

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

<b>NAMEPLATE DATA</b>	<b>IEC TYPE</b>	<b>132 KW</b>	<b>2979 RPM</b>
K315M-2 <b>FRAME</b>	<b>3 PHASE</b>	<b>400 VOLTS</b>	<b>50 HZ / CYCLES</b>
<b>95.0 EFFICIENCY</b>	<b>218.7 AMPS</b>	<b>55 IP</b>	<b>IC411 IC</b>
<b>2 POLE</b>	<b>S1 DUTY</b>	<b>0.917 PF</b>	<b>N/A EFF2</b>
<b>VALIADIS MANUFACTURER</b>	<b>SERIAL NO.</b>	<b>F INS.CLASS</b>	<b>DELTA CONNECTION</b>

TEST DATA	LOCKED							
	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125% LOAD	ROTOR
EFFICIENCY	0	88.01	92.97	94.43	94.98	95.08	95.15	
PF	0.097	0.695	0.903	0.912	0.917	0.917	0.915	0.402
RPM	3000	2995	2990	2985	2979	2976	2972	0
SLIP	0.00%	0.15%	0.34%	0.50%	0.70%	0.78%	0.92%	100.00%
AMPS	61.05	77.83	113.53	165.95	218.66	240.39	273.63	1439.4
VOLTS	400	400	400	400	400	400	400	400
TORQUE NM	0	105.3	210.9	316.9	423.3	466.1	530.4	983.0
KW INPUT	4.122	37.50	70.99	104.85	138.98	152.72	173.41	400.87
KW OUTPUT	0	33.00	66.00	99.00	132.00	145.20	165.00	

LOSSES(kw)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125%LOAD
STATOR LOSS Pcu1	0.154	0.328	0.700	1.215	1.47	1.90
STATOR LOSS %	0.41%	0.46%	0.67%	0.87%	0.96%	1.10%
ROTOR LOSS Pcu2	0.054	0.232	0.512	0.944	1.17	1.56
ROTOR LOSS %	0.14%	0.33%	0.49%	0.68%	0.76%	0.90%
CORE LOSS Pfe	2.309	2.309	2.309	2.309	2.309	2.309
CORE LOSS %	6.16%	3.25%	2.20%	1.66%	1.51%	1.33%
WINDAGE/FRICTION Pfw	1.782	1.782	1.782	1.782	1.782	1.782
WINDAGE/FRICTION %	4.75%	2.51%	1.70%	1.28%	1.17%	1.03%
STRAY LOAD LOSS Ps	0.187	0.355	0.524	0.695	0.764	0.867
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	0.01303 OHMS @	15 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	0.017 OHMS @	90 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	0.017 OHMS	after test of temp rise	BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	66.6 DEG.C.	at full load steady state at	90 SECS
WINDING TEMPERATURE RISE	73.3 DEG.C.	at full load steady state at	0 SECS
PT100 TEMPERATURE OF DE WINDING	90.3 DEG.C.	at full load steady state at ambient	16.5 DEG.C.
PT100 TEMPERATURE OF NDE WINDING	NO DEG.C.	at full load steady state at ambient	16.5 DEG.C.
PT100 TEMPERATURE DE BEARING	71.6 DEG.C.	at full load steady state at ambient	16.5 DEG.C.
PT100 TEMPERATURE NDE BEARING	N/A DEG.C.	at full load steady state at ambient	16.5 DEG.C.
PT100 TEMPERATURE IN TERMINAL BOX	46.9 DEG.C.	at full load steady state at ambient	16.5 DEG.C.
PT100 TEMPERATURE ON STATOR LEADS	51.6 DEG.C.	at full load steady state at ambient	16.5 DEG.C.

### OTHER

NOISE LEVEL(Lp)	76	dB(A) @ 1meter	INSULATION RESISTANCE	400	MEG.OHMS
VIBRATION LEVEL	1.6	mm/sec on no load	D.E. BEARING		6317
WEIGHT	1080	kg	N.D.E.BEARING		6317
H-POT TEST VOLTS	1800	VOLTS			

<b>VALIADIS S.A.</b> <b>K315M-2</b> <b>132 kW</b> <b>400 VOLTS 50 Hz</b>	SCALE		
	DATE		REV
	DRAWN		DOCUMENT NO.
	APPRVD		
	CHECKED		

