

Rely on Cryo-Trim® lab services to help you improve your cryogenic deflashing process

Current and potential users of cryogenic deflashing technology should thoroughly evaluate their processes to assess finished product quality, determine equipment requirements and identify operational efficiencies. Data obtained from testing becomes real information that contributes to intelligent business decisions about equipment purchases and process control.

When you're ready to evaluate your cryogenic deflashing process, count on Air Products. Our Cryo-Trim lab is a world-class facility in Allentown, Pennsylvania, staffed by a team of experienced cryogenic professionals. As a customer, you'll have access to the latest in testing equipment and services that can help you improve throughput, enhance deflashing quality and reduce capital and operating expenditures.

For your added convenience, tests can also be conducted at Cryogenic Systems and Parts laboratory in Costa Mesa, California.

Evaluate and refine processes, economics, quality

A complete evaluation of cryogenic deflashing requires a multipronged approach that assesses a range of variables to optimize your system. Our team works with you to first identify the type of equipment best suited to your operation. Then a host of process parameters are tested to help you optimize your productivity, including:

- Deflashing quality
- Liquid nitrogen consumption
- Process cycle times
- Temperature profiles
- Shot blast media size (in shot blast units)

Finally, the economic impact of liquid nitrogen use is assessed and throughput analyses are conducted to help identify opportunities to speed production or reduce costs.

State-of-the-art deflashing equipment delivers results

Machinery in our facilities enables us to test your products using two of the most common types of cryogenic deflashing equipment—shot blast deflashing and tumbler deflashing—which can provide you with a quality and performance-enhancing solution for your application.

Shot blast deflashing

This testing unit consists of a tumbling basket that holds the parts, a media and liquid nitrogen delivery system, and an integrated control system. A media classification system is used to separate flash and recycle the blast media. How does it work? Rubber parts are loaded into the machine and then pre-cooled with liquid nitrogen to the optimum operating temperature, causing embrittlement of the parts. A combination of tumbling and simultaneous blasting with polycarbonate blast media removes the flash from the embrittled parts. The tumbling process



enables uniform impingement of the blast media over the entire surface of all parts loaded in the machine. The process is fully automated and can be configured so that parts are automatically unloaded at the end. This technology is ideal for removing both external and internal flash from parts.

Tumbler Deflashing

This unit consists of a tumbling barrel to hold the parts, a liquid nitrogen delivery system, and an integrated control system. Tumbler deflashing uses part-to-part impact during the tumble cycle to remove external flash, generally without using tumbling media. Liquid nitrogen cools and embrittles the parts, allowing for flash removal on impact. Tumbling media can be added to the tumbler to provide limited internal flash removal.

Equipment available in the Cryo-Trim lab includes:

- Model 3106 Cryo-Trim deflashing tumbler
- Model SCC-3000 (3 cu. ft.) basket-style shot blast deflashing unit
- Separator table with interchangeable screens for parts, media, and flash separation suitable for use with both deflashing units
- Liquid nitrogen storage tank and scale for generating consumption data
- Assortment of polycarbonate shot blast media in various particle sizes
- Assortment of tumbling media
- Vacuum-jacketed piping used to deliver liquid nitrogen to the Cryo-Trim lab storage vessel
- Foam-insulated piping used to deliver liquid nitrogen from the Cryo-Trim lab storage vessel to the deflashing units

Trust the leader in cryogenic technology

With over three decades of experience, Air Products has established itself as the leader in a variety of industrial cryogenic technologies. Since the early 1960s, Air Products has designed and manufactured liquid nitrogen-based equipment for cryogenic deflashing. This has given us unequalled expertise in all the aspects of the process—equipment selection, media type, operating temperature, moisture, tool design, operations, system controls, enhanced productivity, maintenance, and piping system design.

In addition to being one of the world's largest producers of industrial gases and cryogenic equipment, Air Products offers a team of engineers, technicians and customer support professionals to assist you with evaluation, design, installation, and maintenance of your cryogenic system.

Contact us today to learn more about our Cryo-Trim lab services and our entire industrial cryogenics product and service offerings.



For More Information

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