

HSB·HSLB DC53 Press Mold

HARDMAX
for high hardness material



Work material : DC53 (hardened) (60HRC)
 Coolant : Oil mist
 Milling size : 100 x 120 x 50 mm
 Machine : MAKINO V33
 CAD/CAM : C&G SYSTEMS CAM-TOOL

Main tools:
 2-Flute Ball HSB R4 x 8
 2-Flute Long Neck Ball HSLB R3 x L30

No.	Process	Tool Geometry	Series / Size	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	Finishing Allowance (mm)	a _p (mm)	a _e (mm)	Overhang Length (mm)	Milling Time	Milling Dist. (m)
1	Roughing	2-Flute Ball	HSB R4 x 8	5,200	2,200	0.05	0.4	1.7	28.0	1:02:37	12.5
2	Roughing	2-Flute Ball	HSB R4 x 8	5,200	2,200	0.05	0.4	1.7	28.0	1:03:42	12.5
3	Roughing	2-Flute Ball	HSB R4 x 8	5,200	2,200	0.05	0.4	1.7	28.0	0:46:16	8.4
4	Roughing	2-Flute Long Neck Ball	HSLB R3 x L30	6,500	2,500	0.05	0.2	0.65	32.0	0:28:01	4.6
5	Semi-finishing	2-Flute Long Neck Ball	HSLB R2 x L25	8,000	1,160	0.005	0.7 (Ridge dir.)	0.35 (Dir. orthogonal to ridge)	30.0	0:21:38	1.8
6	Semi-finishing	2-Flute Long Neck Ball	HSLB R3 x L30	6,500	2,500	0.02	0	0.3	32.0	0:21:38	4.8
7	Finishing	2-Flute Long Neck Ball	HSLB R3 x L30	6,500	2,500	0.002	0	0.01	32.0	2:53:09	27.4
8	Finishing	4-Flute Long Neck Radius	HLRS φ6 x R1 x L30	2,200	580	-0.005	0.1	1	32.0	1:03:01	2.3
9	Logotype Engraving	2-Flute Ball	HSB R0.3 x 0.6	30,000	1,200	0	0.05	0	14.0	0:02:09	0.1
									Total	8:02:11	74.8

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Roughing study case of a press mold

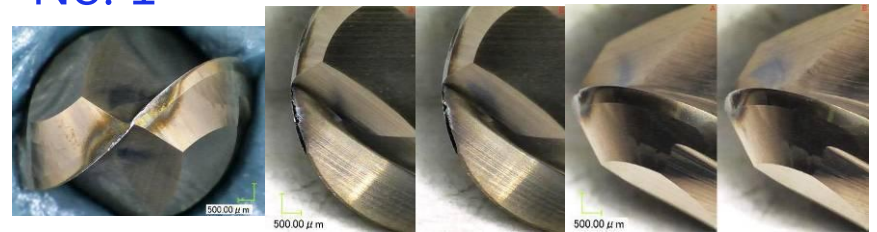
Work material : DC53 (hardened) (60HRC)

Coolant : Oil mist

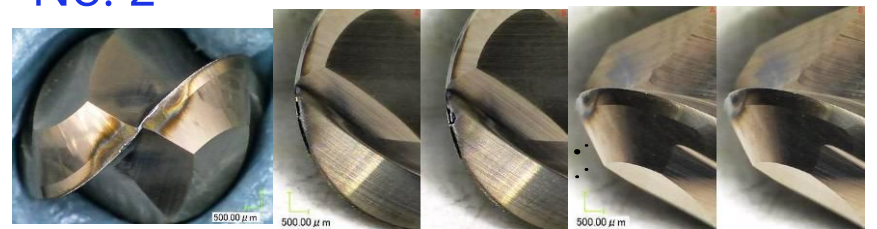
Milling size : 100 x 120 x 50 mm

No.	Process	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a _p (mm)	a _e (mm)	Overhang Length (mm)
1						
2	Roughing	5,200	2,200	0.4	1.7	28.0
3						

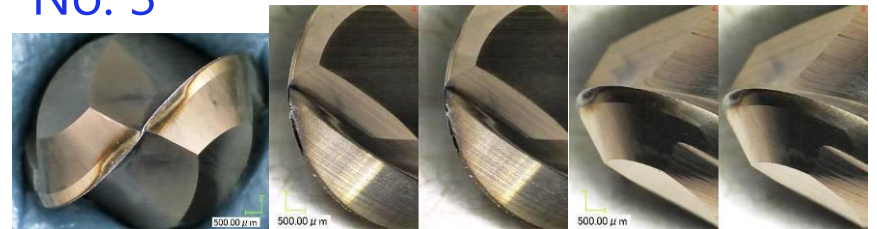
No. 1



No. 2



No. 3



No.	Milling Time	Milling Distance (m)
1	1:02:37	12.5
2	1:03:42	12.5
3	0:46:16	8.4