



Product Brochure

# U.S. Standard LV Motors

(Severe duty, IEEE841, Explosion proof, API661, JM/JP, IEC Metric)



# EMPORIUM ENERGY, C.A.

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## Primer Distribuidor Autorizado de HD Hyundai Electric en Venezuela

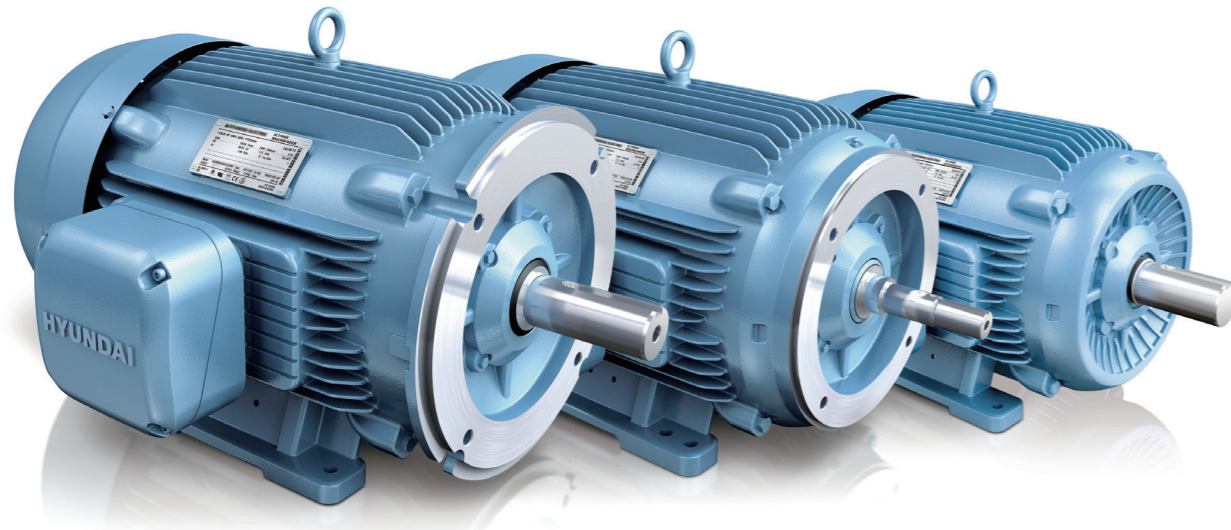
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# HD HYUNDAI ELECTRIC

## U.S STANDARD LV NEMA MOTOR

### (Severe Duty, IEEE841, Explosion proof)



#### Product Features

- NEMA Premium Efficiency
- 40°C Ambient temperature
- Altitude 3,300 ft.
- Continuous duty (S1)
- Insulation Class F (Impregnation Resin & Magnet wire : Class H) (Insulation systems meets NEMA MG-1 Part 31)
- Class B Temp. Rise (Class F at Inverter duty condition)
- Service Factor
  - 1.15 at Sine Wave Power
  - 1.0 at VFD Power
  - 1.25 up to 100HP when Temp. Rise F & Non-Hazardous
- Suitable for Inverter use
  - V.T 6-60Hz | 3-60Hz (at 50% load, Fr. 143-5012)
  - C.T 6-60Hz | 30-60Hz (Fr. 5811/12 only)
  - Constant HP 60~90Hz (Except Fr. 5811/12)
- Totally Enclosed Fan Cooled
- NEMA Design B Torque
- IP55 Protection
- Lifting device : Eye bolt(s)
- Ground
  - Terminal box inside : Applied
  - Outside on the frame (Option)

#### Product Line-up

Model Number Selection  
Each model number contains HP rating, RPM, and NEMA frame size

Product Family	HP	RPM	Frame	Suffix
ex) HSDE	800	36	5812S	IBBRSRSHSP
HES	1HP	12(6P)	143T	IB
HHI	1.5HP	18(4P)	145T	BR
HSDE	2HP	36(2P)	182T	SR
IEEE	:	:	:	SH
IXHHI	900HP		5812S	SP
API				

- HES : Severe duty motor (Fr. 143-326), CCP JM/JP motor(Fr. 143-326)
- HHI : Severe duty motor (Fr. 364-449)
- HSDE : Severe duty Large motor (Fr. L449-5812)
- IEEE : IEEE841 motor (Fr. 143-5812)
- IXHHI : Explosion proof motor (Fr. 143-449)
- API : API661 motor(Fr. 184-365)
- IEC : IEC Metric motor(Fr. 80M-315L)

#### Applications

- Pumps
- Fans
- Conveyors
- Refineries
- Compressors
- Mixers
- General Applications
- Petrochemical Plants

