



# OUTPACE THE COMPETITION



**Legendary Speed | Unparalleled Support & Training | Best In Class ROI**

**DAVENPORT  
MACHINE**

*A Brinkman Products Company*

# Tough time staying competitive? **EXPERIENCE THE *HYBRID ADVANTAGE***

- Superior size and process control proven in the toughest alloys
- Tighter bell curves
- Higher CPKs and lower PPM defect rates
- Expanded flexibility to meet your toughest manufacturing demands
- Faster setups with Davenport's innovative modular quick change tooling system
- Fast cycle times
- Operator friendly CNC interface
- Unparalleled support and training (Hybrid Solutions)



DavenportMachine.com

# **HYBRID FEATURES** to help you **OUTPACE THE COMPETITION**



## **CNC Control & Display**



### **NEW DISPLAY**

Larger screen and **improved user-friendly interface**



**Independent spindle size comps to make setups easy and accurate:**  
Adjustments in 0.0001" increments



**Position by position programming**



**High-speed predictive processing system**



**Global wear offsets in production. Adjust size on-the-fly!**



**Feed rate override**



**Load monitoring** to protect your tooling investments



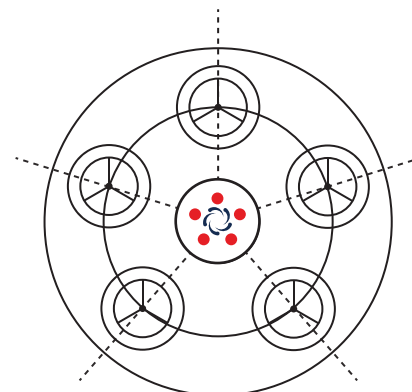
**Proprietary software** developed by Davenport for **free software updates!**



**Optimal chip control**

## **Revolving Head on Bearings**

- Revolving head and spindles are mounted on sets of preloaded angular contact bearings
- Higher accuracy and consistent spindle-to-spindle positioning
- No more thrust ring adjustments
- Superior length control
- Longer machine life
- Fast head index speeds



# Slide Configurations

All CNC slides are configured with the highest quality linear rails and ball screws providing superior rigidity and accuracy

## 3 AXIS SLIDE

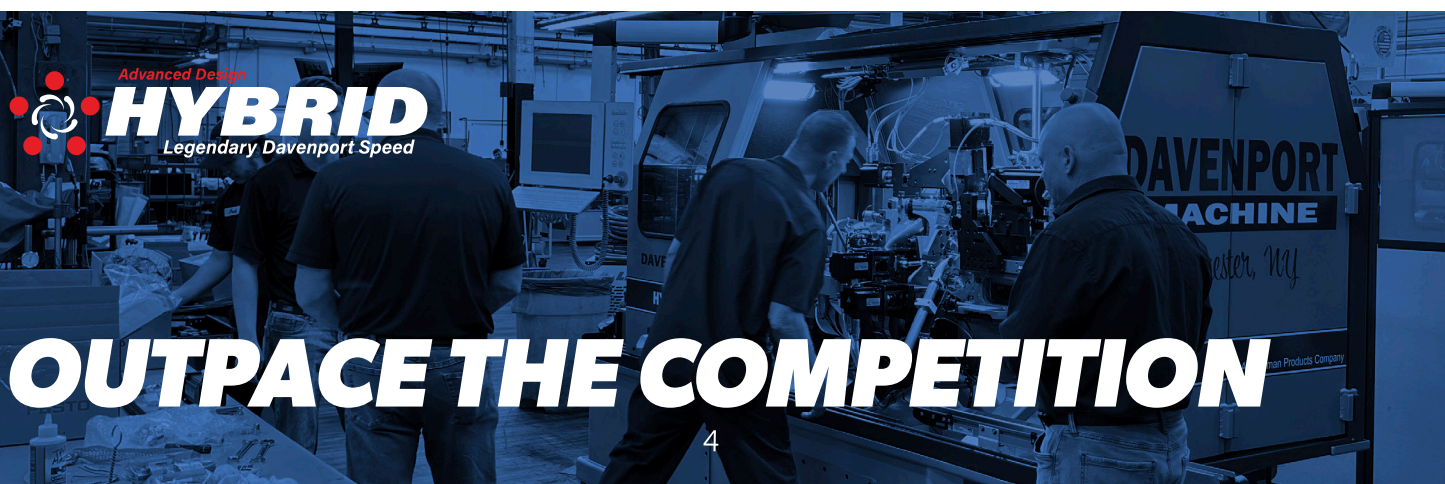
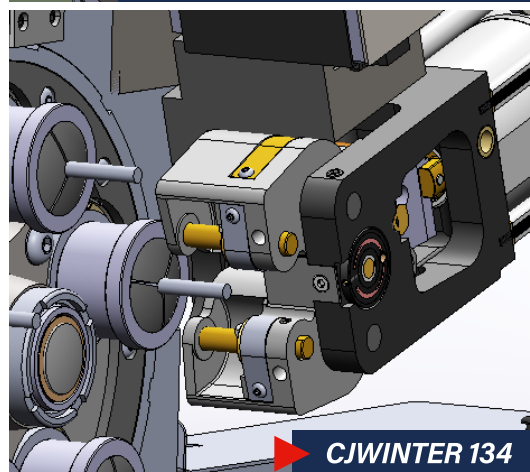
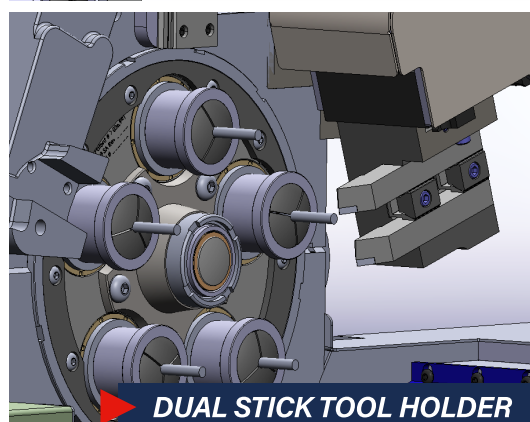
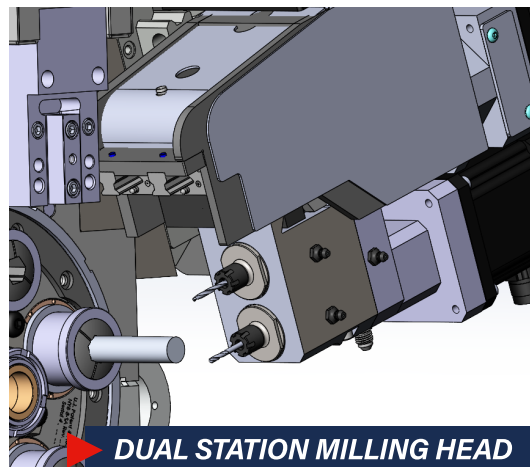
- 3rd position can be configured with a standard CNC swing arm or a 3-Axis multi-purpose slide for ultimate flexibility
- **Dual-station milling head:** for complex milling, cross-drilling or cross-tapping operations
- **Dual-stick tool mounting block:** expanded turning capabilities with two stations to mount off-the-shelf stick tools for turning, grooving, threading, boring, etc.
- **CJWinter 134** thread rolling attachment option

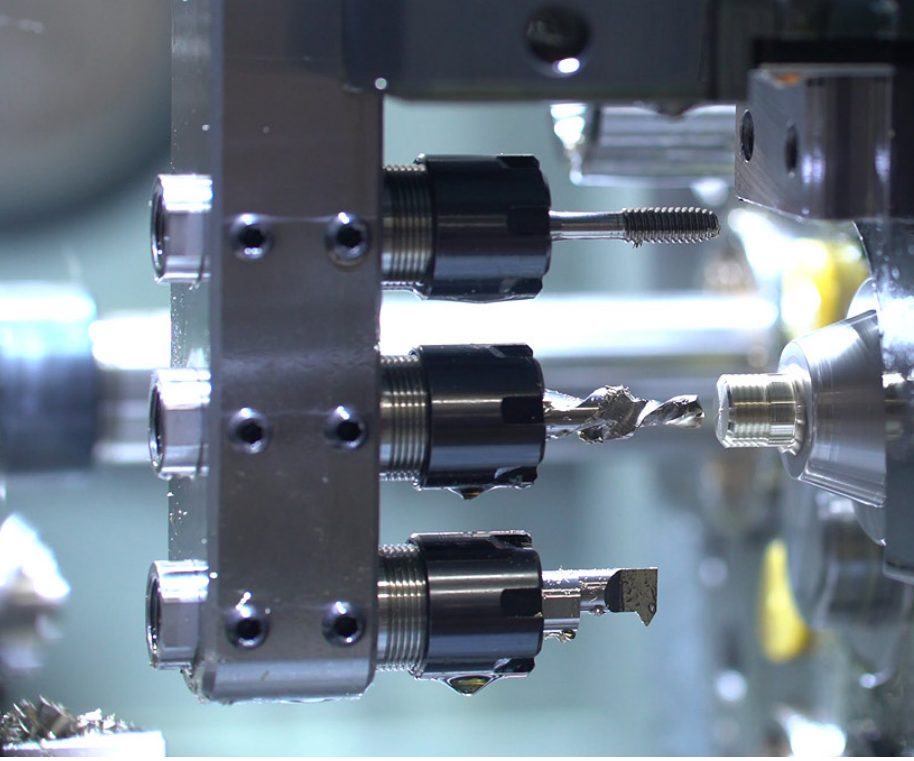
## 1<sup>ST</sup>, 2<sup>ND</sup> & 5<sup>TH</sup> POSITION

- No more turnbuckle adjustments! Cams and linkages have been replaced with CNC slides
- Independent tool offsets for each tool and spindle
- CNC cut-off, chip breaks, dwells and variable feeds
- Superior rigidity and precision slide positioning allows for form tolerances to be held to 0.0005" or better!

## 4<sup>TH</sup> POSITION

- 2 axis slide configuration allowing for additional turning capability
- Full 2D profiling, single point threading, turning, angular undercuts, chamfer, radii
- Boring bar holders available for complex internal undercuts and contours
- Multi-tool holders for OD/ID work combos

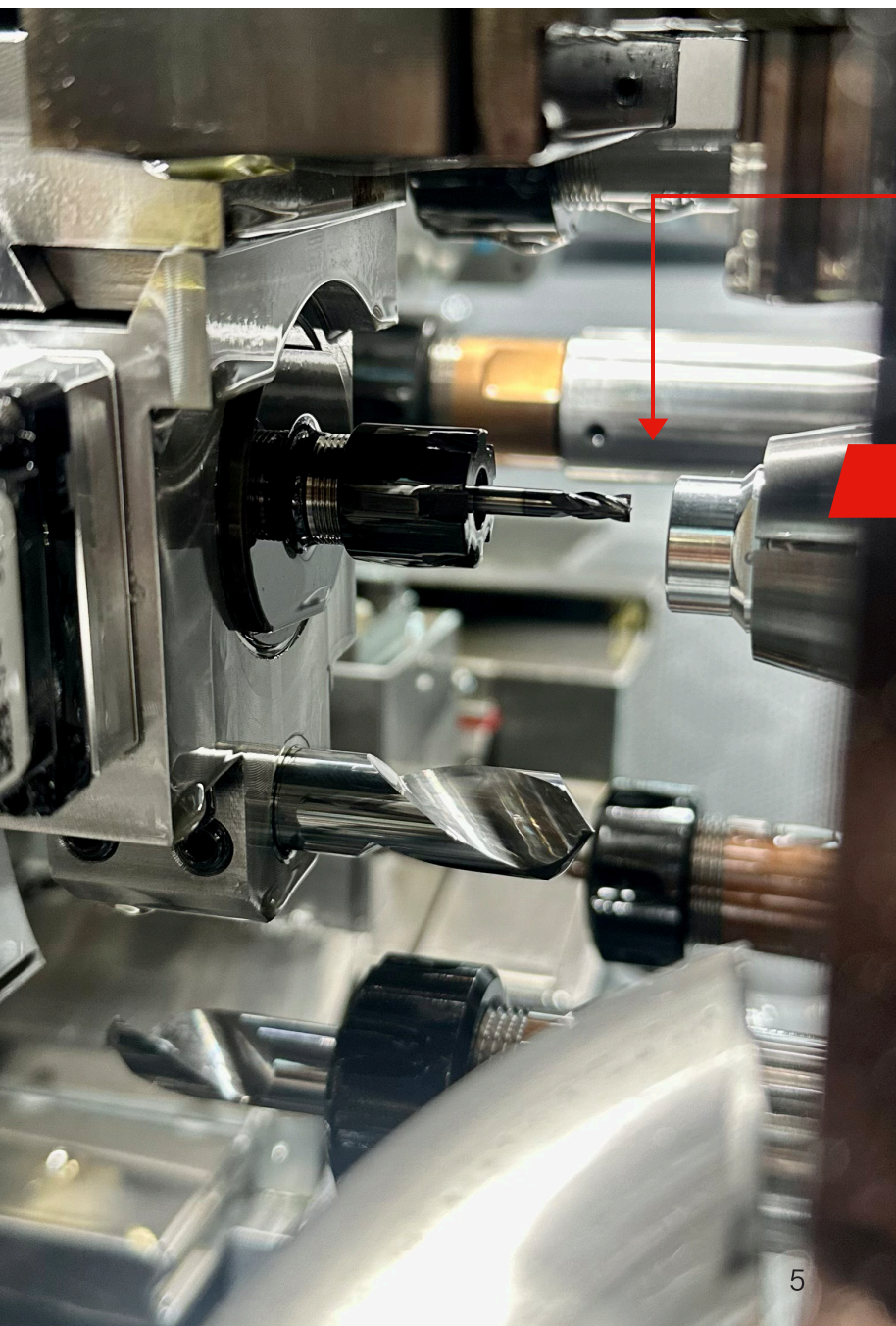




### 3 Station Back Working

Eliminate secondary operations with the Hybrid's 3-station back working axes:

- Utilize up to three tools in your sub-spindle for:
  - drilling
  - tapping
  - single point threading
  - turning, etc.
- Variety of milling options available to generate:
  - flats
  - cross-holes
  - face milled features
  - screw-driver slots, etc.



### Standard Features

Every Hybrid machine comes with an all-encompassing package of standard features to make your machine safe and effective.



- High Pressure Coolant System
- Mist Collection
- Fire Suppression
- Motorized Chip Conveyor
- Part Chute & Conveyor
- Heat Exchanger
- Door Interlocks

## Modular Tooling System

Davenport and its team of engineers has developed a new modular, quick change, tooling system for the Hybrid Machine — giving operators the flexibility to preset tools and make changeovers faster than ever before.



### FORM TOOL HOLDERS

- Insert style holders compatible with off the shelf 13, 20 or 24mm carbide insert blanks
- Fully adjustable for center height and taper
- Adjustable hard stops for tool positioning
- High pressure coolant ready
- Stick tool style holders also available

### END-WORKING

- QCT end working tool holders allow you to preset tools outside the machine and save time on part changeovers
- Innovative thread design for 1/4 turn installation and removal
- Available in varying standard ER collet sizes



## IEMCA NEXT 25 Bar Loader

Equip the IEMCA NEXT 25 Bar loader to your Hybrid Machine and realize significant productivity enhancements:

- Longer continuous machining, unattended!
- Compatible with Hybrid and Model B Machines
- Faster bar changes!

# Hybrid Machine Specifications



## Specifications, Area Requirements, and Pre-Installation Procedures

Bar capacity (maximum)	0.875 inch (22.2 mm) round 0.750 inch (19.1 mm) hex 0.625 inch (15.9 mm) square
Bar capacity (minimum)	0.187 inch (4.8 mm)
Turning length (maximum)	3.0 inches (76.2 mm)
Stock depletion sensor	Yes
Broken cutoff detection	Yes
Number of main (work) spindles	5
Main spindle speed range	0-3,800 rpm
Revolving spindle speed range	0-4,500 rpm
Spindle pickoff speed range	0-4,500 rpm
Number of independent longitudinal tool stations	5
Cross slides	(Configurable) up to 5
Spindle pick-off and deburring	Yes
Spindle pick-off Diameter (maximum)	0.875 inch (22.2 mm)
Number of tools servicing pick-off spindle	3
Tooling positions	9 (plus attachments)
Spindle indexing time	0.4 seconds minimum variable
Control make and model	Davenport Machine PC & Touch Display
Shop Air Pressure (min)	90 psi (Option Dependent) (up to 20 cfm)
System Voltage	480v 3 Phase +/- 5%, 50/60Hz, 60 Amp
Clear area required for installation	20'L(609.6cm) x 15'W(457.2cm) x 10'H(304.8cm)
Spindle load monitoring	Yes
Parts counters	Yes
Tool life counters	Yes

## Weight and Length Information

Hybrid Machine - 7,700#	9'4"L(284.48cm) x 4'8"W(142.24cm) x 8'10"H(269.24cm)
Stock Carrier Cover (12 ft. stock) - 250#	8'6"L(259.08cm) x 19"W(48.26cm) x 21"H(53.34cm)
Stock Carrier (12 ft. stock) - 225#	10'4"L(314.96cm) x 11.5"W(29.21cm) x 11.5"H(29.21cm)
Transformer (if required) - 325#	16"L(40.64cm) x 28"W(71.12cm) x 32"H(81.28 cm)
High Pressure Coolant (Chipblaster) - 1250#	36"L(91.44cm) x 36"W(91.44cm) x 32"H(81.28cm)
High Pressure Coolant (MP Systems) - 1500#	42"L(106.68cm) x 38"W(96.52cm) x 42"H(106.68cm)
IEMCA NEXT 25 Bar Loader - 2645#	14' 5"L(441.96cm) x 48"W(121.93cm) x 55"H(139.7cm)



## How we help our customers succeed



10 days of training with every machine purchase



Custom tool design and production



Job layout assist services



Ongoing engineering and programming support



Online support portal and knowledge center



DavenportMachine.com  
Toll Free: 800-344-5748  
info@davenportmachine.com  
167 Ames Street  
Rochester, NY 14611 USA

# DAVENPORT MACHINE

Proudly Building Machines in America for More Than 130 Years