

# VC600C Series Integrated Electrical Control for Water Jet Loom



**VEICHI**

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Official Website

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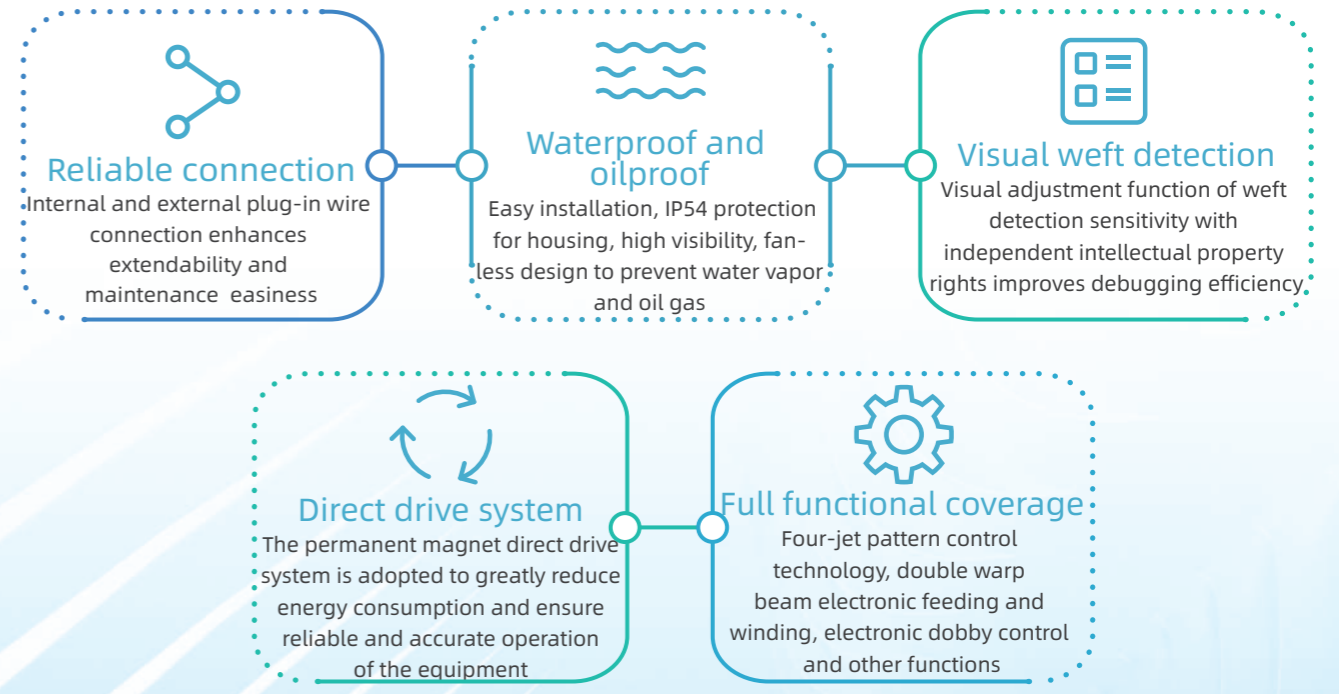
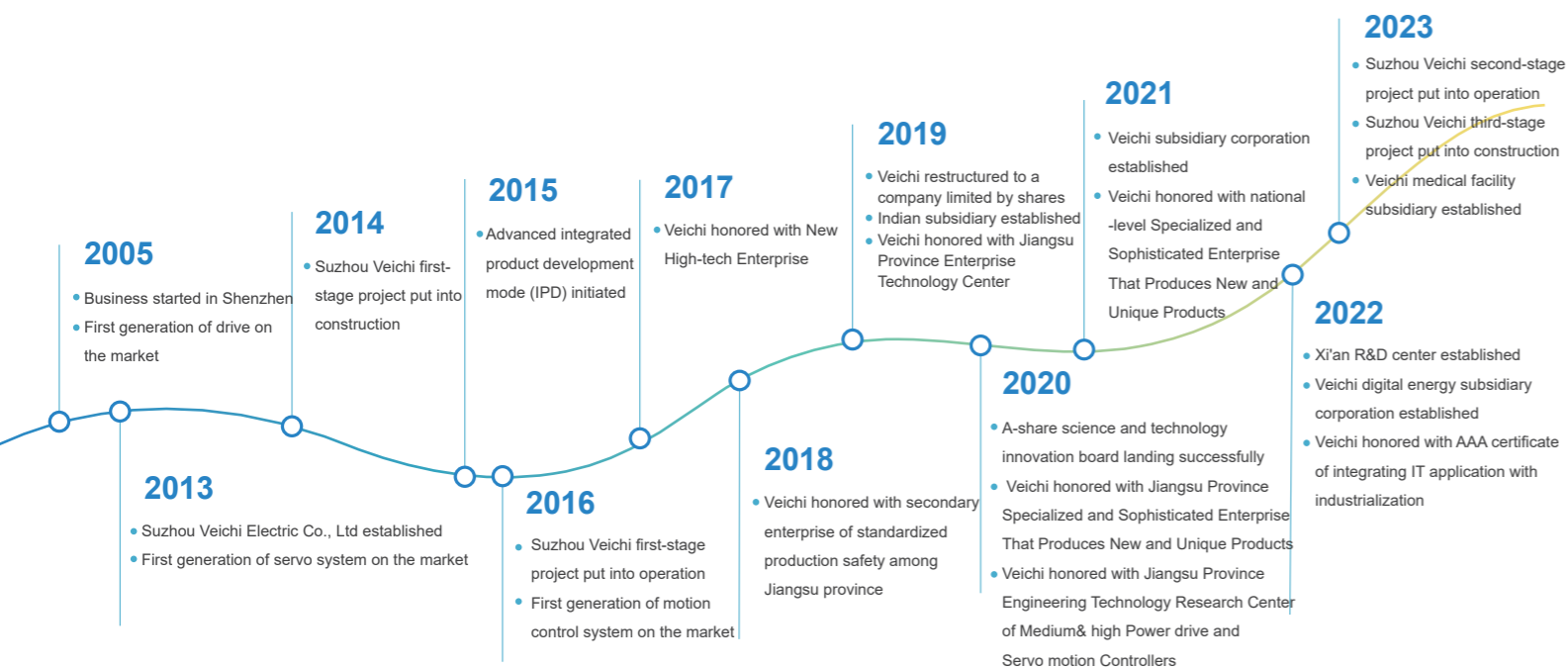
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# About us

