



Haydon
Motion Solutions



TM

The Haydon IDEA™ Programmable Stepper Motor Linear Actuator

The IDEA™ Programmable Actuator is an integrated linear actuator, electronic drive and fully programmable control unit. Programming the actuator is through a simple-to-use patent-pending Graphic User Interface (GUI).



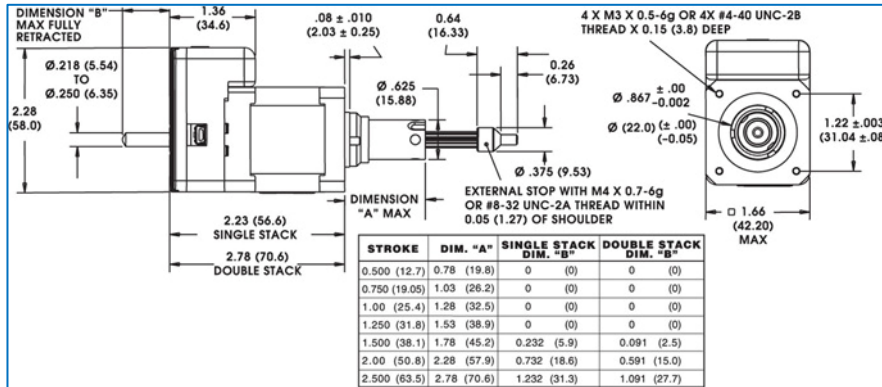
Features include:

- RoHS Compliant
- Single Compact Package - Controller, Driver, Step Motor Linear Actuator
- Programming done through Graphic User Interface (GUI)
- Automatic Population of Motor and Drive parameters
- No complicated mnemonic commands
- +12 to +48 VDC input voltage range
- USB Communication
- 8 Opto-Isolated Digital I/O

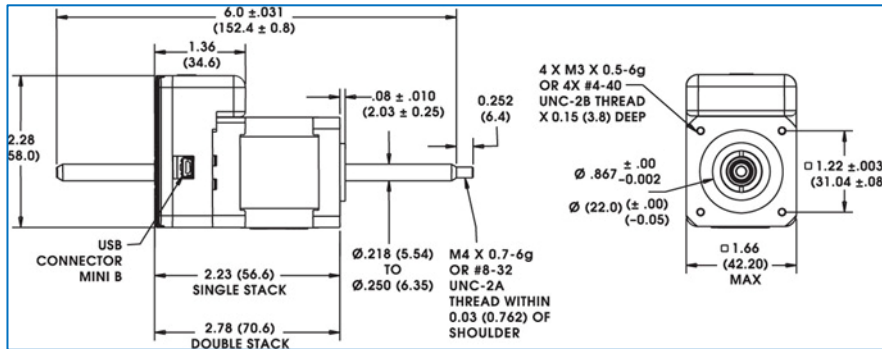


Available in Size 17
Single Stack &
Double Stack:
Captive,
Non-Captive &
External

