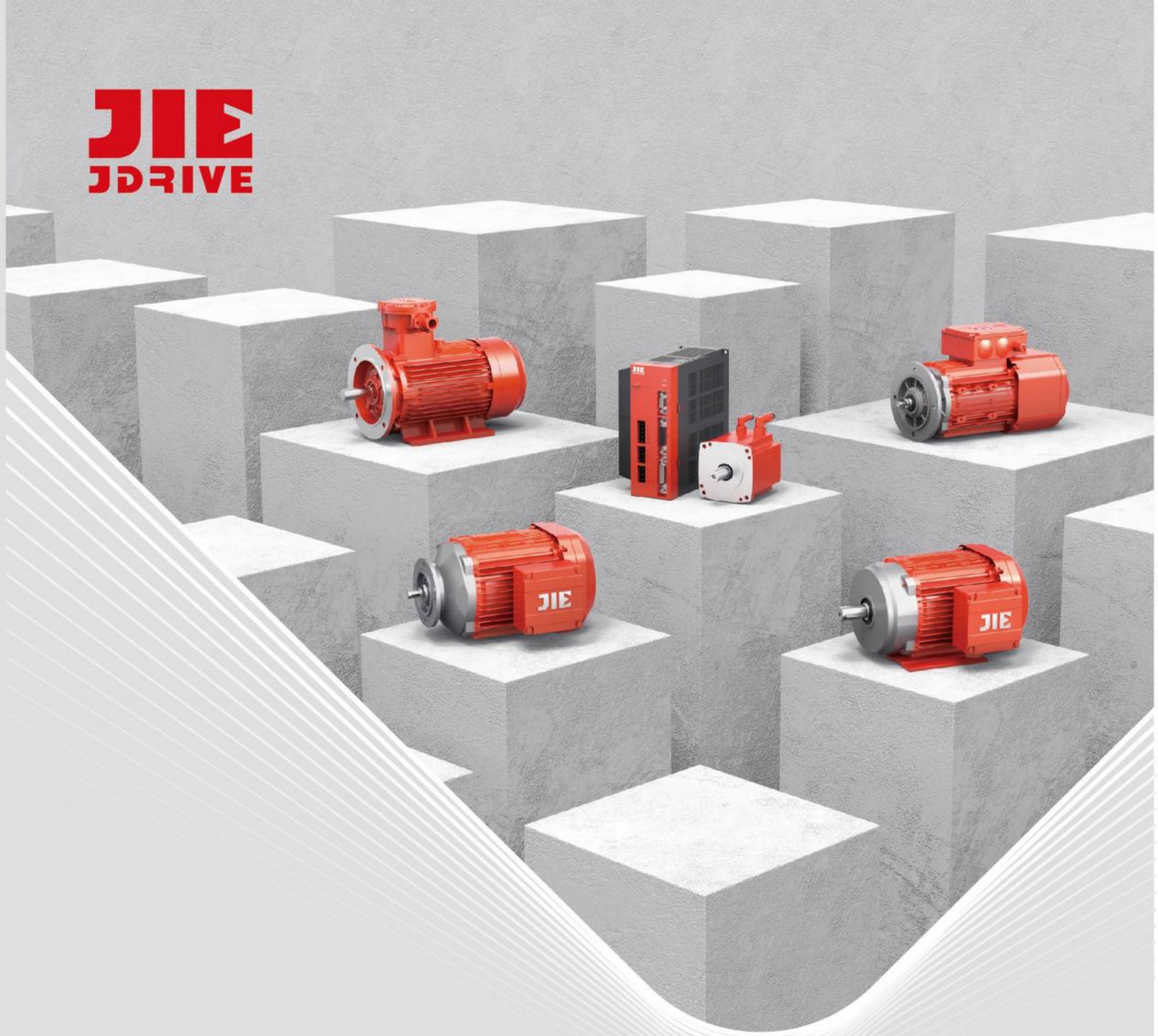
JD High-efficiency Motor Selection Manual



JD High-efficiency Motor

JIE Total Drive Solutions Provider

www.jie-drives.com

JIE JDRIVE

No.1, JIE Road, Hangzhou,
Zhejiang, China
Tel.: +86 571 8299 1111
E-mail: jie@jie.com.cn
Web.: www.jiedrive.com

JIE USA

279 Madsen Drive Ste 101
Bloomingdale IL 60108
Tel.: +1 630 580 9986
E-mail: info@jie-drives.com
Web: www.jie-drives.com

JIE CANADA

130 Rue de l'Émissaire Drummondville,
Québec J2E 1S4 Canada
Tel.: +1 819 850 9886
E-mail: info@jie-drives.com
Web.: www.jie-drives.com

JIE EURONORM

Hub van Doorneweg 8, 2171 KZ
Sassenheim, Netherlands
Tel.: +31 252 228 850
E-mail: info@jie-euronorm.com
Web.: www.jie-euronorm.com

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JIE INTELLIGENT DRIVE SOLUTIONS PROVIDER

CONTENTS

1. Selection Guide

1

Select JIE Drive products

Example: Pick the right model, JD- P motor, JD-IEC motor and JD-NEMA motor.

2

Enter current product brand

Example: JIE Drive or competitors.

3

Enter current product specifications

Example: JD electric motors power 0.12-200kW, poles 2, 4, 6, energy efficiency gradeIE3, IE4, voltage 110-690v, frequency 50Hz, 60Hz, 87Hz, protection level IP55, IP56, insulation grade F, H and other specifications.

4

Generate JIE Drive model and specifications

Example: JDN90L4-P-D160、JDN90L4-IEC-B3、JDN90L4-IEC-B5-E、JDN90L4-NEMA-145TC and other models.

5

Generate 2D/3D drawings of JIE Drive products

Example: 2D-3D drawings of JDN90L4-P-D160、JDN90L4-IEC-B3、JDN90L4-IEC-B5-E、JDN90L4-NEMA-145TC and other models.

6

Confirm the technical quality standard

Example: The technical and quality standards shall be implemented according to the relevant standards of JIE Drive and the standards agreed by both parties. The warranty period shall be 12 months after start using products or 18 months after shipment from JIE whichever comes earlier.

7

Confirm delivery standard

Example: Delivery shall be made according to the time agreed by both parties for the first cooperation; 7 days lead time base on 1+3 rolling plan, including total usage, annual usage, monthly usage, batch usage and sample; confirmation of pre-sales service, in-sales service, after-sales service and pre-order management.

8

Confirm the settlement price standard

Example: The order comes into effective after 30% deposition received and products will be delivered after balance payment; price shall be subject to agreed upon both parties.

9

Confirm order information

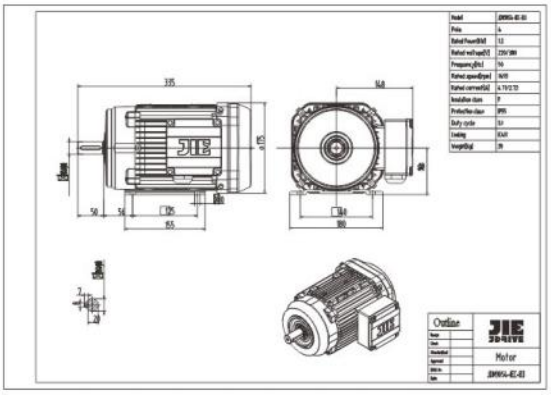
Example: Confirm product type, model, specification, order quantity, color, packaging, transportation, P.O issue time, delivery time, delivery location, receiving company and other order information.

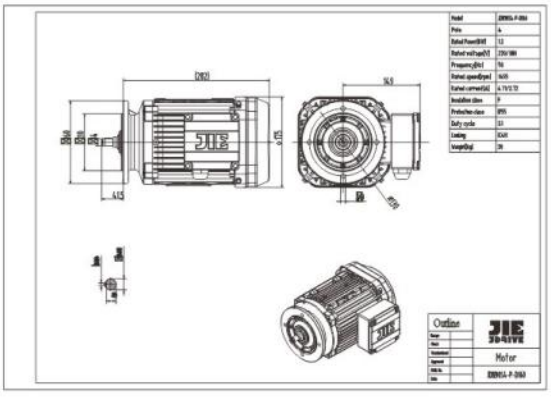
10

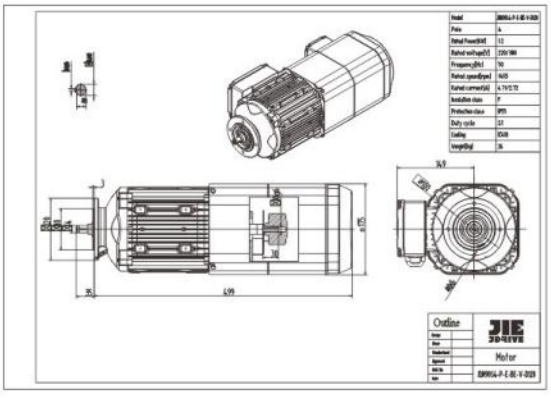
Confirm product delivery information

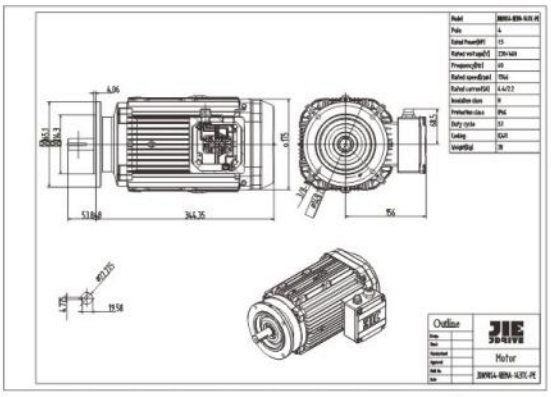
Example: Confirm prototype delivery, small batch delivery, batch delivery and other delivery information.

5. Generate 2D/3D drawing of JIE products

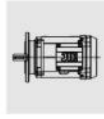








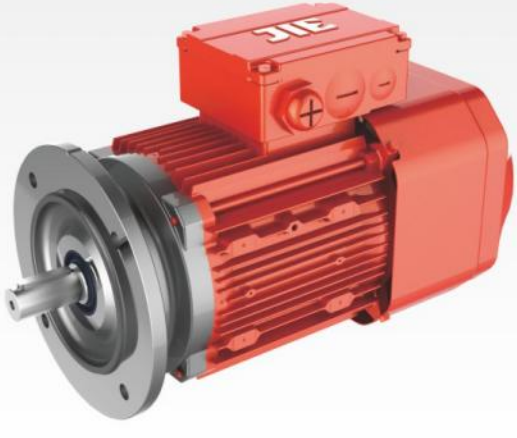
2. Product Pictures



JD..-E

JD..-P

JD..-BE



Others

3. Product Description

JD High-efficiency Motors with independent intellectual property rights. It has beautiful appearance, featured with low noise and light weight, which is intelligent and fast in delivery. It includes IEC standard motor,Brake motor,Frequency control motor and NEMA standard motor.

JD High-efficiency Motors promotes lean production, builds intelligent factories, and realizes the integration of research, production, supply, marketing and service, so as to meet customers' demand for rapid response through complete product planning and design such as "core product-extreme technology, peripheral product-extreme service, external product-extreme experience" and the implementation of the optimal plan of lean production in the whole value chain such as "product planning, design validation, processing test, assembly test, warehouse logistics, sales service, information system, HR, operation plan, strategy planning".

JD High-efficiency Motors follows the concept of modular and optimized design. The whole-series product includes B3, B5, B35 and B14 installation types. At the same time, it supports the modular combination and integration of independent fan, brake, backstop, encoder, inverter, with standard painting color RAL7031 & packed based on order by recyclable materials.

And available for customized base on customer requirement.

JIE is committed to providing great products for great partners across the world, JIE Intelligent Drive Solutions Provider.

1. Characteristic Features

The motor power listed in the selection table is for selection .However, the output torque corresponding to the required output speed is indispensable in application and must be checked.

Speed

The output speed of the motor marked is a reference value. The actual output speed is related to the motor load and power supply conditions.

Ventilation

The installation in the axial and radial should have enough spaces to facilitate the flow of air and maintenance. Please refer to the remarks in the motor dimensions.

Brake Motor

According to the requirements of JIE motor integrate mechanical brake.Please refer to the JIE brake and its accessories manual.

Frequency Control

JDN/JDU motor can be controlled by inverter.

2. Model Description

JDN90L4-IEC-B3-0°-N-BE-TF-TH-U-RS-Z-C-V-E-STH-RI-2WE-DH-PE

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

1 Enterprise code
J-JIE Drive

2 Product code
D-Motor

3 Energy efficieny index
N-level3 (IE3)
U-level2 (IE4)

4 Frame sizes
63-315

5 Core length
S-Short M-Medium
L-Long H-High

6 Poles
2、4、6 poles

7 Mounting positions
P-Reduction motor
IEC-IEC motor
NEMA-NEMA motor

8 Installation method
B3-IMB3 B5-IMB5
B14-IMB14
B35-IMB35etc

9 Terminal box position
0° 90°
180° 270°

10 Cable interface position
N、①、②、③

11 Attachment information (No sequence)
BE- Brake TF-Temperature TH-Thermostat protection device
PT-Temperature sensors U-Non-ventilated(No fan) RS-Backstop
Z-Additional flywheel C-Protection cowl V-Forced cooling fan
E-Encoder STH-Electric heating RI-Reinforced insulation
DH-Condensation drain holes 2WE-Rear shaft of the motor

12 NEMA Premium
PE—NEMA Premium energy efficiency motor

NEMA Premium The nameplate and model description comply with the regulations of the People's	CE Republic of China for small equipment. It is used to confirm UL (Underwriters Laboratory) validation of registered components and meets European standards	such as low-pressure standards.

3. Model Description

Energy efficiency

Table 1

Type	Description
JDN63S-315H	IEC60034-IE3
JDU63S-315H	IEC60034-IE4

Mounting arrangement

Table 2

Type	Description
B3	IEC ground mounting motor (when the power level design does' t meet the IEC standard should describe the height of the center)
B5	IEC flange mounting motor light hole connection
B14	IEC flange mounting motor threaded hole connection
B35	IEC flange (light hole connection) to the foot installation(when the power level design does' t meet the IEC standard should describe the height of the center)

Note: Please refer to the motor size table for specific dimensions

Brake

Table 3

Type	Description
BE	Brake
HR	Handle release
HF	Screw release

Temperature sensor / temperature detection

Table 4

Type	Description
TF	Temperature sensor (PTC thermistor protection)
TH	Thermostat protection device (bimetal switch)
PT	One or three PT100 sensors

Encoder

Table 5

Type	Description
E	RS422 (With reverse signal) 5VDCpowered by RS422 (With reverse signal) 10-30VDC powered by HTL (With reverse signal) 10-30VDC powered by HTL (No reverse signal) 10-30VDC powered by NPN 10-30VDC powered by

Note: If you have any other requirements, please contact JIE

Cooling

JD electric motors

Table 6

Type	Description
V	Forced cooling fan
U	Non-ventilated(No fan)

Note:If there is no special cooling requirement, type of cooling is fan-cooled(IC411)

Other options

Table 7

Type	Description
RI	Reinforced insulation
STH	Electric Heating
DH	Condensation drain holes
RS	Backstop
2WE	Rear shaft of the motor
C	Protection cowl
Z	Additional flywheel

Mounting arrangement instructions

The mounting types of motor are made follow IM B3、IM B6、
IM B7、IM B8、IM B14、IM B35、IM B34、IM B65、IM B75、IM B85、IM V1、IM V15、IM V5、IM V6 and M V36 .

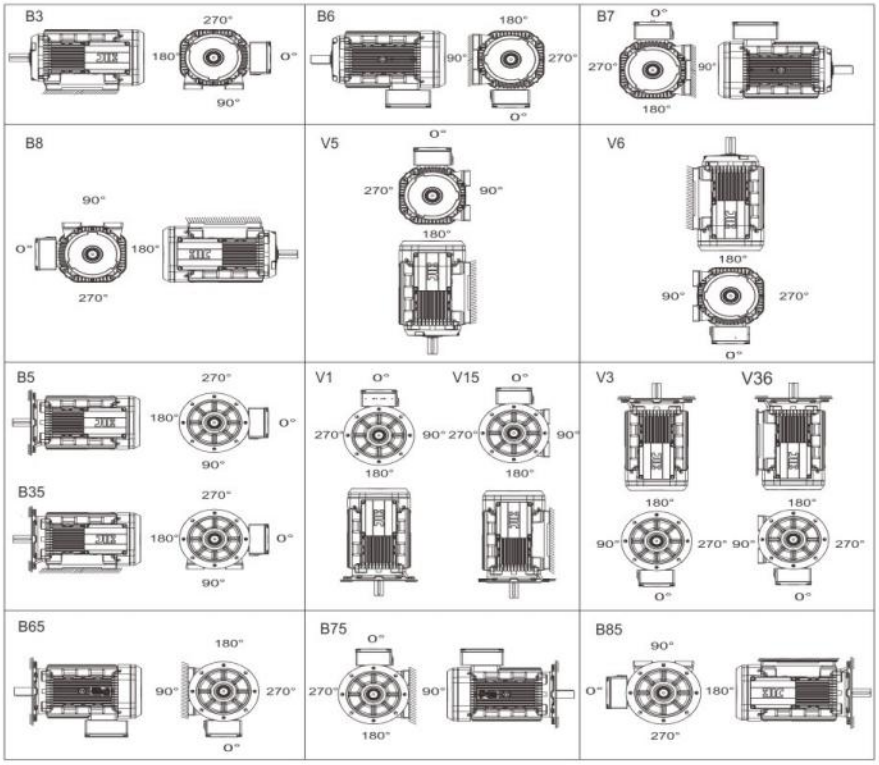


Chart 1

JD electric motors terminal box and cable interface position, the motor feet installation doesn't have the 90 ° position. Please specify the location of motor terminal box and cable interface .

