

4HFSS, 5HFSS, 6HFSS, 7HFSS

Number of Flutes: 4, 5, 6, 7

Finishing of Hard Materials

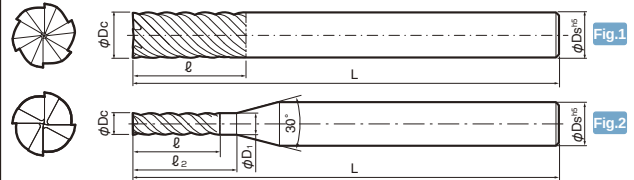


MEGACOAT is applied

Super Micro-grain carbide

Recommended Material

★ 1st Recommendation



Lineup

(Unit: mm)

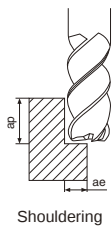
Description	Std.	Outside Dia. ØDc	Outside Dia. tolerance	Length of edge ℓ	Neck Dia. ØD1	Under Neck Length ℓ2	Shank Dia. ØDs	Overall length L	Number of Flutes Z
4HFSS010-040-06 Fig.2	●	1	0 -0.015	4	1.05	4.8	6	60	4
4HFSS020-060-06 Fig.2	●	2	0 -0.015	6	2.10	7.2	6	60	4
4HFSS030-080-06 Fig.2	●	3	0 -0.015	8	3.15	9.6	6	60	4
4HFSS040-100-06 Fig.2	●	4	0 -0.015	10	4.2	12.0	6	60	4
4HFSS050-120-06 Fig.2	●	5	0 -0.015	12	5.2	14.4	6	60	4
5HFSS040-100-06 Fig.2	●	4	0 -0.015	10	4.2	12.0	6	60	5
6HFSS060-140-06 Fig.1	●	6	0 -0.020	14	-	-	6	60	6

(Unit: mm)

Description	Std.	Outside Dia. ØDc	Outside Dia. tolerance	Length of edge ℓ	Neck Dia. ØD1	Under Neck Length ℓ2	Shank Dia. ØDs	Overall length L	Number of Flutes Z
6HFSS080-180-08 Fig.1	●	8	-0.005 -0.025	18	-	-	8	70	6
6HFSS100-220-10 Fig.1	●	10	-0.005 -0.025	22	-	-	10	80	6
6HFSS120-260-12 Fig.1	●	12	-0.010 -0.030	26	-	-	12	90	6
6HFSS060-140-06 Fig.1	●	6	0 -0.020	14	-	-	6	60	7
7HFSS080-180-08 Fig.1	●	8	-0.005 -0.025	18	-	-	8	70	7
7HFSS100-220-10 Fig.1	●	10	-0.005 -0.025	22	-	-	10	80	7
7HFSS120-260-12 Fig.1	●	12	-0.010 -0.030	26	-	-	12	90	7

- “MEGACOAT Hard”, new PVD Coated Carbide for hardened materials is adopted. Achieves high rigidity by ensuring a large core diameter. End mill for hardened materials that achieves longer tool life and stable machining. Also cutting edge strength and chip evacuation are improved with a negative rake angle.

Recommended Cutting Conditions



Shouldering

Workpiece Materials	Depth of Cut (ap×ae) (mm)	Outside Dia. (mm)	Ø1	Ø2	Ø4	Ø6	Ø8	Ø12	Ø16
Tool Steel (< 40HRC) Pre-hardened steel	1.5Dc×0.05D (D<Ø3) 1.5Dc×0.1Dc (Ø3≤D)	Spindle Revolution (min ⁻¹)	20,700	20,000	11,100	7,400	5,600	3,700	2,800
		Feed Rate (mm/min)	910	1,750	2,000	2,900	2,930	2,930	2,720
Tool Steel Heat Treated Steel (40~45HRC) Pre-hardened steel	1.5Dc×0.05D (D<Ø3) 1.5Dc×0.1Dc (Ø3≤D)	Spindle Revolution (min ⁻¹)	20,700	20,000	9,900	6,600	5,000	3,300	2,500
		Feed Rate (mm/min)	910	1,750	1,800	2,630	2,650	2,650	2,400
Hardened 45~55HRC	1.5Dc×0.05D	Spindle Revolution (min ⁻¹)	20,700	16,000	8,000	5,300	4,000	2,700	2,000
		Feed Rate (mm/min)	910	1,400	1,400	2,100	2,100	2,100	1,900
Hardened 55~60HRC	1.5Dc×0.02Dc	Spindle Revolution (min ⁻¹)	20,700	12,000	6,000	4,000	3,000	2,000	1,500
		Feed Rate (mm/min)	640	730	740	1,100	1,100	1,100	1,050
Hardened 60~65HRC	1.5Dc×0.02Dc	Spindle Revolution (min ⁻¹)	20,700	11,100	5,600	3,700	2,800	1,900	1,400
		Feed Rate (mm/min)	550	600	600	880	880	880	910
Hardened 65~70HRC	1.5Dc×0.02Dc	Spindle Revolution (min ⁻¹)	15,900	8,000	4,000	2,700	2,000	1,330	1,000
		Feed Rate (mm/min)	370	370	370	560	560	550	550

Not Recommended for Slotting.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

