

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2	Poles	2	Power	110,0 kW	IE:3
Voltage	400 V	Current	185,3 A	Frequency	50 Hz	
Speed	2973 r/min	Duty	S1	Connecti	△	
Ins.class	F	Weight	1040 kg		IP55	
MAJOR CONTENTS			TEST VALUE			
95,0 °C PHASE RESISTANCE OF WINDING	Ω					0,0283
NO LOAD CURRENT	A					38,566
NO LOAD INPUT	W					2481,53
CORE LOSS(Pfe)	W					921,99
WINDAGE FRICTION LOSS(Pfw)	W					1520,30
STATOR WINDING LOSS(Pcu1)	W					955,08
ROTOR WINDING LOSS(Pcu2)	W					1022,28
STRAY LOAD LOSS(Ps)	W					1435,77
LOCKED ROTOR CURRENT	A					1143,112
LOCKED ROTOR INPUT @ FULL LOAD	W					233607
LOCKED ROTOR TORQUE	N.m					643,0
PULL OUT TORQUE	N.m					1002,5
LOCKED ROTOR CURRENT/RATED CURRENT	P.U					6,17
LOCKED ROTOR TORQUE/RATED TORQUE	P.U					1,82
PULL OUT TORQUE/RATED TORQUE	P.U					2,84
FULL LOAD TORQUE	N.m					353,5
FULL LOAD CURRENT	A					185,3
FULL LOAD SLIP	%					0,897
INPUT @ FULL LOAD	kW					115,858
FULL LOAD SPEED	r/min					2973,1
EFFICIENCY @ FULL LOAD	%					94,94
EFFICIENCY @ 75% LOAD	%					94,89
POWER FACTOR @ FULL LOAD						0,902
STATOR WINDING TEMPERATURE RISE	K					63
D.E. BEARINGS TEMPERATURE BY PT100	°C					47,1
STATOR WINDING TEMPERATURE	°C					87,0
High voltage test	V	1800				Imin
Insulation resistance	MΩ					500
NOISE (LW)	dB(A)					90
VIBRATION	mm/s					0,8

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2		Poles	2		Power	110,0 kW		IE:3
Voltage	400	V	Current	185,3	A	Frequency	50 Hz		
Speed	2973	r/min	Duty	S1		Connection	Δ		
Ins.class	F		Weight	1040	kg		IP55		

NO LOAD TEST

VOL	mul.	HZ	I01	I02	I03	mul.	W1	W2	mul.	°C	Ω
473,7	1	50	2,548	2,706	2,659	20	-512,7	663,8	20	73,2	0,01762
435,2	1	50	2,113	2,240	2,183	20	-383,6	520	20	72,9	0,01760
400,1	1	50	1,873	1,984	1,930	20	-306,6	430,7	20	72,7	0,01759
352,3	1	50	1,585	1,693	1,633	20	-220,2	334	20	72,3	0,01756
302,2	1	50	1,315	1,433	1,355	20	-148,7	254,1	20	72,0	0,01755
249,3	1	50	1,086	1,202	1,117	20	-90,6	187,7	20	71,6	0,01752
199,1	1	50	3,589	3,650	3,729	5	-145,4	496,8	5	71,0	0,01749
178,4	1	50	3,286	3,332	3,417	5	-80,5	432,2	5	70,7	0,01747
145,2	1	50	2,836	2,873	2,946	5	-8,5	332,5	5	70,5	0,01746
116,8	1	50	2,648	2,683	2,743	5	48,7	275,9	5	70,3	0,01745

data calculation of no load

V%	U0/UN	I0	P0	(U0/UN)^2	P0cu1	P0'
118,4%	1,18	52,753	3022,0	1,402	73,53	2948,47
108,8%	1,09	43,573	2728,0	1,184	50,12	2677,88
100,0%	1,00	38,580	2482,0	1,001	39,27	2442,73
88,1%	0,88	32,740	2276,0	0,776	28,24	2247,76
75,6%	0,76	27,353	2108,0	0,571	19,69	2088,31
62,3%	0,62	22,700	1942,0	0,388	13,55	1928,45
49,8%	0,50	18,280	1757,0	0,248	8,77	1748,23
44,6%	0,45	16,725	1758,5	0,199	7,33	1751,17
36,3%	0,36	14,425	1620,0	0,132	5,45	1614,55
29,2%	0,29	13,457	1623,0	0,085	4,74	1618,26

RESULTS AT: 400 V

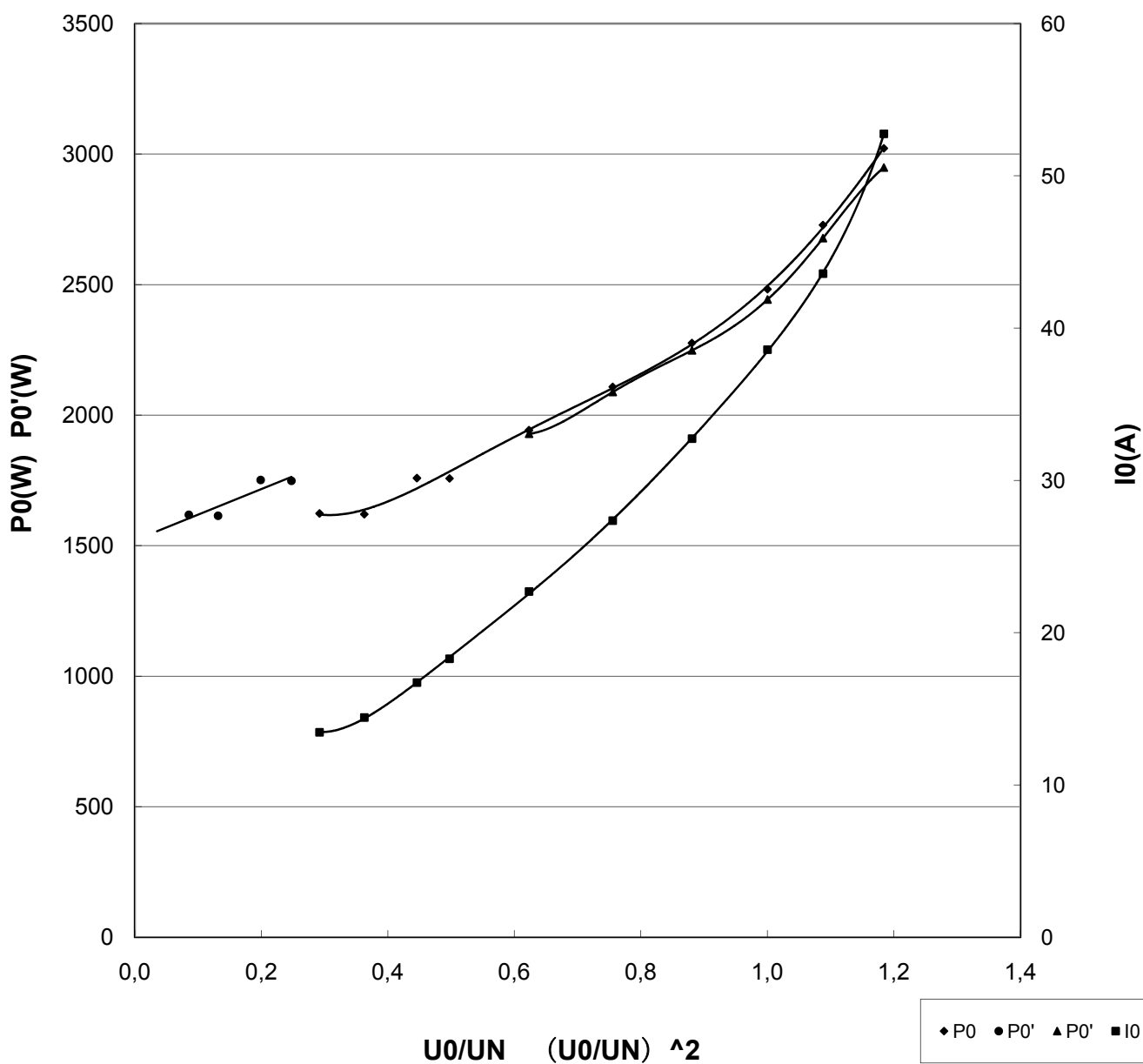
N.L.AMP	38,57	N.L.LOSS(W)	2481,53	Pw(W)	1520,3	Pe(W)	922,0		
---------	-------	-------------	---------	-------	--------	-------	-------	--	--

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2		Poles	2	Power	110,0	IE:3
Voltage	400	V	Current	185,3	A	Frequency	50,0
Speed	2973	r/min	Duty	S1	Connection	Δ	
Ins.class	F		Weight	1040	kg	IP55	

No Load Curve



VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

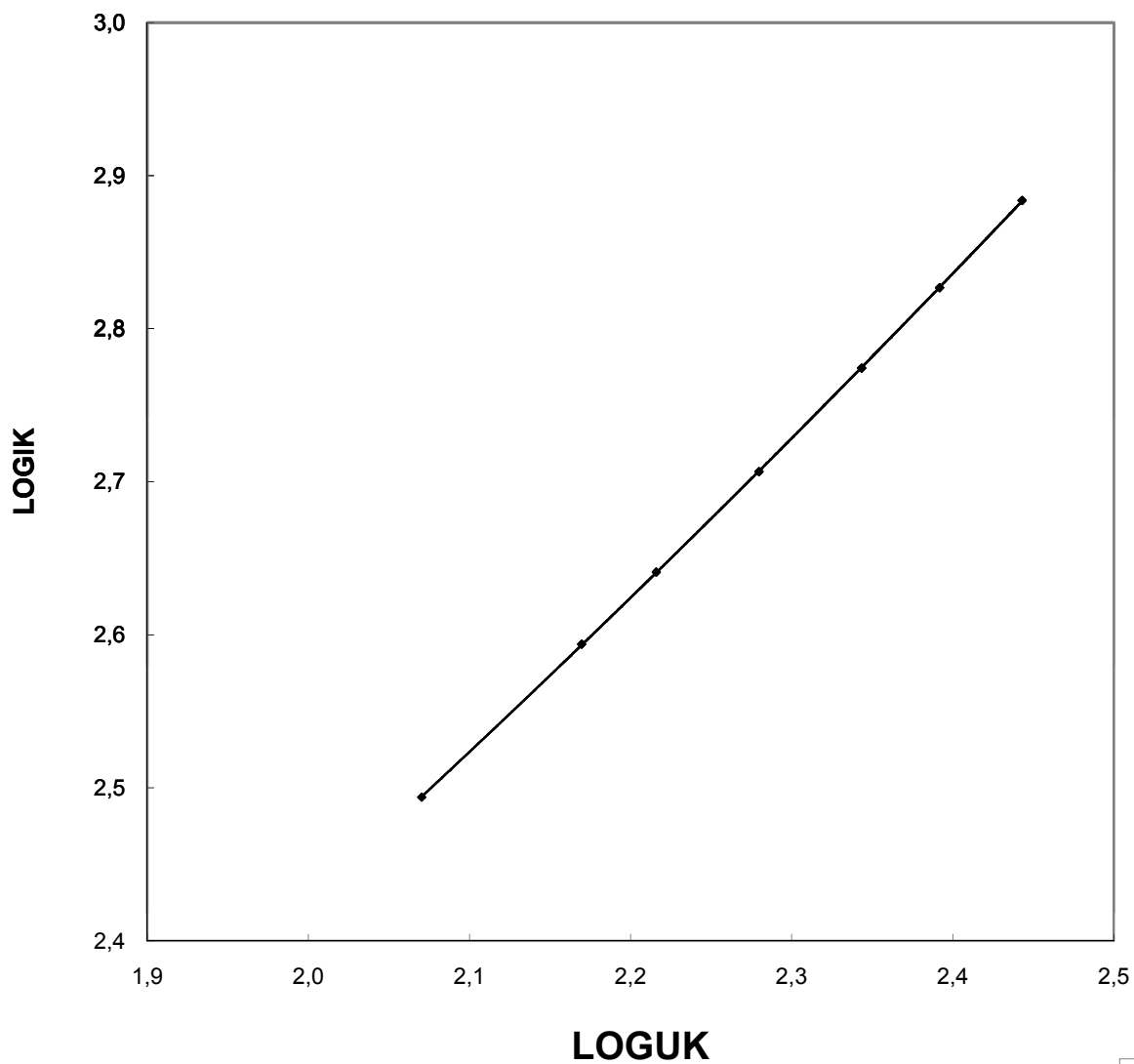
Type	K315S-2		Poles	2		Power	110,0		IE:3	kW
Voltage	400	V	Current	185,3	A	Frequency	50,0		Hz	
Speed	2973	r/min	Duty	S1		Connection	Δ			
Ins.class	F		Weight	1040	kg		IP55			
LOCKED ROTOR TEST										
VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torqu (kg.m)	
277,4	1,0	3,822	3,803	3,853	200,0	-189,1	724,4	200,0	29,4	
246,5	1,0	3,348	3,338	3,380	200,0	-145,2	564,2	200,0	22,6	
220,5	1,0	2,973	2,955	2,992	200,0	-118,5	447,2	200,0	17,1	
190,4	1,0	2,544	2,533	2,556	200,0	-89,2	330,2	200,0	13,3	
164,4	1,0	2,187	2,179	2,196	200,0	-66,7	244,9	200,0	9,8	
147,8	1,0	3,923	3,905	3,946	100,0	-106,6	394,4	100,0	8,0	
117,6	1,0	3,114	3,106	3,134	100,0	-66,9	248,8	100,0	5,0	
data calculation of locked rotor										
Uk	IK	PK	TK			LOGUk	LOGIk	LOGPk	LOGTk	
V	A	kW	N.m							
277,37	765,19	107,060	288,12			2,4431	2,8838	2,0296	2,4596	
246,53	671,09	83,800	221,48			2,3919	2,8268	1,9232	2,3453	
220,53	594,60	65,740	167,58			2,3435	2,7742	1,8178	2,2242	
190,42	508,84	48,200	130,34			2,2797	2,7066	1,6830	2,1151	
164,42	437,47	35,640	96,04			2,2160	2,6410	1,5519	1,9825	
147,79	392,49	28,780	78,40			2,1696	2,5938	1,4591	1,8943	
117,58	311,79	18,190	49,00			2,0703	2,4939	1,2598	1,6902	
performance collection of locked rotor										
	at rated volts		at rated current		at 2.5 times rated current		at 100V			
VOLTS (V)	400		71,030		172,6		100,0			
AMPS (A)	1143,1		185,3		463,3		263,81			
INPUT (kW)	233,61				39,9		13,031			
TORQUE (N.m)	643,00									

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2	Poles	2	Power	110,0	IE:3
Voltage	400 V	Current	185,3 A	Frequency	50,0	kW
Speed	2973 r/min	Duty	S1	Connection	Δ	Hz
Ins.class	F	Weight	1040 kg			IP55

LOCKED



VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2		Poles	2		Power	110	kW	IE:3	
Voltage	400	V	Current	185,3	A	Frequency	50	Hz		
Speed	2973	r/min	Duty	S1		Connection	Δ			
Ins.class	F		Weight	1040	kg	IP55				

TEMPERATURE RISE TEST

TIME (h:min)	V	I1	I2	I3	mul.	W1	W2	mul.	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	400,4	1,830	1,836	1,854	100	420,5	735,1	100	39,7	—	75,7	67,5	—	—	—	—	—	—	—	—	—	10,3
11,01	400,4	1,826	1,833	1,850	100	419,9	733,5	100	42,2	—	79,9	71,4	—	—	—	—	—	—	—	—	—	10,4
11,28	400,6	1,834	1,841	1,859	100	422,0	737,2	100	43,4	—	81,5	72,8	—	—	—	—	—	—	—	—	—	10,5
12,02	400,5	1,831	1,836	1,854	100	421,0	735,5	100	44,4	—	84,2	75,4	—	—	—	—	—	—	—	—	—	10,2
12,30	400,4	1,836	1,843	1,861	100	422,0	737,7	100	47,0	—	85,7	76,8	—	—	—	—	—	—	—	—	—	10,2
13,01	400,6	1,827	1,833	1,851	100	420,3	734,3	100	46,3	—	86,5	77,6	—	—	—	—	—	—	—	—	—	10,4
13,28	400,4	1,835	1,841	1,859	100	421,7	737,2	100	46,1	—	86,8	77,7	—	—	—	—	—	—	—	—	—	10,5
13,59	400,6	1,849	1,854	1,872	100	424,6	742,8	100	47,1	—	87,0	77,9	—	—	—	—	—	—	—	—	—	10,6
The average of the last three		184,680			A	116030		W	47,1	—	86,8	77,9	—	—	—	—	—	—	—	—	—	10,5

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)	58	85	134	185	257	312	358	417		
RESISTANC	0,01768	0,01766	0,01760	0,01756	0,01749	0,01744	0,01739	0,01735		

WINDING RESISTANCE(COLD)

Δ	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,01384	0,01384	0,01385	0,01384	0,01384	7,2 °C
Y	U1-U2	V1-V2	W1-W2	AVERAGE	MIN	AMBIENT TEM.
						°C

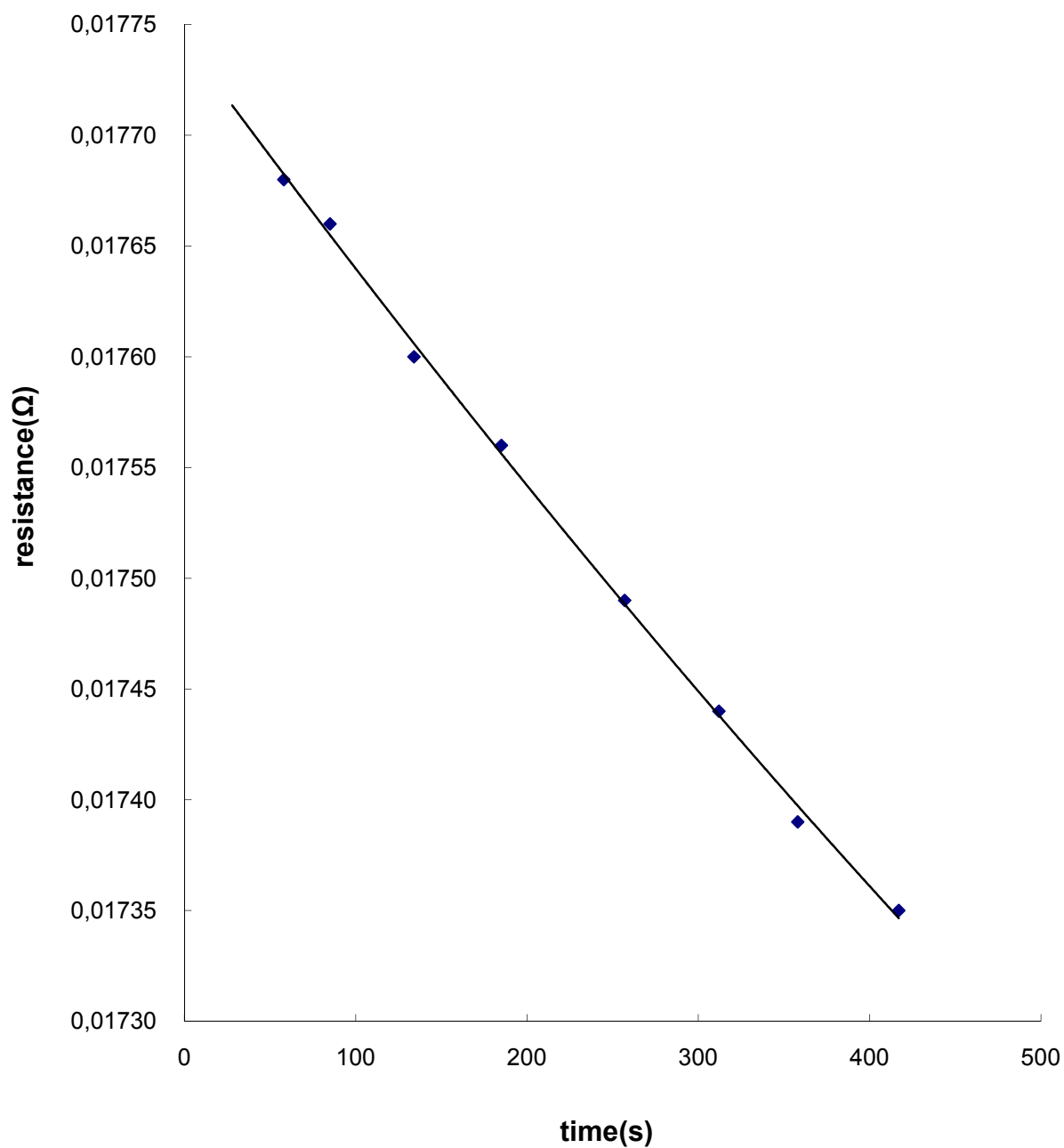
resistance value at 0 sec (Ω)	0,017743	calculation value of temp.rising	65,00	K
90 S (Ω)	0,017649	calculation value of temp.rising	63,36	K
full load curent	183,90 A	modify value of temp. rising	62,83	K

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2		Poles	2		output Power	110,0	IE:3 kW
Voltage	400	V	Current	185,3	A	Frequency	50,0	Hz
Speed	2973	r/min	Duty	S1		Connection	Δ	
Ins.class	F		Weight	1040	kg		IP55	

RESISTANCE CURVE



VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315S-2		Poles	2		output Power	110,0	kW	IE:3
Voltage	400	V	Current	185,3	A	Frequency	50,0	Hz	
Speed	2973	r/min	Duty	S1		Connection	Δ		
Ins.class	F		Weight	1040	kg		IP55		

LOAD CURVE