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 been authorized with patents totaling 148 by the end of December, 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 drives 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 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 technological innovation, enlarge and enhance its core business like drives, servo systems, control systems and SIoT. And Veichi will always be devoted to providing quality products and services for customers and further make contributions to the development of electric drive and industrial control.

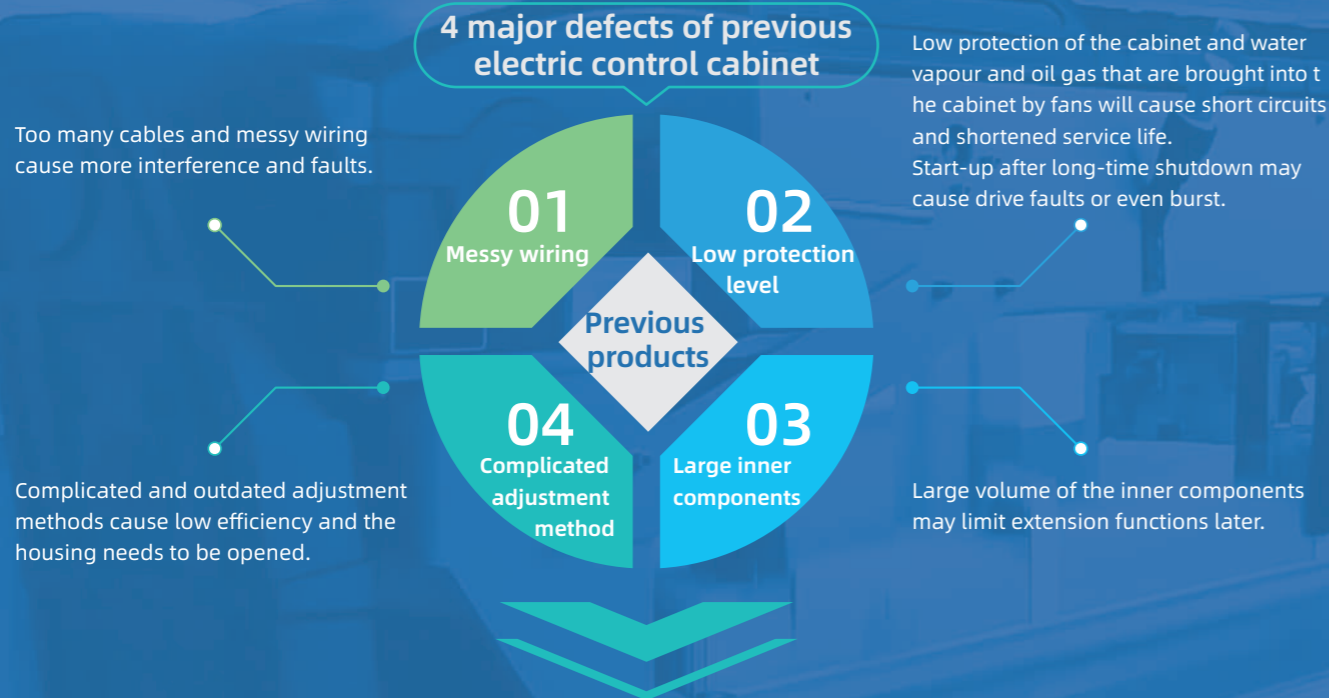


