

**bilz**

# ThermoGrip® BIONICS

Shrink chucks with bionic  
structural optimisation



INCREASED STABILITY  
THROUGH FORM  
OPTIMISATION

Form optimisation leads to an increase in the life and load capacity of the holder through a uniform structure throughout.



The bearing structure of our Thermogrip® Bionic shrink chucks has been designed based on the growth form of trees, meaning that notch stress is avoided and only as much material is used as is required.

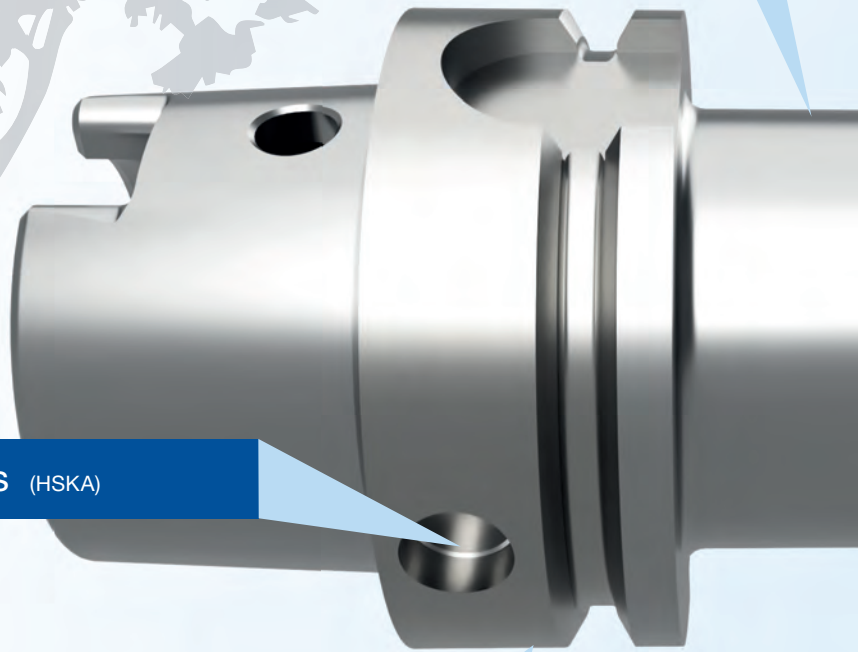


### Perfectly suited for our Thermogrip® shrink machines

- Shrinkable with standard coil 1 up to diameter 25 mm
- Shrink machine X parameters for shrinking in and out

### Smooth, silent running due to “Balanced by Design” and subsequent fine balancing

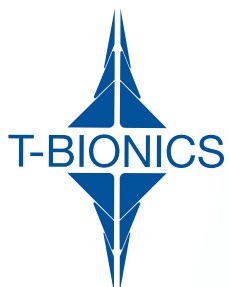
- Improved surface quality = longer tool life, improved surface finish and better maintenance of tolerances
- Ideal for HPC/HSC
- Protection for the machine spindle



### Data Chip holes (HSKA)

### Maximum form stability and life of the shrink chuck due to the use of high temperature resistant special steel

- High radial rigidity
- Low deflection
- High metal removal rates



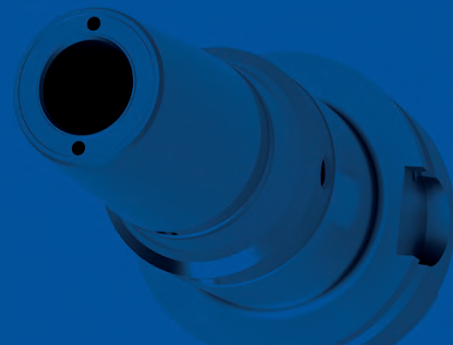
## Features

- Maximum bending strength due to the bionic contour
- Increased rigidity
- Counterbore – the Thermogrip® trademark
- Improved surface quality due to optimal chip removal
- Run-out quality <math>< 3\mu\text{m}</math>

## Benefits

- Higher feed rates and greater cutting depth
- Increased torque transmission
- Lockable Cool Jet holes for peripheral cooling and balance screw holes for fine balancing as standard

“ A tree is stabilised on the windward side by means of its root system, and exactly this method has been used by our engineers to develop an exceptional shrink chuck with extremely high bending strength.”



## Security

- All cylindrical shanks manufactured to DIN1835 Form A, B and E, DIN 6535 Form HA, HB and HE can be used

## The patented counterbore

makes it possible for the tool to be inserted cold so that the shrinking process can be carried out fully automatically and thereby simplifies handling and improves user safety.

15 – 20 % reduction in heat requirements when heating up the shrink chuck

## Cool-Jet holes (lockable)

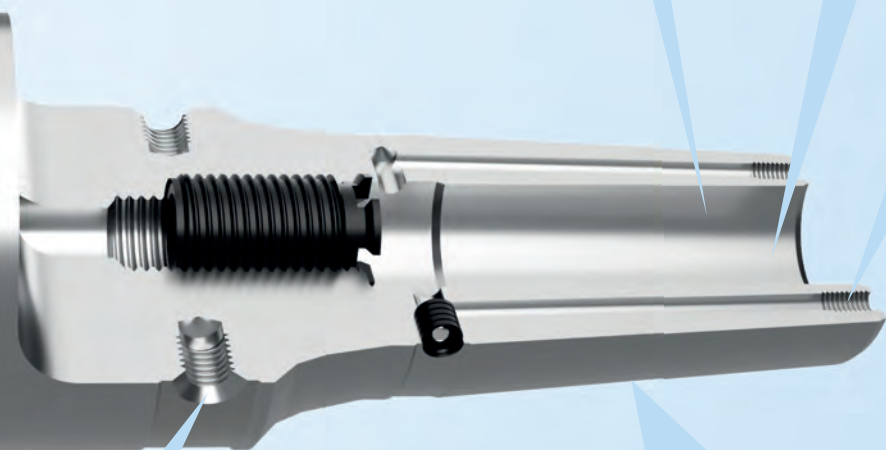
## Maximum Concentricity

<math>< 0,003\text{ mm}</math> and exact taper tolerances, manufactured in a climate-controlled environment

- Reduction of production costs due to a smoother cutting process leading to improved tool life.
- Reduction of chatter marks
- Increased tool life
- Better surface finish quality
- Maintenance of tolerances for longer

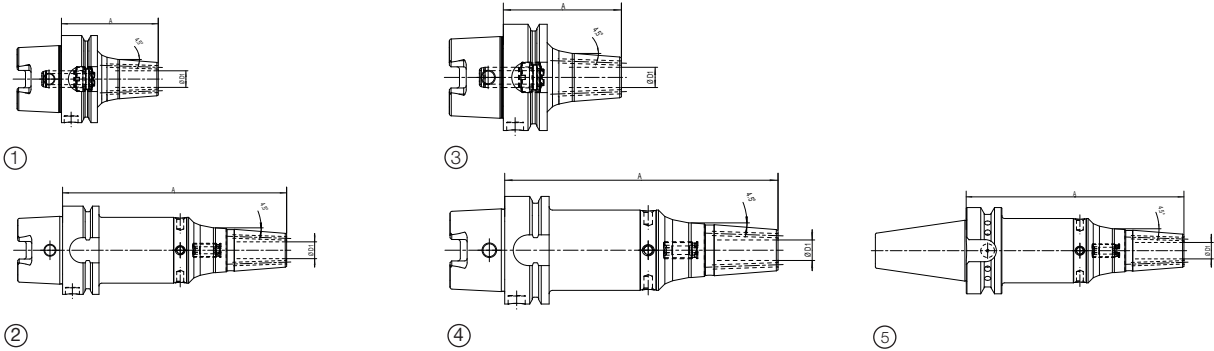
## Tapped holes

For fine balancing with balancing screws



TB.....-C1-FBT40


Shrink chucks with bionic structural optimisation



TB.....-C1-HSKA63 Shrink Chucks				
D1 (mm)	A (mm) Ultra kurz	A (mm) 130	A (mm) 160	Img
6	5177819			1
8	5177821			1
10	5177822			1
12	5177827			1
16	5177834			1
20	5177840			1
6		5177818		2
8		5177820		2
10		5177823		2
12		5177829		2
14		5177832		2
16		5177835		2
18		5177838		2
20		5177841		2
6			5177817	2
8			5177816	2
10			5177826	2
12			5177830	2
14			5177833	2
16			5177836	2
18			5177839	2
20			5177842	2

TB.....-C1-HSKA100 Shrink Chucks			
D1 (mm)	A (mm) Kurz	A (mm) 160	Img
6	5180065		3
8	5180066		3
10	5180067		3
12	5180068		3
14	5180069		3
16	5180074		3
18	5180075		3
20	5180077		3
25	5180078		3
6		5180079	4
8		5180080	4
10		5180081	4
12		5180082	4
14		5180083	4
16		5180084	4
18		5180085	4
20		5180086	4
25		5180087	4

TB.....-C1-FBT40 Shrink Chucks				
D1 (mm)	A (mm) Ultra kurz	A (mm) 130	A (mm) 160	Img
6		5180114		5
8		5180115		5
10		5180116		5
12		5180117		5
14		5180118		5
16		5180119		5
18		5180120		5
20		5180121		5
6			5180122	5
8			5180123	5
10			5180124	5
12			5180125	5
14			5180126	5
16			5180127	5
18			5180128	5
20			5180129	5

 You can find more detailed information in our online-shop <https://www.bilz.de/produktfinder-anmeldung> or in our ThermoGrip® shrink chuck catalogue

Interchangeable discs for shrink fit chucks with very short A-dimensions (e.g. TBUC) The chuck dips easily into the ferrite disc here. At the same time it is ensured, that the coil does not rest on the collar of the HSK and thus the coil is not damaged when heated.



Designation	Clamping-Ø	Ident No.	Img
ISGS3201-1-UC <sup>1</sup>	6,0 – 12 mm	5195533	1
ISGS3201-2-UC <sup>2</sup>	12,1 – 22,0 mm	5195534	2

<sup>1</sup>A-dimension: 70 mm to 75 mm possible (HSK63).  
From an A-dimension of 75 mm, the standard 1 disc can be used.  
<sup>2</sup>A-dimension: 75 mm to 82.5 mm possible (HSK63).  
From an A-dimension of 82.5 mm, the standard 2-disc can be used.