U.S Standard  
Low Voltage NEMA Motor

**SEVERE DUTY**  
**PREMIUM EFFICIENCY**



#### Product Features

Frame	143 - 5812	
HP	1 HP - 900 HP	
RPM (Poles)	3600(2P), 1800(4P), 1200(6P)	
Hz & Voltage (Dual Frequency Design)	60Hz : 230/460V (~125HP), 460V (150HP~) or 575V 50Hz : 380V, 400V, 415V	
Mounting	Foot mount (B3)	Foot drilled hole(s) to accommodate mounting flexibility
	Flange with Foot (B35)	C-Face and D-Flange
	Flange without Foot ( B5, V1)	C-Face and D-Flange (Fr. L449-5812 : V1 only)
Material	Frame	Cast iron
	Rotor	Aluminum die casting or Centrifugal cast aluminum
	End-shield	Cast iron
	Fan	Non-sparking conductive plastic fan
Rotation	Bi-directional	Fr. 143-449   Fr. L449-5812 4P/6P
	Uni-directional	Fr. L449-5812 2P
Bearing	Drive end	Anti-friction bearing (Ball or Roller) / Regreaseable type (Fr. 254 & Up)
	Non-Drive end	Anti-friction bearing (Ball or Insulation) / Regreaseable type (Fr. 254 & Up)
	Protection	V-seal   Labyrinth seal (Fr. L449-5812 2P)
	Inner Bearing Cap	Applied for Fr. 364-5812
	Lubrication	Polyurea (Polyrex EM grease)
Shaft	Material	AISI 1045 (Fr. 143-L449 2P)   AISI 4140 (Fr. L449 4P-5812)
	DE threaded hole	Applied
	DE Keyway	Opened keyway
Terminal box	Shaft locking device	To prevent Bearing brinelling (Frames with Roller bearing)
	Material	Cast Iron (Fr. 143-5011)   Fabricated Steel (Fr. 5012 - 5812)
Lead cable	Mounting	F1 to F2 conversion available (Up to Fr. 449)
	Plug	Plastic
Accessories	Number of lead wires	9 leads   Fr. 143 - 215
	Number of lead wires	12 leads   Fr. 254 - 445(~125HP)
	Number of lead wires	6 leads   Fr. 445 - 5812(150HP~)
Drain Plug	W.T.D	PT 100 ohm (2EA/ph.)   Fr. L449-5812
	B.T.D	PT 100 ohm (2EA/Motor)   Fr. L449-5812
	Space Heater	1EA/Motor   Fr. L449-5812
Tap provision	Auxiliary Terminal box	2EA/Motor   Fr. L449-5812
	Frame	All
Certification	Box	None
	Grease outlet	Fr. 254-5812
Name plate	For Vib. Sensor	Fr. 364-5812
	For B.T.D	Fr. 364-5812
Painting	CSA	Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups E (Fr. 143-326), F & G - (143-5012) Premium Efficiency (CSA C-390)
	UL	Recognized Motor Components (E211828, Fr. 143-449)
	DOE	Department of Energy Efficiency Certification #CC038A
	CE	CE Declaration of Conformity (EN 60034-1)
Warranty	IEEE45	Marine Duty IEEE45 (ABS Product Type Approval) / Up to 600HP (Fr. 143-5011)
	Markings	RU, CSA, CC(DOE), CE, IEEE45
	Material	Stainless Steel AISI304
		Polyurethane top coat (Munsell 4.OPB5.4/5.5)
		3 Years Warranty from Date of shipment

# IEEE841 PREMIUM EFFICIENCY



## Product Features

Frame	143 - 5812	
HP	1 HP - 900 HP	
RPM (Poles)	3600(2P), 1800(4P), 1200(6P)	
Hz & Voltage (Dual Frequency Design)	60Hz : 460V or 575V 50Hz : 380V, 400V, 415V	
Mounting	Foot mount (B3)	Foot drilled hole(s) to accommodate mounting flexibility
	Flange with Foot (B35)	C-Face and D-Flange
	Flange without Foot ( B5, V1)	C-Face and D-Flange (Fr. L449-5812 : V1 only)
Material	Frame	Cast iron
	Rotor	Aluminum die casting or Centrifugal cast aluminum
	End-shield	Cast iron
	Fan	Non-sparking conductive plastic fan
	Fan cover	Cast iron (Fr. 143 - 449)   Fabricated steel (Fr. L449 - 5812)
Rotation	Bi-directional	Fr. 143-449   Fr. L449-5812 4P/6P
	Uni-directional	Fr. L449-5812 2P
Bearing	Drive end	Anti-friction bearing (Ball or Roller) / Regreaseable type
	Non-Drive end	Anti-friction bearing (Ball or Insulation) / Regreaseable type
	Protection	ProTech Seal   Labyrinth seal (Fr. L449-5812 2P)
	Inner Bearing Cap	Applied
	Lubrication	Polyurea (Polyrex EM grease)
Shaft	Material	AISI 1045 (Fr. 143-L449 2P)   AISI 4140 (Fr. L449 4P-5812)
	DE threaded hole	Applied
	DE Keyway	Opened keyway
	Shaft locking device	To prevent Bearing brinelling (Frames with Roller bearing)
Terminal box	Material	Cast Iron (Fr. 143-5011)   Fabricated Steel (Fr. 5012 - 5812)
	Mounting	F1 to F2 conversion available (Up to Fr. 449)
	Plug	Plastic
Lead cable	Number of lead wires	3 leads   Fr. 143 - 326
	Number of lead wires	6 leads   Fr. 364 - 5812
Accessories	W.T.D	PT 100 ohm (2EA/ph.)   Fr. L449-5812
	B.T.D	PT 100 ohm(2EA/Motor)   Fr. L449-5812
	Space Heater	1EA/Motor   Fr. L449-5812
	Auxiliary Terminal box	2EA/Motor   Fr. L449-5812
Drain Plug	Frame	All
	Box	None
	Grease outlet	All
Tap provision	For Vib. Sensor	Fr. 364-5812
	For B.T.D	Fr. 364-5812
Certification		Class I, Division 2, Groups A, B, C & D
	CSA	Class II, Division 2, Groups E (Fr. 143-326), F & G - (143-5012) Premium Efficiency (CSA C-390)
	UL	Recognized Motor Components (E211828, Fr. 143-449)
	DOE	Department of Energy Efficiency Certification #CC038A
	CE	CE Declaration of Conformity (EN 60034-1)
Nameplate	IEEEE45	Marine Duty IEEEE45 (ABS Product Type Approval) / Up to 600HP (Fr. 143-5011)
	Markings	RJ, CSA ,CC(DOE), CE, IEEEE45, IEEEE841
	Material	Stainless Steel AISI 304
Painting	Epoxy Zinc with Polyurethane top coat (Munsell 7.5BG6/1.5)	
Warranty	5 Years Warranty from Date of shipment	