## VC600C Series Integrated Electrical Control for Water Jet Loom

Independent research and development

Independent intellectual property

## Solve remained problems from multi-aspects at one time Raise electronic control of water jet loom in all respects



## To the defects above Veichi now has launched an integrated solution **VC600C** series

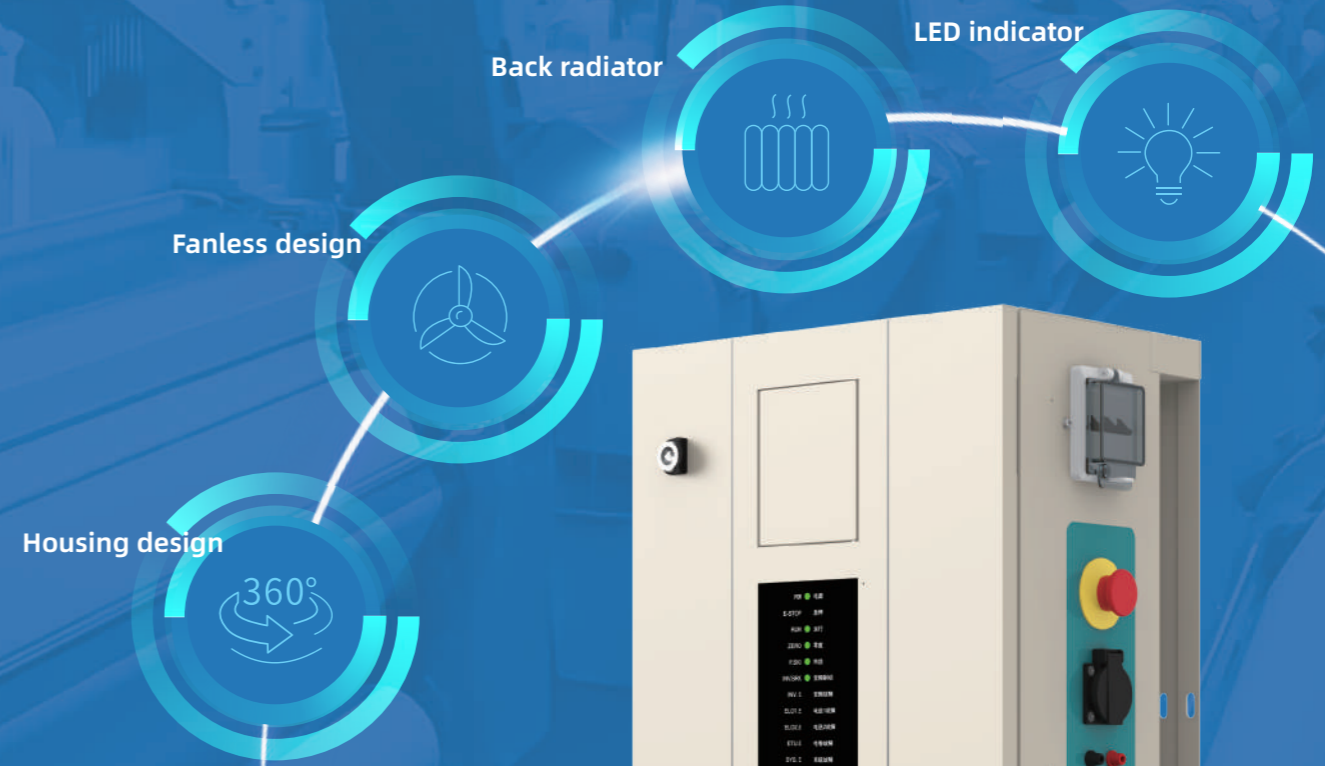
VC600C series, based on Veichi's strong R&D and production capabilities and on the breakthrough in the integrated design concept, **features stronger protection, higher integration and longer service life**, solves many problems of previous electric control at one time, improving the level of electric control of water jet loom.

## IP54 protection level Prolong service life remarkably



### Housing with IP54 protection level (Certificate: 20210505K12013)

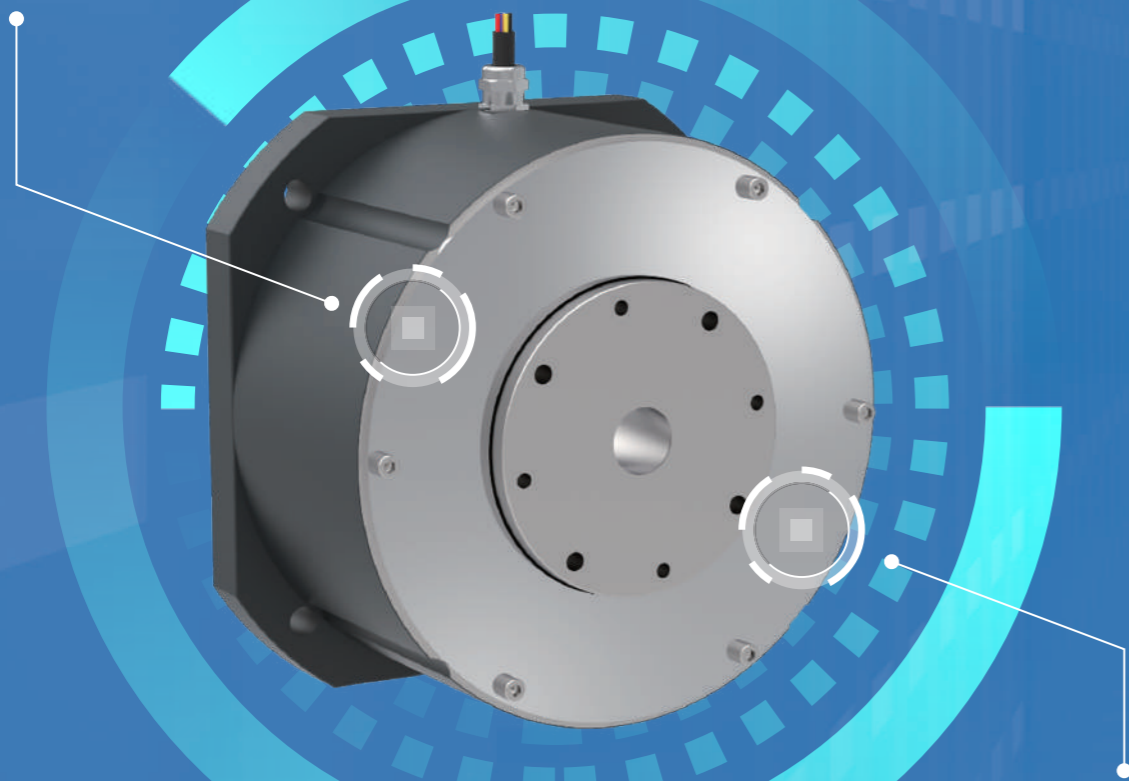
Water vapor and oil gas on the weaving site are effectively prevented to ensure normal running and longer service life of the equipment; And it will be safe to cut power for long holidays.



## High efficiency and low consumption direct drive system With Veichi core vector control technologies of synchronous motors

The high-efficiency range of weaving speed is 300-1200R/min, the brake disc and belt disc are canceled to save most of the transmission losses. VEICHI's core vector control technologies on synchronous motors raises energy saving rate up to 20%.

- Stable operation - electronic inertia technology with small speed fluctuation
- Convenient speed regulation - stepless regulation for arbitrary speed change



- Green and energy saving - permanent magnet frequency conversion technology to reduce energy consumption
- Never demagnetize - choose 150°C high temperature magnetic steel, never demagnetize

## HMI with high performance Tailored for weaving industry

**Industrial-grade design**  
Thin and delicate housing better suits costumers

**Strong scientific sense**  
Infinity display screen and frosted body

**Versatile extensions**  
Serial ports, Ethernet and textile big data cloud platform supported

**VNC function**  
Users can check running conditions on their phones

**Enhanced all-round protection**  
Better applied to weaving fields with water and air jets

**Unique interface design**  
Textile element added

### VC200-Series Textile-specific HMI

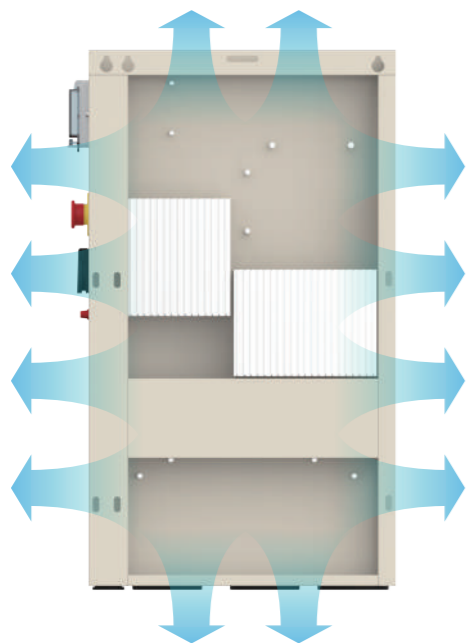


Independent housing design  
Delicate structure and comprehensive functions



01 Fanless design

Problems on previous textile control cabinets are solved like easily damaged fans, water vapor and oil contamination.



02 Back radiator

Air ducts are designed on the back via which inner heat is dissipated to prolong service life.



03 Small size and high integration

The VC600C series directly saves the housing cost for manufacturers by reducing size, weight, and installation steps.

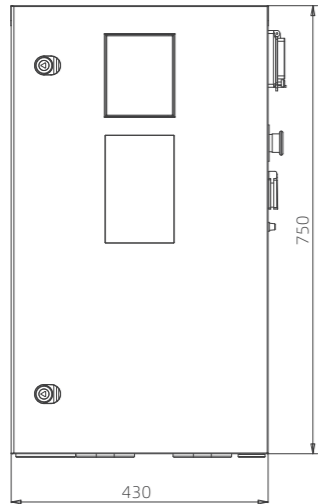


04 LED indicator

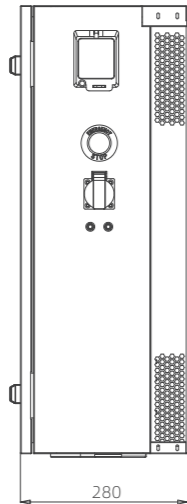
Running conditions are clear so maintenance range can be narrowed down.

