

Size $\phi 0.1 \sim \phi 6$ **HLS2000**Super
MGHARD
MAX

30°

Flatland

Shank Dia
0/-0.005

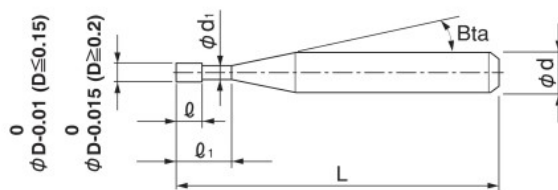
Material Applications (★ Highly Recommended ● Recommended ○ Suggested)

Work Material														
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels					Cast Iron	Aluminum Alloys	Graphite	Copper	Plastics	Glass Filled Plastics	Titanium Alloys
S45C S55C	SK / SCM SUS	NAK HPM	~50HRC	~55HRC	~60HRC	~65HRC	~70HRC							
○	○	●	●	●	○			○			○			○

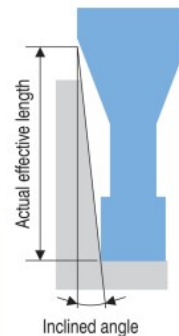
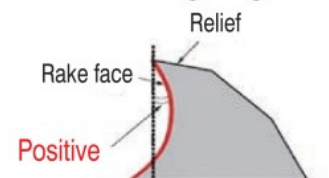
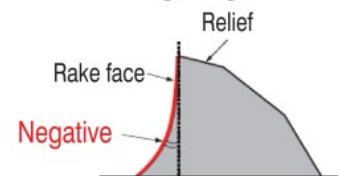
Features

HARDMAX coating and optimized tool design control tool chipping.
Longer tool life with deep rib milling on hard materials.

High Accuracy: Diameter Tolerance: 0/-0.01 ($D \leq 0.15$), 0/-0.015 ($D \geq 0.2$)
Refer to page 288 for 4 flute HLS.



The shank taper angle shown is not an exact value and to avoid contact with the work piece, we recommend the user controls the precise value of this angle. Shank taper angle should not make contact with the work piece.

**C-CER Cutting edge****HLS Cutting edge**

Total 189 models

Unit (mm)

Model Number	Outside Diameter ϕD	Effective Length ℓ_1	Length of Cut ℓ	Neck Diameter ϕd_1	Shank Taper Angle Bta	Overall Length L	Shank Diameter ϕd	Suggested Retail Price ¥	Effective Length by Inclined Angles				
									30'	1°	1° 30'	2°	3°
HLS 2001-003	0.1	0.3	0.1	0.088	11°	45	4	11,160	0.33	0.36	0.38	0.40	0.45
HLS 2001-005		0.5				45	4	12,240	0.54	0.58	0.61	0.64	0.69
HLS 2001-0075		0.75				45	4	13,560	0.80	0.85	0.90	0.95	1.07
HLS 2001-010		1				45	4	15,240	1.07	1.12	1.18	1.25	1.41
HLS 20015-005	0.15	0.5	0.15	0.128	11°	45	4	11,400	0.58	0.61	0.63	0.66	0.71
HLS 20015-0075		0.75				45	4	12,600	0.84	0.88	0.91	0.94	1.02
HLS 20015-010		1				45	4	12,600	1.10	1.14	1.18	1.23	1.32
HLS 2002-005	0.2	0.5	0.3	0.18	16°	45	4	7,320	0.65	0.70	0.74	0.78	0.85
HLS 2002-010		1				45	4	7,920	1.18	1.25	1.31	1.36	1.45
HLS 2002-015		1.5				45	4	9,600	1.67	1.76	1.84	1.90	2.01
HLS 2002-020		2				45	4	10,800	2.23	2.33	2.41	2.49	2.68
HLS 2002-030		3				45	4	11,160	3.27	3.39	3.51	3.63	3.91