



PERFORMANCE
SERIES
**CARBIDE
ENDMILLS**

Lowest production costs



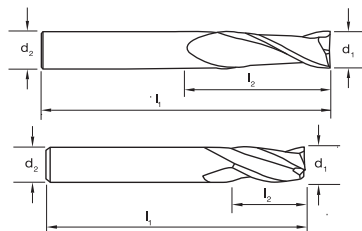
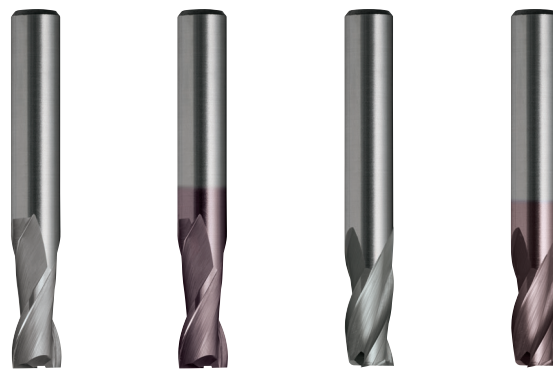
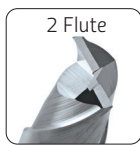
***sutton*tools**

Endmills Carbide, 2/3 Flute, R30 N, Regular

suttontools

TECLINE

- For precision milling of slots & cavities
- Suitable for materials up to 1600 N/mm²
- TiAlN for longer tool life



Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry
Shank Form (DIN 6535)
Shank Tolerance

E600	E603	E610	E611
B0212	B0214	B0212	B0214
VHM	VHM	VHM	VHM
BrT	TiAlN	BrT	TiAlN
N	N	N	N
R30	R30	R30	R30
HA	HA	HA	HA
h6	h6	h6	h6

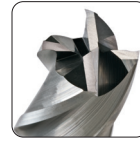
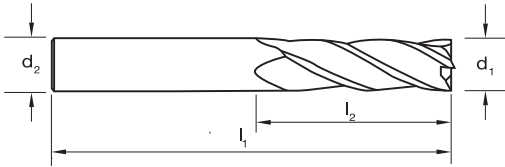
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0150	1.5	38	4.5	3	2	E600 0150	E603 0150	E610 0150	E611 0150
0200	2.0	38	6	3	2	E600 0200	E603 0200	E610 0200	E611 0200
0250	2.5	38	9.5	3	2	E600 0250	E603 0250	E610 0250	E611 0250
0300	3.0	38	12	3	2	E600 0300	E603 0300	E610 0300	E611 0300
0350	3.5	50	12	4	2	E600 0350	E603 0350	E610 0350	E611 0350
0400	4.0	50	14	4	2	E600 0400	E603 0400	E610 0400	E611 0400
0450	4.5	50	16	6	2	E600 0450	E603 0450	E610 0450	E611 0450
0500	5.0	50	16	6	2	E600 0500	E603 0500	E610 0500	E611 0500
0600	6.0	50	19	6	2	E600 0600	E603 0600	E610 0600	E611 0600
0700	7.0	63	19	8	2	E600 0700	E603 0700	E610 0700	E611 0700
0800	8.0	63	20	8	2	E600 0800	E603 0800	E610 0800	E611 0800
0900	9.0	75	22	10	2	E600 0900	E603 0900	E610 0900	E611 0900
1000	10.0	75	22	10	2	E600 1000	E603 1000	E610 1000	E611 1000
1100	11.0	75	25	12	2	E600 1100	E603 1100	E610 1100	E611 1100
1200	12.0	75	25	12	2	E600 1200	E603 1200	E610 1200	E611 1200
1400	14.0	89	32	14	2	E600 1400	E603 1400	E610 1400	E611 1400
1600	16.0	89	32	16	2	E600 1600	E603 1600	E610 1600	E611 1600
1800	18.0	100	38	18	2	E600 1800	E603 1800	E610 1800	E611 1800
2000	20.0	100	38	20	2	E600 2000	E603 2000	E610 2000	E611 2000
2500	25.0	100	38	25	2	E600 2500	E603 2500	E610 2500	E611 2500

