

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

<b>NAMEPLATE DATA</b>	IEC	<b>TYPE</b>	2.2	<b>KW</b>	710	<b>RPM</b>
AK132S-8 <b>FRAME</b>	3	<b>PHASE</b>	400	<b>VOLTS</b>	50	<b>HZ/CYCLES</b>
77.5 <b>EFFICIENCY</b>	5.61	<b>AMPS</b>	55	<b>IP</b>	IC01	<b>IC</b>
8 <b>POLE</b>	S1	<b>DUTY</b>	0.73	<b>PF</b>	N/A	<b>EFF2</b>
VALIADIS <b>MANUFACTURER</b>		<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

<b>MAJOR CONTENTS</b>	<b>UNIT</b>	<b>TEST VALUE</b>
STATOR RESISTANCE OF PHASE TO PHASE	75 DEG.C	OHM 7.2512
NO LOAD CURRENT		AMP 3.93
NO LOAD INPUT		kW 0.3318
CORE LOSS (Pfe)		kW 0.155
WINDAGE FRICTION LOSS (Pfw)		kW 0.012
STATOR WINDING LOSS(Pcu1)		kW 0.3460
ROTOR WINDING LOSS(Pcu2)		kW 0.1157
STRAY LOAD LOSS (Ps)		kW 0.0142
FULL LOAD CURRENT		AMP 5.64
LOCKED ROTOR CURRENT		AMP 29.39
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 5.2
LOCKED ROTOR INPUT @ 100% VOLT		kW 13.114
FULL LOAD TORQUE		N.m. 29.52
LOCKED ROTOR TORQUE		N.m. 63.51
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 2.15
PULL OUT TORQUE		N.m. 83.94
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 2.84
PULL UP TORQUE		N.m. 45.22
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 1.53
EFFICIENCY @ FULL LOAD		% 77.42
POWER FACTOR @ FULL LOAD		0.729
FULL LOAD SLIP		4.93%
FULL LOAD SPEED		r/min 713
STATOR WINDING TEMPERATURE RISE	30 SECS	K 54.0
DE BEARING TEMPERATURE BY PT100		Deg. C 63.0
NDE BEARING TEMPERATURE BY PT100		Deg. C 60.0
TEMPERATURE ON LEADS BY PT100		Deg. C
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C
AMBIENT TEMPERATURE BY PT100		Deg. C
SOUND PRESSURE LEVEL		dB (A) 56.0
VIBRATION		mm/s 0.6
MOMENT OF INERTIA		kgm <sup>2</sup> 0.0314
WEIGHT		kg 45

The data above is calculated as per IEC 34-2 , all data at nominal Volts

<b>VALIADIS S.A.</b>				<b>SCALE</b>	<b>N/A</b>		
				<b>DATE</b>		<b>REV</b>	
2.2 kW 400 VOLTS 50 Hz				<b>DRAWN</b>		<b>DOCUMENT NO.</b>	
				<b>APPRVD</b>			
				<b>CHECKED</b>			

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77.5	<b>EFFICIENCY</b>	5.61	<b>AMPS</b>	55	<b>IP</b>	IC01
8	<b>POLE</b>	S1	<b>DUTY</b>	0.73	<b>PF</b>	N/A
VALIADIS	<b>MANUFACTURER</b>	<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

<b>TEST DATA</b>	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD	LOCKED ROTOR
EFFICIENCY	0	63.0	73.7	77.0	77.4	75.8	
PF	0.122	0.344	0.512	0.639	0.729	0.777	0.644
RPM	750	742	734	724	713	700	0
SLIP	0.00%	1.07%	2.13%	3.47%	4.93%	6.67%	100.00%
AMPS	3.93	3.71	4.25	4.85	5.64	6.77	29.39
VOLTS	400	400	400	400	400	400	400
TORQUE NM	0	7.17	14.45	21.81	29.52	37.69	63.51
KW INPUT	0.3318	0.8845	1.5065	2.1473	2.8471	3.646	13.114
KW OUTPUT	0	0.557	1.111	1.654	2.204	2.763	

