

AC Drive/ Frequency Inverter/ AC Servo Drive/PV Inverter/Intelligence Robot/PLC/HMI/...

ACH100 Series High Voltage Variable Frequency Inverter



ТОВ «ТЕХНОЕЛЕКТРО» 61166, м Харків, пр.Науки, 40, к.530а.

тел.: +38 (067) 376-84-96, (099) 184-62-14, (050) 302-90-33

Viber, WhatsApp, Telegram: +38-099-184-62-14

e-mail: info@tekhar.com

URL: www.tekhar.com

skype: alex19749

About VEICHI

Veichi Electric Co., Ltd. is a high-tech enterprise that is engaged in the development, manufacturing and marketing of variable frequency drives. The main target areas include electric drive, industrial control, solar inverter, intelligent robot, etc. Since the start-up in July 2005, the company has grown quickly into a well-known provider of VFDs and motor control solutions. In 2012, with a sales value above 51.23 millions USD, we have been ranked for top 3 manufacturer of VFD among Chinese maker.

Over the the past few years, we have been dedicated to the delivering well proven automation products and solutions in the industrial and renewable energy sectors. We have steadily progressed hand in hand with our partners, based on our leading drive and control technologies and our rapid response in meeting customer needs.

We committed to being the world's leading and most respected provider industrial control systems to deliver the high grade and competitively price products in market.

Registered Capital: 5 millions CNY(0.83 millions USD) in 2005, added to 30 millions CNY(4.92 millions USD) in 2010.

Factory: Locate in Baoan District, Shenzhen, Guangdong China. occupies more than **5,500 squares meters**, and another manufacturing base are constructing in Suzhou with **600,000 squares meters** from 2013, will push to use in 2015.

Staffs: over 500 employees in 2014, 106 is R&D engineer, more than 50 after service engineer.

Products: A wide range AC drive(Frequency Inverter/VSD/VFD), Specific Industrial Controller and Inverter, Integrated Industrial System, Photovoltaic Inverter, AC Servo Motor and Drive, Intelligent Robot, Motor soft starter, Braking Unit, PLC, automation manufacturing machine.

Annual Turnover: 51.23 millions USD in 2012, 71.07 millions USD in 2013, 91.10 millions USD in 2014,

Sales network: over 40 offices and service center in China, many distributors in oversea market.

Veihci High voltage inverter introduce.

ACH100 series high voltage frequency inverter is high-high voltage type inverter, it adopts advantage phase shift rectifier, and innovative bridge invert technology, and optimized series overlay technology, it has high power factors, low harmonics, and input and output wave current approach to sine wave. So it was called perfect and no harmonics inverter.

ACH100 series inverter renown for him long term running stable, precision control, easy maintain, high efficiency and easy operation. It can help you improve your competitiveness and cost down system maintaining, for improving your motor, fans and pumps running condition.

