

GS00 Smart Pump Drive



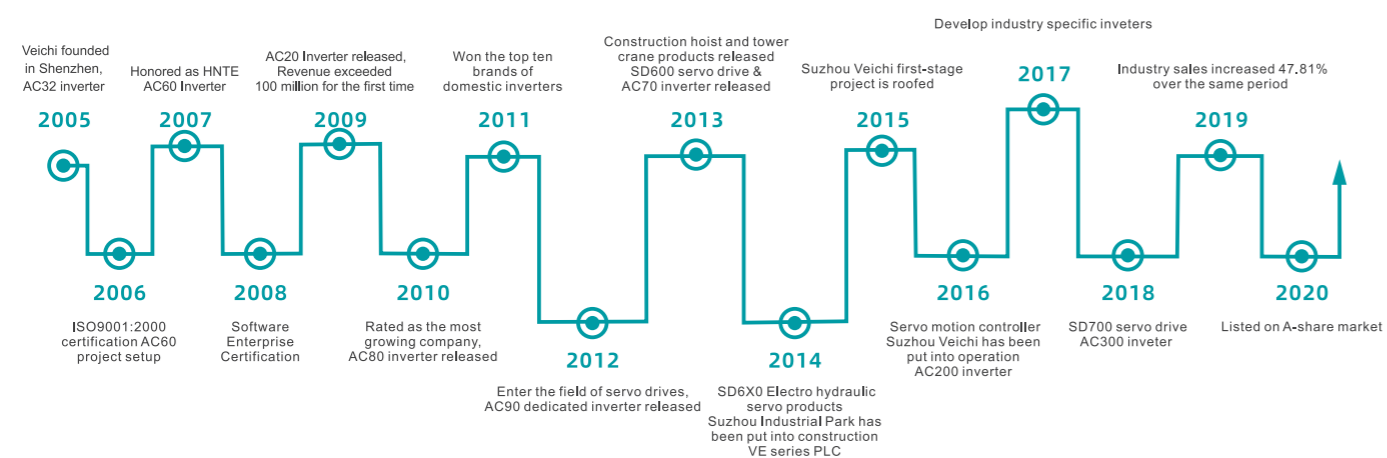
## About us



New Products ; New Industry; New future

## GS00 Smart pump Drive

Smart Efficiency Quiet Reliable



Established in 2005, Veichi Electric is a national high-tech and double-soft enterprise with the ability of R&D, manufacturing, and selling of industrial automation products. Veichi Electric has always been focused on the field of electric drive and industrial control. Headquarter is located at Suzhou, Jiangsu province, Veichi also has operation centers in Shenzhen, China, and Ahmedabad, India. Now Veichi's business has covered 49 countries and regions, and our mission is to serve customers worldwide with competitive, safe and reliable products and services.

After years of self-dependent research and innovation, Veichi Electric has developed a series of patented technologies with independent intellectual property rights. Up to December 31, 2020, a total of 103 patents has been authorized, including 18 invention patents.

With the philosophy "technology-leading and quality first", Veichi Electric supply a wide range of products, including inverters from 0.4kW to 1,200kW, servo systems from 50W to 200kW, motion controllers, PLC and HMI, etc to the customer in lifting and mining facilities, rail transportation, machine tools, compressors, plastics, photovoltaic pumping, building materials, robots or manipulator, printing and packaging, textile and chemical fiber, metallurgy, municipal administration, petroleum, chemical and other industries.

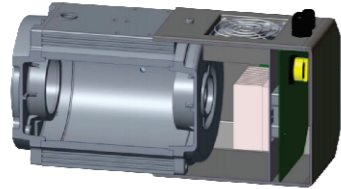
In the next 10 years, Veichi Electric will strive to adhere to the core value of "customer-centric and striver-oriented", and strengthen the core business of inverters, servo systems, and motion controllers, and intelligent cyber systems. As being committed to offering good products and services persistently, the company will spare no efforts to make contributions to promote the development of electric drive and industrial control.



