

SLIM CHUCKS



FEATURES

- Balanced to G2.5, 25,000RPM
- More than twice the accuracy of standard ER collet chucks when used with <math><3\mu\text{m}</math> ultra-precision through coolant collets
- <math><5\mu\text{m}</math> Run-Out at 4xD
- Flexible collet system

BENEFITS

- Versatility of an ER chuck without the Deflection!
- Improved workpiece access due to the slimmer design
- Increased tool life
- Increased accuracy
- Better surface finish
- Compatible with Nikken SK collets

SLIM CHUCKS

For High Speed & High Precision Machining Without Deflection

Dine GSK and Cutwel HP3 Slim Collet chucks offer the flexibility of an ER collet chuck with the rigidity, precision and performance that is associated with high performance tool holders such as hydraulic or shrink fit chucks.

Slim chucks are designed with an 8 degree collet taper angle (vs 16 degree for ER collets). This eliminates deflection and vibration commonly associated with ER collet chucks. The 8 degree taper also enables a much slimmer nut design compared to an ER collet, ideal for 5 axis machining.



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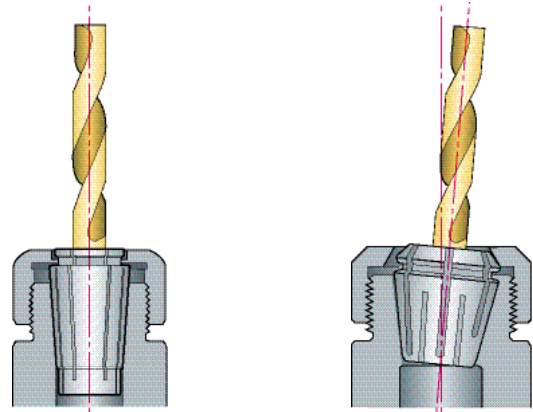
BT MAS BT30, BT40, BT50.....P1016	HSK-A HSK63-A, HSK100-A.....P1020
DIN 69871 SK40, SK50.....P1018	SLIM COLLETS HC Series.....P1021

IMPROVED CONCENTRICITY & DEFLECTION

The 8° taper means the collet sits deeper in the body of the chuck which results in a number of benefits over standard ER collets.

POWERFUL CLAMPING WITH LESS EFFORT Double the clamping force can be produced than is possible with standard ER collet chucks while using a lower tightening torque.

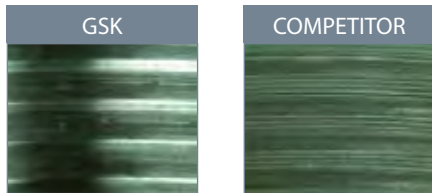
HIGHER ACCURACY because clamping force is distributed equally at the circumference of the collet, tool deflection is greatly reduced, resulting in more than double the accuracy and rigidity of standard ER collets with run-out of less than 5µm.



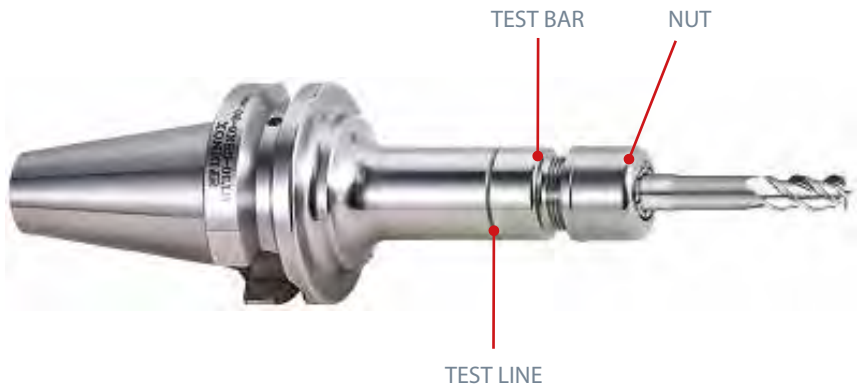
SLIM COLLET CHUCK
8° Taper

ER COLLET CHUCK
12°/16° Taper

CAN BE USED AS A TEST BAR



GSK collet chucks can be used as a test bar because both the chuck body and nuts are high quality ground to ensure micron repeatability and location accuracy.



GAUGE LENGTHS

Lengths	BT			SK		HSK-A	
	30	40	50	40	50	63	100
Standard (60-80mm)	✓	-	-	✓	-	-	-
Long (90-115mm)	✓	✓	✓	✓	✓	✓	-
Long (120-150mm)	-	✓	✓	✓	-	✓	✓
Extended (155-170mm)	-	-	✓	-	✓	-	✓

APPLICATION GUIDE

HPC	MILLING				HOLE MAKING			PROPERTIES		
	Rough	General	HSC	Finish	Drilling	Reaming	Tapping	Max. RPM	Run Out at 4xD	Damping
✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✗	25000 G2.5	<5µm	-

✓✓✓ = 1st Choice ✓✓ = Highly Suitable ✓ = Only suitable in some applications ✗ = Not Recommended

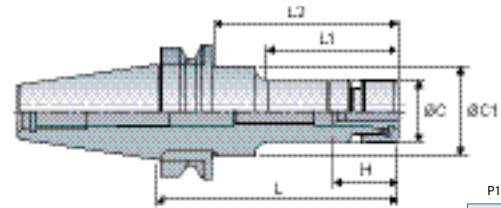


GSK SLIM CHUCKS BT MAS

High Precision, High Speed & Increased Rigidity Over ER Chucks



- ▶ Slim Type Collet Chuck for High Precision & High Speed Machining
- ▶ Run Out <5µm with standard collets
- ▶ <3µm ultra-precision through coolant collets available on request
- ▶ 8° slim collets for minimised & reduced vibration



P1021



G2.5
25000

<5µm
Run-out

BT
MAS

BALANCED UP TO 25,000RPM • G2.5

Taper	Clamping Range	L	L1	L2	H	Collet	ØC	ØC1	Max. RPM	ORDER CODE	PRICE		
BT30	1.0 ~ 6.0	60	33	33	35	HC6	19.5	19.5	G2.5 25,000	BT30-GSK6-60	▲		
		90	56	65				32		BT30-GSK6-90	▲		
	2.0 ~ 10.0	60	35	35	50	HC10	27.5	27.5		BT30-GSK10-60	▲		
		90	65	65				27.5		BT30-GSK10-90	▲		
	3.0 ~ 16.0	60	37	37	60	HC16	40	40		BT30-GSK16-60	▲		
		90	67	67				40		BT30-GSK16-90	▲		
	16.0 ~ 25.0	90	67.5	67.5	63.5	HC25	55	55		BT30-GSK25-90	▲		
BT40	1.0 ~ 6.0	90	51	61	35	HC6	19.5	32	G2.5 20,000	BT40-GSK6-90	▲		
		120	60	90				32		BT40-GSK6-120	▲		
		150	60	120				25		BT40-GSK6-150	▲		
	2.0 ~ 10.0	90	48	60	50	HC10	27.5	40		BT40-GSK10-90	▲		
		120	73	90				40		BT40-GSK10-120	▲		
		150	73	118				34.5		BT40-GSK10-150	▲		
	3.0 ~ 16.0	90	58	58	60	HC16	40	40		BT40-GSK16-90	▲		
		120	88	88				40		BT40-GSK16-120	▲		
		150	118	118				40		BT40-GSK16-150	▲		
	4.0 ~ 20.0	90	60	60	70	HC20	48	48		BT40-GSK20-90	▲		
		120	90	90				48		BT40-GSK20-120	▲		
	16.0 ~ 25.0	90	61	61	75	HC25	55	55		BT40-GSK25-90	▲		
		120	91	91				55		BT40-GSK25-120	▲		
	BT50	1.0 ~ 6.0	105	55	64	35	HC6	19.5		32	G2.5 15,000	BT50-GSK6-105	▲
			135	60	92					32		BT50-GSK6-135	▲
			165	60	114					32		BT50-GSK6-165	▲
		2.0 ~ 10.0	105	57	57	50	HC10	27.5		27.5		BT50-GSK10-105	▲
			135	70	92					32		BT50-GSK10-135	▲
165			75	114	36				BT50-GSK10-165	▲			
3.0 ~ 16.0		105	62	62	60	HC16	40	40	BT50-GSK16-105	▲			
		135	92	92				40	BT50-GSK16-135	▲			
		165	40	122				50	BT50-GSK16-165	▲			
4.0 ~ 20.0		105	62	62	70	HC20	48	40	BT50-GSK20-105	▲			
		135	92	92				40	BT50-GSK20-135	▲			
		165	122	122				40	BT50-GSK20-165	▲			
16.0 ~ 25.0		105	62	62	85	HC25	55	55	BT50-GSK25-105	▲			
		135	92	92				55	BT50-GSK25-135	▲			
		165	122	122				55	BT50-GSK25-165	▲			

