



VALIADIS S.A.

HELLENIC MOTORS

Type Test Report three phase squirrel-cage motors

Winding cale card

Type : K 280LX-6	Motor No. :		
Voltage : 400 V	Output : 132 kW	Duty type : S1	
Current : 234.9 A	Conn. : Δ	Frequency : 50 Hz	Cos ϕ : 0.85
	Speed : 990 rpm	Eff. : 95.4 %	SF. 1

Stator winding resistance measurement (cold)

Connection : Δ	$R_{u1-v1} : 0.01746 \Omega$		
Winding temp: 28 °C	$R_{v1-w1} : 0.01745 \Omega$	$R_{av} = 0.01746 \Omega$	Asymmetry : 0.0764 %
Room temp: 28 °C	$R_{w1-u1} : 0.01746 \Omega$		

No-load test

$R_{end} = 0.02019 \Omega$

Uo	Io	Po	cos ϕ	Losses		
				Vcu1	Vfe	Vfw
V	A	W		W	W	W
500	140.3	5405.0	0.044	595.9	4481.1	328
440	97.3	3367.5	0.045	286.7	2752.8	328
400	71.3	2170.0	0.044	154.1	1687.9	328
320	45.6	1202.3	0.048	63.1	811.2	328
240	31.6	782.9	0.060	30.3	424.6	328
200	26.0	644.0	0.072	20.5	295.5	328
160	21.2	565.6	0.096	13.6	224.0	328
120	15.7	439.4	0.135	7.5	103.9	328

Sound pressure level in dB (A) (at 1 m): 73.64

Sound power level in dB(A): 82

Vibration level (mm/s): x= 0.8 y= 0.55 z= 0.4
x= 0.35 y= 0.56 z= 0.45

Temperature rise test

Voltage : 400 V, Frequency : 50 Hz , Current : 234.9 A , connection : Δ

According to IEC 34-1	Time	Room temp. °C	Rwdg Ω	Wdg. temp. °C	Wdg. temp. rise(K)	U V	I A	P W	*frame °C
Begin	9:18	31.6	0.01746	28	-----	400.7	235.0	137400	32.9
	10:51	31.6			-----	400.6	235.0	137700	54.2
	11:22	32.8			-----	400.6	233.1	136800	48.4
	11:52	33.2			-----	400.9	231.6	136200	49.5
	12:22	33.6			-----	401.0	230.6	135900	51.6
	12:52	33.2			-----	401.1	229.8	135400	52.4
	13:22	33.4			-----	400.9	229.4	135100	52.5
	1352	33.5			-----	400.8	229.1	135100	52.7
End			0.0222	98.7	65.33	*bearing: DE=45.3 °C, NDE= 52.2 °C			



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Load test

Frequency: 50 Hz

Connection: Δ

Rav= 0.0222 Ω

QAV= 98.7 ° C

SF = 1

P2	U	I	P1	cos ϕ	n	s	P2	n
Approx. %	V	A	kW		Min ⁻¹	%	kW	%
25	400	92.0	35.493	0.548	998	0.24	33	92.98
50	400	132.1	69.312	0.745	995	0.48	66	95.22
75	400	180.4	103.829	0.836	993	0.74	99	95.35
100	400	235.9	139.178	0.86	990	1.03	132	94.84
125	400	297.7	175.491	0.85	986	1.37	165	94.02
150	400	364.6	212.840	0.843	983	1.75	198	93.03

P2	Pcu1	Pcu2	Pfe	Pfw	Ps
Approx. %	kW	kW	kW	kW	kW
25	0.270	0.083	1.677	0.328	0.132
50	0.550	0.315	1.655	0.328	0.462
75	1.050	0.744	1.632	0.328	1.073
100	1.030	1.035	1.688	0.328	2.016
125	2.880	2.352	1.589	0.328	3.340
150	4.279	3.597	1.570	0.328	5.066

Locked rotor test

U	I	P1	cos ϕ	T
V	A	kW		Nm
400	1521	305	0.289	2473.5
340	1239	211	0.289	1641.3
280	970	135	0.287	1006.0
220	716	76	0.279	548.1
160	479	34	0.256	245.3
100	265	10	0.218	75.1

