



# 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 712-4

TR Number: 2011070201

Test Lab: Techtop factory

## Nameplate:

Type: TAI 712-4		Duty: S1		IP: 55		
Serial No: 201103096009		Ins.Cl: F		KG: 5.8		
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]
230/400	50	0.37	1.80/1.03	0.77	1370	67.2
Brg.DE:	6202 RZ		Brg.NDE:	6202 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	350	0.64	69	50	1500	0.0	0	0.18	0.0
<b>No load</b>	<b>400</b>	<b>0.91</b>	<b>116</b>	<b>50</b>	<b>1500</b>	<b>0.0</b>	<b>0</b>	<b>0.18</b>	<b>0.0</b>
No load	440	1.28	198	50	1500	0.0	0	0.20	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	0.83	204	50	1468	0.6	93	0.35	45.4
0.5	400	0.86	305	50	1449	1.2	185	0.51	60.7
0.75	400	0.92	418	50	1418	1.9	277	0.66	66.3
<b>1</b>	<b>400</b>	<b>1.04</b>	<b>550</b>	<b>50</b>	<b>1375</b>	<b>2.6</b>	<b>370</b>	<b>0.77</b>	<b>67.2</b>
1.25	400	1.24	716	50	1320	3.3	463	0.83	64.6
1.5	400	1.55	937	50	1253	4.2	555	0.88	59.3

## 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	1.05	554.7	50	1356	2.606	370	0.80	66.7
420V	420	1.04	551.4	50	1381	2.559	370	0.73	67.1

## Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	4.439	2580	5.889	0.84

## Temperature Rise:

Amb. Temperature:	28.1	[°C]	Winding temperature rise:	66.5	[K]
Cold Resistance:	49.1	[Ω]	Frame:	28.9	[°C]
Hot Resistance:	61.7	[Ω]	Bearing:	31.2	[°C]

## Torque And Current:

Locked Rotor Tor./Rated Tor.: 2.29	Breakdown Torque/Rated Torque: 2.28
Locked Rotor Cur./Rated Cur.: 4.28	Pullup Torque/Rated Torque: 1.9

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 02/Jul/11
------------------	---------------------------	----------------------