

专注行业 精于方案



## 威科达伺服系统

### VECTOR SERVO

深圳市威科达科技有限公司  
SHENZHEN VECTOR TECHNOLOGY CO.,LTD.

专注行业 精于方案

更灵活，更精准  
MORE FLEXIBLE AND ACCURATE



深圳市威科达科技有限公司  
SHENZHEN VECTOR TECHNOLOGY CO.,LTD.

地址：深圳市南山区留仙大道创客小镇13栋

电话：0755-26610452

研发大楼：广东省东莞市松山湖高新技术产业开发区南山路一号中集智谷12栋

电话：0769-22235716

 [Http://www.szvector.com](http://www.szvector.com)

  
威科达科技



## 公司简介 COMPANY PROFILE

成立于2004年

威科达专注于拥有自主知识产权的工业自动化产品，定位服务于中高端设备制造商，为细分市场客户提供整体解决方案。致力于成为全球领先的工业自动化控制产品及方案的提供者。自主研发的产品有伺服驱动器、运动控制器、人机界面、伺服电机等，拥有多项发明专利、实用新型专利及软件注册权，是国家高新技术企业。有自己的产品研发中心和生产基地，在全国设有多个办事处及代理商。威科达的核心竞争力是实现产品研发与产品应用的无缝配合，为设备提供专业高效的系统解决方案。

威科达将继续秉承“全心全意为客户创造价值”的经营理念，在工业自动化领域深耕细作，创造运动控制之美是我们不懈的追求，立志塑造技术领先、高效管理、国内领先、国际知名的民族品牌。



Focusing on industrial automation products with independent intellectual property rights, we are positioned to serve high-end equipment manufacturers and provide overall solutions for customers in market segments. To become the world's leading provider of industrial automation products and solutions. Independently developed products include servo drive, motion controller, human-machine interface, servo motor, etc., with a number of invention patents, utility model patents and software registration rights, is a national high-tech enterprise. Has its own product research and development center and production base, in the country has a number of offices and agents. Our core competitiveness is to achieve seamless integration of product r&d and product application, and provide professional and efficient system solutions for equipment.

Vector will continue to adhere to the business philosophy of "creating value for customers wholeheartedly", make deep efforts in the field of industrial automation, and create the beauty of motion control is our unremitting pursuit, determined to build a national brand with leading technology, efficient management, leading domestic and internationally renowned.

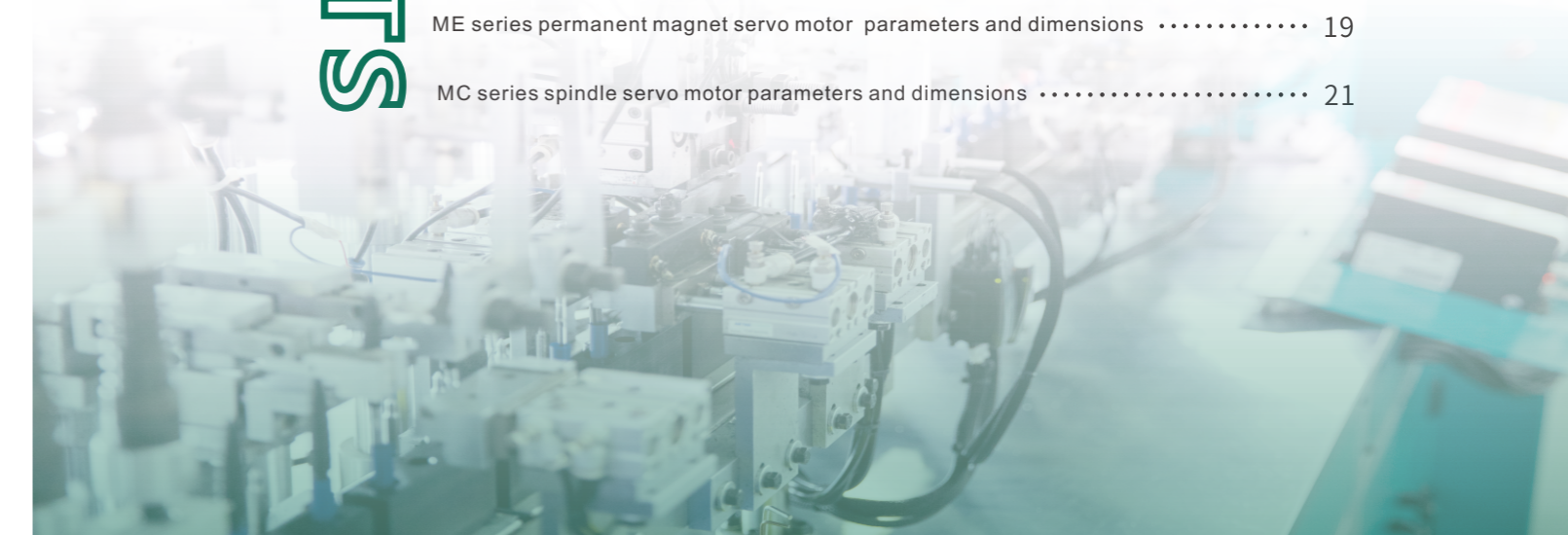
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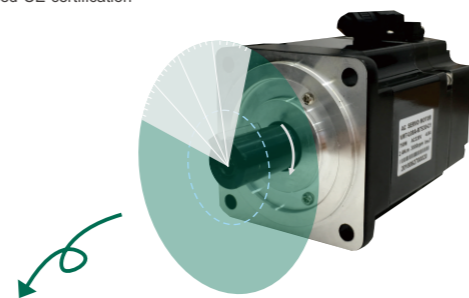
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## PRODUCT INTRODUCTION

- A variety of specifications and models, the power level covers 200W-110KW
- Multiple encoder feedback interfaces, incremental/wire-saving encoder, 17-bit/23-bit/24-bit absolute encoder, resolver encoder, etc.
- Multiple communication protocols, Modbus/CANopen/EtherCAT
- Speed response frequency up to 4kHz
- Voltage feedforward control, torque feedforward control, speed feedforward control
- With command low-pass filter, median filter function

- Position command planning function, built-in T-shaped speed curve planning
- Third order speed curve planning, electronic gear ratio dynamic and smooth switching function
- 35 standard home functions
- Support common DC bus
- Passed CE certification



24bit (Absolute encoder) / 17bit (Absolute encoder)

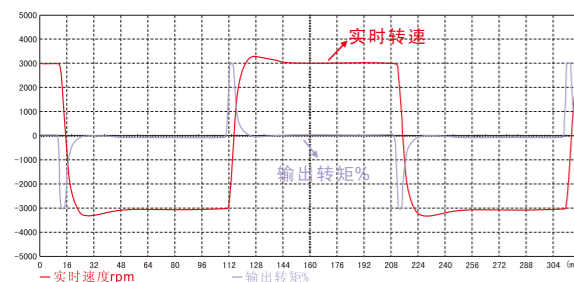
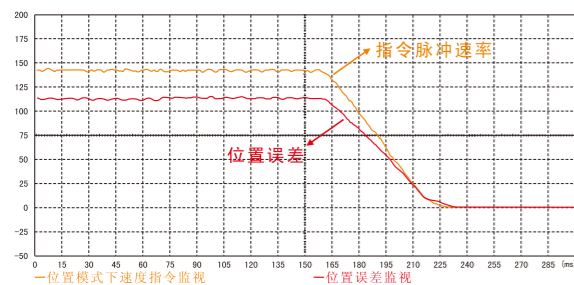
## PRODUCT FEATURES

### HIGH PRECISION POSITIONING

A 24-bit absolute encoder can be configured to improve positioning accuracy and stability of low-speed operation. Support multi-turn absolute positioning mode, powered by battery, motor position is not lost due to power failure.

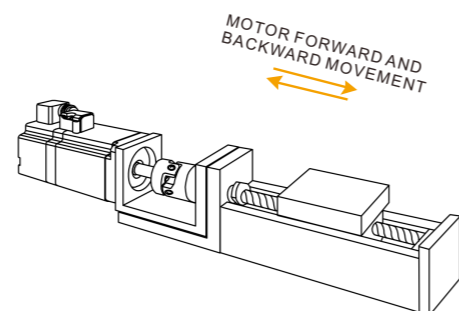
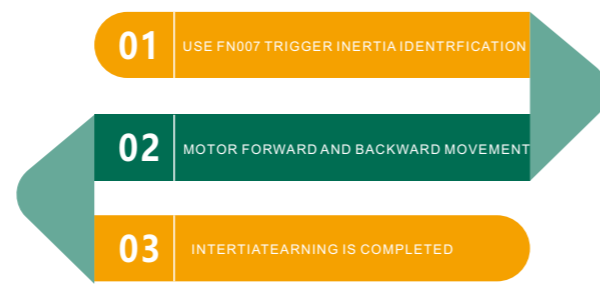
### HIGH-SPEED DYNAMIC RESPONSE

Speed response frequency 4KHz  
Position command adjustment time is less than 5ms  
The speed rise time from -3000rpm to 3000rpm is 10ms



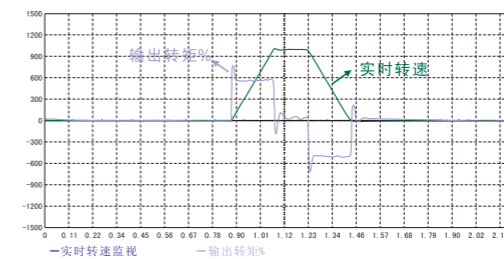
### LOAD INERTIA IDENTIFICATION

The servo has a load inertia recognition function. By controlling the motor for several acceleration and deceleration rotations, the load inertia ratio can be automatically identified. According to the inertia ratio and the rigidity level set, the servo can automatically calculate the required gain.

