

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA		IEC TYPE		90 KW		1483 RPM		
K280M-4 FRAME		3 PHASE		400 VOLTS		50 HZ / CYCLES		
94.7 EFFICIENCY		152.3 AMPS		55 IP		IC411 IC		
4 POLE		S1 DUTY		0.901 PF		93.90 EFF2		
VALIADIS MANUFACTURER		SERIAL NO.		F INS.CLASS		DELTA CONNECTION		
<b>TEST DATA</b>	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125% LOAD	LOCKED ROTOR
EFFICIENCY	0	90.84	94.04	94.71	94.68	94.56	94.29	
PF	0.075	0.689	0.852	0.894	0.901	0.898	0.892	0.415
RPM	1500	1496	1492	1488	1483	1481	1478	0
SLIP	0.00%	0.27%	0.55%	0.82%	1.11%	1.24%	1.45%	100.00%
AMPS	37.57	51.89	81.08	115.12	152.30	168.24	193.08	1079.6
VOLTS	400	400	400	400	400	400	400	400
TORQUE NM	0	143.7	288.2	433.5	579.7	638.5	727.1	1441.7
KW INPUT	1.952	24.77	47.85	71.27	95.06	104.70	119.31	310.64
KW OUTPUT	0	22.50	45.00	67.50	90.00	99.00	112.50	
<b>LOSSES(kw)</b>	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125%LOAD		
STATOR LOSS Pcu1	0.191	0.467	0.942	1.648	2.01	2.65		
STATOR LOSS %	0.77%	0.98%	1.32%	1.73%	1.92%	2.22%		
ROTOR LOSS Pcu2	0.064	0.257	0.567	1.031	1.26	1.67		
ROTOR LOSS %	0.26%	0.54%	0.80%	1.08%	1.20%	1.40%		
CORE LOSS Pfe	0.934	0.934	0.934	0.934	0.934	0.934		
CORE LOSS %	3.77%	1.95%	1.31%	0.98%	0.89%	0.78%		
WINDAGE/FRICTION Pfw	0.939	0.939	0.939	0.939	0.939	0.939		
WINDAGE/FRICTION %	3.79%	1.96%	1.32%	0.99%	0.90%	0.79%		
STRAY LOAD LOSS Ps	0.124	0.239	0.356	0.475	0.523	0.597		
STRAY LOAD LOSS %	0.50%	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								
<b>TEMPERATURES</b>								
STATOR RESISTANCE COLD	0.0376 OHMS @		23 DEG.C.		BETWEEN STATOR LEADS			
STATOR RESISTANCE ADJUSTED	0.047 OHMS @		90 DEG.C.		BETWEEN STATOR LEADS			
STATOR RESISTANCE HOT	0.047 OHMS		after test of temp rise		BETWEEN STATOR LEADS			
WINDING TEMPERATURE RISE	60.3 DEG.C.		at full load steady state at		90	SECS		
WINDING TEMPERATURE RISE	68.2 DEG.C.		at full load steady state at		0	SECS		
PT100 TEMPERATURE OF DE WINDING	88.8 DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
PT100 TEMPERATURE OF NDE WINDING	N/A DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
PT100 TEMPERATURE DE BEARING	73.5 DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
PT100 TEMPERATURE NDE BEARING	N/A DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
PT100 TEMPERATURE IN TERMINAL BOX	50.5 DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
PT100 TEMPERATURE ON STATOR LEADS	56.8 DEG.C.		at full load steady state at ambient		24.9	DEG.C.		
<b>OTHER</b>								
NOISE LEVEL(Lp)	73.7	dB(A) @ 1meter		INSULATION RESISTANCE		500	MEG.OHMS	
VIBRATION LEVEL	1.5	mm/sec on no load		D.E. BEARING		6317 C3		
WEIGHT	628	kg		N.D.E.BEARING		6317 C3		
H-POT TEST VOLTS	1800	VOLTS						
<b>VALIADIS S.A.</b>				SCALE	N/A			
				DATE			REV	
				DRAWN			DOCUMENT NO.	
				APPRVD				
K280M-4 90 KW 400 VOLTS 50 Hz				CHECKED				

