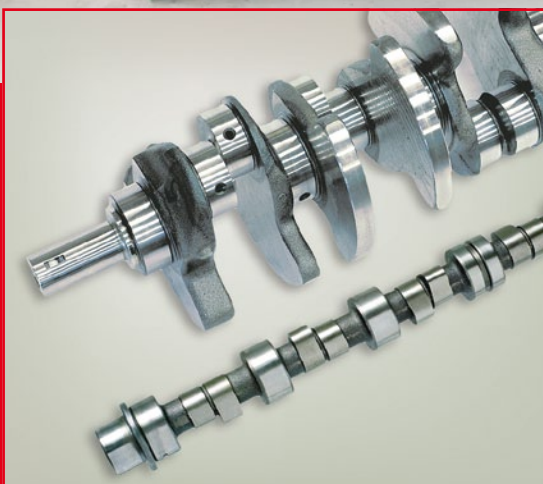


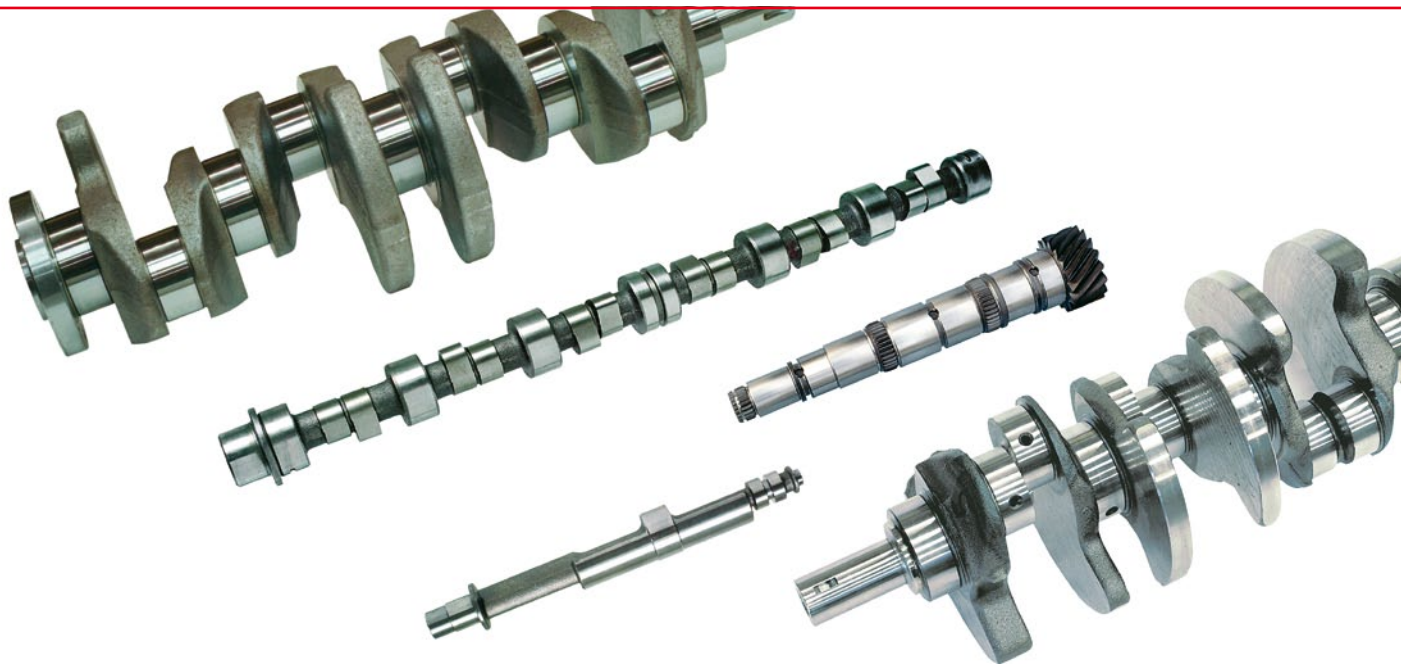
supfina

Superfinishing-Machine

Supfina CenFlex 1



**Finishing of crankshafts,
camshafts, gearshafts
and balancer shafts**



Superfinish

Supfina CenFlex 1 – the flexible tape finishing machine for automotive applications

Areas of Application:

Whether it is a limited production of prototypes or a production of flexible production lines, the Supfina CenFlex covers all areas of application with its high reliability and economic efficiency.

Depending on the application the set-up is either a one- or multi-step machining process of the workpiece (for example a crankshaft) or a step by step process of a cam- and crankshaft on the same machine (for example motorsports components).

supfina CenFlex 1

Workpiece (shaft) length: 400–1000mm
Stroke (for crankshafts): max. 100mm
optional max. 120mm
Superfinishing tape arms: max. 15



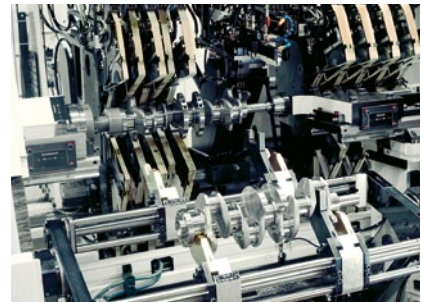
The highly flexible CenFlex concept is the result of numerous customer suggestions from the automotive and automotive supplier industry, as well as our own long time surface machining experience.

Ergonomics → Your User Comfort

- Outstanding accessibility of the machining area resulting in the working area being within reach for the operator.
- All hydraulic and pneumatic valves, as well as the de-centralized electric periphery, are easily accessible and visible outside the machining area.

Economic Efficiency → Your Advantage

- Separate control circuits for the hydraulic working pressure of the individual tape arm groups (optional for each tape arm).
- Individually adjustable tape feed through each Superfinishing arm.
- Easy and quick workpiece changeover using automatic tape arm adjustment in connection with quick-changing shoes.
- Prolonged lifetimes of machining shoes and interchangeable parts using abrasion preventing coatings.
- Integrated tape cutting and disposal system.



High Flexibility Advantages:

- Automatic tool adjustment of all installed Superfinishing tape arms to the workpiece
- Easy and quick changing of shoes (Supfina Quick-Changing System)
- Use of 'hard' and 'soft' shoes
- Up to 15 Superfinishing tape arms in a block or step-by-step machining process (per CNC-Program)
- Varying types of shafts (for example cam- and crankshafts) on the same machine

- Selection of individual tape arms for possible refinishing
- Easy and cost-efficient adjustment to new workpieces
- Universal loading and unloading: manual gantry loader or swivelling pallet system

Machining Options:

Main bearings, pin bearings, post end, flange, thrust face, radii, cam lobes

Special Processes:

- Machining of oil seal seats with circumferential lines
- Removal of chatter marks and waviness
- Removal of ferrite caps of cast iron workpieces
- Deburring of cam lobes and flange drillings
- Rounding of oil holes



Quick change shoes allow easy changeovers to various workpiece geometries

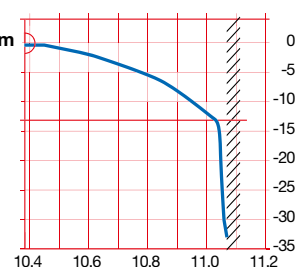
Crankshaft (steel, induction hardened)

