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# VT-Series & CADENCE

Thin-Film  
Coating Systems

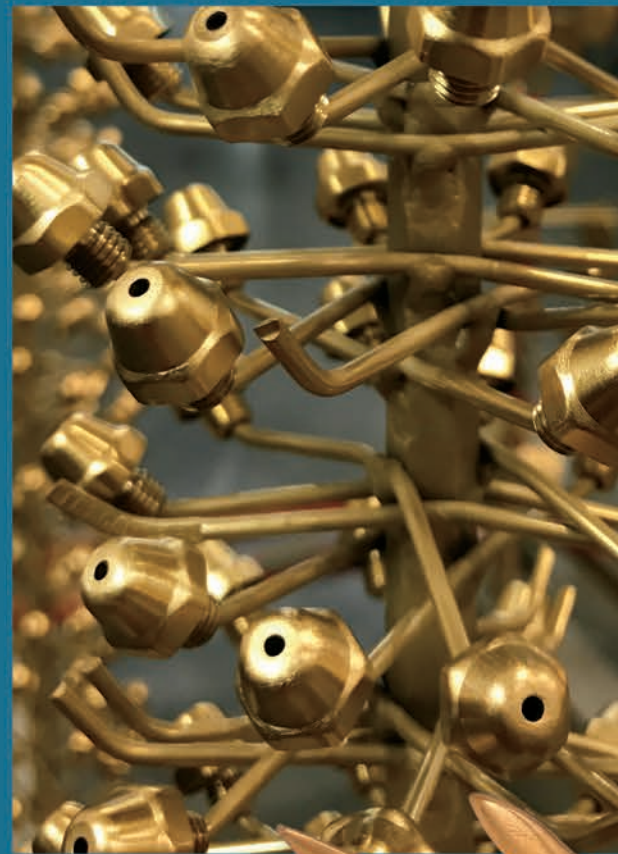
CADENCE

# VaporTech PVD Coating Machines

Bringing coating processes in-house simplifies production and significantly reduces per-part coating costs. In addition, in-house coating adds value to your products by providing control over product appearance, durability, and performance.

Many of our customers report a rapid return on investment, predictable operating costs, ease of use, and-often most important-adaptability. Our systems can apply many types of coatings to a variety of part types, sizes, and geometries. Our coating recipes are custom-created to meet your exact needs.

VaporTech systems offer compelling benefits, especially for products that require different properties, such as a steel cog that needs to be hard and durable, a scalpel, which has to retain an extremely sharp edge, or a faucet, which must be available in a wide choice of colors. Our systems feature a compact footprint and are easy to use and maintain.





# VT-Series™

*Our compact systems are easy to integrate, use, and maintain.*

VaporTech® VT-Series thin-film coating systems are designed to meet your manufacturing needs. The series includes 4 machines designed to work for the smallest to the largest applications. VT-Series chambers are designed to ensure consistency and maximum control of your product's finish. A system capacity of up to 122cm accommodates your largest parts.

Our lower-temperature process increases your choices of base materials—including steel, brass, zinc, and prepared plastics—and gives multi-material parts a common finish and appearance. We can custom-design coatings to meet your specifications for color and function. If you use multiple types of coatings (for example, both chrome and diamond-like carbon [DLC] coatings), you can apply them using the same chamber.

## These systems provide:

- Excellent color uniformity & deposition rates throughout the chamber.
- Even coating deposition rates throughout the chamber.
- A lower temperature process suitable for metal and plastic parts.
- Ideal design for large parts up to 122cm long.
- Multiple size systems, multiple processes per system.
- Multiple coating technologies in a single system.
- Easy-to-use graphic interface with automated recipes built in.
- Improved ROI with better, faster in-house coatings.



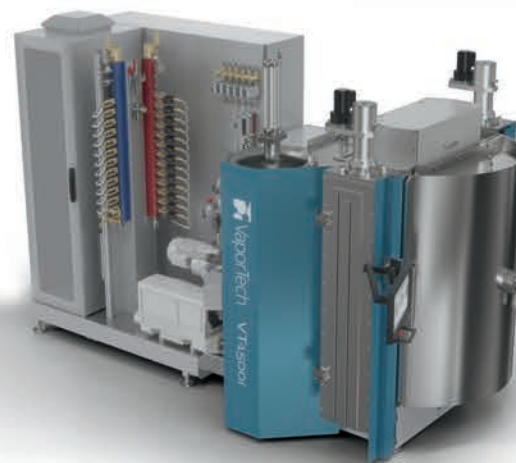
VT-3000i™ System



VT-500i™ System



VT-1000i™ System



VT-1500i™ System

## Cadence Systems™

When you need your products to perform, **Cadence** systems—with our proprietary RAAMS™ technology—improve coating structure, hardness, and wear resistance compared to traditional sputtering systems. Our high-energy process shortens coating times, and multiple coating sources further increase deposition rates of composite materials.