RESULT SUMMARY

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<b>94.7 EFFICIENCY</b>	<b>152.3 AMPS</b>	<b>55 IP</b>	<b>IC411 IC</b>
<b>4 POLE</b>	<b>S1 DUTY</b>	<b>0.901 PF</b>	<b>93.90 EFF2</b>
<b>VALIADIS MANUFACTURER</b>	<b>SERIAL NO.</b>	<b>F INS.CLASS</b>	<b>DELTA CONNECTION</b>

MAJOR CONTENTS	UNIT	TEST VALUE	
STATOR RESISTANCE OF PHASE TO PHASE	90 DEG.C	OHM	<b>0.04736</b>
NO LOAD CURRENT		AMP	37.57
NO LOAD INPUT		kW	1.952
CORE LOSS(Pfe)		kW	0.934
WINDAGE FRICTION LOSS(Pfw)		kW	0.939
STATOR WINDING LOSS(Pcu1)		kW	1.648
ROTOR WINDING LOSS(Pcu2)		kW	1.031
STRAY LOAD LOSS(Ps)		kW	0.475
FULL LOAD CURRENT		AMP	152.30
LOCKED ROTOR CURRENT		AMP	1079.63
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U.	7.1
LOCKED ROTOR INPUT @ FULL LOAD		kW	310.64
FULL LOAD TORQUE		N.m	579.71
LOCKED ROTOR TORQUE		N.m	1441.74
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U.	2.5
PULL OUT TORQUE		N.m	1697.4
PULL OUT TORQUE/FULL LOAD TORQUE		P.U.	2.9
PULL UP TORQUE		N.m	1187.80
PULL UP TORQUE/FULL LOAD TORQUE		P.U.	2.05
EFFICIENCY @ FULL LOAD		%	94.7
POWER FACTOR @ FULL LOAD			0.90
FULL LOAD SLIP		%	1.114
FULL LOAD SPEED		r/min	1483
STATOR WINDING TEMPERATURE RISE	90 SECS	K	60.3
D.E. BEARINGS TEMPERATURE BY PT100		Deg. C	73.5
TEMPERATURE ON LEADS BY PT100		Deg. C	56.8
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C	50.5
AMBIENT TEMPERATURE OF TESTING		Deg. C	24.9
SOUND PRESSURE LEVEL		dB(A)	74
VIBRATION		mm/s	1.5
MOMENT OF INERTIA		kgm2	<b>1.4600</b>
WEIGHT		kg	628

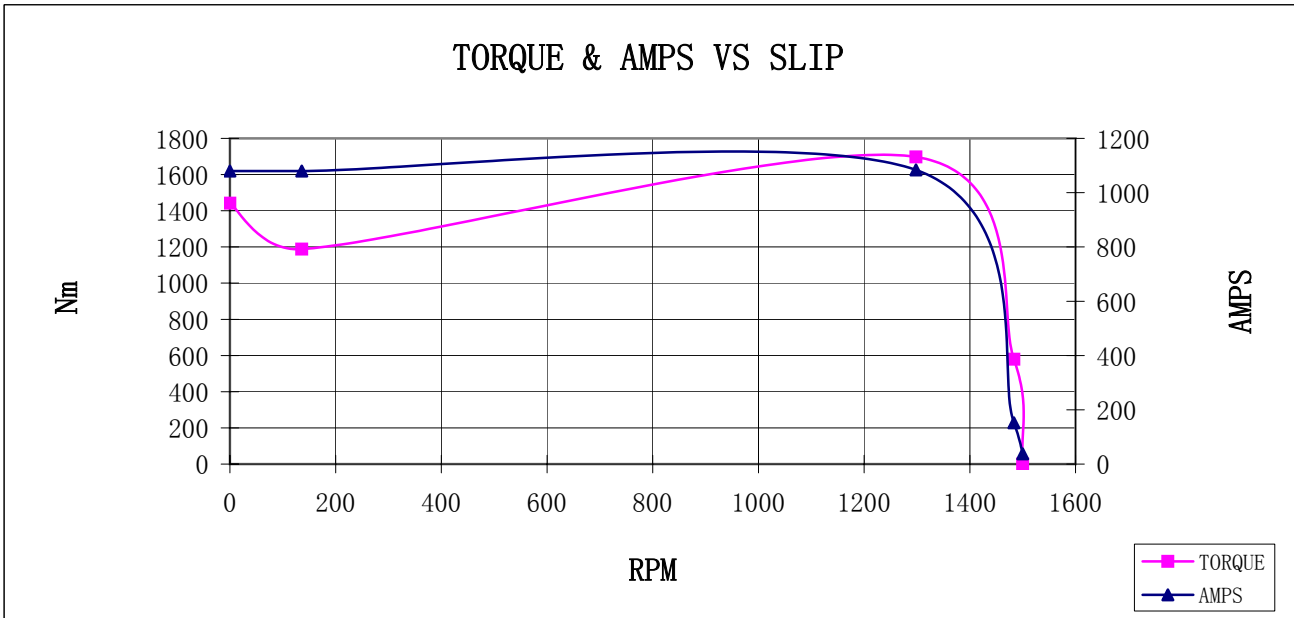
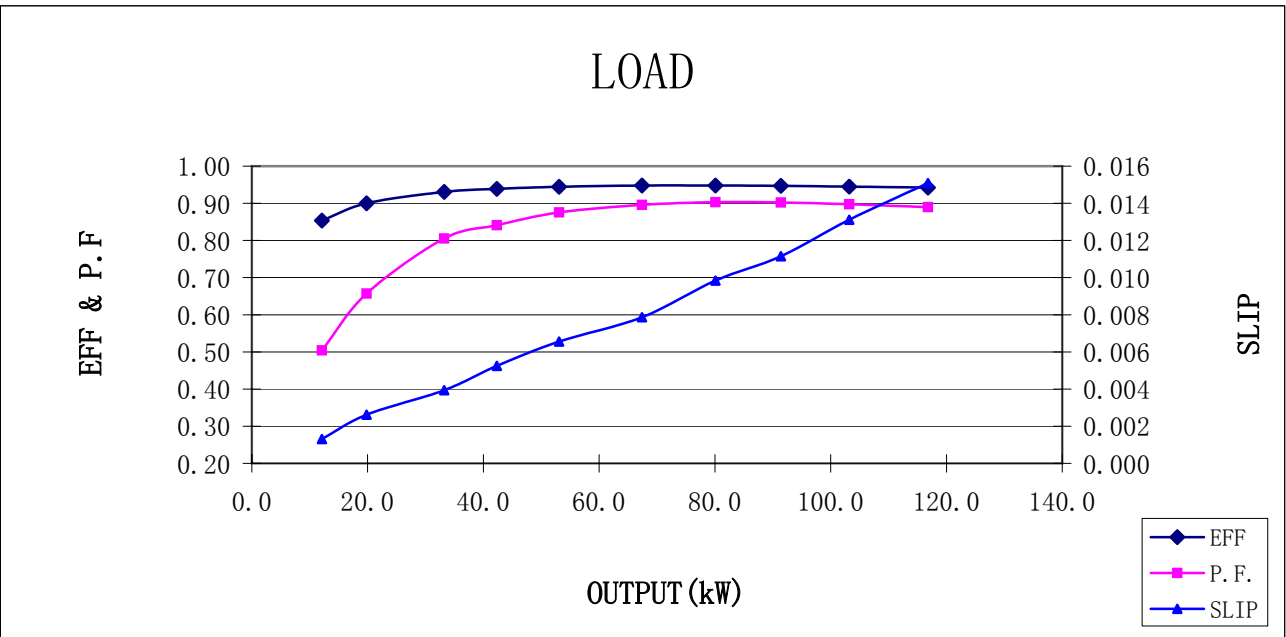
The data above is calculated as per IEC 34-2,all data at nominal Volts

<b>VALIADIS S.A.</b>  <b>K280M-4</b>  <b>90 kW</b>  <b>400 VOLTS 50 Hz</b>	<b>SCALE</b>	N/A	
	<b>DATE</b>		<b>REV</b>
	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
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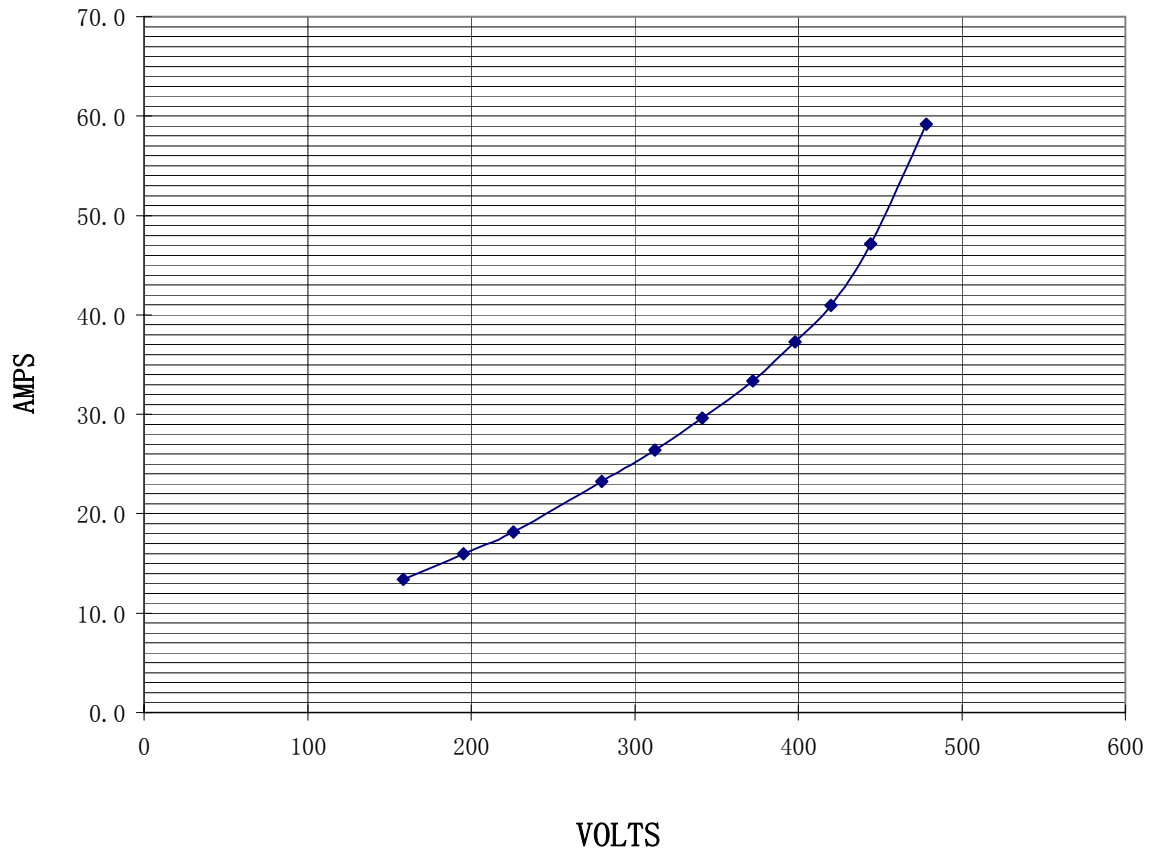
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MAGNETIZATION CURVE - NO LOAD



<b>VALIADIS S.A.</b> K280M-4 90 kW 400 VOLTS      50 Hz	<b>SCALE</b>	N/A	<b>REV</b>	
	<b>DATE</b>		<b>DOCUMENT NO.</b>	
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