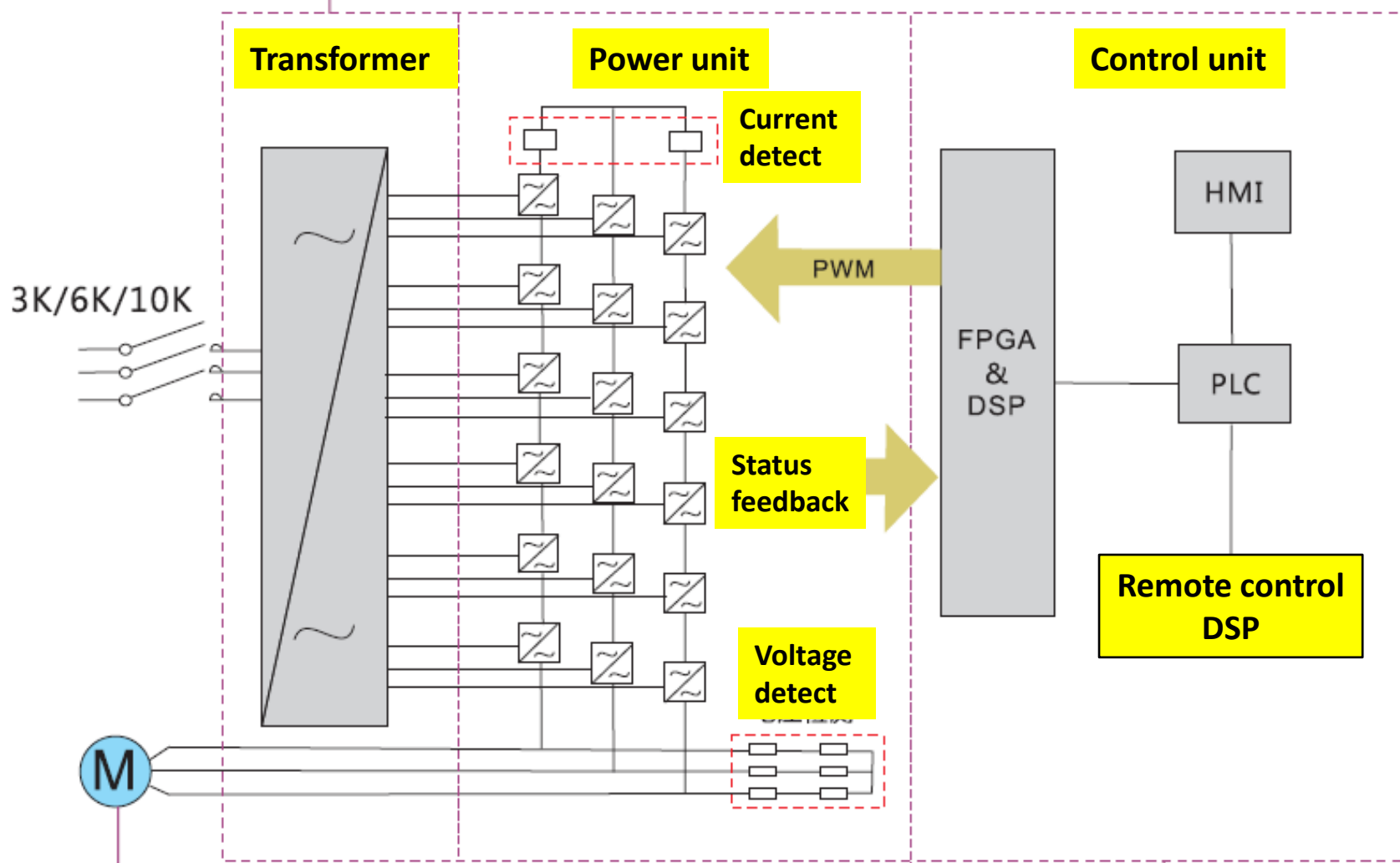


Products features

Technical Features

- Voltage source High-high frequency inverter, it can realize No-step speed regulation, which makes the typical motors into intelligent motors.
- Low harmonics input and high power factor, the typical value for power factor is 0.96 through whole speed regulation, even more higher, no need for power factor compensation.
- WLD-HVF output few harmonics, the motor does not generate extra heat and noise.
- Modularized design of power units, interchangeable and easy to produce and repair, the equipment can find any fault exactly based on advanced diagnostic procedures in MPU.
- The inverter still can operate even the faults for part of power units exists, if there are faults happen for inverter, the system can switch to power frequency through bypass function.
- Applicable to all kinds of power grid at home and abroad and suitable for typical high voltage motor.
- Colorful touch screen, easy to operate and maintenance.
- Able to realize remote control, DCS operation and communications with Host, and support all kinds of communications interfaces such as CAN, Profibus, Modbus, RS232, RS485 etc.
- Applied latest components, master control chip adopted TI's DSP F28335 and ALTERA's FPGA of EP3C to realize powerful processing capacity; Sampling adopted AD's AD7606 with 16 bit to ensure control accuracy of the system.
- The switchgear can satisfy safety requirements, and the pressure-relief channel of high voltage switch can ensure safe use of operators.
- The Output current wave approach sine wave, the harmonic less than 2%, and output efficiency large than 97%.
- Adopt double power supply for control system ensure system running without power loss.
- Built it fault diagnose and protection function to make sure system working reliability in long term span.

Veichi HV VFD system 1. Phase-shift transformer



2. Perfect wave form Output

4. Power unit main Circuit with module design

3.DSP+FPGA

System configuration

Cooling fans

Power unit



Phase shift transformer

Main controller

Cooling fans

Cooling fans is main heat dissipation equipment in HV VFD, enough allowance design is better for cooling and extend VFD service span.

Power unit

Power unit is important factor for VFD running reliability. The power unit cabinet consist of multiple the same power units, which formed by superposition in series, it provide stable power supply for VFD. The inverter system of VFD adopts unique **double-edge frequency doubling technology, which can reduce power heating, and output perfect sine waveform, and can drive motor directly without filter, and no motor cable limit.**

Phase shifting transformer

36/48 pulse rectifier using, that can make grid side current very close to sine wave, and little harmonic, to meet IEEE519-199 and GB/T14549-93 regulation completely , the temperature sensor of transformer can monitor coil side temperature in real time, and will start auxiliary fans automatically when over heat.

