



ESTABLISHED 1927

VALIADIS**HELLENIC MOTORS**Quality Assurance Certificate EN ISO 9001:2015
Certificate Reg. No. 041130055**Type Test Report three phase squirrel-cage motors****Winding calc card**

Type : K 400-6	Output : 400 kW	Motor No. :	Duty type : S1
Voltage : 400 V	Conn. : Δ	Frequency : 50 Hz	Cos ϕ : 0.86
Current : 702.2 A	Speed : 990 rpm	Eff. : 95.6 %	

Statorwinding resistance measurement (cold)

Connection : Δ	$R_{u1-v1} : 0.003694 \Omega$	
Winding temp: 24.6 °C	$R_{v1-w1} : 0.003694 \Omega$	$R_{av} = 0.0036940 \Omega$
Room temp: 24.6 °C	$R_{w1-u1} : 0.003694 \Omega$	

No-load testRbegin = 0.004686 Ω Rend = 0.004678 Ω

				Losses		
Uo	Io	Po	cos ϕ_o	Vcu1	Vfe	Vw
V	A	W		W	W	W
473	393.76	15883	0.049	1088	12210	2585
438	297.50	11357	0.050	621	8151	2585
400	231.51	8289	0.052	376	5328	2585
358	192.09	6545	0.055	259	3701	2585
310	159.95	5522	0.064	180	2757	2585
253	128.67	4676	0.083	116	1975	2585
179	90.73	3670	0.130	58	1027	2585
127	63.82	3104	0.221	29	490	2585

Sound pressure level in dB (A) (at 1 m): 84.3

Vibration level (mm/s): x = 1.2 y = 1.4 z = 1.2

Temperature rise testVoltage : 400 V, Frequency : 50 Hz, Current : 710.3 A, connection : Δ

According to IEC 34-1	Time	Room temp. °C	R _{wdg} Ω	Wdg. temp. by R _{wdg}	Wdg. temp. rise(K)	Temperature (°C) with ETD*			
						Wdg.	Bearing DE	Bearing NDE	Frame
Begin	9:40	24.6	0.003694	24.6					24.6
	13:45	27.6							102.9
	14:15	27.5							103.4
End	14:45	27.4	0.004836	104.9	77.5		53.5	50.0	103.4

* ETD= embedded temperature detector



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Frequency: 50 Hz

 $T_{\text{wdg,begin}} = 104.3\text{ }^{\circ}\text{C}$ $T_{\text{wdg,end}} = 103.9\text{ }^{\circ}\text{C}$ Connection: Δ $R_{\text{begin}} = 0.004828\text{ }\Omega$ $R_{\text{end}} = 0.004822\text{ }\Omega$

P2	U	I	P1	cosϕ	n	s	Vfe	Vcu1	Ve	Vcu2	Vw	Vv	P2	n
Approx. %	V	A	kW		Min⁻¹	%	W	W	W	W	W	W	kW	%
25	400	280.1	108.861	0.561	997.7	0.23	5328	553	162	233	2585	8861	100	91.86
50	400	396.3	210.545	0.767	996.4	0.36	5328	1106	782	744	2585	10545	200	94.99
75	400	535.3	313.127	0.844	994.8	0.52	5328	2019	1594	1601	2585	13127	300	95.81
100	400	692.0	417.157	0.870	992.8	0.72	5328	3373	2917	2954	2585	17157	400	95.89
125	400	860.8	522.901	0.877	990.1	0.99	5328	5219	4722	5047	2585	22901	500	95.62
150	400	1036.4	630.703	0.878	986.7	1.33	5328	7566	7014	8210	2585	30703	600	95.13

 $T_s/T_n = 1.71$ $I_s/I_n = 7.06$ **Locked rotor test**

U	I	P1	cosϕ	T
V	A	kW		Nm
400	4959.0	1063.612	0.310	6609
350	4204.7	764.197	0.300	4748
300	3474.1	522.067	0.289	3244
250	2772.2	332.636	0.277	2067
200	2104.5	191.321	0.262	1189
100	892.6	34.692	0.224	211



