

SLM SERIES

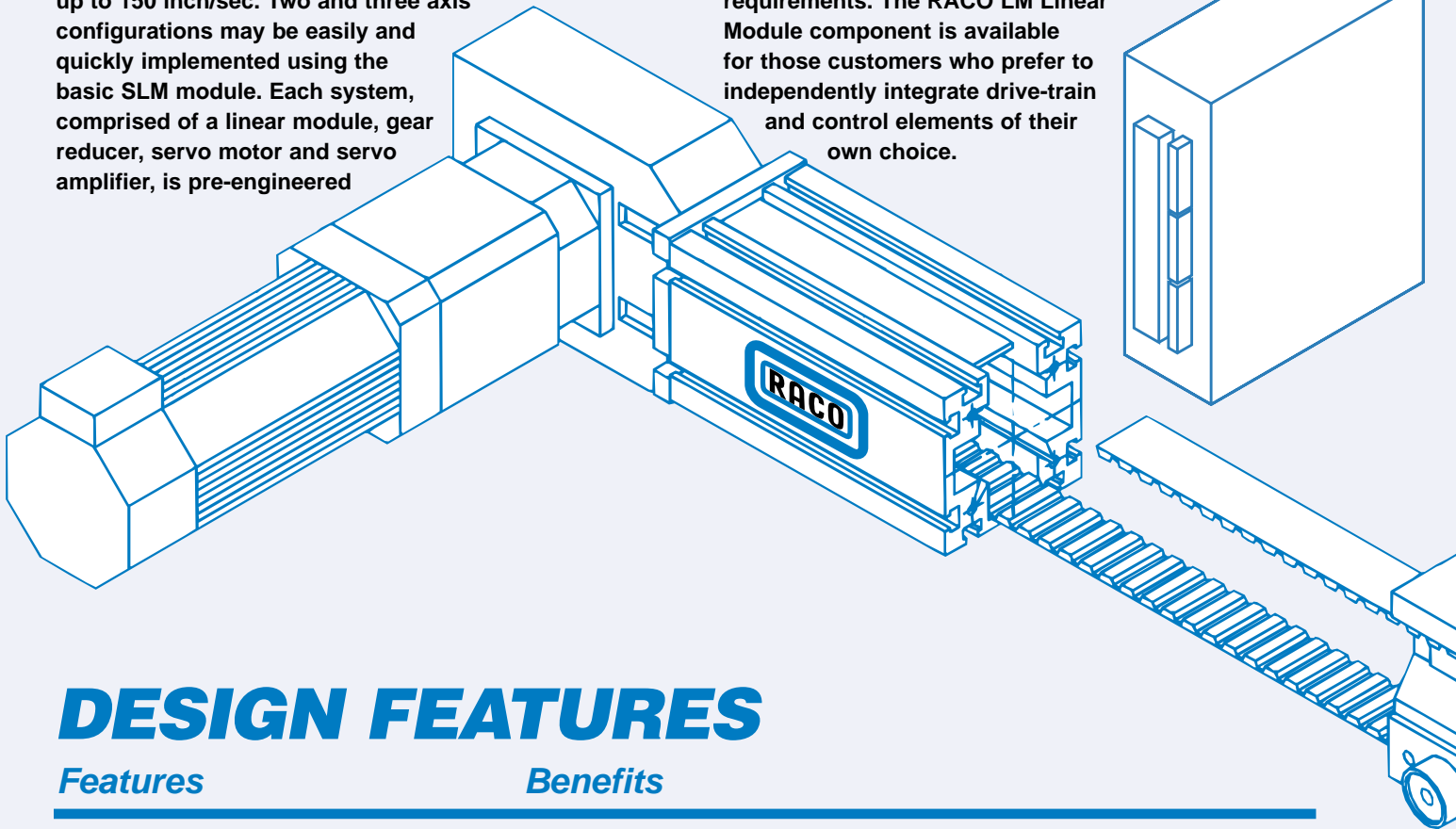
**SERVO DRIVEN
LINEAR MODULE**



THE SLM RODLESS LINEAR ACTUATOR

RACO'S SLM line of linear positioning modules offers design versatility for any application requiring "cost effective" linear motion. The SLM design lends itself to stroke lengths of up to 235 inches and linear speeds up to 150 inch/sec. Two and three axis configurations may be easily and quickly implemented using the basic SLM module. Each system, comprised of a linear module, gear reducer, servo motor and servo amplifier, is pre-engineered

for selected speed and load capacities, as well as a proper inertia match to provide a stable and robust system. Refer to the charts and graphs on pages 4-8 for a pre-engineered solution to your application requirements. The RACO LM Linear Module component is available for those customers who prefer to independently integrate drive-train and control elements of their own choice.



DESIGN FEATURES

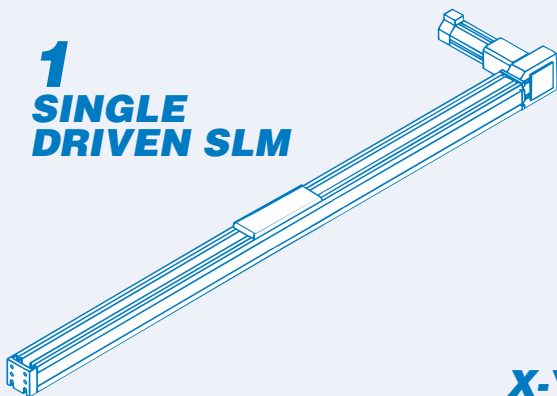
Features

Benefits

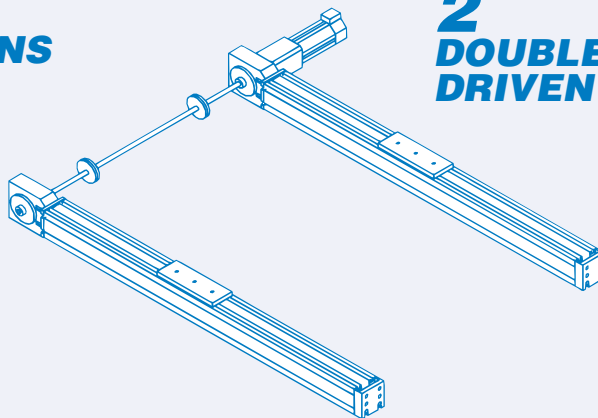
■ Pre-engineered packaging	Servo motor, amplifier and gear reducer sized for specific performance characteristics
■ Precision extruded body	Allow stroke lengths to 235 inches
■ End of travel/home position sensors	Over travel protection and home detection for complete position control
■ Polyurethane/steel reinforced belt	Minimal stretch and high thrust capabilities
■ Cogged drive elements	For thrusts up to 400 lbs. single and 800 lbs. double
■ Ball bearing carriage wheels	For loads up to 600 lbs. single and 900 lbs. double
■ External belt adjustment	Simple maintenance
■ Sealed wipers and bearings	Long service life
■ T – Slots	Facilitate mounting of SLM

VARIOUS USER CONFIGURATIONS

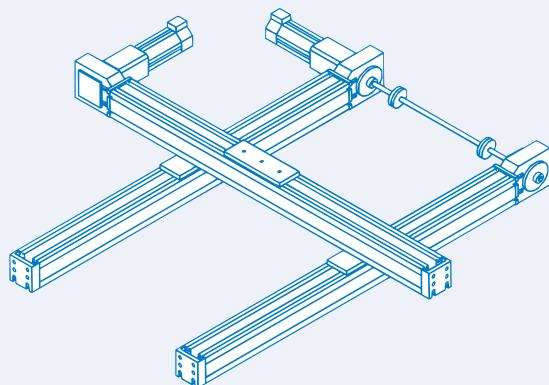
1
SINGLE
DRIVEN SLM



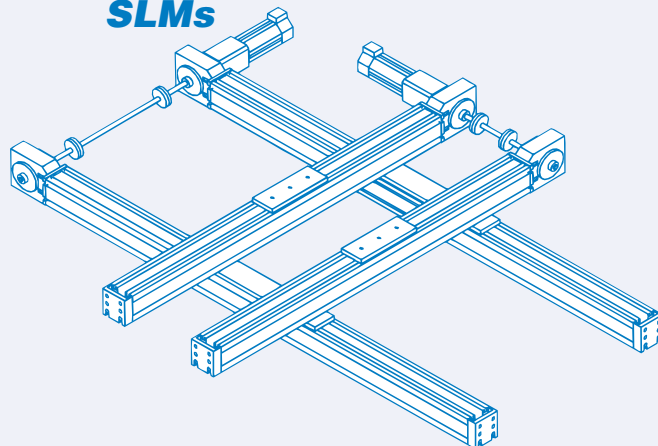
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DOUBLE
DRIVEN SLM



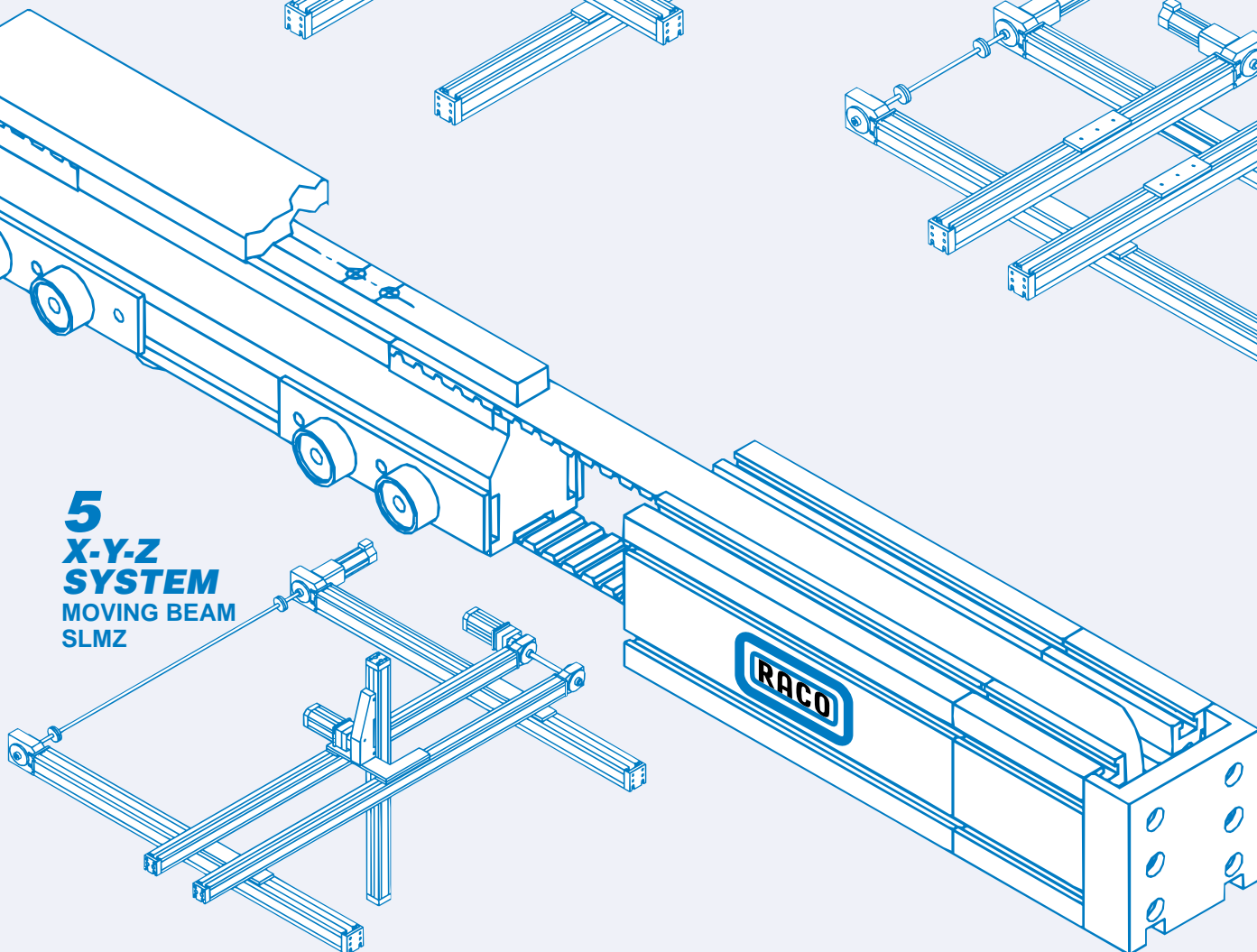
3
X-Y SYSTEM
USING A DOUBLE
DRIVEN SLM AND
A SINGLE SLM



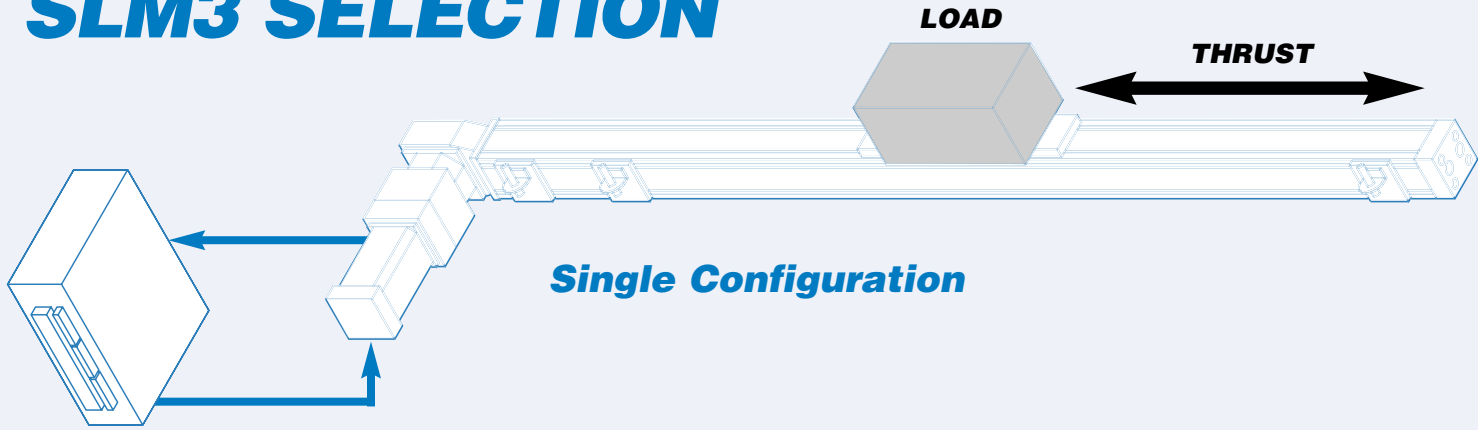
4
X-Y SYSTEM USING
DOUBLE DRIVEN
SLMs



5
X-Y-Z
SYSTEM
MOVING BEAM
SLMZ



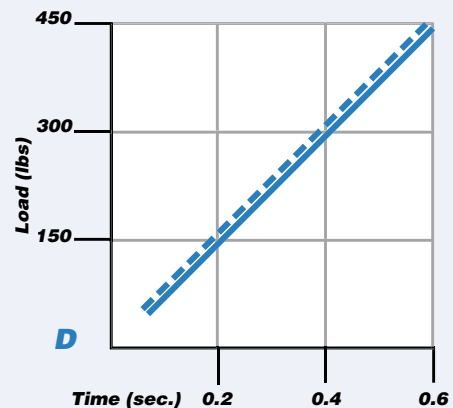
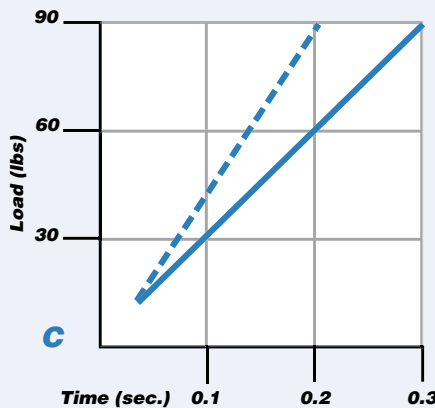
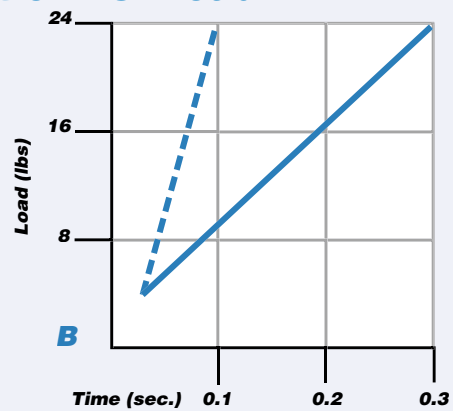
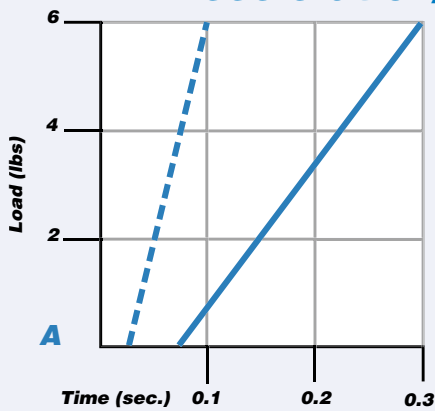
SLM3 SELECTION



Actuator Specification and Selection Chart

Model Number	SLM3 A	SLM3 B	SLM3 C	SLM3 D
Maximum Speed	150"/sec.	100"/sec.	50"/sec.	25"/sec.
Maximum Thrust	50 lbs.	80 lbs.	150 lbs.	300 lbs.
Maximum Load (weight)	6 lbs.	24 lbs.	90 lbs.	450 lbs.
Actuator Weight	Approximately 27 lbs. plus 0.325 lbs. per inch of stroke			

Acceleration/Deceleration vs. Load

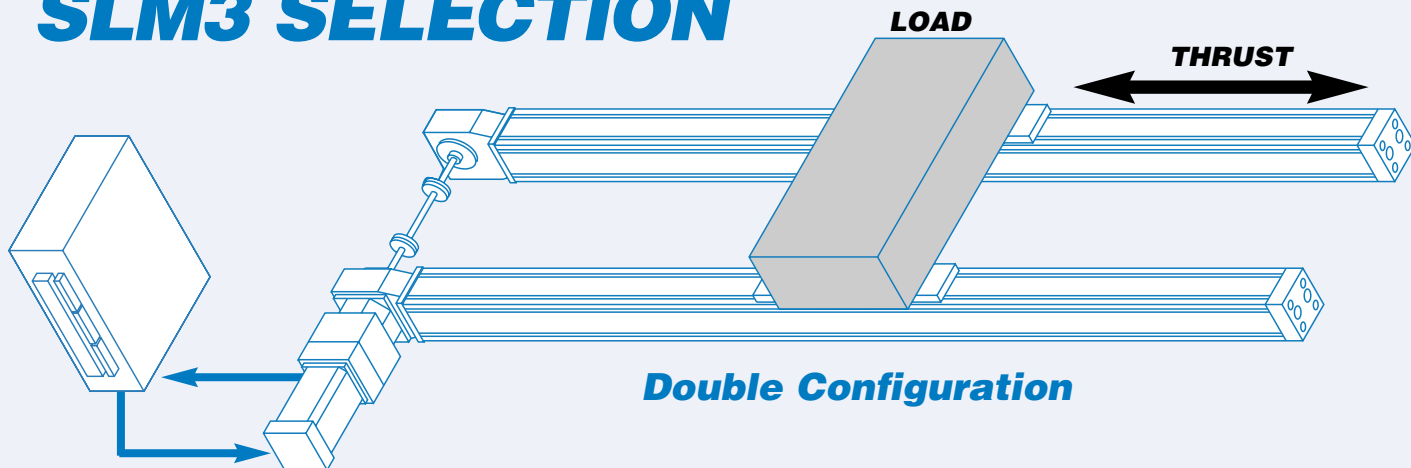


Solid Line = Full Thrust

Dashed Line = No Thrust



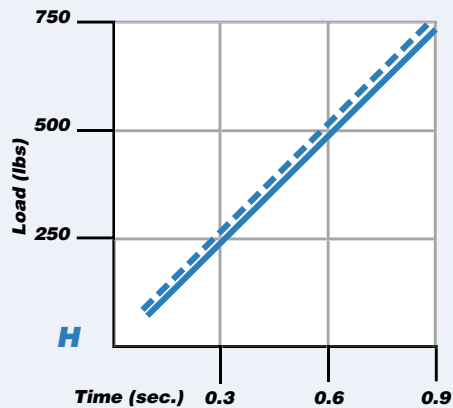
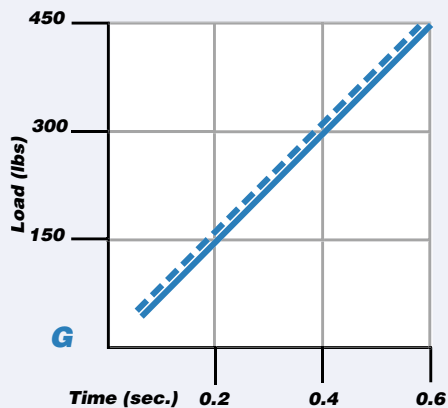
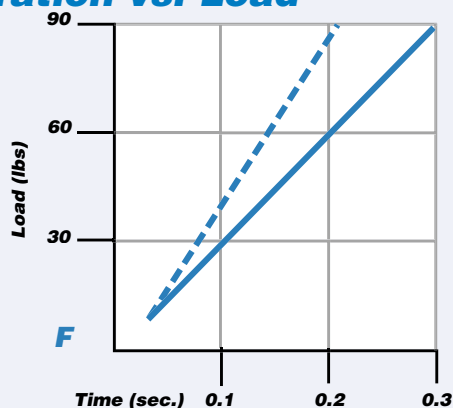
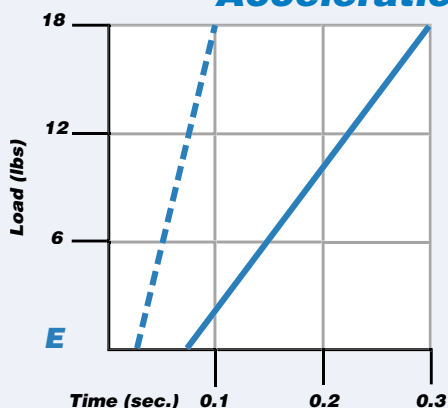
SLM3 SELECTION



Actuator Specification and Selection Chart

Model Number	SLM3 E	SLM3 F	SLM3 G	SLM3 H
Maximum Speed	100"/sec.	50"/sec.	25"/sec.	15"/sec.
Maximum Thrust	80 lbs.	150 lbs.	300 lbs.	500 lbs.
Maximum Load (weight)	18 lbs.	90 lbs.	450 lbs.	750 lbs.
Actuator Weight	Approximately 46 lbs. plus 0.65 lbs. per inch of stroke			

Acceleration/Deceleration vs. Load

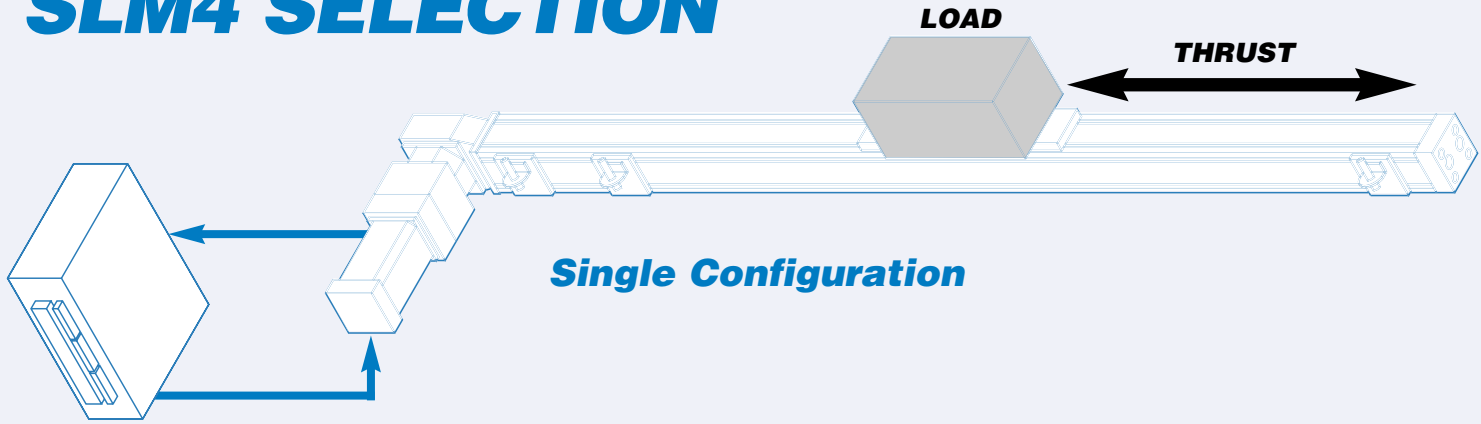


Solid Line = Full Thrust

Dashed Line = No Thrust



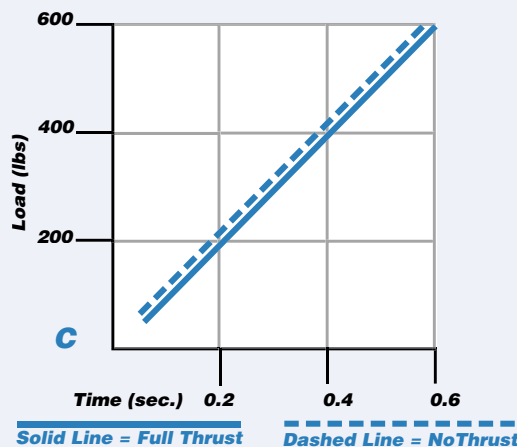
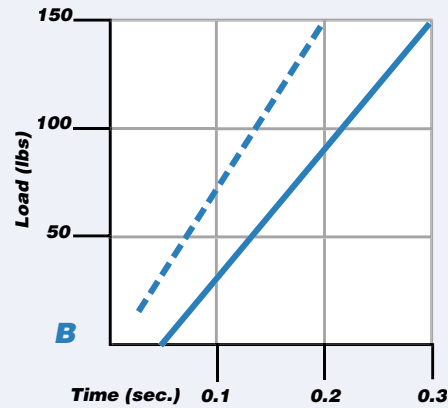
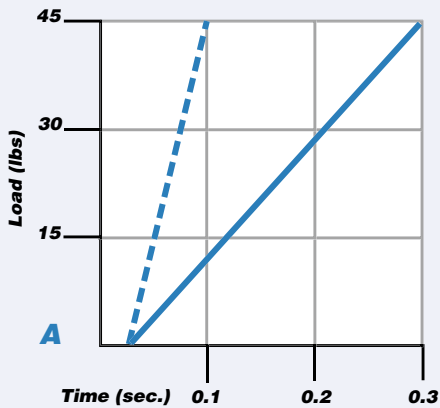
SLM4 SELECTION



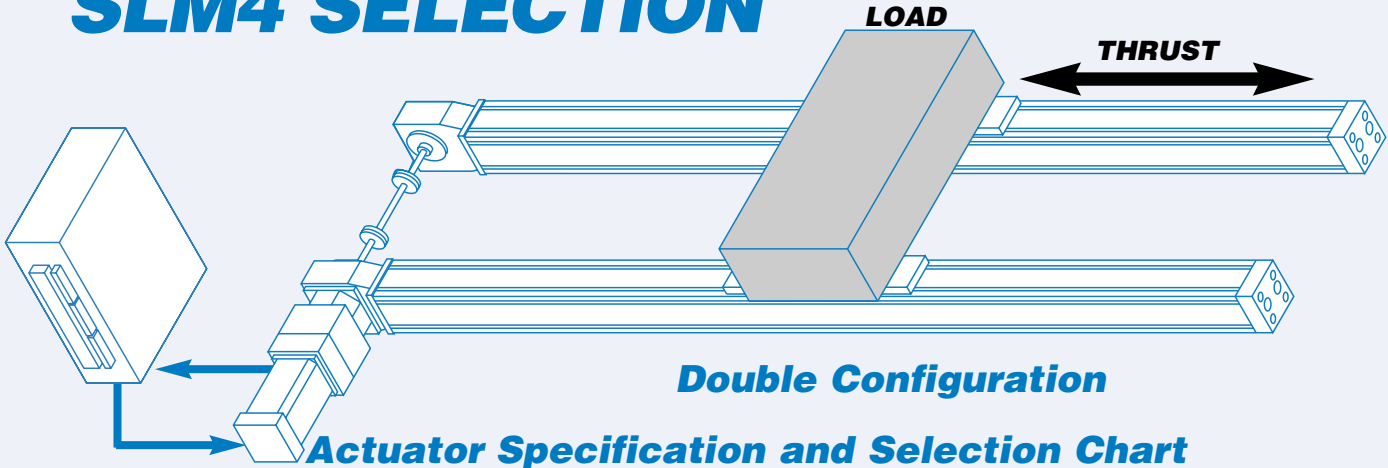
Actuator Specification and Selection Chart

Model Number	SLM4 A	SLM4 B	SLM4 C
Maximum Speed	100"/sec.	50"/sec.	25"/sec.
Maximum Thrust	100 lbs.	180 lbs.	400 lbs.
Maximum Load (weight)	45 lbs.	150 lbs.	600 lbs.
Actuator Weight	Approximately 52 lbs. plus 0.617 lbs. per inch of stroke		

Acceleration/Deceleration vs. Load

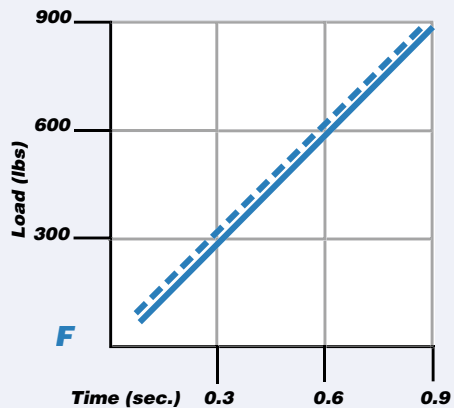
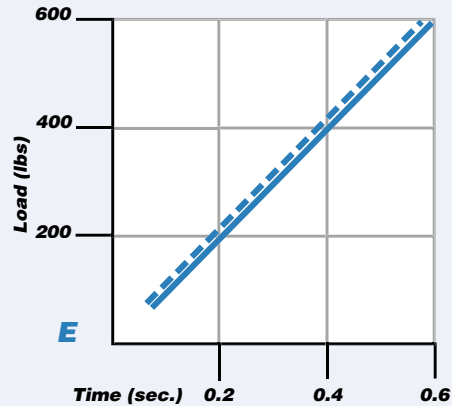
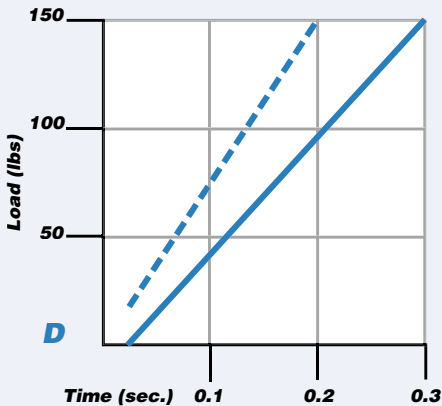


SLM4 SELECTION



Model Number	SLM4 D	SLM4 E	SLM4 F
Maximum Speed	50"/sec.	25"/sec.	12.5"/sec.
Maximum Thrust	180 lbs.	400 lbs.	800 lbs.
Maximum Load (weight)	150 lbs.	600 lbs.	900 lbs.
Actuator Weight	Approximately 80 lbs. plus 1.24 lbs. per inch of stroke		

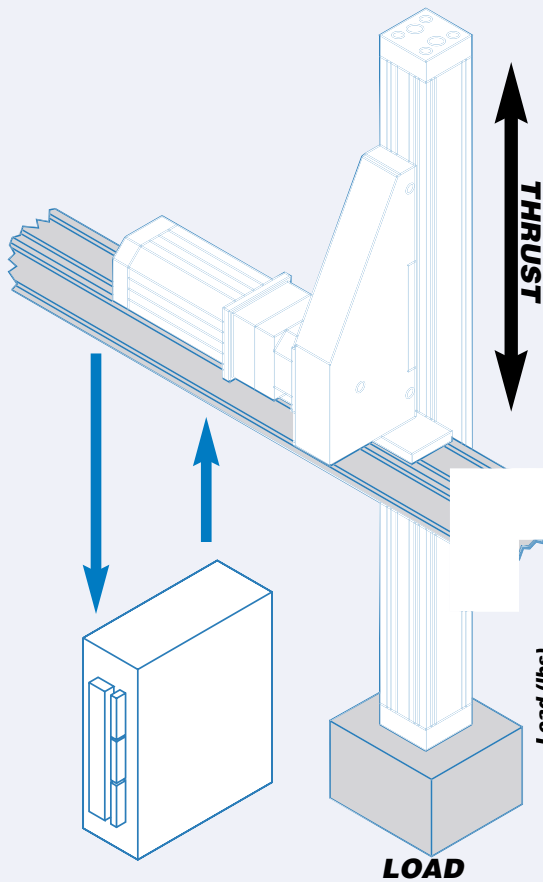
Acceleration/Deceleration vs. Load



Solid Line = Full Thrust Dashed Line = No Thrust

SLMZ SELECTION

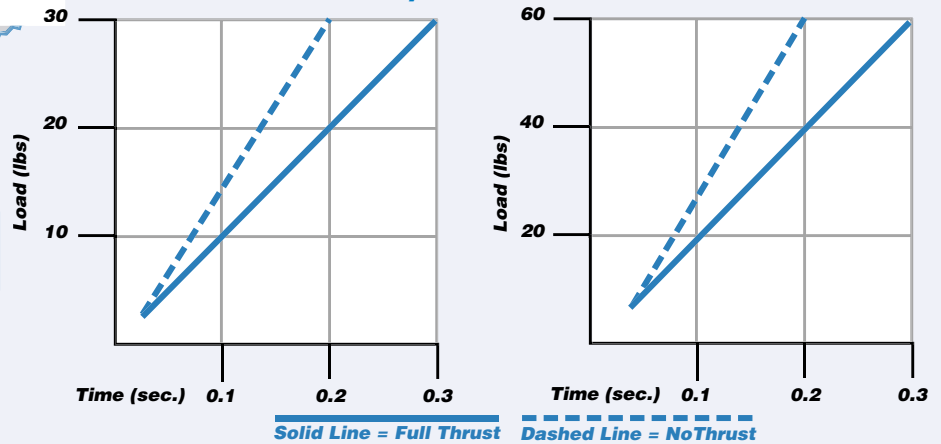
MOVING BEAM



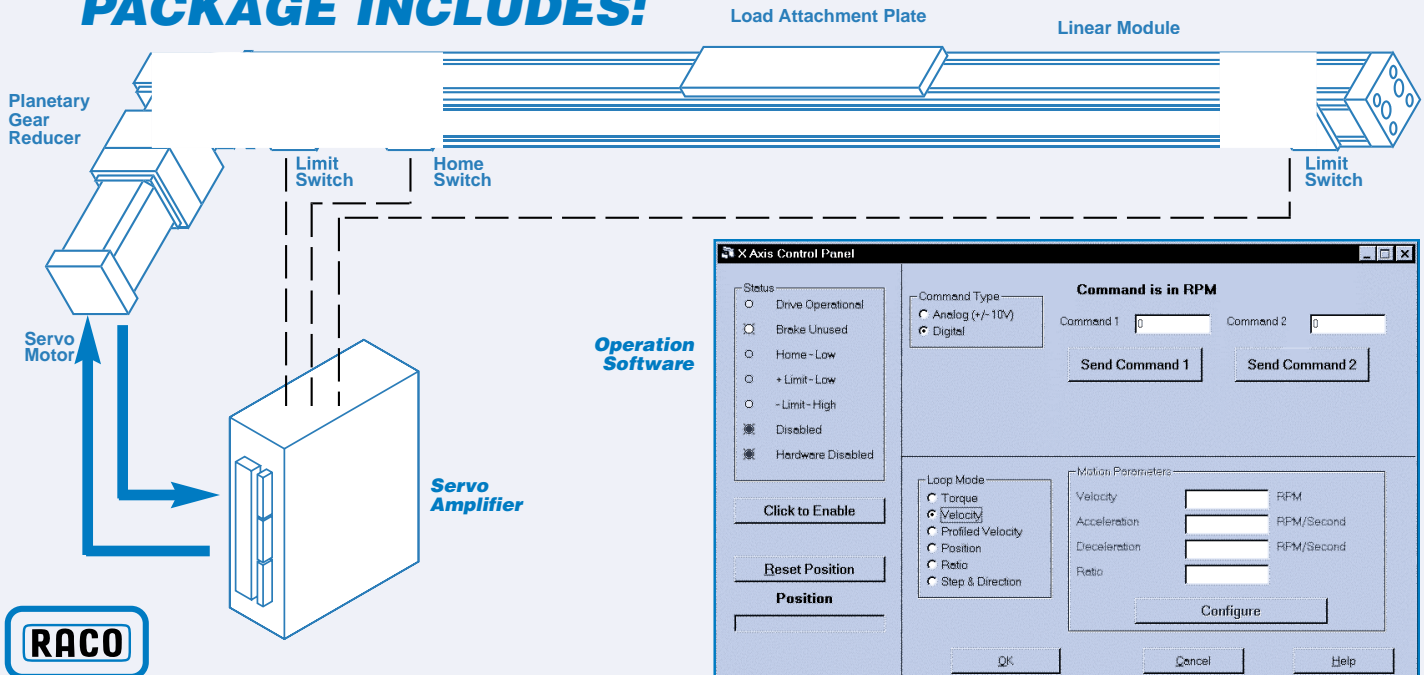
Actuator Specification and Selection Chart

Model Number	SLMZ A	SLMZ B
Maximum Speed	20"/sec.	10"/sec.
Maximum Thrust	100 lbs.	200 lbs.
Maximum Load (weight)	30 lbs.	60 lbs.
Maximum Stroke	36"	24"
Actuator Weight	Approximately 44 lbs. plus 0.325 lbs. per inch of stroke	

Acceleration/Deceleration vs. Load

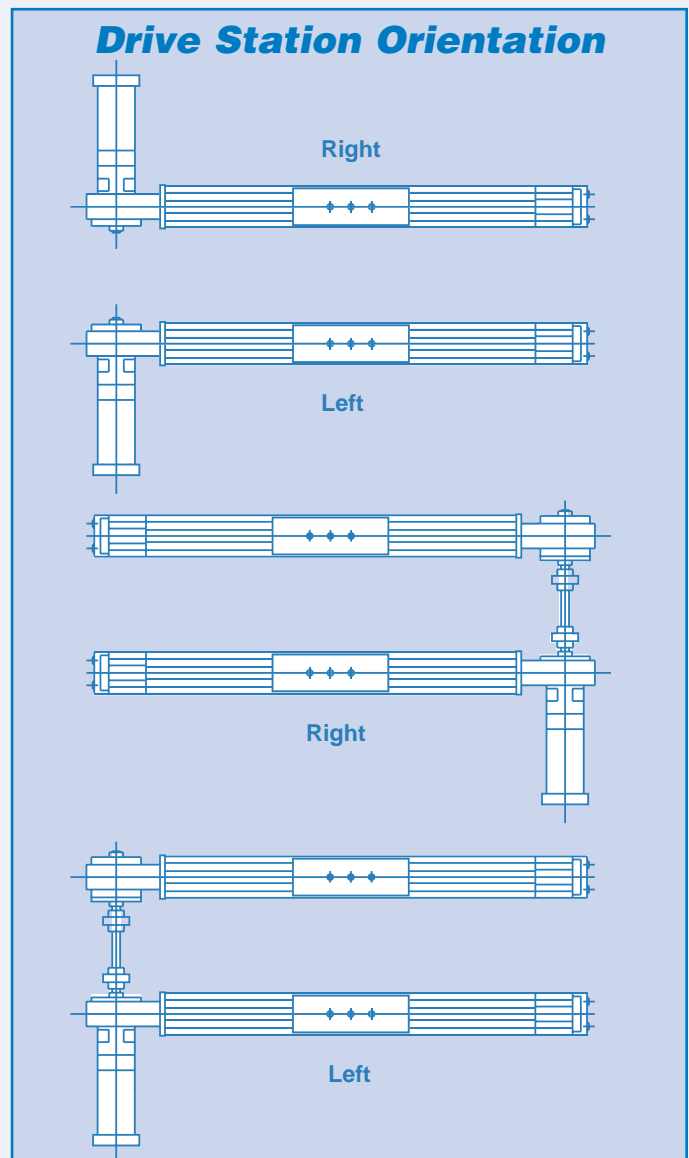
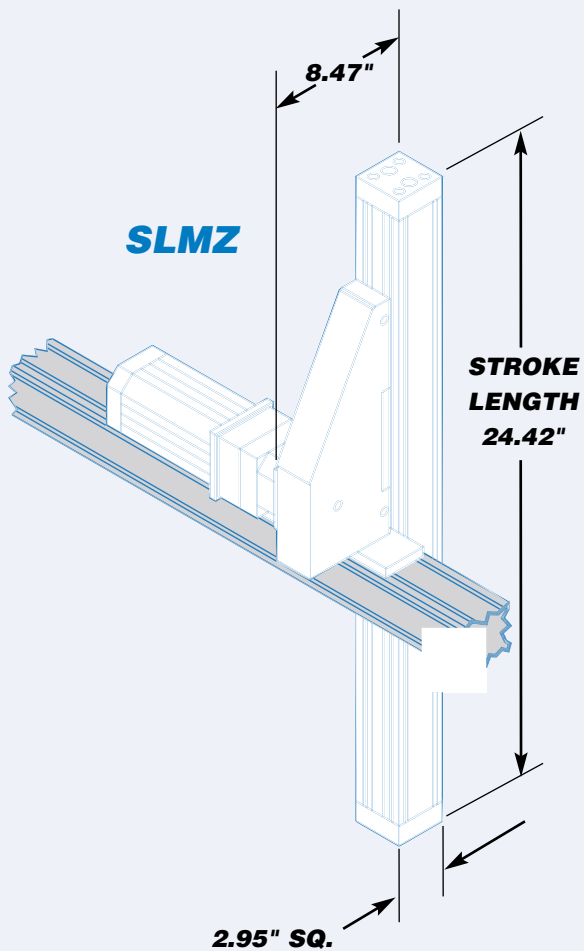
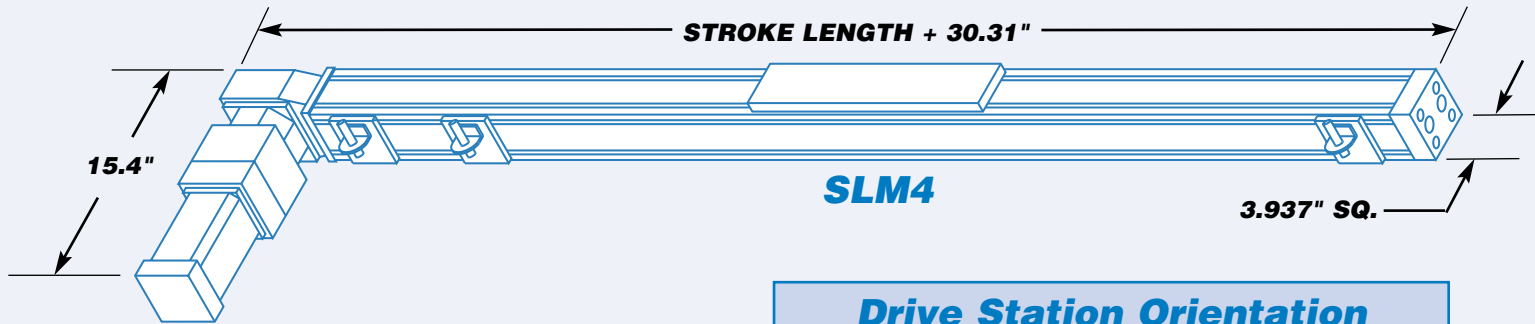
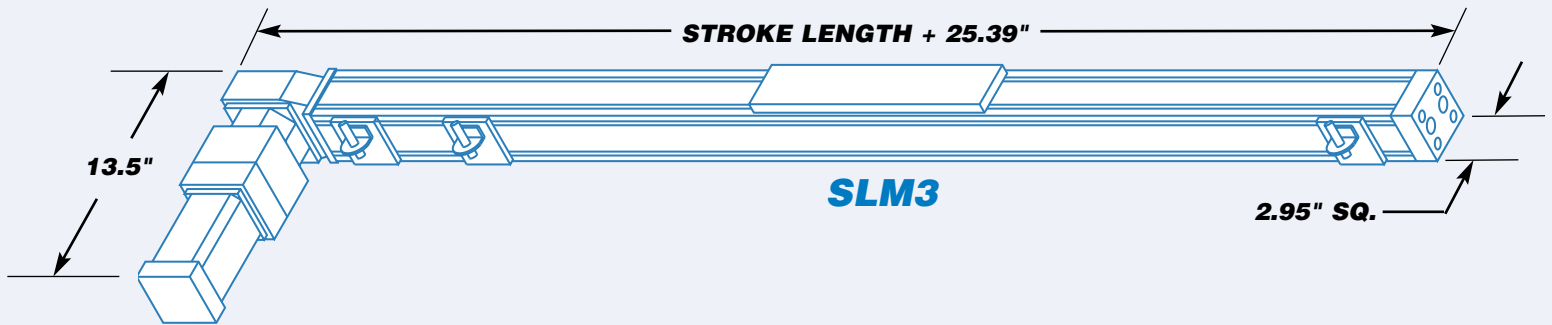


EACH ENGINEERED PACKAGE INCLUDES:

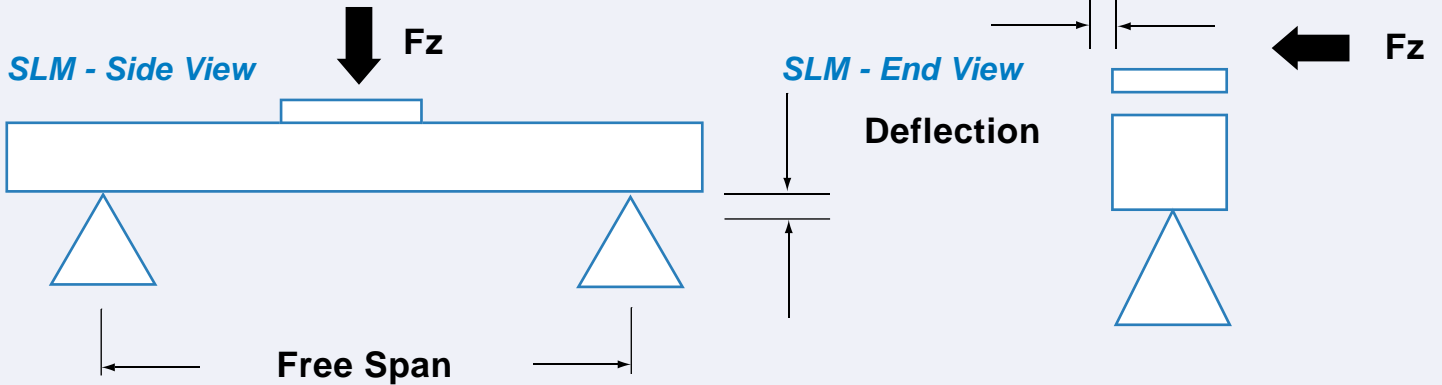


RACO

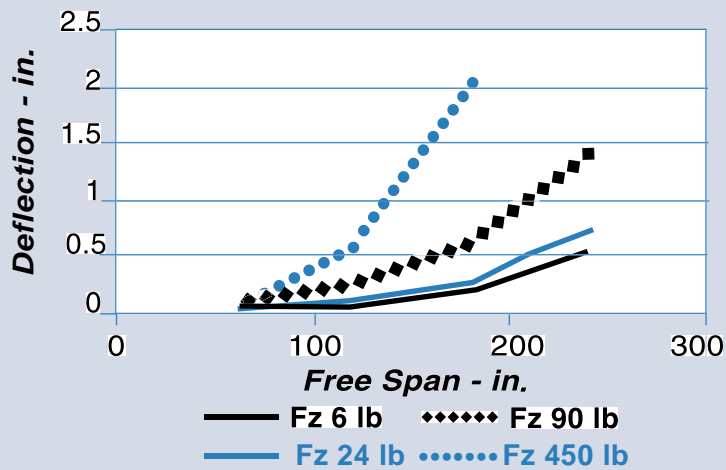
GENERAL DIMENSIONS



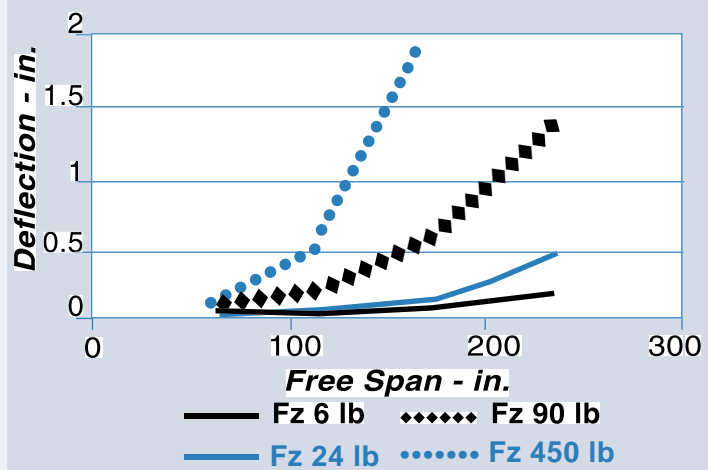
SLM3/SLM4 DEFLECTION UNDER LOAD



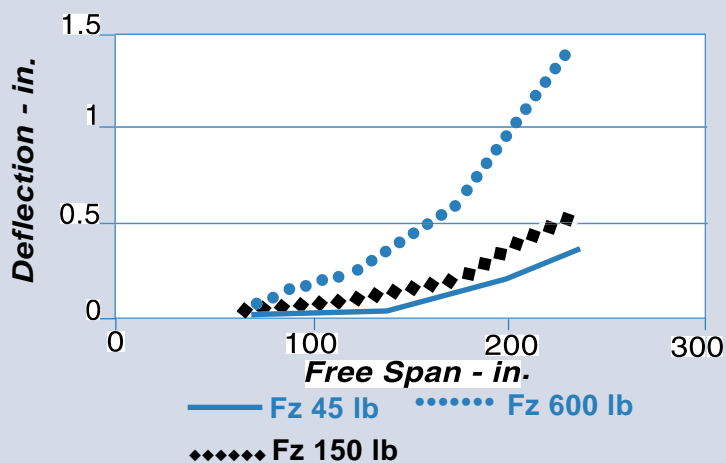
Normal Load Deflection - SLM3



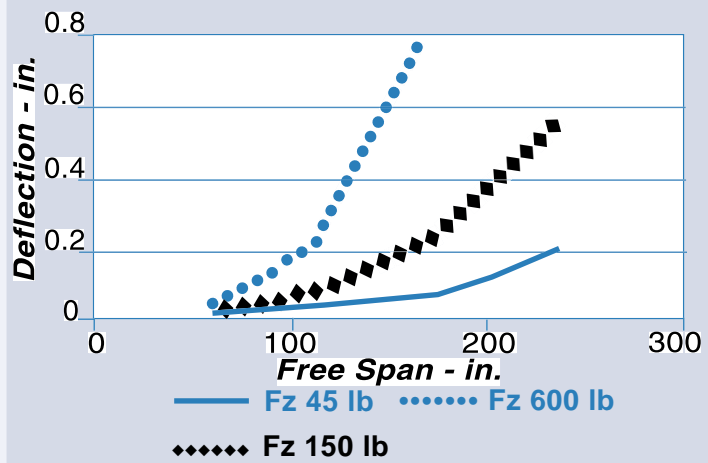
Side Load Deflection - SLM3



Normal Load Deflection - SLM4



Side Load Deflection - SLM4



SLM3/SLM4 TECHNICAL DATA

<i>Data</i>	<i>SLM3</i>	<i>SLM4</i>
Input Power	----- 230vac 3 ϕ ----- For operation on 115vac 1 ϕ power divide maximum speed shown on charts by 2	
Repeatability	+/- 0.003"	+/- 0.003"
Temperature Range	-5° to +120° F	-5° to +120° F
Maximum Stroke	235"	233"
Materials		
Structure	----- 6063 Al. Alloy -----	
Belt	----- Polyurethane / steel reinforced -----	
Wheel Treads	----- Delrin 150 SA -----	
Link Shaft	----- Solid or Tubular -----	
Profile Tolerances		
Flatness	0.012"	0.016"
Straightness	----- 0.0125" per ft. -----	
Twist	----- 0.25 degrees per ft. (3 degrees max.) -----	
Belt Tension		
0" to 120" Stroke	90 lb. (6 lb-in)	110 lb. (9 lb-in)
120" to 240" Stroke	180 lb. (12 lb-in)	210 lb. (15 lb-in)



For more than 45 years the name RACO has been known for high-quality electric cylinders around the world. Based on our experience and on-going relationships with our customers we guarantee a reliable product using state of the art technology. RACO has the largest installed actuator base in the world. The "RACO Electric Cylinder" has earned its position of world importance today as the replacement of pneumatic and hydraulic cylinders. RACO is located in Bethel Park, Pennsylvania with sales, manufacturing, engineering and administrative offices at the Bethel Park Headquarters.



RACO ELECTRIC ACTUATORS FOR TODAY'S INDUSTRY

Other Products Offered By RACO

RACO MA

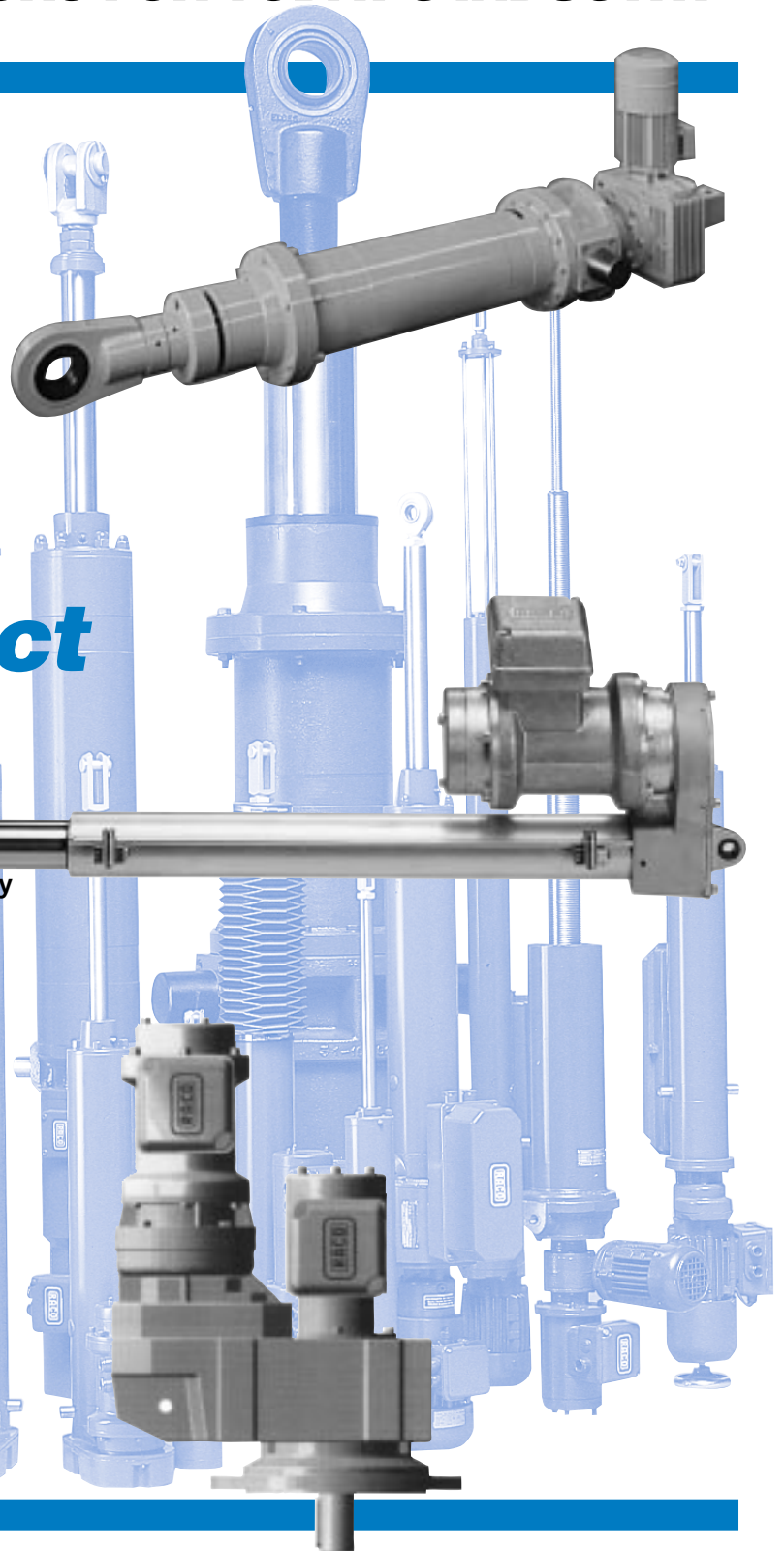
- Largest installed base in the world
- Thrust Capacities to 200,000 lbs.
- Standard stroke lengths to 80 inches
- Ball or acme power screw thread configuration
- Multiple leads available in every size to optimize motor / gearhead / output speed capability
- Complete line of standard controls and options
- ISO 9001 Manufacturing
- Typical delivery 2-3 weeks

RACO Compact

- Smaller installed envelope size
- Thrust capacities to 9000 lbs.
- Standard stroke lengths to 23.6 inches
- Ball or acme power screw thread configuration
- Multiple leads available in every size to optimize motor / reduction / output speed capability
- Complete line of standard controls and options
- ISO 9001 Manufacturing
- Typical delivery 2-3 weeks

RACO RM

- Available in seven sizes to 10,000 lb-ft of torque
- Fractional or multiple turn rotations
- Output speeds thru 90 degrees in 1 to 30 seconds
- Hollow or solid shaft output
- Adjustable rotation limit switches
- Analog or digital position feedback
- Electronic torque control
- Modular design allows custom solutions



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