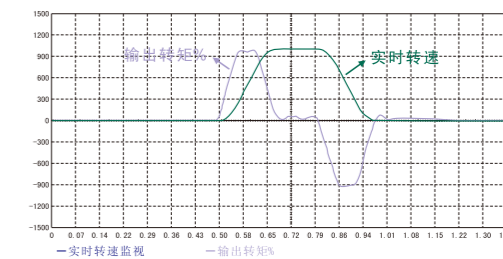


## THIRD ORDER VELOCITY CURVE PLANNING IN POSITION MODE

The traditional position planning algorithm uses the trapezoidal speed curve planning algorithm, and the VEC servo internal position planning algorithm uses the Third order speed curve algorithm. This standard algorithm can avoid outputting high-frequency torque, reduce mechanical shock, and improve processing efficiency.



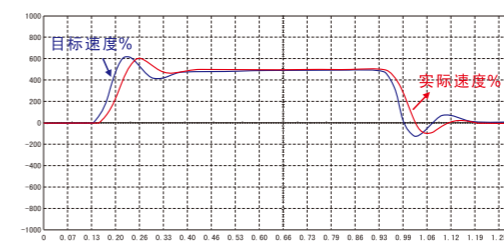
T-shaped speed curve output torque has impact



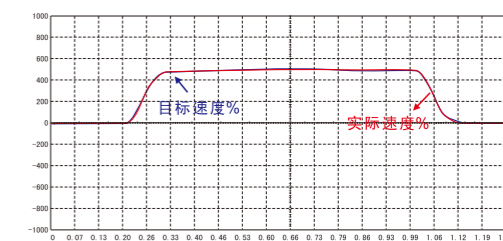
Third order speed curve without impact

## TORQUE FEEDFORWARD CONTROL

Torque feedforward refers to the mathematical operation of a given speed command, combined with the load inertia, to obtain the torque that the motor needs to output, and directly set it into the torque loop, so that the actual speed of the motor can quickly keep up with the target speed. The torque feedforward coefficient is determined by the load inertia. The greater the load inertia, the greater the value. This value can be obtained by learning habits.



No torque feed forward, poor speed following

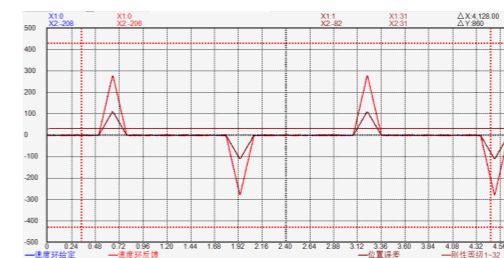


With torque feedforward, speed following is very good

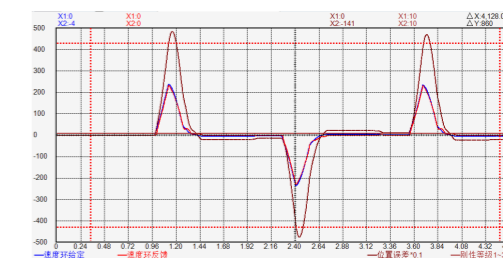
## SIMPLE PARAMETER SELF-TUNING FUNCTION

Realize the self-adjustment of servo parameters by setting the rigidity level of the servo. When the rigidity level is set high, the servo rigidity is high and the response is fast; when the rigidity level is set small, the servo rigidity is low and the response is slow.

**A<sub>01</sub>** The rigidity level is set to 31  
High rigidity and fast response



**B<sub>02</sub>** Set the rigidity level to 10  
Low stiffness, slow response

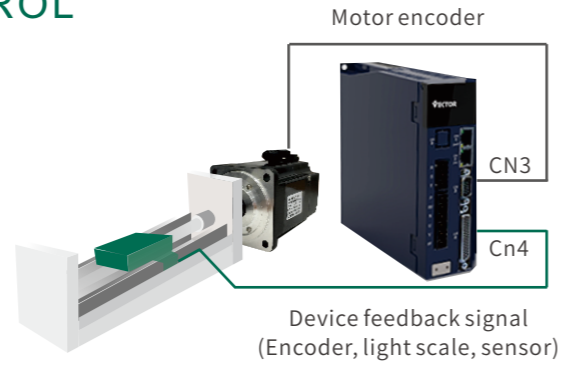


## VIBRATION SUPPRESSION FUNCTION

The internal low-pass filter and notch filter can effectively suppress the low-frequency vibration generated at the moment of shutdown and the end vibration of the long swing arm mechanism.

## FULLY CLOSED-LOOP CONTROL

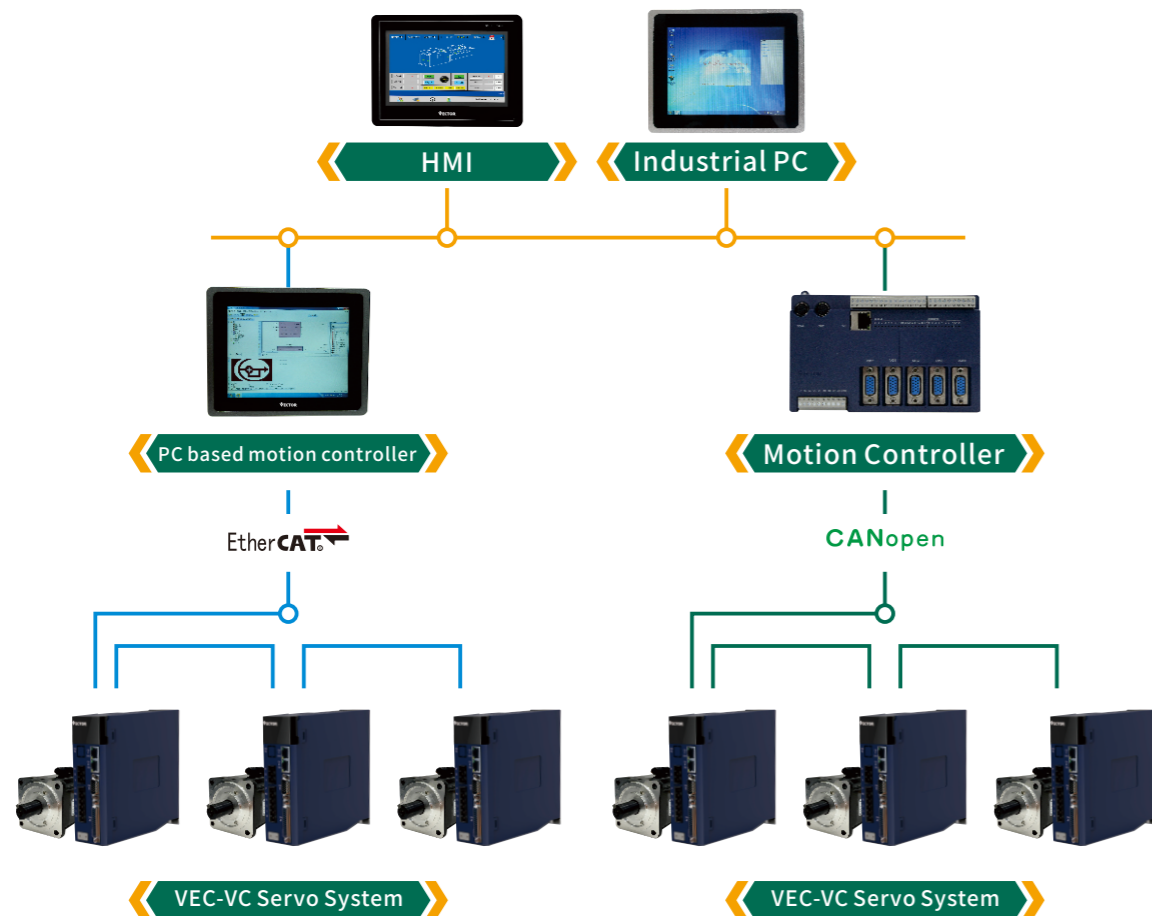
In the application of motor feeding, if there is relative sliding between the material and the motor, the displacement of the motor will be inconsistent with the displacement of the actual material. Therefore, an external second encoder measures the displacement of the actual material. The servo drive controls the motor speed according to the given position command and the position signal fed back by the second encoder, so that the given position command and the second encoder The feedback position is consistent, effectively improving the processing accuracy of the material.



## FLEXIBLE POSITION COMMAND OVERLAY FUNCTION

The position command can be set as the superposition of two pulses, that is, the sum of the pulse commands that track the two pulses at the same time. It can also be set as the superposition of pulse command and internal planning position command, that is, superimposing the position command planned by multiple internal positions on the basis of traditional pulse tracking.

## SUPPORT FOR CANOPEN, ETHERCAT MULTIPLE HIGH SPEED BUSES TO REALIZE MULTI-AXIS SYNCHRONIZATION CONTROL

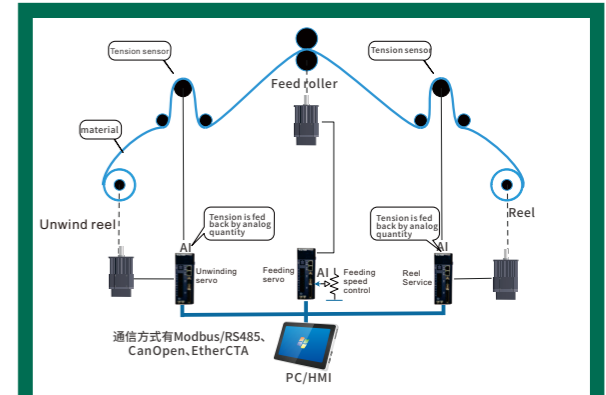


## VEC-VCJ SPECIAL SERVO FOR TENSION CONTROL



### PRODUCT INTRODUCTION

VEC-VCJ tension control servo has built-in multiple tension control modes: including closed loop speed mode, closed loop torque mode, open loop speed mode, and open loop torque mode. Vikeda provides a full-servo tension control solution, with VEC-VCJ tension control dedicated servo as the core, adopts different tension control modes for different machines, and integrates the tension controller into the servo drive. The tension control system consists of a man-machine interface, a special servo for tension control, and a tension sensor. It can realize the open loop tension control of rewinding and unwinding, the closed loop tension control of rewinding and unwinding, and the process tension control. Achieve high precision, high stability, maintenance-free and energy-saving effects.



