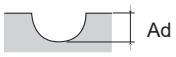
TECHNICAL DATA

H-PRO

HPRB (High Speed Milling Condition)

WARINING

Danger of fire by spark incidence or heat caused by tool breakage can happen during processing.
Confirm fire prevention countermeasure beforehand necessarily before use.

Work Material	PREHARDENED STEELS NAK			HARDENED STEELS SKD, STAVAX			HARDENED STEELS SKD			COPPER ALLOY		
Hardness (HRc)	HRc30 ~ 45			HRc45 ~ 55			HRc55 ~ 65					
Radius of Ball Nose	Depth of Cut Ad(mm)	SPEED (min^{-1})	FEED (mm/min)	Depth of Cut Ad(mm)	SPEED (min^{-1})	FEED (mm/min)	Depth of Cut Ad(mm)	SPEED (min^{-1})	FEED (mm/min)	Depth of Cut Ad(mm)	SPEED (min^{-1})	FEED (mm/min)
R0.05	0.001~0.005	38,000~50,000	50~80	0.001~0.005	38,000~50,000	40~60	0.001~0.004	38,000~50,000	30~50	0.003~0.010	38,000~50,000	50~100
R0.1	0.001~0.010	38,000~50,000	200~350	0.001~0.009	38,000~50,000	200~280	0.001~0.005	38,000~50,000	150~240	0.010~0.020	38,000~50,000	200~500
R0.15	0.004~0.018	38,000~50,000	200~600	0.003~0.014	38,000~50,000	200~400	0.003~0.012	38,000~50,000	150~350	0.010~0.025	38,000~50,000	300~800
R0.2	0.005~0.020	30,000~45,000	250~800	0.003~0.014	30,000~45,000	200~500	0.003~0.011	30,000~45,000	160~400	0.010~0.030	30,000~42,000	300~1,000
R0.25	0.006~0.020	25,000~42,000	300~700	0.004~0.014	25,000~42,000	250~500	0.003~0.011	25,000~42,000	220~400	0.010~0.030	30,000~42,000	500~1,400
R0.3	0.006~0.030	22,000~40,000	300~1,200	0.006~0.030	22,000~40,000	250~800	0.003~0.015	20,000~27,000	210~380	0.010~0.100	24,000~40,000	350~1,600
R0.4	0.006~0.100	20,000~40,000	260~1,800	0.006~0.080	20,000~40,000	250~1,500	0.006~0.021	20,000~40,000	190~480	0.030~0.100	20,000~40,000	450~2,000
R0.5	0.010~0.200	20,000~38,000	650~2,800	0.010~0.080	20,000~38,000	500~2,400	0.007~0.025	12,000~17,000	230~420	0.050~0.200	20,000~40,000	800~3,000
R0.6	0.050~0.100	20,000~30,000	600~2,500	0.020~0.060	20,000~30,000	400~1,800	0.011~0.020	13,000~14,000	260~450	0.060~0.100	20,000~30,000	1,000~2,500
R0.75	0.050~0.200	18,000~30,000	600~3,100	0.020~0.100	18,000~30,000	550~2,500	0.010~0.030	8,500~11,000	200~400	0.100~0.300	18,000~30,000	1,200~3,000
R1.0	0.050~0.100	12,000~20,000	1,000~2,400	0.030~0.120	12,000~20,000	850~2,300	0.015~0.035	7,000~8,500	280~400	0.100~0.400	12,000~20,000	1,200~3,000
R1.5	0.050~0.200	16,000~20,000	1,100~3,800	0.030~0.180	16,000~20,000	900~2,900	0.020~0.050	5,200~6,000	380~550	0.200~0.500	16,000~20,000	1,800~4,000
R2.0	0.100~0.300	16,000~20,000	2,300~3,900	0.080~0.180	16,000~20,000	1,800~3,000	0.050~0.090	4,000~4,600	380~590	0.300~0.500	16,000~20,000	2,600~4,000
DEPTH OF CUT												

1. Use a rigid and precise machine and holder.
2. Adjust milling condition when corner processing.
3. The above condition should be adjusted according to the machining shape and machine type.
4. For milling steels, air blow or MQL(Oil Mist) are recommended. When using cutting fluids, use cutting fluid with smoke retardant. (For milling copper, water soluble fluids are recommended.)