



Advantages of Hydrostatic Over Ballscrews

- Speed comparable to a linear motor
- Very low friction when machining, virtually frictionless during positioning
- Steps in the 0.1 micron range are possible
- No backlash when reversing direction
- Slip-stick effect is eliminated
- Wear is eliminated because there is no metal-to-metal contact during operation
- No loss of accuracy or stiffness even under full load and oscillating motion
- Friction does not vary when reversing direction
- Very long service life

Unique Technical Features

- High accuracy when transferring rotary motion into linear motion
- Nut is suspended on hydrostatic oil pockets
- Internal flow control
- Only one hydraulic connection required
- Dimensions of leadscrew similar to ballscrew size
- No seal wear or friction
- Adaptable to a machine's parameters:
 - Axial load (can be different in both directions)
 - Maximum RPM
 - Required stiffness
 - Viscosity and temperature of hydraulic oil

Sizes of Hydrostatic Leadscrews[†]

| Size | 50 | 63 | 80 | 100 | 125 | 160 |
|---|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Loadability at 5 turns/100 bar, 50% reserve | 22 kN | 34 kN | 51 kN | 77 kN | 120 kN | 200 kN |
| Minimum stiffness at 5 turns/100 bar | 2.5 kN/μm | 3.7 kN/μm | 5.5 kN/μm | 8.5 kN/μm | 12.5 N/μm | 20 kN/μm |
| Min. pitch with v max. | 10 mm 30 m/min | 12 mm 30 m/min | 16 mm 30 m/min | 20 mm 30 m/min | 20 mm 30 m/min | 25 mm 30 m/min |
| | 20 mm 65 m/min | 25 mm 65 m/min | 32 mm 65 m/min | 40 mm 65 m/min | | |
| Pitch with v max. | 30 mm 100 m/min | | | | | |

Technical Features of Size 50[‡]

| Number of turns per nut | | 1/1 | 2/2 | 3/3 | 4/4 ¹ | 5/5 ² |
|--|---------|--------------------|---------------------|----------------------|----------------------|----------------------|
| Approximate features for maximum axial force and axial stiffness for size 50 | 25 bar | 1100 N 160 N/μm | 2200 N 320 N/μm | 3300 N 480 N/μm | 4400 N 640 N/μm | 5500 N 800 N/μm |
| | 32 bar | 1400 N 200 N/μm | 2800 N 400 N/μm | 4200 N 600 N/μm | 5600 N 800 N/μm | 7000 N 1000 N/μm |
| | 40 bar | 1750 N 250 N/μm | 3500 N 500 N/μm | 5250 N 750 N/μm | 7000 N 1000 N/μm | 8800 N 1250 N/μm |
| Axial force with 50% reserve | 50 bar | 2200 N | 4400 N 630 N/μm | 6600 N 950 N/μm | 8800 N 1260 N/μm | 11000 N 1600 N/μm |
| | 63 bar | | 5500 N 800 N/μm | 8300 N 1200 N/μm | 11100 N 1600 N/μm | 13800 N 2000 N/μm |
| At pump pressure | 80 bar | | 7000 N 1000 N/μm | 10500 N 1500 N/μm | 14000 N 2000 N/μm | 17600 N 2500 N/μm |
| | 100 bar | | 8800 N | 13200 N | 17600 N | 22000 N |

[†]All dimensions shown in mm.

All features are customizable and can be adapted to loads up to 500 kN.

Size 40 will be available.

[‡] ¹not available with pitch 30 mm

²only with pitch 10 mm