

PolarFit[®] cryogenic deflashing lab services



Whether you're currently using cryogenic deflashing technology or are interested in using it, you should thoroughly evaluate your processes to assess finished product quality, determine equipment requirements and identify operational efficiencies. Data obtained from testing becomes real information that can contribute to intelligent business decisions about equipment purchases and process control.

Evaluate and refine processes, economics and quality

When you're ready to evaluate your cryogenic deflashing process, Air Products can help. At our world-class PolarFit deflashing lab in Allentown, Pennsylvania, you have access to the latest in testing equipment and services that can help you improve throughput and enhance deflashing quality as well as reduce capital and operating expenditures. In this facility, our team of experienced cryogenic professionals can perform an evaluation of your deflashing process to help identify ways to improve efficiencies.

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

- Deflashing quality
- Liquid nitrogen consumption
- Process cycle times
- Temperature profiles
- Shot blast media size

Finally, they can help you evaluate the economic impact of using liquid nitrogen and perform a throughput analysis to help identify opportunities to increase production or reduce costs.

State-of-the-art deflashing equipment delivers results

Our lab is equipped with a shot blast deflashing system, which is the most common type of cryogenic deflashing technology. The system consists of a tumbling basket that holds the parts, a media and liquid nitrogen delivery system, and an integrated control system. The media classification system

separates flash and recycles the blast media. How does it work? Rubber parts are loaded into the machine and then precooled 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.

Benefit from our experience

When you choose Air Products to meet your deflashing needs, you gain access to over four decades of experience in applying cryogenics to deflashing applications. As a leader in cryogenic applications, we can guide you in equipment selection, media type, operating temperature, moisture, tool design, operations and system controls as well as enhanced productivity, maintenance and piping system design. Our team can also help you evaluate, design, install and maintain your cryogenic system.



PolarFit deflashing lab testing equipment includes:

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

Contact us to learn more about our lab services and other industrial gas-based offerings to see how we can help you identify ways to increase throughput, enhance deflashing quality and reduce costs.

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