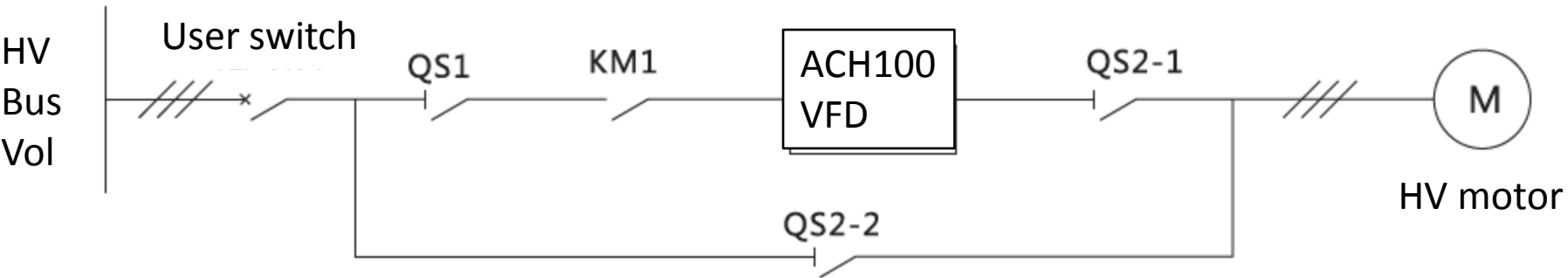
Main control system

The main control parts adopt DSP+ FPGA system, high control accuracy, little power loss. Using PLC to control output interface, Modbus, profibus, Ethernet are available, easy for establishing communication .

ACH100 series High Voltage VFD speed adjusting solution.

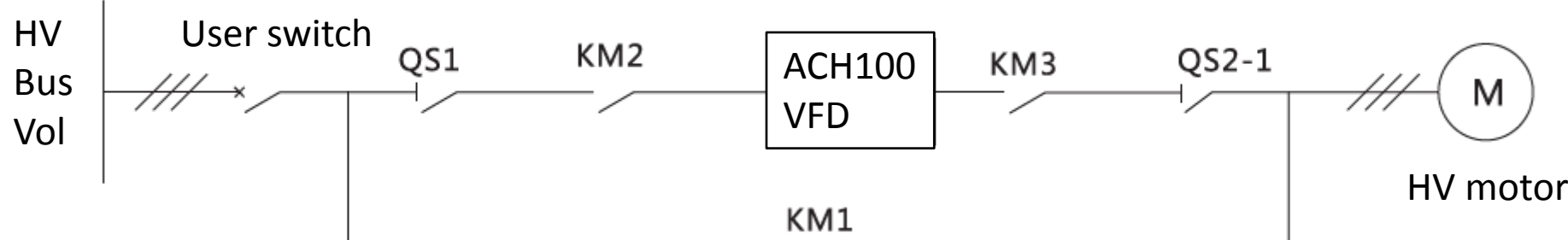
1. One drag one manual solution

Enable to switch between power frequency to variable frequency , high-voltage isolator has good isolating capability to ensure VFD maintain safety.



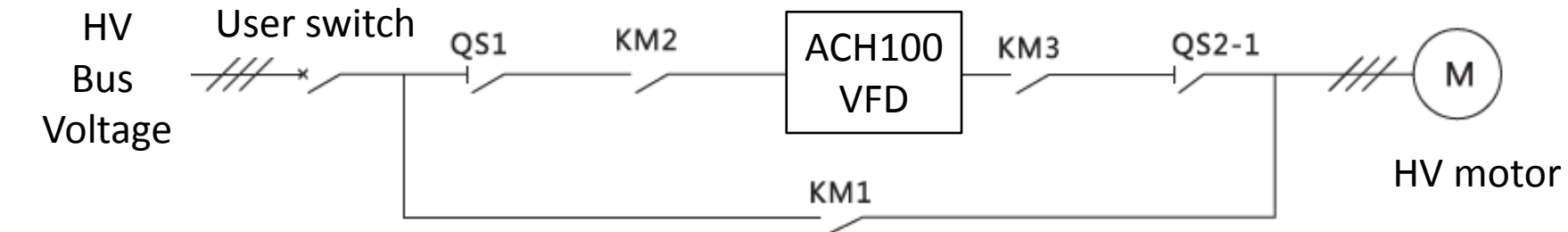
2. One drag one automation solution

Enable to switch between power frequency to variable frequency.



