



# Type Test Report

Motor tested in accordance with IEC60034-2-1 & AS/NZS1359.102.3.Efficiency as per IEC60034-2-1  
(PLL determined from residual loss)

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Type: TAI 160M2-2  
TR Number: 2013030402  
Test Lab: Techtop factory

### Nameplate:

Type:	TAI 160M2-2		Duty:	S1	IP:	55
Serial No:	201301016002		Ins.Cl:	F	KG:	91
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]
400/690	50	15	26.0/15.1	0.9	2950	92.5
Brg.DE:	6309 RZ		Brg.NDE:	6209RZ		

### No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	380	8.07	434	50	3000	0.0	0	0.08	0.0
<b>No load</b>	<b>400</b>	<b>8.96</b>	<b>475</b>	<b>50</b>	<b>3000</b>	<b>0.0</b>	<b>0</b>	<b>0.08</b>	<b>0.0</b>
No load	420	10.13	525	50	3000	0.0	0	0.07	0.0

### Load Test:

Load [p.u]	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
0.25	400	10.84	4276	50	2990	12.0	3750	0.57	87.7
0.5	400	15.20	8162	50	2980	24.0	7500	0.78	91.9
0.75	400	20.34	12140	50	2968	36.2	11250	0.86	92.7
<b>1</b>	<b>400</b>	<b>26.12</b>	<b>16220</b>	<b>50</b>	<b>2957</b>	<b>48.5</b>	<b>15000</b>	<b>0.90</b>	<b>92.5</b>
1.25	400	32.39	20420	50	2944	60.8	18750	0.91	91.8
1.5	400	39.02	24740	50	2930	73.3	22500	0.92	90.9

### Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [kW]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [kW]	Power Factor	Eff. [%]
380V	380	27.19	16.29	50	2949	48.58	15	0.91	92.1
420V	420	25.36	16.23	50	2961	48.38	15	0.88	92.4

### Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/690	245.2	89450	125.9	0.10

### Temperature Rise:

Amb. Temperature:	22	[°C]	Winding temperature rise:	54	[K]
Cold Resistance:	0.330	[Ω]	Frame:	40	[°C]
Hot Resistance:	0.403	[Ω]	Bearing:	55	[°C]

### Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.60	Breakdown Torque/Rated Torque:	3.43
Locked Rotor Cur./Rated Cur.:	9.39	Pullup Torque/Rated Torque:	1.86

Check: Zhang Kai	Operator: Li Jian	Test Date: 04-Mar-13
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