

T|E|N|D|O[®] Silver

Hydraulic expansion toolholder

Experience a low-cost entry into the world
of hydraulic expansion technology

Hand in hand for tomorrow



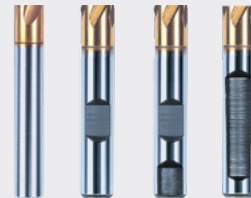
TENDO Silver – The new hydraulic expansion toolholder

TENDO Silver facilitates the easy entry into hydraulic expansion technology, offering the best price-performance ratio in direct clamping. The available seven interfaces makes the TENDO Silver to a reliable and precise toolholder for clamping all commonly used shank types, ensuring a dependable machining process.

Excellent vibration damping

Micro-blowouts are prevented, best work-piece surfaces, protection of the machine spindle, and increased tool service life

All commonly used shank types



As standard, fine-balanced

Suitable for high speeds of 50,000 RPM with a balancing grade of G2.5 at 25,000 RPM
(Depending on the mounting size of the spindle)

Seamless compatibility

100% compatible with all commonly used machine tool mountings (HSK-A, JIS-BT, SK)



NEW

μ-precise tool change within seconds



- 1 **Clamping screw**
The clamping screw is used to actuate the clamping piston
- 2 **Clamping piston**
The clamping piston compresses the hydraulic medium into the chamber system
- 3 **Sealing element**
Special sealing for leakage-free clamping
- 4 **Expansion sleeve**
The expansion sleeve evenly expands against the tool shank
- 5 **Chamber system**
It has a damping effect on the clamped tool
- 6 **Base body**
With machine interface
- 7 **Tool**
Maximum run-out and repeat accuracy < 0.003 mm

+ All commonly used shank types can be clamped

Form A: with smooth cylindrical shank, shank form A according to DIN 1835 and DIN 6535 HA

Form AB: with flat face and cylindrical shank with pulling face, shank form B according to DIN 1835 and DIN 6535 HB

Form B: with lateral pulling faces, shank form B according to DIN 1835

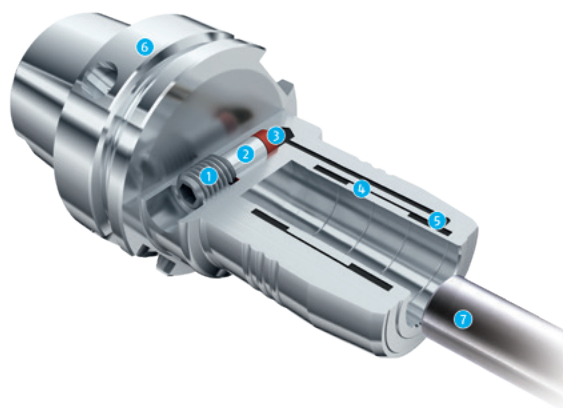
Form E: with inclined clamping face, shank form E according to DIN 1835 and DIN 6535 HE

+ As standard, fine-balanced

Suitable for high speeds with a balancing grade of G2.5 at 25,000 RPM

+ μ-precise tool change within seconds without peripheral equipmen

Time saving through reduction of set-up time and no investment and energy costs due to additional clamping devices



Interfaces

HSK-A 63
HSK-A 100
SK 40
SK 50
JIS-BT 30
JIS-BT 40
JIS-BT 50



Run-out accuracy
≤ 3 μ



Min. torque
16 .. 650 Nm



Max. speed I
25000 .. 50000 RPM



Diameter
6 .. 32 mm



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Technical data

Series	Clamping diameter [mm]	Run-out accuracy	Min. torque [Nm]	Bore holes for data carriers
TENDO Silver HSK-A 63	6 .. 32	< 0.003 mm at 2,5 x D	16 .. 650	available, according to DIN 69873
TENDO Silver HSK-A 100	6 .. 32	< 0.003 mm at 2,5 x D	16 .. 650	available, according to DIN 69873
TENDO Silver SK 40	6 .. 32	< 0.003 mm at 2,5 x D	16 .. 650	Optional
TENDO Silver SK 50	12 .. 32	< 0.003 mm at 2,5 x D	90 .. 650	Optional
TENDO Silver JIS-BT 30	6 .. 20	< 0.003 mm at 2,5 x D	16 .. 330	Optional
TENDO Silver JIS-BT 40	6 .. 32	< 0.003 mm at 2,5 x D	16 .. 650	Optional
TENDO Silver JIS-BT 50	12 .. 32	< 0.003 mm at 2,5 x D	90 .. 650	Optional

Permanent run-out and repeat accuracy of $< 0.003 \text{ mm}$

Without compromises. The TENDO Silver combines the benefits of hydraulic expansion technology with an attractive pricing strategy. Therefore you benefit from a tool change in a matter of seconds, excellent vibration-damping properties, and a μm -precise run-out and repeat accuracy.

The TENDO Silver has been developed for a variety of applications and seamlessly adapts to different processing requirements. The robust design of the TENDO Silver not only enhances rigidity for demanding machining tasks, but also ensures additional flexibility and comprehensive compatibility with SCHUNK intermediate sleeves and extensions.

- + Excellent vibration damping
- + Exact length presetting
- + High flexibility
- + Dirt groove for reliable torque transmission

Learn more!

For further information or any questions, we are at your disposal. Feel free to contact our expert consultant for toolholding technology.

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