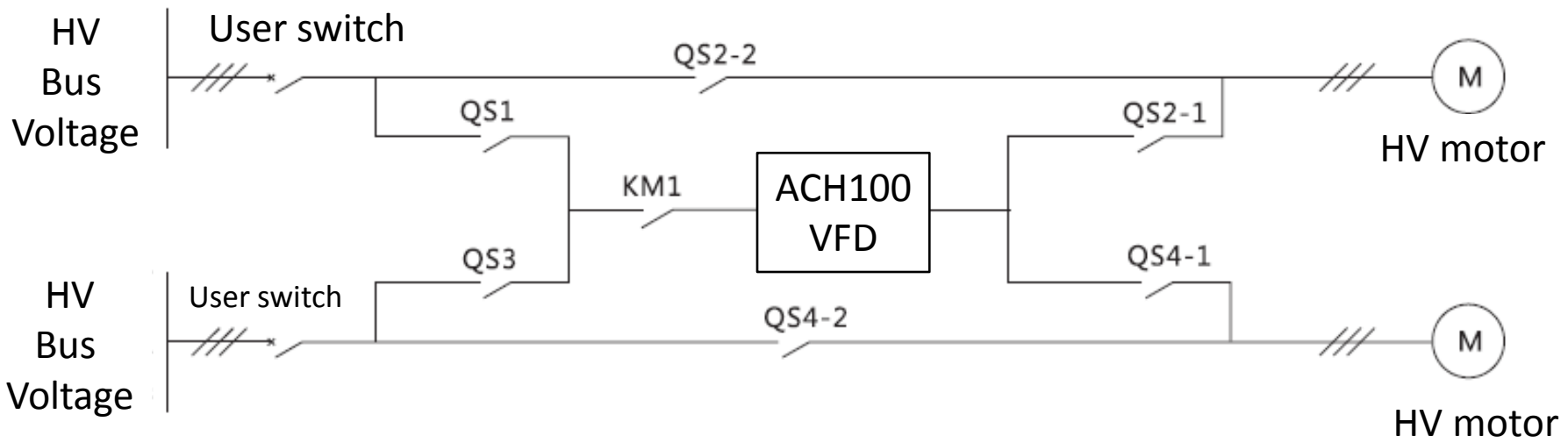
3. Manual/Auto combination solution

Enable to switch between power frequency to variable frequency , high-voltage isolator has good isolating capability to ensure VFD maintain safety.



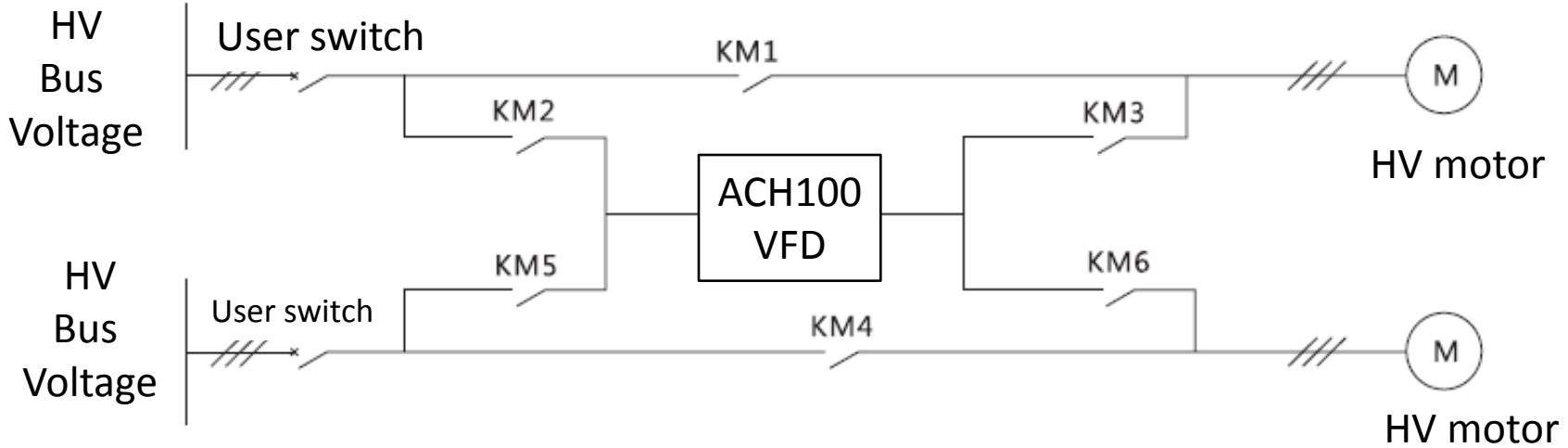
One drag two manual solution

Enable to switch for two machines load, it can be use when serve two motors(one work one stand by.)



One drag two auto solution

Enable to switch for two machines load, it can be use when serve two motors(one work one stand by.)

