ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

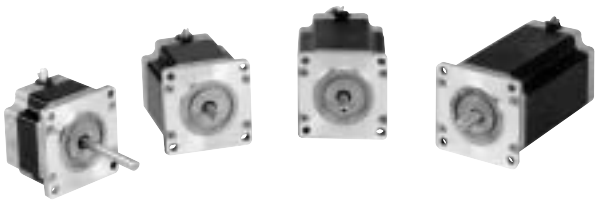
- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Danaher Motion / Kollmorgen T21NRHJ-LSS-SS-02* at our website: *Click HERE*

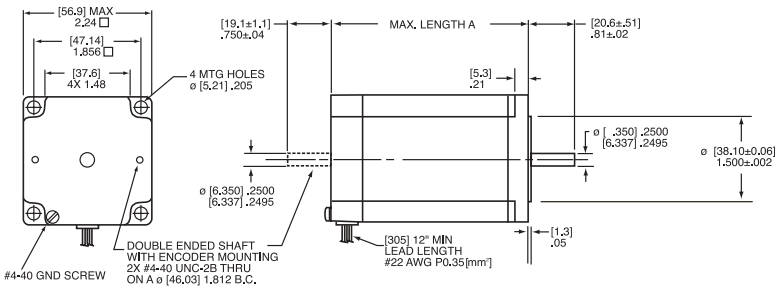
PACIFIC SCIENTIFIC T-SERIES NEMA 23 HIGH TORQUE MOTORS



Features	Benefits
With holding torques to 380 oz-in, (356 lb-in), the T Series provide the highest torques per frame size in the industry— more than 3 and 5 phase designs.	Optimized magnetics provide maximum performance in small envelope, reducing space required for the motor.
Improved torque linearity (above rated current) provides high peak torque capability (duty cycle dependent, contact factory)	Acceleration boost to move loads even faster. Provides more torque for intermittent duty applications.
High torque at moderate speeds	Cost effective alternative to servo motors
Low detent torque harmonic	Provides smoother microstepping performance
Rugged “housingless” square frame	Efficient use of volume for optimal magnetic circuit
Two phase design	Compatible with most drivers, smoother microstepping, and lower input power required vs. three phase for same torque
Optional encoder mounting provisions	Optimizes control scheme
Optional terminal box construction	Enclosed connections for more demanding environments
Wide selection of shaft configurations, terminations, and windings	Standard and custom configurations for cost effective system integration

LEADWIRE HOOKUP MODELS

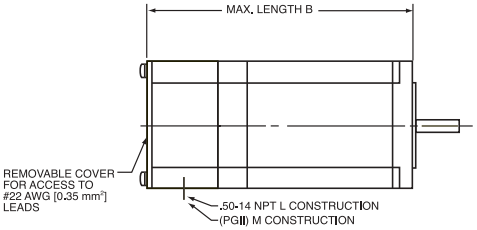
[mm] in



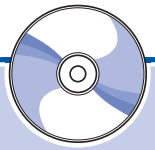
Leaded Motor Model	Max Length A	
	mm	in
T2H	41.6	1.64
T21	56.1	2.21
T22	77.7	3.06
T22	103.1	4.06

TERMINAL BOX CONSTRUCTION

[mm] in.



Leaded Motor Model	Max Length B	
	mm	in
T21	86.6	3.41
T22	108.2	4.26
T22	133.6	5.26



MOTIONEERING® CD-ROM

For more detailed product and selection information, see the **MOTIONEERING** CD-ROM inside the back cover of this catalog or visit our website at www.DanaherMotion.com.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

PACIFIC SCIENTIFIC T-SERIES NEMA 23 HIGH TORQUE MOTORS

RATINGS AND CHARACTERISTICS SEE SYSTEM RECOMMENDATIONS AND DATA ON PAGES 88-89.

Typical Leadwire Motor Model Number	Connection① 4 Lead	Connection① 6 Lead	Holding Torque② (2 phases on) oz-in (N-m) ±10%	Rated Current/Phase③ (amps DC)	Phase Resistance (ohms) ±10%	Phase Inductance④ (mH) Typical	Detent Torque oz-in (N-m)	Thermal Resistance⑤ (°C/watt)	Rotor Inertia oz-in-S² (kgm² x 10^{-3})	Net Weight kg (lbs)
T SERIES - 1/2 ROTOR STACK										
T2HNRHK-LNN-NS-00	●		**74** (0.52)	**5.3**	0.19	0.63	2 (0.0141)	6.14	0.00154 (0.0114)	0.5 (1.03)
T2HNRHJ-LNN-NS-00	●		**74** (0.52)	**4**	0.28	1				
T2HNRLH-LNN-NS-00	●		**74** (0.52)	**2.7**	0.64	2.5				
T2HNRLD-LNN-NS-00	●		**74** (0.52)	**1.1**	3.6	16				
T SERIES - 1 ROTOR STACK										
T21NRHK-LNN-NS-00	●		**180** (1.27)	**5.4**	0.23	1.1	3 (0.0212)	4.64	0.0034 (0.0248)	0.7 (1.6)
T21NRHJ-LNN-NS-00	●		**180** (1.27)	**4.1**	0.33	1.8				
T21NRLH-LNN-NS-00	●		**180** (1.27)	**2.7**	0.85	4.6				
T21NRLE-LNN-NS-00	●		**180** (1.27)	**1.4**	3.0	16				
T21NRLD-LNN-NS-00	●		**180** (1.27)	**1.1**	4.9	30				
T SERIES - 2 ROTOR STACK										
T22NRHK-LNN-NS-00	●		**280** (1.98)	**6.6**	0.20	0.85	6 (0.0424)	3.69	0.0056 (0.0408)	1.0 (2.3)
T22NRHJ-LNN-NS-00	●		**280** (1.98)	**4.1**	0.49	2.5				
T22NRLH-LNN-NS-00	●		**280** (1.98)	**3.3**	0.75	3.4				
T22NRLG-LNN-NS-00	●		**280** (1.98)	**2.5**	1.3	7.1				
T22NRLE-LNN-NS-00	●		**280** (1.98)	**1.5**	2.9	17				
T SERIES - 3 ROTOR STACK										
T23NRHK-LNF-NS-00	●		**380** (2.68)	**6.0**	0.28	1.5	7 (0.0494)	3.04	0.0084 (0.0612)	1.5 (3.2)
T23NRHJ-LNF-NS-00	●		**380** (2.68)	**3.8**	0.64	3.9				
T23NRLH-LNF-NS-00	●		**380** (2.68)	**3.0**	1.0	6.2				
T23NRLF-LNF-NS-00	●		**380** (2.68)	**1.8**	2.8	17				
T23NRLE-LNF-NS-00	●		**380** (2.68)	**1.5**	4.1	24				

All ratings typical and at 25°C unless otherwise noted.

① Refer to Selection Guide for more information.

② With rated current applied.

③ Windings at 105°C and motor in still air at 40°C (without heat sink). Operation of these motors above rated current may cause demagnetization. Contact factory.

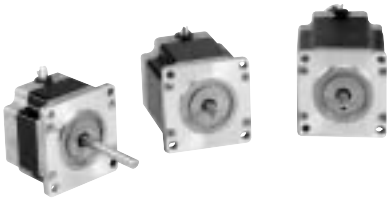
④ Small signal inductance as measured with impedance bridge at 1 kHz, 1 amp.

⑤ Thermal resistance measured with motor hanging in still air (unmounted).

www.DanaherMotion.com • 815-226-2222

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

PACIFIC SCIENTIFIC T-SERIES NEMA 23 STEPPER SYSTEMS



The performance information shown in the torque/speed curves that follow show the T series of NEMA 23 step motors with windings, connections and current levels selected for maximum performance with the drives shown on this page. For additional assistance in sizing or selecting the stepper system appropriate for your application, contact Danaher Motion Customer Support at 815-226-2222.