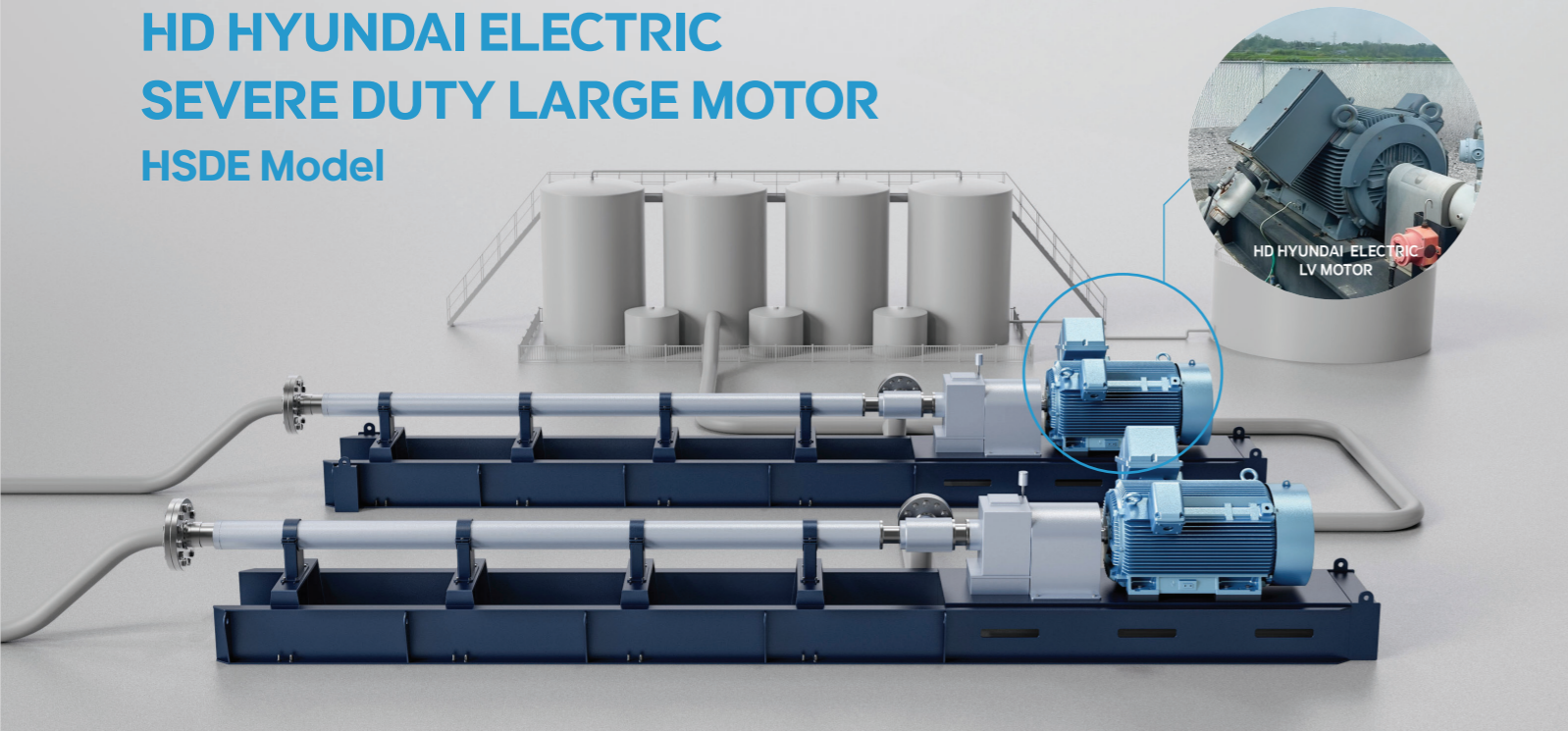
# Explosion proof PREMIUM EFFICIENCY



## Product Features

Frame	143 - 449	
HP	1 HP - 250 HP	
RPM (Poles)	3600(2P), 1800(4P), 1200(6P)	
Hz & Voltage (Dual Frequency Design)	60Hz : 230/460V (~125HP), 460V (150HP~) or 575V 50Hz : 380V, 400V, 415V	
Mounting	Foot mount (B3)	Foot drilled hole(s) to accommodate mounting flexibility
	Flange with Foot (B35)	C-Face   Fr. 143-326, C-face without Foot (B5, V1)   Fr. 143-326
	Frame	Cast iron
Material	Rotor	Aluminum die casting
	End-shield	Cast iron
	Fan	Non-sparking conductive plastic fan
	Fan cover	Steel
Rotation	Bi-directional	Applied
	Drive end	Anti-friction bearing (Ball or Roller) / Regreaseable type (Fr. 254 & Up)
Bearing	Non-Drive end	Anti-friction bearing (Ball) / Regreaseable type (Fr. 254 & Up)
	Protection	V-seal   Labyrinth seal (Fr. 364-449 & All frame in Class II Div. 1)
	Inner Bearing Cap	Applied
	Lubrication	Polyurea (Polyrex EM grease)
	Material	AISI 1045
Shaft	DE threaded hole	Applied
	DE Keyway	Opened keyway
	Shaft locking device	To prevent Bearing brinelling (Frames with Roller bearing)
	Material	Cast Iron
Terminal box	Mounting	F1 to F2 conversion available
	Plug	Plastic
	Number of lead wires	9 leads   Fr. 143 - 215
Lead cable	Number of lead wires	12 leads   Fr. 254 - 445(~125HP)
	Number of lead wires	6 leads   Fr. 445 - 449(150HP~)
Accessories	W.T.D	Thermostats (1EA/Ph., 145deg.C) as standard
Ground	Terminal box inside	Applied
	Outside on the frame	None (Option)
Drain Plug	Frame	All
	Box	None
	Grease outlet	Fr. 254-449
Tap provision	For Vib. Sensor	Fr. 364-449
	For B.T.D	Fr. 364-449
Ce rtification		Class I, Division 1, Groups C&D, UL Listed E216236
	UL	Class II, Division 1, Groups F&G (Fr. 143-326), UL Listed E216236
	CSA	Premium Efficiency (CSA C-390)
	DOE	Department of Energy Efficiency Certification #CC038A
Name plate	Markings	UL, CSA ,CC(DOE)
	Material	Stainless Steel AISI 304
Painting	Polyurethane top coat (Munsell 4.0PB5.4/5.5)	
Warranty	3 Years Warranty from Date of shipment	

# HD HYUNDAI ELECTRIC SEVERE DUTY LARGE MOTOR HSDE Model



H Pump (Horizontal Surface Pump) is a cutting-edge surface pumping system designed to provide efficient fluid transfer in upstream, midstream, and industrial applications. Its advanced design ensures superior performance, cost-effectiveness, and adaptability, making it a standout choice among modern pumping solutions. This system focuses on reducing operational costs, minimizing environmental risks, and maximizing system uptime. H Pump offers flexibility and stability to adapt to various flow rates and pressure conditions, achieved through modular design, advanced sealing technology, and precise vibration and temperature monitoring systems.

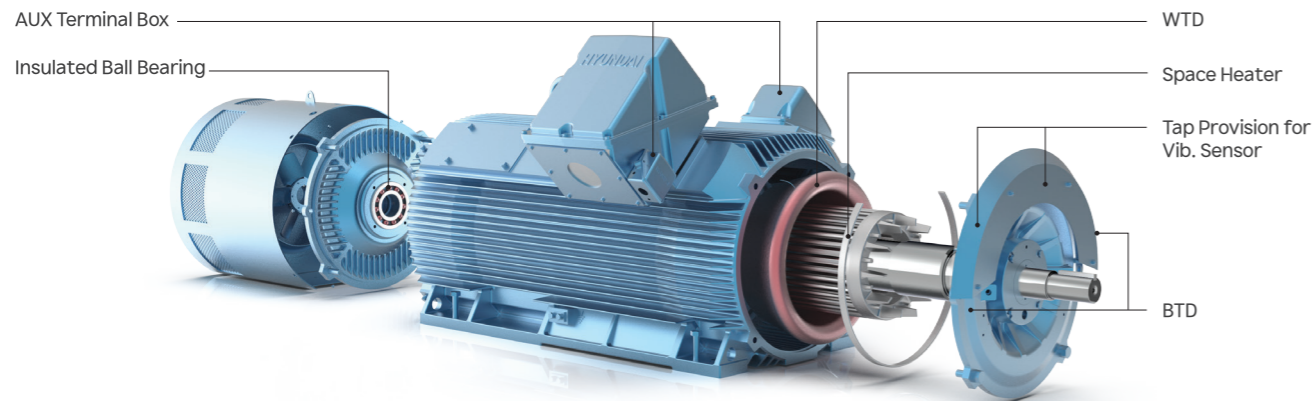
## Key Features of the H Pump

1. Cost Efficiency:
2. Operational Stability:
3. Environmental Friendliness:
4. Customizability

## Why HD Hyundai's HSDE Model?

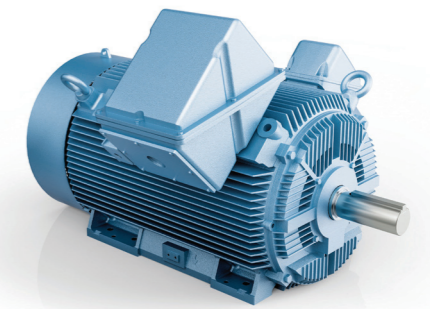
HD Hyundai's HSDE Model is specifically designed to meet the key features of the H Pump. This low-voltage large motor supports the stable and efficient operation of H Pump systems and is equipped with the following features:

1. Insulation Class F, Temp. Rise B at 40°C Ambient Temp.	Ensures stability and durability, providing reliable performance even in high-temperature environments
2. Insulated Bearing on NDE Side	Protects bearings from electrical stress, ensuring long-term stability
3. WTD PT 100 Ohm: 2 EA/Phase	Provides precise winding temperature monitoring for thermal management and fault prevention
4. BTD PT 100 Ohm: 1 EA/Bearing	Monitors bearing temperature to prevent overheating and extend lifespan
5. Space Heater: 1 EA/Motor	Prevents condensation during downtime, protecting the motor interior and enhancing reliability
6. Auxiliary Terminal Box: 2 EA/Motor	Facilitates easy connection of auxiliary devices, offering flexibility and ease of maintenance
7. Tap Adaptor for Vibration Sensor	Allows easy installation of vibration sensors to ensure structural stability and prevent potential issues



