

# Philips Consumer Lifestyle, Netherlands

Industrial case-03 Date: 22.09.2020

# SYNOVA S.A. 1266 Duillier Switzerland SYNOVA

Route de Genolier 13 www.synova.ch

## Shaver caps

C Micro-machining of highly demanding parts: Development of shaver caps (60-450µm thick SS) 

### LMJ used for:

- Prototyping
- Cutting and drilling damage free processes

0 Ŷ 

ш

Z

ш

### Flexible & stable tool for perfect/heat damage-free processes

PHILIPS

#### G Main processing criteria:

- No heat affected zone (HAZ)
- Sharp angles without rounding
- Perfect verticality
- Narrow tolerances & small radius
- Very low stress machining
- Cutting with a potential angle of up to 30deg

Machining technologies able to reach these criteria:

- Wire EDM (partially)
- Dry laser (partially)
- Chemical etching (partially)
- Laser MicroJet (LMJ) water jet guided laser technology

Best flexibility, able to reach expected top guality/tolerances, covers capacity of 3

### other machines

- 0
- LMJ advantages vs wire EDM/dry laser/CE:
- Covers all requisites: damage-free, vertical, and precise processing
- Flexibility
- Very short warm-up and set-up times

#### Installed machine type:

- 1 x LCS 300 Hybrid 5 axes
- 100 W green laser



mm

