

## BTB2T

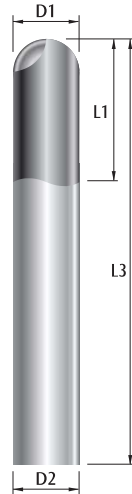
超微粒圓頭立銼刀 Ball Nose End Mills



## 產品規格 / SPECIFICATIONS

型號 Type NO.	D1 直徑 Diameter	L1 刃長 Flute Length	L3 全長 O.A.L.	D2 柄徑 Shank Dia.
BTB0102	R0.5	2	50	6
BTB0152	R0.75	3	50	6
BTB0202	R1	4	50	6
BTB0252	R1.25	5	50	6
BTB0302	R1.5	6	50	6
BTB0402	R2	8	50	6
BTB0502	R2.5	10	50	6
BTB0602	R3	12	50	6
BTB0802	R4	16	60	8
BTB1002	R5	20	75	10
BTB1202	R6	24	75	12
BTB1602	R8	32	100	16
BTB2002	R10	40	100	20

Unit : mm



直徑 D1	球頭公差值 R Tolerance
R0.5	±0.01
R0.75	±0.01
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.015
R6	±0.015
R8	±0.02
R10	±0.02

柄徑 D2	柄徑公差值 D2 Tolerance
Ø4	0 -0,008
Ø6	0 -0,008
Ø8	0 -0,009
Ø10	0 -0,009
Ø12	0 -0,011
Ø16	0 -0,011
Ø20	0 -0,013

Unit : mm

BTB<sup>2T</sup> / BTH<sup>2T</sup>

切削條件表

Milling Conditions

被切削材 Work Material

碳素鋼 / 鑄鐵 : Carbon Steels / Cast Iron

S50C / Fc250 / SS400 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)

BTB<sup>2T</sup> 冷卻方式 Coolant Type

乾式切削 Dry coolant

BTH<sup>2T</sup> 冷卻方式 Coolant Type

濕式切削 Wet coolant

型號 Type NO.	刀具伸長量 Extension Length(mm)	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (min <sup>-1</sup> )	進給速度 Feed (mm/min)	加工深度 (Aa) Depth of Cut	加工寬度 (Ap) Width of Cut	加工方式 Milling Type
BTB BTH 0102	10	60	18000~20000	800~1000	0.08~0.1	0.16~0.2	3D銑 (3D MILLING)
0102	10	60	18000~20000	1000~1400	0.06~0.08	0.12~0.16	3D銑 (3D MILLING)
0102	10	60	18000~20000	1400~1800	0.02~0.04	0.04~0.08	3D銑 (3D MILLING)
BTB BTH 0152	12	90	18000~20000	800~1000	0.1~0.12	0.2~0.24	3D銑 (3D MILLING)
0152	12	90	18000~20000	1000~1400	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0152	12	90	18000~20000	1600~2000	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0202	14	120	18000~20000	800~1000	0.1~0.12	0.2~0.24	3D銑 (3D MILLING)
0202	14	120	18000~20000	1000~1400	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0202	14	120	18000~20000	1600~2000	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0252	16	135	17000~18000	800~1000	0.12~0.14	0.24~0.28	3D銑 (3D MILLING)
0252	16	135	17000~18000	1000~1400	0.08~0.1	0.16~0.2	3D銑 (3D MILLING)
0252	16	135	17000~18000	1600~2000	0.04~0.06	0.08~0.12	3D銑 (3D MILLING)
BTB BTH 0302	18	150	16000~17000	800~1000	0.15~0.18	0.3~0.36	3D銑 (3D MILLING)
0302	18	150	16000~17000	1000~1400	0.1~0.12	0.2~0.24	3D銑 (3D MILLING)
0302	18	150	16000~17000	1600~2000	0.05~0.07	0.1~0.14	3D銑 (3D MILLING)
BTB BTH 0402	20	190	15000~16000	800~1000	0.18~0.22	0.36~0.44	3D銑 (3D MILLING)
0402	20	190	15000~16000	1100~1500	0.11~0.13	0.22~0.26	3D銑 (3D MILLING)
0402	20	190	15000~16000	1600~2000	0.05~0.08	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0502	20	220	14000~15000	800~1200	0.2~0.25	0.4~0.5	3D銑 (3D MILLING)
0502	20	220	14000~15000	1100~1500	0.13~0.16	0.26~0.32	3D銑 (3D MILLING)
0502	20	220	14000~15000	1600~2000	0.05~0.09	0.14~0.18	3D銑 (3D MILLING)
BTB BTH 0602	20	230	12000~13000	800~1200	0.28~0.33	0.56~0.66	3D銑 (3D MILLING)
0602	20	245	13000~14000	1300~1700	0.15~0.2	0.3~0.4	3D銑 (3D MILLING)
0602	20	245	13000~14000	1800~2200	0.05~0.11	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0802	30	255	10000~11000	800~1200	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
0802	30	305	12000~13000	1900~2300	0.2~0.25	0.4~0.5	3D銑 (3D MILLING)
0802	30	305	12000~13000	1800~2200	0.05~0.13	0.2~0.26	3D銑 (3D MILLING)
BTB BTH 1002	35	285	8700~9200	1200~1600	0.35~0.45	0.7~0.9	3D銑 (3D MILLING)
1002	35	285	8700~9200	2100~2500	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
1002	35	285	8700~9200	2000~2400	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
BTB BTH 1202	40	265	7000~8000	1000~1400	0.4~0.5	0.8~1	3D銑 (3D MILLING)
1202	40	265	7000~8000	1700~2100	0.27~0.32	0.54~0.64	3D銑 (3D MILLING)
1202	40	265	7000~8000	2000~2400	0.1~0.2	0.3~0.4	3D銑 (3D MILLING)
BTB BTH 1602	50	275	5000~6000	800~1000	0.6~0.65	1.2~1.3	3D銑 (3D MILLING)
1602	50	275	5000~6000	1200~1600	0.35~0.4	0.7~0.8	3D銑 (3D MILLING)
1602	50	275	5000~6000	2000~2400	0.1~0.23	0.36~0.46	3D銑 (3D MILLING)
BTB BTH 2002	60	280	4000~5000	800~1200	0.7~0.8	1.4~1.6	3D銑 (3D MILLING)
2002	60	280	4000~5000	1400~1800	0.4~0.45	0.8~0.9	3D銑 (3D MILLING)
2002	60	280	4000~5000	1400~1800	0.1~0.25	0.4~0.5	3D銑 (3D MILLING)

