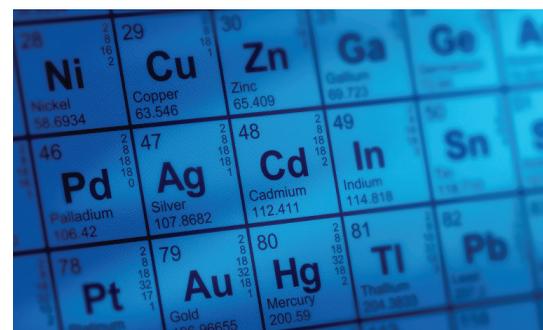




# BENCHTOP TURBO

BEST-IN-CLASS BENCHTOP  
THERMAL EVAPORATION



## DENTON VACUUM ENABLES INNOVATION AND HAS FOR OVER 50 YEARS.

With thousands of thin film deposition tools installed globally — including a large, globally installed base of precision optical deposition systems — engineers and researchers rely on Denton's thin film innovations to drive higher throughputs, better yields and low cost of ownership (COO) while benefiting from comprehensive service and support, and a dedicated R&D program that delivers enabling technologies.

### Denton's Best-In-Class BenchTop Thermal Evaporation

- Carbon coating
- Sputtering
- AC glow discharge
- Low-voltage thermal evaporation

**DENTON VACUUM**  
Enabling Innovation

## DENTON'S BEST-IN-CLASS BENCHTOP THERMAL EVAPORATION

The Denton Vacuum BenchTop™ Turbo is a unique, powerful, versatile and capable full-range low-voltage (resistive) thermal evaporation platform engineered for a wide variety of thermal evaporation applications. It can also be configured for high resolution electron microscopy sample preparation.

Safe, reliable and easy to maintain, the BenchTop Turbo is the ideal compact low-voltage thermal evaporator for both routine and complex carbon coating applications. The BenchTop Turbo also supports sputtering applications, able to produce fine-grained, thin films for high-resolution analysis or other applications.



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The BenchTop Turbo can also be configured for high-resolution microscopy sample preparation. Whether carbon coating (rods and/ or yarn), cleaning your films and grids or activating carbon, the BenchTop Turbo provides microscopists the necessary uptime, consistency, repeatability and yield to meet the most demanding microscopy applications.

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## VERSATILE

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The BenchTop Turbo can be easily configured to meet your requirements and preferences. For thermal evaporation, it supports up to two sources with optional codeposition, delivering films up to an 8-inch (200 mm) diameter area, with a variety of stage configurations available. Additional configuration options include AC glow and sputtering. And when evaporating, you can choose several options to accommodate your requirements and preferences, including larger (12" x 18") glass jar, faster vacuum pumps, PLC-controlled electro-pneumatic shutter, film thickness monitors and controllers, mass flow controller and backside quartz heat, among others.

## COMPACT

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The BenchTop Turbo houses a self-contained, built-in turbo molecular pump coupled directly to the chamber collar and, combined with a mechanical pump, increases pumping efficiency of the chamber and a cleaner deposition environment. Complete with gauges, the BenchTop Turbo offers users an uncommonly compact size. The bell jar, collar and base plate assembly are mounted to a space-saving cabinet designed to be placed on a laboratory table. All power distribution and system controls are enclosed in the cabinet. Removable panels provide safe and convenient access to internal components for servicing, maintenance and inspection. The BenchTop Turbo uses less than 32" width of your desk top space.

## EASY

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The BenchTop Turbo lowers the learning curve for you, too. Manage and guide both your system and processes in real time from its full-color, touch-screen graphical interface. The BenchTop Turbo's graphical interface provides control input and data display of current status. With the intuitive color touch-screen, you can operate valves, pumps, low voltage sources, and the fixture rotation subsystems and initiate automatic processes. With the BenchTop Turbo, novices quickly become proficient operators.

## SAFE

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Every BenchTop Turbo is equipped with an automatic glass-jar lift. This standard feature promotes safety as well as ease-of-use, as it prevents damage to glass jars due to improper placement. Hardware and software interlocks are standard in all Denton Vacuum systems. These interlocks protect the operator from unsafe operating conditions (high voltages, high temperatures, dangerous pressure differentials, etc.). Automated interlocks, hard-wired safety features and an emergency stop button protect both operator and machine.

In addition to the BenchTop Turbo, Denton Vacuum offers the following Research Productivity Products:

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Desktop Pro



Desk V



DV-502

# BENCHTOP TURBO OPTIONS

BENCHTOP TURBO FEATURES	STANDARD	OPTION
12" (wide) x 12" (high) glass jar chamber with guard and automatic lift	X	
12" x 18" glass jar chamber with guard and automatic lift		X
77 l/s turbo molecular pump, air cooled mechanical pump, two-stage rotary vane with filter, 3 cfm	X	
Dual-stage, rotary vane mechanical pump, 5.8 cfm dry scroll mechanical pump 3.5 cfm dry scroll mechanical pump 6.0 cfm		X
Rotating stage up to 8"- top drive only or up to 6" - bottom drive only (speed adjustable up to 20 rpm)	X	
Tilting/rotating stage, up to 4-inch (bottom drive, speed adjustable up to 20 rpm)		X
1kVa/2kVa resistance thermal power sources with switching	X	
Capability for co-deposition		X
3" electro-pneumatic shutter, interfaced to system process controller		X
2-inch diameter, internal mount DC cathode		X
120 Watt AC glow discharge		X
SQM-160 deposition monitor		X
SQC-310 deposition controller		X
500 Watt quartz, backside with reflector		X
Mass flow controller, 50 sccm		X
Bayard-Alpert ionization gauge transmitter	X	

## ABOUT US

All Denton Vacuum solutions are backed by a 12-month warranty on parts and labor, over 50 years of process knowledge, an in-house process engineering group, worldwide representation and support, and a Global Factory Service Center.