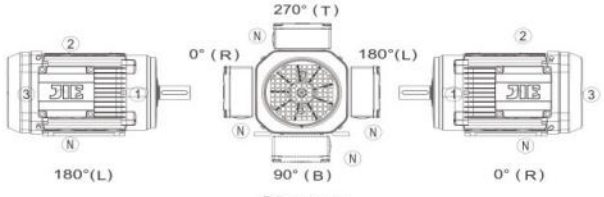


Chart 2

4. Product Structure

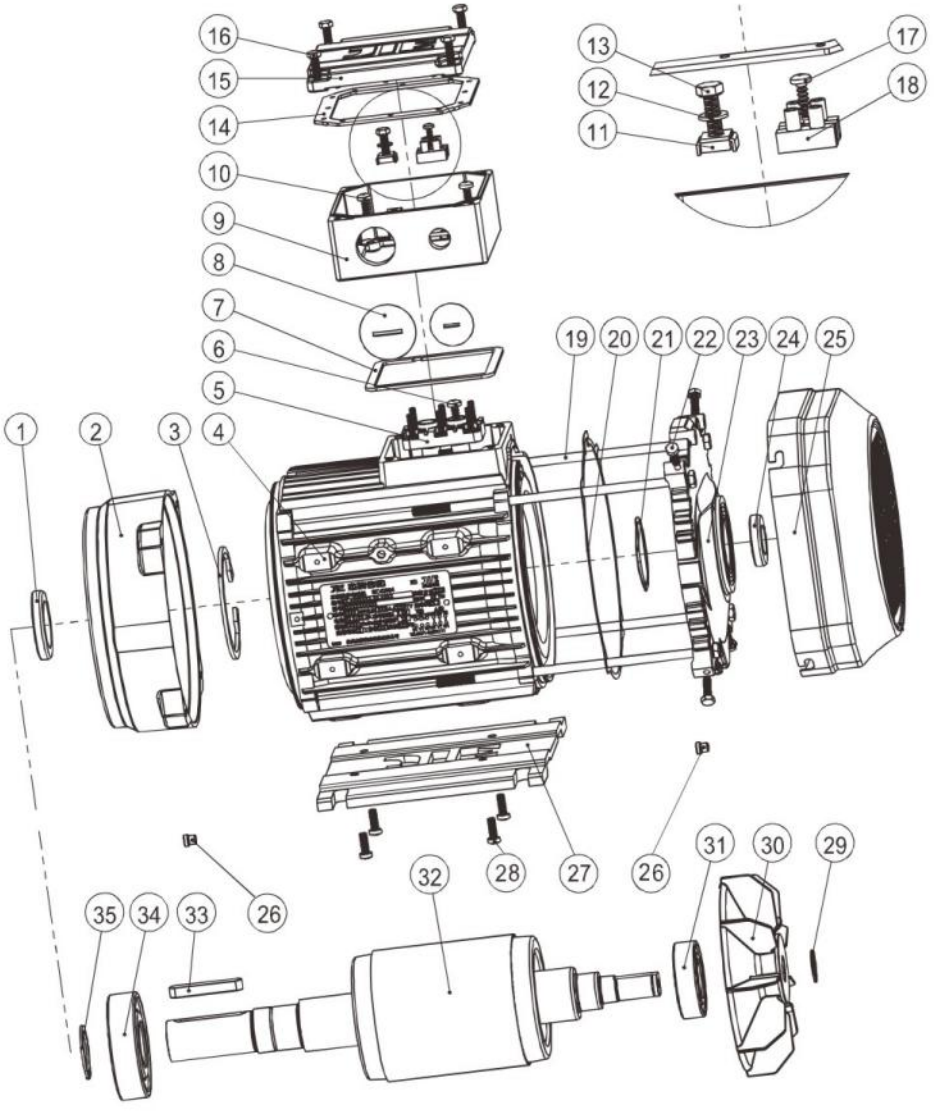


Chart 3

1.Oil seal	8.Hole cover of outley	15.Bolt	22.Bolt	29.Shaft with a collar
2.A endshield	9.Terminal box base	16.Terminal box lid	23.Rear endshield	30.Fan
3.Circlips for holes	10.Screw	17.Screw	24.Oil seal	31.Bearing
4.Stator	11.Ground card	18.Wiring row	25.Fan cowl	32.Rotor
5.Terminal board	12.Washer	19.Bolt	26.Sealing plug	33.Key
6.Screw	13.Bolt	20.Gasket	27.Feet	34.Bearing
7.Gasket	14.Gasket	21.Wave washer	28.Screw	35.Shaft with a collar

5.Selection Table of JIE JD Products

Conditions of use:

Application industry: Equipment name:

Ambient temperature: Ambient humidity:

Altitude: Site of use: ☐indoor ☐outdoor

Start-stop frequency: Running time:

Load time: ☐15% ☐25% ☐40% ☐60% ☐75% ☐100%

Current brand: Current model:

Existing problem: Items needing improvement:

Product information:

Packaging:

Packaging material: ☐Carton ☐Wooden case ☐Carton + Wooden case Case mark: ☐Chinese ☐English

Relevant data: ☐Certificate of conformity ☐Ex-factory inspection report ☐Chinese operating instruction ☐English operating instruction

List of accessories: ☐Backstop ☐Hollow shaft encoder ES ☐Solid shaft encoder EV ☐ Thermistor TF ☐Thermal protection switch TH ☐Platinum thermal resistance PT100 ☐Rain cover C ☐Electric heating tape STH

Appearance:

Paint color: ☐JMR-01 ☐JMG-01 ☐JGB-01 ☐RAL2002 ☐RAL5015 ☐RAL9003 ☐RAL7045 ☐RAL7031

Nameplate requirement: ☐Chinese ☐English Anti-corrosive grade: ☐Standard ☐JS1 ☐JS2 ☐JS3 ☐JS4

Installation:

Motor Type: ☐Normal☐ Frequency ☐Braking ☐Frequency &braking Type of installation: ☐B3 ☐B5 ☐B35 ☐B14

Terminal box angle: ☐0°☐90°☐180° ☐270° (see attached figure) Cable entry: ☐N ☐1 ☐2 ☐3 (see attached figure)

Performance:

Rated power: kW Pole number: ☐2 ☐4 ☐6 ☐8

Rated voltage: ☐230/460V ☐573V Motor frequency: ☐60Hz

Insulation grade: ☐F ☐H Protection grade: ☐IP54 ☐IP55 ☐IP56

Working system: ☐S1 ☐S3-40% ☐S3-75% Cooling mode: ☐IC410 ☐IC411 ☐IC416

Energy efficiency class: ☐ IE3 ☐ IE4 ☐ NEMA High EFF. ☐ NEMA Premium EFF.

Fan voltage: ☐DC 24V ☐AC 230V（1～） ☐AC 460V（3～） ☐AC 575V（3～）

Fan frequency: ☐60Hz

Braking voltage: ☐DC24V ☐AC230V ☐AC330V ☐AC460V ☐AC575V

Release device: ☐ Handle release HR ☐ Screw release HF ☐ None brake response: ☐ Ordinary ☐ Fast

Angle between release device and terminal box (clockwise from the end of shaft extension) : ☐0°☐90°☐180° ☐270° (see attached figure)

Product model: _____

Customized information:

Packing category:

Appearance class:

Installation dimension:

Performance indicators:

After-sales service:

Service information:

Pre-sales service:

Training consulting: ☐ Type selection training ☐ Application training ☐ Use and maintenance

Design selection: ☐ Participate in design ☐ Design verification ☐ Product selection

Demand confirmation: ☐ Working condition confirmation ☐ Product confirmation ☐ Service confirmation

In-sales service: ☐ On-site full inspection ☐ Process sampling ☐ Ex-factory inspection

After-sales service: ☐ Installation and commissioning☐ Testing and maintenance ☐ Spare parts

Business information:

Transportation:

Delivery place:

Delivery time:

Order quantity:

Settlement price:

Attached figure:

Terminal box angle:

Out of line position:

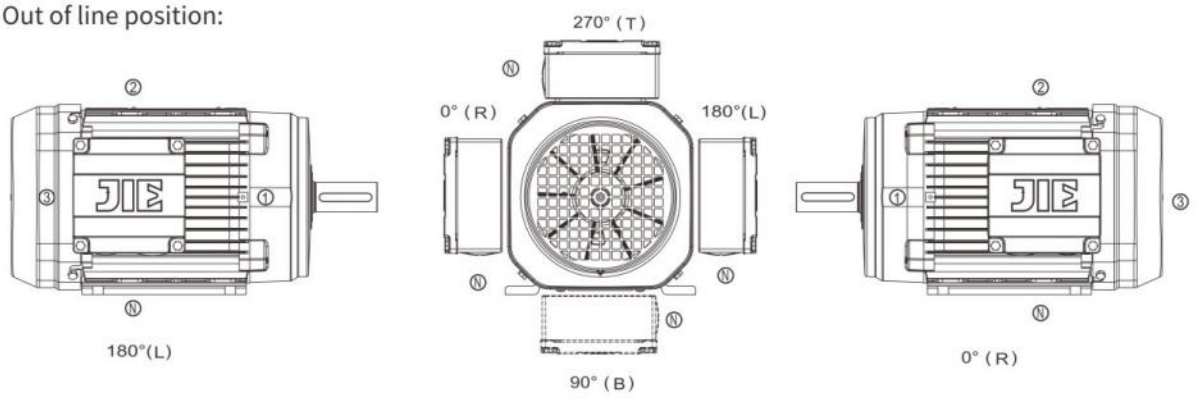


Chart 4

2. Standards and Regulations

Execution standard

IEC 60034-1 EN 60034-1
Rotating motor quota and performance
IEC 60034-2-1 EN 60034-1

Standard Method for Determining Rotor Motor Loss and Efficiency by Rotating Motor
IEC 60034-9 EN 60034-9
Rotating motor noise limits
IEC60034-14 EN60034-14
Rotating motor vibration standard
IEC 60034-30
Rotary motor efficiency pole IE3、IE4
EN60529、IEC60034-5、EN60034-5
Degree of IP protection

Rated data

Three-phase asynchronous motor specific data

- Type
- Rated Output
- Cyclic Duration Factor
- Rated Speed
- Rated Current
- Rated Voltage
- Cos/Power Factor
- Degree of Protection
- Insulation Class
- Efficiency

The above datas are marked on the motor nameplate. According to IEC 60034 (EN 60034) this nameplate data is for ambient temperatures up to 40°C and elevations up to 1000 m above sea level.

JD electric motors nameplate | Example

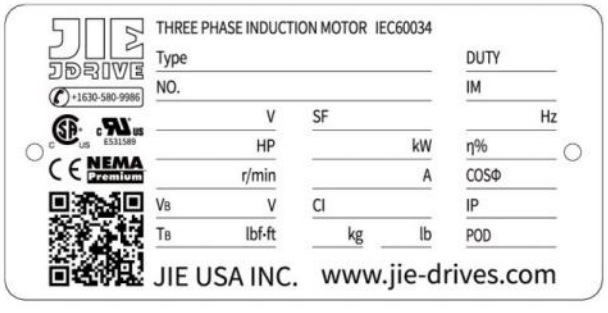


Chart 5

Deviation

According the IEC60034(EN60034) with the rated voltage(or range of rated voltage),the deviation of motor's performance is as:

Table 8

serial number	Electrical performance name	Tolerance
1	Efficiency The rated power is 132kW and lower The rated power is over 132kW	$-0.15\ (1-\eta)$ $-0.10\ (1-\eta)$
2	Power factor $\cos\Phi$	$-\ (1-\cos\Phi)\ /6$
3	Slip $P_N \geqslant 1kW$	±30% ±20%
4	Locked rotor torque	Protection value – 15%
5	Maximum torque	Protection value – 10%
6	Locked rotor current multiple	Protection value + 20%
7	Mass moment of inertia	± 10%

Deviation A, Deviation B

The bounds of allowable deviation characterized in the Deviations A zones and B zones are the bounds when frequencies and voltages are allowed to deviate from their respective fixed points, please refer to the following figure. The origin "0" is regarded as the respective fixed point of frequency and voltage

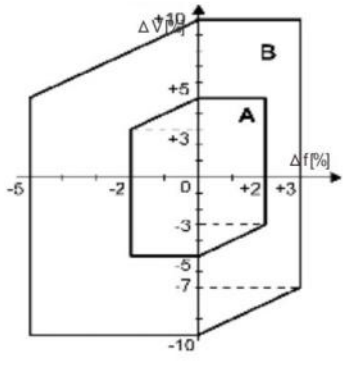


Chart 6

In the range of deviation A, the motor must output rated torque in the continuous working (S1) . Other characteristic value and temperature rise with the rated frequency, the voltage value have the slight deviation. The motor can output the rated torque in the discontinuous working in the range of B. when the deviation of temperature rises and the rated parameter is higher than A ,the motor should avoid to run in the range of deviation B.

Undervoltage

If there is an undervoltage or improper voltage, the motor power, torque and rotational speed parameters may not reach the values listed in the sample book,especially when the motor is started, the starting current is several times than the rated current.

3. Electrical Performance

Apply to converter fed control.

JD series AC (brake) motors adapt high performance winding as standard configuration for the frequency conversion control.

Frequency

According to the requirement, JIE motors are designed for 50Hz or 60Hz. 60Hz is the standard design. In the motor parameter table , some special JDN and JDU motor can work on the 50Hz and 60Hz.
One type motor can be used universally in the area with different electricity regulation.
The different countries' different minimum efficiency grade regulations can be realized with an ideal method. About these special motors, please contact to JIE.

Motor voltage

Standard motor and high efficiency motor can match rated voltage range : 220V–690V
Remark: the application range of motor voltage is within the ±5%.

Forced cooling fan

Table 9

Power type	Power voltage	Power frequency
Three phase	200–254△–346–440Y VAC	50/60Hz
Single phase	200–240 VAC	50/60Hz

When the fan work on the wide voltage, the voltage fluctuates within ±5%.The air flow is not lower than 5% of the data in the table.
The IP grade of fan is IP55
The insulation grade is F, the winding temperature can't rise over 80K (electric–resistivity method)
The coil of fan motor will not be broke down withstanding 1 minute breakdown test to the ground, the test frequency is 50Hz, the actual waveform is sine wave, and the voltage effective value is 1000 2UN (V),(UN: the rated voltage of fan)
Insulation resistance of the fan motor winding to the cover will not be lower than 20M in the normal temperature

Brake data

Table 10

Brake voltage	The motor power is lower than 4kW: 230V 1~
	The motor power is over 4kW (include 4 kw) :460V 1~
Mode of rectification	Full wave rectification when braking voltage is 110VAC–240VAC
	Half wave rectification when the brake voltage is 241VAC–575VAC
Release mode	HR(handle release)HF(screws release)

Insulation resistance

According to the IEC60034-1 temperature rise classification.

All three phase asynchronous motors are based on the insulation level 155(F) as the design standard,and can also be compliant to requirements of the insulation class 180(H).The following table lists the temperature rise in accordance with the requirements of IEC62114 and IEC60034.

Table 12

Insulation class		Temperature limit [K]
New	Old	
155	F	105K
180	H	125K

Power Reduction

The rated power of the motor P depends on the ambient temperature and installation elevation. The normal rated power on the nameplate is measured with condition below 1000m above sea level and the temperature less than 40 degrees. If the ambient temperature is higher or the installation elevation is higher, the motor rated power will be reduced accordingly.

$$P_{Nred} = P_N \times f_T \times f_H$$

AC motor

The following table shows the power regulation variation caused by changes in ambient temperature and altitude. Tables for AC motors are listed in the coefficients and the definition of work in IEC60034 is as follows:

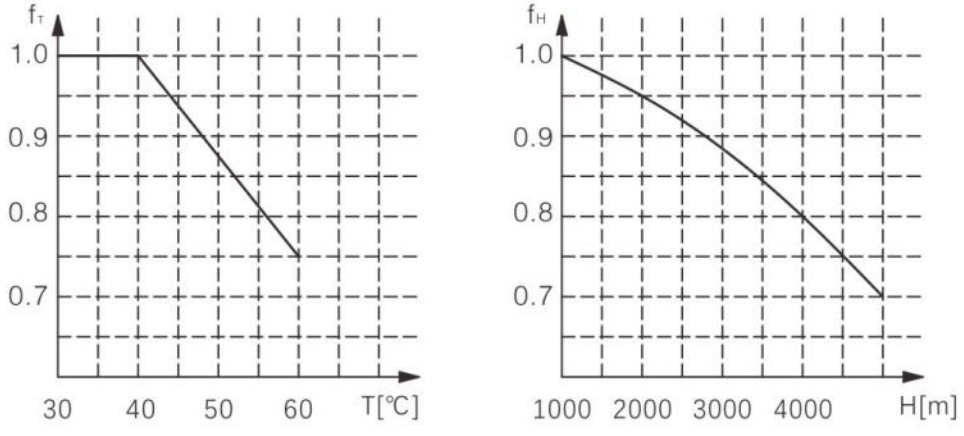


Chart 7

T=Ambient temperature
H=Altitude

Duty cycle

IEC 60034-1（EN 60034-1）：

Table 13

Duty cycle	Annotations
S1	Continuous Duty cycle: Stable operation under constant load.
S2	Short-time Duty cycle: The motor operates in a limited period of time and then stops until the motor returns to the ambient temperature.
S3	Intermittent working system: Motor start-up process has no effect on temperature rise. Each cycle consists of a constant load time and a stop time, expressed in cdf%
S4-S10	Intermittent working system: The starting process of motor has influence on temperature rise. The motor operates in a series of identical operating cycles. Each cycle includes a period of constant load and stop time, expressed in cdf%

	Remark
	For the inverter control S1, the operating system is usually assumed. For numerous cycle per hour of the working conditions, it must be in accordance with the S9 cycle system.

The following figures show the duty cycles of S1, S2 and S3.

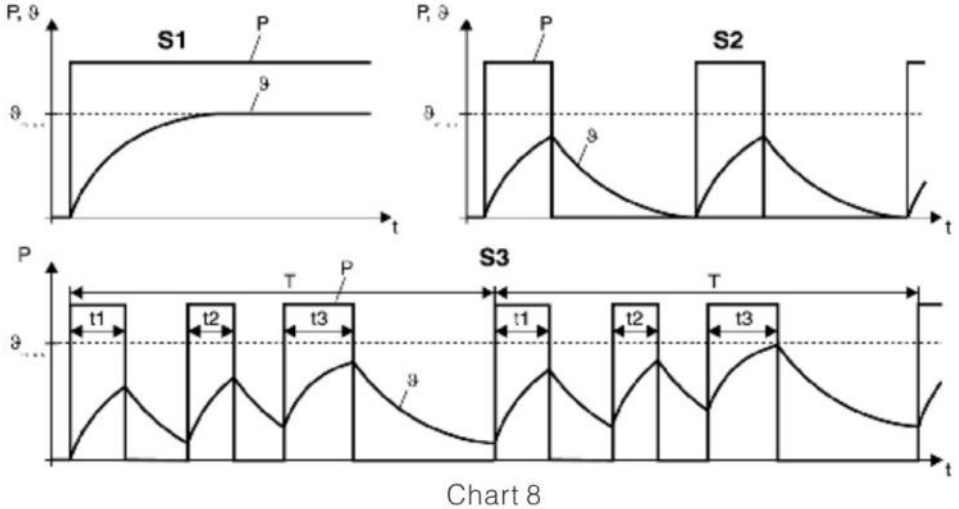


Chart 8

Cyclic Duration factor(CDF)

It is ratio of cyclic duration factor and working cycle time .The duty cycle time is the run time plus the no-coltuge intermittent time.Typical working cycle time is ten mimutes.

$$CDF=\frac{\text{Sum of the operation hours } (t1+t2+t3)}{\text{working cycle time } (T)}\times 100[\%]$$

Power growth coefficient K

According to IEC60034 (EN60034) the motor power rating is only applicable to S1 (CDF) 100% unless there are special provisions. If the motor that designed according to S1 working system (100% CDF) wants to run under S2 "Short-time duty operation "or "S3 cycle operating duty", the output power should be the product of the rated power and power growth series coefficient K.

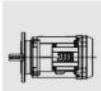
Table 14

Duty cycle			Power growth coefficient K
S2	Working time	60 min 30 min 10 min	1.1 1.2 1.4
S3	Cyclic duration factor	60% 40% 25% 15%	1.1 1.15 1.3 1.4
S4-S10	In order to determine the rated power and work system, it should give out start-stop times and ways, starting time, load time, brake type, braking time, idle time, cycle time, intermittent time and required power in per hour.		According to the request

When encounter big reverse torque and high moment of inertia (high inertia starting), please contact JIE for accurate technical data.

Start frequency

Usually motor is designed according to the thermal load, in many cases the motor according to S1 work system (S1 = continuously work system= 100%CDF).Power should be calculated according to the load torque should be equal to the rated power of the motor.



High frequency starting

Often use high frequency starting drive equipment such as: walking drive equipment. Under this circumstance, the decisive factor of choosing the motor is the starting times, not the required power .Every time the motor with a high starting current leads to temperature rise too high. If the heat generated by the motor emission of heat winding is greater than the ventilation system , it will overheat and damage . Under thermal load capacity can provide motor through selecting proper insulation class or using the forced air cooling fan.

No-load start frequency Z_0

JIE stipulate allowable start frequency of the motor is 50% the CDF (duty cycle) at the time of the no-load speed start frequency Z_0, Z_0 said at 50% CDF and without anti-torque the allowance times of motor moment of inertia of the rotor speed from to the number of rotation per hour. Speed up to see if there are additional rotational inertia or there is an additional load torque of the motor starting time will increase. This suggests that due to the heat load the motor allows less starting frequency.

