

# Flexmill Blisk Polishing

HIGH RELIABILITY AND ACCURATE PROCESS CONTROL

The Flexmill L-series platform is a flexible and high performance solution designed for finishing objects with challenging shapes such as a blisk's (bladed disks or integrally bladed rotors, IBR). Even the difficult-to-reach undercut areas can be reached with ease using the multi-axis technology.

Flexmill's L-series for blisk polishing is a solution for larger work pieces. It has been developed in order to provide intelligent robotic automation in a manner that provides the best performance and added value to the polishing process.

A blisk is a turbine component comprising of both a rotor disk and blades. It consists of a single component, instead of an assembly of a disk and individual detachable blades.

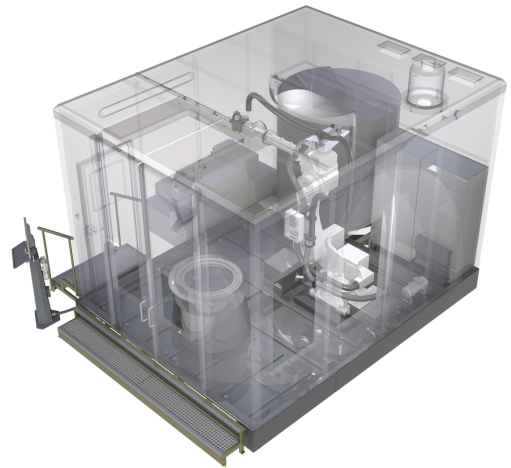
As the component is very complicated and machining of the work piece takes days, the last surface treatment can very rarely be completed manually due to inconsistent quality.

Flexmill has developed a solution and the needed process tools to polish the pressure and suction airfoil surfaces of blisks and to provide long unmanned operation time.



## L-SERIES FOR BLISK POLISHING FEATURES

- ✓ 7-axis robotized platform
- ✓ Work piece diameter up to 1500 mm with weight up to 1000 kg
- ✓ Wet process environment
- ✓ Tool to part working method
- ✓ Belt, rotary and spindle tools available
- ✓ Automatic tool/tool media exchange system
- ✓ Integrated tool center point calibration and part position measurement



### Benefits

- High reliability and process quality
- Long unmanned production time
- Controlled process with flammable materials
- Swarf collection and filtration
- Large tooling capacity
- Automatic tool media exchange
- Toolpath programming with any 5-axis CAD/CAM program (APT toolpath files)



### Options

- Wide range of standard tools
- High torque and high-speed spindles
- Application-specific Flexmill belt tools
- Automatic belt exchange
- Automatic rotary tool exchange
- Tool compliance

