

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA		IEC TYPE		37 KW		979 RPM	
K250M-6 FRAME		3 PHASE		400 VOLTS		50 HZ / CYCLES	
92.6 EFFICIENCY		64.1 AMPS		55 IP		IC411 IC	
6 POLE		S1 DUTY		0.900 PF		N/A EFF2	
VALIADIS MANUFACTURER		SERIAL NO.		F INS.CLASS		DELTA CONNECTION	

TEST DATA	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125% LOAD	LOCKED
								ROTOR
EFFICIENCY	0	89.08	92.35	92.98	92.61	92.31	91.76	
PF	0.078	0.655	0.828	0.887	0.900	0.897	0.887	0.411
RPM	1000	992	988	984	979	977	974	0
SLIP	0.00%	0.82%	1.22%	1.64%	2.10%	2.31%	2.59%	100.00%
AMPS	16.38	22.88	34.92	48.57	64.06	70.99	82.02	385.0
VOLTS	400	400	400	400	400	400	400	400
TORQUE NM	0	89.1	178.9	269.6	361.1	398.1	453.6	777.5
KW INPUT	0.882	10.38	20.03	29.84	39.95	44.09	50.40	109.65
KW OUTPUT	0	9.25	18.50	27.75	37.00	40.70	46.25	

LOSSES(kw)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125%LOAD
STATOR LOSS Pcu1	0.142	0.331	0.640	1.113	1.37	1.82
STATOR LOSS %	1.37%	1.65%	2.14%	2.79%	3.10%	3.62%
ROTOR LOSS Pcu2	0.079	0.233	0.469	0.802	0.97	1.24
ROTOR LOSS %	0.76%	1.16%	1.57%	2.01%	2.21%	2.46%
CORE LOSS Pfe	0.661	0.661	0.661	0.661	0.661	0.661
CORE LOSS %	6.36%	3.30%	2.21%	1.65%	1.50%	1.31%
WINDAGE/FRICTION Pfw	0.157	0.157	0.157	0.157	0.157	0.157
WINDAGE/FRICTION %	1.51%	0.78%	0.53%	0.39%	0.36%	0.31%
STRAY LOAD LOSS Ps	0.052	0.100	0.149	0.200	0.220	0.252
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

### TEMPERATURES

STATOR RESISTANCE COLD	0.1480333 OHMS @	31.1 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	0.181 OHMS @	90 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	0.178 OHMS	after test of temp rise	BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	53.4 DEG.C.	at full load steady state at	30 SECS
WINDING TEMPERATURE RISE	55.5 DEG.C.	at full load steady state at	0 SECS
PT100 TEMPERATURE OF DE WINDING	92.8 DEG.C.	at full load steady state at ambient	27.3 DEG.C.
PT100 TEMPERATURE OF NDE WINDING	N/A DEG.C.	at full load steady state at ambient	27.3 DEG.C.
PT100 TEMPERATURE DE BEARING	73.8 DEG.C.	at full load steady state at ambient	27.3 DEG.C.
PT100 TEMPERATURE NDE BEARING	N/A DEG.C.	at full load steady state at ambient	27.3 DEG.C.
PT100 TEMPERATURE IN TERMINAL BOX	50.6 DEG.C.	at full load steady state at ambient	27.3 DEG.C.
PT100 TEMPERATURE ON STATOR LEADS	58.6 DEG.C.	at full load steady state at ambient	27.3 DEG.C.