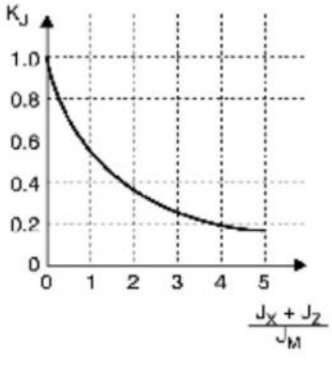
Motor allowable starting frequency Z

Motor allowable starting frequency Z can use the following formula (start-stop times/h)

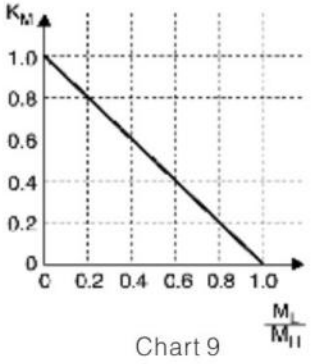
$Z = Z_0 \times K_J \times K_M \times K_P$

The coefficients K_J K_M and K_P refer to the following figure:

Additional moment of inertia function



Accelerated reverse torque



Static power and load endurance

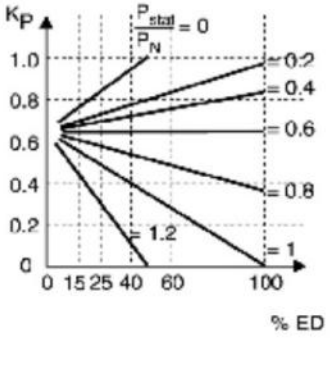


Chart 9

J_X=Additional moment of inertia function

J_Z=The rotational inertia of the flywheel fan

J_m=Momet of Inertia

M_L=Accelerated reverse torque

M_H=Motor speed torque

P_{stat}=Static power

P_N=The motor rated power

%CDF=Cyclic duration factor

For example

Brake motor JDN71M4/BE

No-load starting frequency Z_0=11000 h^{-1}

1.$(Jx+Jz)/J_M$=3.5 K_J=0.2

2.M_L/M_H=0.6 K_M=0.4

3.P_{STAT}/P_N=0.6和60% cdf K_P=0.65

$Z=Z_0 \times K_J \times K_M \times K_P = 11000h^{-1} \times 0.2 \times 0.4 \times 0.65 = 572h^{-1}$

Cycle is 6.3s operation time is 3.8s

Motor allowable starting frequency

If you are using a brake motor, you must check whether the brake can be used in the requirements or not under the start frequency

4. JD electric motors Protective Device

Start-stop operation

If the motor is in start–stop operation, it must take appropriate Anti–interference measures

Motor protection

Right rotating protection device is an important factor to ensure the safe operation of the motor. Motor protection and motor temperature protection are different, as the motor protection device comprises a fuse or a motor circuit breaker. The temperature protection device comprises a PTC thermistor or a bimetal switch in the winding(thermostats). When the maximum permissible temperature of the winding is reached, the PTC thermistor or bimetal switch will act. It is characterized by the direct detection of the set temperature.

Motor protective switch

Usually the motor can provide sufficient overload protection when the starting frequency is low and the starting time is short and the starting current is small. Motor short circuit is generally set in the motor rated current value. It is not enough to rely solely on the motor circuit breaker to provide protection at the starting frequency (>60 / h) and the high starting inertia. In this case, we recommend the use of (PTC) thermistor protection TF.

TF PTC Thermistor

3 (PTC) thermistor TF (PTC characteristic curve see DIN 44080) series are connected in the motor and from the junction box connected to the input of the inverter TF/TH or switch cabinet on the relay. With (PTC) thermistor protection for the motor to provide full protection against overheating. The motor can be used for high inertia starting braking operation and unstable power supply system. Usually motor circuit breaker and TF work together. When using the inverter control JIE recommend motor installed on the TF.

TH bimetallic protection switch

The three bimetallic switch sheets TH are connected in series within the motor windings and directly from the wiring to the motor detection circuit.

Trigger temperature

The thermal protection of the motor is realized by burying the TF thermistor or TH bimetal switch in the motor winding. The trigger temperature is a little lower than the highest temperature of the motor insulation grade. The trigger temperature of TF thermistor and TH bimetal switch is as follows:

Table 15

Insulation Level	Trigger temperature Rated response time of TF TH rated switching temperature JDN、JDU
155(F)	150℃
180(H)	170℃

Safe conversion of inductive winding

Note the following inductive conversion

Low speed motor winding conversion

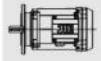
If the cable is not suitable wiring，peak voltage will happen during the low speed motor winding conversion. This peak voltage can damage the windings and contacts. In order to avoid this situation, the connecting wire can be connected with the varistor.

Brake coil switch

Disc brake DC circuit switch can produce over voltage，It must be used to eliminate this hazard. The standard configuration of the JIE brake control system includes a varistor.

Protection circuit for switching device

In order to protect the digital or program logic controller, the motor winding must suppress the electromagnetic interference. It is recommended that the protective circuit should be installed on the switchgear to avoid damage to the electronic equipment.



Frequency control

According to the installation instructions provided by the frequency converter manufacturer for frequency conversion operation。

Frequency conversion motor controlled by frequency converter

Brake motor cable wiring should be separated from other power cables and maintained at least 200mm distance. Common wiring is allowed unless the brake cable or power cable is shielded.

Inverter control the speed of the connection

In conjunction with the speedometer,

- Please follow the instructions below.
- Both ends of the shield are connected to the PE point through a large contact surface.
- The signal cable wiring should be separated from the power cable or the brake cable (the shortest distance is 200mm).

The connection of thermistor protector (TF) under the control of frequency converter

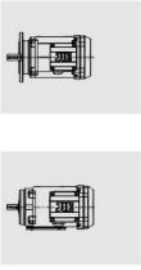
The connection cable wiring of the PTC thermistor protector TF shall be separated from the power cable and maintained at least 200mm distance. Common wiring is not allowed unless the TF connection cable and the power band shield.

6.Electrical parameters

IE3 JDN.. IEC motors,230/460V,575V,60Hz,2–pole,duty type S1

Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDN63S2	0.25	0.18	3270	65.6	0.78	0.88	0.44	0.35	13.2
JDN63M2	0.33	0.25	3306	69.5	0.81	1.11	0.56	0.45	15.0
JDN71S2	0.5	0.37	3372	73.4	0.78	1.62	0.81	0.65	17.2
JDN71M2	0.75	0.55	3390	76.8	0.81	2.22	1.11	0.89	20.7
JDN80S2	1	0.75	3426	77.0	0.82	2.98	1.49	1.19	27.1
JDN80M2	1.5	1.1	3432	84.0	0.83	3.96	1.98	1.58	33.0
JDN90S2	2	1.5	3463	85.5	0.83	5.31	2.65	2.12	43.6
JDN90L2	3	2.2	3486	86.5	0.85	7.51	3.76	3.00	51.0
JDN100L2	4	3	3492	86.5	0.85	10.24	5.12	4.10	72.6
JDN112M2	5	3.7	3540	88.5	0.86	12.2	6.1	4.9	104
JDN132S2	7.5	5.5	3522	89.5	0.87	17.7	8.9	7.1	114
JDN132M2	10	7.5	3522	90.2	0.85	24.6	12.3	9.8	119
JDN160M2	15	11	3534	91.0	0.89	34.1	17.0	13.6	253
JDN160L2	20	15	3534	91.0	0.89	46.5	23.2	18.6	257
JDN160H2	25	18.5	3528	91.7	0.89	56.9	28.5	22.8	286
JDN180M2	30	22	3546	91.7	0.89	67.7	33.8	27.1	341
JDN200L2	40	30	3552	92.4	0.89	91.6	45.8	36.6	616
JDN200H2	50	37	3552	93.0	0.89	112.2	56.1	44.9	623
JDN225M2	60	45	3558	93.6	0.90	134.1	67.0	53.6	1012
JDN250M2	75	55	3564	93.6	0.90	163.9	81.9	65.6	1201
JDN280S2	100	75	3570	94.1	0.90	222.3	111.2	88.9	1386
JDN280M2	125	90	3570	95.0	0.90	264.2	132.1	105.7	1973
JDN315S2	150	110	3570	95.0	0.90	323.0	161.5	129.2	2264
JDN315L2	200	150	3570	95.4	0.90	438.5	219.3	175.4	2332

IE3 JDN.. IEC motors,230/460V,575V,60Hz,4–pole,duty type S1



Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDN63S4	0.16	0.12	1668	66.0	0.65	0.71	0.35	0.28	13.2
JDN63M4	0.25	0.18	1674	69.5	0.65	1.01	0.50	0.40	15.0
JDN71S4	0.33	0.25	1692	73.4	0.66	1.30	0.65	0.52	17.2
JDN71M4	0.5	0.37	1698	78.2	0.66	1.80	0.90	0.72	20.7
JDN80S4	0.75	0.55	1734	81.1	0.75	2.28	1.14	0.91	27.1
JDN80M4	1	0.75	1740	83.5	0.74	3.07	1.53	1.23	33.0
JDN90S4	1.5	1.1	1746	86.5	0.73	4.37	2.19	1.75	43.6
JDN90L4	2	1.5	1740	86.5	0.74	5.88	2.94	2.35	51.0
JDN100S4	3	2.2	1740	89.5	0.77	8.03	4.02	3.21	60.7
JDN100L4	4	3	1746	89.5	0.80	10.52	5.26	4.21	72.6
JDN112M4	5	3.7	1752	89.5	0.79	13.1	6.6	5.2	104
JDN132S4	7.5	5.5	1752	91.7	0.80	18.8	9.4	7.5	114
JDN132M4	10	7.5	1758	91.7	0.82	24.9	12.5	10.0	194
JDN132L4	12.5	9.2	1764	91.7	0.81	31.1	15.6	12.5	201
JDN160M4	15	11	1764	92.4	0.84	35.6	17.8	14.2	266
JDN160L4	20	15	1770	93.0	0.84	48.0	24.0	19.2	312
JDN180M4	25	18.5	1770	93.6	0.83	59.7	29.9	23.9	398
JDN180L4	30	22	1770	93.6	0.82	71.6	35.8	28.6	460
JDN200L4	40	30	1776	94.1	0.84	95.0	47.5	38.0	627
JDN225S4	50	37	1776	94.5	0.83	118.2	59.1	47.3	722
JDN225M4	60	45	1776	95.0	0.84	141.1	70.6	56.5	799
JDN250M4	75	55	1776	95.4	0.85	170.3	85.1	68.1	972
JDN280S4	100	75	1776	95.4	0.86	229.5	114.7	91.8	1252
JDN280M4	125	90	1776	95.4	0.86	275.4	137.7	110.1	1406
JDN315S4	150	110	1782	95.8	0.87	331.3	165.6	132.5	2066
JDN315L4	200	150	1782	96.2	0.87	449.9	224.9	180.0	2477

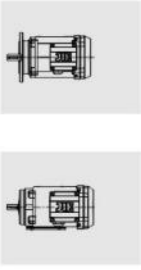
IE3 JDN.. IEC motors,230/460V,575V,60Hz,6–pole,duty type S1

Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDN71S6	0.25	0.18	1098	67.5	0.69	0.97	0.49	0.39	17.2
JDN71M6	0.33	0.25	1098	71.4	0.68	1.29	0.65	0.52	20.7
JDN80M6	0.5	0.37	1122	75.3	0.68	1.81	0.91	0.73	33.0
JDN90S6	0.75	0.55	1158	81.7	0.65	2.60	1.30	1.04	43.6
JDN90M6	1	0.75	1146	82.5	0.68	3.36	1.68	1.34	43.6
JDN90L6	1.5	1.1	1146	87.5	0.67	4.71	2.36	1.88	51.0
JDN100L6	2	1.5	1152	88.5	0.63	6.75	3.38	2.70	72.6
JDN112M6	3	2.2	1164	89.5	0.66	9.35	4.67	3.74	104
JDN132S6	4	3	1164	89.5	0.66	12.75	6.37	5.10	114
JDN132M6	5	3.7	1164	89.5	0.67	15.5	7.7	6.2	128
JDN132L6	7.5	5.5	1170	91.0	0.64	23.7	11.9	9.5	201
JDN160M6	10	7.5	1170	91.0	0.74	28.0	14.0	11.2	253
JDN160L6	15	11	1170	91.7	0.80	37.6	18.8	15.1	290
JDN180L6	20	15	1170	91.7	0.81	50.7	25.3	20.3	433
JDN200L6	25	18.5	1176	93.0	0.81	61.6	30.8	24.7	616
JDN200H6	30	22	1176	93.0	0.81	73.3	36.7	29.3	649
JDN225M6	40	30	1176	94.1	0.83	96.4	48.2	38.6	682
JDN250M6	50	37	1182	94.1	0.84	117.5	58.8	47.0	1012
JDN280S6	60	45	1182	94.5	0.85	140.6	70.3	56.3	1144
JDN280M6	75	55	1182	94.5	0.86	169.9	84.9	68.0	1386
JDN315S6	100	75	1182	95.0	0.84	235.9	118.0	94.4	1914
JDN135M6	125	90	1182	95.0	0.85	279.8	139.9	111.9	2070
JDN315L6	150	110	1182	95.8	0.85	339.1	169.5	135.6	2244

IE4 JDU.. IEC motors,230/460V,575V,60Hz,4–pole,duty type S1

Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDU63S4	0.16	0.12	1668	70.0	0.72	0.60	0.30	0.24	15.2
JDU63M4	0.25	0.18	1674	74.0	0.73	0.84	0.42	0.33	17.2
JDU71S4	0.33	0.25	1692	77.0	0.74	1.10	0.55	0.44	19.8
JDU71M4	0.5	0.37	1698	81.5	0.75	1.52	0.76	0.61	23.8
JDU80S4	0.75	0.55	1734	84.0	0.75	2.19	1.10	0.88	31.0
JDU80M4	1	0.75	1740	85.5	0.75	2.94	1.47	1.17	38.1
JDU90S4	1.5	1.1	1746	87.5	0.76	4.15	2.08	1.66	50.2
JDU90L4	2	1.5	1740	88.5	0.77	5.53	2.76	2.21	58.7
JDU100S4	3	2.2	1740	91.0	0.81	7.49	3.75	3.00	69.8
JDU100L4	4	3	1746	91.0	0.82	10.09	5.05	4.04	83.6
JDU112M4	5	3.7	1752	91.0	0.82	12.4	6.2	5.0	119
JDU132S4	7.5	5.5	1752	92.4	0.83	18.0	9.0	7.2	132
JDU132M4	10	7.5	1758	92.4	0.84	24.3	12.1	9.7	223
JDU132L4	12.5	9.2	1764	93.0	0.84	29.6	14.8	11.8	231
JDU160M4	15	11	1764	93.6	0.85	34.7	17.4	13.9	291
JDU160L4	20	15	1770	94.1	0.86	46.5	23.3	18.6	329
JDU180M4	25	18.5	1770	94.5	0.86	57.1	28.6	22.9	376
JDU180L4	30	22	1770	94.5	0.86	68.0	34.0	27.2	411
JDU200L4	40	30	1776	95.0	0.86	92.2	46.1	36.9	678
JDU225S4	50	37	1776	95.4	0.86	113.2	56.6	45.3	750
JDU225M4	60	45	1776	95.4	0.86	137.7	68.8	55.1	799
JDU250M4	75	55	1776	95.8	0.86	167.6	83.8	67.0	1118
JDU280S4	100	75	1776	96.2	0.88	222.4	111.2	89.0	1201
JDU280M4	125	90	1776	96.2	0.88	266.9	133.4	106.7	1456
JDU315S4	150	110	1782	96.2	0.89	322.5	161.3	129.0	2011
JDU315L4	200	150	1782	96.5	0.89	438.4	219.2	175.4	2356

IE4 JDU.. IEC motors,230/460V,575V,60Hz,2–pole,duty type S1



Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDU63S2	0.25	0.18	3270	70.0	0.80	0.81	0.40	0.32	15.2
JDU63M2	0.33	0.25	3306	74.0	0.81	1.05	0.52	0.42	17.2
JDU71S2	0.5	0.37	3372	77.0	0.81	1.49	0.74	0.60	19.8
JDU71M2	0.75	0.55	3390	80.0	0.82	2.10	1.05	0.84	23.8
JDU80S2	1	0.75	3426	82.5	0.82	2.78	1.39	1.11	31.0
JDU80M2	1.5	1.1	3432	85.5	0.83	3.89	1.95	1.56	38.1
JDU90S2	2	1.5	3463	86.5	0.84	5.18	2.59	2.07	49.7
JDU90L2	3	2.2	3486	88.5	0.85	7.34	3.67	2.94	58.7
JDU100L2	4	3	3492	89.1	0.87	9.71	4.86	3.89	83.6
JDU112M2	5	3.7	3540	89.5	0.87	11.9	6.0	4.8	119
JDU132S2	7.5	5.5	3522	90.2	0.88	17.4	8.7	7.0	132
JDU132M2	10	7.5	3522	91.7	0.88	23.3	11.7	9.3	134
JDU160M2	15	11	3534	92.4	0.89	33.6	16.8	13.4	290
JDU160L2	20	15	3534	92.4	0.89	45.8	22.9	18.3	297
JDU160H2	25	18.5	3528	93.0	0.89	56.1	28.1	22.4	330
JDU180M2	30	22	3546	93.0	0.89	66.7	33.4	26.7	376
JDU200L2	40	30	3552	93.6	0.89	90.4	45.2	36.2	678
JDU200H2	50	37	3552	94.1	0.89	110.9	55.5	44.4	684
JDU225M2	60	45	3558	94.5	0.90	132.8	66.4	53.1	750
JDU250M2	75	55	3564	94.5	0.90	162.3	81.2	64.9	1113
JDU280S2	100	75	3570	95.0	0.90	220.2	110.1	88.1	1201
JDU280M2	125	90	3570	95.4	0.90	263.1	131.6	105.3	1456
JDU315S2	150	110	3570	95.4	0.90	321.6	160.8	128.6	2011
JDU315L2	200	150	3570	95.8	0.90	436.7	218.4	174.7	2057

IE4 JDU.. IEC motors,230/460V,575V,60Hz,6–pole,duty type S1

Type	Power		RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
	HP	kW				A_{230V}	A_{460V}	A_{575V}	
JDU71S6	0.25	0.18	1098	72.0	0.66	0.95	0.48	0.38	19.8
JDU71M6	0.33	0.25	1098	75.5	0.68	1.22	0.61	0.49	23.8
JDU80M6	0.5	0.37	1122	78.5	0.70	1.69	0.85	0.68	38.1
JDU90S6	0.75	0.55	1158	82.5	0.72	2.32	1.16	0.93	50.2
JDU90M6	1	0.75	1146	84.0	0.71	3.16	1.58	1.26	52.4
JDU90L6	1.5	1.1	1146	88.5	0.73	4.27	2.14	1.71	58.7
JDU100L6	2	1.5	1152	89.5	0.73	5.76	2.88	2.31	83.6
JDU112M6	3	2.2	1164	90.2	0.74	8.27	4.14	3.31	119
JDU132S6	4	3	1164	90.2	0.74	11.28	5.64	4.51	132
JDU132M6	5	3.7	1164	90.2	0.74	13.9	7.0	5.6	134
JDU132L6	7.5	5.5	1170	91.7	0.75	20.1	10.0	8.0	231
JDU160M6	10	7.5	1170	92.4	0.79	25.8	12.9	10.3	291
JDU160L6	15	11	1170	93.0	0.80	37.1	18.6	14.8	329
JDU180L6	20	15	1170	93.0	0.81	50.0	25.0	20.0	411
JDU200L6	25	18.5	1176	94.1	0.81	60.9	30.5	24.4	678
JDU200H6	30	22	1176	94.1	0.81	72.5	36.2	29.0	684
JDU225M6	40	30	1176	95.0	0.83	95.5	47.8	38.2	750
JDU250M6	50	37	1182	95.0	0.84	116.4	58.2	46.6	1113
JDU280S6	60	45	1182	95.4	0.85	139.3	69.7	55.7	1201
JDU280M6	75	55	1182	95.4	0.86	168.3	84.1	67.3	1456
JDU315S6	100	75	1182	95.8	0.84	234.0	117.0	93.6	2011
JDU135M6	125	90	1182	95.8	0.85	277.4	138.7	111.0	2057
JDU315L6	150	110	1182	96.2	0.85	337.7	168.8	135.1	2356

