


Windg. calc. card.:	motor No.	106419002	
type: DMA2-90L2	Output:	2,2 kW	Duty type: S1
Voltage: 400 V	conn. Y	frequency: 50 Hz	cosφ 0,85 IM B3
current: 4,61 A	speed: 2840 rpm	eff. 81,0 %	M of I 0,00282 kgm ²
remarks:			

Statorwinding resistance measurement (cold) :

Connection: Y	$R_{u1-v1} :$	5,14 Ω	
Winding temp: 7,5 °C	$R_{v1-w1} :$	5,13 Ω	$R_{av} =$ 5,14 Ω ;
room temp: 7,5 °C	$R_{w1-u1} :$	5,15 Ω	

No-load test

$$R_{begin} = \frac{5,97}{\Omega}$$

$$R_{end} = \frac{5,97}{\Omega}$$

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	5,27	556	0,129	249	246	61
438	3,45	320	0,122	107	152	61
400	2,29	207	0,130	47	99	61
358	1,60	150	0,151	23	66	61
310	1,20	118	0,183	13	44	61
253	0,92	98	0,243	8	29	61
179	0,64	82	0,413	4	17	61
127	0,52	70	0,612	2	7	61

sound pressure level in dB(A) (at 1m) : $\frac{59,9}{}$
 sound power level in dB(A) : $\frac{67,9}{}$
 vibration level (mm/s) : $x = \frac{0,5}{}$ $y = \frac{0,5}{}$ $z = \frac{0,4}{}$

Temperature rise test

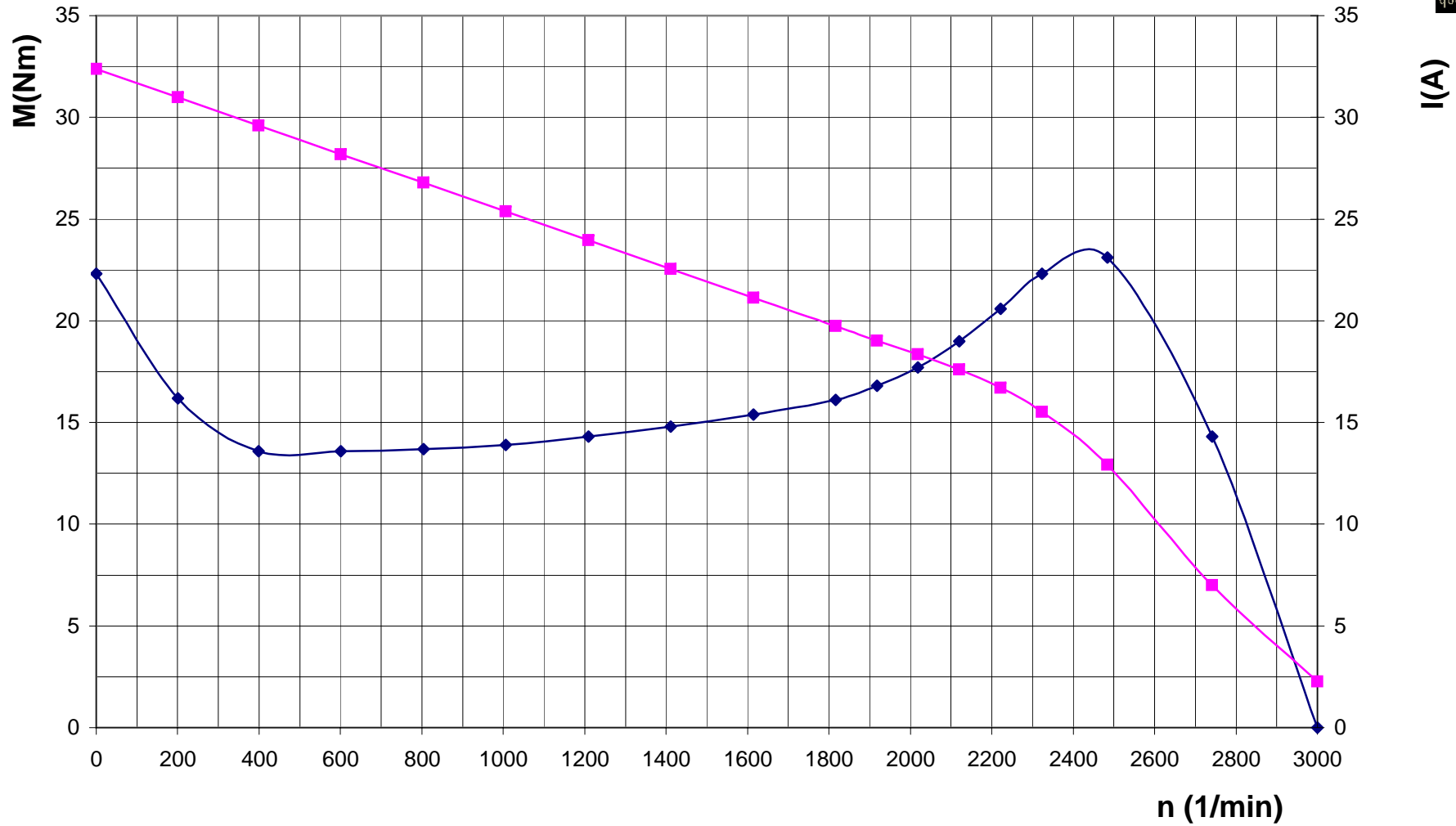
voltage : 400 V frequency: 50 Hz current 4,61 A connection : Y

		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	8:00	7,5	5,15	8,1					8,0
	10:15	9,0							37,0
End	10:45	9,0	6,53	73,2	64,2	47	47		37,0

* ETD = embedded temperature detector

EFF 2

DMA2-90L2 Y400V 50HZ 2,2kW





Load test

DMA2-90L2

frequency : 50 Hz

connection : Y

$t_{wdg,av} = 79,6$ °C

$R_{av} = 6,67$ 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	2,39	0,774	0,467	2965	1,17	99	57	4	7	61	228	0,546	70,5
50	400	2,99	1,381	0,667	2930	2,33	99	89	6	28	61	283	1,098	79,5
75	400	3,75	2,023	0,779	2889	3,70	99	141	9	66	61	375	1,648	81,4
100	400	4,67	2,718	0,840	2845	5,17	99	218	14	123	61	516	2,202	81,0
125	400	5,79	3,481	0,868	2791	6,97	99	335	21	211	61	728	2,753	79,1
150	400	7,14	4,339	0,877	2734	8,9	99	510	33	328	61	1031	3,308	76,2
100	440	4,97	2,816	0,743	2869	4,37	157	247	16	105	61	586	2,230	79,2
100	420	4,77	2,762	0,796	2856	4,80	123	228	15	115	61	541	2,221	80,4
100	380	4,77	2,752	0,877	2820	6,00	81	228	15	146	61	530	2,222	80,7
100	360	4,87	2,770	0,912	2796	6,80	68	237	15	167	61	548	2,222	80,2

Torque/speed and Current/speed test

voltage : 400 V

frequency: 50 Hz

connection : Y

n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A
3000	0,0	2,26	2019	17,7	18,4	1006	13,9	25,4
2742	14,3	7,0	1918	16,8	19,0	804	13,7	26,8
2484	23,1	12,9	1817	16,1	19,7	601	13,6	28,2
2323	22,3	15,5	1614	15,4	21,1	399	13,6	29,6
2222	20,6	16,7	1411	14,8	22,6	201	16,2	31,0
2120	19,0	17,6	1209	14,3	24,0	0	22,3	32,4

Locked rotor test

wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
29,0	400	32,37	16,019	0,714	24,1
35,5	350	27,12	11,435	0,696	17,2
35,6	300	22,10	7,768	0,676	11,7
31,9	250	17,34	4,927	0,656	7,4
29,0	200	12,90	2,821	0,631	4,3
28,0	100	5,14	0,455	0,511	0,6



Date: 12-3-2001

Name: HvD

Signature: