

RCMS17 - Reliance Cool Motion Stage

Intelligent linear motion, accurate positioning, and long life in a compact assembly



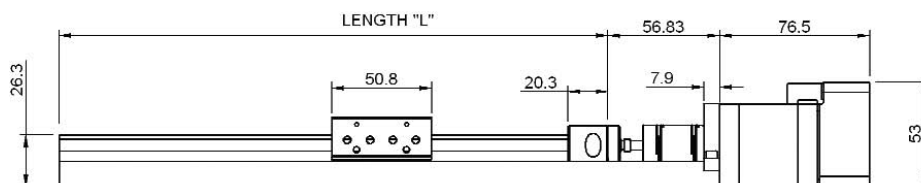
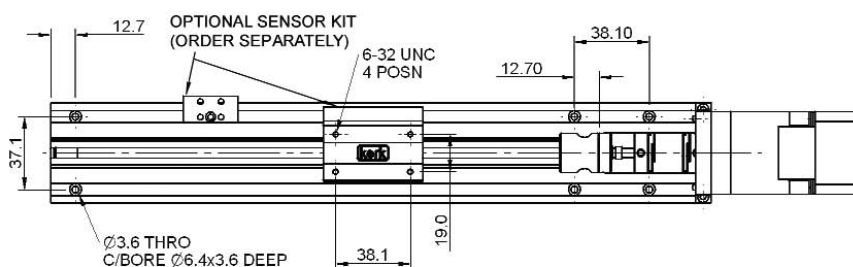
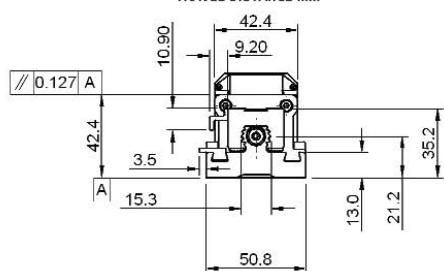
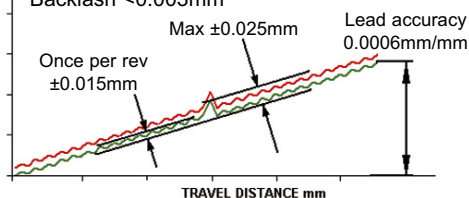
RoHS Compliant

Product Description:

- The assembly combines the high speeds, linear accuracy and reliability of a screw driven linear slide with the intelligence of the Reliance Cool Muscle motor
- The size 17 Reliance Cool Muscle motor encompasses an integrated vector drive, amplifier, H-infinity control, 50,000 count magnetic encoder and a 0-3000 rpm high torque motor into one package
- High performance proprietary polymers and TFE coating extends the life of the slides moving parts
- Precision aluminium guide and carriage, driven by a precision rolled stainless steel leadscrew

Typical RCMS Accuracy Graph

Based on 12.7mm lead
with a 3Kg load
Backlash <0.003mm



Travel distance = L - Carriage Length - Bearing Support

Length Tolerances	
< L4	± 0.1
4 < L ≤ 16	± 0.15
16 < L ≤ 63	± 0.2
63 < L ≤ 250	± 0.3

Technical Specification:

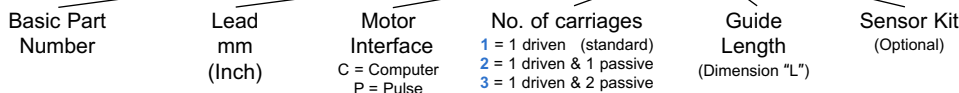
All dimensions in mm unless otherwise stated

Basic Part Number	Screw Lead mm (Inch)	Max Drag Torque Nm	Life @ 1/4 Design Load mm	Torque to Move Carriage Design Load Nm/kg	Carriage Design Load kg	Max Linear Speed mm/sec	Axial Load kg	Screw Inertia Kgm ² /m	Linear Resolution (Default) mm	Carriage Roll Angle Deg.	Standard Guide Lengths L' Inch
RCMS17L-M02	2.0	0.03	254x10 ⁶	0.016	16	127	5	4.2x10 ⁻⁶	0.002	1	12 18
RCMS17L-M04	4.0	0.04		0.023		254			0.004		12 18
RCMS17L-M12	12.0	0.04		0.039		635			0.012		12 24
RCMS17L-M25	25.0	0.05		0.070		1270			0.025		18 24
RCMS17L-0100	(0.100)	0.03		0.016		127			0.00254		10 12 15 18 24
RCMS17L-0200	(0.200)	0.04		0.023		254			0.00508		10 12 15 18 24
RCMS17L-0500	(0.500)	0.04		0.039		635			0.0127		12 15 18 24
RCMS17L-1000	(1.000)	0.05		0.070		1270			0.0254		12 18 24 36

Basic Order Part Numbering:

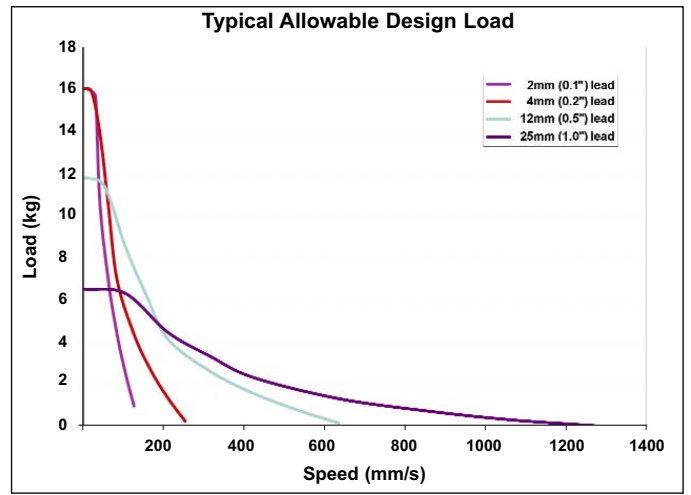
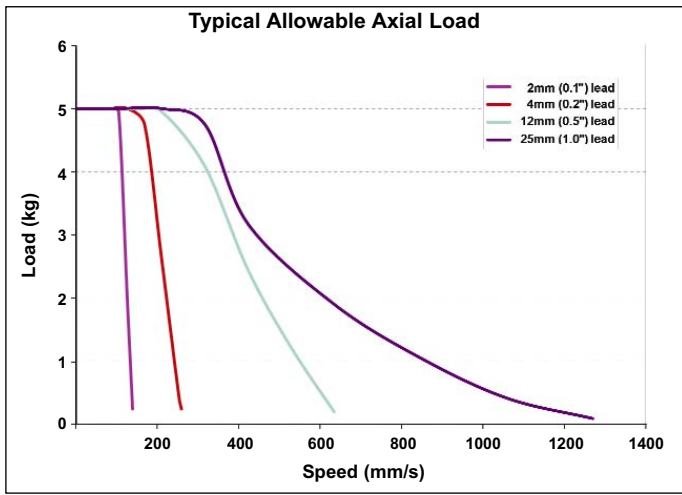
Slide manufactured by Kerk Motion Products, Inc. Hollis, NH 03049

RCMS17L-M04-(C/P)-1-18-S



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Reliance Cool Muscle

- A one package solution
- Vector drive optimises motor efficiency, running cooler and smoother
- TCP/IP, MODBUS, RS232, RS485, pulse or stand alone operation
- H-infinity controller gives robust control over dynamic loads and speeds
- 50,000 count/rev magnetic encoder
- Internal programmable logic
- High repeatability, accuracy and stability
- Powerful, flexible and easy to use
- 32 Bit RISC processor
- Programmable on board memory
- Logic bank, Sine, Cosine, polynomial functions



Motor Performance:

		RCM1- □ -17L30-RT3
Control Method		Closed loop vector control
Input Supply Voltage		DC24V±10%
Input Supply Current Rated (Continuous Torque/Rated Peak Torque)		1.2A/2.2A
Motor Output Power		18W
Maximum Speed		3000rpm
Continuous Torque	Nm	0.38
Peak Torque	Nm	0.54
Load Inertia Allowance	g-cm ²	760
Motor Inertia	g-cm ²	76
		Depending on the load inertia, servo gain needs to be adjusted
Encoder		Incremental magnetic encoder (50,000 pulse per rotation)
Resolution Pulse Rotation (Pulse/Rotation)		200, 400, 500, 1000(default), 2000, 2500, 5000, 10000, 25000, 50000 Select by parameter
Environmental Conditions (Operating/Storage Temperature)		Between 0°C and 40°C/between -20°C and +60°C
Operating Humidity		Less than 90%RH
Shock/Vibration		Less than 10G/Less than 1G

RCMS Non-standard options, please enquire:

- Special carriage, rail, screw or mounting configuration
- Higher accuracy lead screw, Left Hand (LH) or Left/Right (L/R) threads
- Metric leads and guide lengths available
- Alternative guide length
- Sensor Kits

Full technical information available on request

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	<p>Reliance Precision Mechatronics LLP is a registered company in England, No. 08222876, Registered Office: Rowley Mills, Penistone Road, Lepton, Huddersfield, HD8 0LE, England.</p>		



RCMS23 - Reliance Cool Motion Stage

Intelligent linear motion, accurate positioning, and long life in a compact assembly

