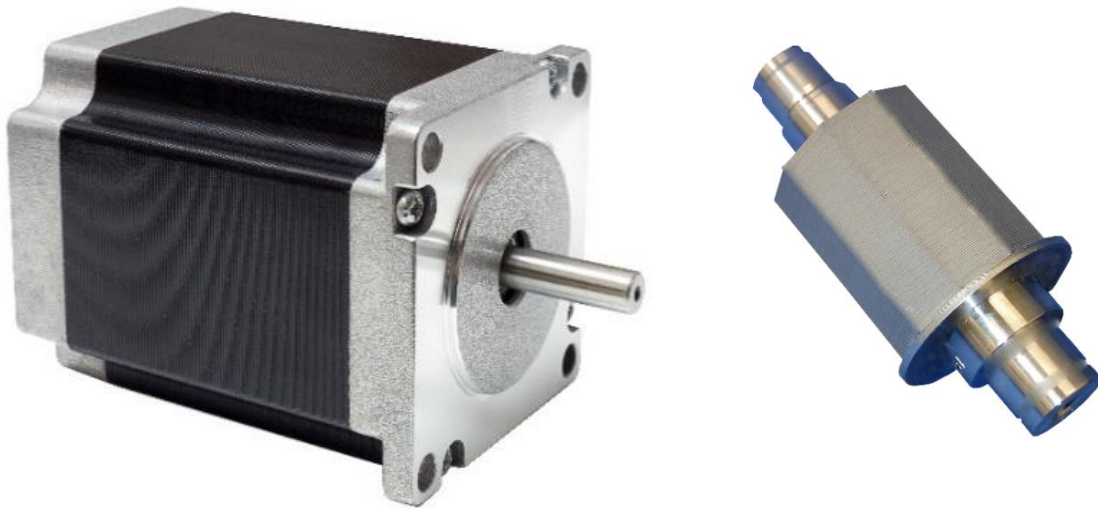
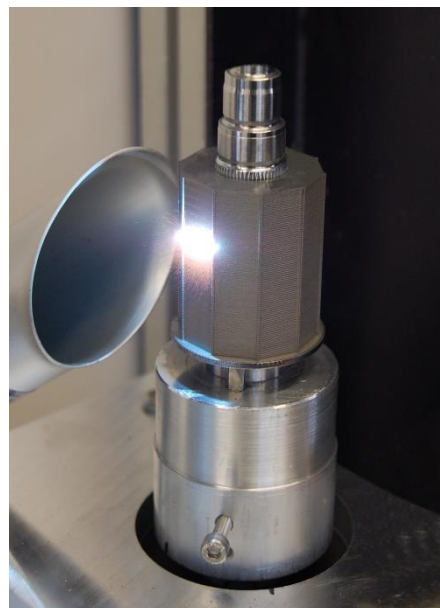


## BONDING PRE-TREATMENT FOR SERVOMOTORS

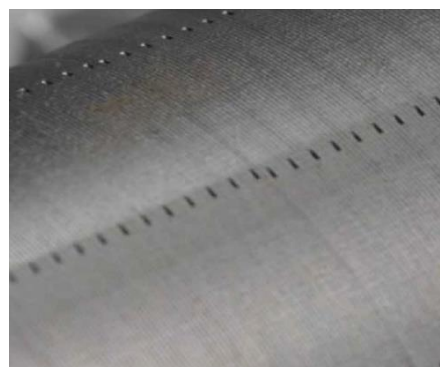


### APPLICATION

- Bonding pre-treatment of shafts and sheet metal stacks for rotor production
- Pre-treatment of magnets for bonding as an option
- For synchronous and asynchronous three-phase and servo motors
- Long-term stable adhesion through surface modification
- Surface tensions:  
 $\sigma > 38 \text{ mN/m}$
- Increase of demolition values
- Alternative or complementary to conventional blasting and washing processes



Laser processing rotor



Laser treated rotor surface

### LASERSYSTEM AND - PROCESS

- Even with Low Power Systems efficient and economical
- Processing:  
up to  $5 \text{ cm}^2/\text{s}$  with CL 50
- Faster processing times due to higher laser power
- Process-oriented suction technology
- Optionally:  
Process monitoring and component control
- Own laser production and application expertise
- Process qualification up to the serial production

# COMPACT TURNKEY SOLUTION FOR YOUR WHEELS & CASTORS PRODUCTION

- Machine type:  
**cleanCELL 2220**
- ESD compliant design
- Footprint (W x L):  
1.722 mm x 2.847 mm
- Weight:  
approx. 1.200 kg
- 2-station rotary table with  
automatic clamping system
- Workpiece spectrum:  
Loading height up to 445 mm  
Diameter up to 260 mm
- Automatic diameter check
- Loading height check
- Camera system for process  
visualization and  
documentation
- High technical availability  
(> 98,5%)
- Designed for 24/7 operation
- Customer-specific  
adaptations possible



cleanCELL 2220 with rotary table

2020. Subject to technical changes



Right: Mandrel with rolls  
Left: Laser optics with 90°  
positioning

## COST-BENEFIT: ECONOMIC EFFICIENCY

- **Running costs:**  
cleanCELL 2220  
incl. suction  
**< 7,00 €/h**
- **Costs per unit:**  
Rim d=100 mm, b=30 mm  
Laser CL 500G (500 Watt)  
3-shift operation  
**~ 0,10 €/piece**

PLEASE CONTACT US - WE ARE HAPPY TO ADVISE!

 **cleanLASER**  
cleaning with light