



photo: Berlin Heart

Zollner services in the areas of:
Development. Prototype production.
Accreditation. Serial production.



Success Story: Berlin Heart

„Zollner develops a compact drive unit for cardiac support systems“

Customer and product:

Berlin Heart GmbH develops, produces and markets innovative cardiac support systems, so-called Ventricular Assist Devices (VADs), for mechanical cardiac support. With its EXCOR® Adult and EXCOR® Pediatric products, it is possible for Berlin Heart, the only company in the world, to support patients of every age and every size, starting with babies and on to adults. The innovative EXCOR® Active drive concept gives the gift of more mobility and independence to children with heart conditions while they wait for a donor heart.

The compact drive unit was developed and brought to serial production by Zollner Elektronik AG.

What was the big challenge of the project?

The functional reliability of the cardiac support system means life or death for the patients. Therefore safeguarding against failure was the uppermost goal during development of the EXCOR® Active.

This compact drive unit needed to be insensitive to environmental influences. Thus it must, for example, be just as reliable under extreme temperatures as it is when faced with electromagnetic disturbances or vibrations.

What solution did Zollner find?

The power supply of the compact drive unit is supported by three sources: a standard power supply, two rechargeable batteries with a runtime of at least five hours and an emergency battery, which can supply the patient for up to half an hour. Two rechargeable batteries always operate simultaneously to secure the mobile power supply from failure. Along with the rechargeable batteries, Zollner also provides an external charging device with the compact drive unit. The rechargeable battery is completely charged within three hours, as needed.

The Zollner Group's Research & Development Division conceived the complete mechatronic system with all of its complexity and brought it serial maturity. 25 prototypes of the compact drive unit were produced for this, and they were subjected to comprehensive, long-term testing. Zollner also performed all relevant accreditation testing.

This is what our customer says about our collaboration:



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„We are proud that after many years of intensive development work together with Zollner Elektronik AG on such a complex medical product we were able to successfully obtain the European CE mark. With the innovative regulation software, EXCOR® Active is able to support patients ranging from newborns to adults.“

Sven-René Friedel, General Manager at Berlin Heart GmbH

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