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ThermoGrip® BIONICS

Shrink chucks with bionic structural optimisation

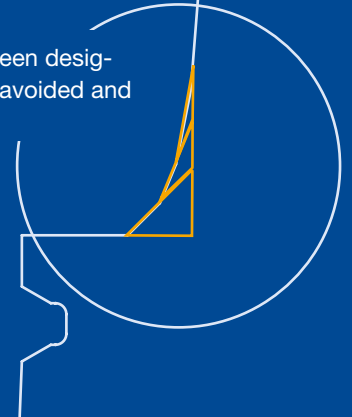


INCREASED STABILITY
THROUGH FORM
OPTIMISATION

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.

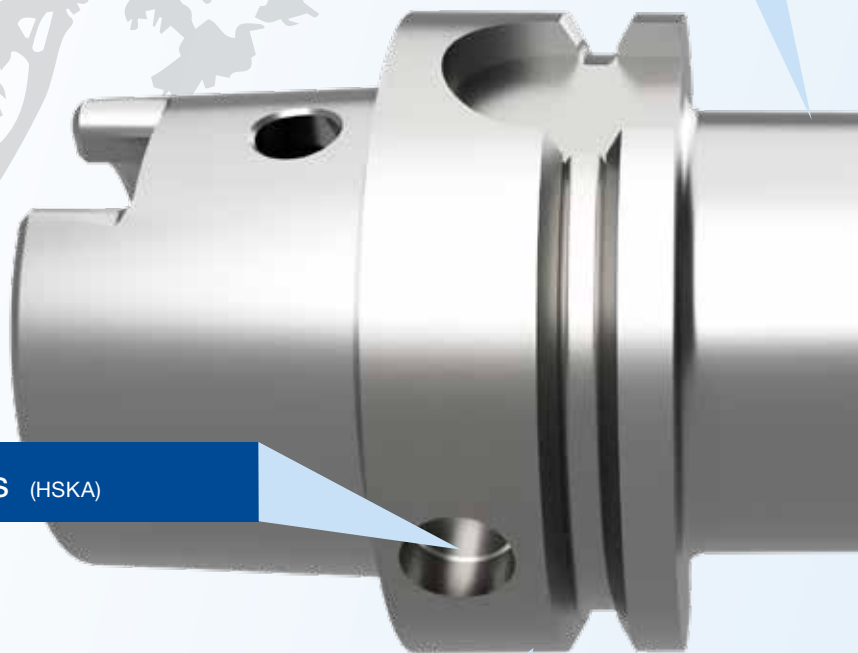


Perfectly suited for our Thermogrip® shrink machines

- 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

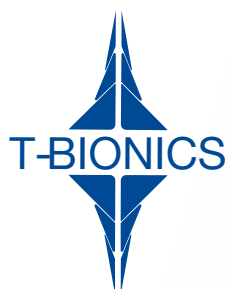
- Improved surface quality = longer tool life, improved surface finish and better maintenance of tolerances
- Ideal for HPC/HSC
- Protection for the machine spindle



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

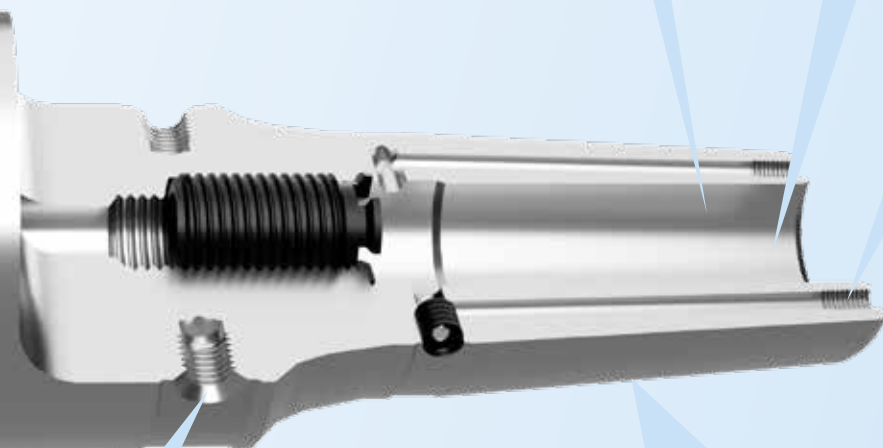
Cool-Jet holes
(lockable)

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



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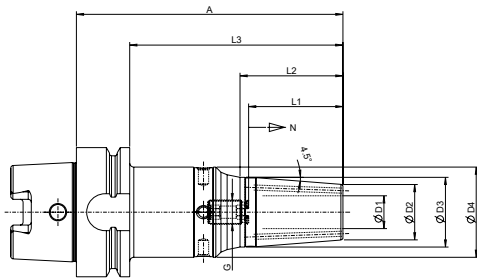


Image 1

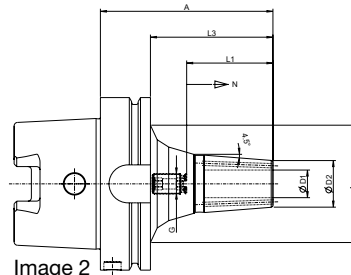


Image 2

TB.....-C1-HSKA63

Shrink Chucks

D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	A (mm)	L1 (mm)	L2 (mm)	L3 (mm)	N (mm)	G	Img	Designation	Ident No.
6	21	27	37	130	36	41	103	10	M5	1	TB0600-130-C1-HSKA63	5177818
8	21	27	37	130	36	41	103	10	M6	1	TB0800-130-C1-HSKA63	5177820
10	24	32	42	130	42	53	103	10	M8x1	1	TB1000-130-C1-HSKA63	5177823
12	24	32	42	130	47	53	103	10	M10x1	1	TB1200-130-C1-HSKA63	5177829
14	27	34	44	130	47	50	103	10	M10x1	1	TB1400-130-C1-HSKA63	5177832
16	27	34	44	130	50	50	103	10	M12x1	1	TB1600-130-C1-HSKA63	5177835
18	33	42	52	130	50	60	103	10	M12x1	1	TB1800-130-C1-HSKA63	5177838
20	33	42	52	130	52	60	103	10	M16x1	1	TB2000-130-C1-HSKA63	5177841
6	21	27	42	160	36	40	133	10	M5	1	TB0600-160-C1-HSKA63	5177817
8	21	27	42	160	36	40	133	10	M6	1	TB0800-160-C1-HSKA63	5177816
10	24	32	47	160	42	52	133	10	M8x1	1	TB1000-160-C1-HSKA63	5177826
12	24	32	47	160	47	52	133	10	M10x1	1	TB1200-160-C1-HSKA63	5177830
14	27	34	50	160	47	50	133	10	M10x1	1	TB1400-160-C1-HSKA63	5177833
16	27	34	50	160	50	50	133	10	M12x1	1	TB1600-160-C1-HSKA63	5177836
18	33	42	52	160	50	60	133	10	M12x1	1	TB1800-160-C1-HSKA63	5177839
20	33	42	52	160	52	60	133	10	M16x1	1	TB2000-160-C1-HSKA63	5177842

TB.....-C1-HSKA100

Shrink Chucks

6	21		50	85	36		56	10	M5	2	TB0600-85-C1-HSKA100	5180065
8	21		50	85	36		56	10	M6	2	TB0800-85-C1-HSKA100	5180066
10	24		50	90	42		61	10	M8x1	2	TB1000-90-C1-HSKA100	5180067
12	24		50	95	47		66	10	M10x1	2	TB1200-95-C1-HSKA100	5180068
14	27		62	95	47		66	10	M10x1	2	TB1400-95-C1-HSKA100	5180069
16	27		68	100	50		71	10	M12x1	2	TB1600-100-C1-HSKA100	5180074
18	33		68	100	50		71	10	M12x1	2	TB1800-100-C1-HSKA100	5180075
20	33		68	105	52		76	10	M16x1	2	TB2000-105-C1-HSKA100	5180077
25	44		85	115	58		86	10	M16x1	2	TB2500-115-C1-HSKA100	5180078
6	21	27	42	160	36	40	131	10	M5	1	TB0600-160-C1-HSKA100	5180079
8	21	27	42	160	36	40	131	10	M6	1	TB0800-160-C1-HSKA100	5180080
10	24	32	47	160	42	52	131	10	M8x1	1	TB1000-160-C1-HSKA100	5180081
12	24	32	47	160	47	52	131	10	M10x1	1	TB1200-160-C1-HSKA100	5180082
14	27	34	50	160	47	50	131	10	M10x1	1	TB1400-160-C1-HSKA100	5180083
16	27	34	50	160	50	50	131	10	M12x1	1	TB1600-160-C1-HSKA100	5180084
18	33	42	52	160	50	59	131	10	M12x1	1	TB1800-160-C1-HSKA100	5180085
20	33	42	52	160	52	59	131	10	M16x1	1	TB2000-160-C1-HSKA100	5180086
25	44	52,5	68	160	58	59	131	10	M16x1	1	TB2500-160-C1-HSKA100	5180087