fruitcore robotics

Ready to use

Automation modules ready to use

Economical. Flexible. Efficient.

Your advantages at a glance

✓ **Safe operation according to ISO 10218-2**
You will receive your automation module including a completed risk assessment and CE certification.

✓ **85 % less project planning effort**
Access predefined programs, interfaces and plug-and-play control solutions.

✓ **Lowest risk**
To ensure goal attainment, we conduct free feasibility analysis for your use case on the actual system.

✓ **High Flexibility**
Stay flexible with our modular robot base and wide-ranging assemblies, even with changing requirements.

✓ **Return on investment within 6 months**
Save costs effectively and benefit from the amortization of your Solution Kit in less than 6 months.

✓ **Simple control without additional PLC**
Control the entire solution centrally and monitor robots and components from a single point of control.

fischer

"
A Solution Kit can be installed, programmed and operated quickly and easily without any special prior knowledge.
"

Robert Meißner
Senior Expert Manufacturing Technologies, Research & Development at fischer group of companies

Our Solution Kits

Pick and Place
The best basic equipment for a safe, flexible, quick and easy introduction into robot-supported automation solutions. Perfectly suited for use in training and educational institutions.

Part Separation I
Part separation for separating parts that can be easily recognized in transmitted light based on their outer contour. Best cycle time and fast teach-in of new parts in less than 15 minutes.

Part Separation II
Separating complex, dimensionally unstable parts is no problem with this setup. Thanks to the AI software and flexible gripper, different parts can be easily recognized and gripped from a bulk material.

Part Separation III
The Solution Kit for 3D pick & place tasks makes it possible to precisely locate undefined, tilted and layered parts, grip them accurately with the vacuum gripper and processing them flexibly.

Machine Tending I
The mobile automation module for machine loading with maximum flexibility. The Solution Kit can be flexibly positioned on machine tools using a positioning kit.

Machine Tending II
The modular Solution Kit can be configured as required and enables maximum autonomy times thanks to flexible parts provision. Short machine intervention times can be achieved thanks to the double gripper.

Simple parts handling

Do you want to automate your production processes as smoothly and efficiently as possible? Our Solution Kit Pick and Place offers you maximum flexibility and customisability. The Solution Kit arrives pre-assembled and CE-certified - guaranteeing a smooth commissioning and a quick start to the automation of your process.

Ready to use

With this package you receive:

1. Mobile Robot Base (MRB) S, M or L with safety fence and safety lock

2. Digital Robot HORST600 or Digital Robot HORST1000

3. Electric parallel gripper or electric vacuum suction gripper

4. Operating console

5. Control system "Control"

6. Operating panel "Panel"

Your advantages at a glance

High flexibility and customisability

The protective fence on the mobile robot base can be easily modified, allowing you to simply attach the Solution Kit directly to your machine.

Lowest project costs

With the Pick and Place Solution Kit, you can start your automation project with calculable costs and remain flexible even with changing requirements.

Simplest processing

The Solution Kit Pick and Place is a perfectly coordinated automation module consisting of robot, platform, safety technology and gripping system - all from a single source.

Quick start due to pre-assembled unit

The Solution Kit is delivered to you fully assembled and can be easily integrated on site. The pre-assembly includes the installation of the robot, the assembly of the gripper and the wiring of the safety lock and the control console.

More details

Dimensions of MRB with safety fence	1085 x 812 x 1930 mm (size S) 1285 x 903 x 1938 mm (size M) 1500 x 1103 x 2054 mm (size L)
Total weight of MRB with safety fence	141 kg (size S) 176 kg (size M) 235 kg (size L)
Load capacity of MRB with safety fence	250 kg (size S) 220 kg (size M) 165 kg (size L)
Components	HORST600/HORST1000, Mobile Robot Base with safety fence, safety lock & operating console as well as SCHUNK parallel gripper including a standard jaw set or Schmalz vacuum suction pads including standard suction cups

Quick separation of simple parts

The Part Separation for separating parts, which can be reliably detected in transmitted light based on their outer contour, allows for optimal cycle times and quick setup for new parts in under 15 minutes. The employed robot guidance system, SICK PLOC 2D, enables reliable and fast part localization. With the electric parallel gripper, the parts can be gripped and flexibly processed in downstream processes such as quality control. You will receive the automation module fully assembled and CE-certified.

