



# 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 180L-6  
TR Number: 2013031002  
Test Lab: Techtop factory

## Nameplate:

Type:	TAI 180L-6		Duty:	S1	IP:	55
Serial No:	201301016014		Ins.Cl:	F	KG:	130
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]
400/690	50	15	29.2/16.9	0.82	975	90.4
Brg.DE:	6311 RZ		Brg.NDE:	6211 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	380	11.48	500	50	1000	0.0	0	0.07	0.0
No load	400	12.94	572	50	1000	0.0	0	0.06	0.0
No load	420	15.44	686	50	1000	0.0	0	0.06	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	14.29	7375	50	995	36.2	3750	0.74	85.7
0.5	400	18.04	8308	50	990	72.7	7500	0.66	90.3
0.75	400	23.04	12372	50	985	109.6	11304	0.78	90.9
1	400	29.05	16598	50	978	146.8	15000	0.82	90.4
1.25	400	35.83	21011	50	972	184.4	18768	0.85	89.2
1.5	400	43.15	25628	50	964	222.3	22440	0.86	87.8

## 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	30.11	16.65	50	975	146.92	15	0.84	90.1
420V	420	28.81	16.56	50	980	146.17	15	0.79	90.6

## Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/690	302.9	105008	351.1	0.50

## Temperature Rise:

Amb. Temperature:	33.4	[°C]	Winding temperature rise:	75	[K]
Cold Resistance:	0.289	[Ω]	Frame:	31.5	[°C]
Hot Resistance:	0.369	[Ω]	Bearing:	34.6	[°C]

## Torque And Current:

Locked Rotor Tor./Rated Tor.: 2.42	Breakdown Torque/Rated Torque: 2.83
Locked Rotor Cur./Rated Cur.: 7.68	Pullup Torque/Rated Torque: 1.7

Check: Zhang Kai	Operator: Li Jian	Test Date: 10-Mar-13
------------------	-------------------	----------------------