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Domo Arigato, Mr. Roboto The Benefits Of Dense Phase Technology

The efficiencies of robotics designed specifically for painting—coupled with advances in powder coating application and delivery technology through the use of dense phase technology guns, pumps and controls—provides greater productivity, higher repeatability and savings in daily powder coating operations.

But just what is “dense phase technology”, and how does it work?

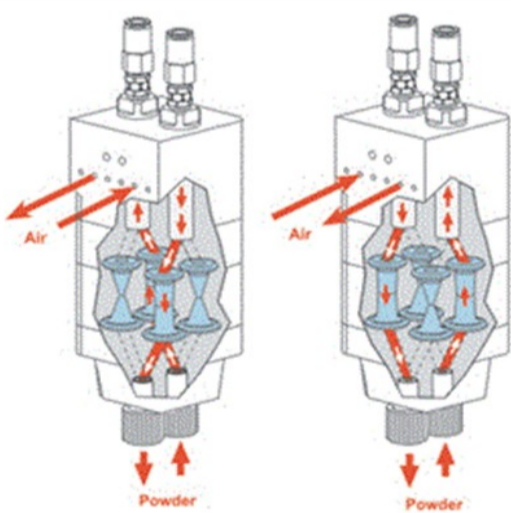


Figure 1. In this schematic, a dense phase technology pump illustrates alternating cycles of the two chambers, each containing two valves.

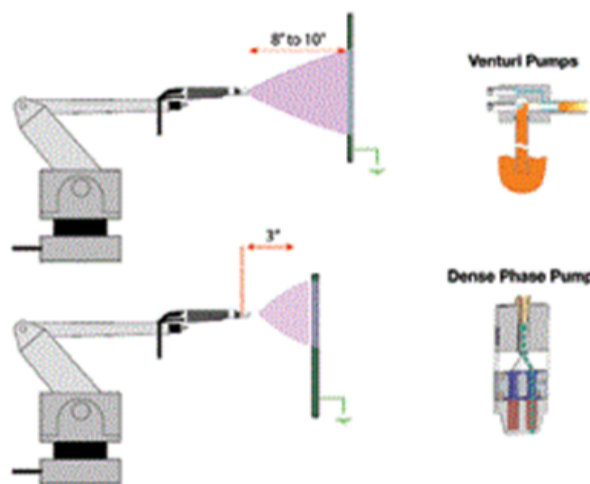


Figure 2. The gun-to-part distance of a dense phase gun is much closer to the part, making it the perfect powder coating tool for use with robotics.

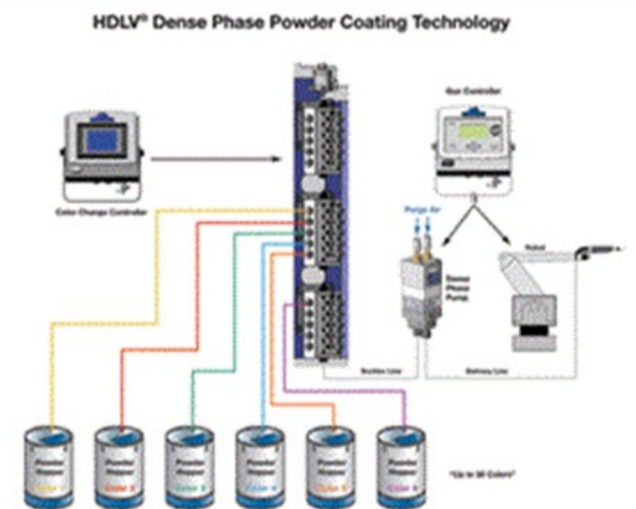
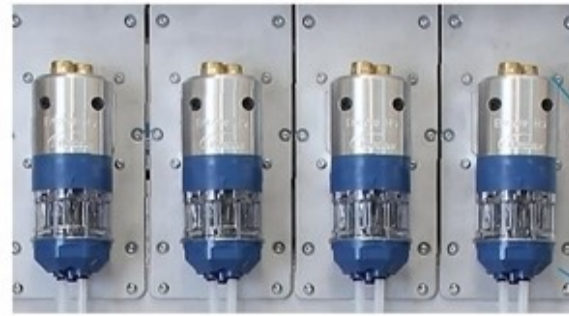


Figure 3. When combined with color-on-demand technology, dense phase application equipment can provide color changes in 20 seconds or less.



Benefits of utilizing a dense phase application system include:

- Fast coating processes and high output
- Uniformly high coating quality and film thickness without reworking
- A high degree of automation requiring minimal intervention by operating personnel
- Economical operation which consumes a minimum of resources
- Careful application of materials
- The ability to change colors rapidly – even more than once during a shift
- Fast and thorough cleaning of the equipment
- Extremely durable components



There was a time when powder coaters would adapt large welding robots to powder coating applications. The result was costly over-sized machines that did not lend themselves well to powder booths or precise powder paint applications. Today, there are robots designed specifically for powder painting that are smaller, more cost effective and more precise with advanced part identification and controls that communicate between the powder application equipment and the robot. As a result, powder coaters achieve higher productivity, greater repeatability – and savings!

This month, we will highlight Nordson's patented HDLV pumps. With more than 10 years of field-proven experience, Nordson remains at the cutting edge of dense phase pump technology in the powder coating industry. Their HDLV pumps are the latest in cutting-edge technology designed to help your business more efficiently deliver consistent results.



Spotlight:

Nordson HDLV® Dense Phase Technology

Nordson's HDLV pumps work without Venturis, and powder delivery remains absolutely constant as a result. This enables full process control, a high transfer efficiency and perfectly defined, precise powder application with unsurpassed coating thickness uniformity, even in recesses and on complex surfaces – for coatings in reliably outstanding quality that Encore HD guns reproducibly hold to extremely tight tolerances .

The HDLV transfer pump's extremely uniform output is the basis for 100% process control and ensures consistent, repeatable quality. Pumps are designed for up to 4,000 hours of maintenance-free operation, and the outstanding accessibility of their systems also minimize downtime and maintenance costs. Low operating costs also shorten amortization times.

HDLV guns provide outstanding coverage and precise, reliable color changes for ease of operation.



Nordson's dense-phase technology is available from manual application to fully automated, robot-controlled coating systems – and gets you in top form for smart factory production.

For more information:

[Nordson HDLV® Dense Phase Technology Products \(Website\)](#)

[Powder Coating And Dense Phase Technology \(PDF\)](#)

[Powder Coating with HDLV® Technology \(Video\)](#)





COAST INDUSTRIAL SYSTEMS, INC.

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COMPANY OVERVIEW

Coast Industrial Systems, Inc. is the #1 supplier for painting and coating application equipment to the marine and manufacturing industries, and is proud to serve both San Diego and Mexico since 1986.

Coast Industrial Systems, Inc. has always placed the customer first, and strives for business excellence in all ways. Our friendly sales and customer service staff are knowledgeable, experienced and qualified to help meet your painting and coating application requirements, and to exceed your expectations.

**Graco Top 20 High-Protective Coatings & Foam
Distributor Award Winner 2010-2018**

