

MagicDrill® DRX

Case Studies

X40CrMoV51 (SKD62 (45HRC))	
<ul style="list-style-type: none"> Vc=60 m/min f=0.05 mm/rev H=50 mm (through hole) Wet (Internal Coolant) ZXMT070305GH (PR1230) S25-DRX250M-4-07 	
MagicDrill DRX	6 holes/edge
Competitor J	4 holes/edge (breakage)
<p>Results</p> <ul style="list-style-type: none"> MagicDrill DRX has 1.5 times longer life than Competitor J Breakage is confirmed after machining 4 holes for Competitor J Interrupted machining is still possible after cutting 6 holes with MagicDrill DRX Finishing is not necessary because MagicDrill DRX provides a good finished surface (Evaluation by the user) 	

X10CrNiS18 9 (SUS303)	
<ul style="list-style-type: none"> Vc=75 m/min f=0.1 mm/rev H=10 mm (through hole) Wet (Internal Coolant) ZXMT06T204SM (PR1225) S25-DRX200M-3-06 	
MagicDrill DRX	1300 holes/edge
Competitor K	500 holes/edge
<p>Results</p> <ul style="list-style-type: none"> MagicDrillDRX had no sudden breakage that occurred for Competitor K and achieved stable machining with 2.6 times longer tool life. 	

SCM420HV (Cold Forging)	
<ul style="list-style-type: none"> Vc=118 m/min f=0.08 mm/rev (0.05 at the beginning) H=30 mm (through hole) Wet (Internal Coolant) ZXMT070305SM (PR1225) S25-DRX250M-3-07 	
MagicDrill DRX	Less adhesion, continue to use even after 400 holes
Competitor L	Large adhesion (after 400 holes)
<p>Results</p> <ul style="list-style-type: none"> MagicDrill DRX had a good chip control and low adhesion for machining of the same number comparing to Competitor L. 	

55NiCrMoV6 (SKT4 (42HRC))	
<ul style="list-style-type: none"> Vc=100 m/min f=0.07~0.08 mm/rev H=101 mm (through hole) Wet (External Coolant) ZXMT070305GM (PR1230) S25-DRX250M-4-07 	
MagicDrill DRX	Machining time : 28 min./pc
Conventional tool M	Machining time: 58 min./pc
<p>Results</p> <ul style="list-style-type: none"> For deep hole machining (4xD), MagicDrill DRX had no chip stuck and enabled machining without step feeding (machining time was reduced in half) despite use of external coolant MagicDrillDRX has improved 3 times longer tool life than Conventional tool M 	

K
Drilling