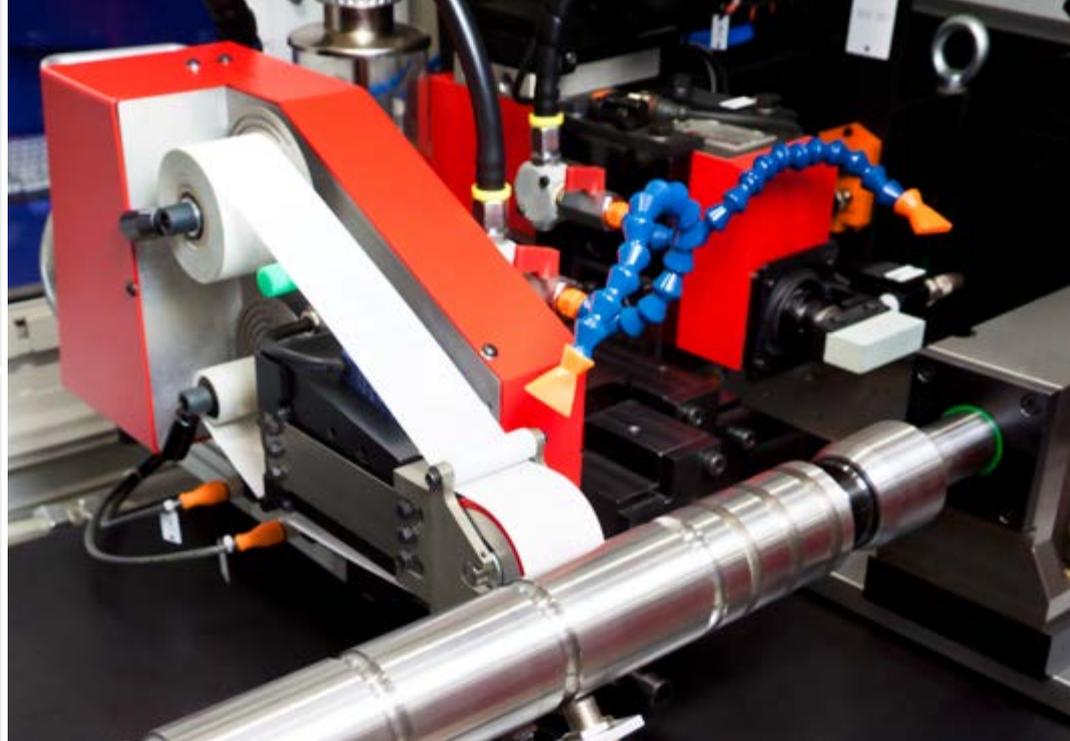
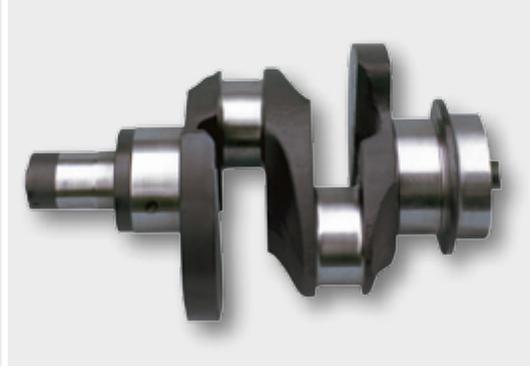
A person in a red shirt is operating a large industrial machine with a glass enclosure. The machine has the 'supfina LOM' logo on its top left corner. The person is standing to the right of the machine, interacting with a control panel that features a screen and several buttons. The background shows a factory environment with overhead lighting and structural elements.

supfina

**Supfina LeanSystems®**  
For every superfinishing application



## More than 10,000 units in use

Thanks to decades of superfinishing experience with stone and tape machines, Supfina Grieshaber excels at understanding the various upstream and downstream processes. In addition to our acclaimed superfinishing solutions for a number of industries—automotive supplier; anti-friction roller bearing; precision and medical technology—we also provide economical machining systems for double-sided and tape superfinishing.

In thousands of installations worldwide, our attachments combine excellent superfinishing characteristics on flat, cylindrical, and spherical surfaces, with impressively quiet operation and stable parameters—even with load changes.

## Superfinishing: simply better

Each superfinishing tool—which is selected to suit the task in terms of grain as well as compound and hardness rating—oscillates parallel to the axial line of the revolving workpiece.