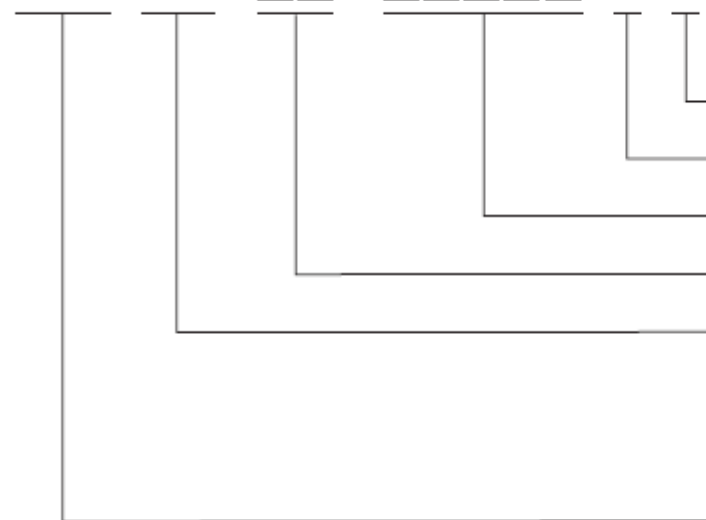


Technical features

Technical data		
Input	Grid	3, 6, 10kv/50Hz
	fluctuation	voltage:±10%, frequency ±5%
Output	rated voltage	3kv, 6kv, 10kv
	speed range	0-50/60Hz
	frequency resolution	0.01Hz
	overload tolerance	120% for 60s, 150% for 10s, 180% for momentary
control	Operation mode	local, remote, DCS
	stable voltage output	automatical voltage regulating when DC bus fluctuation.
	control mode	V/f
	torque compensation	auto, and manual
	slip compensation	slip compensation automatically
	frequency slip	setting
	upper and lower frequency	setting
	starting mode	static and rotational start
	acceleration/deceleration time	1-3200s, mult speed configure
	stop mode	free stop and decelerate
	communication mode	Ethernet, Modbus, profibus
	PID close loop control	selectable
	phase output	setting
	over voltage	setting
	overload	setting
	control channel	downward communication failure
	response channel	upward communication failure
	power unit failure	including power unit short circuit ,over current, over voltage, over heat, no driving signal

Model and Name plate

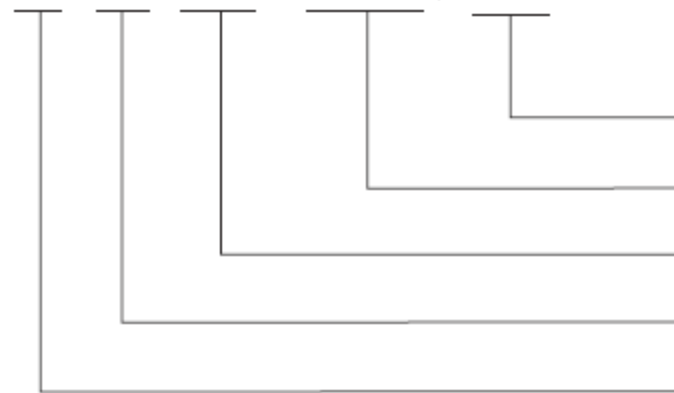
ACH 100 - □□ - □□□□ P R



- R: With energy feedback unit
- P: power unit configure by pass function
- VFD rated capability
- Voltage range (kv)
- Products series
- 100: V/F for asyn. Motor
- 110: VF/ for syn. Motor
- 120: vector control for asyn. Motor
- 130: vector control for svn. Motor

Model and Name plate

BP 10 - □□ - □□□ / □□



- Rated voltage(6Kv, 10kv)
- Rated current (160A, 250A)
- Control method (A, M, AM)
- Products series
- Products code

Application.

- Power Generation: Induced draft fan, forced draft fan, condensate pump, feed pump, primary air fan, secondary air fan, booster fan, circulating pump, mill fan, slurry pump etc
 - Cement: draft fan, high-temperature fan, air blower, dust collection fan, grinding machine etc.
 - Metallurgy: blast furnace blower, slurry pump, feed water pump, dust fan, compressor etc.
 - Petroleum&Chemical: Water injection pump, crude oil pump, Compressor, fan, circulation pump, etc
 - Urban water supply: Water delivery pump, water intake pump, water supply pump, sewage treatment industry, self-fractionating pump etc
 - Minerals & Mining: Mud pump, ventilation fan, belt conveyor, slurry pump etc
- Others: Loads such as fan, pump and compressor in pharmaceutical, paper making and wind tunnel test.



