

# D-BOT

THE NEXT EVOLUTION  
OF COLLABORATIVE ROBOTS

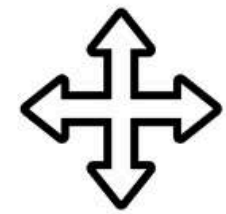


ENGINEERED FOR EXCELLENCE

## D-Bots: Automation Made Accessible

Introducing the D-Bot range, engineered to seamlessly integrate advanced automation into your daily operations. Each D-bot excels in user-friendliness, robust safety features, and versatility, tackling diverse tasks across various industries effortlessly. They are the ideal choice for businesses eager to embrace automation with minimal technical skill or setup time.

 **Payload**  
6 - 30 kg

 **Reach**  
800 - 1800 mm

 **Speed**  
max. 2 - 4 m/s

 **Weight**  
26 - 95 kg

 **Repeatability**  
 $\pm 0.02$  mm

 **Safety**  
Pld Cat. 3 / SIL 3



## Precision and Trust

Each D-Bot delivers unmatched precision and accuracy in diverse applications, ensuring reliable operations that foster trust among users. Tailored to enhance operational efficiency, these cobots offer consistent performance and reliability, empowering businesses to innovate and grow with confidence.



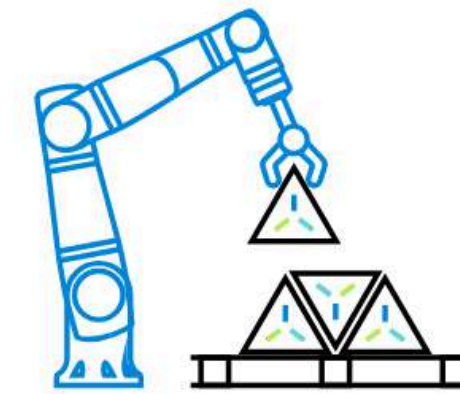
# Specialized Solution for Diverse Needs

D-Bots combine robotic accuracy with human ingenuity to enhance productivity and drive innovation, for example in the electronics industry. These cobots are tailor-made to address the unique challenges found in various sectors, transforming complex electronic manufacturing obstacles into opportunities for technological advancement and growth.

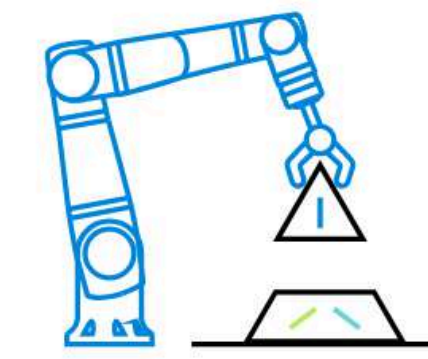


# D-Bots Across Industries

Collaborative robots, or cobots, are revolutionizing various industries by boosting efficiency and productivity. Designed to work alongside humans, they seamlessly blend manual labor with advanced automation, unlocking new levels of innovation and proving indispensable for a collaborative, futuristic workplace.



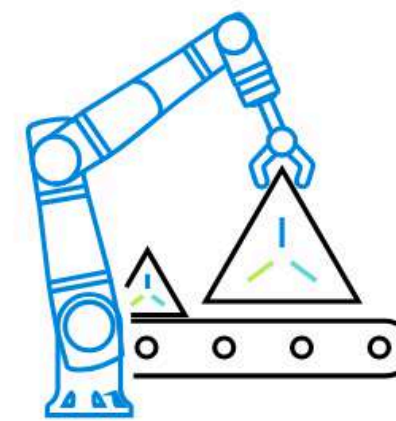
Packaging & Labeling



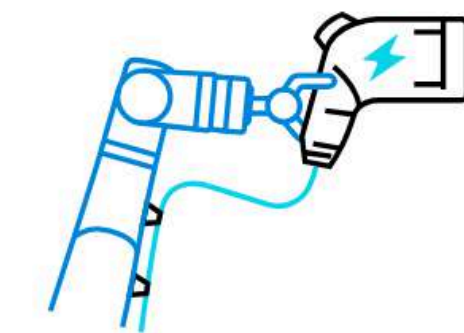
Assembly



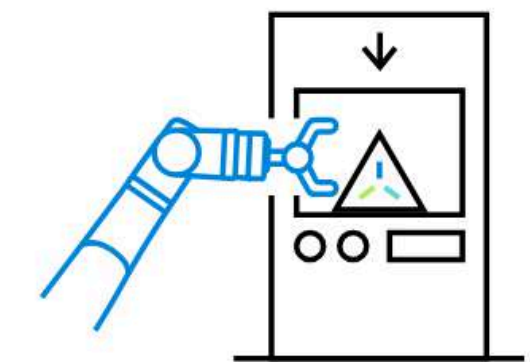
Welding



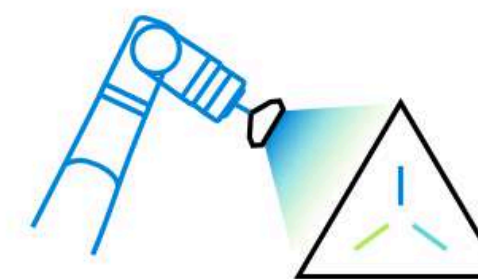
Material Handling



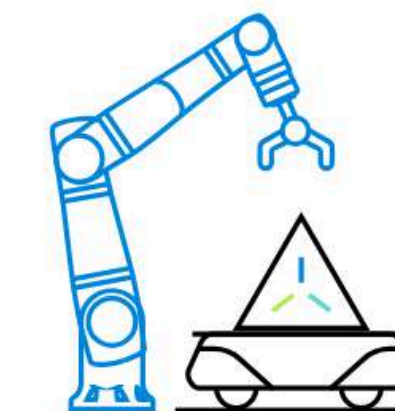
Charging



Machine Tending



Quality Inspection



Transportation



Finishing





# D-Bot Series

## Technical Parameters

DC06



DC08



DC10



DC16



DC20



DC30



### Specifications

<b>Payload</b>	6 kg (13.3 lbs)	8 kg (17.7 lbs)	10 kg (22.1 lbs)	16 kg (35.3 lbs)	20 kg (44.1 lbs)	30 kg (66.2 lbs)
<b>Reach</b>	800 mm (31.5 in)	1300 mm (51.2 in)	1200 mm (47.3 in)	1600 mm (63 in)	1800 mm (70.1 in)	1300 mm (51.2 in)
<b>Degrees of Freedom</b>	6 rotary joints	6 rotary joints	6 rotary joints	6 rotary joints	6 rotary joints	6 rotary joints

### Environment & Safety

<b>Ambient Temperature</b>	Ambient temperature: 0° to 50°C (32° to 122°F)			Ambient temperature: 0° to 50°C (32° to 122°F)		
<b>IP Classification</b>	IP 66 water and dust protection			IP 66 water and dust protection		
<b>Safety Rating</b>	PLd Cat3. / SIL 3 (Safe position, speed, torque limits, I/Os)			PLd Cat3. / SIL 3 (Safe position, speed, torque limits, I/Os)		
<b>Safety Functions</b>	25 configurable safety functions			25 configurable safety functions		

### Performance

<b>Max. TCP Speed</b>	2 m/s		4 m/s		3 m/s		4 m/s		4 m/s		4 m/s	
<b>Pose Repeatability</b>	±0.02 mm		±0.02 mm		±0.02 mm		±0.02 mm		±0.02 mm		±0.02 mm	
<b>Axis Movement</b>	<b>Working range</b>	<b>Maximum speed</b>	<b>Working range</b>	<b>Maximum speed</b>	<b>Working range</b>	<b>Maximum speed</b>	<b>Working range</b>	<b>Maximum speed</b>	<b>Working range</b>	<b>Maximum speed</b>	<b>Working range</b>	<b>Maximum speed</b>
Axis 1	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	120°/s	±360°	120°/s
Axis 2	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	120°/s	±360°	120°/s
Axis 3	±120°	200°/s	±120°	200°/s	±120°	200°/s	±120°	200°/s	±120°	150°/s	±120°	150°/s
Axis 4	±150°	200°/s	±150°	200°/s	±150°	200°/s	±150°	200°/s	±150°	150°/s	±150°	150°/s
Axis 5	±360°	200°/s	±360°	200°/s	±360°	200°/s	±360°	200°/s	±360°	180°/s	±360°	180°/s
Axis 6	±360°	200°/s	±360°	200°/s	±360°	200°/s	±360°	200°/s	±360°	180°/s	±360°	180°/s

### Interfaces & Programming

<b>Interfaces at the Flange</b>	I/Os Ports, MODBUS, RTU, 24V PSU						I/Os Ports, MODBUS, RTU, 24V PSU					
<b>I/O Ports</b>												
Digital in	3		3		3		3		3		3	
Digital out	3		3		3		3		3		3	
Analog	2		2		2		2		2		2	
<b>Programming Interface</b>	Drag & Drop, Python, ROS 1, C++ (low level)						Drag & Drop, Python, ROS 1, C++ (low level)					

### Physical

<b>Weight</b>	26 kg (57.4 lbs)	48 kg (105.9 lbs)	45 kg (99.3 lbs)	60 kg (132.3 lbs)	88 kg (194.1 lbs)	95 kg (209.5 lbs)
<b>Mounting</b>	Omnidirectional, including table mounting, wall mounting, and ceiling mounting			Omnidirectional, including table mounting, wall mounting, and ceiling mounting		
<b>Material</b>	Aluminum, plastic, steel			Aluminum, plastic, steel		



#### Control Box

<b>Dimensions</b>	563 mm x 470 mm x 243 mm
<b>Weight</b>	20 kg (44.1 lbs)
<b>Power Supply</b>	100-240 VAC, 50/60 Hz, max. 1.5 kW
<b>Interface</b>	8x GPIO, Modbus, TCP, Ethernet IP, USB 3.0, Safe I/Os



#### Teach pendant

<b>Dimensions</b>	285 mm x 228 mm x 95 mm (11.4 in)
<b>Resolution</b>	2560 x 1600
<b>Cable length</b>	5 m (3.3 ft)

## Built with Safety in Mind

The D-Bots feature advanced safety mechanisms that adjust or halt their operation when a person is nearby, significantly reducing the risk of accidents. This seamless integration of safety allows for close human-robot collaboration without barriers, transforming D-Bots from simple tools to essential team members.



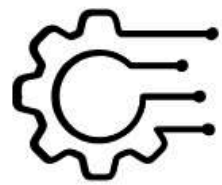
### Innovative Reflex Safety

D-Bots are engineered to detect contact with people or objects and instantly cease operation. This rapid response is vital for accident prevention, maintaining a secure workspace, and protecting both personnel and equipment from potential harm.



### IP66 Certified

The IP66 certification shields the D-Bots from dust and makes them resistant to strong water jets. This protection guarantees optimal performance in environments with dust or moisture, significantly reducing downtime and maintenance needs.



### Adjustable Speed Settings

D-Bots are equipped with adjustable speed settings that can be tailored to specific tasks and environments. By controlling the speed, operators can ensure that the cobot operates safely, particularly when human interaction is frequent.



## Omnidirectional Mounting

Our Cobots are designed with versatile mounting capabilities, enabling installation in any orientation—upright, sideways, or even overhead. This flexibility maximizes space efficiency and complements a variety of operational layouts. The D-Bots are smoothly integrated into any workspace, enhancing workflow and boosting productivity.



## From Box to Bot in 3 Hours

D-Bots are engineered for quick and easy deployment. Their efficient assembly process accelerates the integration of automation capabilities, reducing the time from integration to operation. Straightforward guidance and a user-friendly design ensure a seamless transition into your daily processes, enhancing productivity with minimal setup time required.



## D-Bot Teach Pendant & Control Box

Our cobots come equipped with an advanced tech pendant that simplifies programming and operation, making it accessible even to those new to robotics. The teach pendant offers real-time adjustments and easy access to all cobot functions. This user-friendly interface ensures that managing your cobot's activities is straightforward and efficient.

### Teach pendant

The Teach Pendant features a user-friendly touchscreen that simplifies programming and control of cobots. Its ergonomic design and customizable settings enhance operational flexibility and efficiency, allowing for easy adjustments and real-time troubleshooting directly from the production floor.

- 11.4-inch touchscreen
- GUI with 3D visualization
- 'Plug & Play'
- Pre-installed apps
- 'Drag & Drop' function
- Dynamic path & force recording with the Hand Guiding Mode



### Control Box

The Control Box serves as the central hub for the D-Bot operations, offering a robust, secure interface that integrates seamlessly with existing systems. It features advanced security, durable design, and easy mounting, ensuring reliable and smooth operations in various industrial settings.

- Compact Design
- Flexible Connectivity Options
- Advanced Safety Features
- Energy Efficiency
- Robust Construction
- Universal Compatibility



# Delta Electronics

Since 1971, Delta has been at the forefront of developing energy-efficient solutions that meet today's environmental challenges. With a global presence and a strong commitment to R&D, Delta continues to lead in creating technologies that enhance sustainability and drive industry progress.

Delta Electronics, established in 1971, has grown to become a leading global provider of power and thermal management solutions, embodying its mission to forge a better tomorrow through innovative, clean, and energy-efficient solutions. With a keen focus on addressing pivotal environmental challenges, including global climate change, Delta harnesses its expertise in power electronics and automation to offer cutting-edge solutions across Power Electronics, Mobility, Automation, and Infrastructure sectors.

Renowned for delivering some of the industry's most energy-efficient power products, Delta boasts achievements such as switching power supplies with over 90% efficiency, telecom power systems reaching up to 98%, and PV inverters that achieve up to 99.2% efficiency. Notably, Delta pioneered the world's first server power supply to receive the 80 Plus Titanium certification, setting a new benchmark for energy efficiency.

With its global headquarters in Taiwan, Delta invests more than 8% of its annual sales revenue into research and development, maintaining R&D facilities across China, Europe, Japan, Singapore, Thailand, and the U.S. This commitment to innovation is a testament to Delta's dedication to sustainability and technological advancement.

Delta's excellence has been recognized worldwide, earning numerous awards for innovation, design, and its unwavering commitment to Environmental, Social, and Governance (ESG) principles. Highlighting its sustainability efforts, Delta has been featured on the Dow Jones Sustainability™ Indices World Index for 13 consecutive years since 2011 and has thrice been awarded a double A List rating by CDP for its significant contributions to combating climate change and enhancing water security. Furthermore, for seven consecutive years, Delta has been recognized as a Supplier Engagement Leader, underscoring its dedication to fostering a sustainable value chain.

In the face of climate change, Delta remains steadfast in its commitment to the continuous development of innovative, energy-saving products, solutions, and services. This dedication not only underscores Delta's role in promoting sustainable development but also reinforces its vision of contributing meaningfully to the welfare of mankind. Delta's journey is one of innovation, sustainability, and leadership, as it continues to set industry standards and push the boundaries of what is possible for a sustainable future.

As we navigate towards a sustainable future, Delta invites you to join us in our mission to innovate for a cleaner, more efficient world. Discover how our solutions can transform your business and contribute to global environmental sustainability.

**Let's build a better future together with cutting-edge D-Bot technology.**





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