Contact force is steplessly variable. Depending on the surface's length, the workpiece is machined using either a plunge method or a feed method. Because contact between the superfinishing tool and the workpiece is extensive, such irregularities as waviness, spiral feed marks, runout, and chatter marks are removed, and excellent surface qualities are achieved within a short time.

## Supfina LeanSystems®

Economical solutions for every application

Superfinishing attachments are used to machine a broad range of workpieces:

- crankshafts
- camshafts
- balancer shafts
- extrusion shafts
- gear shafts
- synchronizing cones
- shock-absorber rods
- steering rods
- ... and many more.

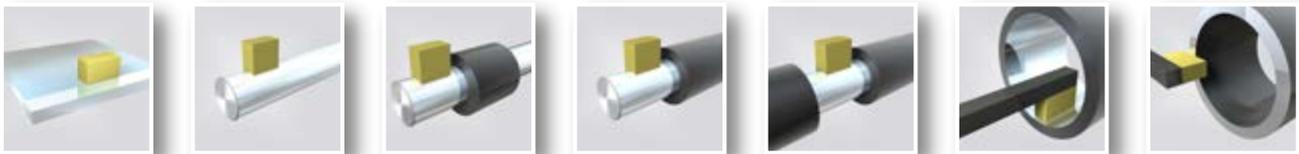
Attachments are used on existing CNC and grinding machines and lathes. Depending on the workpiece and the quantities to be processed, our Supfina LeanCostMachine® can be the ideal carrier machine.



# Universal superfinishing

The right superfinishing unit for every need

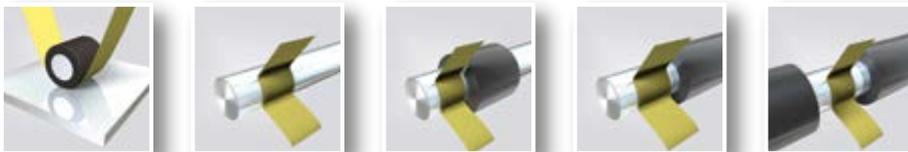
## Stone superfinishing



Stone superfinishing machines are known for versatility and impressively quiet operation, which is why they meet the highest requirements for superfinishing bearing seats and for polishing large rollers.

They're also easy to use and economical—key reasons to favor them for every application.

## Tape superfinishing



The benefits of Supfina's tape superfinishing machines are easy operation (both dry and with coolant); flexible adjustment to each workpiece diameter; and consistently high accuracy. All tape superfinishing machines can be converted easily to stone. In fact, simultaneous tape and stone finishing is possible.

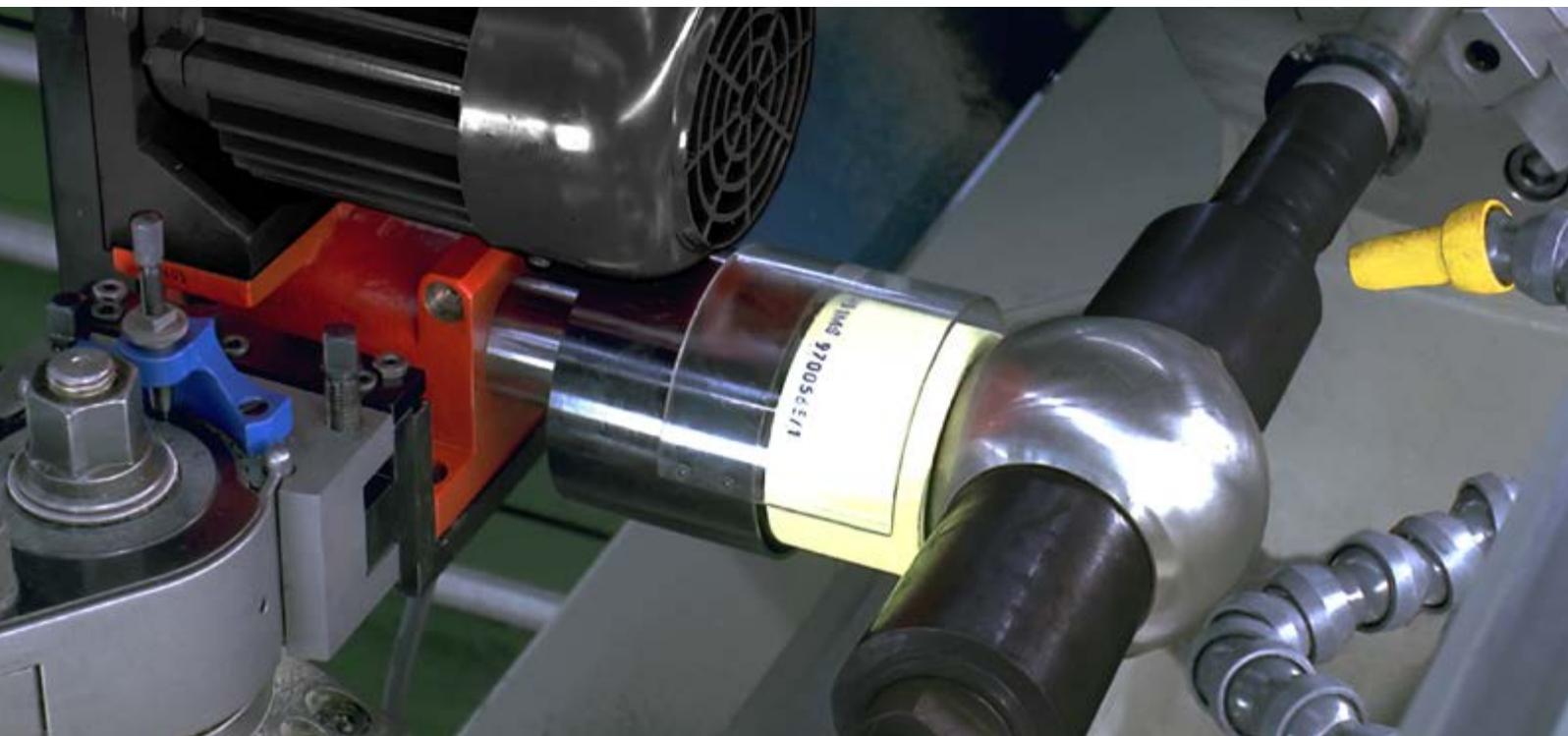
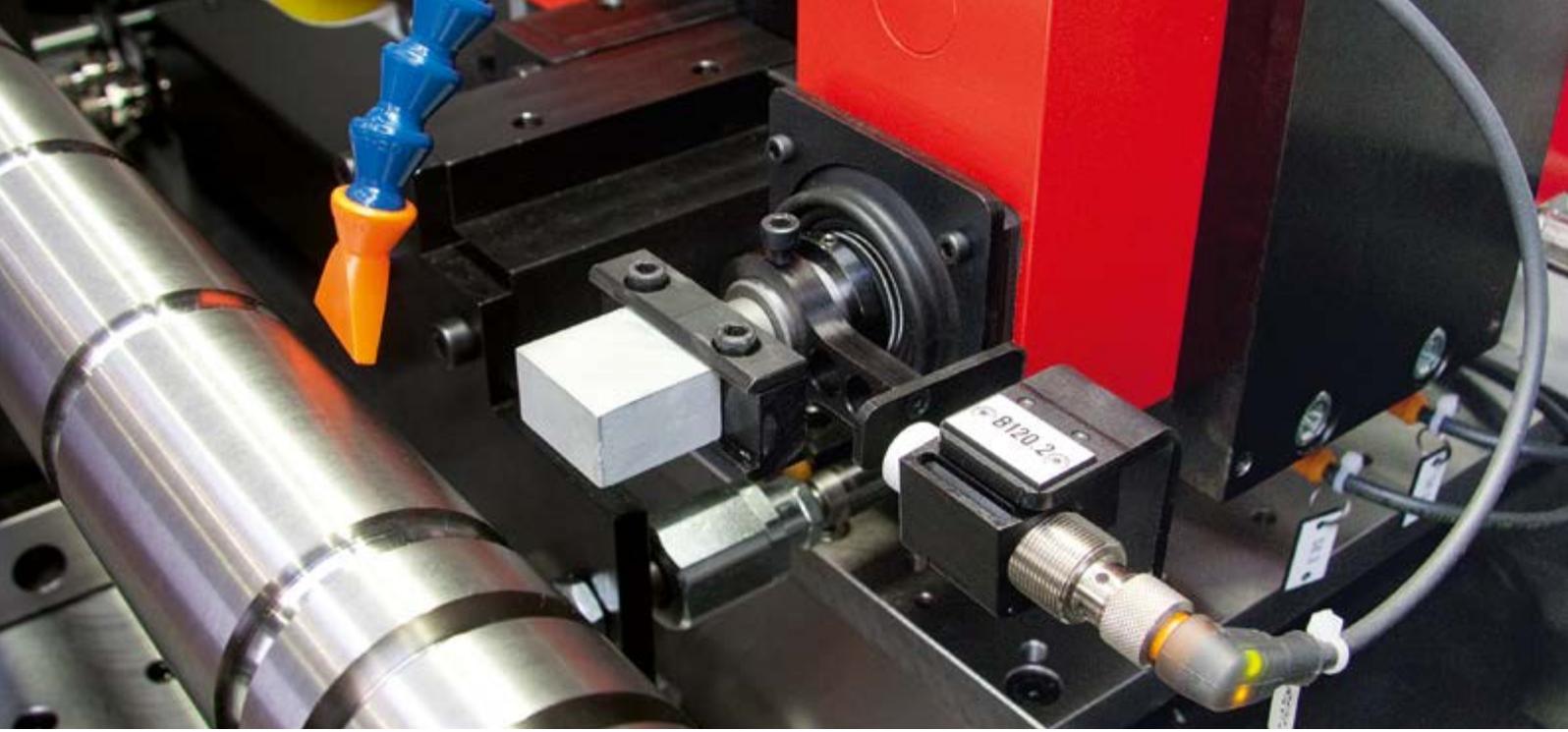
A wide range of superfinishing tapes and stones are available to finish a variety of workpieces.

## Ball finishing



Fine finishing on flat and spherical surfaces? Of course. Supfina's ball-finishing attachments can machine—with extreme accuracy and consistent quality—valve balls, metal sealing surfaces, and flat nozzles.

Numerous ball-finishing attachments provide uncompromising solutions to tough technical challenges.



# Supfina LeanSystems®

## Attachments for versatile applications

We provide robust, flexible, and economical attachments with minimum space requirements. Tape can be converted to stone, and dry processing is an option. All of our attachments can be equipped with safety devices that match the intended use, which means that both attachment and workpiece are protected against damage in the event of an unexpected fault, such as broken tape.

Whether pneumatic or mechanical, our tape, stone, and ball-finishing attachments ensure economical processes for every application.



### Supfina 90

Suitable for repairs on large marine diesel engines—for example, crankshafts, crankshaft bearings, and crank pins—without dismantling the engine. Thanks to the compact construction, these attachments can easily be fitted to CNC machines with a revolving tool turret.



### Supfina 110/120

For workpieces  $\varnothing 10\text{--}100$  mm and with lengths up to 1,000 mm. If the extension is fitted, for bores from  $\varnothing 30$  mm and depths of up to 120 mm. Flat finishing is also possible with the appropriate setup. For superfinishing gear shafts; axle shafts; input and take-off shafts; balancer shafts; bearing seats; and shaft-seal seats. Simultaneous plunge finishing for one or more bearings.



### Supfina 130/140

For workpieces with larger dimensions of  $\varnothing 100\text{--}500$  mm; lengths of 1,000–2,500 mm as turned or ground workpieces; rollers; guide rods; piston rods; closing pistons. Machining of large-format crankshaft crank pins and central bearings. Use between high shoulders is possible with extended stone guides.



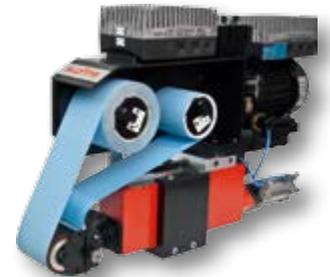
### Supfina 200/201

Medium to large workpieces  $\varnothing 100\text{--}2,000$  mm and lengths of 14,000 mm. For example, friction cylinders, film cylinders, friction rollers, drying cylinders, and paper rollers, etc., for the plastics and paper industry.



## Supfina 202/204/208

Medium to large workpieces  $\varnothing 100\text{--}2,000\text{ mm}$  and lengths of 14,000 mm. For example, friction cylinders, film cylinders, friction rollers, drying cylinders, and paper rollers, etc., for the plastics and paper industry.



## Supfina 210

For workpieces with small to medium dimensions, in plunge or longitudinal processes. Also for small runs, individual components, and repairs.



## Supfina 220/300

Suitable for large rollers in the paper and plastics industries in particular, where spiral feed marks from upstream processes (grinding) must be removed. Machining with superfinishing stones and special-purpose polishing agents provides a high-gloss finish.