Endmills Carbide, 4 Flute, R30 N, Regular

suttontools

TECLINE

- For precision finish milling applications
- Suitable for materials up to 1600 N/mm²
- TiAlN for longer tool life



Catalogue Code	E601	E604
Discount Group	B0212	B0214
Material	VHM	VHM
Surface Finish	BrT	TiAlN
Sutton Designation	N	N
Geometry	R30	R30
Shank Form (DIN 6535)	HA	HA
Shank Tolerance	h6	h6

Size Ref.	d ₁	l ₁	l ₂	d ₂	z	Item #	Item #
0100	1.0	38	4	3	4	E601 0100	E604 0100
0150	1.5	38	4.5	3	4	E601 0150	E604 0150
0200	2.0	38	6	3	4	E601 0200	E604 0200
0250	2.5	38	9.5	3	4	E601 0250	E604 0250
0300	3.0	38	12	3	4	E601 0300	E604 0300
0350	3.5	50	12	4	4	E601 0350	E604 0350
0400	4.0	50	14	4	4	E601 0400	E604 0400
0450	4.5	50	16	6	4	E601 0450	E604 0450
0500	5.0	50	16	6	4	E601 0500	E604 0500
0600	6.0	50	19	6	4	E601 0600	E604 0600
0700	7.0	63	19	8	4	E601 0700	E604 0700
0800	8.0	63	20	8	4	E601 0800	E604 0800
0900	9.0	75	22	10	4	E601 0900	E604 0900
1000	10.0	75	22	10	4	E601 1000	E604 1000
1100	11.0	75	25	12	4	E601 1100	E604 1100
1200	12.0	75	25	12	4	E601 1200	E604 1200
1400	14.0	89	32	14	4	E601 1400	E604 1400
1600	16.0	89	32	16	4	E601 1600	E604 1600
1800	18.0	100	38	18	4	E601 1800	E604 1800
2000	20.0	100	38	20	4	E601 2000	E604 2000
2500	25.0	100	38	25	4	E601 2500	E604 2500

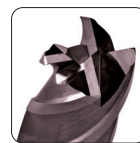
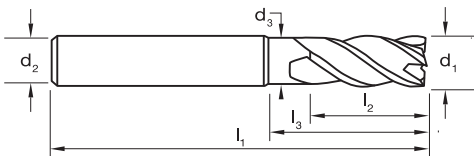
Endmills Carbide, 4 Flute, R35/38, Regular

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TECLINE



- VHM-ULTRA grade of carbide for high performance
- 35/38° variable flute helix for chatter free milling
- Suitable for materials up to 1600 N/mm²
- TiAlN for longer tool life



Catalogue Code	E635	E636
Discount Group	B0214	B0214
Material	VHM	VHM
Surface Finish	TiAlN	TiAlN
Sutton Designation	N	N
Geometry	R35/38	R35/38
Shank Form (DIN 6535)	HA	HB
Shank Tolerance	h6	h6

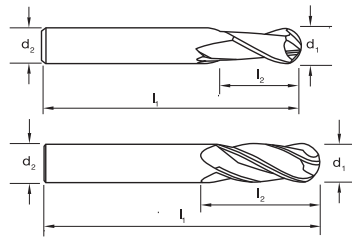
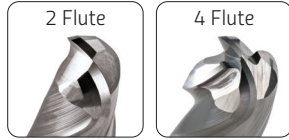
Size Ref.	d ₁	l ₁	l ₂	l ₃	d ₂	d ₃	z	Min. Order Qty*	Item #	Item #
0300	3.0	57	8	19	6	2.8	4	100	E635 0300	E636 0300
0400	4.0	57	11	19	6	3.7	4	100	E635 0400	E636 0400
0500	5.0	57	13	20	6	4.6	4	100	E635 0500	E636 0500
0600	6.0	57	13	21	6	5.5	4	100	E635 0600	E636 0600
0800	8.0	63	19	27	8	7.5	4	100	E635 0800	E636 0800
1000	10.0	72	22	32	10	9.5	4	100	E635 1000	E636 1000
1200	12.0	83	26	38	12	11.2	4	100	E635 1200	E636 1200
1400	14.0	83	26	38	14	13.0	4	50	E635 1400	E636 1400
1600	16.0	92	32	44	16	15.0	4	50	E635 1600	E636 1600
1800	18.0	92	32	44	18	17.0	4	50	E635 1800	E636 1800
2000	20.0	104	38	54	20	19.0	4	50	E635 2000	E636 2000

Endmills Carbide, Ballnose, 2/4 Flute, R30 N, Regular

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TECLINE

- For profile and contour milling applications
- Suitable for materials up to 1600 N/mm²
- TiAlN for longer tool life



Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry
Shank Form (DIN 6535)
Shank Tolerance

E602	E605	E606*	E607*
B0212	B0214	B0212	B0214
VHM	VHM	VHM	VHM
Brt	TiAlN	Brt	TiAlN
N	N	N	N
R30	R30	R30	R30
HA	HA	HA	HA
h6	h6	h6	h6

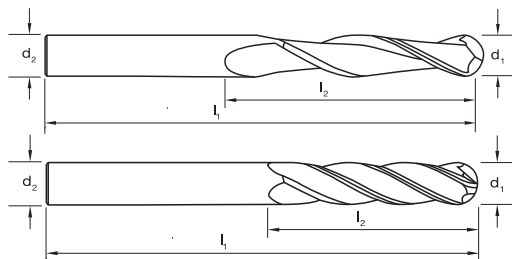
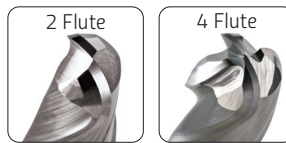
Size Ref.	d ₁	l ₁	l ₂	d ₂	z	z*	Item #	Item #	Item #	Item #
0100	1.0	38	4	3	2	4	E602 0100	E605 0100	E606 0100	E607 0100
0150	1.5	38	4.5	3	2	4	E602 0150	E605 0150	E606 0150	E607 0150
0200	2.0	38	6	3	2	4	E602 0200	E605 0200	E606 0200	E607 0200
0250	2.5	38	9.5	3	2	4	E602 0250	E605 0250	E606 0250	E607 0250
0300	3.0	38	12	3	2	4	E602 0300	E605 0300	E606 0300	E607 0300
0350	3.5	50	12	4	2	4		E605 0350		E607 0350
0400	4.0	50	14	4	2	4	E602 0400	E605 0400	E606 0400	E607 0400
0450	4.5	50	16	6		4				E607 0450
0500	5.0	50	16	6	2	4	E602 0500	E605 0500	E606 0500	E607 0500
0600	6.0	50	19	6	2	4	E602 0600	E605 0600	E606 0600	E607 0600
0700	7.0	63	19	8	2	4	E602 0700	E605 0700	•	•
0800	8.0	63	20	8	2	4	E602 0800	E605 0800	E606 0800	E607 0800
0900	9.0	75	22	10	2	4	E602 0900	E605 0900	•	•
1000	10.0	75	22	10	2	4	E602 1000	E605 1000	E606 1000	E607 1000
1100	11.0	75	25	12	2	4	E602 1100	E605 1100		E607 1100
1200	12.0	75	25	12	2	4	E602 1200	E605 1200	E606 1200	E607 1200
1400	14.0	89	32	14	2	4	E602 1400	E605 1400		E607 1400
1600	16.0	89	32	16	2	4	E602 1600	E605 1600	E606 1600	E607 1600
1800	18.0	100	38	18	2	4		E605 1800		E607 1800
2000	20.0	100	38	20	2	4	E602 2000	E605 2000	E606 2000	E607 2000
2500	25.0	100	38	25	2	4	E602 2500	E605 2500		E607 2500

Slot Drills Carbide, Ballnose, 2-4 Flute, R30 N, Extra Long

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TECLINE

- For profile & contour milling in extra long reach applications
- Suitable for materials up to 1300 N/mm²
- 4 Flute: Minimal deflection due to strong/larger core



Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry
Shank Form (DIN 6535)
Shank Tolerance

E315	E320*
B0208	B0208
VHM	VHM
Brt	Brt
N	N
R30	R30
HA	HA
h6	h6

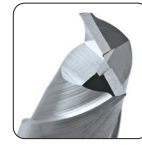
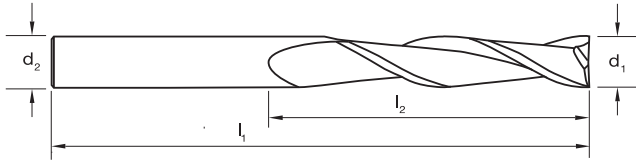
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0300	3.0	76	25	3	2	4	E315 0300	E320 0300
0400	4.0	76	28	4	2	4	E315 0400	E320 0400
0500	5.0	76	32	5	2	4	E315 0500	E320 0500
0600	6.0	102	38	6	2	4	E315 0600	E320 0600
0800	8.0	102	42	8	2	4	E315 0800	E320 0800
1000	10.0	102	45	10	2	4	E315 1000	E320 1000
1200	12.0	153	76	12	2	4	E315 1200	E320 1200
1400	14.0	153	76	14	2	4	E315 1400	E320 1400
1600	16.0	153	76	16	2	4	E315 1600	E320 1600
1800	18.0	153	76	18	2	4	E315 1800	E320 1800
2000	20.0	153	76	20	2	4	E315 2000	E320 2000

Endmills Carbide, 2 Flute, R30 N, Extra Long

suttontools

TECLINE

- For precision milling of slots & cavities
- Suitable for materials up to 1600 N/mm²



Catalogue Code	E608
Discount Group	B0212
Material	VHM
Surface Finish	Br
Sutton Designation	N
Geometry	R30
Shank Form (DIN 6535)	HA
Shank Tolerance	h6

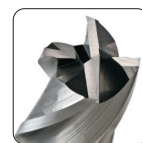
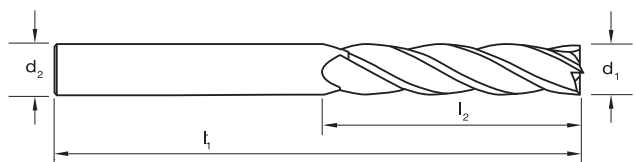
Size Ref.	d ₁	l ₁	l ₂	d ₂	z	Item #
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0400	4.0	100	40	4	2	E608 0400
0500	5.0	100	40	5	2	E608 0500
0600	6.0	100	50	6	2	E608 0600
0800	8.0	100	50	8	2	E608 0800
1000	10.0	150	75	10	2	E608 1000
1200	12.0	150	75	12	2	E608 1200
1600	16.0	150	75	16	2	E608 1600
2000	20.0	150	75	20	2	E608 2000

Endmills Carbide, 4 Flute, R30 N, Extra Long

suttontools

TECLINE

- For precision milling of slots & cavities
- Suitable for materials up to 1600 N/mm²



Catalogue Code	E609
Discount Group	B0212
Material	VHM
Surface Finish	Br
Sutton Designation	N
Geometry	R30
Shank Form (DIN 6535)	HA
Shank Tolerance	h6

Size Ref.	d ₁	l ₁	l ₂	d ₂	z	Item #
0300	3.0	100	40	3	4	E609 0300
0400	4.0	100	40	4	4	E609 0400
0500	5.0	100	40	5	4	E609 0500
0600	6.0	100	50	6	4	E609 0600
0800	8.0	100	50	8	4	E609 0800
1000	10.0	150	75	10	4	E609 1000
1200	12.0	150	75	12	4	E609 1200
1600	16.0	150	75	16	4	E609 1600
2000	20.0	150	75	20	4	E609 2000

