

DLC coating series for machining aluminum

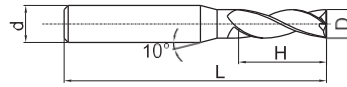
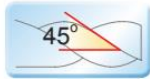
3-flute flattened end mills with straight shank



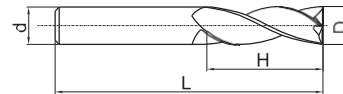
DLC-3E



- Outstanding cutting performance with no chattering, achieving high-precision machining.



Picture 1



Picture 2

Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
DLC-3E-D1.0	1.0	4	3	50	3	Picture 1	●
DLC-3E-D1.5	1.5	4	4	50	3	Picture 1	●
DLC-3E-D2.0	2.0	4	6	50	3	Picture 1	●
DLC-3E-D2.5	2.5	4	7	50	3	Picture 1	●
DLC-3E-D3.0	3.0	6	9	50	3	Picture 1	●
DLC-3E-D4.0	4.0	6	12	50	3	Picture 1	●
DLC-3E-D5.0	5.0	6	15	50	3	Picture 1	●
DLC-3E-D6.0	6.0	6	18	60	3	Picture 2	●
DLC-3E-D8.0	8.0	8	20	60	3	Picture 2	●
DLC-3E-D10.0	10.0	10	30	75	3	Picture 2	●
DLC-3E-D12.0	12.0	12	32	75	3	Picture 2	●
DLC-3E-D16.0	16.0	16	45	100	3	Picture 2	●
DLC-3E-D20.0	20.0	20	45	100	3	Picture 2	●

● Stock available ○ Make-to-order

➤ Applicable workpiece material table ◎Very suitable ○Suitable

Workpiece material											
Carbon steel	Alloy steel	Pre-hardened steel.		Hardened steel		Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
									◎		

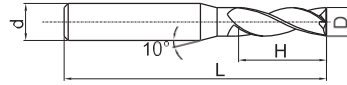
Indexable milling tools
Solid carbide end mills
DLC series

DLC Coating series for machining aluminum

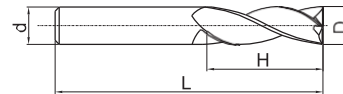
3-flute flattened end mills with straight shank and long cutting edge



DLC-3EL

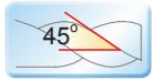


Picture 1



Picture 2

- DLC-3EL series with long cutting edge.



Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
DLC-3EL-D3.0	3.0	6	12	75	3	Picture 1	●
DLC-3EL-D4.0	4.0	6	16	75	3	Picture 1	●
DLC-3EL-D5.0	5.0	6	20	75	3	Picture 1	●
DLC-3EL-D6.0	6.0	6	30	100	3	Picture 2	●
DLC-3EL-D8.0	8.0	8	35	100	3	Picture 2	●
DLC-3EL-D10.0	10.0	10	40	100	3	Picture 2	●
DLC-3EL-D12.0	12.0	12	45	100	3	Picture 2	●
DLC-3EL-D16.0	16.0	16	70	150	3	Picture 2	●
DLC-3EL-D20.0	20.0	20	80	150	3	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

DLC series

➤ Applicable workpiece material table ◎Very suitable ○Suitable

Workpiece material											
Carbon steel	Alloy steel	Pre-hardened steel.		Hardened steel		Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
									◎		

Cutting parameters for DLC series end mills

DLC-3E★DLC-3EL

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1		40000	800	40000	600
2		40000	1200	32000	900
3		26500	1800	21000	1300
4		20000	2000	16000	1500
5		16000	1750	13000	1300
6		13000	1500	10600	1200
8		10000	1650	8000	1300
10		8000	1900	6500	1500
12		6600	1950	5300	1550
14		5700	2000	4600	1600
16		5000	2000	4000	1600
18		4400	2000	3500	1600
20		4000	2000	3200	1600
Maximum cutting depth					

1. The above table shows the reference value of side milling. The feed speed in slot milling is 70% of the reference value stated in the table.
2. Please select high rigidity and precision machine and tool holder. Vibration and abnormal noise may be generated if the machine rigidity and workpiece fixture stability is low. Please reduce the rotating speed and feed speed stated above correspondingly.
3. It is possible to increase the rotating speed and feed speed correspondingly if the cutting depth is low.
4. Please use water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in conditions of non-interference.