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

WRENCH GSK SLIM CHUCKS

CHUCK	GSK6	GSK10	GSK16	GSK20	GSK25
WRENCH	GSK6SPANNER	GSK10SPANNER	GSK16SPANNER	GSK20SPANNER	GSK25SPANNER



HP3 SLIM CHUCKS BT MAS

High Precision, High Speed & Increased Rigidity Over ER Chucks



- ▶ Slim Type Collet Chuck for High Precision & High Speed Machining
- ▶ Run Out <5µm with standard collets
- ▶ <3µm ultra-precision through coolant collets available on request
- ▶ 8° slim collets for minimised & reduced vibration



HP3 CHUCK



BALANCED TO 25,000RPM • G2.5

Taper	Collet	Clamping Range	Gauge Length	Nut Diameter	Wrench	ORDER CODE	PRICE
BT40	HC10	2.0 ~ 10.0	90	27.5	HP3-10-WRENCH	BT40-HP3-10-90	▲
			120			BT40-HP3-10-120	▲
			150			BT40-HP3-10-150	▲
	HC16	3.0 ~ 16.0	90	40	HP3-16-WRENCH	BT40-HP3-16-90	▲
			120			BT40-HP3-16-120	▲
			150			BT40-HP3-16-150	▲
	HC20	4.0 ~ 20.0	90	48	HP3-20-WRENCH	BT40-HP3-20-90	▲
			120			BT40-HP3-20-120	▲
			150			BT40-HP3-20-150	▲

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WRENCH HP3 SLIM CHUCKS

COLLET TYPE	HC10	HC16	HC20
WRENCH	HP3-10-WRENCH	HP3-16-WRENCH	HP3-20-WRENCH

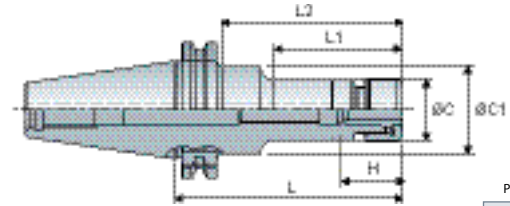


GSK SLIM CHUCKS DIN 69871

High Precision, High Speed & Increased Rigidity Over ER Chucks



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- ▶ Run Out <5µm with standard collets
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P1021



BALANCED UP TO 20,000RPM • G2.5

Taper	Clamping Range	L	L1	L2	Collet	D	Max. RPM	ORDER CODE	PRICE
SK40	2.8 ~ 6.0	60	-	-	HC6	19.5	G2.5 20,000	SK40-GSK6-60	▲
		90	51	61				SK40-GSK6-90	▲
	1.75 ~ 10.0	90	48	60	HC10	27.5		SK40-GSK10-90	▲
		150	73	118				SK40-GSK10-150	▲
	2.75 ~ 16.0	90	58	58	HC16	40		SK40-GSK16-90	▲
		150	118	118				SK40-GSK16-150	▲
3.6 ~ 20.0	90	60	60	HC20	48	SK40-GSK20-90	▲		
7.6 ~ 25.0	90	61	61	HC25	55	SK40-GSK25-90	▲		
SK50	2.8 ~ 6.0	105	55	64	HC6	19.5	G2.5 15,000	SK50-GSK6-105	▲
		165	60	114				SK50-GSK6-165	▲
	1.75 ~ 10.0	105	57	57	HC10	27.5		SK50-GSK10-105	▲
		165	75	114				SK50-GSK10-165	▲
	2.75 ~ 16.0	105	62	62	HC16	40		SK50-GSK16-105	▲
		165	40	122				SK50-GSK16-165	▲
	3.6 ~ 20.0	105	62	62	HC20	48		SK50-GSK20-105	▲
		165	122	122				SK50-GSK20-165	▲
	7.6 ~ 25.0	105	62	62	HC25	55		SK50-GSK25-105	▲
		165	122	122				SK50-GSK25-165	▲

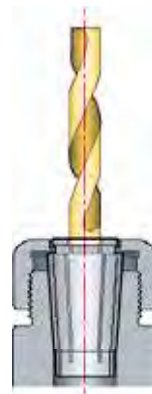
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IMPROVED CONCENTRICITY & DEFLECTION

The 8° taper means the collet sits deeper in the body of the chuck which results in a number of benefits over standard ER collets.

POWERFUL CLAMPING WITH LESS EFFORT Double the clamping force can be produced than is possible with standard ER collet chucks while using a lower tightening torque.

HIGHER ACCURACY because clamping force is distributed equally at the circumference of the collet, tool deflection is greatly reduced, resulting in more than double the accuracy and rigidity of standard ER collets with run-out of less than 5µm.



SLIM COLLET CHUCK
8° Taper



ER COLLET CHUCK
12°/16° Taper

WRENCH GSK SLIM CHUCKS

CHUCK	GSK6	GSK10	GSK16	GSK20	GSK25
WRENCH	GSK6SPANNER	GSK10SPANNER	GSK16SPANNER	GSK20SPANNER	GSK25SPANNER



HP3 SLIM CHUCKS DIN 69871

High Precision, High Speed & Increased Rigidity Over ER Chucks



- ▶ Slim Type Collet Chuck for High Precision & High Speed Machining
- ▶ Run Out <5µm with standard collets
- ▶ <3µm ultra-precision through coolant collets available on request
- ▶ 8° slim collets for minimised & reduced vibration



HP3 CHUCK



BALANCED TO 25,000RPM • G2.5

Taper	Collet	Clamping Range	Gauge Length	Nut Diameter	Wrench	ORDER CODE	PRICE
SK40	HC10	2.0 ~ 10.0	90	27.5	HP3-10-WRENCH	SK40-HP3-10-90	▲
			120			SK40-HP3-10-120	▲
			150			SK40-HP3-10-150	▲
	HC16	3.0 ~ 16.0	90	40	HP3-16-WRENCH	SK40-HP3-16-90	▲
			120			SK40-HP3-16-120	▲
			150			SK40-HP3-16-150	▲
	HC20	4.0 ~ 20.0	90	48	HP3-20-WRENCH	SK40-HP3-20-90	▲
			120			SK40-HP3-20-120	▲
			150			SK40-HP3-20-150	▲

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WRENCH HP3 SLIM CHUCKS

COLLET TYPE	HC10	HC16	HC20
WRENCH	HP3-10-WRENCH	HP3-16-WRENCH	HP3-20-WRENCH

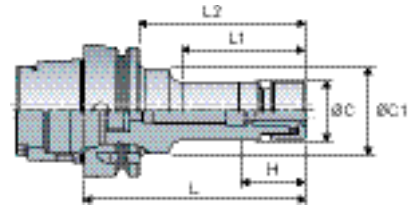


GSK SLIM CHUCKS HSK-A

High Precision, High Speed & Increased Rigidity Over ER Chucks



- ▶ Slim Type Collet Chuck for High Precision & High Speed Machining
- ▶ Run Out <5µm with standard collets, <3µm with ultra-precision collets
- ▶ 8° slim collets for minimised & reduced vibration



P1021



BALANCED UP TO 20,000RPM • G2.5

Taper	Clamping Range	L	L1	L2	H	Collet	ØC	ØC1	Max. RPM	ORDER CODE	PRICE
HSK63A	1.0 ~ 6.0	100	51	61	35	HC6	19.5	32	G2.5 20,000	HSK63A-GSK6-100	▲
	2.0 ~ 6.0	105	73	118	50	HC10	27.5	34.5		HSK63A-GSK10-105	▲
	3.0 ~ 16.0	120	58	58	60	HC16	40	40		HSK63A-GSK16-120	▲
	4.0 ~ 20.0	120	60	60	70	HC20	48	48		HSK63A-GSK20-120	▲
HSK100A	1.0 ~ 6.0	120	55	64	35	HC6	19.5	32	G2.5 15,000	HSK100A-GSK6-120	▲
	2.0 ~ 10.0	120	57	57	50	HC10	27.5	27.5		HSK100A-GSK10-120	▲
	3.0 ~ 16.0	140	62	62	60	HC16	40	40		HSK100A-GSK16-140	▲
	16.0 ~ 25.0	155	62	62	85	HC25	55	55		HSK100A-GSK25-155	▲

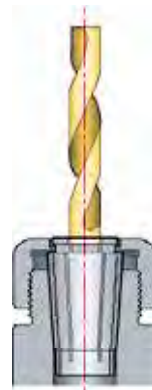
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SLIM COLLET CHUCK
8° Taper



ER COLLET CHUCK
12°/16° Taper

COOLANT TUBES & KEYS HSK-A

- ▶ For through coolant supply on HSK tool holders (sold separately)



	HSK50-A	HSK63-A	HSK100-A
COOLANT TUBE	950APR01	963APR01	910APR01
COOLANT TUBE KEY	950CHVAR	963CHVAR	910CHVAR

WRENCH GSK SLIM CHUCKS

CHUCK	GSK6	GSK10	GSK16	GSK20	GSK25
WRENCH	GSK6SPANNER	GSK10SPANNER	GSK16SPANNER	GSK20SPANNER	GSK25SPANNER



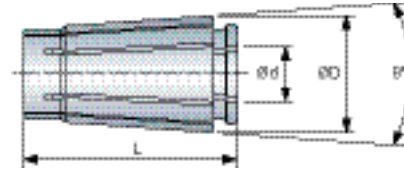
SLIM COLLETS

WITHOUT THROUGH COOLANT



HC SERIES WITHOUT THROUGH COOLANT

- ▶ Run Out <5µm
- ▶ <3µm ultra-precision through coolant collets available on request



<5µm
Run-out

Ød Max.	Clamping Range	ØD	L	ORDER CODE	PRICE	Ød Max.	Clamping Range	ØD	L	ORDER CODE	PRICE
HC6						HC20					
6	1.8 ~ 2.0	10.5	18	HC6-2.0	▲	20	3.6 ~ 4.0	29.1	45	HC20-4.0	▲
	2.3 ~ 2.5			HC6-2.5	▲		4.1 ~ 4.5			HC20-4.5	▲
	2.8 ~ 3.0			HC6-3.0	▲		4.6 ~ 5.0			HC20-5.0	▲
	3.3 ~ 3.5			HC6-3.5	▲		5.1 ~ 5.5			HC20-5.5	▲
	3.6 ~ 4.0			HC6-4.0	▲		5.6 ~ 6.0			HC20-6.0	▲
	4.1 ~ 4.5			HC6-4.5	▲		6.1 ~ 6.5			HC20-6.5	▲
	4.6 ~ 5.0			HC6-5.0	▲		6.6 ~ 7.0			HC20-7.0	▲
	5.1 ~ 5.5			HC6-5.5	▲		7.1 ~ 7.5			HC20-7.5	▲
5.6 ~ 6.0	HC6-6.0	▲	7.6 ~ 8.0	HC20-8.0	▲						
HC10							8.1 ~ 8.5			HC20-8.5	▲
10	1.75 ~ 2.0	15.5	25	HC10-2.0	▲		8.6 ~ 9.0			HC20-9.0	▲
	2.3 ~ 2.5			HC10-2.5	▲		9.1 ~ 9.5			HC20-9.5	▲
	2.8 ~ 3.0			HC10-3.0	▲		9.6 ~ 10.0			HC20-10.0	▲
	3.3 ~ 3.5			HC10-3.5	▲		10.6 ~ 11.0			HC20-11.0	▲
	3.6 ~ 4.0			HC10-4.0	▲		11.6 ~ 12.0			HC20-12.0	▲
	4.1 ~ 4.5			HC10-4.5	▲		12.6 ~ 13.0			HC20-13.0	▲
	4.6 ~ 5.0			HC10-5.0	▲		13.6 ~ 14.0			HC20-14.0	▲
	5.1 ~ 5.5			HC10-5.5	▲		14.6 ~ 15.0			HC20-15.0	▲
	5.6 ~ 6.0			HC10-6.0	▲		15.6 ~ 16.0			HC20-16.0	▲
	6.1 ~ 6.5			HC10-6.5	▲		16.6 ~ 17.0			HC20-17.0	▲
	6.6 ~ 7.0			HC10-7.0	▲	17.6 ~ 18.0	HC20-18.0	▲			
	7.1 ~ 7.5			HC10-7.5	▲	18.6 ~ 19.0	HC20-19.0	▲			
	7.6 ~ 8.0			HC10-8.0	▲	19.6 ~ 20.0	HC20-20.0	▲			
	8.1 ~ 8.5			HC10-8.5	▲	HC25					
8.6 ~ 9.0	HC10-9.0	▲	25	35.6	48	7.6 ~ 8.0	HC25-8.0	▲			
9.1 ~ 9.5	HC10-9.5	▲				9.6 ~ 10.0	HC25-10.0	▲			
9.6 ~ 10.0	HC10-10.0	▲				11.6 ~ 12.0	HC25-12.0	▲			
HC16						15.6 ~ 16.0	HC25-16.0	▲			
16	2.75 ~ 3.0	24.6				36	HC16-3.0	▲	16.6 ~ 17.0	HC25-17.0	▲
	3.2 ~ 3.5						HC16-3.5	▲	17.6 ~ 18.0	HC25-18.0	▲
	3.6 ~ 4.0						HC16-4.0	▲	18.6 ~ 19.0	HC25-19.0	▲
	4.1 ~ 4.5						HC16-4.5	▲	19.6 ~ 20.0	HC25-20.0	▲
	4.6 ~ 5.0						HC16-5.0	▲	20.6 ~ 21.0	HC25-21.0	▲
	5.1 ~ 5.5						HC16-5.5	▲	21.6 ~ 22.0	HC25-22.0	▲
	5.6 ~ 6.0						HC16-6.0	▲	22.6 ~ 23.0	HC25-23.0	▲
	6.1 ~ 6.5						HC16-6.5	▲	23.6 ~ 24.0	HC25-24.0	▲
	6.6 ~ 7.0		HC16-7.0	▲	24.6 ~ 25.0		HC25-25.0	▲			
	7.1 ~ 7.5		HC16-7.5	▲							
	7.6 ~ 8.0		HC16-8.0	▲							
	8.1 ~ 8.5		HC16-8.5	▲							
	8.6 ~ 9.0		HC16-9.0	▲							
	9.1 ~ 9.5		HC16-9.5	▲							
	9.6 ~ 10.0		HC16-10.0	▲							
	10.6 ~ 11.0		HC16-11.0	▲							
11.6 ~ 12.0	HC16-12.0	▲									
12.6 ~ 13.0	HC16-13.0	▲									
13.6 ~ 14.0	HC16-14.0	▲									
14.6 ~ 15.0	HC16-15.0	▲									
15.6 ~ 16.0	HC16-16.0	▲									

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