U.S Standard Low Voltage NEMA Motor

## Severe Duty Large HP Motor HSDE Model Product Features



Frame	L449 - 5812	
HP	250 HP - 900 HP	
Speed (RPM)	3600, 1800, 1200	
Hz & Voltage (Dual Frequency Design)	60 Hz : 460 V or 575 V 50 Hz : 380 V, 400 V, 415 V at HP derating	
Design	NEMA Premium Efficiency & NEMA Design B Torque	
Insulation Class	F	
Temp. rise	Sine Wave Power	B at S.F 1.15 (** F-rise at 900 HP 3600 RPM)
	VFD Power	F at S.F 1.0
Mounting	Foot mount (B3)	Foot drilled hole(s) to accommodate mounting flexibility
	Flange with Foot (B35)	C-Face and D-Flange
Material	Frame	Cast iron frame with corrosion resistanced
	Rotor	Aluminum die casting or Centrifugal cast aluminum
	End-shield	Cast iron with corrosion resistanced
	Fan	Non-sparking conductive plastic fan
	Fan cover	Steel, Grease outlet through the Fan cover
Rotation	Bi-directional	Fr. L449-5812 at 1800 RPM & 1200 RPM
	Uni-directional	Fr. L449-5812 at 3600 RPM
Bearing	Drive end	Anti-friction bearing (Ball or Roller)
	Non-Drive end	★ Insulated ball bearing
	Protection	★ V-seal   Labyrinth (Fr. L449-5812 at 3600 RPM)
	Inner Bearing Cap	Applied
	Lubrication	Polyurea (Polyrex EM Grease)
Shaft	Material	★ AISI1045 (L449 at 3600RPM)   AISI4140 (Fr. L449 4P-5812)
	DE threaded hole	Applied
	DE Keyway	Opened keyway
	Shaft locking device	Frames with Roller bearing (To prevent Bearing brinelling)
Terminal box	Material	Cast Iron (Fr. L449-5012)   Fabricated Steel (Fr. 5812)
	Cable hole plug	Plastic
Lead cable	Number of lead wire(s)	6 Lead(s)
	W.T.D	★ PT 100 ohm (2 EA/ph.)
Accessories	B.T.D	★ PT 100 ohm (2 EA/Motor)
	Space Heater	★ 1 EA/Motor
	Auxiliary Terminal box	★ 2 EA/Motor
	For Vib. Sensor	★ Applied
Tap provision	For B.T.D	★ Applied
	CSA	Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups F & G - (Fr. L449-5012) Premium Efficiency (CSA C-390)
Certification	DOE	Department of Energy Efficiency Certification #CC038A
	CE	CE Declaration of Conformity (EN 60034-1)
	IEEE45	Marine Duty (ABS Product Type Approval up to 600 HP at Fr. L449-5012)
	Markings	CSA, CC(DOE), CE, IEEE45(ABS)
Name plate	Material	Stainless Steel AISI304
Painting	Munsell 4.0PB5.4/5.5	
Warranty	3 Years Warranty from Date of shipment	

※ Note: Features marked with a star (★) are standard options included in the HSDE model.

## API 661 Severe Duty PREMIUM EFFICIENCY



### Why HD Hyundai's API Model ?

HD Hyundai's API Model is specifically designed to meet the key requirements of API 661. Additionally, its performance is compliant with the IEEE 841-2021 specification.

**Experience** a durable API Model with excellent performance, built on HD Hyundai's 40 years of engineering & manufacturing expertise, now available at a **reasonable price**.

#### Technical Data

The API661 motors are built in compliance with API Standard 661, incorporating regreasable roller bearings and ProTech™ Bearing Isolator Seal at both ends of the 184-365 frame.



Horse Power <b>5~75HP</b>	Frame Size <b>184T~365T</b>	Bearing <b>Min. 40,000hr L10 life</b>	Protection <b>IP56</b>
warranty <b>5 Years</b>	Quality <b>IEEE841 Test Report</b>	Inverter Use <b>As per NEMA MG-1 Part 31</b>	Compliance to <b>API661</b>

### Main Industries for Heat Exchanger Applications



- Refineries
- Petrochemical Plants
- Natural Gas Processing Plants
- Power Plants
- Industrial Cooling Systems



### Key Features of API 661 Motors in Heat Exchanger Applications

- API661 Motors are built to meet and exceed global standards including API661 and IEEE841, ensuring superior performance, durability, and reliability.
- ProTech™ Bearing Isolator Seal rated IP56 on both bearings + DE umbrella Slinger
- Roller bearing on DE for min 40,000 L-10 bearing life on belted loads (184T and larger)
- Stainless Steel long grease nipple and T-drain
- Hazardous locations, Certified to be used in Class I, Division 2
- Shaft End Tapped for vertical lifting
- CAST IRON construction(Frame, End shield Conduit box and fan cover)
- Gasketed conduit box and cover

## API 661 Severe Duty PREMIUM EFFICIENCY

### Product Features (Basic)

Frame	184 - 365
HP	5 HP - 75 HP
Speed (RPM)	1800, 1200
Hz & Voltage (Dual Frequency Design)	60Hz : 460V ★ 50Hz : 380V, 400V & 415V
Mounting	★ Vertical Shaft up with Foot & umbrella Slinger
Enclosure / Protection	★ TEFC / IP56
Rotation	Bi-directional
Painting	Epoxy Zinc with Polyurethane top coat (Munsell 7.5BG6/1.5)
Warranty	★ 5 Years Warranty from Date of shipment
Ambient temperature	40°C
Insulation Class	F

### Product Features (Details)

Starting Method	Sine Wave Power	1.15 Service Factor & B Temp. rise
	Inverter Duty 10:1 VT	1.0 Service Factor & F Temp. rise
	Inverter Duty 20:1 VT (at 50% load)	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT (1 Hour duty)	1.0 Service Factor & F Temp. rise   Fr. 254-365
	Inverter Duty 4:1 CT	1.0 Service Factor & F Temp. rise   Fr. 254-365
Material	Constant HP	CHP up to 1.5 times base speed
	Frame	Cast iron
Bearing	Rotor	Aluminum die casting
	End-shield	Cast iron
	Fan	Non-sparking conductive plastic fan
	Fan cover	Cast iron
	Drive end	Ball Bearing   NU Bearing (Fr. 184~)
	Non-Drive end	Anti-friction bearing (Ball)
Shaft	Protection	ProTech™ Bearing Isolator Seal on DE & NDE
	Inner Bearing Cap	Applied(Cast iron)
	Lubrication	Polyrex EM Grease
	Material	AISI1045
	DE threaded hole	Applied
	DE Keyway	Opened keyway
Terminal box	Material	Cast Iron
	Cable hole plug	Plastic
Lead cable	Number of lead wire(s)	★ 3 Lead(s)   Fr. 184-326
	Number of lead wire(s)	★ 6 Lead(s)   Fr. 364~365
Drain Plug	Frame	Both sides of frame bottom
	Box	None
	Grease outlet	Applied
Certification	CSA	Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups E, F & G   Group E : Up to Fr. 326 Premium Efficiency (CSA C-390)
	DOE	Department of Energy Efficiency Certification #CC038A
	UL	Recognized Motor Components (E211828) Recognized Insulation Materials (E210479)
	CE	CE Declaration of Conformity (EN 60034-1)
	IEEE45	Marine Duty (ABS Product Type Approval)
Name plate	Markings	★ CSA ,CC(DOE), UL Recognized, CE, IEEE 45(ABS), IEEE 841, API 661
	Material	Stainless Steel AISI304

※ Note : Features marked with a star (★) are Key Features for API Motor.