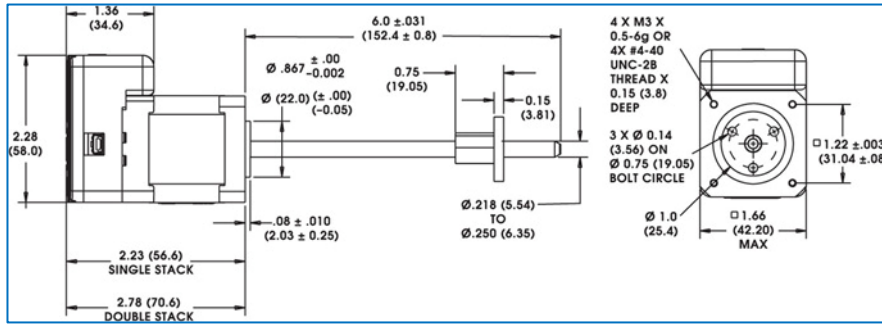
Captive



Non-Captive



External



	Feature	Value	Additional Information
GENERAL INFORMATION	RoHS Compliant	Yes	
	Input Voltage	+12 to +48 VDC	
	Communication Type	USB	
	Microstepping	full, half, 1/4, 1/8, 1/16, 1/32, 1/64	
	Motor Stack Lengths	Single and Double Stack	
	Actuator Configuration Types	Captive, Non-Captive, External Linear	
	Maximum Thrust (single stack)	220 N	
	Maximum Thrust (double stack)	337 N	
	Step Resolution (single stack)	3.0 to 48.7 microns	
	Step Resolution (double stack)	15.8 to 127 microns	
PROGRAMMING	Programming Language	Graphic User Interface	No mnemonic commands. Programming via on-screen buttons
	Electronically Configurable	Yes	Via GUI
	Auto-Population of Drive Parameters	Yes	Software prompt for actuator part number
	Programmable Acceleration and Deceleration	Yes	
	Programmable Current Control	Yes	run and hold current; boost current for accel and decel
	Move Profile Plotter	Yes	
	Interactive Program Debug	Yes	Line-by-line program execution or multiple line execution
	Program Storage	Flash / 85KBytes	
	Multiple Program Files	Yes	Organized by program name
	Units of Measure	Metric or English	Software Configurable
	User Labels and Comment Fields	Unlimited	
	Branching Functions	Yes	
	Interrupt Functions	Yes	
	Counter	64 bit	
CONNECTORS	General Purpose I/O Inputs, Opto-Isolated	4	5 to 24vdc, 4mA max per input
	General Purpose I/O Outputs, Opto-Isolated, Open Collector	4	5 to 24vdc, 200mA max per output, pull-up resistor required
	Power Supply Connector - Drive Side	Tyco 284512-2	
	Power Supply Connector - Mating	Tyco 284506-2	
	Communications	USB to mini USB (drive side)	
	Digital I/O Connector - Drive Side	HIROSE DF3A-10P-2DS	
	Digital I/O Connector - Mating	HIROSE DF3-10S-2C	

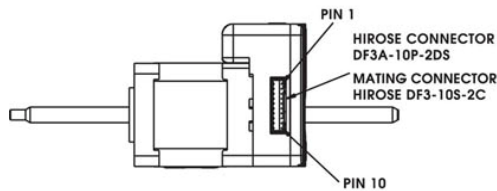
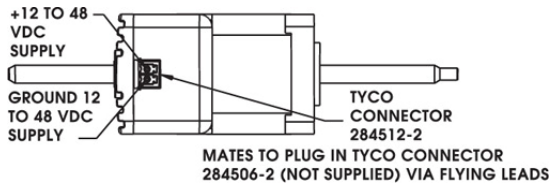
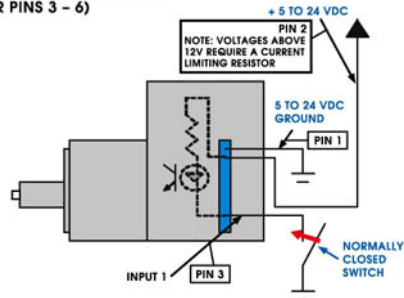


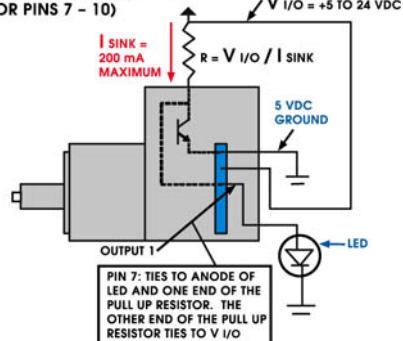
TABLE COMMON FOR EACH PRODUCT CONFIGURATION

PIN POSITION	DESCRIPTION	NOTES
PIN 1	GROUND I/O SUPPLY	5 TO 24 VDC
PIN 2	+ I/O SUPPLY	5 TO 24 VDC
PIN 3	INPUT 1	
PIN 4	INPUT 2	
PIN 5	INPUT 3	
PIN 6	INPUT 4	
PIN 7	OUTPUT 1	
PIN 8	OUTPUT 2	
PIN 9	OUTPUT 3	
PIN 10	OUTPUT 4	