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Type : K 400-6

Voltage : 400 V

Current : 702.2 A

Output : 400 kW

Conn. : Δ

Speed : 990 rpm

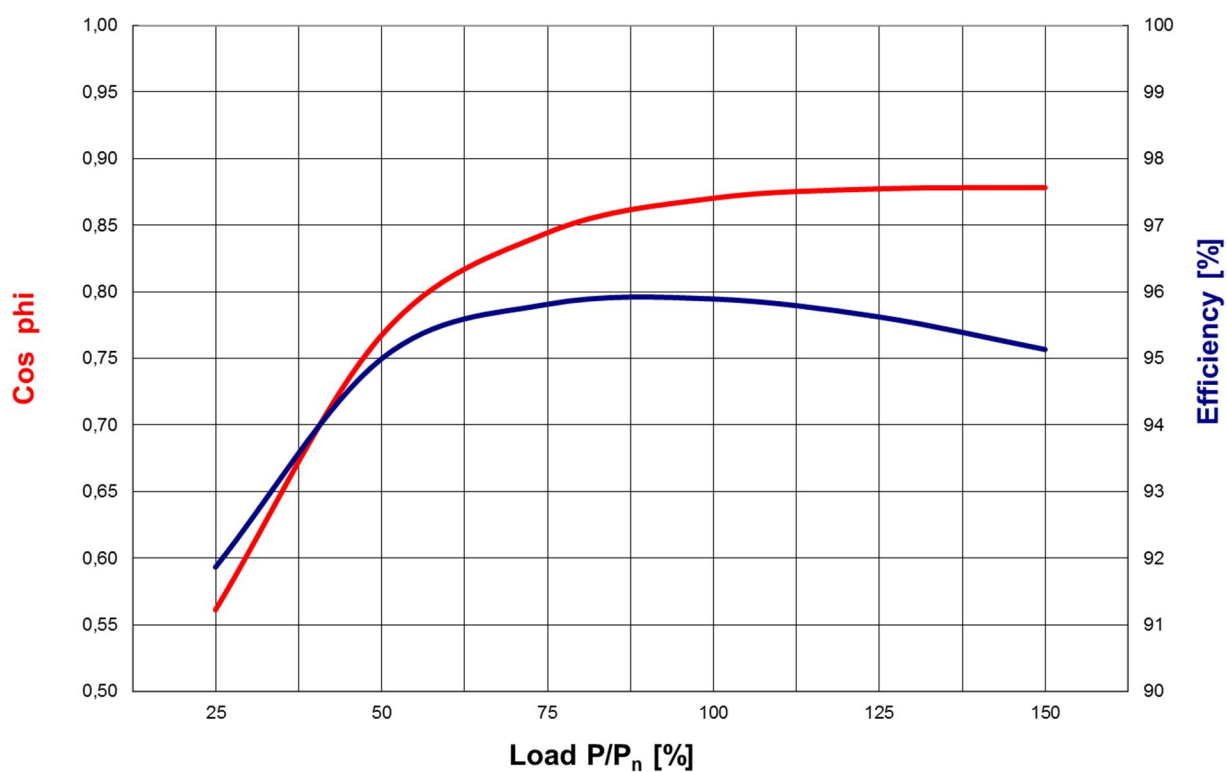
Motor No. :

Duty type : S1

Frequency : 50 Hz

Eff. : 95.6 %

Cos ϕ : 0.86





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Type : K 400-6

Voltage : 400 V

Current : 702.2 A

Output : 400 kW

Conn. : Δ

Speed : 990 rpm

Motor No. :