PACIFIC SCIENTIFIC T-SERIES NEMA 23 STEPPER SYSTEMS



6210/6215 Microstepping Drives **SEE PAGE 74**
- 24-40 VDC input
- Step/direction input or oscillator models
- Current selectable from 1 to 3.5 amps peak
- Microstepping - 4 step sizes



6410/6415 Microstepping Drives **SEE PAGE 72**
- 24-75 VDC input
- Step/direction input or oscillator models
- Current selectable from 0.625 to 7.1 amps peak
- Selectable step sizes, binary or decimal, full to 1/250 or 1/256



Impulse Microstepping Drives **SEE PAGE 75**
- 90-120 VAC input, 160 VDC bus
- Step/direction input
- Programmable inputs/outputs
- Current selectable from 0.75 to 4.0 amps
- Microstepping 200 to 100,000, selectable in increments of 200



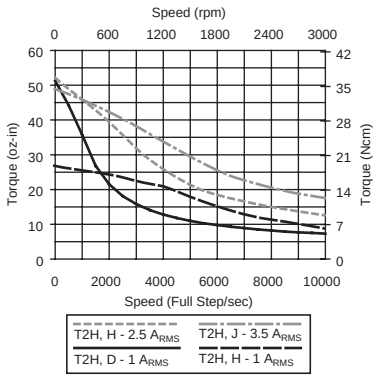
NextStep® Microstepping Drives **SEE PAGE 76**
- 90-120 VAC input, 160 VDC bus
- Step/direction input
- Current selectable from 0 to 7.9 amps
- 5,000 steps/rev to 50,000 steps/rev microstepping



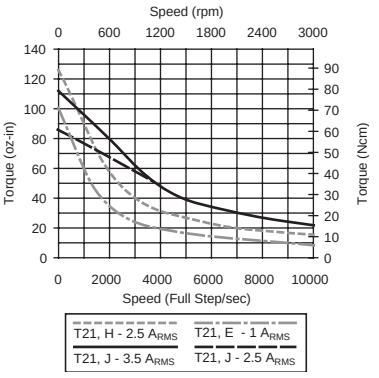
SMARTSTEP Microstepping Drives **SEE PAGE 77**
- 90-120 VAC input, 160 VDC bus
- Programmable indexing
- Current selectable from 0 to 7.9 amps
- 36,000 steps/rev microstepping

