STANDARD CUTTING CONDITIONS

LQMU11-PXER-MJ

ISO	Workpiece material		Hardness	Grade	Cutting speed *Vc* (m/min)	Feed per tooth *fz* (mm/t)
P	Low carbon steel S15C, etc. C15E, etc.		- 200HB	AH3135	100 - 250	0.1 - 0.25*
P	Alloy steel S55C, etc. C55, etc.		- 300HB	AH3135	100 - 230	0.1 - 0.2*
P	Prehardened steel NAK80, PX5, etc.		30 - 40HRC	AH3135	100 - 230	0.1 - 0.2*
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.		-	AH3135	90 - 180	0.1 - 0.25*
K	Grey cast iron FC250, etc. 250, etc.		150 - 250HB	AH120	140 - 250	0.1 - 0.25*
K	Ductile cast iron FCD400, etc. 450-10S, etc.		150 - 250HB	AH120	110 - 200	0.1 - 0.25*
S	Titanium alloys Ti-6Al-4V, etc.		-	AH120	30 - 60	0.08 - 0.2*
S	Superalloys Inconel 718, etc.		-	AH120	20 - 50	0.06 - 0.1*
H	Hardened steel	SKD61, etc.	40 - 50HRC	AH120	45 - 70	0.08 - 0.15*
H		SKD11, etc.	50 - 60HRC	AH120	40 - 65	0.06 - 0.1*

LQMU11/18-PNER-MJ

ISO	Workpiece material	Hardness HB	Grade	Cutting speed *Vc* (m/min)	Feed per tooth *fz* (mm/t)
P	Low carbon steel S15C, etc. C15E, etc.	- 200	AH725	100 - 250	0.1 - 0.25*
P	High carbon steel S45C, S55C, etc. C45, C55, etc.	200 - 300	AH725	100 - 230	0.1 - 0.2*
P	Alloy steel SCM440, SCr415, etc. 42CrMo4, etc.	150 - 300	AH725	100 - 230	0.1 - 0.2*
P	Tool steel D2, etc. X153CrMoV12, etc.	- 300	AH725	100 - 180	0.1 - 0.2*
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	-	AH140	90 - 180	0.1 - 0.25*
K	Grey cast iron FC250, etc. 250, etc.	150 - 250	AH120	140 - 250	0.1 - 0.25*
K	Ductile cast iron FCD400, etc. 450-10S, etc.	150 - 250	AH120	110 - 200	0.1 - 0.25*
S	Superalloys Inconel 718, Ti-6Al-4V, etc.	-	AH725	20 - 50	0.08 - 0.2*

* When using LQMU11 inserts, see page 13 for proper feed per tooth setting.
· For applications with poor chip evacuation, use air gun to remove chips from the machining area to avoid chip re-cutting and part damage.
· To machine cast surface with unstable cutting depths or interruptions, it is recommended to lower the feed rate (*fz*) to the lowest parameter in the recommended range.
· Rigidity of the machine and/or workpiece and the spindle power capability greatly influence the cutting conditions. For applications with large cutting width/depth and/or long tool overhang, start with a *Vc* and *fz* in the lower range of the recommended cutting parameters and monitor the machine stability.