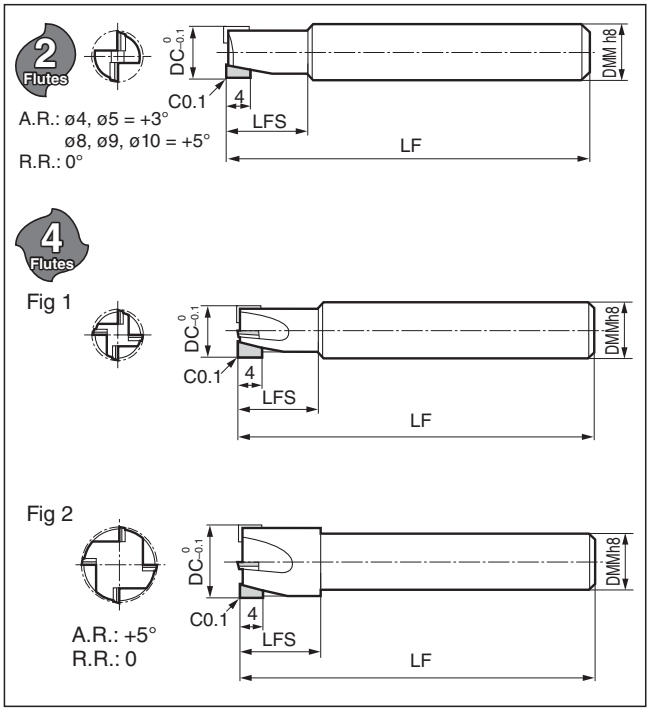
SUMIDIA Endmills
DFE Type

Grade	General steel	Carbon steel	Alloy steel	Pre-hardened steel	Tempered steel Die steel	Hardened steel 45–55 HRC	Hardened steel 55–60 HRC	Hardened steel 60–65 HRC	Stainless steel	Ti alloy Heat resistant alloy	Cast iron	Aluminum alloy	Copper alloy	Graphite	CFRP
Polycrystalline diamond	×	×	×	×	×	×	×	×	×	×	×	◎	◎	○	



■ 2 Flutes

(Dimensions: mm)

Cat. No.	Stock	Cutting diameter DC	Length LFS	Length LF	Shank diameter DMM
DFE 2040S	●	**4.0**	15	50	6
2050S	●	**5.0**	15	50	6
DFE 2080S	●	**8.0**	15	60	10
2090S	●	**9.0**	15	70	10
2100S	●	**10.0**	15	70	10

Grade DA2200

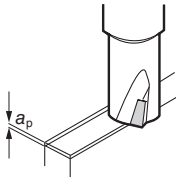
■ 4 Flutes

(Dimensions: mm)

Cat. No.	Stock	Cutting diameter DC	Length LFS	Length LF	Shank diameter DMM	Fig
DFE 4090S	●	**9.0**	15	70	10	1
4100S	●	**10.0**	15	70	10	1
DFE 4130GS	●	**13.0**	15	70	10	2

Grade DA2200

- ● High rake blade shape combined with DA2200 suppresses burrs over long periods of time and enables high speed / high efficiency machining
- ● Best suited for front surface cutting of aluminum alloys, such as computer parts.



■ Recommended Cutting Conditions

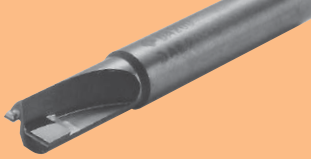
2 flutes

Work material / Cutting conditions / DC (mm)	Aluminum alloy Copper alloy Spindle speed (min⁻¹)	Feed rate (mm/min)
4.0	40,000	4,000
5.0	32,000	3,200
8.0	20,000	2,000
9.0	17,800	1,780
10.0	16,000	1,600
Standard depth of cut a_p	0.4DC	

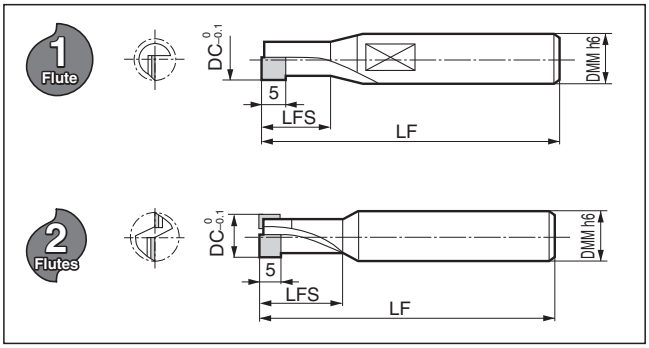
4 flutes

Work material / Cutting conditions / DC (mm)	Aluminum alloy Copper alloy Spindle speed (min⁻¹)	Feed rate (mm/min)
9.0	17,800	3,560
10.0	16,000	3,200
13.0	12,300	2,460
Standard depth of cut a_p	0.4DC	

SUMIDIA Endmills
DAE Type



Grade	General steel	Carbon steel	Alloy steel	Pre-hardened steel	Tempered steel Die steel	Hardened steel 45–55 HRC	Hardened steel 55–60 HRC	Hardened steel 60–65 HRC	Stainless steel	Ti alloy Heat resistant alloy	Cast iron	Aluminum alloy	Copper alloy	Graphite	CFRP
Polycrystalline diamond	×	×	×	×	×	×	×	×	×	×	×	◎	◎	○	



■ 1 Flute

(Dimensions: mm)

Cat. No.	Stock	Cutting diameter DC	Length LFS	Length LF	Shank diameter DMM
DAE 1040	●	**4.0**	10	45	6
1050	●	**5.0**	12	50	6

Grade DA200

■ 2 Flutes

(Dimensions: mm)

Cat. No.	Stock	Cutting diameter DC	Length LFS	Length LF	Shank diameter DMM
DAE 2060	●	**6.0**	20	50	6
DAE 2070	●	**7.0**	20	60	8
2080	●	**8.0**	20	60	8
DAE 2090	●	**9.0**	25	71	10
2100	●	**10.0**	25	71	10
DAE 2110	●	**11.0**	25	75	12
2120	●	**12.0**	25	75	12

Grade DA200

- ● A diamond endmill with long tool life and smooth surface finishing
- ● Best suited for finishing non-ferrous metals (aluminum alloy, copper alloy, etc.) and for machining strong plastics such as GFRP / CFRP

■ Recommended Cutting Conditions

1 flute

Work material / Cutting conditions / DC (mm)	Aluminum alloy Copper alloy Spindle speed (min⁻¹)	Feed rate (mm/min)
4.0	6,000	210
5.0	5,000	175
Standard depth of cut a_p	0.4DC	

2 flutes

Work material / Cutting conditions / DC (mm)	Aluminum alloy Copper alloy Spindle speed (min⁻¹)	Feed rate (mm/min)
6.0	6,400	580
7.0	5,500	500
8.0	5,400	500
9.0	5,300	480
10.0	4,800	440
11.0	4,400	400
12.0	4,000	360
Standard depth of cut a_p	0.4DC	