to customers in the first place for in-time handling.
- ⊙ The data collected regularly for data security and collection efficiency.
- ⊙ Firmware upgraded remotely for more efficient maintenance service.
- ⊙ Multiple-device access supported for one IOT terminal and multiple slave device.
- ⊙ Offline storage of data to collect data without network
- ⊙ SMS setting of GPRS internal parameters supported



# **| Innovative technology leading service**



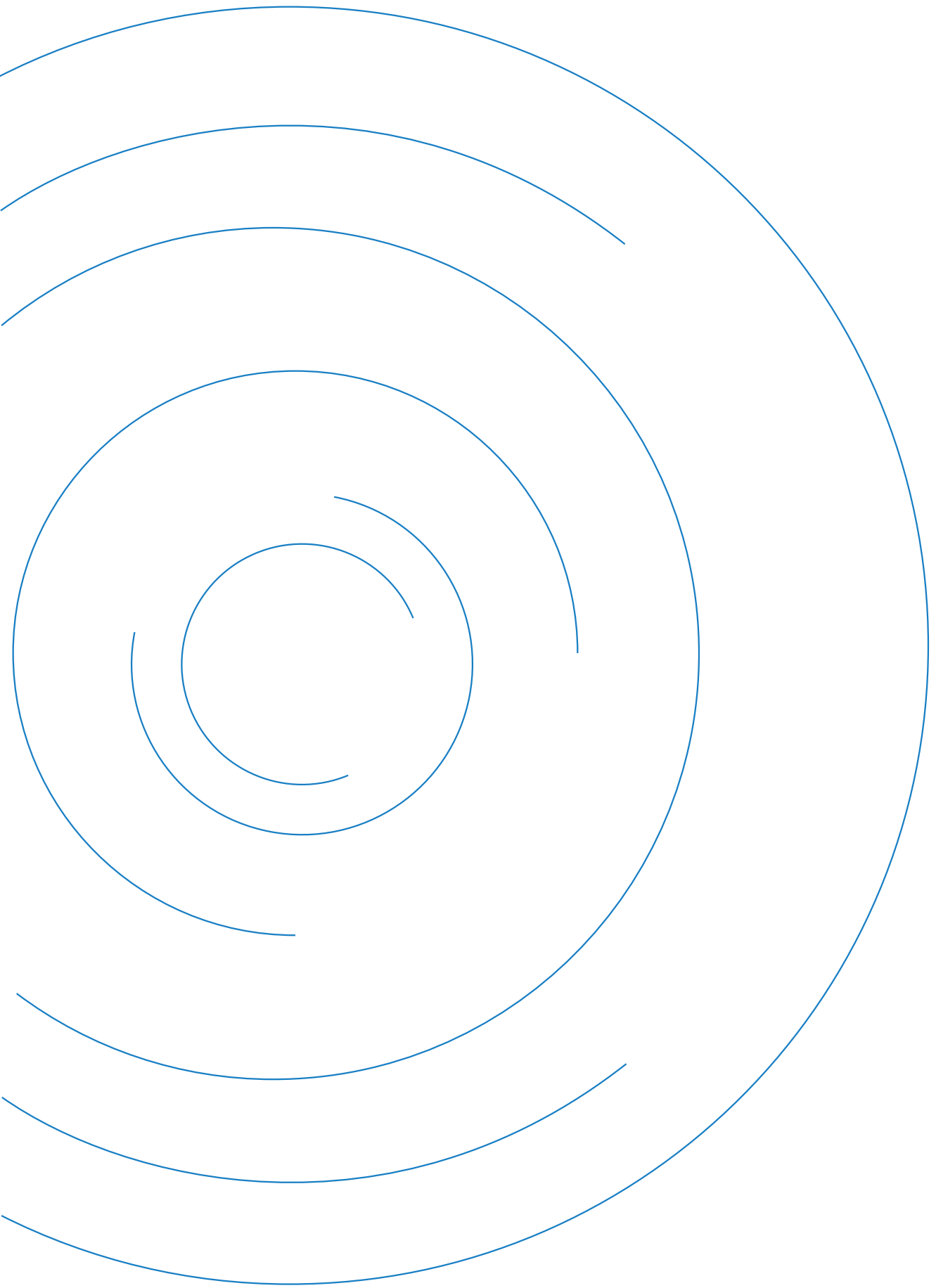


**Domestic**

20 service outlets established and 182 contracted channel dealers, distribution channels covering 31 provinces & cities on mainland China, and Hong Kong, Macao and Taiwan

**Overseas**

Offices and services established in major cities in Southeast Asia, Europe, America and Africa, and global services being expanded gradually



# VEICHI

To be a leading company in the field of electric drive and  
industrial control

# Company Profile

Veichi (stock code: 688698) has always committed to electric drive and industrial control since its foundation. As an all-round company engaged in R & D, manufacturing and sales on high-tech industrial automation products, Veichi has been identified with several honorary titles such as Jiangsu provincial-level Enterprise Technology Center, Jiangsu Private-own Technical Enterprise, Specialized and sophisticated enterprises that produce new and unique products, Jiangsu Engineering Research Center, Jiangsu New and High-tech Enterprise and Suzhou city-level Gazelle Company (High Growth Enterprise) and has obtained the highest level of enterprise credit. Through years of independent research and development, Veichi now has authorized patents totaling 148 by the end of 12, 2022, and among them 36 are for invention. Having established R & D center and manufacturing bases in Suzhou, Shenzhen and Xi'an, added with the wholly-owned subsidiary in India, Veichi now are dealing with customers from several nations and regions and has the full capability to provide safe, competitive and trustworthy products and services to customers from the larger world.

Veichi provides various products including inverters from 0.4kW to 5,600kW, servo systems from 50W to 200kW, motion controllers, PLC and HMI, which are applied in all sorts of fields occasions like lifting, mining, rail traffic, machine tools, compressors, plastic equipment, photo-voltaic pumping, construction, robots/mechanical arms, printing and packaging, chemical fibers for textile use, metallurgy, municipal works, petrol work and chemical engineering.

20 service stations and 182 contracted distributors cover 31 provinces on China mainland and Hong Kong, Macao and Taiwan regions, which guarantees a massive and efficient network for sales and services for our customers.

Veichi will continue to abide by the operation philosophy, that is, guided by market demand and driven by technical innovation, enlarge and enhance its core business like inverters, servo systems, control systems and SIoT. And Veichi will always be hard at providing quality products and services for customers and further make contributions to the development of electric drives and industrial controls.



**Suzhou R&D and Production Base**

covering an area of 42.7 mu (28,300 m<sup>2</sup>) totaling 72,500m<sup>2</sup>



**Shenzhen R&D Center**

shenzhen base mainly for research and development, office covering 3600m<sup>2</sup>



**Xi'an R&D Center**

office covering 725m<sup>2</sup>





# Development History

**2005**

- Business started in Shenzhen
- First generation of inverter on the market

**2013**

- Suzhou Veichi Electric Co., Ltd established
- First generation of servo system on the market

**2014**

- Suzhou Veichi first-stage project put into construction

**2015**

- Advanced integrated product development mode (IPD) initiated

**2016**

- Suzhou Veichi first-stage project put into operation
- First generation of motion control system on the market

**2017**

- Veichi honored with New High-tech Enterprise

**2018**

- Veichi honored with secondary enterprise of standardized production safety among Jiangsu province

## 2019

- Veichi restructured to a company limited by shares
- Indian subsidiary established
- Veichi honored with Jiangsu Province Enterprise Technology Center

## 2020

- A-share science and technology innovation board landing successfully
- Veichi honored with Jiangsu Province Specialized and Sophisticated Enterprise That Produces New and Unique Products
- Veichi honored with Jiangsu Province Engineering Technology Research Center of Medium& high Power Inverters and Servo motion Controllers

## 2021

- Veichi subsidiary corporation established
- Veichi honored with national-level Specialized and Sophisticated Enterprise That Produces New and Unique Products

## 2022

- Xi'an R&D center established
- Veichi digital energy subsidiary corporation established
- Veichi honored with AAA certificate of integrating IT application with industrialization

## 2023

- Suzhou Veichi second-stage project put into operation
- Suzhou Veichi third-stage project put into construction
- Veichi medical facility subsidiary established

# | Corporate Culture



## Corporate culture

Care for employees, work with partners and grow together

## Core values

Customer-centered, striver-based

## Operation philosophy

Guided by market demand, driven by technological innovation

## Corporation vision

Be a leading company in the field of electric drive and industrial control

## Development Strategies

[3231]

3 core technologies : electric motors, power electronics, motion control

2 applications: electric drive and industrial control

3 marketing tactics: systematic solutions, TOP customized services and ODM for World-renowned enterprises

1 dream: be a leading company in the field of electric drive and industrial control



# | Product Manufacturing

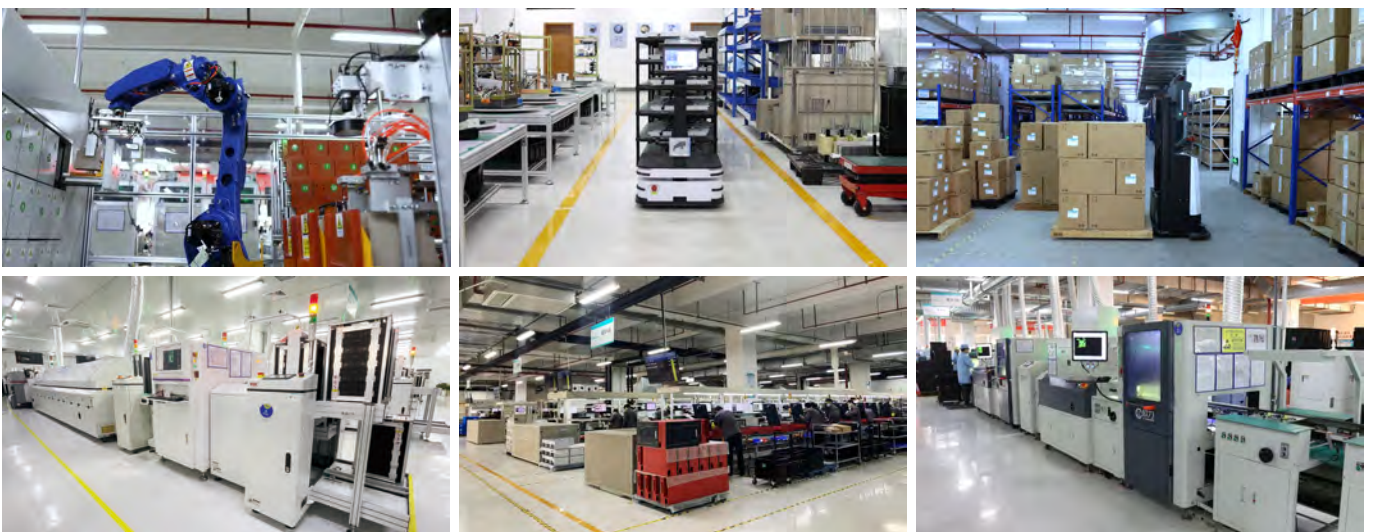
## Automated production equipments create a new ecology of "smart factory"

Products are based on digital technologies. From the beginning of product development, to production programme and then production, that is the whole production cycle, is digitalized and intellectualized, with an annual output up to 600,000 units.

5 fully imported SMT high-speed chip mounting lines, 5 automatic coating lines, 4 DIP testing lines, 1 automated line equipped with robotic arms, 12 production lines, normal and high temperature aging room, and sheet metal fabrication workshop, together with other intelligentized production supporting equipments, ensures production of all of the Veichi products.

All of the products are checked according to the quality management mode of 3 (tri-inspection system) + 1 (proportional inspection) during the whole process, and all of them are carried out automatically so as to ensure the performance of the original factory standard machines.

Three major production management system like WMS, MES and ERP ensure that the unique product codes of each product are traceable in the system to check the quality.



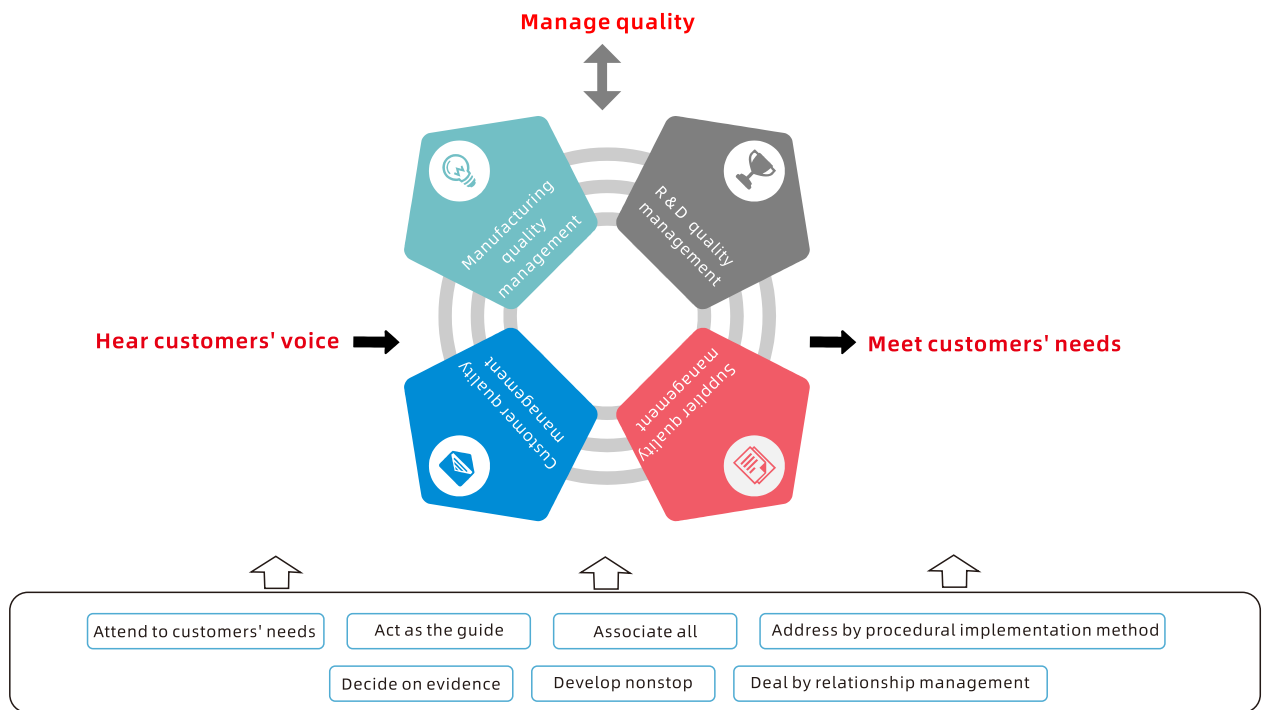
# Quality Management |

## Inheritance of craftsman spirit creates ingenious products

By the policy and philosophy of quality first, procurement, product development, production process and other aspects are all managed by the world's leading standards to ensure the high quality of products.

Each code with products is unique, and this code can be used in the system to trace its details during production.

## Quality management system based on the seven



  
 ISO9001:2015  
 ISO14001:2015  
 ISO45001:2018

  
 The whole series of products have passed CE certification

  
 The whole series of products have passed 3C certification


  
 Customized products comply with RoHS 2.0 Directive

  
 Measurement Management System has passed AAA certification

  
 After-sales service has passed five-star certification

  
 The whole series of products have passed QC08000 requirements

  
 UL certified

  
 TUV certified



## AC310-Series High-performance Vector Inverter

Single-phase 220V AC 50Hz/ 60Hz 0.75kW-15kW

Three-phase 220V AC 50Hz/ 60Hz 0.75kW-220kW

Three-phase 380V AC 50Hz/ 60Hz 0.75kW-1120kW

Three-phase 660V AC 50Hz/ 60Hz 22kW-1120kW



Book-style design  
with narrow bodies



High performance  
magnetic field-  
oriented & Vector  
control technology



Permanent magnet  
synchronous &  
asynchronous motor  
compatible



Abundant expansion  
accessories for com-  
prehensive applicability



High power density  
& reliability &  
applicability



## Features

High-performance vector general platform with new motor control algorithms

Permanent magnet synchronous & three-phase asynchronous & spindle & torque motors and other integrated open-/closed-loop drives all compatible

Industry parameters attributed together and suitable for various applications

Easy debugging & setup for field firmware upgrade

Comprehensively optimized algorithm for better driving effect & more comprehensive protection

Random carrier technology for a comfortable industrial environment

Communication protocols: standard MODBUS, optional Profinet, Profibus-DP and CANopen

Booklet design for the whole series, DC fan cooling for space-saving and enhanced reliability

## Description

Book-style narrow body design reduces up to 60% in volume, modularized structure layout leads to higher degree of sealing of electronic components.



Direct heat dissipation from upper and lower directions thus they can be installed side by side and space is utilized more rationally, greatly reducing the size and cost of the panel cabinet for higher value.



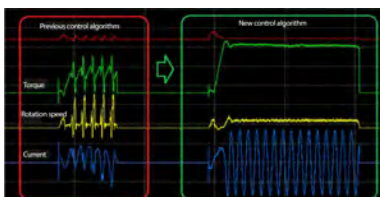
Professional European-style terminals ensure safety and reliability while shorter wiring time and improved efficiency of the group cabinet.



## Characteristics

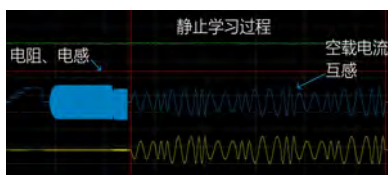
### Optimized synchronous motor drive —high frequency injection method

The high-frequency signals injected in open-loop operation contribute to the output of 200% of the rated torque at 0Hz under open-loop control for the permanent magnet synchronous motor, and function even more steadily under heavy load.



### Leading self-learning Algorithm

The effect of static self-learning is comparable to that of rotational self-learning, as motor parameters are obtained when the motor cannot be unloaded.



A multi-purpose machine compatible with asynchronous & synchronous motors for diversified needs

Dual SPI extension ports with auto recognizing for cards, rich extensions all in one

Full range of protections for inverter and motor

New function code layout for easy using and locating



## AC330-Series Synchronous Reluctance Motor-special Drive

Single-phase 220V AC 50Hz/ 60Hz 0.75kW-15kW  
Three-phase 220V AC 50Hz/ 60Hz 0.75kW-220kW  
Three-phase 380V AC 50Hz/ 60Hz 0.75kW-1120kW  
Three-phase 660V AC 50Hz/ 60Hz 22kW-1120kW



Extra efficient drive



Energy-saving and cost-reducing



Expansion cards applicable



Dependable performance



Deep integration

## Features

New high-performance vector algorithm platform for synchronous reluctance motors

Extra efficient & energy-saving drive

Precise decoupling by torque & excitation , excellent dynamic response

Comprehensive thermal simulation design to optimize the hardware layout

Book-type design for all of the series to reduce space

Abundant expansion interfaces for accessories for wider applications

Easier debugging methods for on-site firmware upgrades

Tri-protection for the complete machine and tri-protection coating for PCBA to ensure stability and dependability

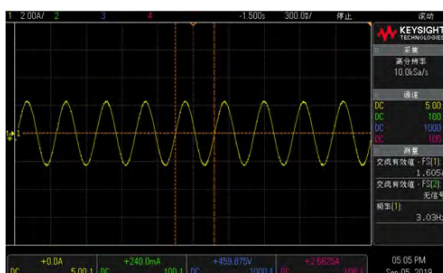
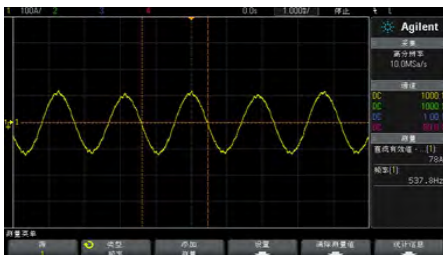
## Description

AC330 series inverter, which is designed with a narrow body just as a book, integrates synchronous reluctance motors and auxiliary algorithm platform of synchronous reluctance motor drives, thus are applied specially for synchronous reluctance motors due to it's stability and reliability.

## Characteristics

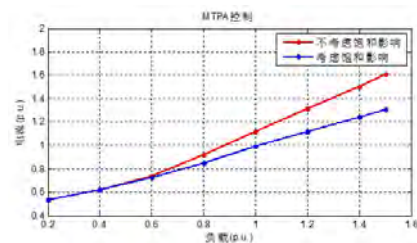
### Superior control capacity when low frequency & weak flux

The AC330 series can drive synchronous reluctance motors at a speed ratio of 50:1, far exceeding the 20:1 low-frequency speed control capability supported by other products on the market; And then, a new high-speed weak magnetic control algorithm has been developed above the base speed to maximize the torque output by using the voltage limit, stabilizing the normal operation under high speed and weak flux. Thus Veichi's AC330-Series driver for synchronous reluctance motor are perfect for low frequency and weak flux combined.



### Efficient and energy-saving capacity

AC330 series of special drive, with a newly optimized MTPA algorithm, displays accurate control and efficient operation. Coupled with the AC330-series new generation of energy-saving control technology, the electrical system can automatically adjust the energy consumption according to the load, leading to the maximum improvement of motor efficiency and reduction of energy loss. Electrical energy efficiency increases to IE4 and above.



Current under MTPA control

### All-round protection and reliable performance

AC330-series synchronous reluctance motor-special drive, equipped with all-round protection for hardware and software such as output short-circuit protection, internal buffering relay protection, fan drive circuit protection, external 24V DC short circuit protection, motor overload protection and others, achieving a full range of protection for the motor and peripheral equipments.



## AC10-Series General-purpose Inverter

Single-phase 220V AC 50Hz/ 60Hz 0.4kW-2.2kW

Three-phase 220V AC 50Hz/ 60Hz 0.4kW-2.2kW

Three-phase 380V AC 50Hz/ 60Hz 0.75kW-22kW



Unique heat  
dissipation



Network design for  
easy connection



Book-style design  
with compact and  
narrow body

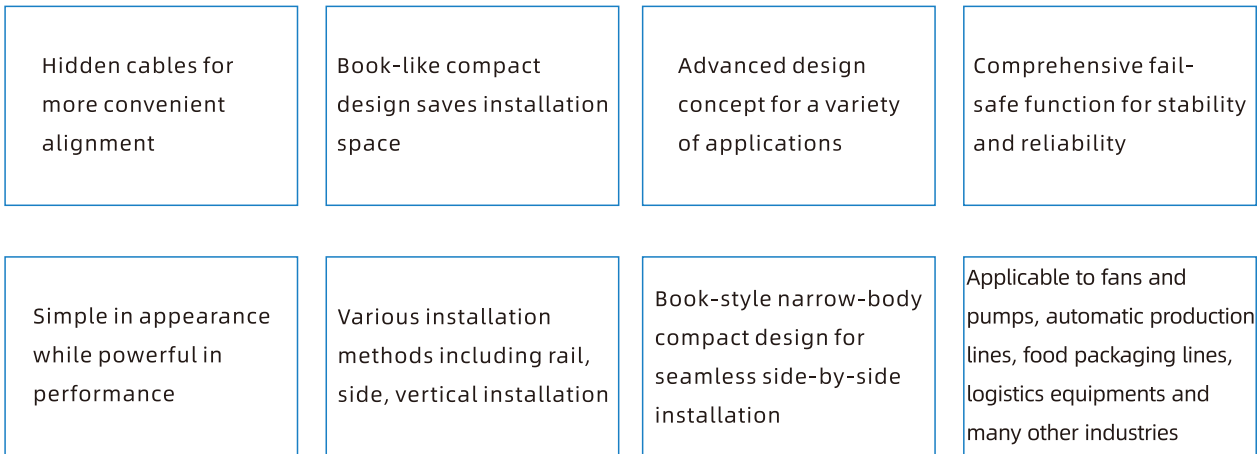


Time & effort &  
energy saving during  
operation

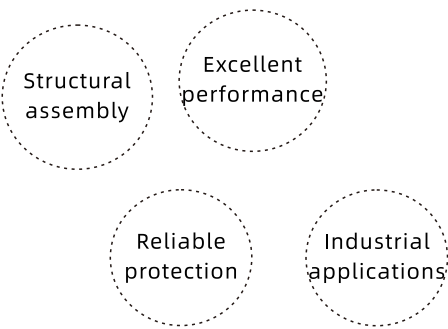


Flexible for a variety  
of installation  
methods

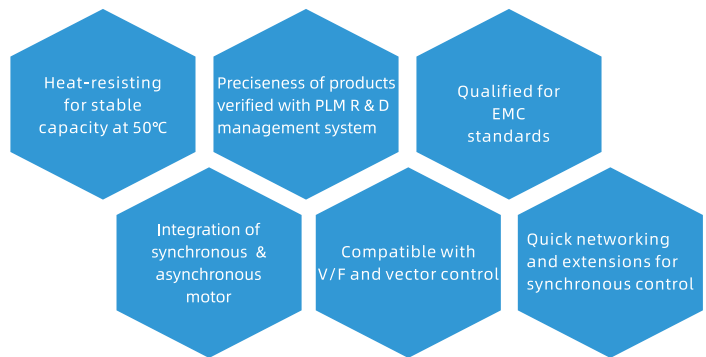
## Features



## Description

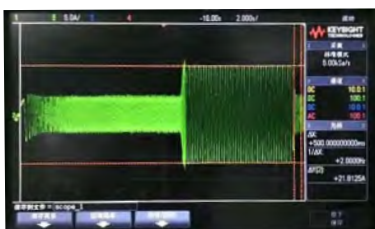


## Superior Performance



## Comprehensive Protections | Structural Assembly

Equipped with protections against over current, overload, wave by wave limit, overvoltage and such all-round protection from inverters to peripheral devices.



Full series designed with narrow bodies as books. The upper and lower direct heat dissipation enabling a gap-free side-by-side installation.

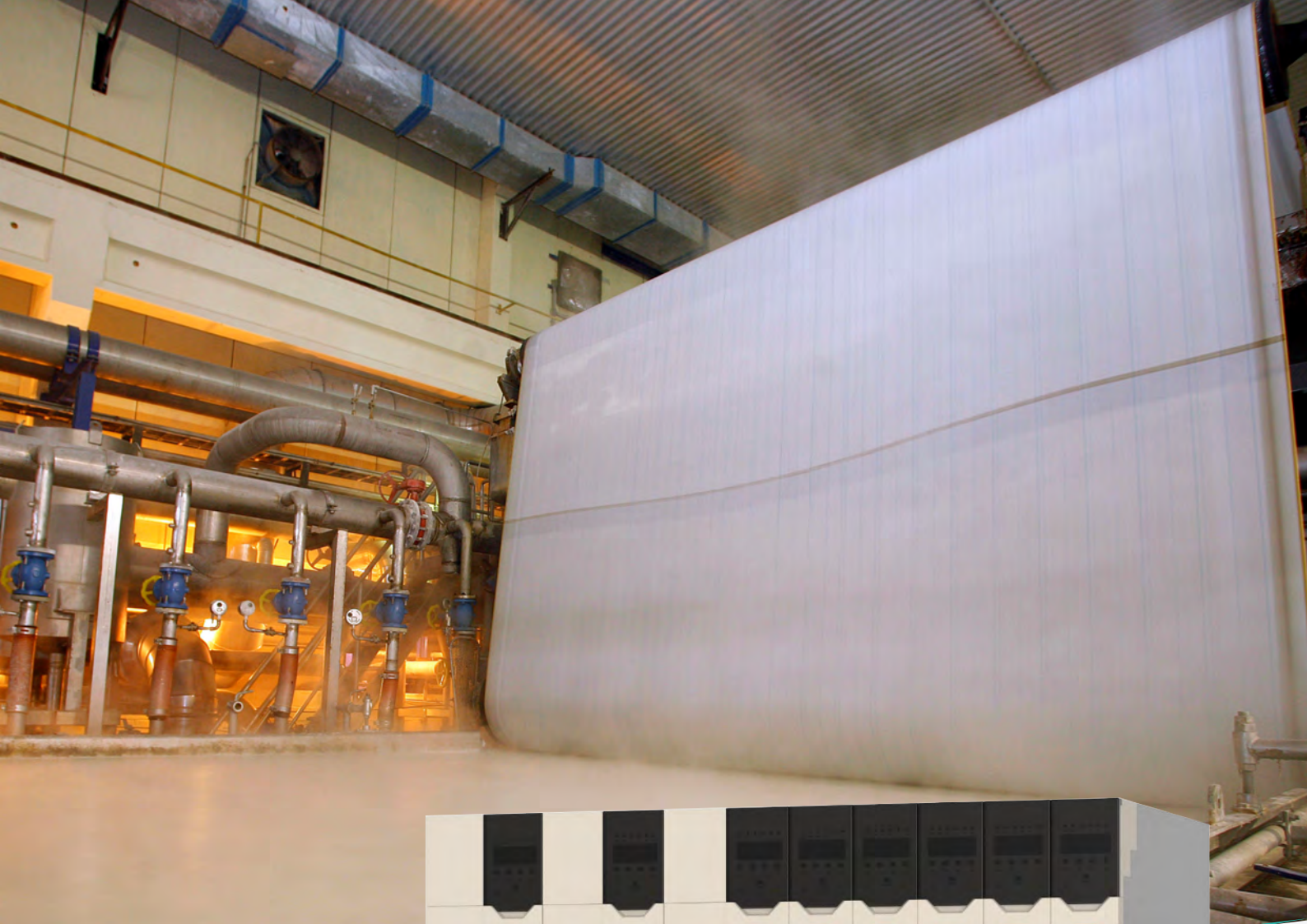
More prominent and flexible for several installment methods like rail, side, vertical and other forms.