### PRODUCT FEATURES

- 1 Stable start, no jitter at low speed;
- 2 The rewinding and unwinding diameter has a wide range, basically unlimited;
- 3 During acceleration, deceleration or emergency stop, the tension is stable, and the tension accuracy is controlled within 1%-5% of the sensor range;
- 4 Calculate the winding diameter with the special algorithm of the servo, the system is simple, efficient and accurate;
- 5 Servo products are maintenance-free and have a service life of 6-10 years.

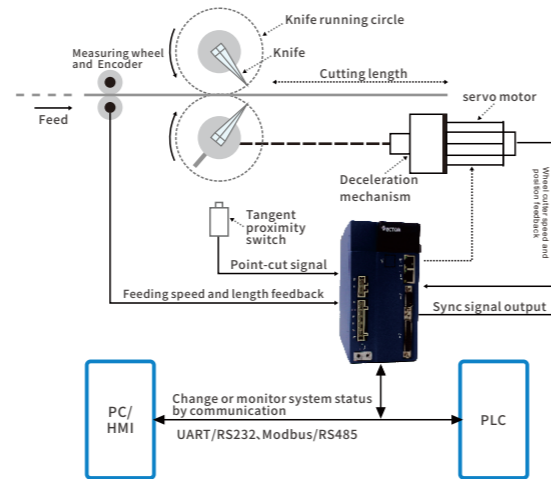
## VEC-VCR SPECIAL SERVO FOR ROTARY KNIFE

### PRODUCT INTRODUCTION

The VEC-VCR rotary knife special-purpose servo integrates the fifth power electronic cam algorithm, which can realize the master-slave following function. The angle, cutting length, rotary cutting and other angles of the synchronization interval can be set, and the position and speed of the wheel cutting axis are automatically calculated, so as to achieve the effect of following the spindle position and precise processing. Applicable to various corrugated paper cross-cutting machines, horizontal and vertical packaging machines, color printing machines and other equipment; with chord/arc correction function, can be used for thicker material cutting equipment, such as steel plate wheel cutting system; can be used for cursor following, suitable for fixed length, positioning cutting of printing.

### PRODUCT FEATURES

- Borrow Mark-Window settings to enhance Mark recognition ability
- Recognizable print point (Print Mark) automatically corrects the cutting length
- After losing the bid, you can automatically find the bid again
- First cut teaching function, that is, the first cut can be cut to the color mark
- With four groups of order management functions, order switching can choose not to switch, cycle switching, DI switching
- With simulation function, both dynamic simulation and static simulation
- Automatically find the point of cut
- Interrupt event function, follow the main axis from the axis, run according to the speed, acceleration and deceleration time set by the user
- Long material cutting can choose cutter stop angle



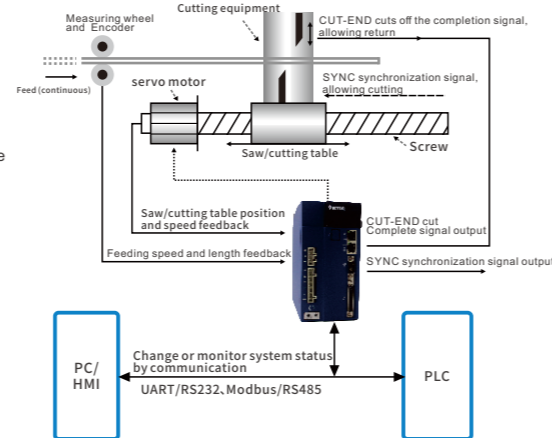
## VEC-VCF TAILOR-MADE SERVO

### PRODUCT INTRODUCTION

The VEC-VCF chase-cutting special servo contains automatic chase-cutting control function. With the feeding speed of the processed material, the forward speed of the saw table is automatically controlled. When the set length is reached, it enters the synchronization zone and sends out a cutting signal to process. After the object is sawn, the cutting completion signal is issued, and the saw table quickly returns to the origin to prepare for the next cutting. The product is suitable for: all kinds of bar, pipe, extruded profile length fixing, filling/injection and other special processing equipment that need to move with the workpiece.

### PRODUCT FEATURES

- Automatically find the mechanical origin (absolute coordinate method)
- Jog forward and reverse, arbitrarily specify the machine origin (relative coordinate method)
- S-curve acceleration function that automatically tracks the feed speed of the main line and calculates the preload
- In the process of S-curve acceleration, torque compensation can also be used to quickly synchronize and reduce cutting errors
- Four-segment S curve (forward acceleration/deceleration, reverse acceleration/deceleration) can be set individually
- Recognize Print Mark and automatically correct the cutting length
- Provide Mark-Window setting for printing punctuation to enhance Mark recognition ability
- Order management function, four groups of orders can be switched at will



## VEC-VCC SPECIAL SERVO FOR INDEPENDENT DIE CUTTING

### PRODUCT INTRODUCTION

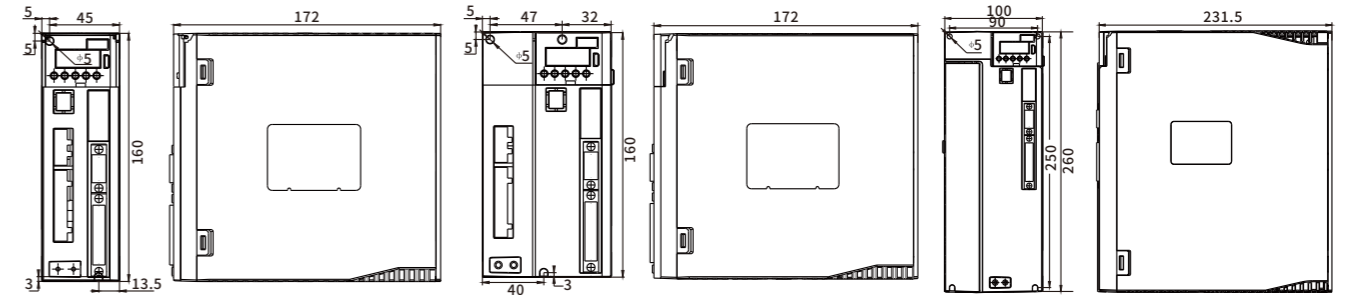
VEC-VCC independent die-cutting special servo internal tracking pulse command and phase adjustment command, the two parts of the command respectively use two different electronic gear ratios. The tracking of pulse commands does not produce phase changes, and any other position commands can adjust the phase, including jog fixed speed, jog fixed position and so on.

### PRODUCT FEATURES

- With internal return to zero function: built-in 37 standard return modes. Return to zero according to origin switch and position limit switch
- Fixed speed forward/reverse jog function: forward/reverse jog at a fixed speed
- Fixed position forward/reverse jog function: forward/reverse jog to a set position
- Go to the specified phase: move to the specified phase
- Back to the previous phase: Movement to the previous phase. The previous phase refers to the phase that followed the spindle movement last time
- Automatic alignment function: access to two origin switches, can automatically adjust the phase of the two origin switches to the set value

## DRIVER MOUNTING DIMENSIONS

### E INSTALLATION DIMENSION DIAGRAM (Unit:mm)

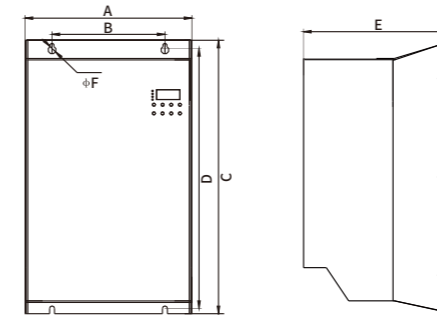


E1 adaptation current (A) 3-6

E2 adaptation current (A) 7-12

E3 adaptation current (A) 16-27

### EA INSTALLATION DIMENSION DIAGRAM (Unit:mm)



EA installation size chart comparison table

电流 (A)	32-38	45-60	75-90	110-150
A	220	223	259	259
B	149	150	160	160
C	361	439	499	499
D	343	423	488	488
E	220	250	250	250
F	5.5	6.5	6.5	6.5

### ACCESSORIES LIST

	Accessory name	Accessories Picture	备注
Mating plug	Power terminal		Adapt to E1, E2 structure drive
	Cn3 encoder plug		Encoder plug on the driver side
	Cn4 control terminal plug		Input/output signal terminals, user wiring
Mating plug	Encoder connection line		The standard cable length is 3, 5, 8, 10, 13, 15 meters, according to customer needs Provide independent connector
	Power line		The standard cable length is 3, 5, 8, 10, 13, 15 meters, according to customer needs Provide independent connector
	USB to RS232 Adapter cable		If necessary, self purchase
	Drive monitoring line		Connect and adjust the software for remote monitoring and firmware update
	Ethernet communication line		If necessary, self purchase

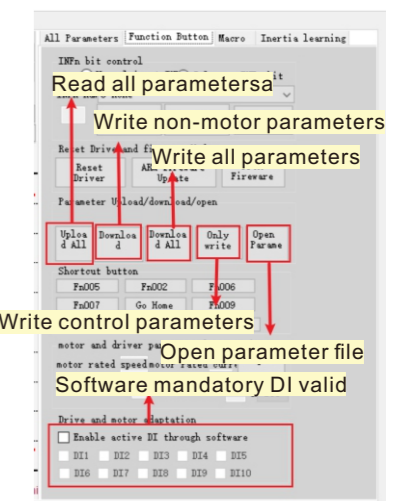
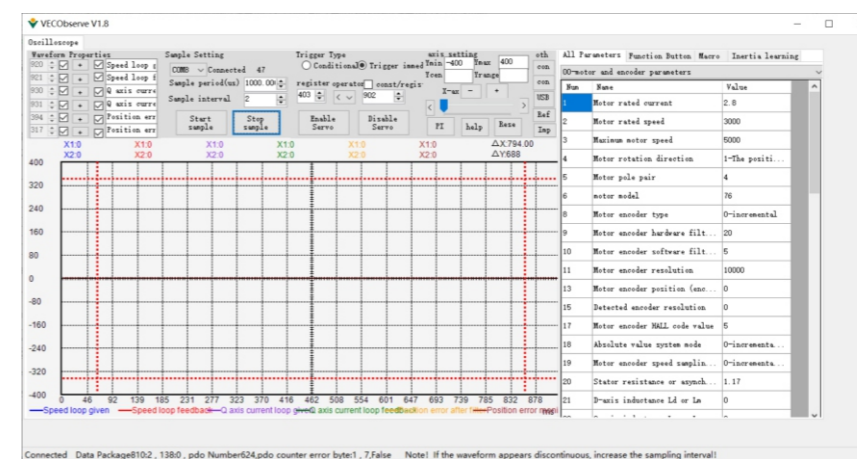
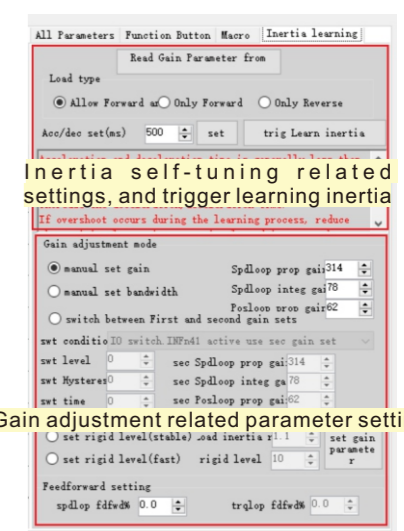
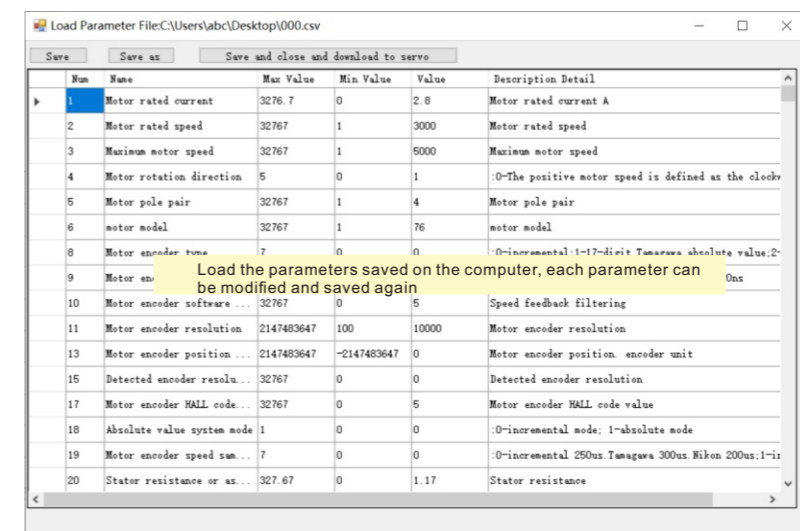
VOLTAGE	Control Mode	Single-phase/Three-phase full-bridge rectifier SVPWM drive
ENCODER	Encoder Feedback	2500 line incremental + Hall encoder; 2500 line incremental; 17/23 bit Tamagawa absolute encoder; 24 bit Nikon absolute encoder
PULSE INPUT	Pulse Type	Differential input, open collector
	Frequency Range	Differential input, 0-500kHz, pulse width greater than 1us/ open collector, 0-200kHz, pulse width greater than 2.5us
	Pulse Mode	Pulse+direction; AB pulse; CW+CCW
ANALOG INPUT	Voltage Range	-10V-10V
	Input Impedance	10KΩ
	Maximum Frequency	1.5kHz
DI/DO	Interface Type	NPN/PNP
COMMUNICATION	Protocol Type	Modbus/CANopen/EtherCAT
LOCATION MODE	Command input method	Pulse command/internal position planning
	Command smoothing method	Low-pass filtering / median filtering
	Electronic Gear Ratio	N/M; (M=1~2147483647.N=1~2147483647)
	Torque limiting	Internal Torque Limiting Analog Torque Limiting
	Feedforward compensation	Speed Feedforward/Torque Feedforward
	Torque compensation	Fixed torque compensation/analog torque compensation/automatic torque compensation
SPEED CONTROL MODE	Command input method	Pulse frequency/analog input/internal speed planning
	Speed control method	1~maximum speed
	Bandwidth	3kHz
	Torque limiting	Internal Torque Limiting / Analog Torque Limiting
	Command smoothing method	Low-pass filtering / median filtering
	Feedforward Compensation	Torque feedforward
TORQUE CONTROL	Command input method	Internal torque feed/analog control torque
	Torque Compensation	Fixed torque compensation/analog torque compensation/automatic torque compensation
	Speed Limit	Internal speed limit/analog speed limit
DIGITAL INPUT	Enable the drive, reset the drive; forward pointing, reverse pointing, reverse speed giving, position command disable, position command reverse, pulse command disable, electronic gear ratio switching, Position error clearing, zero return, reset fault, etc.	
DIGITAL OUTPUT	Drive enable, speed arrival, speed reduction, speed increase, zero speed, forward rotation, reverse rotation, fault output, positioning completion output, positioning approach output, etc.	
FAULT PROTECTION	Hardware overcurrent, overvoltage, undervoltage, drive overtemperature, overspeed, position error too large, motor overload, motor blocking, brake resistor overload, etc.	
INSTALLATION ENVIRONMENT REQUIREMENTS	Atmospheric pressure	86~106kPa
	Ambient temperature	0~55°C
	Ambient Humidity	0~90%RH
	IP Rating	IP20
	Vibration	0~4.9m/s~2

## VECOBSERVE'S MAIN FEATURES

- Real-time monitoring of the operating curve of any parameter
- Save and load run profile data
- Analyze run curve data
- Update all parameters of the drive
- Read all parameters of the drive
- Execute macro command function
- Inertia self-tuning and gain self-adjustment function
- Off-line parameter editing function

## VECOBSERVE'S MAIN INTERFACE

The main interface includes: waveform property interface, sampling control interface, trigger mode, axis control



## TYPE DESCRIPTION OF SPINDLE SERVO MOTOR

**1 8 5 M C - 1 R 6 C 3 3 E - M F 2 \***

1. Flange hole size 2. Product Line

3. Power Rating

Marking	Power Rating
1R6	1.6KW
003	3KW
015	15KW
037	37KW

4. Rated speed

Marking	Rated speed
A	750rpm
B	1000rpm
C	1500rpm

5. Voltage Rating

Marking	Voltage Rating
23	Three-phase 220V
33	Three-phase 380V

6. Installation method

Marking	Installation method
A	IMB5
D	IMB3
E	IMB35

7. Encoder type

Marking	Encoder type
M	Optical non-wire saving encoder
N	Optical wire-saving encoder
X	Rotary encoders
A	17-bit absolute encoder
B	23-bit absolute encoder

8. Specification

Marking	Specification
F1	1024C/T
F2	2500C/T
F5	5000C/T
F6	6000C/T

9. In-plant signage

Marking	Y	A

## TYPE DESCRIPTION OF PERMANENT MAGNET SERVO MOTOR

**2 0 0 F M B - 0 0 7 1 5 E 3 3 F - M F 2 \***

1. Flange size (mm)

2. Cooling method

Marking	Cooling method
F	Air-cooled
Omit	Naturally cold

3. Product Series

Marking	ME	MB

4. rated power

Marking	rated power
R40	0.4KW
1R5	1.5KW
003	3KW
7R5	7.5KW
020	20KW

5. Rated speed

Marking	Rated speed
10	1000rpm
15	1500rpm
20	2000rpm
25	2500rpm
30	3000rpm

6. Installation method

Marking	Installation method
A	IMB5
D	IMB3
E	IMB35

7. Voltage level

Marking	Voltage level
23	Three phase220V
33	Three phase380V

8. Brake

Marking	Brake
F	Without built-in brake
B	Electromagnetic brake
C	Permanent magnetic brake

9. Encoder type

Marking	Encoder type
M	Optical non-wire saving encoder
N	Optical wire-saving encoder
X	Rotary encoders
A	17-bit absolute encoder
B	23-bit absolute encoder

10. Specifications

Marking	Specifications
F1	1024C/T
F2	2500C/T
F5	5000C/T
F6	6000C/T

11. In-plant signage

Marking	M	LA	Z	K	D

## DRIVER MODEL DESCRIPTION

**V E C - V C - 0 0 3 2 3 H C - M - E A**

1.VEC Brand  
3.Current

Marking	Rated currenta
003	3A
006	6A
007	7A
012	12A
016	16A
020	20A
027	27A
032	32A
038	38A
045	45A
060	60A
075	75A
090	90A
110	110A
150	150A

2.Product Series

4.Rated voltage

Marking	Rated voltage
23	Three phase220V
33	Three phase380V

5. Drive type

Marking	Drive type
H	smart
J	Tension special type
R	Wheel cutting special type
C	Independent die cutting special type
L	Chain knife special type

6. Bus type

Marking	Bus type
C	CanOpen Bus type
E	EtherCAT Bus type

7. Encoder type

Marking	Encoder type
M	Optical non-wire saving encoder
N	Optical wire-saving encoder
X	Rotary encoders
A	17-bit absolute encoder
B	23-bit absolute encoder

8. structure type

Marking	structure type
E	3-27A
EA	32A

## ENCODER LINE MODEL DESCRIPTION

**E C M - 0 3 M 1 6 - K 8 0 - R O - N**

1. Encoder line

2. Structure type

3. Encoder type

Marking	Encoder type
X	Rotary encoders
M	Optical non-wire saving encoder
N	Optical wire-saving encoder
A	A/B absolute encoder

4. Line length

Marking	Line length
03M	3M
05M	5M
08M	8M
10M	10M

5. Wire coreA

Marking	Wire core
4	4 Wire core
8	8 Wire core
16	16 Wire core

6. Adapters for motor encoder plugs

Marking	Marking
K80	M80
K130E	M180
k180	L200
Y265	A210
M60	

8. Battery

Marking	Battery
N	No battery
Omit	With battery

7. Flexible cable material

Marking	Flexible cable
R0	5 million times
R1	10 million times
R2	15 million times