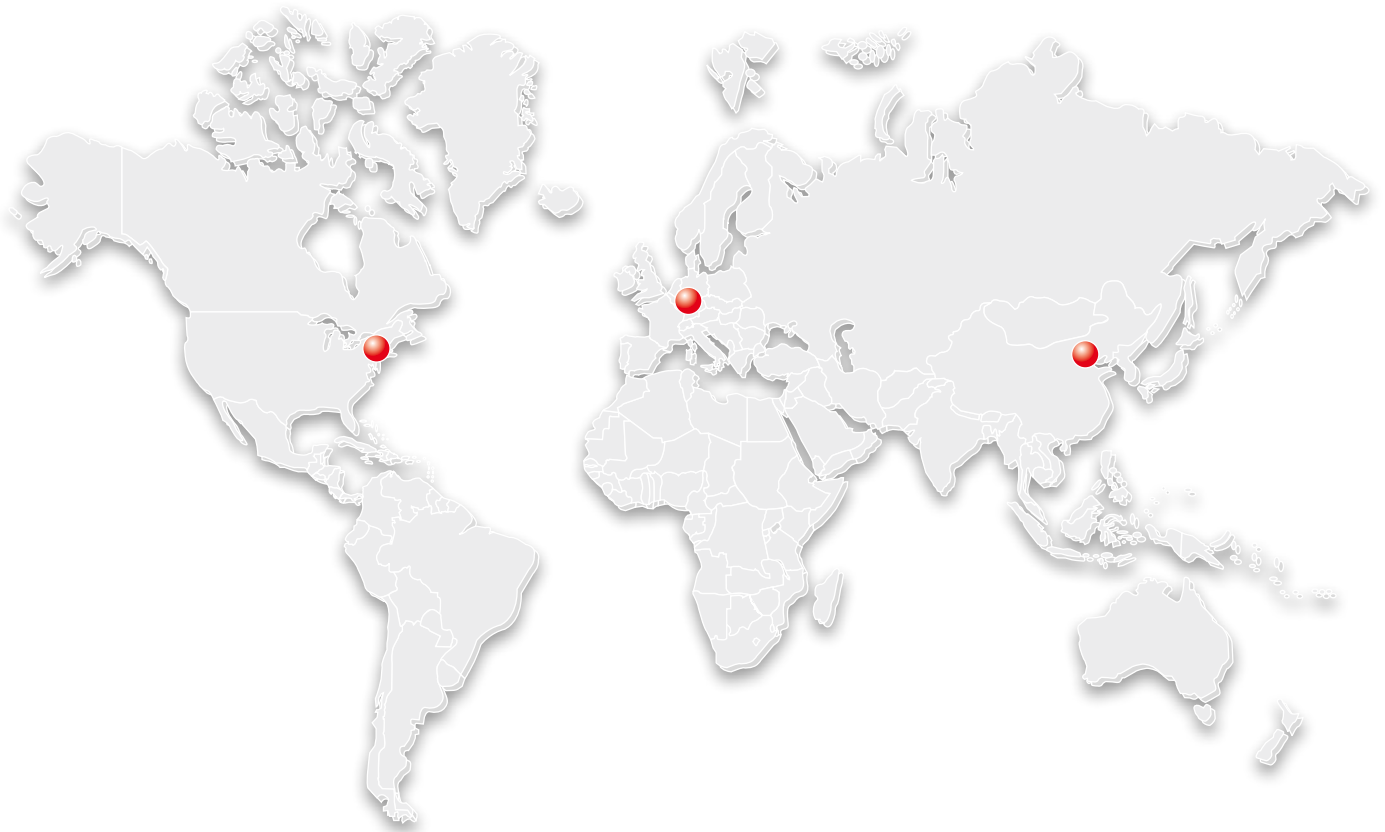


Results

Rz: <math>< 1.3\mu\text{m}</math>
 Single-state process
 Cycle time: 40
 including loading

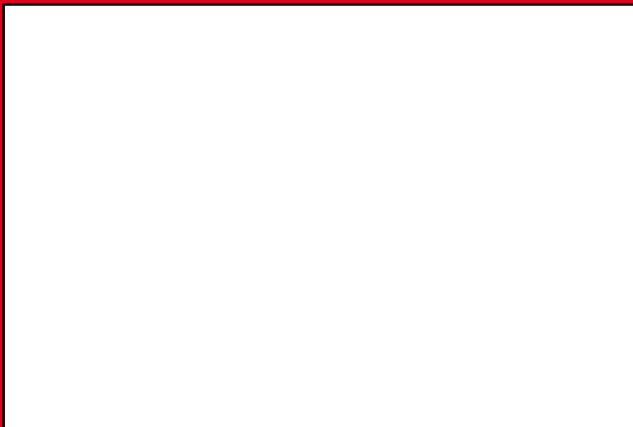
Oilway radiusing:
 approx. $15\mu\text{m}$ to 1mm





With locations in America and Asia and over 50 distributors worldwide we can offer customers comprehensive global service.

Surface Finishing Systems
www.supfina.com



 Supfina Grieshaber GmbH & Co. KG
Schmelzegrün 7 · 77709 Wolfach / Germany
Phone +49 7834 866-0 · Fax +49 7834 866-200
info@supfina.com · www.supfina.com

 Suptina Machine Company, Inc.
181 Circuit Drive · N. Kingstown, RI 02852 / USA
Phone +1 401 294-6600 · Fax +1 401 294-6262
info@supfina.com · www.supfina.com

 Supfina Grieshaber GmbH & Co. KG
Beijing representative Office
DiYang Tower 1202B
Chaoyang District Beijing 100027 / P.R. China
Phone +86 84536-669 · Fax +86 84536-670
supfina@126.com · www.supfina.com