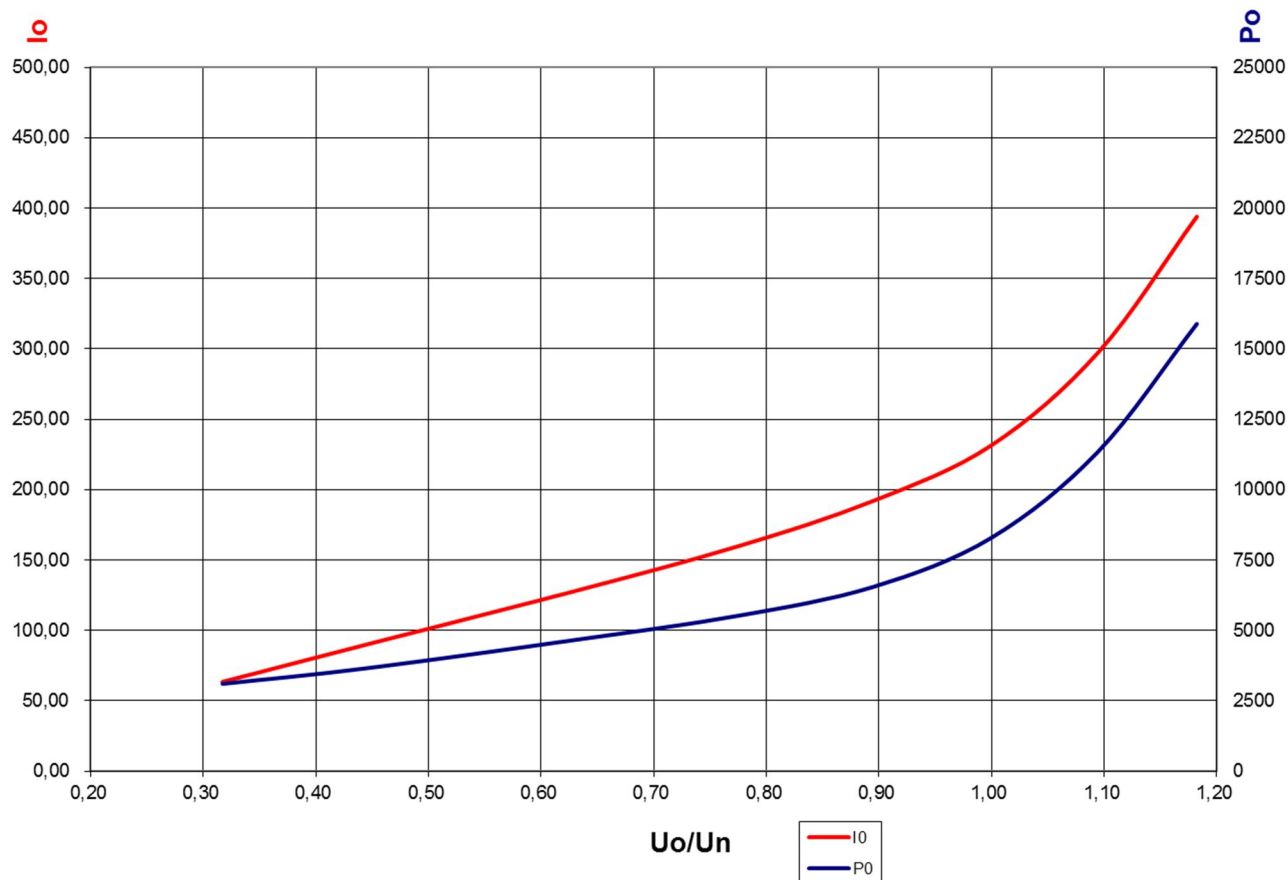
Duty type : S1

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No-load Test





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Voltage : 400 V

Current : 702.2 A

Output : 400 kW

Conn. : Δ

Speed : 990 rpm

Motor No. :

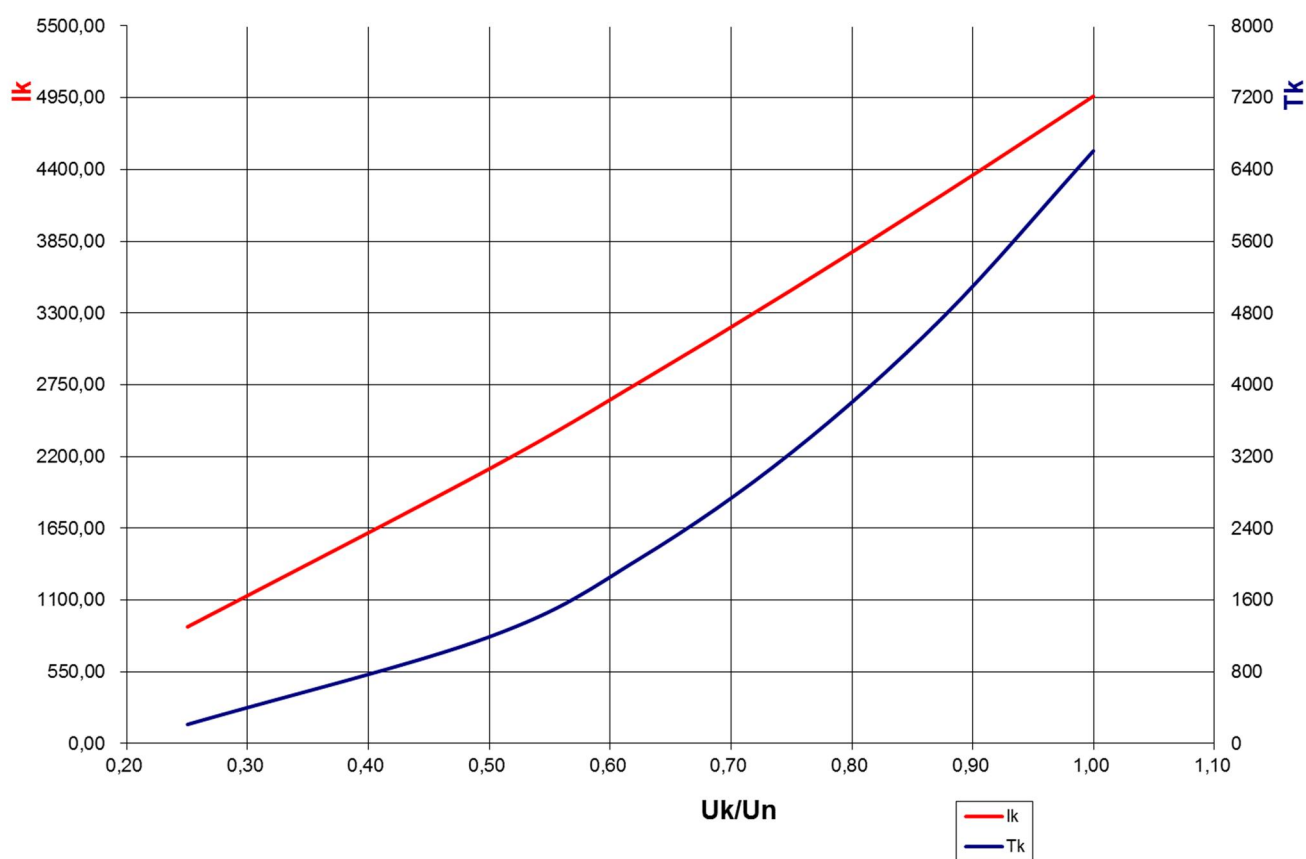
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Locked-rotor Test1





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Output : 400 kW

Conn. : Δ

Speed : 990 rpm

Motor No. :

Duty type : S1

Frequency : 50 Hz

Eff. : 95.6 %

Cos ϕ : 0.86

Locked-rotor Test2

