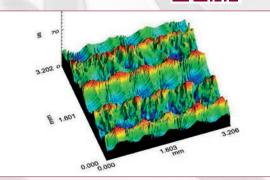
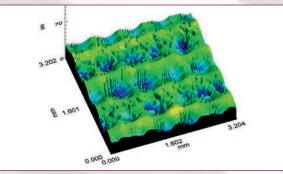
COLD FORGING WITH FORGEfix[®] P BENEFITS AT A GLANCE:

- Processing also complex tool- and mould surfaces according to NC datasets
- Using on machines such as standard CNC tooling machines, robots or similar
- No negative thermal effects (such as those caused by long runtimes during electrodynamic cold forging)
- → Handy tool
- Can automatically be exchanged (if using internal coolant supply)

 Practical video: FORGEfix® P in 1.2312



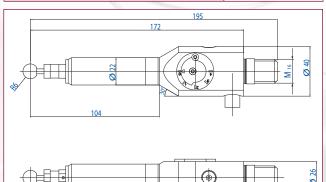
Surface after ball milling with pronounced roughness peaks



Tribologically optimised surface after cold forge processing

TECHNICAL DATA:

Length:	195 mm
Diameter:	40 mm
Threaded shank:	M 16
Stroke adjustment:	from 0 to 4 mm
Frequency f at 6 bar:	<u>></u> 200 Hz



All values in mm. Changes reserved.

Development partner

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FORGEfix[®] P

Pneumatic cold forging Precision tool

Spokolm

FL-302-EN 022016

FORGEfix[®] P - PNEUMATIC COLD FORGING PRECISION TOOL FOR MECHANICAL WORKPIECE SURFACE TREATMENT

The pneumatic cold forging tool **FORGEfix®P** with threaded shank M16 is now available for the high-quality, economical and reproducible smoothing also of complex surfaces.

To the now common method of manual polishing for highquality surfaces in the tool- and mould-making is high due to lack of time, effort and reproducibility very disadvantageous.

Cold forging

- → is a process for mechanical surface treatment
- ← in which a hammering tool is moved systematically over the workpiece surface by a CNC tooling machine or aro-bot or similar systems
- ↔ is compared to known methods a superior method of surface treatment. Known methods such as shot blasting, form grinding, deep rolling or laser polishing



Use of FORGEfix® P for cold forging of batch drawing tools on a robot system



COLD FORGING BENEFITS ALL METHODS

- ↔ Machine smoothing significantly reduces the high time and cost outlay of manual surface finishingin tool- and mould-making.
- Increased surface hardening through cold solidification reduces wear not only on forming tools, but also on all types of metallic bearings and guides.
- Optimised distribution of residual stress prevents the formation of cracks on components subject to variations in stress, thus increasing their service life.

FORGEfix® P - RANGE OF PRODUCTS:

Catalogue no.	Article
	Three Sets of Cold forging systems are available: - Hit energy approx. 250, 500 or 1000 N - Ram long cone for knock balls - Knock ball as attachment to ram, diameter 12 mm
FFP-HP-A	Set, hit energy approx. 1000 N
FFP-SP-A	Set, hit energy approx. 500 N
FFP-LP-A	Set, hit energy approx. 250 N
FFP-ZB-DV-HP	Kit pressure distribution HP
FFP-ZB-DV-SP	Kit pressure distribution SP
FFP-ZB-DV-LP	Kit pressure distribution LP
FFP-ZB-K-10	Knock ball, diameter 10 mm
FFP-ZB-K-12	Knock ball, diameter 12 mm
FFP-ZB-K-16	Knock ball, diameter 16 mm
FFP-ZB-K-20	Knock ball, diameter 20 mm
FFP-ZB-ST-L	Ram long cone for knock balls, diameter 10 - 20 mm
FFP-ZB-ST-L-3	Ram long, diam. 3 mm, ram shaft 4 mm conical, grinded ball on carbide ram (one unit)
FFP-ZB-ST-L-4	Ram long, diam. 4 mm, ram shaft 4 mm conical, grinded ball on carbide ram (one unit)
FFP-ZB-ST-L-6	Ram long, diam. 6 mm, ram shaft 4 mm conical, grinded ball on carbide ram (one unit)
FFP-ZB-ST-L-8	Ram long, diam. 8 mm, ram shaft 4 mm conical, grinded ball on carbide ram (one unit)