



# 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)

## SHANGHAI TOP MOTOR CO., LTD

No.303 Kangliu Road  
Kang Qiao Industrial Area  
Pudong, Shanghai, China

Ph: 86 15000088129  
[zk@techtopy.net.cn](mailto:zk@techtopy.net.cn)  
[www.techtopy.com](http://www.techtopy.com)

**Type:** TAI 100L1-4  
**TR Number:** 2012071902  
**Test Lab:** Techtop factory

**Comments:** *This test report is also applicable for TCI 100L1-4 2.2kW*

### Nameplate:

Type:	TAI 100L1-4		Duty:	S1	IP:	55
Serial No:	201204078045		Ins.Cl:	F	KG:	23.4
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]
230/400	50	2.2	7.90/4.55	0.82	1440	85.2
Brg.DE:	6206ZZ		Brg.NDE:	6206ZZ		

### 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	2.07	116	50	1500	0.0	0	0.08	0.0
<b>No load</b>	<b>400</b>	<b>2.37</b>	<b>134</b>	<b>50</b>	<b>1500</b>	<b>0.0</b>	<b>0</b>	<b>0.08</b>	<b>0.0</b>
No load	420	2.78	161	50	1500	0.0	0	0.08	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	2.48	697	50	1487	3.5	550	0.41	78.9
0.5	400	2.95	1286	50	1475	7.1	1100	0.63	85.5
0.75	400	3.63	1906	50	1460	10.8	1650	0.76	86.6
<b>1</b>	<b>400</b>	<b>4.49</b>	<b>2564</b>	<b>50</b>	<b>1444</b>	<b>14.6</b>	<b>2200</b>	<b>0.82</b>	<b>85.8</b>
1.25	400	5.51	3270	50	1425	18.4	2750	0.86	84.1
1.5	400	6.66	4032	50	1405	22.4	3300	0.87	81.8

### Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
380V	380	4.61	2588	50	1435	14.6	2200	0.85	85.0
420V	420	4.50	2563	50	1451	14.5	2200	0.78	85.8

### Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	32.62	14206	37.88	0.63

### Temperature Rise:

Amb.Temperature:	25.2	[°C]	Winding temperature rise:	48.3	[K]
Cold Resistance:	4.711	[Ω]	Frame:	53.1	[°C]
Hot Resistance:	5.649	[Ω]	Bearing:	56.2	[°C]

### Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.60	Breakdown Torque/Rated Torque:	3.05
Locked Rotor Cur./Rated Cur.:	7.26	Pullup Torque/Rated Torque:	2.18

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 19-Jul-12
------------------	---------------------------	----------------------