### OTHER

NOISE LEVEL(Lp)	72	dB(A) @ 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	1.6	mm/sec on no load	D.E. BEARING	6314 C3	
WEIGHT	408	kg	N.D.E.BEARING	6314 C3	
H-POT TEST VOLTS	1800	VOLTS			

<b>VALIADIS S.A.</b> <b>K250M-6</b> <b>37 kW</b> <b>400 VOLTS      50 Hz</b>	SCALE	N/A	
	DATE	2003.09.06	REV
	DRAWN		DOCUMENT NO.
	APPRVD		
CHECKED			

RESULT SUMMARY

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<b>NAMEPLATE DATA</b>	<b>IEC TYPE</b>	<b>37 KW</b>	<b>979 RPM</b>
K250M-6 <b>FRAME</b>	<b>3 PHASE</b>	<b>400 VOLTS</b>	<b>50 HZ / CYCLES</b>
<b>92.6 EFFICIENCY</b>	<b>64.1 AMPS</b>	<b>55 IP</b>	<b>IC411 IC</b>
<b>6 POLE</b>	<b>S1 DUTY</b>	<b>0.900 PF</b>	<b>N/A 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 0.181
NO LOAD CURRENT		AMP 16.38
NO LOAD INPUT		kW 0.882
CORE LOSS(Pfe)		kW 0.661
WINDAGE FRICTION LOSS(Pfw)		kW 0.157
STATOR WINDING LOSS(Pcu1)		kW 1.113
ROTOR WINDING LOSS(Pcu2)		kW 0.802
STRAY LOAD LOSS(Ps)		kW 0.200
FULL LOAD CURRENT		AMP 64.06
LOCKED ROTOR CURRENT		AMP 384.97
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 6.0
LOCKED ROTOR INPUT @ FULL LOAD		kW 109.65
FULL LOAD TORQUE		N.m 361.09
LOCKED ROTOR TORQUE		N.m 777.49
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 2.15
PULL OUT TORQUE		N.m 866.6
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 2.40
PULL UP TORQUE		N.m 606.32
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 1.68
EFFICIENCY @ FULL LOAD		% 92.61
POWER FACTOR @ FULL LOAD		0.900
FULL LOAD SLIP		% 2.100
FULL LOAD SPEED		r/min 979
STATOR WINDING TEMPERATURE RISE	30 SECS	K 53.4
D.E. BEARINGS TEMPERATURE BY PT100		Deg. C 73.8
TEMPERATURE ON LEADS BY PT100		Deg. C 58.6
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C 50.6
AMBIENT TEMPERATURE OF TESTING		Deg. C 27.3
SOUND PRESSURE LEVEL		dB(A) 72
VIBRATION		mm/s 1.6
MOMENT OF INERTIA		kgm2 0.8340
WEIGHT		kg 408

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

<b>VALIADIS S.A.</b>  <b>K250M-6</b> <b>37 kW</b>  <b>400 VOLTS      50 Hz</b>	<b>SCALE</b>	N/A	
	<b>DATE</b>	2003.09.06	<b>REV</b>
	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
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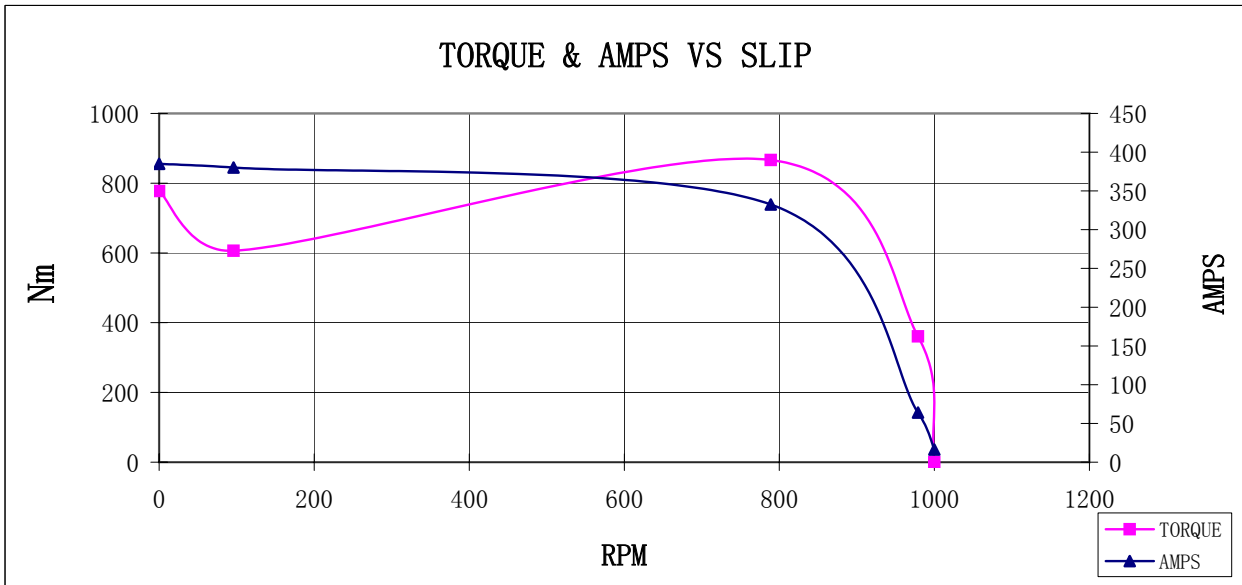
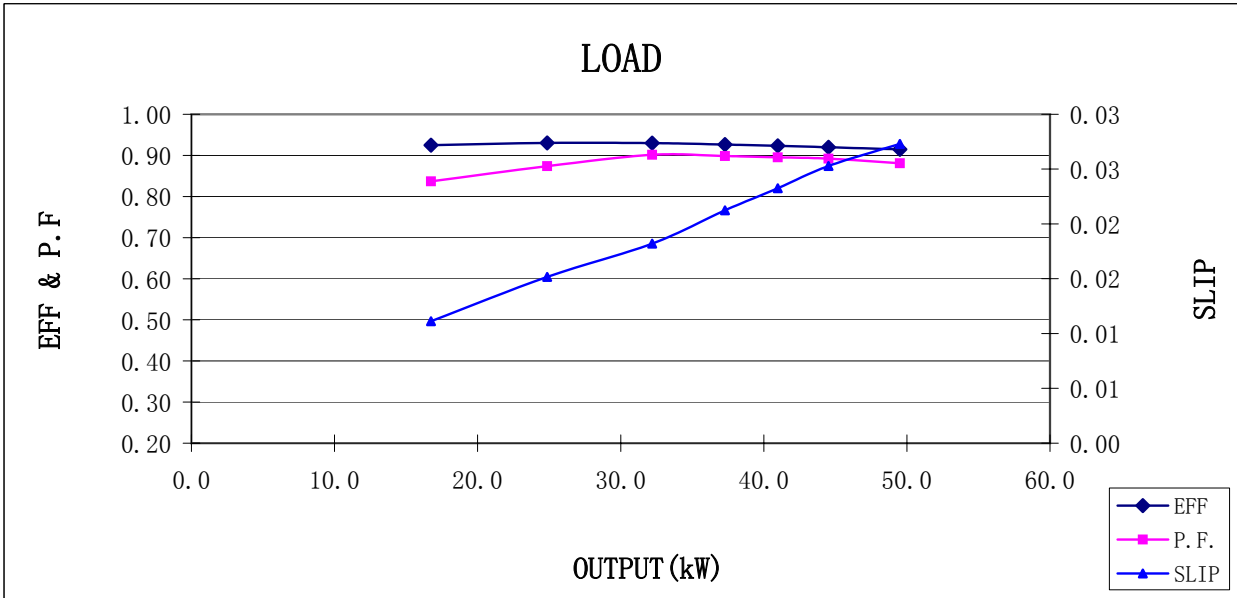
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979 RPM  
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<b>VALIADIS S.A.</b>	SCALE	N/A	
	DATE	2003.09.06	REV
K250M-6 37 kW 400 VOLTS 50 Hz	DRAWN		<b>DOCUMENT NO.</b>
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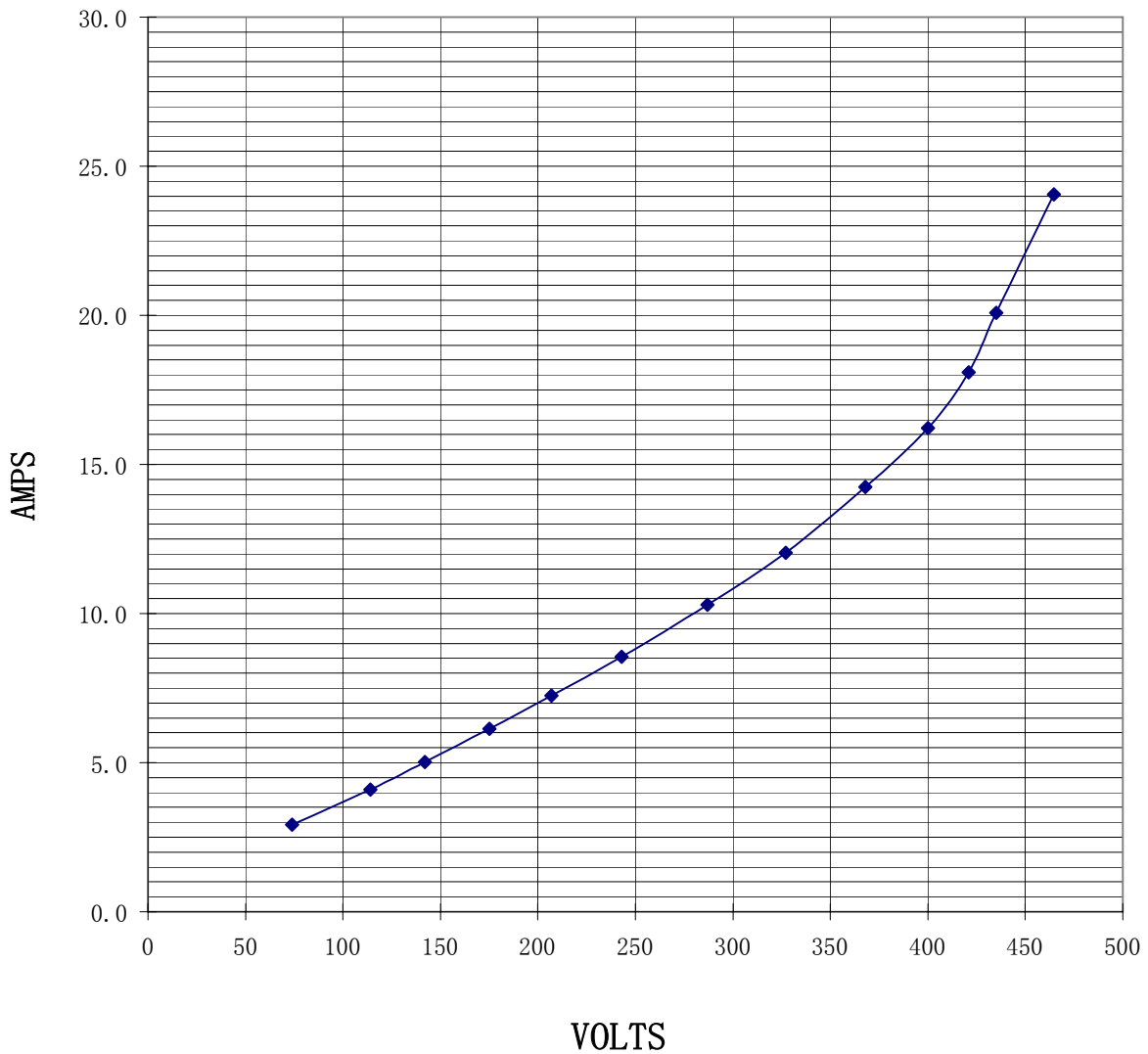
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400 VOLTS  
 55 IP  
 0.900 PF  
 F INS.CLASS

### 979 RPM

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 DELTA CONNECTION

### MAGNETIZATION CURVE - NO LOAD



<b>VALIADIS S.A.</b> K250M-6 37 kW 400 VOLTS      50 Hz	SCALE	N/A	
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