

TECHNICAL CHARACTERISTICS 190ST

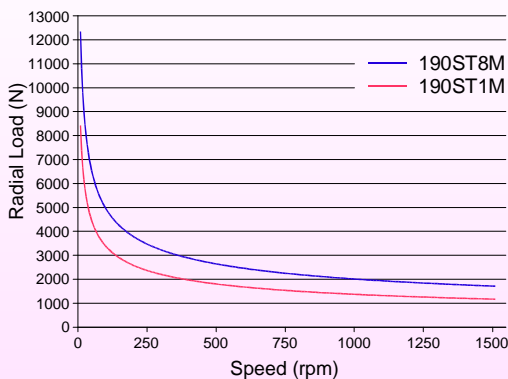
Motors wound for 330 Vac phase to phase

			190ST2M		190ST4M		190ST6M		190ST8M		
Rated speed			rpm	500	1500	500	1500	500	1000	500	1000
Continuous torque at stall (4)			N.m	36		63		89		111	
Current at continuous torque (1)			A	5	11.7	8	20	11.5	19	14	23.3
Peak torque (2)(3)			N.m	119		238		357		476	
Current at peak torque (2)			A	18.6	48.9	34.2	93.2	56.9	102.5	73.2	128.1
Rated power (1)			W	1600	3780	2504	3307	2940	4570	3780	5355
Inertia without position feedback (8)			Solid shaft	4.5		7.46		10.43		13.4	
				4.42		7.39		10.36		13.32	
				7.46		10.43		13.39		16.36	
				6.9		9.6		12.3		15	
Inertia with resolver			Hollow shaft Ø72	10.16		13.13		16.1		19.06	
				9.2		11.9		14.6		17.3	
Weight without position feedback with B5 flange (6)(7)			Solid shaft	19.7		28.6		37.6		46.6	
				18.2		27.2		36.2		45.1	
				20.3		29.3		38.3		47.3	
				19.9		28.7		37.5		46.3	
Weight with resolver and B5 flange (6)			Hollow shaft Ø72	22.7		31.6		40.6		49.6	
				22		30.7		39.5		48.3	
Thermal time constant (1)(5)			s	1506		2129		2559		2865	
Thermal resistance (1)(5)			°C/W	0.253		0.203		0.17		0.146	
Phase resistance at 20°C (2)			Ω	4.76	0.69	2.12	0.28	1.02	0.31	0.77	0.25
Phase inductance at I continuous			mH	48.2	7	28.8	3.9	15.7	4.8	12.7	4.1
Electrical time constant (2)			ms	10.1		13.6		15.4		16.5	
Back emf constant (line to line) (2)			V/rad.s	5.13	1.96	5.6	2.05	5.04	2.8	5.22	2.99
Number of poles				12							

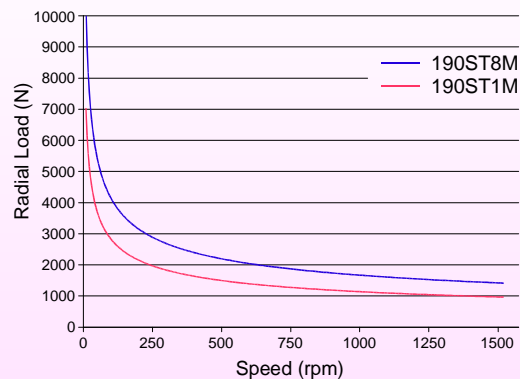
- (1) Ambient temperature: 20°C, Winding temperature rise: 120°C
Motor in natural convection mounted on a □200 flange.
- (2) Cold motor at 20°C
- (3) See torque vs speed characteristics on : <http://www.alxion.com/CFN>
- (4) Consider a 7% derating with position feedback codes 2 and 7.
- (5) Housing – ambient
- (6) B14 flange: +0.4 kg
- (7) Position feedback options
 1 : +1.5 kg
 2 7 : +1.2 kg
 3 : +0.34 kg
 4 5 8 9 : +0.25 kg
 6 : +0.1 kg
- (8) Position feedback options
 1 : $1.50 \cdot 10^{-3}$ kg.m²
 2 7 : $0.34 \cdot 10^{-3}$ kg.m²
 3 : $0.15 \cdot 10^{-3}$ kg.m²
 4 5 8 9 : $2.60 \cdot 10^{-6}$ kg.m²
 6 : $2.50 \cdot 10^{-6}$ kg.m²

Maximum load for a 20 000h life time and axial load < 30% of radial load

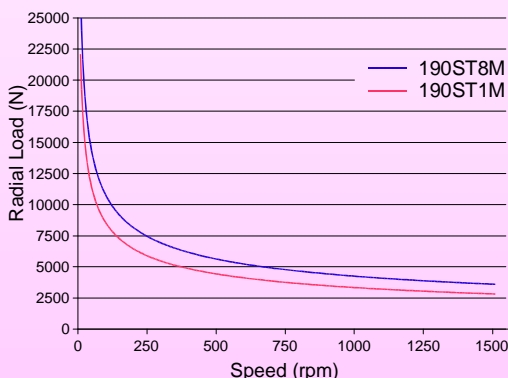
190ST with solid shaft



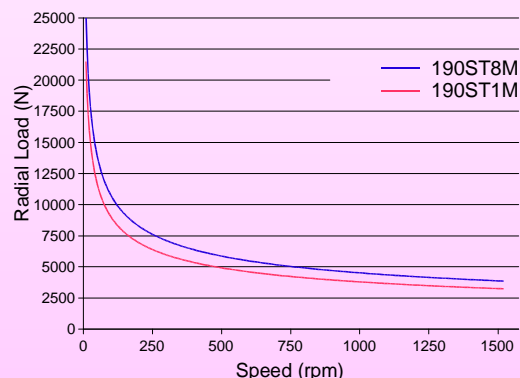
190ST with hollow shaft Ø40



190ST with blind shaft Ø72 & Ø75



190ST with hollow shaft Ø72 & Ø75



The values of load are given:
 - For a smooth operation without shock.
 - In rated conditions of motor operation.
 - For a load applied in the middle of the shaft end.
 The shaft end, on its own, cannot support the whole maximum load applied punctually.
 In some cases, repartition of the load should be necessary, please contact us.
 For atypical conditions (shocks, vibrations, temperature, environment), please contact us.