



Dobot Robotics

One-Stop Palletizing Solution

Makes Automation Accessible
2024/06



Manual Palletizing



Lack of Labor:

- Potential health and safety risks.
- Lack of skilled labor and high wages required.

Limited Space Utilization:

- Limited pallet height and inexperienced workers may not optimize the pallet space.

Inconsistent Quality:

- Human errors in counting, arranging and potential product damage.

Low Efficiency:

- Lower throughput and potentially impacting overall production efficiency.

Case Story



This is a company manufacturing Food, Beverage, & Tobacco with 11 production lines.
This company needs to usually switch product lines to meet different production needs.

Without Dobot Palletizing Solution

- **Production Schedule**

11 production lines for manual palletizing. One day the production line needs to arrange 2 palletizing workers, forming two shifts, each manual working took 6-8 hours.

- **Customer Pain Points:**

- (1) The palletizing workers have a heavy workload, leading to unstable workforce and difficulty in recruitment.
- (2) The palletizing results are also unstable because there is a need for frequent product updates and corresponding mold changes. Manual errors or oversights in the palletizing process result in poor palletizing, causing rework or difficulties in downstream processes.

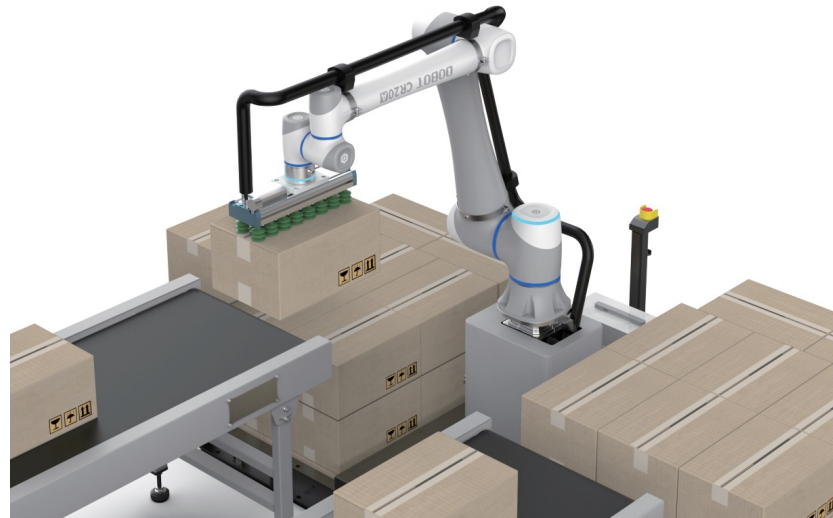
With Dobot Palletizing Solution

- **Solution:**

The user has purchased 11 Dobot palletizing solutions to cover all production lines. Only 1-2 workers are needed for changeovers and forklift operations. The payback period is around 12 months.



Cobot Palletizing



Space-Saving:

Less space needed

Movable :

Easy to reinstall

Quick to Deploy :

No any change to
existing line layout

Flexible:

Available for multi-
variety, fit for small batch
production

How to Choose Your Cobot Palletizing Solution?



1. Function Requirements

- Palletizing & Depalletizing

Note:

1 Conveyor 1 Pallet

1 Conveyor 2 Pallets

2 Conveyor 2 Pallets



2. Movement Requirements

- Payload
- Height
- Efficiency



3. Applicants & Entrepreneurship

- Fixed production line / Flexible production line
- Adjusting production line frequency
- Working space and human-machine collaboration
- Professionals

Dobot Palletizing Workstation



Palletizing Workstation Composition



1. Dobot CR20A Cobot

The CR20A boasts an impressive maximum payload capacity of 20 kg, a working range of up to 1,700 mm, and a wider coverage area, making it highly capable of effectively handling palletizing tasks.

