

APPS23 : AxialPower™ Plus Stepper Type Linear Actuator



Technology: Stepper
Size: Nema 23
Torque: to 150 oz-in or 106 Ncm

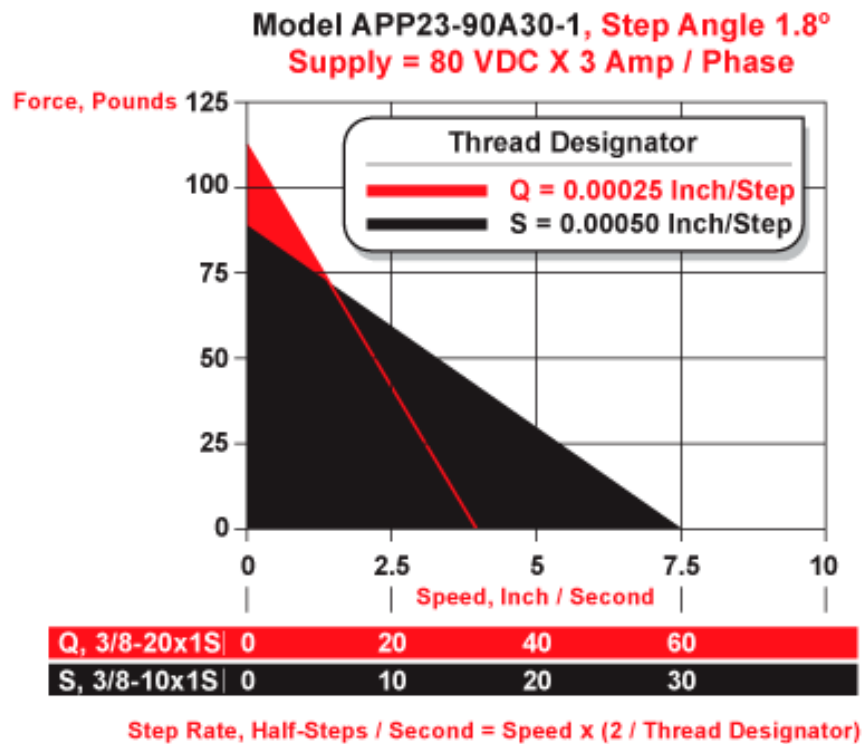
Powerful. Cost-Effective.

This Nema size-23 ultra-reliable, stepper-based linear actuator is made with ball-bearings and dynamically balanced rotors for high-speed operation.

Linear Model Number (example)

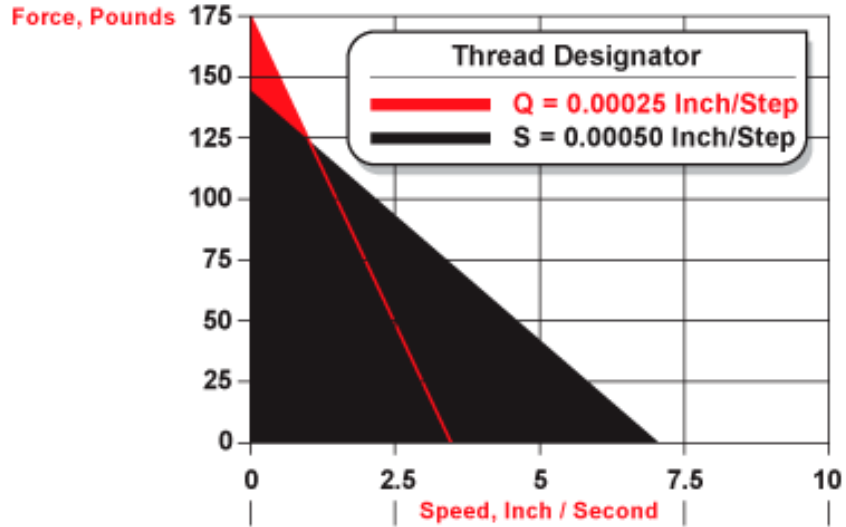


APPS23 Speed / Force Curves



Model APP23-150A20-1, Step Angle 1.8°

Supply = 40 VDC X 2 Amp / Phase



Q, 3/8-20x1S	0	20	40	60
S, 3/8-10x1S	0	10	20	30

Step Rate, Half-Steps / Second = Speed x (2 / Thread Designator)