## Dimensions

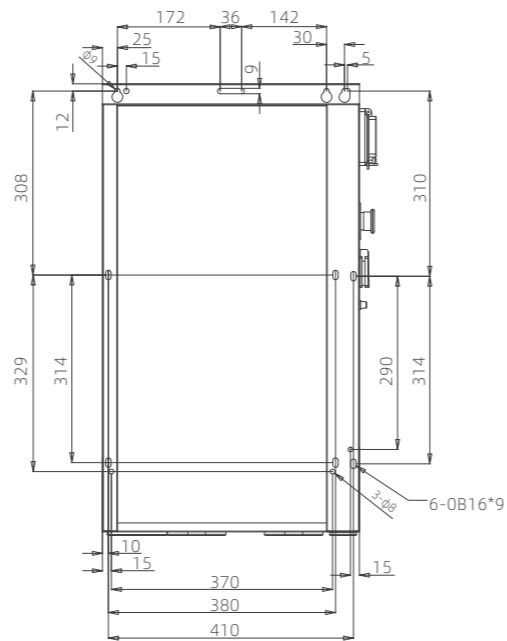
Front view



Side view



Outer dimensions



Installation dimensions

## Naming rule

**VC600C - VCZ2 - 2M - HY12 - C6 - DB**

**Series name**

VC600C: All-in-one series

**Housing configuration**

VC: Veichi standard  
Others: Customized

**Spindle motor configuration**

Z: Direct drive motor  
Y: Asynchronous motor

**Servo configuration**

0: Machine-feeding and machine-winding;  
1: Electronic feeding & machine-winding or machine-feeding & electronic winding;  
2: Electronic feeding and electronic winding  
3: Double-warp beam electronic feeding and electronic winding

**Electronic doobby**

DB: With electronic doobby control  
Empty: Without electronic doobby control

**Direct drive motor**

C6: 600RPM  
C8: 800RPM  
C12: 1200RPM  
Empty: No direct drive motor

**Pattern board**

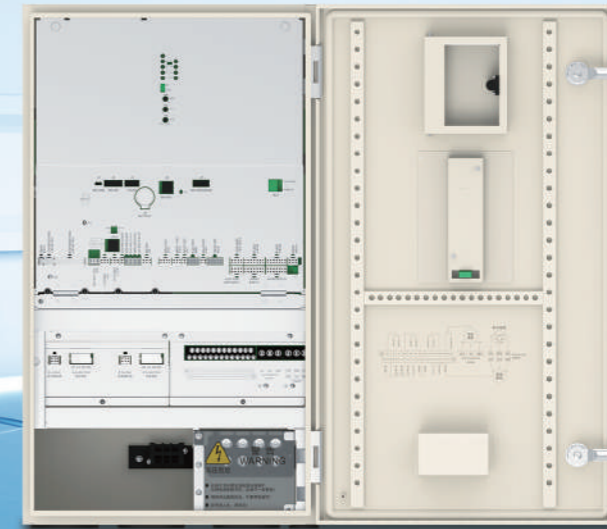
HY12: One-pump-one-jet, one-pump-two-jet;  
HY23: One-pump-three-jet;  
HY34: Two-pump-four-jet;  
Empty: No pattern board

**Width**

2M: Models within 2.4 meters (included)  
3M: Models above 2.5 meters (included)

## Cabinet layout introduction

VC600C integrated cabinet, on the basis of advantages of Veichi products, adopts advanced modular design to optimize layout and maintenance and saves space for extensions.



**Easy maintenance**

Only need to replace the corresponding control board.

**Wiring between units saved**

Solve the problem of poor contact of wiring in high vibration environment.

**Standard terminalless toroidal transformer**

Lower temperature rise, more vibration resistant, more stable running.

**More extensible**

Only need to adjust the corresponding control board to transform and upgrade equipment.

**Common DC bus technology**

More energy-saving compared to previous asynchronous motors and direct drives.



## Weft Insertion and Digital Weft detection

Weft detection has always troubling end users, so Veichi figured out a dual detection technology (outer and inner detection) on VC600C to safeguard stable running of the machines on years of diligent research and development.



- Sensitivity of each weft yarn jet can be independently set to reduce empty stops or the stop failures with weft yarns.
- External visual weft detection solves the trouble of machine adjustment.
- Four-jets for high-end weaving is supported.
- Pattern board with built-in spindle real-time tracing adjustment algorithm makes weft insertion control more stable. (magnetic needle, rotary valve, yarn holder)

## Built-in Electronic Dobby Control



- Host control with integrated doobby to support 16 sheets of heald frames
- Time sequence and angles of the electronic body controlled by host encoder thus it's preciser than the proximity switch to avoid missed needles.
- 20000 steps or higher pattern editing supported to support cycle between any two textile weaves.
- Touch screen and PC double-pattern editing environment to support local host control and random reading and storage switch between USB.

## Electronic Feeding and Winding



- Host control integrates advanced discrete tension PID control algorithm to make tension converge more quick.
- 20,000 steps of pattern variable weft density setting so each huttle weft density can be changed freely and steplessly.
- Left and right double warp beams, upper and lower double warp beams, and tension control of outside rolls, etc.
- Combined with the textile weave cycle, tension fluctuation under the complex weaving sample be kept within a reasonable range to eliminates hidden gears (for unbalanced weaving).
- Built-in new functions like weave opening swing, weave opening avoidance, regulator hook, weft compensation, time compensation, etc.
- Rich maintenance navigation, oscilloscope display of tension curve and feeding and winding speed curve to deeper human-machine interaction.

