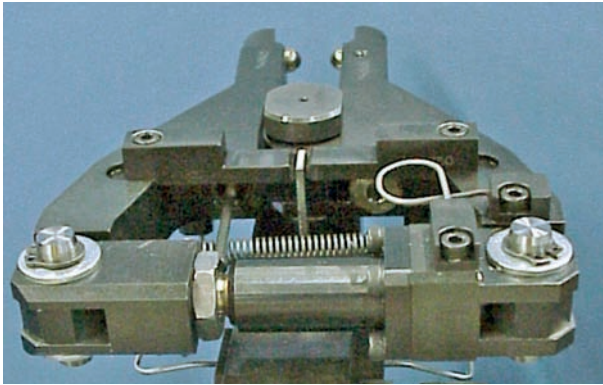


# Type HGx-29 Hydrostatic Deep Rolling Tool

## Applications: Disc-like and thin-walled components

*Economical method for increasing the fatigue strength of thin-walled, complex components and free-form surfaces, such as turbine blades*



Tool version HG6-29Z

*Based on the proven hydrostatic HG tool design, this tool is equipped with two burnishing elements mounted in a pliers-shaped arrangement. This design allows the burnishing force to balance out on both sides of the workpiece such that no force is transferred to the machine tool.*

*In addition, because the burnishing elements can move and rotate freely, the workpiece cannot shift into an unstable or undesirable position.*

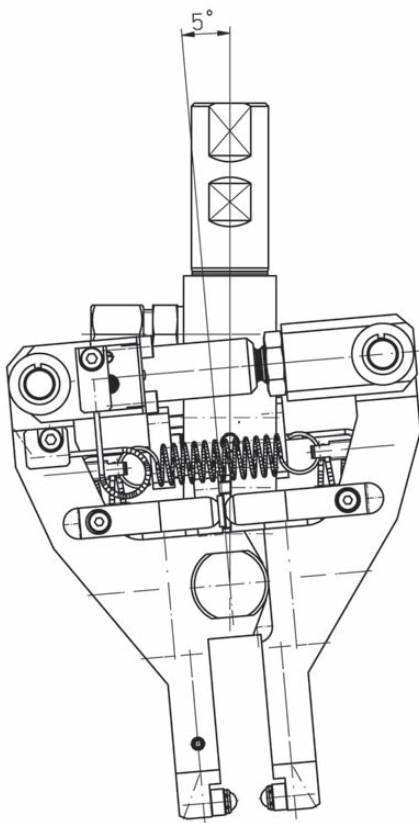
*The tool guides the roller burnishing balls in parallel traces over the workpiece. Either a specifically defined area or the entire workpiece can be treated.*

### Features

- Deep rolling substantially increases fatigue strength
- Can be applied on both conventional and CNC-controlled lathes
- Eliminates protruding peaks to generate smooth surfaces with favorable tribomechanical properties
- Operates with a pressure-dependent burnishing force — the process is easy to control and reproduce
- Features rotating burnishing elements that adjust to complex shapes with a compensation stroke of up to 8.5 mm

### Tool Function

- An external hydraulic pump unit supplies the working pressure to the tool via a high pressure hose.
- When the hydraulic pump unit is activated, the ball inserts move toward each other until they contact the workpiece surface. The working pressure (as set on the hydraulic pump unit) slowly builds up.
- During the process, both ball inserts follow the workpiece surface within a deviation of 5° right or left.
- In addition to the 8.5 mm compensation stroke, the HGx-29 is designed to pivot on its axis (or “float”) in order to compensate for positioning errors and to process free form contours. This extra freedom of movement makes it possible to treat complex free-form surfaces such as turbine blades.



Both ball inserts follow the workpiece surface.