Type testreport three phase squirrel-cage motors DM1-132S8

Windg. calc. card.: motor No. 10

type: DM1-132S8 Output: 2,2 kW Duty type: S1

Voltage: 400 V conn. Y frequency: 50 Hz cosφ 0,71 IM B3

current: 5,7 A speed: 710 rpm eff. 78,0 % M of I 0,029 kgm^2

remarks: PTC150^{0}C inside the motors

Statorwinding resistance measurement (cold) :

Connection: Y R_{u1-v1} : 5,970 Ω

Winding temp: 16,0 °C R_{v1-w1} : 5,980 Ω R_{av} = 5,967 Ω ;

room temp: 16,0 °C R_{w1-u1} : 5,980 Ω

No-load test

R_{begin} = 6,681 Ω

R_{end} = 6,794 Ω

				Losses		
U_0 V	I_0 A	P_0 W	cosφ$_0$	V_{cu1} W	V_{fe} W	V_w W
473	6,5	678	0,127	431	233	14
438	5,1	480	0,124	265	201	14
400	4,1	337	0,119	171	152	14
358	3,3	238	0,116	111	113	14
310	2,6	168	0,120	69	85	14
253	2,0	114	0,130	41	59	14
179	1,4	63	0,145	20	29	14
127	1,0	35	0,159	10	11	14

