

# The LA3200 Advanced Lathe

*Precision Micro-Abrasive Blasting  
for Demanding Production Environments*



*Comco has integrated the precision of micro-abrasive blasting with an advanced machining platform to create the LA3200 Advanced Lathe. It is ideal for stent surface conditioning, detailed engraving, and other applications requiring a high degree of accuracy and repeatability.*

## COMCO INC.

# Comco's Advanced Lathe

The Advanced Lathe works by propelling abrasive and air out of up to five small nozzles aimed at a part rotating on a spindle. The nozzles are mounted on a blast head that moves on the X- and Z-axes. This movement is fully coordinated with the spindle rotation enabling the system to trace complex shapes, directing the abrasive stream with pinpoint accuracy.

Designed for both engineering development projects and full-scale production operations, the Advanced Lathe provides superior control, quality and repeatability in micro-abrasive blasting.

## Flexible Architecture Customizable to Meet Your Requirements

Total Control Electronics (TCE) architecture forms the base of our advanced automation projects enabling the control of multiple axes of motion and blasters. This architecture gives us the flexibility to add custom features to the standard platform to meet your specific application requirements.



Within the TCE is our new user interface programmed with a modified version of G code. Within this structure the engineer can control all aspects of the abrasive process. Nozzles can be precisely positioned to trace complex patterns, adjusting both speed and acceleration.

Additional features such as bar code readers can be added to the interface to meet your requirements. These systems can be used to automatically load program files into the system and specify the necessary tooling.

With the multiple axes controls, the Advanced Lathe is not limited to processing cylindrical devices. It is also capable of mixing a variety of motions to clean the intricate shapes of cutting edge devices.



## User-Friendly Interface and Smart Tooling Minimize Errors

A large LCD screen on the front panel is used for selecting programs and prompting tooling requirements. Smart tooling then checks that the tooling and head installed correctly match the selected program requirements. If they do not match, a color-coded warning message appears and the blasting will not start. The operator is guided step-by-step through the process for easy operation; smart tooling further reduces the risk of human error.

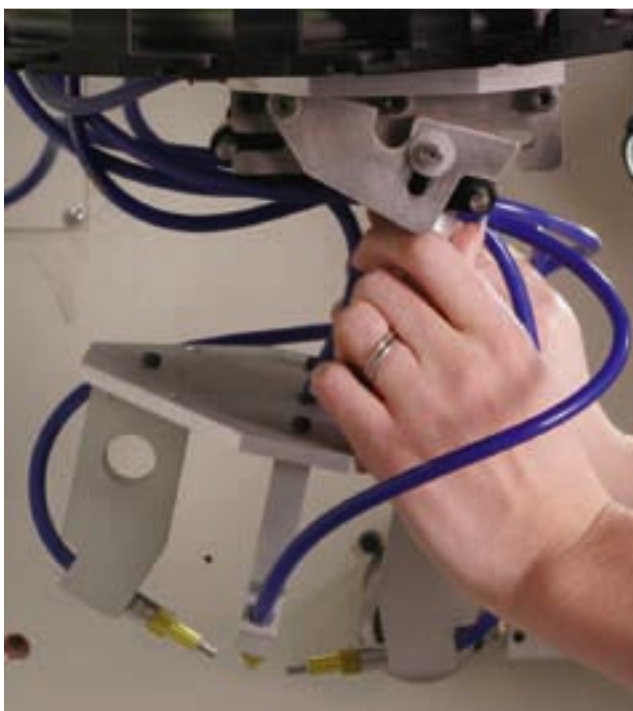
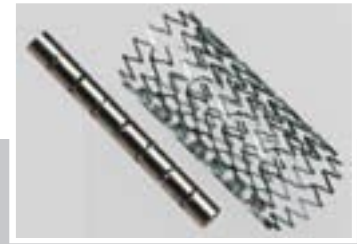


### Efficient Stent Cleaning

The Advanced Lathe accurately directs the abrasive stream at specific locations on the stent to remove oxide, dross, and heat affected areas. Complex blast patterns can be repeated with precision and control to ensure accuracy. The lathe can process stents as small as 6 mm ID up to 100 mm in length. A quick-change blast head facilitates OD and ID blasting.

Built to operate in a production environment with minimal operator interaction, the Advanced Lathe reduces variations and errors. The operator simply loads the tooling and selects the program.

The lathe then checks for errors before starting the blast cycle.



## Blast Head Designs for Development and Production

The Engineering OD head has 13 adjustments for precise alignment of the nozzles. This head is ideally suited for prototype and development work. Once correctly positioned, a fixed head can be fabricated for production. The set positions of the fixed head prevent the operator from accidentally changing nozzle alignment.

The quick-change feature on the blast head facilitates changing between OD and ID blasting.

**Precision Engraving** – The lathe, equipped with a single nozzle head, can accurately engrave the outside surface of cylindrical parts. The single nozzle head incorporates our PowderGate abrasive control system (patent pending). The PowderGate minimizes the delay in starting and stopping the abrasive stream. For intricate patterns this increases the level of detail that can be achieved.

The Advanced Lathe can control the abrasive process precisely enough to etch a design in the surface of an egg shell.



### **PowerFlo® Integrated for Better Control**

A modified PowerFlo® equipped with a precision electronic regulator, enables the Advanced Lathe to accurately control the blast pressure defined in the program. The lathe can adjust the blast pressure during a blast cycle allowing it to perform multiple operations during the same blast routine. This setup also prevents the pressure from being accidentally adjusted during production.

## **LA3200 Advanced Lathe Requirements**

Compressed air for LA3200	100 to 125 PSIG (6.9 to 8.6 Bars), 3 SCFM (85 SLM), of clean, dry shop air	
Compressed air for PowerFlo®	90 to 140 PSIG (6.2 to 9.7 Bars), 10-12 SCFM typical (283-340 SLM) Dried to -25°F dew point and oil content filtered to <10ppm	
Dust Collection	1,000 SCFM (28,000 SLM)	
Electrical	115V/60Hz – 400 watts	230V/50Hz – 400 watts
Dimensions	48" wide x 30" deep x 68" tall 122 cm wide x 76 cm deep x 173 cm tall	



**Contact us today at**  
**800-796-6626**  
[sales@COMCOinc.com](mailto:sales@COMCOinc.com)

**Comco Inc.** 2151 North Lincoln Street, Burbank, CA 91504, USA  
 818-841-5500 / Fax: 818-955-8365  
 Visit us at [www.COMCOinc.com](http://www.COMCOinc.com)

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