## Applicable Industries

Widely used in automatic production lines, food packaging lines, logistics equipments, fans and pumps and many other industries.





## AC810-Series Standard Inverter for Multi-motors

Basic rectifier module:  
400V (three-phase power supply) : 22/45/110/160kW

Inverter module:  
400V (three-phase power supply):1.5-75kW



Flexible networking  
and extension



Net multiple function  
extensions and com-  
munication protocols



Modularized design  
for flexible  
configuration



Common DC bus  
solution for energy  
and cost reduction



Full and multi-layer  
protection & fault gra-  
ding and classification

# Features

ARM+FPGA dual-chip controlling structure with superb response and precision

Asynchronous, synchronous, reluctance, high-speed motors all compatible

Comprehensive and multi-layer protection & fault grading and classification management

Net multiple function extensions and communication protocols

Filter, rectifier, inverter, braking, buffer modules independent from each other for convenient configuration

Common DC bus solution for electronic control wiring reduction and thus cost & energy reduction

# Description

AC810-series standard inverter for multi-motors is developed on Veichi's high-performance high-end technological platform of frequency and speed regulation products. It features excellent control performance, flexible networking and extensions, modular design and common DC bus with high safety level and stability.

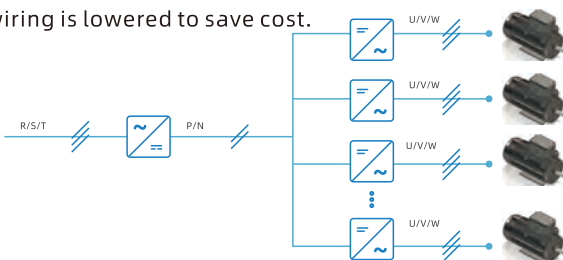
## Modularized design

- Filter, rectifier, inverter, braking and buffer all designed into independent and standard modules thus modules configurable according to motor power
- Book-like appearance design saving 30% space thus easier for cabinet layout with lower costs.
- Standard design for volume production & delivery



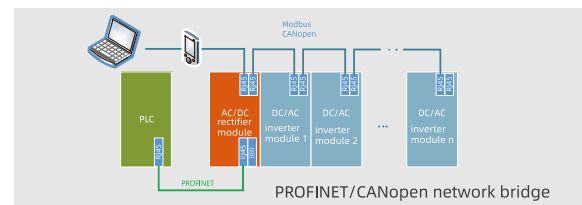
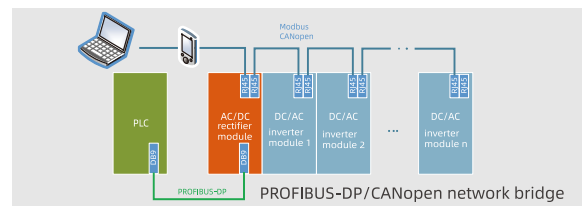
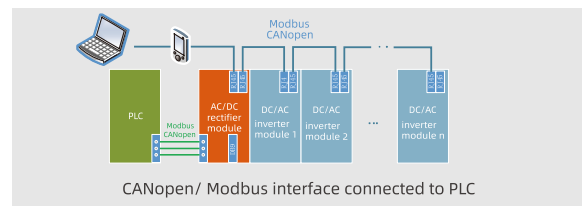
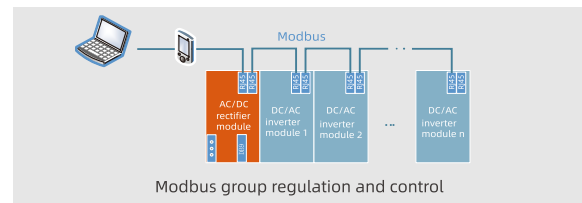
## Common DC bus solution

- Energy from power generation and electricity between the inverter modules can be exchanged through the common DC bus and saved 5%-30% off when feedback load lowering or crimping/unwinding.
- Rectifier module and brake module current are effectively reduced and so as system capacity.
- Unified power supply by rectifier unit reduces the main circuit switch and brake unit consumption.
- Difficulty and consumption of electric control system wiring is lowered to save cost.



## Net multiple protocols

- Modbus-RTU protocol: maximum baud rate 115200, 128 nodes, maximum distance 1000m.
- Profibus-DP (optional for different models): 12M rate, 32 nodes, maximum distance 100m.
- Profinet protocol.
- CANopen protocol: 1M rate, 64 nodes, maximum distance 40m.





## Low and Medium-voltage Inverter

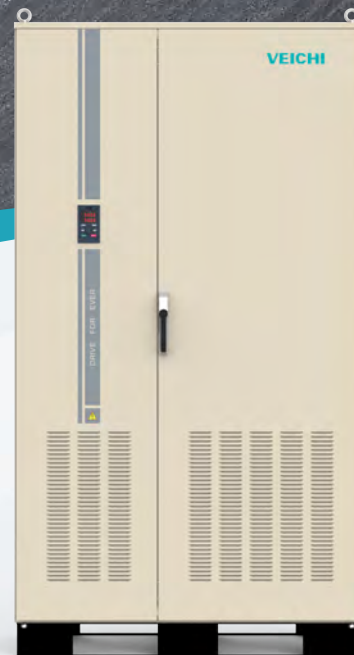
Three-phase 660V : 22kW-1120kW

Three-phase 1140V : Tri-level

Three-phase 3300V : Tri-level

Two/four quadrants: 45kW-1000kW

Two/four quadrants: 500kW-2500kW



Stable operation



Energy saving  
and high efficiency



Safety and reliability



Wide range of power  
band coverage



Compact size and  
high power density



## Features

Open and closed loop vector drive for AC motor drive integration	Advanced flux algorithm and modular design	Optimized low frequency dedicated overload and overcurrent protection curve to meet the specific needs of the field drive	Easy to install, debug and maintain
Good grid adaptability & wide grid voltage range	Built-in medium-voltage inverter drive applications & power balance of main-sub communication applications	Upgraded dust protection, strong adaptability to the environment	Thickened PCB board & three-proof paint treatment

## Description

At present, the company's general-purpose medium-voltage inverter consists of AC310 and ACP30 two product platforms, including AC310-T6, ACP30-TL11, ACP30-T33, which strengthens the user-friendliness and industry-specific design, achieving high performance, high reliability, high applicability and other characteristics, gaining excellent cost performance and good user reputation.

## Characteristics

**AC310-T6 series is the basic rectifier series inverter, and the drive application is consistent with AC310 series.**

- © All series are iron case inverters.
- © Asynchronous, synchronous, spindle, high-speed motor drive control function with open-loop, closed-loop vector control algorithm platform with various expansion, and optional cards are like standard CANopen, Profibus-DP, Profinet expansion communication.
- © ACP30-TL11 and ACP30-T33 series products have the following features.

**ACP30-T11 and ACP30-T33 series products have the following features:**

- © Designed with NPC three-level topology and low voltage stress, friendlier to motor insulation, adapt to the long-distance drive motor.
- © Adaptable to permanent magnet synchronous motors and asynchronous motors, open-loop vector control to ensure heavy load starting.
- © Designed with four-quadrant inverter drive models, optional AFE rectification, high grid affinity, low harmonic content.

## Applicable Industries

Industrial engineering and mining, municipal environmental protection, paper making machinery, lifting machinery, metallurgy and other industries.



## ACH200-Series Medium-voltage Inverter

Three-phase 6kV: 315kW~1120 kW  
Three -phase 10kV: 400kW~2000kW



Control platform with excellent dynamic response & accuracy



Superb low-voltage control performance



Stall protection for full frequency to trace rotation & process quickly



Advanced anti-interference switching between high & low voltage



Multiple unit bypassed to avoid harmonic wave

## Features

DSP+FPGA dual-chip controlling structure to realize high-speed & highly-accurate loop control operation

Dead zone compensation & low-frequency oscillation suppression

Stall protection for full frequency to trace rotation speed and process within 200ms

Master-slave control with CAN or fiber communication to ensure instantaneity and output consistency

Phase locking for power frequency and frequency conversion switching and running without interference

High adaptability to grid fluctuation and running maintained during 1~5s power failure

Harmonic free to lower both grid-side and motor side THD value to 2%

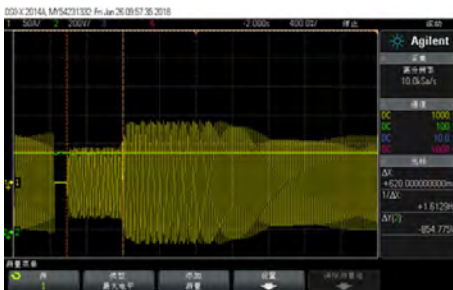
Multiple extension modules with full protections including PT100 temperature detection

## Description

ACH200-Series medium-voltage is the third generation of products that are independently developed, designed and manufactured by Veichi, featuring mature power unit series technique, DSP+FPGA dual-chip controlling, vector control algorithm with high accuracy, fast response and large torque at low-frequency output, and it is widely used in draught fans, pumps, compressors and belt conveyors.

### Stall protection in place

Stall protection is always functioning to trace rotation speed no matter how the motor is. And inverter direct frequency output is automatically activated and drag the motor to set status during 0.1~1s of instantaneous fault recovery caused by power failure and such.



Residual voltage on devices of large inertia remains quite strong, and when it restarts, residual voltage and phases can be estimated and then begins rotating and exciting, and accelerating

### Excellent low-frequency control performance

#### Dead zone

#### compensation

Current waveform close to sinusoid at low frequency



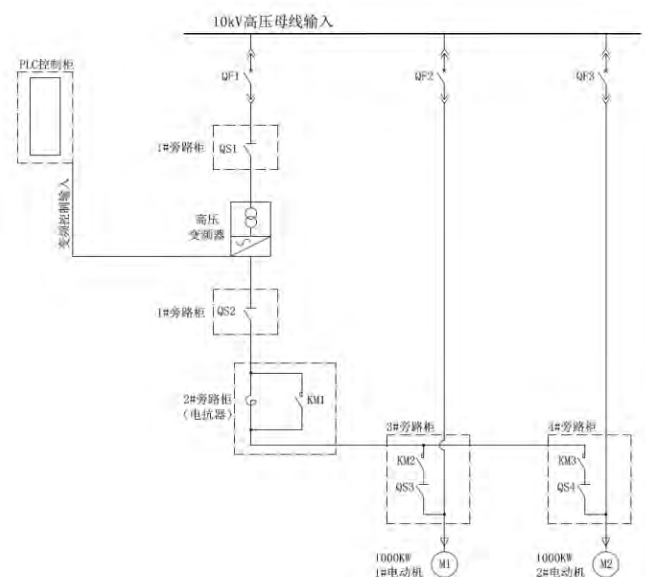
#### Oscillation suppression

Motor syntony avoided at low frequency

### Advanced interference-free switching

Phase locking is added so interference-free switching and running of the motor between power frequency and frequency conversion, especially suitable for multi - pump wheel switching of the pump.

Impact current stays lower than 1.5 times of the motor rated current.





## SD700-Series High-performance Servo Drives



robust control



smart setting



Multi-stage  
vibration control



23-bit absolute  
value encoder



brand-new structure

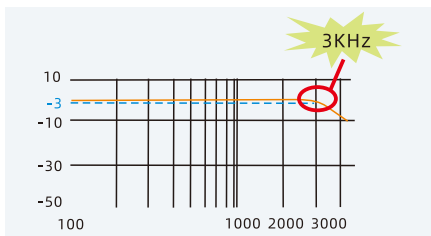
## Features

loop response bandwidth up to 3KHz	23-Bit absolute encoder and communication speed up to 2.5Mbps	Automatic bandwidth setting to complete PIO loop gain calculation	Powerful and user-friendly upper computer software to manage multi-channel monitoring
Mainstream field bus such as EtherCAT, PROFINET, CANopen, RS-485, MECHATROLINK II, MECHATROLINK III, etc, supported	Automatic inertia recognition, loop gain, friction compensation and other parameter settings supported	Multi-segment vibration control to effectively limit resonance	Robust control to ensure smooth operation for loads with up to 30 times inertia

## Characteristics

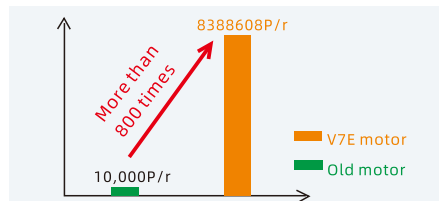
### loop response bandwidth reaches up to 3KHz

Through the unique current loop algorithm, loop bandwidth is effectively increased, which greatly shortens the setting time, and the setting time reaches as fast as 1ms to improve the production efficiency.



