



SFM Safety Nut

Backup Safety Feature For Vertical Ball Screw Applications



Maximizing Safety In Vertical Ball Screw Applications

When installing a ball nut assembly in a vertical application, it can be critical to have a safety lock mechanism in the ball nut assembly to hold the load in the event of a ball nut failure. Thomson SFM safety nuts deliver reliable backup functionality for the traveling nut to ensure maximum safety.

Flexible Design Options

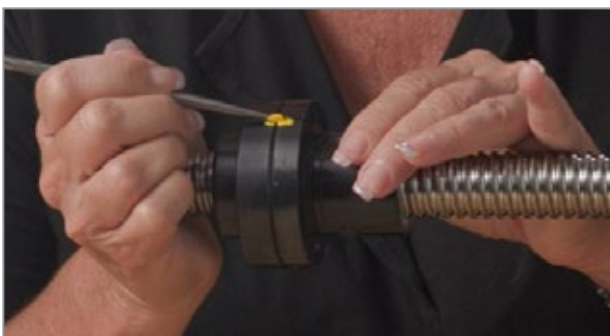
To best accommodate your application requirements, SFM safety nuts are available in various sizes.

The safety nut is an optional part to a ball screw assembly and mounted below the traveling nut without any axial load applied. In case axial play increases (caused by wear, nut or ball breakage, or ball loss resulting from dirt, lubrication starvation, overheating, etc.), the negative thread of the safety unit gets into contact with the screw thread, thus holding the load and avoiding damage to the machine.

Easy Installation

Watch our Tech Tips video on how to properly install an external safety nut onto a ball screw:

<https://www.thomsonlinear.com/safetynut-video>



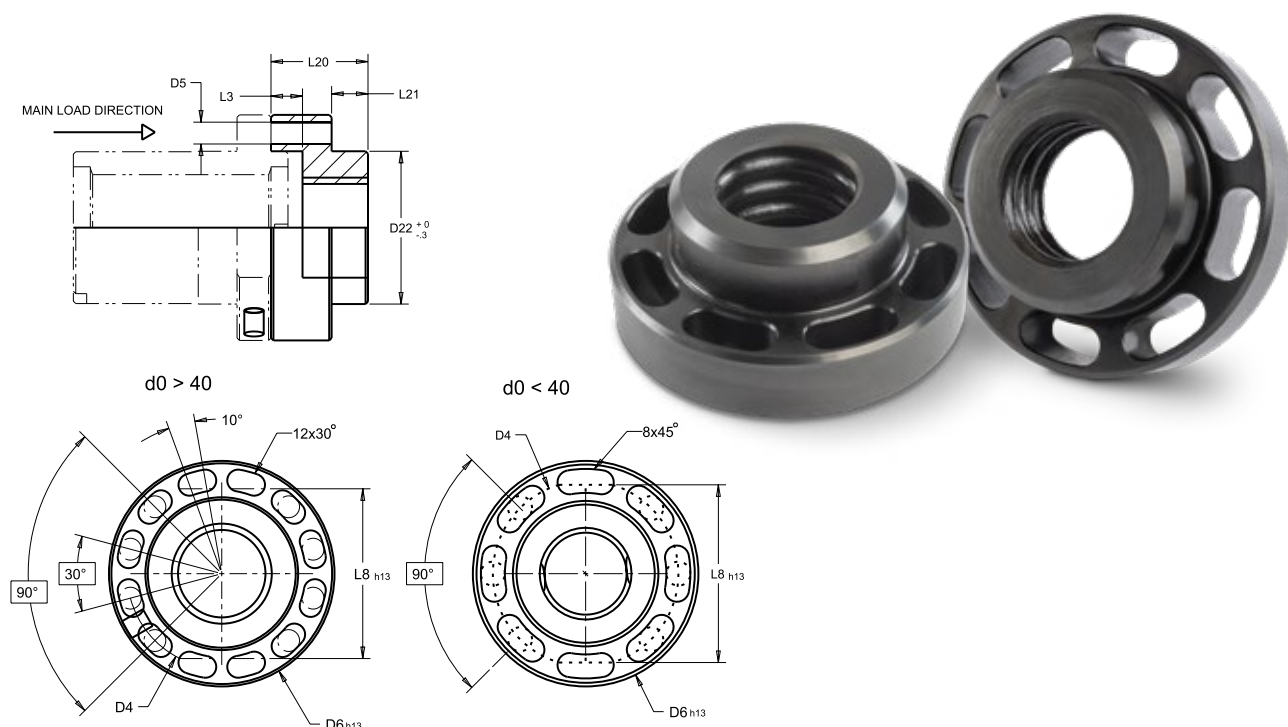
Application Examples

Some applications require higher safety standards. This rings particularly true for machine and structural engineering designs in which personal safety is critical such as patient tables, stage constructions and people bridges at the airport.



SAFE. RELIABLE.
EASY TO INSTALL.

Specifications – External Safety Nut



Flanged Version – Standard Sizes

| Size | ID Number | Dimensions [mm] | | | | | | | | Max. Load [kN] |
|------|------------|-----------------|-----|-----|-----|---------|-----|-----|------|----------------|
| | | D _w | D6 | D4 | D22 | D5 | L20 | L21 | L3 | |
| 1605 | 0215901978 | 3.500 | 48 | 38 | 28 | 8×5.5 | 25 | 12 | 8.5 | 60 |
| 2005 | 0215901979 | 3.500 | 58 | 47 | 36 | 8×5.5 | 25 | 12 | 9 | 75 |
| 2505 | 0215901630 | 3.500 | 62 | 51 | 40 | 8×6.6 | 25 | 12 | 9 | 90 |
| 2525 | 0215900326 | 3.500 | 62 | 51 | 40 | 8×6.6 | 35 | 10 | 16 | 95 |
| 3205 | 0215901682 | 3.500 | 80 | 65 | 50 | 8×9 | 30 | 15 | 9 | 160 |
| 3210 | 0215901419 | 5.556 | 80 | 65 | 50 | 8×9 | 30 | 15 | 11.5 | 95 |
| 4005 | 0215901726 | 3.500 | 93 | 78 | 63 | 12×9 | 35 | 15 | 10 | 240 |
| 4010 | 0215901389 | 7.144 | 93 | 78 | 63 | 12×9 | 40 | 15 | 13 | 235 |
| 4020 | 0215901980 | 5.556 | 93 | 78 | 63 | 12×9 | 40 | 15 | 12 | 115 |
| 5010 | 0215901404 | 7.144 | 110 | 93 | 75 | 12×11 | 40 | 15 | 15 | 285 |
| 5020 | 0215901981 | 6.35 | 110 | 93 | 75 | 12×11 | 40 | 15 | 14 | 160 |
| 6310 | 0215901123 | 7.144 | 125 | 108 | 90 | 12×11 | 40 | 15 | 15 | 350 |
| 6320 | 0215901982 | 7.144 | 135 | 115 | 95 | 12×13.5 | 40 | 20 | 17 | 235 |
| 8010 | 0215900895 | 7.144 | 145 | 125 | 105 | 12×13.5 | 40 | 20 | 14 | 430 |
| 8020 | 0215900831 | 12.700 | 165 | 145 | 125 | 12×13.5 | 45 | 20 | 19 | 450 |

The normal function of the unit is guaranteed up to an axial play of 0.4 mm.

Note: The safety nut can only be installed together with the corresponding flanged nut.

Thomson also offers complete units with integrated safety nuts (flanged and cylindrical). Contact Thomson Customer Service for more information or for additional technical resources: www.thomsonlinear.com/cs.

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SFM_Safety_Nut_BRUK-0048-01 | 20240626SK

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