

# ELECTRIC MOTORS FOR THE RAILWAY SECTOR

CAST IRON-ALUMINIUM  
CASING



I.S.G.E.V. S.p.A. is one of the most technically advanced manufacturers of three-phase asynchronous motors designed for the railway sector.

As a result of meticulous research, that also took into account the most extreme operating conditions, I.S.G.E.V.'s engineers were able to design electric motors to satisfy all the needs of the railway sector.

The railway sector demands high quality standards and technical skills. Thanks to the innovative all cast iron high-quality construction, this series of motors can operate in extremely severe conditions that really put performance and reliability to the test.

I.S.G.E.V. has been operating in the railway sector for many years and is fully recognised and certified by national and



international railway institutions. I.S.G.E.V. motors also comply with railway norms and standards.

With a housing and shields in high-quality cast iron and a squirrel-cage rotor, the motors in this series are completely enclosed and cooled by a shaft-mounted fan (IC411).

Offering outstanding performance and a unique design,

these motors are truly robust thanks to their cast iron structure. With very high mechanical and electric performance ratings (although built with class F insulation, all the motors are used within the class B limits), they are the natural answer to the market's demand for electronic drives (Inverters).



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### TECHNICAL CHARACTERISTICS

- Optimised yield to reduce losses, decrease thermal dissipation and, as a consequence, save energy
- Maintenance free
- Cast iron stator housing
- Cast iron end shields
- Cast iron fan cover
- Cast iron terminal box and terminal box cover
- Mechanical protection IP54-IP55-IP56-IP65
- Aluminium cooling fan
- Shaft in C40 hardened and tempered steel or 39NiCrMo3 hardened and tempered steel for low temperatures
- Rotor shaft with reduced degree of vibration (R)
- Sealing rings on coupling side and opposite side in Viton
- Stainless steel external bolts and screws
- Nickel-plated brass cable gland
- Class H insulation materials and copper wire, UL certified insulation system; heat-resistant winding impregnation paint
- Reinforced windings for inverter operating mode
- Reinforced vibration-damping cable terminals for electric connections
- For particularly aggressive environments with high humidity, tropicalized winding treatment or double immersion impregnation
- Motors equipped with condensation drain holes for environments with a broad temperature range and high humidity
- Painting cycles:
  - ⇒ Water-based rust inhibitor primer
  - ⇒ Polyurethane paint on inside of covers and terminal box
  - ⇒ Water-based RAL 5010 topcoat; two coats of two-pack epoxy, polyurethane, polyacrylic paint
- Bearings, lubricated for life, shielded (with metal guards) or watertight with clearance C3 and special grease.

