



# Technical Data Sheet



Project Location  
**United Arab Emirates**

Customer: **Trielectric International FZE** | Contact: **Mr.Saravanan(+971564345964)** | Contact: **Mr.Tamil(+971502353763)** | Item name: **1.0002**  
 Our ref. Stock: **A** | Rev/Changed by: **A** | Date of issue: **9/14/2021** | Saving ident: | Pages: **1(3)**

No.	Definition	Data	Unit	Remarks
1	Product	<b>TEFC, 3-phase, squirrel cage induction motor</b>		
2	Product code	<b>3GBA 281 220-BDCIN</b>		
3	Type/Frame	<b>M2BAX 280SMB 2</b>		
4	Mounting	<b>IM3001, B5(flange)</b>		
5	Rated output P <sub>N</sub>	<b>90</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>2976</b>	r/min	
11	Rated current I <sub>N</sub>	<b>155</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>289</b>	Nm	
15	Locked rotor torque T <sub>s</sub> /T <sub>N</sub>	<b>2.2</b>		
16	Maximum torque T <sub>max</sub> /T <sub>N</sub>	<b>3</b>		
17				
18				
	Load characteristics	Load %	Current A	Efficiency %
19	PLL determined from residual loss	<b>100</b>	<b>155</b>	<b>94.1 / IE2</b>
20		<b>75</b>	<b>122</b>	<b>94.1</b>
21		<b>50</b>	<b>88.3</b>	<b>93.1</b>
22				
23	Thermal withstand time hot	<b>25</b>	s	
24	Thermal withstand time cold	<b>44</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>6316/C3 - 6316/C3</b>		
31	Sound pressure level (LP dB(A) 1m)	<b>90</b>	dB(A)	at no-load
32	Moment of inertia J = ¼ GD2	<b>0.9</b>	kg-m2	
33	Position of terminal box	<b>Top</b>		
34	Direction of rotation	<b>Bi-directional</b>		
35	Total weight of motor	<b>619</b>	kg	
36	Paint shade	<b>Munsell Blue</b>		
37	Cable size			
38	Vibration	<b>As Per IS 12075</b>		
39				
40				
41				
42				
43				
44				
45				
Ex-motors				
46				
47				
48				

