NS TOOL

For Crafting Tomorrow

High Efficient 3-Flute Square End Mill with Nick for Aluminium L/D=3

AL3D-345N NEW

Total 8 sizes

N

Breaks chips into smaller pieces for smooth evacuation



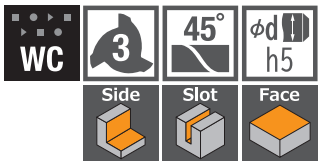
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Nick type added to the aluminium series to suppress chatter vibration

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Release in Jun, 2026.

ϕ 1 ～ ϕ 6　　Total 8 sizes





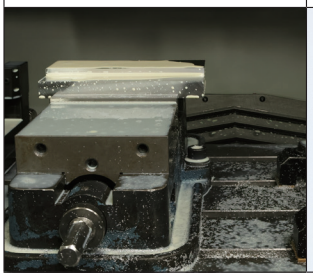
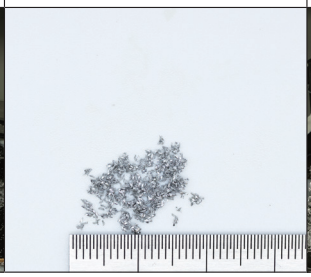
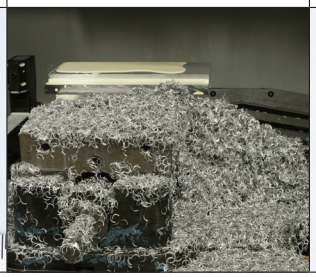


AL3D-345N O.D.Cutting edge

Features

Feature 1	Improved chip evacuation	Break chips into smaller pieces to improve chip evacuation

Nick shape breaks chips into smaller that improving chip evacuation and preventing chip-related issues such as machine stoppages and machining defects.
In addition, it reduces cutting load, enabling high efficiency roughing.

After machining 10 min			
AL3D-345N　ϕ3		Conventional 3-flute tool　ϕ3	
Table condition after machining	Chip	Table condition after machining	Chip
			

Spindle speed：24,000min^{-1} , Feed：2,600mm/min, Depth of cut：ap 9 × ae 0.9mm

AL3D-345N New

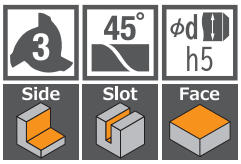
Size ϕ1 ～ ϕ6

WC

High Efficient 3-Flute Square End Mill with Nick for Aluminium L/D=3

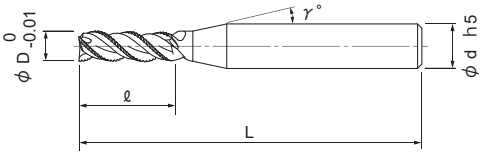
Total 8 sizes

Breaks chips into smaller pieces for smooth evacuation
Nick type added to the aluminium series to suppress chatter vibration









- Adopt nick shape on peripheral cutting edge to reduce cutting load.
- Chip can be removed smoothly by breaking up the chips smaller that preventing machining troubles.
- NS TOOL AL series end mills suppress chattering even during high speed machining.

Work Material

Aluminium Alloy	N
◎	

◆ Release in Jun, 2026.

Unit [Size : mm]

Code No.	Dia. (D)	Length of Cut (ℓ)	Neck Taper Angle (γ)	Shank Dia. (d)	Overall Length (L)
◆ 01-00629-01030	**1**	3	12°	4	60
◆ 01-00629-01530	**1.5**	4.5	12°	4	60
◆ 01-00629-02030	**2**	6	12°	4	60
◆ 01-00629-02530	**2.5**	7.5	12°	4	60
◆ 01-00629-03030	**3**	9	12°	6	60
◆ 01-00629-04030	**4**	12	12°	6	70
◆ 01-00629-05030	**5**	15	12°	6	80
◆ 01-00629-06030	**6**	18	-	6	80

How to Order When you order, indicate AL3D-345N (D).

