



Windg. calc. card.:		motor No. <u>1563235003</u>	
type: <u>DM1-160M6</u>	Output: <u>7,5</u> kW	Duty type: <u>S1</u>	
Voltage: <u>400</u> V	conn. <u>Δ</u>	frequency: <u>50</u> Hz	cosφ <u>0,78</u> IM <u>B5</u>
current: <u>16,1</u> A	speed: <u>970</u> rpm	eff. <u>86,0</u> %	M of I <u>0,08</u> kgm ²
remarks:			

Statorwinding resistance measurement (cold) :

Connection: <u>Δ</u>	$R_{u1-v1} :$ <u>1,01</u> Ω	
Winding temp: <u>25,5</u> °C	$R_{v1-w1} :$ <u>1,01</u> Ω	$R_{av} =$ <u>1,01</u> Ω ;
room temp: <u>25,0</u> °C	$R_{w1-u1} :$ <u>1,01</u> Ω	

No-load test

$R_{begin} =$ 1,255 Ω
 $R_{end} =$ 1,255 Ω

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	14,8	1444	0,119	412	986	46
438	10,8	911	0,111	220	645	46
400	8,0	586	0,106	120	420	46
358	6,1	400	0,106	70	284	46
310	4,8	285	0,111	43	196	46
253	3,6	200	0,127	24	130	46
179	2,5	123	0,159	12	65	46
127	1,8	85	0,215	6	33	46

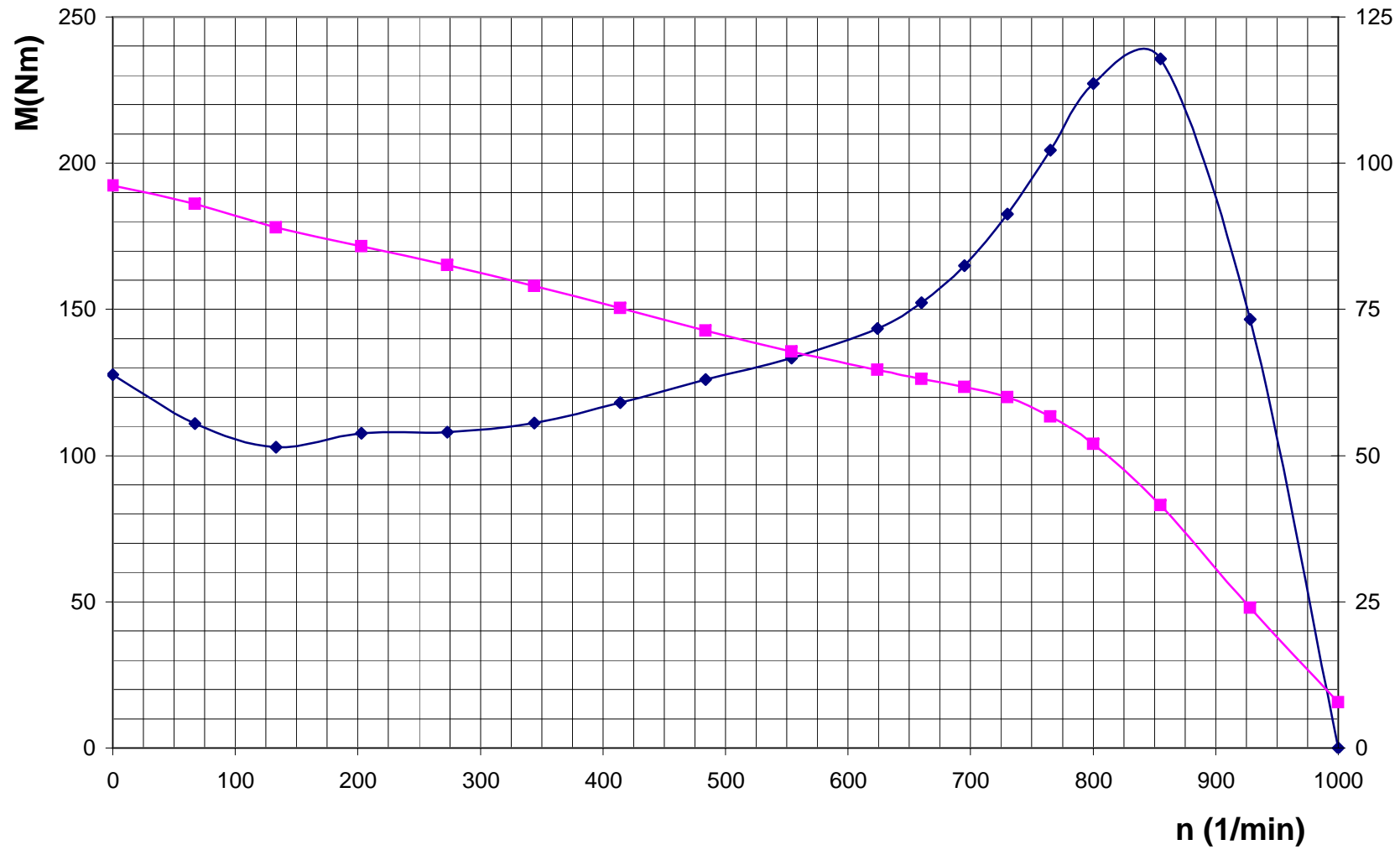
sound pressure level in dB(A) (at 1m) : 52,1
 sound power level in dB(A) : 60
 vibration level (mm/s) : x = 0,5 y = 0,8 z = 1,0

voltage : 400 V frequency: 50 Hz current 16 A 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	8:00	25,5	1,02	25,7					26,0
	10:05	28,0							79,0
End	10:35	28,0	1,32	106,6	78,6	85	85,0		79,0

* ETD = embedded temperature detector

DM1-160M6 Δ 400V 50HZ 7,5kW



Load test

DM1-160M6

frequency : 50 Hz

connection : Δ

$t_{wdg,av} = 106,1$ °C

$R_{av} = 1,322$ 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	8,9	2,506	0,406	995	0,50	420	157	14	10	46	646	1,86	74,2
50	400	10,2	4,486	0,635	984	1,60	420	206	18	61	46	751	3,73	83,3
75	400	12,6	6,569	0,753	974	2,60	420	315	27	151	46	959	5,61	85,4
100	400	15,8	8,783	0,802	962	3,80	420	495	43	297	46	1301	7,48	85,2
125	400	19,4	11,150	0,830	948	5,20	420	746	65	516	46	1792	9,36	83,9
150	400	23,1	13,697	0,856	930	7,0	420	1058	92	849	46	2464	11,23	82,0
100	440	16,4	9,083	0,727	968	3,20	662	533	46	251	46	1538	7,54	83,1
100	420	15,9	8,803	0,761	965	3,50	522	501	43	271	46	1383	7,42	84,3
100	380	16,1	8,753	0,826	956	4,40	343	514	44	345	46	1293	7,46	85,2
100	360	16,5	8,673	0,843	951	4,90	287	540	47	382	46	1302	7,37	85,0

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
1000	0	7,82	695	165	61,8	344	111	79
928	147	24,0	660	152	63,1	273	108	83
855	236	41,5	624	144	64,6	203	108	86
800	227	51,9	554	133	67,8	133	103	89
765	204	56,7	484	126	71,4	67	111	93
730	183	59,9	414	118	75,2	0	128	96

Locked rotor test

wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
25,5	400	96,2	35,339	0,530	127,6
43,1	350	81,1	25,239	0,513	90,2
43,6	300	66,6	17,132	0,495	60,7
59,2	250	52,7	10,841	0,475	38,4
83,3	200	39,7	6,186	0,450	22,2
59,1	100	16,3	1,075	0,381	4,3



Date: 21-12-2001

Name: HvD

Signature: _____