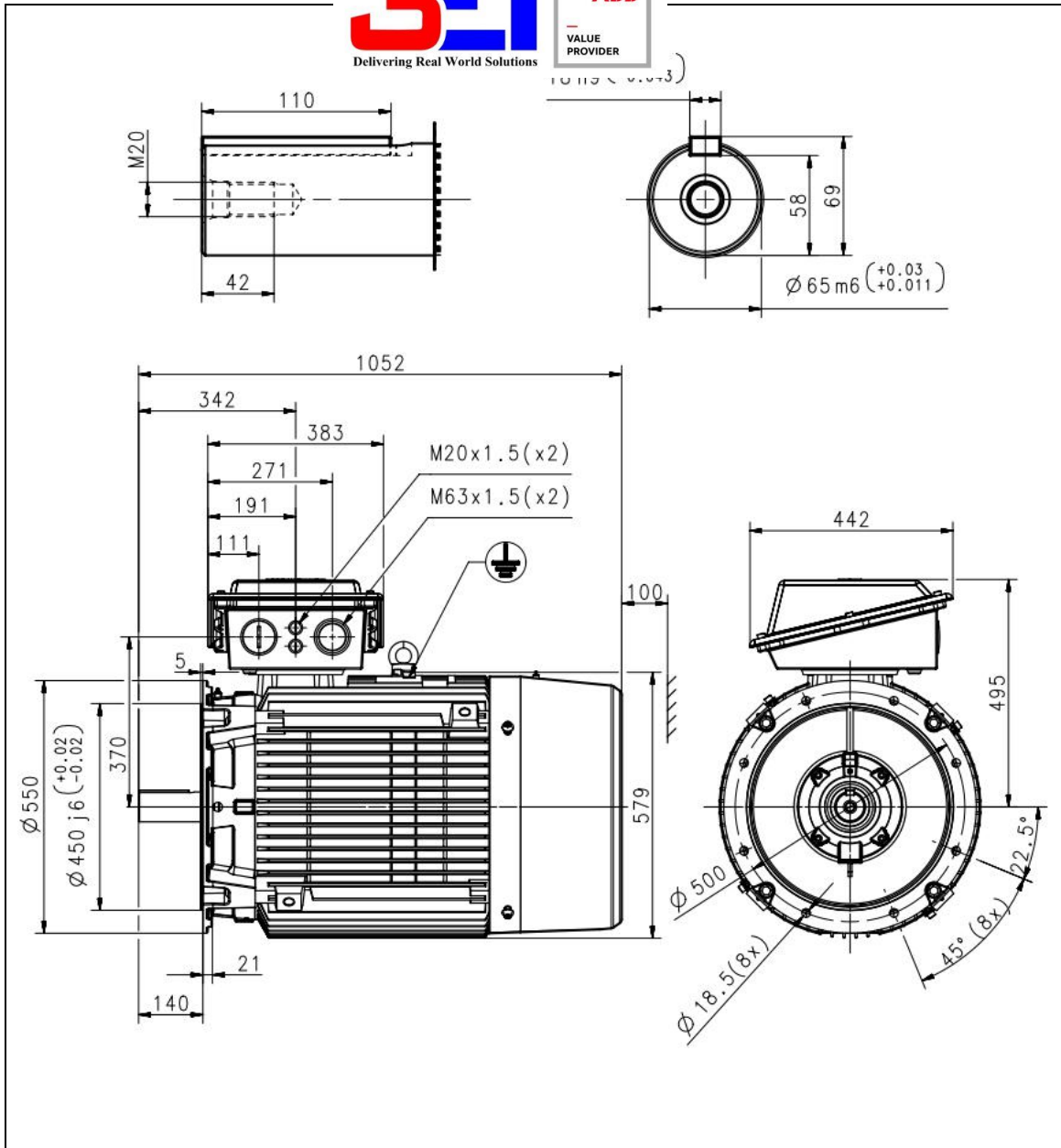
Option Variant Codes / Definition

49	
50	
51	
52	

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

All performance values are subject to IS/IEC tolerances





Additional information:

<b>Dimension Print</b>	Motor Type: M2BA/BAX 280SM_2 B5 V1 V3.	Document No: 3GZC500028-75 C 13 BA 280 A
	Description: STANDARD SQUIRREL CAGE MOTOR	
Unit: ABB Ltd., Motors and Generators	Issued by: Bin Zou	Replaces:
Date: 2015-08-12	Approved by: Anna Feng	Replaced by:
<b>ABB Ltd.</b>	Customer Reference:	<b>ABB</b>

## Motors in brief

General performance IE2 high efficiency cast iron motors

Size		280 2-8 Pole	315 2 Pole	315 4-8 Pole	355 2 Pole	355 4-8 Pole
<b>Stator</b>	Material	Cast iron grade 150, IS:210				
	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 150, IS:210				
<b>Bearing end shields</b>	Material	Cast iron grade 150, IS:210				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Aliphatic polyurethane paint ≥ 80µm				
<b>Bearings</b>	D-end	6316/C3	6316/C3	6319/C3	6319/C3	6322/C3
	N-end	6315/C3	6316/C3	6316/C3	6319/C3	6319/C3
<b>Axially-locked</b>	Inner Bearing Cover	As standard, locked at D-end				
<b>Bearing seals</b>	D-end	Oil Seal				
	N-end					
<b>Lubrication</b>		Regreasable Bearings, Regreasing nipple M10X1				
<b>Terminal Box</b>	Material	Cast iron grade 150, IS:210				
	Surface	Similar to stator				
	Screws	Steel				
<b>Connections</b>	Cable Entries	2 x 2" BSC		2 x 2-1/2" BSC*		
	Cable Sizes	280 : 2Rx3Cx185Sqmm Cu/Al Cable 315 : 2Rx3Cx240Sqmm Cu/Al Cable 355 : 2Rx3Cx240Sqmm Cu/Al Cable*				
	Terminal Stud Size	M12		M16		
	Terminal Box	6 terminals for connection, cable lugs (not included)				
	<b>Fan</b>	Material	Polypropylene, Reinforced with 20% glass fibre			Aluminium
<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 standarad				
<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>		Bolted to the Stator				

\*Cable Size for 355MLC2,355MLD2,355MLB4, 355MLB6H & 355MLB4H will be 2Rx3Cx300 Sqmm Cu/Al , Threaded opening 2x3" BSC