

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K200L-2		Poles	2		Power	37,0	kW	IE:3
Voltage	400	V	Current	64	A	Frequency	50	Hz	
Speed	2962	r/min	Duty	S1		Connecti	Δ		
Ins.class		F	Weight	325	kg		IP55		
MAJOR CONTENTS					TEST VALUE				
95,0	°C	PHASE RESISTANCE OF WINDING	Ω			0,1622			
NO LOAD CURRENT			A			20,753			
NO LOAD INPUT			W			990,00			
CORE LOSS(Pfe)			W			501,80			
WINDAGE FRICTION LOSS(Pfw)			W			426,00			
STATOR WINDING LOSS(Pcu1)			W			643,54			
ROTOR WINDING LOSS(Pcu2)			W			479,25			
STRAY LOAD LOSS(Ps)			W			371,59			
LOCKED ROTOR CURRENT			A			465,899			
LOCKED ROTOR INPUT @ FULL LOAD			W			143220			
LOCKED ROTOR TORQUE			N.m			264,3			
PULL OUT TORQUE			N.m			340,9			
LOCKED ROTOR CURRENT/RATED CURRENT			P.U			7,28			
LOCKED ROTOR TORQUE/RATED TORQUE			P.U			2,22			
PULL OUT TORQUE/RATED TORQUE			P.U			2,86			
FULL LOAD TORQUE			N.m			119,3			
FULL LOAD CURRENT			A			64,0			
FULL LOAD SLIP			%			1,252			
INPUT @ FULL LOAD			kW			39,424			
FULL LOAD SPEED			r/min			2962,4			
EFFICIENCY @ FULL LOAD			%			93,85			
EFFICIENCY @ 75% LOAD			%			93,98			
POWER FACTOR @ FULL LOAD						0,889			
STATOR WINDING TEMPERATURE RISE			K			58			
D.E. BEARINGS TEMPERATURE BY PT100			°C			37,5			
STATOR WINDING TEMPERATURE			°C			68,0			
High voltage test			V	1800		Imin			
Insulation resistance			MΩ			500			
NOISE (LW)			dB(A)			80			
VIBRATION			mm/s			0,4			