## Close-coupled Pump JM/JP Severe Duty PREMIUM EFFICIENCY



**HD Hyundai Close-coupled Pump Motors** offer reliable performance in harsh environments. These motors are designed and built specifically for commercial and industrial pump applications.



HD Hyundai Close-coupled motors are built in compliance with NEMA MG1-2024 Standards.

### Key Features

Horse Power	Frame Sizes	Voltage	Enclosure
<b>1~50HP</b>	<b>143~326</b>	<b>60Hz : 230/460V, 575V 50Hz : 380V, 400V, 415V</b>	<b>TEFC</b>
Mounting	Insulation	Inverter Use	Certifications
<b>Dual Hole Multi-mounting</b>	<b>Class F</b> (Class H: Impregnation Resin & Magnet wire)	<b>As per NEMA MG-1 Part 31</b>	<b>CSA, DOE, UL, CE, IEEE45</b>

### Applications

- Commercial and industrial pumps
- For pumps installed in harsh and dirty environment
- Variable speed drive applications
- Pump Impeller mounted directly onto motor shaft.

### Standard Features

- Service Factor : 1.15 & B Temp. Rise for DOL, 1.0 & F Temp. Rise for Inverter
- Material : Cast Iron frame, end shield, and conduit box / Steel Fan Cover / Aluminum Die-cast rotor / AISI 1045 Shaft
- F1 gasketed box and cover (F2 Convertible)
- Regreasable ball bearing for frames 254 and up.
- Bearing Protection : V-Seals
- Hazardous : Class I, Div. 2, Groups A, B, C, D & Class II, Div.2, Groups E, F, G
- Bi-Directional Rotation
- Drain Plugs on both sides of Frame Bottom

## Close-coupled Pump JM/JP Severe Duty PREMIUM EFFICIENCY

### Product Features (Basic)

Frame	143 - 326
HP	1 HP - 50 HP
Speed (RPM)	3600, 1800, 1200
Hz & Voltage (Dual Frequency Design)	60Hz : 230/460V, 575V ★ 50Hz : 380V, 400V & 415V
Mounting	★ C-face with foot(B35), Dual-drilled holes for multi-mounting capability
Enclosure / Protection	TEFC / IP55
Rotation	Bi-directional
Painting	Polyurethane top coat (Munsell 4.0PB5.4/5.5)
Ambient temperature	40°C
Insulation Class	★ F (Impregnation Resin & Magnet wire : Class H)

### Product Features (Details)

Starting Method	Sine Wave Power	1.15 Service Factor & B Temp. rise
	Inverter Duty 10:1 VT	1.0 Service Factor & F Temp. rise
	Inverter Duty 20:1 VT (at 50% load)	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT (1 Hour duty)	1.0 Service Factor & F Temp. rise   Fr. 254-326
	Inverter Duty 4:1 CT	1.0 Service Factor & F Temp. rise   Fr. 254-326
	Constant HP	CHP up to 1.5 times base speed
Material	Frame	Cast iron
	Rotor	Aluminum die casting
	End-shield	Cast iron
	Fan	Non-sparking conductive plastic fan
	Fan cover	Steel
Bearing	Drive end	Ball Bearing   Regreasable (254-326)
	Non-Drive end	Ball Bearing   Regreasable (254-326)
	Protection	V-seal
	Lubrication	Polyrex EM Grease
Shaft	Material	AISI1045
	DE threaded hole	Applied
	DE Keyway	Opened keyway
Terminal box	Material	Cast Iron
	Cable hole plug	Plastic
Lead cable	Number of lead wire(s)	★ 9 Leads   Fr. 143-215
	Number of lead wire(s)	★ 12 Leads   Fr. 254-326
Drain Plug	Frame	Both sides of frame bottom
	Box	None
	Grease outlet	Applied (Fr. 254-326)
Certification	CSA	Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups E, F & G Premium Efficiency (CSA C-390)
	DOE	Department of Energy Efficiency Certification #CC038A
	UL	Recognized Motor Components (E211828)
	CE	Recognized Insulation Materials (E210479)
	IEEE45	CE Declaration of Conformity (EN 60034-1)
	IEEE45	Marine Duty
Name plate	Markings	★ CSA ,CC(DOE), UL Recognized, CE, IEEE 45
	Material	Stainless Steel AISI304

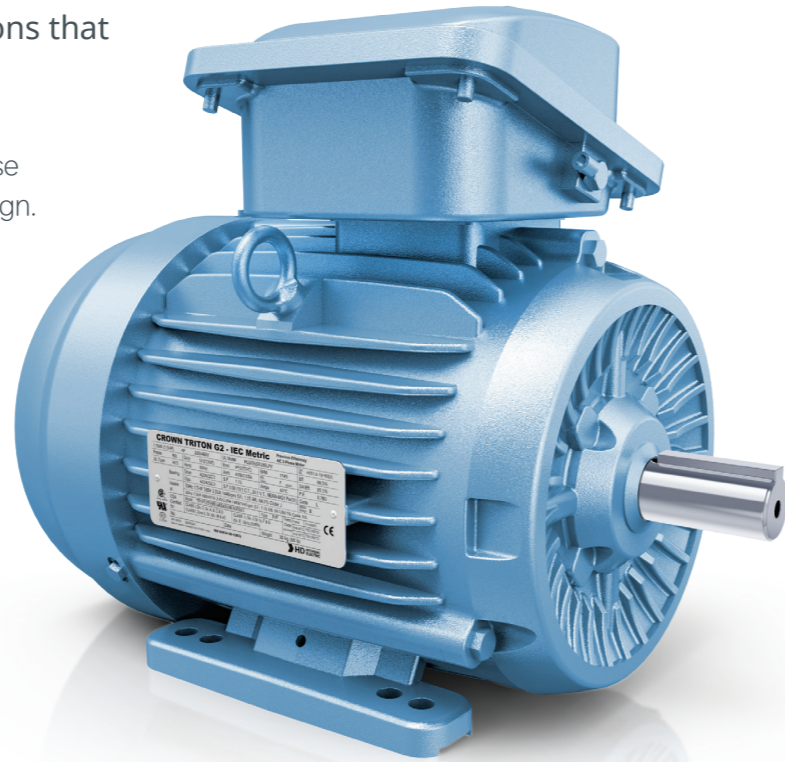
※ Note : Features marked with a star (★) are Key Features for JM/JP Motors.

# Crown Triton - IEC Metric

## Premium Efficiency Severe Duty Motor

**CROWN TRITON-IEC METRIC motor line is engineered for severe duty applications that requires IEC mounting dimension.**

It features the highest efficiency through FEM, CFD and HARMONIC analysis, and low noise and low vibration by optimized structural design.



### Standard Features

- NEMA Premium Efficiency@60Hz, IEC IE3 Efficiency @50Hz
- Class B Temperature Rise
- Magnet wire and insulation systems meets NEMA MG-1 Part 31
- Suitable for Inverter use, 10:1CT, 20:1VT, meets NEMA MG-1 Part31
- Totally Enclosed Fan Cooled
- NEMA Design B Torque@60Hz (LRC in accordance with IEC Design N)
- IEC Design N@50Hz
- Service Factor
  - 1.15@60Hz,Sine Wave Power; 1.0@VFD Power
  - 1.0@50Hz
- Top mounting(F3) conduit box
- FF-Flange and FT-Flange kits available for B35 and B34
- IP55 Protection
- Cast Iron Frame, End Brackets, Main Conduit Box (except 80M frame)
- Steel Fan Cover
- CSA Certificate for Class I, Div. 2, Groups A,B,C&D, T3
- 3 Year Warranty

### Product Range

- **HP** : 1 to 250HP
- **Frame** : 80 ~ 315
- **RPM** : 1200/1800/3600
- **Voltage** :
  - Fr.80 - 132 (9 Leads with Terminal block except 80fr.) : 230/460@60Hz, 190/380~415V@50Hz
  - Fr.160 and above (6 Leads with Terminal block) : 460@60Hz, 190/380~415V@50Hz

### Applications

- Pumps
- Fans
- Conveyors
- Compressors
- Mixers
- Any application that requires IEC Mounting

### Product Features (Basic)

Frame	80-315
HP	1 HP-250 HP
Speed (RPM)	3600, 1800, 1200
Hz & Voltage (Dual Frequency Design)	60Hz : 230/460V(FR.80~132), 460V(FR.160~315) ★ 50Hz : 190/380V~415V
Mounting	Foot Mount (B3) ★ Foot drilled hole(s) to accommodate mounting flexibility, Dual-drilled holes for multi-mounting capability
	Flange with Foot (B35 & B34) ★ FF-Flange and FT-Flange(FR.80~132) with foot, Dual-drilled holes for multi-mounting capability
	Flange without Foot (B5) FF-Flange without foot(FR.80~280)
Enclosure / Protection	TEFC / IP55
Rotation	Bi-directional Fr.80-250   Fr.280-315 4P/6P
	Uni-directional Fr.280-315 2P
Painting	Polyurethane top coat (PANTONE 279C)
Ambient Temperature	40°C
Insulation Class	★ F(Impregnation Resin & Magnet wire : Class H)

### Product Features (Details)

Starting Method	Sine Wave Power	I	1.15 Service Factor & B Temp. rise
	Inverter Duty 10:1 VT	I	1.0 Service Factor & F Temp. rise
	Inverter Duty 20:1 VT (at 50% load)	I	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT	I	1.0 Service Factor & F Temp. rise
	Inverter Duty 10:1 CT (1 Hour duty)	I	1.0 Service Factor & F Temp. rise   Fr. 160-315
	Inverter Duty 4:1 CT	I	1.0 Service Factor & F Temp. rise   Fr. 160-315
	Constant HP	I	CHP up to 1.5 times base speed
Material	Frame	Cast iron	
	Rotor	Aluminum die casting	
	End-shield	Cast iron	
	Fan	Non-sparking conductive plastic fan	
Bearing	Fan cover	Steel	
	Drive end	Ball Bearing   Regreasable (160-315)	
	Non-Drive end	Ball Bearing   Regreasable (160-315)	
	Protection	V-seal	
Shaft	Lubrication	Polyrex EM Grease	
	Material	AISI1045	
	DE threaded hole	Applied	
Terminal Box	DE Keyway	Opened keyway	
	Material	Cast Iron	
Lead Cable	Cable hole plug	Plastic	
	Number of lead wire(s)	★	9 Leads   Fr. 80-132
Drain Plug	Number of lead wire(s)	★	6 Leads   Fr. 160-315
	Frame	Both sides of frame bottom	
	Box	None	
Certification	Grease outlet	Applied (Fr. 160-315)	
	CSA	Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups E, F & G Premium Efficiency (CSA C-390)	
	DOE	Department of Energy Efficiency Certification #CC038A	
	UL	Recognized Motor Components (E211828)(Fr.80-280) Recognized Insulation Materials (E210479)(Fr.80-280)	
	CE	CE Declaration of Conformity (EN 60034-1)	
Name Plate	Markings	★	CSA, CC(DOE), UL Recognized, CE
	Material	Stainless Steel AISI304	

※ Note : Features marked with a star (★) are Key Features for IEC Metric Motors.

