

STANDARD DRILLING CONDITIONS

ISO	Workpiece material	Cutting speed: Vc (m/min)	Feed: f (mm/rev)			
			ø3 ~ ø5	ø5 ~ ø10	ø10 ~ ø16	ø16 ~ ø20
N	Aluminium alloys	60 - 120	0.2 - 0.4	0.3 - 0.5	0.4 - 0.6	0.5 - 0.7
K	Grey cast irons	40 - 80	0.15 - 0.35	0.25 - 0.45	0.3 - 0.6	0.35 - 0.65
	Ductile cast irons	30 - 70	0.15 - 0.3	0.2 - 0.4	0.25 - 0.5	0.3 - 0.6

Notes:

- The above table shows standard and typical cutting conditions for DMX - FM type drills.
- Because the cutting conditions may be changed depending on the material type, hardness, machinability, machine tool, and coolant, the most appropriate conditions must be decided whilst referring the chip control condition and tool failure mode.
- When using the smaller side of the diameter range, the feed rate should be set lower.
- When working with long overhang or using "L" type drills, the feed rate should be set lower.



NOTE ON CUTTING FLUID

- Cutting fluid should be sufficiently supplied to the drill point and the entrance of the hole.
- Use a water soluble cutting fluid containing relatively high content of extreme pressure additive for heavy duty cutting or use a water insoluble cutting fluid.

- No. of revolutions (min^{-1}) = Cutting speed \times 1000 \div 3.14 \div Tool diameter
- Table feed (mm/min) = No. of revolutions \times Feed per revolution



2-effective Drill