



# 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@techtom.net.cn](mailto:zk@techtom.net.cn)

[www.techtom.com](http://www.techtom.com)

Type: TAI 90L-8

TR Number: 2011102302

Test Lab: Techtom factory

## Nameplate:

Type:	TAI 90L-8		Duty:	S1	IP:	55
Serial No:	201107053009		Ins.Cl:	F	KG:	13.94
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]
230/400	50	0.55	3.65/2.1	0.58	700	65.3
Brg.DE:	6205 RZ		Brg.NDE:	6205 RZ		

## 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	360	1.48	120	50	750	0.0	0	0.13	0.0
<b>No load</b>	<b>400</b>	<b>1.86</b>	<b>179</b>	<b>50</b>	<b>750</b>	<b>0.0</b>	<b>0</b>	<b>0.14</b>	<b>0.0</b>
No load	440	2.37	278	50	750	0.0	0	0.15	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	1.82	343	50	739	1.776	138	0.27	40.1
0.5	400	1.85	492	50	731	3.594	275	0.38	55.9
0.75	400	1.94	656	50	719	5.478	413	0.49	62.9
<b>1</b>	<b>400</b>	<b>2.10</b>	<b>842</b>	<b>50</b>	<b>705</b>	<b>7.455</b>	<b>550</b>	<b>0.58</b>	<b>65.3</b>
1.25	400	2.35	1062	50	687	9.555	688	0.65	64.7
1.5	400	2.72	1331	50	667	11.817	825	0.71	62.0

## 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	2.09	852.7	50	692	7.590	550	0.62	64.5
420V	420	2.13	867.5	50	704	7.461	550	0.56	63.4

## Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	7.092	3079	14.56	0.63

## Temperature Rise:

Amb. Temperature:	10.7	[°C]	Winding temperature rise:	48.4	[K]
Cold Resistance:	23.8	[Ω]	Frame:	10.2	[°C]
Hot Resistance:	28.3	[Ω]	Bearing:	12.8	[°C]

## Torque And Current:

Locked Rotor Tor./Rated Tor.:	1.95	Breakdown Torque/Rated Torque:	2.35
Locked Rotor Cur./Rated Cur.:	3.38	Pullup Torque/Rated Torque:	1.79

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 23/Oct/11
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