



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 160M-4
TR Number: 2013030502
Test Lab: Techtop factory

Nameplate:

Type:	TAI 160M-4		Duty:	S1		IP:	55	
Serial No:	201301016004		Ins.Cl:	F		KG:	83	
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]		
400/690	50	11	21.3/12.4	0.83	1460	89.7		
Brg.DE:	6309 RZ		Brg.NDE:	6209RZ				

No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	360	7.07	332	50	1500	0.0	0	0.08	0.0
No load	400	8.73	400	50	1500	0.0	0	0.07	0.0
No load	440	11.70	522	50	1500	0.0	0	0.06	0.0

Load Test:

Load [p.u]	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
0.25	400	9.67	3201	50	1491	17.6	2750	0.48	85.9
0.5	400	12.69	6102	50	1483	35.4	5500	0.69	90.1
0.75	400	16.58	9112	50	1474	53.4	8250	0.79	90.5
1	400	21.25	12263	50	1463	71.8	11000	0.83	89.7
1.25	400	26.56	15580	50	1451	90.5	13750	0.85	88.3
1.5	400	32.42	19092	50	1437	109.6	16500	0.85	86.4

Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [kW]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [kW]	Power Factor	Eff. [%]
380V	380	22.14	12.39	50	1456	72.15	11	0.85	88.8
420V	420	20.72	12.21	50	1467	71.61	11	0.81	90.1

Locked Rotor Test:

Un (V)	Ik (A)	Pk(kW)	Tk (Nm)	cosφ
400/690	148.3	51.45	182.3	0.50

Temperature Rise:

Amb. Temperature:	28.1	[°C]	Winding temperature rise:	64.4	[K]
Cold Resistance:	0.583	[Ω]	Frame:	40.7	[°C]
Hot Resistance:	0.753	[Ω]	Bearing:	43.9	[°C]

Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.54	Breakdown Torque/Rated Torque:	2.79
Locked Rotor Cur./Rated Cur.:	6.98	Pullup Torque/Rated Torque:	1.76

Check: Zhang Kai	Operator: Li Jian	Test Date: 05-Mar-13
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