2. Lifting Axis

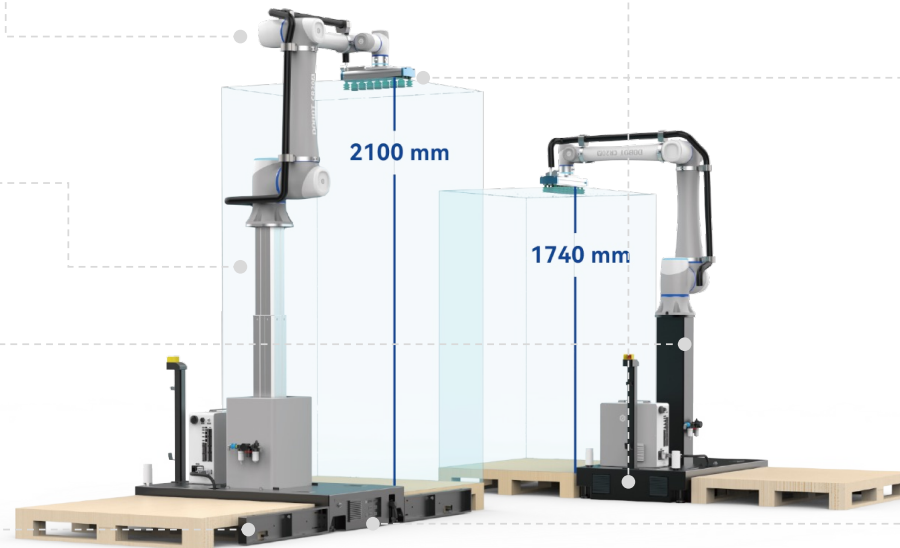
The height of the column has the potential to increase by up to 900 mm, while the maximum height for palletizing can reach 2,100 mm.

3. Fixed Column

The square tube used for welding is 8 mm thick and possesses a stable structure. It is designed with a fixed height of 1,150 mm and can reach a maximum palletizing height of 1,740 mm.

4. Standard Palletizing Base

The palletizing base is equipped with a comprehensive electrical control and communication system, ensuring seamless integration. Its modular hardware design simplifies the construction process, allowing for greater ease and efficiency. Additionally, the inclusion of a reserved forklift hole position enhances convenience during production line changes.



5. Pallet Detection and Positioning Device

The pallet detection and positioning device serves the function of identifying the existence of a pallet at the workstation and verifying that it has been appropriately positioned at the specified location. Its primary role is to detect whether a pallet has been installed and to ensure its precise deployment.

6. End-effector Vacuum Suction Tools (Optional)

Schmalz offers vacuum suction tools that can handle payloads of up to 20 kg and cover a large surface area.

7. External Terminal Panel

With the inclusion of terminal fast-on functionality, the panel offers a convenient and rapid means of connecting to the client control signal. Moreover, the presence of reserved I/O signal interfaces simplifies the process of integrating external devices or systems, allowing for seamless expansion and enhanced versatility.

Safety Certifications

ISO12100, EN60204-1,
ISO10218-2 and ISO13849-1

High Pace

8-13 pace/m,
single/dual suction mode

Brilliant Payload Capacity

Up to 20 kg/ 1500N payload/
2100mm height

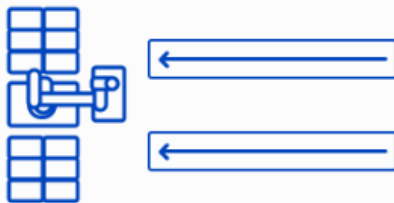
Versatile Functions, Perfect for Diverse Application Scenarios



1. Quick Palletizing & Depalletizing



2. One Workstation, Multiple Product Line*



* Supports:

1 Conveyor 1 Pallet (Left Pallet), 1 Conveyor 1 Pallet (Right Pallet), 1 Conveyor 2 Pallet, 2 Conveyor 2 Pallet.



Easy to Deploy



- Factory standard forklift can complete transportation.



- Modular design, assembly completed in 30mins.



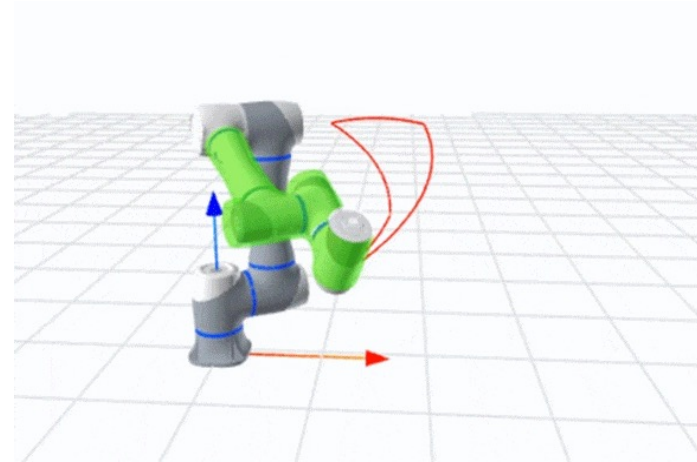
- Dedicated process package, deployment completed in 5 steps;
- Quick to use, quick to switch.

Visualized Design, Cobot Can be Used by Beginners on Multiple Terminals



Intelligent Interactive Panel

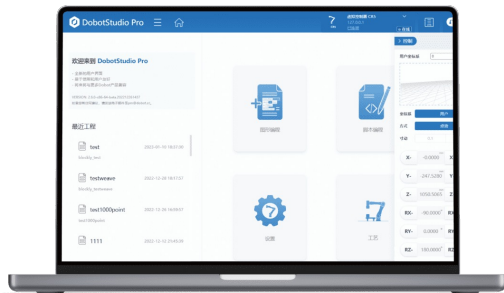
Easily achieve enable, drag teaching, gripper control, etc.



Visualized Motion Trajectory

Real-time display of motion trajectory for more efficient debugging;
Supports log traceability for rapid problem solving

Plug and Play, Easy to Use



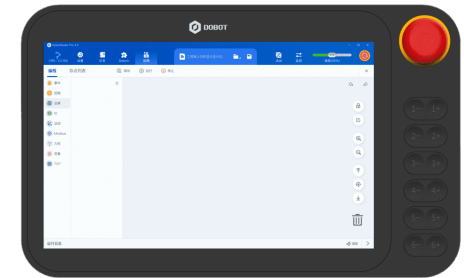
PC Software Platform

Provides flexible operation and higher programming efficiency through scripting.