<b>LOSSES (kW)</b>	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD
STATOR LOSS Pcu1	0.150	0.196	0.256	0.346	0.499
STATOR LOSS %	16.93%	13.04%	11.91%	12.15%	3.80%
ROTOR LOSS Pcu2	0.006	0.025	0.060	0.116	0.199
ROTOR LOSS %	0.70%	1.64%	2.80%	4.07%	1.52%
CORE LOSS Pfe	0.155	0.155	0.155	0.155	0.155
CORE LOSS %	17.52%	10.29%	7.22%	5.44%	1.18%
WINDGE/FRICTION Pfw	0.012	0.012	0.012	0.012	0.012
WINDGE/FRICTION %	1.36%	0.80%	0.56%	0.42%	0.09%
STRAY LOAD LOSS Ps	0.004	0.008	0.011	0.014	0.018
STRAY LOAD LOSS %	0.50%	0.50%	0.50%	0.50%	0.50%

Losses are measured/calculated as per IEC 34-2-The Summation of Losses Method  
 All data is measured at Nominal Volts

### TEMPERATURES

STATOR RESISTANCE COLD	5.96467 OHMS @	20.0	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	7.2512 OHMS @	75	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	7.227 OHMS	after test of temp rise		BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	54.0 DEG.C.	at full load steady state at		30 SECS
WINDING TEMPERATURE RISE	DEG.C.	at full load steady state at		0 SECS
PT100 TEMPERATURE OF DE WINDING	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF NDE WINDING	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF DE BEARING	63.0 DEG.C.	at full load steady state at ambient		20.0 DEG.C.
PT100 TEMPERATURE OF NDE BEARING	60.0 DEG.C.	at full load steady state at ambient		20.0 DEG.C.
PT100 TEMPERATURE OF IN TERMINAL BOX	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF ON STATOR LEAD	DEG.C.	at full load steady state at ambient		DEG.C.

### OTHER

NOISE LEVEL (Lp)	56.0	dB(A) 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	0.6	mm/sec on no load	D.E. BEARING		
WEIGHT	45	kg	N.D.E. BEARING		
H-POT TEST VOLTS	1800	VOLTS			

<b>VALIADIS S.A.</b>			<b>SCALE</b>	N/A	
			<b>DATE</b>		<b>REV</b>
2.2 kW 400 VOLTS 50 Hz			<b>DRAWN</b>		<b>DOCUMENT NO.</b>
			<b>APPRVD</b>		
			<b>CHECKED</b>		

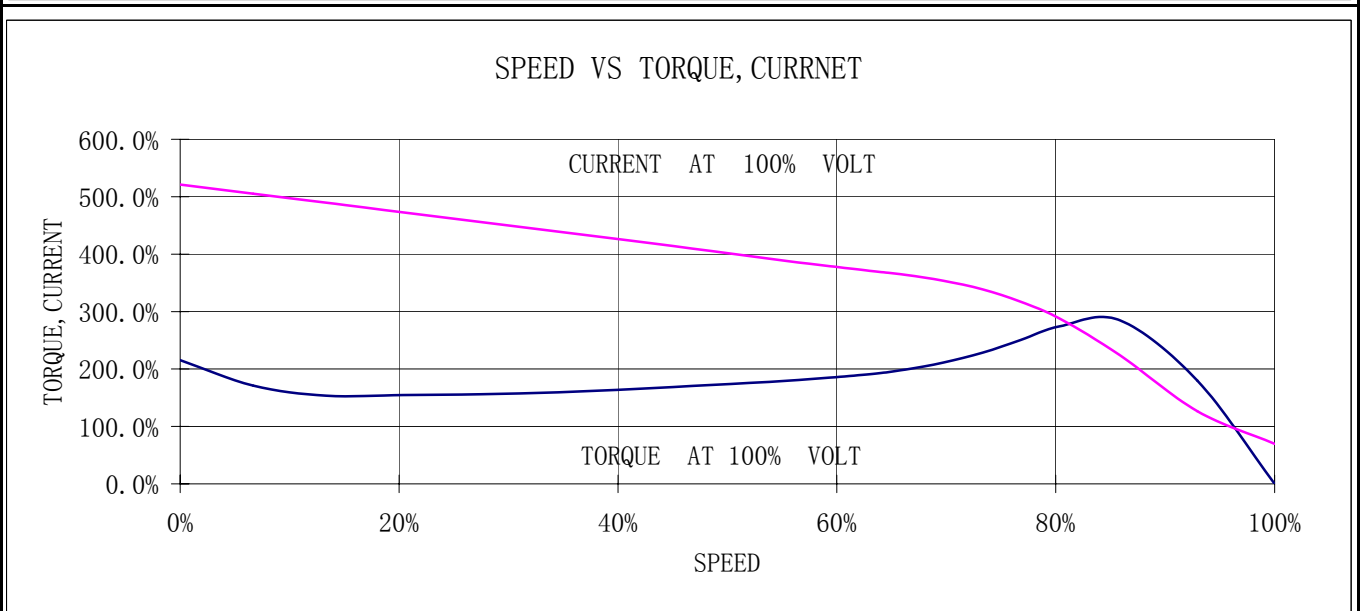
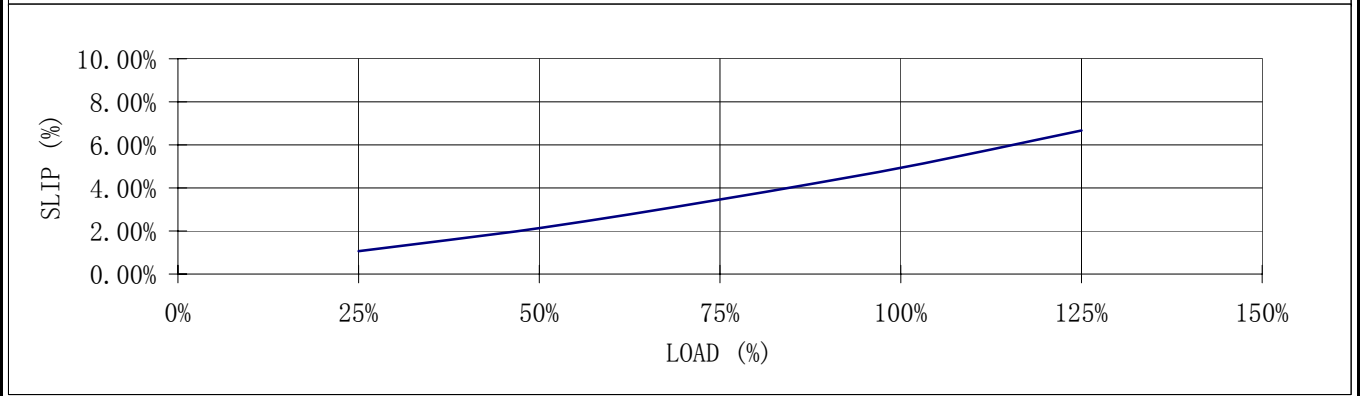
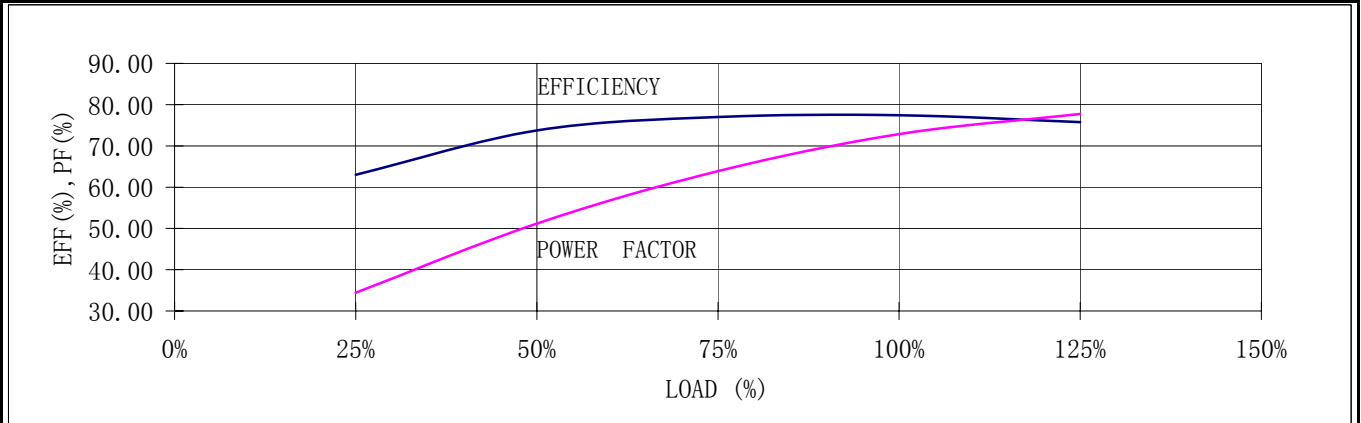
RESULT SUMMARY

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VALIDIS	<b>MANUFACTURER</b>	<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

### LOAD TEST



	<b>VALIDIS S.A.</b>	<b>SCALE</b>	N/A	
		<b>DATE</b>		<b>REV</b>
	<b>AK132S-8</b>	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	<b>2.2 kW</b>	<b>APPRVD</b>		
<b>400 VOLTS 50 Hz</b>	<b>CHECKED</b>			

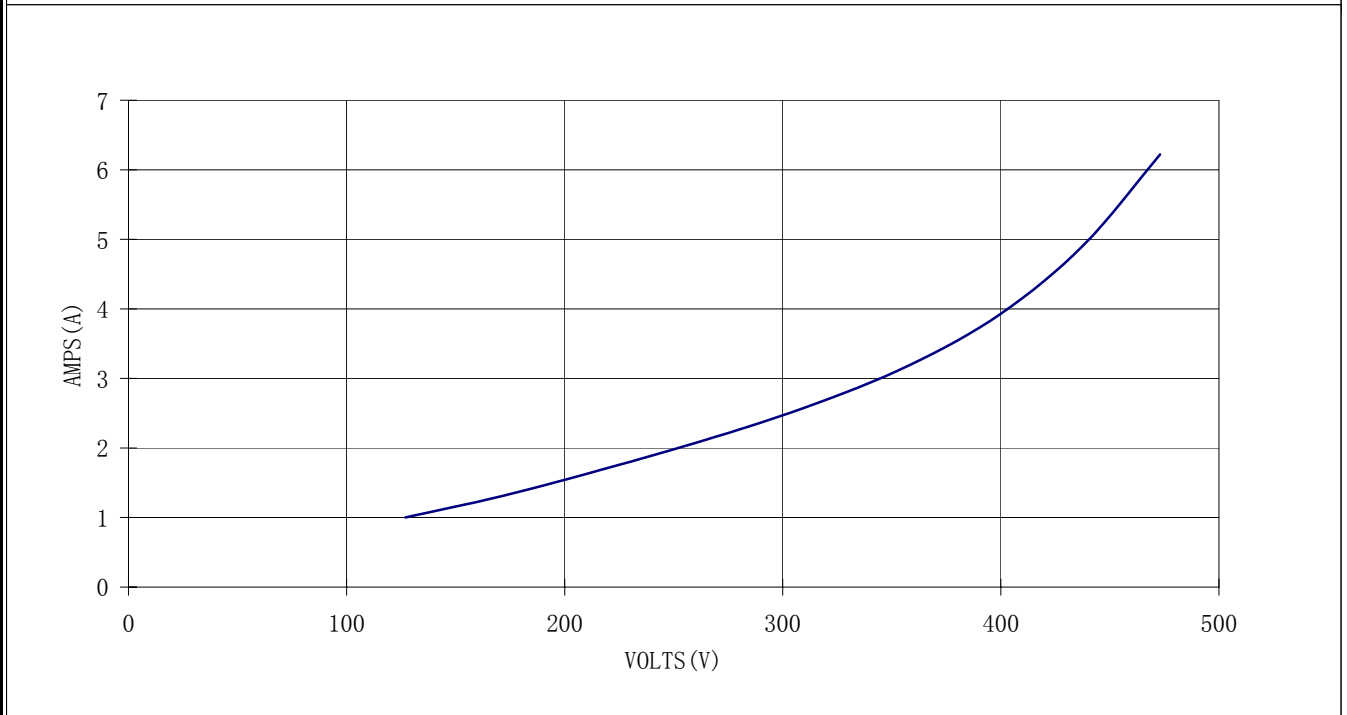
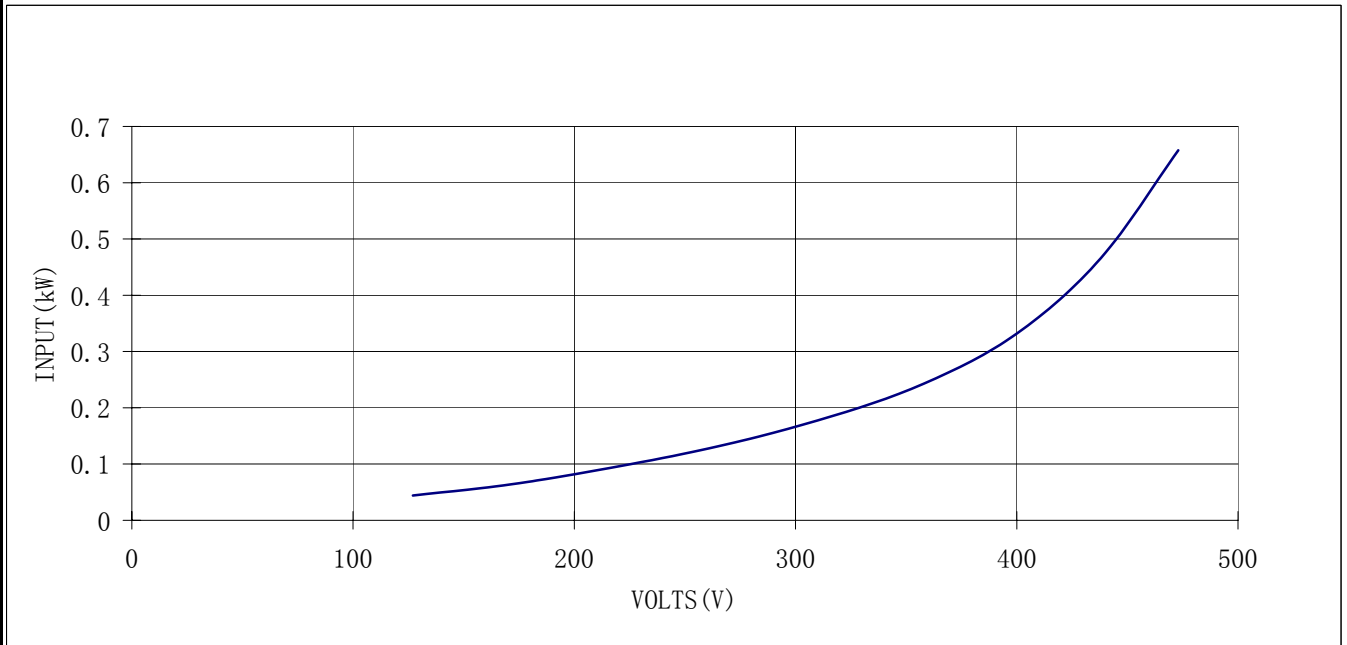
CURVE

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VALIADIS	<b>MANUFACTURER</b>	<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

**NO LOAD TEST**



	<b>VALIADIS S.A.</b>	<b>SCALE</b>	N/A	
		<b>DATE</b>		<b>REV</b>
	<b>AK132S-8</b>	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	<b>2.2</b>	<b>APPRVD</b>		
<b>400</b>	<b>CHECKED</b>			
	<b>2.2</b>	<b>400</b>	<b>50</b>	<b>Hz</b>
	<b>400</b>	<b>VOLTS</b>	<b>50</b>	<b>Hz</b>

CURVE