High Efficient JDN.. NEMA motors,230/460V，575V,60Hz,2–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN63S2	1/4	48C	3270	65.9	0.78	0.88	0.44	0.35	13
JDN63M2	1/3	48C 56C	3306	69.7	0.81	1.11	0.56	0.44	15
JDN71S2	1/2	48C 56C	3390	73.8	0.78	1.61	0.81	0.65	17
JDN71M2	3/4	56C	3432	77.8	0.81	2.19	1.10	0.88	21
JDN80S2	1	56C 143/5TC	3463	80.7	0.82	2.85	1.42	1.14	27
JDN80M2	1.5	56C 143/5TC	3492	82.7	0.83	4.02	2.01	1.61	33
JDN90S2	2	56C 143/5TC	3522	84.2	0.83	5.4	2.7	2.2	44
JDN90L2	3	143/5TC 182/4TC	3534	85.9	0.85	7.6	3.8	3.0	51
JDN112M2	5	182/4TC	3528	88.1	0.86	12.3	6.1	4.9	104
JDN132S2	7.5	182/4TC 213/5TC	3546	89.2	0.87	17.8	8.9	7.1	114
JDN132M2	10	213/5TC	3552	90.1	0.85	24.6	12.3	9.8	119
JDN160M2	15	254/6TC	3558	91.2	0.89	34.0	17.0	13.6	253
JDN160L2	20	254/6TC	3564	91.9	0.89	46.0	23.0	18.4	257
JDN160H2	25	284/6TC	3570	92.4	0.89	56.5	28.2	22.6	286
JDN180M2	30	284/6TC	3570	92.7	0.89	66.9	33.5	26.8	341
JDN200L2	40	324/6TC	3570	93.3	0.89	90.7	45.3	36.3	616
JDN200H2	50	324/6TC	3570	93.7	0.89	111.4	55.7	44.5	623
JDN225M2	60	364/5TV	3576	94.0	0.90	133.5	66.8	53.4	711

High Efficient JDN.. NEMA motors,230/460V,575V,60Hz,4–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN63M4	1/4	48C	1674	69.9	0.65	1.00	0.50	0.40	15
JDN71S4	1/3	48C 56C	1692	73.5	0.66	1.30	0.65	0.52	17
JDN71M4	1/2	48C 56C	1698	77.3	0.66	1.82	0.91	0.73	21
JDN80S4	3/4	56C	1734	80.8	0.75	2.28	1.14	0.91	27
JDN80M4	1	56C 143/5TC	1740	82.5	0.74	3.10	1.55	1.24	33
JDN90S4	1.5	56C 143/5TC	1746	84.1	0.73	4.50	2.25	1.80	44
JDN90L4	2	56C 143/5TC	1740	85.3	0.74	6.0	3.0	2.4	51
JDN100S4	3	143/5TC 182/4TC	1740	86.7	0.77	8.3	4.1	3.3	61
JDN112M4	5	182/4TC	1752	88.6	0.79	13.2	6.6	5.3	104
JDN132S4	7.5	182/4TC 213/5TC	1752	89.6	0.80	19.3	9.6	7.7	114
JDN132M4	10	213/5TC	1764	90.4	0.81	25.7	12.9	10.3	201
JDN160M4	15	254/6TC	1764	91.4	0.84	36.0	18.0	14.4	266
JDN160L4	20	254/6TC	1770	92.1	0.84	48.5	24.2	19.4	312
JDN180M4	25	284/6TC	1770	92.6	0.83	60.3	30.2	24.1	398
JDN180L4	30	284/6TC	1770	93.0	0.82	72.1	36.0	28.8	460
JDN200L4	40	324/6TC	1776	93.6	0.84	95.6	47.8	38.2	627
JDN225S4	50	324/6TC	1776	93.9	0.83	119.0	59.5	47.6	722
JDN225M4	60	364/5TC	1776	94.2	0.84	142.3	71.2	56.9	799

High Efficient JDN.. NEMA motors,230/460V,575V,60Hz,6–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN71S6	1/4	48C	1098	63.9	0.69	1.02	0.51	0.41	17
JDN71M6	1/3	48C 56C	1098	68.6	0.68	1.35	0.67	0.54	21
JDN80M6	1/2	48C 56C	1122	73.5	0.68	1.86	0.93	0.74	33
JDN90S6	3/4	56C	1146	77.2	0.65	2.75	1.38	1.10	44
JDN90M6	1	56C 143/5TC	1146	78.9	0.68	3.51	1.75	1.40	44
JDN90L6	1.5	56C 143/5TC	1152	81.0	0.67	5.09	2.54	2.04	51
JDN100L6	2	56C 143/5TC	1164	82.5	0.63	7.2	3.6	2.9	73
JDN112M6	3	143/5TC 182/4TC	1164	84.3	0.66	9.9	5.0	4.0	104
JDN132M6	5	182/4TC	1164	86.8	0.67	16.0	8.0	6.4	128
JDN132L6	7.5	182/4TC 213/5TC	1170	88.0	0.64	24.5	12.3	9.8	200
JDN160M6	10	213/5TC	1170	89.1	0.74	28.6	14.3	11.4	253
JDN160L6	15	254/6TC	1170	90.3	0.80	38.2	19.1	15.3	290
JDN180L6	20	254/6TC	1170	91.2	0.81	51.0	25.5	20.4	433
JDN200L6	25	284/6TC	1176	91.7	0.81	62.5	31.3	25.0	616
JDN200H6	30	284/6TC	1176	92.2	0.81	73.9	37.0	29.6	649
JDN225M6	40	364/5TC	1176	92.9	0.83	97.7	48.8	39.1	682

Premium Efficient JDN.. NEMA motors,230/460V,575V,60Hz,2–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN80S2	1	56C 143/5TC	3463	77.0	0.82	2.98	1.49	1.19	34.8
JDN80M2	1.5	56C 143/5TC	3492	84.0	0.83	3.96	1.98	1.58	39.2
JDN90S2	2	56C 143/5TC	3522	85.5	0.83	5.31	2.65	2.12	55.0
JDN90L2	3	143/5TC	3534	86.5	0.85	7.51	3.76	3.00	62.0
JDN112M2	5	182/4TC 182/4TC	3534	86.5	0.85	7.51	3.76	3.00	62.0
JDN132S2	7.5	182/4TC 213/5TC	3546	89.5	0.87	17.7	8.9	7.1	145
JDN132M2	10	213/5TC	3552	90.2	0.85	24.6	12.3	9.8	169
JDN160M2	15	254/6TC	3558	91.0	0.89	34.1	17.0	13.6	297
JDN160L2	20	254/6TC	3564	91.0	0.89	46.5	23.2	18.6	319
JDN160H2	25	284/6TC	3570	91.7	0.89	56.9	28.5	22.8	330
JDN180M2	30	284/6TC	3570	91.7	0.89	67.7	33.8	27.1	378
JDN200L2	40	324/6TC	3570	92.4	0.89	91.6	45.8	36.6	678
JDN200H2	50	324/6TC	3570	93.0	0.89	112.2	56.1	44.9	684
JDN225M2	60	364/5TV	3576	93.6	0.90	134.1	67.0	53.6	750

Premium Efficient JDN.. NEMA motors,230/460V,575V,60Hz,4–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN80M4	1	56C 143/5TC	1740	85.5	0.74	3.00	1.50	1.20	38.1
JDN90S4	1.5	56C 143/5TC	1746	86.5	0.73	4.37	2.19	1.75	55.0
JDN90L4	2	56C 143/5TC	1740	86.5	0.74	5.92	2.96	2.37	61.6
JDN100S4	3	143/5TC 182/4TC	1750	89.5	0.77	8.03	4.02	3.21	79.2
JDN100L4	4	182/4TC	1760	89.5	0.80	10.52	5.26	4.21	83.6
JDN112M4	5	182/4TC	1760	89.5	0.79	13.1	6.6	5.2	120
JDN132S4	7.5	182/4TC 213/5TC	1760	91.7	0.80	18.8	9.4	7.5	132
JDN132M4	10	213/5TC	1765	91.7	0.82	24.9	12.5	10.0	184
JDN132L4	12.5	213/5TC	1770	91.7	0.81	31.2	15.6	12.5	189
JDN160M4	15	254/6TC	1770	92.4	0.84	35.6	17.8	14.2	297
JDN160L4	20	254/6TC	1770	93.0	0.84	48.0	24.0	19.2	330
JDN180M4	25	284/6TC	1775	93.6	0.83	59.7	29.9	23.9	449
JDN180L4	30	284/6TC	1775	93.6	0.82	71.6	35.8	28.6	508
JDN200L4	40	324/6TC	1780	94.1	0.84	95.0	47.5	38.0	627
JDN225S4	50	324/6TC	1780	94.5	0.83	118.2	59.1	47.3	750
JDN225M4	60	364/5TC	1780	95.0	0.84	141.1	70.6	56.5	772

Premium Efficient JDN.. NEMA motors,230/460V,575V,60Hz,6–pole,duty CONT.

Type	HP	Frame	RPM	Full load Eff. 100%	cos ϕ	Full load Amps			Ship WT. (lbs.)
						A_{230V}	A_{460V}	A_{575V}	
JDN90M6	1	56C 143/5TC	1146	82.5	0.68	3.36	1.68	1.34	55
JDN90L6	1.5	56C 143/5TC	1152	87.5	0.67	4.71	2.36	1.88	62
JDN100L6	2	56C 143/5TC	1164	88.5	0.63	6.75	3.38	2.70	92
JDN112M6	3	143/5TC 182/4TC	1164	89.5	0.66	9.35	4.67	3.74	121
JDN132M6	5	182/4TC	1164	89.5	0.67	15.5	7.7	6.2	169
JDN132L6	7.5	182/4TC 213/5TC	1170	91.0	0.64	23.7	11.9	9.5	184
JDN160M6	10	213/5TC	1170	91.0	0.74	28.0	14.0	11.2	266
JDN160L6	15	254/6TC	1170	91.7	0.80	37.6	18.8	15.1	306
JDN180L6	20	254/6TC	1170	91.7	0.81	50.7	25.3	20.3	449
JDN200L6	25	284/6TC	1176	93.0	0.81	61.6	30.8	24.7	510
JDN200H6	30	284/6TC	1176	93.0	0.81	73.3	36.7	29.3	581
JDN225M6	40	364/5TC	1176	94.1	0.83	96.4	48.2	38.6	750

7. Mechanical Properties

Motor Protection grade

Motor shell protection grade standard EN60034 (IEC60034-5).
JIE AC motor protection based on IP55 standard, Brake and variable frequency motor based on IP54 standard, IP55 and IP56 levels can also be provided as required。

Table 16

IP	Foreign body level	Waterproof grade
0	No special protection	No special protection
1	Prevention of solid foreign body diameter greater than 50mm into the shell	Vertical drip should be no harmful effects
2	Prevention of solid foreign body diameter greater than 12MM into the shell	There is no harmful effect on the vertical drop of water when the motor is tilted from any direction to any angle within 15 degrees
3	Prevention of solid foreign body diameter greater than 2.5mm into the shell	Prevention of water drenching
4	Prevention of solid foreign body diameter greater than 1mm into the shell	Splash proof
5	Dustproof	Spray proof
6	Dust tight	Anti strong spray
7	-	Short time flooding
8	-	Long term diving

Motor vibration

Table 17

Motor specifications	63S～132L		160M～225M		250M～315L	
Synchronous speed	600～1800	>1800～3600	600～1800	>1800～3600	600～1800	>1800～3600
Vibration level	Effective velocity of vibration					
N	1.8		2.8		3.5	
R	0.71	1.12	1.12	1.8	1.8	2.8
S	0.45	0.71	0.71	1.12	1.12	1.8

Note: the JD series motors are manufactured according to N, and can be manufactured to R or S if the user requires.

Noise

Noise value of A-weighted sound power level measured at no-load of motor.
Tolerance of noise value is +3dB(A).

Table 18

Motor type	Synchronous speed (r/min)		
	3000	1500	1000
	Noise (dB(A))		
JD63	61	52	—
JD71	64	55	54
JD80	62	56	57
JD90	67	59	57
JD100	74	64	61
JD112	77	65	65
JD132	79	71	69
JD160	81	73	73
JD180	83	76	73
JD200	84	76	73
JD225	86	78	74
JD250	89	79	76
JD280	91	80	78
JD315	92	88	83

KS Corrosion protection

If the motor is exposed outside without protective measures are needs to increase KS corrosion protection

Bearing type

The following table lists the types of bearings to be used B-end bearing (Rear bearing) IEC motor

Table 19

Motor type	A-end beannq(front bearing) IEC motor	B-end bearing (Rear bearing) IEC motor	IEC Brake motor
JD.63	6202-2Z-C3	6202-2Z-C3	6202-2Z-C3
JD.71	6204-2Z-C3	6203-2Z-C3	6203-2Z-C3
JD.80	6205-2Z-C3	6304-2Z-C3	6304-2Z-C3
JD.90-JD.100	6306-2Z-C3	6205-2Z-C3	6205-2Z-C3
JD.112-JD.132S	6308-2Z-C3	6207-2Z-C3	6207-2Z-C3
JD.132M-JD.132L	6309-2Z-C3	6209-2Z-C3	6209-2Z-C3
JD.160	6309-2Z-C3	6309-2Z-C3	6309-2Z-C3
JD.180	6311-2Z-C3	6211-2Z-C3	6213-2Z-C3
JD.200	6312-2Z-C3	6212-2Z-C3	6213-2Z-C3
JD.225	6313-2Z-C3	6312-2Z-C3	6313-2Z-C3
JD.250-JD.280	6317-2Z-C3	6317-2Z-C3	6317-2Z-C3
JD.315S-JD315M	NU6319	6319-C3	6319-C3
JD.315L-JD315H	NU6319	6319-C3	6322-C3

Torque limit curve of JDN, JDU under variable frequency control

Torque

The size of the torque should be considered in the process of JD asynchronous motor with frequency converter. The following points determine the allowable torque value

- Duty cycle
- Cooling mode:Self cooling or forced cooling
- Baseband:f_{base}=60Hz

The torque limit curve determines the torque. The selected torque must be less than the torque limit. The following example illustrates the limits of the 4 pole JDN asynchronous motor. The following is the condition of the torque limit curve:

- duty S1
- Inverter supply voltageV_{line}=3 × AC460V
- Motor insulation class155 (F)

f_{base}=60Hz

f_{base}=60Hz torque limit curve as shown below. The torque limiting curve of the self cooling motor and the forced cooling motor (with forced cooling fan) are different.

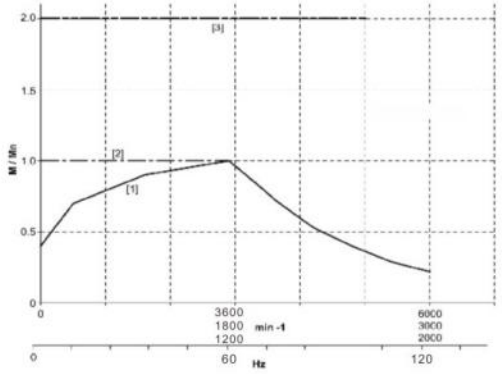


Chart 10

[1]duty S1 self cooling (no forced cooling fan)
[2] duty S1 forced cooline (with forced cooling fan)
[3] /Mechanical limit of gear motor

8. Product Accessories

1. Brake

1.1 Descirption

As needed, Our company's electric motor can be equipped with electromagnetic brake as requirement.Electromagnetic brake is a magnetic disc brake structure with DC coil, the brake principle is power off brake, i.e. DC coil induction by the electromagnetic force of the brake release, and spring force to brake. Brake by installing manual release device realize mechanical brake release, which can be mounted on a release handle or release the screw, the release lever will automatically reset and release the screw can be locked screws to achieve reduction.The connection mode of the brake can be directly installed on the motor terminal and can also be installed in the switch cabinet.

1.2 Construction Diagram

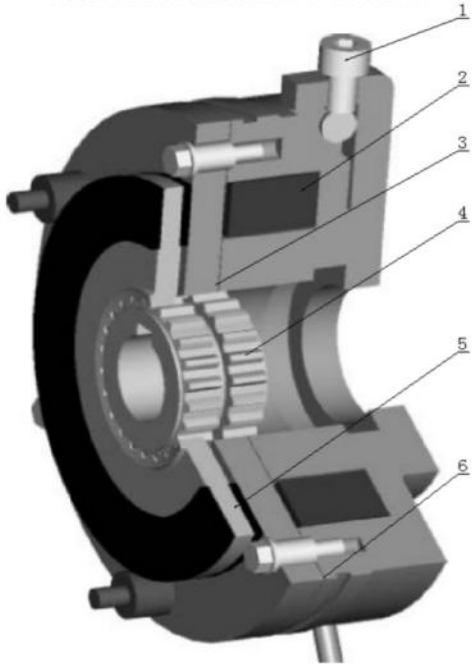


Chart 12

1.Release screws、2.Coil of brake、3.Pressure plate、4.Spline sleeve、5.Disc friction、6.Working clearance

1.3 Performance Requirements

Electromagnetic brake shell protection class is IP54, the insulation level of the brake is F; The winding temperature rise should not exceed 105K(Electrical resistance).

- The electromagnetic brake winding should withstand 1 minutes of pressure test without breakdown, The test frequency is 50Hz, waveforms is sine wave, voltage effective value is $1000V+2U_N$.
- The insulation resistance of the winding of the electromagnetic brake should not be less than 20MΩ .Ambient temperature of electromagnetic brake:
- Temperature:−20℃ to +40℃, Humidity≤90%.
- Rectifier block ambient temperature:−20℃ to +70℃.

The noise of electromagnetic brake should not be more than 75dB under the normal operating environment. Electromagnetic brake life 1 million times, JD132 above (including JD132) braking frequency of not more than 24 times / minute, Life gap is 200 thousand times. JD160 above (including JD160) braking frequency is not more than 10 times / minute; Life gap 100 thousand times.

The brake response time of the standard electromagnetic brake motor meets the requirements of Table 20.

Table 20

Frame Size	Braking time (DC side power rated gap)/ms	Braking time (AC side power rated gap)/ms
JD.63../BE	≤15	≤60
JD.71../BE	≤25	≤150
JD.80../BE	≤40	≤170
JD.90.7100../BE	≤90	≤230
JD.112.7132../BE	≤100	≤300
JD.160../BE	≤150	≤500
JD.180../BE	≤150	≤900
JD.200../225../BE	≤150	≤1000
JD.250../280../BE	≤180	≤1200
JD.315../BE	≤180	≤1500

Standard electromagnetic brake motor parameters

Standard brake motor braking torque Refer to Table 21, Table 22, Table 23

2P-2(n=3000rpm)Motor braking torque parameters

Table 21

(kW)	RameSize	Brake torque (N · m)
0.18	JD.63S2/BE	3.5
0.25	JD.63M2/BE	3.5
0.37	JD.71S2/BE	5
0.55	JD.71M2/BE	5
0.75	JD.80S2/BE	10
1.1	JD.80M2/BE	10
1.5	JD.90S2/BE	20
2.2	JD.90L2/BE	20
3	JD.100L2/BE	40
4	JD.112M2/BE	55
5.5	JD.132S2/BE	80
7.5	JD.132M2/BE	110
11	JD.160M2/BE	200
15	JD.160L2/BE	200
18.5	JD.160H2/BE	200
22	JD.180M2/BE	300
30	JD.200L2/BE	400
37	JD.200H2/BE	400
45	JD.225M2/BE	600
55	JD.250M2/BE	750
75	JD.280S2/BE	1350
90	JD.280M2/BE	1350
110	JD.315S2/BE	2000
132	JD.315M2/BE	2000
160	JD.315L2/BE	2500
200	JD.315H2/BE	3000

2P-4(n=1500rpm)Motor braking torque parameters

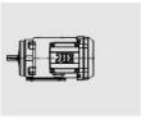


Table 22

(kW)	RameSize	Brake torque (N · m)
0.12	JD.63S4/BE	3.5
0.18	JD.63M4/BE	3.5
0.25	JD.71S4/BE	5
0.37	JD.71M4/BE	5
0.55	JD.80S4/BE	10
0.75	JD.80M4/BE	10
1.1	JD.90S4/BE	20
1.5	JD.90L4/BE	20
2.2	JD.100S4/BE	40
3	JD.100L4/BE	40
4	JD.112M4/BE	55
5.5	JD.132S4/BE	80
7.5	JD.132M4/BE	110
9.2	JD.132L4/BE	150
11	JD.160M4/BE	150
15	JD.160L4/BE	200
18.5	JD.180M4/BE	200
22	JD.180L4/BE	300
30	JD.200L4/BE	400
37	JD.225S4/BE	600
45	JD.225M4/BE	600
55	JD.250M4/BE	750
75	JD.280S4/BE	1350
90	JD.280M4/BE	1350
110	JD.315S4/BE	2000
132	JD.315M4/BE	2000
160	JD.315L4/BE	3000
200	JD.315H4/BE	3000

2P-6(n=1000rpm)Motor braking torque parameters

Table 23

(kW)	RameSize	Brake torque (N · m)	(kW)	RameSize	Brake torque (N · m)
0.18	JD.71S6/BE	5	15	JD.180L6/BE	300
0.25	JD.71M6/BE	5	18.5	JD.200L6/BE	300
0.37	JD.80M6/BE	10	22	JD.200H6/BE	400
0.55	JD.90S6/BE	20	30	JD.225M6/BE	600
0.75	JD.90M6/BE	20	37	JD.250M6/BE	750
1.1	JD.90L6/BE	20	45	JD.280S6/BE	1350
1.5	JD.100L6/BE	40	55	JD.280M6/BE	1350
2.2	JD.112M6/BE	55	75	JD.315S6/BE	2000
3	JD.132S6/BE	80	90	JD.315M6/BE	2000
4	JD.132M6/BE	110	110	JD.315L6/BE	3000
5.5	JD.132L6/BE	150	132	JD.315H6/BE	3000
7.5	JD.160M6/BE	200			

1.4 Control system schematic

The power supply of the electromagnetic brake can be supplied separately, or can be supplied by the motor terminal.Only the motor has been factory brake control power supply is connected.JIE connect the brake control's power before the motors delivered as for the customer's convenience ,when the motor is energized when the motor operates, the brake releasing it at the same time, when the motor power when the motor stops, the brake also lock.The specific method is shown in Figure 13, figure 14, figure 15.in addition, if the brake is from the motor terminal power supply, then the motor residual voltage will lead to delay braking.The motor of the variable speed motor and the inverter control, the power supply of the brake controller must be supplied separately. JIE company does not connect the factory, the actual use of the customer when the connection is shown in Figure 15.

Quick brake

By changing the connection mode of the rectifier block, the brake can be changed into a fast braking operation. Refer to table 13, table 14,table 15.

Note: When the customer does not make a quick braking requirement,JIE use the leather brake as the default action of the standard wiring; customers use of fast braking in the actual , customers need to dismantle the ordinary brake.

If customers do not require for of frequency conversion, JIE company use a single speed motor as the default standard wiring mode, customers need inverter power supply, customers need to remove the standard wiring,and connect wiring in accordance with figure 15 .

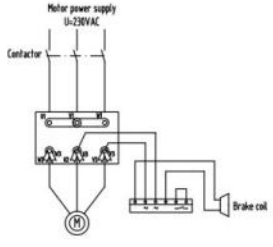
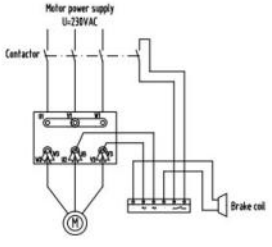
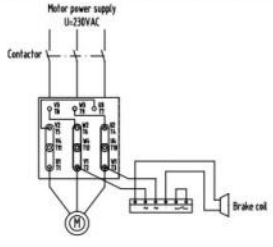
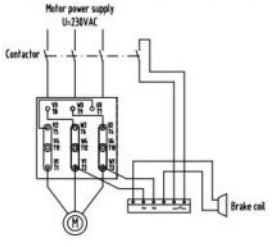
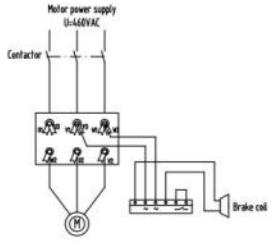
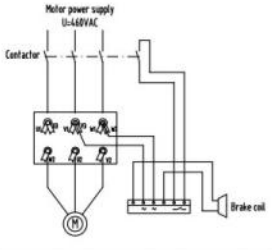
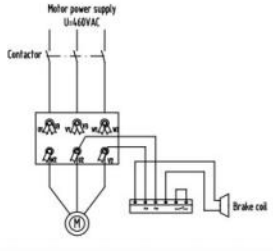
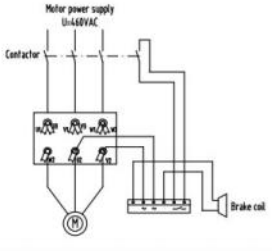
Series number	Single – speed motor voltage and wiring	Brake voltage	Brake connection	
			Ordinary brake	Fast brake
1	230V/YY	230V		
2	230V/△△	230V		
3	460V/Y	230V		
4		460V		

Chart 13

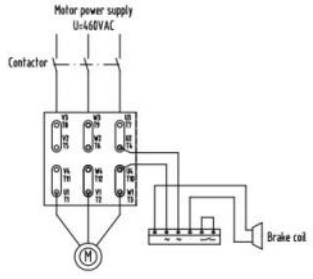
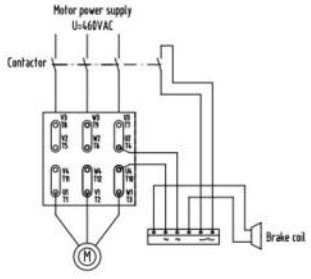
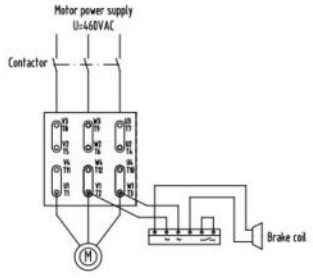
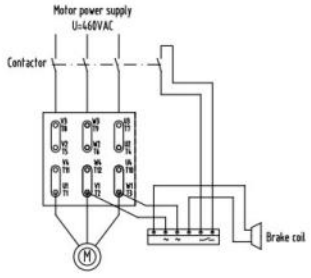
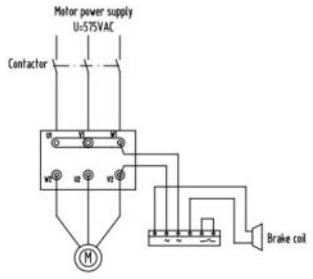
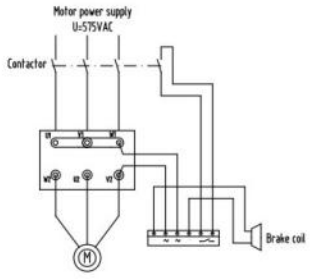
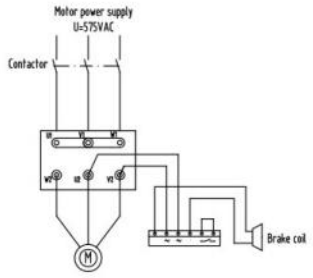
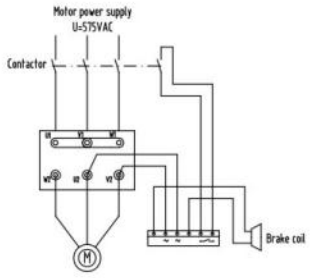
Series number	Single – speed motor voltage and wiring	Brake voltage	Brake connection	
			Ordinary brake	Fast brake
1	460V/△	230V		
2		460V		
3	575V/Y	330V		
4		575V		

Chart 14

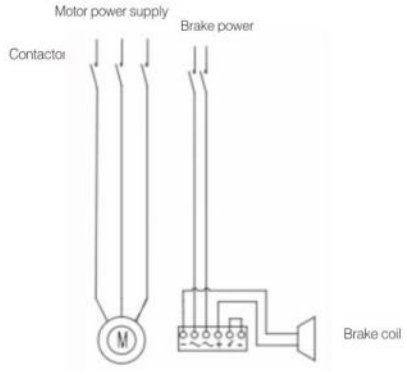
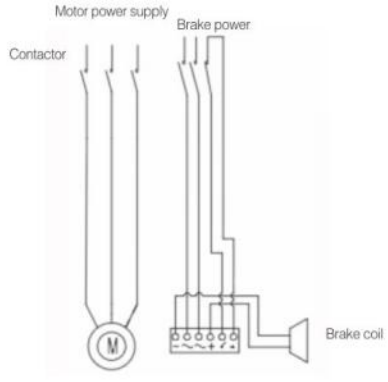
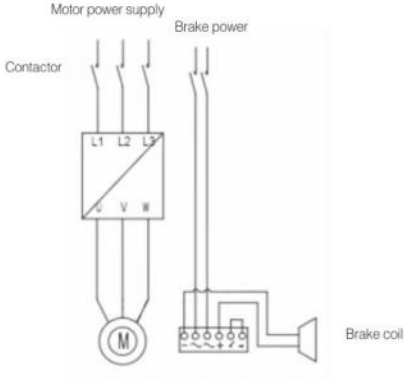
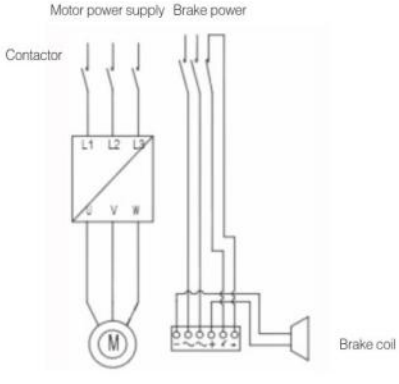
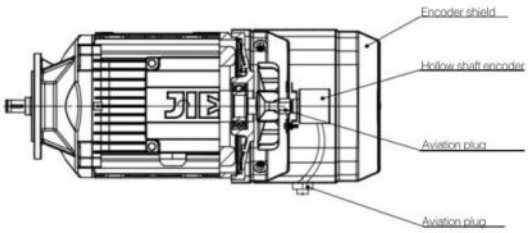
	Ordinary brake	Fast brake
Pole changing speed regulating motor		
Frequency conversion motor		

Chart 15

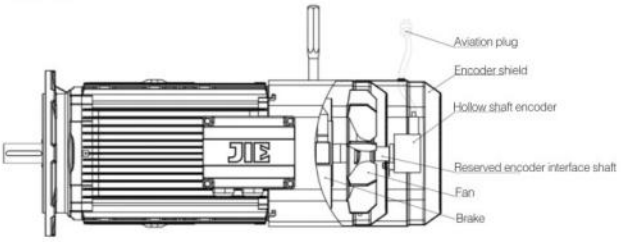
2. Encoder

Our company can provide encoder motor to customers as requirement according to need, the encoder model is specified by the customer. JIE provide the following six kinds of the encoder motor.please refer to JIE for any customization.

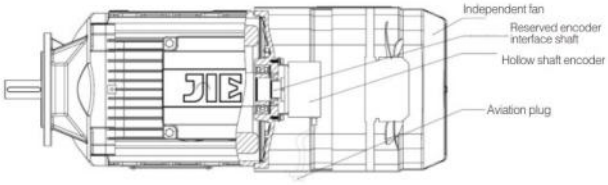
JD../ES Hollow shaft and standard motor connection structure



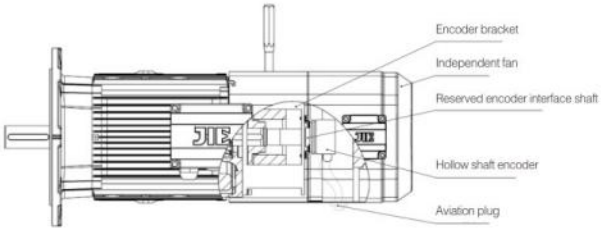
JD../BE/ES Hollow shaft with brake motor connection structure



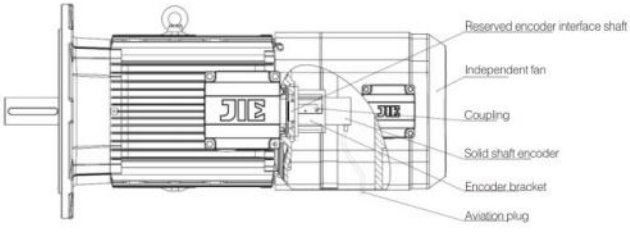
JD../V/ES Hollow shaft and belt motor connection structure



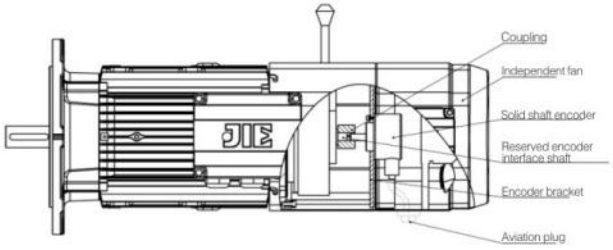
JD../BE/V/ES Hollow shaft with brake and fan motor connection structure



JD../V/EV Solid shaft and belt connection structure



JD../BE/V/EV Solid shaft and belt motor connection structure



3. Forced Cooling Fan

Code

V Standard design

Description

Forced cooling fan is used to ensure the cooling of the motor at different speeds. That is, the motor can run at full speed without the risk of overheating.The original PVC fan will be removed from the motor when the forced cooling fan is equipped . The length of the forced cooling fan depends on the different motor attachment options, such as brakes or encoders.Cover as before and also allow openings such as manual brake release hole.

As needed, the motor can be installed with a forced cooling fan. No need to install the forced cooling fan when continuous operation condition. JIE suggest in the following situations :

- High startup frequency
- Motor with high inertia flywheel Z (flywheel fan)
- Speed range from 5 to 35Hz
- Frequency control speed range≥1:20
- When the speeds is low or even zero speed, the output torque is required

The following is a typical dynamic frequency control speed– The torque characteristic diagram

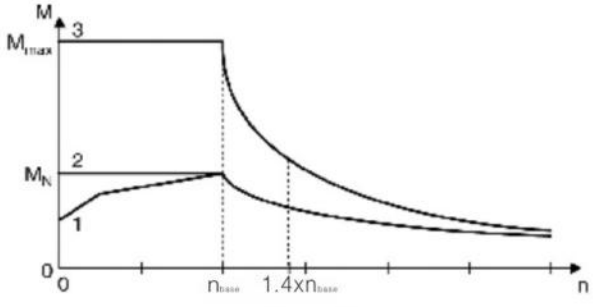


Chart 16

M_N=Rated torque
M_{max}=Maximum torque
n_{base}=Rated speed
1=Self cooling fan
2=Forced cooling fan
3=Maximum torque

When the speed located at 0–n_{base}, the load torque located in the curve for more than 1 hours, at this time, in order to prevent overheating of the motor, it will be need to install a forst cooling fan.

Encoder combination

Forced cooling fan can be used in combination with all encoders, Encoder information please see chapter 3.Note that the overall size may be longer

Technical datas of forced cooling fan

Frame Size	Single-Phase Three-Phase	(V)	(W)	(A)	(m3/h)	(Pa)	(Hz)	(r/min)
63	Single–Phase	200–240	25/30	0.18	98/108	42/45	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	25/30	0.23/0.13				
71	Single–Phase	200–240	25/30	0.18	98/108	42/45	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	25/30	0.23/0.13				
80	Single–Phase	200–240	30/35	0.22	98/108	42/45	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	30/35	0.26/0.15				
90	Single–Phase	200–240	50/65	0.33	265/290	82/88	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	50/65	0.35/0.20				
100	Single–Phase	200–240	80/100	0.44	265/290	82/88	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	80/100	0.39/0.23				
112	Single–Phase	200–240	80/100	0.44	306/335	110/120	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	80/100	0.39/0.23				
132	Single–Phase	200–240	80/100	0.44	306/335	110/120	50/60	2800/3000
	Three–Phase	200–254△/346–440Y	80/100	0.39/0.23				
160	Single–Phase	200–240	55/70	0.35	485/530	110/120	50/60	1400/1650
	Three–Phase	200–254△/346–440Y	55/70	0.31/0.18				
180	Single–Phase	200–240	130/155	0.37	660	130	50/60	1400/1680
	Three–Phase	200–254△/346–440Y	100/120	0.62/0.36				
200	Single–Phase	200–240	160/220	1.1	1679	65	50/60	1350/1620
	Three–Phase	200–254△/346–440Y	150/200	1.21/0.70				
225	Single–Phase	200–240	220/250	1.1	1786	70	50/60	1350/1620
	Three–Phase	200–254△/346–440Y	200/230	1.21/0.70				
250	Single–Phase	220	300	1.88	1900	110	50	1350
			330	2.06	2090	110	60	1620
	Three–Phase	380	300	0.90	1900	110	50	1350
			330	0.99	2090	110	60	1620
280	Single–Phase	220	400	2.50	2000	130	50	1350
			440	2.75	2200	130	60	1620
	Three–Phase	380	400	1.20	2000	130	50	1350
			440	1.32	2200	130	60	1620
315	Single–Phase	220	450	2.81	2500	130	50	1350
			500	3.13	2750	130	60	1620
	Three–Phase	380	450	1.35	2500	130	50	1350
			500	1.50	2750	130	60	1620

4. High Inertia Flywheel

Code

Z High Inertia Flywheel

Description

The motor is installed with high inertia flywheel Z (flywheel fan) so as to realize the smooth braking of the motor under the main control.
High inertia flywheel Z will increase the motor inertia J_Z.
High inertia flywheel Z can be installed in both braking and non braking motors.

Important Notices

- When calculating the starting frequency, No-load allowable frequency is multiplied by 0.8 or install a forced cooling fan
- Motor moment of inertia Jges=Jmot+J_Z
- Do not allow reverse or reverse impact braking
- Do not allow Vibration level B

Table 28

Motor specifications	J_Z [10^{-4}kgm^2]	J_{mot} [10^{-4}kgm^2]	$J_{mot}+J_Z$ [10^{-4}kgm^2]	Quality [kg]
JD.71S4	21.3	5.1	26.4	1.3
JD.71M4		7.2	28.5	
JD.80S4	37.9	17.5	55.4	1.8
JD.80M4		24.6	62.5	
JD.90S4	100	54.4	154.4	3.4
JD.90L4		66.9	166.9	
JD.100S4	135	82	217	3.5
JD.100L4		111.6	246.6	
JD.112M4	200	185.4	385.4	4.5
JD.132S4		225.4	425.4	
JD.132M4	300	389.9	689.9	6.4
JD.132L4		456	756	

5. Protective Cowl

Code

C Cowl protect

Description

The protective cowl is used for preventing rain water from entering the fan cowl. Mainly used in vertical installation position.
When the motor is installed vertically down the shaft, the liquid and solid foreign body is easy to enter into the motor fan cowl, and the JIE provides a protective cowl to protect the motor.
When the motor shaft is installed vertically downwards, it is necessary to order the protective cover C, and the motor must be fitted with a protective cowl C.

6. 2WE Biaxial Extension Motor

Code

2WE Biaxial Extension Motor

Description

If required,JIE can provide 2WE dual-axes motors with structure sizes below:

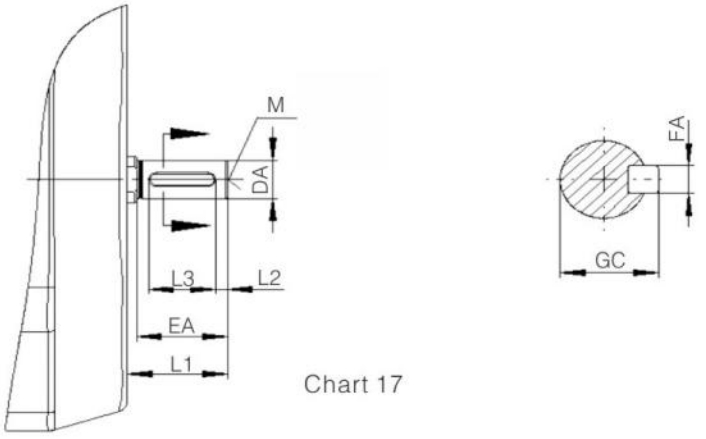


Chart 17

Table 29

Frame Size	DA	FA	GC	EA	L1	L2	L3	M
JD.63../71../2WE	11	4	12.5	23	25	3.5	16	M4
JD.80../90../100../2WE	14	5	16	30	32	4	22	M5
JD.112../132../2WE	19	6	21.5	40	43.5	4	32	M6
JD.160../2WE	28	8	31	60	64	5	50	M10
JD.180../2WE	38	10	41	80	84	5	70	M12
JD.200..-225../2WE	48	14	51.5	110	115	5	100	M16
JD.250../280../2WE	55	16	59	110	113	5	100	M20

7. Fanless Design

Code

U Without fan design

Description

For the U motor B end cover closes without fan and cover .It can prevent dirt, water and dust into the machine. This motor has special rotors. The motor rotor shaft with brake is not cut off behind the bearing, but extends to the fit size of spline . Use end cover seals behind the brake coil.Motor/Break motor has two cooling ways without fans, the motor/break motor can rely on the convection for cooling only when reduce work load or intermittent brake.