## GS00 Water pump integrated machine

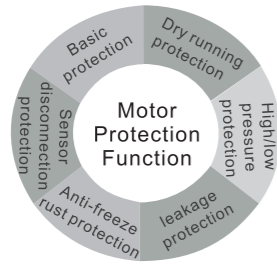
### Motor-drive integrated structure, convenient installation and maintenance

The controller wraps the surface of the motor to truly achieve an integrated design. Only four screws are required for installation; the motor and the fan also dissipate heat for the motor and the drive, reducing the fan failure rate.



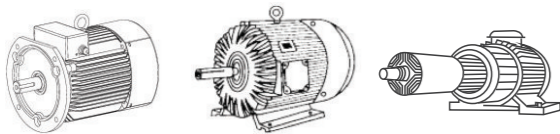
### Motor protection function

Multiple inverter basic protection functions; Water pump exclusive protection function (water shortage protection, high and low pressure protection, leakage protection, anti-freeze embroidery protection, sensor disconnection protection)



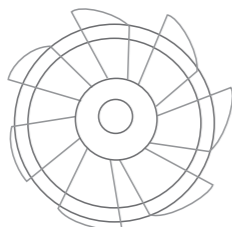
### Perfectly drive a variety of pump motors

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



### Efficient speed regulating fan

High-efficiency fan dissipates the motor and drive at the same time, with large air volume and low noise.



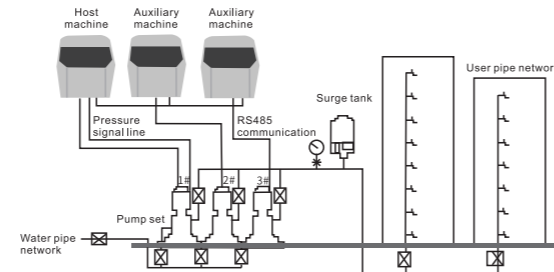
### Multiple key selection

Mechanical key, touch screen key



### 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.

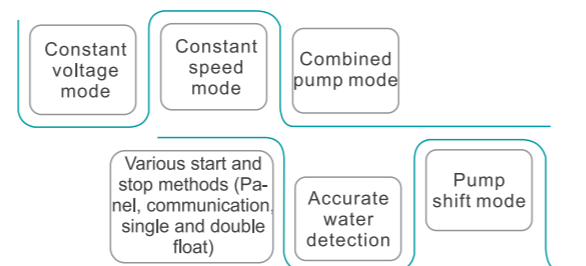


### Wide range of applications

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



### Multiple water supply functions



## GS00 water pump integrated machine naming rules

GS 00 - T3 - 004G - 55 B W

① ② ③ ④ ⑤ ⑥ ⑦

① GS: Water pump integrated machine code	⑤ Protection level 55:IP55 65:IP65
② 00: Customized water pump integrated machine 10: Mini water pump drive 20: Standard pump drive 30: High shield water pump drive	⑥ Key type B: Mechanical key T: Touch key
③ Voltage Level S2: Single phase 220V T2: Three-phase 220V T3: Three-phase 380V	⑦ Cooling method W: Air-cooled N: Natural cooling L: Water cooling
④ Suitable for water pump power level 1R5G:1.5kW 004G:4.0kW 2R2G:2.2kW 5R5G:5.5kW	

Inverter model	Output current (A)	Adapted motor (kW)	Adapted motor model
GS00-T3-003G-54BW	6.0	3.0	VMM 90L 15 003R 38 55 B3 E4
GS00-T3-004G-54BW	10	4.0	VMM 90M 15 004R 38 55 B3 E4
GS00-T3-5R5G-54BW	13	5.5	VMM 132L 15 5R5 38 55 B3 E4
GS00-T3-7R5G-54BW	17	7.5	VMM 132M 15 7R5 38 55 B3 E4
GS00-T3-011G-54BW	25	11	VMM 160M 15 11R 38 55 B3 E4
GS00-T3-015G-54BW	30	15	VMM 160L 15 15R 38 55 B3 E4
GS00-T3-018G-54BW	37	18	VMM 180L 15 18R5 38 55 B3 E4
GS00-T3-022G-54BW	45	22	VMM 180L 15 22R 38 55 B3 E4

