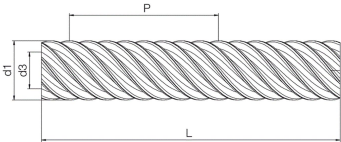


dryspin® high helix lead screw, right-handed
thread, aluminium EN AW 6082

DST-LS-10X12-R-AL



dryspin® high helix lead screw, right-handed
thread, aluminium EN AW 6082

- Outer diameter: 8-20mm
- Pitch: 10-100mm
- Multi start
- Not self-locking

Product description

Introducing the dryspin high helix lead screw, crafted from durable aluminium EN AW 6082. This right-handed thread design ensures efficient linear motion conversion, making it ideal for fast applications. Enjoy maintenance-free dry running and a longer service life thanks to its innovative asymmetrical design. With its quiet operation and resistance to dust, this lead screw is perfect for various environments. Experience the benefits of advanced lead screw technology with the dryspin high helix lead screw.

General properties

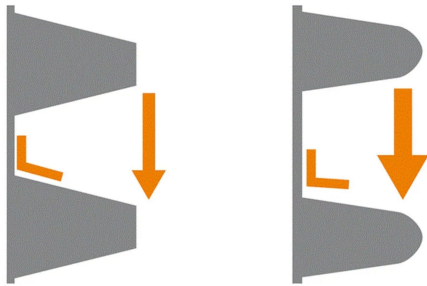
Thread direction	Right-hand thread
Thread type	High helix thread dryspin; highest efficiency
Number of threads	4
Weight	210 g
Lead screw material	aluminium EN AW 6082

Dimensions

Thread size	DS10X12
Pitch P	12 mm
Pitch angle α	21.54 °
Outer diameter Ø d1 min.	9.9 mm
Outer diameter Ø d1 max.	10 mm
Core diameter Ø d3 min.	6.85 mm
Core diameter Ø d3 max.	6.95 mm
max. length	1000 mm



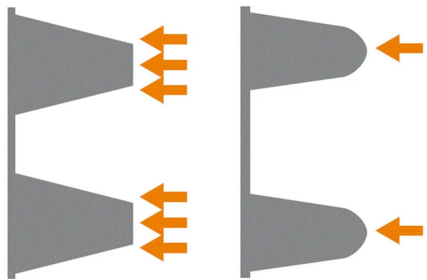
Additional information and diagrams



Higher efficiency due to optimised thread angle

Due to a flatter thread angle in dryspin® high helix lead screws (similar to a trapezoidal thread), the applied force is efficiently converted into a translatory motion. Compared with a steeper thread angle, this means a lower power loss.

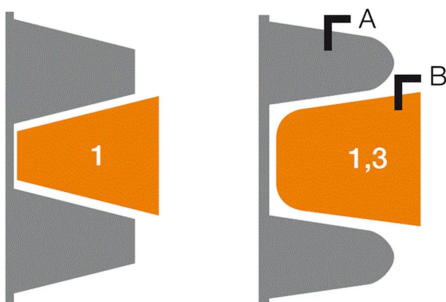
Left: Steep flank angle, standard geometry
Right: Flat flank angle, dryspin® geometry



Quiet and vibration dampening due to rounded teeth

Due to the radius tooth design, the contact surface between the lead screw nut and the lead screw is reduced. Therefore the dryspin® lead screw nuts move without vibration and are virtually silent. This is due to the fact that the greater the contact of two surfaces moving against one another, the more vibrations are transmitted, which can be perceived as a rattle or squeak. The rounded teeth minimise this effect and the thread moves quietly and without lubrication.

Left: Angular-toothed flanks, standard geometry
Right: Round toothed flanks, dryspin® geometry



Extended service life due to asymmetry

Due to the larger distances between the individual dryspin® thread turns, the thread ideally matches the properties of the lubrication-free igus® high-performance polymers. The proportion of the tribologically optimised polymer in the thread turns can be extended by a factor of 1.3 for all sizes. More wear-resistant material and higher levels of efficiency are crucial for a service life that is up to 5 times longer compared to standard geometries. The larger the lead screw diameter, the stronger the impact of this effect. Backlash can be minimised life-long by the use of dryspin® zero-backlash threaded nuts with integrated spring pretension.

Left: Symmetrical standard geometry
Right: Asymmetrical dryspin® geometry