RESULT SUMMARY

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<b>95.0 EFFICIENCY</b>	<b>218.7 AMPS</b>	<b>55 IP</b>	<b>IC411 IC</b>
<b>2 POLE</b>	<b>S1 DUTY</b>	<b>0.917 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 0.017
NO LOAD CURRENT		AMP 61.05
NO LOAD INPUT		kW 4.122
CORE LOSS(Pfe)		kW 2.309
WINDAGE FRICTION LOSS(Pfw)		kW 1.782
STATOR WINDING LOSS(Pcu1)		kW 1.215
ROTOR WINDING LOSS(Pcu2)		kW 0.944
STRAY LOAD LOSS(Ps)		kW 0.695
FULL LOAD CURRENT		AMP 218.66
LOCKED ROTOR CURRENT		AMP 1439.45
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 6.6
LOCKED ROTOR INPUT @ FULL LOAD		kW 400.87
FULL LOAD TORQUE		N.m 423.33
LOCKED ROTOR TORQUE		N.m 983.04
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 2.32
PULL OUT TORQUE		N.m 1132.9
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 2.68
PULL UP TORQUE		N.m 867.39
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 2.05
EFFICIENCY @ FULL LOAD		% 94.98
POWER FACTOR @ FULL LOAD		0.917
FULL LOAD SLIP		% 0.697
FULL LOAD SPEED		r/min 2979
STATOR WINDING TEMPERATURE RISE	90 SECS	K 66.6
D.E. BEARINGS TEMPERATURE BY PT100		Deg. C 71.6
TEMPERATURE ON LEADS BY PT100		Deg. C 51.6
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C 46.9
AMBIENT TEMPERATURE OF TESTING		Deg. C 16.5
SOUND PRESSURE LEVEL		dB(A) 76
VIBRATION		mm/s 1.6
WEIGHT		kg 1080

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

<b>VALIADIS S.A.</b>  <b>K315M-2</b> <b>132 kW</b>  <b>400 VOLTS      50      Hz</b>	<b>SCALE</b>		
	<b>DATE</b>		<b>REV</b>
	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	<b>APPRVD</b>		
	<b>CHECKED</b>		

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K315M-2 FRAME  
95.0 EFFICIENCY  
2 POLE  
VALIADIS MANUFACTURER

### IEC TYPE

3 PHASE  
218.7 AMPS  
S1 DUTY  
SERIAL NO.

132 KW

400 VOLTS

55 IP

0.917 PF

F INS.CLASS

2979 RPM

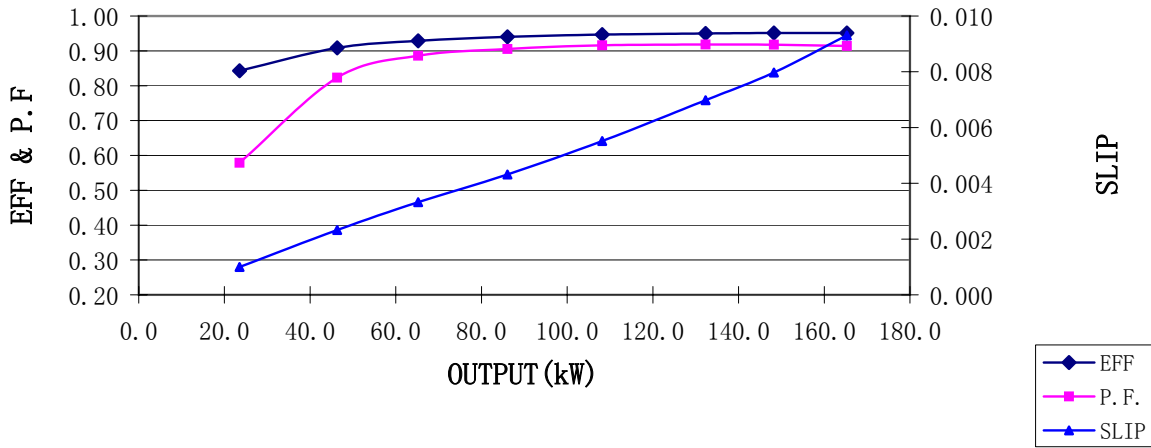
50 HZ / CYCLES

IC411 IC

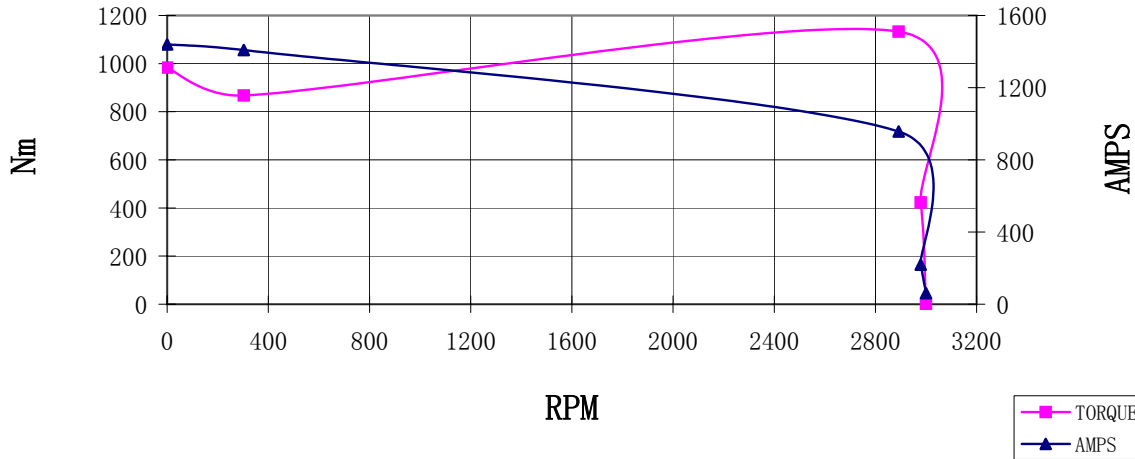
N/A EFF2

DELTA CONNECTION

### LOAD



### TORQUE & AMPS VS SLIP



VALIADIS S.A.	SCALE		
	DATE		REV
K315M-2 132 kW 400 VOLTS	DRAWN		DOCUMENT NO.
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	CHECKED		
50 Hz			

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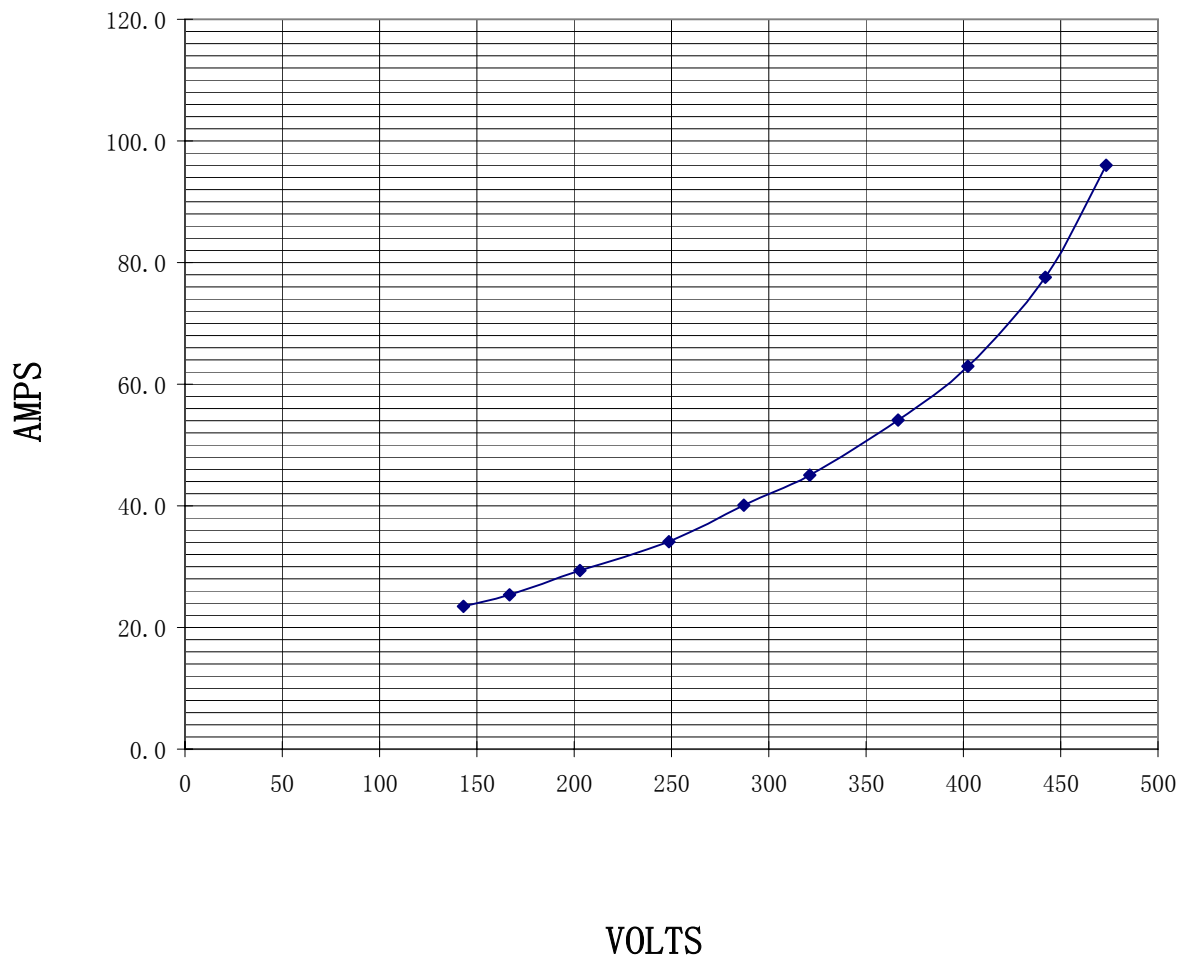
### 132 KW

400 VOLTS  
 55 IP  
 0.917 PF  
 F INS.CLASS

### 2979 RPM

50 HZ / CYCLES  
 IC411 IC  
 N/A EFF2  
 DELTA CONNECTION

### MAGNETIZATION CURVE - NO LOAD



VALIADIS S.A.		SCALE		
		DATE		REV
K315M-2 132 kW 400 VOLTS		DRAWN		DOCUMENT NO.
		APPRVD		
		CHECKED		
		50 Hz		