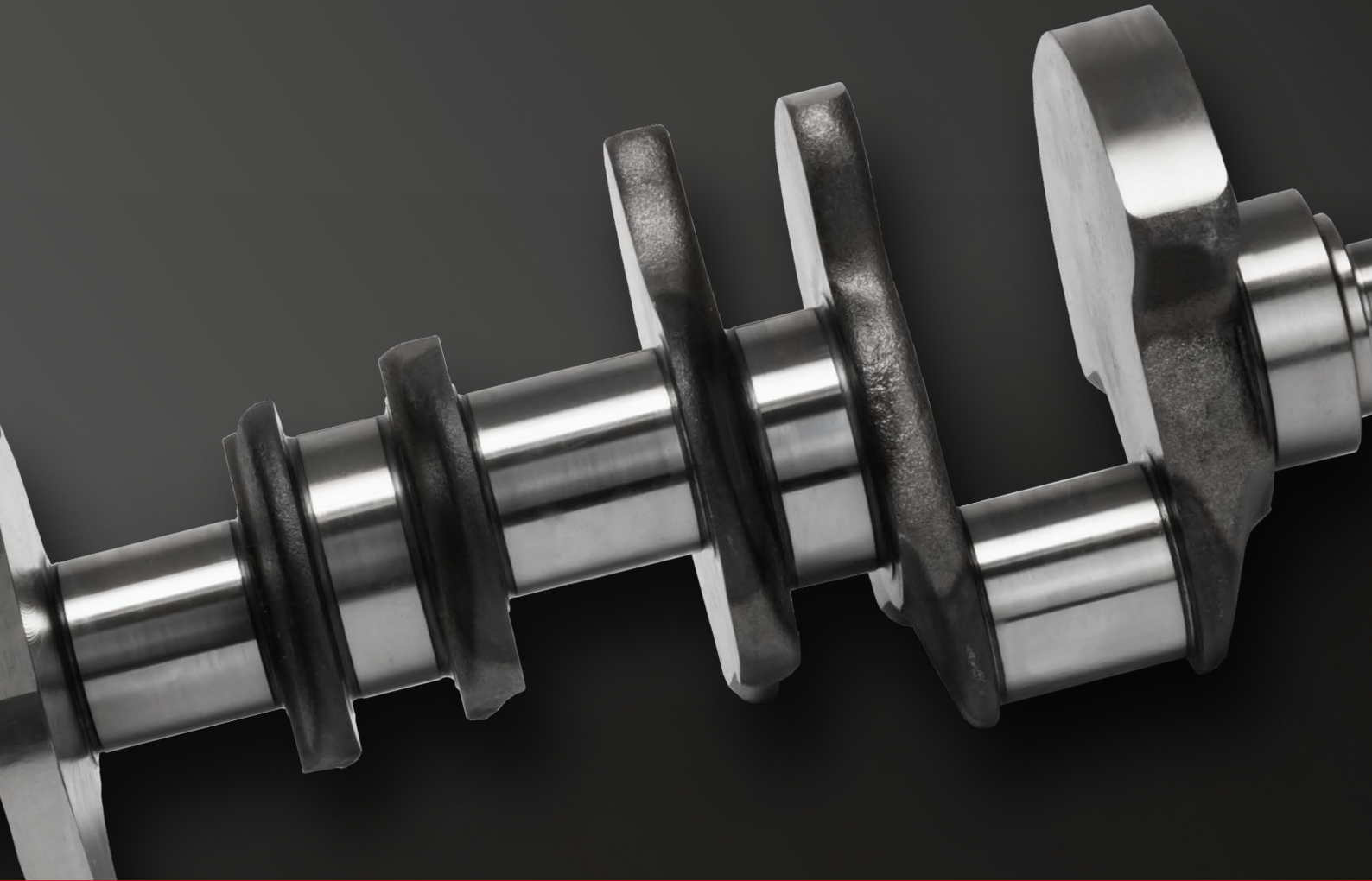


supfina



CENPRO S

supfina  
CENPRO S



“模块化的德国索菲纳 CenPro S系列砂带抛光机，  
是中小型曲轴进行批量生产的理想之选。它正好满足我们对规模精简的需求。”

## 批量生产的多面手

**Versatile**  
mass production

“The modular Supfina CenPro S is ideally suited for the mass production of small and medium crankshafts. It’s exactly the kind of downsizing I need.”



目前，几乎所有汽车生产商都在着手对轿车发动机进行“瘦身”。小排量发动机更轻，产生的摩擦损失更小，从而更加省油，且满足更严苛的排放要求。

从技术角度上讲，如要实现此目标，未来曲轴的发展需要缩减尺寸和长度，但同时又通常需要增大强度 - 由于压力的增大，应力和应变也会增大。因此，这对主轴颈和连杆轴颈表面加工精度提出了更高要求。

为了应对汽车制造商面临的挑战，索菲纳开发出一款新型曲轴砂带抛光机：索菲纳CenPro S系列。该系列具有加工质量高、生产节拍短的特点，同时其体积更小、运营成本更低。

Nearly every automobile manufacturer is in the process of downsizing its passenger cars' engines. Small displacement engines are lighter and have reduced friction loss, thus making them more fuel efficient and able to meet more stringent emission limits.

To achieve this technically, tomorrow's crankshaft bearings will need to have smaller diameters and lengths, and will often need to be harder — resulting in higher stresses and strains due to increased pressures. Thus, the surfaces of the main and pin bearings will require more precise microgeometry.

Rising to this manufacturing challenge, Supfina has created a new machine line: the Supfina CenPro S. It combines high workpiece quality with short cycle times, not to mention a smaller footprint and lower operating costs.

## 高质量的批量生产已成曲轴生产的迫切之需

# Quality mass production of crankshafts subject to high stress







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## supfina CENPRO S

工件长度

Workpiece length

最长 500mm

max. 500mm

工件摆动直径

Workpiece diameter swing

最长 200mm

max. 500mm

连杆颈冲程上止点到下止点距离

Stroke of pin bearing,

top dead center to bottom dead center

最长 100mm

max. 100mm



生产线采用机械手上下料, 共有三个加工工位

*Production line with three stations  
and gantry loader*

## 外形和功能

## 优化的易接近性

## Form and function

## optimal accessibility

在开发CenPro S之前, 德国索菲纳已开发出 CenPro系列砂带抛光机。体积更小的CenPro S系列秉承了CenPro 拥有的众多优势。

这款模块化机床, 最多可将机床占地面积减少36%。经过重新设计的摆动上料系统(即从工厂桁架机械手接过工件并放入机床两顶尖之间), 则减少了机床不必要的来回移动动作。因此, 在抛光架四周可以进行固定管线布置, 从而大幅减少维护保养管线和导轨所需的工作量, 同时也减少了安装所需的空间。

该系列采用牢固的框架结构, 内部零部件检修起来更方便, 同时机床重量有所减轻, 机床清洗也更加轻松。

By using the Supfina CenPro as our starting point, creating the smaller CenPro S was more consistently achieved.

This modular machine can reduce the footprint by up to 36 percent. A redesigned swivel loader – which moves the workpiece from the handover position of customer's gantry-loading system into position between centers – eliminates unnecessary machine movements. This allows fixed piping for the finishing units; far fewer maintenance-intensive hoses and energy guides; and even more reduced installation space.

The highly stiff frame construction improves accessibility to all components, reduces machine weight, and simplifies machine cleaning.

## 模块化设计可灵活满足用户需求

# Modular construction flexibly meets your needs







- 牢固的框架结构既减轻了机床重量, 也有助于接近机床内部;
  - 可安装长达300米的砂带卷, 最多可加工37500个工件;
  - 处理旧砂带时, 机床无需停机;
  - 机床零部件均来自知名厂家;
  - 抛光架单元采用窄型设计, 可加工仅为35 mm的主轴颈和连杆轴颈节距;
  - 抛光瓦沿用索菲纳使用的金刚石镀层硬质抛光瓦, 可多次拆卸, 加工精度更高;
  - 设置更方便快捷, 提高了用户友好度和机床使用率;
  - 对于现有的CenPro或CenFlex 1 /CenFlex 2机床系列, 其不同工件的工装可无缝整合;
- Highly stiff frame construction with lighter weight and simplified accessibility
  - 300 m tape rolls with a service life of up to 37,500 workpieces
  - Disposal of used finishing tape without machine stop
  - Exclusive use of components from well-known suppliers
  - Narrow finishing units that can machine main and pin bearings with pitches of 35 mm only
  - Proven Supfina systems featuring hard, diamond-coated shoes for high removal rates and optimized microgeometry
  - Faster setup times that optimize user-friendliness and machine availability
  - Seamless integration of workpiece dependent tooling from/into existing CenPro or CenFlex 1 /CenFlex 2 machines

## 细节 重要特性

## Facts

Important characteristics



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