Ready to use

With this package you receive:

1. Robot platform horstCUBE with safety lock
2. Digital Robot HORST600
3. Camera SICK PLOC2D
4. Feeding and part separation
5. Electric parallel gripper
6. Operating panel "Panel"
7. Operating console
8. Control system "Control"
9. Switch cabinet for the integration of additional peripherals

Your advantages at a glance

✓ Lowest risk
We are happy to advise you on the use of the Solution Kit in your project. We conduct free feasibility analyses in advance on a fully assembled setup.

✓ Quick set-up in less than 15 minutes
The PLOC 2D offers intuitive software, allowing you to set up new parts in less than 15 minutes even without prior knowledge. Setup is centralized via the panel.

✓ Cost control and predictability
With the Solution Kit Part Separation, you start your automation project with calculable costs. Thanks to standardisation, the Solution Kit Part Separation is available with short delivery times.
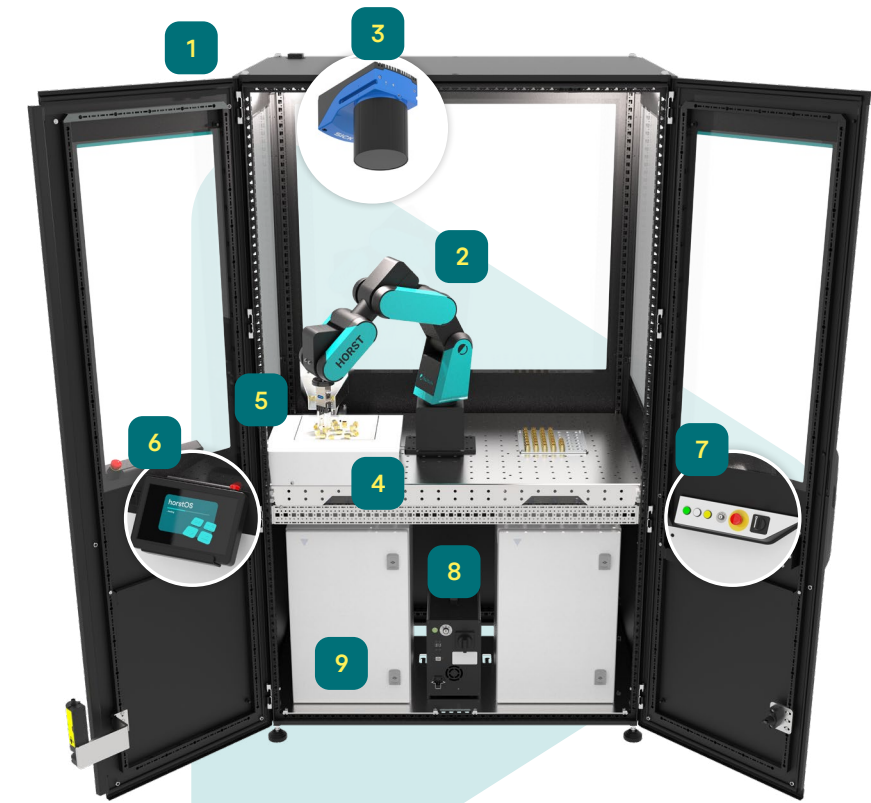
✓ Quick start thanks to pre-assembled unit
The Solution Kit is delivered fully assembled, mechanically and electrically. The complete process sequence is pre-configured on the software side and can be customized in just a few steps.