Power plant



Oil field



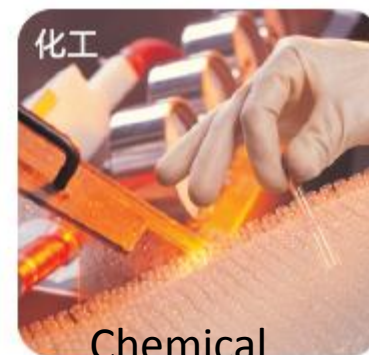
mining



Cement



Water treatment

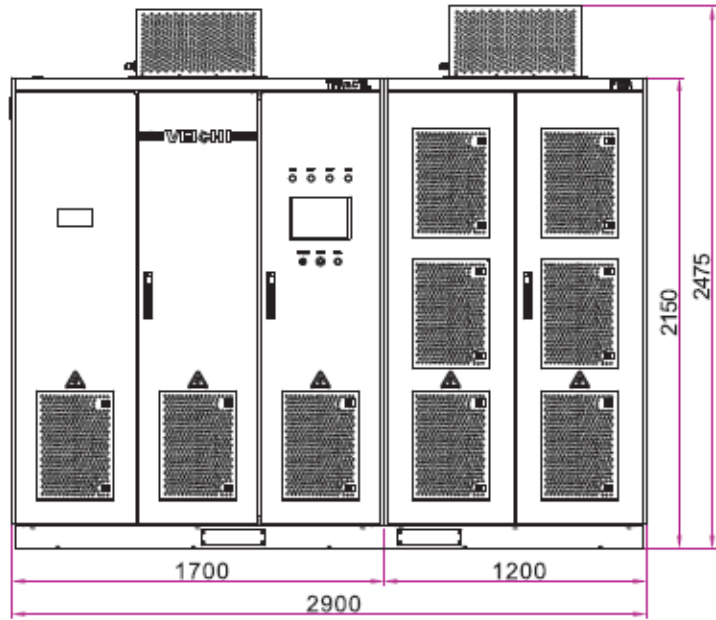


Chemical

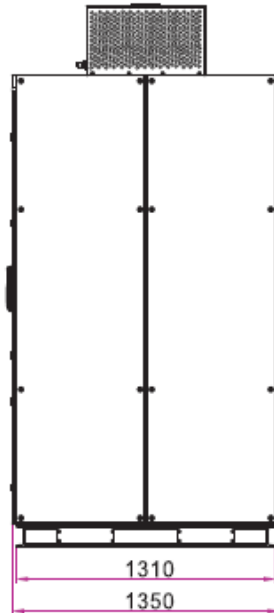
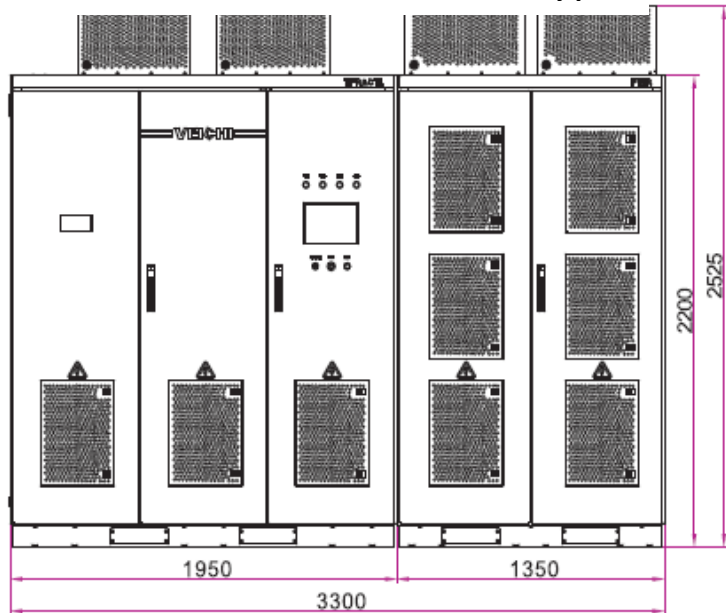
SN	power (KVA)	current A	Motor matching (kw)	Model	cabinet size
1	315	32	250	ACH100-06-315	A
2	350	35	280	ACH100-06-350	A
3	400	40	315	ACH100-06-400	A
4	450	45	355	ACH100-06-450	A
5	500	51	400	ACH100-06-500	A
6	560	57	450	ACH100-06-560	A
7	630	63	500	ACH100-06-630	A
8	700	71	560	ACH100-06-700	B
9	800	80	630	ACH100-06-800	B
10	900	90	710	ACH100-06-900	B
11	1000	101	800	ACH100-06-1000	B
12	1150	114	900	ACH100-06-1150	B
13	1250	127	1000	ACH100-06-1250	B
14	1400	142	1120	ACH100-06-1400	C
15	1600	158	1250	ACH100-06-1600	C
16	1750	177	1400	ACH100-06-1750	C
17	2000	203	1600	ACH100-06-2000	C
18	2250	228	1800	ACH100-06-2250	D
19	2500	253	2000	ACH100-06-2500	D
20	2800	284	2240	ACH100-06-2800	D
21	3150	317	2500	ACH100-06-3150	E
22	3500	355	2800	ACH100-06-3500	E
23	4000	399	3150	ACH100-06-4000	F
24	4450	449	3550	ACH100-06-4450	G
25	5000	506	4000	ACH100-06-5000	G
26	6250	633	5000	ACH100-06-6250	G
27	7000	709	5600	ACH100-06-7000	H
28	8000	798	6300	ACH100-06-8000	H

