

EXCHANGEABLE HEAD ENDMILL



Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UEXR1630	60	160	2700~3200	1600~2000	0.18~0.23	9~16	SLOTTING
X-UEXR1630	60	160	2700~3200	800~1200	0.1~0.15	9~16	SLOTTING
X-UEXR1630	60	160	2700~3200	1600~2000	0.18~0.23	0.18~0.23	3D MILLING
X-UEXR1630	60	160	2700~3200	1400~1800	0.12~0.15	0.12~0.15	3D MILLING
X-UEXR1630	100	110	1800~2200	600~1000	0.1~0.15	9~16	SLOTTING
X-UEXR1630	100	110	1800~2200	800~1200	0.1~0.15	0.1~0.15	3D MILLING
X-UEXR1630	130	90	1400~1800	400~700	0.08~0.12	9~16	SLOTTING
X-UEXR1630	130	90	1400~1800	600~800	0.08~0.12	0.08~0.12	3D MILLING
X-UEXR2010	70	175	2500~3000	1200~1600	0.18~0.23	17~20	SLOTTING
X-UEXR2010	70	175	2500~3000	800~1200	0.1~0.15	17~20	SLOTTING
X-UEXR2010	70	175	2500~3000	1400~1800	0.15~0.23	0.15~0.23	3D MILLING
X-UEXR2010	70	175	2500~3000	1200~1600	0.1~0.15	0.17~0.2	3D MILLING
X-UEXR2010	120	110	1600~2000	600~1000	0.1~0.2	17~20	SLOTTING
X-UEXR2010	120	120	1800~2200	800~1000	0.1~0.2	0.1~0.15	3D MILLING
X-UEXR2010	170	80	1100~1400	400~700	0.1~0.15	17~20	SLOTTING
X-UEXR2010	170	90	1300~1600	600~800	0.1~0.15	0.1~0.15	3D MILLING
X-UEXR2020	70	175	2500~3000	1200~1600	0.18~0.23	15~20	SLOTTING
X-UEXR2020	70	175	2500~3000	800~1200	0.1~0.15	15~20	SLOTTING
X-UEXR2020	70	175	2500~3000	1400~1800	0.15~0.23	0.15~0.23	3D MILLING
X-UEXR2020	70	175	2500~3000	1200~1600	0.1~0.15	0.17~0.2	3D MILLING
X-UEXR2020	120	110	1600~2000	600~1000	0.1~0.2	15~20	SLOTTING
X-UEXR2020	120	120	1800~2200	800~1000	0.1~0.2	0.1~0.15	3D MILLING
X-UEXR2020	170	80	1100~1400	400~700	0.1~0.15	15~20	SLOTTING
X-UEXR2020	170	90	1300~1600	600~800	0.1~0.15	0.1~0.15	3D MILLING
X-UEXR2030	70	175	2500~3000	1200~1600	0.18~0.23	13~20	SLOTTING
X-UEXR2030	70	175	2500~3000	800~1200	0.1~0.15	13~20	SLOTTING
X-UEXR2030	70	175	2500~3000	1400~1800	0.15~0.23	0.15~0.23	3D MILLING
X-UEXR2030	70	175	2500~3000	1200~1600	0.1~0.15	0.17~0.2	3D MILLING
X-UEXR2030	120	110	1600~2000	600~1000	0.1~0.2	13~20	SLOTTING
X-UEXR2030	120	120	1800~2200	800~1000	0.1~0.2	0.1~0.15	3D MILLING
X-UEXR2030	170	80	1100~1400	400~700	0.1~0.15	13~20	SLOTTING
X-UEXR2030	170	90	1300~1600	600~800	0.1~0.15	0.1~0.15	3D MILLING
X-UEXR2510	80	175	2000~2400	800~1200	0.15~0.25	22~25	SLOTTING
X-UEXR2510	80	175	2000~2400	600~1000	0.1~0.15	22~25	SLOTTING
X-UEXR2510	80	175	2000~2400	1000~1400	0.15~0.25	0.15~0.25	3D MILLING
X-UEXR2510	80	175	2000~2400	1000~1400	0.1~0.2	0.17~0.2	3D MILLING
X-UEXR2510	130	110	1200~1600	400~600	0.1~0.15	22~25	SLOTTING
X-UEXR2510	130	120	1300~1700	700~900	0.1~0.2	0.12~0.15	3D MILLING
X-UEXR2510	180	80	800~1200	300~400	0.1~0.15	22~25	SLOTTING
X-UEXR2510	180	90	1000~1400	500~700	0.1~0.15	0.12~0.15	3D MILLING

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UEXR2530	80	175	2000~2400	800~1200	0.15~0.25	18~25	SLOTTING
X-UEXR2530	80	175	2000~2400	600~1000	0.1~0.15	18~25	SLOTTING
X-UEXR2530	80	175	2000~2400	1000~1400	0.15~0.25	0.15~0.25	3D MILLING
X-UEXR2530	80	175	2000~2400	1000~1400	0.1~0.2	0.17~0.2	3D MILLING
X-UEXR2530	130	110	1200~1600	400~600	0.1~0.15	18~25	SLOTTING
X-UEXR2530	130	120	1300~1700	700~900	0.1~0.2	0.12~0.15	3D MILLING
X-UEXR2530	180	80	800~1200	300~400	0.1~0.15	18~25	SLOTTING
X-UEXR2530	180	90	1000~1400	500~700	0.1~0.15	0.12~0.15	3D MILLING
X-UEXR2550	80	175	2000~2400	800~1200	0.15~0.25	14~25	SLOTTING
X-UEXR2550	80	175	2000~2400	600~1000	0.1~0.15	14~25	SLOTTING
X-UEXR2550	80	175	2000~2400	1000~1400	0.15~0.25	0.15~0.25	3D MILLING
X-UEXR2550	80	175	2000~2400	1000~1400	0.1~0.2	0.17~0.2	3D MILLING
X-UEXR2550	130	110	1200~1600	400~600	0.1~0.15	14~25	SLOTTING
X-UEXR2550	130	120	1300~1700	700~900	0.1~0.2	0.12~0.15	3D MILLING
X-UEXR2550	180	80	800~1200	300~400	0.1~0.15	14~25	SLOTTING
X-UEXR2550	180	90	1000~1400	500~700	0.1~0.15	0.12~0.15	3D MILLING
X-UEXR3230	80	175	1600~2000	600~1000	0.15~0.25	25~32	SLOTTING
X-UEXR3230	80	175	1600~2000	500~800	0.1~0.15	25~32	SLOTTING
X-UEXR3230	80	175	1600~2000	800~1100	0.15~0.25	0.15~0.25	3D MILLING
X-UEXR3230	80	175	1600~2000	800~1100	0.1~0.2	0.17~0.2	3D MILLING
X-UEXR3230	140	110	900~1300	300~500	0.1~0.15	25~32	SLOTTING
X-UEXR3230	140	120	1000~1400	600~800	0.1~0.2	0.12~0.15	3D MILLING
X-UEXR3230	200	80	700~1000	250~400	0.1~0.15	25~32	SLOTTING
X-UEXR3230	200	90	800~1100	400~600	0.1~0.15	0.12~0.15	3D MILLING
X-UEXR3250	80	175	1600~2000	600~1000	0.15~0.25	21~32	SLOTTING
X-UEXR3250	80	175	1600~2000	500~800	0.1~0.15	21~32	SLOTTING
X-UEXR3250	80	175	1600~2000	800~1100	0.15~0.25	0.15~0.25	3D MILLING
X-UEXR3250	80	175	1600~2000	800~1100	0.1~0.2	0.17~0.2	3D MILLING
X-UEXR3250	140	110	900~1300	300~500	0.1~0.15	21~32	SLOTTING
X-UEXR3250	140	120	1000~1400	600~800	0.1~0.2	0.12~0.15	3D MILLING
X-UEXR3250	200	80	700~1000	250~400	0.1~0.15	21~32	SLOTTING
X-UEXR3250	200	90	800~1100	400~600	0.1~0.15	0.12~0.15	3D MILLING

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UEXR2030	120	100	1500~1800	400~600	0.1~0.13	13~20	SLOTTING
X-UEXR2030	120	100	1500~1800	600~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2030	170	70	1000~1300	300~500	0.1~0.13	13~20	SLOTTING
X-UEXR2030	170	70	1000~1300	500~700	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2510	80	120	1400~1700	500~700	0.1~0.13	22~25	SLOTTING
X-UEXR2510	80	140	1600~2000	600~1000	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2510	130	100	1100~1500	300~500	0.1~0.13	22~25	SLOTTING
X-UEXR2510	130	100	1100~1500	500~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2510	180	70	700~1100	250~350	0.1~0.13	22~25	SLOTTING
X-UEXR2510	180	70	700~1100	400~600	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2530	80	120	1400~1700	500~700	0.1~0.13	18~25	SLOTTING
X-UEXR2530	80	140	1600~2000	600~1000	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2530	130	100	1100~1500	300~500	0.1~0.13	18~25	SLOTTING
X-UEXR2530	130	100	1100~1500	500~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2530	180	70	700~1100	250~350	0.1~0.13	18~25	SLOTTING
X-UEXR2530	180	70	700~1100	400~600	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2550	80	120	1400~1700	500~700	0.1~0.13	14~25	SLOTTING
X-UEXR2550	80	140	1600~2000	600~1000	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2550	130	100	1100~1500	300~500	0.1~0.13	14~25	SLOTTING
X-UEXR2550	130	100	1100~1500	500~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR2550	180	70	700~1100	250~350	0.1~0.13	14~25	SLOTTING
X-UEXR2550	180	70	700~1100	400~600	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3230	80	120	1000~1300	400~600	0.1~0.13	25~32	SLOTTING
X-UEXR3230	80	140	1200~1500	600~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3230	140	100	800~1200	300~400	0.1~0.13	25~32	SLOTTING
X-UEXR3230	140	100	800~1200	500~700	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3230	200	70	600~900	200~350	0.1~0.13	25~32	SLOTTING
X-UEXR3230	200	70	600~900	300~500	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3250	80	120	1000~1300	400~600	0.1~0.13	21~32	SLOTTING
X-UEXR3250	80	140	1200~1500	600~800	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3250	140	100	800~1200	300~400	0.1~0.13	21~32	SLOTTING
X-UEXR3250	140	100	800~1200	500~700	0.1~0.13	0.1~0.13	3D MILLING
X-UEXR3250	200	70	600~900	200~350	0.1~0.13	21~32	SLOTTING
X-UEXR3250	200	70	600~900	300~500	0.1~0.13	0.1~0.13	3D MILLING

X-UVT

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UVT0806	25	95	3600~4000	1000~1400	0.1~0.2	6~8	SLOTTING
X-UVT0806	25	95	3600~4000	800~1000	0.05~0.1	6~8	SLOTTING
X-UVT0806	25	70	2600~3000	1000~1400	8	0.2~0.4	SIDE MILLING
X-UVT0806	25	85	3300~3600	600~800	8	0.05~0.15	SIDE MILLING
X-UVT0806	40	80	3000~3400	500~700	0.05~0.1	6~8	SLOTTING
X-UVT0806	40	55	2200~2600	450~650	8	0.05~0.15	SIDE MILLING
X-UVT0806	60	60	2200~2600	300~500	0.05~0.1	6~8	SLOTTING
X-UVT0806	60	60	2200~2600	350~500	8	0.05~0.1	SIDE MILLING
X-UVT1006	30	95	2800~3200	1000~1200	0.1~0.2	8~10	SLOTTING
X-UVT1006	30	95	2800~3200	800~1000	0.05~0.1	8~10	SLOTTING
X-UVT1006	30	95	2800~3200	900~1300	10	0.3~0.5	SIDE MILLING
X-UVT1006	30	95	2800~3200	500~700	10	0.05~0.15	SIDE MILLING
X-UVT1006	50	75	2200~2600	600~800	0.05~0.1	8~10	SLOTTING
X-UVT1006	50	75	2200~2600	450~650	10	0.05~0.15	SIDE MILLING
X-UVT1006	70	60	1800~2200	300~500	0.05~0.1	8~10	SLOTTING
X-UVT1006	70	60	1800~2200	350~550	10	0.05~0.1	SIDE MILLING
X-UVT1206	35	100	2400~2800	800~1000	0.1~0.2	10~12	SLOTTING
X-UVT1206	35	135	3400~3800	600~800	0.05~0.1	10~12	SLOTTING
X-UVT1206	35	115	2800~3200	800~1200	12	0.3~0.5	SIDE MILLING
X-UVT1206	35	115	2800~3200	600~800	12	0.05~0.15	SIDE MILLING
X-UVT1206	55	115	2800~3200	400~600	0.05~0.1	10~12	SLOTTING
X-UVT1206	55	80	2000~2400	400~600	12	0.05~0.15	SIDE MILLING
X-UVT1206	80	80	2000~2400	300~500	0.05~0.1	10~12	SLOTTING
X-UVT1206	80	75	1800~2200	350~450	12	0.05~0.1	SIDE MILLING
X-UVT1606	50	110	2000~2400	700~1000	0.1~0.2	14~16	SLOTTING
X-UVT1606	50	120	2200~2600	600~800	0.05~0.15	14~16	SLOTTING
X-UVT1606	50	100	1800~2200	900~1300	16	0.3~0.5	SIDE MILLING
X-UVT1606	50	100	1800~2200	450~650	16	0.05~0.2	SIDE MILLING
X-UVT1606	70	100	1800~2200	400~600	0.05~0.1	14~16	SLOTTING
X-UVT1606	70	70	1200~1600	300~450	16	0.05~0.15	SIDE MILLING
X-UVT1606	100	80	1400~1800	300~500	0.05~0.1	14~16	SLOTTING
X-UVT1606	100	50	800~1100	250~400	16	0.05~0.1	SIDE MILLING
X-UVT2006	50	110	1600~1900	700~1000	0.15~0.25	18~20	SLOTTING
X-UVT2006	50	120	1800~2100	600~800	0.05~0.15	18~20	SLOTTING
X-UVT2006	50	100	1400~1800	600~900	20	0.4~0.6	SIDE MILLING
X-UVT2006	50	100	1400~1800	400~600	20	0.05~0.2	SIDE MILLING
X-UVT2006	80	110	1600~1900	400~600	0.05~0.15	18~20	SLOTTING
X-UVT2006	80	70	1000~1400	300~450	20	0.05~0.2	SIDE MILLING
X-UVT2006	110	80	1100~1500	300~500	0.05~0.1	18~20	SLOTTING
X-UVT2006	110	50	600~1000	250~350	20	0.1~0.15	SIDE MILLING

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UVT2506	70	110	1200~1600	600~900	0.15~0.25	23~25	SLOTTING
X-UVT2506	70	120	1300~1700	500~700	0.05~0.15	23~25	SLOTTING
X-UVT2506	70	100	1100~1500	600~900	25	0.4~0.6	SIDE MILLING
X-UVT2506	70	100	1100~1500	400~600	25	0.05~0.2	SIDE MILLING
X-UVT2506	100	110	1200~1600	400~600	0.05~0.15	23~25	SLOTTING
X-UVT2506	100	70	800~1200	300~400	25	0.05~0.2	SIDE MILLING
X-UVT2506	130	80	800~1200	300~500	0.05~0.1	23~25	SLOTTING
X-UVT2506	130	60	600~900	250~400	25	0.1~0.15	SIDE MILLING
X-UVT3206	80	110	900~1300	500~700	0.15~0.25	25~32	SLOTTING
X-UVT3206	80	120	1000~1400	300~500	0.05~0.15	25~32	SLOTTING
X-UVT3206	80	100	800~1200	500~700	32	0.4~0.6	SIDE MILLING
X-UVT3206	80	100	800~1200	300~480	32	0.05~0.2	SIDE MILLING
X-UVT3206	110	110	900~1300	300~500	0.05~0.15	25~32	SLOTTING
X-UVT3206	110	70	600~800	240~380	32	0.05~0.2	SIDE MILLING
X-UVT3206	150	80	700~900	300~400	0.05~0.1	25~32	SLOTTING
X-UVT3206	150	60	500~700	180~280	32	0.1~0.15	SIDE MILLING

Work Material		Hardened Steels SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)					
Coolant Type		乾式/油霧切削 Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UVT0806	25	95	3600~4000	1000~1400	0.1~0.2	6~8	SLOTTING
X-UVT0806	25	95	3600~4000	800~1000	0.05~0.1	6~8	SLOTTING
X-UVT0806	25	70	2600~3000	1000~1400	8	0.2~0.4	SIDE MILLING
X-UVT0806	25	85	3300~3600	600~800	8	0.05~0.15	SIDE MILLING
X-UVT0806	40	80	3000~3400	500~700	0.05~0.1	6~8	SLOTTING
X-UVT0806	40	55	2200~2600	450~650	8	0.05~0.15	SIDE MILLING
X-UVT0806	60	60	2200~2600	300~500	0.05~0.1	6~8	SLOTTING
X-UVT0806	60	60	2200~2600	350~500	8	0.05~0.1	SIDE MILLING
X-UVT1006	30	95	2800~3200	1000~1200	0.1~0.2	8~10	SLOTTING
X-UVT1006	30	95	2800~3200	800~1000	0.05~0.1	8~10	SLOTTING
X-UVT1006	30	95	2800~3200	900~1300	10	0.3~0.5	SIDE MILLING
X-UVT1006	30	95	2800~3200	500~700	10	0.05~0.15	SIDE MILLING
X-UVT1006	50	75	2200~2600	600~800	0.05~0.1	8~10	SLOTTING
X-UVT1006	50	75	2200~2600	450~650	10	0.05~0.15	SIDE MILLING
X-UVT1006	70	60	1800~2200	300~500	0.05~0.1	8~10	SLOTTING
X-UVT1006	70	60	1800~2200	350~550	10	0.05~0.1	SIDE MILLING

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UVT1206	35	100	2400~2800	800~1000	0.1~0.2	10~12	SLOTTING
X-UVT1206	35	135	3400~3800	600~800	0.05~0.1	10~12	SLOTTING
X-UVT1206	35	115	2800~3200	800~1200	12	0.3~0.5	SIDE MILLING
X-UVT1206	35	115	2800~3200	600~800	12	0.05~0.15	SIDE MILLING
X-UVT1206	55	115	2800~3200	400~600	0.05~0.1	10~12	SLOTTING
X-UVT1206	55	80	2000~2400	400~600	12	0.05~0.15	SIDE MILLING
X-UVT1206	80	80	2000~2400	300~500	0.05~0.1	10~12	SLOTTING
X-UVT1206	80	75	1800~2200	350~450	12	0.05~0.1	SIDE MILLING
X-UVT1606	50	110	2000~2400	700~1000	0.1~0.2	14~16	SLOTTING
X-UVT1606	50	120	2200~2600	600~800	0.05~0.15	14~16	SLOTTING
X-UVT1606	50	100	1800~2200	900~1300	16	0.3~0.5	SIDE MILLING
X-UVT1606	50	100	1800~2200	450~650	16	0.05~0.2	SIDE MILLING
X-UVT1606	70	100	1800~2200	400~600	0.05~0.1	14~16	SLOTTING
X-UVT1606	70	70	1200~1600	300~450	16	0.05~0.15	SIDE MILLING
X-UVT1606	100	80	1400~1800	300~500	0.05~0.1	14~16	SLOTTING
X-UVT1606	100	50	800~1100	250~400	16	0.05~0.1	SIDE MILLING
X-UVT2006	50	110	1600~1900	700~1000	0.15~0.25	18~20	SLOTTING
X-UVT2006	50	120	1800~2100	600~800	0.05~0.15	18~20	SLOTTING
X-UVT2006	50	100	1400~1800	600~900	20	0.4~0.6	SIDE MILLING
X-UVT2006	50	100	1400~1800	400~600	20	0.05~0.2	SIDE MILLING
X-UVT2006	80	110	1600~1900	400~600	0.05~0.15	18~20	SLOTTING
X-UVT2006	80	70	1000~1400	300~450	20	0.05~0.2	SIDE MILLING
X-UVT2006	110	80	1100~1500	300~500	0.05~0.1	18~20	SLOTTING
X-UVT2006	110	50	600~1000	250~350	20	0.1~0.15	SIDE MILLING
X-UVT2506	70	110	1200~1600	600~900	0.15~0.25	23~25	SLOTTING
X-UVT2506	70	120	1300~1700	500~700	0.05~0.15	23~25	SLOTTING
X-UVT2506	70	100	1100~1500	600~900	25	0.4~0.6	SIDE MILLING
X-UVT2506	70	100	1100~1500	400~600	25	0.05~0.2	SIDE MILLING
X-UVT2506	100	110	1200~1600	400~600	0.05~0.15	23~25	SLOTTING
X-UVT2506	100	70	800~1200	300~400	25	0.05~0.2	SIDE MILLING
X-UVT2506	130	80	800~1200	300~500	0.05~0.1	23~25	SLOTTING
X-UVT2506	130	60	600~900	250~400	25	0.1~0.15	SIDE MILLING
X-UVT3206	80	110	900~1300	500~700	0.15~0.25	25~32	SLOTTING
X-UVT3206	80	120	1000~1400	300~500	0.05~0.15	25~32	SLOTTING
X-UVT3206	80	100	800~1200	500~700	32	0.4~0.6	SIDE MILLING
X-UVT3206	80	100	800~1200	300~480	32	0.05~0.2	SIDE MILLING
X-UVT3206	110	110	900~1300	300~500	0.05~0.15	25~32	SLOTTING
X-UVT3206	110	70	600~800	240~380	32	0.05~0.2	SIDE MILLING
X-UVT3206	150	80	700~900	300~400	0.05~0.1	25~32	SLOTTING
X-UVT3206	150	60	500~700	180~280	32	0.1~0.15	SIDE MILLING

