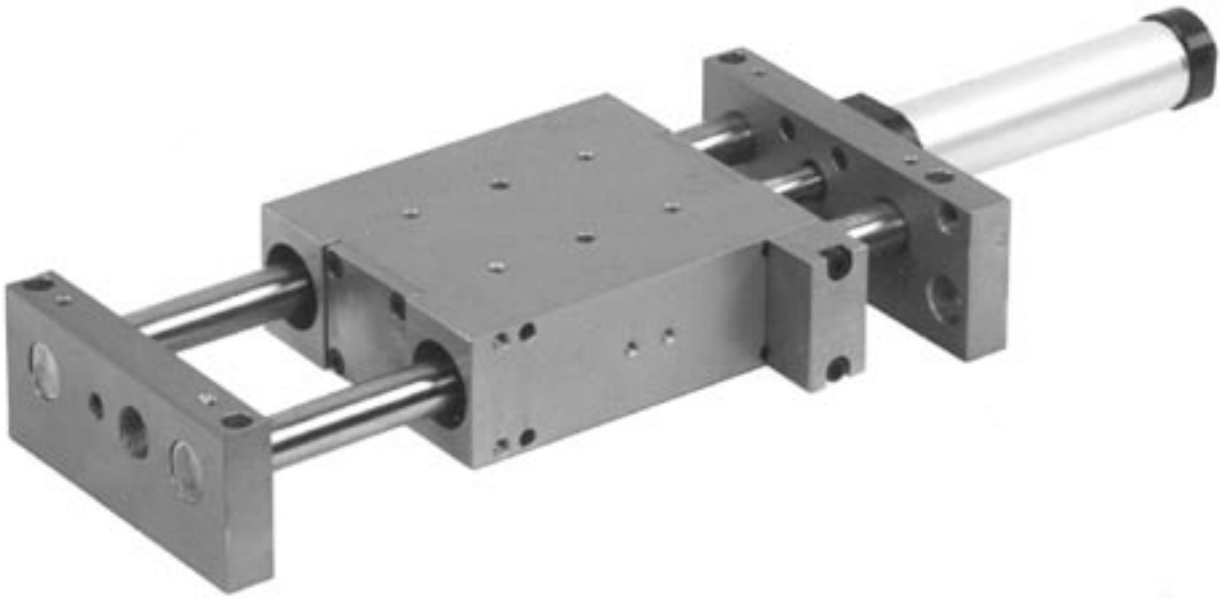

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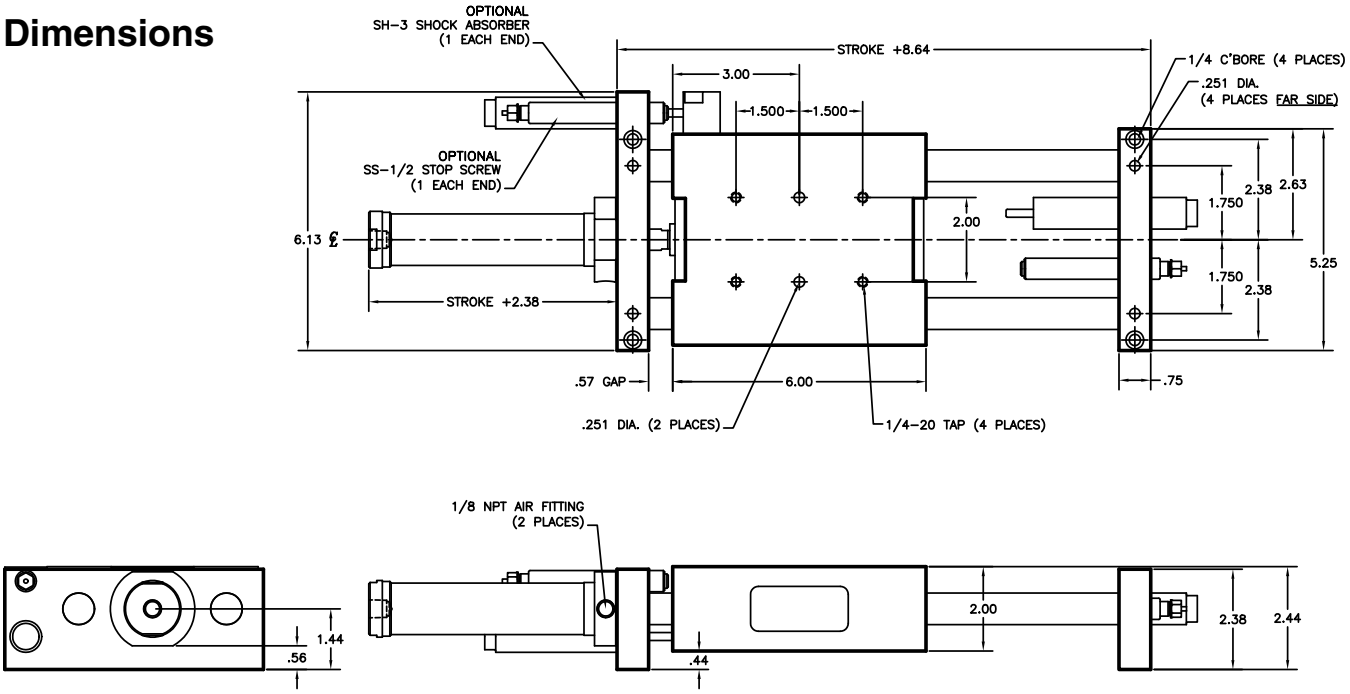
Features

- External mounted cylinder
- Rod type cylinder for short stroke table slide applications
- .750 dia. case hardened & ground shafts
- 4 linear ball bearings and seals for extended cycle life
- Tapped & dowel pin holes in anodized body for ease of mounting
- Tapped & dowel pin holes in anodized end plates for ease of mounting
- Hardened adjustable stopscrews for accurate and repeatable positioning available (see page 146)
- Hydraulic shock absorbers available (see page 139)
- End of stroke sensing switches are available for stopscrews (see page 143-149)

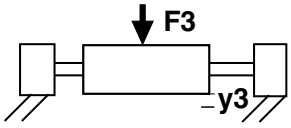
Dimensions



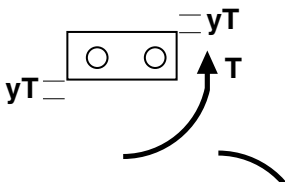
NOTE: Flow controls are recommended for all applications.

Technical Data

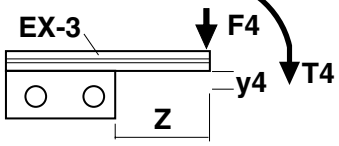
- Bore = 1.5"
- Force @ 80 psi = 120 lbs
- Operating medium = compressed air 60-100 psi
- Air connection = 1/8 NPT
- Repeat accuracy = +/-0.0005"
- Life expectancy = >100 million travel inches
- Force diagrams below depict the load and the resultant deflection caused by that force (or torque).



$F3=X*F1$
$y_3=y_1/X$



$T=F3*1.75/X$
$y_T = y_1/2$ or
$y_T = y_3*X/2$

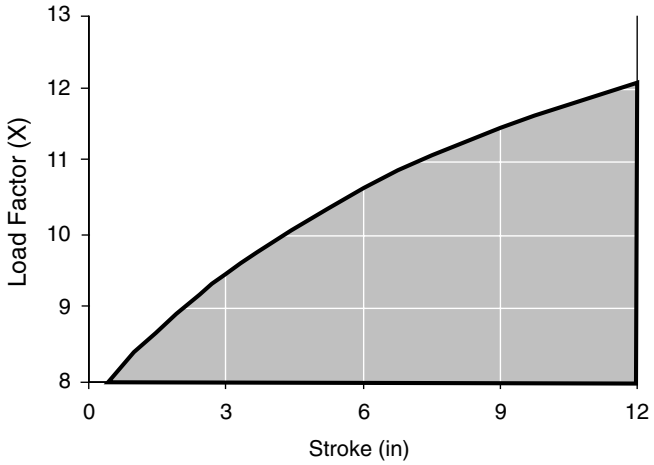


For T4 = T;
If T4 = F4*(z+1.75) and T=F3*1.75/X then,

$F4 = F3*1.75/(X*(z+1.75))$

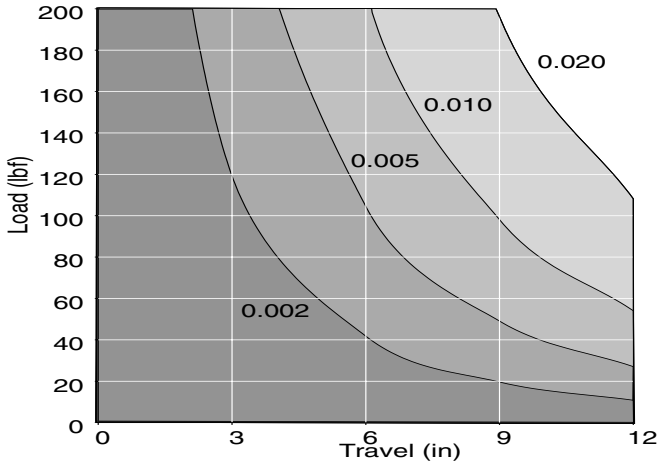
F4 is the force that will cause a deflection (y_T) at the block's edge. To determine the deflection at the cantilever end use the following:
$y_4 = F4*z^3/(9.78E+07)$

Load Factor (X)



The load factor (X) is used in calculations as a relationship between a load on the ends (F1) versus a load in the center (F3).

F3 Load vs. Travel at set Deflection (y_3) for the TSR-3



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Ordering & Options

TSR - 3 - ☐ - ☐

STROKE
(1" to 12")

SS = with 2 Stop Screws
SH = with 2 Shock Absorbers
SB = with both Stopscrews & Shock Absorbers

For end of stroke sensing, see page 143-149