

Spindle Machines are known for high-speed precision deburring and are also referred to as slurry deburring machines. Spindle Finishing equipment utilizes one or multiple rotating spindles in a tub of rotating media to achieve a consistent finish on a part. They are primarily designed to finish small to medium-sized precision parts such as shafts, transmission components, gears, aerospace parts, medical parts, automotive parts, firearm components, and bearing races - with the capability of finishing many other types of parts.



**Ideal for finishing:**

- Smaller to medium sized parts
- Parts with tight tolerances
- Parts with hard-to-reach areas
- Parts with long finishing times
- Parts that can't be finished by hand
- Where part consistency is important

In Spindle Finishing Machines, the part is typically attached to the spindle via a custom fixture that holds the parts during the finishing process. Parts may be loaded by hand or via robot. Once the parts are attached to the fixture/tooling, they are lowered into a tub of rapidly moving abrasive media.

The tub rotates in one direction, while the spindle(s) typically turn in the opposite direction. When the spindle rotates, it exposes all sides of the parts to the abrasive media or slurry, resulting in consistent deburring and finishing.

On a machine equipped with the Rotary Actuator (RA) feature, the spindle will pivot in two different directions within the tub, allowing multiple position angles to achieve uniform coverage of all part surfaces without having to manually remove the part from the spindle. The movement of the tub and spindle(s) create a more consistent finish in a shorter cycle time than most other finishing processes.

#### Standard Features:

- Repeatable load and process positions allow for easy integration with robotic production lines
- Spring-hold air-release tooling holds part to spindle
- Variable speed tub featuring a perforated drain section for the removal of liquid sludge from the media

Various types available