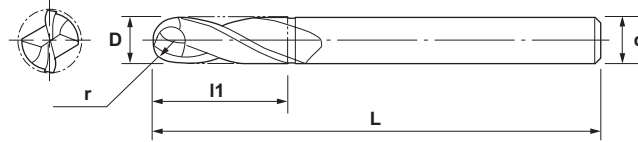


Solid Carbide Ball Nose End Mills for Graphite

METRIC

GF-SBR, GF-SBL, GF-SBX Type

- 2 Flute with 15° Helix on GF-SBR & GF-SBL and 30° on GF-SBX



GF-SBR (Standard Type)

CATALOG NUMBER	STK	DIMENSIONS				
		D	r	l1	L	d
GF-SBR2020	•	2.0	1.0	10	80	4
GF-SBR2020S6	•	2.0	1.0	10	80	6
GF-SBR2030	•	3.0	1.5	15	80	4
GF-SBR2030S6	•	3.0	1.5	15	80	6
GF-SBR2040	•	4.0	2.0	20	80	4
GF-SBR2040S6	•	4.0	2.0	20	80	6
GF-SBR2050	□	5.0	2.5	30	100	6
GF-SBR2060	•	6.0	3.0	30	100	6
GF-SBR2070	□	7.0	3.5	30	100	6
GF-SBR2080	•	8.0	4.0	40	110	8
GF-SBR2090	□	9.0	4.5	40	110	8
GF-SBR2100	•	10.0	5.0	50	120	10
GF-SBR2110	□	11.0	5.5	50	120	10
GF-SBR2120	•	12.0	6.0	55	130	12

GF-SBL (Long Shank Type)

CATALOG NUMBER	STK	DIMENSIONS				
		D	r	l1	L	d
GF-SBL2020	•	2.0	1.0	10	100	4
GF-SBL2020S6	•	2.0	1.0	10	100	6
GF-SBL2030	□	3.0	1.5	15	100	4
GF-SBL2030S6	□	3.0	1.5	15	100	6
GF-SBL2040	•	4.0	2.0	20	100	4
GF-SBL2040S6	•	4.0	2.0	20	100	6
GF-SBL2050	□	5.0	2.5	30	120	6
GF-SBL2060	•	6.0	3.0	30	150	6
GF-SBL2080	•	8.0	4.0	40	150	8
GF-SBL2100	•	10.0	5.0	50	180	10
GF-SBL2120	•	12.0	6.0	55	200	12

GF-SBX (Extra Long Type)

CATALOG NUMBER	STK	DIMENSIONS				
		D	r	l1	L	d
GF-SBX2020	•	2.0	1.0	20	100	6
GF-SBX2030	□	3.0	1.5	30	100	6
GF-SBX2040	•	4.0	2.0	60	110	6
GF-SBX2050	□	5.0	2.5	70	125	6
GF-SBX2060	•	6.0	3.0	80	130	6
GF-SBX2080	•	8.0	4.0	100	150	8
GF-SBX2100	•	10.0	5.0	120	170	10
GF-SBX2120	•	12.0	6.0	130	190	12

Recommended Cutting Data for GF-SBR, GF-SBL & GF-SBX

Material	Graphite	
Type of Machining		
Diameter	n (min ⁻¹)	Vf (mm/min)
2	40,000	800
3	27,000	900
4	20,000	1,000
5	16,000	1,100
6	13,300	1,200
8	10,000	1,800
10	8,000	2,000
12	6,500	2,000