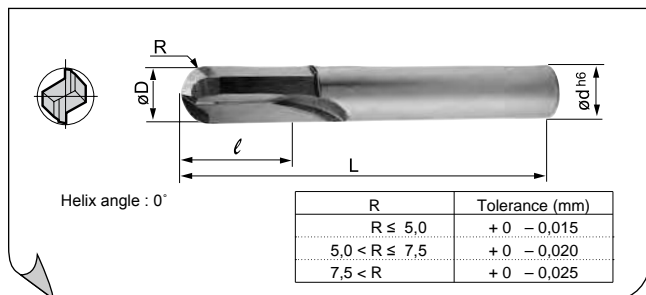


# Straight Flute Ball Endmills BSM 2000 Type

Carbide grade: A1 (Micrograin)



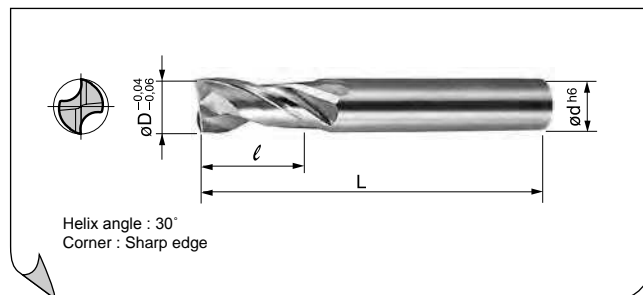
## Endmills

(mm)

	Cat. No.	Stock	R	øD	ℓ	L	ød
2	BSM 2010	▲	0,5	1,0	4	40	4
	BSM 2020		1,0	2,0	7	40	4
	BSM 2030		1,5	3,0	9	45	6
	BSM 2040		2,0	4,0	15	45	6
	BSM 2050		2,5	5,0	15	50	6
	BSM 2060		3,0	6,0	20	50	6
	BSM 2080		4,0	8,0	20	60	8
	BSM 2100		5,0	10,0	20	70	10
	BSM 2120		6,0	12,0	25	75	12
	BSM 2140		7,0	14,0	25	90	16
	BSM 2160		8,0	16,0	35	110	16
	BSM 2200		10,0	20,0	35	110	20

# Spiral Endmills for Non-Ferrous Cutting ASM 2000 Type

Carbide grade: H1 (Micrograin)



## Endmills

(mm)

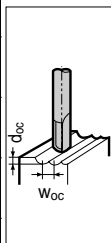
	Cat. No.	Stock	øD	ℓ	L	ød
2	ASM 2020	□	2,0	6	40	4
	ASM 2030	□	3,0	10	45	6
	ASM 2040	□	4,0	12	45	6
	ASM 2050	□	5,0	15	50	6
	ASM 2060	□	6,0	15	50	6
	ASM 2080	□	8,0	18	60	8
	ASM 2100	□	10,0	22	71	10
	ASM 2120	□	12,0	25	75	12
	ASM 2160	□	16,0	32	90	16

## Recommended conditions

$d_{oc} = 0,3 \times \phi D$ , (Below R1,0 ;  $0,2 \times \phi D$ )  
 $w_{oc} = \text{Max} 0,7 \times \phi D$ , (Below R1,0 ;  $0,6 \times \phi D$ )

R	Material	Carbon steel, Alloy steel			Cast iron
		(Below HRC30)	(Below HRC40)	(Below HRC45)	
R0,5 ~ R1,25	$v_c$	40~60	30~40-50	20~40	40~50-60
	$f_t$	0,004~0,010	0,004~0,010	0,002~0,005	0,008~0,015
R1,5 ~ R2,5	$v_c$	40~50-60	30~50	20~30-40	40~60
	$f_t$	0,013~0,025	0,013~0,025	0,007~0,013	0,017~0,042
R3 ~ R6	$v_c$	40~50-60	30~50	20~30-40	40~60
	$f_t$	0,030~0,050	0,030~0,050	0,017~0,033	0,056~0,136
R6,5 ~ R9,5	$v_c$	40~50-60	30~50	20~40	40~50-60
	$f_t$	0,070~0,100	0,070~0,100	0,040~0,057	0,167~0,238
R10 ~	$v_c$	40~50-60	30~40-50	20~30-40	40~50-60
	$f_t$	0,118~0,167	0,118~0,167	0,085~0,095	0,250~0,350

$v_c = \text{m/min}$   $f_t = \text{mm/tooth}$



## Recommended conditions

(Shoulder processing)  $d_{oc} = 1,5 \times \phi D$   
 $w_{oc} = 0,1 \times \phi D$

øD	Material	Al-alloy		Cast iron
		$v_c$	$f_t$	
1 ~ 2,5	$v_c$	100~200-300	100~120-150	
	$f_t$	0,004~0,017	0,008~0,020	
3 ~ 5	$v_c$	100~200-300	100~120-150	
	$f_t$	0,018~0,036	0,027~0,060	
6 ~ 12	$v_c$	100~200-300	100~120-150	
	$f_t$	0,038~0,070	0,065~0,157	
14 ~ 16	$v_c$	100~200-300	100~120-150	
	$f_t$	0,075~0,125	0,160~0,250	

$v_c = \text{m/min}$   $f_t = \text{mm/tooth}$