APPS23 Mechanical / Winding Data

Stack Size Models	APPS23 - 90A	APPS23 - 150A	APPS23 - 90V	APPS23 - 150V
Holding Torque Bi-Polar (oz-in)	90.0	150.0	90.0	150.0
Holding Torque Bi-Polar (Ncm)	63.55	105.92	63.55	105.92
Holding Torque Uni-Polar (oz-in)	0.0	0.0	72.0	120.0
Holding Torque Uni-Polar (Ncm)	0.00	0.00	50.84	84.73
Length (inches)	1.8	2.2	1.8	2.2
Length (cm)	4.6	5.6	4.6	5.6
Width (inches)	2.2	2.2	2.2	2.2
Width (cm)	5.6	5.6	5.6	5.6
Weight (oz)	17.0	24.0	17.0	24.0
Weight (Kg)	0.5	0.7	0.5	0.7
Step Angle (°/step)	1.8	1.8	1.8	1.8
Number Leads	4	4	6	6

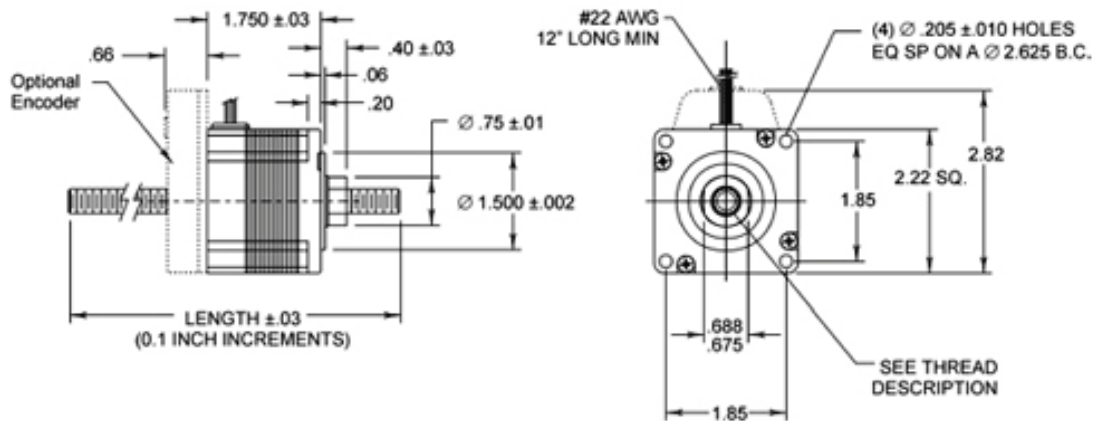
APPS23 Bi-Polar Windings

Winding Models	APPS23 - 90A10 - 1	APPS23 - 90A20 - 1	APPS23 - 90A30 - 1	APPS23 - 150A10 - 1	APPS23 - 150A20 - 1	APPS23 - 150A30 - 1
Current (A/Phase)	1.0	2.0	3.0	1.0	2.0	3.0
Voltage (V/Phase)	5.8	3.0	1.8	7.9	3.8	2.4
Resistance (R/Phase)	5.8	1.5	0.6	7.9	1.9	0.8
Inductance (mH)	20.3	5.2	2.0	35.0	8.6	3.5

APPS23 Uni-Polar Windings

Winding Models	APPS23 - 90V18 - 1	APPS23 - 90V30 - 1	APPS23 - 90V60 - 1	APPS23 - 90V119 - 1	APPS23 - 150V23 - 1	APPS23 - 150V38 - 1	APPS23 - 150V60 - 1	APPS23 - 150V76 - 1	APPS23 - 150V154 - 1
Current Bi-Polar (A/Phase)	2.1	1.4	0.7	0.4	2.1	1.4	0.9	0.7	0.4
Voltage Bi-Polar (V/Phase)	2.5	4.2	8.5	16.8	3.3	5.4	8.5	10.8	21.8
Resistance Bi-Polar (R/Phase)	1.2	3.1	12.0	47.0	1.5	3.8	9.6	15.2	61.8
Inductance Bi-Polar (mH)	4.0	10.4	43.2	165.6	6.4	16.8	47.0	70.8	269.2
Current Uni-Polar (A/Phase)	3.0	2.0	1.0	0.5	3.0	2.0	1.3	1.0	0.5
Voltage Uni-Polar (V/Phase)	1.8	3.0	6.0	11.9	2.3	3.8	6.0	7.6	15.4
Resistance Uni-Polar (R/Phase)	0.6	1.5	6.0	23.5	0.8	1.9	4.8	7.6	30.9
Inductance Uni-Polar (mH)	1.0	2.6	10.8	41.4	1.6	4.2	11.7	17.7	67.3

APPS23 Outline Drawing



APPS23 Leadscrew Options

Thread Designation	Thread Description (# starts)	Thread Lead (inches)	Linear Travel per step (inches)
Q	3/8-20ACME	0.05000	0.00025000
S	3/8-10ACME	0.10000	0.00050000
T	3/8-16ACME	0.06250	0.00031250

