

Technical Data Summary, SBMAX Frame Sizes 145 mm							
Winding selection for 4000 rpm with 220 Vac 3 phase drive							
Issue 3, 16/12/95 Lamiera nuova							
			Frame 145				Units
Reference data:	SBM	3004	4008	4015	4022	4028	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	4,5	8,7	15,0	22,0	28,0	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	8,5	15,4	27,0	36,7	44,5	Nmrms
Base speed	wn	420	420	420	420	420	rad/s
Nominal power,1)	Pn	1726	2950	4557	5610	5911	W
Nominal power,2)	P105	3067	5406	9282	12034	13957	W
Torque at max. speed 1)	Tw	4,1	7,0	10,9	13,4	14,1	Nmrms
Torque at max. speed 2)	Tw105	7,3	12,9	22,1	28,7	33,2	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	26,7	48,6	85,4	116,0	140,8	Nmrms
Physical data:							
Maximum speed	wmax	700	700	700	700	700	rad/s
Rotor inertia	Jm	0,775	1,05	1,6	2,15	2,7	mkgm2
Acceleration at peak torque	apk	34489	46329	53362	53971	52148	rad/s2
Max. shock on motor, any direction	S	200	200	200	200	200	m/s2
Max. vibration, radial	Vr	200	200	200	200	200	m/s2
Max. vibration, axial	Va	40	40	40	40	40	m/s2
Shaft torsional resonance frequency 3)	fm	N.A.	N.A.	N.A.	N.A.	500	Hz
Mass	M	10,0	10,0	14,0	18,0	22,0	kg
Thermal data:							
Motor losses at nominal power	Ln	88	98	105	130	148	W
Thermal impedance, motor to air	Rtha	0,738636	0,663265	0,619048	0,5	0,439189	oC/W
Thermal impedance, motor to air+flange	Rthf	0,34	0,34	0,31	0,29	0,28	oC/W
Thermal capacity	Cth	6279	6279	8791	11302	13814	J/oC
Thermal time constant in air	ta	4638	4165	5442	5651	6067	s
No load losses at base speed	L0	18,0	36,1	52,5	83,6	111,5	W
Treshold of built-in PTC	PTCt	130	130	130	130	130	oC
Electrical data:							
Pole number	PN	8	8	8	8	8	
Connection		Y	Y	Y	Y	Y	
Back E.M.F. between phases	Ke	0,34749	0,43875	0,43875	0,43875	0,43875	Vs
Torque constant	Kt	0,60187	0,759937	0,759937	0,759937	0,759937	Nm/Arms
Temperature coefficient of E.M.F. and Kt	dKe/dT	-0,09	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	0,820814	0,39506	0,140658	0,081401	0,057261	Ohm
Winding inductance	Lw	8,26	3,84	1,23	0,671	0,446	mH
Nominal voltage	Vn	182	198	189	187	186	Vrms
EMF at 1000 rpm	V1000	36	46	46	46	46	Vrms
Nominal current, zero speed	In0	8,1	12,3	21,3	31,1	39,6	Arms
Nominal current at rated power 1)	In	7,2	9,7	15,0	18,6	19,7	Arms
Peak current	Ipk	44	64	112	153	185	Arms
Frequency	fn	267	267	267	267	267	Hz
Efficiency at rated power	n	0,951	0,968	0,977	0,977	0,976	
Min. demagnetization current, 125oC	Idm	59	94	188	282	376	Apk