## Motor naming rules

VMM 250M 15 55R 38 55 B3 E4

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① VMM: Synchronous reluctance motor	⑤ Reference voltage 380: 380V (Three-phase)
② Motor frame code 250M: Center height 250 mm	⑥ Protection level IP55
③ Reference speed 10:1000r/min 15:1500r/min 30:3000r/min	⑦ Installation method B35: Horizontal and vertical B3:Horizontal B5:Vertical
④ Motor power 55R:55kW 18R5:18.5kW .....	⑧ Energy efficiency rating IE3:Level 2 IE4:Level 1

Energy saving, high efficiency,  
reliable, low temperature rise

# Synchronous reluctance water pump motor



## Synchronous reluctance product features



Energy saving and  
environmental protection

No permanent magnets; no cast aluminum in the rotor, reducing energy consumption in the manufacturing process



Good versatility

The installation size refers to the IEC standard frame; it can be reduced by 1 to 2 frame numbers to facilitate customization according to customer needs



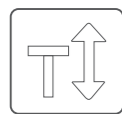
Efficient operation

IE4 energy efficiency, wide high efficiency area



Low temperature rise

The rotor loss is small, the temperature rise margin is large, and the overload capacity is strong



Quick response

There is no squirrel cage guide bar or magnetic steel, and the moment of inertia is small; it is more suitable for occasions that require higher acceleration response capabilities, such as extruders



Highly reliable and  
easy to maintain

No risk of demagnetization, low loss, low bearing temperature, long-term stability; light weight of the rotor, convenient disassembly and assembly, and safer maintenance

## Motor specifications

Motor model	Electrical parameters				
	Power kW	Speed r/min	Torque N.m	Current A	Weight Kg
VMM 160L 15 15R 38 55 B3 E4	15	1500	95.5	33	136
VMM 180M 15 18R5 38 55 B3 E4	18.5	1500	118	40	176
VMM 180L 15 22R 38 55 B3 E4	22	1500	140	46.5	196
VMM 200L 1530R 38 55 B3 E4	30	1500	191	64	259
VMM 225S 15 37R 38 55 B3 E4	37	1500	235.6	77	302
VMM 225M 15 45R 38 55 B3 E4	45	1500	286.5	95.5	329
VMM 250M 15 55R 38 55 B3 E4	55	1500	350	118	418
VMM 280S 15 75R 38 55 B3 E4	75	1500	477.5	164.6	546
VMM 280M 15 90R 38 55 B3 E4	90	1500	573	190.5	638
VMM 315S 15 110R 38 55 B3 E4	110	1500	700	222	939
VMM 315M 15 110R 38 55 B3 E4	132	1500	840.4	268.4	1033

## Synchronous reluctance advantage

The advantages of synchronous reluctance motor compared with other motors

DC motor	Without brushes and commutators, simple, reliable, and easy to maintain
AC asynchronous motor	The rotor only has silicon steel sheets and no windings (no loss); the cost is relatively low; the efficiency is high; the structure is simpler
Switched reluctance motor	Continuous reluctance change, small torque ripple, low noise, mature platform, lower control cost
Permanent magnet synchronous motor	Only silicon steel sheet, no permanent magnet, low cost, no high temperature demagnetization problem, more resistant to high temperature and high vibration environment

In an asynchronous motor, the rotor loss accounts for about 20-30% of the total loss of the motor, while the reluctance synchronous motor has no rotor loss, so the total loss is at least 20-30% lower than that of the asynchronous motor. A stronger killer is: the material cost of manufacturing reluctance synchronous motors is also lower than asynchronous motors.

