TM Palletizing Operator

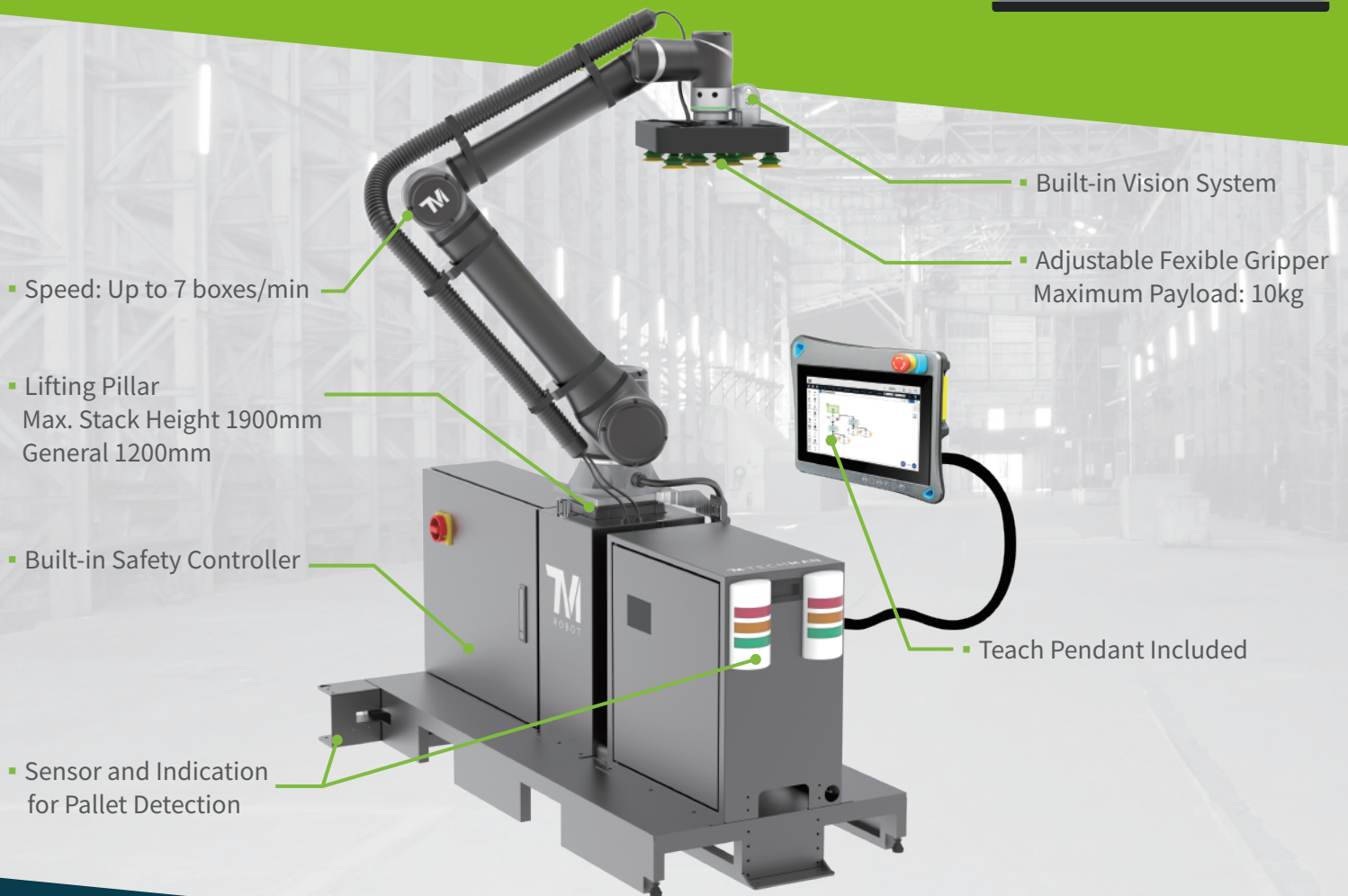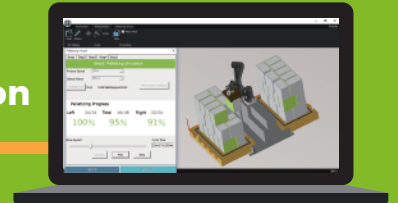**TM ROBOT**

WORLD NO. 1

- **17 Certified PL=d Cell Level Safety Functions**
- **Start toPalletize in 5 Minutes!**
- **TMstudio Palletizing Wizard: palletizing wizard and collision detection**

- Speed: Up to 7 boxes/min
- Lifting Pillar Max. Stack Height 1900mm General 1200mm
- Built-in Safety Controller
- Sensor and Indication for Pallet Detection

- Built-in Vision System
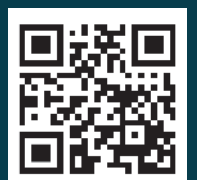- Adjustable Fexible Gripper Maximum Payload: 10kg
- Teach Pendant Included

TM Operator

Click & Run, Cheer & Apply

What is TM Operator?

