

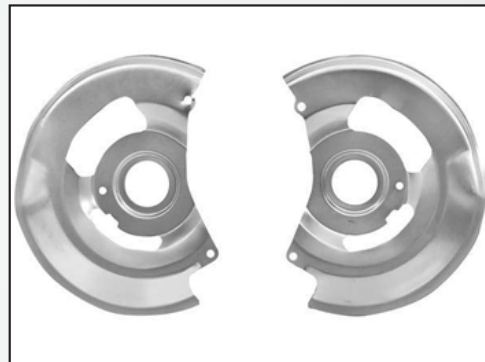


## Mold Backing Plates: Revolution Drill® / Opening Drill®

The customer is machining A36 mold backing plates using a DOOSAN DB 130CX Horizontal Boring Mill with 200 PSI (13.79 bar) through tool coolant.

Competing with off-shore mold makers, the customer was looking for a way to speed up this job. Allied was asked if they had a solution.

The difference was amazing as Allied was able to reduce the operation time from hours to just minutes. Completion of 6 holes using **Revolution Drill®** took less than 3 minutes, while the **Opening Drill®** opened 3 holes from 2" (50.8 mm) to 3.6" (91.44 mm) in under 2 minutes, outperforming the competitive tooling by over 4 hours!



Product:	Revolution Drill®	Measure	Competitor Tools	Revolution Drill®	Opening Drill®
Objective:	Decrease cycle time	RPM	Tools used in process: (1) - Center drill (2) - Standard twist drill (3) - Circular interpolation tool (4) Finish bore operation	2,200	1,200
Industry:	Tool, mold, & die	Feed Rate		0.0055 IPR (0.140 mm/rev)	0.0055 IPR (0.140 mm/rev)
Part:	Mold backing plates	Penetration Rate		12.1 IPM (307.340 mm/min)	6.6 IPM (167.640 mm/min)
Material:	A36	Cycle Time		under 5 min	
Hole Ø:	(1) 2.0" (50.8 mm) - x3 (2) 3.6" (91.44 mm) - x3				
Hole Depth:	(1) 3.5" (88.9 mm) - x3 (2) 4.0" (404.6 mm) - x3				

- ▶ Revolution Drill  
Holder: R34X22-150L  
Inserts: OP-05T308-H
- ▶ Opening Drill  
Holder: OP3-1L-CV50  
Inserts: OP-05T308-H

Revolution Drill

Opening Drill

The Revolution and Opening Drill provided:

**Decreased cycle time**

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