The power of the non-ventilated motor is usually half of cooling fan motor, if there is any question, please contact JIE.

8. With Thermostat Protection Device

Code

TH With thermostat protection device

Description

The motor thermal protection can prevent motor from overheating damage and choose to monitor the two temperature levels of 155 (F) and 180 (H).
Three TH for one group, each phase has a NC electric shock temperature control switch and in series together.
When the temperature reaches rating, TH bimetallic switch combination will disconnect and uses the contactor or feedback system to stop the motor. When the motor begins to cool down, TH will not restore closure immediately with the rated temperature. But when the temperature decreases to the rated temperature of 40 k (reset temperature ,RST), the TH closes again.

When the winding temperature exceed the permitted temperature, the metal temperature switch will disconnect and can be connected in the drive detection circuit.

Table 30

	AC V	DC V	
Voltage U [V]	250	60	24
(cos φ = 1.0) [A] Electric current	2.5	1.0	1.6
(cos φ = 0.6) [A] Electric current	1.6	-	-
The maximum contact resistance 1ohm is DC5V/1mA			

The conditions of bimetallic switch "NC" opening and closing

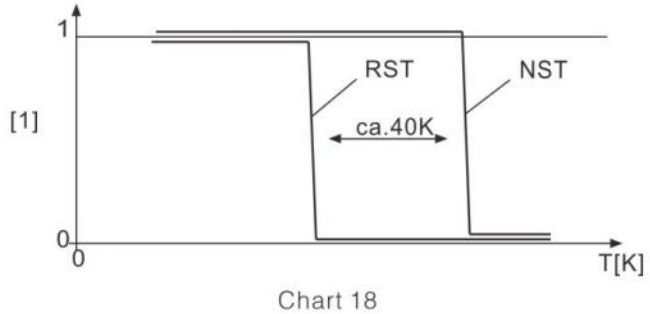


Chart 18

RST Reset temperature
NST The rated temperature switch

9. PT100 Motor Thermal Protection

Code

PT

PT Thermal protection

Description

PT thermal protection device can continuously measure the motor temperature, and can be within the inverter or controller for further processing. Unlike KTY semiconductor sensor, PT100 is made by platinum metal, it has the nearly linear characteristic curve, and has a higher precision.PT attachment cannot replace the standard motor protection TF or TH. Only when the inverter has the motor thermal model function, adopting frequency converter + PT has the motor thermal protection function.

- Mean to embed one sensor in the stator.
- Mean to embed 3 sensors in the stator(one piece for one phase).

Pt100 temperature sensor can test motor temperature continuously. According to the need that it can rotate 1 or 3 pcs 100 pt100 sensors.

Table 31

Technical Data	PT100
Connect	Red / White
20–25℃ The resistance of each PT100	107Ω < R < 110Ω
The test current	< 3mA

PT100 characteristic curve

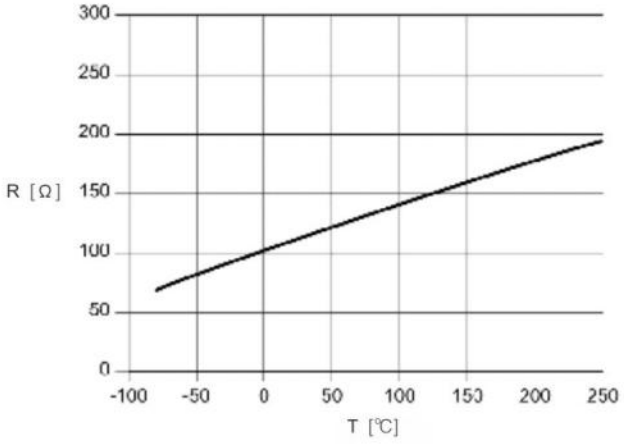


图19 / Chart 19

9. Product Dimension

JD series AC motor / brake motor dimensions table

Notes on the dimensions table

Please follow the notices about the size of the 4 class JD AC motor

- Motor rear should keep a space more than the radius of the fan cover as to avoid hindering the ventilation.
- For brake motors, space is required to remove the fan cowl(diamter of the fan cover).
- Brake manual release has a variety of angles, as shown below. Four Options available.

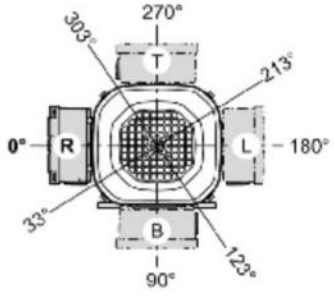


Chart 20

Brake manual release angle for the motor junction box is installed by default to 270° . If don't define default manual release lever position will be rotating with the motor junction box. Manual release may rotate by 90° With a forced cooling fan(V), the manual release position will be affected.

Brake motor with forced cooling fan

Table 32

Motor Frame size	Manual release angle allowed for different junction box angles			
	0° (R)	90° (B)	180° (L)	270° (T)
63..BE../V	90° ,180° ,270°	90° ,180° ,270°	90° ,180° ,270°	90° ,180° ,270°
71..BE../V	0° ,90° 180° ,270°	0° ,90° 180° ,270°	0° ,90° 180° ,270°	0° ,90° 180° ,270°
80..BE../V				
90..BE../V				
100..BE../V				
112..BE../V				
132..BE../V				
160..BE../V				
180..BE../V				
200..BE../V				
225..BE../V				
250..BE../V				
280..BE../V				
315..BE../V				

Tolerance

Center height

The following tolerances applied to the size of the given table

h≤250mm → −0.5mm

h > 250mm → −1mm

The shaft tolerance
The diameter tolerance

Ø ≤28mm → ISO j6

Ø ≤50mm → ISO k6

Ø >50mm → ISO m6

According to the type DIN332 standard JD center hole

Ø =7−10mm	→ M3	Ø >30−38mm	→ M12
Ø >10−13mm	→ M4	Ø >38−50mm	→ M16
Ø >13−16mm	→ M5	Ø >50−85mm	→ M20
Ø >16−21mm	→ M6	Ø >85−130mm	→ M24
Ø >21−24mm	→ M8	Ø >130mm	→ M30
Ø >24−30mm	→ M10		

Key DIN6885 standard (round head flat key)

Flange

The seam allowance tolerance

Ø ≤230mm (A120−A300) → ISO j6

Ø >230mm (A350−A660) → ISO h6

Each type of AC motor has a different optional of the flange sizes. See the kinds of flange sizes for the appropiate size of each type.

Lifting bolt and lug

JD. 90 and below the motor does not provide lifting tools. JD100 and above motor provide configuration.

Motor accessories

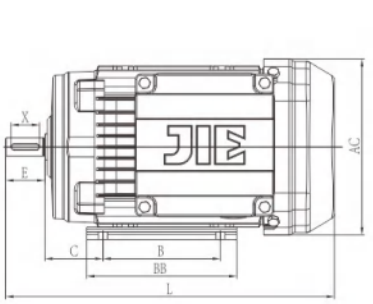
The dimension of the motor may be changed after fitting the attachment. Please refer to the drawing of the motor dimension.

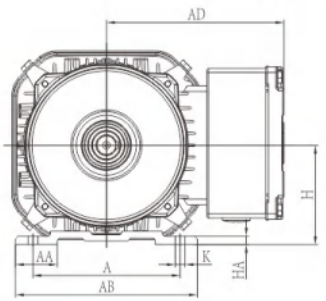
Special design

Because of the special design or the need, the size may be a bit deviation from the standard size. Please pay attention to JIE's order confirmation.

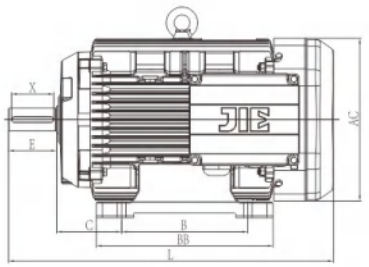
Appendix A (normative appendix)

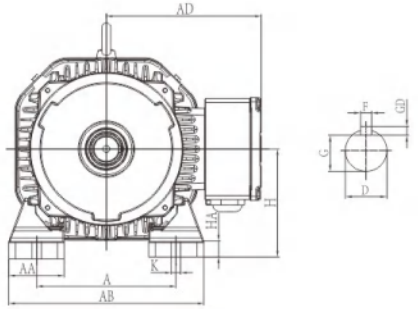
IEC With feet and without flange





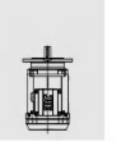
Frame Size: 63-90





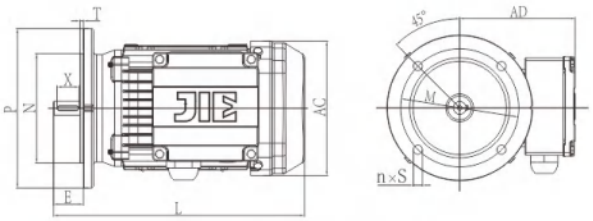
Frame Size: 100-315

Frame Size JD.63..~315../B3	Overall and mounting dimensions(mm)																	
	A	AA	AB	AC	AD	B	BB	C	D	E	F	G	H	HA	K	X	L(DN)	L(DU)
63S4	100	31	127	120	109	80	110	40	Φ11	23	4	8.5	63	4.5	4-Φ7	16	218	218
63M4																		230
71S4	112	30	130	135	128	90	115	45	Φ14	30	5	11	71	6	4-Φ7	22	252	252
71M4																		258
80S4	125	36	165	156	138	100	140	50	Φ19	40	6	15.5	80	6	4-Φ10	32	322	322
80M4																		342
90S4	140	32	180	175	149	125	155	56	Φ24	50	8	20	90	6	4-Φ10	40	335	395
90L4	140	32	180	175	157	125	155	56	Φ24	50	8	20	90	6	4-Φ10	40	395	395
100S4	160	30	189	198	157	140	165	63	Φ28	60	8	24	100	9	4-Φ12	50	420	420
100L4																		440
112M4	190	46	220	221	171	140	208	70	Φ28	60	8	24	112	7.5	4-Φ12	50	452	522
132S4	216	42	246	221	171	140	216	89	Φ38	80	10	33	132	12	4-Φ12	70	522	552
132M4	216	42	242	263	228	178	200	89	Φ38	80	10	33	132	10	4-Φ12	70	552	552
132L4																		/
160M4	254	65	314	314	251	210	260	108	Φ42	110	12	37	160	20	4-Φ14.5	90	662	662
160L4	254	65	314	314	251	254	304	108	Φ42	110	12	37	160	20	4-Φ14.5	90	692	692
180M4	279	70	349	355	268.5	241	349	121	Φ48	110	14	42.5	180	22	4-Φ14.5	80	716	764
180L4	279	70	349	355	268.5	279	387	121	Φ48	110	14	42.5	180	22	4-Φ14.5	80	764	830
200L4	318	70	388	397	305	305	369	133	Φ55	110	16	49	200	25	4-Φ18.5	90	770	846
225S4	356	75	431	446	335	286	368	149	Φ60	140	18	53	225	28	4-Φ18.5	100	820	880
225M4	356	75	431	446	335	311	393	149	Φ60	140	18	53	225	28	4-Φ18.5	100	845	915
250M4	406	80	484	485	358	349	445	168	Φ65	140	18	58	250	30	4-Φ24	125	910	980
280S4	457	85	542	547	387	368	485	190	Φ75	140	20	67.5	280	35	4-Φ24	125	982	1030
280M4	457	85	542	547	387	419	536	190	Φ75	140	20	67.5	280	35	4-Φ24	125	1033	1080
315S4	508	120	628	620	527	406	570	216	Φ80	170	22	71	315	45	4-Φ28	160	1224	1290
315M4	508	120	628	620	527	457	680	216	Φ80	170	22	71	315	45	4-Φ28	160	1334	1334
315L4	508	120	628	620	527	508	680	216	Φ80	170	22	71	315	45	4-Φ28	160	1334	1334
315H4	508	120	628	620	527	508	680	216	Φ80	170	22	71	315	45	4-Φ28	160	1334	1334

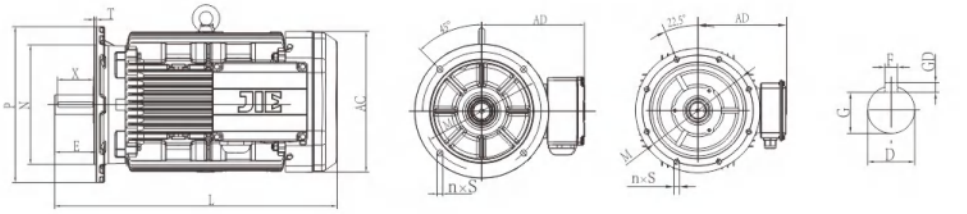



Appendix B (normative appendix)

IEC Without feet and with flange



Frame Size: 63-90

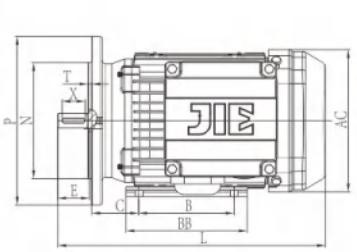


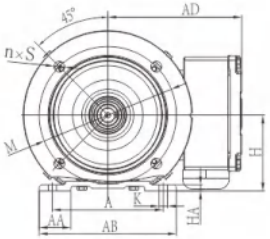
Frame Size: 225-315

Frame Size JD.63..~315../B5	The flange	Overall and mounting dimensions(mm)													
		AC	AD	D	E	F	G	M	N	P	S	T	X	L(DN)	L(DU)
63S4	FF115	120	109	Φ11	23	4	8.5	Φ115	Φ95	Φ140	4×Φ10	3	16	218	218
63M4															230
71S4	FF130	135	128	Φ14	30	5	11	Φ130	Φ110	Φ160	4×Φ10	3.5	22	252	252
71M4															258
80S4	FF165	156	138	Φ19	40	6	15.5	Φ165	Φ130	Φ200	4×Φ12	3.5	32	322	322
80M4															342
90S4	FF165	175	149	Φ24	50	8	20	Φ165	Φ130	Φ200	4 × Φ 12	3.5	40	335	395
90L4	FF165	175	157	Φ24	50	8	20	Φ165	Φ130	Φ200	4 × Φ 12	3.5	40	395	395
100S4	FF215	198	157	Φ28	60	8	24	Φ215	Φ180	Φ250	4 × Φ 14.5	4	50	420	420
100L4															440
112M4	FF215	221	171	Φ28	60	8	24	Φ215	Φ180	Φ250	4 × Φ 14.5	4	50	452	522
132S4	FF265	221	171	Φ38	80	10	33	Φ265	Φ230	Φ300	4 × Φ 14.5	4	70	522	552
132M4	FF265	263	228	Φ38	80	10	33	Φ265	Φ230	Φ300	4 × Φ 14.5	4	70	552	552
132L4															/
160M4	FF300	315	251	Φ42	110	12	37	Φ300	Φ250	Φ350	4 × Φ 18.5	5	90	662	662
160L4	FF300	315	251	Φ42	110	12	37	Φ300	Φ250	Φ350	4 × Φ 18.5	5	90	692	692
180M4	FF300	355	268.5	Φ48	110	14	42.5	Φ300	Φ250	Φ350	4 × Φ 18.5	5	80	716	764
180L4	FF300	355	268.5	Φ48	110	14	42.5	Φ300	Φ250	Φ350	4 × Φ 18.5	5	80	764	830
200L4	FF350	397	305	Φ55	110	16	49	Φ350	Φ300	Φ400	4 × Φ 18.5	5	90	770	846
225S4	FF400	446	335	Φ60	140	18	53	Φ400	Φ350	Φ450	8 × Φ 18.5	5	100	820	880
225M4	FF400	446	335	Φ60	140	18	53	Φ400	Φ350	Φ450	8 × Φ 18.5	5	100	845	915
250M4	FF500	485	358	Φ65	140	18	58	Φ500	Φ450	Φ550	8 × Φ 18.5	5	125	910	980
280S4	FF500	547	387	Φ75	140	20	67.5	Φ500	Φ450	Φ550	8 × Φ 18.5	5	125	982	1030
280M4	FF500	547	387	Φ75	140	20	67.5	Φ500	Φ450	Φ550	8 × Φ 18.5	5	125	1033	1080
315S4	FF600	620	527	Φ80	170	22	71	Φ600	Φ550	Φ660	8 × Φ 24	6	160	1224	1290
315M4	FF600	620	527	Φ80	170	22	71	Φ600	Φ550	Φ660	8 × Φ 24	6	160	1334	1334
315L4	FF600	620	527	Φ80	170	22	71	Φ600	Φ550	Φ660	8 × Φ 24	6	160	1334	1334
315H4	FF600	620	527	Φ80	170	22	71	Φ600	Φ550	Φ660	8 × Φ 24	6	160	1334	1334

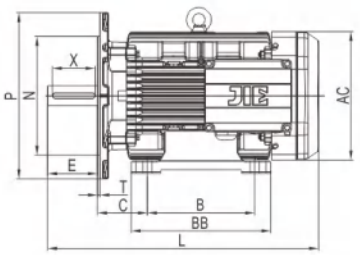
Appendix C (normative appendix)

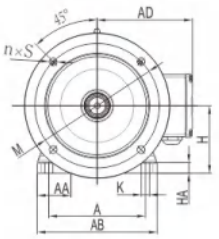
IEC With feet and flange



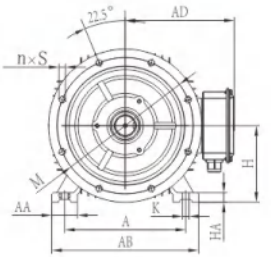


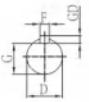
Frame Size: 63-90





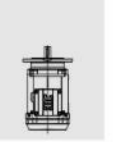
Frame Size: 100-200





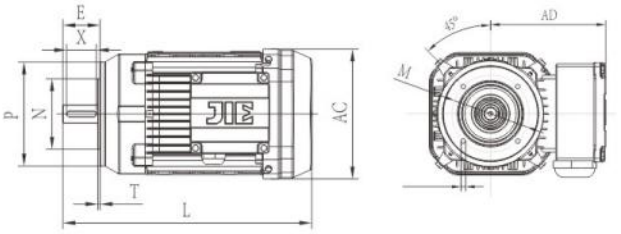
Frame Size: 225-315

Frame Size JD.63..~315../B5	The flange	Overall and mounting dimensions(mm)																						
		A	AA	AB	AC	AD	B	BB	C	D	E	F	G	H	HA	K	M	N	P	S	T	X	L(DN)	L(DU)
63S4	FF115	100	31	127	120	109	80	110	40	Φ11	23	4	8.5	63	4.5	4-Φ7	Φ115	Φ95	Φ140	4×Φ10	3	16	218	218
63M4																								230
71S4	FF130	112	30	130	135	128	90	115	45	Φ14	30	5	11	71	6	4-Φ7	Φ130	Φ110	Φ160	4×Φ10	3.5	22	252	252
71M4																								258
80S4	FF165	125	36	165	156	138	100	140	50	Φ19	40	6	15.5	80	6	4-Φ10	Φ165	Φ130	Φ200	4×Φ12	3.5	32	322	322
80M4																								342
90S4	FF165	140	32	180	175	149	125	155	56	Φ24	50	8	20	90	6	4-Φ10	Φ165	Φ130	Φ200	4×Φ12	3.5	40	335	395
90L4	FF165	140	32	180	175	157	125	155	56	Φ24	50	8	20	90	6	4-Φ10	Φ165	Φ130	Φ200	4×Φ12	3.5	40	395	395
100S4	FF215	160	30	189	198	157	140	165	63	Φ28	60	8	24	100	9	4-Φ12	Φ215	Φ180	Φ250	4×Φ14.5	4	50	420	420
100L4																								440
112M4	FF215	190	46	220	221	171	140	208	70	Φ28	60	8	24	112	7.5	4-Φ12	Φ215	Φ180	Φ250	4×Φ14.5	4	50	452	522
132S4	FF265	216	42	246	221	171	140	216	89	Φ38	80	10	33	132	12	4-Φ12	Φ265	Φ230	Φ300	4×Φ14.5	4	70	522	552
132M4	FF265	216	42	242	263	228	178	200	89	Φ38	80	10	33	132	10	4-Φ12	Φ265	Φ230	Φ300	4×Φ14.5	4	70	552	552
132L4																								/
160M4	FF300	254	65	314	314	251	210	260	108	Φ42	110	12	37	160	20	4-Φ14.5	Φ300	Φ250	Φ350	4×Φ18.5	5	90	609	662
160L4	FF300	254	65	314	314	251	254	304	108	Φ42	110	12	37	160	20	4-Φ14.5	Φ300	Φ250	Φ350	4×Φ18.5	5	90	653	692
180M4	FF300	279	70	349	355	268.5	241	349	121	Φ48	110	14	42.5	180	22	4-Φ14.5	Φ300	Φ250	Φ350	4×Φ18.5	5	80	716	764
180L4	FF300	279	70	349	355	268.5	279	387	121	Φ48	110	14	42.5	180	22	4-Φ14.5	Φ300	Φ250	Φ350	4×Φ18.5	5	80	764	830
200L4	FF350	318	70	388	397	305	305	369	133	Φ55	110	16	49	200	25	4-Φ18.5	Φ350	Φ300	Φ400	4×Φ18.5	5	90	777	846
225S4	FF400	356	75	431	446	335	286	368	149	Φ60	140	18	53	225	28	4-Φ18.5	Φ400	Φ350	Φ450	8×Φ18.5	5	100	820	880
225M4	FF400	356	75	431	446	335	311	393	149	Φ60	140	18	53	225	28	4-Φ18.5	Φ400	Φ350	Φ450	8×Φ18.5	5	100	845	915
250M4	FF500	406	80	484	485	358	349	445	168	Φ65	140	18	58	250	30	4-Φ24	Φ500	Φ450	Φ550	8×Φ18.5	5	125	910	980
280S4	FF500	457	85	542	547	387	368	485	190	Φ75	140	20	67.5	280	35	4-Φ24	Φ500	Φ450	Φ550	8×Φ18.5	5	125	982	1030
280M4	FF500	457	85	542	547	387	419	536	190	Φ75	140	20	67.5	280	35	4-Φ24	Φ500	Φ450	Φ550	8×Φ18.5	5	125	1033	1080
315S4	FF600	508	120	628	620	527	406	570	216	Φ80	170	22	71	315	45	4-Φ28	Φ600	Φ550	Φ660	8×Φ24	6	160	1224	1290
315M4	FF600	508	120	628	620	527	457	680	216	Φ80	170	22	71	315	45	4-Φ28	Φ600	Φ550	Φ660	8×Φ24	6	160	1334	1334
315L4	FF600	508	120	628	620	527	508	680	216	Φ80	170	22	71	315	45	4-Φ28	Φ600	Φ550	Φ660	8×Φ24	6	160	1334	1334
315H4	FF600	508	120	628	620	527	508	680	216	Φ80	170	22	71	315	45	4-Φ28	Φ600	Φ550	Φ660	8×Φ24	6	160	1334	1334

