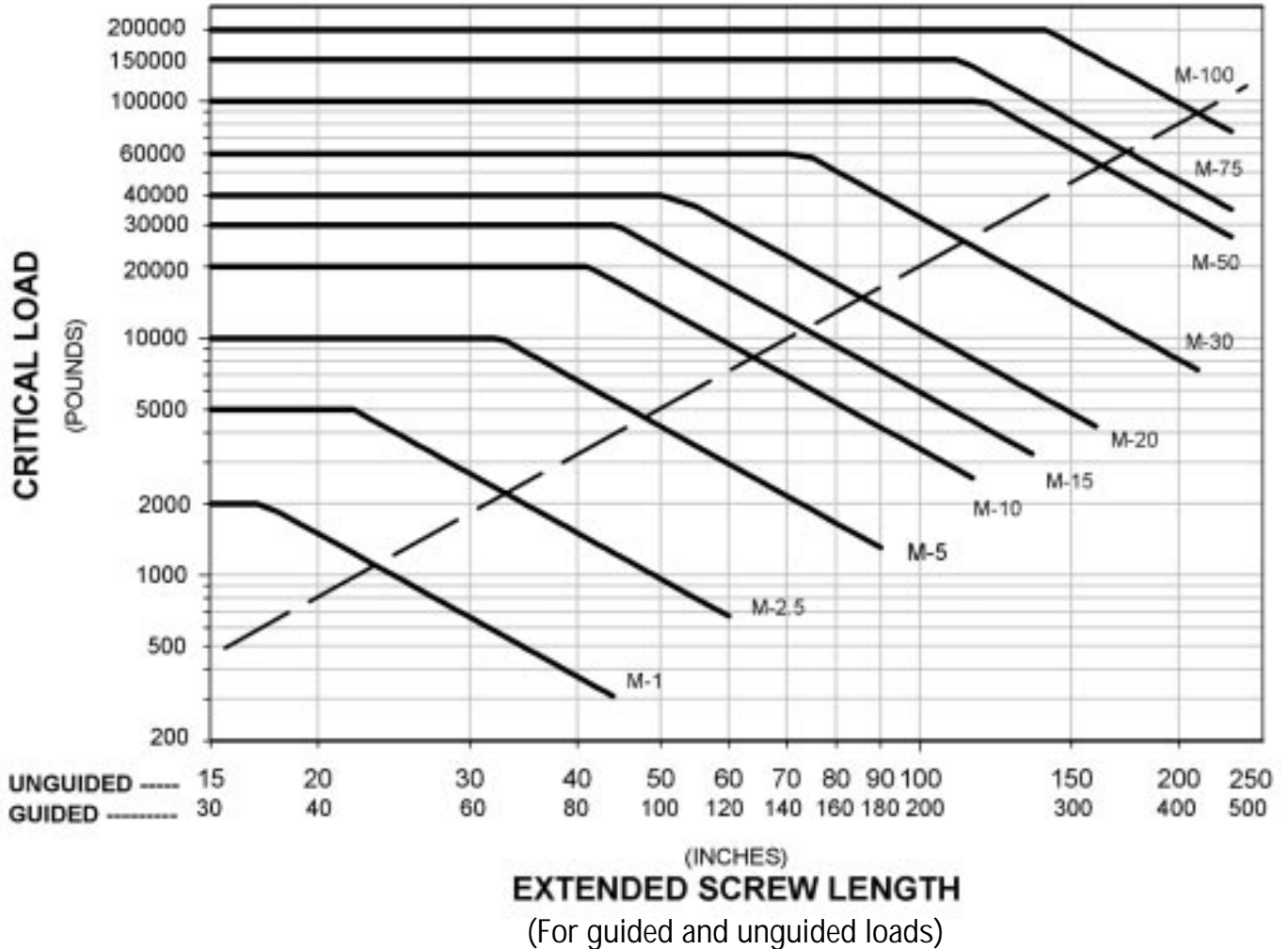


**M-SERIES MACHINE SCREW COLUMN BUCKLE CHART**



The maximum ESL values in the chart above are based on a **2:1 factor of safety against column buckle**, and on a standard design with a top plate, or a rotating design travel nut. Increased load screw lengths are not shown where the slenderness ratio exceeds 400.

**1. Determine extended screw length: (ESL)**

The ESL is the distance in inches the load screw can extend from the housing. See layout page for the model selected to determine ESL.

**2. Determine the adjusted screw length: (ASL)**

The chart above is for a standard design top plate or the rotating design travel nut. For other design configurations you must adjust the ESL value using the F factor multiplier to determine the adjusted screw length.

$$ASL = ESL \times F$$

**F = Column Factor Multiplier**

DESIGN CONFIGURATION	F factor	Guided K factor	Unguided K factor
Standard Design Top Plate	1	0.65	1.3
Rotating Design Traveling Nut	1	0.65	1.3
Standard Design Clevis End	1.25	0.8	1.6
Keyed Design Top Plate	1.25	0.65	1.3
Keyed Design Clevis End	2	0.65	1.6

**3. Select correct size Uni-lift:** On the chart above, draw a horizontal line to represent the maximum load ( $P_1$ ). Using the set of ESL values that apply to your design (guided or unguided), draw a vertical line to represent the ESL or ASL. All of the Uni-Lift's above the point of intersection will be acceptable.

Screw lengths above the dotted line comply with AISC maximum slenderness ratio  $KL/r=200$  specified for design and fabrication of structural steel buildings. This data is for reference only and is not a limiting factor, except as required.

K=Column Factor  
L=Extended Screw Length (ESL)  
r =Radius of Gyration  
See Technical Specifications (Table 1) for r values