

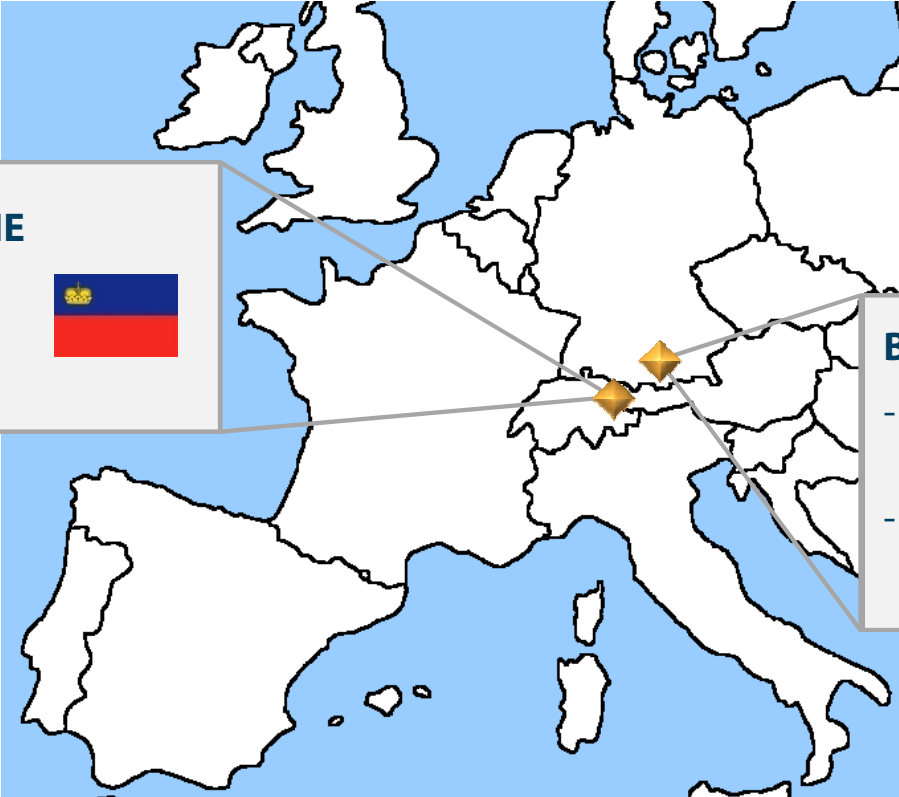
# ADENSYS

## Company and Products

2012/2013




ADENSYS is based in Triesen, Liechtenstein, with a branch office in Buxheim, Germany





**Head office Triesen, LIE**

- Final assembly
- Sales and marketing



**Branch office Buxheim, GER**

- R&D + supply chain management
- Production of axis sub-assemblies



ADENSYS is privately owned and was founded in April, 2012 by the two managing directors – Frits Diepen and Helmut Gruber

Our primary focus is to sell after-market cartridges for many of the popular dental handpieces worldwide, but we also sell spare parts and supply consulting services

# Why ADENSYS?



## Performance

- Torque: when possible, original impeller design optimised and improved
- High retention force: >30N, ensures that bur stays secure in chuck
- Low bur runout: <0.015mm, reduces vibration during operation



## Reliability

- Hardened steel parts: allows for bearings changes and reduces wear overall
- High retention force (long chuck lifetime), low bur runout (increased bearing lifetime) and balanced rotor (smooth operation and incr. bearing LT)
- 12 month guarantee for all combo products



## Expertise

- Many years of experience in the design and production of dental handpieces
- All part manufacturing and product assembly in Germany and Switzerland
- All relevant ISO norms are followed or exceeded



## Value

- Ability to deliver tailored consulting to help your business
- Personalised and independent service 24/7 from handpiece experts
- Original-quality products at a fraction of original-product prices

# Testing a handpiece to verify performance is more than just measuring rpm



Test chuck retention force with a retention force gauge



Measure run-down time from full speed to a stop



Test rpm with an rpm measurement tool



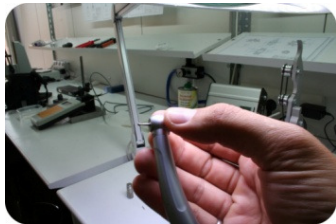
Check thumb force required to open chuck



Test power by measuring force to stall on a scale



Measure bur runout of rotor without bearings



Feel handpiece vibration in operation. Also check head and back cap for heat generation



Measure sound (and identify possible issues) on dB spectrometer

**Most target values for these tests are published by original manufacturers in their user's manual**

**Interested to know more? Let ADENSYS help you with any of these tests**

# ADENSYS quality – materials and construction



Ceramic, high-quality bearings with, when possible, higher bearing width than OEM's  
**Increased lifetime**

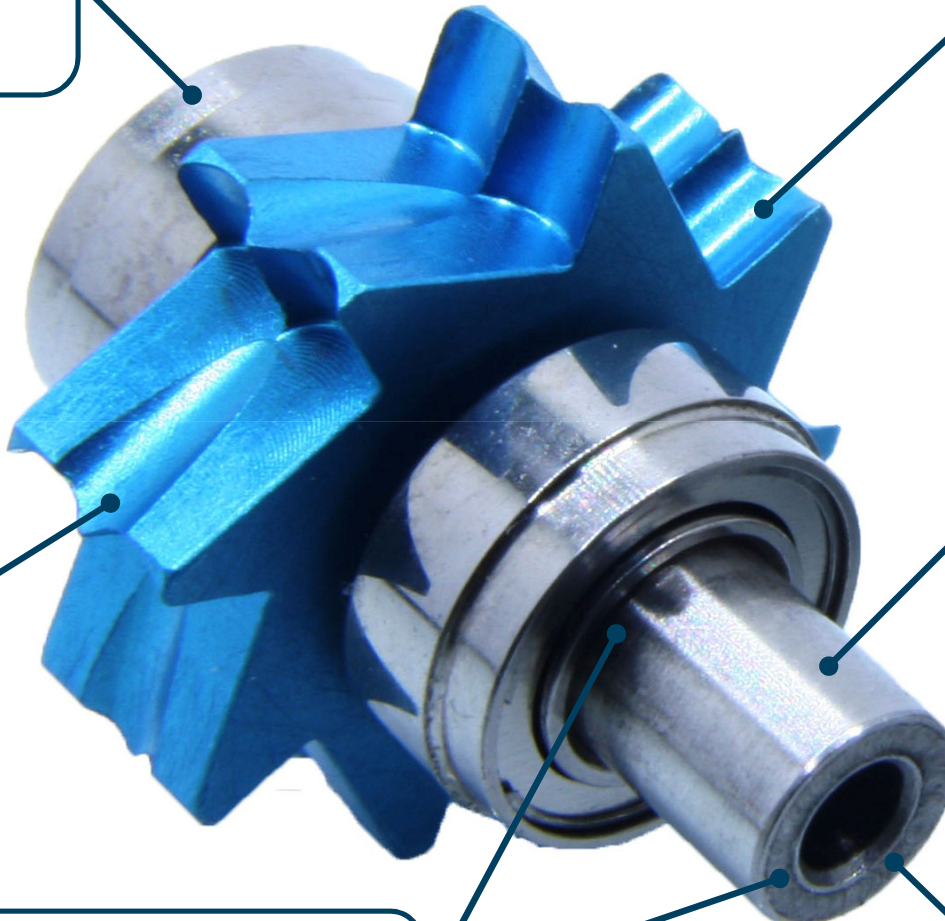
Turbine assemblies (rotors) balanced to 0.2 mgmm  
**Reduced vibration**  
**Increased bearing lifetime**

All aluminum alloy impellers are anodized  
**Reduced corrosion**  
**Improved hygiene**

All components made from high-quality medical-grade stainless steel  
**Reduced corrosion**

Axis components laser-welded after assembly  
**Increased reliability**

Guiding bushing made from a special grade of stainless and is hardened up to 64 HRC  
**Reduced wear**





All ADENSYS cartridges are built with bearings ceramic balls only.

Bearings are selected based on a number of high-quality properties:

- At least ABEC 7 quality level
- Torlon cage material (fully sterilisable)
- Specialised high speed grease

Most of our bearings are available in deep groove or angular contact configurations.

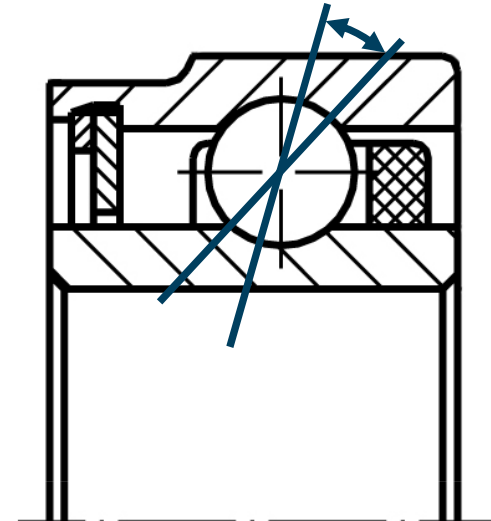
**Deep groove** bearings have a less defined contact point and have a less robust snap-on bearing cage.

**Angular contact** bearings have a clearly defined contact point, designed for a particular axial force and rpm. They also have a more robust full cage

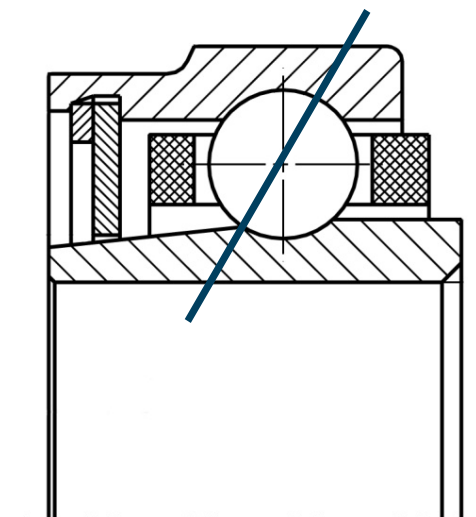
## Result:

Angular contact bearings have less friction, resulting in less wear and higher lifetime to failure

### Deep Groove



### Angular Contact



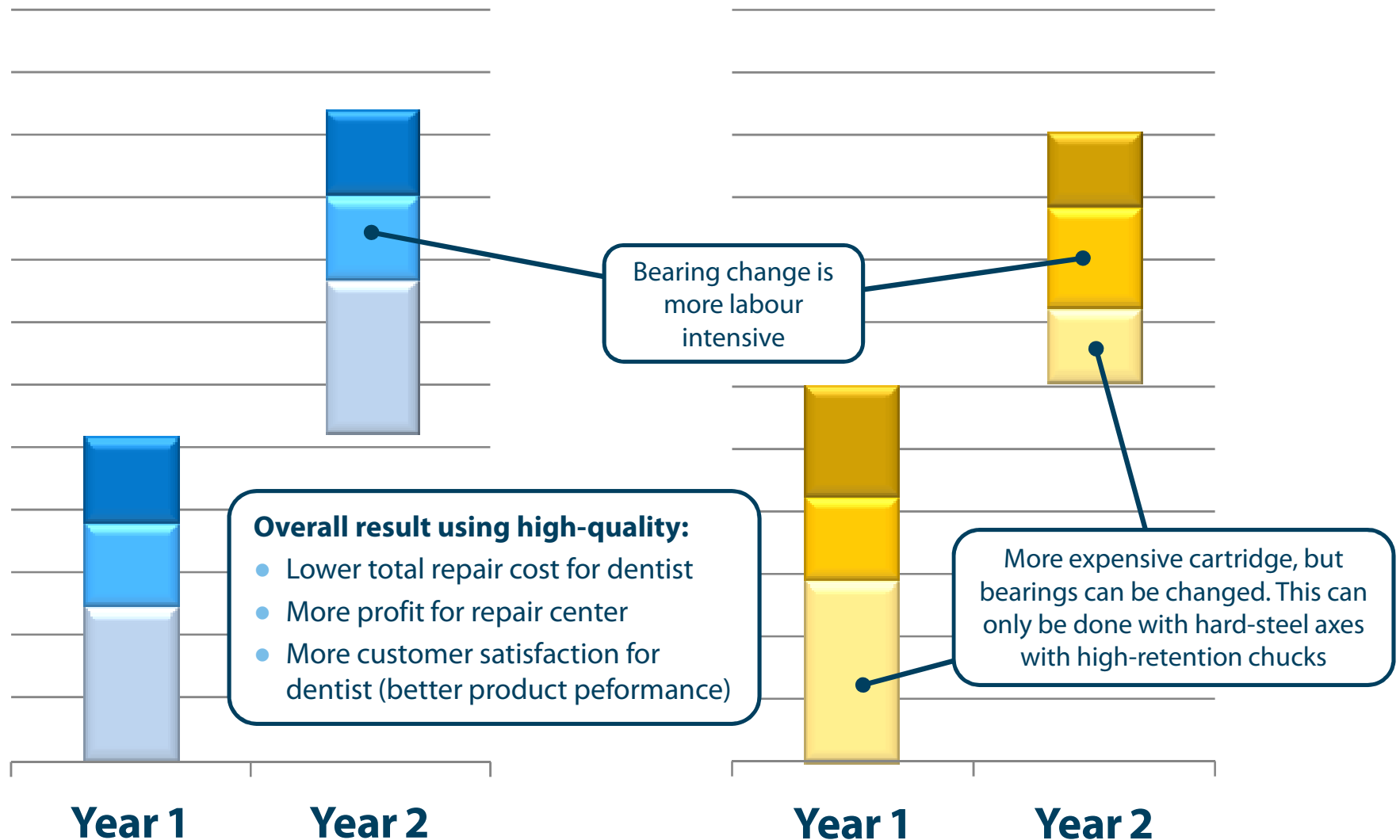
# Choosing high-quality after-market handpiece parts is profitable for repair centers

## Dentist repair costs

### Lower Quality Parts

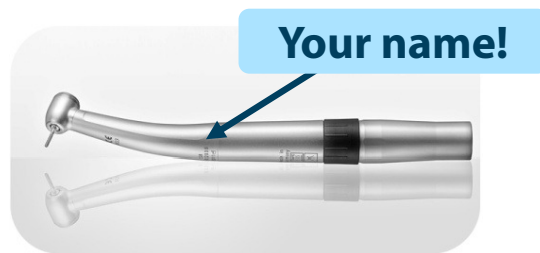
### High Quality Parts

- Profit
- Labour
- Parts



Although our focus is on cartridge products, our expertise and experience in handpiece design allow us to offer consulting services that complement our products

## Private-label Handpiece



Have you ever dreamed of your own handpiece brand? Let us help you with the selection, design and testing of **your** product

## Handpiece repair facilities



Are you ISO 9001 / 13485 certified? Do you feel you need to develop your repair operations? Let us help you analyze and optimise

## Design improvements



Would you like to improve the performance or reliability of your private-label handpiece? Let us optimize your design!