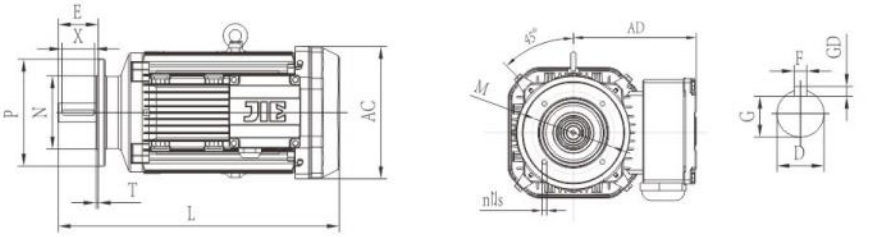



Appendix D (normative appendix)

IEC Without feet and with flange



Frame Size: 63-90

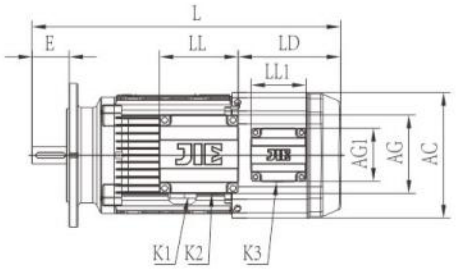


Frame Size: 100-112

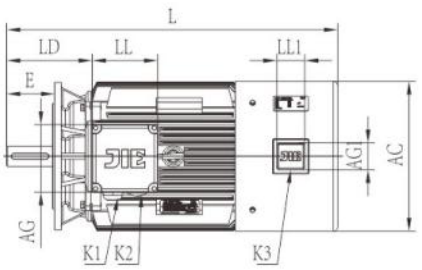
Frame Size JD.63..-112../B14	The flange	Overall and mounting dimensions(mm)													
		AC	AD	D	E	F	G	M	N	P	S	T	X	L(DN)	L(DU)
63S4	FT75	120	109	Φ11	23	4	8.5	Φ75	Φ60	Φ90	4×M5	2.5	16	218	218
63M4															230
71S4	FT85	135	128	Φ14	30	5	11	Φ85	Φ70	Φ105	4×M6	2.5	22	252	252
71M4															258
80S4	FT100	156	138	Φ19	40	6	15.5	Φ100	Φ80	Φ120	4×M6	3	32	322	322
80M4															342
90M4	FT115	175	149	Φ24	50	8	20	Φ115	Φ95	Φ140	4×M8	3	40	335	395
90L4	FT115	175	157	Φ24	50	8	20	Φ115	Φ95	Φ140	4×M8	3	40	395	395
100S4	FT130	198	157	Φ28	60	8	24	Φ130	Φ110	Φ160	4×M8	3.5	50	420	420
100L4															440
112M4	FT130	221	171	Φ28	60	8	24	Φ130	Φ110	Φ160	4×M8	3.5	50	452	522

Appendix E (normative appendix)

IEC Variable frequency motor



Frame Size：63–132

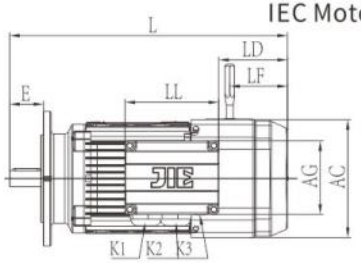


Frame Size：160–315

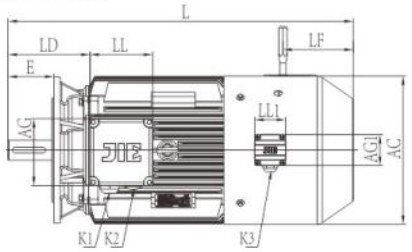
Frame Size JD.63..–315..	Overall and mounting dimensions(mm)											
	E	LL	LD	LI1	AG1	AG	AC	K1	K2	K3	L(DN)	L(DU)
63S4	23	92	102	74	74	92	120	M20×1.5	M16×1.5	M20×1.5	278	278
63M4												290
71S4	30	106	108	74	74	109	135	M25×1.5	M16×1.5	M20×1.5	314	314
71M4												320
80S4	40	106	124	74	74	109	156	M25×1.5	M16×1.5	M20×1.5	394	394
80M4												414
90S4	50	106	136	74	74	109	175	M25×1.5	M16×1.5	M20×1.5	413	473
90L4	50	106	136	74	74	109	175	M25×1.5	M16×1.5	M20×1.5	473	473
100S4	60	106	136	74	74	109	198	M32×1.5	M16×1.5	M20×1.5	513	513
100L4												533
112M4	60	106	148	74	74	109	221	M32×1.5	M16×1.5	M20×1.5	515	585
132S4	80	106	148	74	74	109	221	M32×1.5	M16×1.5	M20×1.5	586	616
132M4	80	182	124	74	74	152	263	2–M40×1.5	2–M16×1.5	M20×1.5	619	616
132L4												/
160M4	110	152	180	74	74	162	314	M36×2	M36×2	M20×1.5	643	779
160L4	110	152	180	74	74	162	314	M36×2	M36×2	M20×1.5	687	809
180M4	110	150	196	74	74	160	355	M36×2	M36×2	M20×1.5	751	799
180L4	110	150	196	74	74	160	355	M36×2	M36×2	M20×1.5	799	865
200L4	110	188	202	74	74	208	397	M48×2	M48×2	M20×1.5	825	894
225S4	140	188	232	74	74	208	446	M48×2	M48×2	M20×1.5	879	939
225M4	140	188	232	74	74	208	446	M48×2	M48×2	M20×1.5	904	974
250M4	140	218	246	74	74	248	485	M63×1.5	M63×1.5	M20×1.5	975	1045
280S4	140	218	246	74	74	248	547	M63×1.5	M63×1.5	M20×1.5	1057	1105
280M4	140	218	246	74	74	248	547	M63×1.5	M63×1.5	M20×1.5	1108	1155
315S4	170	280	257	74	74	320	620	M63×1.5	M63×1.5	M20×1.5	1314	1380
315M4	170	280	257	74	74	320	620	M63×1.5	M63×1.5	M20×1.5	1424	1424
315L4	170	280	257	74	74	320	620	M63×1.5	M63×1.5	M20×1.5	1424	1424
315H4	170	280	257	74	74	320	620	M63×1.5	M63×1.5	M20×1.5	1424	1424

Appendix F (normative appendix)

IEC Motor with brake



Frame Size：63–132

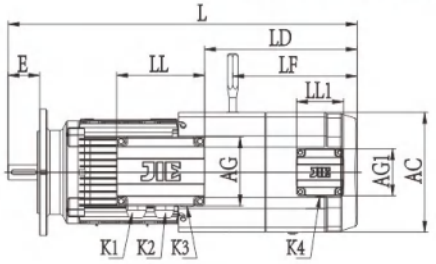


Frame Size：160–315

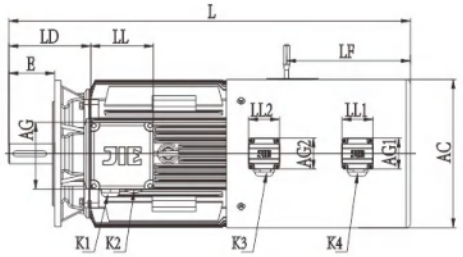
Frame Size JD.63..–315..	Overall and mounting dimensions(mm)												
	E	LL	LD	LL1	AG1	AG	AC	LF	K1	K2	K3	L(DN)	L(DU)
63S4	23	128	63	/	/	92	120	59	M20×1.5	M20×1.5	M16×1.5	278	278
63M4													290
71S4	30	139	75	/	/	109	135	60	M25×1.5	M25×1.5	M16×1.5	315	315
71M4													321
80S4	40	139	91	/	/	109	156	73	M25×1.5	M25×1.5	M16×1.5	394	394
80M4													414
90S4	50	139	102	/	/	109	175	80	M25×1.5	M25×1.5	M16×1.5	413	473
90L4	50	139	102	/	/	109	175	80	M25×1.5	M25×1.5	M16×1.5	473	473
100S4	60	139	102	/	/	109	198	74	M32×1.5	M32×1.5	M16×1.5	513	513
100L4													533
112M4	60	139	139	/	/	109	221	103	M32×1.5	M32×1.5	M16×1.5	540	610
132S4	80	139	139	/	/	109	221	103	M32×1.5	M32×1.5	M16×1.5	608	638
132M4	80	182	168	/	/	152	263	115	M40×1.5	M40×1.5	2–M16×1.5	638	638
132L4													/
160M4	110	152	180	74	74	162	314	150	M36×2	M36×2	M20×1.5	779	779
160L4	110	152	180	74	74	162	314	150	M36×2	M36×2	M20×1.5	809	809
180M4	110	150	196	74	74	160	355	180	M36×2	M36×2	M20×1.5	826	874
180L4	110	150	196	74	74	160	355	180	M36×2	M36×2	M20×1.5	874	940
200L4	110	188	202	74	74	208	397	200	M48×2	M48×2	M20×1.5	902	971
225S4	140	188	232	74	74	208	446	220	M48×2	M48×2	M20×1.5	955	1015
225M4	140	188	232	74	74	208	446	220	M48×2	M48×2	M20×1.5	980	1050
250M4	140	218	246	74	74	248	485	255	M63×1.5	M63×1.5	M20×1.5	1060	1130
280S4	140	218	246	74	74	248	547	290	M63×1.5	M63×1.5	M20×1.5	1134	1182
280M4	140	218	246	74	74	248	547	290	M63×1.5	M63×1.5	M20×1.5	1185	1232
315S4	170	280	257	74	74	320	620	320	M63×1.5	M63×1.5	M20×1.5	1400	1466
315M4	170	280	257	74	74	320	620	320	M63×1.5	M63×1.5	M20×1.5	1504	1504
315L4	170	280	257	74	74	320	620	320	M63×1.5	M63×1.5	M20×1.5	1504	1504
315H4	170	280	257	74	74	320	620	320	M63×1.5	M63×1.5	M20×1.5	1504	1504

Appendix G (normative appendix)

IEC Variable frequency motor with brake



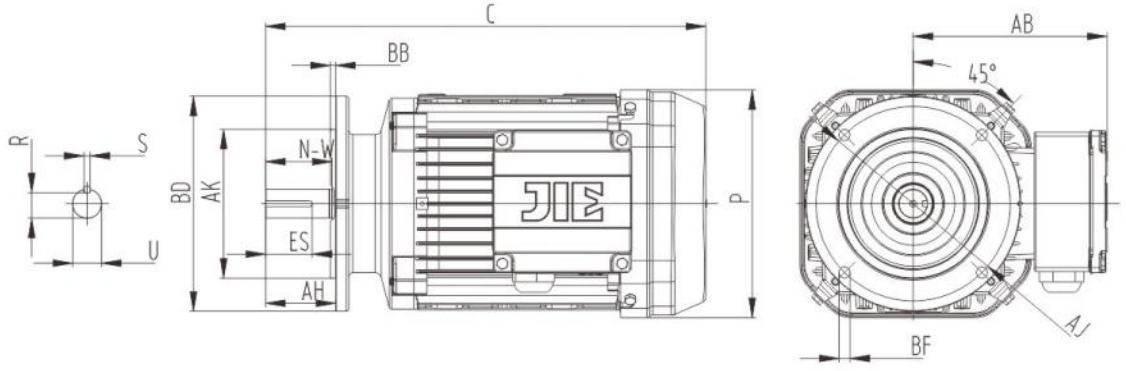
Frame Size：63-132



Frame Size：160-315

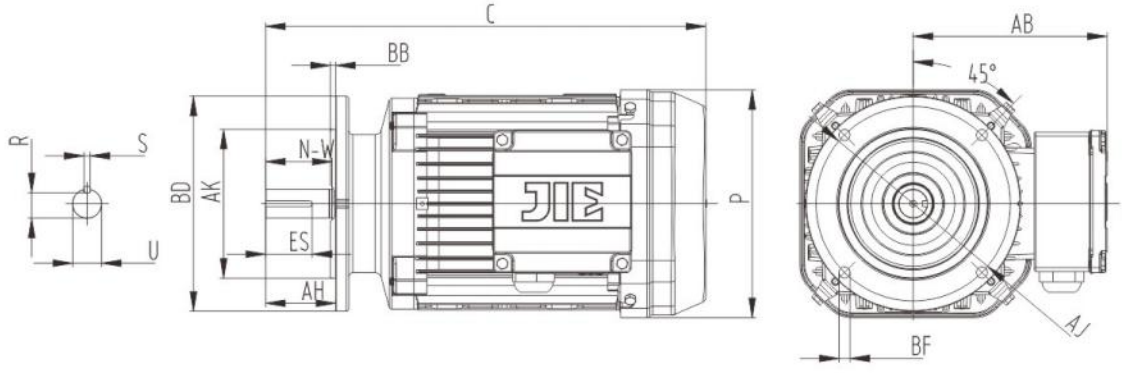
Frame Size JD.63..-315..	Overall and mounting dimensions(mm)															
	E	LL	LD	LL1	LL2	AG1	AG2	AG	AC	LF	K1	K2	K3	K4	L(DN)	L(DU)
63S4	23	128	141	74	74	74	74	92	120	137	M20×1.5	M20×1.5	M16×1.5	M20×1.5	356	356
63M4																368
71S4	30	139	132	74	74	74	74	109	135	117	M25×1.5	M25×1.5	M16×1.5	M20×1.5	372	372
71M4																378
80S4	40	139	147	74	74	74	74	109	156	129	M25×1.5	M25×1.5	M16×1.5	M20×1.5	450	450
80M4																462
90S4	50	139	151	74	74	74	74	109	175	134	M25×1.5	M25×1.5	M16×1.5	M20×1.5	461	521
90L4	50	139	151	74	74	74	74	109	175	134	M25×1.5	M25×1.5	M16×1.5	M20×1.5	524	524
100S4	60	139	151	74	74	74	74	109	198	122	M32×1.5	M32×1.5	M16×1.5	M20×1.5	549	549
100L4																569
112M4	60	139	197	74	74	74	74	109	221	169	M32×1.5	M32×1.5	M16×1.5	M20×1.5	598	668
132S4	80	139	197	74	74	74	74	109	221	169	M32×1.5	M32×1.5	M16×1.5	M20×1.5	666	696
132M4	80	182	247	74	74	74	74	152	263	195	M40×1.5	M40×1.5	M16×1.5	M20×1.5	742	742
132L4																/
160M4	110	152	180	74	74	74	74	162	314	184	M36×2	M36×2	M20×1.5	M20×1.5	869	869
160L4	110	152	180	74	74	74	74	162	314	184	M36×2	M36×2	M20×1.5	M20×1.5	899	899
180M4	110	150	196	74	74	74	74	160	355	215	M36×2	M36×2	M20×1.5	M20×1.5	861	909
180L4	110	150	196	74	74	74	74	160	355	215	M36×2	M36×2	M20×1.5	M20×1.5	909	975
200L4	110	188	202	74	74	74	74	208	397	248	M48×2	M48×2	M20×1.5	M20×1.5	950	1033
225S4	140	188	232	74	74	74	74	208	446	279	M48×2	M48×2	M20×1.5	M20×1.5	1014	1074
225M4	140	188	232	74	74	74	74	208	446	279	M48×2	M48×2	M20×1.5	M20×1.5	1039	1109
250M4	140	218	246	74	74	74	74	248	485	320	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1125	1195
280S4	140	218	246	74	74	74	74	248	547	365	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1209	1257
280M4	140	218	246	74	74	74	74	248	547	365	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1260	1307
315S4	170	280	257	74	74	74	74	320	620	410	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1490	1556
315M4	170	280	257	74	74	74	74	320	620	410	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1594	1594
315L4	170	280	257	74	74	74	74	320	620	410	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1594	1594
315H4	170	280	257	74	74	74	74	320	620	410	M63×1.5	M63×1.5	M20×1.5	M20×1.5	1594	1594

