





**KERK LEAD SCREW ASSEMBLIES**

TFE coated lead screw and self-lubricating polyacetal nut

| <b>Lead screws - anti-backlash and standard assemblies with high efficiency</b>   |  |   |  |
|---|--|---|--|
| <b>General Description</b><br>- 303 stainless steel<br>- TFE coated screw length up to 2,4 m (supplied cut-to-length) - TFE coating (special formulation) for the maximum level of self-lubrication and for the nut life extension<br>- Self-lubricating polyacetal nuts<br>- Positional repeatability is within 0,0013 mm<br>- Standard lead accuracy is better than 0,0006 mm/mm (lead accuracies to 0,0001 mm/mm are also available) |  |   |  |
|    |   |   |   |
| <b>B Series</b>   | <b>ZBX Series</b>  | <b>NTB Series</b>   | <b>VHD Series</b>  |
| <b>General Description</b>  |  |   |  |
| It provides effective power transmission at minimum cost and features long life.  | Patented self-lubricating polyacetal nut; anti-backlash assembly offers precise positional accuracy and repeatability at a low cost. | Using Kerk's patented axial take-up mechanism, it maintains axial stiffness with minimum system drag torque, provides smooth operation and long life. | Assembly delivers maximum load carrying capability with the highest axial and radial stiffness, provides low drag torque by making use of the axial take-up mechanism. |
| <b>Where To Use</b>   |  |   |  |
| The B Series general purpose assembly is designed for applications not requiring anti-backlash and wear compensation.   | The ZBX Series is appropriate for light load applications requiring noise or vibration control.                                      | The NTB Series anti-backlash assembly is designed for higher load applications than the ZBX Series units; the best price/performance ratio.           | The VHD Series is designed for smooth, quiet operation and long life; high-tech solution for heavy duty applications.  |
| <b>Screw Diameter</b>   |  |   |  |
| 6,35 - 23,81 mm   | 6,35 - 15,88 mm  | 6,35 - 23,81 mm   | 12,7 - 19,05 mm  |
| <b>Metric Lead</b>  |  |   |  |
| 1 - 50 mm/rev.  | 1 - 25 mm/rev.   | 1 - 50 mm/rev.  | 2,5 - 50 mm/rev.   |
| <b>Efficiency (5 mm lead and higher)</b>  |  |   |  |
| 51 - 84%  | 62 - 84%   | 51 - 84%  | 51 - 84%   |
| <b>Dynamic Design Load</b>  |  |   |  |
| 200 - 2 270 N   | 20 - 160 N   | 45 - 900 N  | 680 - 1 590 N  |
| <b>Anti-Backlash Life with TFE Coating (1/4 Design Load)</b>  |  |   |  |
| Typical backlash 0,076- 0,25 mm   | 380 - 500 x 10 <sup>4</sup> m  | 500 - 635 x 10 <sup>4</sup> m   | 760 - 880 x 10 <sup>4</sup> m  |

**LR Series Support Rails**

- The linear rail system has been designed for light load applications where low cost, minimum frictional drag and long wear life are primary design considerations. The assembly consists of a special stainless steel shaft mated with a thermoplastic bushing.

**Mini Lead Screw Assemblies**

- The Mini Series includes anti-backlash and standard assemblies; revolutionary miniature designs for applications previously off limits to lead screw technology. The screw diameters from 3,18 mm.

The Kerk product catalogue is available for further details. See the effective price list for stock items.

**KERK SCREWRAILS**

- suitable for light load applications

**ScrewRails - drive and support/guidance functions in a single, compact, coaxial component**

**General Description**

- ScrewRails length up to 1,2 m (TFE coated assemblies for maximum level of self-lubrication)
- Self-lubricating polyacetal nuts
- Positional repeatability is within 0,0013 mm
- Standard lead accuracy is better than 0,0006 mm/mm (lead accuracies to 0,0001 mm/mm are also available)



**SRQX Series**



**SRZ Series**

**General Description**

A standard nut with anti-backlash compensation. The flange with a hole is extended to accept an auxiliary rail for higher torsional loads.  
Backlash is compensated in axial motion direction.

A special nut with Kerk's patented axial take-up mechanism providing continuous self-adjusting anti-backlash compensation. The unit is capable of carrying axial loads in either direction with no backlash.

**Where To Use**

The SRQX Series is appropriate for general applications where higher torsional stiffness with minimal backlash is required.

The SRZ Series anti-backlash assembly is designed for smooth and quiet operation and long life.

**Screw Diameter**

6,35 - 12,7 mm

**Rail Diameter**

12,7 - 25,4 mm

**Metric Lead**

1 - 25 mm/rev.

**Efficiency (5 mm lead and higher)**

62 - 84%

**Dynamic Design Load**

110 - 450 N

**Life at 1/4 Design Load**

up to 200 x 10<sup>4</sup> m

up to 410 x 10<sup>4</sup> m

**End Supports**

- for all ScrewRails optional; end supports are designed to be fixed over the outside diameter of each end of the rail
- suitable for easy and fast assembly mounting

- end supports with the flange fitting to the motor frame size:
  - NEMA 17 - screw diameter 6,35 mm
  - NEMA 23 - screw diameter 12,7 mm

The Kerk Motion Products product catalogue is available for further details. See the effective price list for stock items.