## POWER LINE MODEL DESCRIPTION

**P - R 5 0 0 3 M - K 8 0 - N - R O**

1. Power line

2. Cable diameter

Marking	Cable diameter
R50	0.5m <sup>2</sup>
001	1m <sup>2</sup>
1R5	1.5m <sup>2</sup>
002	2m <sup>2</sup>
2R5	2.5m <sup>2</sup>
004	4m <sup>2</sup>

3. Line length

Marking	Line length
03M	3M
05M	5M

4. Adapted motor power plug

Marking	Marking	Marking
K80	K130	K180
M80	M130	M180

5. Driver power terminal

Marking	Driver power terminal
N	Bare thread
Y	Y terminal

6. Flexible cable material

Marking	Flexible cable
R0	5 million times
R1	10 million times
R2	15 million times

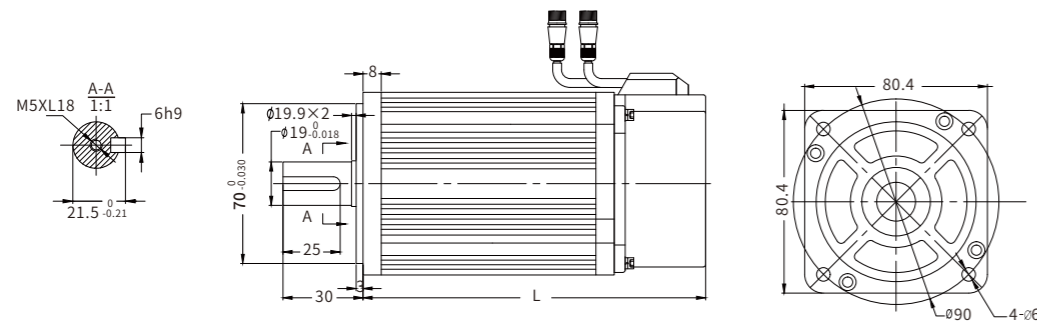
# MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A21F-*M)	80MB-R4030	80MB-R7530	80MB-R7520	110MB-1R230	110MB-1R830	130MB-00125	130MB-1R525	130MB-1R515	130MB-00225	130MB-2R625	130MB-2R315
RATED POWER	0.4	0.75	0.75	1.2	1.8	1	1.5	1.5	2	2.6	2.3
RATED VOLTAGE	220	220	220	220	220	220	220	220	220	220	220
RATED CURRENT	2	3	3	5	6	4	6	6	7.5	10	9.5
RATED SPEED	3000	3000	2000	3000	3000	2500	2500	1500	2500	2500	1500
RATED TORQUE	1.27	2.39	3.5	4	6	4	6	10	7.7	10	15
INSTANTANEOUS TORQUE	3.9	7.1	10.5	12	18	12	18	25	22	25	30
ROTOR INERTIA With brake[(Kg.m <sup>2</sup> )X10 <sup>-3</sup> ]	1.05 (1.13)	1.82 (1.9)	2.63 (2.71)	5.4 (5.85)	7.6 (8.05)	8.5 (8.95)	12.6 (13.05)	19.4 (20.88)	15.3 (15.75)	19.4 (20.88)	27.7 (29.18)
TORQUE COEFFICIENT(N.m/A)	0.64	0.8	1.17	0.8	1	1	1	1.67	1.03	1	1.58
ELECTRICAL TIME CONSTANT(ms)	1.66	2.2	2.4	3	3.2	2.32	3.26	2.91	2.91	3.36	4.05
WEIGHT (Kg)	1.78	2.9	3.9	6	7.9	6.2	7.4	10.2	8.3	9.8	12.6
PROTECTION /COOLING MODE	IP65/Natural cooling										

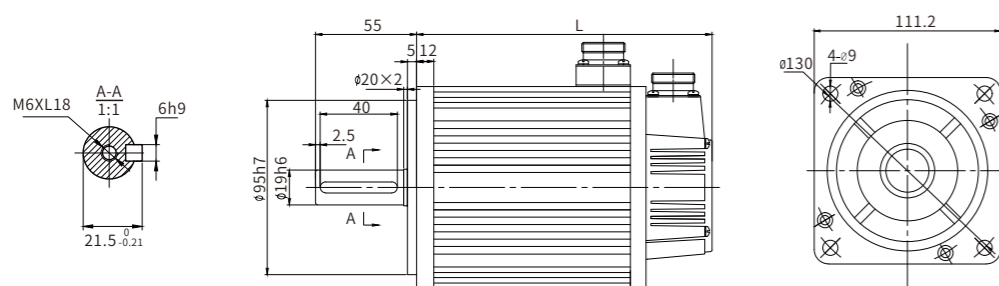
ADAPT DRIVE MODEL	VC-00323*	VC-00323*	VC-00323*	VC-00623*	VC-00623*	VC-00623*	VC-00623*	VC-00623*	VC-01223*	VC-01223*	VC-01223*
RATED CURRENT	3	3	3	6	6	6	6	6	12	12	12
DIMENSIONS	E1	E1	E1	E1	E1	E1	E1	E1	E2	E2	E2

MOTOR SIZE	80MB			110MB		130MB					
	R4030	R7530	R7520	1R230	1R830	00125	1R525	1R515	00225	2R625	2R315
L (mm)	124	151	179	189	219	166	179	179	192	209	241
L (Brake mm)	164	191	219	263	293	223	236	236	249	290	322

## 80MB INSTALLATION DIMENSION DIAGRAM



## 110MB INSTALLATION DIMENSION DIAGRAM



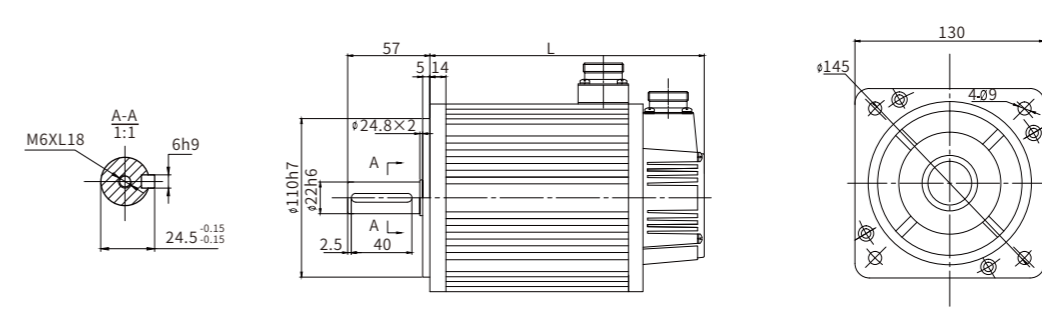
# MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A21F-*M)	130MB-1R525	130MB-1R515	130MB-00225	130MB-2R625	130MB-2R315	180MB-00315	180MB-4R520	180MB-4R315	180MB-5R515	180MB-7R515
RATED POWER (KW)	1.5	1.5	2	2.6	2.3	3	4.5	4.3	5.5	7.5
RATED VOLTAGE (V)	380	380	380	380	380	380	380	380	380	380
RATED CURRENT (A)	3.7	3.5	4.5	5.9	5.9	7.5	9.5	10	12	20
RATED SPEED (rpm)	2500	1500	2500	2500	1500	1500	2000	1500	1500	1500
RATED TORQUE (N.m)	6	10	7.7	10	15	19	21.5	27	35	48
INSTANTANEOUS TORQUE (N.m)	18	25	22	25	30	47	53	67	70	96
ROTOR INERTIA (With brake)[(Kg.m <sup>2</sup> )X10 <sup>-3</sup> ]	12.6 (13.05)	19.4 (20.88)	15.3 (15.75)	19.4 (20.88)	27.7 (29.18)	70 (71.48)	79.6 (81.08)	96.4 (97.88)	122.5 (123.98)	167.2 (168.68)
TORQUE COEFFICIENT (N.m/A)	1.54	1.96	1.64	1.69	2.53	2.5	2.26	2.7	2.9	2.4
ELECTRICAL TIME CONSTANT(ms)	2.48	3.51	2.84	3.12	12.57	5.93	5.6	6	6.45	7.8
WEIGHT (Kg)	7.4	10.2	8.3	9.8	13.7	20.5	22.2	25.5	30.5	40
PROTECTION /COOLING MODE	IP65/Natural cooling									

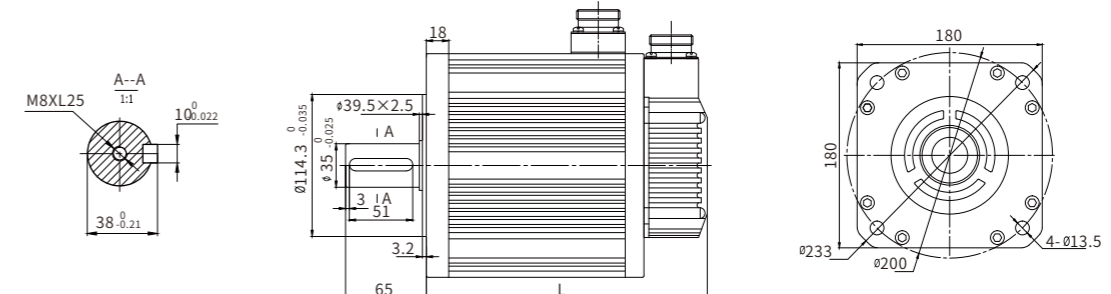
ADAPT DRIVE MODEL	VC-00733*	VC-00733*	VC-00733*	VC-00733*	VC-00733*	VC-01233*	VC-01233*	VC-01233*	VC-01233*	VC-02033*
RATED CURRENT (A)	7	7	7	7	7	12	12	12	12	20
DIMENSIONS	E2	E2	E2	E2	E2	E2	E2	E2	E2	E3

MOTOR SIZE	130MB					180MB				
	1R525	1R515	00225	2R625	2R315	00315	4R520	4R315	5R515	7R515
L (mm)	179	179	192	209	241	232	243	262	292	346
L (Brake mm)	236	236	249	290	322	304	315	334	364	418

