



Windg. calc. card.:		motor No. <u>118806001</u>	
type: <u>DMA2-90S2</u>	Output: <u>1,5</u> kW	Duty type: <u>S1</u>	
Voltage: <u>400</u> V	conn. <u>Y</u>	frequency: <u>50</u> Hz	cosφ <u>0,84</u> IM <u>B3</u>
current: <u>3,26</u> A	speed: <u>2845</u> rpm	eff. <u>78,5</u> %	M of I <u>0,00246</u> kgm ²
remarks:			

Statorwinding resistance measurement (cold) :

Connection: <u>Y</u>	$R_{u1-v1} :$ <u>8,00</u> Ω	
Winding temp: <u>23,0</u> °C	$R_{v1-w1} :$ <u>7,99</u> Ω	$R_{av} =$ <u>7,99</u> Ω ;
room temp: <u>23,0</u> °C	$R_{w1-u1} :$ <u>7,99</u> Ω	

No-load test

$R_{begin} =$ 9,18 Ω
 $R_{end} =$ 9,17 Ω

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	4,24	455	0,131	247	172	36
438	2,78	253	0,120	106	111	36
400	1,87	158	0,122	48	74	36
358	1,34	114	0,137	25	53	36
310	1,01	88	0,162	14	38	36
253	0,77	68	0,202	8	24	36
179	0,53	51	0,310	4	11	36
127	0,45	45	0,455	3	6	36

sound pressure level in dB(A) (at 1m) : 59,5
 sound power level in dB(A) : 67,5
 vibration level (mm/s) : $x =$ 0,5 $y =$ 0,5 $z =$ 0,6

Temperature rise test

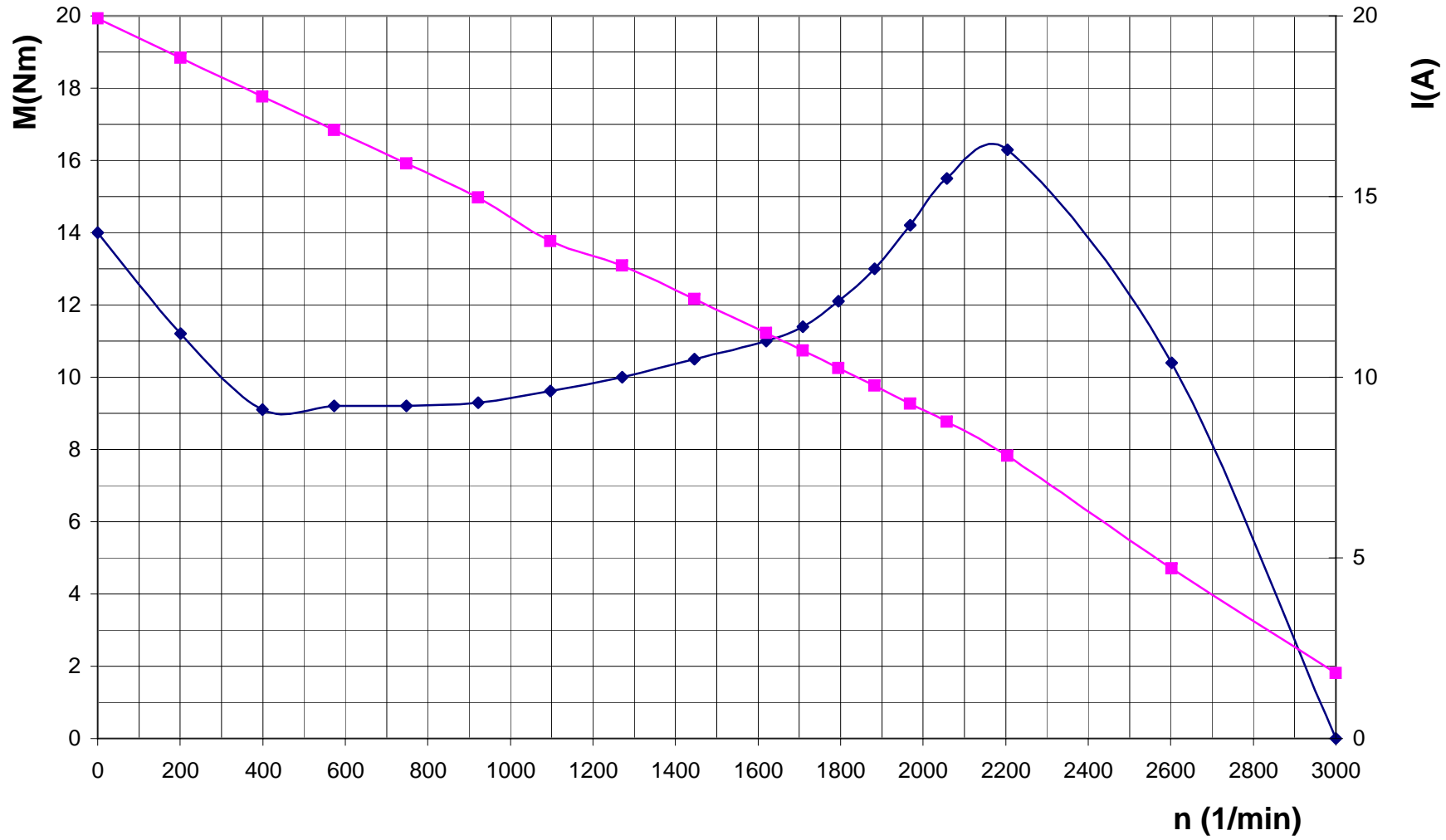
voltage : 400 V frequency: 50 Hz current 3,34 A connection : Y

