

Column strength is the ability of the lift shaft to hold compressive loads without buckling. With longer screw lengths, column strength may be substantially lower than nominal jack capacity.

If the lift shaft is in tension only, the screw jack travel is limited by the available screw material or by the critical speed of the screw. Refer to the trapezoidal screw technical section for critical speed limitations. If there is any possibility for the lift shaft to go into compression, the application should be sized for sufficient column strength.

Charts are used to determine the required jack size in applications where the lift shaft is loaded in compression. To use this chart:

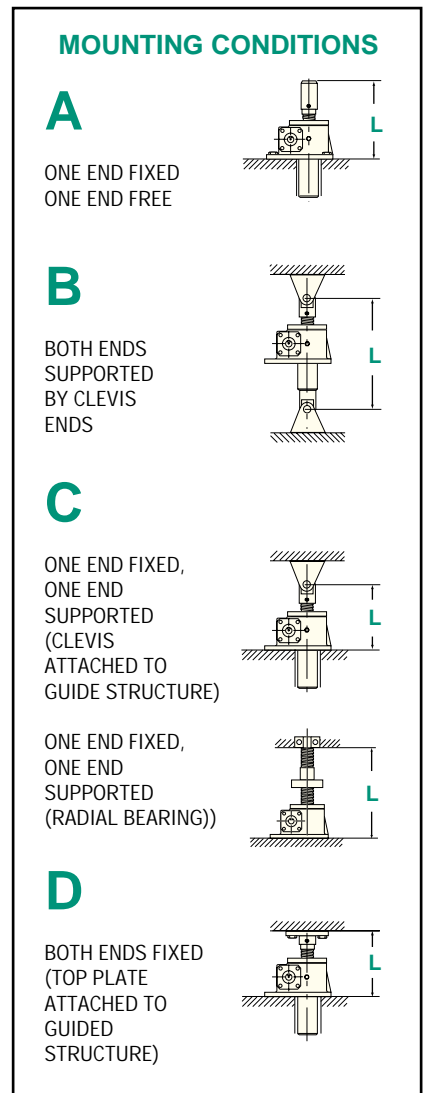
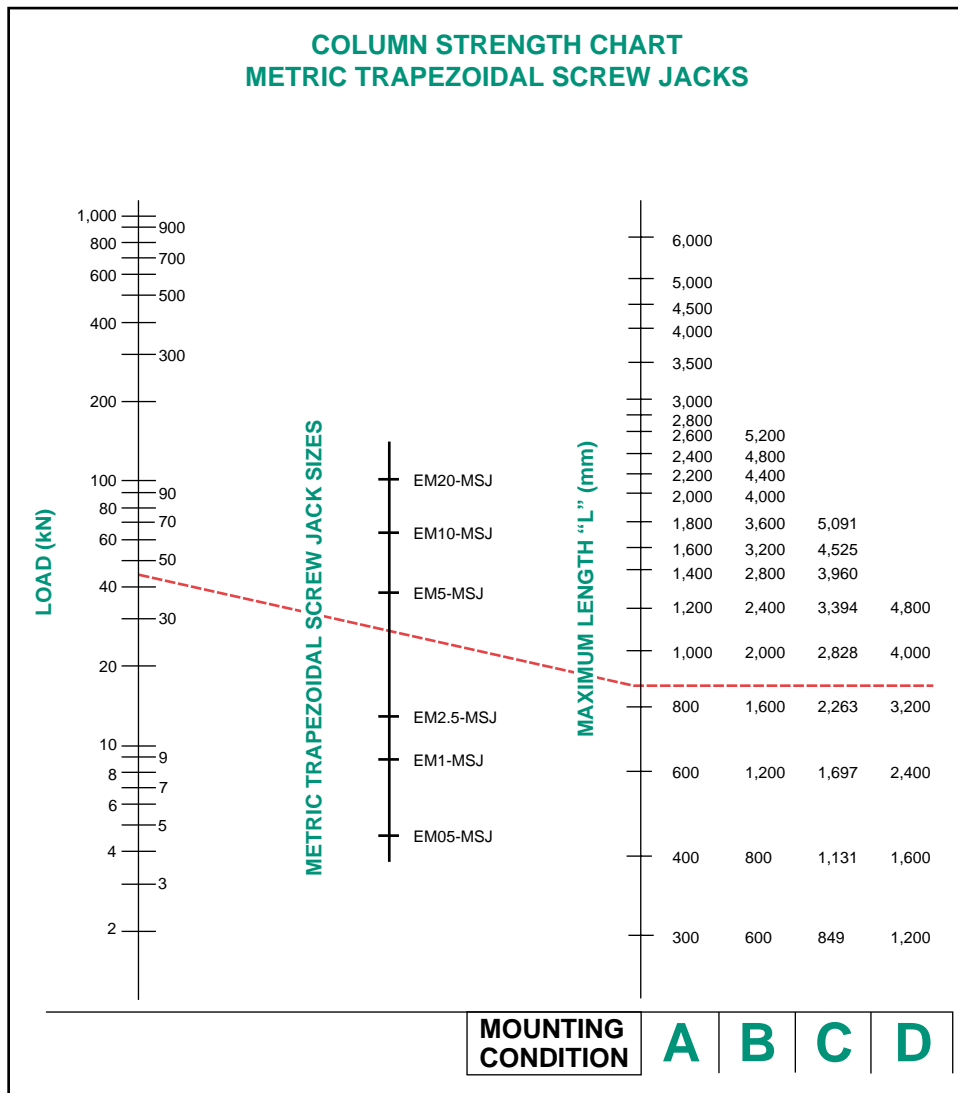
- Determine the mounting condition and mark a point on the "Maximum length" line.

- Mark a point on the "Load" line, applying an appropriate design factor.

CAUTION: chart does not include a design factor.

- Draw a line connecting the two marked points. Select a jack above the point where the line drawn crosses the "Jack Sizes" line.

The chart assumes proper jack alignment with no bending loads on the screw. Effects from side loading are not included in this chart. Jacks operating horizontally with long lift shafts can experience bending from the weight of the screw. Consult Nook Industries, Inc. if side thrust is anticipated, operating horizontally, or maximum raise is greater than 30 times the screw diameter.



AVAILABLE LIFT SCREW LENGTHS

As a major manufacturer of industrial lead screws, Nook Industries stocks a broad selection of trapezoidal screws. Nook Industries has the capacity to make long

trapezoidal screws for special applications. Rotating screw jacks can be built with a larger diameter lift shaft for greater column strength.