Appendix H(normative appendix)
NEMA High Efficient without feet and with flange



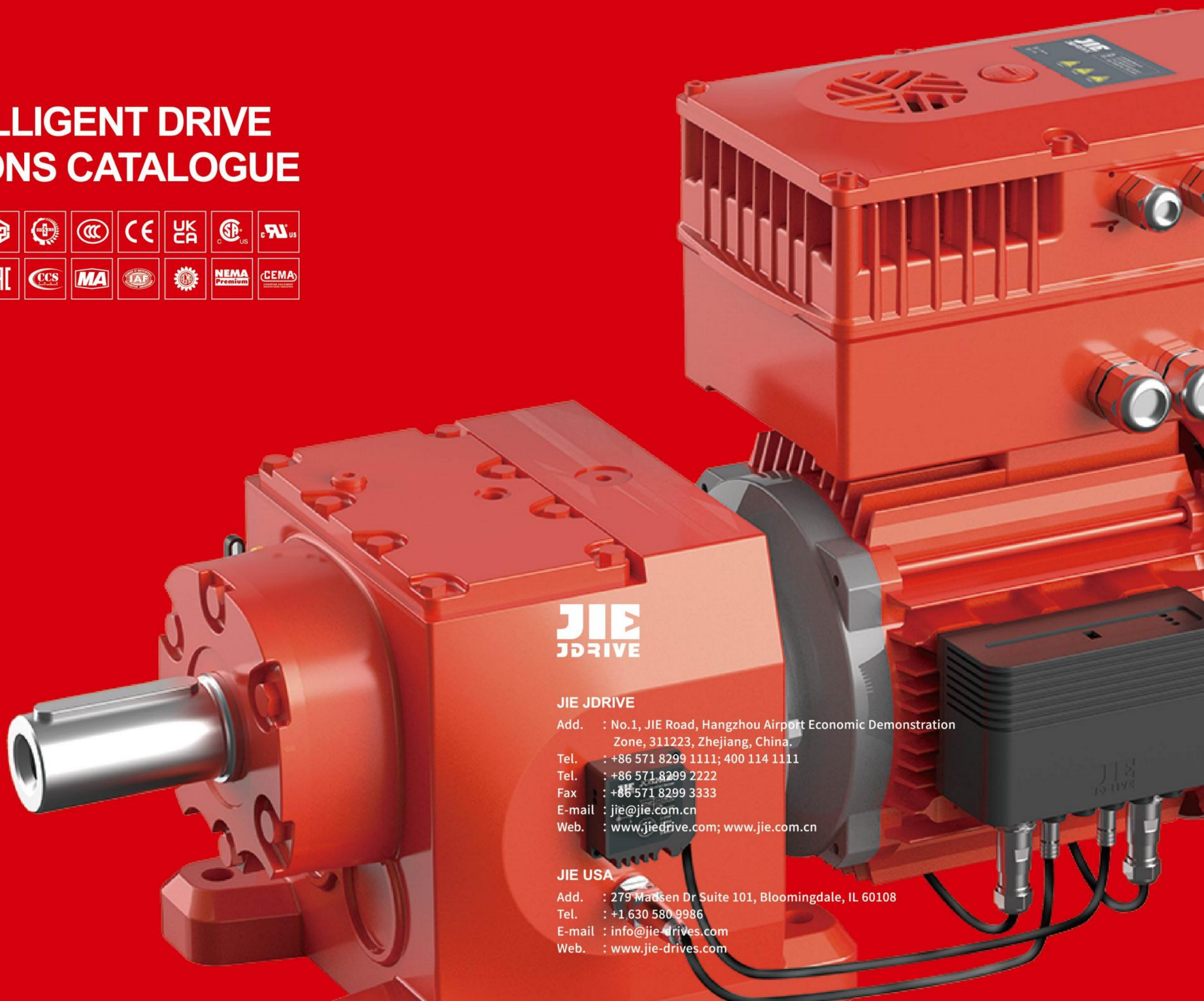
Frame size	HP	N-W	C	R	S	U	ES	AH	BB	AK	BD	AJ	AB	BF
48C	1/4	1.5	9.36	0.453	/	0.5	/	1.69	0.16	3	5.62	3.75	4.3	1/4–20
	1/3		10.42										5.04	
	1/2		10.42										5.04	
56C	1/3	1.88	10.8	0.517	0.188	0.625	1.41	2.06	0.16	4.5	6.5	5.875	5.04	3/8–16
	1/2		10.8										5.04	
	3/4		13.15										5.43	
	1		13.15										5.43	
	1.5		13.25										5.87	
	2		15.61										6.18	
143/5TC	1	2.46	13.22	0.771	0.188	0.875	1.41	2.12	0.16	4.5	6.5	5.875	5.43	3/8–16
	1.5		13.34										5.87	
	2		15.7										6.18	
	3		16.37										6.18	
182/4TC	3	2.75	17	0.986	0.25	1.125	1.78	2.62	0.25	8.5	9	7.25	6.18	1/2–13
	5		17.99										6.73	
	7.5		20.04										6.73	
213/5TC	7.5	3.38	20.24	1.201	0.312	1.375	2.41	3.12	0.25	8.5	9	7.25	6.73	1/2–13
	10		21.67										8.98	
254/6TC	15	4	26.24	1.416	0.375	1.625	2.91	3.75	0.25	8.5	10	7.25	9.88	1/2–13
	20		27.38										9.88	
284/6TC	25	4.62	27.83	1.591	0.5	1.875	3.28	4.38	0.25	10.5	11.25	9	11	1/2–13
	30		29.72										11	
324/326TC	40	5.25	30.6	1.845	0.5	2.125	3.91	5	0.25	12.5	14	11	11.4	5/8–11
	50		32.3										12.28	
364/5TC	60	5.88	33.3	2.021	0.625	2.375	4.28	5.62	0.25	12.5	14	11	12.28	5/8–11

Appendix I(normative appendix)
NEMA Premium Efficient without feet and with flange



Frame size	HP	N-W	C	R	S	U	ES	AH	BB	AK	BD	AJ	AB	BF
56C	1	1.88	14.13	0.517	0.188	0.625	1.41	2.06	0.16	4.5	6.5	5.875	5.04	3/8–16
	1.5		15.61										6.18	
	2		15.61										6.18	
143/5TC	1	2.46	14.2	0.771	0.188	0.875	1.41	2.12	0.16	4.5	6.5	5.875	5.43	3/8–16
	1.5		15.7										6.18	
	2		15.7										6.18	
	3		16.37										6.18	
182/4TC	3	2.75	17	0.986	0.25	1.125	1.78	2.62	0.25	8.5	9	7.25	6.18	1/2–13
	5		20.04										6.73	
	7.5		21.67										8.98	
213/5TC	7.5	3.38	21.67	1.201	0.312	1.375	2.41	3.12	0.25	8.5	9	7.25	8.98	1/2–13
	10		21.67										8.98	
254/6TC	15	4	26.24	1.416	0.375	1.625	2.91	3.75	0.25	8.5	10	7.25	9.88	1/2–13
	20		28.38										9.88	
284/6TC	25	4.62	27.83	1.591	0.5	1.875	3.28	4.38	0.25	10.5	11.25	9	11	1/2–13
	30		29.72										11	
324/326TC	40	5.25	30.6	1.845	0.5	2.125	3.91	5	0.25	12.5	14	11	11.4	5/8–11
	50		32.3										12.28	
364/5TC	60	5.88	33.3	2.021	0.625	2.375	4.28	5.62	0.25	12.5	14	11	12.28	5/8–11

JIE INTELLIGENT DRIVE SOLUTIONS CATALOGUE



JIE JDRIVE

Add. : No.1, JIE Road, Hangzhou Airport Economic Demonstration Zone, 311223, Zhejiang, China.
Tel. : +86 571 8299 1111; 400 114 1111
Tel. : +86 571 8299 2222
Fax : +86 571 8299 3333
E-mail : jie@jie.com.cn
Web. : www.jiedrive.com; www.jie.com.cn

JIE USA

Add. : 279 Madsen Dr Suite 101, Bloomingdale, IL 60108
Tel. : +1 630 580 9986
E-mail : info@jie-drives.com
Web. : www.jie-drives.com

JRT GEAR UNITS & GEARMOTORS

JRTR
Helical Inline Gearmotors
Size: 09-189
Ratio: 3.37-289.74
Input power: 0.16-340HP
Output torque: 21-499633 lb-in

JRTF
Parallel Shaft Helical Gearmotors
Size: 29-169
Ratio: 3.77-281.71
Input power: 0.16-340HP
Output torque: 31-328333 lb-in

JRTK
Helical-Bevel Gearmotors
Size: 39-189
Ratio: 3.98-197.37
Input power: 0.16-272HP
Output torque: 88-555403 lb-in

JRTS
Helical-Worm Gearmotors
Size: 39-99
Ratio: 3.97-288
Input power: 0.16-30HP
Output torque: 88-43336 lb-in

JRTW
Helical Face Gearmotor
Size: 10-30
Ratio: 6.57-75
Input power: 0.12-1.5HP
Output torque: 221-619 lb-in

JRH INDUSTRIAL GEAR UNITS

JRHH
Parallel Shaft Gear Units
Size: 3-28
Ratio: 1.25-450
Input power: 5.85-14306HP
Output torque: 20341-12381600 lb-in

JRHB
Helical Bevel Gear Units
Size: 4-28
Ratio: 5-400
Input power: 3.81-6677HP
Output torque: 48642-12381600 lb-in

JRHD
Bucket Elevator Gear Units
Size: 5-16
Ratio: 25-71
Input power: 21.8-1775HP
Output torque: 97284-1530012 lb-in

JRHO
Palm Oil Gear Units
Size: 310
Ratio: 56, 80
Input power: 144, 191HP
Output torque: 663300 lb-in

JRHA
Cooling Tower Gear Units
Size: 166
Ratio: 14
Input power: 310HP
Output torque: 185724 lb-in

JRP PLANETARY GEAR UNITS

JRP
Planetary Gear Units
Size: 9-36
Ratio: 25-4000
Input power: 0.54-17597HP
Output torque: 194568-229994400 lb-in

JRP
Planetary Gear Units
Size: 01-8
Ratio: 3.08-3460
Input power: 0.03-261HP
Output torque: 8844-114972 lb-in

JRPH
Rotary Planetary Gear Units
Size: 08-100
Ratio: 3.4-2000
Input power: 102-340HP
Output torque: 70752-884400 lb-in

JRP RV
Inline Planetary Gear Units
Ratio: 3-100
Backlash: 1-3/3-5/5-7arc-min
Torque: 53-29185 lb-in

JRP RE
Right Angle Planetary Gear Units
Ratio: 3-100
Backlash: 4-9/6-11arc-min
Torque: 106-16980 lb-in

JRW WORM GEAR UNITS

JRSTD
IEC Worm Gear Units
Size: 25-150
Ratio: 5-100
Input power: 0.08-20HP
Output torque: 115-13716 lb-in

JRWND
NEMA Worm Gear Units
Size: 30-150
Ratio: 5-100
Input power: 0.08-20HP
Output torque: 115-13716 lb-in

JRWNED
Double Reduction Units
Size: 25/30-63/150
Ratio: 100-5000
Input power: 0.08-2HP
Output torque: 257-23628 lb-in

JRKM, JRKB
Hypoid Gear Units
Size: 28-68
Ratio: 7.5-300
Input power: 0.1-15HP
Output torque: 708-6637 lb-in

WPA
Worm Gears
Size: 40-250
Ratio: 10-60
Input power: 0.16-45HP
Output torque: 168-24292 lb-in

JD THREE PHASE ASYNCHRONOUS MOTORS

JDC, JCS Servo Motors & Drives
Power: 0.54-10HP
Output Torque: 11-425 lb-in
Input power: 1AC 220V/3AC 380V
Communication:
Pulse, EtherCAT, Profinet

JDL
Asynchronous Servo Motor
Torque: 22-1770N.m
Speed: 1200r/min-3000r/min

JD-IEC
IEC Standard Motors
Size: 63-315
Power: 0.16-272HP
Efficiency: IE3 IE4 IE5

JD-NEMA
NEMA Standard Motors
Size: 56C-365TC
Power: 0.16-30HP
Efficiency: NEMA Premium

JD-B
Explosion-Proof Motors
Size: 80-315
Power: 0.75-272HP
Explosion-Proof Grade:
Exib II BT4
Efficiency: IE3 IE4 IE5

JC INTELLIGENT DRIVE SOLUTIONS

JC
Intelligent Drive Solutions
Industrial Drive Solutions incl Reducers, Motors, Converters, Sensors, Internet of Things, etc.

JCMC VFD Gearmotors
Size: 175-255
Power: 1-7HP
Input Power: 3AC 380-440V
Output Frequency: 0-200Hz
Communication:
ModbusRTU, Profinet, ASi

JCI Intelligent Monitoring System
Power: AC220V, DC24V
Communication: Wifi, 4G, RS485
Items:
Vibration, Temperature, Pressure, Current
Deployment:
Public Cloud, Private Cloud

JCME Distributed VFDS
Size: 175-255
Power: 1-7HP
Input power: 3*AC380-440V
Output Frequency: 0-200Hz
Communication:
Profinet, ModbusRTU, ASi

JCF VFDS
Size: 175-355
Power: 1-74HP
Input power:
1*AC220/3*AC400V
Communication:
Profinet, EtherCAT, CANOPEN

MORE OPTIONS

JRES(R、K)
Stainless Steel Helical Gearmotos
Size: 37-67
Ratio: 3.41-199.81
Input power: 0.24-10HP
Output torque: 106-8048 lb-in

JRES
Stainless Steel Worm Gearmotors
Size: 30-90
Ratio: 7.5-100
Input power: 0.08-5.4HP
Output torque: 23-4053 lb-in

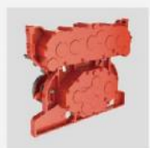
JRTH、JRTV
Front&Rear Roller Gearboxes
Size: 18-60
Ratio: 3-1800
Input power: 0.13-10HP
Output torque: 14-29136 lb-in

JRSS
Screw Lifters
Size: 35-150
Ratio: 5-40
Input power: 0.26-22HP
Lift Capacity: 1102-57431 lb-in

JRTM
Spiral Bevel Right Angle Units
Size: 2-25
Ratio: 1-5
Input power: 0.019-455HP
Input Speed: 10-1450r/min

JRGC
Transfer Case
Size: 0401, 1501
Ratio: 0.589, 0.659, 0.756, 0.825
Max. Output Torque(Pump): 12303 lb-in
Max. Output Torque(Working Shift)
353760 lb-in

JN
Agricultural Machinery Gear Units
Ratio: 0.364-2.33
Input Speed: 800r/min
Efficiency: ≥96%



JPF
Front&Rear Roller Gearboxes
Size: 1706-2012
Ratio: 3.04-33.568
Input power: 2-4HP
Output torque: 974-2407 lb-in

JEC
Escalator Units
Size: 2-15, 2-25
Ratio: 24.5
Efficiency: ≥96%
Working Life: 146000h
Output torque: 31219-45547 lb-in

JIE Intelligent Drive Solutions Provider
For more products, please contact JIE.
(Inch)

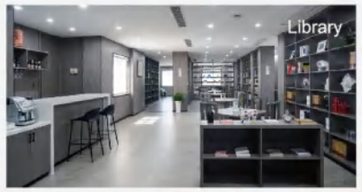
JIE Drive Intelligent Factory

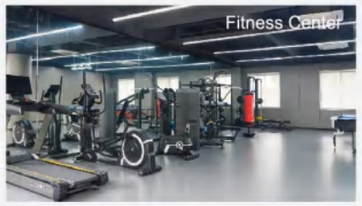
"12345" Plan of JIE Intelligent Drive Future Factory: 1 Scene, i.e. JIE Intelligent Drive Solutions; 2 Platforms, i.e. Off-line JIE Intelligent Drive Industrial Platform and On-line JIE New Manufacturing Platform; 3 function, i.e. Office Area, Production Area and Living Area; 4 Standards, i.e. Chinese Standard, American Standard, German Standard and Japanese Standard; 5 Intelligence, i.e. Intelligent Plants, Intelligent Products, Intelligent Services, Intelligent Experiences and Intelligent Talents.We are dedicated to build a professional, Intelligent and Global JIE on Environment-friendly, sustainable development, global service basis.

Office Area

Production Area

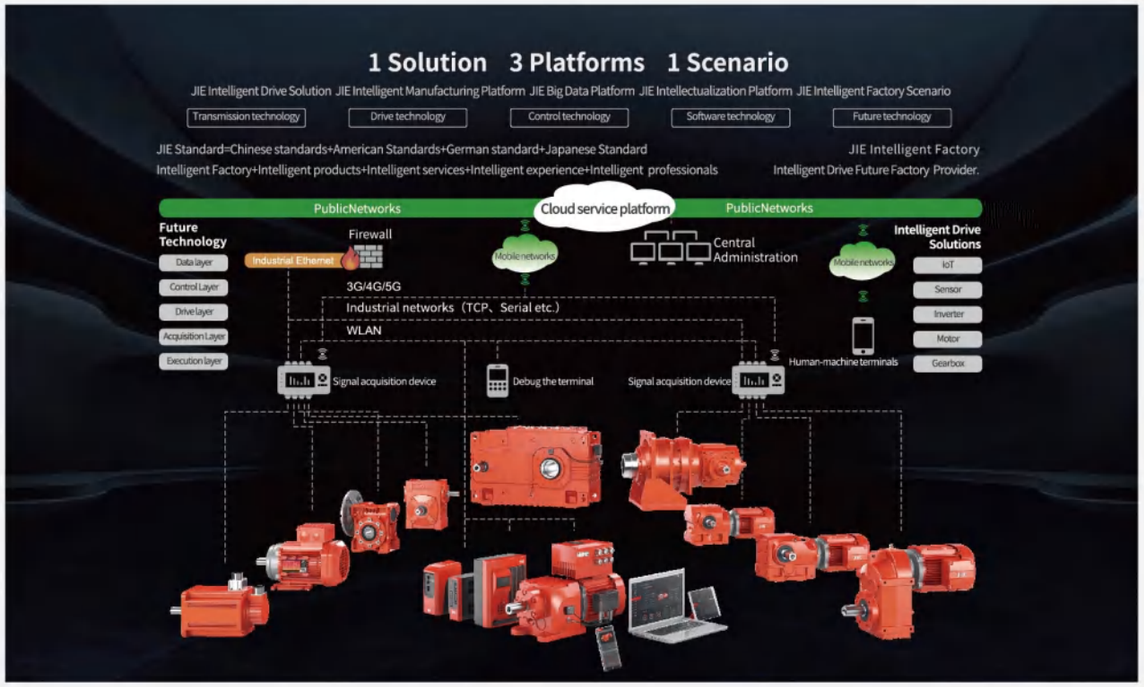
Living Area





JIE Intelligent Drive Solutions Provider

JRT Intelligent Gearmotors JRH Intelligent Industrial Gear Units JRP Intelligent Planetary Gear Units JRW High-efficiency Worm Reducers JD High-efficiency Motors JC Intelligent Drive Solutions
Intelligent drive solutions such as gear units, gearmotors, motors, VFDs, sensors, and the Internet of Things; and intelligent digital technologies such as execution layer, acquisition layer, drive layer, control layer, and data layer.



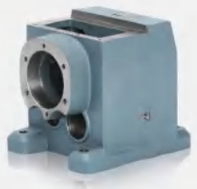
JIE Intelligent Drive Research Institute + Innovation Center + Intelligent Factory

Take the Research Institute as the lead to create talent highland; Take Science & Innovation Park as a platform to build industrial ecology; Based on business entities, positioning "specialized and special new".

JIE Intelligent Drive Products

Standardizing products for platform integration, technologies for automation, and processes for information management.

Intelligent services



Gear Housings

Gear pairs

Bevel gear pairs

Worm Gear & Shaft

Planetary Gears Inner Rings

Planetary Housings

Motor Stators, Rotors & Housings

JIE Intelligent Drive Applications

Drive solutions include Intelligent Planning Logistics, Smart Housing Plant, Smart Gear Plant, Smart Motor Plant, Smart Assembly Plant, and Intelligent Testing.

Intelligent Drive Solutions for Stackers

Intelligent Drive Solutions for RGVs

Intelligent Drive Solutions for Conveyor Systems

Intelligent Drive Solutions for Elevators

Intelligent Drive Solutions for Cranes

Intelligent Drive Solutions for Industrial Ceiling Fans

Intelligent Drive Solutions for Cleaning Lines

Intelligent Drive Solutions for Heat Treatment Lines

Intelligent Drive Solutions for Motors Winding & Embedding

Intelligent Drive Solutions for Product Assembly Lines

JIE Intelligent Drive Industrial Ecology

Using smart products to build intelligent factories and produce innovative solutions, we provide customers with smart products, services, and experiences. Our goal is to create an industrial platform for win-win cooperation.

JIE Intelligent Drive Projects

JIE provides Intelligent Drive Solutions and Digital Technologies to the top 10 enterprises in manufacturing, clothing, food, housing, automotive, energy, transportation, agriculture, livestock, and maritime industries.

JIE Intelligent Drive solutions for Intelligent Manufacturing Industry

JIE Intelligent Drive solutions for Textiles & Garments Industry

JIE Intelligent Drive solutions for Food & Beverage Industry

JIE Intelligent Drive solutions for Construction Machinery Industry

JIE Intelligent Drive solutions for Automotive Engineering Industry

JIE Intelligent Drive solutions for Power & Energy Industry

JIE Intelligent Drive solutions for Lifting & Transportation Industry

JIE Intelligent Drive solutions for Agricultural Machinery Industry

JIE Intelligent Drive solutions for Petrochemical Industry

JIE Intelligent Drive solutions for Marine Engineering Industry