



B5N

Model	B5N
Power	Up to 1.600 kW
Voltages	Up to 690 V
Atex protection	Ex nA II C T3 Gc
Frame LV	71 ± 500
Frame MV	355 ± 500
Poles	2, 4, 6, 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	900	1.600	1.300	900	



Certificates and testing																			
Certificate	Motors from 160 to 315 frame size are certified by TÜV NORD. Ex nA 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)																		
Shield	Made in cast-iron (EN 1561 – GJL 200)																		
Shaft	General data Made in carbon steel (EN 10083 – 2 C45) Shaft design Cylindrical shaft with key.																		
Main terminal box	Mounted on top. Made in cast iron. (EN 1561 – GJL 200)																		
Fan	<table border="1"><tbody><tr><td>Frame</td><td>71 ± 280</td><td>315</td><td colspan="3">355 ± 450</td></tr><tr><td>Pole</td><td>2 ± 8</td><td>2 ± 6</td><td>8</td><td>2</td><td>4 ± 6</td></tr><tr><td>Material</td><td colspan="2">Thermoplastic reinforced with glass fibres</td><td>Metallic</td><td>Polyamide</td><td>Aluminum alloy</td></tr></tbody></table>	Frame	71 ± 280	315	355 ± 450			Pole	2 ± 8	2 ± 6	8	2	4 ± 6	Material	Thermoplastic reinforced with glass fibres		Metallic	Polyamide	Aluminum alloy
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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 primary 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	<p>Laminated and enamel-insulated on both sides to minimise eddycurrent losses.</p> <p>The stator winding is made in flat copper or round copper wire depending on the machine size.</p> <p>The completely wound stator pack with housing is thereby impregnated in an epoxy-resin VPI.</p> <p>The subsequent heat treatment hardens the resin.</p>
Rotor	<p>Short circuit rotor type.</p> <p>Depending on machine size, the rotor construction is usually a solid shaft type.</p> <p>The rotor winding can be either a pressure die cast aluminum or a copper bar construction.</p>
Bearing	<p>General data</p> <p>Motors are normally fitted with single-row deep groove ball bearings.</p> <p>Up to 132 frame size bearings are lubricated for life.</p> <p>Up to 250 frame size motors are supplied with prelubricated ball bearings without grease nipples.</p> <p>From 280 frame size and above motors are supplied with regreasable bearings and greasing nipples on both ends.</p> <p>From 355 frame size SPM nipples for bearing vibration monitoring are delivered as standard both at N and D end.</p> <p>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.</p> <p>Bearings are first greased in the factory with lithium base grease.</p> <p>The used grease is removed through a valve locked in the outer bearing cover. Sleeve bearings available as an option.</p>
Impregnation system	<p>Stator is VPI treated with an unsaturated polyester amide resin which is polymerisation in an oven.</p>
Insulation system	<p>Stator: F class insulated with a synthetic enamel. (H class insulation available on request)</p>
Protective treatments	<p>Specific Oil&gas treatment.</p>

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.