X-UVTR

MILLING CONDITIONS

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UVTR0805	25	115	4500~5500	800~1000	0.05~0.1	4~6	SLOTTING
X-UVTR0805	25	70	2800~3300	400~600	8	0.05~0.1	SIDE MILLING
X-UVTR0805	25	115	4500~5500	1800~2200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR0805	40	95	3700~4200	500~700	0.05~0.1	4~6	SLOTTING
X-UVTR0805	40	40	1600~2000	300~500	8	0.05~0.1	SIDE MILLING
X-UVTR0805	40	85	3300~3800	1200~1600	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR0805	60	70	2700~3200	300~500	0.05~0.1	4~6	SLOTTING
X-UVTR0805	60	70	2700~3200	800~1200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR0810	25	115	4500~5500	800~1000	0.05~0.1	4~6	SLOTTING
X-UVTR0810	25	70	2800~3300	400~600	8	0.05~0.1	SIDE MILLING
X-UVTR0810	25	115	4500~5500	1800~2200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR0810	40	95	3700~4200	500~700	0.05~0.1	4~6	SLOTTING
X-UVTR0810	40	40	1600~2000	300~500	8	0.05~0.1	SIDE MILLING
X-UVTR0810	40	85	3300~3800	1200~1600	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR0810	60	70	2700~3200	300~500	0.05~0.1	4~6	SLOTTING
X-UVTR0810	60	70	2700~3200	800~1200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1005	35	95	3000~4000	500~700	0.05~0.1	6~8	SLOTTING
X-UVTR1005	35	85	2600~3000	400~600	10	0.05~0.1	SIDE MILLING
X-UVTR1005	35	95	3000~4000	1000~1400	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1005	50	85	2700~3200	400~600	0.05~0.1	6~8	SLOTTING
X-UVTR1005	50	50	1600~2000	300~500	10	0.05~0.1	SIDE MILLING
X-UVTR1005	50	80	2500~3000	1000~1400	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1005	70	55	1700~2200	300~500	0.05~0.1	6~8	SLOTTING
X-UVTR1005	70	55	1700~2200	800~1200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1010	35	95	3000~4000	500~700	0.05~0.11	5~7	SLOTTING
X-UVTR1010	35	85	2600~3000	400~600	10	0.05~0.11	SIDE MILLING
X-UVTR1010	35	95	3000~4000	1000~1400	0.05~0.11	0.05~0.11	3D MILLING
X-UVTR1010	50	85	2700~3200	400~600	0.05~0.1	5~7	SLOTTING
X-UVTR1010	50	50	1600~2000	300~500	10	0.05~0.1	SIDE MILLING
X-UVTR1010	50	80	2500~3000	1000~1400	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1010	70	55	1700~2200	300~500	0.05~0.1	5~7	SLOTTING
X-UVTR1010	70	55	1700~2200	800~1200	0.05~0.1	0.05~0.1	3D MILLING
X-UVTR1205	40	105	2700~3200	500~700	0.05~0.15	8~10	SLOTTING
X-UVTR1205	40	75	2000~2400	400~600	12	0.05~0.15	SIDE MILLING
X-UVTR1205	40	105	2700~3200	1000~1400	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1205	60	90	2300~2800	400~600	0.05~0.15	8~10	SLOTTING
X-UVTR1205	60	55	1400~1800	300~500	12	0.05~0.15	SIDE MILLING
X-UVTR1205	60	90	2300~2800	800~1200	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1205	100	65	1700~2200	300~500	0.05~0.15	8~10	SLOTTING
X-UVTR1205	100	65	1700~2200	600~800	0.05~0.1	0.05~0.1	3D MILLING

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UVTR1210	40	105	2700~3200	500~700	0.05~0.15	7~9	SLOTTING
X-UVTR1210	40	75	2000~2400	400~600	12	0.05~0.15	SIDE MILLING
X-UVTR1210	40	105	2700~3200	1000~1400	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1210	60	90	2300~2800	400~600	0.05~0.15	7~9	SLOTTING
X-UVTR1210	60	55	1400~1800	300~500	12	0.05~0.15	SIDE MILLING
X-UVTR1210	60	90	2300~2800	800~1200	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1210	100	65	1700~2200	300~500	0.05~0.15	7~9	SLOTTING
X-UVTR1210	100	65	1700~2200	600~800	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1605	60	120	2400~2800	600~800	0.05~0.15	12~14	SLOTTING
X-UVTR1605	60	70	1400~1800	400~600	16	0.05~0.15	SIDE MILLING
X-UVTR1605	60	100	2000~2400	800~1200	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1605	100	100	2000~2400	500~700	0.05~0.15	12~14	SLOTTING
X-UVTR1605	100	40	800~1100	200~400	16	0.05~0.15	SIDE MILLING
X-UVTR1605	100	90	1800~2200	600~800	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1605	130	80	1600~2000	300~500	0.05~0.15	12~14	SLOTTING
X-UVTR1605	130	70	1400~1800	300~500	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1610	60	120	2400~2800	600~800	0.05~0.15	11~13	SLOTTING
X-UVTR1610	60	70	1400~1800	400~600	16	0.05~0.15	SIDE MILLING
X-UVTR1610	60	100	2000~2400	800~1200	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1610	100	100	2000~2400	500~700	0.05~0.15	11~13	SLOTTING
X-UVTR1610	100	40	800~1100	200~400	16	0.05~0.15	SIDE MILLING
X-UVTR1610	100	90	1800~2200	600~800	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1610	130	80	1600~2000	300~500	0.05~0.15	11~13	SLOTTING
X-UVTR1610	130	70	1400~1800	300~500	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1620	60	120	2400~2800	600~800	0.05~0.15	9~11	SLOTTING
X-UVTR1620	60	70	1400~1800	400~600	16	0.05~0.15	SIDE MILLING
X-UVTR1620	60	100	2000~2400	800~1200	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1620	100	100	2000~2400	500~700	0.05~0.15	9~11	SLOTTING
X-UVTR1620	100	40	800~1100	200~400	16	0.05~0.15	SIDE MILLING
X-UVTR1620	100	90	1800~2200	600~800	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR1620	130	80	1600~2000	300~500	0.05~0.15	9~11	SLOTTING
X-UVTR1620	130	70	1400~1800	300~500	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR2010	80	150	2400~2800	600~800	0.05~0.15	15~17	SLOTTING
X-UVTR2010	80	50	800~1000	150~300	20	0.05~0.15	SIDE MILLING
X-UVTR2010	80	150	2400~2800	600~1000	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR2010	130	125	2000~2400	400~600	0.05~0.15	15~17	SLOTTING
X-UVTR2010	130	125	2000~2400	600~800	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR2010	180	90	1400~1800	300~500	0.05~0.15	15~17	SLOTTING
X-UVTR2010	180	90	1400~1800	400~600	0.05~0.15	0.05~0.15	3D MILLING
X-UVTR2020	80	150	2400~2800	600~800	0.05~0.15	13~15	SLOTTING

X-BTB^{3T}

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-BTB0803	30	280	10000~11000	2200~2600	0.18~0.23	0.36~0.46	3D MILLING
X-BTB0803	30	330	12000~13000	3600~4000	0.08~0.13	0.16~0.26	3D MILLING
X-BTB0803	50	185	6700~7300	1400~1800	0.15~0.2	0.3~0.4	3D MILLING
X-BTB0803	50	225	8300~8800	2000~2400	0.08~0.1	0.16~0.2	3D MILLING
X-BTB0803	70	175	6000~7000	1400~1800	0.08~0.1	0.16~0.2	3D MILLING
X-BTB1003	40	290	8700~9200	2200~2600	0.23~0.28	0.46~0.56	3D MILLING
X-BTB1003	40	290	8700~9200	3200~3600	0.1~0.15	0.2~0.3	3D MILLING
X-BTB1003	60	290	8700~9200	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
X-BTB1003	60	290	8700~9200	2000~2400	0.06~0.1	0.12~0.2	3D MILLING
X-BTB1003	100	195	5700~6200	1000~1200	0.1~0.14	0.2~0.28	3D MILLING
X-BTB1003	100	260	7700~8200	1200~1500	0.06~0.1	0.12~0.2	3D MILLING
X-BTB1203	40	325	8200~8600	2100~2500	0.28~0.3	0.56~0.6	3D MILLING
X-BTB1203	40	325	8200~8600	2800~3200	0.1~0.15	0.2~0.3	3D MILLING
X-BTB1203	60	325	8200~8600	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
X-BTB1203	60	325	8200~8600	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
X-BTB1203	100	220	5300~5800	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-BTB1603	60	230	4000~4500	1600~2000	0.23~0.28	0.46~0.56	3D MILLING
X-BTB1603	60	305	5500~6000	2600~3000	0.12~0.17	0.24~0.34	3D MILLING
X-BTB1603	100	175	3000~3500	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
X-BTB1603	100	230	4000~4500	2000~2400	0.12~0.17	0.24~0.34	3D MILLING
X-BTB1603	140	140	2300~2800	1200~1500	0.1~0.15	0.2~0.3	3D MILLING
X-BTB2003	80	330	4700~5200	1600~2000	0.23~0.28	0.46~0.56	3D MILLING
X-BTB2003	80	380	5500~6000	2000~2400	0.12~0.17	0.24~0.34	3D MILLING
X-BTB2003	130	160	2000~2500	1100~1400	0.2~0.25	0.4~0.5	3D MILLING
X-BTB2003	130	220	3000~3500	1200~1600	0.12~0.17	0.24~0.34	3D MILLING
X-BTB2003	180	140	1800~2200	1000~1300	0.1~0.15	0.2~0.3	3D MILLING
X-BTB2503	80	330	3500~4000	1300~1700	0.23~0.28	0.46~0.56	3D MILLING
X-BTB2503	80	350	4000~4500	1800~2200	0.12~0.17	0.24~0.34	3D MILLING
X-BTB2503	130	220	2400~2800	1000~1400	0.2~0.25	0.4~0.5	3D MILLING
X-BTB2503	130	300	3400~3800	1300~1700	0.12~0.17	0.24~0.34	3D MILLING
X-BTB2503	180	240	2500~3000	1100~1400	0.1~0.15	0.2~0.3	3D MILLING
X-BTB3203	80	330	2700~3200	1100~1500	0.23~0.28	0.46~0.56	3D MILLING
X-BTB3203	80	370	3500~4000	1500~1900	0.12~0.17	0.24~0.34	3D MILLING
X-BTB3203	140	280	2400~2800	900~1300	0.2~0.25	0.4~0.5	3D MILLING
X-BTB3203	140	340	3200~3700	1200~1600	0.12~0.17	0.24~0.34	3D MILLING
X-BTB3203	200	220	1800~2200	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UB^{2T}

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UB0802	25	280	10000~11000	2000~2400	0.18~0.23	0.36~0.46	3D MILLING
X-UB0802	25	330	12000~13000	3800~4200	0.08~0.13	0.16~0.26	3D MILLING
X-UB0802	45	185	6700~7300	1200~1600	0.15~0.2	0.3~0.4	3D MILLING
X-UB0802	45	225	8300~8800	1800~2200	0.08~0.1	0.16~0.2	3D MILLING
X-UB0802	65	175	6000~7000	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
X-UB1002	40	290	8700~9200	2600~3000	0.23~0.28	0.46~0.56	3D MILLING
X-UB1002	40	290	8700~9200	3600~4000	0.1~0.15	0.2~0.3	3D MILLING
X-UB1002	60	290	8700~9200	1800~2200	0.1~0.15	0.2~0.3	3D MILLING
X-UB1002	60	290	8700~9200	2200~2600	0.06~0.1	0.12~0.2	3D MILLING
X-UB1002	100	195	5700~6200	1100~1300	0.1~0.14	0.2~0.28	3D MILLING
X-UB1002	100	260	7700~8200	1400~1700	0.06~0.1	0.12~0.2	3D MILLING
X-UB1202	40	325	8200~8600	2200~2600	0.28~0.3	0.56~0.6	3D MILLING
X-UB1202	40	325	8200~8600	3000~3400	0.1~0.15	0.2~0.3	3D MILLING
X-UB1202	60	325	8200~8600	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
X-UB1202	60	325	8200~8600	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
X-UB1202	100	220	5300~5800	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UB1602	60	230	4000~4500	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
X-UB1602	60	305	5500~6000	2800~3200	0.12~0.17	0.24~0.34	3D MILLING
X-UB1602	100	175	3000~3500	1200~1600	0.23~0.28	0.46~0.56	3D MILLING
X-UB1602	100	230	4000~4500	2200~2600	0.12~0.17	0.24~0.34	3D MILLING
X-UB1602	140	140	2300~2800	1300~1600	0.1~0.15	0.2~0.3	3D MILLING
X-UB2002	80	360	5200~5700	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
X-UB2002	80	380	5500~6000	2400~2800	0.12~0.17	0.24~0.34	3D MILLING
X-UB2002	130	190	2500~3000	900~1200	0.2~0.25	0.4~0.5	3D MILLING
X-UB2002	130	220	3000~3500	1600~2000	0.12~0.17	0.24~0.34	3D MILLING
X-UB2002	180	140	1700~2200	1000~1300	0.1~0.15	0.2~0.3	3D MILLING
X-UB2502	80	330	3500~4000	1300~1700	0.23~0.28	0.46~0.56	3D MILLING
X-UB2502	80	350	4000~4500	1800~2200	0.12~0.17	0.24~0.34	3D MILLING
X-UB2502	130	220	2400~2800	1000~1400	0.2~0.25	0.4~0.5	3D MILLING
X-UB2502	130	300	3400~3800	1300~1700	0.12~0.17	0.24~0.34	3D MILLING
X-UB2502	180	240	2500~3000	1100~1400	0.1~0.15	0.2~0.3	3D MILLING
X-UB3202	80	330	2700~3200	1100~1500	0.23~0.28	0.46~0.56	3D MILLING
X-UB3202	80	370	3500~4000	1500~1900	0.12~0.17	0.24~0.34	3D MILLING
X-UB3202	140	280	2400~2800	900~1300	0.2~0.25	0.4~0.5	3D MILLING
X-UB3202	140	340	3200~3700	1200~1600	0.12~0.17	0.24~0.34	3D MILLING
X-UB3202	200	220	1800~2200	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UB^{2T}

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UB0802	25	280	10000~11000	2600~3000	0.06~0.09	0.12~0.18	3D MILLING
X-UB0802	45	145	5400~5800	1600~2000	0.06~0.08	0.12~0.16	3D MILLING
X-UB0802	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
X-UB1002	40	260	7700~8200	2600~3000	0.08~0.13	0.16~0.26	3D MILLING
X-UB1002	60	230	6700~7200	1400~1800	0.08~0.13	0.16~0.26	3D MILLING
X-UB1002	80	185	5300~5800	1000~1200	0.07~0.1	0.16~0.2	3D MILLING
X-UB1202	40	305	7500~8000	1800~2200	0.08~0.13	0.16~0.26	3D MILLING
X-UB1202	60	290	7200~7700	1200~1600	0.08~0.13	0.16~0.26	3D MILLING
X-UB1202	100	220	5300~5800	800~1100	0.08~0.13	0.16~0.26	3D MILLING
X-UB1602	60	215	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UB1602	100	160	2800~3200	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
X-UB1602	130	115	2000~2300	800~1200	0.1~0.12	0.2~0.24	3D MILLING
X-UB2002	80	315	4500~5000	1200~1600	0.1~0.15	0.2~0.3	3D MILLING
X-UB2002	130	190	2500~3000	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UB2002	180	140	1700~2200	800~1000	0.08~0.1	0.16~0.2	3D MILLING
X-UB2502	80	315	3500~4000	1300~1700	0.1~0.15	0.2~0.3	3D MILLING
X-UB2502	130	240	2500~3000	1000~1400	0.1~0.15	0.2~0.3	3D MILLING
X-UB2502	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UB3202	80	330	3200~3700	1300~1700	0.12~0.17	0.2~0.3	3D MILLING
X-UB3202	140	260	2700~3200	1000~1400	0.12~0.17	0.24~0.34	3D MILLING
X-UB3202	200	200	1600~2000	700~1100	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(HSK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.
3. When X-UB1002 of extension is 100mm in HRC52, the cutting data is not good.

X-UB^{4T}

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UB0804	25	330	12000~13000	4000~4400	0.08~0.13	0.16~0.26	3D MILLING
X-UB0804	45	225	8300~8800	2000~2400	0.08~0.1	0.16~0.2	3D MILLING
X-UB0804	65	175	6000~7000	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
X-UB1004	40	290	8700~9200	3600~4000	0.1~0.15	0.2~0.3	3D MILLING
X-UB1004	60	290	8700~9200	2400~2800	0.06~0.1	0.12~0.2	3D MILLING
X-UB1004	100	260	7700~8200	1400~1700	0.06~0.1	0.12~0.2	3D MILLING
X-UB1204	40	325	8200~8600	3200~3600	0.1~0.15	0.2~0.3	3D MILLING
X-UB1204	60	325	8200~8600	2400~2800	0.1~0.15	0.2~0.3	3D MILLING
X-UB1204	100	220	5300~5800	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UB1604	60	305	5500~6000	2800~3200	0.12~0.17	0.24~0.34	3D MILLING
X-UB1604	100	230	4000~4500	2200~2600	0.12~0.17	0.24~0.34	3D MILLING
X-UB1604	140	140	2300~2800	1300~1600	0.1~0.15	0.2~0.3	3D MILLING
X-UB2004	80	380	5500~6000	2800~3200	0.12~0.17	0.24~0.34	3D MILLING
X-UB2004	130	220	3000~3500	1600~2000	0.12~0.17	0.24~0.34	3D MILLING
X-UB2004	180	140	1700~2200	1000~1300	0.1~0.15	0.2~0.3	3D MILLING
X-UB2504	80	350	4000~4500	2000~2400	0.12~0.17	0.24~0.34	3D MILLING
X-UB2504	130	300	3400~3800	1300~1700	0.12~0.17	0.24~0.34	3D MILLING
X-UB2504	180	240	2500~3000	1100~1400	0.1~0.15	0.2~0.3	3D MILLING
X-UB3204	80	370	3500~4000	1600~2000	0.12~0.17	0.24~0.34	3D MILLING
X-UB3204	140	340	3200~3700	1200~1600	0.12~0.17	0.24~0.34	3D MILLING
X-UB3204	200	220	1800~2200	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UB^{4T}

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UB0804	25	280	10000~11000	2800~3200	0.06~0.09	0.12~0.18	3D MILLING
X-UB0804	45	145	5400~5800	1800~2200	0.06~0.08	0.12~0.16	3D MILLING
X-UB0804	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
X-UB1004	40	260	7700~8200	2600~3000	0.08~0.13	0.16~0.26	3D MILLING
X-UB1004	60	230	6700~7200	1600~2000	0.08~0.13	0.16~0.26	3D MILLING
X-UB1004	80	185	5300~5800	1000~1200	0.07~0.1	0.16~0.2	3D MILLING
X-UB1204	40	305	7500~8000	2200~2600	0.08~0.13	0.16~0.26	3D MILLING
X-UB1204	60	290	7200~7700	1400~1800	0.08~0.13	0.16~0.26	3D MILLING
X-UB1204	100	220	5300~5800	800~1100	0.08~0.13	0.16~0.26	3D MILLING
X-UB1604	60	215	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UB1604	100	160	2800~3200	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
X-UB1604	130	115	2000~2300	800~1200	0.1~0.12	0.2~0.24	3D MILLING
X-UB2004	80	315	4500~5000	1400~1800	0.1~0.15	0.2~0.3	3D MILLING
X-UB2004	130	190	2500~3000	900~1300	0.1~0.15	0.2~0.3	3D MILLING
X-UB2004	180	140	1700~2200	800~1000	0.08~0.1	0.16~0.2	3D MILLING
X-UB2504	80	315	3500~4000	1400~1800	0.1~0.15	0.2~0.3	3D MILLING
X-UB2504	130	240	2500~3000	1100~1500	0.1~0.15	0.2~0.3	3D MILLING
X-UB2504	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UB3204	80	330	3200~3700	1400~1800	0.12~0.17	0.2~0.3	3D MILLING
X-UB3204	140	260	2700~3200	1000~1400	0.12~0.17	0.24~0.34	3D MILLING
X-UB3204	200	200	1600~2000	700~1100	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UBT^{2T}

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UBT0802	25	280	10000~11000	1800~2000	0.15~0.2	0.3~0.4	3D MILLING
X-UBT0802	25	280	10000~11000	3000~3400	0.07~0.1	0.14~0.2	3D MILLING
X-UBT0802	45	145	5400~5800	1600~2000	0.06~0.08	0.12~0.16	3D MILLING
X-UBT0802	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
X-UBT1002	40	280	8700~9200	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
X-UBT1002	40	280	8700~9200	2600~3000	0.08~0.13	0.16~0.26	3D MILLING
X-UBT1002	60	215	6700~7200	1600~2000	0.08~0.13	0.16~0.26	3D MILLING
X-UBT1002	80	175	5500~6000	1000~1200	0.07~0.1	0.14~0.2	3D MILLING
X-UBT1202	40	300	7800~8200	2200~2600	0.25~0.3	0.5~0.6	3D MILLING
X-UBT1202	40	300	7800~8200	2600~3000	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1202	60	225	5800~6300	1200~1600	0.2~0.25	0.4~0.5	3D MILLING
X-UBT1202	60	280	7200~7700	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1202	100	160	4000~4500	1100~1300	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1602	60	200	3800~4200	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
X-UBT1602	60	200	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1602	100	170	3200~3700	1400~1700	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1602	130	135	2500~3000	1000~1200	0.1~0.12	0.2~0.24	3D MILLING
X-UBT2002	80	325	5000~5500	1400~1800	0.2~0.23	0.4~0.46	3D MILLING
X-UBT2002	80	355	5500~6000	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2002	130	220	3200~3700	800~1000	0.2~0.23	0.4~0.46	3D MILLING
X-UBT2002	130	315	4700~5200	1400~1800	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2002	180	140	1700~2200	800~1000	0.08~0.1	0.16~0.2	3D MILLING
X-UBT2502	80	300	3200~3700	1000~1400	0.2~0.25	0.35~0.5	3D MILLING
X-UBT2502	80	315	3500~4000	1300~1700	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2502	130	240	2500~3000	1000~1400	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2502	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UBT^{2T}

