



# Technical Data Sheet



Project Location  
**United Arab Emirates**

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No.	Definition	Data	Unit	Remarks
1	Product	<b>TEFC, 3-phase, squirrel cage induction motor</b>		
2	Product code	<b>3GBA 162 420-BDCIN</b> Calc. ref. 3GZH021016-6		
3	Type/Frame	<b>M2BAX 160MLB 4</b>		
4	Mounting	<b>IM3001, B5(flange)</b>		
5	Rated output P <sub>N</sub>	<b>15</b>	kW	
6	Service factor	<b>1</b>		
7	Type of duty	<b>S1 100%</b>		
8	Rated voltage U <sub>N</sub>	<b>400</b>	VD	± 5 %
9	Rated frequency f <sub>N</sub>	<b>50</b>	Hz	± 2 %
10	Rated speed n <sub>N</sub>	<b>1460</b>	r/min	
11	Rated current I <sub>N</sub>	<b>29.5</b>	A	
12				
13	Starting current I <sub>s</sub> /I <sub>N</sub>	<b>7</b>		
14	Nominal torque T <sub>N</sub>	<b>98</b>	Nm	
15	Locked rotor torque T <sub>s</sub> /T <sub>N</sub>	<b>2.5</b>		
16	Maximum torque T <sub>max</sub> /T <sub>N</sub>	<b>3</b>		
17				
18				
	Load characteristics	Load %	Current A	Efficiency % Power factor
19	PLL determined from residual loss	<b>100</b>	<b>29.5</b>	<b>90.6 / IE2 0.81</b>
20		<b>75</b>	<b>23.4</b>	<b>91.2 0.76</b>
21		<b>50</b>	<b>18.2</b>	<b>90.2 0.66</b>
22				
23	Thermal withstand time hot	<b>10</b>	s	
24	Thermal withstand time cold	<b>16</b>	s	
25	Insulation class / Temperature class	<b>F / B</b>		
26	Ambient temperature	<b>50</b>	°C	
27	Altitude	<b>1000</b>	m.a.s.l.	
28	Degree of protection	<b>IP55</b>		
29	Cooling system	<b>IC411</b>		
30	Bearing DE/NDE	<b>6209-2Z/C3 - 6209-2Z/C3</b>		
31	Sound pressure level (LP dB(A) 1m)	<b>77</b>	dB(A)	at no-load
32	Moment of inertia J = ¼ GD2	<b>0.1025</b>	kg-m2	
33	Position of terminal box	<b>Top</b>		
34	Direction of rotation	<b>Bi-directional</b>		
35	Weight of rotor	<b>38</b>	kg	
36	Total weight of motor	<b>134</b>	kg	
37	Paint shade	<b>Munsell Blue</b>		
38	Cable size			
39	Vibration	<b>As Per IS 12075</b>		
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Ex-motors				
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**Option Variant Codes / Definition**

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Remarks:

Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

All performance values are subject to IS/IEC tolerances



## Motors in brief

General performance IE2 high efficiency cast iron motors

Size	160	180	200	225	250	
<b>Stator</b>	Material	Cast iron grade 200 : ISO 185				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
<b>Feet</b>		Integrated with stator				
	Material	Cast iron grade 200 : ISO 185				
<b>Bearing end shields</b>	Material	Cast iron grade 200 : ISO 185				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Aliphatic polyurethane enamel paint_70µm				
<b>Bearings</b>	D-end	6209-2Z/C3	6310-2Z/C3	6312-2Z/C3	6313-2Z/C3	6315-2Z/C3
	N-end	6209-2Z/C3	6209-2Z/C3	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3
<b>Axially-locked</b>	Inner Bearing Cover	As standard, locked at D-end				
<b>Bearing seals</b>	D-end	V-ring				
	N-end	V-ring				
<b>Lubrication</b>		Permanently lubricated shielded bearings				
<b>Terminal Box</b>	Material	Sheet of Steel, Cold Rolled				
	Surface	Treatment Similar to stator				
	Screws	Steel 8.8				
<b>Connections</b>	Cable Entries	2xM40, 1xM16			2xM50, 1xM16	
	Cable Sizes	2Rx3Cx70mm <sup>2</sup>			2Rx3Cx120mm <sup>2</sup>	
	Terminal Stud Size	M6			M10	
	Terminal Box	6 terminals for connection, cable lugs (not included)				
<b>Fan</b>	Material	Polypropylene, Reinforced with 20% glass fibre				
<b>Fan Cover</b>	Material	Sheet of Steel, Cold Rolled				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Similar to stator				
<b>Stator winding</b>	Material	Copper				
	Insulation	Insulation class F				
<b>Rotor winding</b>	Material	Diecast aluminum				
<b>Balancing method</b>		Half Key Balancing as standard				
<b>Key ways</b>		Open Key Way				
<b>Enclosure</b>		IP 55				
<b>Cooling method</b>		IC 411				
<b>Drain holes</b>		Drain holes with closable plastic plugs, open on delivery				
<b>Lifting lugs</b>		Integrated with the stator				