## Supfina 290/291/293/294

Ball-finishing attachment for machining ground or fine-turned surfaces. Well-suited to fine-finishing valve balls, wedge gate sections, flat nozzles, and spherical caps.



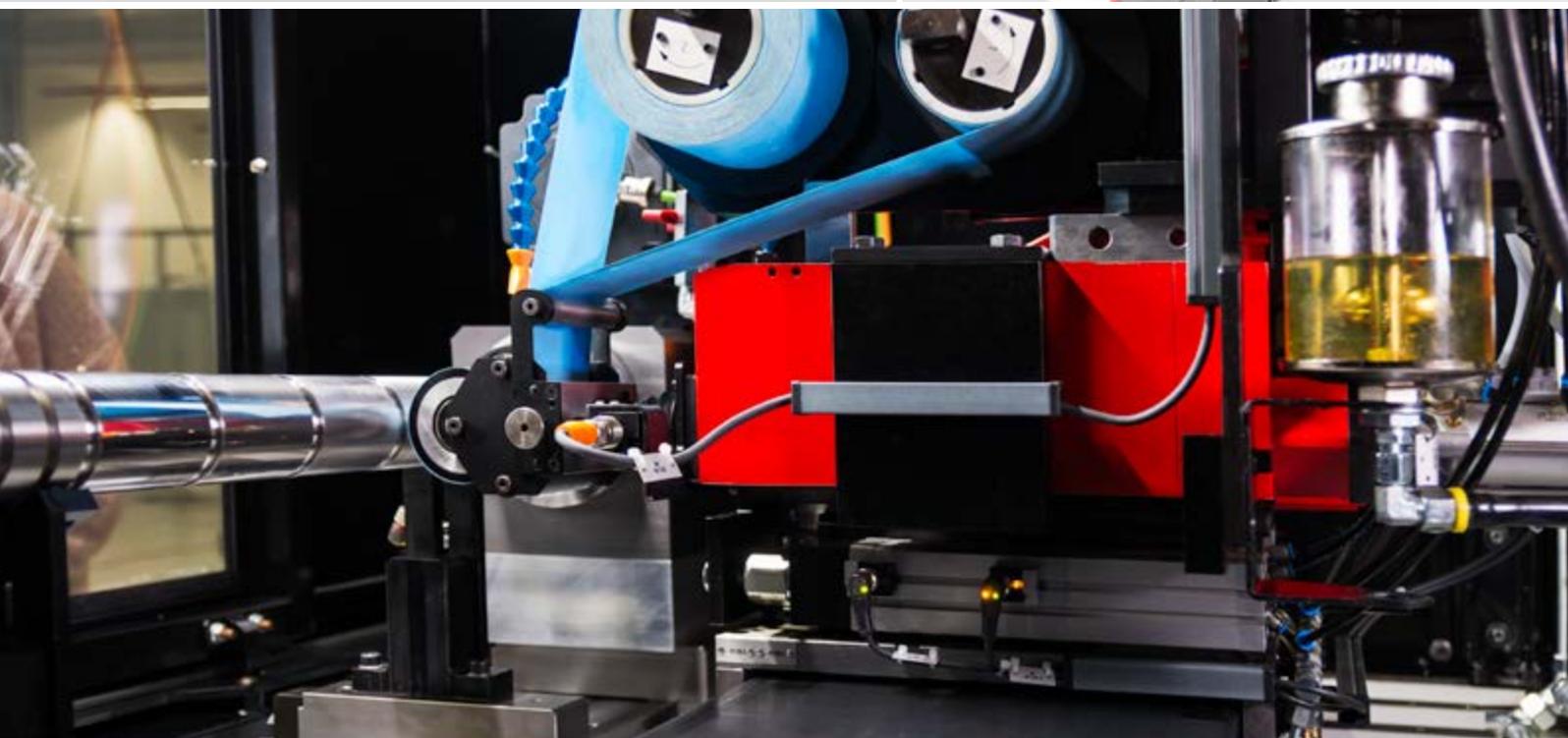
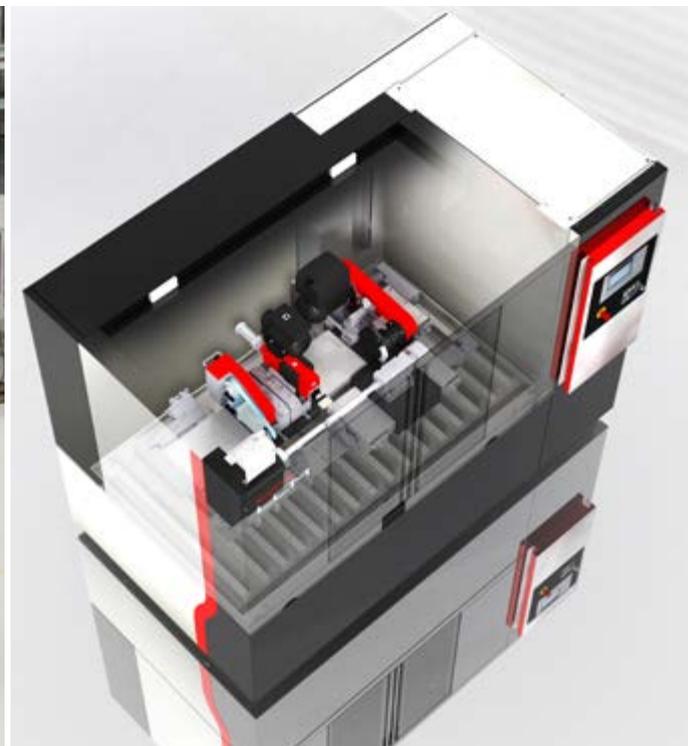
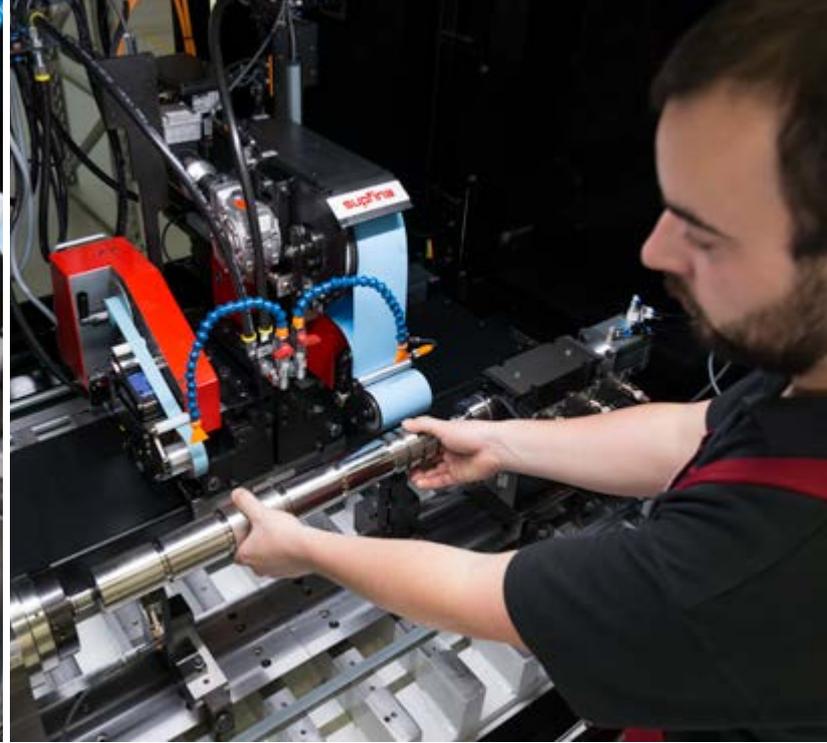
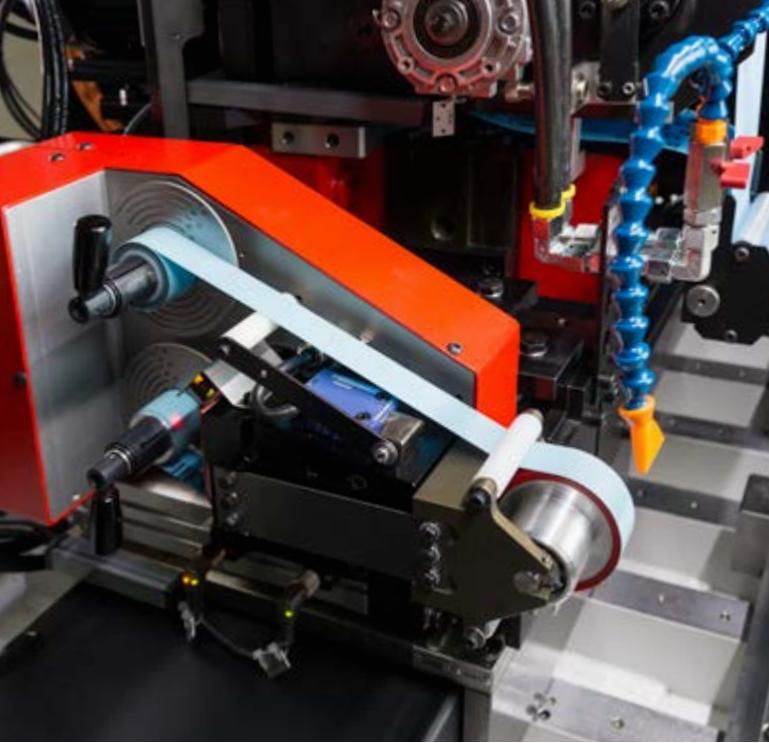
### Impressive advantages