iOS & Android Software Platform

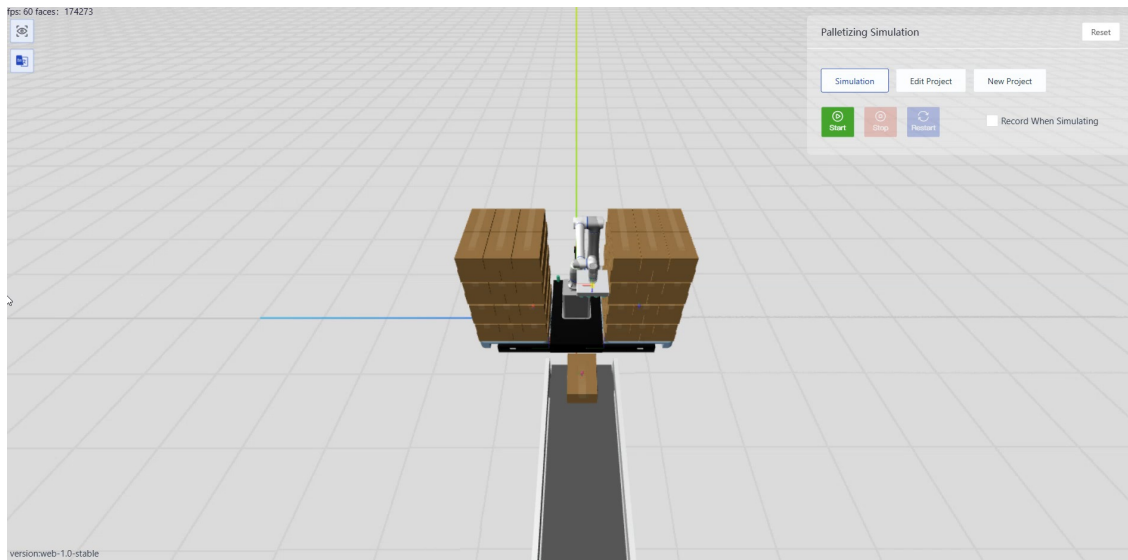
Plug & play for simple operation



Teach Pendant

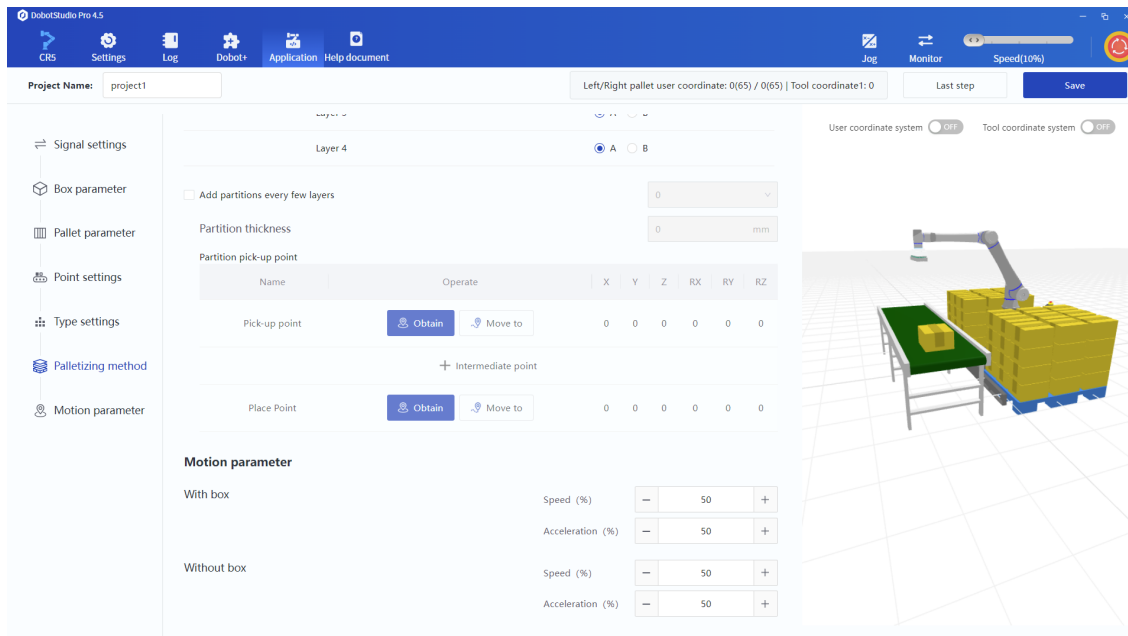
Compatible with traditional robot operation habits, supports both wired and wireless modes.

Functions of Palletizing Process Package



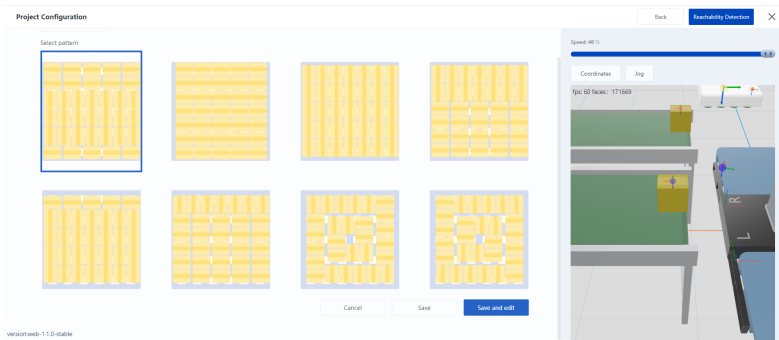
- **No Programming:** Deployment and adjustment through parameterization.
- **Versatility:** Various settings such as stacking pattern and robot movement trajectory.
- **3D Simulated Palletizing:** Simulation to preview deployment results, accelerating efficiency and identifying potential issues.
- **One for All:** Fully integrated software controls welding, palletizing, and end-effectors without platform switching.

Key Feature 1: Visual Configuration



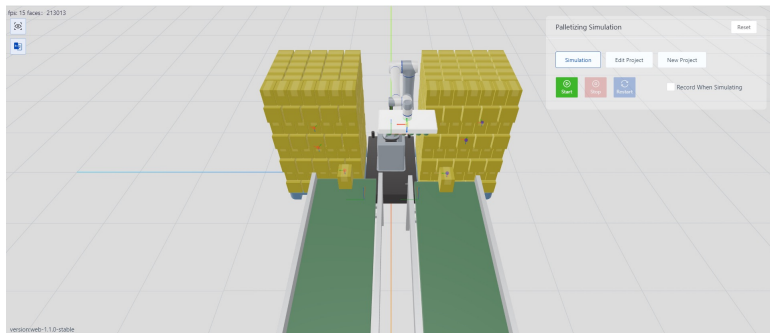
The Palletizing Process Package has a **3D display function** that shows boxes, pallets, stack patterns, and layers in real-time 3D graphics, simplifying the configuration process.

Key Feature 2: Auto-Generation for Palletizing Patterns



- **Palletizing Patterns**
The palletizing process package can automatically generate stacking patterns, avoiding the complex operation and time-consuming process of manual placement, greatly accelerating the deployment and adjustment time.

Palletizing Patterns



Palletizing Overall Preview

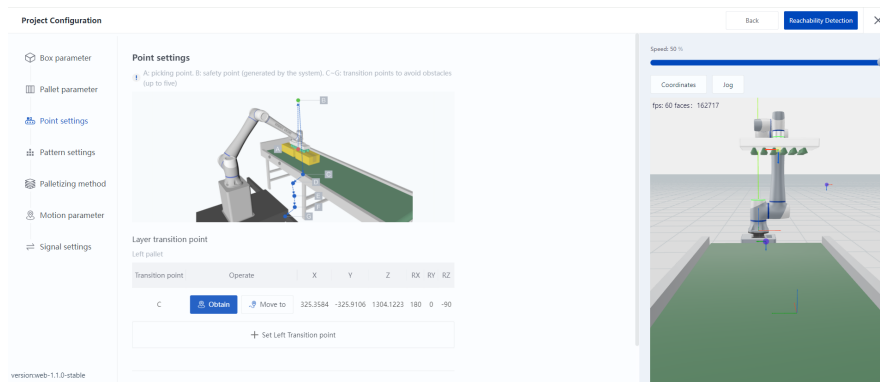
- **Palletizing Overall Preview**
Supports overall preview of the entire palletizing effect to confirm if the desired result is achieved.

Key Feature 3: Easily Set up Points



- Supports Configuration of Box Transition Point and Target Point

- It allows you to set the palletizing position and the box transition point, which minimizes the effect of box size and pallet height differences, eliminates extra space between boxes, and compacts them.
- User can also set the palletizing position and the box transition point independently, which makes debugging easier.

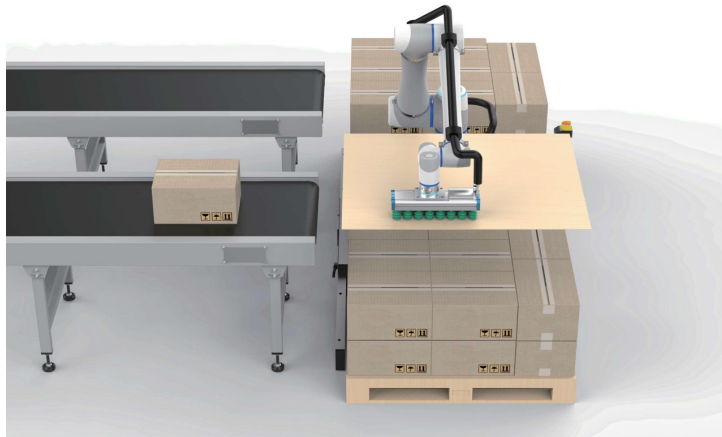


Transition Point Settings

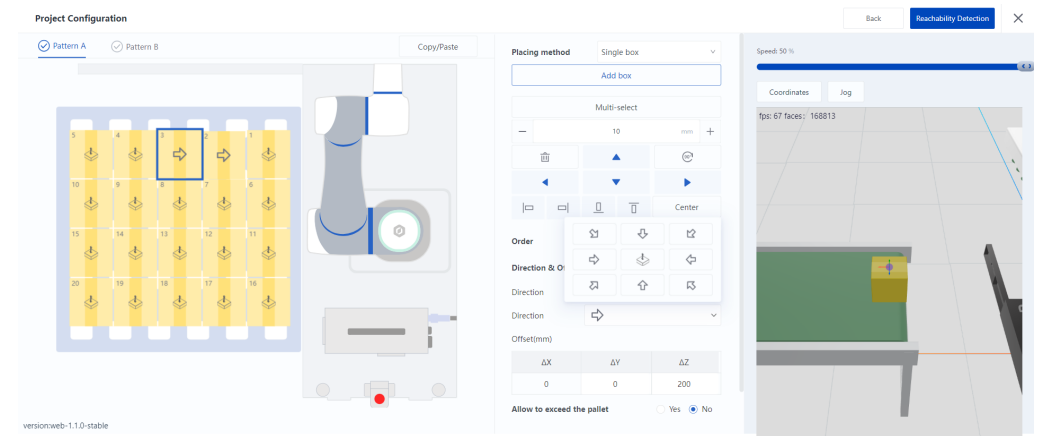


The Actual Stacking Effect

Other Features



- Supports easy **plug-in of interlayer** to increase the stability of palletizing.



- The Palletizing Process Platform allows for the **customization of box palletizing order and entry directions for 8 different types**.
- This function is used to **support complex palletizing requirements**, such as the need for a specific sequence or obstacles in the motion trajectory due to tolerances.

Single/Dual Suction Mode



- Efficient Dual-suction Mode

- It supports free configure to pick one or two boxes at a time, which boosts palletizing efficiency and adapts to faster scenarios.
- It has a dual-suction mode that can pick two boxes at a time, increasing palletizing efficiency by up to 62.5% and enabling easy and efficient palletizing.

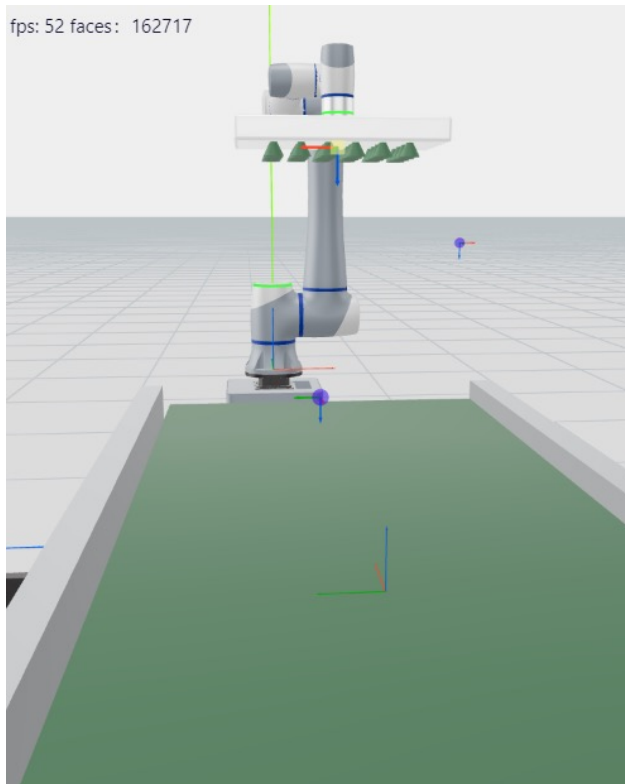


Single Suction Mode



Double Suction Mode

Palletizing Stimulated Software Platform



[Click to try automated palletizing](#)

Dobot Stimulated Software Platform helps users and system integrators simulate the real-time effects of automated palletizing, and evaluate the work pace.

- Directly simulates the **actual pallet** and **box dimensions** in real-world scenarios.
- Simulates the **deployment process** and **actual functionality** of the real-world palletizing solution.

Certifications



- Certificated by CE-MD, CE-RED, and RoHs.

SGS

VERIFICATION OF MD COMPLIANCE

No.: MD QZES2311020638MD
 Applicant: Shenzhen Yuejing Technology Co., Ltd.
 Room 1003, Building 2, Chongwen Park, Nanshan IPark, Nanshan District, Shenzhen, China
 Manufacturer: Same as applicant
 Product Description: CR20A Lifting Palletizing Workstation, CR20A Columnar Palletizing Workstation
 Model No.: DT-PR-L, DT-PR-C
 Trade Mark:

Sufficient samples of the product have been tested and found to be in conformity with
 Test Standard: EN ISO 12100:2010
 EN 60204-1:2018
 EN ISO 13849-1:2015
 ISO 10218-2:2011 except for Chapter 5.8, Chapter 5.9, Chapter 5.10

as shown in the Test Report Number(s):
 QZES231102063801
 QZES231102063802
 QZES231102063803

This Verification of MD Compliance has been granted to the applicant based on the results of tests, performed by Laboratory of SGS-CSTC Standards Technical Services Co., Ltd. on samples of the above-mentioned product in accordance with the provisions of the relevant harmonized standards under the Machinery Directive 2006/42/EC. The CE mark as shown below can be affixed, under the responsibility of the manufacturer, after completion of the EC Declaration of Conformity and compliance with all relevant EC Directives. The validity of the CE marking presupposes in addition that the conditions in the Directives are fulfilled.

2024-02-28
 Technical Manager
 SGS-CSTC

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 Member of SGS Group (Société Générale de Surveillance)
 Safety-VOC-FOR Rev.1.0 (2024-01-08)
 Page: 1 of 1

SGS

VERIFICATION OF COMPLIANCE

Verification No.: SZCR2311003734MDV
 Applicant: Shenzhen Yuejing Technology Co., Ltd.
 Address of Applicant: Room 1003, Building 2, Chongwen Park, Nanshan IPark, No.3370, Luolan Blvd, Fuguang Community, Taysuan Street, Nanshan District, Shenzhen, China
 Manufacturer: Shenzhen Yuejing Technology Co., Ltd.
 Address of Manufacturer: Room 1003, Building 2, Chongwen Park, Nanshan IPark, No.3370, Luolan Blvd, Fuguang Community, Taysuan Street, Nanshan District, Shenzhen, China
 Product Description: CR20A Lifting Palletizing Workstation, CR20A Columnar Palletizing Workstation
 Model No.: DT-PR-L, DT-PR-C
 Test Standards: EN IEC 61000-6-4: 2019, EN IEC 61000-6-2: 2019, EN 301 489-1 V22.3, EN 301 489-17 V2.4, EN 300 328 V2.2.2, EN IEC 62311:2020
 Test Report Number(s): SZCR231100373401, SZCR231100373402, SZCR231100373403, SZCR231100373404

COMPLIANCE

Conclusion
 Based on a review of the test reports detailed above, this apparatus meets the requirements of above standards. The product is in conformity with the essential requirements of Annex 1 (a) for the protection of the health and withoutout safety, 3.1 (a) an adequate level of electromagnetic compatibility and 3.2 emission and the provision of 01.40(3)(3).
 The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.

Date: 2024-01-04
 Kony Xu
 Laboratory Manager

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FTT

Certificate of Compliance

RoHS Directive(2011/65/EU)
 on the Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (Pb, Cd, Hg, CrVI, PBBs, PBDEs, Phthalates)

Certificate Number: CR230122098 Issued Date: Feb 27, 2024

Applicant: Shenzhen Yuejing Technology Co., Ltd.
 Address: Room 1003, Building 2, Chongwen Park, Nanshan IPark, No.3370 Luolan Blvd, Fuguang Community, Taysuan Street, Nanshan District, Shenzhen, China
 Name: CR20A Lifting Palletizing Workstation, CR20A Columnar Palletizing Workstation

*The difference between Lifting Palletizing Workstation and Columnar Palletizing Workstation:

Product Name	CR20A Lifting Palletizing Workstation	CR20A Columnar Palletizing Workstation
Model name	DT-PR-L	DT-PR-C
Sample Model:	Column Lifting column: an ascending column with a stroke of 800mm, which can be automatically raised and lowered according to the stacking height	Fixed column: a fixed column with a height of 1500mm and cannot be raised or lowered
Dimension (L x W x H)	1380mm*2280mm*1680mm	1580mm*2280mm*1180mm

This certificate of compliance is based on a test procedure or an evaluation of the above-mentioned product. This is to certify that the above-mentioned product is in compliance with the RoHS Directive (2011/65/EU) of the European Parliament. It is only valid in connection with the test report. (Report Number: HLF230122098)

Signed for and on Behalf of FTT

 Technology Manager

RoHS

Shenzhen FTT Testing Technologies Co., Ltd.
 Gangqi industrial park, Fungong industrial zone, Shaqing, Bao'an, Shenzhen, China
 Tel:0755-27248855 Fax:0755-27460090 Website: <http://www.crift.com>

On the Way... ..