SN	power (KVA)	current A	Motor matching (kw)	Model	cabinet size
1	400	24	315	ACH100-10-400	A
2	450	27	355	ACH100-10-450	A
3	500	30	400	ACH100-10-500	A
4	560	34	450	ACH100-10-560	A
5	630	38	500	ACH100-10-630	A
6	700	43	560	ACH100-10-700	A
7	800	48	630	ACH100-10-800	A
8	900	54	710	ACH100-10-900	A
9	1000	61	800	ACH100-10-1000	A
10	1150	68	900	ACH100-10-1150	B
11	1250	76	1000	ACH100-10-1250	B
12	1400	85	1120	ACH100-10-1400	B
13	1550	95	1250	ACH100-10-1550	B
14	1750	106	1400	ACH100-10-1750	B
15	2000	122	1600	ACH100-10-2000	B
16	2250	137	1800	ACH100-10-2250	C
17	2500	152	2000	ACH100-10-2500	C
18	2800	170	2240	ACH100-10-2800	C
19	3150	190	2500	ACH100-10-3150	C
20	3500	213	2800	ACH100-10-3500	C
21	4000	239	3150	ACH100-10-4000	D
22	4450	270	3550	ACH100-10-4450	D
23	5000	304	4000	ACH100-10-5000	E
24	5600	342	4500	ACH100-10-5600	E
25	6300	380	5000	ACH100-10-6300	F
26	7000	425	5600	ACH100-10-7000	F
27	8000	479	6300	ACH100-10-8000	G
28	9000	539	7100	ACH100-10-9000	G
29	10000	608	8000	ACH100-10-10000	G
30	11250	684	9000	ACH100-10-11250	H
31	12500	760	10000	ACH100-10-12500	H

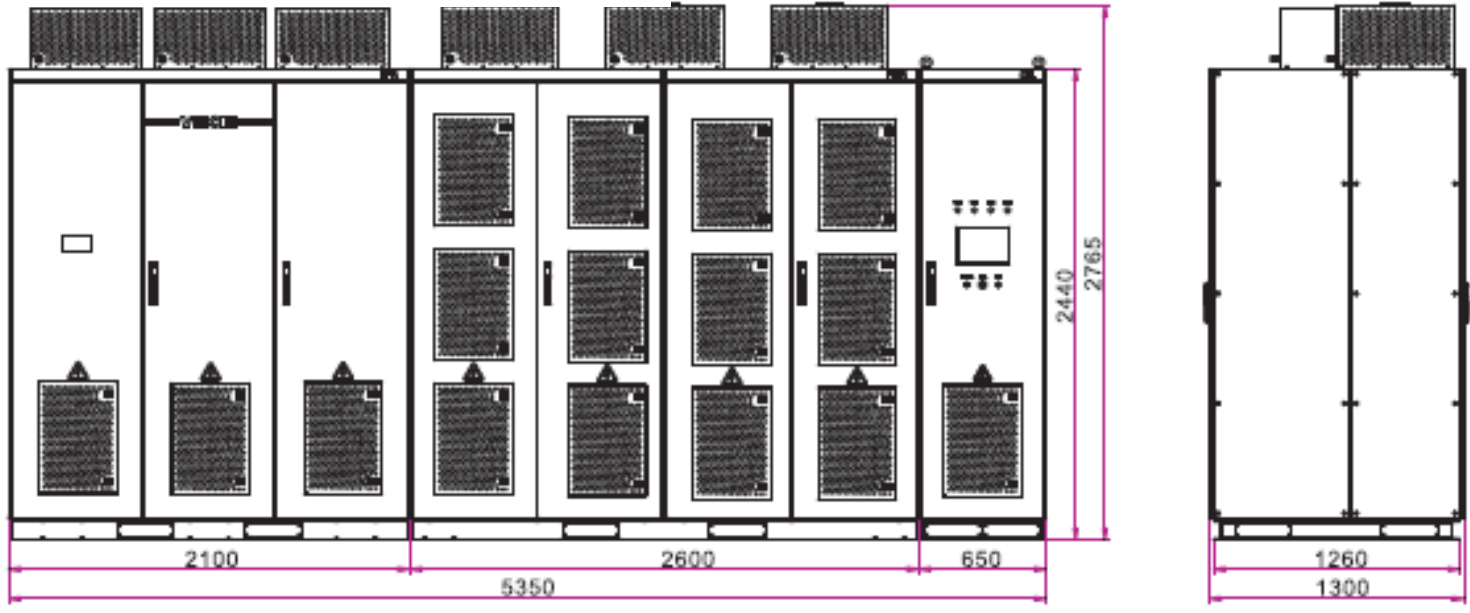
Veichi ACH100 series VFD A type **in China!**