Application specification

Part specifications	5 - 50 mm / 5 – 200 g
Setup of new parts	approx. 15 min for the complete setup of a new component
Part variance	The setup is ideal for separating parts that can be clearly identified by their outer contour.
Part provision	Parts can be filled into the vibration hopper as bulk material. The hopper size can be selected depending on the required autonomy time.
Feasible cycle time	up to 5 sec

More details

Dimensions / Weight	1120 x 900 x 2060 mm / approx. 400 kg
Components	HORST600, horstCUBE Robot Platform with safety lock & operating console, robot guidance system SICK PLOC2D, part separator VarioShaker 270 or 540, vibration hopper 5L, 10L or 25L and SCHUNK electric parallel gripper

Flexible separation of complex parts

The Solution Kit Part Separation offers you a flexible and powerful solution for handling complex separation tasks all in one package. The implemented SCHUNK 2D Grasping Kit, thanks to its AI software, allows for precise localization and orientation recognition of complex parts even under changing lighting conditions. With the EGK gripper, various parts can be gripped flexibly. Additionally, flexible parts such as chain links or structurally stable items like bags can be separated and picked with this setup.

Ready to use

Your advantages at a glance

Lowest risk

We are happy to advise you on the use of the Solution Kit in your project. We conduct free feasibility analyses in advance on a fully assembled setup.

Reliable part recognition

Even complex parts with variable surfaces can be taught in quickly without prior knowledge. The AI software from SCHUNK reliably recognizes the parts in the process, even under changing lighting conditions.

Cost control and predictability

With the Solution Kit Part Separation, you start your automation project with calculable costs. Thanks to standardisation, the Solution Kit Part Separation is available with short delivery times.

Quick start thanks to pre-assembled unit

The Solution Kit is delivered fully assembled, mechanically and electrically. The complete process sequence is pre-configured on the software side and can be customized in just a few steps.

With this package you receive:

1. Robot platform horstCUBE with safety lock
2. Digital Robot HORST600
3. SCHUNK 2D Grasping-Kit consisting of a camera, a flexible parallel gripper and an industrial PC
4. Flexibowl 500 with 10L vibration hopper
5. Operating panel "Panel"
6. Operating console
7. Control system "Control"
8. Switch cabinet for the integration of additional peripherals

Application specification

Part specifications	5 - 50 mm / 5 – 100 g
Setup of new parts	approx. 15 min for training the AI (plus model calculation by the AI)
Part variance	Separating, recognizing and gripping different parts from a bulk material. Even dimensionally unstable parts and parts with reflective surfaces can be separated.
Part provision	Parts can be filled into the vibration hopper as bulk material from outside the horstCUBE.
Feasible cycle time	up to 5 sec

More details

Dimensions / Weight	1510 x 900 x 2060 mm (incl. protruding vibration bunker) / approx. 400 kg
Components	HORST600, horstCUBE Robot Platform with safety lock & operating console, flexibowl 500, vibration hopper 10L and SCHUNK 2D Grasping-Kit incl. flexible EGK-25 gripper

3D Pick & Place

Ready to use

The Solution Kit Part Separation for 3D pick & place tasks enables the precise localization of undefined, tilted and layered parts, allowing them to be accurately grasped with the electric vacuum gripper. You will receive the automation module fully assembled and CE-certified. Thanks to the modularity of horstCUBE, a conveyor belt for loading parts can be easily integrated into the setup. The Solution Kit provides you the ideal solution for organizing and sorting parts, allowing them to be flexibly processed in subsequent stages such as machining, laser marking, or quality control.

With this package you receive:

1. Robot platform horstCUBE with safety lock
2. Digital Robot HORST600
3. Ensenso 3D camera
4. Electric vacuum gripper or parallel gripper
5. Operating panel "Panel"
6. Operating console
7. Control system "Control"
8. Switch cabinet for the integration of additional peripherals
9. Individual parts output (optional)

Your advantages at a glance

✓ Flexible and easy to integrate

The system allows your parts to be recognised as 3D objects in any position and gripped in a defined manner. Therefore, parts can be easily supplied in an unsorted manner, for example, via a conveyor belt.