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

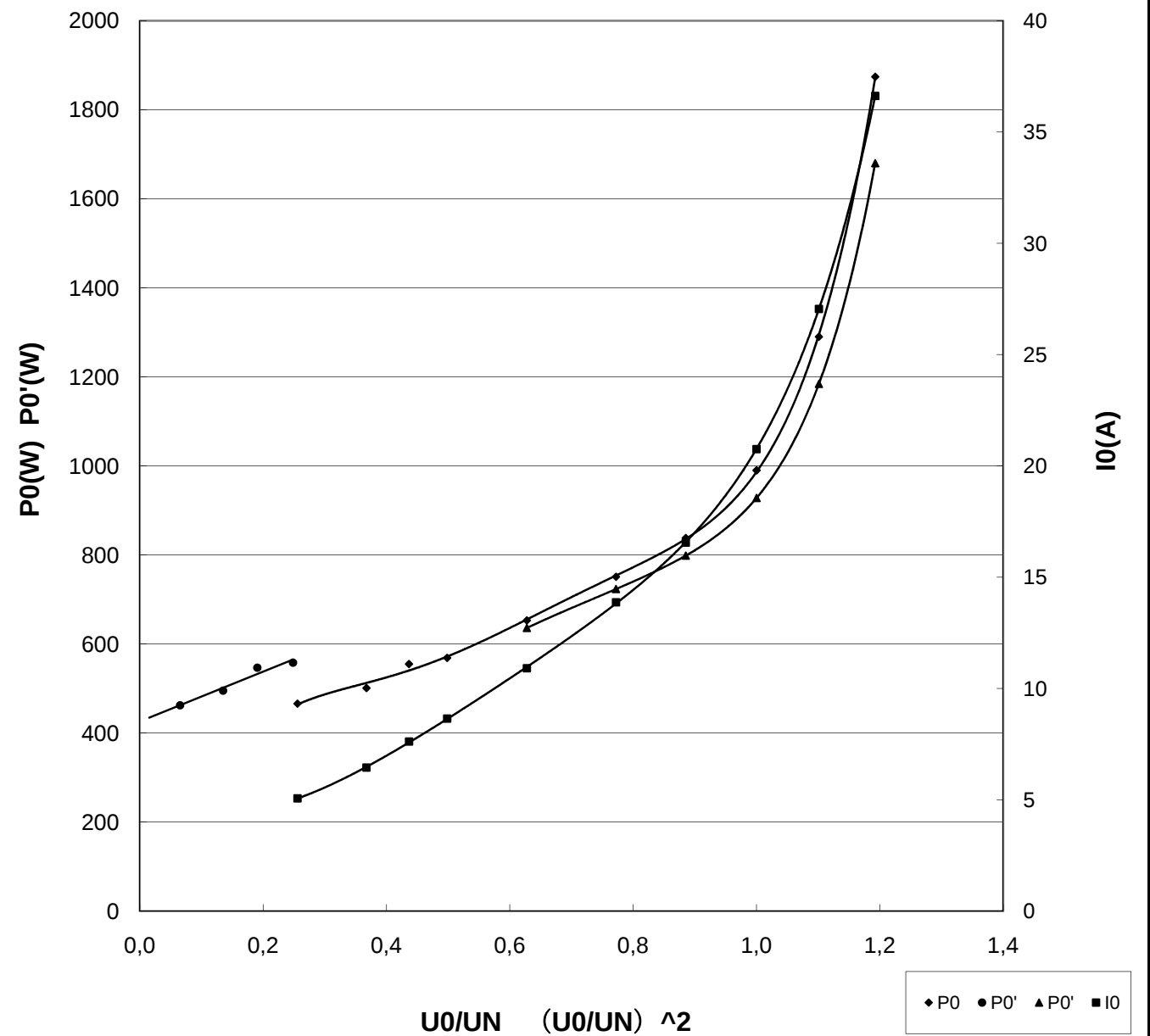
											IE:3
Type	K200L-2		Poles	2		Power	37,0		kW		
Voltage	400	V	Current	64	A	Frequency	50	Hz			
Speed	2962	r/min	Duty	S1		Connection	Δ				
Ins.class	F		Weight	325	kg	IP55					
NO LOAD TEST											
VOL	mul.	HZ	I01	I02	I03	mul.	W1	W2	mul.	°C	Ω
476,9	1	50	3,604	3,681	3,701	10	-721,9	909,3	10	59,7	0,09654
440,4	1	50	2,660	2,719	2,737	10	-490,8	619,8	10	59,4	0,09644
400,0	1	50	2,048	2,079	2,099	10	-337,1	436,1	10	58,9	0,09628
354,1	1	50	1,641	1,654	1,672	10	-231,5	315,3	10	58,6	0,09618
308,8	1	50	1,376	1,385	1,401	10	-161,7	236,8	10	58,3	0,09608
251,1	1	50	1,084	1,087	1,101	10	-94,0	159,3	10	58,0	0,09598
199,4	1	50	4,290	4,304	4,377	2	-251,8	536,2	2	57,5	0,09582
174,6	1	50	3,775	3,794	3,854	2	-161,7	439,2	2	57,2	0,09572
147,1	1	50	3,200	3,213	3,255	2	-85,0	335,5	2	57,0	0,09565
102,3	1	50	2,511	2,528	2,557	2	14,5	218,5	2	56,8	0,09559
data calculation of no load											
V%	U0/UN	I0	P0	(U0/UN)^2	P0cu1	P0'					
119,2%	1,19	36,620	1874,0	1,422	194,19	1679,81					
110,1%	1,10	27,053	1290,0	1,212	105,87	1184,13					
100,0%	1,00	20,753	990,0	1,000	62,20	927,80					
88,5%	0,89	16,557	838,0	0,784	39,55	798,45					
77,2%	0,77	13,873	751,0	0,596	27,74	723,26					
62,8%	0,63	10,907	653,0	0,394	17,13	635,87					
49,8%	0,50	8,647	568,8	0,248	10,75	558,05					
43,7%	0,44	7,615	555,0	0,191	8,33	546,67					
36,8%	0,37	6,445	501,0	0,135	5,96	495,04					
25,6%	0,26	5,064	466,0	0,065	3,68	462,32					
RESULTS AT: 400 V											
N.L.AMP	20,75	N.L.LOSS(W)	990,00	Pw(W)	426,0	Pe(W)	501,8				