# BTB<sup>2T</sup> / BTH<sup>2T</sup>

## 切削條件表

## Milling Conditions

被切削材 Work Material		合金工具鋼 / 碳工具鋼 : Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)					
BTB <sup>2T</sup> 冷卻方式 Coolant Type		乾式切削 Dry coolant		BTH <sup>2T</sup> 冷卻方式 Coolant Type		濕式切削 Wet coolant	
型號 Type NO.	刀具伸長量 Extension Length(mm)	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (min <sup>-1</sup> )	進給速度 Feed (mm/min)	加工深度 (Aa) Depth of Cut	加工寬度 (Ap) Width of Cut	加工方式 Milling Type
<b>BTB BTH 0102</b>	10	60	18000~20000	900~1300	0.06~0.08	0.12~0.16	3D銑 (3D MILLING)
<b>0102</b>	10	60	18000~20000	1200~1600	0.02~0.04	0.04~0.08	3D銑 (3D MILLING)
<b>BTB BTH 0152</b>	12	90	18000~20000	900~1300	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
<b>0152</b>	12	90	18000~20000	1200~1600	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
<b>BTB BTH 0202</b>	14	110	16000~18000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
<b>0202</b>	14	110	16000~18000	1200~1600	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
<b>BTB BTH 0252</b>	16	120	15000~16000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
<b>0252</b>	16	120	15000~16000	1200~1600	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
<b>BTB BTH 0302</b>	18	145	15000~16000	800~1200	0.09~0.11	0.18~0.22	3D銑 (3D MILLING)
<b>0302</b>	18	145	15000~16000	1200~1600	0.04~0.06	0.08~0.12	3D銑 (3D MILLING)
<b>BTB BTH 0402</b>	20	175	14000~15000	900~1300	0.11~0.13	0.22~0.26	3D銑 (3D MILLING)
<b>0402</b>	20	175	14000~15000	1400~1800	0.05~0.08	0.14~0.22	3D銑 (3D MILLING)
<b>BTB BTH 0502</b>	20	205	13000~14000	900~1300	0.13~0.16	0.26~0.32	3D銑 (3D MILLING)
<b>0502</b>	20	205	13000~14000	1400~1800	0.05~0.09	0.14~0.18	3D銑 (3D MILLING)
<b>BTB BTH 0602</b>	20	230	12000~13000	900~1300	0.15~0.2	0.3~0.4	3D銑 (3D MILLING)
<b>0602</b>	20	230	12000~13000	1600~2000	0.05~0.11	0.14~0.22	3D銑 (3D MILLING)
<b>BTB BTH 0802</b>	30	255	10000~11000	600~1000	0.25~0.3	0.5~0.6	3D銑 (3D MILLING)
<b>0802</b>	30	255	10000~11000	1700~2100	0.18~0.23	0.36~0.46	3D銑 (3D MILLING)
<b>0802</b>	30	305	12000~13000	1600~2000	0.05~0.13	0.16~0.26	3D銑 (3D MILLING)
<b>BTB BTH 1002</b>	35	285	8700~9200	800~1200	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
<b>1002</b>	35	285	8700~9200	1800~2200	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
<b>1002</b>	35	285	8700~9200	1600~2000	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
<b>BTB BTH 1202</b>	40	260	6500~7500	800~1100	0.35~0.4	0.7~0.8	3D銑 (3D MILLING)
<b>1202</b>	40	260	6500~7500	1500~1900	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
<b>1202</b>	40	260	6500~7500	1600~2000	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
<b>BTB BTH 1602</b>	50	275	5000~6000	700~900	0.5~0.55	1~1.1	3D銑 (3D MILLING)
<b>1602</b>	50	275	5000~6000	1000~1400	0.27~0.32	0.54~0.64	3D銑 (3D MILLING)
<b>1602</b>	50	275	5000~6000	1600~2000	0.1~0.2	0.3~0.4	3D銑 (3D MILLING)
<b>BTB BTH 2002</b>	60	280	4000~5000	600~1000	0.6~0.65	1.2~1.3	3D銑 (3D MILLING)
<b>2002</b>	60	280	4000~5000	1000~1400	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
<b>2002</b>	60	280	4000~5000	1300~1700	0.1~0.23	0.36~0.46	3D銑 (3D MILLING)

BTB<sup>2T</sup> / BTH<sup>2T</sup>

切削條件表

Milling Conditions

被切削材 Work Material

調質鋼 / 預硬鋼 : Prehardened Steels  
NAK80 : 1.2083 : AISI420 : M310 (HRC36-45)BTB<sup>2T</sup> 冷卻方式 Coolant Type

乾式切削 Dry coolant

BTH<sup>2T</sup> 冷卻方式 Coolant Type

濕式切削 Wet coolant

型號 Type NO.	刀具伸長量 Extension Length(mm)	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (min <sup>-1</sup> )	進給速度 Feed (mm/min)	加工深度 (Aa) Depth of Cut	加工寬度 (Ap) Width of Cut	加工方式 Milling Type
BTB BTH 0102	10	60	18000~20000	900~1300	0.06~0.08	0.12~0.16	3D銑 (3D MILLING)
0102	10	60	18000~20000	1100~1400	0.02~0.04	0.04~0.08	3D銑 (3D MILLING)
BTB BTH 0152	12	90	18000~20000	900~1300	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0152	12	90	18000~20000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0202	14	110	16000~18000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0202	14	110	16000~18000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0252	16	120	15000~16000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0252	16	120	15000~16000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0302	18	145	15000~16000	800~1200	0.09~0.11	0.18~0.22	3D銑 (3D MILLING)
0302	18	145	15000~16000	1100~1400	0.04~0.06	0.08~0.12	3D銑 (3D MILLING)
BTB BTH 0402	20	175	14000~15000	900~1300	0.11~0.13	0.22~0.26	3D銑 (3D MILLING)
0402	20	175	14000~15000	1200~1600	0.05~0.08	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0502	20	205	13000~14000	900~1300	0.13~0.16	0.26~0.32	3D銑 (3D MILLING)
0502	20	205	13000~14000	1200~1600	0.05~0.09	0.14~0.18	3D銑 (3D MILLING)
BTB BTH 0602	20	230	12000~13000	900~1300	0.15~0.2	0.3~0.4	3D銑 (3D MILLING)
0602	20	230	12000~13000	1400~1800	0.05~0.11	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0802	30	255	10000~11000	600~1000	0.25~0.3	0.5~0.6	3D銑 (3D MILLING)
0802	30	255	10000~11000	1700~2100	0.18~0.23	0.36~0.46	3D銑 (3D MILLING)
0802	30	305	12000~13000	1400~1800	0.05~0.13	0.16~0.26	3D銑 (3D MILLING)
BTB BTH 1002	35	285	8700~9200	800~1200	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
1002	35	285	8700~9200	1800~2200	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
1002	35	285	8700~9200	1400~1800	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
BTB BTH 1202	40	260	6500~7500	800~1100	0.35~0.4	0.7~0.8	3D銑 (3D MILLING)
1202	40	260	6500~7500	1500~1900	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
1202	40	260	6500~7500	1400~1800	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
BTB BTH 1602	50	275	5000~6000	700~900	0.5~0.55	1~1.1	3D銑 (3D MILLING)
1602	50	275	5000~6000	1000~1400	0.27~0.32	0.54~0.64	3D銑 (3D MILLING)
1602	50	275	5000~6000	1400~1800	0.1~0.2	0.3~0.4	3D銑 (3D MILLING)
BTB BTH 2002	60	280	4000~5000	600~1000	0.6~0.65	1.2~1.3	3D銑 (3D MILLING)
2002	60	280	4000~5000	1000~1400	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
2002	60	280	4000~5000	1200~1600	0.1~0.23	0.36~0.46	3D銑 (3D MILLING)