✓ Simplest setup via CAD models

Your parts can be loaded as CAD models and subsequently recognized by the Mikado Find algorithm. Through the integrated interface of Mikado Find, the parts can be directly grasped by the robot.

✓ Cost control and predictability

With the Solution Kit Part Separation, you start your automation project with calculable costs. Thanks to standardisation, the Solution Kit Part Separation is available with short delivery times.

✓ Quick start thanks to pre-assembled unit

The Solution Kit is delivered fully assembled, mechanically and electrically. The complete process sequence is pre-configured on the software side and can be customized in just a few steps.

Application specification

Part specifications	Part size up to 200 mm / part weight up to 1 kg
Setup of new parts	approx. 15 min for the complete installation of a new component
Part provision	Parts can be roughly pre-separated on a conveyor belt or stacked in a blister or box. It is not necessary to separate the parts using a shaker.
Part variance	The setup is ideal for separating parts of different geometries and sizes, even with challenging surfaces.
Feasible cycle time	up to 5 sec

More details

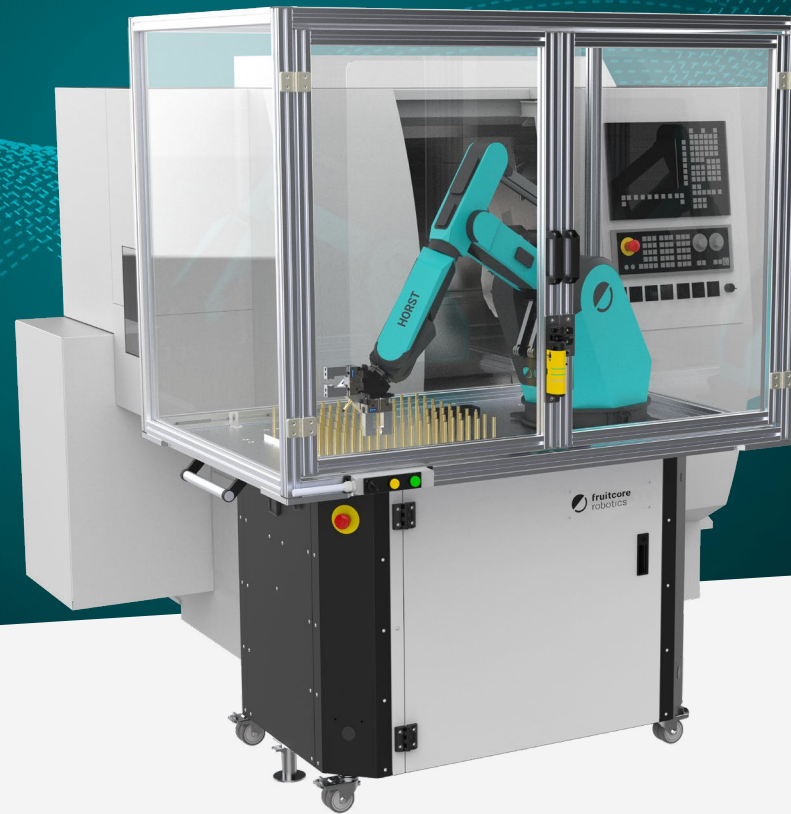|	
Dimensions / Weight	1120 x 900 x 2060 mm / approx. 350 kg
Components	HORST600, horstCUBE Robot Platform with safety lock & operating console, Optonic Mikado Find with Ensenso camera system and Schmalz vacuum gripper or SCHUNK parallel gripper

Mobile solution for loading and unloading machines

Ready to use

Are you looking for a cost-effective and flexible way to automate the loading of your production machine? With this comprehensive package, you can quickly boost your productivity while keeping project costs low and maintaining full flexibility. The pre-assembled, CE-certified Solution Kit is compatible with all common production machines and ensures efficient operation thanks to short loading times.

