

Haydon[®] Size 17 dual motion actuators provide linear and rotary motions, controllable independently of one another



Size 17
Dual Motion

For a rotary/linear motor, it is desirable that the linear and rotary motions be controllable independently of one another. These devices can be run using a standard two axis stepper motor driver. Performance can be enhanced using chopper and/or microstepping drives.

The actuators are based on unique, patented designs and incorporate proven motor technology. These units simplify product development by replacing what would otherwise be far more bulky and complex mechanisms.

Technical Specifications

Linear Travel / Step		Load Limit		Order Code I.D.
inches	mm	lbs	N	
0.00006	0.0015*	30	133	U
0.000078*	0.00198*	30	133	V
0.00012	0.0030*	30	133	N
0.000156259	0.0039*	30	133	P
0.00024	0.0060*	50	222	K
0.0003125	0.0079*	50	222	A
0.00048	0.0121*	50	222	J
0.0005	0.0127	50	222	3
0.000625	0.0158*	50	222	B
0.00096	0.0243*	50	222	Q
0.001	0.0245	50	222	1
0.00125	0.0317*	50	222	C
0.00192	0.0487*	50	222	R

*Values truncated

Standard motors are Class B rated for maximum temperature of 130°C.

Identifying the 43000 Series dual motion part number codes when ordering

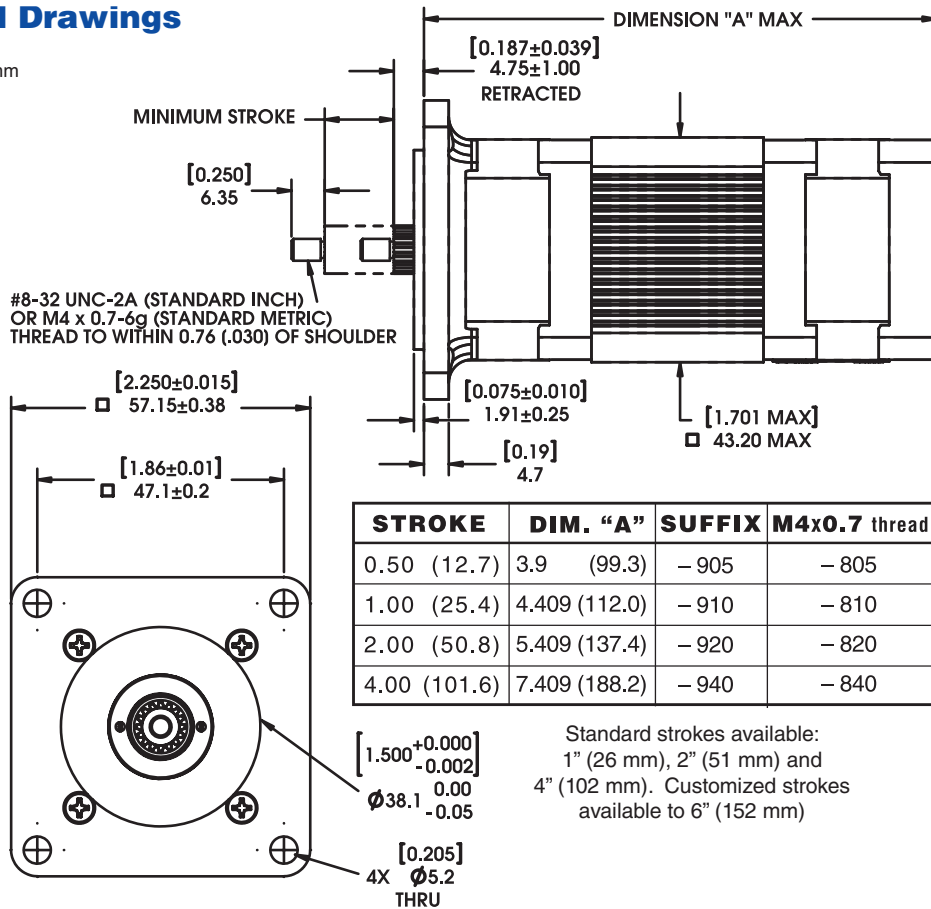
LR	43	H	H	4	J	-	05	-	910
Prefix LR = Linear/ Rotary	Series number designation 43 = 43000	Rotary Step Angle H = 1.8° K = 0.9° M = 1.8° Double Stack P = 0.9° Double Stack	Linear Step Angle H = 1.8° K = 0.9°	Coils 4 = Bipolar (4 wire) 6 = Unipolar (6 wire)	Code ID Resolution Travel/Step U = .00006-in (.0015) V = .000078-in (.00198) N = .00012-in (.0030) P = .000156259-in (.0039) K = .00024-in (.0060) A = .0003125-in (.0079) J = .00048-in (.0121) 3 = .0005-in (.0127) B = .000625-in (.0158) Q = .00096-in (.0243) 1 = .001-in (.0245) C = .00125-in (.0317) R = .00192-in (.0487)		Voltage 05 = 5 VDC 12 = 7.5 VDC SP = Mixed Voltages <i>Custom V available</i>		Suffix: Stroke Example: -910 = 1-in (26 mm) -XXX = Proprietary suffix assigned to a specific customer application. The identifier can apply to either a standard or custom part.

