

## PRESS RELEASE

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*OTEC MASS FINISHING SOLUTIONS FOR THE FOOD INDUSTRY*

### FOOD PRODUCTION SYSTEMS: AUTOMATED SURFACE SMOOTHING FOR COMPONENTS

Cast, milled and turned machine components for food production have rough surfaces and sharp, unhone edges. This not only leaves products prone to food residues and micro-organisms as well as contamination by small fragments from unstable component edges, but also results in high levels of component wear and therefore shorter service life. Efficient mechanical surface processing eliminates these problems.

#### **FOCUS ON FOOD MANUFACTURING AND PACKAGING**

Given that the number one priority is to produce hygienic, safe foods at all times, smooth surfaces and stable edges are especially important if the component is in contact with foodstuffs. Priority number two is to ensure that the system can produce, fill and package as much food as possible. No downtime, no rejects and no contamination. One way to help achieve both of these objectives is to post process the components that come into contact with foodstuffs or their packaging during production. But manual post processing is a waste of time and money compared to a repeatable, reliable mechanical process solution.

#### **POLISH UP YOUR MANUFACTURING, FILLING AND PACKAGING EFFICIENCY**

Extruder screws with smooth surfaces and stable edges guarantee effective product movement without the risk of contamination due to sticky build-ups or from small fragments of machine components.



Extruder screw before (left) and after (right) processing with OTEC stream finishing

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Seaming roll 0.44  $\mu\text{m}$  before (left) and 0.05  $\mu\text{m}$  after (right) processing with OTEC stream finishing

Depending on their function, seaming rolls are sometimes subject to high friction wear – for example when they are used for can seaming. Regular re-polishing can extend their service life and keep processing results consistent. Reducing the surface friction minimises the force and lubrication required.

In the production of packaging materials such as screw caps, it is important that the mould has a very smooth, polished surface so that the finished item can be easily released from the mould. Caps that stick to a rough mould change shape when released, increasing the reject rate. Highly smoothed workpiece surfaces boost output quantity.

### **MANUAL FINISHING IS TIME-CONSUMING AND COSTLY**

Manual post processing or reconditioning after a certain number of operating hours is a costly, time-consuming feat that carries a high risk of worker injury. With existing grinding tools, it is impossible to produce an even finish on complex inner geometries and therefore hard to achieve consistent quality and processing times.

### **OTEC STREAM FINISHING PUTS AN END TO MANUAL WORK**

Das OTEC's stream finishing (SF) process was developed in-house and is ideal for components with complex geometries. Workpieces are clamped in a holder and lowered into a rotating container filled with an abrasive or polishing medium. The workpiece is also rotated to produce an even finish without manual work. The process produces high-quality surfaces with a roughness of up to Ra 0.01  $\mu\text{m}$ .

The enormous machining forces used in stream finishing can remove material faster and more precisely than any other type of surface finishing process. The stream finishing process significantly shortens processing times, saving you time and money. It is also easy to store and retrieve custom process programs, guaranteeing repeatability.

OTEC's latest innovation, the SF-HP, can process large and heavy workpieces with a diameter and length of up to 650 mm and a maximum weight of up to 200 kg.

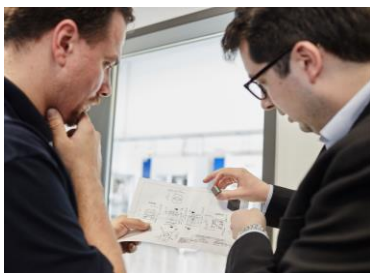
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### SF TECHNOLOGY REPRESENTS HIGH ADDED VALUE FOR OTEC CUSTOMERS

- High process flexibility for a variety of workpieces
- Repeatable, reliable processing
- Rapid, easy machine loading and unloading
- Short post processing times without the risk of injury
- Finishing for components with complex geometries
- Reduces wear and extends workpiece service life
- Reduces component friction coefficient
- Consistent grinding pattern along with consistently high quality

### DEFINE YOUR PROCESS WITH THE HELP OF OTEC PRÄZISIONSFINISH EXPERTS



Our specialist team at the OTEC Finishing Center is ready to assist in defining your process – whatever the tool geometry, surface structure or edge-rounding requirements. Work with us to identify exactly the right process for your component. Arrange an appointment today to take part in your sample processing..



More about  
samle processing >>

### OTEC APPLICATION REPORTS ON THE FOOD INDUSTRY:



Can seamer  
polishing >>



Mould -  
polishing >>



Extruder  
screw smoothing >>



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### **ABOUT OTEC PRÄZISIONSFINISH**

OTEC GmbH Präzisionsfinish provides precision technology for achieving perfect surfaces. OTEC machines are used for smoothing, precision edge-rounding, polishing and deburring a wide variety of workpieces, with the aim of improving surface quality. OTEC has a global presence supported by international business partners. OTEC's comprehensive, market-leading technical expertise in developing the perfect interplay of machine and abrasive benefits a wide range of industries including tooling, medical devices, jewellery, and automotive and aerospace.

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