MarelliMotori
Oil & gas

D5U

Model	D5U
Power	Up to 240 kW
Voltages	Up to 690 V
Atex protection	Ex de I Mb
Frame	160 ± 315
Poles	2, 4, 6, and 8
Cooling	IC 411 on request IC 416
IP	IP 55 / 56 / 65
Enclosure	TEFC – Totally Enclosed Fan Cooled Motors.
Main Applications	Centrifugal & reciprocating compressor, Conveyor systems, Cranes, Extruders and expanders, Heat exchangers and blowers, Mills, Mixers, Pumps
Sector	Oil&Gas

Poles	**2 Poles**	**4 Poles**	**6 Poles**	**8 Poles**	
| kW	240	240	192	158	

Certificates and testing	
Certificate	Motors are certified by CESI. Ex d according to IEC/EN 60079-15 and ATEX directive 94/9/EC.
Main components	
Housing	Frame is made in cast iron. (EN 1561-GJL-200 or better)
Shield	Made in cast-iron (EN 1561 – GJL 200 or better)
Shaft	General data Made in carbon steel (EN 10083 – 2 C45 or better) Shaft design Cylindrical shaft with key.
Main terminal box	Mounted on top. Made in cast iron. (EN 1561 – GJL 200 or better)
Fan	Frame: 160 ± 280 | 315 Pole: - | - | 2 ± 6 | 8 Material: Thermoplastic reinforced with glass fibres | Metallic
Construction	
Cooling System	IC 411 as per IEC60034-6. Totally enclosed standard motor, frame surface cooled with fan 4: frame surface cooled 1: self circulation of prymary coolant 1: self circulation of secondary coolant On request for variable speed application an external ventilation unit can be supplied to get the IC416 cooling type.
Degree of protection	IP 55 as per IEC60034-5. (Available up to IP 65)

Technical data	
Stator/Rotor core	Laminated and enamel-insulated on both sides to minimise eddycurrent losses. The stator winding is made in flat copper or round copper wire depending on the machine size. The completely wound stator pack with housing is thereby impregnated in an epoxy-resin VPI. The subsequent heat treatment hardens the resin.
Rotor	Short circuit rotor type. Depending on machine size, the rotor construction is usually a solid shaft type. The rotor winding can be either a pressure die cast aluminum or a copper bar construction.
Bearing	General data Motors are normally fitted with single-row deep groove ball bearings. Up to 132 frame size bearings are lubricated for life. Up to 250 frame size motors are supplied with prelubricated ball bearings without grease nipples. From 280 frame size and above motors are supplied with regreasable bearings and greasing nipples on both ends. The motor bearings are designed according to the principle that the locating bearings are on the D end side and the floating bearings on the ND end side. Bearings are first greased in the factory with lithium base grease. The used grease is removed through a valve locked in the outer bearing cover.
Impregnation system	Stator is VPI treated with an unsaturated polyester amide resin which is polymerisation in an oven.
Insulation system	Stator: F class insulated with a synthetic enamel. (H class insulation available on request)
Protective treatments	Specific Oil&gas treatment.
Vibrations	Mechanical vibrations correspond to the limits specified in EN 60034-14 and are certified by the test room.
Rating plate	Stainless steel, thickness 0,5 mm.

Optional features	
List	Reinforced insulation suitable for frequency converter application dual / multiple winding configuration special shaft end on both sides increase protection degree up to IP 56 / 65 encoder vibration sensors special frame design to suite the application insulated bearings design other options available on request.