NOTE: Dashes must be included in Part Number (-) as shown above. For assistance or order entry, call our engineering team at 203 756 7441.

NOTE: SEE 43000 SERIES HYBRID LINEAR DATA SHEET FOR MORE DETAILED MOTOR INFORMATION

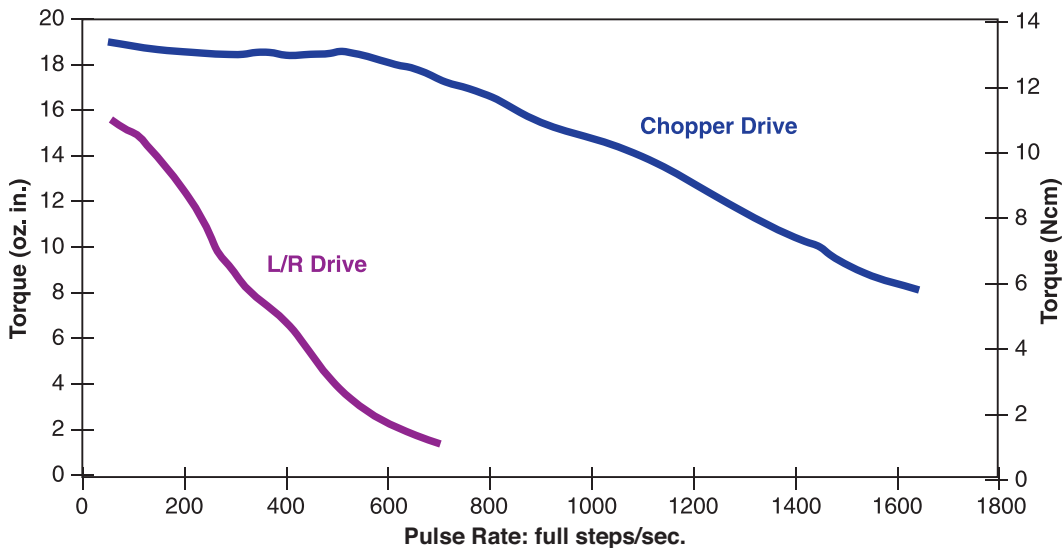
Dimensional Drawings

Dimensions = (inches) mm



TORQUE vs. PULSE RATE: ROTARY FUNCTION

Bipolar • 100% Duty Cycle



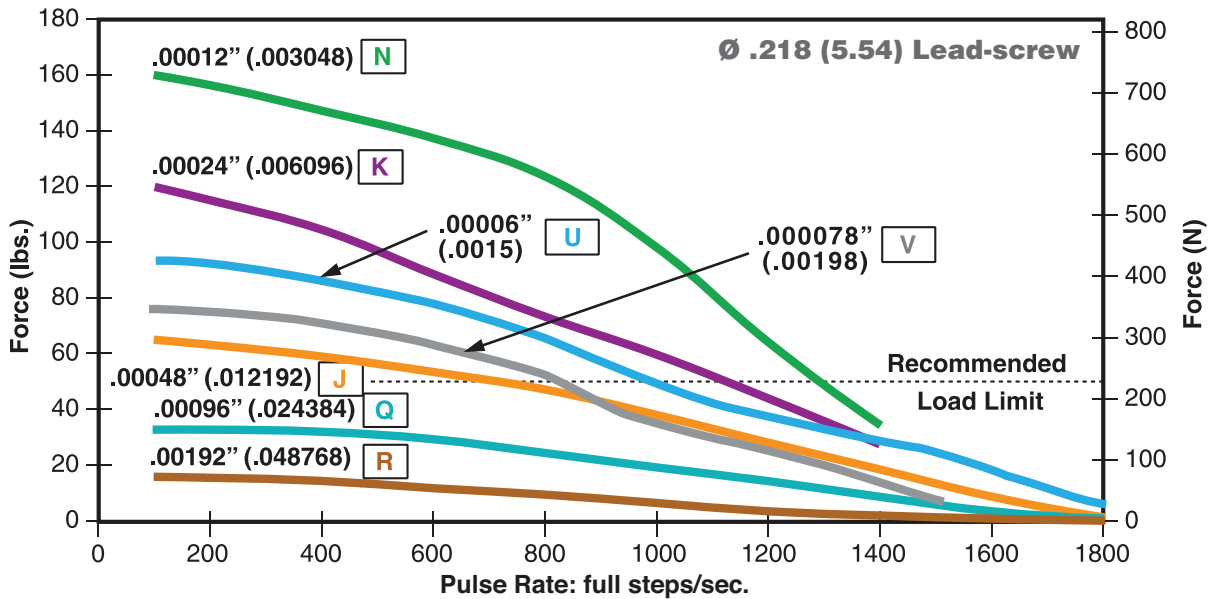
NOTE: All chopper drive curves were created with a 5 volt motor and a 40 volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

With L/R drives peak force and speeds are reduced, using a unipolar drive will yield a further 30% force reduction.

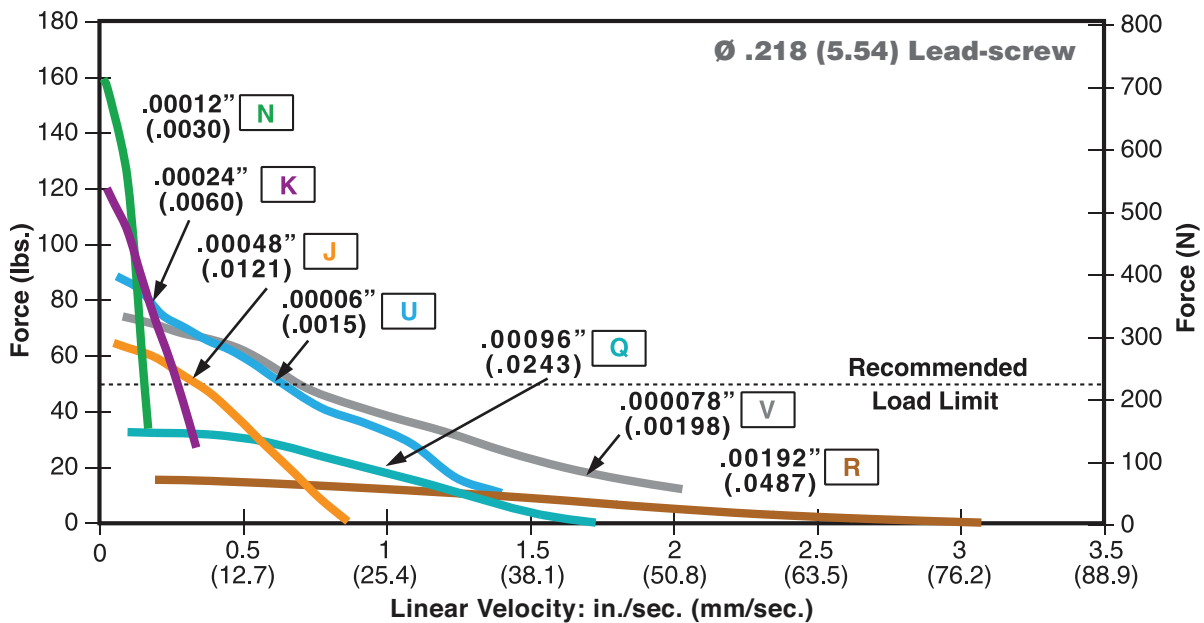
FORCE vs. PULSE RATE: LINEAR FUNCTION

Chopper • Bipolar • 100% Duty Cycle



FORCE vs. LINEAR VELOCITY

Chopper • Bipolar • 100% Duty Cycle



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