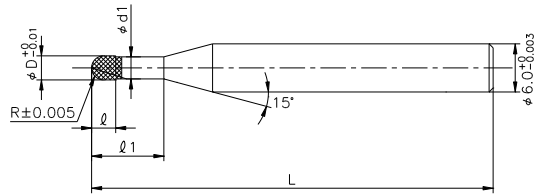


BBE-2

CBN 2枚刃ボールエンドミル
CBN 2 Flutes Ball Endmill

- 高硬度材・焼入れ鋼の直彫り加工
Direct cutting for Highly hardened material and Quenching steel
- 高送りで高能率加工が可能
Possible to cut by High Feed and High Efficiency



被削材 Workpiece		
~HRC55 NAK80 STAVAX等	~HRC60 SKD11等	~HRC65 SKH等

- 切削条件表はP62に記載
- Cutting conditions are recommended on page 62.

単位[寸法: mm/価格: 円]
Unit [size: mm/Retail Price: JPY]

品番 Code No.	R	刃径 D Flute Diameter	有効長 l_1 Effective Length	刃長 l Flute Length	首下径 d_1 Neck Diameter	CBN層 CBN Length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
BBE-2010S	R0.1	0.2	0.6	0.2	0.18	0.4	50	6	21,200
BBE-2015S	R0.15	0.3	0.9	0.3	0.28	0.6	50	6	20,800
BBE-2020S	R0.2	0.4	1.2	0.4	0.37	0.6	50	6	19,600
BBE-2025S	R0.25	0.5	1.5	0.5	0.46	0.6	50	6	19,300
BBE-2030S	R0.3	0.6	1.8	0.6	0.56	0.6	50	6	17,900
BBE-2040S	R0.4	0.8	2.4	0.8	0.76	1	50	6	17,900
BBE-2050S	R0.5	1	3	1	0.95	1	50	6	17,400
BBE-2060S	R0.6	1.2	3.6	1.2	1.15	2	50	6	18,400
BBE-2070S	R0.7	1.4	4.2	1.4	1.35	2	50	6	18,400
BBE-2075S	R0.75	1.5	4.5	1.5	1.45	2	50	6	18,400
BBE-2080S	R0.8	1.6	4.8	1.5	1.55	2	50	6	18,700
BBE-2090S	R0.9	1.8	5.4	1.5	1.75	2	50	6	18,700
BBE-2100S	R1	2	6	1.5	1.95	2	50	6	18,700
BBE-2150S	R1.5	3	9	2	2.95	2	50	6	30,800
BBE-2200S	R2	4	12	2.5	3.95	2.5	50	6	45,300
BBE-2250S	R2.5	5	15	3	4.95	3.5	60	6	54,300
BBE-2300S	R3	6	20	3.5	5.95	3.5	60	6	60,800