## 130MB INSTALLATION DIMENSION DIAGRAM



## 180MB INSTALLATION DIMENSION DIAGRAM





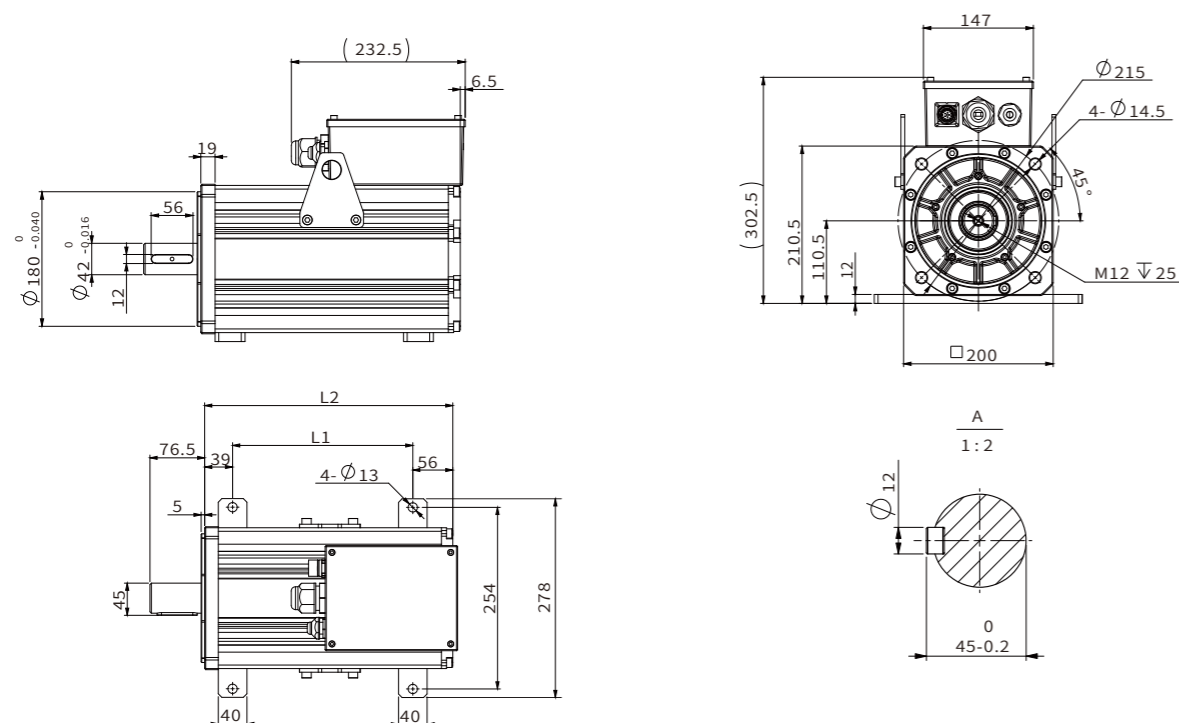
## MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33F-IA)	200MB-5R715	200MB-8R220	200MB-00715	200MB-01120	200MB-01115	200MB-01420	200MB-01215	200MB-01620	200MB-01515	200MB-02020	200MB-17R615	200MB-02420	200MB-02015	200MB-02620
RATED POWER(KW)	5.7	8.2	7	10.5	11	13.6	11.8	16.3	15.4	20.5	17.6	23.5	19.8	26.4
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	13	16	16	24.7	24.8	29.8	29.7	35.1	33	42.3	33.5	49.5	42.4	59.4
RATED SPEED(rpm)	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000
RATED TORQUE(N.m)	36	39	45	50	70	65	75	78	98	98	112	112	126	126
INSTANTANEOUS TORQUE(N.m)	72	78	90	100	140	130	150	156	196	196	224	224	252	252
ROTOR INERTIA[(Kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	82	82	107	107	129	129	153	153	177	177	201	201	225	225
TORQUE COEFFICIENT(N.m/A)	2.77	2.44	2.81	2.02	2.82	2.18	2.53	2.22	2.97	2.32	3.34	2.26	2.97	2.12
ELECTRICAL TIME CONSTANT(ms)	13.72	12.76	15.91	15.31	16.44	16.09	17.72	16.49	18.25	17.49	19.38	18.44	20.39	19.63
WEIGHT(Kg)	48	48	37.2	55	62	62	68	68	75	75	82	82	90	90
PROTECTION/COOLING MODE	IP54/Natural cooling													

ADAPT DRIVE MODEL	VC-01633*	VC-01633*	VC-01633*	VC-02733*	VC-02733*	VC-03233*	VC-03233*	VC-03833*	VC-03833*	VC-04533*	VC-03833*	VC-06033*	VC-04533*	VC-06033*
RATED CURRENT(A)	16	16	16	27	27	32	32	38	38	45	38	60	45	60
DIMENSIONS	E3	E3	E3	E3	E3	EA	EA	EA	EA	EA	EA	EA	EA	EA

MOTOR SIZE	200MB													
	5R715	8R220	00715	01120	01115	01420	01215	01620	01515	02020	17R615	02420	02015	02620
L1 (mm)	210	252	252	252	294	294	336	336	378	378	420	420	462	462
L2 (mm)	305	347	347	347	389	389	431	431	473	473	515	515	557	557

## 200 MB INSTALLATION DIMENSION DIAGRAM



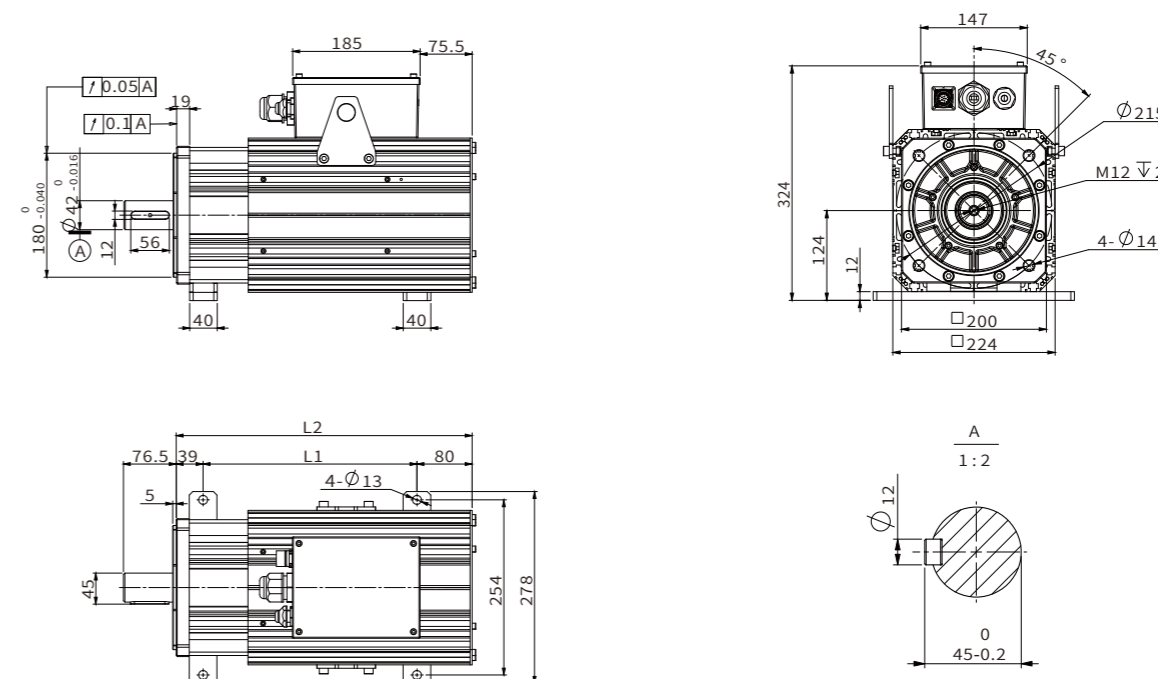
## MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33F-IA)	200FMB-8R615	200FMB-01220	200FMB-01115	200FMB-01920	200FMB-01615	200FMB-02020	200FMB-02015	200FMB-02920	200FMB-02315	200FMB-03120	200FMB-02615	200FMB-02915	200FMB-03820
RATED POWER(KW)	8.6	12.1	11.6	18.6	16.2	20.1	20.1	29.1	23.2	31	26.4	29.2	37.7
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	22.4	24.3	25	39.5	36	44.8	45.5	56	50	64.1	56.1	64.1	89.7
RATED SPEED(rpm)	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000	1500	1500	2000
MAXIMUM SPEED(rpm)	1670	2200	1883	2500	2009	2400	2000	2500	1914	2460	1880	1914	2679
RATED TORQUE(N.m)	55	58	74	89	103	96	128	139	148	148	168	186	180
INSTANTANEOUS TORQUE(N.m)	110	116	148	178	206	192	256	278	296	296	336	372	360
ROTOR INERTIA[(Kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	82	82	107	107	130	130	153	153	177	177	201	225	225
TORQUE COEFFICIENT(N.m/A)	2.46	2.39	2.96	2.25	2.86	2.14	2.81	2.48	2.96	2.31	2.99	2.90	2.01
ELECTRICAL TIME CONSTANT(ms)	13.72	12.76	15.91	15.31	16.44	16.09	17.72	16.49	18.25	17.48	19.38	20.39	19.63
WEIGHT(Kg)	60	60	68	68	76	76	84	84	93	93	101	113	113
PROTECTION/COOLING MODE	IP54/Natural cooling												

ADAPT DRIVE MODEL	VC-02733*	VC-02733*	VC-02733*	VC-04533*	VC-03833*	VC-04533*	VC-04533*	VC-06033*	VC-06033*	VC-07533*	VC-06033*	VC-07533*	VC-09033*
RATED CURRENT(A)	27	27	27	45	38	45	45	60	60	75	60	75	90
DIMENSIONS	E3	E3	E3	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA

MOTOR SIZE	200FMB													
	8R615	01220	01115	01920	01615	02020	02015	02920	02315	03120	02615	02915	03820	
L1 (mm)	268	268	310	310	352	352	394	394	436	436	478	520	520	
L2 (mm)	387	387	429	429	471	471	513	513	555	555	597	639	639	

