



# Precision Grinding



## Purpose

Precision grinding, also known as die grinding, is performed with handheld tools to remove material from small areas, cavities, or other confined spaces. Typical operations include creating cavities in a die and removing excess material from narrow welds. Other precision tasks include deburring cast or cut pieces of any material, such as beveling and grinding grooves.



## Tool Types

Die grinders are designed for precision work. These are ungeared, high-speed tools with a collet chuck, often referred to as collet grinders. Die grinders weigh about 1 kg and are relatively small and light compared to tools for rough grinding, with a limited output of up to 800W. They come in straight (short/extended) or angle (angle-head) versions, depending on the location of the area to be ground and the operator's preference.



## Settings: Rotational Speeds

Speeds for precision grinding range from 20,000 to 100,000 rpm, depending on the material, shape of the burr, and workpiece. Finer, more precise operations require higher speeds and smaller burrs. The operation determines the size of the abrasive, which in turn determines the rotational speed. Choosing the right power level is crucial, balancing power requirements against increased weight. Handheld die grinders typically have a power rating of up to 800W.



## Technique

Each time a "tooth" of the burr or an abrasive grain touches the workpiece, it removes a chip. The size of the chip depends on several factors: the size of the "tooth" or grain, the hardness of the materials, rotational speed, and feed force. The operator should avoid applying excessive force that could cause the bit to jam and the tool to stall. Keeping the surface area of the workpiece in contact with the abrasive as small as possible provides greater control over the tool and increases contact pressure, resulting in a higher material removal rate. Rough treatment can easily damage abrasives, particularly die grinding burrs. High burr consumption will negatively impact grinding economy.

**High Precision and Speed:** The high-speed grinding pencil operates at high speeds, allowing for precise and efficient engraving or marking on various surfaces.

#### Description

The high-speed grinding pencil is a small, lightweight, pen-shaped tool designed for easy one-handed operation. Light and compact, it is designed to effortlessly achieve precision grinding tasks on almost any surface and material, including glass, stone, and metal. Our grinding pencil's compact design ensures comfortable use, even during extended engraving tasks.

#### Features

- Small and compact
- Lightweight
- Ergonomic design

#### Benefits

- High-Precision
- Excellent operator comfort and accessibility
- Optimized process speed



## High-Speed Grinding Pencil



LSF07

Details >



Model	Max free speed r/min	Max output kW	Collet size mm	Length mm	Weight kg	Air consumption at max output l/s	Air consumption at free speed l/s	Rec hose size mm	Scatter damped	Ordering No.
LSF07 S850	88000	0.10	3	173	0.4	2.2	2.3	4.5	No	8423 1222 03

## Accessories

Description	Ordering No.
<b>Included</b>	
Collet (3mm - For all countries except North America)	4150 1800 00
Collet (1/8" - For North America only)	4150 1822 00
Open-end spanner	4150 1821 90
Hose kit (4.5mm (3/16))	4150 1820 90
<b>Optional</b>	
Hose kit (PVC 10. D= 10 mm (3/8"), L=5 m (16 ft). Incl. ErgoQIC 08 / ErgoNIP 10)	8202 1180 30
MIDI-FRL-1/2-BSP EQ08-C06-1/8	8202 0850 10

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