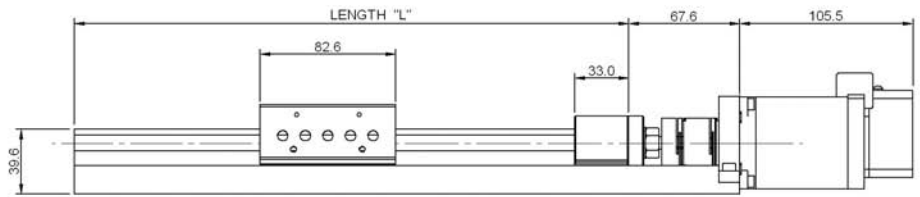
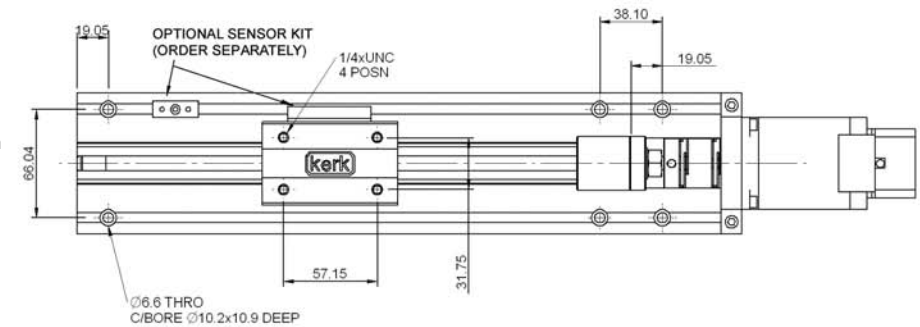
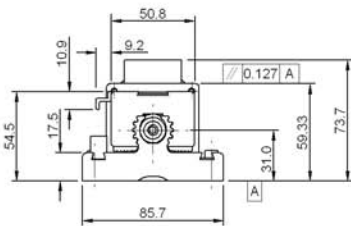
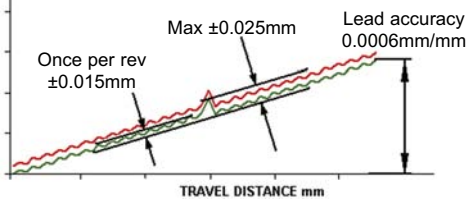


RoHS Compliant

Product Description:

- The assembly combines the high speeds, linear accuracy and reliability of the Reliance screw driven linear slide with the intelligence of the Reliance Cool Muscle motor
- The size 23 Reliance Cool Muscle motor encompasses an integrated vector drive, amplifier, H-infinity control, 50,000 count magnetic encoder and a 0-2000 rpm high torque motor into one package
- High performance proprietary polymers and TFE coating extends the life of the slides moving parts
- Precision aluminium guide and carriage, driven by a precision rolled stainless steel leadscrew

Typical RCMS Accuracy Graph
Based on 12.7mm lead with a 3kg load
Backlash <0.030mm



Travel distance = L - Carriage Length - Bearing Support

Length Tolerances	
< L4	± 0.1
4 < L ≤ 16	± 0.15
16 < L ≤ 63	± 0.2
63 < L ≤ 250	± 0.3

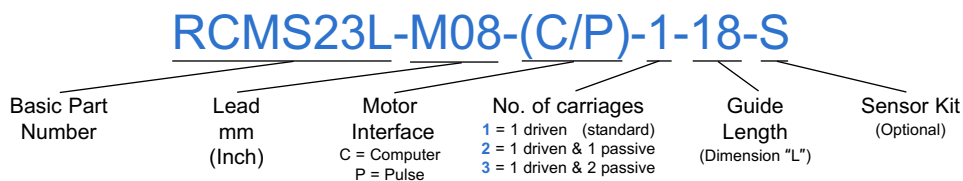
Technical Specification:

All dimensions in mm unless otherwise stated

Basic Part Number	Screw Lead mm (Inch)	Max Drag Torque Nm	Life @ 1/4 Design Load mm	Torque to Move Carriage Design Load Nm/kg	Carriage Design Load kg	Max Linear Speed mm/sec	Axial Load kg	Screw Inertia Kgm ² /m	Linear Resolution (Default) mm	Carriage Roll Angle Deg.	Standard Guide Lengths 'L' Inch
RCMS23L-M08	8.0	0.04	254x10 ⁶	0.038	46	267	14	3.9x10 ⁻⁵	0.0080	1	18 24
RCMS23L-0100	(0.100)	0.04		0.020		85			12 18 24 36		
RCMS23L-0200	(0.200)	0.04		0.031		169			12 18 24 36		
RCMS23L-0500	(0.500)	0.05		0.047		423			12 18 24 36		
RCMS23L-1000	(1.000)	0.06		0.101		847			12 18 24 36		

Slide manufactured by Kerk Motion Products, Inc. Hollis, NH 03049

Basic Order Part Numbering:



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