- A ready to use, all-in-one application based robot cell.
- With application based software.
- Reduce programming effort.
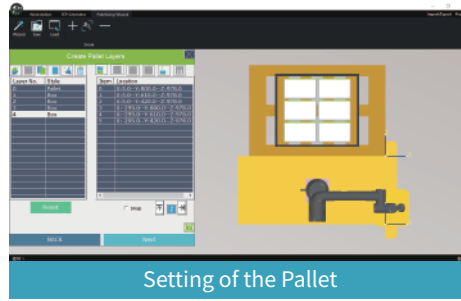- Start to work within 5~10 minutes.

www.tm-robot.com

Application Based Software

TMstudio Palletizing Wizard

Provide the optimization solution for palletizing.
- Customize box, pallet size
  - Regular Palletizing for same boxes
  - Palletizing for different pallets of boxes
  - Regular De-Palletizing for same boxes
  - De-Palletizing for different pallets of boxes
  - Change Pallet
- Generate point file offline.
- Custom box arrangement and sequence.
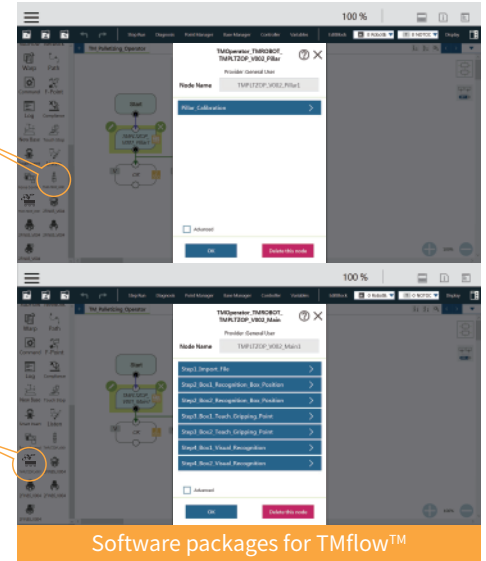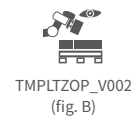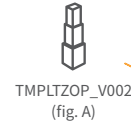- Palletizing simulation and collision detection.

Setting of the Pallet

Simulation

Software packages for TMflow™

Main Function
- Calibration of pillar. (fig. A)
- Main function based on file generated from TMstudio Palletizing Wizard, and settings for the cell. (fig. B)

Flexibility for functional expansion by user
- Using customized gripper.
- Adding more vision functions like barcode reading.
- Adding downward sensor detection before releasing the box.
- Slip sheet application programming .

TMPLTZOP_V002
(fig. A)

TMPLTZOP_V002
(fig. B)

Software packages for TMflow™

Specification

Specification	TM Palletizing Operator-TM12
Stack Height*	General 1200mm, Max. 1900mm
Maximum Payload*	10kg
Maximum Pallet Speed	Up to 7 boxes/object per minute
Certification	CE, Machine Directive 2006/42/EC, ISO 12100, EN 60204-1, ISO 10218-2 (partly completed machinery), ISO 13849-1, ISO/TS 15066
Safety Functions	17 cell level safety functions with 3rd Party certification PL=d according to ISO13849-1
Teach Pendant	10.1" capacitive touch screen, with ESTOP and Enabling Switch, Cable length: 3m, 2 USB ports provided
IP Rating	IP54 for Robot Arm, IP65 for Teach Pendant, IP 32 for Gripper and rest parts
Interface	Support multiple safety inputs and safety outputs: emergency stop, safeguard pause, Safeguard Human-Machine Safety Setting
Software	Offline programming & Simulation: TMstudio Palletizing Wizard etting and Running: TM Palletizing Operator Software Packages
Eye in Hand(Built in)	1.2M/5M pixels, color camera
Eye to Hand(Optional)	Support Maximum 2 GigE cameras

*The maximum stack height indicates the use case of single-box stack within proximity. In the use case of maximum pallet size(1219mm×1016mm), it can generally reach 1,200 mm. Differences in box size, box layout and gripper might affect actual stack height
*The payload at robot flange is 12kg.

Product Content

Item	Standard Package
TM12 robot Arm & control box	✓
Teach Pendant and cable	✓
TM Palletizing Operator Base, including -Indication light for Pallet detection -Lifting Pillar module & Drag Chain	✓
Pneumatic Suction Gripper Set, including -Pneumatic Suction Gripper -Pneumatic Set: Air preparation unit, Solenoid valve, Air tube to the tool end -Cable Conduit	✓
Software License Dongles 1 for TMstudio Palletizing Wizard 1 for TM Palletizing Operator Software Packages	✓