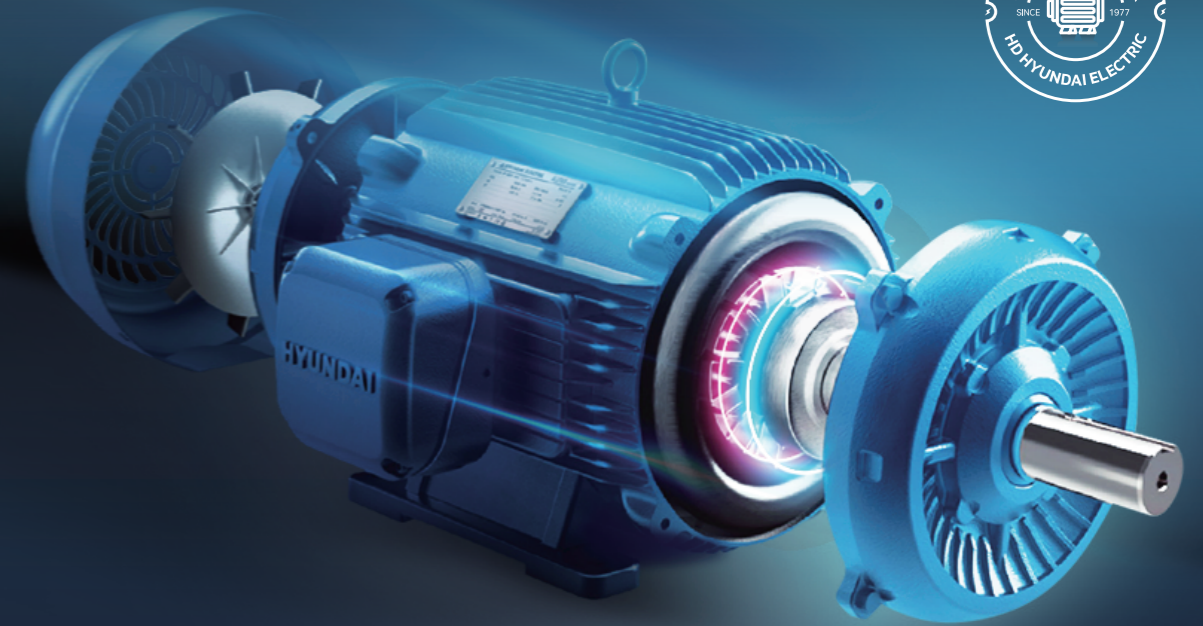
## Product Line-up

Type	Product Family	HP	RPM	Frame	Suffix
Severe Duty	HES	1-50	12/18/36	143-326	IB : Insulated Bearing on N-DE BR : Bearing RTDs(1EA/Bearing) with Auxiliary Terminal Box SR : Stator RTDs(2EA/Ph.) with Auxiliary Terminal Box SH : Space Heater (1Set/Motor) with Auxiliary Terminal Box SP : Spare part (Fan) JM : CCP JM Motor JP : CCP JP Motor
	HHI	60-250	12/18/36	364-449	
	HSDE	300-900	12/18/36	L449-5812	
	JM/JP	1-50	12/18/36	143-326	
IEEE841	IEEE	1-50	12/18/36	143-326	
	IEEE	60-250	12/18/36	364-449	
	IEEE	300-900	12/18/36	L449-5812	
Explosion proof	IXHHI	1-50	12/18/36	143-326	
	IXHHI	60-250	12/18/36	364-449	
API661	API	5-75	12/18	184-365	
IEC Metric	HES	1-50	12/18/36	80M-200L	
	HHI	60-100	12/18/36	225S-280M	
	HSDE	125-250	12/18/36	315S/M/L	

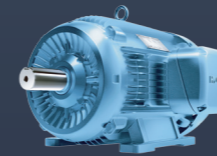
## Warranty

We guarantee the warranty period of all products based on world-class quality, performance, and reliability.

Products family	Warranty period
Severe duty series	36 Months
Explosion proof series	36 Months
IEEE841 series	60 Months
API661 series	60 Months



### Severe Duty Motors



- Premium Efficiency
- 1hp - 900 hp
- 1200, 1800, 3600 rpm
- 230, 460V / 60Hz
- Inverter Duty
- TEFC / IP55
- Foot/Footless/V1/C-face/D-flange

### IEEE841 Motors



- Premium Efficiency
- 1hp - 900hp
- 1200, 1800, 3600 rpm
- 460, 575V / 60Hz
- Inverter Duty
- TEFC / IP55
- Foot/Footless/V1/C-face/D-flange
- 5 year warranty

### Explosion Proof Motors



- UL Certified Class I Division 1, Class II Division 1
- Premium Efficiency
- 1hp - 250hp
- 1200, 1800, 3600 rpm
- 230, 460V / 60Hz
- Inverter Duty
- TEFC / IP55
- Foot/C-Face

### Other Low Voltage Motors



- IEC Metric Motors
- Close Coupled JM/JP Motors
- API661 Motors
- H-Pump Motors

### Medium Voltage Motors and Generators



- Induction Motors : up to 35MW, 14kV
- Synchronous Motors : up to 40MW, 14kV
- Synchronous Generators : up to 50MW, 14kV
- Marine Type Shaft Generators : up to 5.5MW

# EMPORIUM ENERGY, C.A.

Primer Distribuidor Autorizado de HD Hyundai Electric en Venezuela

CONTÁCTENOS

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