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K200L-2		Poles	2		Power	37,0	IE:3 kW Hz Δ IP55
Voltage	400	V	Current	64	A	Frequency	50,0	
Speed	2962	r/min	Duty	S1		Connection		
Ins.class	F		Weight	325	kg			

No Load Curve



VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

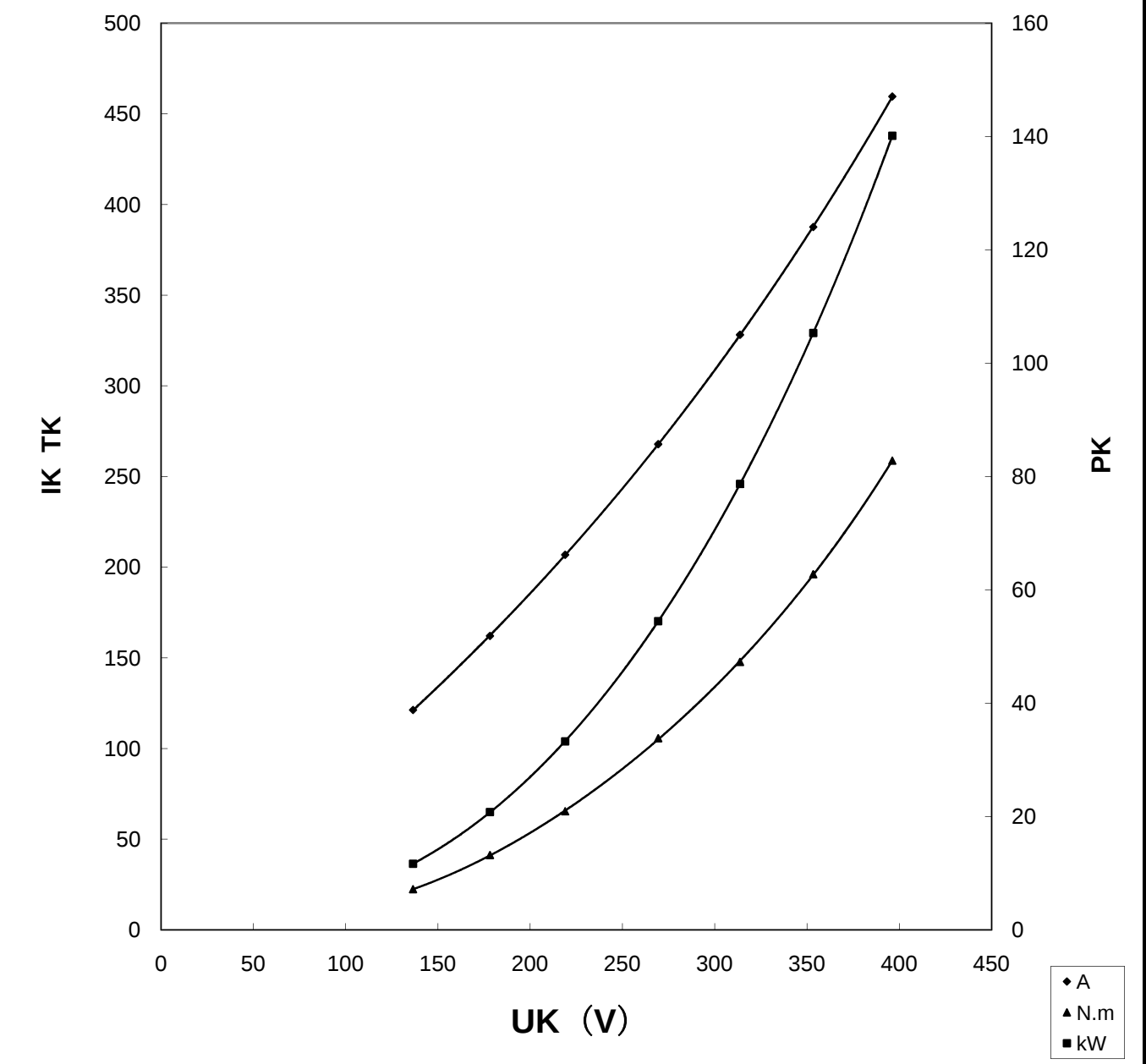
Type	K200L-2		Poles	2		Power	37,0		IE:3
Voltage	400	V	Current	64	A	Frequency	50,0		kW
Speed	2962	r/min	Duty	S1		Connection	Δ		Hz
Ins.class		F	Weight	325	kg	IP55			
LOCKED ROTOR TEST									
VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torqur (kg.m)
396,2	1,0	2,277	2,304	2,312	200,0	-144,8	845,5	200,0	26,4
353,4	1,0	1,920	1,947	1,947	200,0	-109,5	636,1	200,0	20,0
313,7	1,0	1,624	1,650	1,647	200,0	-84,8	478,3	200,0	15,1
269,4	1,0	1,324	1,349	1,345	200,0	-60,9	333,2	200,0	10,8
218,9	1,0	2,046	2,083	2,075	100,0	-83,0	415,5	100,0	6,7
178,2	1,0	1,605	1,632	1,625	100,0	-55,3	263,1	100,0	4,2
136,5	1,0	2,402	2,441	2,431	50,0	-66,0	299,4	50,0	2,3
data calculation of locked rotor									
Uk	IK		PK	TK		LOGUk	LOGIk	LOGPk	LOGTk
V	A		kW	N.m					
396,21	459,53		140,140	258,74		2,5979	2,6623	2,1466	2,4129
353,37	387,58		105,320	196,07		2,5482	2,5884	2,0225	2,2924
313,68	328,13		78,700	147,73		2,4965	2,5160	1,8960	2,1695
269,37	267,81		54,460	105,65		2,4303	2,4278	1,7361	2,0239
218,95	206,82		33,250	65,36		2,3403	2,3156	1,5218	1,8153
178,21	162,08		20,780	41,18		2,2509	2,2097	1,3176	1,6147
136,53	121,23		11,670	22,38		2,1352	2,0836	1,0671	1,3499
performance collection of locked rotor									
at rated volts		at rated current		at 2.5 times rated current		at 100V			
VOLTS (V)		400		74,276		176,1		100,0	
AMPS (A)		465,9		64,0		160,0		87,65	
INPUT (kW)		143,22				20,3		6,089	
TORQUE (N.m)		264,29							

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K200L-2		Poles	2		Power	37,0	IE:3 kW Hz Δ IP55
Voltage	400	V	Current	64	A	Frequency	50,0	
Speed	2962	r/min	Duty	S1		Connection		
Ins.class	F		Weight	325	kg			

Locked Rotor Curve



VALIADIS S.A.

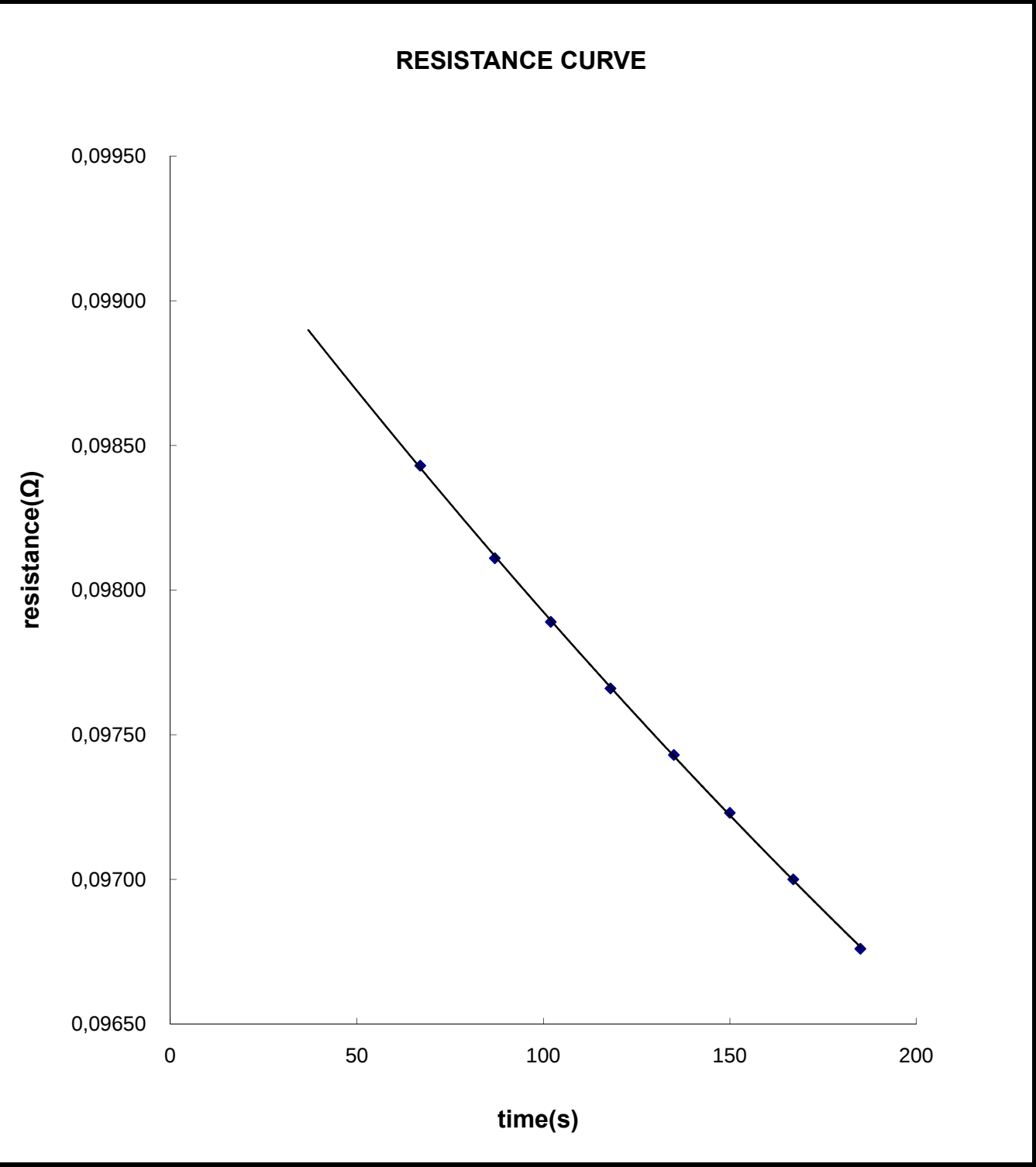
ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K200L-2								Poles	2		Power	37	kW		IE:3												
Voltage	400		V										Current	64	A		Frequency	50	Hz									
Speed	2962		r/min										Duty	S1		Connection	Δ											
Ins.class	F												Weight	325	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							
9,30	400,3	1,280	1,283	1,291	50	277,1	521,3	50	30,6	—	53,5	55,6	—	—	—	—	—	—	—	—	7,7							
9,59	400,3	1,289	1,292	1,300	50	284,8	526,2	50	32,6	—	58,7	61,0	—	—	—	—	—	—	—	—	7,6							
10,29	400,1	1,276	1,279	1,288	50	276,6	519,5	50	35,1	—	62,9	65,1	—	—	—	—	—	—	—	—	8,4							
10,58	400,3	1,268	1,270	1,280	50	278,9	517,1	50	35,8	—	64,3	66,5	—	—	—	—	—	—	—	—	8,3							
11,30	400,2	1,274	1,277	1,286	50	280,1	520,7	50	36,5	—	65,2	67,5	—	—	—	—	—	—	—	—	9,0							
12,00	400,3	1,279	1,282	1,290	50	280,0	521,6	50	37,0	—	65,5	67,8	—	—	—	—	—	—	—	—	9,1							
12,30	400,3	1,262	1,266	1,274	50	273,4	513,7	50	37,5	—	65,8	68,0	—	—	—	—	—	—	—	—	9,3							
The average of the last three		63,830				A		39825		W	37,5	—	65,5	68,0	—	—	—	—	—	—	—	9,1						
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)	67	87	102	118	135	150	167	185																				
RESISTANC	0,09843	0,09811	0,09789	0,09766	0,09743	0,09723	0,09700	0,09676																				
WINDING RESISTANCE(COLD)																												
Δ	U1-V1		U1-W1		V1-W1		AVERAGE		MIN		AMBIENT TEM.																	
	0,07975		0,07975		0,0798		0,07977		0,07975		8,5 °C																	
Y	U1-U2		V1-V2		W1-W2		AVERAGE		MIN		AMBIENT TEM.																	
											°C																	
resistance value at 0 sec (Ω)					0,099517					calculation value of temp.rising					59,72 K													
30 S (Ω)					0,098999					calculation value of temp.rising					58,14 K													
full load curent					64,00 A					modify value of temp. rising					58,46 K													

