

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA	IEC	TYPE	1.5	KW	700	RPM
AK112M-8 FRAME	3	PHASE	400	VOLTS	50	HZ/CYCLES
74.5 EFFICIENCY	4.27	AMPS	55	IP	IC01	IC
8 POLE	S1	DUTY	0.68	PF	N/A	EFF2
VALIADIS MANUFACTURER		SERIAL NO.	F	INS. CLASS	Y	CONNECTION

MAJOR CONTENTS	UNIT	TESE VALUE
STATOR RESISTANCE OF PHASE TO PHASE	75 DEG.C	OHM 9.7587
NO LOAD CURRENT		AMP 3.32
NO LOAD INPUT		kW 0.2778
CORE LOSS (Pfe)		kW 0.108
WINDAGE FRICTION LOSS (Pfw)		kW 0.011
STATOR WINDING LOSS(Pcu1)		kW 0.2669
ROTOR WINDING LOSS(Pcu2)		kW 0.1110
STRAY LOAD LOSS (Ps)		kW 0.0100
FULL LOAD CURRENT		AMP 4.27
LOCKED ROTOR CURRENT		AMP 18.02
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 4.2
LOCKED ROTOR INPUT @ 100% VOLT		kW 7.51
FULL LOAD TORQUE		N.m. 20.50
LOCKED ROTOR TORQUE		N.m. 44.47
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 2.17
PULL OUT TORQUE		N.m. 55.89
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 2.73
PULL UP TORQUE		N.m. 31.05
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 1.51
EFFICIENCY @ FULL LOAD		% 74.75
POWER FACTOR @ FULL LOAD		0.679
FULL LOAD SLIP		6.80%
FULL LOAD SPEED		r/min 699
STATOR WINDING TEMPERATURE RISE	30 SECS	K 69.2
DE BEARING TEMPERATURE BY PT100		Deg. C 54.0
NDE BEARING TEMPERATURE BY PT100		Deg. C 54.0
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) 48.1
VIBRATION		mm/s 0.6
MOMENT OF INERTIA		kgm <sup>2</sup> 0.0149
WEIGHT		kg 28

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

<b>VALIADIS S.A.</b>	SCALE	N/A		
	DATE		REV	
AK112M-8	DRAWN		DOCUMENT NO.	
1.5 kW	APPRVD			
400 VOLTS 50 Hz	CHECKED			

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74.5	<b>EFFICIENCY</b>	4.27	<b>AMPS</b>	55	<b>IP</b>	IC01
8	<b>POLE</b>	S1	<b>DUTY</b>	0.68	<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	56.1	69.4	73.9	74.7	72.0	
PF	0.121	0.287	0.446	0.576	0.679	0.740	0.602
RPM	750	739	725	714	699	674	0
SLIP	0.00%	1.47%	3.33%	4.80%	6.80%	10.13%	100.00%
AMPS	3.32	3.32	3.56	3.81	4.27	5.16	18.02
VOLTS	400	400	400	400	400	400	400
TORQUE NM	0	4.78	10.04	15.03	20.50	27.00	44.47
KW INPUT	0.2778	0.6592	1.0993	1.5207	2.0078	2.645	7.51
KW OUTPUT	0	0.370	0.762	1.124	1.501	1.905	

<b>LOSSES (kW)</b>	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD
STATOR LOSS Pcu1	0.161	0.186	0.212	0.267	0.390
STATOR LOSS %	24.48%	16.88%	13.97%	13.29%	5.19%
ROTOR LOSS Pcu2	0.006	0.027	0.058	0.111	0.218
ROTOR LOSS %	0.87%	2.44%	3.79%	5.53%	2.90%
CORE LOSS P <sub>fe</sub>	0.108	0.108	0.108	0.108	0.108
CORE LOSS %	16.38%	9.82%	7.10%	5.38%	1.44%
WINDGE/FRICTION P <sub>fw</sub>	0.011	0.011	0.011	0.011	0.011
WINDGE/FRICTION %	1.67%	1.00%	0.72%	0.55%	0.15%
STRAY LOAD LOSS P <sub>s</sub>	0.003	0.005	0.008	0.010	0.013
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	8.106 OHMS @	22.5	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	9.7587 OHMS @	75	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	10.3 OHMS	after test of temp rise		BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	69.2 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	54.0 DEG.C.	at full load steady state at ambient		23.0 DEG.C.
PT100 TEMPERATURE OF NDE BEARING	54.0 DEG.C.	at full load steady state at ambient		23.0 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)	48.1	dB(A) 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	0.6	mm/sec on no load	D.E. BEARING		
WEIGHT	28	kg	N.D.E. BEARING		
H-POT TEST VOLTS	1800	VOLTS			

