

NPN

New Product News



DIA MILL

New Geometries Added to DIA-MILL for Composite Materials



KEY POINT

TaeguTec has added new geometries to the DIA-MILL line for the machining of composite materials.

To respond to various machining applications of composite materials, TaeguTec has added new geometries (RCME, RCDE) and a higher number of flutes (RDCF) to the DIA-MILL line.

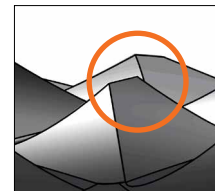
Features

RCME type **new**

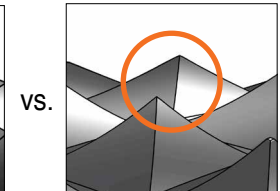
- Multi-flute router design with unique cutting edge shape for medium to finishing applications



The straight cutting edge shape for improved surface roughness



RCME

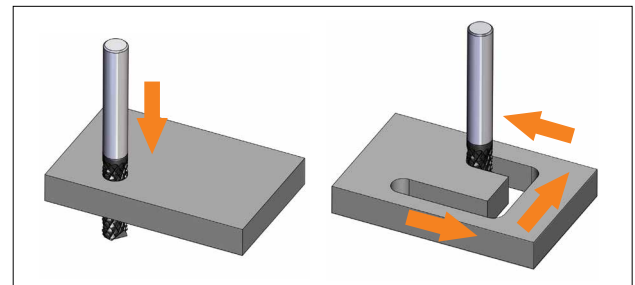


RCDE

vs.

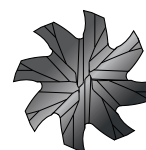
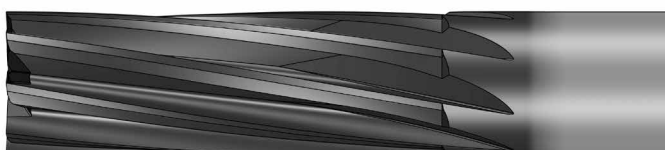
RCDE type **new**

- RCME cutting edge plus a drilling cutting edge for medium to finishing applications
- Drilling and slotting with one end mill



RDCF type **expansion**

- Eliminates delamination and splintering
- Low helix angle
- A higher number of teeth added (6z, 8z)
- For finishing applications



8 flutes (new)

RRFE type

- Splitter router
- Low cutting force and less vibration
- High productivity for roughing applications



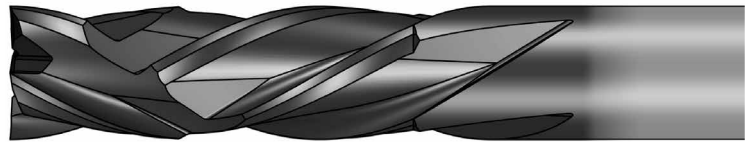
RCFE type

- Multi-flute router
- Low cutting force and less vibration
- High productivity for roughing applications



RCOM type

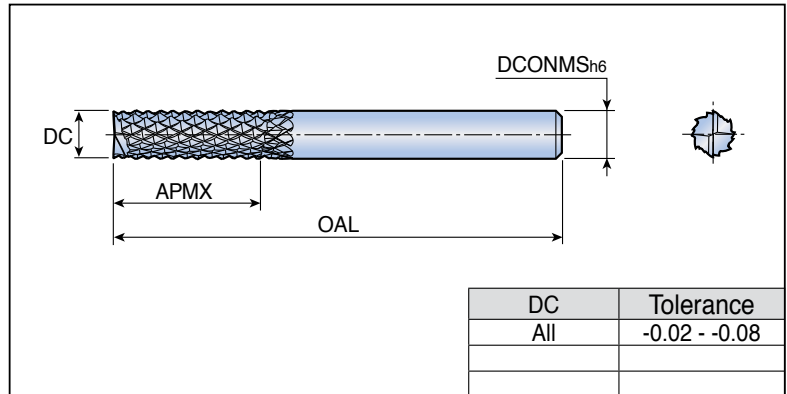
- Left and right hand helix type
- Eliminates delamination and splintering
- For finishing applications



RCME new



Medium to finishing for composite materials (Multi-flute)



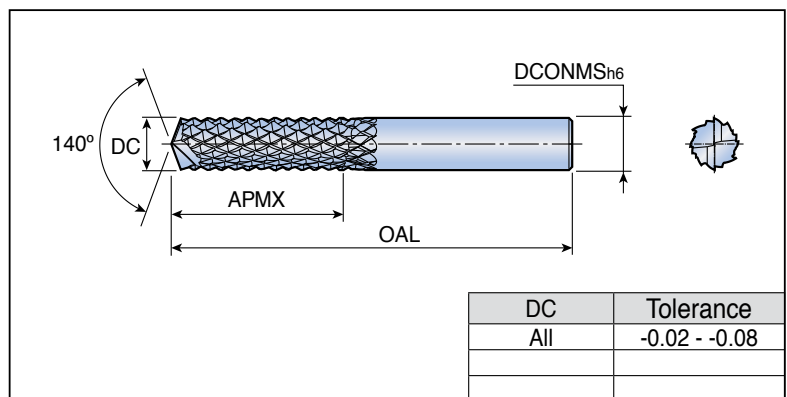
Designation	Feed (mm/rev)	Dimension (mm)				Grade TTD610
		DC	OAL	APMX	DCONMS	
RCME 040	0.03-0.06	4	50	12	4	●
060	0.07-0.15	6	65	18	6	●
080	0.10-0.20	8	75	24	8	●
100	0.15-0.30	10	85	30	10	●
120	0.20-0.40	12	100	36	12	●

