Description

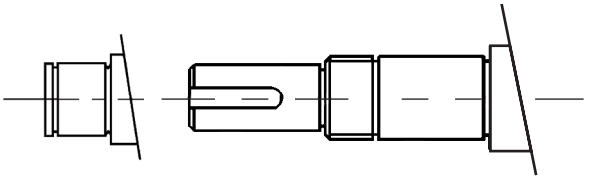
The excellent efficiency of a ballscrew is due to the balls that maintain the contact between the nut and the thread. Similar to a roller bearing, the nut "slides" on the screw. The balls are circulated inside the nut after one or more turns by a recycling pin (single-thread screw), or by two deflectors and a tubular conduit, found in the shell of the nut (multi-threaded screw).
Vulkolan seals are incorporated to prevent the lubricant from leaking.
The tolerance of the thread is T7, which means that for a pitch of 5mm, the axial backlash is 0.05mm, 0.10mm for a pitch of 10mm, and 0.20mm for multiple-threaded screws.
The backlash can be reduced by applying a pre-load, this is applied by placing two nuts one against the other and then turning them in opposite directions. This type of assembly is suitable for machines requiring a high rigidity and accurate positioning.

Guidelines

Ballscrews are only designed to bear axial loads. They should not be used for guidance. Such use will greatly reduce the working life of the ballscrews. A suitable form of linear guide must be integrated into the system to carry radial loads. During assembly, ensure that all the parts are accurately aligned. Any offset between the screws and the guiding parts may cause a malfunction, or even a blockage, which will reduce the working life and the accuracy of the system.

Ends

Ballscrews are supplied by the metre, unfinished and with plain ends. The customer should cut to the length required and carry out any other machining operations before the nut is fitted to the screw.



Technical page

Lubrication

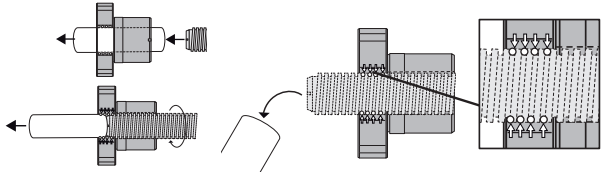
Flanged ball nuts are provide with grease points. The use of a lubricant avoids metallic contact between the moving parts, protects against corrosion and reduces wear. Its role is therefore very important and is similar to that of a ball bearing. A Lithium based grease is perfect for most uses. Use of oil is preferable for higher speeds.
When refilling with lubricant, make sure the same type of lubricant is used as previously.
Grease type KPE ZR-20 according to DIN51502.
Depending on the operating environment, each customer can use their own particular grease.

Mounting and removing the nut

- The thread has a rough machined finish
- The end requires machining, as a minimum the end should be straight with a chamfer.

1) Position the assembly sleeve against the thread of the shaft. If a flange or another type of machined surface is in the way, use an adhesive strip to ensure the sleeve is in place up to the thread.
2) Screw on the nut without forcing it.
3) Move the nut over the entire length of the thread to ensure that the screw is functioning correctly.

The nut must never be taken off the threaded shaft without the use of an assembly sleeve to keep the balls in place.

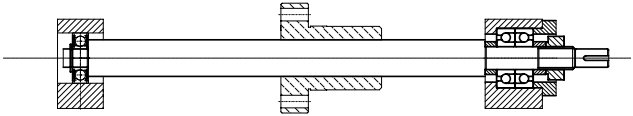


Should the balls fall out, do not put them back in the nut. Correctly reassembling the balls in the nut requires extreme conditions of cleanliness and detailed knowledge if the ballscrew is to function correctly.

Handling

Handle the ballscrews with care. Avoid shocks, and do not damage the threads.
The ballscrews should remain in their original packaging for as long as possible. It is important that they are clean for them to function correctly. Take care not to apply radial loads that may cause the screw to be bent and irreparable become.

Mounting arrangements



Supported
BSB

Speed	Load	Rigidity
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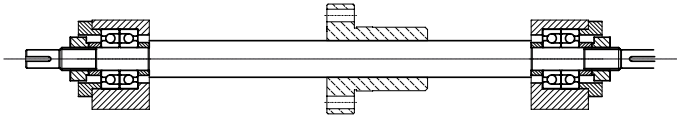
Encased
RPB



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Speed	Load	Rigidity
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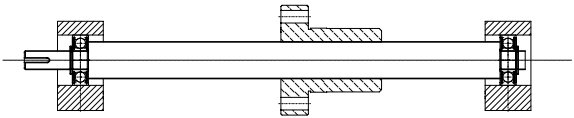

Supported
BSB

Speed	Load	Rigidity
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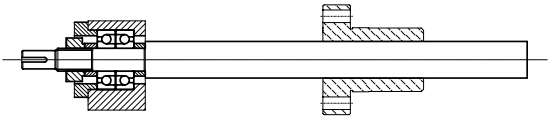
Supported
BSB



Encased
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Speed	Load	Rigidity
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Unsupported