		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	23,0	8,00	23,1					23,0
	9:45	23,0							50,5
End	10:15	23,0	9,17	61,0	38,0		60	60,0	50,5

* ETD = embedded temperature detector

EFF 2

DMA2-90S2 Y400V 50HZ 1,5kW





Load test

DMA2-90S2

frequency : 50 Hz

connection : Y

$t_{wdg,av} = 58,8$ °C

$R_{av} = 9,10$ 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	1,93	0,542	0,405	2955	1,50	74	51	3	6	36	170	0,372	68,6
50	400	2,22	0,954	0,620	2901	3,30	74	67	4	27	36	208	0,746	78,2
75	400	2,71	1,405	0,748	2839	5,37	74	100	6	66	36	282	1,123	79,9
100	400	3,39	1,907	0,812	2762	7,93	74	157	10	132	36	409	1,498	78,6
125	400	4,25	2,492	0,846	2660	11,33	74	247	15	244	36	616	1,876	75,3
150	400	5,32	3,212	0,871	2519	16,0	74	386	24	437	36	958	2,254	70,2
100	440	3,61	1,937	0,704	2810	6,33	6,34	178	11	110	36	342	1,595	82,4
100	420	3,43	1,887	0,756	2785	7,17	7,18	161	10	122	36	336	1,551	82,2
100	380	3,37	1,887	0,851	2744	8,53	8,54	155	10	146	36	356	1,531	81,2
100	360	3,49	1,917	0,881	2723	9,23	9,24	166	10	160	36	382	1,535	80,1

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	1,81	1795	12,1	10,3	922	9,3	15,0
2602	10,4	4,7	1708	11,4	10,7	748	9,2	15,9
2204	16,3	7,8	1620	11,0	11,2	573	9,2	16,8
2057	15,5	8,8	1446	10,5	12,2	399	9,1	17,8
1969	14,2	9,3	1271	10,0	13,1	201	11,2	18,8
1882	13,0	9,77	1097	9,6	13,8	0	14,0	19,9

Locked rotor test

wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
28,5	400	19,92	10,371	0,751	18,4
42,1	350	15,93	7,436	0,770	13,0
47,9	300	12,73	5,108	0,772	8,7
48,6	250	10,10	3,314	0,758	5,6
46,6	200	7,83	1,979	0,730	3,3
41,4	100	3,48	0,396	0,657	0,5



Date: 28-5-2001
Name: HvD
Signature: