

5DERM, 5DEKM

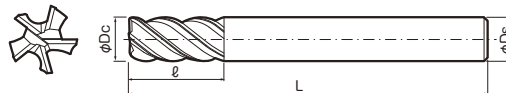
Number of Flutes: 5

Semi-Finishing of Difficult-to-Cut Material (High Feed Rate)



Recommended Material

★ 1st Recommendation



Lineup

(Unit: mm)

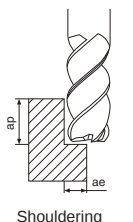
Description	Std.	Outside Dia. øDc	Outside Dia. tolerance	Length of edge ℓ	Shank Dia. øDs	Overall length L	Spec of Corners	Number of Flutes Z
5DERM040-120-06-R025	●	4	-0.020 -0.038	12	6	55	0.25	5
5DERM050-130-06-R025	●	5	-0.020 -0.038	13	6	57	0.25	5
5DERM060-130-06-R040	●	6	-0.020 -0.038	13	6	57	0.4	5
5DERM080-160-08-R050	●	8	-0.025 -0.047	16	8	63	0.5	5
5DERM090-190-10-R050	●	9	-0.025 -0.047	19	10	72	0.5	5
5DERM100-220-10-R050	●	10	-0.025 -0.047	22	10	72	0.5	5
5DERM120-260-12-R075	●	12	-0.032 -0.059	26	12	83	0.75	5
5DERM160-320-16-R075	●	16	-0.032 -0.059	32	16	92	0.75	5
5DERM200-380-20-R075	●	20	-0.040 -0.073	38	20	104	0.75	5
5DERM250-450-25-R075	●	25	-0.040 -0.073	45	25	121	0.75	5

(Unit: mm)

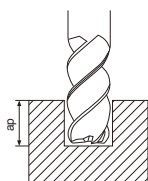
Description	Std.	Outside Dia. øDc	Outside Dia. tolerance	Length of edge ℓ	Shank Dia. øDs	Overall length L	Number of Flutes Z
5DEKM040-120-06	●	4	-0.020 -0.038	12	6	55	5
5DEKM050-130-06	●	5	-0.020 -0.038	13	6	57	5
5DEKM060-130-06	●	6	-0.020 -0.038	13	6	57	5
5DEKM080-160-08	●	8	-0.025 -0.047	16	8	63	5
5DEKM090-190-10	●	9	-0.025 -0.047	19	10	72	5
5DEKM100-220-10	●	10	-0.025 -0.047	22	10	72	5
5DEKM120-260-12	●	12	-0.032 -0.059	26	12	83	5
5DEKM160-320-16	●	16	-0.032 -0.059	32	16	92	5
5DEKM200-380-20	●	20	-0.040 -0.073	38	20	104	5
5DEKM250-450-25	●	25	-0.040 -0.073	45	25	121	5

- High feed rate machining is possible with 5 edge design. Unequally partitioned flute design prevents vibration. 5DERM type is applicable for slotting with a cutting depth up to 0.8D.

Recommended Cutting Conditions



Shouldering



Slotting

Shouldering

Workpiece Materials	Depth of Cut (apxae) (mm)	Outside Dia. (mm)	ø4	ø5	ø6	ø8	ø10	ø12	ø16	ø20	ø25
Medium and high carbon steel > 0.3%C	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	16,000	12,700	10,600	8,000	6,400	5,300	4,000	3,200	2,500
		Feed Rate (mm/min)	2,400	2,500	2,700	2,400	2,200	1,900	1,600	1,600	1,400
Alloy Steel Alloy tool Steel < 330HB, < 35HRC	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	14,300	11,500	9,600	7,200	5,700	4,800	3,600	2,900	2,300
		Feed Rate (mm/min)	2,100	1,700	1,900	1,800	1,700	1,700	1,400	1,300	1,100
Alloy Steel Alloy tool Steel 340~450HB, 36~48HRC	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	13,000	10,000	8,500	6,400	5,100	4,200	3,200	2,500	2,000
		Feed Rate (mm/min)	1,300	1,500	1,700	1,300	1,300	1,300	1,100	1,000	1,000
Austenitic Stainless Steel	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	9,200	7,300	6,100	4,600	3,700	3,100	2,300	1,800	1,500
		Feed Rate (mm/min)	1,400	1,100	1,200	1,100	1,100	1,100	920	820	730
Austenitic Stainless Steel	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	6,400	5,100	4,200	3,200	2,500	2,100	1,600	1,300	1,000
		Feed Rate (mm/min)	640	760	640	640	640	640	560	510	410
Gray Cast Iron	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	14,000	11,000	9,000	6,800	5,400	4,500	3,400	2,700	2,200
		Feed Rate (mm/min)	2,000	2,200	2,300	2,000	2,200	1,800	1,700	1,600	1,400
Nodular Cast Iron, CGI and Malleable Cast Iron	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	10,000	8,300	6,900	5,200	4,100	3,500	2,600	2,100	1,700
		Feed Rate (mm/min)	1,000	1,200	1,000	1,300	1,000	1,000	910	830	830
Heat-resistant Alloy	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	3,200	2,500	2,100	1,600	1,300	1,100	800	640	510
		Feed Rate (mm/min)	160	130	210	240	190	210	200	190	180
Titanium Alloy	5DERM: 1.5Dc×0.5Dc 5DEKM: 1.5Dc×0.25Dc	Spindle Revolution (min ⁻¹)	4,800	3,800	3,200	2,400	1,900	1,600	1,200	960	760
		Feed Rate (mm/min)	480	380	480	480	380	400	360	380	340

Please refer to page L45 about Slotting.

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

