

Brasstech Shines with 2 PVD Systems

Case Study

Customer: Brasstech Inc.

Application: Faucet Parts

System Installations:

VT-3000i™; 2019

VT-1500™; 2015

Recently, PVD coating equipment manufacturer Vapor Technologies, Inc., installed a second PVD finishing system for repeat customer and home-fixture leader Brasstech Inc. (Brasstech). The new VT-3000i™ machine is now up and running alongside its predecessor, providing Brasstech's Los-Angeles-area facility with the same quality VaporTech® coatings now applied more quickly and efficiently. So how did Brasstech choose VaporTech and its two hard-working models, the legacy VT-1500 (now updated in the VT-1500i™) and the higher capacity, smaller footprint VT-3000i™? And how have the VaporTech systems performed? Find out in this updated PVD coating machine case study.



280%

increase in throughput



50%

lower run time

Background

Brasstech, manufacturer of Newport Brass® and Ginger® brands kitchen and bath products, knows what it takes to differentiate from competitors. Operating successfully for more than 30 years, the plumbing fixtures leader first saw a need for higher-quality finishes back in 1989, when it installed its first in-house physical vapor deposition (PVD) coating system. By 2015, this equipment no longer met the company's growing needs. Brasstech evaluated finishing options including powder coating, lacquering, e-coating, and electroplating.



Before we installed the VaporTech® equipment, PVD was simply a niche surface finish. Now I like to use the LTAVD® [Vapor Technologies' proprietary Low Temperature Advanced Vapor Deposition] process wherever I can.

Carlos, Plant Manager, Brasstech, Inc.



Choosing a coating system

After weighing its options, Brasstech chose to continue and expand its successful PVD coating options and created a list of requirements for a new system:

Versatile

Apply durable coatings to various part sizes and geometries in an array of colors.

Right-sized

Minimal changes to the manufacturing floor.

Efficient

Low operation and maintenance costs as well as efficient use of consumables.

Easy

Easy-to-operate equipment with low maintenance requirements

Brasstech was looking for a single system capable of applying durable coatings to a variety of part sizes and geometries. The machine had to meet volume requirements and be easy and efficient to operate. The company also needed an external resource for new finish development.

Brasstech evaluated available PVD coating systems and found only one that met all its requirements. The system the company chose provided the required throughput and operational flexibility, a superior lower-temperature cathodic arc process, and coating development scientists to develop and test new coatings. The system's proprietary process could cost-effectively deposit durable, decorative, color-fast finishes on Brasstech products. The system Brasstech chose was the VaporTech VT-1500™ system.

Ongoing service & support

In addition to the machine's capabilities, Brasstech felt confident working with Vapor Technologies, a PVD equipment manufacturer with a solid history and installations worldwide. Brasstech appreciated the

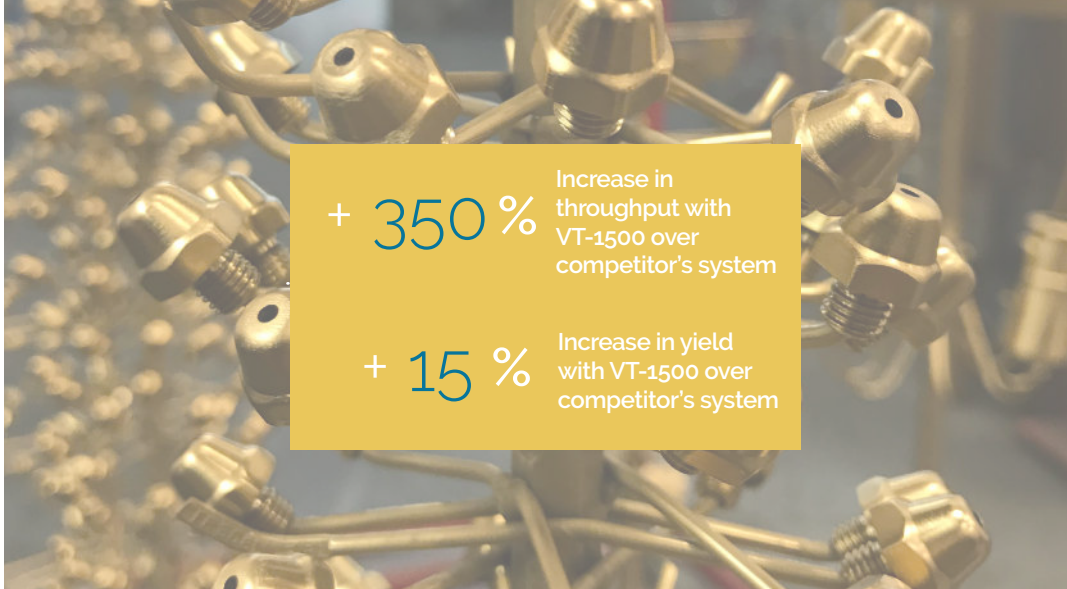
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Since the VT-1500 system is so simple, we had five employees with no knowledge of PVD running the equipment right away.

