

# TECHNICAL CHARACTERISTICS

## FC MOTORS VERSION 230 V<sub>AC</sub>

Type of motor		170 FC 05	170 FC 1	170 FC 4	290 FC 1	290 FC 4	390 FC 2	390 FC 6
<b>Specific Characteristics</b>								
Continuous torque at stall (Nm)	(1)	14.3	26	48	93	175	248	461
Current at continuous torque (A)	(1)	5.6	5.1	7.7	13.3	17	23.8	37.6
Peak torque (Nm)	(2)	42.6	83	169	272	544	885	1745
Current at peak torque (A)	(2)	17.7	17.7	29.6	42.9	58.1	84.9	141.4
Rated speed (RPM)	(1)	800	520	430	380	260	250	210
Rated power (W)	(1)	1080	1190	1700	3100	4250	5980	9000
Inertia (Kg.m <sup>2</sup> )		0.0079	0.0136	0.025	0.151	0.274	0.830	1.525
Weight (Kg)		14.5	20	31	70	87	124	204
Thermal time constant Housing ambient (s)	(1)	4050	4270	4610	5375	6130	7920	8850
Thermal resistance Housing ambient (°C/W)	(1)	0.254	0.225	0.178	0.105	0.085	0.067	0.054
Phase resistance at 20°C (Ω)		2.91	3.85	2.15	1.18	0.90	0.60	0.29
Phase inductance at I contin. (mH)		12.4	24.8	18.6	12.8	14.0	9.8	6.8
Electrical time constant (ms)		5.4	6.4	8.6	10.8	15.6	16.3	23.4
No load phase emf at 60 RPM (V)	(1)	6.2	12.4	15.2	18.0	26.5	26.8	31.5
<b>Characteristics with recommended drives</b>								
DBM 03 range	(3)	10	10	10	15	25	25	50
● Peak torque (Nm)	(2)	42.6	83	111	222	488	571	1309
● Peak current (A)		17.7	17.7	17.7	31.8	49.5	49.5	99

(1) - ambient temperature 20°C  
 - winding temperature rise : 120°C  
 - motor in natural convection mounted on flange :  
   \* range 170 : square of 180 mm  
   \* range 290 : square of 340 mm  
   \* range 390 : square of 410 mm

(2) - cold motor at 20°C

(3) - drives adjusted in plant  
 for FC range motors.  
 See our catalog and  
 the DBM 03 Manual.