## 200 FMB INSTALLATION DIMENSION DIAGRAM



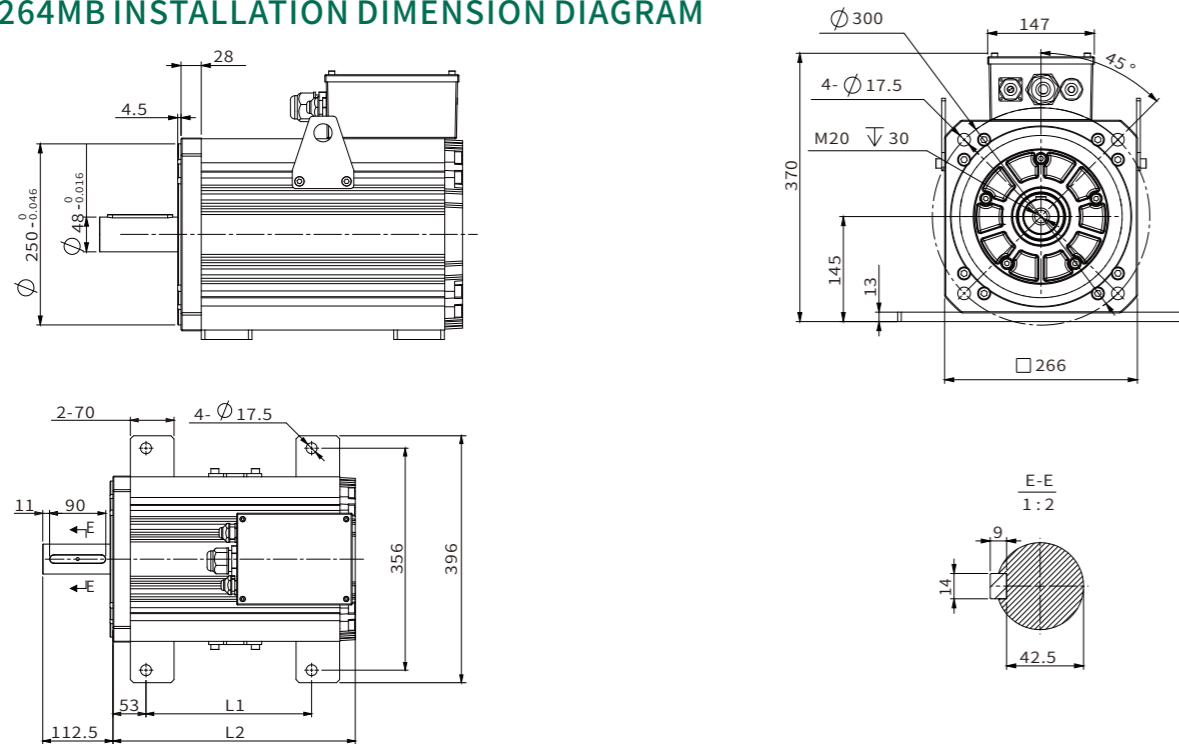
## MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33F-IA)	264MB-01615	264MB-02220	264MB-02015	264MB-02720	264MB-02715	264MB-03620	264MB-03315	264MB-04420	264MB-03815	264MB-05120	264MB-04415	264MB-05820	264MB-04915	264MB-06620
RATED POWER(KW)	16.4	22	20.1	26.8	27.3	36.4	32.8	43.7	38.2	51	43.7	58.3	49.2	65.5
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	36.5	43.6	43.6	54.5	54.5	72.6	72.7	87.1	87	108.9	87.1	109	109	145
RATED SPEED(rpm)	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000	1500	2000
MAXIMUM SPEED(rpm)	2080	2490	1870	2340	1870	2490	2080	2490	2140	2670	1870	2340	2080	2770
RATED TORQUE(N.m)	104	104	128	128	174	174	209	209	243	243	278	278	313	313
INSTANTANEOUS TORQUE(N.m)	208	208	278	278	348	348	418	418	486	486	556	556	626	626
ROTOR INERTIA[(Kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	440	440	575	575	710	710	850	850	980	980	1120	1120	1250	1250
TORQUE COEFFICIENT(N.m/A)	2.85	2.39	2.94	2.35	3.19	2.40	2.87	2.40	2.79	2.23	3.19	2.55	2.87	2.16
ELECTRICAL TIME CONSTANT(ms)	2.72	2.54	3.46	3.54	3.83	3.77	3.98	4.12	4.52	4.50	4.60	4.41	4.96	4.64
WEIGHT(Kg)	96	96	110	110	128	128	144	144	151	151	176	176	190	190
PROTECTION/COOLING MODE	IP54/Natural cooling													

ADAPT DRIVE MODEL	VC-03833*	VC-04533*	VC-04533*	VC-06033*	VC-06033*	VC-07533*	VC-07533*	VC-09033*	VC-09033*	VC-11033*	VC-09033*	VC-11033*	VC-11033*	VC-15033*
RATED CURRENT(A)	38	45	45	60	60	75	75	90	90	110	90	110	110	150
DIMENSIONS	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA

MOTOR SIZE	264MB													
	01615	02220	02015	02720	02715	03620	03315	04420	03815	05120	04415	05820	04915	06620
L1 (mm)	216.5	216.5	265.5	265.5	314.5	314.5	363.5	363.5	412.5	412.5	461.5	461.5	510.5	510.5
L2 (mm)	339.5	339.5	388.5	388.5	437.5	437.5	485.5	486.5	535.5	535.5	584.5	584.5	633.5	633.5

## 264MB INSTALLATION DIMENSION DIAGRAM



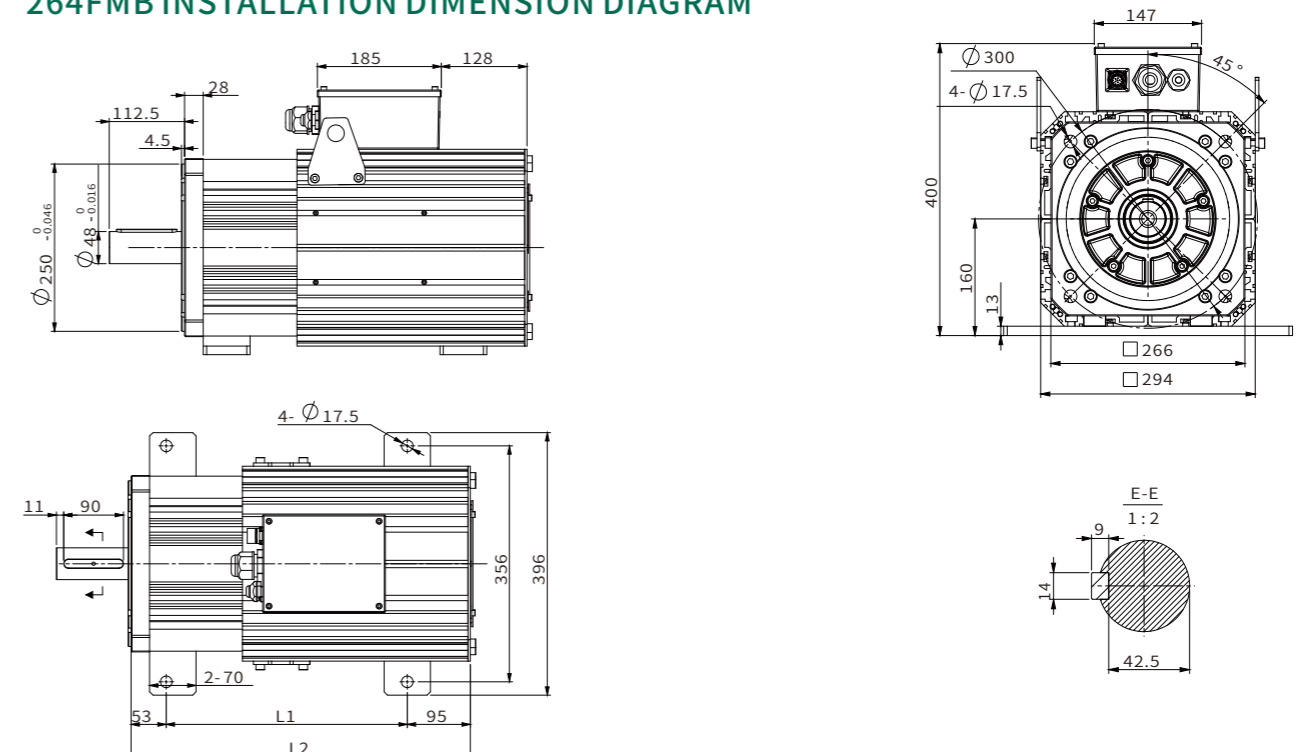
## MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33F-IA)	264FMB-02515	264FMB-03420	264FMB-03315	264FMB-04520	264FMB-04215	264FMB-05620	264FMB-05015	264FMB-06720	264FMB-05915	264FMB-06715
RATED POWER(KW)	25.1	33.5	33	44.8	42	56.3	50.4	67.2	58.7	67.2
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	55.8	67	67	83.8	83.8	112	111.7	133.9	133.9	133.8
RATED SPEED(rpm)	1500	2000	1500	2000	1500	2000	1500	2000	1500	1500
MAXIMUM SPEED(rpm)	2080	2490	2080	2340	1870	2400	2080	2490	2140	1870
RATED TORQUE(N.m)	160	160	210	214	267	269	312	312	374	428
INSTANTANEOUS TORQUE(N.m)	320	320	420	428	534	538	624	624	760	856
ROTOR INERTIA[(Kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	440	440	575	575	710	710	850	850	980	1120
TORQUE COEFFICIENT(N.m/A)	5.73	4.78	6.27	5.11	6.37	4.80	5.59	4.66	5.68	6.40
ELECTRICAL TIME CONSTANT(ms)	2.72	5.86	3.46	3.54	3.83	3.77	3.98	4.12	4.52	4.60
WEIGHT(Kg)	106	106	123	123	141	141	159	159	176	193
PROTECTION/COOLING MODE	IP54/Natural cooling									