Carlos, Plant Manager

commitment to helping customers understand costs, determine ROI, and effectively incorporate PVD coating systems into its manufacturing process. Finally, as part of the equipment purchase, Vapor Technologies provided expert services from initial installation and training to continuing service and support.

The VT-1500 system was up and running after only two weeks of process and maintenance training for manufacturing plant employees. "Installation went like clockwork," Carlos, Brasstech's plant manager, reported soon after, "The VT-1500 system is so simple, we had five employees with no knowledge of PVD running the equipment right away."



+ 350 %

Increase in throughput with VT-1500 over competitor's system

+ 15 %

Increase in yield with VT-1500 over competitor's system

With its VT-1500 system, Brasstech incorporated the PVD finishing process into both its brands. For example, the company converted one of its top products from plating to PVD for a harder, more durable finish. These coatings are more scratch-resistant, wear-resistant, and easy to clean. The company has expanded its metallic color options while continuing to match legacy finishes. The VT-1500 system also enabled Brasstech to increase PVD throughput by 350% and boost yields by 15%. These impressive gains served the fixture manufacturer for several years, but by 2018, the Brasstech plant had grown and needed an additional machine.

When the company came back to VaporTech, it could choose a machine

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Since our systems are both VaporTech machines, the quality is excellent. The throughput is what is the big change with the step up to the VT-3000i model.

Kevin Welker, Vice President Operations at Brasstech

from a brand-new line of right-sized, compact, easy-to-use PVD coating systems. Brasstech wanted a system it wouldn't outgrow and purchased the highest capacity VaporTech coating system, the new VT-3000i. The new system is providing higher throughput in a smaller package than the still-strong VT-1500 next to which it stands.

VT-3000i system: higher yield, smaller package

"Comparing the VT-3000i model to the VT-1500 system, we see huge improvements again," explains Brasstech Vice President Kevin Welker. "Since they are both VaporTech machines, the quality remains excellent. The cycle times for our process in the VT-3000i model are about half the time of the VT-1500 system. The chamber can process about 40% more parts in each run due to the taller vacuum chamber and the footprint is about 20% smaller than that of the VT-1500 system." This difference means a capability to process 280% more parts than the VT-1500 system can. Brasstech doesn't take advantage of that full capacity yet, but the capability is there when the company grows to need it.

VT-3000i compared to VT-1500

Throughput



Number of faucet parts processed

■ 280%

Cycle time



Total time from process start to finish

■ 50%

Capacity



Maximum number of parts per chamber

■ 40%

Footprint



Machine size as fits onto manufacturing floor

■ 20%

PVD systems apply functional, durable, and decorative hard coatings that improve and add value to parts and products in many industries, including transportation and energy, medical devices, industrial tooling, home and luxury goods, consumer electronics, and sporting goods.





“Very good uptime & no issues.”



“The taller chamber height has also allowed us to process larger parts that we could never coat before,” Welker adds. Service and support have been excellent but not really needed as the system has had very good uptime and no significant issues. The machine actually was installed and up in running in a matter of only a few days, which made the upgrade much less of a disruption than we had expected.”

Vapor Technologies, Inc.

VaporTech® PVD systems apply functional, durable, and DLC hard coatings that improve and add value to parts and products in many industries, including kitchen and bath fixtures, transportation and energy, medical devices, industrial tooling, luxury goods, consumer electronics, and sporting goods. Vapor Technologies and Brasstech are both Masco companies.

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