

Cautions for installation on Machining Center

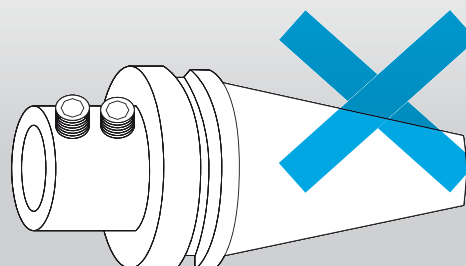
- For installation of DRC type MagicDrill, use Hydro Chuck, Power Chuck, Collet Chuck, etc.
For side lock arbor, tool life is shortened due to drilling center deviation. Hole shape failure may occur.

Hydro Chuck

Collet Chuck

Power Chuck

Install MagicDrill to above chuck.

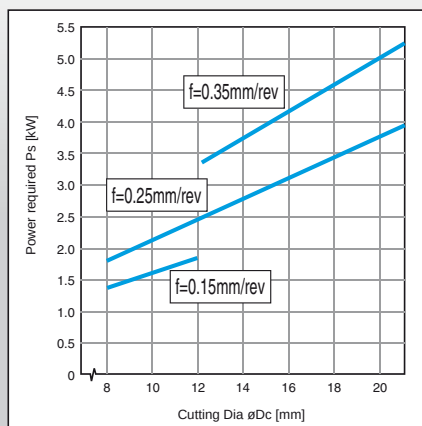


Example of side lock arbor

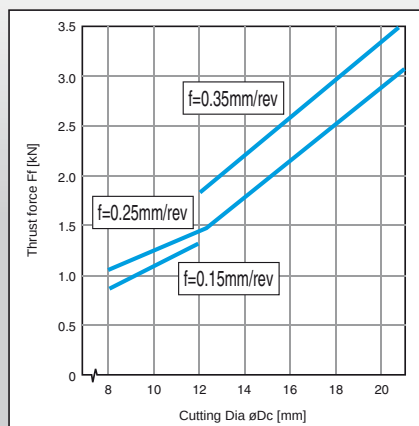
Reference charts

<Cutting Conditions>: Workpiece Heat treated steel (Hardness 240HB), $V_c=80\text{m/min}$, Wet

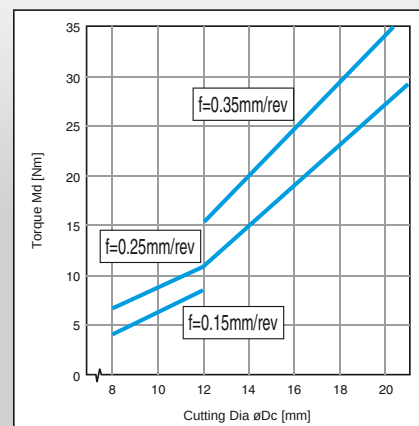
Power required



Thrust force



Torque



Case Studies

C50 (S50C)	
- Flange $V_c=97\text{m/min}$ ($n=2,490\text{min}^{-1}$) $H=32\text{mm}$ $f=0.3\text{mm/rev}$ ($V_f=747\text{mm/min}$) - Wet (Internal Coolant) - DC1250M-SC (PR0315)	
SS14-DRC120M-3	3,000holes/insert
Competitor A	1,800holes/drill
Compared to competitor's drill A, MagicDrill DRC type has reduced burr and reduced more than 10% of the power required. Tool life has also improved greatly. (Evaluation by the user)	

42CrMo4 (SCM440)	
- Housing $V_c=83\text{m/min}$ ($n=2,400\text{min}^{-1}$) $H=32\text{mm}$ $f=0.24\text{mm/rev}$ ($V_f=576\text{mm/min}$) - Wet (Internal Coolant) - DC1100M-SC (PR0315)	
SS12-DRC110M-3	2,400holes/insert
Competitor B	2,000holes/drill
Compared to competitor's solid drill B, MagicDrill DRC type has greatly reduced preparation time with its easy insert replacement feature. Also, the costs of spare tools for re-grinding has been reduced, and tool life has improved. (Evaluation by the user)	

Q&A

Q-1 Is re-grinding available?

A-1 We don't recommended it. Grinding of edge nose chisel is not possible.

Q-2 How large would the cutting hole be to the insert diameter (ϕD_c)?

A-2 The machining hole with SCM 435, comparing to the insert diameter (ϕD_c), will be about $+0.020\sim+0.040\text{mm}$ larger.

