

**Cut Up To
60% Off
Drill Cycle
Time!**



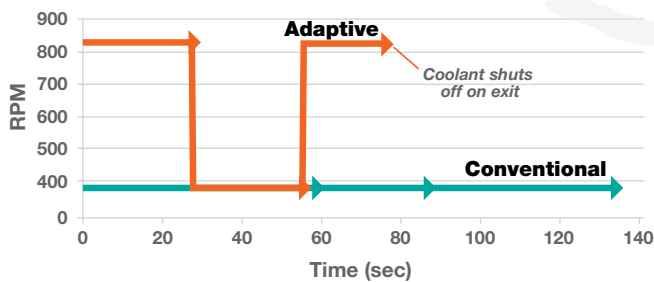
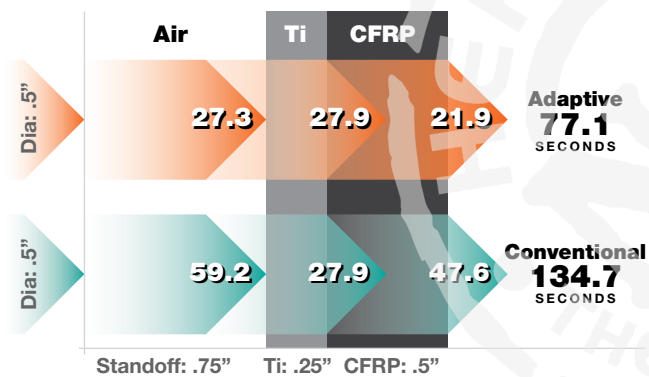
Drilling Through Composite Stacks Just Got Faster
The New Quackenbush® Adaptive Drilling System Makes It Happen

Optimizing Cutter Speed

The Recoules® Adaptive Drilling System automatically matches drill speed to the material regardless of layer thickness, changing speed in less than one second, so it's always drilling at the fastest speed possible. The result is a cycle-time reduction of up to 60% over conventional positive feed drilling and a major increase in productivity.

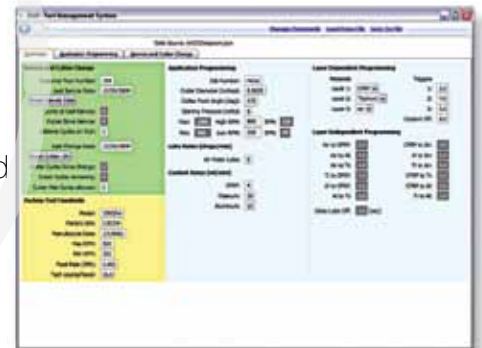
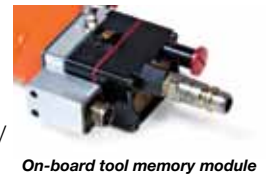
Up To 60% Cycle Time Reduction

The adaptive drilling system automatically changes from high to low speed when drilling Ti. High speed can be up to 3X faster, giving impressive cycle time reductions in dissimilar material stacks. Allowable combinations are CFRP/Ti, Ti/CFRP, Ti/CFRP/Ti, Al/CFRP/Ti, and Ti/Al.



Computer Process Control

The adaptive programming interface kit allows application and process parameters to be set on the on-board tool memory module. The control box reads the memory, provides the process control, and stores cycle data. Key programming features are speed, coolant flow, cutter data, maximum holes per cutter, and material stack combination. At the end of each cycle, data is stored on the control box and can be downloaded to a PC for traceability and diagnostics using an Ethernet connection.



Minimize Clean-up Time

Coolant flow rates are programmable for each material of a stack and can be shut off on breakthrough to reduce cleanup time and further increase productivity.



For Maximum Productivity

Easy Conversion Of Existing Drills

The Adaptive Drilling System is designed to enable the most efficient use of your existing equipment. Although the control box can operate only one tool at a time, it can control multiple different applications one after the other. Ease of programmability allows tools to be quickly reconfigured for different hole size and material stack combinations. The tools are based on the proven Quackenbush 158, 230, and 900 series positive feed line. New parts have been kept to a minimum and the on-board memory module is designed to be retro-fittable to existing tools in the field.

The Leader In Aerospace Drilling

Whether you're working with the special machining requirements of CFRP components or have a general question regarding the latest in drilling technology, you can turn to the experts at Recoules for answers. Call 866-569-9449 or go to www.apextoolgroup.com.



New Recoules® Adaptive Drilling System

Specifications

Model Number	Description	Max. Speed*	Min. Speed	Feed Rate Options	Hole Capacity Titanium
		RPM	RPM		
Controller					
642003PT	DMP-111-15 Drill Manager Pneumatic				
Drills					
932QA	Right Angle Adaptive Positive Feed	1200	400	.001"/.002"	7/16"
158-15QRA	Right Angle Adaptive Positive Feed	1200	400	.001"/.002"	7/16"
158QRA	Right Angle Adaptive Positive Feed	900	300	.001"/.002"	5/8"
230QRA	Right Angle Adaptive Positive Feed	900	300	.001"/.002"	5/8"
942QA	In-Line Adaptive Positive Feed	1200	400	.001"/.002"	7/16"
230QBA	In-Line Adaptive Positive Feed	1200	400	.001"/.002"	5/8"

*Based on 90 psi. inlet pressure to DMP

Retrofit Services

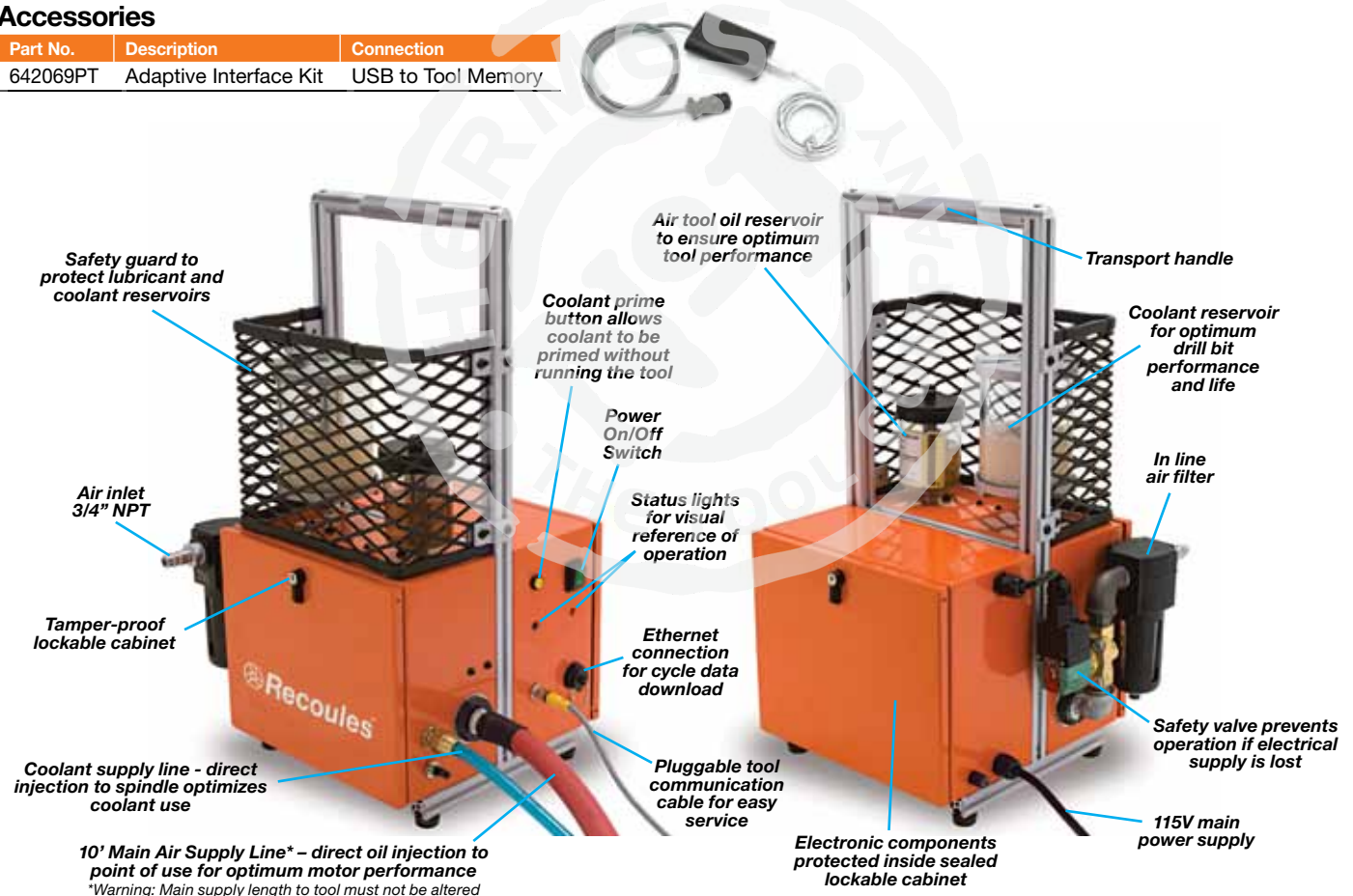
158 Series	Retrofit and rebuild Quackenbush 158 Series Positive Feed Drill
230 Series	Retrofit and rebuild Quackenbush 230 Series Positive Feed Drill
900 Series	Retrofit and rebuild Quackenbush 900 Series Positive Feed Drill

Accessories

Part No.	Description	Connection
642069PT	Adaptive Interface Kit	USB to Tool Memory

Controller Specifications

Electrical Supply:	115V 50/60Hz 2A
Pneumatic Supply:	90 psi min 140 psi max, clean dry air
Dimensions:	W 13" x D 15" x H 26"
Weight:	53 lbs.



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 **Recoules™**