



pokolm[®]
premiumtools.

GRAVfix[®]

INSTRUCTION MANUAL

1. INTRODUCTION

GRAVfix® is used for marking and labeling workpieces, a compact tool used on the spindles of CNC machine. The embossing mechanism is driven by the compressed air supply of the machine tool. The labeling and marking of the labeling contours is CNC controlled.

The GRAVfix® is a tool according to the Machinery Directive 2006/42/EC.

2. GENERAL NOTES

Before using the GRAVfix® for the first time, an experienced NC application engineer should provide operators with product-specific instruction and explain the operating and maintenance instructions. Components that move or are in contact with moving parts are subject to wear due to their function. If the tool is used continuously, it is recommended to stock wear parts in order to minimize delays in use.

Scope of delivery

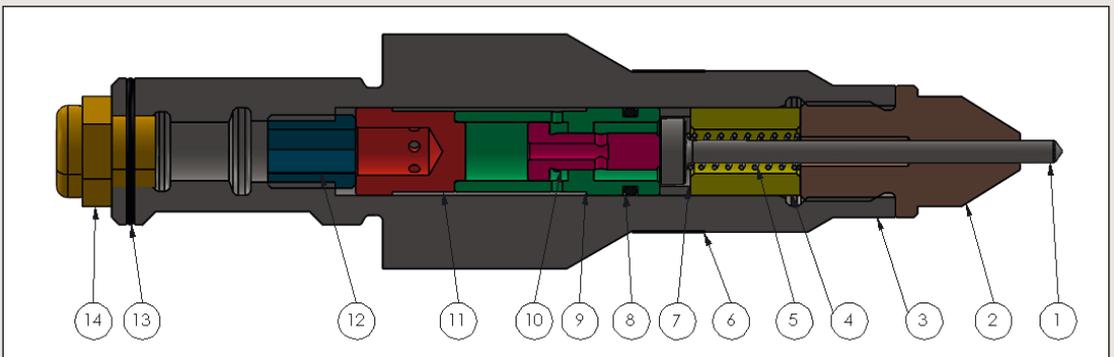
- 1 x Compact GRAVfix® with cylindrical shank for d1 = 20 mm for tool mounting
- 4 x Engraving needle (embossing needle), of which 1 x mounted, engraving needles specially hardened. Point angle: 70°, 90°, 100°, 110°
- 1x Adapter for external compressed air supply
- 5x Sealing rings O-ring 17.00 x 1.00 mm according to DIN 3771 / ISO 3601

The serial number with year of manufacture is visibly attached to the device.

3. APPLICATION

3.1 Device setup

- ① Engraving needle (embossing needle) ② Leadership ③ Sleeve ④ Spacer sleeve
⑤ Pressure spring ⑥ Sticker ⑦ Spacer disc ⑧ Sealing ring ⑨ Cylinder ⑩ Piston
⑪ Sleeve ⑫ Threaded bolt ⑬ Sealing ring ⑭ Air filter



3.2 Connection conditions on machine tool

- Compressed air supply (spindle blow air / continuous compressed air - without coolant): ≥ 4 bar
- Continuous blower with spindle speed = 0 1/min
- Milling cutter adapter DIN 6359 (Weldon) for straight shank $d1 = 20$ mm (DIN 1835 form B)

3.3 Presetting engraving needle tip

The distance to the top edge of the workpiece is 0.5 mm (retracted state), (engraving needle stroke = 0.7 mm).

GRAVfix[®] length (retracted needle) = 93 mm (note for automatic tool change in the tool magazine).

3.4 Application areas of the needles



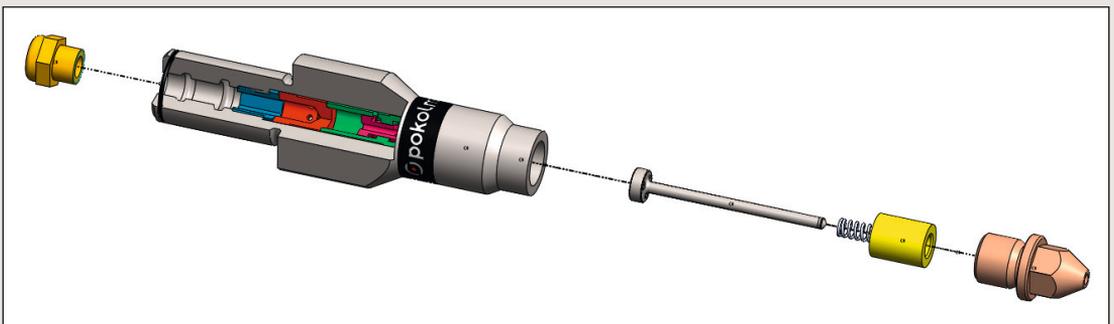
Tip degree (α)	70°	90°	100°	110°
Application	Plastic, soft materials	Aluminium	Steels up to 500 N/mm ²	Stainless steels and quenched and tempered steels >500 N/mm ²

4. SERVICE AND MAINTENANCE

Tools required for the assemblies (not included):

- Open-end wrench SW13
- Allen wrench 6

4.1 Changing the engraving needle (embossing needle)



Step 1: Remove air filter ⑭ (dismantle adapter beforehand, if present)

Step 2: Loosen threaded bolt ⑫ (one turn) (Allen wrench)

Step 3: Removing the guide ② (open-end wrench SW13)

Step 4: Remove assembly (engraving needle ①; pressure spring ⑤; spacer sleeve ④)

Step 5: Exchange engraving needle

Step 6: Reinsert assembly (engraving needle①; pressure spring⑤; spacer sleeve④)

Step 7: Mount guide②(open-end wrench SW13)

Step 8: Screw in threaded bolt ⑫ to clamp the entire assembly

Step 9: Fasten air filter ⑭ (mount adapter, if available)

4.2 Filter

- Filter check / air filter cleanliness check ⑭: Control cycle: every 4 weeks (or in case of malfunction)
- Filter removal and installation: Unscrew the air filter ⑭ / Clean (compressed air) / Re-install and tighten the air filter in reverse order

5. SAFETY AND STORAGE INSTRUCTIONS

The tool must be protected from dirt and other contaminants. Use only in clean environment. Compressed air supply (spindle compressed air / continuous compressed air - must be suitable for operation of tools - DIN ISO 8573 / classes approx. 3, 4, 5). After end of use and dismantling: blow through the tool. Light oiling - air-blown, to prevent possible corrosion and to maintain smooth running of sliding surfaces / sliding elements / moving components.

In case of unforeseen problems or queries, please contact Pokolm Frästechnik GmbH & Co. KG.

6. ACCESSORIES AND SPARE PARTS

- Engraving needles 110° (GFP-1010)
- Engraving needles 100°(GFP-1011)
- Engraving needles 90° (GFP-1012)
- Engraving needles 70° (GFP-1013)
- Allen wrench 6 (Inbus 6)
- Open-end wrench SW13 (Z 00144)
- Air filter (GFP-3001)
- Tool adapter (See catalog arbor and adapter systems)
- Leadership (GFP-1009)

