

Group	Motors	Date	2/21/2005
Series	T	Revised	12/20/2007
Element Group	Specifications	Revision	3
Element	Electrical and Mechanical	Author	J. Coleman
		# Of Pages	6

**T-Series Stepper Motor Specifications**

Languages	Target Group	Status	Usage	International Restrictions
<input checked="" type="checkbox"/> English	<input checked="" type="checkbox"/> Basic	<input type="checkbox"/> In Process	<input type="checkbox"/> Internal	<input checked="" type="checkbox"/> Citizens/Nationals of U.S.A.
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<input type="checkbox"/> .....	<input type="checkbox"/> Specialist			<input checked="" type="checkbox"/> Uses, and End Users (www.bis.doc.gov)

**About the Content:**

This document contains electrical and mechanical specifications for the T-Series IDC motors.

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**Introduction**

Electrical and Mechanical specifications are provided for the following motors: T22T, T22V, T31T, T31V, T32T, T32V, T41T, T41V

Note: T for Series Winding; V for Parallel Winding. Differences between the T and V windings are listed in the V column.

T22	T22T	T22V
<b>ELECTRICAL SPECIFICATIONS</b>		
Continuous Stall Torque, oz-in (N-m)	280 (1.98)	
Recommended Current/Phase, Amps	0.77	1.5
Winding Resistance @ Ambient, Ohms	11.5	2.9
Inductance, mH	65.5	17
Max. Winding Temperature, °F (°C)	212 (100)	
<b>MECHANICAL SPECIFICATIONS</b>		
Rotor Inertia, oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	0.0056 (0.0408 x 10 <sup>-3</sup> )	
Axial Shaft Load, lbs (N)	10 (44)	
Radial Shaft Load, lbs (N)	15 (66)	
Motor Weight, lbs (kg)	2.7 (1.23)	
Step Angle (Full Step) degrees	1.8	
Bolt Circle Diameter, inches	2.625	
Shaft Length, inches (mm)	0.81 (20.57)	
Shaft Diameter, inches (mm)	0.25 (6.35)	
Shaft Feature	Flat	

T31	T31T	T31V
<b>ELECTRICAL SPECIFICATIONS</b>		
Continuous Stall Torque, oz-in (N-m)	450 (3.2)	
Recommended Current/Phase, Amps	1.4	2.8
Winding Resistance @ Ambient, Ohms	6.21	1.55
Inductance, mH	50.1	12.5
Max. Winding Temperature, °F (°C)	212 (100)	
<b>MECHANICAL SPECIFICATIONS</b>		
Rotor Inertia, oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	0.0202 (0.14 x 10 <sup>-3</sup> )	
Axial Shaft Load, lbs (N)	305 (1355)	
Radial Shaft Load, lbs (N)	65 (285)	
Motor Weight, lbs (kg)	5 (2.27)	
Step Angle (Full Step), degrees	1.8	
Bolt Circle Diameter, inches	3.875	
Shaft Length, inches (mm)	1.25 (31.75)	
Shaft Diameter, inches (mm)	0.375 (9.53)	
Shaft Feature	Flat	

T32	T32T	T32V
<b>ELECTRICAL SPECIFICATIONS</b>		
Continuous Stall Torque, oz-in (N-m)	920 (6.5)	
Recommended Current/Phase, Amps	1.6	3.2
Winding Resistance @ Ambient, Ohms	6.44	1.61
Inductance, mH	69	17
Max. Winding Temperature, °F (°C)	212 (100)	
<b>MECHANICAL SPECIFICATIONS</b>		
Rotor Inertia, oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	0.038 (2.7 x 10 <sup>-4</sup> )	
Axial Shaft Load, lbs (N)	305 (1355)	
Radial Shaft Load, lbs (N)	65 (285)	
Motor Weight, lbs (kg)	8.4 (3.81)	
Step Angle (Full Step), degrees	1.8	
Bolt Circle Diameter, inches	3.875	
Shaft Length, inches (mm)	1.25 (31.75)	
Shaft Diameter, inches (mm)	0.500 (12.70)	
Shaft Feature	1/8" Square Key	

T41	T41T	T41V
<b>ELECTRICAL SPECIFICATIONS</b>		
Continuous Stall Torque, oz-in (N-m)	1250 (8.8)	
Recommended Current/Phase, Amps	2.8	5.6
Winding Resistance @ Ambient, Ohms	2.21	0.55
Inductance, mH	36	9.1
Max. Winding Temperature, °F (°C)	212 (100)	
<b>MECHANICAL SPECIFICATIONS</b>		
Rotor Inertia, oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	0.0783 (5.5 x 10 <sup>-4</sup> )	
Axial Shaft Load, lbs (N)	404 (1790)	
Radial Shaft Load, lbs (N)	125 (550)	
Motor Weight, lbs (kg)	11 (5)	
Step Angle (Full Step), degrees	1.8	
Bolt Circle Diameter, inches	4.95	
Shaft Length, inches (mm)	1.88 (47.75)	
Shaft Diameter, inches (mm)	0.625 (15.88)	
Shaft Feature	3/16" Square Key	

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