

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

<b>NAMEPLATE DATA</b>	IEC	<b>TYPE</b>	1.1	<b>KW</b>	920	<b>RPM</b>	
AK90L - 6 <b>FRAME</b>	3	<b>PHASE</b>	400	<b>VOLTS</b>	50	<b>HZ/CYCLES</b>	
74.0 <b>EFFICIENCY</b>	3.02	<b>AMPS</b>	55	<b>IP</b>	IC01	<b>IC</b>	
6 <b>POLE</b>	S1	<b>DUTY</b>	0.71	<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>TESE VALUE</b>
STATOR RESISTANCE OF PHASE TO PHASE	75	DEG.C		<b>OHM</b>	14.3420
NO LOAD CURRENT				<b>AMP</b>	2.14
NO LOAD INPUT				<b>kW</b>	0.1849
CORE LOSS (Pfe)				<b>kW</b>	0.083
WINDAGE FRICTION LOSS (Pfw)				<b>kW</b>	0.006
STATOR WINDING LOSS(Pcu1)				<b>kW</b>	0.1962
ROTOR WINDING LOSS(Pcu2)				<b>kW</b>	0.0915
STRAY LOAD LOSS (Ps)				<b>kW</b>	0.0074
FULL LOAD CURRENT				<b>AMP</b>	3.02
LOCKED ROTOR CURRENT				<b>AMP</b>	13.6
LOCKED ROTOR CURRENT/FULL LOAD CURRENT				<b>P.U.</b>	4.5
LOCKED ROTOR INPUT @ 100% VOLT				<b>kW</b>	6.282
FULL LOAD TORQUE				<b>N.m.</b>	11.36
LOCKED ROTOR TORQUE				<b>N.m.</b>	25.01
LOCKED ROTOR TORQUE/FULL LOAD TORQUE				<b>P.U.</b>	2.20
PULL OUT TORQUE				<b>N.m.</b>	31.98
PULL OUT TORQUE/FULL LOAD TORQUE				<b>P.U.</b>	2.81
PULL UP TORQUE				<b>N.m.</b>	17.53
PULL UP TORQUE/FULL LOAD TORQUE				<b>P.U.</b>	1.54
EFFICIENCY @ FULL LOAD				<b>%</b>	74.11
POWER FACTOR @ FULL LOAD					0.709
FULL LOAD SLIP					7.60%
FULL LOAD SPEED				<b>r/min</b>	924
STATOR WINDING TEMPERATURE RISE	30	SECS		<b>K</b>	52.9
DE BEARING TEMPERATURE BY PT100				<b>Deg. C</b>	59.0
NDE BEARING TEMPERATURE BY PT100				<b>Deg. C</b>	59.0
TEMPERATURE ON LEADS BY PT100				<b>Deg. C</b>	
TEMPERATURE IN TERMINAL BOX BY PT100				<b>Deg. C</b>	
AMBIENT TEMPERATURE BY PT100				<b>Deg. C</b>	
SOUND PRESSURE LEVEL				<b>dB (A)</b>	41.9
VIBRATION				<b>mm/s</b>	0.5
MOMENT OF INERTIA				<b>kgm<sup>2</sup></b>	0.0035
WEIGHT				<b>kg</b>	14

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>	
AK90L - 6 1.1 kW 400 VOLTS 50 Hz				<b>DRAWN</b>		<b>DOCUMENT NO.</b>	
				<b>APPRVD</b>			
				<b>CHECKED</b>			

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74.0	EFFICIENCY	3.02	AMPS	55	IP	IC01
6	POLE	S1	DUTY	0.71	PF	N/A
VALIADIS	MANUFACTURER	SERIAL NO.	F	INS. CLASS	Y	CONNECTION

TEST DATA	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD	LOCKED ROTOR
EFFICIENCY	0	58.1	70.6	74.1	74.1	71.7	
PF	0.125	0.313	0.485	0.617	0.709	0.769	0.667
RPM	1000	984	965	946	924	895	0
SLIP	0.00%	1.60%	3.50%	5.40%	7.60%	10.50%	100.00%
AMPS	2.14	2.17	2.33	2.6	3.02	3.62	13.6
VOLTS	400	400	400	400	400	400	400
TORQUE NM	0	2.65	5.47	8.31	11.36	14.76	25.01
KW INPUT	0.1849	0.4707	0.7825	1.1111	1.4837	1.9277	6.282
KW OUTPUT	0	0.273	0.552	0.823	1.100	1.383	

LOSSES (kW)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD
STATOR LOSS Pcu1	0.101	0.117	0.145	0.196	0.282
STATOR LOSS %	21.52%	14.93%	13.09%	13.22%	4.49%
ROTOR LOSS Pcu2	0.005	0.020	0.048	0.092	0.164
ROTOR LOSS %	0.97%	2.61%	4.29%	6.17%	2.61%
CORE LOSS Pfe	0.083	0.083	0.083	0.083	0.083
CORE LOSS %	17.63%	10.61%	7.47%	5.59%	1.32%
WINDGE/FRICTION Pfw	0.006	0.006	0.006	0.006	0.006
WINDGE/FRICTION %	1.27%	0.77%	0.54%	0.40%	0.10%
STRAY LOAD LOSS Ps	0.002	0.004	0.006	0.007	0.010
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	11.65867 OHMS @	17.0	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	14.3420 OHMS @	75	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	14.06 OHMS	after test of temp rise		BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	52.9 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	59.0 DEG.C.	at full load steady state at ambient		16.0 DEG.C.
PT100 TEMPERATURE OF NDE BEARING	59.0 DEG.C.	at full load steady state at ambient		16.0 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)	41.9	dB(A) 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	0.5	mm/sec on no load	D.E. BEARING		
WEIGHT	14	kg	N.D.E. BEARING		
H-POT TEST VOLTS	1800	VOLTS			

<b>VALIADIS S.A.</b>				SCALE	N/A		
				DATE		REV	
AK90L - 6				DRAWN		DOCUMENT NO.	
1.1	kW		APPRVD				
400	VOLTS	50	Hz	CHECKED			

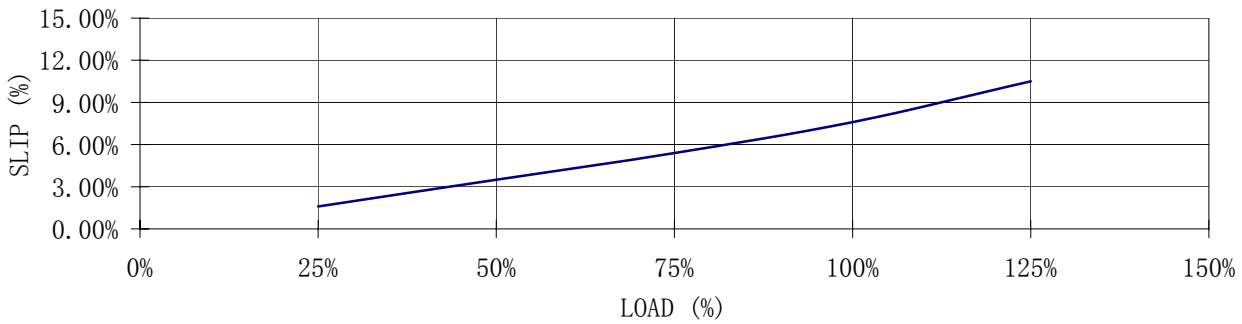
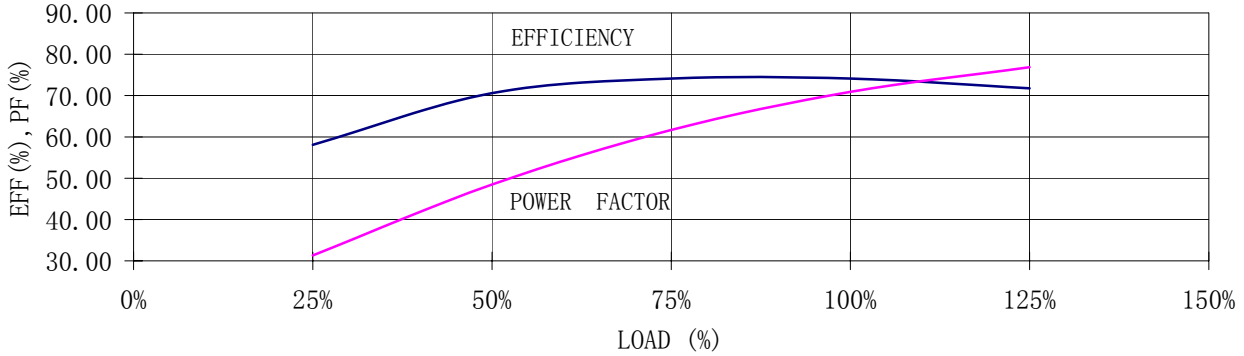
RESULT SUMMARY

**VALIADIS S.A.**

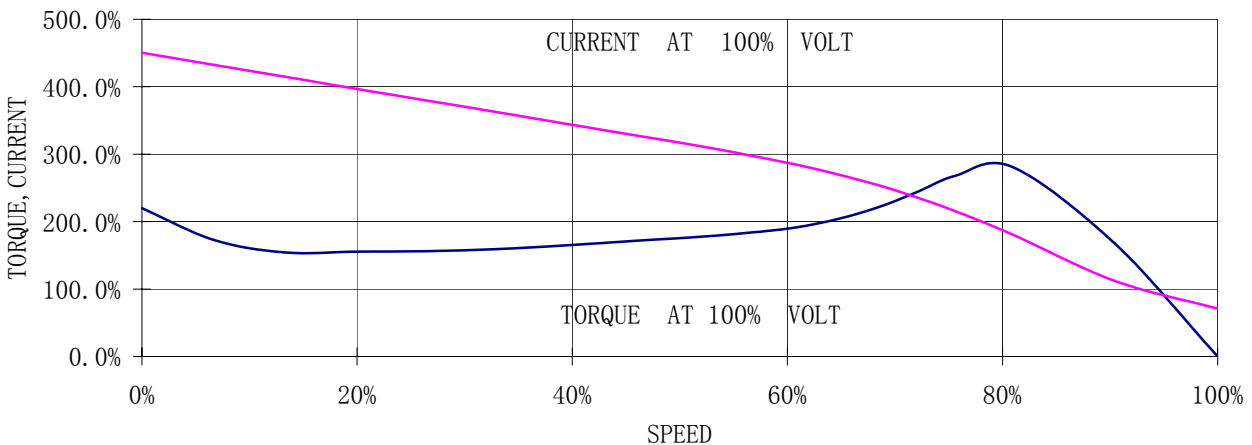
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VALIADIS	<b>MANUFACTURER</b>	<b>SERIAL NO.</b>	F	<b>INS. CLASS</b>	Y	<b>CONNECTION</b>

**LOAD TEST**



**SPEED VS TORQUE, CURRENT**



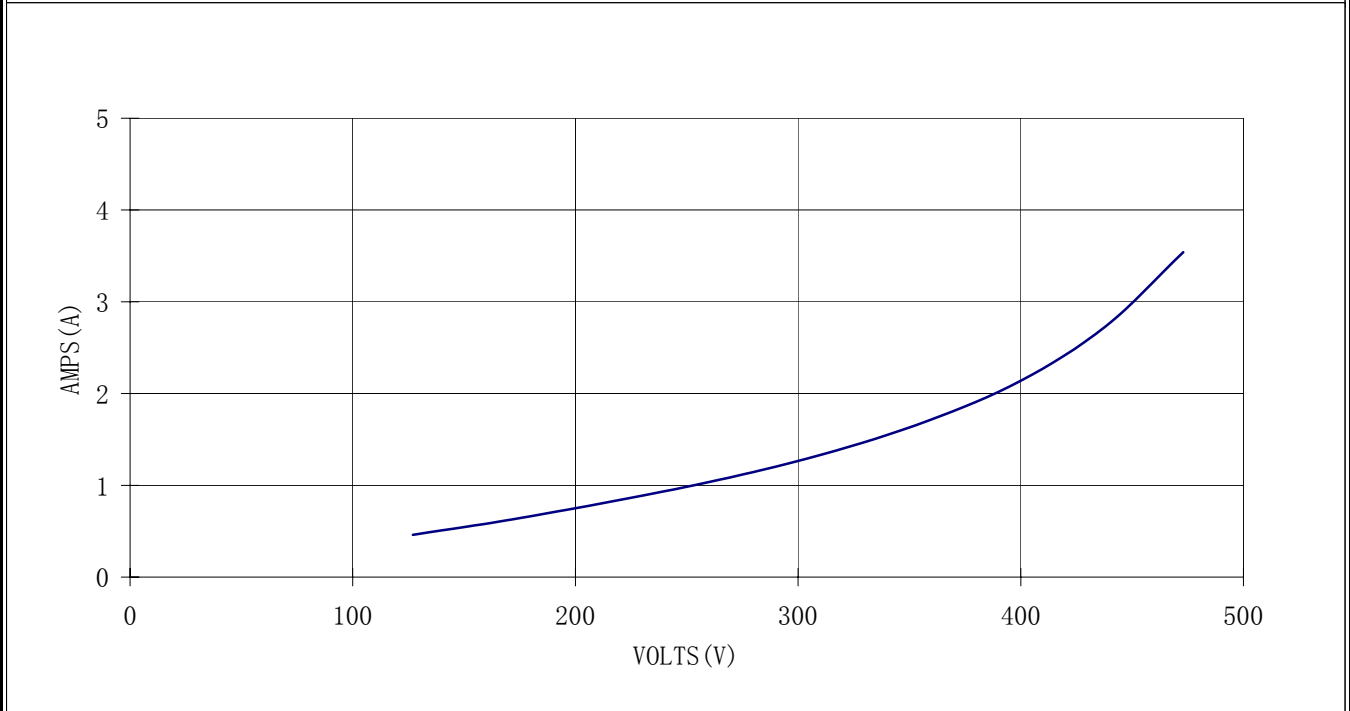
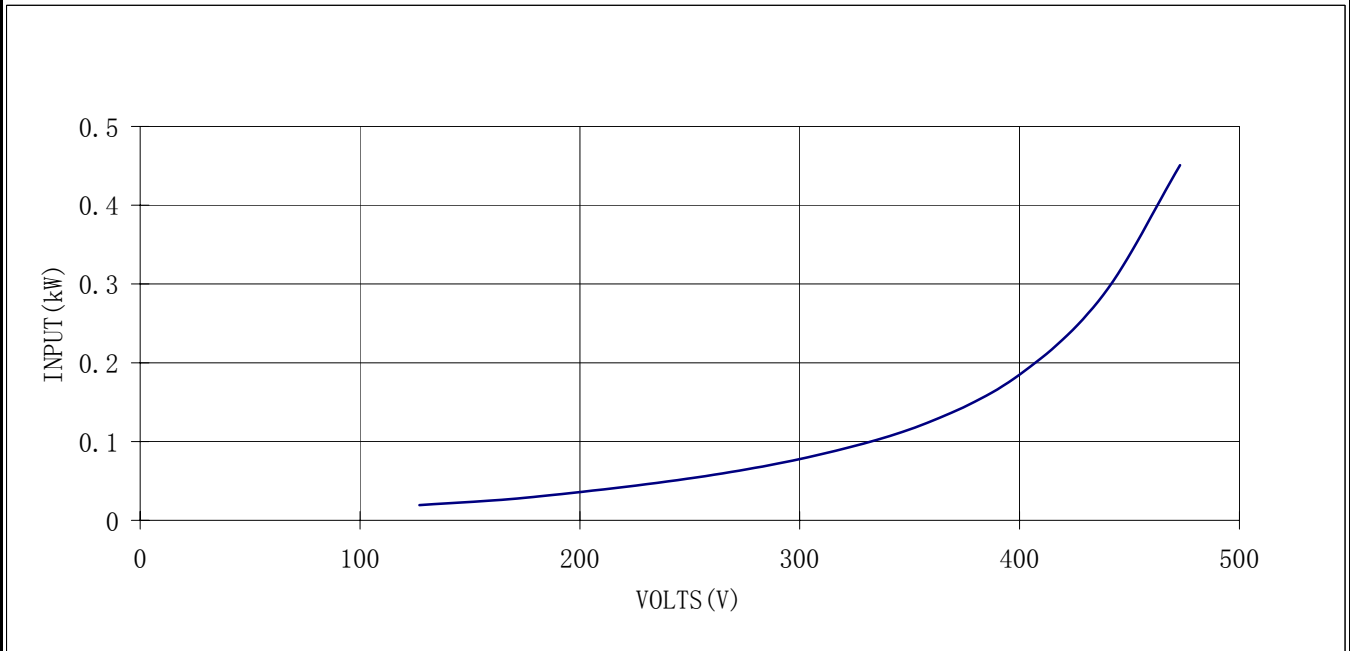
<b>VALIADIS S.A.</b>  AK90L - 6 1.1 kW 400 VOLTS 50 Hz	<b>SCALE</b>	N/A	
	<b>DATE</b>		<b>REV</b>
	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	<b>APPRVD</b>		
<b>CHECKED</b>			

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### NO LOAD TEST



	<b>VALIADIS S.A.</b>	<b>SCALE</b>	N/A	
		<b>DATE</b>		<b>REV</b>
	AK90L - 6	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	1.1 kW	<b>APPRVD</b>		
400 VOLTS 50 Hz	<b>CHECKED</b>			

CURVE