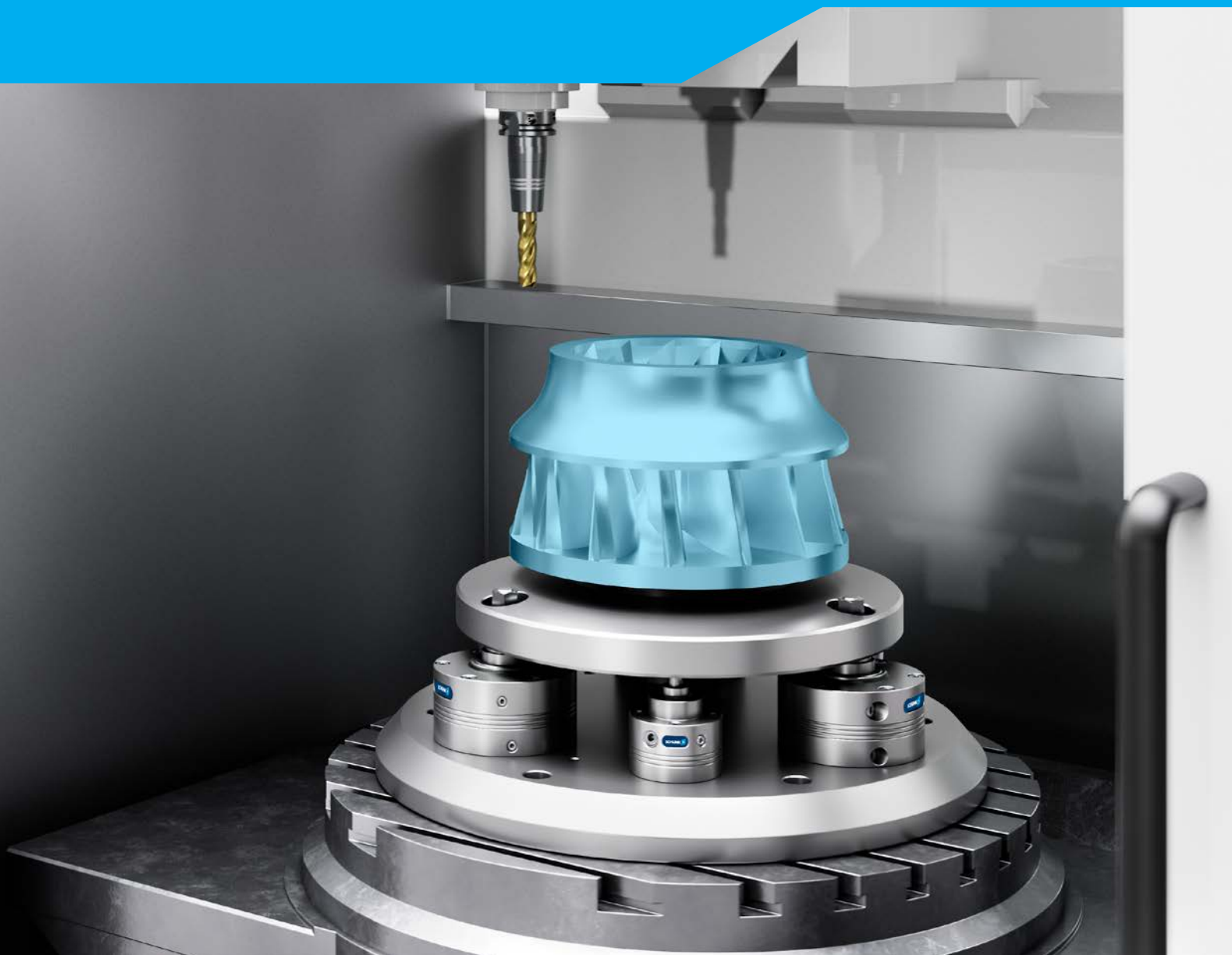


SCHUNK Engineering
▷▷▷▷

Workpiece alignment

Hand in hand for tomorrow



Workpiece alignment

Precision that makes the difference

Take control of your workpiece machining! Workpiece alignment allows you to make precise adjustments along the axis. From precise axial positioning to minimizing vibrations and protecting the workpiece from deformation – with our workpiece alignment options, we set the standard for fine adjustment.



Micro-adjustment

Positioning with accuracy down to the μm

The micro-adjustment feature allows you to precisely align your workpieces.

The membrane inside the mechanism is continuously actuated via two clamping screws using hydro-expansion technology. The plunger extends and positions the workpiece. The plunger is then hydraulically clamped in place using a clamping screw.



Supporting element

Reliable support

SCHUNK supporting elements allow you to support relatively long workpieces during the clamping process while protecting them from deformation and vibration.

The built-in spring ensures precise and continuous adjustment of the bolt against the workpiece. The bolt is then hydraulically clamped using a clamping screw.

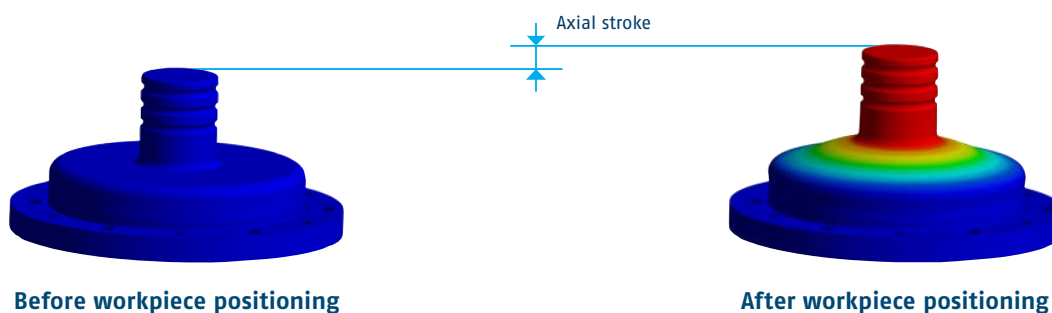
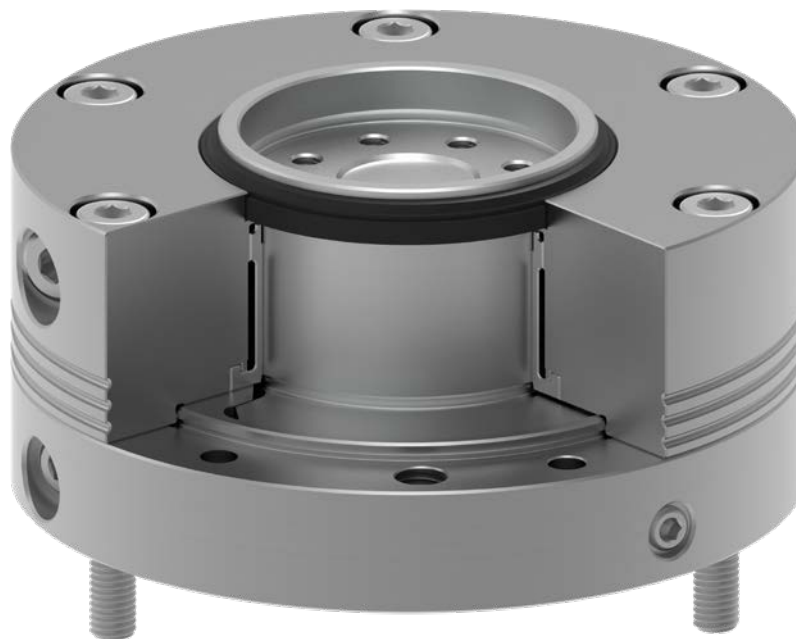


Micro-adjustment and supporting elements
can be used in combination.

Your contact to the department
Special Expansion Technology
Telephone: +49 7133 103 2555
sonderdehnspanntechnik@de.schunk.com

Micro-adjustment

Positioning with accuracy down to the μm

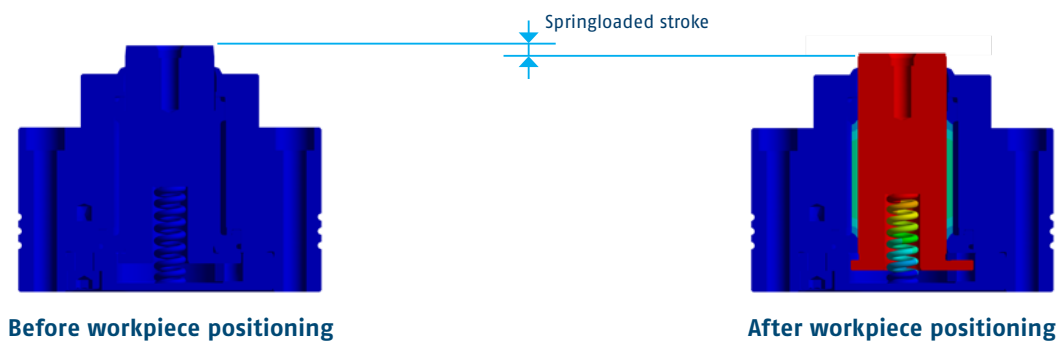


Technical data

- + Can be adjusted with accuracy down to the μm within the range of 0.001 mm
- + Hysteresis-free system
- + Manual and automated actuation
- + Hermetically sealed hydraulic expansion technology
- + Can be integrated into existing systems
- + Customization of the part that comes into contact with the workpiece

Supporting element

Reliable support

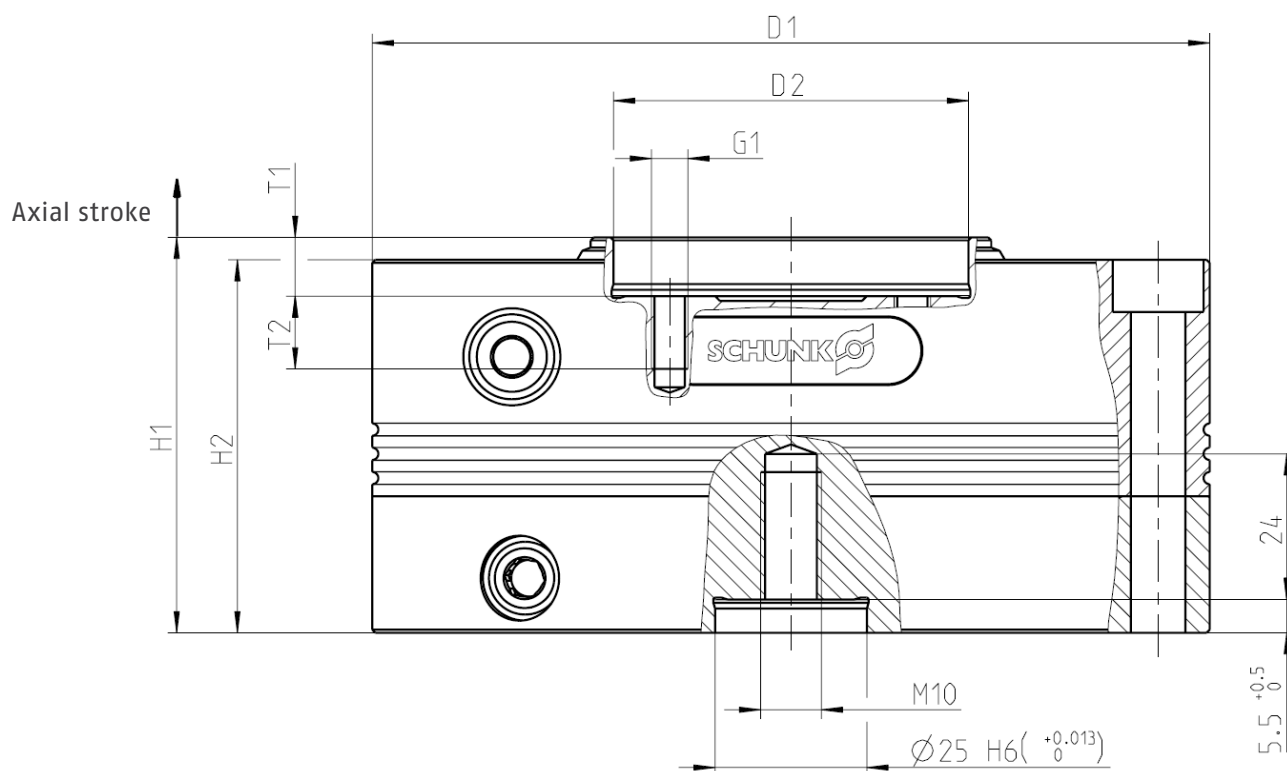


Technical data

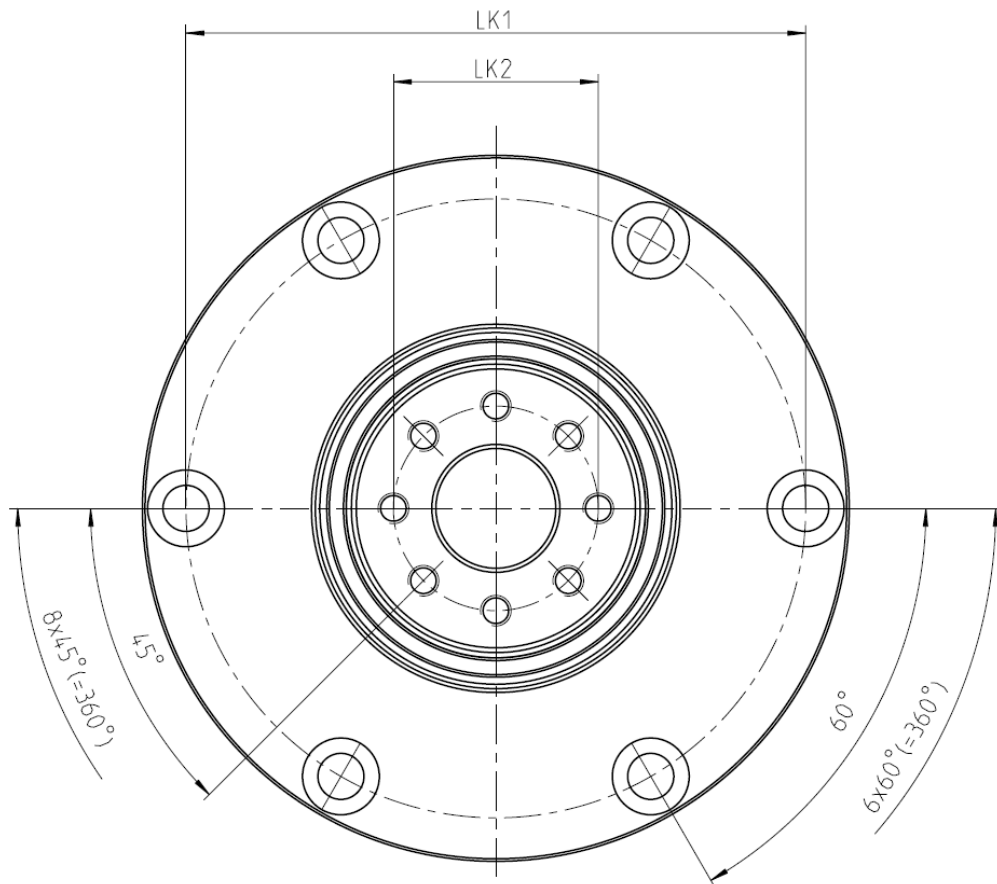
- + Vibration damping and stabilization using hydraulic expansion technology
- + Individual interface
- + Manual or automated actuation possible
- + Hermetically sealed clamping
- + Different spring forces are possible thanks to interchangeable springs
- + Can be integrated into existing systems
- + Customization of the part that comes into contact with the workpiece

Micro-adjustment

Technical details



Size	D1 Outer Ø [mm]	D2 Insert Ø [mm]	T1 Insert depth [mm]	T2 Thread depth [mm]	G1 Thread size	H1 Height [mm]	H2 Base body height [mm]
1	138	58.5 ±0.2	9.7	12	M6	65.2 ±0.03	61.5
2	200	95.0 ±0.2	14.4	16	M8	114.4 ±0.03	109.5

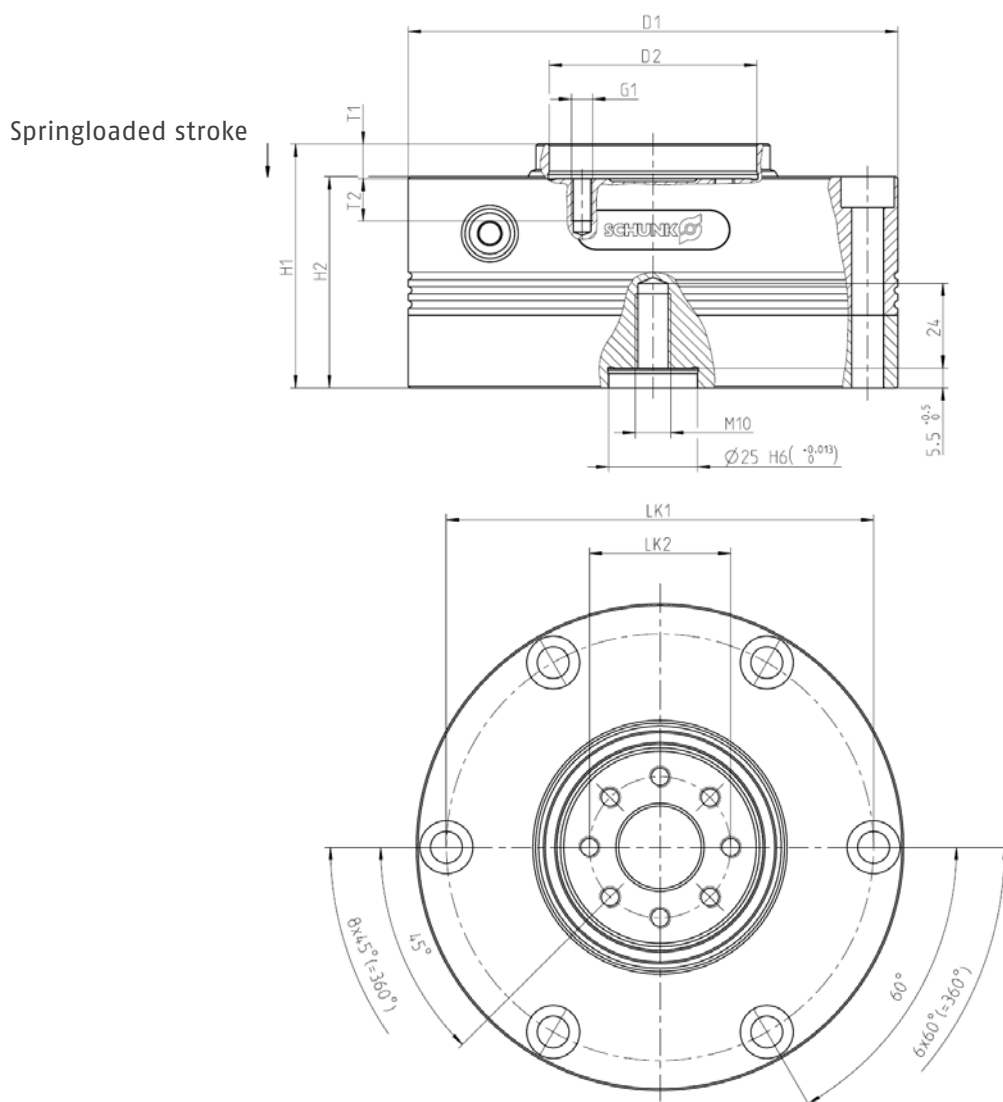


LK1 Mtg. bolt circle Ø 1	LK2 Mtg. bolt circle Ø 2	Weight	Axial stroke	Max. workpiece weight	Axial holding force	Screw size
[mm]	[mm]	[kg]	[mm]	[kg]	[N]	
121 ±0.2	40 ±0.2	6.6	0.5	100	2300	M8
180 ±0.2	70 ±0.2	30.9	1.0	500	11000	M10

Supporting element

Technical details

Sizes 1 and 2

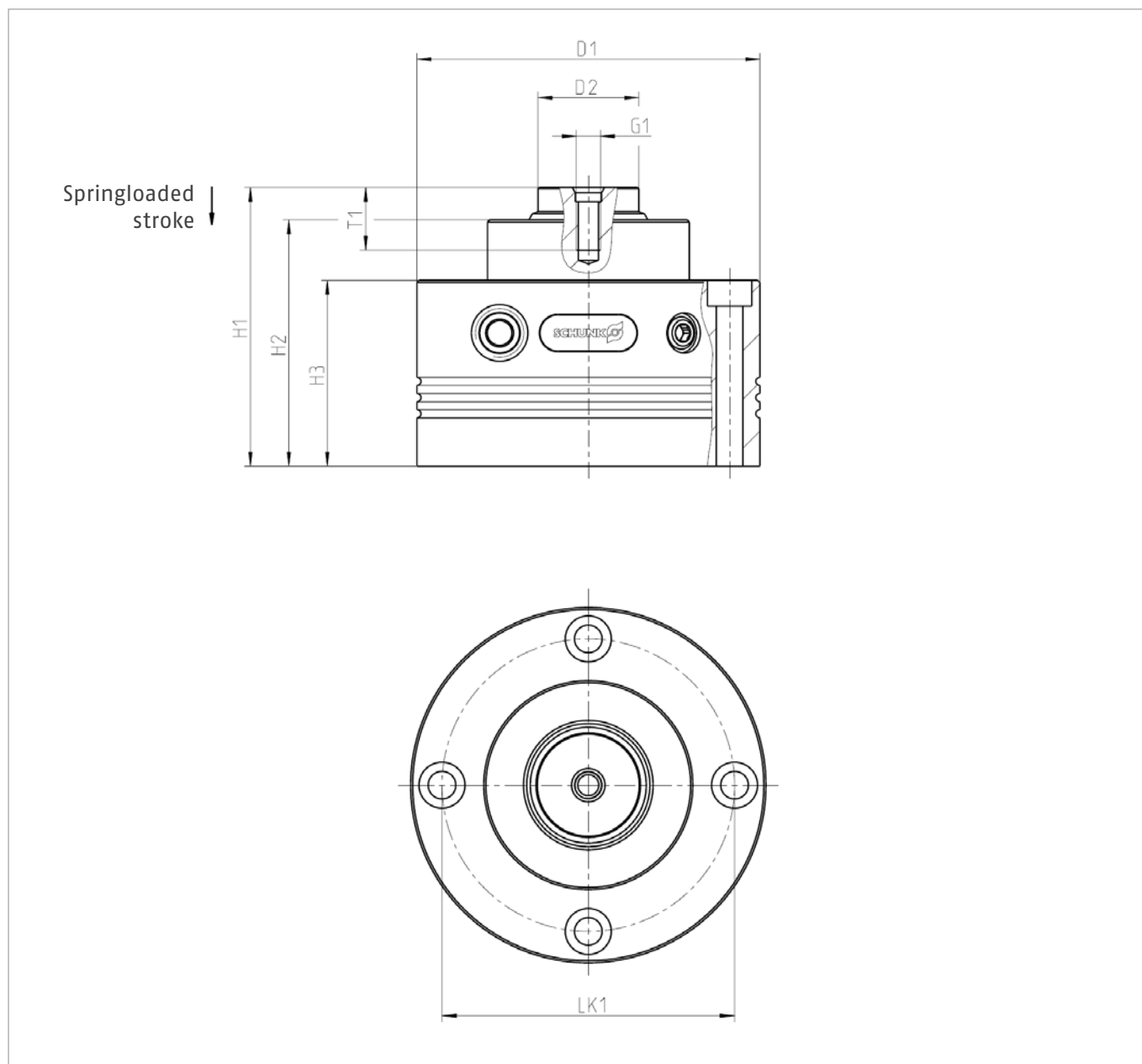


Size	D1 Outer $\varnothing$	D2 Insert $\varnothing$	LK1 Mtg. bolt circle $\varnothing$ 1	LK2 Mtg. bolt circle $\varnothing$ 2	G1 Thread size	H1 Height	H2 Base body height	T1 Insert depth	T2 Thread depth	Weight	Spring- loaded stroke	Axial holding force	Screw size
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[N]	
1	138	58.5 ± 0.2	121 ± 0.2	40 ± 0.2	M6	68.7 ± 0.03	59.5	9.7	12	6.3	5.0	2300	M8
2	200	95.0 ± 0.2	180 ± 0.2	70 ± 0.2	M8	119.4 ± 0.03	105.5	14.4	16	28.7	5.0	11000	M10

Supporting element

Technical details

Size 0.5



Size	D1 Outer Ø	D2 Piston Ø	LK1 Mtg. bolt circle Ø	G1 Thread size	H1 Height	H2 Base body 1 height	H3 Base body 2 height	T1 Insert depth	Weight	Spring- loaded stroke	Axial holding force	Screw size
	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[N]	
0.5	85	25	70	M6	69	61	46	15.5	2	5	6000	M6

SCHUNK Engineering



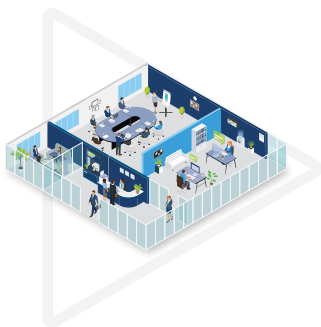
CLEAR THE QUESTIONS – Minimize the risk



We offer a comprehensive range of services for the development of individual solutions, including in-depth industry expertise, an established engineering process, and a broad component portfolio. With 34 sales offices and 6 state-of-the-art engineering hubs, we offer worldwide project management, design, manufacturing, installation, and after-sales service. We are always close to our customers.

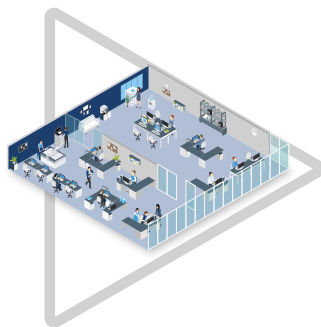
Four steps to project success

1
Understanding challenges



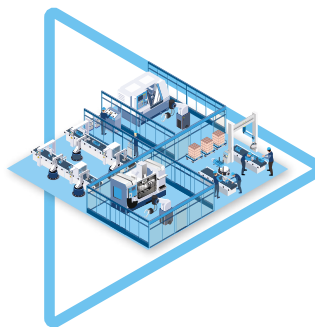
From defining precise requirements through personal dialog to developing a concept with a reliable budget estimate.

2
Developing solutions



We work closely with you to develop customized solutions. This allows you to fully concentrate on your core competencies.

3
Manufacturing and assembly



With our high level of manufacturing expertise and an end-to-end digital process chain, we ensure maximum efficiency and precision, worldwide.

4
On-site support



As a trusted partner, we take care of your concerns and support you at every step.

Factors contributing to the success of our collaboration



A perfect fit instead of a compromise

Solutions tailored exactly to your requirements



Quick decision-making

Keeping track of solutions, the work involved, and the costs



More stable processes

Consistent quality and reliable sequences

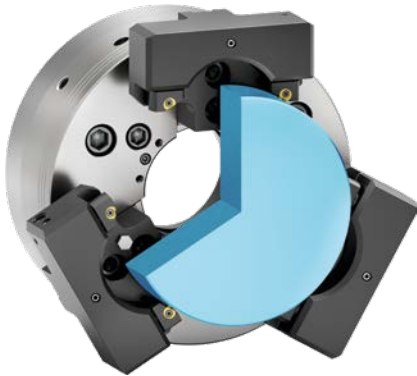


Lower risk

One contact person, clear responsibilities

Solutions for your industry

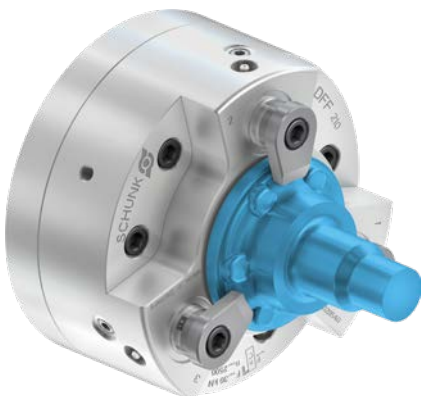
We can assist you, whether you are machining particularly challenging workpieces or seeking targeted support for finding industry-specific solutions. SCHUNK Engineering offers you exactly this expertise and will stand by your side as a reliable partner.



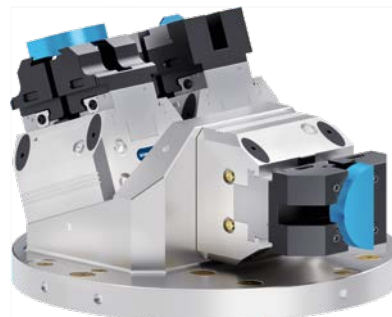
Clamping irregularly shaped components with hydraulic compensation jaws



Clamping engine parts with a hydraulic expansion chuck



Axial clamping of workpieces that are sensitive to deformation using a ROTA DFF rotary finger chuck

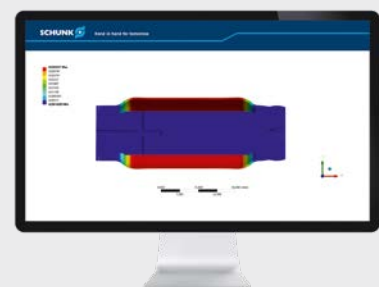


Clamping knee implants using a TANDEM clamping pyramid

Simulation services

We can simulate your clamping solutions in order to optimize your machining and handling processes. We design clamping and gripping systems tailored precisely to your production processes and, if necessary, align them with your planned automation.

- + **Basis for making decisions faster:** feasibility, variants
- + **Lower risk & less reworking:** detect vulnerabilities early
- + **Greater process reliability:** consistent, reproducible results





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Greiftechnik
Automatisierungstechnik

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