BioRob Lightweight Robot
For safe cooperation between humans and robots
THE EVOLUTION OF ROBOTICS
BioRob gives a helping hand.

„A robot may not injure a human being [...]“
Isaac Asimov; 1st Law of Robotics, 1942

We here at Bionic Robotics have always felt a strong obligation to adhere to the Laws of Robotics. And for a good reason: Conventional robotic arms unfortunately have the design-related tendency to be a threat to human employees.

Our BioRob lightweight robot is completely different – not to say revolutionary. It stands out due to its unique passive safety concept. This concept is so comprehensive that the trade association certified it for use together with humans without requiring further safety measures. Its elastic, flexible design as well as the fact that it is oriented towards humans makes it a perfect coworker.

Thanks to its intuitive Teach-in programming and its low weight, it also is completely flexible. If you like, it can work in a different place every day. BioRob is an efficient partner in the production chain and thus the ideal supplement for manual work stations.

We believe all of this makes BioRob a pleasant guy.
BioRob has a very successful role model: With regard to its dimensions, as well as to its speed of movement, it takes the human arm as an example. Its elastic safety concept allows for a load of up to 500 g.

Thanks to its outstanding properties, BioRob is specialized for the automation of changing handling tasks with small and medium lot sizes.

BioRob is perfectly suited for a great variety of automation tasks:
- PALLETIZING WORKPIECES OR FINISHED PRODUCTS
- LOADING AND UNLOADING MACHINES
- TESTING OR INSPECTION TASKS
- LABORATORY AUTOMATION

Your advantage: BioRob’s simple operation and its innovative safety concept make intense training of employees and expensive safety enclosures superfluous. This fact alone makes it outstanding in comparison to conventional robot systems. In addition to that, its low acquisition and operating costs ensure quick amortization of the investment. Thus the cooperation of man and machine leads to efficient production and enables optimized and calculable results. BioRob therefore becomes a universal employee in your production process. Which are the tasks it will take over from you?
BioRob's safety has been certified – this was confirmed in a type examination performed by the trade association according to Machine Directive 2006/42/EG. Its contact force in case of collision is definitely harmless, making costly cordons, light barriers and cells a thing of the past for you. This makes BioRob – besides its other numerous advantages – a key factor for an optimal and efficient use of robots. Safe cooperation of man and machine opens up many countless new and flexible possibilities for automation. Create your future with BioRob!

Our customer V-ZUG AG shows one possible application. Their challenge was that they had to react quickly to changes in production and had to implement flexible automation in their production line. That’s the perfect job for BioRob. With its help, they are now positioning sensors on a washing machine. Thanks to the simple programming and integration into the customer’s software, it is possible to train BioRob within just a few minutes in case of a change in production.

"We decided to use BioRob in quality control in order to be able to react flexibly to changes in the production process. Since BioRob can be used safely without a protective fence, we do not obstruct the working space in our production facilities."

Mr. Pfister, Test Engineering Team Manager at V-ZUG AG

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**SAFETY AS A STANDARD**

BioRob protects is colleagues – and your production site.

**IN ACTION AS A STANDARD**

BioRob at V-ZUG AG.

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**TECHNOLOGY AND FACTS**

BioRob at a glance.

**ASSEMBLY OPTIONS**

- Ground installation
- Overhead installation
- Wall installation

**RANGE OF MOTION**

- Side view
- Plan view

**PRODUCT CONTENTS**

- BioRob robotic arm
- Carrying case
- Compact industrial PC
- Connection box

**TECHNICAL DATA**

- Number of swivel joints: 4 - 5
- Bearing load: 800 g Nominal load up to 500 g in cooperative operation
- Repeat accuracy: up to +/- 0.2 mm
- Robot weight: ca. 6 kg incl. control
- Energy consumption: Nominal 40 W
- Power supply: 12 V
- Controls: EtherCat-Bus system Real-time Linux
- Interfaces: Intuitive GUI C / C++ API; ROS; Digital I/O
- Installation surface: ø 140 mm
- Safety concept: passive safety due to low robot weight and elasticity in drive
- Safety certificate: German Trade Association
- Cleanroom classification: ISO 1 as option