



# 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 90S-8

TR Number: 2011102301

Test Lab: Techtop factory

## Nameplate:

Type:	TAI 90S-8		Duty:	S1		IP:	55	
Serial No:	201107053008		Ins.Cl:	F		KG:	11.38	
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]		
230/400	50	0.37	2.44/1.41	0.59	700	64.4		
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	1.05	91	50	750	0.0	0	0.14	0.0
<b>No load</b>	<b>400</b>	<b>1.26</b>	<b>132</b>	<b>50</b>	<b>750</b>	<b>0.0</b>	<b>0</b>	<b>0.15</b>	<b>0.0</b>
No load	440	1.58	199	50	750	0.0	0	0.17	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	1.23	242	50	740	1.193	93	0.28	38.2
0.5	400	1.25	342	50	732	2.412	185	0.39	54.1
0.75	400	1.31	451	50	722	3.669	278	0.50	61.5
<b>1</b>	<b>400</b>	<b>1.41</b>	<b>575</b>	<b>50</b>	<b>710</b>	<b>4.976</b>	<b>370</b>	<b>0.59</b>	<b>64.4</b>
1.25	400	1.56	718	50	696	6.348	463	0.67	64.5
1.5	400	1.77	888	50	679	7.803	555	0.72	62.5

## 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	1.40	572.7	50	688	5.136	370	0.62	64.6
420V	420	1.43	583.6	50	706	5.005	370	0.56	63.4

## Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	4.371	1908	9.718	0.63

## Temperature Rise:

Amb. Temperature:	11	[°C]	Winding temperature rise:	49.4	[K]
Cold Resistance:	37.9	[Ω]	Frame:	16.4	[°C]
Hot Resistance:	45.9	[Ω]	Bearing:	18.9	[°C]

## Torque And Current:

Locked Rotor Tor./Rated Tor.:	1.95	Breakdown Torque/Rated Torque:	2.25
Locked Rotor Cur./Rated Cur.:	3.09	Pullup Torque/Rated Torque:	1.76

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