TYPICAL I/O INPUT (FOR PINS 3 - 6)



TYPICAL I/O OUTPUT (FOR PINS 7 - 10)



Size 17 Single Stack



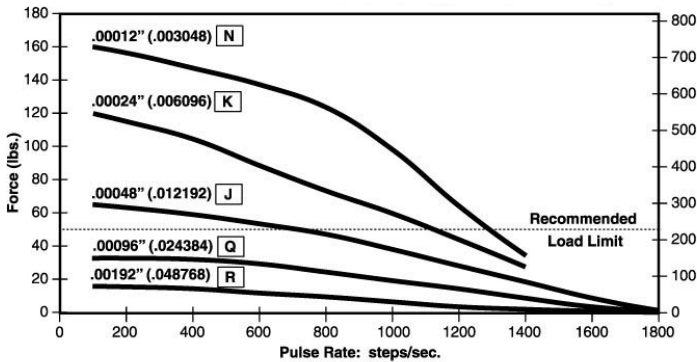
Series 43000 Single Stack Hybrid Linear Actuator (Size 17: 43mm (1.7") 1.8 degree step angle)

Part No.	Captive	43HB-(V)
	Non-Captive	43FB-(V)
	External	E43HB-(V)
Wiring	Bipolar	
Operating Voltage	2.33 VDC	

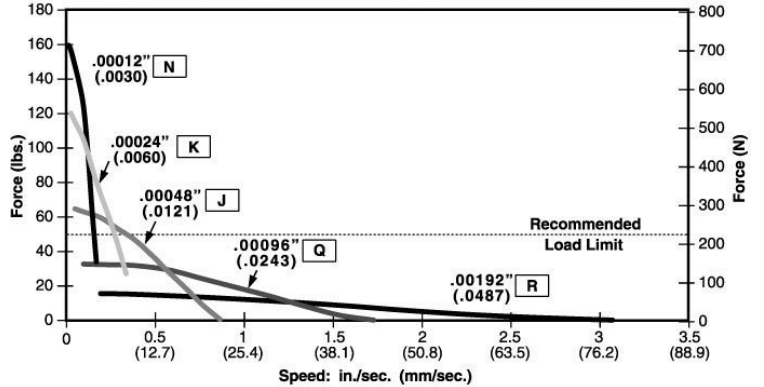
Linear Travel/ Step 0.218" (5.54mm)		Order Code ID
Inches	mm	
0.00012	0.0030	N
0.00024	0.0060	K
0.00048	0.0121	J
0.00096	0.0243	Q
0.00192	0.0487	R

Linear Travel/ Step 0.250" (6.35mm)		Order Code ID
Inches	mm	
0.0001562	0.0039	P
0.0003125	0.0079	A
0.000625	0.0158	B
0.00125	0.0317	C

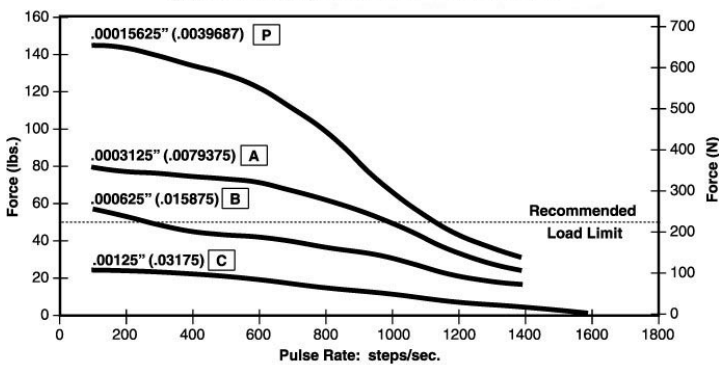
Size 17 IDEA Drive Force vs Pulse Rate
.218 in [5.54 mm] dia Lead Screw, 100% Duty Cycle



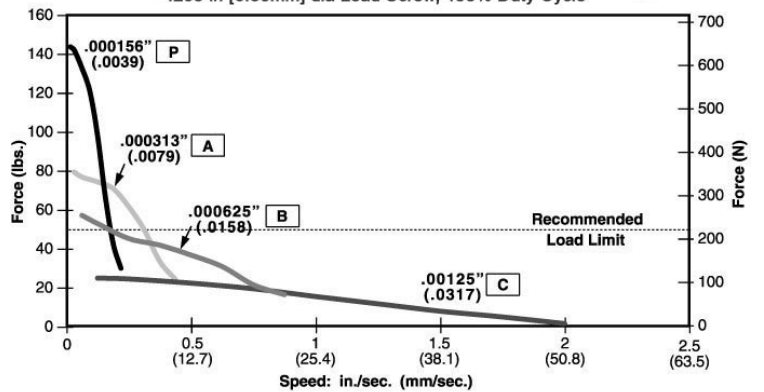
Size 17 IDEA Drive Force vs Linear Velocity
.218 in [5.54mm] dia Lead Screw, 100% Duty Cycle



.250 in [6.35mm] dia Lead Screw, 100% Duty Cycle



.250 in [6.35mm] dia Lead Screw, 100% Duty Cycle



Size 17 Double Stack

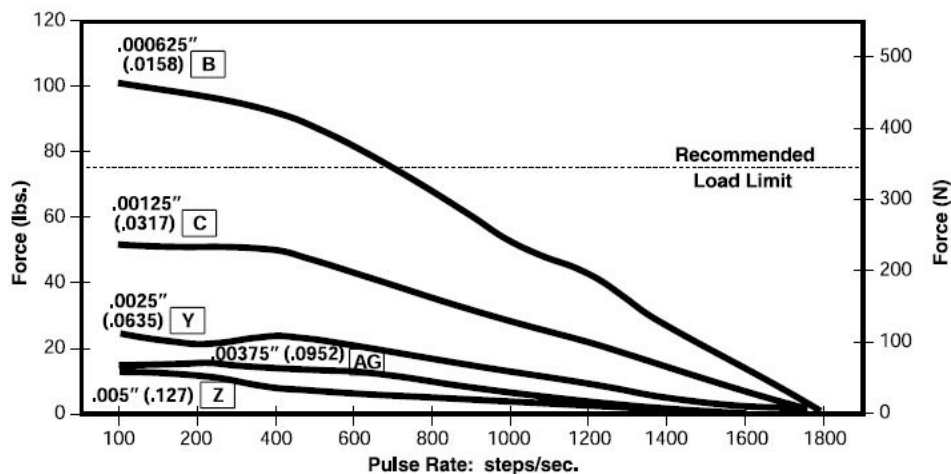


Series 43000 Double Stack Hybrid Linear Actuator
(Size 17: 43mm (1.7") 1.8 degree step angle)

Part No.	Captive	43MB-(V)
	Non-Captive	43LB-(V)
	External	E43MB-(V)
Wiring	Bipolar	
Operating Voltage	2.33 VDC	

Linear Travel/ Step 0.250" (6.35mm)		Order Code ID
Inches	mm	
0.000625	0.0158	B
0.00125	0.0317	C
0.0025	0.0635	Y
0.00375	0.0953	AG
0.005	0.127	Z

Size 17 Double Stack IDEA Drive Force vs Pulse Rate
.250 in [6.35 mm] dia Lead Screw, 100% Duty Cycle



Size 17 Double Stack IDEA Drive Force vs Linear Velocity
.250 in [6.35 mm] dia Lead Screw, 100% Duty Cycle