sound pressure level in dB(A) (at 1m) : 47

sound power level in dB(A) : 55

vibration level (mm/s) : x = 1 y = 0,7 z = 0,3

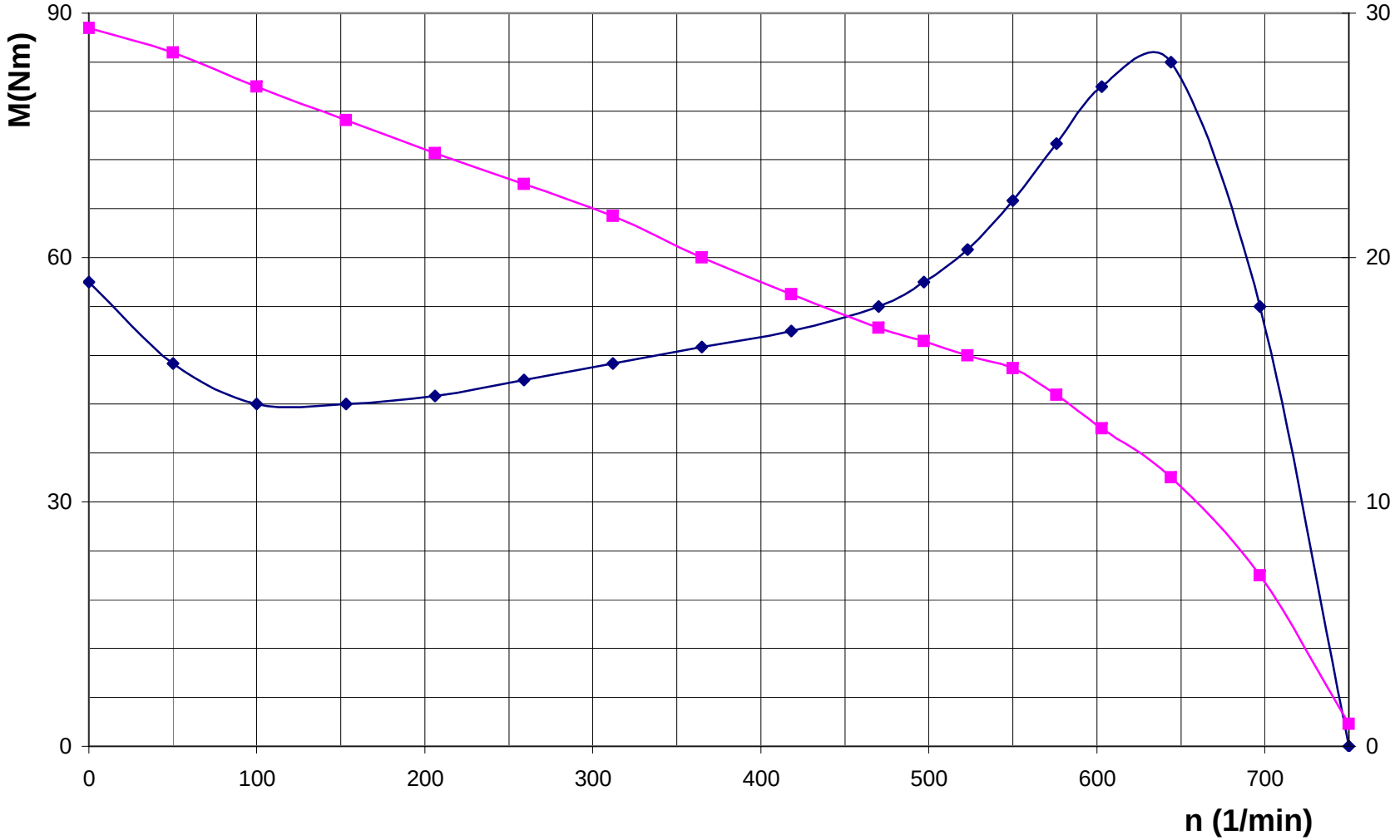
Temperature rise test

voltage : 400 V frequency: 50 Hz current 5,7 A connection : Y

		Room	$R_{wdg.}$	wdg.	wdg.	measured Temperature (°C) with ETD*			
According to IEC 34 -1	time	Temp. °C	Ω	Temp. by $R_{wdg.}$	temp. rise (K)	wdg.	bearing DE	bearing NDE	frame
begin	19:05	16,0	5,980	16,1					16,0
	20:25	16,0							49,5
End	20:55	16,0	7,231	68,7	52,7		55	56,0	49,5

* ETD = embedded temperature detector

DM1-132S8 DR.400V 50HZ 2,2kW



Load test DM1-132S8

frequency : 50 Hz connection : Y $t_{wdg,av}$ = 72,8 °C R_{av} = 7,08 Ω

							Losses							
P_2 approx. %	**U** V	**I** A	**P_1** kW	**cosφ**	**n** min^{-1}	**s** %	**V_{fe}** W	**$V_{cu,1}$** W	**V_e** W	**$V_{cu,2}$** W	**V_w** W	**V_v** W	**P_2** kW	**η** %
25	400	3,9	0,88	0,327	747	0,40	152	162	7	2	14	336	0,55	61,98
50	400	4,4	1,51	0,494	735	2,00	152	206	8	23	14	403	1,10	73,25
75	400	5	2,14	0,618	726	3,20	152	266	11	55	14	497	1,64	76,78
100	400	5,7	2,83	0,717	716	4,53	152	345	14	105	14	630	2,20	77,74
125	400	6,8	3,62	0,769	704	6,13	152	491	20	181	14	858	2,76	76,30
150	400	8,3	4,56	0,792	686	8,5	152	732	30	311	14	1238	3,32	72,83
100	440	6,1	2,94	0,631	722	3,73	209	395	16	86	14	721	2,21	75,44
100	420	5,8	2,88	0,682	720	4,00	167	357	15	94	14	647	2,23	77,54
100	380	5,7	2,81	0,748	712	5,07	111	345	14	118	14	603	2,20	78,53
100	360	5,7	2,78	0,781	707	5,73	94	345	14	133	14	600	2,18	78,37

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
750	0	0,92	523	61	16	259	45	23
697	54	7	497	57	16,57	206	43	24
644	84	11	470	54	17,12	153	42	26
603	81	13	418	51	18,49	100	42	27
576	74	14,37	365	49	20	50	47	28
550	67	15,47	312	47	21,69	0	57	29

Locked rotor test

wdg. temp. °C	U V	I A	P_1 kW	cosφ	T Nm
11,5	400	29,8	13,39	0,648	57
26,4	350	25,1	9,72	0,639	46
32,2	300	20,7	6,73	0,625	34
36,4	250	16,6	0,61	0,084	24
34,3	200	12,8	0,58	0,131	15
30,1	100	6	0,517	0,497	3

DUTCHI MOTORS® quality of high class

Date: 10-2-1998
Name: HvD
Signature: