

SLIDE RAIL 2



America's Linear Bearing Flag Ship

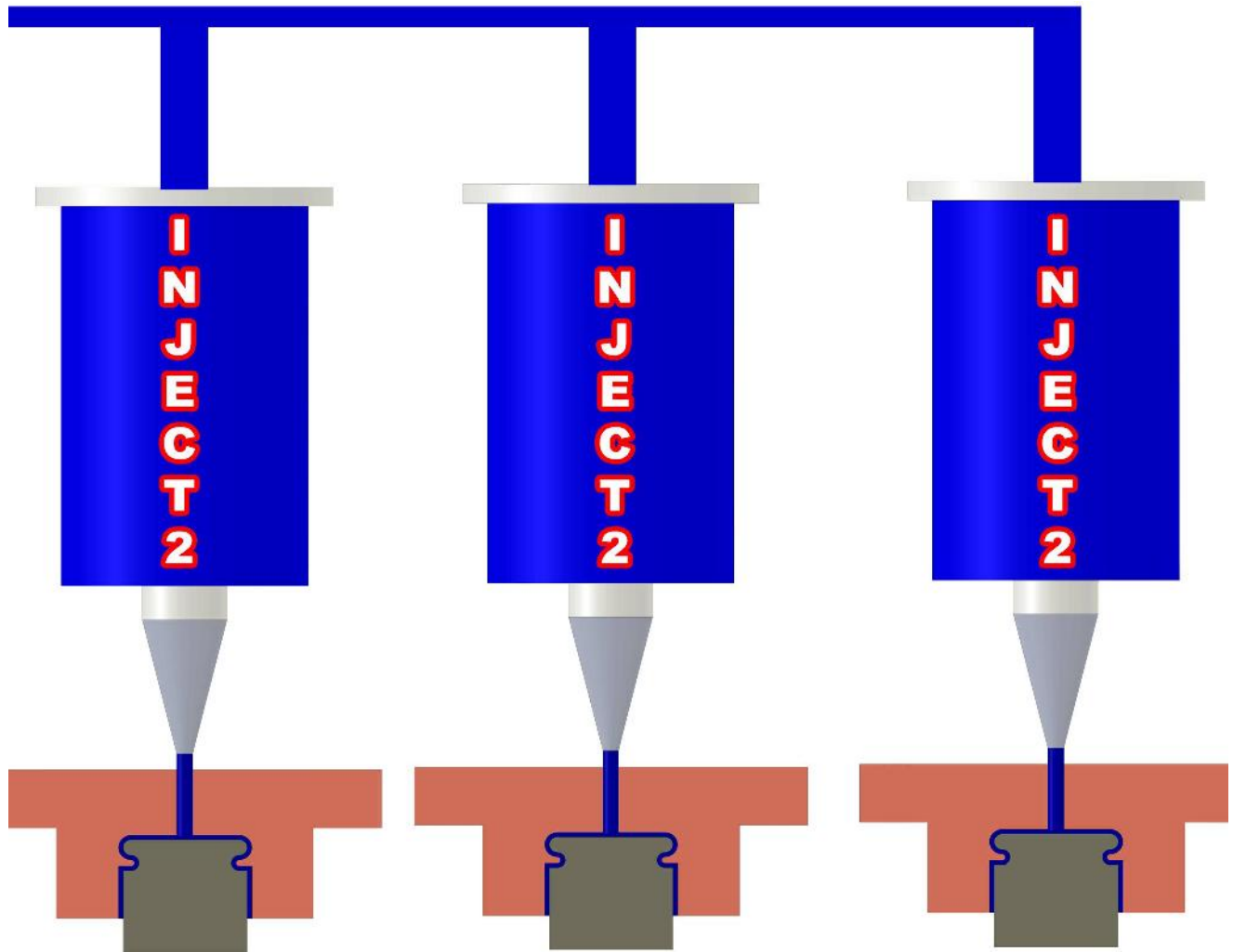
**INJECTE
TECHNOLOGY**



- **Low Cost**
- **Low Friction**
- **Smooth Quiet Motion**
- **Great for Contamination**

WWW.LM76.COM

1-800-513-3163



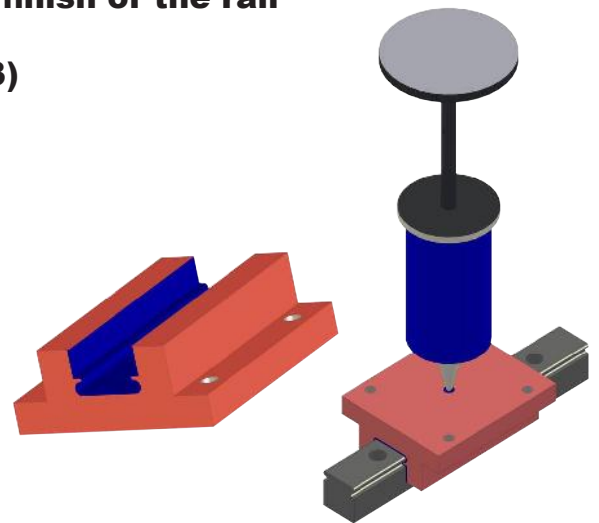
- Step 1** Blocks and Rails are Fixtured in Place
- Step 2** INJECT2 EPOXY is injected between block & rail
- Step 3** INJECT2 hardens, casting a mirror finish of the rail into load bearing surface
(Final Running Clearance: .002/.003)
- Step 4** Blocks and Rails are Separated

Material Specification:

Block - T6061 Non-Anodized Aluminum

Rail: Ceramic Coated Aluminum Extrusion

INJECT2 A low friction Polymatrix epoxy

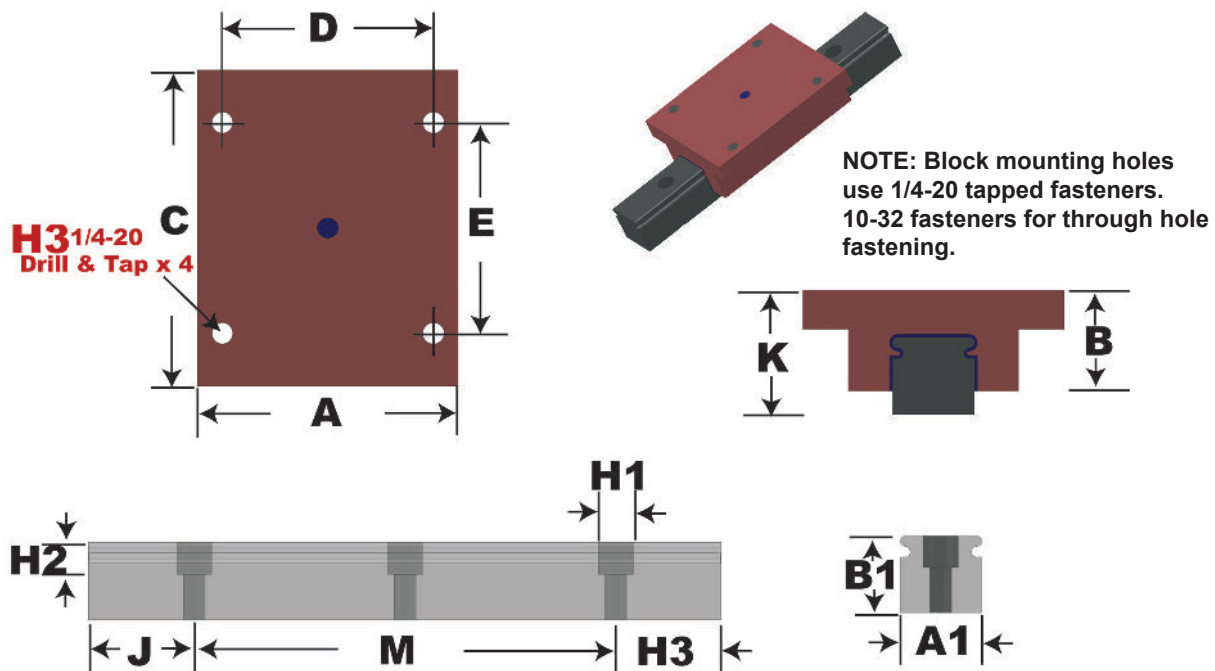


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Slide Rail2 is both novel and innovative. Unlike injection molded, plastic-lined block and rail systems, **INJECT2's** unique properties ensure higher loads, 1/2 the coefficient of friction and increased toughness for shock, vibration and contamination. **INJECT 2's** low friction, self-lubricating sliding surface guarantees smooth, quiet and contamination proof operation. **Slide Rail 2** begins with a machined aluminum carriage block and a ceramic coated aluminum extruded 20mm rail. The carriage and rail are mounted in a fixture and **INJECT2** is injected between the block and rail. **INJECT2** hardens and the rail and block are separated. No additional machining or bonding is required. **INJECT2** penetrates the aluminum block forming a superior, tenacious bond which will not separate.

INJECT2 benefits are notable:

- **Self-Lubricating - Anti-Stick Slip**
- **Up to 400 Surface Feet a Minute *Dependent on Loads**
- **High Load/High Compression Strength 19,000 PSI**
- **Low Friction .050 - .115**
- **Quiet and Smooth Operation**
- **Rapid Oscillation**
- **Withstands Contaminates, Coolants and Wash-down Chemicals**
- **Temperatures to 400F**
- **Excellent for Shock & Vibration**

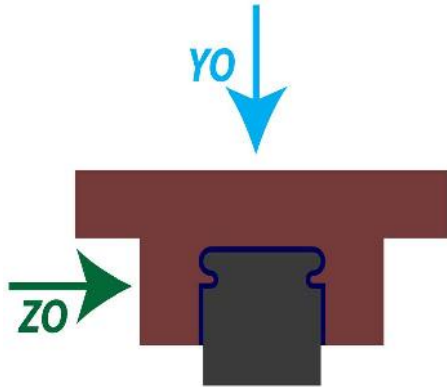


PART NUMBER for ordering: LMST20 - 1 x Rail Length
Example: LMST20 - 2 (Number of Blocks) x 48"

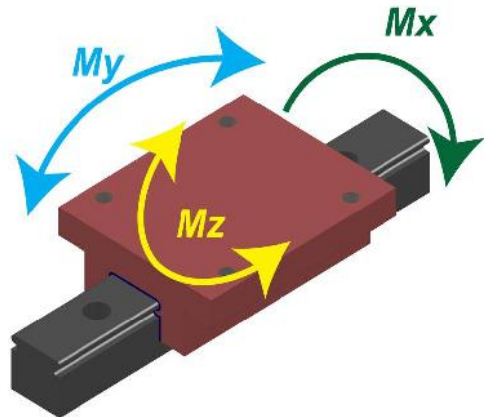
A	B	C	A1	B1	C1	D	E	F	H1	H2	H3	J	K	M
2.48	.960	3.0	.78	.730	.862	2.00	2.00	.715	.33	.30	.202	1.0	1.181	2.00

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LOAD DATA

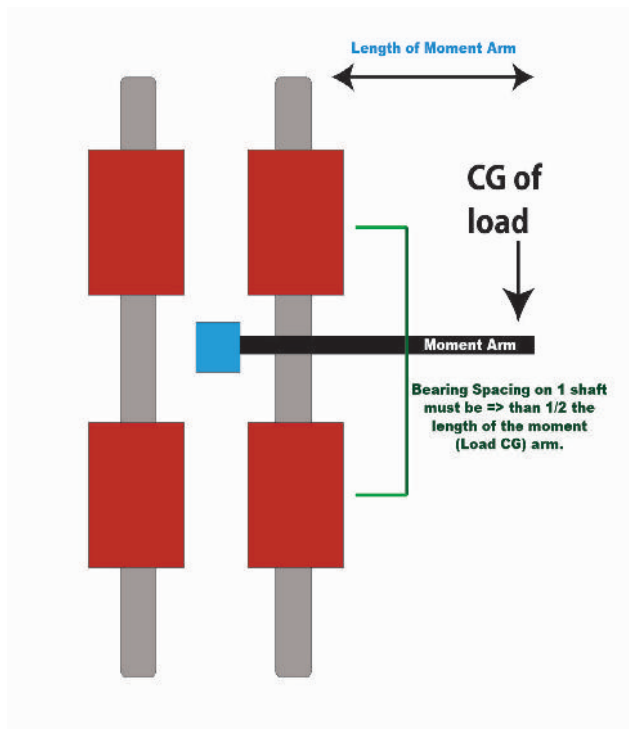


YO	ZO
Pounds	
1000	1000



My	Mx	Mz
Pounds		
30	60	30

2:1 RATIO



Unlike ball or roller units, sliding friction bearings are susceptible to binding if the 2:1 ratio rule is not observed. Bearing block edge loading will result in increased friction, wear and possible seizure.

In vertical applications, bearings on 1 shaft must be spaced a minimum of 1/2 the distance of the moment arm load CG.

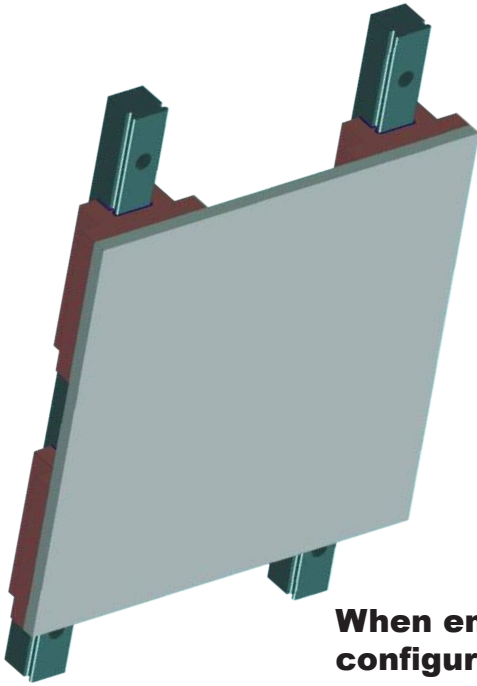
If you can design 1:1 all the better.

In horizontal applications, the 2:1 ratio pertains to the distance between parallel shafts - on center lines. Again, a minimum of 1/2 the distance of the moment arm load CG.

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PARALLEL RAIL CONFIGURATION



When employing SLIDE Rail 2 in parallel rail configuration, please consider the following:

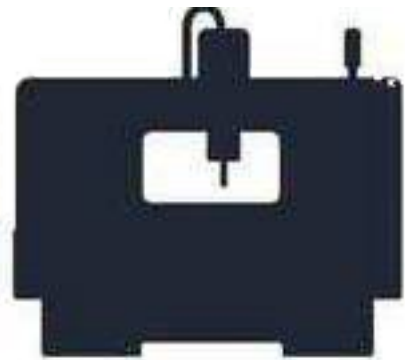
- 1. Mount one rail relative to a positive edge**
- 2. Slide Rail2 rails are .78" wide. That in mind, note the following example using a 3" distance between rails on centers:**

a. Dividing $.78" \div 2 = .390"$

b. Distance between rails is $3" - .390" = 2.61"$

Rail to rail parallelism should be $\leq .002"$

ACTIVE LOADS



Beyond moment loads about the pitch, yaw and roll axis, there are often active loads such as drill heads, punching tools and levers that mechanically actuate other components. In these applications, contact LM76 engineering:

Mike Quinn 1-800-513-3163 Cell: 617-538-8756 mquinn@LM76.com

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