

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA			
K315LX-2 FRAME	IEC TYPE	315 kW	2980 r/min
2 POLE	3 PHASE	400 VOLTS	50 Hz
VALIADIS MANUFACTURER	525,9 AMPS	IP55 IP	
	S1 DUTY	F INS.CLASS	Δ CONNECTION

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE	OHM	0,00981
NO LOAD CURRENT	AMP	90,97
NO LOAD INPUT	W	4099,5
CORE LOSS(Pfe)	W	1341,6
WINDAGE FRICTION LOSS(Pfw)	W	2678,7
STATOR WINDING LOSS(Pcu1)	W	2866,0
ROTOR WINDING LOSS(Pcu2)	W	2258,1
STRAY LOAD LOSS(Ps)	W	4133,0
FULL LOAD CURRENT	AMP	524,96
LOCKED ROTOR CURRENT	AMP	3314,92
LOCKED ROTOR CURRENT/FULL LOAD CURRENT	P.U.	6,30
FULL LOAD TORQUE	N.m	1009,68
LOCKED ROTOR TORQUE	N.m	1932,05
LOCKED ROTOR TORQUE/FULL LOAD TORQUE	P.U.	1,91
PULL OUT TORQUE	N.m	2793,16
PULL OUT TORQUE/FULL LOAD TORQUE	P.U.	2,77
INPUT @ FULL LOAD	kW	328,28
EFFICIENCY @ FULL LOAD	%	95,96
POWER FACTOR @ FULL LOAD		0,903
FULL LOAD SLIP	%	0,697
FULL LOAD SPEED	r/min	2979,1
STATOR WINDING TEMPERATURE RISE	K	70
D.E. BEARINGS TEMPERATURE BY PT100	Deg. C	26,5
AMBIENT TEMPERATURE OF TESTING	Deg. C	7,6
NOISE	dB(A)	103
VIBRATION	mm/s	1,6

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

	VALIADIS S.A.	SERIAL NO.			
		DATE		REV	
		DRAWN		DOCUMENT NO.	
		APPRVD			
		CHECKED			
400	K315LX-2 315 kW VOLTS 50 Hz				

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THREE PHASE INDUCTION MOTOR**

VALIADIS S.A.

Type	K315LX-2		Poles	2		Power	315,0 kW	
Voltage	400	V	Current	525,9	A	Frequency	50	Hz
Speed	2980	r/min	Duty	S1		Connection	△	
Ins.class	F		Weight	1520	kg	IP55		

NO LOAD TEST

VOL	mul.	HZ	I01	I02	I03	mul.	W1	W2	W3	°C
506,7	1	50	4,690	4,910	4,730	50	38,0	54,0	89	87,5
464,9	1	50	3,050	3,130	3,180	50	50,0	24,0	47	87,3
400,1	1	50	1,770	1,840	1,850	50	29,0	19,0	34	86,7
347,7	1	50	3,525	3,525	3,625	20	72,5	52,5	62,5	86,4
294,8	1	50	2,825	2,950	2,900	20	50,0	55,0	65	86,2
241,1	1	50	2,300	2,350	2,325	20	50,0	57,5	57,5	85,8
198,0	1	50	2,000	2,050	2,025	20	47,5	52,5	55	85,3
155,0	1	50	1,675	1,900	2,075	20	55,0	42,5	50	84,7
106,1	1	50	1,500	1,350	1,475	20	47,5	47,5	45	84,4

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Voltage	400 V	Current	525,9 A	Frequency	50,0	Hz
Speed	2980 r/min	Duty	S1	Connection	Δ	
Ins.class	F	Weight	1520 kg		IP55	

LOCKED ROTOR TEST

VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torqur (N.m)
188,3	1,0	3,492	3,536	3,555	400,0	-130,4	470,2	400	350,08
168,4	1,0	3,075	3,111	3,128	400,0	-104,7	368,8	400	272,23
153,6	1,0	2,777	2,812	2,825	400,0	-87,0	303,7	400	223,53
134,4	1,0	2,401	2,430	2,442	400,0	-66,7	229,2	400	167,69
110,0	1,0	1,944	1,969	1,976	400,0	-44,7	151,9	400	110,73
86,9	1,0	1,527	1,546	1,551	400,0	-27,8	94,5	400	69,04
66,6	1,0	1,163	1,179	1,180	400,0	-16,3	55,3	400	40,51

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Type	K315LX-2		Poles	2		Power	315	kW
Voltage	400	V	Current	525,9	A	Frequency	50	Hz
Speed	2980	r/min	Duty	S1		Connection	Δ	
Ins.class	F		Weight	1520	kg		IP55	

TEMPERATURE RISE TEST

TIME (h:min)	V	I1	I2	I3	mul.	W1	W2	W3	T1 °C	T2 °C	T3 °C	T4 °C	T5 °C	T6 °C	T7 °C	T8 °C	T9 °C	T10 °C	T11 °C	T12 °C	T13 °C
10:29	400,9	2,613	2,660	2,613	200	542,5	552,5	543	0,0	0,0	0,0	0,0	—	—	—	—	—	—	—	—	0,0
11:00	400,3	2,613	2,613	2,589	200	540,0	540,0	540	24,8	50,7	95,4	92,4	—	—	—	—	—	—	—	—	6,4
11:30	400,7	2,565	2,613	2,589	200	535,0	540,0	543	25,3	51,3	95,9	92,9	—	—	—	—	—	—	—	—	6,7
12:00	400,7	2,613	2,613	2,589	200	540,0	542,5	538	26,1	51,9	96,5	93,6	—	—	—	—	—	—	—	—	7,1
12:30	400,0	2,565	2,613	2,589	200	532,5	540,0	540	26,5	52,3	97,2	94,2	—	—	—	—	—	—	—	—	7,7
13:00	400,1	2,636	2,684	2,636	200	547,5	552,5	550	26,5	51,8	97,6	94,6	—	—	—	—	—	—	—	—	8,1
THE AVERAGE		523,028		A		325500		W	26,5	51,8	97,1	94,1	—	—	—	—	—	—	—	—	7,6

T1 T2 : DE BEARING TEMPERATURE

T11 : CORE TEMPERATRE

T12: FRAME TEMPERATRE

T3~T10 : DE WINDING TEMPERATURE

T13 : AMBIENT TEMPERATURE

WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST

TIME (S)	69	96	136	162	193	218	245	277
RESISTANCE	0,00621	0,00620	0,00619	0,00618	0,00617	0,00616	0,00615	0,00615

WINDING RESISTANCE(COLD)

Δ	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,004751	0,004753	0,004754	0,00475	0,00475	4,9 °C
Y	U1-U2	V1-V2	W1-W2	AVERAGE	MIN	AMBIENT TEM.
	0	0	0	0,000	0	0 °C

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Voltage	400 V	Current	525,9 A	Frequency	50,0	Hz
Speed	2980 r/min	Duty	S1	Connection	Δ	
Ins.class	F	Weight	1520 kg		IP55	

LOAD TEST									
V	HZ	A1 (unit)	A2 (unit)	A3 (unit)	mul.	W1 (unit)	W2 (unit)	W3 (unit)	r/min
400,0	49,99	3,820	3,874	3,827	200	773,3	782,8	775,8	2969,6
400,2	49,98	3,257	3,264	3,260	200	671,5	671,3	670,8	2974,9
400,1	49,99	2,593	2,617	2,602	200	540,0	544,8	544,5	2980,8
399,9	49,99	1,910	1,943	1,950	200	400,8	404,0	409,8	2986,5
400,4	49,98	2,671	2,737	2,671	100	543,0	558,5	551,0	2991,2
400,1	50,01	1,541	1,598	1,588	100	276,0	281,5	288,5	2995,9

% LOAD	OUTPUT W	INPUT W	AMPS A	Pcu1 W	SLIP %	Pcu2 W	Ps W	EFF %	P.F.
150	472500	499729,0	828,882	7145,1	1,221	5998,9	10064,6	94,55	0,870
125	393750	413079,8	670,992	4682,3	0,923	3758,0	6869,1	95,32	0,889
100	315000	328277,4	524,958	2866,0	0,697	2258,1	4133,0	95,96	0,903
75	236250	245273,3	390,699	1587,5	0,485	1175,4	2240,1	96,32	0,906
50	157500	163694,4	267,154	742,2	0,280	452,7	979,0	96,22	0,884
25	78750	83405,4	155,928	252,9	0,173	141,4	240,8	94,42	0,772

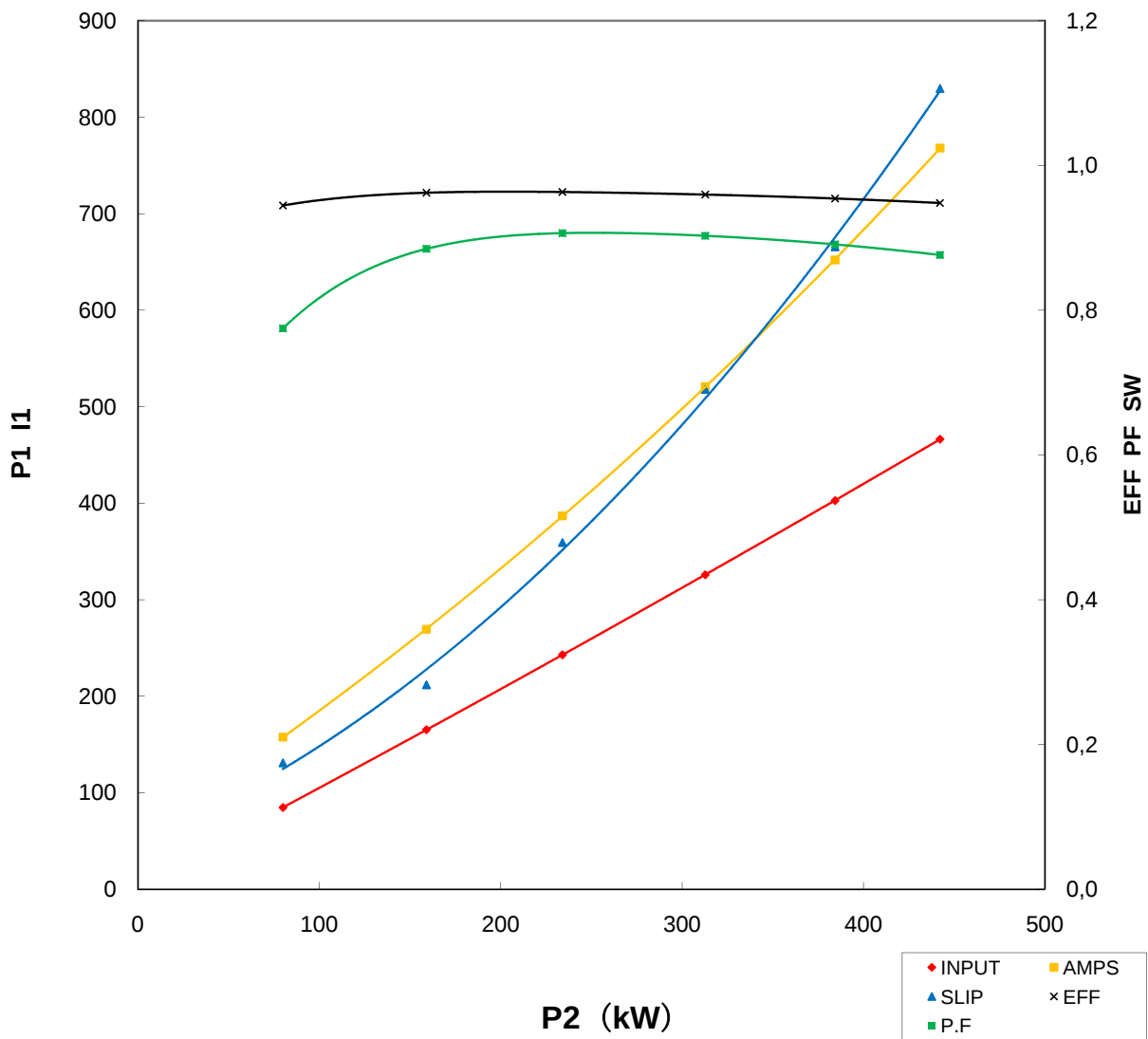
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Voltage	400	V	Current	525,9	A	Frequency	50,0	Hz
Speed	2980	r/min	Duty	S1		Connection	Δ	
Ins.class	F		Weight	1520	kg	IP55		

Load Curve



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