FCC, NRTL,

Case Studies



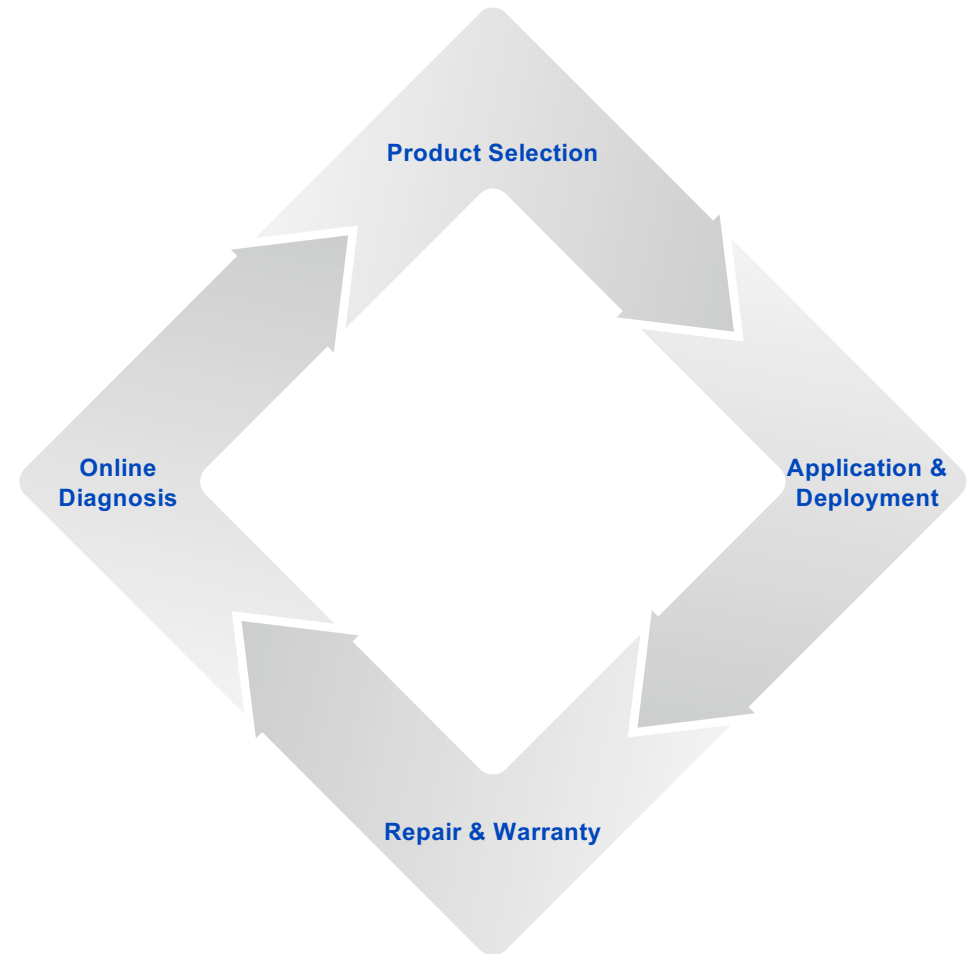
Services & Supports



Get dedicated support you need to optimize Dobot robots.

Dobot offers lifecycle services including product selection, deployment, repair, warranty, and online diagnostics. Technical experts provide real-time support to quickly resolve issues and maximize production uptime.

- Customer Support 24/7
- Full Lifecycle Services from Selection to Diagnostics
- Online/Offline Training and On-Site Support
- Standard 12-Month Warranty, Extendable to 5 Years
- Loaner Units Minimize Downtime
- Remote Monitoring and Fault Diagnosis



Services & Supports



Training System

Dobot offers a progressive curriculum of training courses from basic to advanced levels, helping customers systematically understand the operating principles, usage methods, and maintenance of robots. Trainees who pass the assessment upon completion will receive a customer service engineer certification and training certificate.

On-Site Training

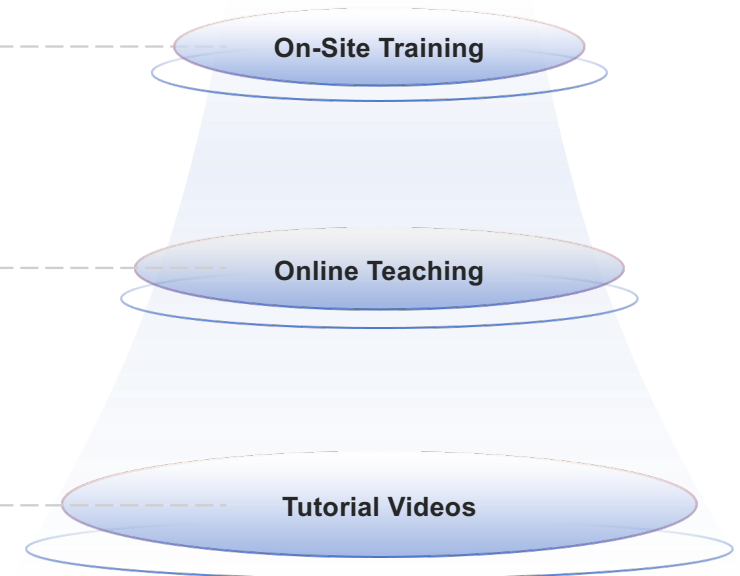
Integrates theory and practice, enabling trainees to comprehensively master professional robotic skills.

Online Teaching

Experienced tutors share industry insights, enabling in-depth learning of robotic application knowledge.


Tutorial Videos


Beginner training enables learners to quickly master collaborative robot basics.




Thank you.



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