With this package you receive:

1. Mobile Robot Base L (MRB) with safety fence and safety lock
2. Digital Robot HORST1000
3. Control system "Control"
4. Operating panel "Panel"
5. Double gripper with blow-off unit
6. Operating console

Your advantages at a glance

Only 15 % of the usual project costs

The Solution Kit is ready for immediate use with plug-in interfaces for all common machine tools and predefined programs.

High flexibility

Need to make the machine accessible? The Solution Kit can be easily removed from the machine thanks to the mobile robot platform. It can be repositioned quickly thanks to the safety lock.

Simple and centralized operation

The programming and control of the Solution Kit are centrally managed through the control software, horstOS. No external control (PLC) is required.
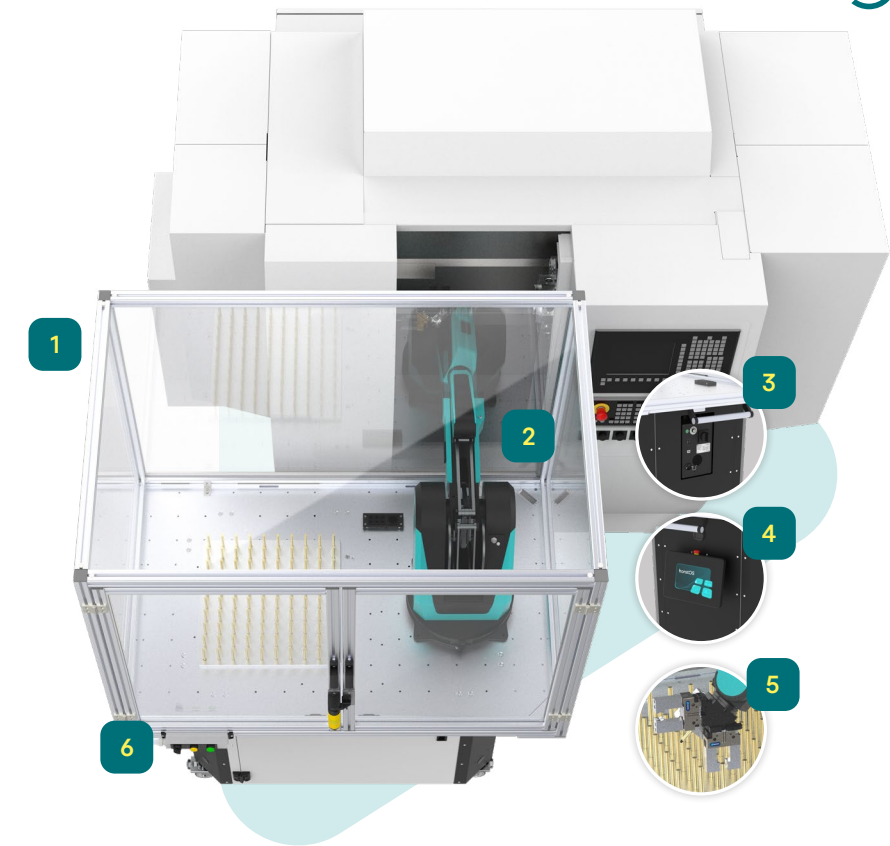
Highest efficiency

The short loading time, including the blowing off of the finished part and the chuck, ensures you minimal machine downtime and maximum output.

Application specification

Tradable part weight	max. 3 kg with double gripper
Range in machine	up to 700 mm depending on screw-on position
Assembly time	approx. 12 sec with extraction, blow-off and insertion
Recommended tray size	500 x 500 mm - square 600 x 400 mm - rectangular
Autonomy time	approx. 60 min for 100 parts, 12 sec placement time and 20 sec machine processing time
Compatible machines	Emco, Hurco, Haas, Trumpf, Foba and many more (also special machines)

More details

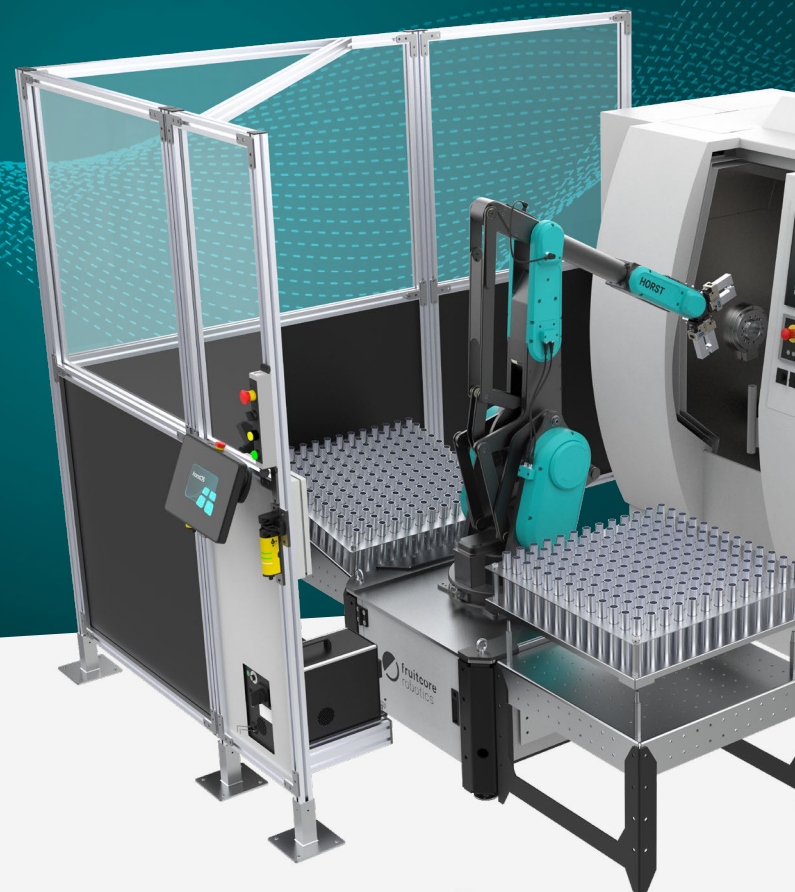|	
Dimensions / Weight	1500 x 1103 x 2054 mm / approx. 312 kg
Components	HORST1000, Mobile Robot Base L with safety fence, safety lock & operating console, positioning kit and SCHUNK double gripper with blow-off unit

Modular concept for efficient machine loading and unloading

Ready to use

The modular Solution Kit Machine Tending allows you to automate the loading and unloading of machine tools with minimal effort and maximum efficiency. The Solution Kit consists of several standardized Component Kits that can be individually assembled for your specific application. This provides the highest level of flexibility in project planning at the lowest cost.

Your advantages at a glance

✓ **Only 15 % of the usual project costs**

The compatibility of all Component Kits is always ensured. Thanks to the plug-and-play interface with the machine, you are ready to go with the Solution Kit immediately - much faster than with a special solution.

✓ **High autonomy**

Design parts provisioning according to your individual requirements and maximize the autonomy time of your machine loading. This allows you to achieve maximum output.

✓ **Simple and centralized operation**

The Solution Kit is programmed and controlled centrally via the horstOS control software. You do not need an external controller (PLC).
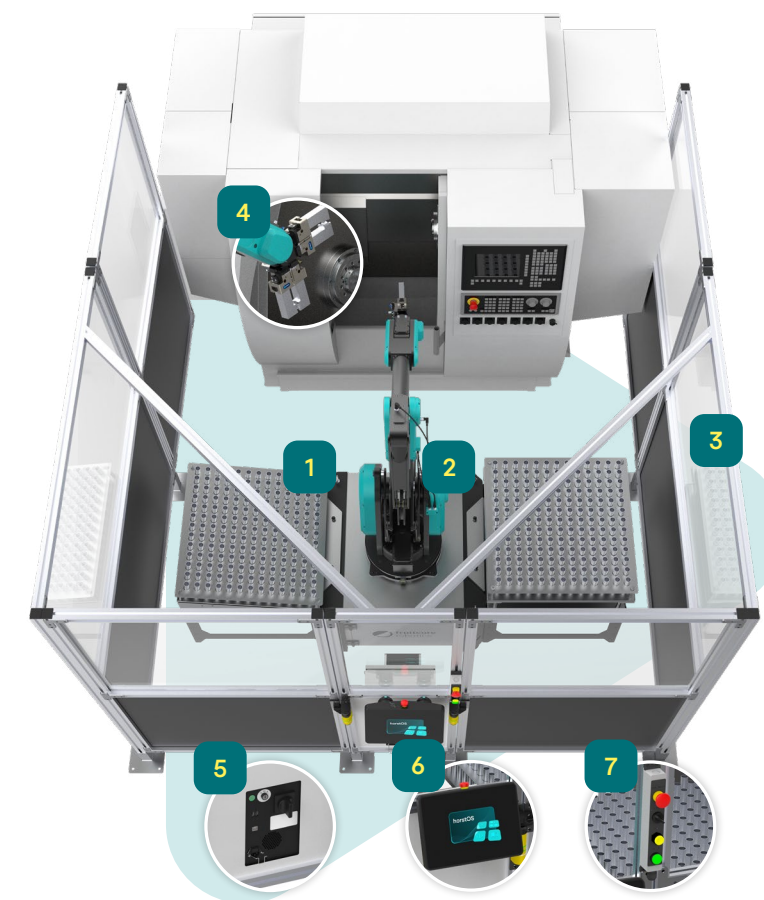
✓ **Highest efficiency**

The short loading time, including blowing off the finished part and the chuck, ensures minimal machine downtime, maximizing output.

The package shown consists of:

1. Robot Base with two tray holders incl. feet
2. Digital Robot HORST1500
3. Modular robot fence with two doors incl. safety lock
4. Double gripper with blow-off unit
5. Control system "Control"
6. Operating panel "Panel"
7. Operating console

Application specification

Tradable part weight	max. 4,5 kg with double gripper
Range in machine	up to 1100 mm depending on screw-on position
Assembly time	approx. 12 sec with extraction, blow-off and insertion
Recommended tray size	Standard size of the tray holder 672 x 672 mm
Autonomy time	Individually definable via the selection of parts provision via 1 to 3 tray holders or via directly dockable pallets.
Compatible machines	Emco, Hurco, Haas, Trumpf, Foba and many more (also special machines)

More details

Available component kits	Robot base, tray holder, feet, positioning unit, SCHUNK double gripper with blow-off unit, robot fence (base element, door element with safety lock, long/short element) & machine interface
Modularity	The available Component Kits can be individually combined for your application. We are happy to advise you on this and provide you with a customized offer.

fruitcorerobotics

The Digital Robot Platform of fruitcore robotics offers you all modules for optimal automation, from project planning to ongoing operation. It includes not only industrial robots, but also a central control software, pre-configured automation modules and supporting services.

You benefit from:

- Highest economic efficiency due to minimal acquisition and maintenance costs with a long service life - usual ROI in less than 6 months

- Highest flexibility through quickest and easiest set-up as well as programming without coding expertise - reprogramming and new programming of the process in less than 60 minutes

- Highest efficiency through the simplest and fastest project planning with patented preconfigured automation modules - only 15 % of the usual effort compared to standard market integration

The Digital Robot Platform of fruitcore robotics makes it easy for you to implement camera-based quality inspection, machine loading and unloading, dosing and gluing, flexible parts separation and pick and place processes.

Version: V 240416