Veichi ACH100 VFD series B type

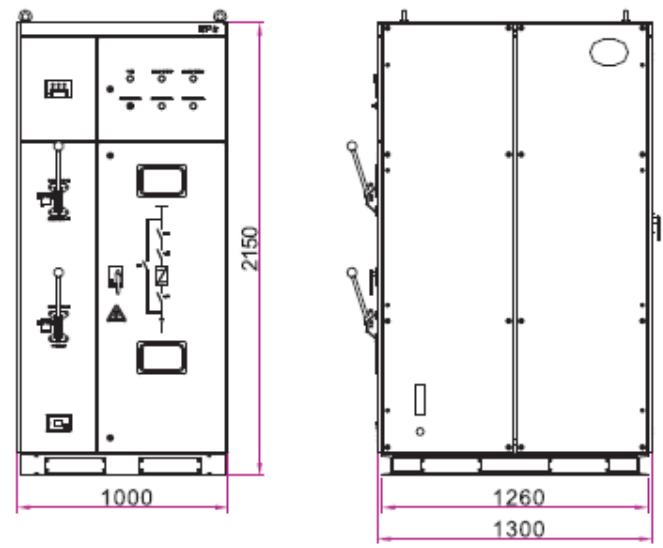
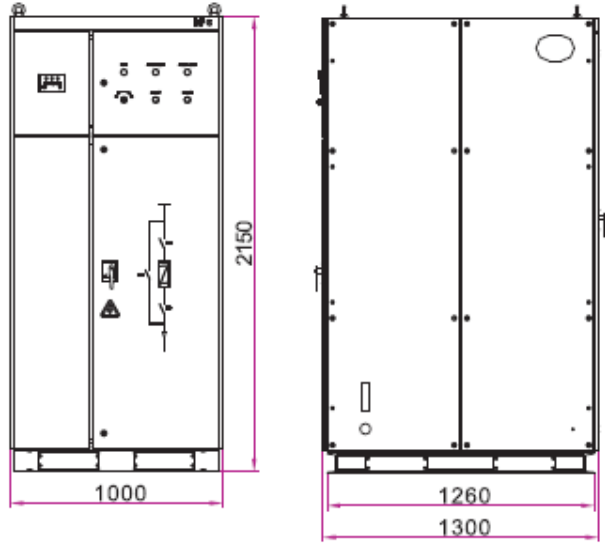


Veichi ACH100 series VFD C type

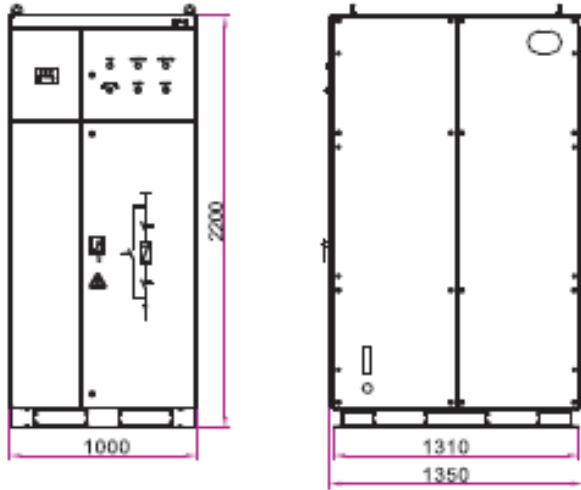


Bypass BP10 series A type

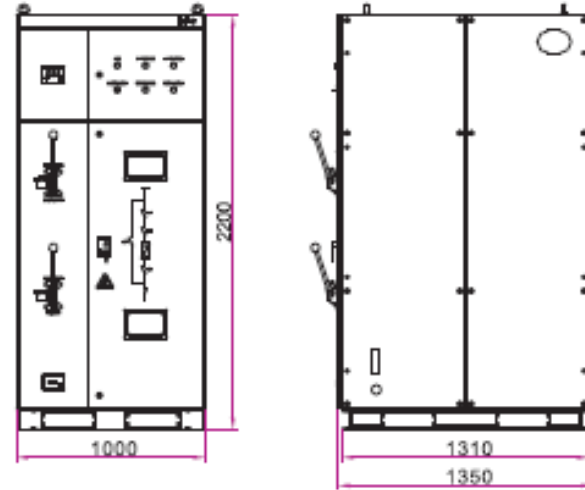
Bypass BP10 series M type



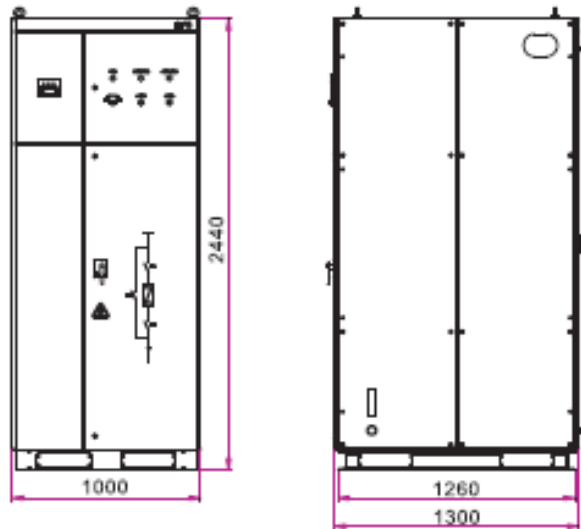
Bypass cabinet BP20 A type



Bypass cabinet BP20 M type



Bypass cabinet BP30 A type



Bypass cabinet BP20 M type