## Several Patents on VC600C-Series

patents and been evaluated by authoritative organizations.



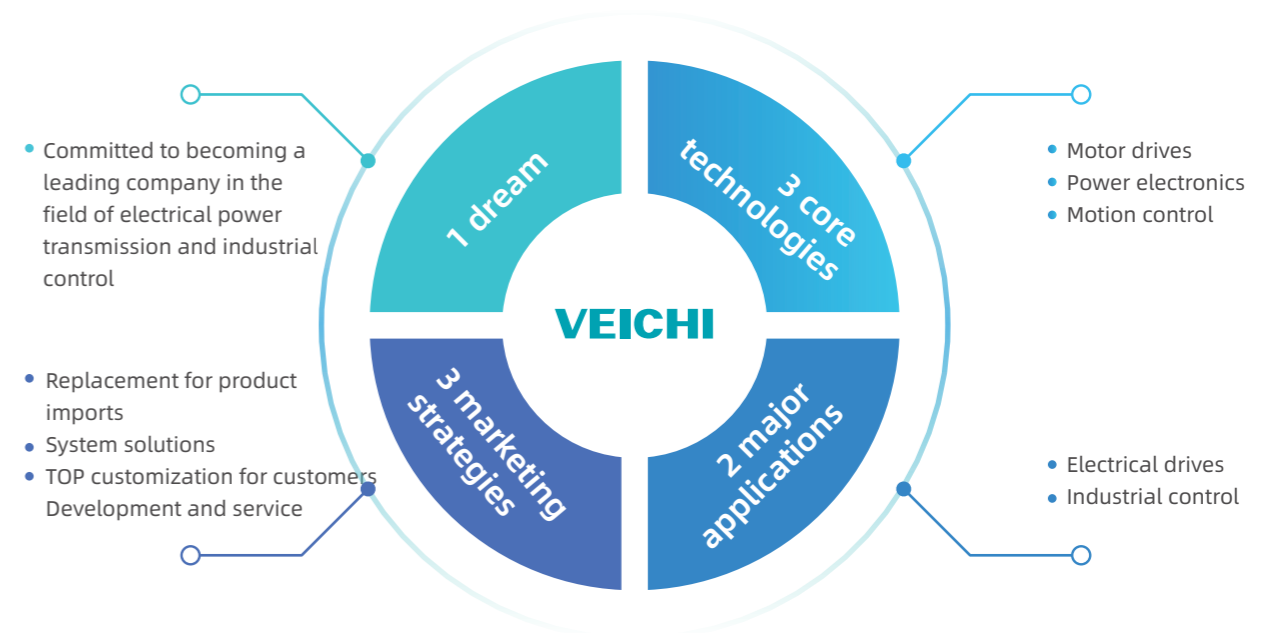
### Policy and philosophy of quality first

Source supervision, process control, design, procurement, incoming material inspection and manufacturing all strict by ISO9001 quality management system standards.



### Informatization management

Product traceability system of whole process tracing from raw materials to finished products.



## Manufacturing and Quality Control



## Smart manufacturing with whole-process automation

- > On intelligent manufacturing ,the smart factory yields an annual capacity of 600,000 sets;
- > Fully automatic SMT production line, automatic coating line, assembly line, testing line, packaging line, high temperature aging room and advanced production equipment are established;
- > Enterprise production is implemented with target management and is operated in strict accordance with the production process and management methods, which greatly improves the production efficiency.
- > Complete supply chain system meets the large volume of one-time delivery.

## Inheriting the spirit of craftsmanship, detail-oriented and striving for better

- > Insist on the quality policy and concept of quality first.
- > Procurement, design, manufacturing and other aspects all implemented in strict accordance with the requirements of the ISO9001 quality management system.
- > Talents create high quality, the production line core positions are occupied by 100% college degrees and above.
- > Each product has a unique product code, which can be used in the product traceability system to ensure quality can be controlled and traced.

## Service and Support

