

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	1,600	3,780	2,504	3,307	2,940	4,570	3,780	5,355	
Inertia without position feedback	(8)	Solid shaft		4.50		7.46		10.43		13.40	
		Hollow shaft Ø40		4.42		7.39		10.36		13.32	
		Blind shaft Ø72		7.46		10.43		13.39		16.36	
		Blind shaft Ø75		6.90		9.60		12.30		15.00	
Inertia with resolver		Hollow shaft Ø72		10.16		13.13		16.10		19.06	
		Hollow shaft Ø75		9.20		11.90		14.60		17.30	
Weight without position feedback with B5 flange	(6)(7)	Solid shaft		19.7		28.6		37.6		46.6	
		Hollow shaft Ø40		18.2		27.2		36.2		45.1	
		Blind shaft Ø72		20.3		29.3		38.3		47.3	
		Blind shaft Ø75		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	
		Hollow shaft Ø75		22		30.7		39.5		48.3	
Thermal time constant	(1)(5)	s	1,506		2,129		2,559		2,865		
Thermal resistance	(1)(5)	°C/W	0.253		0.203		0.170		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	7.0	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		

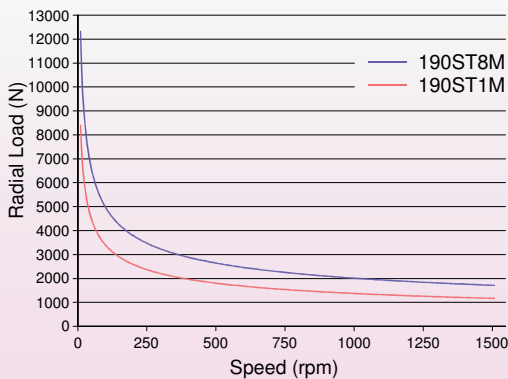
- (1) Ambient temperature: 20 °C, Winding temperature rise: 120 °C
Motor in natural convection mounted on a ϕ 200 flange.
- (2) Cold motor at 20 °C
- (3) See torque vs speed characteristics on : <http://www.alxion.com/CFN>

- (4) Consider a 7% derating with position feedback codes 2 and 7.
- (5) Housing – ambient
- (6) B14 flange: +0.4 kg

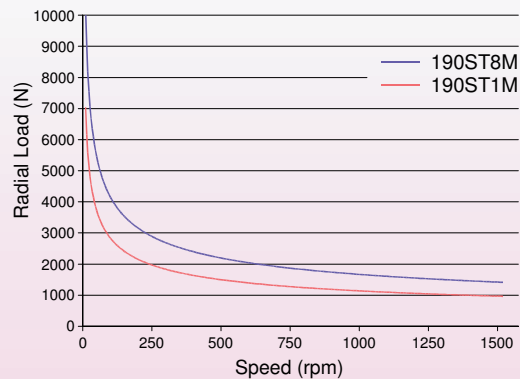
- (7) Position feedback options
- | | |
|---------|------------|
| 1 | : +1.5 kg |
| 2 7 | : +1.2 kg |
| 3 | : +0.34 kg |
| 4 5 8 9 | : +0.25 kg |
| 6 | : +0.1 kg |
- (8) Position feedback options
- | | |
|---------|--|
| 1 | : $1.50 \cdot 10^{-3}$ kg.m ² |
| 2 7 | : $0.34 \cdot 10^{-3}$ kg.m ² |
| 3 | : $0.15 \cdot 10^{-3}$ kg.m ² |
| 4 5 8 9 | : $2.60 \cdot 10^{-6}$ kg.m ² |
| 6 | : $2.50 \cdot 10^{-6}$ kg.m ² |

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

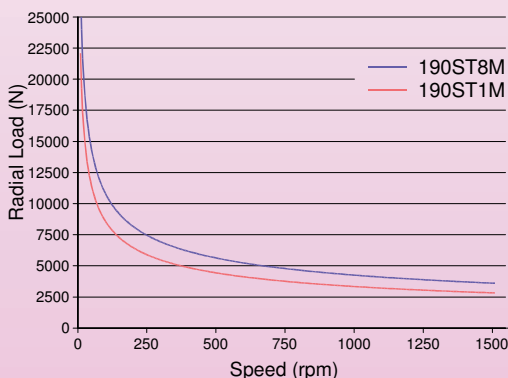
190ST with solid shaft



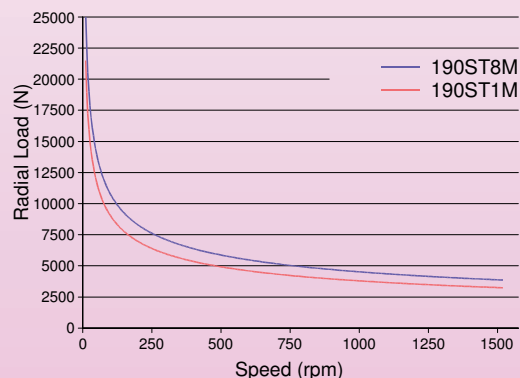
190ST with hollow shaft Ø40



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.