



THREE PHASE
Induction Motors

HYUNDAI MOTORS Promise

Continuous design evolutions for AC Induction Motors developed through years of experience, innovation and reliability in building top quality

Our state-of-the-art manufacturing facilities guarantee that all motors meet customers' requirements with regard to cost, delivery and quality

Motors that are specifically designed to meet the requirements of domestic and international standards for use in chemistry, mining, power generation, steel plants and municipal water applications

Innovations in technology and design that produce motors of outstanding quality

Major References



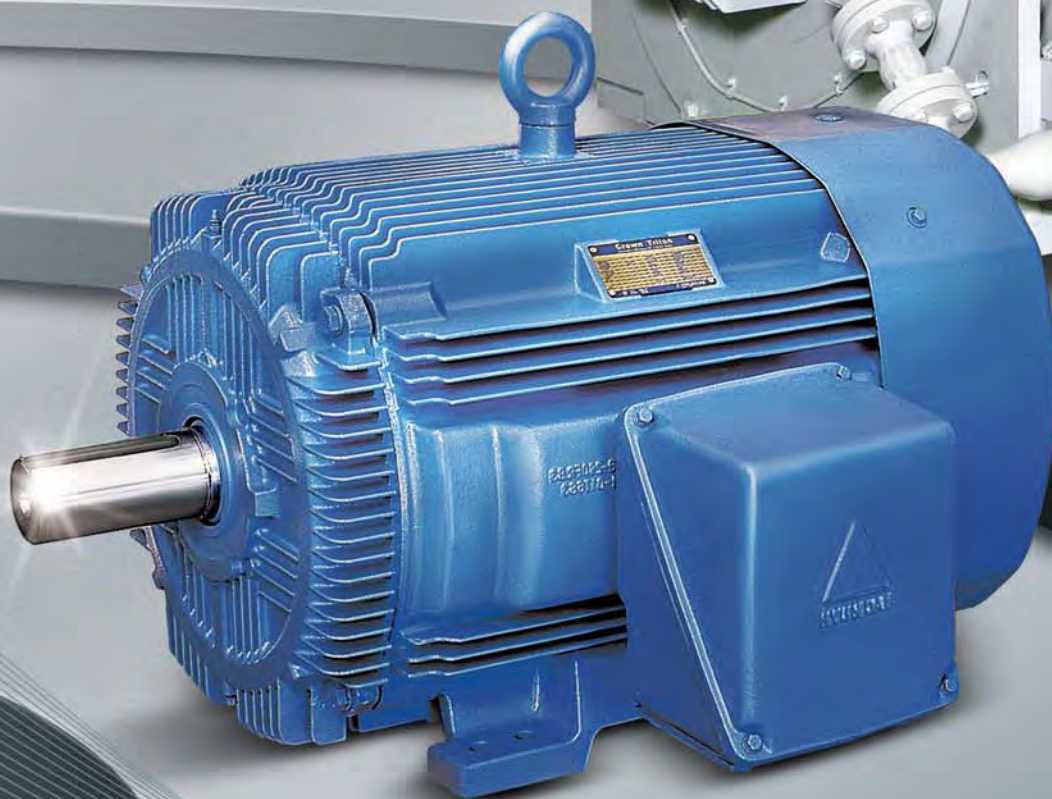
Fujairah Desalination / UAE



Al-Hidd Desalination / BAHRAIN



Kogas Tong-Yong LNG / KOREA



HYUNDAI
HEAVY INDUSTRIES CO., LTD.

Hyundai Motor
Technical Specifications

MODEL: 3
SERIAL: 1



Motors for Hazardous Area Application

Specifically designed for hazardous gas or explosive gas environment



Ex d



Ex p

Item	Enclosure	Certificates & Type of Protection Categories
Medium & High Voltage Induction Motor	TEFC (IC411)	ATEX(BASEEFA) : Ex nA, Ex d IIB, IIC PTB : Ex d CSA : Class 1 Division 2 / Zone 2 KOSHA, KGS : Ex nA, Ex e, Ex d
	TEAAC (IC511)	ATEX(BASEEFA) : Ex nA, Ex d IIB CSA : Class 1 Division 2 / Zone 2 KOSHA, KGS : Ex nA, Ex e
	TEAAC (IC611)	ATEX(BASEEFA) : Ex nA, Ex p CSA : Class 1 Division 2 / Zone 2 KOSHA, KGS : Ex nA, Ex e, Ex p
	TEWAC (IC81W)	ATEX(BASEEFA) : Ex nA, Ex p KOSHA, KGS : Ex nA, Ex e, Ex p
	WP II	CSA : Class 1 Division 2 / Zone 2
Low Voltage Induction Motor	HL-XD	ATEX(BASEEFA), PTB : Exd
	HL-XN	ATEX(BASEEFA) : Ex nA
	XK, XKS, XKP XL, XLS, XLP	c UL : Class 1, Division 1 Group C&D
	PK, PKS, PKP PL, PLS, PLP	CSA C US : Class 1, Division 2 Group A, B, C, D Class 1, Zone 2 Group IIA, IIB, IIC
	HK-XP, HL-XP	KOSHA, KGS : Exd, Exe



Medium & High Voltage Induction Motors

- 3.3 / 4.16 / 6 / 6.6 / 10 / 11 / 13.2kV
- 50 / 60Hz
- Vertical mounting is available as option.

HLE5 Type



- Totally Enclosed Fan Cooled
- Squirrel Cage Rotor
- 2 - 8Poles
- 120 - 1,000kW(160 - 1,400HP)

HRQ3 Type



- Totally Enclosed Air-to-Air Cooled
- Squirrel Cage Rotor
- 2 - 30Poles
- 830 - 8,000kW(1,100 - 11,000HP)

HLA7 Type



- Totally Enclosed Air-to-Air Cooled
- Squirrel Cage Rotor
- 4 - 12Poles
- 750 - 5,000kW(1,000 - 7,000HP)

HRN3 Type



- Totally Enclosed Water-to-Air Cooled
- Squirrel Cage Rotor
- 2 - 32Poles
- 1,030 - 10,800kW(1,300 - 15,000HP)

HRP3 Type



- Weather Protected Type - I / II
- Squirrel Cage Rotor
- 2 - 32Poles
- 1,030 - 10,800kW(1,300 - 15,000HP)

HRA3 Type



- Open Drip Proof
- Squirrel Cage Rotor
- 2 - 32Poles
- 1,030 - 10,800kW(1,300 - 15,000HP)

HRE5 Type



- Open Drip Proof
- Squirrel Cage Rotor
- 2 - 8Poles
- 280 - 1,400kW(380 - 1,850HP)

HLS7 Type



- Totally Enclosed Air-to-Air Cooled
- Wound Rotor with Slip-Ring
- 4 - 12Poles, 6.6kV
- 350 - 7,500kW(500 - 10,000HP)

HRS7 Type



- Open Drip Proof
- Wound Rotor with Slip-Ring
- 4 - 12Poles
- 250 - 18,000kW(350 - 25,000HP)

Low Voltage Induction Motors

TEFC Cast Iron Frame Motor



Output Range	0.75 - 200kW(1 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 44, 54, 55
Insulation Class	B, F

TEFC Aluminum Frame Motor



Output Range	0.2 - 7.5kW(0.3 - 10HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 44, 54, 55
Insulation Class	B, F

TEFC High Efficiency Motor



Output Range	0.2 - 7.5kW(0.3 - 10HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 54, 55
Insulation Class	F

TEFC Cast Iron Frame Motor



Output Range	0.75 - 200kW(1 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 44, 54, 55
Insulation Class	B, F

TEFC Aluminum Frame Motor



Output Range	0.2 - 7.5kW(0.3 - 10HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 44, 54, 55
Insulation Class	B, F

Drip-proof Motor



Output Range	0.75 - 200kW(1 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 22, 23
Insulation Class	B, F

Marine Motor



Output Range	0.4 - 200kW(0.5 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6, 8
Degree of Protection	IP 44, 54, 55
Insulation Class	F

Inverter Shield Motor



Output Range	0.75 - 200kW(1 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6
Degree of Protection	IP 54
Insulation Class	F

IEEE841 Motor



Output Range	0.75 - 200kW(1 - 250HP)
Voltage	~ 600V
Frequency	50Hz, 60Hz
Number of Poles	2, 4, 6
Degree of Protection	IP 55
Insulation Class	F

Manufacturing Facilities

All of the Hyundai Motors are manufactured for best quality using the latest manufacturing facilities and the test system.

Rotating Machinery Factory of Hyundai is fully equipped with modernized manufacturing and testing facilities to ensure the best quality of the product for the customers.



► Precise control of core assembly to minimize noise and vibration of rotating machinery by accomplishing a well-balanced magnetic circuit.



► The most stringent testing processes always ensure high level of quality.



► VPI Facility
Thermal life time of insulation system meet IEEE 275's standard(over 30 years of life time)

Quality of electric machines is highly dependent on the insulation process.
Hyundai ensures perfect insulation strength of stator windings and rotor windings.



► Winding Assembly Shop



► Electric Induction Brazer
Assurance of a solid electrical and mechanical joint between rotor bar and end ring using induction brazing with silver brazing alloy.



► High Speed Balance Machine
All rotors are well balanced at operating speed using high speed balance machine. It makes us provide precise low vibration product to our customers.



www.hyundai-elec.com



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