24 volt

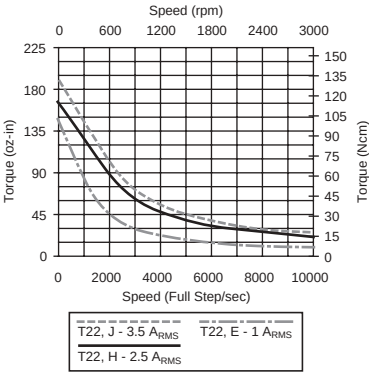
Nema 23 Frame, 1/2 Rotor Stack



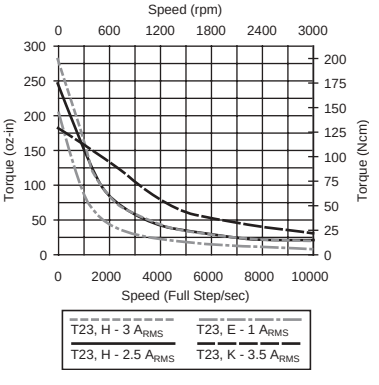
Nema 23 Frame, 1 Rotor Stack



Nema 23 Frame, 2 Rotor Stack

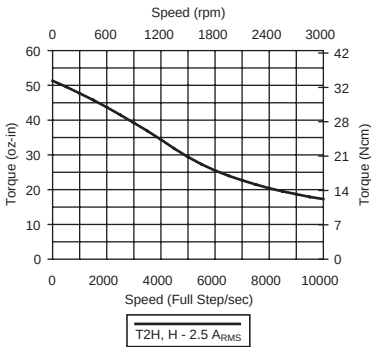
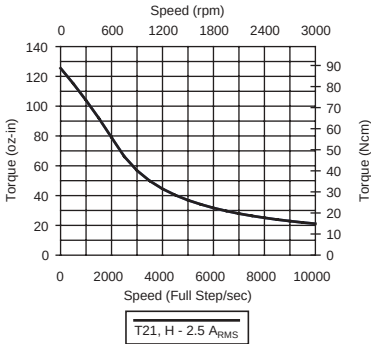
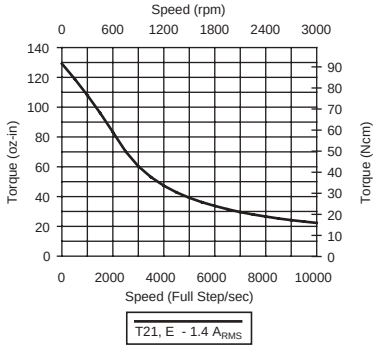
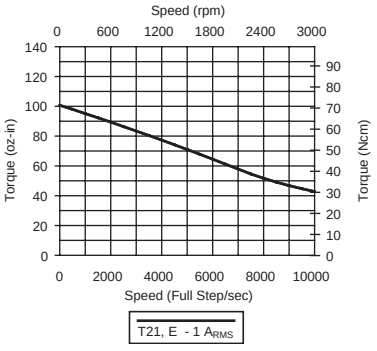
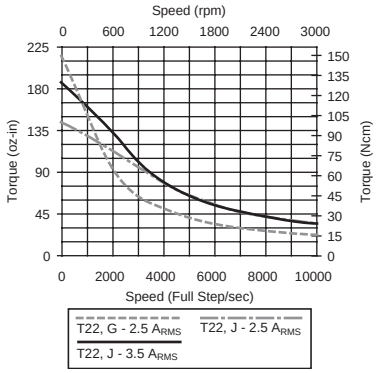
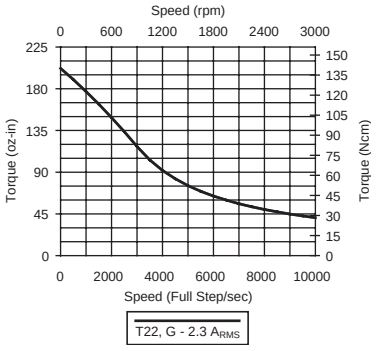
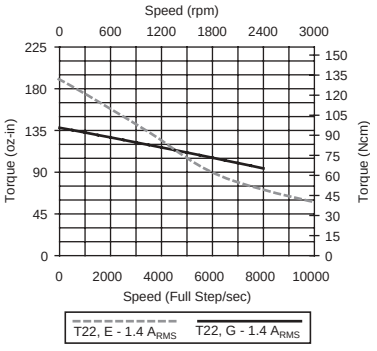
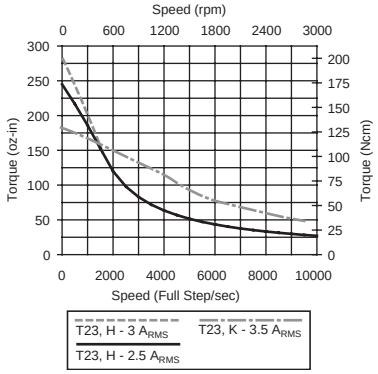
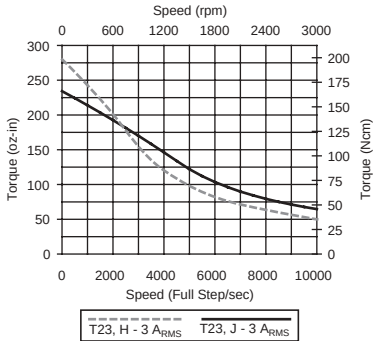
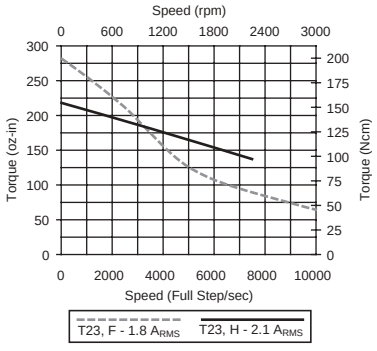


Nema 23 Frame, 3 Rotor Stack



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

PACIFIC SCIENTIFIC T-SERIES NEMA 23 STEPPER SYSTEMS

36 volt	72 volt	160 volt
		
		
		
		

www.DanaherMotion.com • 815-226-2222

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP