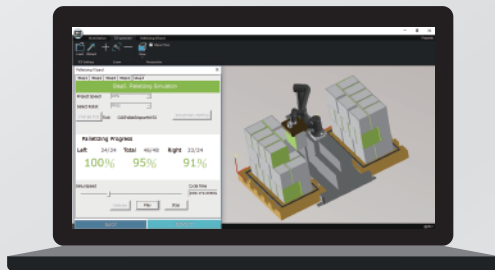


# TM Palletizing Operator

## Click & Run, Cheer & Apply

- **17** Certified PL=d Cell Level Safety Functions
- **TMstudio Palletizing Wizard: World NO.1**, palletizing wizard and collision detection

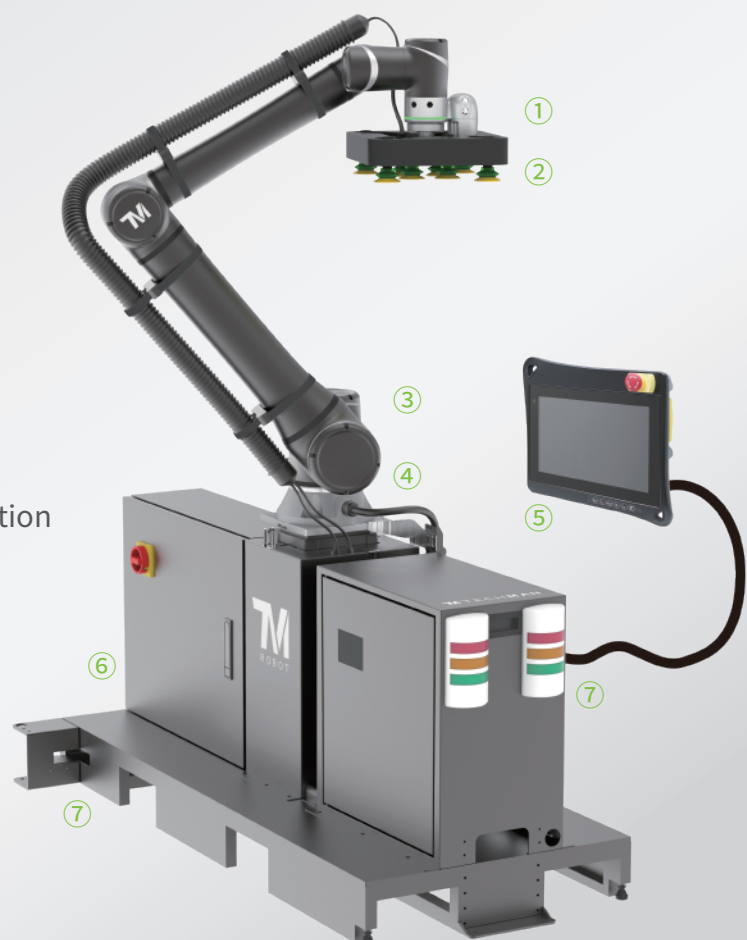


### What is TM Operator?

- A ready to use, all-in-one application based robot cell
- With application based software
- Reduce programming effort

### Features

- ① Built-in Vision System
- ② Adjustable Flexible Gripper  
Maximum Payload 18kg
- ③ Speed: Up to 7 boxes/min
- ④ Lifting Pillar:  
Max. reach 1200mm  
Max. stack height 2325mm  
(Max. stack height varies with different pillar stroke,  
please see specification table for more information)
- ⑤ Teach Pendant Included
- ⑥ Built-in Safety Controller
- ⑦ Sensor and Indication for Pallet Detection

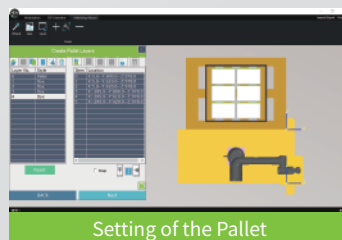


# Application Based Software

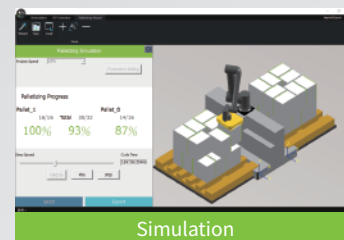
## TMstudio Palletizing Wizard

### 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
- Main function based on file generated from TMstudio Palletizing Wizard, and settings for the cell
- Provide script node for more programming flexibility with TMflow™ 2 series

### 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

## Specification

Specification	TM Palletizing Operator-TM12	TM Palletizing Operator-TM20
Stack Height*	Pillar Stroke 500mm: 1345mm; Pillar Stroke 800mm: 1725mm ; Pillar Stroke 1200mm: 2325mm	
Maximum Payload**	10kg	18kg
Maximum Pallet Speed	Up to 7 boxes/object per minute***	Up to 5 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, IP32 for Gripper and the rest of 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 Editing 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	
* Stack height is the height of the center of the robot's Joint 2 above the ground, with the pillar stroke at its maximum. Differences in box size, box layout and gripper might affect actual stack height		
** The payload at robot flange is 12Kg for TM12 or 20kg for TM20		
*** The pallet speed varies depending on a number of factors, e.g. vision recognition, box arrangement, actual pneumatic suction gripper, pillar, or I/O reaction time		

### Product Content

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                    - Cable Conduit

- Pneumatic Set: Air preparation unit, Solenoid valve, Air tube to the tool end

Software License Dongles