E635 / E636		E602		E605		E606		E607		E315		E320		E608		E609		VDI ¹ 3323	ISO	
VHM-ULTRA		VHM		VHM		VHM		VHM		VHM		VHM		VHM		VHM				
TiAlN		BrT		TiAlN		BrT		TiAlN		VHM		BrT		VHM		BrT				
N		N		N		N		N		N		N		N		N				
Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #			
1.0	1.5	1.5	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.75	1.75	1.75				
0.4	0.1	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.0	0.2	0.2				
210	11	8	80-140	19	110-200	20	100-175	15	140-250	16	100	13	100	13	100	6	100	7	10	1
210	11	8	80-140	19	110-200	20	100-175	15	140-250	16	100	13	100	13	100	6	100	7	10	2
175	11	8	45-100	19	60-145	20	55-125	15	75-180	16	60	13	60	13	60	6	60	7	10	3
175	11	8	45-100	19	60-145	20	55-125	15	75-180	16	60	13	60	13	60	6	60	7	10	4
175	11	8	-	-	60-145	20	55-125	15	75-180	16	-	-	-	-	-	-	-	-	-	5
210	11	8	80-140	19	110-200	20	100-175	15	140-250	16	100	13	100	13	100	6	100	7	10	6
175	11	8	45-100	19	60-145	20	55-125	15	75-180	16	60	13	60	13	60	5	60	7	10	7
175	11	8	-	-	60-145	20	55-125	15	75-180	16	-	-	-	-	-	-	-	-	-	8
120	11	8	-	-	45-95	20	40-85	15	60-120	16	-	-	-	-	-	-	-	-	-	9
175	11	8	45-100	19	60-145	20	55-125	15	75-180	16	60	13	60	13	60	5	60	7	10	10
120	11	8	-	-	45-95	20	40-85	15	60-120	16	-	-	-	-	-	-	-	-	-	11
90	11	8	-	-	-	-	50-75	15	-	-	-	-	-	-	-	-	-	-	-	12
80	11	8	-	-	-	-	40-70	15	-	-	-	-	-	-	-	-	-	-	-	13
-	-	-	40-60	19	55-90	20	50-75	15	70-110	16	50	13	50	13	50	5	50	7	10	14.1
-	-	-	40-60	19	55-90	20	50-75	15	70-110	16	50	13	50	13	50	5	50	7	10	14.2
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150	11	8	70-100	19	95-145	20	85-125	15	120-180	16	80	13	80	13	80	6	80	7	10	15
150	11	8	70-100	19	95-145	20	85-125	15	120-180	16	80	13	80	13	80	6	80	7	10	16
150	11	8	70-100	19	95-145	20	85-125	15	120-180	16	80	13	80	13	80	6	80	7	10	17
150	11	8	70-100	19	95-145	20	85-125	15	120-180	16	80	13	80	13	80	6	80	7	10	18
110	11	8	55-80	19	80-110	20	70-100	15	100-140	16	60	13	60	13	50	6	60	7	10	19
110	11	8	55-80	19	80-110	20	70-100	15	100-140	16	60	13	60	13	50	6	60	7	10	20
200	11	8	80-250	19	120-350	20	100-300	15	150-450	16	80	13	80	13	-	-	-	-	-	21
200	11	8	80-250	19	120-350	20	100-300	15	150-450	16	80	13	80	13	-	-	-	-	-	22
200	11	8	80-250	19	120-350	20	100-300	15	150-450	16	80	13	80	13	-	-	-	-	-	23
200	11	8	80-250	19	120-350	20	100-300	15	150-450	16	80	13	80	13	-	-	-	-	-	24
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-	-	-	70-200	19	100-250	20	80-200	15	120-350	16	70	13	70	13	-	-	-	-	-	26
200	11	8	70-200	19	100-250	20	80-200	15	120-350	16	70	13	70	13	-	-	-	-	-	27
-	-	-	70-200	19	100-250	20	80-200	15	120-350	16	70	13	70	13	-	-	-	-	-	28
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50	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
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50	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
70	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
70	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.1
70	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.2
70	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.3
70	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.5
120	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38.1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38.2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39.1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39.2
120	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
100	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41

METRIC ENDMILLS (mm size)

\varnothing = nominal tool diameter (mm)
n = Spindel speed (RPM) $n = \frac{v_c \times 1000}{\varnothing \times \pi} \approx \frac{v_c}{\varnothing} \times 318$
v_c = Cutting speed (m/min)
f_z = Feed rate per tooth (mm/tooth) $v_c = \frac{n \times \varnothing \times \pi}{1000} \approx \frac{n \times \varnothing}{318}$
v_f = Feed rate (mm/min) $f_z = \frac{v_f}{z \times n}$ $v_f = f_z \times z \times n$
z = No. cutting edges
Q = Metal removal rate (cm³/min) $Q = \frac{a_p \times a_e \times v_f}{1000}$
a_p = Cutting depth (mm)
a_e = Cutting width (mm)

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