<b>VALIADIS S.A.</b>		<b>SCALE</b>	<b>N/A</b>	
		<b>DATE</b>		<b>REV</b>
<b>AK112M - 8</b> <b>1.5 kW</b> <b>400 VOLTS 50 Hz</b>		<b>DRAWN</b>		<b>DOCUMENT NO.</b>
		<b>APPRVD</b>		
		<b>CHECKED</b>		

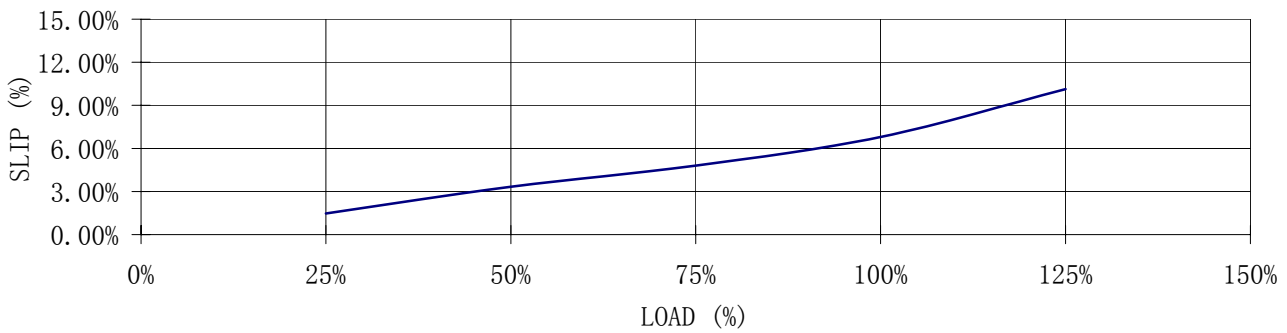
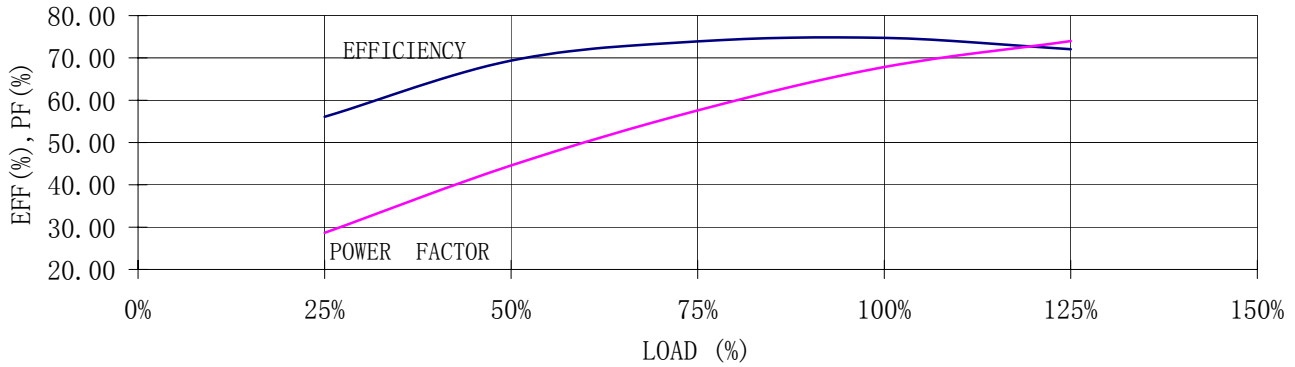
RESULT SUMMARY

# VALIADIS S.A.

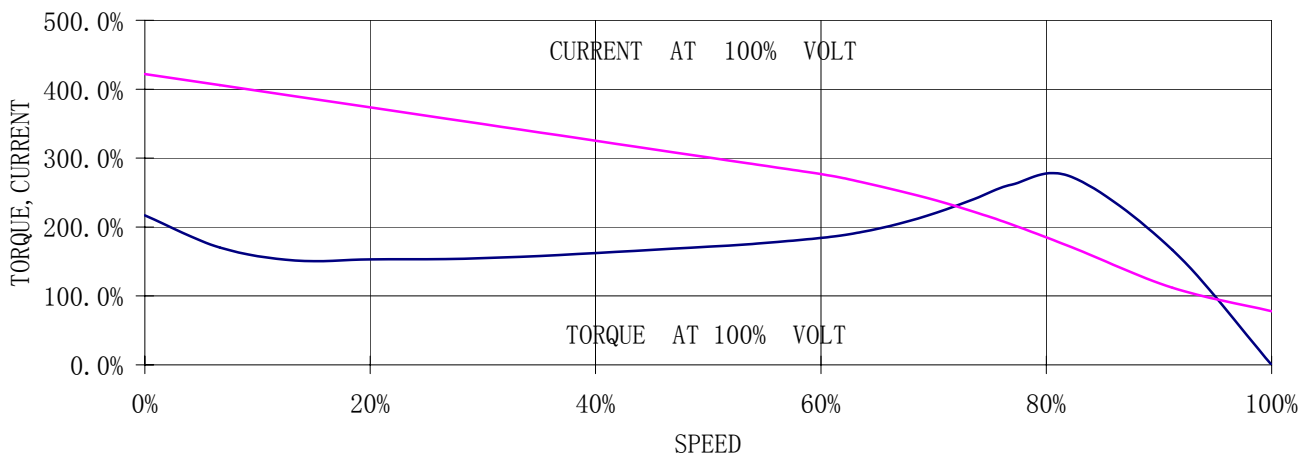
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VALIADIS	<b>MANUFACTURER</b>	<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

### LOAD TEST



### SPEED VS TORQUE, CURRENT



<b>VALIADIS S.A.</b>	<b>SCALE</b>	N/A	
	<b>DATE</b>		<b>REV</b>
	<b>AK112M - 8</b>	<b>DRAWN</b>	<b>DOCUMENT NO.</b>
	<b>1.5 kW</b>	<b>APPRVD</b>	
<b>400 VOLTS 50 Hz</b>	<b>CHECKED</b>		

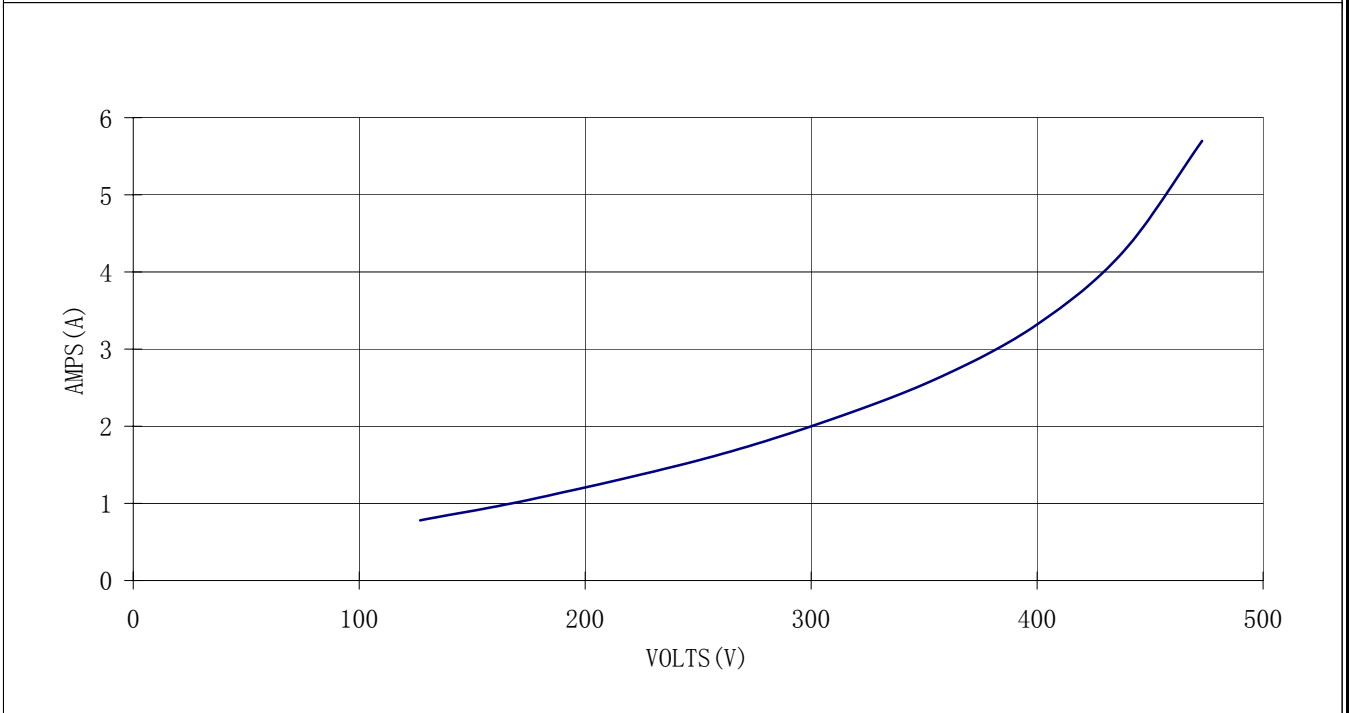
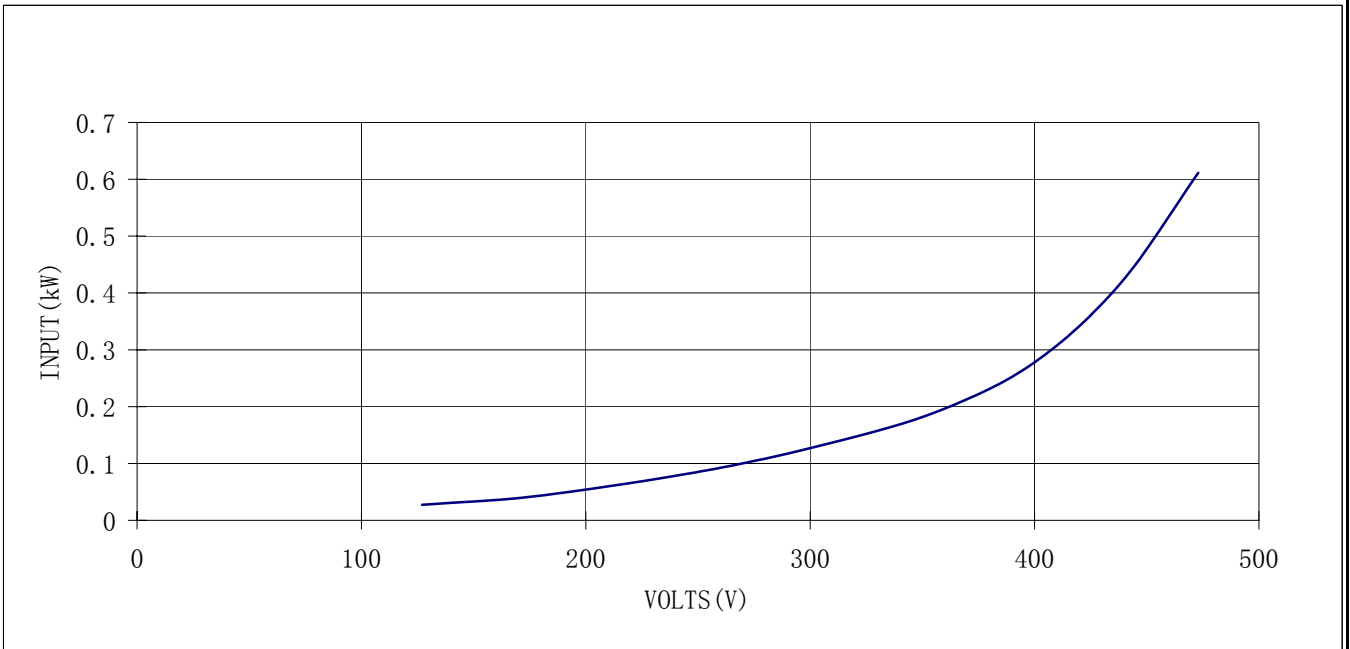
CURVE

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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>
	AK112M - 8			<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	1.5	kW		<b>APPRVD</b>		
400	VOLTS	50	<b>CHECKED</b>			

CURVE