MILLING CONDITIONS

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UBT0802	25	210	7800~8300	2000~2400	0.07~0.1	0.14~0.2	3D MILLING
X-UBT0802	45	125	4500~5000	1300~1700	0.05~0.08	0.1~0.16	3D MILLING
X-UBT0802	65	90	3000~3500	700~900	0.05~0.08	0.1~0.16	3D MILLING
X-UBT1002	40	155	4700~5200	1400~1800	0.1~0.13	0.2~0.26	3D MILLING
X-UBT1002	60	125	3700~4200	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1002	80	45	1400~1700	600~800	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1202	40	240	6200~6700	1600~2000	0.1~0.13	0.2~0.26	3D MILLING
X-UBT1202	60	185	4700~5200	800~1200	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1202	100	95	2200~2700	500~700	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1602	60	150	2700~3200	800~1200	0.1~0.15	0.15~0.25	3D MILLING
X-UBT1602	100	90	1500~2000	800~1200	0.07~0.1	0.07~0.1	3D MILLING
X-UBT1602	130	90	1500~2000	600~1000	0.07~0.1	0.07~0.1	3D MILLING
X-UBT2002	80	110	1500~2000	800~1200	0.07~0.1	0.07~0.1	3D MILLING
X-UBT2002	130	100	1500~1700	600~800	0.07~0.1	0.07~0.1	3D MILLING
X-UBT2502	80	150	1800~2300	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2502	130	120	1300~1700	700~1000	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2502	180	100	1100~1400	600~900	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UBT^{4T}

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UBT0804	25	280	10000~11000	3600~4000	0.07~0.1	0.14~0.2	3D MILLING
X-UBT0804	45	145	5400~5800	1800~2200	0.06~0.08	0.12~0.16	3D MILLING
X-UBT0804	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
X-UBT1004	40	300	9200~9700	2800~3200	0.08~0.13	0.16~0.26	3D MILLING
X-UBT1004	60	220	6700~7200	1800~2200	0.08~0.13	0.16~0.26	3D MILLING
X-UBT1004	80	140	4200~4700	1100~1300	0.07~0.1	0.14~0.2	3D MILLING
X-UBT1204	40	300	7800~8200	2800~3200	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1204	60	280	7200~7700	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1204	80	115	2800~3200	1100~1300	0.08~0.12	0.16~0.24	3D MILLING
X-UBT1604	60	200	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1604	100	175	3200~3700	1400~1700	0.1~0.15	0.2~0.3	3D MILLING
X-UBT1604	130	135	2500~3000	1000~1200	0.1~0.12	0.2~0.24	3D MILLING
X-UBT2004	80	355	5500~6000	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2004	130	305	4700~5200	1400~1800	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2004	180	175	2700~3000	800~1200	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2504	80	315	3500~4000	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2504	130	240	2500~3000	1100~1500	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2504	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-UBT^{4T}

MILLING CONDITIONS

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-UBT0804	25	210	7800~8300	2600~3000	0.07~0.1	0.14~0.2	3D MILLING
X-UBT0804	45	125	4500~5000	1400~1800	0.05~0.08	0.1~0.16	3D MILLING
X-UBT0804	65	90	3000~3500	700~900	0.05~0.08	0.1~0.16	3D MILLING
X-UBT1004	40	155	4700~5200	1400~1800	0.1~0.13	0.2~0.26	3D MILLING
X-UBT1004	60	125	3700~4200	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1004	80	50	1400~1700	600~800	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1204	40	240	6200~6700	1800~2200	0.1~0.13	0.2~0.26	3D MILLING
X-UBT1204	60	185	4700~5200	800~1200	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1204	80	105	2500~3000	600~800	0.08~0.1	0.16~0.2	3D MILLING
X-UBT1604	60	150	2700~3200	800~1200	0.1~0.15	0.15~0.25	3D MILLING
X-UBT1604	100	90	1500~2000	800~1200	0.07~0.1	0.07~0.1	3D MILLING
X-UBT1604	130	90	1500~2000	600~1000	0.07~0.1	0.07~0.1	3D MILLING
X-UBT2004	80	115	1500~2000	800~1200	0.07~0.1	0.14~0.2	3D MILLING
X-UBT2004	130	100	1500~1700	600~800	0.07~0.1	0.07~0.1	3D MILLING
X-UBT2004	180	75	1000~1300	400~600	0.06~0.08	0.06~0.08	3D MILLING
X-UBT2504	80	150	1800~2300	900~1300	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2504	130	120	1300~1700	800~1000	0.1~0.15	0.2~0.3	3D MILLING
X-UBT2504	180	100	1100~1400	600~900	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-BMW

MILLING CONDITIONS

Work Material		Carbon Steels : S50C / SS400 : 1.1210 / 1.0036 : 1050 / A570 Gr.45 (~HRC22)					
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-BMW0804	25	250	9500~10500	4500~5000	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	25	210	8200~8700	2400~2800	0.3~0.4	0.6~0.8	3D MILLING
X-BMW0804	25	195	7600~8000	700~900	0.6~0.8	1~1.2	3D MILLING
X-BMW0804	40	175	6800~7200	3200~3600	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	40	145	5500~6000	1800~2200	0.3~0.4	0.6~0.8	3D MILLING
X-BMW0804	60	125	4800~5200	1600~2000	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	60	100	3800~4200	800~1000	0.3~0.4	0.6~0.8	3D MILLING
X-BMW1004	30	280	8700~9200	6000~6500	0.15~0.25	0.5~0.7	3D MILLING
X-BMW1004	30	260	8000~8500	3200~3600	0.3~0.4	0.8~1	3D MILLING
X-BMW1004	30	260	8000~8500	800~1100	0.6~0.8	1.2~1.6	3D MILLING
X-BMW1004	50	205	6300~6800	3600~4000	0.15~0.25	0.5~0.7	3D MILLING
X-BMW1004	50	195	6000~6400	1000~1400	0.3~0.4	0.8~1	3D MILLING
X-BMW1004	70	130	4000~4500	1200~1600	0.15~0.25	0.5~0.7	3D MILLING
X-BMW1004	70	95	2800~3300	600~900	0.3~0.4	0.8~1	3D MILLING
X-BMW1204	35	315	8200~8600	4000~4500	0.2~0.3	0.6~0.8	3D MILLING
X-BMW1204	35	255	6600~7000	2200~2600	0.35~0.5	1~1.2	3D MILLING
X-BMW1204	35	235	6000~6500	800~1100	0.7~1	1.5~1.8	3D MILLING
X-BMW1204	55	240	6200~6700	2200~2600	0.2~0.3	0.6~0.8	3D MILLING
X-BMW1204	55	190	4800~5300	1100~1500	0.35~0.5	1~1.2	3D MILLING
X-BMW1204	80	150	3700~4200	1400~1800	0.2~0.3	0.6~0.8	3D MILLING
X-BMW1204	80	115	2800~3200	600~800	0.35~0.5	1~1.2	3D MILLING
X-BMW1604	50	290	5500~6000	3700~4200	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	50	250	4700~5200	2500~3000	0.4~0.6	1.2~1.6	3D MILLING
X-BMW1604	50	240	4500~5000	1200~1500	0.8~1	1.5~2	3D MILLING
X-BMW1604	90	200	3700~4200	1800~2200	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	90	150	2800~3200	1200~1600	0.4~0.6	1.2~1.6	3D MILLING
X-BMW1604	130	130	2400~2800	1000~1400	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	130	95	1700~2100	600~800	0.4~0.6	1.2~1.6	3D MILLING
X-BMW2004	60	260	4000~4400	2200~2600	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	60	225	3400~3800	1400~1800	0.4~0.6	1.2~1.6	3D MILLING
X-BMW2004	60	185	2700~3200	700~900	0.8~1	1.5~2	3D MILLING
X-BMW2004	100	225	3400~3800	1400~1800	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	100	165	2400~2800	700~1000	0.4~0.6	1.2~1.6	3D MILLING
X-BMW2004	150	125	1800~2200	800~1100	0.2~0.35	0.7~1	3D MILLING
X-BMW2504	60	260	3200~3600	2000~2400	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	60	225	2700~3100	1200~1600	0.5~0.7	1.4~1.6	3D MILLING
X-BMW2504	60	185	2100~2500	700~900	0.8~1.1	1.7~2	3D MILLING
X-BMW2504	100	225	2700~3100	1200~1600	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	100	165	1900~2300	700~900	0.5~0.7	1.4~1.6	3D MILLING
X-BMW2504	150	125	1400~1800	700~900	0.3~0.4	1~1.2	3D MILLING
X-BMW3004	80	260	2600~3000	1800~2200	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	80	225	2200~2600	1100~1500	0.5~0.7	1.4~1.6	3D MILLING

Carbon Steels : S50C / SS400 : 1.1210 / 1.0036 : 1050 / A570 Gr.45 (~HRc22)							
Coolant Type		Dry / MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BMW3004	80	185	1800~2200	700~900	0.8~1.1	1.7~2	3D MILLING
X-BMW3004	120	225	2200~2600	1100~1500	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	120	165	1600~2000	700~900	0.5~0.7	1.4~1.6	3D MILLING
X-BMW3004	170	125	1100~1500	700~900	0.3~0.4	1~1.2	3D MILLING
X-BMW3204	80	260	2400~2800	1800~2200	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	80	225	2000~2400	1100~1500	0.5~0.7	1.4~1.6	3D MILLING
X-BMW3204	80	185	1600~2000	700~900	0.8~1.1	1.7~2	3D MILLING
X-BMW3204	120	225	2000~2400	1100~1500	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	120	165	1400~1800	700~900	0.5~0.7	1.4~1.6	3D MILLING
X-BMW3204	170	125	1000~1400	700~900	0.3~0.4	1~1.2	3D MILLING

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BMW0804	25	220	8500~9000	3800~4200	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	25	190	7200~7700	2200~2600	0.3~0.4	0.6~0.7	3D MILLING
X-BMW0804	25	175	6700~7200	800~1100	0.4~0.5	0.8~1	3D MILLING
X-BMW0804	40	160	6200~6700	2600~3000	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	40	135	5200~5700	1200~1600	0.3~0.4	0.6~0.7	3D MILLING
X-BMW0804	60	110	4200~4700	1000~1400	0.1~0.2	0.2~0.4	3D MILLING
X-BMW1004	30	230	7200~7600	4600~5000	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1004	30	210	6400~6800	2000~2400	0.3~0.4	0.7~0.8	3D MILLING
X-BMW1004	30	175	5400~5800	800~1100	0.5~0.6	1~1.2	3D MILLING
X-BMW1004	50	170	5200~5700	2000~2400	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1004	50	160	4800~5200	800~1100	0.3~0.4	0.7~0.8	3D MILLING
X-BMW1004	70	130	4000~4500	1800~2200	0.1~0.2	0.2~0.4	3D MILLING
X-BMW1004	70	90	2700~3200	800~1100	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1204	35	280	7200~7600	3000~3400	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1204	35	230	6000~6400	1600~2000	0.35~0.5	0.8~1	3D MILLING
X-BMW1204	35	205	5200~5700	800~1200	0.6~0.7	1.2~1.4	3D MILLING
X-BMW1204	55	190	4800~5300	1800~2200	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1204	55	160	4000~4400	800~1200	0.35~0.5	0.8~1	3D MILLING
X-BMW1204	80	150	3700~4200	1800~2200	0.1~0.2	0.3~0.5	3D MILLING
X-BMW1204	80	135	3400~3800	800~1200	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1604	50	240	4500~5000	3000~3500	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	50	210	4000~4500	1200~1600	0.4~0.5	1.2~1.5	3D MILLING
X-BMW1604	50	210	4000~4500	800~1300	0.6~0.8	1.5~1.7	3D MILLING
X-BMW1604	80	190	3600~4000	1200~1600	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	80	160	3000~3400	900~1300	0.35~0.45	1~1.3	3D MILLING

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRC23~32)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BMW1604	110	200	3800~4200	1600~2000	0.1~0.2	0.3~0.5	3D MILLING
X-BMW1604	110	140	2600~3000	800~1100	0.2~0.35	0.6~0.8	3D MILLING
X-BMW2004	60	250	3800~4200	2000~2400	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	60	240	3600~4000	1200~1600	0.4~0.5	1.2~1.5	3D MILLING
X-BMW2004	60	175	2600~3000	700~1000	0.6~0.8	1.5~1.7	3D MILLING
X-BMW2004	90	225	3400~3800	1200~1600	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	90	155	2200~2700	700~1000	0.35~0.45	1~1.3	3D MILLING
X-BMW2004	130	150	2200~2600	700~1000	0.2~0.35	0.6~0.8	3D MILLING
X-BMW2504	60	250	3000~3400	1800~2200	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	60	235	2800~3200	1000~1400	0.5~0.6	1.4~1.5	3D MILLING
X-BMW2504	60	170	2000~2400	600~800	0.8~1	1.5~1.8	3D MILLING
X-BMW2504	100	225	2700~3100	1000~1400	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	100	150	1700~2100	700~900	0.4~0.5	1.2~1.5	3D MILLING
X-BMW2504	150	150	1700~2100	700~900	0.2~0.35	0.7~1	3D MILLING
X-BMW3004	80	250	2400~2800	1600~2000	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	80	235	2300~2700	1000~1300	0.5~0.6	1.4~1.5	3D MILLING
X-BMW3004	80	170	1600~2000	600~800	0.8~1	1.5~1.8	3D MILLING
X-BMW3004	120	225	2200~2600	1000~1400	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	120	150	1400~1800	600~800	0.4~0.5	1.2~1.5	3D MILLING
X-BMW3004	170	150	1400~1800	700~900	0.2~0.35	0.7~1	3D MILLING
X-BMW3204	80	250	2300~2700	1800~2200	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	80	235	2100~2500	1100~1500	0.5~0.6	1.4~1.5	3D MILLING
X-BMW3204	80	170	1500~1900	700~900	0.8~1	1.5~1.8	3D MILLING
X-BMW3204	120	225	2000~2400	1100~1500	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	120	150	1300~1700	600~800	0.4~0.5	1.2~1.5	3D MILLING
X-BMW3204	170	150	1300~1700	600~800	0.2~0.35	0.7~1	3D MILLING

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BMW0804	25	220	8500~9000	3400~3800	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	25	190	7200~7700	1800~2200	0.3~0.4	0.6~0.7	3D MILLING
X-BMW0804	25	175	6700~7200	700~1000	0.4~0.5	0.8~1	3D MILLING
X-BMW0804	40	160	6200~6700	2200~2600	0.15~0.25	0.3~0.5	3D MILLING
X-BMW0804	40	135	5200~5700	1000~1400	0.3~0.4	0.6~0.7	3D MILLING
X-BMW0804	60	110	4200~4700	800~1200	0.1~0.2	0.2~0.4	3D MILLING
X-BMW1004	30	230	7200~7600	4200~4600	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1004	30	210	6400~6800	1600~2000	0.3~0.4	0.7~0.8	3D MILLING
X-BMW1004	30	175	5400~5800	700~1000	0.5~0.6	1~1.2	3D MILLING

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-BMW1004	50	170	5200~5700	1800~2200	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1004	50	160	4800~5200	700~1000	0.3~0.4	0.7~0.8	3D MILLING
X-BMW1004	70	130	4000~4500	1600~2000	0.1~0.2	0.2~0.4	3D MILLING
X-BMW1004	70	90	2700~3200	600~900	0.15~0.25	0.5~0.6	3D MILLING
X-BMW1204	35	280	7200~7600	3000~3400	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1204	35	230	6000~6400	1400~1800	0.35~0.5	0.8~1	3D MILLING
X-BMW1204	35	205	5200~5700	700~1100	0.6~0.7	1.2~1.4	3D MILLING
X-BMW1204	55	190	4800~5300	1400~1800	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1204	55	160	4000~4400	800~1100	0.35~0.5	0.8~1	3D MILLING
X-BMW1204	80	150	3800~4200	1400~1800	0.1~0.2	0.3~0.5	3D MILLING
X-BMW1204	80	135	3400~3800	700~1000	0.2~0.3	0.6~0.7	3D MILLING
X-BMW1604	50	240	4500~5000	3000~3500	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	50	210	4000~4500	1100~1500	0.4~0.5	1.2~1.5	3D MILLING
X-BMW1604	50	210	4000~4500	800~1100	0.6~0.8	1.5~1.7	3D MILLING
X-BMW1604	80	190	3600~4000	1100~1500	0.2~0.35	0.7~1.2	3D MILLING
X-BMW1604	80	160	3000~3400	800~1100	0.35~0.45	1~1.3	3D MILLING
X-BMW1604	110	200	3800~4200	1400~1800	0.1~0.2	0.3~0.5	3D MILLING
X-BMW1604	110	140	2600~3000	700~900	0.2~0.35	0.6~0.8	3D MILLING
X-BMW2004	60	250	3800~4200	2000~2400	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	60	240	3600~4000	1100~1500	0.4~0.5	1.2~1.5	3D MILLING
X-BMW2004	60	175	2600~3000	600~900	0.6~0.8	1.5~1.7	3D MILLING
X-BMW2004	90	225	3400~3800	1000~1400	0.2~0.35	0.7~1.2	3D MILLING
X-BMW2004	90	155	2200~2700	600~800	0.35~0.45	1~1.3	3D MILLING
X-BMW2004	130	150	2200~2600	600~900	0.2~0.35	0.6~0.8	3D MILLING
X-BMW2504	60	250	3000~3400	1600~2000	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	60	235	2800~3200	1000~1200	0.5~0.6	1.4~1.5	3D MILLING
X-BMW2504	60	170	2000~2400	500~700	0.8~1	1.5~1.8	3D MILLING
X-BMW2504	100	225	2700~3100	1000~1200	0.3~0.4	1~1.4	3D MILLING
X-BMW2504	100	150	1700~2100	600~800	0.4~0.5	1.2~1.5	3D MILLING
X-BMW2504	150	150	1700~2100	600~800	0.2~0.35	0.7~1	3D MILLING
X-BMW3004	80	250	2400~2800	1400~1800	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	80	235	2300~2700	900~1100	0.5~0.6	1.4~1.5	3D MILLING
X-BMW3004	80	170	1600~2000	600~800	0.7~0.9	1.5~1.8	3D MILLING
X-BMW3004	120	225	2200~2600	900~1200	0.3~0.4	1~1.4	3D MILLING
X-BMW3004	120	150	1400~1800	500~700	0.4~0.5	1.2~1.5	3D MILLING
X-BMW3004	170	150	1400~1800	700~900	0.2~0.35	0.7~1	3D MILLING
X-BMW3204	80	250	2300~2700	1600~2000	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	80	235	2100~2500	1000~1300	0.5~0.6	1.4~1.5	3D MILLING
X-BMW3204	80	170	1500~1900	700~900	0.7~0.9	1.5~1.8	3D MILLING
X-BMW3204	120	225	2000~2400	1000~1300	0.3~0.4	1~1.4	3D MILLING
X-BMW3204	120	150	1300~1700	500~700	0.4~0.5	1.2~1.5	3D MILLING
X-BMW3204	170	150	1300~1700	500~700	0.2~0.35	0.7~1	3D MILLING

X-UBY

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UBY0804	25	270	10500~11500	2200~2600	0.15~0.25	0.3~0.5	3D MILLING
X-UBY0804	25	315	12000~13000	2200~2600	0.05~0.1	0.05~0.2	3D MILLING
X-UBY0804	40	195	7500~8000	1600~2000	0.15~0.25	0.3~0.5	3D MILLING
X-UBY0804	40	240	9000~10000	1600~2000	0.05~0.1	0.05~0.2	3D MILLING
X-UBY0804	60	105	4000~4500	1400~1800	0.1~0.2	0.3~0.4	3D MILLING
X-UBY0804	60	115	4300~4800	800~1100	0.05~0.1	0.05~0.15	3D MILLING
X-UBY1004	30	280	8700~9200	2000~2400	0.15~0.25	0.4~0.6	3D MILLING
X-UBY1004	30	300	9000~10000	2800~3200	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	50	230	7000~7500	1400~1800	0.15~0.25	0.4~0.6	3D MILLING
X-UBY1004	50	245	7600~8000	2200~2600	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	70	125	3800~4200	1000~1400	0.15~0.25	0.4~0.5	3D MILLING
X-UBY1004	70	190	5800~6300	1000~1400	0.05~0.15	0.1~0.2	3D MILLING
X-UBY1204	35	280	7200~7700	2200~2600	0.2~0.3	0.4~0.6	3D MILLING
X-UBY1204	35	280	7200~7700	2400~2800	0.05~0.15	0.2~0.3	3D MILLING
X-UBY1204	55	260	6700~7200	1800~2200	0.2~0.3	0.4~0.6	3D MILLING
X-UBY1204	55	280	7200~7700	1800~2200	0.05~0.15	0.2~0.3	3D MILLING
X-UBY1204	80	230	5800~6300	1200~1600	0.2~0.3	0.4~0.6	3D MILLING
X-UBY1204	80	255	6500~7000	1400~1800	0.05~0.15	0.15~0.25	3D MILLING
X-UBY1604	50	230	4300~4800	1800~2200	0.2~0.35	0.6~0.8	3D MILLING
X-UBY1604	50	280	5300~5800	2200~2600	0.05~0.2	0.2~0.35	3D MILLING
X-UBY1604	90	200	3700~4200	1200~1600	0.2~0.35	0.6~0.8	3D MILLING
X-UBY1604	90	240	4500~5000	1600~2000	0.05~0.2	0.2~0.35	3D MILLING
X-UBY1604	130	120	2200~2600	700~1100	0.2~0.35	0.6~0.7	3D MILLING
X-UBY1604	130	140	2600~3000	800~1200	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2004	60	225	3400~3800	1600~2000	0.3~0.4	0.8~1	3D MILLING
X-UBY2004	60	275	4200~4600	2000~2400	0.05~0.2	0.2~0.35	3D MILLING
X-UBY2004	100	200	3000~3400	1200~1600	0.3~0.4	0.8~1	3D MILLING
X-UBY2004	100	240	3600~4000	1600~2000	0.05~0.2	0.2~0.35	3D MILLING
X-UBY2004	150	120	1700~2100	700~1100	0.3~0.4	0.7~0.9	3D MILLING
X-UBY2004	150	140	2000~2400	800~1200	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2504	70	225	2600~3000	1600~2000	0.3~0.4	0.8~1	3D MILLING
X-UBY2504	70	275	3300~3700	1800~2200	0.05~0.2	0.2~0.35	3D MILLING
X-UBY2504	110	200	2200~2700	1100~1400	0.3~0.4	0.8~1	3D MILLING
X-UBY2504	110	240	2800~3200	1400~1800	0.05~0.2	0.2~0.35	3D MILLING
X-UBY2504	160	120	1300~1700	700~1000	0.3~0.4	0.7~0.9	3D MILLING
X-UBY2504	160	140	1600~2000	800~1100	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3004	80	225	2200~2600	1400~1800	0.3~0.4	0.8~1	3D MILLING
X-UBY3004	80	275	2700~3100	1600~2000	0.05~0.2	0.2~0.35	3D MILLING
X-UBY3004	120	200	1800~2200	900~1200	0.3~0.4	0.8~1	3D MILLING
X-UBY3004	120	220	2000~2400	1200~1500	0.05~0.2	0.2~0.35	3D MILLING
X-UBY3004	170	120	1100~1500	600~900	0.3~0.4	0.7~0.9	3D MILLING
X-UBY3004	170	140	1200~1600	700~1000	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3204	80	225	2000~2400	1200~1600	0.3~0.4	0.8~1	3D MILLING
X-UBY3204	80	275	2500~2900	1400~1800	0.05~0.2	0.2~0.35	3D MILLING
X-UBY3204	120	200	1800~2200	800~1100	0.3~0.4	0.8~1	3D MILLING
X-UBY3204	120	220	2000~2400	1000~1300	0.05~0.2	0.2~0.35	3D MILLING
X-UBY3204	170	120	1000~1400	600~900	0.3~0.4	0.7~0.9	3D MILLING
X-UBY3204	170	140	1200~1400	600~900	0.05~0.2	0.2~0.3	3D MILLING

X-UBY

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UBY0804	25	220	8500~9000	2000~2400	0.1~0.2	0.3~0.4	3D MILLING
X-UBY0804	25	240	9000~10000	1800~2200	0.05~0.1	0.05~0.2	3D MILLING
X-UBY0804	40	180	7000~7500	1400~1800	0.1~0.2	0.3~0.4	3D MILLING
X-UBY0804	40	195	7500~8000	1400~1800	0.05~0.1	0.05~0.2	3D MILLING
X-UBY0804	60	100	3800~4300	1000~1400	0.1~0.15	0.2~0.3	3D MILLING
X-UBY0804	60	110	4200~4700	700~1000	0.05~0.1	0.05~0.15	3D MILLING
X-UBY1004	30	240	7500~8000	1800~2200	0.15~0.25	0.35~0.45	3D MILLING
X-UBY1004	30	280	8700~9200	2200~2600	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	50	220	6700~7200	1300~1700	0.15~0.25	0.35~0.45	3D MILLING
X-UBY1004	50	220	6700~7200	1600~2000	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	70	120	3600~4000	800~1200	0.1~0.2	0.3~0.4	3D MILLING
X-UBY1004	70	155	4700~5200	800~1200	0.05~0.15	0.1~0.2	3D MILLING
X-UBY1204	35	255	6500~7000	2200~2600	0.15~0.25	0.4~0.5	3D MILLING
X-UBY1204	35	260	6700~7200	2000~2400	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1204	55	225	5700~6200	1400~1800	0.15~0.25	0.4~0.5	3D MILLING
X-UBY1204	55	260	6700~7200	1600~2000	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1204	80	170	4300~4800	1200~1600	0.1~0.2	0.3~0.4	3D MILLING
X-UBY1204	80	140	3600~4000	800~1200	0.05~0.15	0.1~0.2	3D MILLING
X-UBY1604	50	200	3800~4200	1400~1800	0.2~0.35	0.5~0.7	3D MILLING
X-UBY1604	50	270	5200~5700	1800~2200	0.05~0.2	0.15~0.3	3D MILLING
X-UBY1604	90	180	3400~3800	1000~1400	0.2~0.35	0.5~0.7	3D MILLING
X-UBY1604	90	210	4000~4500	1400~1800	0.05~0.2	0.15~0.3	3D MILLING
X-UBY1604	130	100	1800~2200	700~1000	0.2~0.3	0.4~0.6	3D MILLING
X-UBY1604	130	130	2400~2800	800~1100	0.05~0.15	0.15~0.25	3D MILLING
X-UBY2004	60	200	3000~3400	1400~1800	0.3~0.4	0.6~0.8	3D MILLING
X-UBY2004	60	270	4100~4500	1600~2000	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2004	100	180	2700~3100	1000~1400	0.3~0.4	0.6~0.8	3D MILLING
X-UBY2004	100	210	3200~3600	1400~1800	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2004	150	100	1400~1800	700~1000	0.3~0.4	0.5~0.7	3D MILLING
X-UBY2004	150	130	1900~2300	800~1100	0.05~0.15	0.15~0.25	3D MILLING
X-UBY2504	70	200	2200~2700	1200~1600	0.3~0.4	0.6~0.8	3D MILLING
X-UBY2504	70	270	3200~3600	1400~1800	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2504	110	180	2100~2500	900~1200	0.3~0.4	0.6~0.8	3D MILLING
X-UBY2504	110	210	2400~2800	1200~1600	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2504	160	100	1000~1400	600~900	0.3~0.4	0.5~0.7	3D MILLING
X-UBY2504	160	130	1400~1800	700~1000	0.05~0.15	0.15~0.25	3D MILLING
X-UBY3004	80	200	1900~2300	1000~1400	0.3~0.4	0.6~0.8	3D MILLING
X-UBY3004	80	270	2600~3000	1200~1600	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3004	120	180	1700~2100	700~1000	0.3~0.4	0.6~0.8	3D MILLING
X-UBY3004	120	210	2000~2400	1000~1400	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3004	170	100	800~1200	500~800	0.3~0.4	0.5~0.7	3D MILLING
X-UBY3004	170	130	1200~1600	600~900	0.05~0.15	0.15~0.25	3D MILLING
X-UBY3204	80	200	1800~2200	1000~1300	0.3~0.4	0.6~0.8	3D MILLING
X-UBY3204	80	270	2400~2800	1200~1500	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3204	120	180	1600~2000	700~900	0.3~0.4	0.6~0.8	3D MILLING
X-UBY3204	120	210	1700~2100	900~1200	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3204	170	100	800~1200	500~700	0.3~0.4	0.5~0.7	3D MILLING
X-UBY3204	170	130	1000~1400	500~800	0.05~0.15	0.15~0.25	3D MILLING

X-UBY

MILLING CONDITIONS

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry/MQL coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-UBY0804	25	190	7200~7700	1400~1800	0.05~0.1	0.1~0.2	3D MILLING
X-UBY0804	40	140	5400~5800	1000~1400	0.05~0.1	0.1~0.2	3D MILLING
X-UBY0804	60	90	3400~3800	600~900	0.05~0.1	0.05~0.15	3D MILLING
X-UBY1004	30	175	6700~7200	1800~2200	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	50	140	4200~4700	1200~1600	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1004	70	100	3000~3400	700~1100	0.05~0.1	0.1~0.2	3D MILLING
X-UBY1204	35	230	5800~6300	1600~2000	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1204	55	150	3700~4200	1000~1400	0.05~0.15	0.1~0.25	3D MILLING
X-UBY1204	80	100	2400~2800	600~800	0.05~0.1	0.1~0.2	3D MILLING
X-UBY1604	50	190	3600~4000	1200~1600	0.05~0.2	0.15~0.3	3D MILLING
X-UBY1604	90	150	2700~3200	700~1000	0.05~0.2	0.15~0.3	3D MILLING
X-UBY1604	130	105	1900~2300	600~800	0.05~0.15	0.15~0.25	3D MILLING
X-UBY2004	60	190	2800~3200	1000~1400	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2004	100	145	2100~2500	700~1000	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2004	150	105	1500~1900	600~800	0.05~0.15	0.15~0.25	3D MILLING
X-UBY2504	70	190	2200~2600	900~1200	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2504	110	145	1600~2000	600~900	0.05~0.2	0.2~0.3	3D MILLING
X-UBY2504	160	105	1100~1500	500~700	0.05~0.15	0.15~0.25	3D MILLING
X-UBY3004	80	190	1800~2200	800~1100	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3004	120	145	1300~1700	500~800	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3004	170	105	900~1300	400~600	0.05~0.15	0.15~0.25	3D MILLING
X-UBY3204	80	190	1700~2100	800~1100	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3204	120	145	1200~1600	500~800	0.05~0.2	0.2~0.3	3D MILLING
X-UBY3204	170	105	800~1200	400~600	0.05~0.15	0.15~0.25	3D MILLING

Xs-BTB

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
Xs-BTB0802	30	280	10000~11000	2200~2600	0.18~0.23	0.36~0.46	3D MILLING
Xs-BTB0802	30	330	12000~13000	3600~4000	0.08~0.13	0.16~0.26	3D MILLING
Xs-BTB0802	50	185	6700~7300	1400~1800	0.15~0.2	0.3~0.4	3D MILLING
Xs-BTB0802	50	225	8300~8800	2000~2400	0.08~0.1	0.16~0.2	3D MILLING
Xs-BTB0802	70	175	6000~7000	1400~1800	0.08~0.1	0.16~0.2	3D MILLING
Xs-BTB1002	40	290	8700~9200	2200~2600	0.23~0.28	0.46~0.56	3D MILLING
Xs-BTB1002	40	290	8700~9200	3200~3600	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB1002	60	290	8700~9200	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB1002	60	290	8700~9200	2000~2400	0.06~0.1	0.12~0.2	3D MILLING
Xs-BTB1002	100	195	5700~6200	1000~1200	0.1~0.14	0.2~0.28	3D MILLING
Xs-BTB1002	100	260	7700~8200	1200~1500	0.06~0.1	0.12~0.2	3D MILLING
Xs-BTB1202	40	325	8200~8600	2100~2500	0.28~0.3	0.56~0.6	3D MILLING
Xs-BTB1202	40	325	8200~8600	2800~3200	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB1202	60	325	8200~8600	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
Xs-BTB1202	60	325	8200~8600	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB1202	100	220	5300~5800	800~1200	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB1602	60	230	4000~4500	1600~2000	0.23~0.28	0.46~0.56	3D MILLING
Xs-BTB1602	60	305	5500~6000	2600~3000	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB1602	100	175	3000~3500	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
Xs-BTB1602	100	230	4000~4500	2000~2400	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB1602	140	140	2300~2800	1200~1500	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB2002	80	330	4700~5200	1600~2000	0.23~0.28	0.46~0.56	3D MILLING
Xs-BTB2002	80	380	5500~6000	2000~2400	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB2002	130	160	2000~2500	1100~1400	0.2~0.25	0.4~0.5	3D MILLING
Xs-BTB2002	130	220	3000~3500	1200~1600	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB2002	180	140	1800~2200	1000~1300	0.1~0.15	0.2~0.3	3D MILLING
Xs-BTB2502	80	330	3500~4000	1300~1700	0.23~0.28	0.46~0.56	3D MILLING
Xs-BTB2502	80	350	4000~4500	1800~2200	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB2502	130	220	2400~2800	1000~1400	0.2~0.25	0.4~0.5	3D MILLING
Xs-BTB2502	130	300	3400~3800	1300~1700	0.12~0.17	0.24~0.34	3D MILLING
Xs-BTB2502	180	240	2500~3000	1100~1400	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

Xs-UB

MILLING CONDITIONS

Work Material		Prehardened Steels : NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
Xs-UB0802	25	280	10000~11000	2000~2400	0.18~0.23	0.36~0.46	3D MILLING
Xs-UB0802	25	330	12000~13000	3800~4200	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB0802	45	185	6700~7300	1200~1600	0.15~0.2	0.3~0.4	3D MILLING
Xs-UB0802	45	225	8300~8800	1800~2200	0.08~0.1	0.16~0.2	3D MILLING
Xs-UB0802	65	175	6000~7000	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
Xs-UB1002	40	290	8700~9200	2600~3000	0.23~0.28	0.46~0.56	3D MILLING
Xs-UB1002	40	290	8700~9200	3600~4000	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1002	60	290	8700~9200	1800~2200	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1002	60	290	8700~9200	2200~2600	0.06~0.1	0.12~0.2	3D MILLING
Xs-UB1002	100	195	5700~6200	1100~1300	0.1~0.14	0.2~0.28	3D MILLING
Xs-UB1002	100	260	7700~8200	1400~1700	0.06~0.1	0.12~0.2	3D MILLING
Xs-UB1202	40	325	8200~8600	2200~2600	0.28~0.3	0.56~0.6	3D MILLING
Xs-UB1202	40	325	8200~8600	3000~3400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1202	60	325	8200~8600	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
Xs-UB1202	60	325	8200~8600	2200~2600	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1202	100	220	5300~5800	800~1200	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1602	60	230	4000~4500	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
Xs-UB1602	60	305	5500~6000	2800~3200	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB1602	100	175	3000~3500	1200~1600	0.23~0.28	0.46~0.56	3D MILLING
Xs-UB1602	100	230	4000~4500	2200~2600	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB1602	140	140	2300~2800	1300~1600	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2002	80	360	5200~5700	1400~1800	0.23~0.28	0.46~0.56	3D MILLING
Xs-UB2002	80	380	5500~6000	2400~2800	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB2002	130	190	2500~3000	900~1200	0.2~0.25	0.4~0.5	3D MILLING
Xs-UB2002	130	220	3000~3500	1600~2000	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB2002	180	140	1700~2200	1000~1300	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2502	80	330	3500~4000	1300~1700	0.23~0.28	0.46~0.56	3D MILLING
Xs-UB2502	80	350	4000~4500	1800~2200	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB2502	130	220	2400~2800	1000~1400	0.2~0.25	0.4~0.5	3D MILLING
Xs-UB2502	130	300	3400~3800	1300~1700	0.12~0.17	0.24~0.34	3D MILLING
Xs-UB2502	180	240	2500~3000	1100~1400	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

Xs-UB

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
Xs-UB0802	25	280	10000~11000	2600~3000	0.06~0.09	0.12~0.18	3D MILLING
Xs-UB0802	45	145	5400~5800	1600~2000	0.06~0.08	0.12~0.16	3D MILLING
Xs-UB0802	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
Xs-UB1002	40	260	7700~8200	2600~3000	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB1002	60	230	6700~7200	1400~1800	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB1002	80	185	5300~5800	1000~1200	0.07~0.1	0.16~0.2	3D MILLING
Xs-UB1202	40	305	7500~8000	1800~2200	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB1202	60	290	7200~7700	1200~1600	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB1202	100	220	5300~5800	800~1100	0.08~0.13	0.16~0.26	3D MILLING
Xs-UB1602	60	215	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1602	100	160	2800~3200	1600~2000	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB1602	130	115	2000~2300	800~1200	0.1~0.12	0.2~0.24	3D MILLING
Xs-UB2002	80	315	4500~5000	1200~1600	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2002	130	190	2500~3000	800~1200	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2002	180	140	1700~2200	800~1000	0.08~0.1	0.16~0.2	3D MILLING
Xs-UB2502	80	315	3500~4000	1300~1700	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2502	130	240	2500~3000	1000~1400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UB2502	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.
3. When Xs-UB1002 of extension is 100mm in HRc52, the cutting data is not good.

Xs-UBT

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
Xs-UBT0802	25	280	10000~11000	1800~2000	0.15~0.2	0.3~0.4	3D MILLING
Xs-UBT0802	25	280	10000~11000	3000~3400	0.07~0.1	0.14~0.2	3D MILLING
Xs-UBT0802	45	145	5400~5800	1600~2000	0.06~0.08	0.12~0.16	3D MILLING
Xs-UBT0802	65	130	4700~5200	1200~1600	0.06~0.08	0.12~0.16	3D MILLING
Xs-UBT1002	40	280	8700~9200	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
Xs-UBT1002	40	280	8700~9200	2600~3000	0.08~0.13	0.16~0.26	3D MILLING
Xs-UBT1002	60	215	6700~7200	1600~2000	0.08~0.13	0.16~0.26	3D MILLING
Xs-UBT1002	80	175	5500~6000	1000~1200	0.07~0.1	0.14~0.2	3D MILLING
Xs-UBT1202	40	300	7800~8200	2200~2600	0.25~0.3	0.5~0.6	3D MILLING
Xs-UBT1202	40	300	7800~8200	2600~3000	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT1202	60	225	5800~6300	1200~1600	0.2~0.25	0.4~0.5	3D MILLING
Xs-UBT1202	60	280	7200~7700	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT1202	100	160	4000~4500	1100~1300	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT1602	60	200	3800~4200	1600~2000	0.2~0.25	0.4~0.5	3D MILLING
Xs-UBT1602	60	200	3800~4200	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT1602	100	170	3200~3700	1400~1700	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT1602	130	135	2500~3000	1000~1200	0.1~0.12	0.2~0.24	3D MILLING
Xs-UBT2002	80	325	5000~5500	1400~1800	0.2~0.23	0.4~0.46	3D MILLING
Xs-UBT2002	80	355	5500~6000	2000~2400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2002	130	220	3200~3700	800~1000	0.2~0.23	0.4~0.46	3D MILLING
Xs-UBT2002	130	315	4700~5200	1400~1800	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2002	180	140	1700~2200	800~1000	0.08~0.1	0.16~0.2	3D MILLING
Xs-UBT2502	80	300	3200~3700	1000~1400	0.2~0.25	0.35~0.5	3D MILLING
Xs-UBT2502	80	315	3500~4000	1300~1700	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2502	130	240	2500~3000	1000~1400	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2502	180	200	2000~2500	800~1200	0.1~0.15	0.2~0.3	3D MILLING

Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

Xs-UBT

MILLING CONDITIONS

Work Material		Hardened Steels : SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
Xs-UBT0802	25	210	7800~8300	2000~2400	0.07~0.1	0.14~0.2	3D MILLING
Xs-UBT0802	45	125	4500~5000	1300~1700	0.05~0.08	0.1~0.16	3D MILLING
Xs-UBT0802	65	90	3000~3500	700~900	0.05~0.08	0.1~0.16	3D MILLING
Xs-UBT1002	40	155	4700~5200	1400~1800	0.1~0.13	0.2~0.26	3D MILLING
Xs-UBT1002	60	125	3700~4200	1200~1600	0.08~0.1	0.16~0.2	3D MILLING
Xs-UBT1002	80	45	1400~1700	600~800	0.08~0.1	0.16~0.2	3D MILLING
Xs-UBT1202	40	240	6200~6700	1600~2000	0.1~0.13	0.2~0.26	3D MILLING
Xs-UBT1202	60	185	4700~5200	800~1200	0.08~0.1	0.16~0.2	3D MILLING
Xs-UBT1202	100	95	2200~2700	500~700	0.08~0.1	0.16~0.2	3D MILLING
Xs-UBT1602	60	150	2700~3200	800~1200	0.1~0.15	0.15~0.25	3D MILLING
Xs-UBT1602	100	90	1500~2000	800~1200	0.07~0.1	0.07~0.1	3D MILLING
Xs-UBT1602	130	90	1500~2000	600~1000	0.07~0.1	0.07~0.1	3D MILLING
Xs-UBT2002	80	110	1500~2000	800~1200	0.07~0.1	0.07~0.1	3D MILLING
Xs-UBT2002	130	100	1500~1700	600~800	0.07~0.1	0.07~0.1	3D MILLING
Xs-UBT2502	80	150	1800~2300	800~1200	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2502	130	120	1300~1700	700~1000	0.1~0.15	0.2~0.3	3D MILLING
Xs-UBT2502	180	100	1100~1400	600~900	0.1~0.15	0.2~0.3	3D MILLING

附註
Note

1. Due to spindle torque and the rigidity of machine differs, please lower the Speed(S) and Feed(F) if hearing sharp voices while milling.
2. For the machine use with holder of BT50(SK50/HSK100A), please higher Speed(S) and Feed(F) according to the cutting condition.

X-BTC

MILLING CONDITIONS

Work Material		Aluminum Alloy: 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-BTC0802	30	200	8000~8500	1400~1800	0.7~1	2~2.5	3D MILLING
X-BTC0802	30	200	8000~8500	2600~3000	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	30	230	9000~9500	3200~3600	0.08~0.13	0.15~0.2	3D MILLING
X-BTC0802	50	200	8000~8500	2000~2400	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	50	230	9000~9500	3200~3600	0.08~0.13	0.15~0.2	3D MILLING
X-BTC0802	70	120	4700~5200	2000~2400	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	70	230	9000~9500	3000~3400	0.08~0.13	0.15~0.2	3D MILLING
X-BTC1002	40	255	8000~8500	1800~2200	0.8~1.3	2~2.5	3D MILLING
X-BTC1002	40	255	8000~8500	3600~4000	0.3~0.35	0.7~0.8	3D MILLING
X-BTC1002	40	285	9000~9500	3000~3400	0.1~0.15	0.15~0.23	3D MILLING
X-BTC1002	60	255	8000~8500	3600~4000	0.3~0.35	0.7~0.8	3D MILLING
X-BTC1002	60	285	9000~9500	3000~3400	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1002	100	125	4000~4400	1200~1600	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1002	100	285	9000~9500	3000~3400	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1202	40	290	7700~8200	1600~2000	1~1.5	2.5~3.5	3D MILLING
X-BTC1202	40	290	7700~8200	3000~3400	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	40	290	7700~8200	3800~4200	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1202	60	290	7700~8200	3000~3400	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	60	290	7700~8200	3000~3400	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1202	100	85	2000~2400	800~1000	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	100	150	3700~4200	1800~2200	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1602	60	390	7700~8200	2200~2600	1~2	3~4	3D MILLING
X-BTC1602	60	390	7700~8200	3800~4200	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	60	390	7700~8200	3200~3600	0.15~0.18	0.22~0.27	3D MILLING
X-BTC1602	100	285	5600~6200	1800~2200	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	100	335	6600~7200	3200~3600	0.15~0.18	0.22~0.27	3D MILLING
X-BTC1602	140	100	2000~2400	600~800	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	140	215	4200~4600	2200~2600	0.15~0.18	0.22~0.27	3D MILLING
X-BTC2002	80	475	7500~8200	1000~1400	1~2	3~4	3D MILLING
X-BTC2002	80	505	7500~8500	2200~2600	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	80	505	7500~8500	3200~3600	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2002	130	475	7500~8500	2000~2400	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	130	475	7500~8500	2800~3200	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2002	180	125	2000~2500	500~800	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	180	255	3800~4600	2200~2600	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	90	400	4800~5300	800~1200	1~2	3~4	3D MILLING
X-BTC2502	90	400	4800~5300	2000~2400	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2502	90	400	4800~5300	2600~3000	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	150	350	4400~4800	1600~2000	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2502	150	350	4400~4800	2000~2400	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	200	250	2800~3200	1600~2000	0.15~0.25	0.3~0.4	3D MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BTC3202	100	400	3700~4200	800~1200	1~2	3~4	3D MILLING
X-BTC3202	100	400	3700~4200	1600~2000	0.55~0.65	1.2~1.7	3D MILLING
X-BTC3202	100	400	3700~4200	2000~2400	0.15~0.25	0.3~0.4	3D MILLING
X-BTC3202	170	350	3200~3700	1200~1600	0.55~0.65	1.2~1.7	3D MILLING
X-BTC3202	170	350	3200~3700	1600~2000	0.15~0.25	0.3~0.4	3D MILLING
X-BTC3202	220	250	2200~2700	1200~1600	0.15~0.25	0.3~0.4	3D MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BTC0802	30	330	13000~14000	2000~2400	0.7~1	2~2.5	3D MILLING
X-BTC0802	30	330	13000~14000	3600~4000	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	30	330	13000~14000	4200~4600	0.08~0.13	0.15~0.2	3D MILLING
X-BTC0802	50	305	12000~13000	2400~2800	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	50	305	12000~13000	4200~4600	0.08~0.13	0.15~0.2	3D MILLING
X-BTC0802	70	120	4700~5200	2000~2400	0.25~0.3	0.5~0.6	3D MILLING
X-BTC0802	70	305	12000~13000	3400~3800	0.08~0.13	0.15~0.2	3D MILLING
X-BTC1002	40	315	10000~11000	2000~2400	0.8~1.3	2~2.5	3D MILLING
X-BTC1002	40	380	12000~13000	4000~4400	0.3~0.35	0.7~0.8	3D MILLING
X-BTC1002	40	380	12000~13000	3800~4200	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1002	60	255	8000~8500	3600~4000	0.3~0.35	0.7~0.8	3D MILLING
X-BTC1002	60	345	11000~12000	3800~4200	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1002	100	125	4000~4400	1200~1600	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1002	100	285	9000~9500	3000~3400	0.1~0.15	0.18~0.23	3D MILLING
X-BTC1202	40	415	11000~12000	2400~2800	1~1.5	2.5~3.5	3D MILLING
X-BTC1202	40	415	11000~12000	3800~4200	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	40	415	11000~12000	4200~4600	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1202	60	290	7700~8200	3000~3400	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	60	380	10000~11000	3800~4200	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1202	100	85	2000~2400	800~1000	0.35~0.4	0.8~1	3D MILLING
X-BTC1202	100	150	3700~4200	1800~2200	0.13~0.16	0.2~0.25	3D MILLING
X-BTC1602	60	480	9500~10500	3000~3400	1~2	3~4	3D MILLING
X-BTC1602	60	480	9500~10500	4500~5500	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	60	480	9500~10500	3600~4000	0.15~0.18	0.22~0.27	3D MILLING

Work Material		Aluminum Alloy: 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-BTC1602	100	285	5600~6200	1800~2200	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	100	335	6600~7200	3200~3600	0.15~0.18	0.22~0.27	3D MILLING
X-BTC1602	140	100	2000~2400	600~800	0.4~0.45	0.9~1.3	3D MILLING
X-BTC1602	140	215	4200~4600	2200~2600	0.15~0.18	0.22~0.27	3D MILLING
X-BTC2002	80	475	7500~8200	1000~1400	1~2	3~4	3D MILLING
X-BTC2002	80	505	7500~8500	2200~2600	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	80	505	7500~8500	3200~3600	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2002	130	475	7500~8500	2000~2400	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	130	475	7500~8500	2800~3200	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2002	180	125	2000~2500	500~800	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2002	180	255	3800~4600	2200~2600	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	90	400	4800~5300	800~1200	1~2	3~4	3D MILLING
X-BTC2502	90	400	4800~5300	2000~2400	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2502	90	400	4800~5300	2600~3000	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	150	350	4400~4800	1600~2000	0.55~0.65	1.2~1.7	3D MILLING
X-BTC2502	150	350	4400~4800	2000~2400	0.15~0.25	0.3~0.4	3D MILLING
X-BTC2502	200	250	2800~3200	1600~2000	0.15~0.25	0.3~0.4	3D MILLING
X-BTC3202	100	400	3700~4200	800~1200	1~2	3~4	3D MILLING
X-BTC3202	100	400	3700~4200	1600~2000	0.55~0.65	1.2~1.7	3D MILLING
X-BTC3202	100	400	3700~4200	2000~2400	0.15~0.25	0.3~0.4	3D MILLING
X-BTC3202	170	350	3200~3700	1200~1600	0.55~0.65	1.2~1.7	3D MILLING
X-BTC3202	170	350	3200~3700	1600~2000	0.15~0.25	0.3~0.4	3D MILLING
X-BTC3202	220	250	2200~2700	1200~1600	0.15~0.25	0.3~0.4	3D MILLING

X-AEW

MILLING CONDITIONS

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AEW0803	23	220	8500~9000	6000~6500	0~1.5	6~8	SLOTTING
X-AEW0803	23	220	8500~9000	4000~4500	2~4	6~8	SLOTTING
X-AEW0803	23	220	8500~9000	3000~3500	5~6	6~8	SLOTTING
X-AEW0803	23	220	8500~9000	6000~6500	8	0~2	SIDE MILLING
X-AEW0803	23	220	8500~9000	4500~5000	8	3~5	SIDE MILLING
X-AEW0803	23	220	8500~9000	3000~3500	8	5~6	SIDE MILLING
X-AEW0803	23	390	15000~16000	7500~8500	0~1.5	6~8	SLOTTING
X-AEW0803	23	390	15000~16000	4500~5000	2~4	6~8	SLOTTING
X-AEW0803	23	390	15000~16000	5500~6500	5~6	6~8	SLOTTING
X-AEW0803	23	390	15000~16000	9000~10000	8	0~2	SIDE MILLING
X-AEW0803	23	390	15000~16000	6500~7500	8	3~5	SIDE MILLING
X-AEW0803	23	390	15000~16000	5000~5500	8	5~6	SIDE MILLING
X-AEW0803	35	195	7500~8000	4000~4500	0~1.5	8	SLOTTING
X-AEW0803	35	195	7500~8000	2300~2800	2~4	8	SLOTTING
X-AEW0803	35	195	7500~8000	1000~1500	5~6	8	SLOTTING
X-AEW0803	35	195	7500~8000	4000~4500	8	0~2	SIDE MILLING
X-AEW0803	35	195	7500~8000	2300~2800	8	3~5	SIDE MILLING
X-AEW0803	35	195	7500~8000	1000~1500	8	5~6	SIDE MILLING
X-AEW0803	45	130	5000~5500	1400~1800	4~5	8	SLOTTING
X-AEW0803	45	130	5000~5500	1400~1800	8	4~5	SIDE MILLING
X-AEW1003	26	250	7800~8300	5000~5500	0~2	8~10	SLOTTING
X-AEW1003	26	250	7800~8300	4000~4500	3~5	8~10	SLOTTING
X-AEW1003	26	250	7800~8300	3000~3500	6~8	8~10	SLOTTING
X-AEW1003	26	250	7800~8300	5500~6000	10	0~2	SIDE MILLING
X-AEW1003	26	250	7800~8300	4000~4500	10	3~5	SIDE MILLING
X-AEW1003	26	250	7800~8300	3000~3500	10	6~8	SIDE MILLING
X-AEW1003	26	390	12000~13000	7000~7500	0~2	8~10	SLOTTING
X-AEW1003	26	390	12000~13000	6500~7000	3~5	8~10	SLOTTING
X-AEW1003	26	390	12000~13000	6000~6500	6~8	8~10	SLOTTING
X-AEW1003	26	485	15000~16000	7500~8500	10	0~2	SIDE MILLING
X-AEW1003	26	485	15000~16000	8500~9000	10	3~5	SIDE MILLING
X-AEW1003	26	485	15000~16000	5000~5500	10	6~8	SIDE MILLING
X-AEW1003	45	140	4300~4800	2000~2500	0~2	8~10	SLOTTING
X-AEW1003	45	155	4700~5200	1800~2300	3~5	8~10	SLOTTING
X-AEW1003	45	155	4700~5200	1000~1500	6~8	8~10	SLOTTING
X-AEW1003	45	230	7000~7500	4000~4500	10	0~2	SIDE MILLING
X-AEW1003	45	190	5800~6300	2700~3200	10	3~5	SIDE MILLING
X-AEW1003	45	190	5800~6300	1300~1800	10	6~8	SIDE MILLING
X-AEW1003	60	130	4000~4500	1000~1400	5~6	8~10	SLOTTING
X-AEW1003	60	130	4000~4500	1000~1400	10	5~6	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AEW1203	30	290	7500~8000	4500~5000	0~2	10~12	SLOTTING
X-AEW1203	30	290	7500~8000	3000~3500	5~6	10~12	SLOTTING
X-AEW1203	30	290	7500~8000	2500~3000	8~10	10~12	SLOTTING
X-AEW1203	30	290	7500~8000	3500~4000	12	0~2	SIDE MILLING
X-AEW1203	30	290	7500~8000	3000~3500	12	5~6	SIDE MILLING
X-AEW1203	30	290	7500~8000	2500~3000	12	8~10	SIDE MILLING
X-AEW1203	30	395	10000~11000	7000~7500	0~2	10~12	SLOTTING
X-AEW1203	30	395	10000~11000	5500~6000	5~6	10~12	SLOTTING
X-AEW1203	30	395	10000~11000	5500~6000	8~10	10~12	SLOTTING
X-AEW1203	30	395	10000~11000	8000~8500	12	0~2	SIDE MILLING
X-AEW1203	30	395	10000~11000	4500~5000	12	5~6	SIDE MILLING
X-AEW1203	30	395	10000~11000	4500~5000	12	8~10	SIDE MILLING
X-AEW1203	55	180	4500~5000	2000~2500	0~2	10~12	SLOTTING
X-AEW1203	55	180	4500~5000	1800~2300	5~6	10~12	SLOTTING
X-AEW1203	55	180	4500~5000	1500~2000	8~10	10~12	SLOTTING
X-AEW1203	55	180	4500~5000	2000~2500	12	0~2	SIDE MILLING
X-AEW1203	55	180	4500~5000	1800~2300	12	5~6	SIDE MILLING
X-AEW1203	55	180	4500~5000	1500~2000	12	8~10	SIDE MILLING
X-AEW1203	70	140	3500~4000	1000~1400	5~6	10~12	SLOTTING
X-AEW1203	70	140	3500~4000	1000~1400	12	5~6	SIDE MILLING
X-AEW1603	40	340	6500~7000	2500~3000	3~4	14~16	SLOTTING
X-AEW1603	40	340	6500~7000	1700~2200	6~8	14~16	SLOTTING
X-AEW1603	40	340	6500~7000	1500~2000	10~12	14~16	SLOTTING
X-AEW1603	40	340	6500~7000	4000~4500	16	0~2	SIDE MILLING
X-AEW1603	40	340	6500~7000	2700~3200	16	6~8	SIDE MILLING
X-AEW1603	40	340	6500~7000	2200~2700	16	10~12	SIDE MILLING
X-AEW1603	55	320	6200~6700	2500~3000	3~4	14~16	SLOTTING
X-AEW1603	55	320	6200~6700	1700~2200	6~8	14~16	SLOTTING
X-AEW1603	55	320	6200~6700	1500~2000	10~12	14~16	SLOTTING
X-AEW1603	55	320	6200~6700	4000~4500	16	0~2	SIDE MILLING
X-AEW1603	55	320	6200~6700	2700~3200	16	6~8	SIDE MILLING
X-AEW1603	55	320	6200~6700	2200~2700	16	10~12	SIDE MILLING
X-AEW1603	80	150	2800~3300	900~1300	6~8	14~16	SLOTTING
X-AEW1603	80	150	2800~3300	900~1300	16	6~8	SIDE MILLING
X-AEW2003	50	340	5200~5700	2200~2700	3~4	18~20	SLOTTING
X-AEW2003	50	340	5200~5700	1400~1900	6~8	18~20	SLOTTING
X-AEW2003	50	340	5200~5700	1100~1500	10~12	18~20	SLOTTING
X-AEW2003	50	340	5200~5700	3000~3500	20	0~2	SIDE MILLING
X-AEW2003	50	340	5200~5700	2000~2500	20	6~8	SIDE MILLING
X-AEW2003	50	340	5200~5700	1500~2000	20	10~12	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AEW2003	70	320	4700~5200	2000~2500	3~4	18~20	SLOTTING
X-AEW2003	70	320	4700~5200	1400~1900	6~8	18~20	SLOTTING
X-AEW2003	70	320	4700~5200	1100~1500	10~12	18~20	SLOTTING
X-AEW2003	70	320	4700~5200	3000~3500	20	0~2	SIDE MILLING
X-AEW2003	70	320	4700~5200	2000~2500	20	6~8	SIDE MILLING
X-AEW2003	70	320	4700~5200	1500~2000	20	10~12	SIDE MILLING
X-AEW2003	90	170	2500~3000	800~1200	8~9	18~20	SLOTTING
X-AEW2003	90	170	2500~3000	800~1200	20	8~9	SIDE MILLING
X-AEW2503	60	340	4000~4500	1600~2000	3~4	20~25	SLOTTING
X-AEW2503	60	340	4000~4500	1200~1600	6~8	20~25	SLOTTING
X-AEW2503	60	340	4000~4500	1000~1400	10~12	20~25	SLOTTING
X-AEW2503	60	340	4000~4500	1600~2000	25	3~4	SIDE MILLING
X-AEW2503	60	340	4000~4500	1200~1600	25	6~8	SIDE MILLING
X-AEW2503	60	340	4000~4500	1000~1400	25	10~12	SIDE MILLING
X-AEW2503	80	300	3500~4000	1400~1800	3~4	20~25	SLOTTING
X-AEW2503	80	300	3500~4000	1000~1400	6~8	20~25	SLOTTING
X-AEW2503	80	300	3500~4000	800~1200	10~12	20~25	SLOTTING
X-AEW2503	80	300	3500~4000	1400~1800	25	3~4	SIDE MILLING
X-AEW2503	80	300	3500~4000	1000~1400	25	6~8	SIDE MILLING
X-AEW2503	80	300	3500~4000	800~1200	25	10~12	SIDE MILLING
X-AEW2503	100	180	2000~2500	600~1000	10~12	20~25	SLOTTING
X-AEW2503	100	180	2000~2500	600~1000	25	10~12	SIDE MILLING
X-AEW3203	70	300	2700~3200	1200~1600	3~4	25~32	SLOTTING
X-AEW3203	70	300	2700~3200	900~1300	6~8	25~32	SLOTTING
X-AEW3203	70	300	2700~3200	700~1100	10~12	25~32	SLOTTING
X-AEW3203	70	300	2700~3200	1200~1600	32	3~4	SIDE MILLING
X-AEW3203	70	300	2700~3200	900~1300	32	6~8	SIDE MILLING
X-AEW3203	70	300	2700~3200	700~1100	32	10~12	SIDE MILLING
X-AEW3203	90	250	2200~2700	900~1300	3~4	25~32	SLOTTING
X-AEW3203	90	250	2200~2700	700~1100	6~8	25~32	SLOTTING
X-AEW3203	90	250	2200~2700	500~900	10~12	25~32	SLOTTING
X-AEW3203	90	250	2200~2700	900~1300	32	3~4	SIDE MILLING
X-AEW3203	90	250	2200~2700	700~1100	32	6~8	SIDE MILLING
X-AEW3203	90	250	2200~2700	500~900	32	10~12	SIDE MILLING
X-AEW3203	110	180	1600~2000	500~700	10~12	25~32	SLOTTING
X-AEW3203	110	180	1600~2000	500~700	32	10~12	SIDE MILLING

X-AEWR

MILLING CONDITIONS

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-AEWR0805	25	220	8500~9000	5000~5500	0~1.5	6~8	SLOTING
X-AEWR0805	25	220	8500~9000	3000~3500	2~4	6~8	SLOTING
X-AEWR0805	25	220	8500~9000	2000~2500	5~6	6~8	SLOTING
X-AEWR0805	25	220	8500~9000	5000~5500	8	0~2	SIDE MILLING
X-AEWR0805	25	220	8500~9000	3000~3500	8	3~4	SIDE MILLING
X-AEWR0805	25	220	8500~9000	1800~2300	8	5~6	SIDE MILLING
X-AEWR0805	35	200	7800~8200	4000~4500	0~1.5	6~8	SLOTING
X-AEWR0805	35	200	7800~8200	2500~3000	2~4	6~8	SLOTING
X-AEWR0805	35	200	7800~8200	1500~2000	5~6	6~8	SLOTING
X-AEWR0805	35	200	7800~8200	4000~4500	8	0~2	SIDE MILLING
X-AEWR0805	35	200	7800~8200	2500~3000	8	3~4	SIDE MILLING
X-AEWR0805	35	200	7800~8200	1500~2000	8	5~6	SIDE MILLING
X-AEWR0805	45	160	6000~6500	1100~1500	4~5	6~8	SLOTING
X-AEWR0805	45	160	6000~6500	2200~2700	8	0~1.5	SIDE MILLING
X-AEWR0805	45	160	6000~6500	1800~2300	8	2~3	SIDE MILLING
X-AEWR0805	45	160	6000~6500	1400~1800	8	3~4	SIDE MILLING
X-AEWR0810	25	220	8500~9000	4500~5000	0~1.5	6~8	SLOTING
X-AEWR0810	25	220	8500~9000	2700~3200	2~4	6~8	SLOTING
X-AEWR0810	25	220	8500~9000	1800~2300	5~6	6~8	SLOTING
X-AEWR0810	25	220	8500~9000	4500~5000	8	0~2	SIDE MILLING
X-AEWR0810	25	220	8500~9000	2700~3200	8	3~4	SIDE MILLING
X-AEWR0810	25	220	8500~9000	1800~2300	8	5~6	SIDE MILLING
X-AEWR0810	35	200	7800~8200	3500~4000	0~1.5	6~8	SLOTING
X-AEWR0810	35	200	7800~8200	2000~2500	2~4	6~8	SLOTING
X-AEWR0810	35	200	7800~8200	1300~1800	5~6	6~8	SLOTING
X-AEWR0810	35	200	7800~8200	3500~4000	8	0~2	SIDE MILLING
X-AEWR0810	35	200	7800~8200	2000~2500	8	3~4	SIDE MILLING
X-AEWR0810	35	200	7800~8200	1300~1800	8	5~6	SIDE MILLING
X-AEWR0810	45	160	6000~6500	1000~1400	4~5	6~8	SLOTING
X-AEWR0810	45	160	6000~6500	2000~2500	8	0~1.5	SIDE MILLING
X-AEWR0810	45	160	6000~6500	1500~1900	8	2~3	SIDE MILLING
X-AEWR0810	45	160	6000~6500	1200~1600	8	3~4	SIDE MILLING
X-AEWR1005	30	250	7800~8300	4000~4500	0~2	8~10	SLOTING
X-AEWR1005	30	250	7800~8300	3000~3500	3~5	8~10	SLOTING
X-AEWR1005	30	250	7800~8300	2000~2500	6~8	8~10	SLOTING
X-AEWR1005	30	250	7800~8300	4000~4500	10	0~2	SIDE MILLING
X-AEWR1005	30	250	7800~8300	3000~3500	10	3~5	SIDE MILLING
X-AEWR1005	30	250	7800~8300	1800~2300	10	6~8	SIDE MILLING
X-AEWR1005	40	250	7800~8300	3500~4000	0~2	8~10	SLOTING
X-AEWR1005	40	250	7800~8300	3000~3500	3~5	8~10	SLOTING
X-AEWR1005	40	250	7800~8300	2000~2500	6~8	8~10	SLOTING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AEWR1620	80	260	5000~5500	1000~1400	16	8~9	SIDE MILLING
X-AEWR1630	55	340	6500~7000	1600~2000	3~4	14~16	SLOTING
X-AEWR1630	55	340	6500~7000	900~1300	6~8	14~16	SLOTING
X-AEWR1630	55	340	6500~7000	800~1100	9~10	14~16	SLOTING
X-AEWR1630	55	340	6500~7000	2300~2700	16	0~2	SIDE MILLING
X-AEWR1630	55	340	6500~7000	1600~2000	16	6~8	SIDE MILLING
X-AEWR1630	55	340	6500~7000	1000~1400	16	9~10	SIDE MILLING
X-AEWR1630	80	260	5000~5500	800~1100	8~9	14~16	SLOTING
X-AEWR1630	80	260	5000~5500	1800~2300	16	0~2	SIDE MILLING
X-AEWR1630	80	260	5000~5500	1300~1700	16	5~6	SIDE MILLING
X-AEWR1630	80	260	5000~5500	800~1100	16	8~9	SIDE MILLING
X-AEWR2010	60	315	4800~5300	1700~2200	3~4	18~20	SLOTING
X-AEWR2010	60	315	4800~5300	1000~1400	6~8	18~20	SLOTING
X-AEWR2010	60	315	4800~5300	900~1200	9~10	18~20	SLOTING
X-AEWR2010	60	315	4800~5300	2500~3000	20	0~2	SIDE MILLING
X-AEWR2010	60	315	4800~5300	1600~2000	20	6~8	SIDE MILLING
X-AEWR2010	60	315	4800~5300	1100~1500	20	9~10	SIDE MILLING
X-AEWR2010	90	205	3000~3500	700~1000	9~10	18~20	SLOTING
X-AEWR2010	90	205	3000~3500	1700~2200	20	0~2	SIDE MILLING
X-AEWR2010	90	205	3000~3500	1100~1500	20	6~8	SIDE MILLING
X-AEWR2010	90	205	3000~3500	800~1100	20	9~10	SIDE MILLING
X-AEWR2020	60	315	4800~5300	1700~2200	3~4	18~20	SLOTING
X-AEWR2020	60	315	4800~5300	1000~1400	6~8	18~20	SLOTING
X-AEWR2020	60	315	4800~5300	900~1200	9~10	18~20	SLOTING
X-AEWR2020	60	315	4800~5300	2500~3000	20	0~2	SIDE MILLING
X-AEWR2020	60	315	4800~5300	1600~2000	20	6~8	SIDE MILLING
X-AEWR2020	60	315	4800~5300	1100~1500	20	9~10	SIDE MILLING
X-AEWR2020	90	205	3000~3500	700~1000	9~10	18~20	SLOTING
X-AEWR2020	90	205	3000~3500	1700~2200	20	0~2	SIDE MILLING
X-AEWR2020	90	205	3000~3500	1100~1500	20	6~8	SIDE MILLING
X-AEWR2020	90	205	3000~3500	800~1100	20	9~10	SIDE MILLING
X-AEWR2030	60	315	4800~5300	1500~2000	3~4	18~20	SLOTING
X-AEWR2030	60	315	4800~5300	900~1300	6~8	18~20	SLOTING
X-AEWR2030	60	315	4800~5300	700~1000	9~10	18~20	SLOTING
X-AEWR2030	60	315	4800~5300	2200~2700	20	0~2	SIDE MILLING
X-AEWR2030	60	315	4800~5300	1200~1600	20	6~8	SIDE MILLING
X-AEWR2030	60	315	4800~5300	900~1300	20	9~10	SIDE MILLING
X-AEWR2030	90	205	3000~3500	600~900	9~10	18~20	SLOTING
X-AEWR2030	90	205	3000~3500	1500~2000	20	0~2	SIDE MILLING
X-AEWR2030	90	205	3000~3500	900~1300	20	6~8	SIDE MILLING
X-AEWR2030	90	205	3000~3500	700~1000	20	9~10	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AEWR2510	60	340	4000~4500	1600~2000	3~4	20~25	SLOTING
X-AEWR2510	60	340	4000~4500	1200~1600	6~8	20~25	SLOTING
X-AEWR2510	60	340	4000~4500	1000~1400	10~12	20~25	SLOTING
X-AEWR2510	60	340	4000~4500	1600~2000	25	3~4	SIDE MILLING
X-AEWR2510	60	340	4000~4500	1200~1600	25	6~8	SIDE MILLING
X-AEWR2510	60	340	4000~4500	1000~1400	25	10~12	SIDE MILLING
X-AEWR2510	100	180	2000~2500	600~1000	10~12	20~25	SLOTING
X-AEWR2510	100	180	2000~2500	1200~1600	25	3~4	SIDE MILLING
X-AEWR2510	100	180	2000~2500	900~1300	25	6~8	SIDE MILLING
X-AEWR2510	100	180	2000~2500	600~1000	25	10~12	SIDE MILLING
X-AEWR2530	60	340	4000~4500	1600~2000	3~4	20~25	SLOTING
X-AEWR2530	60	340	4000~4500	1000~1400	10~12	20~25	SLOTING
X-AEWR2530	60	340	4000~4500	1600~2000	25	3~4	SIDE MILLING
X-AEWR2530	60	340	4000~4500	1200~1600	25	6~8	SIDE MILLING
X-AEWR2530	60	340	4000~4500	1000~1400	25	10~12	SIDE MILLING
X-AEWR2530	100	180	2000~2500	600~900	10~12	20~25	SLOTING
X-AEWR2530	100	180	2000~2500	1100~1400	25	3~4	SIDE MILLING
X-AEWR2530	100	180	2000~2500	800~1100	25	6~8	SIDE MILLING
X-AEWR2530	100	180	2000~2500	600~900	25	10~12	SIDE MILLING
X-AEWR3230	70	300	2700~3200	1200~1600	3~4	25~32	SLOTING
X-AEWR3230	70	300	2700~3200	900~1300	6~8	25~32	SLOTING
X-AEWR3230	70	300	2700~3200	700~1100	10~12	25~32	SLOTING
X-AEWR3230	70	300	2700~3200	1200~1600	32	3~4	SIDE MILLING
X-AEWR3230	70	300	2700~3200	900~1300	32	6~8	SIDE MILLING
X-AEWR3230	70	300	2700~3200	700~1100	32	10~12	SIDE MILLING
X-AEWR3230	110	180	1600~2000	400~600	10~12	25~32	SLOTING
X-AEWR3230	110	180	1600~2000	800~1100	32	3~4	SIDE MILLING
X-AEWR3230	110	180	1600~2000	600~900	32	6~8	SIDE MILLING
X-AEWR3230	110	180	1600~2000	400~600	32	10~12	SIDE MILLING
X-AEWR3250	70	300	2700~3200	1200~1600	3~4	25~32	SLOTING
X-AEWR3250	70	300	2700~3200	900~1300	6~8	25~32	SLOTING
X-AEWR3250	70	300	2700~3200	700~1100	10~12	25~32	SLOTING
X-AEWR3250	70	300	2700~3200	1200~1600	32	3~4	SIDE MILLING
X-AEWR3250	70	300	2700~3200	900~1300	32	6~8	SIDE MILLING
X-AEWR3250	70	300	2700~3200	700~1100	32	10~12	SIDE MILLING
X-AEWR3250	110	180	1600~2000	300~500	10~12	25~32	SLOTING
X-AEWR3250	110	180	1600~2000	700~1000	32	3~4	SIDE MILLING
X-AEWR3250	110	180	1600~2000	500~800	32	6~8	SIDE MILLING
X-AEWR3250	110	180	1600~2000	400~600	32	10~12	SIDE MILLING

X-AES

MILLING CONDITIONS

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AES0803	25	215	8500~9000	1800~2300	0.05~0.15	6~8	SLOTTING
X-AES0803	25	215	8500~9000	3500~4000	2~4	6~8	SLOTTING
X-AES0803	25	215	8500~9000	2500~3000	4~7	6~8	SLOTTING
X-AES0803	25	215	8500~9000	1800~2300	8	0.05~0.15	SIDE MILLING
X-AES0803	25	215	8500~9000	2500~3000	8	4~7	SIDE MILLING
X-AES0803	40	180	7000~7500	1400~1800	0.05~0.15	6~8	SLOTTING
X-AES0803	40	180	7000~7500	2200~2600	1.5~2.5	6~8	SLOTTING
X-AES0803	40	180	7000~7500	1400~1800	3~4	6~8	SLOTTING
X-AES0803	40	180	7000~7500	1400~1800	8	0.05~0.15	SIDE MILLING
X-AES0803	40	180	7000~7500	1400~1800	8	3~4	SIDE MILLING
X-AES0803	50	160	6000~6500	1200~1600	0.05~0.15	6~8	SLOTTING
X-AES0803	50	160	6000~6500	1800~2200	1~1.5	6~8	SLOTTING
X-AES0803	50	160	6000~6500	1200~1600	2~3	6~8	SLOTTING
X-AES0803	50	160	6000~6500	1200~1600	8	0.05~0.15	SIDE MILLING
X-AES0803	50	160	6000~6500	1200~1600	8	2~3	SIDE MILLING
X-AES1003	30	300	9000~10000	2200~2600	0.05~0.1	8~10	SLOTTING
X-AES1003	30	300	9000~10000	4000~4500	1~2	10	SLOTTING
X-AES1003	30	225	7000~7500	2600~3000	5~8	10	SLOTTING
X-AES1003	30	300	9000~10000	1800~2200	10	0.05~0.1	SIDE MILLING
X-AES1003	30	225	7000~7500	2600~3000	10	7~9	SIDE MILLING
X-AES1003	45	300	9000~10000	2000~2400	0.05~0.1	8~10	SLOTTING
X-AES1003	45	260	8000~8500	3000~3500	0~1.5	10	SLOTTING
X-AES1003	45	200	6200~6700	2000~2400	5~8	10	SLOTTING
X-AES1003	45	300	9000~10000	1800~2200	10	0.05~0.1	SIDE MILLING
X-AES1003	45	200	6200~6700	2000~2400	10	7~9	SIDE MILLING
X-AES1003	60	260	8000~8500	1600~2000	0.05~0.1	8~10	SLOTTING
X-AES1003	60	170	5200~5600	2200~2600	1~2	10	SLOTTING
X-AES1003	60	130	4000~4500	1400~1800	4~5	10	SLOTTING
X-AES1003	60	260	8000~8500	1400~1800	10	0.05~0.1	SIDE MILLING
X-AES1003	60	130	4000~4500	1400~1800	10	4~5	SIDE MILLING
X-AES1203	30	355	9000~10000	2200~2600	0.05~0.1	10~12	SLOTTING
X-AES1203	30	330	8500~9000	4000~4500	1~2	12	SLOTTING
X-AES1203	30	300	7800~8300	2600~3000	6~10	12	SLOTTING
X-AES1203	30	355	9000~10000	2000~2400	12	0.05~0.1	SIDE MILLING
X-AES1203	30	300	7800~8300	2200~2600	12	6~10	SIDE MILLING
X-AES1203	50	300	7800~8300	2100~2300	0.05~0.1	10~12	SLOTTING
X-AES1203	50	225	5800~6300	2800~3200	1~1.5	12	SLOTTING
X-AES1203	50	180	4600~5100	1800~2200	3~5	12	SLOTTING
X-AES1203	50	300	7800~8300	1800~2200	12	0.05~0.1	SIDE MILLING
X-AES1203	50	225	5800~6300	1600~2000	12	4~6	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _s) Depth of Cut	(A _p) Width of Cut	Milling Type
X-AES1203	70	245	6300~6800	1600~2000	0.05~0.1	10	SLOTING
X-AES1203	70	160	4000~4500	2000~2400	0.5~1	12	SLOTING
X-AES1203	70	115	2700~3200	1400~1800	1~2	12	SLOTING
X-AES1203	70	245	6300~6800	1400~1800	12	0.05~0.1	SIDE MILLING
X-AES1203	70	115	2700~3200	1000~1400	12	2	SIDE MILLING
X-AES1603	50	355	7000~7500	1600~2000	0.05~0.2	14~16	SLOTING
X-AES1603	50	320	6000~6500	4000~4500	1~2	14~16	SLOTING
X-AES1603	50	320	6000~6500	2500~3000	4~6	14~16	SLOTING
X-AES1603	50	320	6000~6500	1200~1600	16	0.05~0.2	SIDE MILLING
X-AES1603	50	320	6000~6500	2500~3000	16	4~6	SIDE MILLING
X-AES1603	70	320	6000~6500	1400~1800	0.05~0.2	14~16	SLOTING
X-AES1603	70	290	5500~6000	3000~3500	1~2	14~16	SLOTING
X-AES1603	70	290	5500~6000	2000~2500	2~4	14~16	SLOTING
X-AES1603	70	290	5500~6000	1200~1600	16	0.05~0.2	SIDE MILLING
X-AES1603	70	290	5500~6000	2200~2700	16	2~4	SIDE MILLING
X-AES1603	90	320	6000~6500	1200~1600	0.05~0.2	14~16	SLOTING
X-AES1603	90	260	5000~5500	2000~2500	1~1.5	14~16	SLOTING
X-AES1603	90	260	5000~5500	1200~1600	2~3	14~16	SLOTING
X-AES1603	90	260	5000~5500	1000~1400	16	0.05~0.2	SIDE MILLING
X-AES1603	90	260	5000~5500	1200~1600	16	2~3	SIDE MILLING
X-AES2003	60	355	5500~6000	1400~1800	0.05~0.2	18~20	SLOTING
X-AES2003	60	315	5000~5400	3500~4000	1~2	18~20	SLOTING
X-AES2003	60	315	5000~5400	2000~2500	4~6	18~20	SLOTING
X-AES2003	60	315	5000~5400	1200~1600	20	0.05~0.2	SIDE MILLING
X-AES2003	60	315	5000~5400	2000~2500	20	4~6	SIDE MILLING
X-AES2003	80	315	5000~5400	1400~1600	0.05~0.2	18~20	SLOTING
X-AES2003	80	265	4000~4500	2500~3000	1~1.5	18~20	SLOTING
X-AES2003	80	265	4000~4500	1500~2000	3~4	18~20	SLOTING
X-AES2003	80	265	4000~4500	1200~1600	20	0.05~0.2	SIDE MILLING
X-AES2003	80	265	4000~4500	1500~2000	20	3~4	SIDE MILLING
X-AES2003	100	265	4000~4500	1100~1300	0.05~0.2	18~20	SLOTING
X-AES2003	100	200	3000~3400	1800~2200	1~1.5	18~20	SLOTING
X-AES2003	100	200	3000~3400	1200~1600	2~3	18~20	SLOTING
X-AES2003	100	200	3000~3400	1100~1300	20	0.05~0.2	SIDE MILLING
X-AES2003	100	200	3000~3400	1200~1600	20	2~3	SIDE MILLING
X-AES2503	60	355	4300~4700	1200~1600	0.05~0.1	23~25	SLOTING
X-AES2503	60	315	3800~4300	1800~2200	2~3	25	SLOTING
X-AES2503	60	315	3800~4300	1200~1600	5~6	25	SLOTING
X-AES2503	60	315	3800~4300	1000~1400	25	0.05~0.1	SIDE MILLING
X-AES2503	60	315	3800~4300	1200~1600	25	5~6	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-AES2503	90	315	3800~4300	1000~1300	0.05~0.1	23~25	SLOTING
X-AES2503	90	265	3200~3600	1400~1600	1.5~2.5	25	SLOTING
X-AES2503	90	265	3200~3600	1000~1300	4~5	25	SLOTING
X-AES2503	90	265	3200~3600	1000~1300	25	0.05~0.1	SIDE MILLING
X-AES2503	90	265	3200~3600	1200~1600	25	4~5	SIDE MILLING
X-AES2503	120	265	3200~3600	800~1000	0.05~0.1	23~25	SLOTING
X-AES2503	120	200	2400~2800	1400~1600	1~2	25	SLOTING
X-AES2503	120	200	2400~2800	1000~1300	3~4	25	SLOTING
X-AES2503	120	200	2400~2800	800~1200	25	0.05~0.1	SIDE MILLING
X-AES2503	120	200	2400~2800	1000~1300	25	3~4	SIDE MILLING
X-AES3203	70	355	3400~3800	1000~1200	0.05~0.1	30~32	SLOTING
X-AES3203	70	315	3000~3400	1300~1600	2~3	32	SLOTING
X-AES3203	70	315	3000~3400	900~1200	5~6	32	SLOTING
X-AES3203	70	315	3000~3400	700~1000	32	0.05~0.2	SIDE MILLING
X-AES3203	70	315	3000~3400	900~1200	32	5~6	SIDE MILLING
X-AES3203	100	315	3000~3400	800~1000	0.05~0.1	30~32	SLOTING
X-AES3203	100	265	2500~2900	1100~1400	2~3	32	SLOTING
X-AES3203	100	265	2500~2900	800~1100	4~5	32	SLOTING
X-AES3203	100	265	2500~2900	600~900	32	0.05~0.2	SIDE MILLING
X-AES3203	100	265	2500~2900	800~1100	32	4~5	SIDE MILLING
X-AES3203	130	265	2500~2900	600~800	0.05~0.1	30~32	SLOTING
X-AES3203	130	200	1800~2200	1000~1300	1~2	32	SLOTING
X-AES3203	130	200	1800~2200	700~1000	3~4	32	SLOTING
X-AES3203	130	200	1800~2200	600~800	32	0.05~0.2	SIDE MILLING
X-AES3203	130	200	1800~2200	700~1000	32	3~4	SIDE MILLING

X-AESR

MILLING CONDITIONS

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AESR0805	25	250	10000	1600~2000	0.05~0.1	6~8	SLOTTING
X-AESR0805	25	225	9000	4000~4500	0~1.5	6~8	SLOTTING
X-AESR0805	25	225	9000	2000~2500	6~8	6~8	SLOTTING
X-AESR0805	25	250	10000	1600~2000	8	0.05~0.1	SIDE MILLING
X-AESR0805	25	225	9000	2000~2500	8	6~8	SIDE MILLING
X-AESR0805	35	225	9000	1400~1800	0.05~0.1	6~8	SLOTTING
X-AESR0805	35	200	8000	3500~4000	0~1.5	6~8	SLOTTING
X-AESR0805	35	200	8000	2000~2500	4~5	6~8	SLOTTING
X-AESR0805	35	225	9000	1400~1800	8	0.05~0.1	SIDE MILLING
X-AESR0805	35	200	8000	2000~2500	8	4~5	SIDE MILLING
X-AESR0805	45	200	8000	1300~1700	0.05~0.1	6~8	SLOTTING
X-AESR0805	45	175	7000	3000~3500	0~1.5	6~8	SLOTTING
X-AESR0805	45	175	7000	1800~2300	3~4	6~8	SLOTTING
X-AESR0805	45	200	8000	1300~1700	8	0.05~0.1	SIDE MILLING
X-AESR0805	45	175	7000	1800~2300	8	3~4	SIDE MILLING
X-AESR0810	25	250	10000	1600~2000	0.05~0.1	5~8	SLOTTING
X-AESR0810	25	225	9000	4000~4500	0~1.5	5~8	SLOTTING
X-AESR0810	25	225	9000	2000~2500	6~8	5~8	SLOTTING
X-AESR0810	25	250	10000	1600~2000	8	0.05~0.1	SIDE MILLING
X-AESR0810	25	225	9000	2000~2500	8	6~8	SIDE MILLING
X-AESR0810	35	225	9000	1400~1800	0.05~0.1	5~8	SLOTTING
X-AESR0810	35	200	8000	3000~3500	0~1.5	5~8	SLOTTING
X-AESR0810	35	200	8000	2000~2500	4~5	5~8	SLOTTING
X-AESR0810	35	225	9000	1400~1800	8	0.05~0.1	SIDE MILLING
X-AESR0810	35	200	8000	2000~2500	8	4~5	SIDE MILLING
X-AESR0810	45	200	8000	1300~1700	0.05~0.1	5~8	SLOTTING
X-AESR0810	45	175	7000	2500~3000	0~1.5	5~8	SLOTTING
X-AESR0810	45	175	7000	1700~2200	3~4	5~8	SLOTTING
X-AESR0810	45	200	8000	1300~1700	8	0.05~0.1	SIDE MILLING
X-AESR0810	45	175	7000	1700~2200	8	3~4	SIDE MILLING
X-AESR1005	30	315	10000	1600~2000	0.05~0.15	8~10	SLOTTING
X-AESR1005	30	280	9000	4000~4500	0~2	8~10	SLOTTING
X-AESR1005	30	220	7000	1700~2200	5~6	8~10	SLOTTING
X-AESR1005	30	280	9000	1400~1800	10	0.05~0.15	SIDE MILLING
X-AESR1005	30	220	7000	1700~2200	10	5~6	SIDE MILLING
X-AESR1005	40	315	10000	1600~2000	0.05~0.15	8~10	SLOTTING
X-AESR1005	40	250	8000	3500~4000	0~2	8~10	SLOTTING
X-AESR1005	40	190	6000	1700~2200	4~5	8~10	SLOTTING
X-AESR1005	40	250	8000	1300~1700	10	0.05~0.15	SIDE MILLING
X-AESR1005	40	190	6000	1700~2200	10	4~5	SIDE MILLING
X-AESR1005	50	315	10000	1600~2000	0.05~0.15	8~10	SLOTTING
X-AESR1005	50	220	7000	3000~3500	0~2	8~10	SLOTTING
X-AESR1005	50	140	4500	1500~2000	3~4	8~10	SLOTTING
X-AESR1005	50	220	7000	1200~1600	10	0.05~0.15	SIDE MILLING
X-AESR1005	50	140	4500	1500~2000	10	3~4	SIDE MILLING
X-AESR1010	30	315	10000	1600~2000	0.05~0.15	7~10	SLOTTING
X-AESR1010	30	280	9000	4000~4500	0~2	7~10	SLOTTING
X-AESR1010	30	220	7000	1700~2200	5~6	7~10	SLOTTING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AESR1010	30	280	9000	1400~1800	10	0.05~0.15	SIDE MILLING
X-AESR1010	30	220	7000	1700~2200	10	5~6	SIDE MILLING
X-AESR1010	40	315	10000	1600~2000	0.05~0.15	7~10	SLOTTING
X-AESR1010	40	250	8000	3500~4000	0~2	7~10	SLOTTING
X-AESR1010	40	190	6000	1700~2200	4~5	7~10	SLOTTING
X-AESR1010	40	250	8000	1300~1700	10	0.05~0.15	SIDE MILLING
X-AESR1010	40	190	6000	1700~2200	10	4~5	SIDE MILLING
X-AESR1010	50	315	10000	1600~2000	0.05~0.15	7~10	SLOTTING
X-AESR1010	50	220	7000	3000~3500	0~2	7~10	SLOTTING
X-AESR1010	50	140	4500	1500~2000	3~4	7~10	SLOTTING
X-AESR1010	50	220	7000	1200~1600	10	0.05~0.15	SIDE MILLING
X-AESR1010	50	140	4500	1500~2000	10	3~4	SIDE MILLING
X-AESR1205	30	375	10000	1600~2000	0.05~0.15	10~12	SLOTTING
X-AESR1205	30	340	9000	4000~4500	0~2	10~12	SLOTTING
X-AESR1205	30	300	8000	2200~2600	8~10	10~12	SLOTTING
X-AESR1205	30	340	9000	1600~2000	12	0.05~0.15	SIDE MILLING
X-AESR1205	30	300	8000	2000~2400	12	9~12	SIDE MILLING
X-AESR1205	40	340	9000	1500~1900	0.05~0.15	10~12	SLOTTING
X-AESR1205	40	300	8000	3500~4000	0~2	10~12	SLOTTING
X-AESR1205	40	265	7000	2000~2400	6~8	10~12	SLOTTING
X-AESR1205	40	340	9000	1500~1900	12	0.05~0.15	SIDE MILLING
X-AESR1205	40	300	8000	1500~1900	12	8~10	SIDE MILLING
X-AESR1205	50	300	8000	1300~1700	0.05~0.15	10~12	SLOTTING
X-AESR1205	50	225	6000	2500~3000	0~1.5	10~12	SLOTTING
X-AESR1205	50	190	5000	1500~1900	3~5	10~12	SLOTTING
X-AESR1205	50	300	8000	1300~1700	12	0.05~0.15	SIDE MILLING
X-AESR1205	50	225	6000	1400~1800	12	4~6	SIDE MILLING
X-AESR1205	60	265	7000	1200~1600	0.05~0.15	10~12	SLOTTING
X-AESR1205	60	190	5000	3000~3500	0~1	10~12	SLOTTING
X-AESR1205	60	170	4500	1600~2000	1~1.5	10~12	SLOTTING
X-AESR1205	60	265	7000	1200~1600	12	0.05~0.15	SIDE MILLING
X-AESR1205	60	115	3000	1200~1600	12	0.5~2	SIDE MILLING
X-AESR1210	30	375	10000	1600~2000	0.05~0.15	9~12	SLOTTING
X-AESR1210	30	340	9000	4000~4500	0~2	9~12	SLOTTING
X-AESR1210	30	300	8000	2200~2600	8~10	9~12	SLOTTING
X-AESR1210	30	340	9000	1600~2000	12	0.05~0.15	SIDE MILLING
X-AESR1210	30	300	8000	2000~2400	12	9~12	SIDE MILLING
X-AESR1210	40	340	9000	1500~1900	0.05~0.15	9~12	SLOTTING
X-AESR1210	40	300	8000	3500~4000	0~2	9~12	SLOTTING
X-AESR1210	40	265	7000	2000~2400	6~8	9~12	SLOTTING
X-AESR1210	40	340	9000	1500~1900	12	0.05~0.15	SIDE MILLING
X-AESR1210	40	300	8000	1500~1900	12	8~10	SIDE MILLING
X-AESR1210	50	300	8000	1300~1700	0.05~0.15	9~12	SLOTTING
X-AESR1210	50	225	6000	2500~3000	0~1.5	9~12	SLOTTING
X-AESR1210	50	190	5000	1500~1900	3~5	9~12	SLOTTING
X-AESR1210	50	300	8000	1300~1700	12	0.05~0.15	SIDE MILLING
X-AESR1210	50	225	6000	1400~1800	12	4~6	SIDE MILLING
X-AESR1210	60	265	7000	1200~1600	0.05~0.15	9~12	SLOTTING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AESR1210	60	190	5000	3000~3500	0~1	9~12	SLOTTING
X-AESR1210	60	170	4500	1600~2000	1~1.5	9~12	SLOTTING
X-AESR1210	60	265	7000	1200~1600	12	0.05~0.15	SIDE MILLING
X-AESR1210	60	115	3000	1200~1600	12	0.5~2	SIDE MILLING
X-AESR1605	40	375	7500	1600~2000	0.05~0.15	14~16	SLOTTING
X-AESR1605	40	350	7000	3500~4000	0~2	14~16	SLOTTING
X-AESR1605	40	350	7000	2500~3000	8~10	14~16	SLOTTING
X-AESR1605	40	375	7500	1600~2000	16	0.05~0.15	SIDE MILLING
X-AESR1605	40	350	7000	2500~3000	16	8~10	SIDE MILLING
X-AESR1605	55	330	6600	1400~1800	0.05~0.15	14~16	SLOTTING
X-AESR1605	55	330	6600	3200~3700	0~2	14~16	SLOTTING
X-AESR1605	55	330	6600	2500~3000	6~7	14~16	SLOTTING
X-AESR1605	55	330	6600	1400~1800	16	0.05~0.15	SIDE MILLING
X-AESR1605	55	330	6600	2500~3000	16	7~8	SIDE MILLING
X-AESR1605	75	250	5000	1200~1600	0.05~0.15	14~16	SLOTTING
X-AESR1605	75	275	5500	2000~2500	0~2	14~16	SLOTTING
X-AESR1605	75	250	5000	1500~2000	3~5	14~16	SLOTTING
X-AESR1605	75	250	5000	1200~1600	16	0.05~0.15	SIDE MILLING
X-AESR1605	75	250	5000	1500~2000	16	3~5	SIDE MILLING
X-AESR1610	40	375	7500	1600~2000	0.05~0.15	13~16	SLOTTING
X-AESR1610	40	350	7000	3500~4000	0~2	13~16	SLOTTING
X-AESR1610	40	350	7000	2500~3000	8~10	13~16	SLOTTING
X-AESR1610	40	375	7500	1600~2000	16	0.05~0.15	SIDE MILLING
X-AESR1610	40	350	7000	2500~3000	16	8~10	SIDE MILLING
X-AESR1610	55	330	6600	1400~1800	0.05~0.15	13~16	SLOTTING
X-AESR1610	55	330	6600	3200~3700	0~2	13~16	SLOTTING
X-AESR1610	55	330	6600	2500~3000	6~7	13~16	SLOTTING
X-AESR1610	55	330	6600	1400~1800	16	0.05~0.15	SIDE MILLING
X-AESR1610	55	330	6600	2500~3000	16	7~8	SIDE MILLING
X-AESR1610	75	250	5000	1200~1600	0.05~0.15	13~16	SLOTTING
X-AESR1610	75	275	5500	2000~2500	0~2	13~16	SLOTTING
X-AESR1610	75	250	5000	1500~2000	3~5	13~16	SLOTTING
X-AESR1610	75	250	5000	1200~1600	16	0.05~0.15	SIDE MILLING
X-AESR1610	75	250	5000	1500~2000	16	3~5	SIDE MILLING
X-AESR1630	40	375	7500	1600~2000	0.05~0.15	9~16	SLOTTING
X-AESR1630	40	350	7000	3000~3500	0~2	9~16	SLOTTING
X-AESR1630	40	350	7000	2000~2500	8~10	9~16	SLOTTING
X-AESR1630	40	375	7500	1600~2000	16	0.05~0.15	SIDE MILLING
X-AESR1630	40	350	7000	2000~2500	16	8~10	SIDE MILLING
X-AESR1630	55	330	6600	1400~1800	0.05~0.15	9~16	SLOTTING
X-AESR1630	55	330	6600	2500~3000	0~2	9~16	SLOTTING
X-AESR1630	55	330	6600	1800~2300	6~7	9~16	SLOTTING
X-AESR1630	55	330	6600	1400~1800	16	0.05~0.15	SIDE MILLING
X-AESR1630	55	330	6600	1800~2300	16	7~8	SIDE MILLING
X-AESR1630	75	250	5000	1200~1600	0.05~0.15	9~16	SLOTTING
X-AESR1630	75	275	5500	1600~2000	0~2	9~16	SLOTTING
X-AESR1630	75	250	5000	1200~1600	3~5	9~16	SLOTTING
X-AESR1630	75	250	5000	1200~1600	16	0.05~0.15	SIDE MILLING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AESR1630	75	250	5000	1200~1600	16	3~5	SIDE MILLING
X-AESR2005	50	375	6000	1300~1700	0.05~0.15	18~20	SLOTTING
X-AESR2005	50	375	6000	2400~2800	0~2	18~20	SLOTTING
X-AESR2005	50	375	6000	1400~1800	6~7	18~20	SLOTTING
X-AESR2005	50	375	6000	1200~1600	20	0.05~0.15	SIDE MILLING
X-AESR2005	50	345	5500	1400~1800	20	6~7	SIDE MILLING
X-AESR2005	70	315	5000	1200~1600	0.05~0.15	18~20	SLOTTING
X-AESR2005	70	315	5000	2000~2400	0~2	18~20	SLOTTING
X-AESR2005	70	280	4500	1200~1600	4~5	18~20	SLOTTING
X-AESR2005	70	315	5000	1100~1500	20	0.05~0.15	SIDE MILLING
X-AESR2005	70	280	4500	1200~1600	20	4~5	SIDE MILLING
X-AESR2005	90	240	3800	1000~1300	0.05~0.15	18~20	SLOTTING
X-AESR2005	90	240	3800	1600~2000	0~2	18~20	SLOTTING
X-AESR2005	90	190	3000	1000~1400	3~4	18~20	SLOTTING
X-AESR2005	90	240	3800	1000~1300	20	0.05~0.15	SIDE MILLING
X-AESR2005	90	190	3000	1000~1400	20	3~4	SIDE MILLING
X-AESR2010	50	375	6000	1300~1700	0.05~0.15	16~20	SLOTTING
X-AESR2010	50	375	6000	2400~2800	0~2	16~20	SLOTTING
X-AESR2010	50	375	6000	1400~1800	6~7	16~20	SLOTTING
X-AESR2010	50	375	6000	1200~1600	20	0.05~0.15	SIDE MILLING
X-AESR2010	50	345	5500	1400~1800	20	6~7	SIDE MILLING
X-AESR2010	70	315	5000	1200~1600	0.05~0.15	16~20	SLOTTING
X-AESR2010	70	315	5000	2000~2400	0~2	16~20	SLOTTING
X-AESR2010	70	280	4500	1200~1600	4~5	16~20	SLOTTING
X-AESR2010	70	315	5000	1100~1500	20	0.05~0.15	SIDE MILLING
X-AESR2010	70	280	4500	1200~1600	20	4~5	SIDE MILLING
X-AESR2010	90	240	3800	1000~1300	0.05~0.15	16~20	SLOTTING
X-AESR2010	90	240	3800	1600~2000	0~2	16~20	SLOTTING
X-AESR2010	90	190	3000	1000~1400	3~4	16~20	SLOTTING
X-AESR2010	90	240	3800	1000~1300	20	0.05~0.15	SIDE MILLING
X-AESR2010	90	190	3000	1000~1400	20	3~4	SIDE MILLING
X-AESR2030	50	375	6000	1300~1700	0.05~0.15	12~20	SLOTTING
X-AESR2030	50	375	6000	2000~2400	0~2	12~20	SLOTTING
X-AESR2030	50	375	6000	1200~1600	6~7	12~20	SLOTTING
X-AESR2030	50	375	6000	1200~1600	20	0.05~0.15	SIDE MILLING
X-AESR2030	50	345	5500	1200~1600	20	6~7	SIDE MILLING
X-AESR2030	70	315	5000	1200~1600	0.05~0.15	12~20	SLOTTING
X-AESR2030	70	315	5000	1600~2000	0~2	12~20	SLOTTING
X-AESR2030	70	280	4500	1000~1400	4~5	12~20	SLOTTING
X-AESR2030	70	315	5000	1100~1500	20	0.05~0.15	SIDE MILLING
X-AESR2030	70	280	4500	1000~1400	20	4~5	SIDE MILLING
X-AESR2030	90	240	3800	1000~1300	0.05~0.15	12~20	SLOTTING
X-AESR2030	90	240	3800	1200~1600	0~2	12~20	SLOTTING
X-AESR2030	90	190	3000	800~1200	3~4	12~20	SLOTTING
X-AESR2030	90	240	3800	1000~1300	20	0.05~0.15	SIDE MILLING
X-AESR2030	90	190	3000	800~1200	20	3~4	SIDE MILLING
X-AESR2530	60	390	5000	1200~1500	0.05~0.15	16~25	SLOTTING
X-AESR2530	60	390	5000	1600~2000	0~2	16~25	SLOTTING

Work Material		Aluminum Alloy : 5052 / 6061 / 7075					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-AESR2530	60	355	4500	1000~1400	6~7	16~25	SLOTTING
X-AESR2530	60	355	4500	1100~1400	25	0.05~0.15	SIDE MILLING
X-AESR2530	60	315	4000	1000~1400	25	6~7	SIDE MILLING
X-AESR2530	80	315	4000	1000~1300	0.05~0.15	16~25	SLOTTING
X-AESR2530	80	315	4000	1400~1800	0~2	16~25	SLOTTING
X-AESR2530	80	275	3500	900~1300	4~5	16~25	SLOTTING
X-AESR2530	80	315	4000	1000~1300	25	0.05~0.15	SIDE MILLING
X-AESR2530	80	235	3000	900~1300	25	4~5	SIDE MILLING
X-AESR2530	100	210	2700	800~1000	0.05~0.15	16~25	SLOTTING
X-AESR2530	100	210	2700	1200~1600	0~1	16~25	SLOTTING
X-AESR2530	100	190	2400	800~1100	2~3	16~25	SLOTTING
X-AESR2530	100	210	2700	700~1000	25	0.05~0.15	SIDE MILLING
X-AESR2530	100	190	2400	800~1100	25	2~3	SIDE MILLING
X-AESR3230	70	360	3600	900~1200	0.05~0.2	24~32	SLOTTING
X-AESR3230	70	360	3600	1300~1700	0~2	24~32	SLOTTING
X-AESR3230	70	280	2800	700~1000	5~6	24~32	SLOTTING
X-AESR3230	70	360	3600	700~1000	32	0.05~0.2	SIDE MILLING
X-AESR3230	70	280	2800	700~1000	32	5~6	SIDE MILLING
X-AESR3230	100	280	2800	800~1000	0.05~0.2	24~32	SLOTTING
X-AESR3230	100	280	2800	1000~1400	0~2	24~32	SLOTTING
X-AESR3230	100	250	2500	500~800	4~5	24~32	SLOTTING
X-AESR3230	100	280	2800	500~800	32	0.05~0.2	SIDE MILLING
X-AESR3230	100	250	2500	500~800	32	4~5	SIDE MILLING
X-AESR3230	140	200	2000	600~800	0.05~0.2	24~32	SLOTTING
X-AESR3230	140	200	2000	800~1200	0~1	24~32	SLOTTING
X-AESR3230	140	180	1800	400~700	2~3	24~32	SLOTTING
X-AESR3230	140	200	2000	400~600	32	0.05~0.2	SIDE MILLING
X-AESR3230	140	180	1800	400~700	32	2~3	SIDE MILLING
X-AESR3250	70	360	3600	900~1200	0.05~0.2	20~32	SLOTTING
X-AESR3250	70	360	3600	1300~1700	0~2	20~32	SLOTTING
X-AESR3250	70	280	2800	700~1000	5~6	20~32	SLOTTING
X-AESR3250	70	360	3600	700~1000	32	0.05~0.2	SIDE MILLING
X-AESR3250	70	280	2800	700~1000	32	5~6	SIDE MILLING
X-AESR3250	100	280	2800	800~1000	0.05~0.2	20~32	SLOTTING
X-AESR3250	100	280	2800	1000~1400	0~2	20~32	SLOTTING
X-AESR3250	100	250	2500	500~800	4~5	20~32	SLOTTING
X-AESR3250	100	280	2800	500~800	32	0.05~0.2	SIDE MILLING
X-AESR3250	100	250	2500	500~800	32	4~5	SIDE MILLING
X-AESR3250	140	200	2000	600~800	0.05~0.2	20~32	SLOTTING
X-AESR3250	140	200	2000	800~1200	0~1	20~32	SLOTTING
X-AESR3250	140	180	1800	400~700	2~3	20~32	SLOTTING
X-AESR3250	140	200	2000	400~600	32	0.05~0.2	SIDE MILLING
X-AESR3250	140	180	1800	400~700	32	2~3	SIDE MILLING

X-TS

MILLING CONDITIONS

Work Material		Carbon Steels : S50C / S5400 : 1.1210 / 1.0036 : 1050 / A570 Gr.45 (~HRC22)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-TS0803	25	215	8000~9000	2000~2400	0.3	0.3	CHAMFERING
X-TS0803	25	215	8000~9000	1800~2200	0.5	0.5	CHAMFERING
X-TS0803	25	215	8000~9000	1000~1400	1	1	CHAMFERING
X-TS0803	45	190	7200~7700	1400~1800	0.3	0.3	CHAMFERING
X-TS0803	45	190	7200~7700	1200~1600	0.5	0.5	CHAMFERING
X-TS0803	45	190	7200~7700	600~900	1	1	CHAMFERING
X-TS1003	30	200	6200~6700	2200~2600	0.5	0.5	CHAMFERING
X-TS1003	30	200	6200~6700	2000~2400	1	1	CHAMFERING
X-TS1003	30	200	6200~6700	1200~1600	1.5	1.5	CHAMFERING
X-TS1003	50	170	5200~5700	1600~2000	0.5	0.5	CHAMFERING
X-TS1003	50	170	5200~5700	1400~1800	1	1	CHAMFERING
X-TS1003	50	170	5200~5700	700~1100	1.5	1.5	CHAMFERING
X-TS1203	35	215	5500~6000	1800~2200	0.5	0.5	CHAMFERING
X-TS1203	35	215	5500~6000	1600~2000	1	1	CHAMFERING
X-TS1203	35	215	5500~6000	800~1200	1.5	1.5	CHAMFERING
X-TS1203	60	185	4700~5200	1400~1800	0.5	0.5	CHAMFERING
X-TS1203	60	185	4700~5200	1200~1600	1	1	CHAMFERING
X-TS1203	60	185	4700~5200	500~800	1.5	1.5	CHAMFERING
X-TS1603	45	215	4000~4500	1200~1600	0.5	0.5	CHAMFERING
X-TS1603	45	215	4000~4500	1000~1400	1	1	CHAMFERING
X-TS1603	45	215	4000~4500	700~1000	1.5	1.5	CHAMFERING
X-TS1603	70	190	3500~4000	900~1200	0.5	0.5	CHAMFERING
X-TS1603	70	190	3500~4000	700~1100	1	1	CHAMFERING
X-TS1603	70	190	3500~4000	500~800	1.5	1.5	CHAMFERING
X-TS2003	60	185	2700~3200	800~1200	0.5	0.5	CHAMFERING
X-TS2003	60	185	2700~3200	600~800	1	1	CHAMFERING
X-TS2003	60	185	2700~3200	400~600	1.5	1.5	CHAMFERING
X-TS2003	100	120	1700~2200	700~1100	0.5	0.5	CHAMFERING
X-TS2003	100	120	1700~2200	500~700	1	1	CHAMFERING
X-TS2003	100	120	1700~2200	400~600	1.5	1.5	CHAMFERING