#### Production

- short machining times
- low tooling and investment costs
- safe application
- high degree of flexibility

#### Application

- less friction
- lower wear
- low noise levels
- low energy costs



With its new LeanCostMachine®, Supfina offers the highest versatility for superfinishing small and medium runs—economically and flexibly. Equipped with state-of-the-art technology, this modular system meets the highest standards of quality and process dependability, in particular for such fields as the automotive industry and its OEM suppliers; the hydraulics industry; and medical technology companies.

Whether fixed in place, manually adjustable, or NC-controlled, as many as six Supfina attachments for stone and tape finishing can be used at the same time as brushing and polishing attachments. Standard assemblies ensure short delivery times, easy expansion, and the highest quality in terms of machine construction and products finished.

Supfina’s LeanCostMachine® can be equipped with pre-assembled modules designed to match specific machining tasks.

## Supfina LeanCostMachine®

Versatile production machine for small runs

Versatile machining options				
				
Between centers	✓	✓		✓
Five-jaw chuck	✓	✓	✓	✓
Collet	✓	✓	✓	✓
Centerless on rollers	✓	✓		



# Supfina LeanSystems®

## Tools for peak quality

### Superfinishing tools

Offering superfinishing tools means being able to guarantee their quality. Product quality is assessed on numerous test machines. This ensures the optimum tool choice for your production processes.

All of the ceramic-bonded superfinishing stones are also available in made-to-measure sizes—e.g., for plunge superfinishing—with short notice. For machining anti-friction bearing tracks, special profile superfinishing stones are provided. The two- or three-dimensional stone shape is a function of the workpiece geometry and of the superfinishing process.

Different tape widths, required for example in machining crankshafts, are manufactured to order at consistent quality standards.

### Impressive advantages

- large choice of superfinishing tools, many from stock
- optimum tool selection for your production processes
- independent advice
- tested solutions ready for immediate application
- short delivery lead times

## Our range of products and services

Supfina provides a large selection of superfinishing tools from a number of well-known manufacturers. We are your one-stop shop for independent advice, which includes not only the best choice of superfinishing tools but also the production expertise.

In this way, Supfina provides tried-and-tested, immediately applicable problem-solving answers, making additional, costly trials unnecessary.

Supfina supplies most superfinishing tools as standard—or special sizes from stock—which means short delivery times and easy processing.

## Our range of products

- superfinishing tapes
- superfinishing stones
- superfinishing sleeves and cup wheels
- superfinishing polishing tools
- superfinishing rinse agents
- tool and technology advice

Various manufacturers' standard superfinishing tapes look very much the same except for the differing colors. The extremely fine grinding dust used here is so uniformly distributed across the tape's surface that almost no difference can be seen.

The adjacent illustration shows the real difference in the way that stock is removed, not to mention the process dependability.

Make use of Supfina's independent advice.

### Grain chosen in accordance with FEPA standard



### Mixed grain in conventional selection method



### CR Finishing® grain calibrated in accordance with CIS



Superfinish · Flat Finishing · Fine Grinding · Double-Disk Grinding · SpeedFinish®

Superfinishing technology from Supfina economically produces the highest-quality surfaces and geometries.

Supfina is your worldwide partner for precision surface finishing.

 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

 Supfina 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 / PR China  
Phone +86 84536-669 · Fax +86 84536-670  
supfina@126.com · www.supfina.com