### 23-Bit absolute value encoder

Leading 23-Bit absolute encoder is adopted whose pulses are up to 8388608 per revolution and communication speed up to 2.5Mbps. It enables better positioning accuracy, more smoothness at low speeds and no loss when power down.



### powerful upper computer software

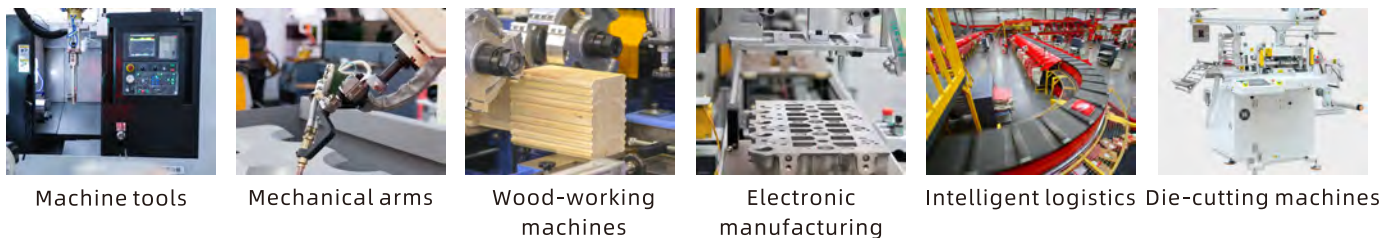
Do not need installation of any debugging software and easy to use USB communication between driver and PC.



## Parameter Specifications

Drive power range: 100W-200KW  
Output torque range: 0.16N. m-3183 N.m

## Applicable Industries





## SD780-Series General-purpose Servo System



International standard  
UL certification



Powerful bus communication

**STO**

STO function



Clean debugging panel



17/23-bit absolute encoder compatible

## Features

Hardware protection and anti-interference performance upgraded comprehensively, reaching UL & CE certification requirements

All products of this series qualified with STO SIL3 safety requirements to offer safer running environment for customers

Multiple bus communication options of CAN open & EtherCAT

Applied to 3C, lithium, semiconductor, new energy, photovoltaic and other industries mainly

Debugging & upgrade via upper computer with hand - by - hand installation wizard to simplify the servo application

Debugging software with drive parameter copy function, to eliminate repetitive parameter setting operation for the same model

Automatic parameter tuning for mechanical conditions without manual interference to realize intelligent parameter setting of various complex loops within as fast as 10ms

V7U motor, IP67 protection on the body, performance optimization of temperature rise 5-10°C lower than previous generation & shaft jump precision higher than 0.02mm

## Characteristics

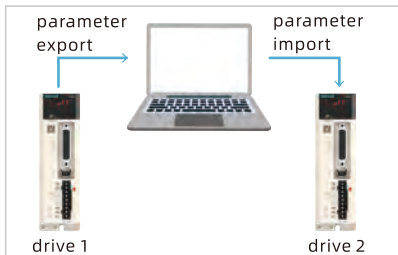
### Debugging & upgrade via upper computer

Hand - by - hand installation wizard to simplify servo system application



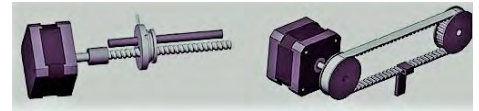
### Drive parameter copy

Parameter copy function in the debugging software saving repetitive settings on the same model



### Parameter self-tuning

1. adjust to different mechanical structures
2. complete the intelligent setting of various complex loop parameters
3. auto setting with mechanical conditions without manual operation
4. position tuning with in 10 ms as fast as possible



screw rod , synchronous belt-suitable to different mechanical structures

### International standard UL certification

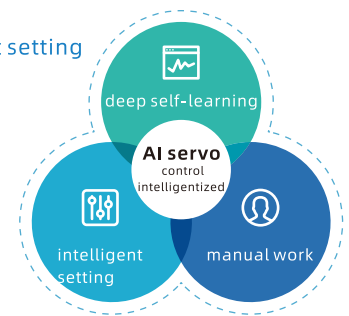
Applicable to import and export between United States, Canada and other countries



### STO function

Standard SIL3 safe torque off function, suitable for new energy, lithium battery, photovoltaic and other industries to provide higher security for users.

### Intelligent setting



### Standard configuration with Micro USB upper computer-special interface



Micro USB

Standard configuration with Micro USB upper computer-special interface

RS485

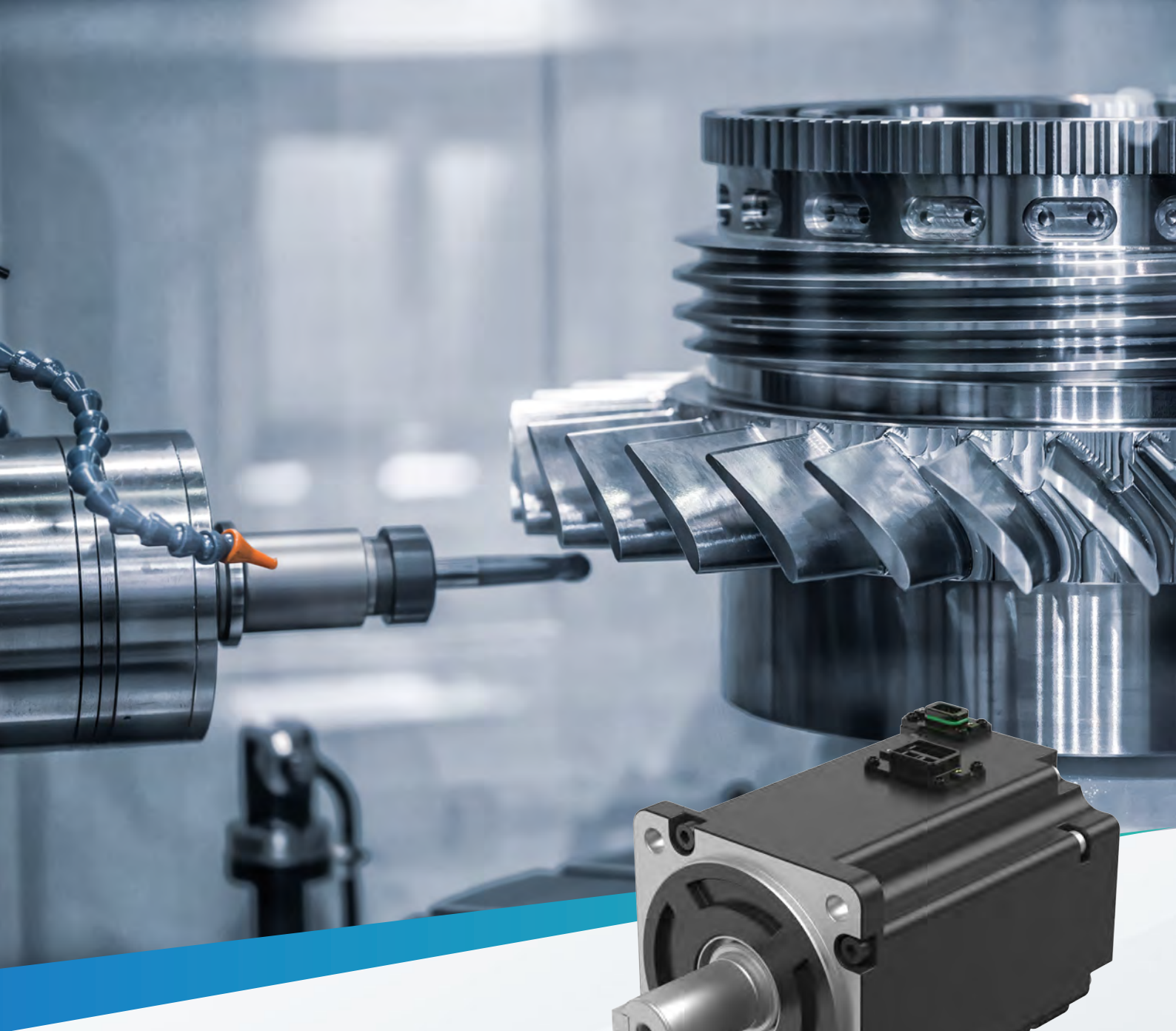
Standard configuration with rs485 communication port

CANopen

Optional with CAN open communication port

EtherCAT

Optional with Ether CAT communication port



## V7E-Series Motor



High performance  
cost ratio



Better outgoing



Lower temperature  
rise



Higher precision



Shorter length



## Features

Faster heat dissipation and better uniformly distributed humidity	Rotor 10-stage optimized design	Optimized design of permanent magnet, high demagnetization resistance	Overload capacity up to 3-4 times
High slot space-factor, large winding diameter, low resistance, 20% less heat generation	The open design of the motor shaft end equipped with a variety of encoders, providing users with a variety of options	Fast motor dynamic response	Motor volume 20% smaller than previous products with small size and light weight

## Characteristics

### Full range of motors with IP67 protection level ensures higher durability

V7E motors have high protection level enables more working environments and longer service life. Protection level is currently the highest in the industry.



Dust and gas can not enter since rubber parts are used on all of the seams to ensure leakproofness.



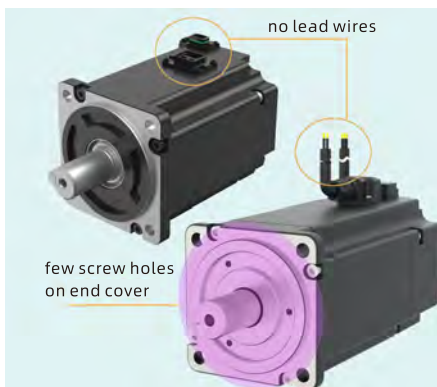
No harmful effects from strong water spraying in any direction against the housing



The shell being immersed temporarily in 1 m deep water under normal temperature and pressure will not cause harmful effects

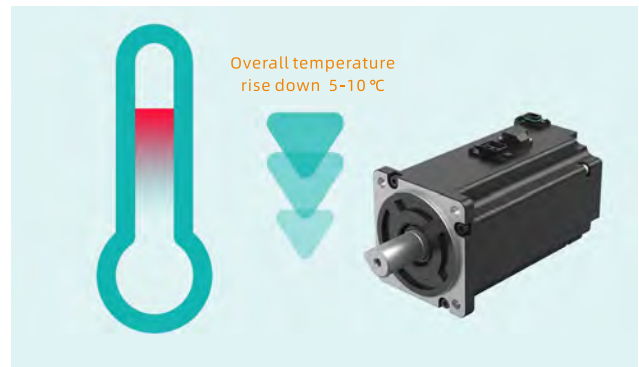
### No lead line for cleaner appearance

V7E motor is designed with terminal wiring thus no lead wires, and integrated end caps with fewer opening on the front cover screws, which makes the overall motor simpler and more pleasing to the eye.



### Less shaft runout and higher precision

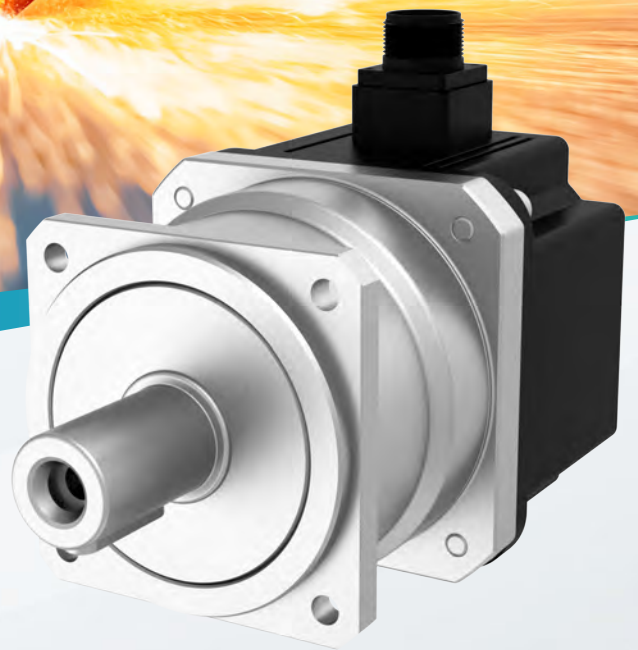
The V7E motor has smaller shaft runout and higher accuracy, which can be used for higher-end occasions. The accuracy of shaft runout has been increased from 4 to 2, which shows the advanced level in the industry.



### Smaller shaft has been upgraded

From 0.04mm to 0.02mm thus deliver higher accuracy for more complicated occasions, one of the best among industries.





## V7R-Series Servo Decelerating Motor



Short body



High precision



Big load



Safety and Reliability



Standard design

## Features

Integrated design saving 40% decelerator length compared to split mounting structure

Gear back clearance  $\leq 3\text{arc-min}$ , rigid coupling between gears and shafts for higher precision

Stronger radial force and axial force bearable for 3 times larger loading torque

Oil and grease lubrication, body maintenance free, protection level IP65, traditional connection structure canceled, mechanical reliability enhanced

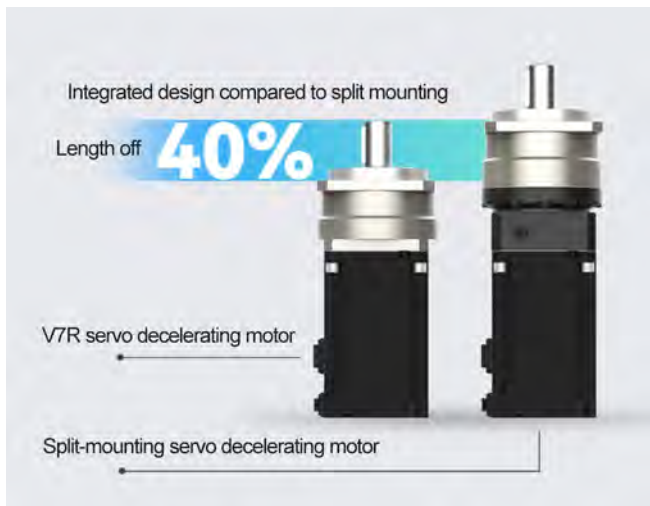
Standardized and integrated products saving repeated drawing checking during procurement

Debugging-free, easy to install, and plug and play

## Characteristics

### Integrated design

Motor and decelerator are connected via pinboards thus length is reduced by 40% compared to split type.



### High precision

Motor spindle noses are equipped with sun gears via interference fit, and deliver higher precision when direct running with planet gears.



## Applicable Industries



Laser cutting machine



AGV



Carving machine



Hand tool



Coiling machine



## VC1-Series PLC



User programs supported up to 16K steps



three-way pulse output at 100khz



convenient firmware upgrade

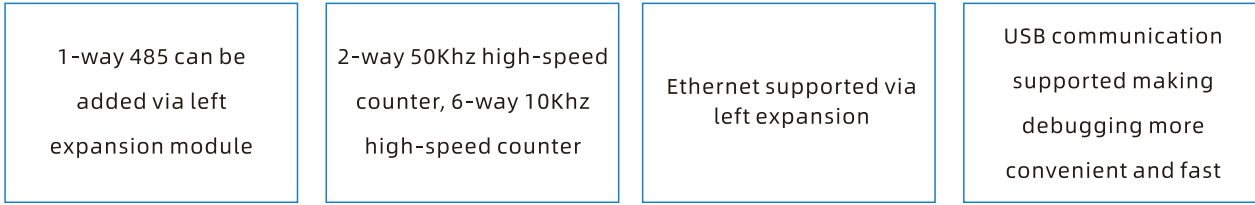


one-way for 232, one-way for 485

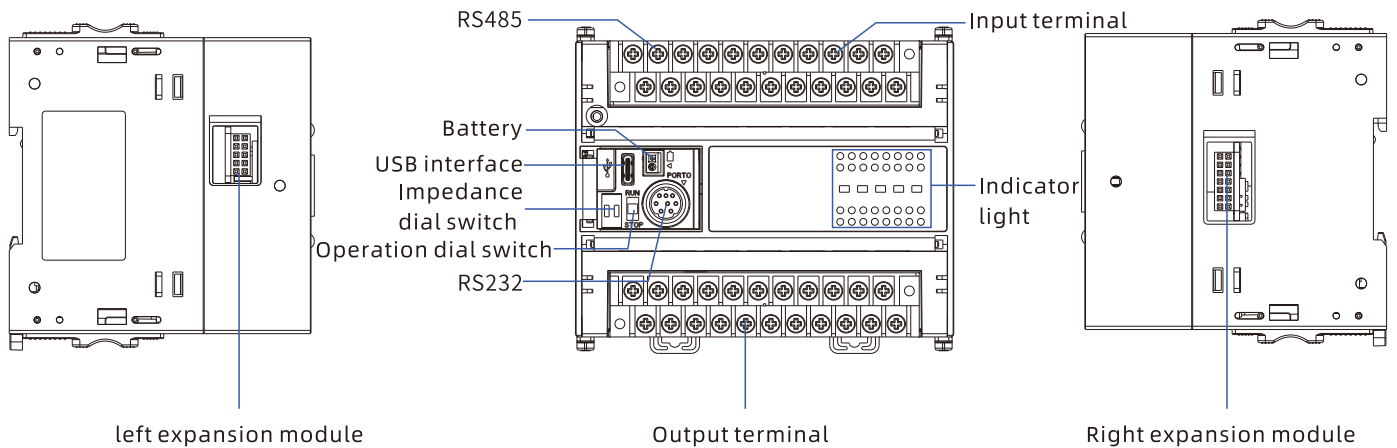


multiple extensions

## Features



## Port Description



## Specifications

Designation		Parameter
General	Basic instruction execution duration	0.2 $\mu$ s
	Real-time clock	$\pm$ 45s/m( normal temperature )
Storage	Program Capacity	16k steps
	Power-off data preservation	Supported
	Power-off soft components preservation	Flash saved permanently, 2000 elements max
IO	Maximum IO points	128
	Maximum expansion modules	15
	Digital filtering	Filtering time can be set the for the 8 input points software, and the subsequent points are filtered by hardware with a filtering constant of oms
Positioning control	Maximum pulse output (transistor)	3 ways at 100Khz
	Single-phase counting channel	2 channels of maximum input frequency 50 kHz, 6 channels of maximum input frequency 10 kHz
	Biphase counting channel	1 channel with maximum input frequency of 25 kHz, 3 channels with maximum input frequency of 5 kHz
Communication	Serial communication port	one way for 232, one way for 485
	Ethernet	none
	USB communication	USB 2.0



## VC5-Series PLC

EtherCAT 

EtherCAT  
master station

CANopen

CANopen master  
and slave station



Simple motion  
control settings



Abundant  
communication  
interfaces



Integrated  
high-speed pulse

## Features

32-axis Ether for AT bus motion control, position, speed, torque, point motion control and interpolation

72 EtherCAT slaves stations

RS485, CAN, Ethernet and EtherCAT interfaces for multi-level network communication

PLC open-based motion control commands bringing 32-axis max motion control; host supports 4-axis by 200KHz pulse output, 8-way high-speed input at 200KHz

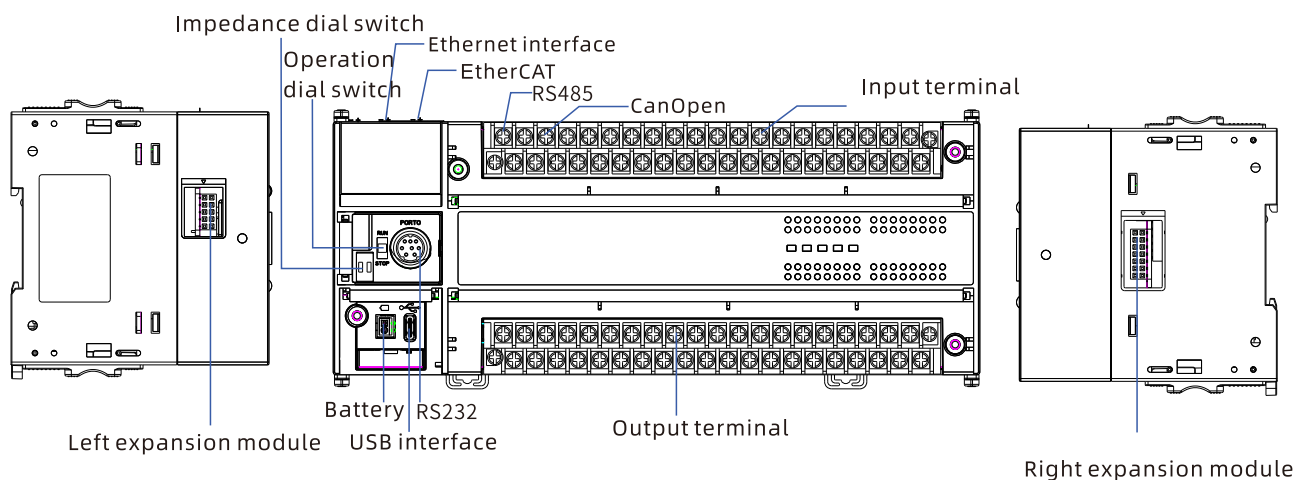
Efficient and convenient programming methods such as LD/SFC programming and function block instructions

The main unit with 32-way inputs and 32-way outputs, including 8-way high-speed inputs and 8-way high-speed outputs, thus realizing 4-axis pulse output and 4-axis encoder counting

15 expansion modules max

Support linear interpolation, circular interpolation, electronic cam and electronic gear

## Port Description



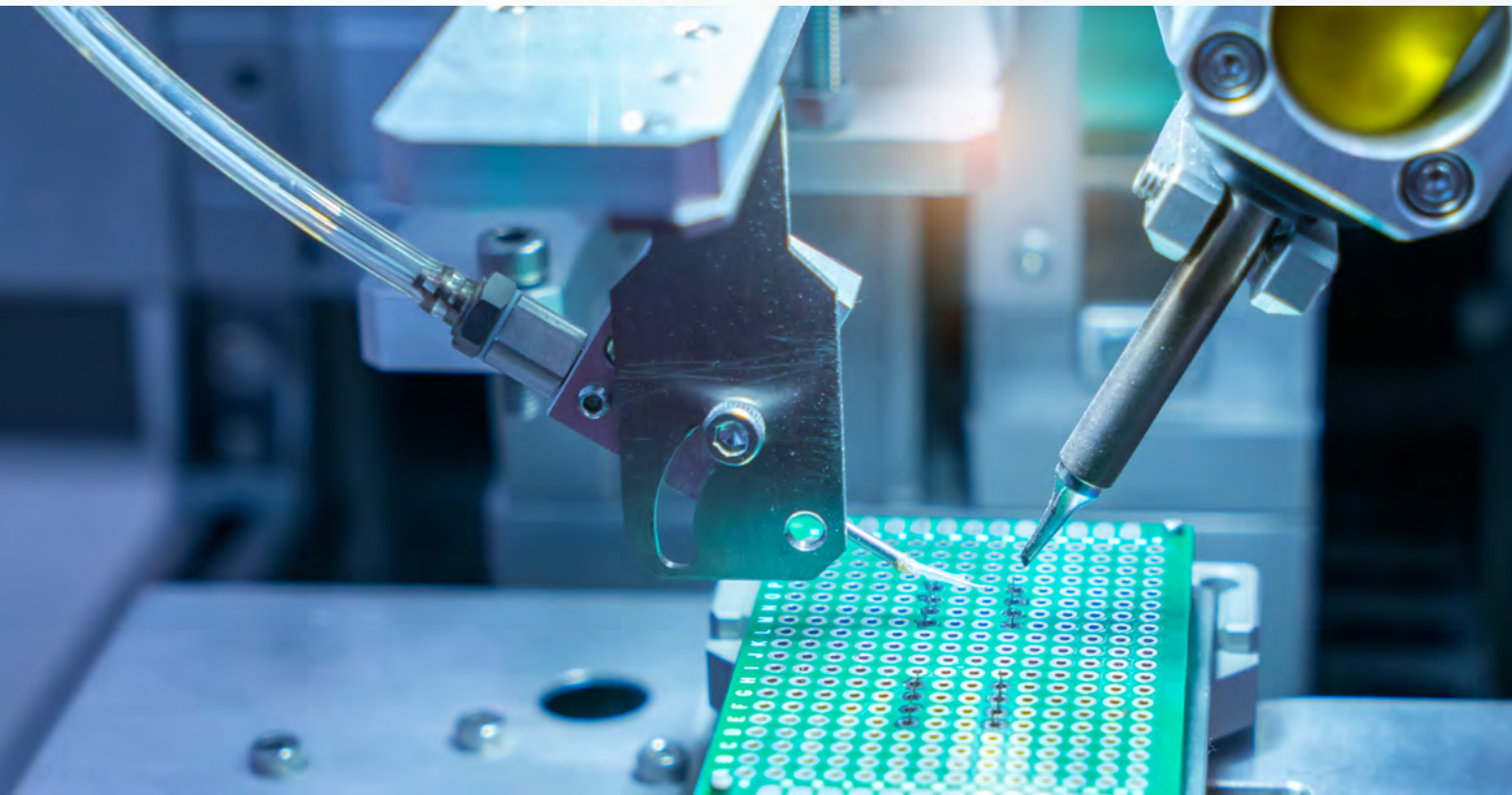
## Specifications

Designation	Parameter
Program data capacity	200K steps of the user program, about 128K soft components among which are about 84K power cut perservation
Number of axes available	32 axes EtherCAT& over 72 EhterCAT slave stations
Synchronizing cycle	EtherCAT synchronization cycles supports a minimum of 250 $\mu$ s
Serial port communication	One way for RS232 and one way for Rs485
CAN communication	CAN open (301/402 protocol)
Ethernet	Modbus TCP & upload\download
High-speed input	High-speed eight-way input at 200khz (4-way AB phase counting)
High-speed output	High-spead eight-way onput at 200khz (4-axis pulse output)
Extension Modules	15 extensions max
Programing Languages	LD,SFC and FB instructions supported
USB	Upload/download and firmware upgrade
Motion	Linear interpolation, circular interpolation; electronic gear and electronic cam function, etc.

# Industrial Dedicated Inverter

---

start with and develop for industrial-specific inverters



Photovoltaic  
pump drive



Intelligent  
weaving system



Crane  
industry



Machine tools  
and compressors



Electro-  
hydraulic  
servo drive



Environmental  
ventilation



Printing and  
packaging







## Solutions for Water Pump



Integrated Drive  
(GS00)



Mini Pump Drive  
(GS10)



IP65 Pump Drive  
(GS30)

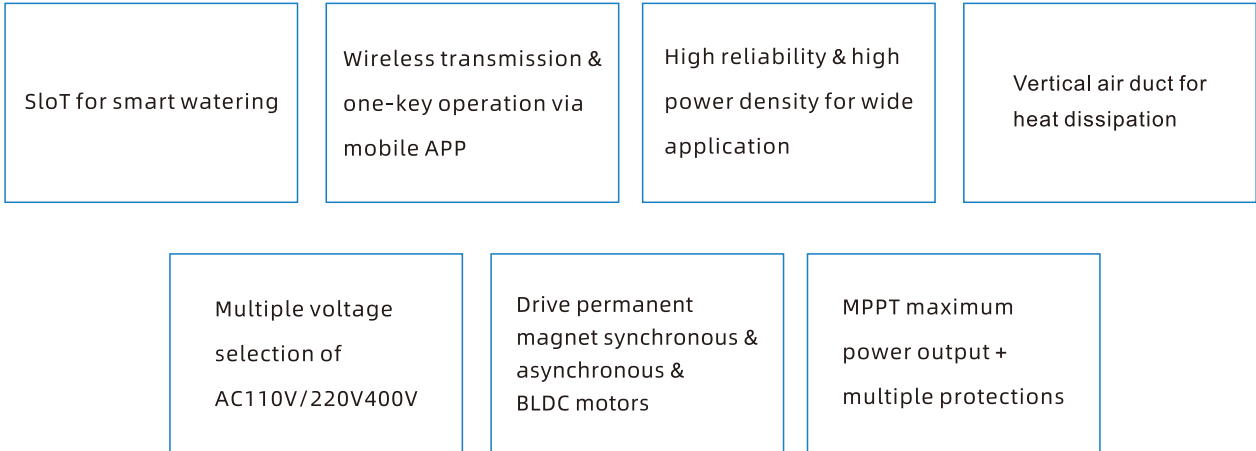


Pump VFD (GS20)



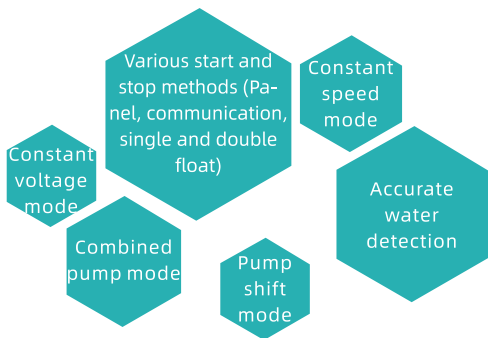
IOT

## Features



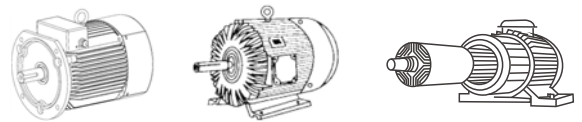
## Characteristics

### Multiple water supply functions



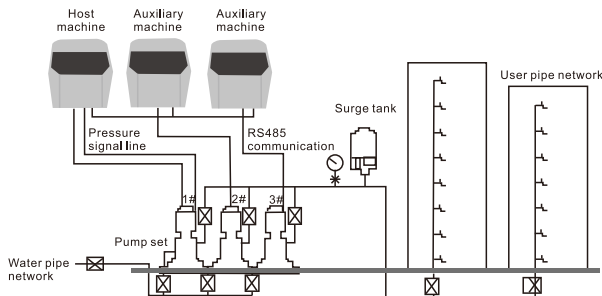
### Perfectly drive a variety of pump motors

Perfectly drive a variety of water pump motors such as asynchronous, permanent magnet synchronous, synchronous reluctance, etc.



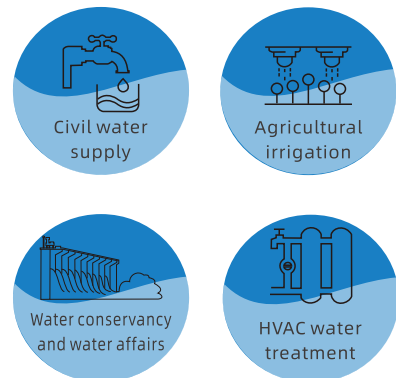
### Multiple pump control

- ◆ The pressure of the pipe network is detected by the host and sent to the auxiliary machine. When the pressure is not enough, the auxiliary machine starts and runs according to the set frequency, and the main machine performs constant pressure PID adjustment.
- ◆ The main and auxiliary machines alternately run in sequence at regular intervals to realize the uniform use of the water pump and extend the life of the water pump.



### Wide range of applications

Used in many occasions such as civil water supply, agricultural irrigation, water conservancy and water affairs, HVAC water treatment, etc.





## QT-Series Integrated Crane Tower Drive



Modular design



High-performance  
PLC logic control unit



Easy maintenance



IP54 protection



Remote monitoring  
modules

## Features

Installation debugging: debugging mode is on during factory debugging to shield travel limits and weight-torque limits and ensure safe running at low speeds

The three major functional modules of hoisting/swiveling/amplitude change operate independently and do not affect each other

Logical operation and fast data processing ability of three major mechanisms

Double signals, double brakes: double signals, double brakes on lifting brake control circuit designed as redundant braking circuit

Remote positioning, real-time monitoring and remote fault diagnosis of machineries etc.

Logic control of holding brake: logic control realized through the release frequency, release current, brake release time, brake holding time, etc. , to ensure system safety and reliability

Load-speed function: calculate the maximum operating speed according to load. "high speed for light load, low speed for heavy load" to improve efficiency

## System Composition





## Systematic Solutions for Intelligent (unmanned) Construction Hoist



Intelligent drive



Humanoid detection



Machine-man  
interaction



Intelligent  
diagnosis



Video surveillance

## Features

Intelligent drive controlled easily via cage-bottom box or operating portable box to direct freight elevator up and down

AI humanoid detection will stop the freight elevator when human detected in the cage to guarantee safety

Smarter HMI machine-man interaction simplifies operation

Intelligent voice notice, emergency stop, fault and real-time voice broadcast of abnormal limiting

Fault self-diagnosis leads users to quick troubleshooting and raise repair efficiency

Distribution box & operating box integrated facilitates installation & single-dual cage switching without differentiating the cage-bottom power control boxes, thus this is more compatible

Floor calling via the floor caller enables level control easily

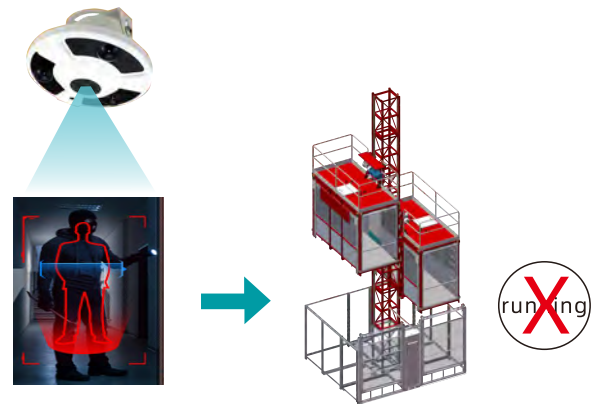
## Video Surveillance

Transmit the surroundings around the freight elevator to the monitoring screen so drivers can check obstacles and personals nearby.

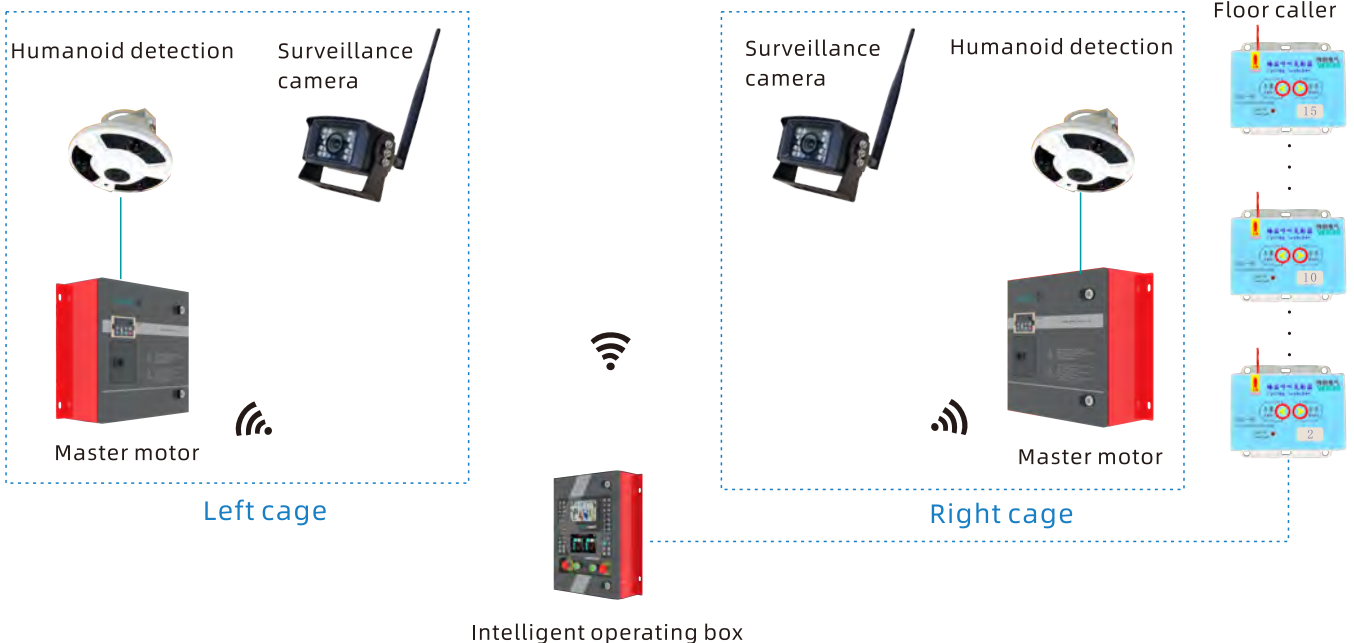


## Built-in Humanoid Detection

Built-in humanoid detection will limit moving of the elevator and let out voice warning once man taking the elevator against rules detected until he leaves.



## System Composition





## ACP30-Series Explosion Protection Inverter

660V two-level two-quadrant / four-quadrant: 45KW-630KW  
1140V three-level two-quadrant / four-quadrant: 55KW-1000KW  
3300V three-level two-quadrant / four-quadrant: 800KW-2500KW



New platform with wide coverage



Three-level topology against the trouble of burning motor



Heavy-duty start-up function and strong power cycle capability



Compact structure reducing installation space



Stray inductance reduced for longer service



## Features

New platform developed for medium pressure and medium power conditions covering all applications of explosion-proof inverters

Three-level topology to solve the trouble of burning motor & cable line up to 2000 meters

Designed scraper, belt machine, winch, etc in coal mine working conditions with heavy-duty starting capability and strong power cycle capability

Thermal simulation & electromagnetic simulation done on all the products for scientificity

Dedicated LCD screen with friendlier human-machine interaction and more comprehensive information

High-power synchronous motor on control automatically locks the pole position before starting to achieve shock-free starting

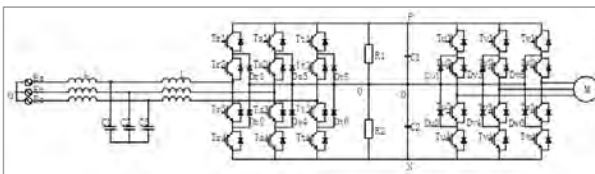
Standard CAN communication power balance control with fast response & low load imbalance

Short circuit protection located to each phase, and multiple faults locked at the same time for easy maintenance

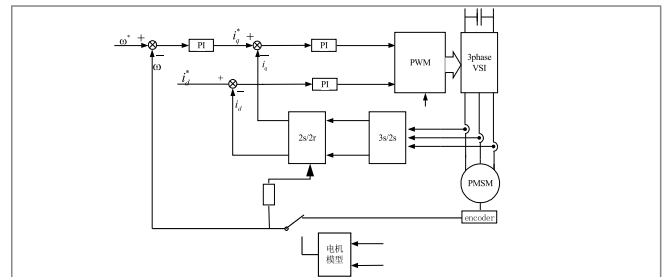
## Description

The ACP30 series, a high-performance vector inverter developed for the coal mining industry, covers input voltage from 660V, 1140V to 3300V, with two-quadrant and four-quadrant operation capability, and can tow asynchronous motors and permanent magnet solid-stepping motors. It adopts the industry-leading motor vector control technology, AFE controlled rectification technology and NPC three-level topology, can provide a complete inverter solution for the coal mining industry.

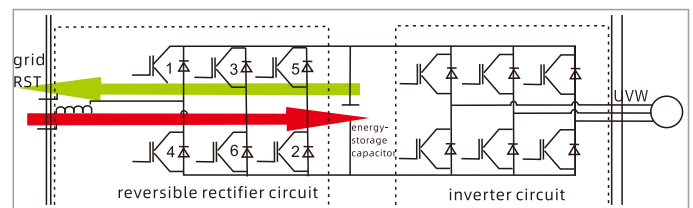
### Back-to-back NPC three-level topology



### High-power motor vector control technology



### AFE controlled rectification technology



## Applicable Industries



Belt conveyor



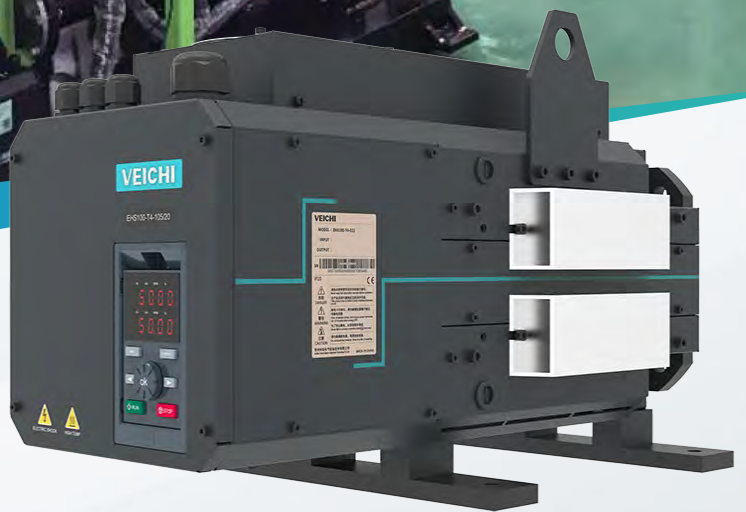
Permanent magnet synchronous motor



Fully mechanized scraper and shearer for mining



Water pump



## EHS100-Series Integrated Servo Drive



Integrated control,  
power and brake  
functions all in one



Easy installation and  
wiring without electric  
control box



No debugging &  
self-learning, LAPU



Dual independent air  
ducts with IP56 fan

## Features

Space saved & productivity improved reducing production errors and correction costs

Wiring inside which contributing to improvement of EMC compatibility, significantly reducing interference and increasing stability

Integrated brake avoiding failure and damage caused by wrong selection or improper selection of devices

Intelligent temperature control with 70,000-hour-long-life fan (IP56 protection)

IPM inline magnet design for low temperature rise and fast response

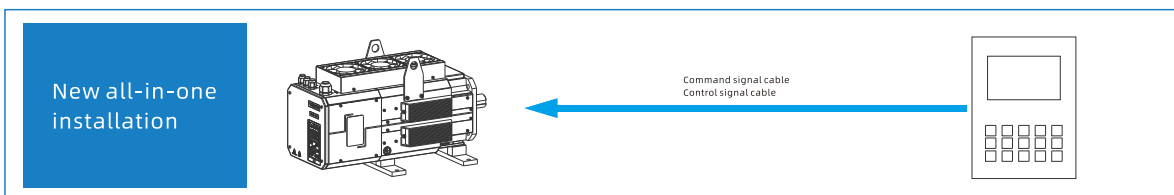
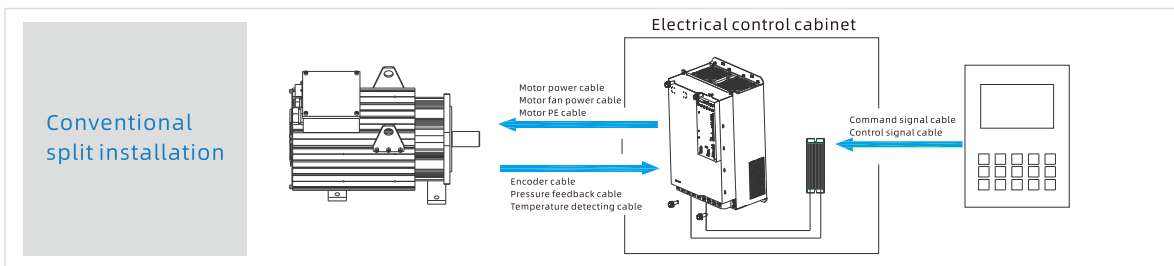
Advanced weak magnetic algorithm doubling the torque for easy handling of overload and speed

Keyboard with RJ45 network cable interface with hot-plug, extendable from a distance, and installable independently with brackets

Joint control mode such as synchronize, follow, overlay, intelligent tracking and others

## Characteristics

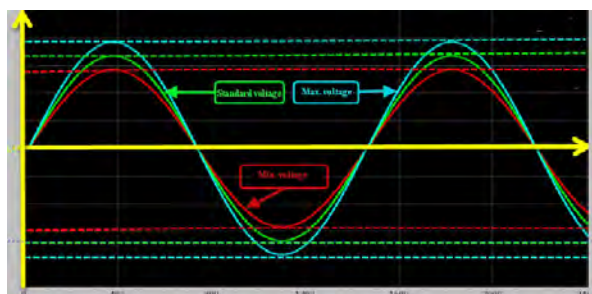
### Subvert the conventional methods



The system is free of debugging and self-learning, and can be operated by powering up and in the meantime the original motor size and method remain to reduce the drive electrical cabinet. No need to connect motor power cable, fan power cable, temperature detection cable, encoder cable, brake resistor cable, motor PE cable, etc.

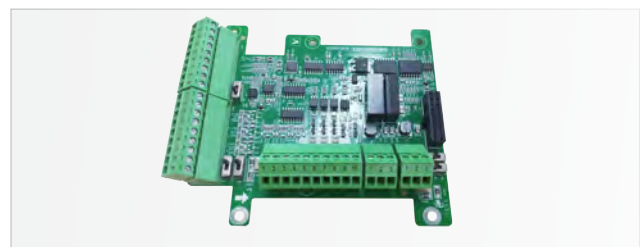
### AC300V-AC480V wide power input

The ultra-wide AC input voltage range can cope with various harsh grid environments and enhance the applicability of the equipment under extreme working conditions.



### Position closed-loop cards

Position closed-loop card for all-in-one machines, combined with excellent position control algorithms. It is suitable for various types of position sensors, analog signals, pulse signals, etc. and for various industries.





## SD700-Series Machine Tool-special Servo System



Multiple bus protocols



Loop response bandwidth of 3kHz



23-bit absolute encoder



Powerful upper computer software



New structural design

## Features

Multiple communication interfaces for high speed and high precision control

Standard 850W, 1.3kW motor for feed axis & all with waterproof connectors

Online mapping to modify parameters and debug easily

Special servo for tool magazine supports half-round tool position calculation, multi-turn overflow processing, gap compensation and other functions

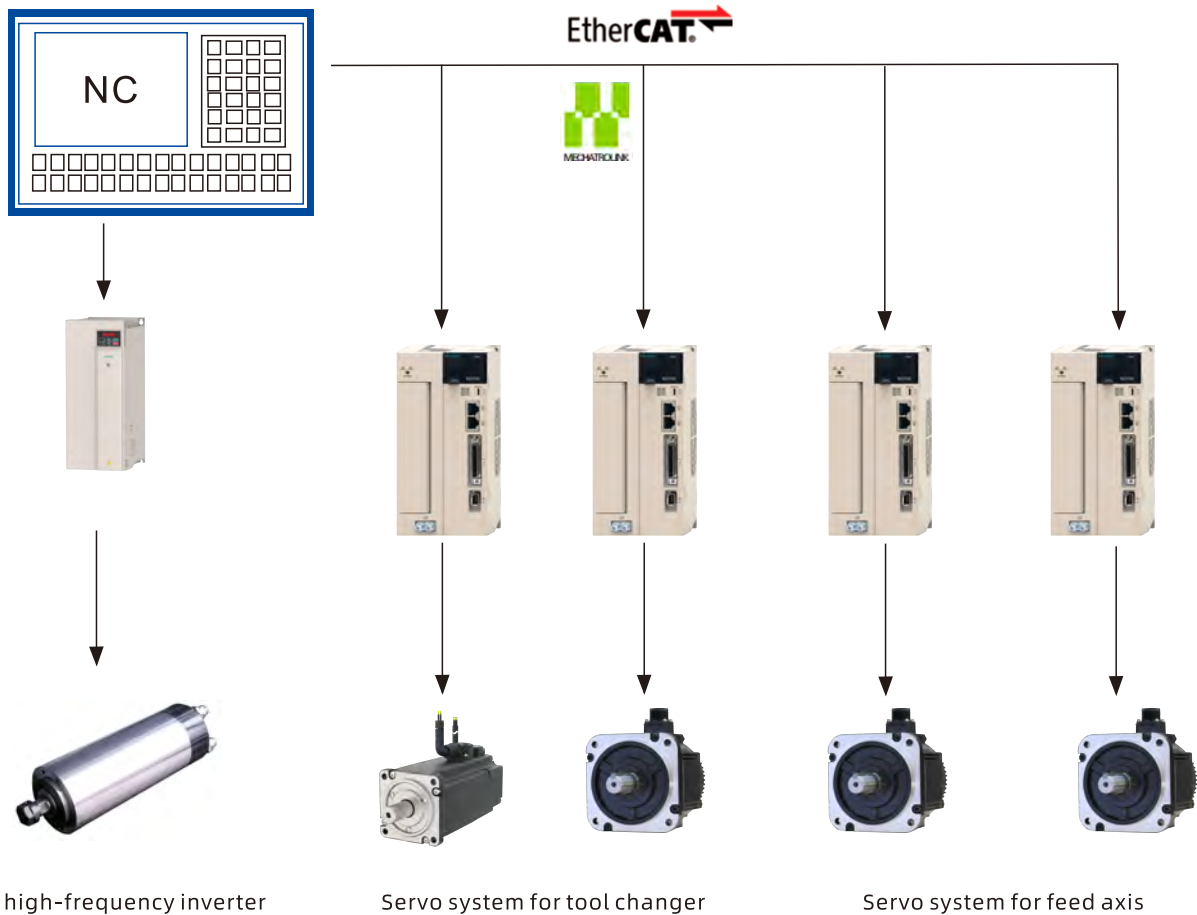
Tool magazine servo supports test mode for easy debugging

Fine grain pattern and high finish of the processed workpiece are guaranteed

Multi-segment vibration control is supported to effectively limit the resonance

Automatic inertia recognition, loop gain, friction compensation and other parameter settings is supported

## Engraving and Milling Machine Solutions





## AP150-Series Integrated Drive for Air Compressor



Drive for synchronous, asynchronous, permanent magnet & reluctance motors



Stable, accurate and fast constant pressure voltage



High energy efficiency and energy consumption decreased by more than 25%



Easy wiring, installation and debugging



Highly integrated system

## Features

High-speed integration of host, fan machine drive output and air compressor logic control system

Fast response characteristics for pressure fluctuation  $\pm 0.01$  Mpa

Simple debugging with solidified parameters while without tuning. Immediate operation when power is on without any setting on parameters

Permanent magnet motor minimum current algorithm to boost voltage, reduce output current and lower specific power

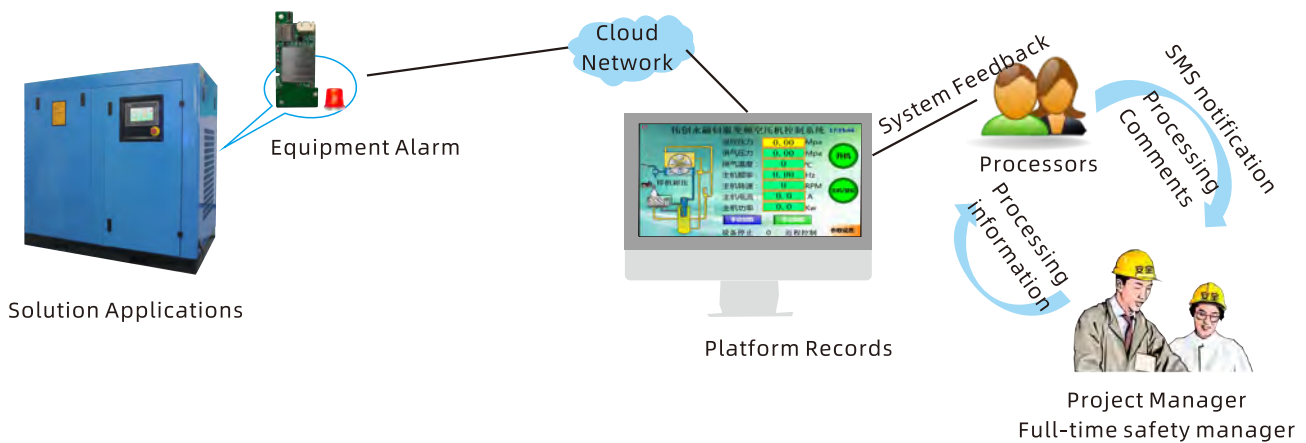
Built-in IoT module for real-time control of equipment operation and maintenance information

Timed start/stop available

User-friendly interface

Strong drive for asynchronous motors, permanent magnet motors and synchronous magnet resistance motors

## All-in-one Solutions for Air Compressor Industry



## Applicable Industries



Packaging



Electronics



Automobile making



Printing



Metal processing



## VC600C-Series Integrated Electric Control of Water Jet Weaving Machine



Water and oil  
proofing



Reliable connection



visual weft detection



Direct-driven system



Full functional  
coverage



## Features

Easy installation, high level of box protection and visualization, fanless design to eliminate water vapor, oil and gas

Internal and external plug-in cable connection, making the product more scalable and easy to maintain

Weft detection with independent intellectual property rights; visual sensitivity adjustment to improve debugging efficiency

Permanent magnet direct drive system to greatly reduce energy consumption and ensure reliable and accurate operation of the equipment

Four-spray pattern control technology, double warp beam electric feed electric roll, electronic dobby control and other functions

Fanless design with back heatsink, miniaturized size and high integration

More energy-saving common DC bus technology than traditional asynchronous motor and direct drive

Standard with non-terminated toroidal transformer for lower temperature rise, higher resistance to vibration and more stable operation

## Characteristics

### Box introduction

◎ **IP54 protection-level (certification: 20210505K12013)** box can stand direct water drenching, thus can effectively prevent the weaving sites from water vapor, protecting the normal operation of equipments and prolonging the service life of equipments.

◎ **The use of back radiator & fanless design**  
Through the back of the box design air duct, cabinet temperature is effectively reduced, completely solving the problem that the traditional textile control cabinet fans are easy to damage due to the water vapor and accumulation of oil.

### ◎ **Volume miniaturization & higher integration**

VC600C series directly eliminates the cost of equipment chassises, achieving smaller size, lighter weight, more convenient installation methods.

### ◎ **Visual weft detection (Invention patent number: ZL201910889295.5)**

The independently developed visualization weft detection technology, compared to the traditional way, it is more intuitive and more convenient; With weft detection self-learning function, it can eliminate effectively empty stops and missed stops.



### Layout introduction

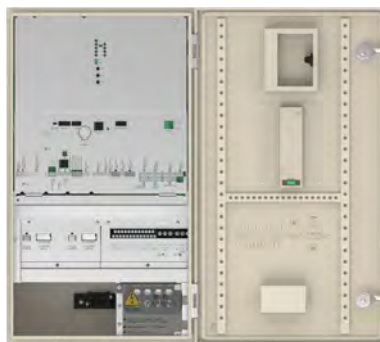
◎ **modularized concept adopted**  
to eliminate the traditional inline harness and then solve the problem of poor contact of harness in high vibration environment.

◎ **Easy maintenance and extensions**  
to add, replace the corresponding control module when transforming the devices

### ◎ **Non-terminated toroidal transformer as standard**

Standard with non-terminated toroidal transformer can stand lower temperature rise, vibration thus delivering more stable operation.

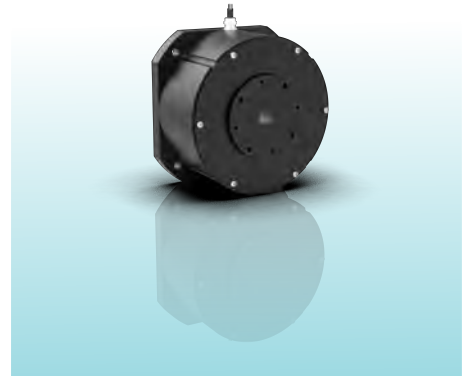
◎ **Common DC bus technology adopted**  
Compared with traditional asynchronous motor and direct drive, it is more energy-saving.



### VC600C-series direct drive system functional

- ◎ Smooth operation - electronic inertia technology of low speed fluctuation.
- ◎ Easy speed adjustment - infinitely variable speed for arbitrary adjustment.
- ◎ Green and energy-saving technology - using permanent magnet frequency conversion technology to reduce energy consumption.
- ◎ Permanent magnetism-150°C high temperature resistant magnets adopted thus no demagnetization.

Efficient range 300-1200R/min of weaving speed due to elimination of the brake disc, belt disc, reducing most of the transmission loss; Veichi's core vector control synchronization technology lifting the system energy-saving rate of about 20%.





## Systematic Solutions for Ships and Offshore Engineering



Systematic solutions for AC electric propulsion



Systematic solutions for shaft power generation



Hybrid power system integration



Systematic solutions for all-electric driven new energy ship



Systematic solutions for deck mechanical drive

## Features

DC networking system basis can easily and flexibly integrate core drives like variable speed generator set, shaft power generator set, fuel battery and power electronic converters

Fault tolerance is raised and storage/fuel battery/shaft power generator set are integrated for redundant power supply for ships

Unique remote diagnosis and service combined with fuse protector, isolator, breaker and transverter to protect system safety

DC bus 1000V networking reduces 40% cable layout compared to 690V or 660V AC plans

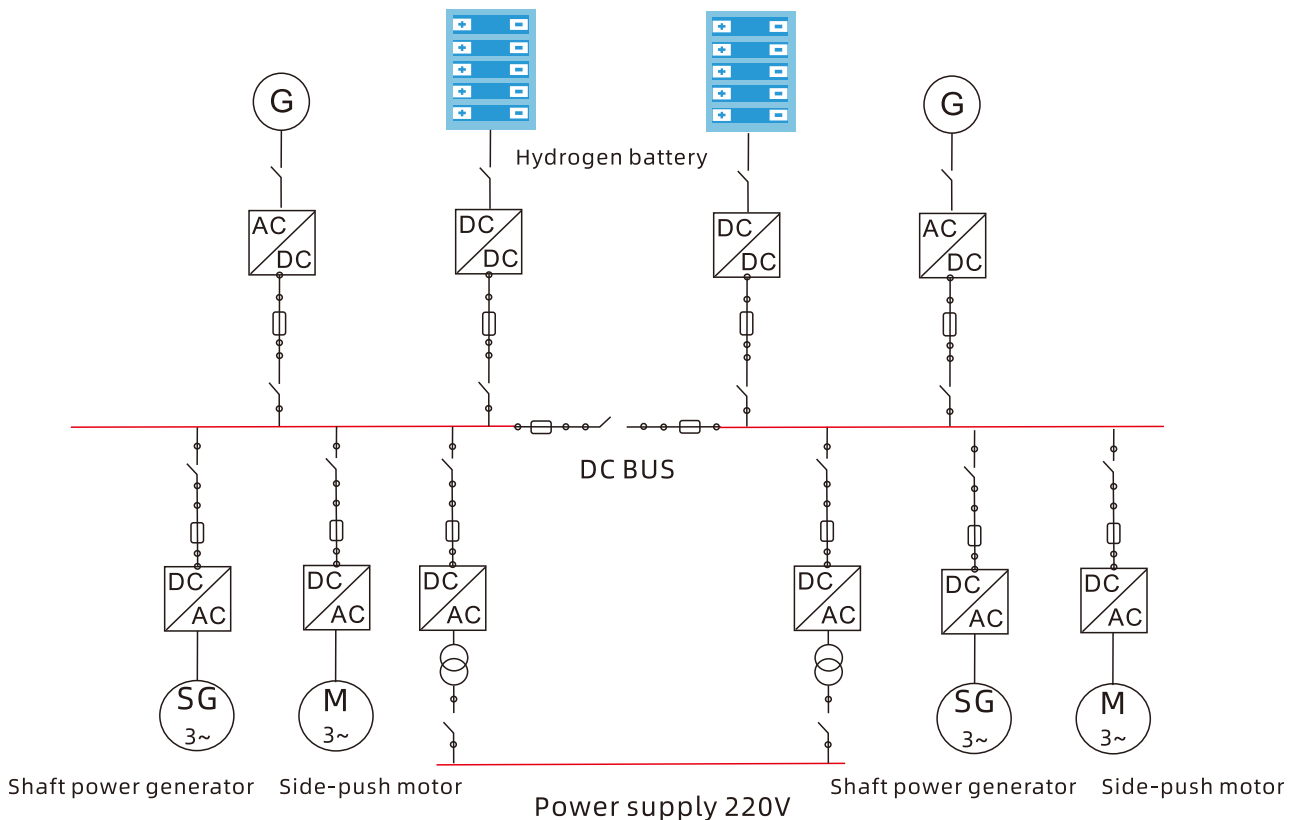
Fuel battery and shaft power generator set can reduce diesel generator set and then saves more space available

Zero discharge at port will shut down the diesel generator and fuel battery starts to generate power

Absorption of strong loading fluctuations increases fuel efficiency and decreases motor running time

High-performance power electronic converters help to thrust ships into a new age featuring low-carbon

## Systematic Solutions for Hybrid Power DC Networking



- © Hybrid power DC networking system are adopted on AC800CS-Series multi-machine drive products;
- © This product meets the requirements of ship-special power electronic converters, covering air cooling/liquid cooling, active rectifier, DC-DC chopper module with all power up to 5.6MW.
- © Built-in DC networking technical reserves and converter control technologies for all kinds of power generator and propellers.
- © Shaft power generator is designed with PTI, PTO, and PTH and with soft control of load transferring, grid-connection and grid-island splitting.



## AC310-XL series Wire and Cable Drawing Machine Electric Control System



Booklike compact body for clean and convenient cabinet installation with reduced space



Separate air duct with good dissipation, fans movable



PCB with thickened triple-anti painting for higher reliability



Strong resistance for vibration of drawbench

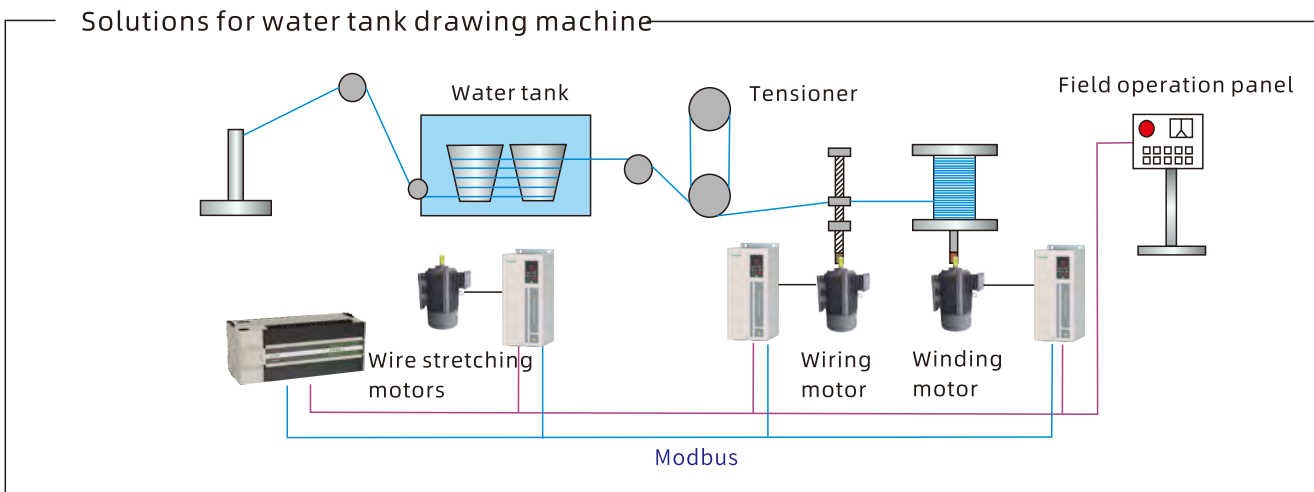
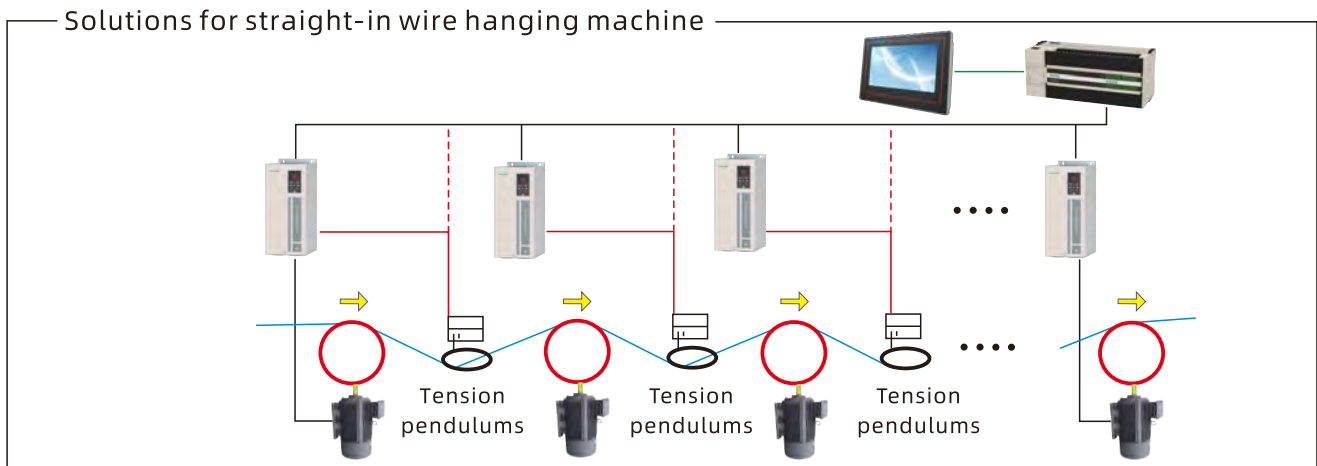


Abundant expansions for IO card, communication card and others

## Features

Integrated drive for both Synchronous and asynchronous motors	Easy and convenient to use macro definition; one-key parameter setting always ready for use, and adapted to various cable devices	A variety of communication applications including standard Mod bus protocol, CAN open, Profinet, Profibus -DP & other communication protocols extendable	High-performance vector control technology with low frequency and large torque, delivering 150% torque output at open loop 0.5Hz and 200% torque output at closed-loop 0Hz
Open-loop torque response <20ms, speed stabilization accuracy 0.2% (synchronous), 0.5% (asynchronous) to ensure high performance output	Good PID control algorithm to meet a variety of applications, fast response to instantaneous speed regulation, to achieve pendulum stability, winding dynamic balance	Smooth start and stop, no break in the emergency acceleration and deceleration to ensure stable and reliable production	Built-in function modules including speed measurement, length counting, weighing, brake output and other auxiliary functions, effectively reducing the cost of system components

## Solutions for Wire Hanging Machine





## Environment Ventilation-special Inverter

Create green energy to help achieve the "double carbon" goal



IN310 industrial fan-specific inverter



Air conditioner compressor-specific driver board



Light commercial air conditioners-specific inverters

## Features

IN310 industrial fan-specific inverter. Integrated and friendly human-machine interaction and easy operation

Air conditioner compressor drive board with boardlike structure for compact size and space saving and easy installation

Inverter cabinet for air conditioner compressor with integrated and easy installation and thus more suitable for harsh environments



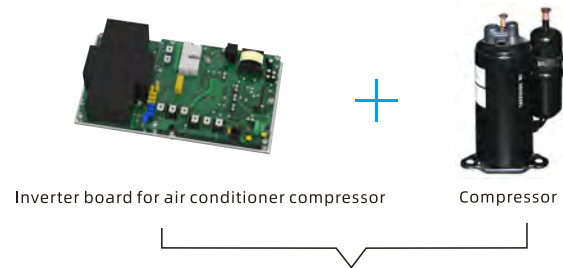
## Solutions for Industrial Fan

The product integrates inverter, multi-function LCD screen, speed knob, up-and-down electric switch, compatible with synchronous asynchronous motor drive, with the stunning design to break the traditional appearance of the group cabinet to create a quiet and comfortable environment at the same time and to provide a quality user experience.



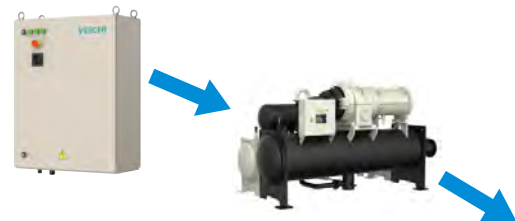
## Solution for Rail Transit Air-conditioning

The drive adopts the board structure, which is perfectly suitable for the installation environment of vehicle-mounted air-conditioning units, and the product adopts the advanced control technology of Veichi, which is suitable for most of the vehicle-mounted compressors on the market and can save energy to the maximum.



## Solutions for Light Commercial Air Conditioning Inverter Unit

The special inverter cabinet integrates power module, control system, filter unit and circuit breaker, and is widely used in shopping malls, subway stations and other commercial environment.



# Partners





# Service and Support |

## Innovative technology and service First

Practice the "customer-centric" service concept and create a "five-heart" service system

Network and telephone dual platform service for real-time grasp of service dynamics, with "heartful, patient, dedicated" service, to truly let customers "buy with confidence, use with comfort"



Multiple service outlets at home and abroad, and a wholly owned subsidiary in India



24-hour technical and after-sale service



Fast response to give specific solutions within 4 hours



5 warehousing centers of fast and convenient global logistics and distribution



### Pre-sales

Promote technology, invest sites, produce programs, assess energy saved

### During-sales

Customized service, design consultation, installation and debugging, on-site training

### After-sales

Regular return visits, regular maintenance, timely maintenance, user training

# Intelligent manufacturing brings green and better future

In the context of the national commitment to dual carbon goals of "carbon peak" and "carbon neutral", the development of intelligent manufacturing, green manufacturing, has become the inevitable trend of high-quality development of the manufacturing industry.

In the future, Veichi Electric will continue to adhere to the business philosophy of "market demand-oriented, technology innovation-driven", and give full play to its technological research and development advantages in the industrial automation industry. Combined with rich experience in industry applications, we will continue to increase investment in research and development to help the manufacturing industry gain with both scientific and technological innovation, push the industrial transformation and upgrading, and join hands with the industries to move towards a new green future.





# VEICHI

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<https://www.veichi.org/>



Official Website

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