X-TS

MILLING CONDITIONS

Work Material		Alloy Tool Steels / Carbon Tool Steels					
		P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-TS0803	25	180	7000~7500	1600~2000	0.3	0.3	CHAMFERING
X-TS0803	25	180	7000~7500	1400~1800	0.5	0.5	CHAMFERING
X-TS0803	25	180	7000~7500	700~1000	1	1	CHAMFERING
X-TS0803	45	150	5700~6200	1000~1400	0.3	0.3	CHAMFERING
X-TS0803	45	150	5700~6200	800~1200	0.5	0.5	CHAMFERING
X-TS0803	45	150	5700~6200	500~800	1	1	CHAMFERING
X-TS1003	30	180	5500~6000	1800~2200	0.5	0.5	CHAMFERING
X-TS1003	30	180	5500~6000	1600~2000	1	1	CHAMFERING
X-TS1003	30	180	5500~6000	800~1200	1.5	1.5	CHAMFERING
X-TS1003	50	150	4500~5000	1200~1600	0.5	0.5	CHAMFERING
X-TS1003	50	150	4500~5000	1000~1400	1	1	CHAMFERING
X-TS1003	50	150	4500~5000	700~1000	1.5	1.5	CHAMFERING
X-TS1203	35	180	4500~5000	1400~1800	0.5	0.5	CHAMFERING
X-TS1203	35	180	4500~5000	1200~1600	1	1	CHAMFERING
X-TS1203	35	180	4500~5000	700~1000	1.5	1.5	CHAMFERING
X-TS1203	60	150	3700~4200	1000~1400	0.5	0.5	CHAMFERING
X-TS1203	60	150	3700~4200	800~1200	1	1	CHAMFERING
X-TS1203	60	150	3700~4200	400~700	1.5	1.5	CHAMFERING
X-TS1603	45	180	3300~3800	1000~1400	0.5	0.5	CHAMFERING
X-TS1603	45	180	3300~3800	800~1200	1	1	CHAMFERING
X-TS1603	45	180	3300~3800	600~900	1.5	1.5	CHAMFERING
X-TS1603	70	150	2700~3200	900~1300	0.5	0.5	CHAMFERING
X-TS1603	70	150	2700~3200	700~1000	1	1	CHAMFERING
X-TS1603	70	150	2700~3200	500~800	1.5	1.5	CHAMFERING
X-TS2003	60	140	2000~2500	700~1000	0.5	0.5	CHAMFERING
X-TS2003	60	140	2000~2500	500~700	1	1	CHAMFERING
X-TS2003	60	140	2000~2500	400~600	1.5	1.5	CHAMFERING
X-TS2003	100	80	1000~1500	500~800	0.5	0.5	CHAMFERING
X-TS2003	100	80	1000~1500	400~600	1	1	CHAMFERING
X-TS2003	100	80	1000~1500	300~500	1.5	1.5	CHAMFERING

X-TS

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-TS0803	25	150	5700~6200	1000~1400	0.3	0.3	CHAMFERING
X-TS0803	25	150	5700~6200	800~1200	0.5	0.5	CHAMFERING
X-TS0803	25	150	5700~6200	500~800	0.8	0.8	CHAMFERING
X-TS0803	45	120	4500~5000	700~1100	0.3	0.3	CHAMFERING
X-TS0803	45	120	4500~5000	500~800	0.5	0.5	CHAMFERING
X-TS0803	45	120	4500~5000	300~600	0.8	0.8	CHAMFERING
X-TS1003	30	150	4500~5000	1200~1600	0.5	0.5	CHAMFERING
X-TS1003	30	150	4500~5000	1000~1400	1	1	CHAMFERING
X-TS1003	30	150	4500~5000	600~1000	1.3	1.3	CHAMFERING
X-TS1003	50	120	3600~4000	900~1300	0.5	0.5	CHAMFERING
X-TS1003	50	120	3600~4000	700~1100	1	1	CHAMFERING
X-TS1003	50	120	3600~4000	500~800	1.3	1.3	CHAMFERING
X-TS1203	35	145	3600~4000	1000~1400	0.5	0.5	CHAMFERING
X-TS1203	35	145	3600~4000	800~1200	1	1	CHAMFERING
X-TS1203	35	145	3600~4000	500~800	1.3	1.3	CHAMFERING
X-TS1203	60	115	2800~3300	700~1100	0.5	0.5	CHAMFERING
X-TS1203	60	115	2800~3300	500~800	1	1	CHAMFERING
X-TS1203	60	115	2800~3300	300~600	1.3	1.3	CHAMFERING
X-TS1603	45	150	2700~3200	900~1300	0.5	0.5	CHAMFERING
X-TS1603	45	150	2700~3200	700~1100	1	1	CHAMFERING
X-TS1603	45	150	2700~3200	400~700	1.5	1.5	CHAMFERING
X-TS1603	70	125	2200~2700	700~1000	0.5	0.5	CHAMFERING
X-TS1603	70	125	2200~2700	500~800	1	1	CHAMFERING
X-TS1603	70	125	2200~2700	300~600	1.5	1.5	CHAMFERING
X-TS2003	60	110	1500~2000	500~700	0.5	0.5	CHAMFERING
X-TS2003	60	110	1500~2000	400~600	0.9	0.9	CHAMFERING
X-TS2003	60	110	1500~2000	300~500	1.3	1.3	CHAMFERING
X-TS2003	100	50	500~1000	400~700	0.5	0.5	CHAMFERING
X-TS2003	100	50	500~1000	300~500	0.9	0.9	CHAMFERING
X-TS2003	100	50	500~1000	250~450	1.3	1.3	CHAMFERING

X-TD

MILLING CONDITIONS

Work Material		Carbon Steels : S50C / S5400 : 1.1210 / 1.0036 : 1050 / A570 Gr.45 (~HRc22)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(Aa) Depth of Cut	(Ap) Width of Cut	Milling Type
X-TD0803	25	200	7800~8300	1600~2000	0.3	0.3	CHAMFERING
X-TD0803	25	200	7800~8300	1400~1800	0.5	0.5	CHAMFERING
X-TD0803	25	200	7800~8300	700~1000	1	1	CHAMFERING
X-TD0803	45	180	6800~7300	1000~1400	0.3	0.3	CHAMFERING
X-TD0803	45	180	6800~7300	800~1200	0.5	0.5	CHAMFERING
X-TD0803	45	180	6800~7300	400~600	1	1	CHAMFERING
X-TD1003	30	185	5700~6200	1800~2200	0.5	0.5	CHAMFERING
X-TD1003	30	185	5700~6200	1600~2000	1	1	CHAMFERING
X-TD1003	30	185	5700~6200	800~1200	1.5	1.5	CHAMFERING
X-TD1003	50	140	4200~4700	1000~1400	0.5	0.5	CHAMFERING
X-TD1003	50	140	4200~4700	800~1200	1	1	CHAMFERING
X-TD1003	50	140	4200~4700	400~700	1.5	1.5	CHAMFERING
X-TD1203	35	185	4700~5200	1200~1600	0.5	0.5	CHAMFERING
X-TD1203	35	185	4700~5200	1000~1400	1	1	CHAMFERING
X-TD1203	35	185	4700~5200	600~900	1.5	1.5	CHAMFERING
X-TD1203	60	150	3700~4200	700~1000	0.5	0.5	CHAMFERING
X-TD1203	60	150	3700~4200	500~800	1	1	CHAMFERING
X-TD1203	60	150	3700~4200	300~600	1.5	1.5	CHAMFERING
X-TD1603	45	185	3500~4000	700~1000	0.5	0.5	CHAMFERING
X-TD1603	45	185	3500~4000	500~800	1	1	CHAMFERING
X-TD1603	45	185	3500~4000	300~600	1.3	1.3	CHAMFERING
X-TD1603	70	150	2700~3200	700~1000	0.5	0.5	CHAMFERING
X-TD1603	70	150	2700~3200	500~700	1	1	CHAMFERING
X-TD1603	70	150	2700~3200	400~600	1.3	1.3	CHAMFERING
X-TD2003	60	140	2000~2500	500~800	0.5	0.5	CHAMFERING
X-TD2003	60	140	2000~2500	400~600	1	1	CHAMFERING
X-TD2003	60	140	2000~2500	300~500	1.3	1.3	CHAMFERING
X-TD2003	100	80	1000~1500	400~700	0.5	0.5	CHAMFERING
X-TD2003	100	80	1000~1500	400~600	1	1	CHAMFERING
X-TD2003	100	80	1000~1500	300~500	1.3	1.3	CHAMFERING

X-TD

MILLING CONDITIONS

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)					
Coolant Type		Wet coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-TD0803	25	160	6200~6700	1200~1600	0.3	0.3	CHAMFERING
X-TD0803	25	160	6200~6700	1000~1400	0.5	0.5	CHAMFERING
X-TD0803	25	160	6200~6700	500~800	1	1	CHAMFERING
X-TD0803	45	135	5200~5700	900~1200	0.3	0.3	CHAMFERING
X-TD0803	45	135	5200~5700	700~1000	0.5	0.5	CHAMFERING
X-TD0803	45	135	5200~5700	300~600	1	1	CHAMFERING
X-TD1003	30	160	4800~5300	1400~1800	0.5	0.5	CHAMFERING
X-TD1003	30	160	4800~5300	1200~1600	1	1	CHAMFERING
X-TD1003	30	160	4800~5300	700~1000	1.5	1.5	CHAMFERING
X-TD1003	50	135	4000~4500	900~1200	0.5	0.5	CHAMFERING
X-TD1003	50	135	4000~4500	700~1000	1	1	CHAMFERING
X-TD1003	50	135	4000~4500	400~700	1.5	1.5	CHAMFERING
X-TD1203	35	160	4000~4500	1000~1400	0.5	0.5	CHAMFERING
X-TD1203	35	160	4000~4500	800~1200	1	1	CHAMFERING
X-TD1203	35	160	4000~4500	500~800	1.3	1.3	CHAMFERING
X-TD1203	60	130	3200~3700	600~900	0.5	0.5	CHAMFERING
X-TD1203	60	130	3200~3700	400~700	1	1	CHAMFERING
X-TD1203	60	130	3200~3700	300~600	1.3	1.3	CHAMFERING
X-TD1603	45	160	3000~3500	600~900	0.5	0.5	CHAMFERING
X-TD1603	45	160	3000~3500	400~700	1	1	CHAMFERING
X-TD1603	45	160	3000~3500	300~500	1.3	1.3	CHAMFERING
X-TD1603	70	125	2200~2700	500~800	0.5	0.5	CHAMFERING
X-TD1603	70	125	2200~2700	400~600	1	1	CHAMFERING
X-TD1603	70	125	2200~2700	300~500	1.3	1.3	CHAMFERING
X-TD2003	60	125	1800~2300	500~700	0.5	0.5	CHAMFERING
X-TD2003	60	125	1800~2300	400~600	1	1	CHAMFERING
X-TD2003	60	125	1800~2300	300~500	1.3	1.3	CHAMFERING
X-TD2003	100	70	900~1300	400~600	0.5	0.5	CHAMFERING
X-TD2003	100	70	900~1300	300~500	1	1	CHAMFERING
X-TD2003	100	70	900~1300	250~450	1.3	1.3	CHAMFERING

X-TD

MILLING CONDITIONS

Work Material		Hardened Steels					
		SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)					
Coolant Type		Dry coolant					
Type No.	Extension Length (mm)	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	(A _a) Depth of Cut	(A _p) Width of Cut	Milling Type
X-TD0803	25	135	5200~5700	800~1200	0.3	0.3	CHAMFERING
X-TD0803	25	135	5200~5700	600~1000	0.5	0.5	CHAMFERING
X-TD0803	25	135	5200~5700	300~600	0.8	0.8	CHAMFERING
X-TD0803	45	90	3400~3800	600~900	0.3	0.3	CHAMFERING
X-TD0803	45	90	3400~3800	500~800	0.5	0.5	CHAMFERING
X-TD0803	45	90	3400~3800	300~500	0.8	0.8	CHAMFERING
X-TD1003	30	120	3500~4000	900~1300	0.5	0.5	CHAMFERING
X-TD1003	30	120	3500~4000	700~1100	1	1	CHAMFERING
X-TD1003	30	120	3500~4000	400~700	1.3	1.3	CHAMFERING
X-TD1003	50	90	2700~3200	700~1000	0.5	0.5	CHAMFERING
X-TD1003	50	90	2700~3200	500~800	1	1	CHAMFERING
X-TD1003	50	90	2700~3200	300~600	1.3	1.3	CHAMFERING
X-TD1203	35	110	2700~3200	700~1000	0.5	0.5	CHAMFERING
X-TD1203	35	110	2700~3200	500~800	1	1	CHAMFERING
X-TD1203	35	110	2700~3200	300~600	1.3	1.3	CHAMFERING
X-TD1203	60	85	2000~2500	500~800	0.5	0.5	CHAMFERING
X-TD1203	60	85	2000~2500	300~600	1	1	CHAMFERING
X-TD1203	60	85	2000~2500	300~600	1.2	1.2	CHAMFERING
X-TD1603	45	110	2000~2500	500~800	0.5	0.5	CHAMFERING
X-TD1603	45	110	2000~2500	300~600	0.8	0.8	CHAMFERING
X-TD1603	45	110	2000~2500	300~500	1	1	CHAMFERING
X-TD1603	70	85	1500~2000	400~700	0.5	0.5	CHAMFERING
X-TD1603	70	85	1500~2000	300~500	0.8	0.8	CHAMFERING
X-TD1603	70	85	1500~2000	250~400	1	1	CHAMFERING
X-TD2003	60	110	1500~1900	400~550	0.5	0.5	CHAMFERING
X-TD2003	60	110	1500~1900	300~500	0.8	0.8	CHAMFERING
X-TD2003	60	110	1500~1900	250~450	1	1	CHAMFERING
X-TD2003	100	60	700~1100	350~500	0.5	0.5	CHAMFERING
X-TD2003	100	60	700~1100	250~450	0.8	0.8	CHAMFERING
X-TD2003	100	60	700~1100	200~400	1	1	CHAMFERING

SELECTION OF DHF Exchangeable Head Endmill II Series

Work Material	End Mills			Corner Radius End Mills			Ball Nose End Mills		
	First Selection	Second Selection	Third Selection	First Selection	Second Selection	Third Selection	First Selection	Second Selection	Third Selection
Carbon Steels S50C / SS400 : 1.1210 / 1.0036 : 1050 / A570 Gr.45 (~HRC 22)	X-UPS	X-UET	-	X-UXR	-	-	X-BMW	X-UB Xs-UB	X-BTB Xs-BTB
Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRC 23~32)	X-UPS	X-UET	-	X-UOR X-UXR	X-UEXR	X-UPR	X-BMW	X-UB Xs-UB	X-BTB Xs-BTB
Prehardened Steels NAK80 : 1.2083 : AISI420 : M310 (HRC36~45)	X-UPS	X-UET	-	X-UOR X-UXR	X-UEXR	X-UPR	X-BMW	X-UBY X-UB Xs-UB	X-BTB Xs-BTB
Hardened Steels SKD61/ STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)	X-UVT	X-UEX X-UPS	X-UET	X-UEYR X-UVTR	X-UOR	X-UEXR X-UPR	X-UBT Xs-UBT	X-UBY	X-UB
Hardened Steels SKD11 / SKH9 : 1.2379 / 1.3342 : D2 / M2 (HRC55~62)	X-UVT	X-UEX	-	X-UEYR X-UVTR	X-UOR	X-UEXR X-UPR	X-UBT Xs-UBT	X-UBY	-

SELECTION OF DHF Exchangeable Head Endmill II Series

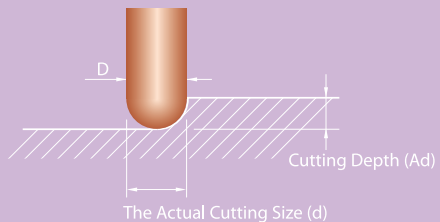
Work Material	End Mills			Corner Radius End Mills			Ball Nose End Mills		
	First Selection	Second Selection	Third Selection	First Selection	Second Selection	Third Selection	First Selection	Second Selection	Third Selection
Aluminum Alloy 5052 / 6061 / 7075	X-AES X-AEW	-	-	X-AESR X-AEWR	X-UXR	-	X-BTC	-	-
Copper C1100 / 2.0090 / B152C11000	X-AES X-AEW	X-UET	-	X-AESR X-AEWR	X-UXR	-	X-BTC	X-UB Xs-UB	X-BTB Xs-BTB
Stainless Steels SUS304 : 1.4301 : AISI 304 (HRC 28~32)	X-UPS	X-UET	-	X-UXR	-	-	X-UB Xs-UB	X-BTB Xs-BTB	X-BMW
Stainless Steels SUS420J2 / SUS630 : 1.2083 / 1.4542 : AISI 420 / 17-4PH (HRC 28~32)	X-UPS	X-UET	-	X-UXR	-	-	X-UB Xs-UB	X-BTB Xs-BTB	X-BMW
Titanium Alloy / Pure Titanium Ti-6Al-4V / Ti-2 : 3.7165 / 3.7035 : Gr5 / Gr2 : TC4 / TA1	X-UET X-AES	X-AEW	-	X-UXR X-AESR	X-AEWR	-	X-UB Xs-UB	X-BTB Xs-BTB	X-BMW

BALL NOSE REAL CUTTING DIAMETER

Ball R (mm)	Mill Dia. (mm)	(Ad) Depth of Cut (mm/min)														
		0.01	0.02	0.03	0.04	0.05	0.08	0.1	0.15	0.2	0.3	0.5	0.8	1.0	2.0	3.0
0.1	0.2	0.087	0.12	0.143	0.16	0.173	0.196	0.2	----	----	----	----	----	----	----	----
0.2	0.4	0.125	0.174	0.211	0.24	0.265	0.32	0.35	0.39	0.4	----	----	----	----	----	----
0.3	0.6	0.154	0.215	0.262	0.299	0.332	0.41	0.45	0.52	0.57	0.6	----	----	----	----	----
0.4	0.8	0.178	0.25	0.304	0.349	0.387	0.48	0.53	0.62	0.63	0.77	0.77	----	----	----	----
0.5	1	0.199	0.28	0.341	0.392	0.436	0.54	0.6	0.71	0.8	0.92	1	----	----	----	----
1	2	0.282	0.398	0.486	0.56	0.624	0.78	0.87	1.05	1.2	1.43	1.73	1.96	2	----	----
1.5	3	0.346	0.488	0.597	0.688	0.768	0.97	1.08	1.31	1.5	1.8	2.24	2.65	2.83	2.83	----
2	4	0.399	0.564	0.69	0.796	0.889	1.12	1.25	1.52	1.74	2.11	2.65	3.2	3.46	4	----
2.5	5	0.447	0.631	0.772	0.891	0.995	1.25	1.4	1.71	1.96	2.37	3	3.67	4	4.9	4.9
3	6	0.489	0.692	0.846	0.977	1.091	1.38	1.54	1.87	2.15	2.62	3.32	4.08	4.47	5.66	6
4	8	0.565	0.799	0.978	1.129	1.261	1.59	1.78	2.17	2.5	3.04	3.87	4.8	5.29	6.93	7.75
5	10	0.632	0.894	1.094	1.262	1.411	1.78	1.99	2.43	2.8	3.41	4.36	5.43	6	8	9.17
6	12	0.693	0.979	1.198	1.383	1.546	1.95	2.18	2.67	3.07	3.75	4.8	5.99	6.63	8.94	10.39
7	14	0.748	1.058	1.295	1.495	1.67	2.11	2.36	2.88	3.32	4.05	5.2	6.65	7.21	9.8	11.49
8	16	0.8	1.131	1.384	1.598	1.786	2.26	2.52	3.08	3.56	4.34	5.57	6.97	7.75	10.58	12.49
9	18	0.848	1.199	1.468	1.695	1.895	2.39	2.68	3.27	3.77	4.61	5.92	7.42	8.25	11.31	13.42
10	20	0.894	1.264	1.548	1.787	1.997	2.52	2.82	3.45	3.98	4.86	6.24	7.84	8.72	12	14.28

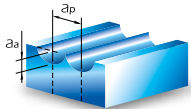
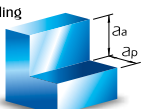
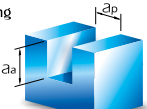
CALCULATION OF REAL DIA.

$$d = 2\sqrt{Ad(D-Ad)}$$



REPLY

Messrs. /

Type No. (Size Description)		Work Material		Hardness(HRC)	
		Heat Treatment ☐ Yes ☐ No			
Machine Type		Programming Method			
Model		☐ UG		☐ CIMATRON	
		☐ Pro-E		☐ Work NC	
		☐ Power-Mill		☐ Master CAM	
Tool Holding System		☐ ER Collect Chuck		☐ Draw Back Chuck	
		☐ Hydraulic Chuck		☐ Shrink Fit Chuck	
Brand					
Cooling Type		☐ Dry Machining		☐ MQL (Mist)	
		☐ Oil Machining		☐ Emulsion(Coolant) Machining	
Processing Method		☐ Down Milling		☐ Up Milling	
					
1. Ball Nose End Mill		2. Flat End Mill			
Speed min ⁻¹		Feed m/min		Speed min ⁻¹	
				Feed m/min	
					
aa = mm		ap = mm		aa = mm	
				ap = mm	
Result		Result			



DHF Precision Tool Co., Ltd.

No.425, Da Dun 6th St., Nantun District, Taichung
40867, Taiwan
TEL : 886-4-23815088 FAX : 886-4-23814488
<http://www.endmill.com.tw>
E-mail : dhf@endmill.com.tw



DHF Italia srl
P.I. 01486270935
Viale M. Grigoletti, 107
33170 PORDENONE
tel: +39.0434.367053
fax: +39.0434.554731
email: info@dhfitalia.it
web: www.dhfitalia.it

Distributor