●: Standard items

RCDE new



Medium to finishing for composite materials (Cutting edge for drilling + multi-flute)



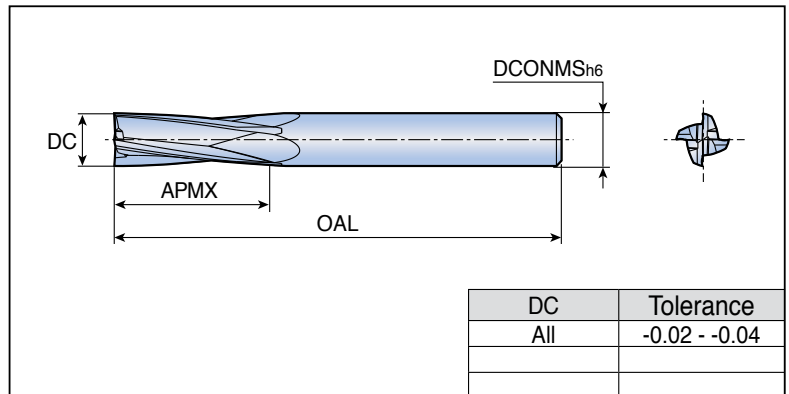
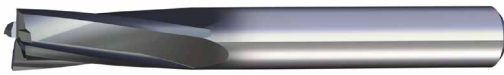
Designation	Feed (mm/rev)	Dimension (mm)				Grade TTD610
		DC	OAL	APMX	DCONMS	
RCDE 040	0.03-0.06	4	50	12	4	●
060	0.07-0.15	6	65	18	6	●
080	0.10-0.20	8	75	24	8	●
100	0.15-0.30	10	85	30	10	●
120	0.20-0.40	12	100	36	12	●

●: Standard items

RDCF



4-8 flute for finishing of composite materials (Low helix angle)



Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	NOF	OAL	APMX	DCONMS	
RDCF 4040	0.01-0.03	4	4	50	12	4	●
6040 <small>(new)</small>	0.01-0.03	4	6	50	12	4	●
4060	0.02-0.04	6	4	65	18	6	●
6060 <small>(new)</small>	0.02-0.04	6	6	65	18	6	●
4080	0.03-0.05	8	4	75	24	8	●
6080 <small>(new)</small>	0.03-0.05	8	6	75	24	8	●
4100	0.04-0.06	10	4	85	30	10	●
8100 <small>(new)</small>	0.04-0.06	10	8	85	30	10	●
4120	0.04-0.08	12	4	100	36	12	●
8120 <small>(new)</small>	0.04-0.08	12	8	100	36	12	●

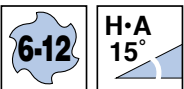
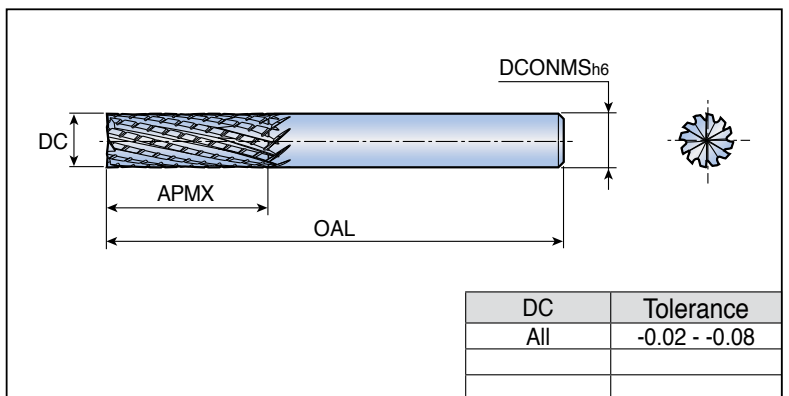
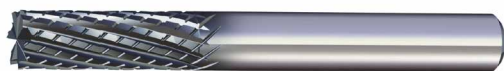
• NOF: Number of flutes

●: Standard items

RRFE



Roughing for composite materials (Chip Splitter)



Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	NOF	OAL	APMX	DCONMS	
RRFE 040	0.01-0.02	4	6	50	12	4	●
060	0.01-0.02	6	8	65	18	6	●
080	0.01-0.03	8	10	75	24	8	●
100	0.02-0.04	10	12	85	30	10	●
120	0.02-0.05	12	12	100	36	12	●

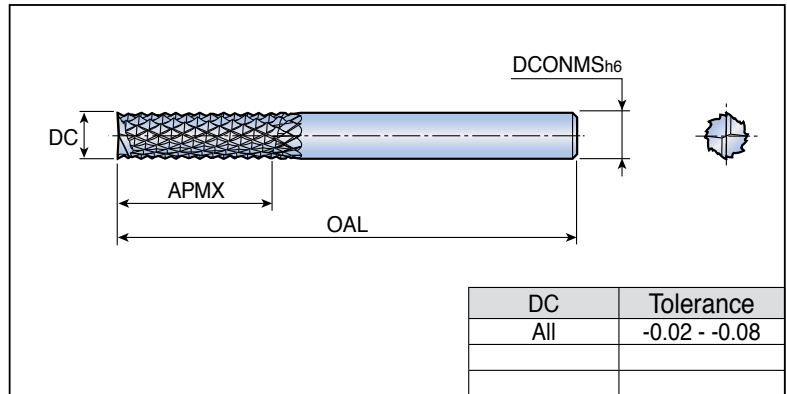
• NOF: Number of flutes

●: Standard items

RCFE



Roughing for composite materials (Multi-flute)



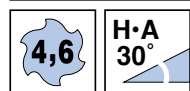
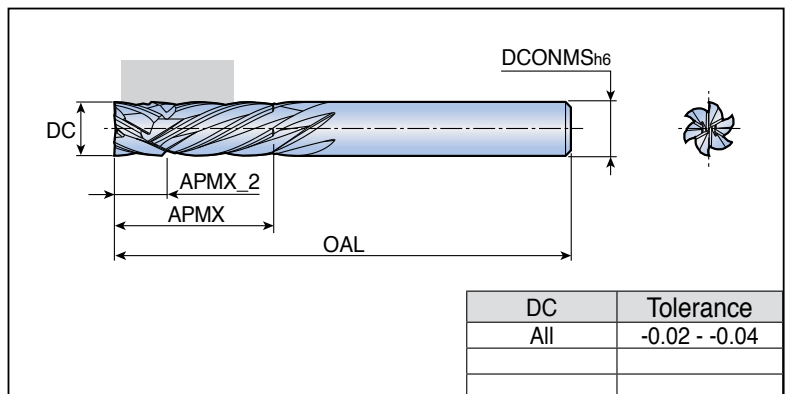
Designation	Feed (mm/rev)	Dimension (mm)				Grade TTD610
		DC	OAL	APMX	DCONMS	
RCFE 040	0.03-0.06	4	50	12	4	●
060	0.07-0.15	6	65	18	6	●
080	0.10-0.20	8	75	24	8	●
100	0.15-0.30	10	85	30	10	●
120	0.20-0.40	12	100	36	12	●

●: Standard items

RCOM



4 and 6 flute for finishing of composite materials (Left and right hand helix type)



Designation	Feed (mm/tooth)	Dimension (mm)						Grade TTD610
		DC	NOF	OAL	APMX	APMX_2	DCONMS	
RCOM 4060	0.02-0.04	6	4	65	18	6.7	6	●
4080	0.02-0.05	8	4	75	24	9.2	8	●
6100	0.03-0.06	10	6	85	30	7.9	10	●
6120	0.04-0.08	12	6	100	36	9.2	12	●

●: Standard items

●: Standard items
●: Notice: For best machining performance, the end mill's intersection point(APMX_2) should be positioned at the center of the workpiece thickness.

Recommended Cutting Conditions

Grade: TTD610

Material		Cutting speed Vc (m/min)					
		RRFE		RCFE		RCDE	
		Shouldering	Slotting	Shouldering	Slotting	Shouldering	Slotting
CFRP	CFRP	100-300	50-120	100-300	50-120	80-250	50-120
	Honeycomb	150-250	100-200	150-250	100-200	120-200	100-200
GFRP	GFRP	50-150	30-70	50-150	30-70	50-130	30-70
	Honeycomb	150-250	100-200	150-250	100-200	120-200	100-200

Material		Cutting speed Vc (m/min)					
		RCME		RCOM		RDCF	
		Shouldering	Slotting	Shouldering	Slotting	Shouldering	Slotting
CFRP	CFRP	80-250	50-120	50-200	50-120	100-300	50-120
	Honeycomb	120-200	100-200	-	-	-	-
GFRP	GFRP	50-130	30-70	50-100	30-70	50-150	30-70
	Honeycomb	120-200	100-200	-	-	-	-

Material		RCDE & H-Drill				
		Drilling				
		Cutting speed Vc (m/min)	Drill diameter (mm) vs. Feed (mm/rev)			
			Ø3.0~Ø6.0	Ø6.1~Ø8.0	Ø8.1~Ø10.0	Ø10.1~Ø12.7
CFRP	50-150	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10	
GFRP	40-120	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10	