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K200L-2		Poles	2		output Power	37,0		IE:3
Voltage	400	V	Current	64	A	Frequency	50,0	Hz	
Speed	2962	r/min	Duty	S1		Connection	Δ		
Ins.class		F	Weight	325	kg		IP55		



VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

												IE:3
Type	K200L-2		Poles		2		Power		37,0		kW	
Voltage	400	V	Current		64	A	Frequency		50,0		Hz	
Speed	2962	r/min	Duty		S1		Connection		Δ			
Ins.class	F		Weight		325	kg			IP55			
LOAD TEST												
V	HZ	I1	I2	I3	mul.	W1	W2	mul.	r/min	Resista nce Ω	Temper ature °C	Torqu r N.m
400,0	50,02	1,905	1,910	1,921	50	423,6	769,4	50	2943,1	0,0990	67,1	178,9
400,0	50,02	1,603	1,606	1,617	50	355,2	646,9	50	2953,7	0,0993	68,0	150,64
400,1	50,01	3,191	3,245	3,225	20	678,0	1306,4	20	2964,6	0,0996	68,9	119,3
400,1	50,02	2,457	2,512	2,489	20	483,0	1017,2	20	2974,5	0,0995	68,8	89,58
400,1	50,02	2,033	2,088	2,063	20	350,7	843,3	20	2980,3	0,0995	68,6	70,82
399,9	50,01	1,813	1,881	1,842	20	275,0	755,0	20	2983,6	0,0994	68,3	60,9
400,0	50,01	1,272	1,342	1,301	20	72,3	505,7	20	2991,5	0,0990	67,3	32,66
399,93	50,0	2,057	2,086	2,121	10,0	-239,8	518,7	10	2999,0	0,0980	64,3	4,89
400,13	50,0	2,050	2,083	2,103	10,0	-336,7	437,6	10	3000,0	0,0968	60,4	0,00
slope A= 0,02613		intercept B= 27,88			relative coefficient r= 0,993							
LOAD %	P2 W	I A	P1 W	Pcu1s W	Ss %	Pcu2s W	Ps W	Pz W	N.m	EFF %	P.F	
150,0	55500	96,04	59917,8	1449,0	2,058	1192,7	850,8	4420,4	180,5	92,63	0,901	
125,0	46250	79,53	49542,5	993,6	1,646	790,9	585,8	3298,2	149,7	93,35	0,899	
100,0	37000	64,00	39424,5	643,5	1,252	479,3	371,6	2422,2	119,3	93,85	0,889	
75,0	27750	49,06	29528,1	378,1	0,920	263,4	206,4	1775,8	88,9	93,98	0,869	
50,0	18500	36,00	19837,8	203,6	0,573	109,7	91,8	1332,9	59,3	93,26	0,795	
25,0	9250	24,61	10313,2	95,1	0,282	27,4	22,8	1073,2	29,5	89,69	0,605	

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

							IE:3	
Type	K200L-2		Poles	2	output Power	37,0	kW	
Voltage	400	V	Current	64	A	Frequency	50,0	Hz
Speed	2962	r/min	Duty	S1	Connection	Δ		
Ins.class	F		Weight	325	kg	IP55		

LOAD CURVE