Total/speed and current/speed test

n	T	I	n	T	I	n	T	I	n	T	I
Min ⁻¹	Nm	A	Min ⁻¹	Nm	A	Min ⁻¹	Nm	A	Min ⁻¹	Nm	A
1000	0.0	71.3	998	315.8	92.0	995	633.5	132.1	993	952.1	180.4
990	1273.3	235.9	986	1598.1	297.7	948	3318.6	1033.9	871	4696.8	1160.4
792	2719.2	1240.7	742	2101.2	1273.1	693	1928.2	1292.4	594	1801.2	1322.8
495	1859.9	1353.2	376	1957.8	1383.7	297	2113.6	1406.5	228	2175.4	1426.2
99	2348.4	1474.9	0	2472.0	1520.5						



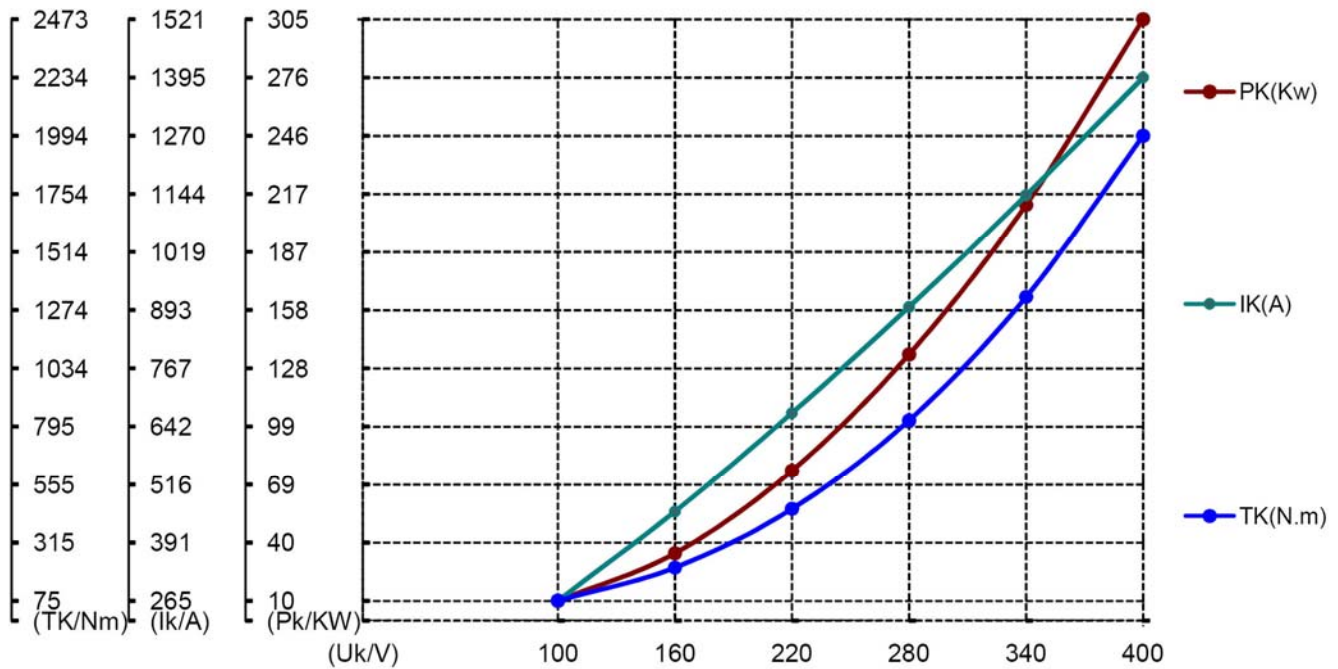
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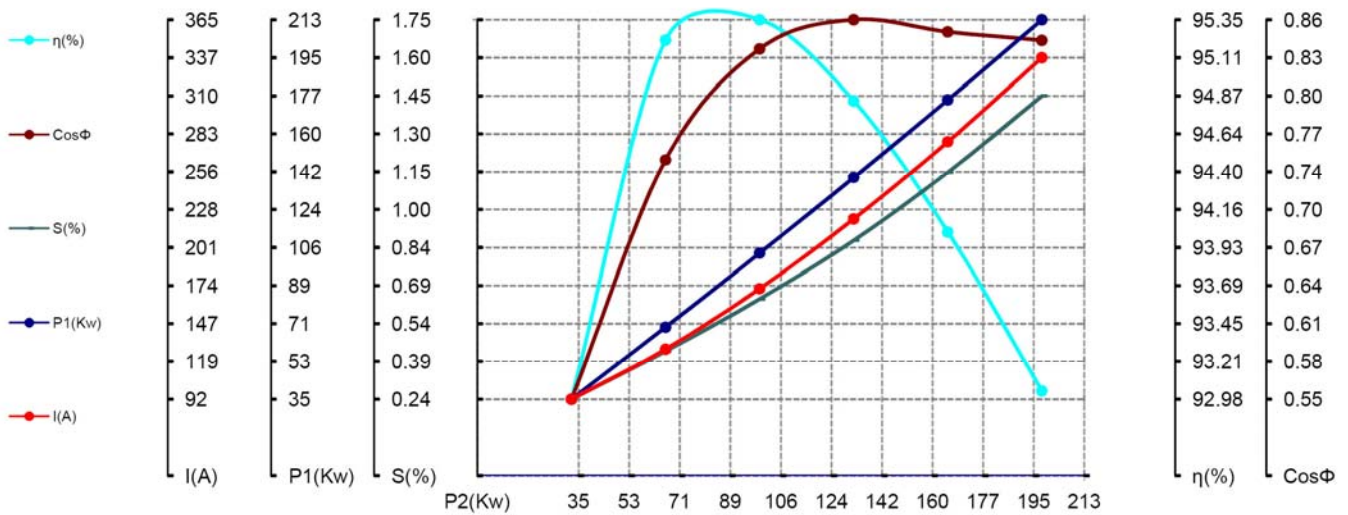
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Load Test





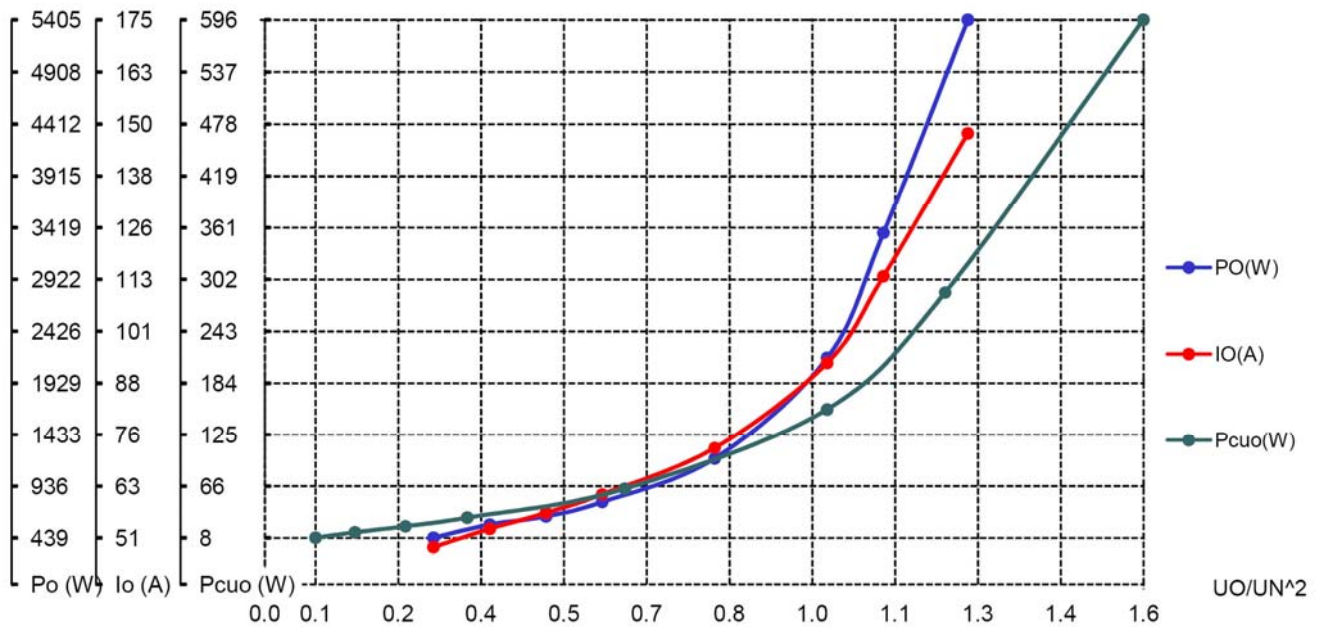
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No Load Test





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Torque / speed and Current / speed Test

