

SHRINK-FIT HOLDER

SLIMLINE **UNO**

HSK
E25 E32 E40
E50 F63...



Achieves a new degree of runout accuracy thanks to improved holder production accuracy and cutter shank tolerance.

Achieves **1 μ m** runout accuracy

- Longer cutter life
- Finishing surface quality improvement
- Ideal for micro-precise application

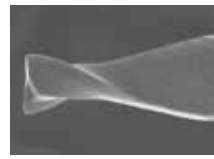


$\phi 3$ 、 $\phi 3.175$ 、 $\phi 4$...

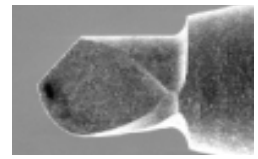
◆ Ideal for ultra high-speed, high-accuracy machining centers.

◆ Ideal for small, high-accuracy cutting tools.

- Micro end-mill, drill
- cBN tools
- Deep-hole drills



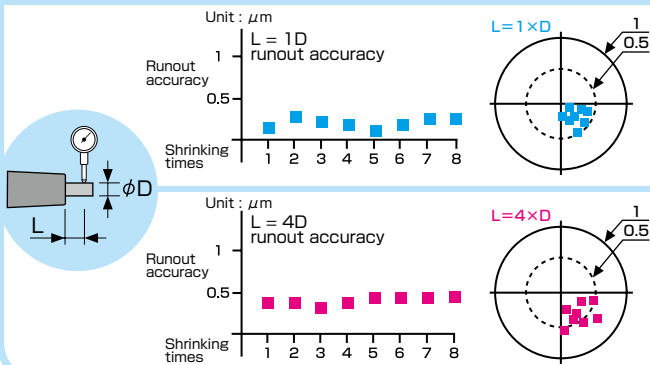
$\phi 0.03$ mm
2 flute Micro end-mill



R0.05mm cBN
1 flute Micro ball end-mill

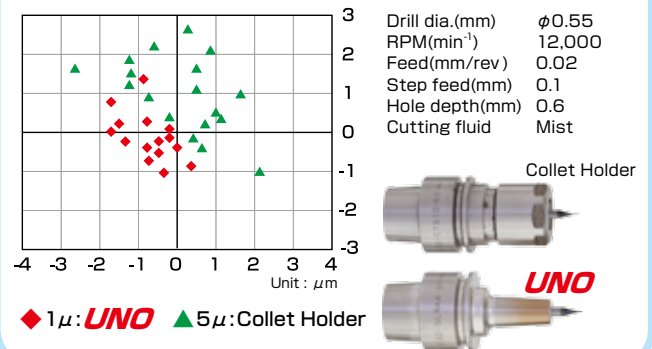
UNO Shrink-fit holder runout accuracy ($\phi 4$)

Runout accuracy greatly impacts micro tool performance.



Drill hole positioning accuracy and drill runout

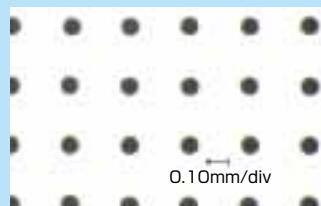
The smaller the runout, the more accurate the drill hole positioning



Micro-precise application

Micro-precise drill for deep hole(L/D=30)

Micro drill ($\phi 0.05$)

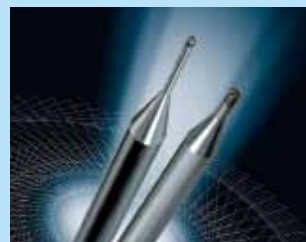


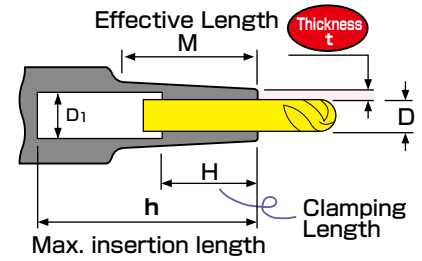
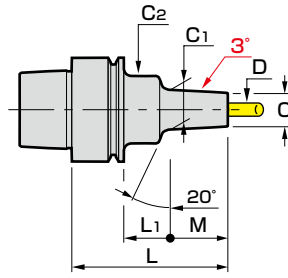
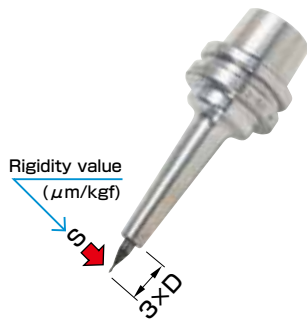
Precise finishing application

cBN end-mill



Hard material(62HRC)





CODE	φD	φC	Thickness t	L	M	L ₁	φC ₁	φC ₂	φD ₁	H	h	Kg	In Balance Value (g·mm)	S	
E25-SLRA3 -35 UNO	3	7.5	2.25	35	17	8	9.3	18	4	9	29	0.06	0.37	2.3	
-SLRA4 -35 UNO	4	10	3				11.8		4.3	12	0.38			1.4	
-SLSA3.175 -35 UNO	3.175	6.175	1.5				8		4	9	0.37			3.5	
E32-SLRA3 -50-M22 UNO	3	7.5	2.25	50	22	8	9.8	20	4	9	42	0.1	0.4	2.8	
-SLRA4 -50-M22 UNO	4	10	3				12.3		5	12	35			0.2	1.7
-SLSA3.175 -50-M22 UNO	3.175	6.175	1.5				8.5		4	9	42			0.1	4.4
E40-SLRA3 -50-M22 UNO	3	7.5	2.25	50	22	8	9.8	20	4	9	42	0.2	0.7	2.8	
-SLRA4 -50-M22 UNO	4	10	3				12.3		5	12	1.6				
-SLSA3.175 -50-M22 UNO	3.175	6.175	1.5				8.5		4	9	4.4				
E50-SLRA3 -75-M22 UNO	3	7.5	2.25	75	22	27	9.8	25	4	9	65	0.5	1.7	2.8	
-SLRA4 -75-M22 UNO	4	10	3				12.3		5	12	1.7				
F63-SLRA3 -75-M22 UNO	3	7.5	2.25	75	22	27	9.8	25	4	9	54	0.7	1.8	2.8	
-SLRA4 -75-M22 UNO	4	10	3				12.3		5	12	58			1.7	

SLIMLINE UNO is available for other shank designs and internal bore sizes not listed in this chart, so please contact us if you have an inquiry.

Required cutter shank tolerance

- D = h4 tolerance
- Roundness = 0.3 μm
- Cylindricity = 0.5 μm



Required cutter shank dimension is marked on Slimline UNO.

It is marked on the flange (right picture) of Slimline UNO. When using an h5/h6 shank tolerance cutting tool, please measure actual cutter shank dimension, and select the suitable dimension cutter shank for Slimline UNO. (example φ3.996-φ4.000)

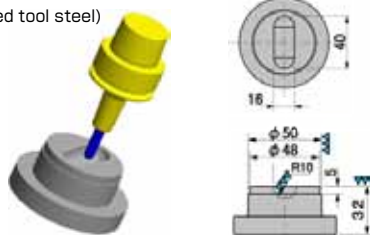


Cutting Data

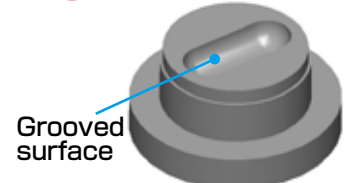


Material : ASP23 (Powder high-speed tool steel)
Hardness : 62HRC

Finishing
R1 cBN ball-nose end-mill
F(feed) : 3,000mm/min
Ad (cutting depth) : 0.0005mm
Pf (pick feed) : 0.03mm
N (revolution) : 30,000min-1



Surface roughness : 0.9 μm



Shrink Fit Heaters

Hot-air type

No need to change heating nozzle

Induction type

Super-fast shrinking

HRB-01	HRB-02S	HRB-03S	HRD-01S
<p>100V 1kW 180 sec. Tool dia. 6mm</p>	<p>100V 1.2kW 120 sec. Tool dia. 6mm</p>	<p>200V 3kW 70 sec. Tool dia. 6mm Compressed air cooling 10 min.</p>	<p>100V 1.2kW 18 sec. Tool dia. 6mm Compressed air cooling 1 min.</p>
100V-1000W	100V-1200W	200V-3000W	100V-1200W
340(W)×160(D)×410(H)	362(W)×215(D)×570(H)	450(W)×215(D)×570(H)	270(W)×410(D)×550(H)
Heating time 180 sec.(φ12 collet)	Heating time 120 sec.(φ12 collet)	Heating time 70 sec.(φ12 collet)	Heating time 30 sec.(φ12 collet)

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