BTB<sup>2T</sup> / BTH<sup>2T</sup>

切削條件表

Milling Conditions

被切削材 Work Material

沃斯田鐵系不銹鋼 : Stainless Steels  
SUS304 : 1.4301 : AISI 304 (HRC28~32)

BTB<sup>2T</sup> 冷卻方式 Coolant Type

乾式切削 Dry coolant

BTH<sup>2T</sup> 冷卻方式 Coolant Type

濕式切削 Wet coolant

型號 Type NO.	刀具伸長量 Extension Length(mm)	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (min <sup>-1</sup> )	進給速度 Feed (mm/min)	加工深度 (Aa) Depth of Cut	加工寬度 (Ap) Width of Cut	加工方式 Milling Type
BTB BTH 0102	10	60	18000~20000	900~1300	0.06~0.08	0.12~0.16	3D銑 (3D MILLING)
0102	10	60	18000~20000	1100~1400	0.02~0.04	0.04~0.08	3D銑 (3D MILLING)
BTB BTH 0152	12	90	18000~20000	900~1300	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0152	12	90	18000~20000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0202	14	110	16000~18000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0202	14	110	16000~18000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0252	16	120	15000~16000	800~1200	0.07~0.09	0.14~0.18	3D銑 (3D MILLING)
0252	16	120	15000~16000	1100~1400	0.03~0.05	0.06~0.1	3D銑 (3D MILLING)
BTB BTH 0302	18	145	15000~16000	800~1200	0.09~0.11	0.18~0.22	3D銑 (3D MILLING)
0302	18	145	15000~16000	1100~1400	0.04~0.06	0.08~0.12	3D銑 (3D MILLING)
BTB BTH 0402	20	175	14000~15000	900~1300	0.11~0.13	0.22~0.26	3D銑 (3D MILLING)
0402	20	175	14000~15000	1200~1600	0.05~0.08	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0502	20	205	13000~14000	900~1300	0.13~0.16	0.26~0.32	3D銑 (3D MILLING)
0502	20	205	13000~14000	1200~1600	0.05~0.09	0.14~0.18	3D銑 (3D MILLING)
BTB BTH 0602	20	230	12000~13000	900~1300	0.15~0.2	0.3~0.4	3D銑 (3D MILLING)
0602	20	230	12000~13000	1400~1800	0.05~0.11	0.14~0.22	3D銑 (3D MILLING)
BTB BTH 0802	30	255	10000~11000	600~1000	0.25~0.3	0.5~0.6	3D銑 (3D MILLING)
0802	30	255	10000~11000	1700~2100	0.18~0.23	0.36~0.46	3D銑 (3D MILLING)
0802	30	305	12000~13000	1400~1800	0.05~0.13	0.16~0.26	3D銑 (3D MILLING)
BTB BTH 1002	35	285	8700~9200	800~1200	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
1002	35	285	8700~9200	1800~2200	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
1002	35	285	8700~9200	1400~1800	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
BTB BTH 1202	40	260	6500~7500	800~1100	0.35~0.4	0.7~0.8	3D銑 (3D MILLING)
1202	40	260	6500~7500	1500~1900	0.23~0.28	0.46~0.56	3D銑 (3D MILLING)
1202	40	260	6500~7500	1400~1800	0.05~0.15	0.2~0.3	3D銑 (3D MILLING)
BTB BTH 1602	50	275	5000~6000	700~900	0.5~0.55	1~1.1	3D銑 (3D MILLING)
1602	50	275	5000~6000	1000~1400	0.27~0.32	0.54~0.64	3D銑 (3D MILLING)
1602	50	275	5000~6000	1400~1800	0.1~0.2	0.3~0.4	3D銑 (3D MILLING)
BTB BTH 2002	60	280	4000~5000	600~1000	0.6~0.65	1.2~1.3	3D銑 (3D MILLING)
2002	60	280	4000~5000	1000~1400	0.3~0.35	0.6~0.7	3D銑 (3D MILLING)
2002	60	280	4000~5000	1200~1600	0.1~0.23	0.36~0.46	3D銑 (3D MILLING)