

TECHNICAL CHARACTERISTICS 190ST

Windings for 400V / 460Vac drives (See Application note)

			190ST1M		190ST2M		190ST3M		190ST4M		190ST6M		190ST8M					
Rated speed			rpm		500	1500	500	1500	500	1500	500	1000	500	1000				
Continuous torque at stall (4)			N.m		19		36		49		63		111					
Current at continuous torque (1)			A		3	6.5	4.5	11.7	5.9	13.2	7.1	19.3	11.1	20	13.3	23.3		
Peak torque (2)(3)			N.m		62		124		186		248		372		496			
Current at peak torque (2)			A		11.8	25.6	18.6	48.9	27	60.3	34.2	93.2	56.9	102.5	73.2	128.1		
Rated power (1)			W		910	2560	1730	4230	2360	5259	3024	6590	4250	7085	5250	8530		
Inertia without position feedback (8)			Solid shaft		3.02		4.5		5.98		7.46		10.43		13.4			
			Hollow shaft Ø40		2.94		4.42		5.9		7.39		10.36		13.32			
			Blind shaft Ø72		5.98		7.46		8.95		10.43		13.39		16.36			
			Blind shaft Ø75		5.55		6.9		8.25		9.6		12.3		15			
Inertia with resolver			Hollow shaft Ø72		8.67		10.16		11.65		13.13		16.1		19.06			
			Hollow shaft Ø75		7.85		9.2		10.55		11.9		14.6		17.3			
Weight without position feedback With B5 flange (6)(7)			Solid shaft		15.3		19.7		24.1		28.6		37.6		46.6			
			Hollow shaft Ø40		13.7		18.2		22.7		27.2		36.2		45.1			
			Blind shaft Ø72		15.8		20.3		24.8		29.3		38.3		47.3			
			Blind shaft Ø75		15.5		19.9		24.3		28.7		37.5		46.3			
Weight with resolver and B5 flange (6)			Hollow shaft Ø72		18.3		22.7		27.2		31.6		40.6		49.6			
			Hollow shaft Ø75		17.7		22		26.4		30.7		39.5		48.3			
Thermal time constant (1)(5)			s		1200		1506		1850		2129		2559		2865			
Thermal resistance (1)(5)			°C/W		0.28		0.253		0.228		0.203		0.17		0.146			
Phase resistance at 20°C (2)			Ω		9.45	2	4.76	0.69	2.76	0.597	2.12	0.28	1.02	0.31	0.77	0.25		
Phase inductance at I continuous			mH		55.2	11.8	48.2	7	31.7	6.4	28.8	3.9	15.7	4.8	12.7	4.1		
Electrical time constant (2)			ms		5.9		10.1		10.7		13.6		15.6		16.5			
Back emf constant (line to line) (2)			V/rad.s		4.06	1.77	5.13	1.96	5.32	2.38	5.6	2.05	5.04	2.8	5.22	2.99		
Power cable square section			nxmm ²		4x1.5		4x1.5		4x1.5		4x1.5		4x2.5		4x1.5		4x4	
Power cable diameter			mm		Ø8.6		Ø8.6		Ø8.6		Ø8.6		Ø10.8		Ø8.6		Ø12.2	
Number of poles					12													

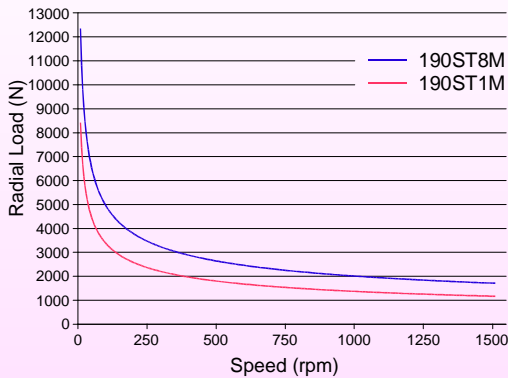
- (1) Ambient temperature: 20°C,
Winding temperature rise: 120°C
Motor in natural convection mounted on a □200 flange.
- (2) Cold motor at 20°C
- (3) See torque vs speed characteristics on :
<http://www.alxion.com/>

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

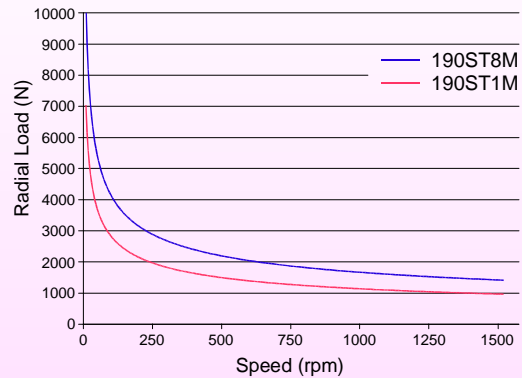
- (7) (8) Weight & Inertia function of feedback option
- | | | |
|-------------------|-------------|---|
| 1 | : + 1.5 kg | + 1.50.10 ⁻³ kg.m ² |
| 2, 7, A & B | : + 1.2 kg | + 0.34.10 ⁻³ kg.m ² |
| 3 | : + 0.34kg | + 0.15.10 ⁻³ kg.m ² |
| 4, 5, 8, 9, C & D | : + 0.25kg | + 2.60.10 ⁻⁶ kg.m ² |
| 6 | : + 0.1 kg | + 2.50.10 ⁻⁶ kg.m ² |
| E & F | : + 0,44 kg | + 0,42.10 ⁻⁶ kg.m ² |

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

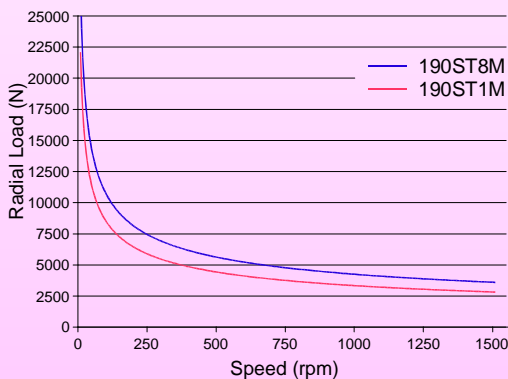
190ST with solid shaft



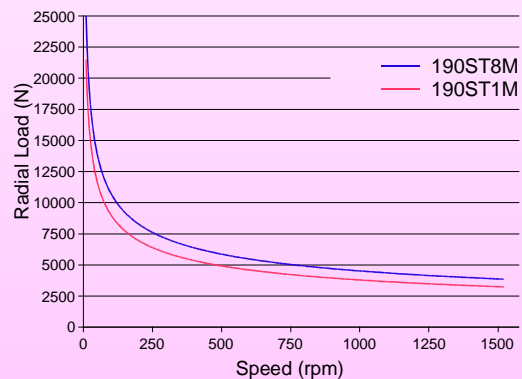
190ST with hollow shaft Ø40



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.