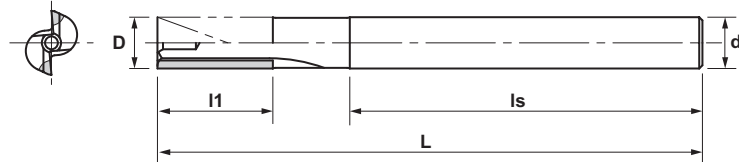


# Beam End Mill

**METRIC**

**VN-SPES2 Type**  
- 2 Flute with 30° Helix



Solid Carbide End Mills

CATALOG NUMBER	STK	DIMENSIONS				
		D	l1	ls	L	d
VN-SPES2-030	•	3	6	45	60	4
VN-SPES2-040	•	4	7	43	60	4
VN-SPES2-050	•	5	7	48	65	6
VN-SPES2-060	•	6	9	46	65	6
VN-SPES2-080	•	8	9	66	85	8
VN-SPES2-100	•	10	12	78	100	10
VN-SPES2-120	•	12	12	98	120	12

Material	Graphite		Carbon		Metal Matrix Composite (up to 30% Ceramic content)		Machinable Ceramics	
Type of Machining - Shoulder Cutting	$V_c=250\text{m/min}$ $a_p=0.5D$ $a_e=0.05D$		$V_c=200\text{m/min}$ $a_p=0.5D$ $a_e=0.33D$		$V_c=30\text{m/min}$ $a_p=0.5D$ $a_e=0.02D$		$V_c=8\text{m/min}$ $a_p=0.33D$ $a_e=0.08D$	
Diameter	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)
3	27,000	1,600	21,000	1,300	3,200	190	850	15
4	20,000	1,600	16,000	1,300	2,400	190	700	15
5	16,000	1,900	13,000	1,400	1,900	190	500	16
6	13,000	2,100	10,000	1,400	1,600	220	400	16
8	10,000	2,400	8,000	1,400	1,200	220	320	16
10	8,000	2,400	6,400	1,300	1,000	220	250	15
12	6,500	2,600	5,300	1,300	800	200	200	15

Material	Graphite		Carbon		Metal Matrix Composite (up to 30% Ceramic content)		Machinable Ceramics	
Type of Machining - Slotting	$V_c=250\text{m/min}$ $a_p=0.5D$ $a_e=D$		$V_c=200\text{m/min}$ $a_p=0.5D$ $a_e=D$		$V_c=30\text{m/min}$ $a_p=0.5D$ $a_e=D$		$V_c=8\text{m/min}$ $a_p=0.33D$ $a_e=D$	
Diameter	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)	N (min <sup>-1</sup> )	Vc (mm/min)
3	27,000	700	21,000	1,200	3,200	60	850	8
4	20,000	700	16,000	1,200	2,400	50	700	8
5	16,000	800	13,000	1,300	1,900	50	500	9
6	13,000	900	10,000	1,300	1,600	60	400	9
8	10,000	1,000	8,000	1,300	1,200	60	320	9
10	8,000	1,000	6,400	1,200	1,000	55	250	8
12	6,500	1,100	5,300	1,200	800	55	200	8