

Technical Data Summary, SBMAX Frame Sizes 145 mm							
Winding selection for 1100 rpm with 220 Vac 3 phase drive							
Issue 3, 16/12/95 Lamiera nuova							
			Frame 145				Units
Reference data:	SBM	1104	1108	1115	1122	1128	
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	8,8	15,8	27,0	37,1	45,2	Nmrms
Base speed	wn	113	113	113	113	113	rad/s
Nominal power,1)	Pn	517	986	1698	2460	3115	W
Nominal power,2)	P105	887	1580	2691	3683	4472	W
Torque at max. speed 1)	Tw	4,6	8,7	15,0	21,8	27,6	Nmrms
Torque at max. speed 2)	Tw105	7,8	14,0	23,8	32,6	39,6	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	28,0	50,0	85,3	117,2	142,9	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	36073	47583	53303	54525	52909	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	80	93	105	127	144	W
Thermal impedance, motor to air	Rtha	0,8125	0,6989247	0,6190476	0,511811	0,4513889	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	5102	4389	5442	5785	6235	s
No load losses at base speed	L0	1,9	3,9	5,6	9,0	12,0	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	1,17	1,4391	1,4976	1,5327	1,5327	Vs
Torque constant	Kt	2,026499	2,4925943	2,5939193	2,654714	2,6547143	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	8,505829	4,0291174	1,6424176	0,973274	0,6788298	Ohm
Winding inductance	Lw	93,64	41,32	14,38	8,18	5,440	mH
Nominal voltage	Vn	182	190	183	184	183	Vrms
EMF at 1000 rpm	V1000	122	151	157	160	160	Vrms
Nominal current, zero speed	In0	2,4	3,7	6,2	8,9	11,3	Arms
Nominal current at rated power 1)	In	2,4	3,7	6,1	8,6	10,9	Arms
Peak current	lpk	14	20	33	44	54	Arms
Frequency	fn	72	72	72	72	72	Hz
Efficiency at rated power	n	0,866	0,914	0,942	0,951	0,956	
Min. demagnetization current, 125oC	ldm	18	29	55	81	108	Apk