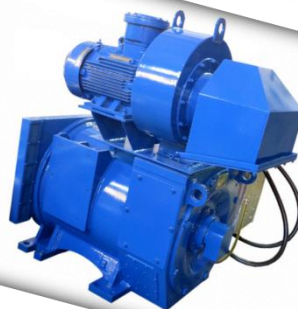
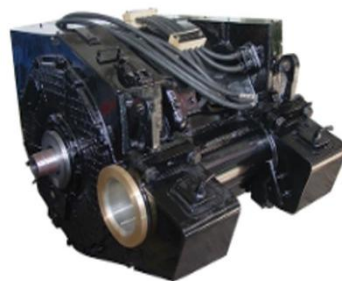




Traction motor

PART 01



YZ95A

Product Overview

This motor is designed for traction applications in mining electric locomotives for the CIS market. Featuring a six-pole configuration, double-sided drive, multiple armature slots (123 slots), a compensation system assembly, cast steel frame, sliding clamp bearings, and a rotatable gear brush holder ring, it is particularly suited for high-voltage operating conditions and harsh environments.



Product Technical Standards and Specifications

Rated Power: 520 kW

Rated Voltage: 1475 V

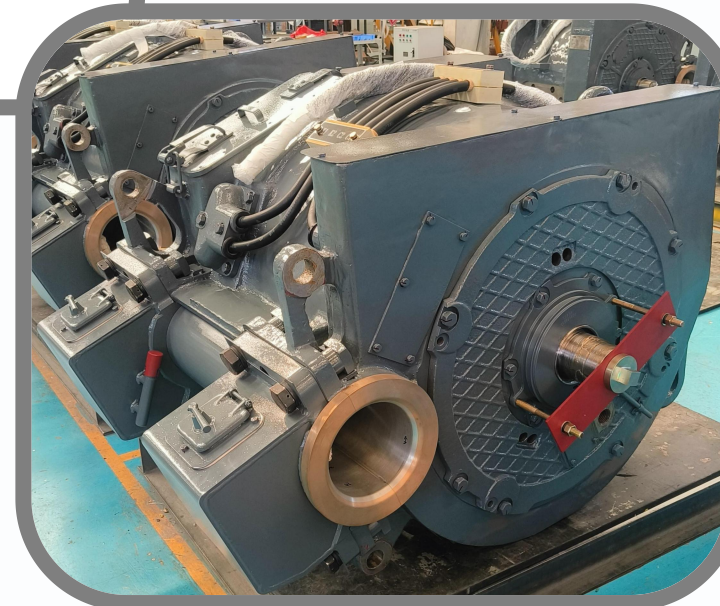
Rated Current: 380 A

Rated Speed: 680 r/min

Rated Torque: 7303 N·m

Insulation Class: H

Weight: 4598 kg



➤ EK590

Product Overview

The EK590 series traction motor is a high-performance DC traction power unit specifically engineered for heavy-duty industrial applications. With its robust 590kW rated power output, high efficiency conversion rate of 93.6%, and explosion-proof design, it has become the core power solution for heavy-duty sectors such as mining dump trucks and heavy rail equipment. Currently, it serves industrial clients across Eastern Europe, the Middle East, and Western Europe, and has been included in key procurement lists for markets including Ukraine.



Product Technical Standards and Specifications

Rated Power: 590 kW

Rated Voltage: 830 V

Rated Current: 760 A

Rated Speed: 910 r/min

Maximum Speed: 2500 r/min

Rated Efficiency: 93.6%

Overload Capacity: 180% (short-term)

Protection Rating: Explosion-proof

Cooling Method: Forced ventilation

Weight: 3300 kg



➤ ZQDR310

Product Overview

The ZQDR-310 DC traction motor is a four-pole, forced-ventilation, series-wound DC traction motor extensively employed in various narrow-gauge diesel locomotives. Designed incorporating C-series motor technology, its performance is comparable to the CE761A19, with interchangeability of both complete units and components.



Product Technical Standards and Specifications

Rated Power: 310 kW

Rated Voltage: 500 V

Maximum voltage: 1200V

Rated Current: 680 A

Maximum current: 1000A

Rated Speed: 760 r/min

Maximum Speed: 3100 r/min

Insulation class: H

Cooling airflow: 80m³/s

Weight: ≤1670kg



➤ ZD126E

Product Overview

This motor is designed for narrow-gauge diesel locomotives, featuring an enhanced power output based on the original narrow-gauge motor design. It represents the next generation of DC traction motors for narrow-gauge vehicles. Key characteristics include high constant torque, a broad power-to-speed ratio range, excellent commutation performance, and superior versatility and compatibility. It currently stands as China's highest-power traction motor for narrow-gauge diesel locomotives.



Product Technical Standards and Specifications

Rated Power: 323 kW

Rated Voltage: 500 V

Rated Current: 710 A

Maximum current: 1000A

Rated Speed: 740 r/min

Maximum Speed: 3100 r/min

Insulation class: H

Cooling airflow: 80m³/s

Weight: ≤1700kg



➤ ZD108

Product Overview

This traction motor is a four-pole series-wound DC traction motor, interchangeable with the GE752AF8.



Product Technical Standards and Specifications

Rated Voltage: 376 V

Rated Current: 1180 A

Rated Speed: 463 r/min

Rated torque: 8200 N•m

Starting current: 1300 A

Maximum voltage: 1300 V

Maximum current: 1600 A

Rated efficiency: 89.6%

Insulation class: H

Weight: 3210 kg

YZ141B

Product Overview

The YZ141A is an export-grade narrow-gauge DC traction motor designed to replace D29 and D31 series motors undergoing international market repairs.

This motor employs a sliding bearing structure, featuring a wave-wound armature coil secured by steel wire binding, with brush holders utilising constant-pressure spiral springs.



Product Technical Standards and Specifications

Rated Power: 291 kW

Rated Voltage: 615 V

Maximum voltage: 1000 V

Rated Current: 520 A

Maximum current: 650 A

Rated Speed: 534 r/min

Maximum Speed: 2268 r/min

Rated efficiency: 91%

Cooling airflow: 70m³/s

YJ90A1

Product Overview

HXD21000 Series (New Eight-Axle Freight Electric Locomotive): This motor features a rolling-clamp structure with a fully laminated welded frame and single-end output. It employs forced external ventilation, with cooling air entering via the drive end and exiting through the non-drive end. Dual-end insulated bearings are utilised, with the drive gear mounted between the two bearings. The drive-end bearing is an oil-lubricated, maintenance-free bearing, while the non-drive-end bearing is a serviceable grease-lubricated bearing. This motor is characterised by high power and high speed, making it suitable for high-speed, heavy-load electric locomotives.



Product Technical Standards and Specifications

Rated Power: 1275kW

Rated Voltage: 1391V

Rated Current: 620 A

Rated Speed: 1500 r/min

Rated frequency: 76Hz

Mounting method: Roll-on structure

Weight: ≤750kg



➤ JF204D1 Main Generator

Product Overview

DF8B diesel locomotive/DF11 diesel locomotive, employing a single-bearing support system with carbon brushes and forced-air cooling.



Product Technical Standards and Specifications

Rated Capacity: 3700 kVA

Rated Voltage: 507/770 V

Rated Current: 4215/2775 A

Rated Speed: 1000 r/min

Insulation Class: H

Excitation Method: Separately Excited

Rated Excitation Voltage: 69/85 VDC

Rated Excitation Current: 295/360 ADC

Frequency: 116.7 Hz

Power Factor: 0.95

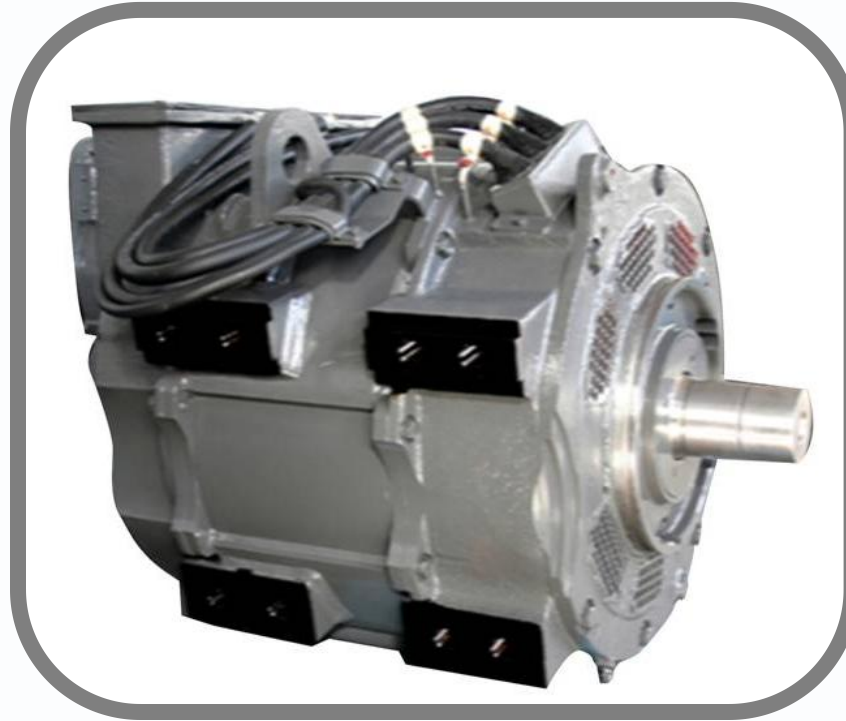
Weight: 6032 kg



YJ85A AC Traction Motor

Product Overview

The YJ85A motor is a three-phase squirrel-cage asynchronous traction motor powered by an inverter, initially manufactured for use in 120km/h freight electric locomotives. This motor features a rolling-clamp structure with single-end output; it employs forced external ventilation, with cooling air entering at the non-drive end and exiting at the drive end; it utilises a three-bearing configuration, all bearings being insulated; oil filling ports are provided at both end covers, allowing grease replenishment during operation.



Product Technical Standards and Specifications

Rated power: 1250 kW

Rated voltage: 2150 V

Rated current: 390 (fundamental) A

Rated speed: 1365 r/min

Rated power factor: 0.91

Rated efficiency: 95%

Constant power speed range: 1365–2662 r/min

Stator winding connection: Y

Number of poles: 4

Insulation class: 200

Cooling method: Forced ventilation, air volume 92 m³/min, static air pressure 2800 Pa

Duty cycle: Continuous

Suspension method: Roller-type

YJ116A AC Traction Motor

Product Overview

The YJ116A2 motor is a three-phase squirrel-cage asynchronous traction motor. The stator employs a fully laminated rolled-up structure, while the rotor forms a squirrel cage through the welding of copper conductors to copper end rings. The end rings feature high-strength, high-quality alloy guard rings.



Product Technical Standards and Specifications

Rated torque: 10261 N•m

Rated efficiency: 91%

Rated frequency: 13.9 Hz

Maximum Speed: 2623 r/min.

Maximum Speed at Constant Power: 2514 r/min.

Insulation Class: 200

Stator Winding Connection: Y

Weight: 2900 kg

Cooling Air Flow: 1.2 m³/s

Duty Cycle: S1

YJ117A Synchronous Main and Auxiliary Generator

Product Overview

The YJ117A main and auxiliary generator set is designed for the 6000-horsepower Harmony diesel locomotive and represents a motor technology introduced by our company.

The motor features an integrated main and auxiliary generator structure, comprising a main generator and an auxiliary generator. Mechanically connected but electrically independent, they are housed within a single generator body and coaxially aligned. The auxiliary generator is positioned near the diesel engine end. The main generator is integrated with a rectifier.

After rectification, it supplies DC power to the subsequent traction motors. The auxiliary generator outputs three sets of AC power:

- Main output (1-2-3) powers the locomotive's AC auxiliary drive system components—cooling fan motor, air compressor motor, and traction fan motor;
- Auxiliary output (4-5-6) provides auxiliary power for battery charging, lighting, and other auxiliary applications; while the intermediate tap output (7-8-9) supplies the main generator's excitation winding.

The motor's primary insulation employs a silicone rubber insulation system, offering excellent integrity, high-voltage resistance, high-temperature resistance, aging resistance, corrosion resistance, and high reliability.

The motor features high online maintainability, allowing components such as slip rings, brushes, brush holders, rectifiers, and bearings to be replaced while mounted on the locomotive.



Product Technical Standards and Specifications

Rated Power of Generator: 4480 kW

Rated Voltage of Generator: 2100 V

Rated Current of Generator: 1296 A

Rated Speed of Generator: 1000 r/min

Rated frequency of main generator: 93.3 Hz

Excitation current of main generator: 135 A

Rated power of auxiliary generator: 270/31.5/20 kW

Rated voltage of auxiliary generator: 444/222/53 V

Rated speed of auxiliary generator: 1000/1000/325 r/min

Auxiliary Generator Rated Current: 500/80/271 A

Auxiliary Generator Excitation Current: ≤ 70 A

Auxiliary Generator Rated Frequency:

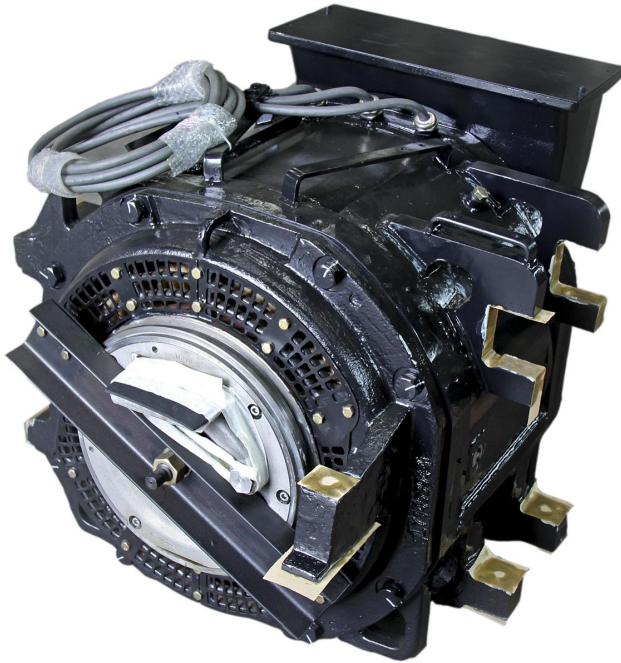
133.3/133.3/43.3 Hz

Rated Efficiency: $\geq 96\%$

YJ157A AC Traction Motor

Product Overview

This traction motor is used in India's mainline 4500HP diesel freight locomotives.



Product Technical Standards and Specifications

Rated Power: 425 kW

Maximum Power: 450 kW

Rated Voltage: 1520 V

Maximum Voltage: 2028 V

Rated Current: 200 A

Maximum Current: 280 A

Rated Speed: 600 r/min

Maximum Speed: 3220 r/min

Rated Frequency: 20.5 Hz

Maximum Frequency: 109 Hz

Rated Torque: 6750 N•m

Maximum Torque: 9500 N•m

Rated DC Voltage: 2210 V

Maximum DC Voltage: 2600 V

Insulation Class: 200

Number of Poles: 4

Cooling Air Flow: 1 m³/s

Weight: ≤2125 kg

YJ170A Traction Motor

Product Overview

This traction motor is designed for the HXD2C locomotive's electronic transmission system manufactured by CRRC. This high-power AC transmission system employs AC-DC-AC conversion technology to control the locomotive's traction and braking characteristics. It meets the performance requirements for domestic high-power AC transmission electric locomotives, delivering exceptional operational performance and significant energy savings.

The CRRC HXD2C locomotive electric transmission system primarily comprises the traction system, auxiliary systems, and the microcomputer network control system (TCMS).



Product Technical Standards and Specifications

Rated Power: 1250 kW

Rated Voltage: 2150 V

Rated Current: 380 A

Rated Speed: 1499 r/min

Rated Frequency: 50.6 Hz

Mounting Method: Roller-type structure



YJ177A AC Main Generator Motor

Product Overview

The YJ177A brushless synchronous generator is designed for the AC electric drive system of 240-ton mining dump trucks. The motor functions as a main-auxiliary synchronous generator. The generator employs a common core design, with the main and auxiliary windings being two sets of mutually independent windings sharing the same slots. The main winding utilizes a double-star connection with a 30-degree electrical angle shift. The output from the main winding, after rectification and inversion, supplies power to the AC drive system. The output from the auxiliary winding, after rectification and inversion, supplies power to the main fan and the brake unit fan.



Product Technical Standards and Specifications

Rated Power:

Main Generator 1646 kW,
Auxiliary Generator 171 kW

Rated Voltage:

Main Generator 1500V,
Auxiliary Generator 500V

Rated Current:

Main Generator $333.5 \times 2A$,
Auxiliary Generator 207A

Rated Speed: 1800 r/min

Rated Efficiency: 95%

Insulation Class: H

Rated Frequency: 120Hz

Power Factor: 0.95

Weight: 3550 kg

YJ177B AC Traction Main Generator

Product Overview

The YJ177B brushless synchronous generator is designed for the AC electric drive system of 300-ton mining dump trucks. The motor functions as a main-auxiliary synchronous generator: The generator employs a common core design, with the main and auxiliary windings being two sets of mutually independent windings sharing the same slots. The main winding utilizes a double-star connection with a 30-degree electrical angle shift. The output from the main winding, after rectification and inversion, supplies power to the AC drive system. The output from the auxiliary winding, after rectification and inversion, supplies power to the main fan and the brake unit fan.



Product Technical Standards and Specifications

Rated Power:

Main Generator: 2380 kW

Auxiliary Generator: 171 kW

Rated Voltage:

Main Generator: 1500 V

Auxiliary Generator: 500 V

Rated Current:

Main Generator: 483×2 A

Auxiliary Generator: 207 A

Rated Speed: 1800 r/min

Rated Frequency: 120 Hz

Rated Efficiency: 95%

Power Factor: 0.95

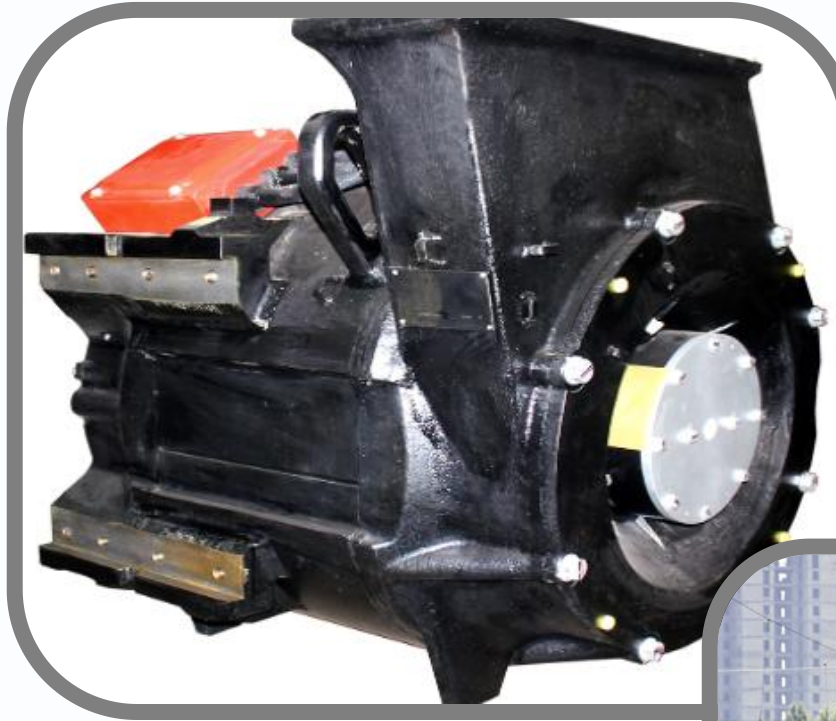
Insulation Class: H

Weight: 4350 kg

YJ245A Traction Motor

Product Overview

HXD2F (30-ton axle load AC traction freight electric locomotive). This motor features a slip-on installation structure with single-end diaphragm coupling output. The stator employs a fully laminated, frame-less design to reduce weight and enhance heat dissipation. The rotor utilizes a robust squirrel-cage structure with added guard rings to improve strength and reliability. The motor employs a single-bearing configuration with a non-axially positioned cylindrical roller bearing installed on the non-drive end. An oil filling port and oil level indicator plate are provided at the non-drive end cover.



Product Technical Standards and Specifications

Rated Power: 1226 kW

Rated Voltage: 1391 V

Rated Current: 590 A

Rated Speed: 1499 r/min

Rated Frequency: 42.5 Hz

Mounting Method: Roller-type structure

Weight: 2860 kg



YJ277B/C

Product Overview

The 160 km/h power-concentrated EMU employs a main traction motor to drive the entire vehicle. The motor features a single-bearing structure with a fully laminated stator and a squirrel-cage rotor.

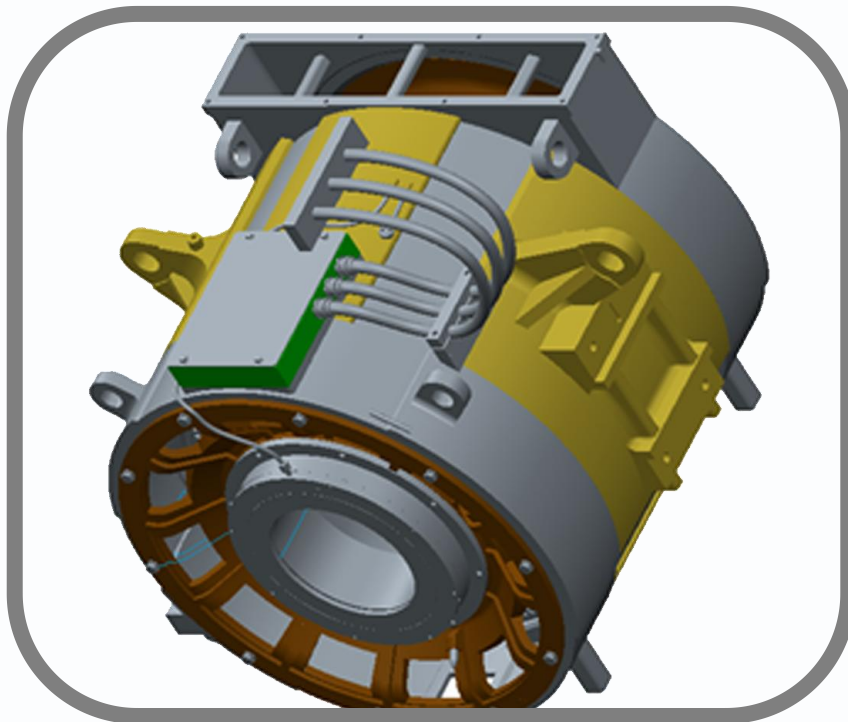


Product Technical Standards and Specifications

Rated Power: 1430 kW
Rated Voltage: 2300 V
Rated Current: 435 A
Rated Speed: 1663 r/min
Rated Frequency: 56 Hz
Rated Efficiency: 95%
Insulation Class: 200
Weight: 2180 kg

Product Overview

The 160 km/h high-power permanent magnet direct-drive electric locomotive replaces the asynchronous motor plus gearbox structure with a direct-drive permanent magnet traction motor. This enhances overall vehicle efficiency, reduces lifecycle costs, lowers noise levels, and minimizes maintenance requirements. The permanent magnet traction motor features a compact structure, small footprint, high torque output, high efficiency, and strong adaptability, achieving sustained operational efficiency exceeding 95.6%.



Product Technical Standards and Specifications

Rated Power: 1225 kW

Rated Voltage: 1660 V

Rated Current: 477 A

Rated Speed: 706 r/min

Rated Frequency: 41.2 Hz

Rated Torque: 33164 N·m

Maximum Torque: 42000 N·m

Weight: 3400 kg

YZ134A DC Traction Motor

Product Overview

The YZ134A traction motor is used in South African mainline electric locomotives and is fully interchangeable with the existing HS-1054-HR traction motor in South Africa.

This motor features a complex structure, high rotational speed, and operation in harsh environments. It is a four-pole motor with non-compensated windings, a welded frame, and rolling axle boxes.



Product Technical Standards and Specifications

Rated Voltage: 850V

Rated Current: 635A

Rated Speed: 930 r/min

Rated Efficiency: 92.6%

Excitation Method:

Compound Excitation (10% fixed tap of series excitation winding) $\beta_N=96.3\%$ $\beta_{min}=38\%$

Maximum Voltage: 935V

Maximum Current: 865A

Maximum Speed: 2655 r/min

Current Ripple Factor: $K_n \leq 30\%$

Ventilation Method: Forced Ventilation

Rated Airflow: 80 m³/min

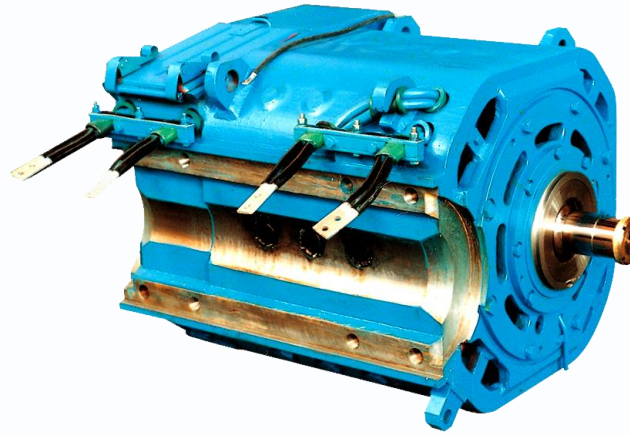
Insulation Class: H

Motor Weight: 2880 kg

➤ ZD109J DC Traction Motor

Product Overview

DF7G diesel locomotive adopts a 4-pole design with flat-wound main poles, single brush holders, pressure springs, and a welded frame.



Product Technical Standards and Specifications

Rated Power: 530 kW

Rated Voltage: 670 V

Rated Current: 845 A

Rated Speed: 770 r/min

Insulation Class: H/H Class

Weight: 2820 kg



➤ ZD110 DC Traction Motor

Product Overview

ZD110 is a DC traction motor designed for the 2400-horsepower, 6-axle, narrow-gauge electric transmission diesel locomotive exported to Myanmar. This motor features lightweight construction, compact dimensions, and high reliability. It employs high-temperature-resistant insulation materials and incorporates proven domestic and international expertise, fully leveraging advanced imported technologies.

Key New Technologies Applied:

1. Unique main pole shoe design enhances commutation performance;
2. Main and auxiliary pole coils employ a pressed structure combined with vacuum pressure impregnation, achieving stator integration;
3. Armature manufacturing utilizes wire pre-binding and vacuum pressure impregnation processes.

Product Technical Standards and Specifications

Rated Power: 235 kW Rated Voltage: 400 V
Rated Current: 650 A Rated Speed: 705 r/min
Minimum Excitation Rate: 45% Maximum Voltage at
Constant Power: 710 V
Maximum Speed at Constant Power: 2960 r/min
Minimum Current at Constant Power: 366 A
Maximum Speed: 3100 r/min Cooling Air Flow: 80 m³/min



YJ288A Asynchronous Traction Motor

Product Overview

This motor is a three-phase squirrel-cage asynchronous traction motor powered by an inverter, designed for use with the eight-axle 200 km/h AC traction passenger electric locomotive manufactured by the same company. The traction motor has a rated power of 1430 kW and a short-time (30-minute) power rating of 1600 kW.



Product Technical Standards and Specifications

Rated Power: 1430 kW

Rated Voltage: 2575 V

Rated Current: 380 A

Rated Speed: 2008 r/min

Rated Torque: 6802 N·m

Rated Frequency: 67.5 Hz

Rated Efficiency: 95%

Power Factor: 0.89

Constant Power Speed Range: 2008 r/min to 3654 r/min (67.5 Hz to 122.7 Hz)

Insulation Class: 200

Number of Poles: 4

Stator Winding Connection: Y

Duty Cycle: S1

Cooling Method: Forced Air, Airflow 1.75 m³/s (Static Pressure 2800 Pa)

Weight: <2250 kg

YZ156A1 DC Traction Motor

Product Overview

The YZ156A1 DC traction motor is designed for 130-ton electric transmission system dump trucks. It is a forced-ventilation, four-pole series-wound DC motor. The main pole core's pole shoes incorporate compensation windings to counteract the distortion of the main magnetic field caused by armature reaction.



Product Technical Standards and Specifications

Rated Power: 590 kW
Rated Voltage: 830 V
Rated Current: 760 A
Rated Speed: 900 r/min
Rated Efficiency: 93.6%
Maximum Speed: 2500 r/min
Duty Cycle: S1
Insulation Class: H, F
Excitation Method: Series Excitation
Motor Mass: 3300 kg

YJ151A1 Harmonic Excitation Synchronous Generator

Product Overview

The YJ151A1 harmonic excitation synchronous generator is paired with a 130-ton electric drive system dump truck. The output from the windings is rectified to supply power to the drive system. The stator windings feature a double-star configuration with a 30-degree electrical phase shift output. The generator employs harmonic excitation, with the stator core incorporating both main windings and harmonic windings.



Product Technical Standards and Specifications

Rated Capacity: 800/1000 kW

Rated Voltage: 490/700 V

Rated Current: 2X565/2X350A

Rated Power Factor: 0.95

Rated Speed: 1900-2100 r/min

Rated Frequency: 126.7 Hz

Rated Efficiency: 95%

Insulation Class: H, F

Weight: 2905 kg

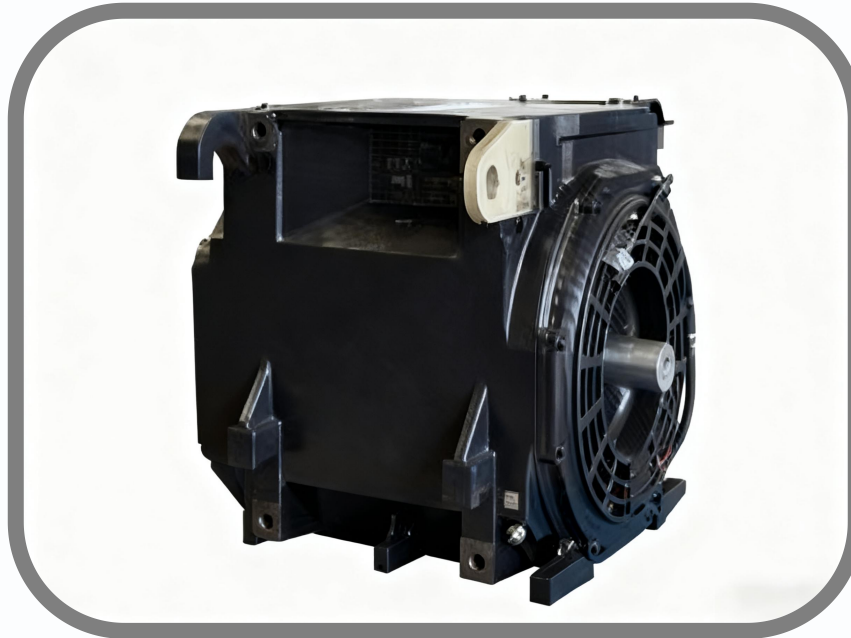
YJ105A Asynchronous Traction Motor

Product Overview

The YJ105A traction motor is assigned to the CRH3C EMU.

This motor features a robust structure, optimized weight, low noise emissions, high efficiency, and a compact design, representing the highest standard for asynchronous traction motors in international high-speed EMUs.

The motor employs forced cooling via an open-circuit forced ventilation system connected by flexible bellows. Equipped with temperature monitoring elements and speed monitoring elements, the motor must be operated using a monitoring system to ensure it does not exceed maximum speed, voltage, and current values. This prevents motor overheating and ensures operational safety.



Product Technical Standards and Specifications

Rated Power: 560 kW

Rated Voltage: 2750 V

Rated Current: 135 A

Rated Frequency: 138 Hz

Rated Speed: 4100 r/min

Maximum Speed: 5891 r/min

Power Factor: 0.87

Product Overview

The YJ257A permanent magnet synchronous generator is designed for the diesel power package generator system at Dalian Institute, ultimately integrated into Changchun Railway Vehicles' hybrid electric multiple units. This generator features high power output, compact size, light weight, and high efficiency.

Key New Technologies Applied:

1. Stator employs a skewed slot structure
2. Frame features a cast dual-row spiral copper tube water-cooling structure for the first time
3. Main insulation utilizes Class 200 insulation materials
4. Rotor adopts an internal magnetic circuit structure, with high-temperature silicone rubber potting filling the gaps on both sides of the magnets.



Product Technical Standards and Specifications

Rated Power: 345 kW

Rated Voltage: AC 1160 V

Rated Current: AC 191 A

Rated Speed: 2000 r/min

Maximum Speed: 2000 r/min

Number of Poles: 6

Rated Power Factor: 0.9

Insulation Class: 200

Temperature Rise Class: H

Protection Rating: IP65

Duty Cycle: S1

Cooling Method: Water-cooled

Product Overview

Traction Motor for Changchun Railway Vehicles KDZ6
EMU



Product Technical Standards and Specifications

Rated Power: 650 kW

Rated Voltage: 2800 V

Rated Current: 158 A

Rated Speed: 4174 r/min

Rated Frequency: 140 Hz

Maximum Speed: 2000 r/min

Maximum Speed at Constant Power:

5508 r/min (Full Wear 350 km/h)

5810 r/min (Half-wear 385 km/h)

Rated Torque: 1487 N•m

Insulation Class: 200

Power Factor: 0.87

Rated Efficiency: $\geq 94\%$

Weight: 680 kg

Mounting Method: Fully suspended frame-mounted

YJ87A Asynchronous Traction Motor

Product Overview

The YJ87A asynchronous motor is a traction motor designed for the CRH5 high-speed trains manufactured by Changchun Railway Vehicles Co., Ltd. Each train set is equipped with 10 motors.

This motor is a three-phase, six-pole, open-type, forced ventilation, shell-less unit with elastic suspension mounting, equipped with a tachometer and temperature sensors. It features a simple structure, high power output, compact size, light weight, wide speed range, and reliable performance. It employs a corona-resistant, low-dielectric-loss insulation system rated at Class 200. The rotor is uninsulated, utilizing insulated bearings with grease lubrication, and delivers excellent traction and braking characteristics.



Product Technical Standards and Specifications

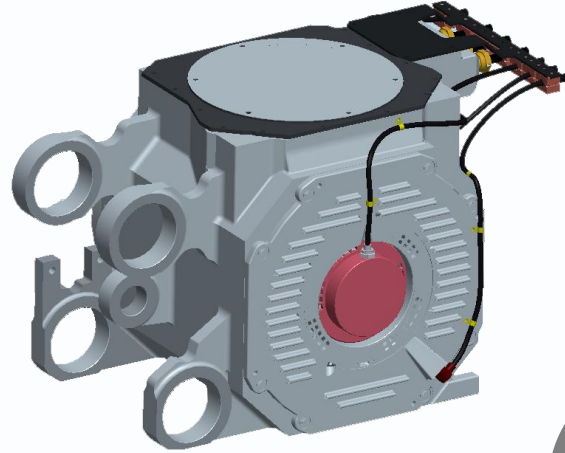
Rated Power: 568 kW
Rated Voltage: 2089.3 V
Rated Current: 211.22 A
Rated Speed: 1177 r/min
Rated Frequency: 59.9 Hz
Maximum Speed: 3638 r/min
Rated Torque: 4608.7 N·m
Stator Connection: Y
Rated Efficiency: 93.5%
Power Factor: 0.795
Number of Phases: 3
Weight: 2660 kg

YJ312A High-Speed Train Permanent Magnet Traction Motor

Product Overview

The YJ312A is an AC permanent magnet synchronous traction motor.

Permanent magnet synchronous motors are a type of AC motor offering advantages such as high efficiency, energy savings, and high power density. They are suitable for high-power, high-efficiency applications like high-speed trains. The YJ312A motor is deployed in the CR400BF-J-0001 high-speed integrated inspection train. At initial factory delivery, two power cars utilized YJ312A permanent magnet motors, while the remaining two power cars employed YJ268A asynchronous motors.



Product Technical Standards and Specifications

Traction Power: 800 kW

Rated Voltage: 2808 V

Rated Current: 178.5 A

Rated Frequency: 279.15 Hz

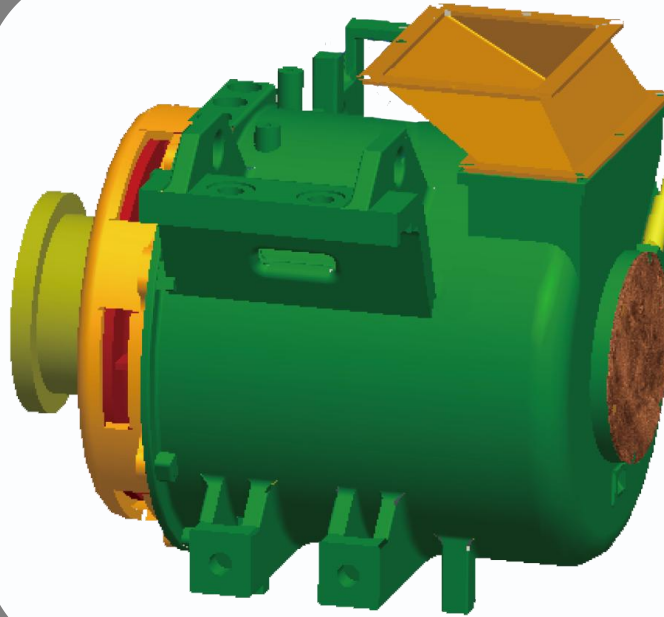
Weight: ≤ 750 kg



YJ248A

Product Overview

The YJ248A is an AC asynchronous traction motor designed for low-speed rail vehicles. This motor is specifically tailored for the CJ5E-B EMU model, which operates at a service speed of 120 km/h and has a maximum test speed of 120 km/h. Its operating temperature range is -20°C to 40°C. The CJ5E-B employs a specific power configuration, featuring eight YJ248A traction motors for a total installed power of 1280 kW. This setup effectively meets the low-speed operational power requirements of the train model, suggesting it is likely deployed for scenarios such as suburban commuter services or low-speed regional transit.



Product Technical Standards and Specifications

Traction Power: 160 kW
Rated Voltage: 1287 V
Rated Current: 88 A
Rated Speed: 2520 r/min
Rated Frequency: 84 Hz
Maximum Speed: 4723 rpm
Insulation Class: 200
Cooling Method: Self-ventilated



Product Overview

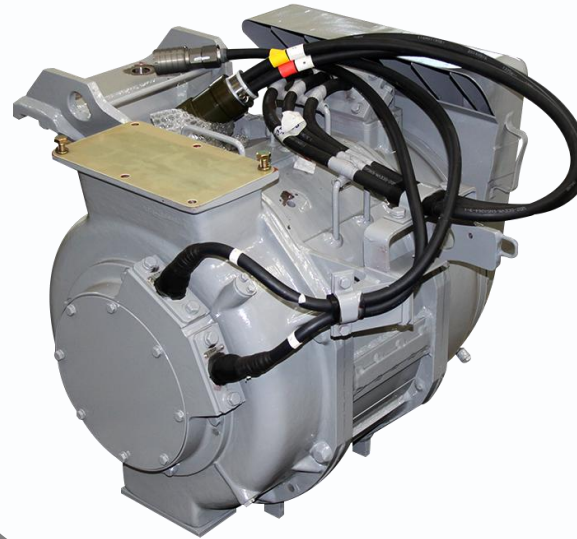
The YJ92B2 traction motor is an AC asynchronous traction motor used in CRH380A EMUs.