## Benefits of Cadence systems:

- Deposit thick coatings in a short process.
- Can be configured for rapid coating deposition.
- Improve coating properties over other magnetron sputtered coatings.
- Increase efficiency using the simple graphic interface with automated recipes built in.
- Improve ROI with better, faster in-house coatings.
- Create more durable coatings.



Cadence™ System

# VaporTech System Comparison

	VT-500i	VT-1000i	VT-1500i	VT-3000i	Cadence
Description	The VT-500i is the most compact VT-Series coating system designed for small-batch manufacturing operations. Even with its compact size, the system can coat large parts. The system's smaller footprint, easier maintenance, and competitive price make it suitable for an even broader range of applications.	The VT-1000i coating system shares almost the same footprint as our smallest VT-Series unit but with approximately 6 times the capacity. The compact 6-rack design can deposit a broad range of durable decorative and functional PVD finishes on metal or plated parts, including some plastics.	The VT-1500i provides approximately 70% of the throughput of the VT-3000i, but in a very compact footprint with both cathodic arc and optional magnetron sputtering technologies. With the ability to coat parts up to 100 cm long and 10 high-capacity racks, this is a very high-volume, price-competitive coating system for larger operations and those offering durable decorative coating services.	The VT-3000i is the largest VaporTech coating system designed for high throughput or bigger parts. The VT-3000i is the newest version of our VT-3000 series coaters that have operated successfully in applications around the world for more than 20 years.	Cadence systems provide high deposition rates to shorten coating times as well as multiple coating sources to further increase deposition rates or deposit composite materials. Our proprietary RAAMS™ technology is a high-energy process that improves coating structure, hardness, and wear-resistance.
Perfect for	Durable/decorative and DLC applications for smaller operations.	Durable/decorative and DLC applications for medium-sized operations.	Functional, durable/decorative and DLC applications for medium to large operations.	Functional, durable/decorative and DLC applications for large operations.	Functional coatings for smaller operations.
Applications Include	Home hardware, plumbing products, sports equipment and firearms, tools and tooling, medical devices, automotive components, and other consumer products.	Home hardware, plumbing products, sports equipment and firearms, tools and tooling, medical devices, automotive components, and other consumer products.	Home hardware, plumbing products, sports equipment and firearms, tools and tooling, medical devices, automotive components, and other consumer products.	Home hardware, plumbing products, sports equipment and firearms, tools and tooling, medical devices, automotive components, and other consumer products.	Home hardware, plumbing products, sports equipment and firearms, tools and tooling, medical devices, automotive components, and other consumer products.
Number of racks	1	6	10	16	1
Rack Size	70cm x 35.6cm Ø	100cm x 25.4cm Ø	100cm x 25.4cm Ø	122cm x 20.3cm Ø	45cm x 20.3cm Ø
Coating Area Per Batch	0.78m²	4.79m²	7.98m²	12.44m²	0.29m²
System Footprint (LxW)	3.3m x 1.2m	3.4m x 1.6m	2.0m x 4.4m	4.3m x 3.6m	3.8m x 1.2m
Coating Technologies	<ul style="list-style-type: none"><li>• Cathodic arc (LTAVD®)</li><li>• Plasma-enhanced chemical vapor deposition (PECVD)</li></ul>	<ul style="list-style-type: none"><li>• Cathodic arc (LTAVD®)</li><li>• Plasma-enhanced chemical vapor deposition (PECVD)</li></ul>	<ul style="list-style-type: none"><li>• Cathodic arc (LTAVD®)</li><li>• Plasma-enhanced chemical vapor deposition (PECVD)</li></ul>	<ul style="list-style-type: none"><li>• Cathodic arc (LTAVD®)</li><li>• Plasma-enhanced chemical vapor deposition (PECVD)</li></ul>	<ul style="list-style-type: none"><li>• Plasma-enhanced chemical vapor deposition (PECVD)</li><li>• Magnetron Sputtering (RAAMS™)</li></ul>
Complexity	Easy to operate and maintain.	Easy to operate and maintain.	Easy to operate and maintain.	Easy to operate and maintain.	Easy to operate and maintain.
Available Coatings	Pure, alloyed, or reacted zirconium, titanium, chromium, or carbon in a wide range of colors.	Pure, alloyed, or reacted zirconium, titanium, chromium, or carbon in a wide range of colors.	Pure, alloyed, or reacted zirconium, titanium, chromium, or carbon in a wide range of colors.	Pure, alloyed, or reacted zirconium, titanium, chromium, or carbon in a wide range of colors.	Pure, alloyed, or reacted zirconium, titanium, chromium, or carbon.

*Vapor Technologies (VaporTech) manufactures thin-film coating equipment and develops custom coatings (PVD, CVD, and DLC) to use with our systems. We are located in Longmont, CO, and have been serving clients worldwide for more than two decades.*

Learn more today!

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