※ R0.1のみ1枚刃仕様となります。 One Flute only for R0.1

BSB-2、BRB-2、BBEF-2、BBE-2

切削条件参考

Referential Cutting Conditions

硬度 Hardness 被削材 Workpiece	~HRC55 NAK80、STAVAX等				~HRC60 SKD11等				~HRC65 SKH等				
	R	回転数 Revolution	送り速度 Feed	切込量 Depth of Cut		回転数 Revolution	送り速度 Feed	切込量 Depth of Cut		回転数 Revolution	送り速度 Feed	切込量 Depth of Cut	
		min ⁻¹	mm/min	Ad mm	Rd mm			Ad mm	Rd mm			min ⁻¹	mm/min
0.1	50,000	150~ 300	0.005~0.015	0.02	50,000	120~ 200	0.005~0.015	0.02	50,000	60~ 150	0.003~0.01	0.02	
0.15	50,000	300~ 600	0.005~0.015	0.02	50,000	200~ 350	0.005~0.015	0.02	50,000	100~ 250	0.003~0.01	0.02	
0.2	50,000	450~ 900	0.005~0.015	0.02	50,000	350~ 650	0.005~0.015	0.02	50,000	250~ 400	0.005~0.015	0.02	
0.25	50,000	600~1,100	0.01 ~0.03	0.04	50,000	450~ 800	0.01 ~0.03	0.04	50,000	350~ 600	0.005~0.015	0.04	
0.3	50,000	900~1,300	0.01 ~0.03	0.04	50,000	800~1,100	0.01 ~0.03	0.04	50,000	500~ 750	0.01 ~0.02	0.04	
0.4	50,000	900~1,300	0.01 ~0.03	0.04	50,000	800~1,100	0.01 ~0.03	0.04	48,000	500~ 750	0.01 ~0.02	0.04	
0.5	48,000	1,100~1,500	0.02 ~0.04	0.07	43,000	1,100~1,400	0.02 ~0.04	0.07	38,000	700~1,000	0.02 ~0.04	0.07	
0.6	40,000	1,100~1,500	0.02 ~0.05	0.07	36,000	1,100~1,400	0.02 ~0.05	0.07	32,000	700~1,000	0.02 ~0.04	0.07	
0.7	34,000	1,300~1,800	0.03 ~0.06	0.1	31,000	1,200~1,500	0.03 ~0.06	0.1	27,500	800~1,100	0.03 ~0.05	0.1	
0.75	32,000	1,300~1,800	0.03 ~0.06	0.1	29,000	1,200~1,500	0.03 ~0.06	0.1	25,500	800~1,100	0.03 ~0.05	0.1	
0.8	30,000	1,300~1,700	0.05 ~0.1	0.2	27,000	1,100~1,400	0.05 ~0.1	0.2	24,000	800~1,100	0.05 ~0.08	0.15	
0.9	26,500	1,400~1,800	0.05 ~0.1	0.2	24,000	1,000~1,400	0.05 ~0.1	0.2	21,500	800~1,000	0.05 ~0.08	0.15	
1	24,000	1,400~1,800	0.07 ~0.15	0.2	21,500	900~1,300	0.07 ~0.15	0.2	19,000	800~1,000	0.06 ~0.1	0.15	
1.5	16,000	1,200~1,600	0.07 ~0.15	0.3	14,500	700~1,000	0.07 ~0.15	0.3	13,000	700~ 900	0.06 ~0.1	0.2	
2	12,000	1,000~1,400	0.08 ~0.15	0.3	11,000	700~1,000	0.08 ~0.15	0.3	9,500	500~ 700	0.08 ~0.15	0.2	
2.5	10,000	1,000~1,400	0.1 ~0.2	0.4	9,000	700~1,000	0.1 ~0.2	0.4	8,000	500~ 700	0.08 ~0.15	0.3	
3	8,500	1,000~1,400	0.1 ~0.2	0.4	7,500	700~1,000	0.1 ~0.2	0.4	7,000	500~ 700	0.08 ~0.15	0.3	

備考

- (1)オイルミストまたはエアブローをお奨めします。
- (2)回転数と送り速度は、同じ割合で調整してください。
- (3)切込量は荒加工、中仕上げ加工の最大値を示しております。
必要とする面粗度に応じて切込量及びピックフィード・ピッチを調整してください。
- (4)切込量は、Adは深さ方向、Rdはピックフィード・ピッチを示しております。
- (5)この切削条件表は目安を示すものですので、加工形状、機械の剛性等によって都度調整してください。
- (6)工具突き出し量は、必要最低限でご使用ください。

Remark

- (1)Oil mist or Air blow is recommendable.
- (2)Adjust Revolution and Feed Speed at the same rate.
- (3)Depth of cut is shown the maximum value in rough cutting and semi finish
Adjust Depth of cut and Pick feed pitch according to required surface roughness.
- (4)Depth of cut is shown as Ad : Axial depth and Rd : Pick feed pitch.
- (5)Adjust the cutting conditions respectively according to Cutting shape and Machine rigidity
since these conditions are shown just as Standard.
- (6)Shorten overhang as much as possible is recommendable.