Basic Parameters: With a rated power of 365kW, the short-formation CRH380A EMU employs a 6M2T configuration. Each train is equipped with 8 YJ92B2 traction motors, delivering a total traction power of 8760kW. Through traction system “overclocking,” single-motor power can reach 400kW, achieving a total train power of 9600kW.

Structural Features: The stator adopts a laminated, caseless welded structure, offering compact dimensions, lightweight construction, and superior heat dissipation. To facilitate system control and reduce uneven load distribution between wheelsets, it retains a high slip rate design philosophy. The conductor bars utilize high-resistance copper alloys and aluminum materials.

Suspension Method: A rigid frame suspension is employed, where the upper slot of the motor is rigidly fitted with the frame's motor suspension bracket. Bolts connect the upper and lower sections of the motor to the frame. This suspension method offers a simple structure and easy installation, though motor vibrations are directly transmitted to the frame.

Development and Application: The YJ92B2 evolved from the YJ92B series. Developed through technological innovation based on the assimilation of MB5120-A traction motor technology, it was first applied in later models of the CRH2A and the CRH2C Phase 2 380A era. It possesses fully independent intellectual property rights.



Product Technical Standards and Specifications

Output Power: 365 kW

Rated Voltage: 2000 V

Rated Current: 130 A

Rated Speed: 4142 r/min

Rated Frequency: 140 Hz

Insulation Class: 200

Weight: 480 kg



YJ305A

Product Overview

The YJ305A traction motor is a motor used in the “Fuxing” high-speed trains.

Application Models: The YJ305A traction motor is used in CR300BF series high-speed trains, such as the SOKO trains operated by the Hungarian-Serbian Railway.

Performance Parameters: This motor features a compact structure, small size, low noise, high efficiency, wide constant power range, and strong overload capacity. Its rated power is 350kW, with a single motor capable of sustaining 400kW continuous operation. Maximum power output reaches 480kW. The motor's insulation strength ensures reliable long-term operation at altitudes up to 3000 meters.

Installation Configuration: Some CR300BF EMUs are equipped with 16 YJ305A traction motors, delivering an installed power of 5600kW and a wheel-end power of 5460kW.



Product Technical Standards and Specifications

Rated Power: 350 kW

Rated Voltage: 1443 V

Rated Current: 170 A

Maximum Speed: 5700 r/min

Rated Frequency: 140 Hz

Starting Torque: 2212 Nm

Efficiency: $\geq 94\%$

Power Factor: ≥ 0.86

Weight: ≤ 650 kg



YJ315A

Product Overview

The YJ315A traction motor is the core traction component for the Fuxing CR300AF series EMUs.

Compatible Models: This motor is the standard traction motor for CR300AF EMUs. Some trains in this series utilize either the YQ350/YJ315A or YQ365-II/YJ315A motor configuration. Each train set typically incorporates 16 units of this motor model to ensure optimal traction performance.

Core Performance Parameters: With a rated power of 350kW per motor, the 16 motors collectively deliver a train installed power of 5600kW and a wheel-end power of 5460kW. This power configuration meets the operational requirements of the CR300AF as a 250km/h-class Fuxing bullet train, ensuring traction power output across varying track conditions while balancing operational efficiency and stability.



Product Technical Standards and Specifications

Rated Power: 350 kW

Rated Voltage: 1443 V

Rated Current: 170 A

Rated Speed: 4168 r/min

Rated Frequency: 140 Hz

Insulation Class: 200

Weight: 625 kg



YJ302A

Product Overview

The YJ302A traction motor is an AC traction motor utilised in the Fuxing CR400AF series EMUs.

Applicable models: The YJ302A traction motor is primarily employed in the CR400AF series EMUs, encompassing multiple variants including the CR400AF, CR400AF-A, and CR400AF-B.

Performance Parameters: The motor has a rated power of 625kW. Each EMU set typically incorporates 16 YJ302A traction motors, delivering an installed power of 10,000kW and a wheel-end power of 9,750kW.

Motor Characteristics: The YJ302A traction motor is an inverter-powered variable-frequency speed-regulated asynchronous motor. It features high rotational speed and substantial torque, employing a rolling clamp bearing structure with a fully enclosed design and radiant heat dissipation. The cast steel frame outer casing incorporates cast ring ribs, while the stator core adopts a laminated structure. The rotor comprises a squirrel-cage design reinforced with pure copper end rings, welded conductors, and protective rings.



Product Technical Standards and Specifications

Rated power: 625 kW

Rated voltage: 2750 V

Rated current: 155 A

Rated speed: 4100 r/min

Rated frequency: 137.8 Hz

Maximum speed: 5810 r/min

Insulation class: Class 200

Mounting method: Bogie mounting

Weight: 740 kg



YJ150A Traction Motor Urban Rail Transit

Product Overview

The YJ150A is a variable frequency speed-regulated asynchronous traction motor designed for urban rail transit and metro systems.

Powered by a voltage-source inverter, this Variable Voltage Variable Frequency (VVVF) asynchronous motor incorporates technology introduced from Hitachi. It features fully domestically produced insulation structures, stators, and final assembly, with a focus on compact and lightweight design. Representing our company's innovation in metro traction motors, it has been deployed on Shanghai World Expo Metro Lines 6 and 8, as well as Xi'an Metro Line 2.



Product Technical Standards and Specifications

Rated power: 180kW

Rated voltage: 1100V

Maximum speed: 4779 r/min

Insulation class: 200

Duty cycle: Continuous duty

Ventilation type: Self-ventilated

Weight: 555kg

