

								
被切削材 Work Material	鈦合金 / 鈦鈦 : Titanium Alloy / Pure Titanium Ti-6Al-4V / Ti-2 : 3.7165 / 3.7035 : Gr5 / Gr2 : TC4 / TA1							
	型號 Type NO.	刀具伸長量 Extension Length	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (min/1) (mm/1)	進給速度 Feed (mm/min)	加工深度 (Aa) Cut of depth	加工寬度(Ap) Cut of width	加工方式 Milling Type
UTHR0305	13mm	135	14000-14500	1200-1400	0-0.13	3	溝銑(Slotting)	
UTHR0305	13mm	130	13500-14000	800-1000	0.7	3	溝銑(Slotting)	
UTHR0305	13mm	130	13500-14000	500-700	0.8-1.3	3	溝銑(Slotting)	
UTHR0305	13mm	130	13500-14000	400-500	1.3-1.7	3	溝銑(Slotting)	
UTHR0305	13mm	130	13500-14000	900-1100	3	0.7	側銑(Side milling)	
UTHR0305	13mm	130	13500-14000	500-700	3	0.8-1.3	側銑(Side milling)	
UTHR0305	13mm	130	13500-14000	400-500	3	1.3-1.7	側銑(Side milling)	
UTHR0305	13mm	130	13500-14000	700-900	3-6	0-0.13	側銑(Side milling)	
UTHR0405	16mm	135	10000-10500	1200-1400	0-0.15	4	溝銑(Slotting)	
UTHR0405	16mm	130	9500-10000	800-1000	0.8	4	溝銑(Slotting)	
UTHR0405	16mm	130	9500-10000	500-700	1-2	4	溝銑(Slotting)	
UTHR0405	16mm	130	9500-10000	400-500	2-2.5	4	溝銑(Slotting)	
UTHR0405	16mm	130	9500-10000	900-1100	4	0.8	側銑(Side milling)	
UTHR0405	16mm	130	9500-10000	500-700	4	1-2	側銑(Side milling)	
UTHR0405	16mm	130	9500-10000	400-500	4	2-2.5	側銑(Side milling)	
UTHR0405	16mm	130	9500-10000	700-900	4-8	0-0.15	側銑(Side milling)	
UTHR0505	18mm	135	8500-9000	1100-1300	0-0.15	5	溝銑(Slotting)	
UTHR0505	18mm	130	8000-8500	900-1100	0.9	5	溝銑(Slotting)	
UTHR0505	18mm	130	8000-8500	500-700	1.5-2.5	5	溝銑(Slotting)	
UTHR0505	18mm	130	8000-8500	400-500	3-4	5	溝銑(Slotting)	
UTHR0505	18mm	130	8000-8500	900-1100	5	0.9	側銑(Side milling)	
UTHR0505	18mm	130	8000-8500	500-700	5	1.5-2.5	側銑(Side milling)	
UTHR0505	18mm	130	8000-8500	400-500	5	3-4	側銑(Side milling)	
UTHR0505	18mm	130	8000-8500	700-900	5-10	0-0.15	側銑(Side milling)	
UTHR0605	20mm	135	7000-7400	1000-1300	0-0.15	6	溝銑(Slotting)	
UTHR0605	20mm	130	6600-7000	900-1100	1	6	溝銑(Slotting)	
UTHR0605	20mm	130	6600-7000	500-700	2-3	6	溝銑(Slotting)	
UTHR0605	20mm	130	6600-7000	400-500	4-5	6	溝銑(Slotting)	
UTHR0605	20mm	130	6600-7000	1000-1200	6	1	側銑(Side milling)	
UTHR0605	20mm	130	6600-7000	500-700	6	2-3	側銑(Side milling)	
UTHR0605	20mm	130	6600-7000	400-500	6	4-5	側銑(Side milling)	
UTHR0605	20mm	130	6600-7000	500-700	6-12	0-0.2	側銑(Side milling)	
UTHR0610	20mm	135	7000-7400	1000-1300	0-0.15	6	溝銑(Slotting)	
UTHR0610	20mm	130	6600-7000	900-1100	1	6	溝銑(Slotting)	
UTHR0610	20mm	130	6600-7000	500-700	2-3	6	溝銑(Slotting)	
UTHR0610	20mm	130	6600-7000	400-500	4-5	6	溝銑(Slotting)	
UTHR0610	20mm	130	6600-7000	1000-1200	6	1	側銑(Side milling)	
UTHR0610	20mm	130	6600-7000	500-700	6	2-3	側銑(Side milling)	
UTHR0610	20mm	130	6600-7000	400-500	6	4-5	側銑(Side milling)	
UTHR0610	20mm	130	6600-7000	500-700	6-12	0-0.2	側銑(Side milling)	
UTHR0805	24mm	135	5000-5500	1000-1300	0-0.2	8	溝銑(Slotting)	
UTHR0805	24mm	130	4800-5300	900-1100	0.5-1	8	溝銑(Slotting)	
UTHR0805	24mm	130	4800-5300	500-700	3-4	8	溝銑(Slotting)	
UTHR0805	24mm	130	4800-5300	400-500	4-6.5	8	溝銑(Slotting)	
UTHR0805	24mm	130	4800-5300	1000-1200	8	0.5-1	側銑(Side milling)	
UTHR0805	24mm	130	4800-5300	500-700	8	3-4	側銑(Side milling)	
UTHR0805	24mm	130	4800-5300	400-500	8	4-6.5	側銑(Side milling)	
UTHR0805	24mm	130	4800-5300	500-700	8-16	0-0.2	側銑(Side milling)	
UTHR0810	24mm	135	5000-5500	1000-1300	0-0.2	8	溝銑(Slotting)	
UTHR0810	24mm	130	4800-5300	900-1100	0.5-1	8	溝銑(Slotting)	
UTHR0810	24mm	130	4800-5300	500-700	3-4	8	溝銑(Slotting)	
UTHR0810	24mm	130	4800-5300	400-500	4-6.5	8	溝銑(Slotting)	
UTHR0810	24mm	130	4800-5300	1000-1200	8	0.5-1	側銑(Side milling)	
UTHR0810	24mm	130	4800-5300	500-700	8	3-4	側銑(Side milling)	
UTHR0810	24mm	130	4800-5300	400-500	8	4-6.5	側銑(Side milling)	
UTHR0810	24mm	130	4800-5300	500-700	8-16	0-0.2	側銑(Side milling)	
UTHR1005	30mm	150	4800-5200	1000-1200	0-0.2	10	溝銑(Slotting)	
UTHR1005	30mm	135	4200-4500	900-1100	0.5-1	10	溝銑(Slotting)	
UTHR1005	30mm	135	4200-4500	500-600	4-5	10	溝銑(Slotting)	
UTHR1005	30mm	135	4200-4500	400-500	7-8	10	溝銑(Slotting)	
UTHR1005	30mm	135	4200-4500	900-1100	10	0.5-1	側銑(Side milling)	
UTHR1005	30mm	135	4200-4500	500-700	10	4-5	側銑(Side milling)	
UTHR1005	30mm	135	4200-4500	400-500	10	7-8	側銑(Side milling)	
UTHR1005	30mm	135	4200-4500	500-700	10-20	0-0.25	側銑(Side milling)	
UTHR1010	30mm	150	4800-5200	1000-1200	0-0.2	10	溝銑(Slotting)	
UTHR1010	30mm	135	4200-4500	900-1100	0.5-1	10	溝銑(Slotting)	
UTHR1010	30mm	135	4200-4500	500-600	4-5	10	溝銑(Slotting)	
UTHR1010	30mm	135	4200-4500	350-450	7-8	10	溝銑(Slotting)	
UTHR1010	30mm	135	4200-4500	900-1100	10	0.5-1	側銑(Side milling)	
UTHR1010	30mm	135	4200-4500	500-600	10	4-5	側銑(Side milling)	
UTHR1010	30mm	135	4200-4500	350-450	10	7-8	側銑(Side milling)	
UTHR1010	30mm	135	4200-4500	500-700	10-20	0-0.25	側銑(Side milling)	
UTHR1020	30mm	150	4800-5200	1000-1200	0-0.2	10	溝銑(Slotting)	
UTHR1020	30mm	135	4200-4500	900-1100	0.5-1	10	溝銑(Slotting)	
UTHR1020	30mm	135	4200-4500	500-600	4-5	10	溝銑(Slotting)	
UTHR1020	30mm	135	4200-4500	350-450	7-8	10	溝銑(Slotting)	
UTHR1020	30mm	135	4200-4500	900-1100	10	0.5-1	側銑(Side milling)	
UTHR1020	30mm	135	4200-4500	500-600	10	4-5	側銑(Side milling)	
UTHR1020	30mm	135	4200-4500	350-450	10	7-8	側銑(Side milling)	
UTHR1020	30mm	135	4200-4500	500-700	10-20	0-0.25	側銑(Side milling)	
UTHR1210	33mm	150	3800-4200	1000-1200	0-0.25	12	溝銑(Slotting)	
UTHR1210	33mm	135	3400-3800	750-950	0.6-1.2	12	溝銑(Slotting)	
UTHR1210	33mm	135	3400-3800	400-500	4-5	12	溝銑(Slotting)	
UTHR1210	33mm	135	3400-3800	250-400	6-7	12	溝銑(Slotting)	
UTHR1210	33mm	135	3400-3800	800-1000	12	0.6-1.2	側銑(Side milling)	
UTHR1210	33mm	135	3400-3800	400-500	12	4-5	側銑(Side milling)	
UTHR1210	33mm	135	3400-3800	300-400	12	6-7	側銑(Side milling)	
UTHR1210	33mm	135	3400-3800	500-700	12-24	0-0.25	側銑(Side milling)	
UTHR1220	33mm	150	3800-4200	1000-1200	0-0.25	12	溝銑(Slotting)	
UTHR1220	33mm	135	3400-3800	750-950	0.6-1.2	12	溝銑(Slotting)	
UTHR1220	33mm	135	3400-3800	400-500	4-5	12	溝銑(Slotting)	
UTHR1220	33mm	135	3400-3800	250-400	5-6	12	溝銑(Slotting)	
UTHR1220	33mm	135	3400-3800	800-1000	12	0.6-1.2	側銑(Side milling)	
UTHR1220	33mm	135	3400-3800	400-500	12	4-5	側銑(Side milling)	
UTHR1220	33mm	135	3400-3800	300-400	12	5-6	側銑(Side milling)	
UTHR1220	33mm	135	3400-3800	500-700	12-24	0-0.25	側銑(Side milling)	
UTHR1230	33mm	150	3800-4200	1000-1200	0-0.25	12	溝銑(Slotting)	
UTHR1230	33mm	135	3400-3800	750-950	0.6-1.2	12	溝銑(Slotting)	
UTHR1230	33mm	135	3400-3800	400-500	4-5	12	溝銑(Slotting)	
UTHR1230	33mm	135	3400-3800	250-400	5-6	12	溝銑(Slotting)	
UTHR1230	33mm	135	3400-3800	800-1000	12	0.6-1.2	側銑(Side milling)	
UTHR1230	33mm	135	3400-3800	400-500	12	4-5	側銑(Side milling)	
UTHR1230	33mm	135	3400-3800	300-400	12	5-6	側銑(Side milling)	
UTHR1230	33mm	135	3400-3800	500-700	12-24	0-0.25	側銑(Side milling)	
UTHR1610	43mm	150	2800-3200	800-1000	0-0.25	16	溝銑(Slotting)	
UTHR1610	43mm	135	2500-2900	700-850	0.6-1.2	16	溝銑(Slotting)	
UTHR1610	43mm	135	2500-2900	350-500	3-4	16	溝銑(Slotting)	
UTHR1610	43mm	135	2500-2900	200-350	4-5	16	溝銑(Slotting)	
UTHR1610	43mm	135	2500-2900	700-900	16	0.6-1.2	側銑(Side milling)	
UTHR1610	43mm	135	2500-2900	350-500	16	3-4	側銑(Side milling)	
UTHR1610	43mm	135	2500-2900	200-350	16	4-5	側銑(Side milling)	
UTHR1610	43mm	135	2500-2900	350-550	16-32	0-0.3	側銑(Side milling)	
UTHR1620	43mm	150	2800-3200	800-1000	0-0.25	16	溝銑(Slotting)	
UTHR1620	43mm	135	2500-2900	700-850	0.6-1.2	16	溝銑(Slotting)	
UTHR1620	43mm	135	2500-2900	350-500	3-4	16	溝銑(Slotting)	
UTHR1620	43mm	135	2500-2900	200-350	4-5	16	溝銑(Slotting)	
UTHR1620	43mm	135	2500-2900	700-900	16	0.6-1.2	側銑(Side milling)	
UTHR1620	43mm	135	2500-2900	350-500	16	3-4	側銑(Side milling)	
UTHR1620	43mm	135	2500-2900	200-350	16	4-5	側銑(Side milling)	
UTHR1620	43mm	135	2500-2900	350-550	16-32	0-0.3	側銑(Side milling)	
UTHR1630	43mm	150	2800-3200	800-1000	0-0.25	16	溝銑(Slotting)	
UTHR1630	43mm	135	2500-2900	700-850	0.6-1.2	16	溝銑(Slotting)	
UTHR1630	43mm	135	2500-2900	350-500	3-4	16	溝銑(Slotting)	
UTHR1630	43mm	135	2500-2900	200-350	4-5	16	溝銑(Slotting)	
UTHR1630	43mm	135	2500-2900	700-900	16	0.6-1.2	側銑(Side milling)	
UTHR1630	43mm	135	2500-2900	350-500	16	3-4	側銑(Side milling)	
UTHR1630	43mm	135	2500-2900	200-350	16	4-5	側銑(Side milling)	
UTHR1630	43mm	135	2500-2900	350-550	16-32	0-0.3	側銑(Side milling)	
UTHR2010	47mm	150	2200-2600	600-800	0-0.3	20	溝銑(Slotting)	
UTHR2010	47mm	135	2000-2300	500-700	0.6-1.2	20	溝銑(Slotting)	
UTHR2010	47mm	135	2000-2300	200-350	3-4	20	溝銑(Slotting)	
UTHR2010	47mm	135	2000-2300	150-250	4-5	20	溝銑(Slotting)	
UTHR2010	47mm	135	2000-2300	600-800	20	0.6-1.2	側銑(Side milling)	
UTHR2010	47mm	135	2000-2300	250-350	20	3-4	側銑(Side milling)	
UTHR2010	47mm	135	2000-2300	200-300	20	4-5	側銑(Side milling)	
UTHR201								

							
被切削材 Work Material	鈦合金 / 純鈦 : Titanium Alloy / Pure Titanium Ti-6Al-4V / Ti-2 : 3.7165 / 3.7035 : Gr5 / Gr2 : TC4 / TA1						
型號 Type NO.	刀具伸長量 Extension Length	切削速度 (m/min) Cutting Speed	迴轉速度 Speed (mim ⁻¹)	進給速度 Feed (mm/min)	加工深度 (Aa) Cut of depth	加工寬度 (Ap) Cut of width	加工方式 Milling Type
UTJ0304	13mm	145	15000~15500	3500~4000	0,13	3	溝銑(Slotting)
UTJ0304	13mm	100	10500~11000	800~1000	0.5~0.6	3	溝銑(Slotting)
UTJ0304	13mm	100	10500~11000	500~700	0.8~1.5	3	溝銑(Slotting)
UTJ0304	13mm	100	10500~11000	400~500	1.5~2	3	溝銑(Slotting)
UTJ0304	13mm	100	10500~11000	900~1100	3	0.5~0.6	側銑(Side milling)
UTJ0304	13mm	100	10500~11000	500~700	3	0.8~1.5	側銑(Side milling)
UTJ0304	13mm	100	10500~11000	400~500	3	1.5~2	側銑(Side milling)
UTJ0404	16mm	145	11000~11500	3500~4000	0,15	4	溝銑(Slotting)
UTJ0404	16mm	100	7800~8200	1000~1200	0.6~0.7	4	溝銑(Slotting)
UTJ0404	16mm	100	7800~8200	500~700	1~2	4	溝銑(Slotting)
UTJ0404	16mm	100	7800~8200	400~500	2~3	4	溝銑(Slotting)
UTJ0404	16mm	100	7800~8200	1000~1200	4	0.6~0.7	側銑(Side milling)
UTJ0404	16mm	100	7800~8200	500~700	4	1~2	側銑(Side milling)
UTJ0404	16mm	100	7800~8200	400~500	4	2~3	側銑(Side milling)
UTJ0504	18mm	145	9000~9500	3500~4000	0,2	5	溝銑(Slotting)
UTJ0504	18mm	100	6200~6600	1200~1400	0.7~0.8	5	溝銑(Slotting)
UTJ0504	18mm	100	6200~6600	500~700	1.5~2.5	5	溝銑(Slotting)
UTJ0504	18mm	100	6200~6600	400~500	3~4	5	溝銑(Slotting)
UTJ0504	18mm	100	6200~6600	1000~1200	5	0.7~0.8	側銑(Side milling)
UTJ0504	18mm	100	6200~6600	500~700	5	1.5~2.5	側銑(Side milling)
UTJ0504	18mm	100	6200~6600	400~500	5	3~4	側銑(Side milling)
UTJ0604	20mm	160	8500~9000	3500~4000	0,2	6	溝銑(Slotting)
UTJ0604	20mm	100	5200~5600	900~1100	0.8~0.9	6	溝銑(Slotting)
UTJ0604	20mm	100	5200~5600	500~700	2~3	6	溝銑(Slotting)
UTJ0604	20mm	100	5200~5600	400~500	4~5	6	溝銑(Slotting)
UTJ0604	20mm	100	5200~5600	1000~1200	6	0.8~0.9	側銑(Side milling)
UTJ0604	20mm	100	5200~5600	500~700	6	2~3	側銑(Side milling)
UTJ0604	20mm	100	5200~5600	400~500	6	4~5	側銑(Side milling)
UTJ0804	24mm	180	7000~7300	3500~4000	0,2	8	溝銑(Slotting)
UTJ0804	24mm	100	3800~4200	800~1000	0.8~1	8	溝銑(Slotting)
UTJ0804	24mm	100	3800~4200	500~700	3~4	8	溝銑(Slotting)
UTJ0804	24mm	100	3800~4200	400~500	4~6.5	8	溝銑(Slotting)
UTJ0804	24mm	100	3800~4200	1000~1200	8	0.8~1	側銑(Side milling)
UTJ0804	24mm	100	3800~4200	500~700	8	3~4	側銑(Side milling)
UTJ0804	24mm	100	3800~4200	400~500	8	4~6.5	側銑(Side milling)
UTJ1004	30mm	180	5600~6000	3000~3500	0,2	10	溝銑(Slotting)
UTJ1004	30mm	100	3000~3400	900~1100	0.8~1	10	溝銑(Slotting)
UTJ1004	30mm	100	3000~3400	500~700	4~5	10	溝銑(Slotting)
UTJ1004	30mm	100	3000~3400	400~500	7~8	10	溝銑(Slotting)
UTJ1004	30mm	100	3000~3400	900~1100	10	0.8~1	側銑(Side milling)
UTJ1004	30mm	100	3000~3400	500~700	10	4~5	側銑(Side milling)
UTJ1004	30mm	100	3000~3400	400~500	10	7~8	側銑(Side milling)
UTJ1204	33mm	180	4600~5000	2800~3200	0,2	12	溝銑(Slotting)
UTJ1204	33mm	100	2400~2800	650~800	0.9~1.2	12	溝銑(Slotting)
UTJ1204	33mm	100	2400~2800	350~500	4~5	12	溝銑(Slotting)
UTJ1204	33mm	100	2400~2800	250~350	5~6	12	溝銑(Slotting)
UTJ1204	33mm	100	2400~2800	700~900	12	0.9~1.2	側銑(Side milling)
UTJ1204	33mm	100	2400~2800	350~450	12	4~5	側銑(Side milling)
UTJ1204	33mm	100	2400~2800	200~320	12	5~6	側銑(Side milling)
UTJ1604	50mm	180	3400~3800	2000~2500	0,2	16	溝銑(Slotting)
UTJ1604	50mm	100	1800~2200	600~700	0.9~1.2	16	溝銑(Slotting)
UTJ1604	50mm	100	1800~2200	300~400	3~4	16	溝銑(Slotting)
UTJ1604	50mm	100	1800~2200	200~350	4~5	16	溝銑(Slotting)
UTJ1604	50mm	100	1800~2200	700~900	16	0.9~1.2	側銑(Side milling)
UTJ1604	50mm	100	1800~2200	300~450	16	3~4	側銑(Side milling)
UTJ1604	50mm	100	1800~2200	200~350	16	4~5	側銑(Side milling)
UTJ2004	55mm	180	2700~3000	1300~1800	0,2	20	溝銑(Slotting)
UTJ2004	55mm	100	1400~1800	500~700	0.9~1.2	20	溝銑(Slotting)
UTJ2004	55mm	100	1400~1800	200~350	3~4	20	溝銑(Slotting)
UTJ2004	55mm	100	1400~1800	150~250	4~5	20	溝銑(Slotting)
UTJ2004	55mm	100	1400~1800	600~800	20	0.9~1.2	側銑(Side milling)
UTJ2004	55mm	100	1400~1800	220~320	20	3~4	側銑(Side milling)
UTJ2004	55mm	100	1400~1800	180~280	20	4~5	側銑(Side milling)
附註 / Note:							
◆ 建議冷卻方式為濕式。							
◆ Suggest to use Wet coolant.							
◆ UTJ本身刀法應用於粗、中、精銑加工，且其無論在溝銑與側銑皆有0.4~0.8D之能力，							
但在UTJ1004以上需視主軸扭力與機器剛性做調整。							
◆ UTJ is good at roughing, semi-finishing and finishing. It can do 0.4D~0.8D slot milling and side milling.							
For diameter 10mm and above, make necessary adjustment as per spindle torque and machine rigidity.							
◆ 因UTJ為粗中精銑刀具，故粗切削時請用濕式高壓水溶性切削液沖排削，以免造成積屑。							
◆ Since UTJ is suitable for roughing, semi-finishing and finishing, use high pressure water soluble cutting fluid during							
roughing to evacuate chips.							
◆ 純鈦與鈦合金材料屬性較沾黏，加工時請務必使用高壓水溶性切削液沖排削，以免造成積屑。							
◆ Owing to the sticky features of pure titanium and titanium alloy materials, be sure to use high pressure water soluble							
cutting fluid to evacuate chips.							