※ (γ) is reference value.

Recommended Milling Conditions

Work Material		Aluminium A1070							Aluminium Alloy A2017・A5052・A7075							Aluminium Cast AC8C						
		Side Milling				Slotting			Side Milling				Slotting			Side Milling				Slotting		
Dia.	Length of Cut	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut
		min^{-1}	mm/min	ap mm	ae mm	min^{-1}	mm/min	ap mm	min^{-1}	mm/min	ap mm	ae mm	min^{-1}	mm/min	ap mm	min^{-1}	mm/min	ap mm	ae mm	min^{-1}	mm/min	ap mm
1	**3**	30,000	1,700	3	0.3	30,000	750	1	30,000	1,700	3	0.3	30,000	750	1	30,000	1,700	3	0.3	30,000	750	1
1.5	**4.5**	30,000	2,100	4.5	0.45	30,000	850	1.5	30,000	2,100	4.5	0.45	30,000	850	1.5	30,000	2,100	4.5	0.45	30,000	850	1.5
2	**6**	27,000	2,300	6	0.6	27,000	900	2	27,000	2,300	6	0.6	27,000	900	2	27,000	2,300	6	0.6	27,000	900	2
2.5	**7.5**	27,000	2,400	7.5	0.75	27,000	1,100	2.5	27,000	2,400	7.5	0.75	27,000	1,100	2.5	27,000	2,400	7.5	0.75	24,000	1,000	2.5
3	**9**	24,000	2,600	9	0.9	24,000	1,300	3	24,000	2,600	9	0.9	24,000	1,300	3	24,000	2,600	9	0.9	21,000	1,100	3
4	**12**	22,000	2,700	12	1.2	21,000	1,400	4	22,000	2,800	12	1.2	22,000	1,400	4	22,000	2,800	12	1.2	16,000	1,100	4
5	**15**	20,000	2,700	15	1.5	17,000	1,500	5	20,000	3,500	15	1.5	19,000	1,500	5	20,000	2,800	15	1.5	13,000	1,100	5
6	**18**	20,000	2,800	18	1.8	14,500	1,600	6	20,000	3,900	18	1.8	16,000	1,600	6	17,500	2,800	18	1.8	11,000	1,100	6

Note

※1 Depth of Cut : ap=Axial Depth of Cut / ae=Radial Depth of Cut.
※2 Adjust milling condition conforming with machine rigidity and clamping condition.Final milling conditions are subject to machining profile, purpose and machine status.
※3 If the maximum spindle speed of the machine tool is lower than the reference value, please reduce the spindle speed and feed rate at the same rate.
Also, reduce both spindle speed and feed rate at the same ratio if chattering occurs.
※4 Water soluble fluid is recommended.
※5 Please exercise caution that insufficient chip evacuation may lead to tool chipping or breakage.
※6 Use a rigid and precise machine and chuck holder.
※7 Overhang of end mill should be as short as possible from spindle nose.

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CAUTION **Attention on Safety**

1) When removing tools from cases, be careful of getting-out of tools and don't touch directly the cutting edges.
2) Never touch the cutting edges directly with bare hand.
3) Use safety covers and eye protection, as tools may be broken.
4) Use holders, etc. that match the tools and nature of the processing operations. The tool should be firmly attached to the holder to prevent shaking.
5) The work materials clamp firmly.
6) Make sure of dimensions of tools and work pieces before starting operation.
7) It is necessary to adjust conditions according to the dimensions of work materials and the machine.
8) Select a cutting fluid appropriate to the particular usage. Using a non-water cutting fluid could lead to fires due to sparks generated during processing or heat caused by breakage. Ensure that you take proper fire-prevention measures.
9) If abnormal sound, etc. occurs during processing, stop the machine immediately.
10) Don't modify tools.

ISO 9001 JQA-QM6096 ISO 14001 JQA-EM3712

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■Specifications may change without notice for improvement.
■This print uses environmentally friendly inks.