



Windg. calc. card.: _____	motor No. <u>106459042</u>
type: <u>DMA2-100LX4</u>	output: <u>3</u> kW
Duty type: <u>S1</u>	
Voltage: <u>400</u> V	conn. <u>Δ</u> frequency: <u>50</u> Hz
cosφ <u>0,82</u> IM <u>B3</u>	
current: <u>6,4</u> A	speed: <u>1420</u> rpm
eff. <u>82,6</u> % M of I <u>0,006418</u> kgm ²	
remarks: _____	

Statorwinding resistance measurement (cold) :

Connection: <u>Δ</u>	$R_{ul-v1} :$ <u>3,40</u> Ω	
Winding temp: <u>6,5</u> °C	$R_{v1-w1} :$ <u>3,41</u> Ω	$R_{av} =$ <u>3,40</u> Ω ;
room temp: <u>6,5</u> °C	$R_{w1-ul} :$ <u>3,41</u> Ω	

No-load test

$R_{begin} =$ 4,02 Ω
 $R_{end} =$ 4,02 Ω

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	9,3	932	0,123	518	397	17
438	6,2	498	0,106	232	249	17
400	4,2	283	0,097	106	160	17
358	2,9	173	0,095	52	104	17
310	2,2	112	0,096	29	66	17
253	1,6	73	0,102	16	40	17
179	1,0	45	0,140	7	21	17
127	0,7	31	0,196	3	11	17

sound pressure level in dB(A) (at 1m) : 49,1
 sound power level in dB(A) : 57,1
 vibration level (mm/s) : x = 0,7 y = 0,6 z = 0,6

Temperature rise test

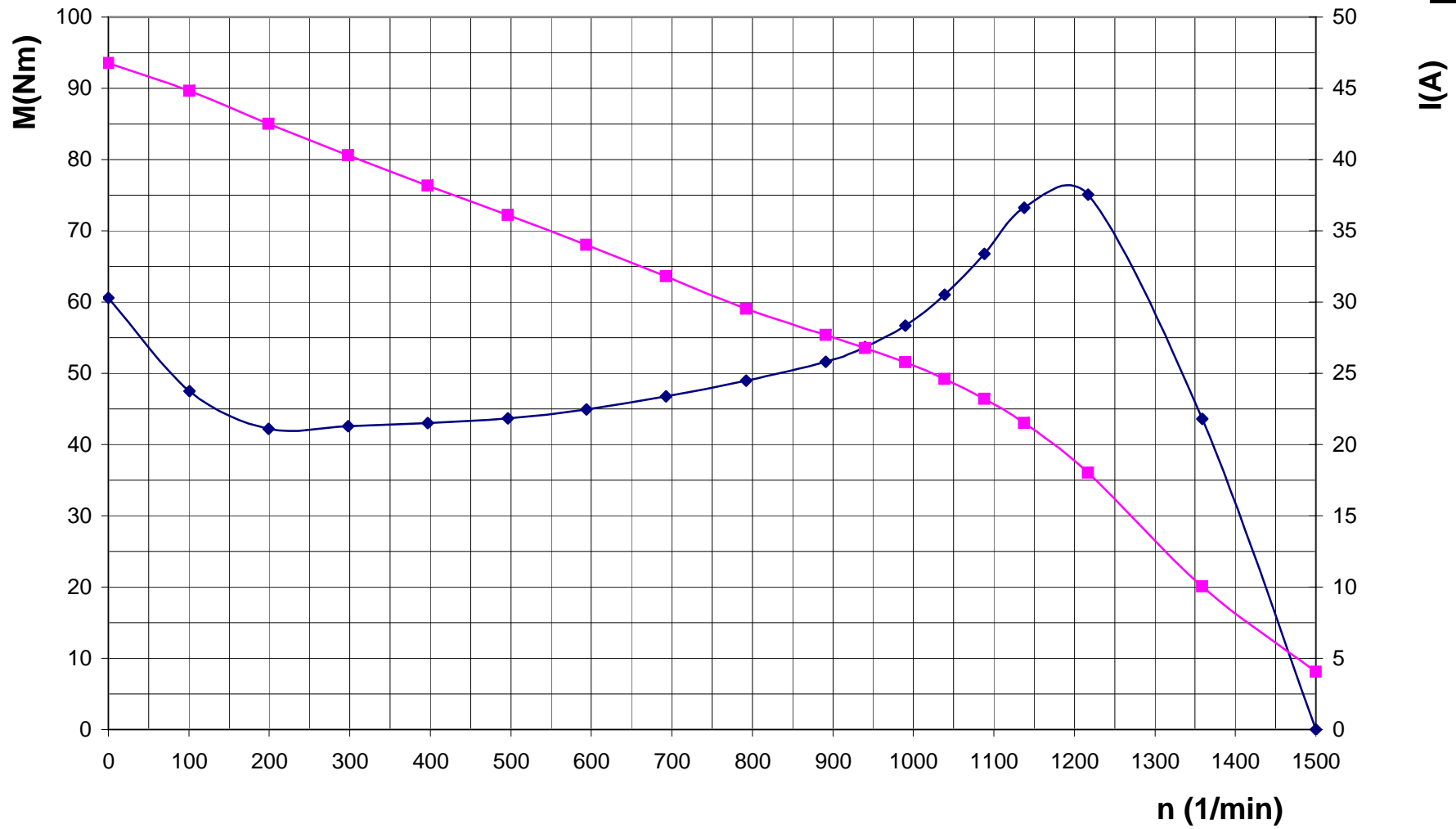
voltage : 400 V frequency: 50 Hz current 6,47 A connection : Δ

		Room Temp. °C	$R_{wdg.}$ Ω	wdg. Temp. by $R_{wdg.}$	wdg. temp. rise (K)	measured Temperature (°C) with ETD*			
According to IEC 34 -1	time					wdg.	bearing DE	bearing NDE	frame
begin	10:00	7,0	3,40	6,8					7,0
	11:45	6,5							47,0
End	12:15	6,5	4,28	68,6	62,1	57	57		47,0

* ETD = embedded temperature detector

EFF 2

DMA2-100LX4 Δ 400V 50HZ 3kW





Load test

DMA2-100LX4

frequency : 50 Hz connection : Δ twdg,av = 79,2 °C Rav = 4,43 Ω

P ₂ approx. %	U V	I A	P ₁ kW	cosφ	n min ⁻¹	s %	Losses						P ₂ kW	η %
							V _{fe} W	V _{cu,1} W	V _e W	V _{cu,2} W	V _w W	V _v W		
25	400	4,21	1,052	0,361	1484	1,07	160	118	8	8	17	311	0,74	70,4
50	400	4,57	1,850	0,584	1468	2,13	160	139	9	33	17	358	1,49	80,6
75	400	5,35	2,704	0,730	1449	3,40	160	190	12	80	17	459	2,24	83,0
100	400	6,44	3,622	0,812	1428	4,80	160	276	18	152	17	623	3,00	82,8
125	400	7,73	4,618	0,862	1402	6,53	160	397	26	264	17	864	3,75	81,3
150	400	9,10	5,700	0,904	1372	8,53	160	550	36	423	17	1186	4,51	79,2
100	440	7,34	3,746	0,670	1442	3,87	256	358	23	120	17	775	2,97	79,3
100	420	6,54	3,660	0,769	1436	4,27	200	284	19	135	17	654	3,01	82,1
100	380	6,34	3,564	0,854	1418	5,47	130	267	17	172	17	604	2,96	83,1
100	360	6,34	3,554	0,899	1409	6,07	107	267	17	192	17	600	2,95	83,1

Torque/speed and Current/speed test

voltage : 400 V frequency: 50 Hz connection : Δ

n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A
1500	0	4,06	990	57	26	496	44	36
1359	44	10,02	940	54	26,77	397	43	38
1217	75	18,01	891	52	27,68	298	43	40
1138	73	21,49	792	49	29,54	199	42	43
1088	67	23,2	693	47	31,79	101	48	45
1039	61	24,61	594	45	33,99	0	61	47

Locked rotor test

wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
26,0	400	46,75	21,343	0,66	60,6
28,2	350	38,12	15,107	0,65	41,9
34,4	300	30,66	10,224	0,64	28,0
36,3	250	24,15	6,519	0,62	17,9
33,4	200	18,36	3,817	0,60	10,7
27,7	100	8,05	0,723	0,52	1,9



Date: 28-2-2001
 Name: HvD
 Signature: [Signature]