ADAPT DRIVE MODEL	VC-06033*	VC-07533*	VC-07533*	VC-09033*	VC-09033*	VC-15033*	VC-11033*	VC-15033*	VC-15033*	VC-15033*
RATED CURRENT(A)	60	75	75	90	90	150	110	150	150	150
DIMENSIONS	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA

MOTOR SIZE	264FMB									
	02515	03420	03315	04520	04215	05620	05015	06720	05915	06715
L1 (mm)	314.5	314.5	363.5	363.5	412.5	412.5	461.5	461.5	510.5	559.5
L2 (mm)	462.5	462.5	511.5	511.5	560.5	560.5	609.5	609.5	658.5	707.5

## 264FMB INSTALLATION DIMENSION DIAGRAM



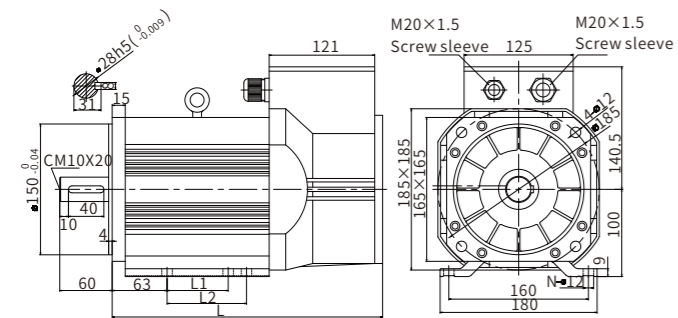


# MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33E-*)	185MC-1R5C	185MC-2R2C	185MC-3R7C	215MC-5R5C	215MC-7R5C	265MC-011C	265MC-015C	265MC-018C	265MC-022C	265MC-030C	350MC-037C	350MC-045C	350MC-055C	350MC-075C
RATED POWER(KW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	3.8	5.1	8.2	11.4	15.3	22.2	29.1	35.7	42	56.5	68.5	84.1	103.6	139.8
RATED SPEED(rpm)	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
MAXIMUM SPEED(rpm)	6000	6000	6000	6000	6000	6000	4500	4500	6000	6000	3600	3600	3600	3600
RATED TORQUE(N.m)	9.6	14	23.6	35	48	70	96	118	140	191	236	287	350	478
30-MINUTE RATED TORQUE(N.m)	14	23.6	35	48	70	95.5	118	140	166	236	287	350	478	573
ROTOR INERTIA[(kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	58	77	101	169	236	605	791	954	1117	1676	3724	4469	5362	6405
FRAME NUMBER	165S	165M	165N	200M	200L	265S	265M	265L	265H	265F	360M	360L	360H	360E
WEIGHT(Kg)	20	23	25	40	50	60	110	120	130	180	320	360	400	480

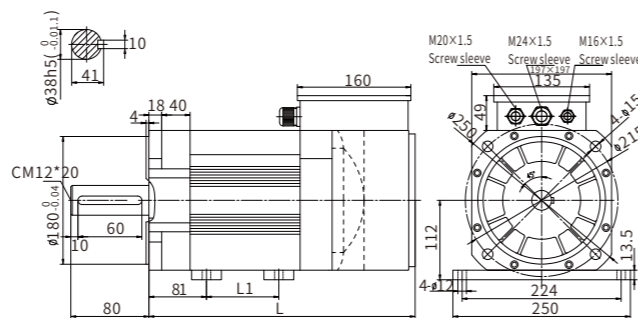
ADAPT DRIVE MODEL	VC-00733*	VC-00733*	VC-01233*	VC-01233*	VC-01633*	VC-02733*	VC-03233*	VC-03833*	VC-04533*	VC-06033*	VC-07533*	VC-09033*	VC-11033*	VC-15033*
RATED CURRENT(A)	7	7	12	12	16	27	32	38	45	60	75	90	110	150
DIMENSIONS	E2	E2	E2	E2	E3	E3	EA	EA	EA	EA	EA	EA	EA	EA

## 185 MC INSTALLATION DIMENSION DIAGRAM



Stile	L	L1	L2	N
165S	310	70	/	4
165M	335	95	112	6
165N	365	140	159	6
165L	385	140	159	6
165H	445	200	219	6

## 215 MC INSTALLATION DIMENSION DIAGRAM



Stile	L	L1
200S	375	109
200M	405	139
200L	455	189
200H	505	239

## FILTER SELECTION TABLE (FOR REFERENCE ONLY)

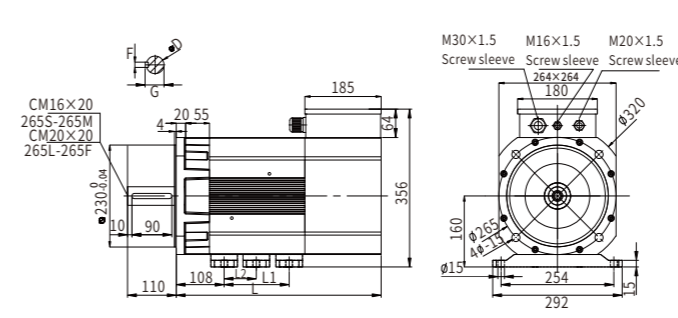
Current	5A	10A	20A	30A	50A	70A	90A	120A
Filter model	YX84G2-5A-S Rd1806054	YX84G3-10A-S Rd1806053	YX84G3-20A-S Rd1806052	YX84G5-30A-S Rd1806051	YX84G4-50A-S Rd1806050	YX84G6-70A-S Rd1806049	YX84G6-90A-S Rd1806048	YX84G6D-120A-S Rd1703010

# MOTOR PARAMETERS AND DIMENSIONS

MOTOR MODEL(A33E-*)	265MC-7R5A	265MC-011A	265MC-015A	350MC-018A	350MC-022A	350MC-030A	350MC-037A	215MC-004B	215MC-5R5B	215MC-7R5B	265MC-011B	265MC-015B	265MC-018B	265MC-022B	350MC-030B	350MC-037B	350MC-050B
RATED POWER(KW)	7.5	11	15	18	22	30	37	4	5.5	7.5	11	15	18.5	22	30	37	50
RATED VOLTAGE(V)	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380
RATED CURRENT(A)	15.3	22.1	29.9	35.9	43.7	61	72.5	8.6	11.8	16.5	22.1	29.6	36.3	42.8	57.9	70.3	98.1
RATED SPEED(rpm)	750	750	750	750	750	750	750	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MAXIMUM SPEED(rpm)	2250	2250	2250	1800	1800	1800	1800	4000	4000	4000	3000	3000	3000	4000	2500	2500	2500
RATED TORQUE(N.m)	96	140	191	236	280	382	471	38	52.5	71.6	105	143	177	210	287	353	478
30-MINUTE RATED TORQUE(N.m)	115	166	236	280	331	471	573	52.5	71.6	105	124	177	210	248	353	430	716
ROTOR INERTIA[(kg.m <sup>2</sup> )X10 <sup>-4</sup> ]	791	1117	1676	3724	4469	5362	6405	169	236	303	791	1117	1350	1676	4469	5362	6405
FRAME NUMBER	265M	265H	265F	360M	360L	360H	360E	200M	200L	200H	265M	265H	265E	265F	360L	360H	360E
WEIGHT(Kg)	110	130	180	320	360	400	480	40	50	60	110	130	150	180	360	400	480

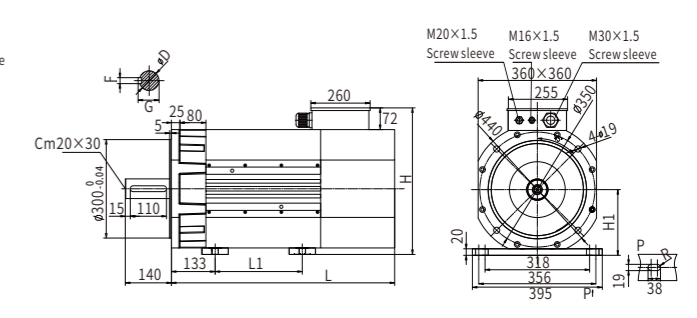
ADAPT DRIVE MODEL	VC-01633*	VC-02733*	VC-03233*	VC-03833*	VC-04533*	VC-06033*	VC-07533*	VC-01233*	VC-01233*	VC-02033*	VC-02733*	VC-03233*	VC-03833*	VC-04533*	VC-06033*	VC-07533*	VC-11033*
RATED CURRENT(A)	16	27	32	38	45	60	75	12	12	20	27	32	38	45	60	75	110
DIMENSIONS	E3	E3	EA	EA	EA	EA	E2	E2	E2	E3	E3	EA	EA	EA	EA	EA	EA

## 265 MC INSTALLATION DIMENSION DIAGRAM



Stile	L	L1	L2	D	F	G
265S	482	133	/	42h5(0/-0.011)	12	45
265M	510	173	/	42h5(0/-0.011)	12	45
265L	545	208	/	42h5(0/-0.013)	16	59
265H	580	243	/	55h5(0/-0.013)	16	59
265E	630	293	/	55h5(0/-0.013)	16	59
265F	700	363	174	55h5(0/-0.013)	16	59

## 350 MC INSTALLATION DIMENSION DIAGRAM



Stile	L	L1	H	H1	D	F	G
360S	713	265	452	200	55h5(0/-0.013)	16	59
360M	763	315	477	225	55h5(0/-0.013)	16	59
360L	813	365	477	225	60h5(0/-0.013)	18	64
360H	873	425	477	225	60h5(0/-0.013)	18	64
360E	943	495	477	225	60h5(0/-0.013)	18	64

## BRAKE RESISTANCE SELECTION TABLE (FOR REFERENCE ONLY)

Current (A)	3	6	12	7	12	16	20	27	32	38	45	60	75	90	110	150
Voltage	220V	220V	220V	380V	380V	380V	380V	380V	380V	380V	380V	380V	380V	380V	380V	380V
resistance (Ω)	180	100	35	80	50	40	25	25	20	20	15	10	10	7	5	4
Resistance power (W)	200	250	780	1200	1500	2400	3200	3200	4500	5500	6600	9000	11000	13000	16000	21000