

# FlexLoader™ FP 800

## Function package for flexible machine tool tending



The flexible and pre-engineered machine tool tending function package is a cost efficient and powerful solution designed for handling work-pieces on pallets. The built-in vision system is one of the easiest-to-use operator interfaces on the market.

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01 FlexLoader FP 800  
with IRB 4600 robot.

ABB's FlexLoader FP 800 capitalizes on ABB's long experience in developing and manufacturing machine tool tending solutions for integrators and end-users worldwide in machining operations.

### A pre-engineered function package

The FlexLoader FP 800 is a pre-engineered and well-tested function package for machine tool tending. The main benefits are the great flexibility and small limitations when it comes to size or weight of work-pieces. Thanks to the flexible layout, it can be adapted for most kinds of machine tool tending operations as well as pre and post operations such as pallet handling, deburring, cleaning, marking, washing and quality control.

### Advanced 3D technology yet easy to operate

Even complex 3D applications are easy to setup and operate with FlexLoader Vision. The simplicity of the built-in vision system, FlexLoader Vision, dedicated for machine tool tending lets the operator teach in new work-pieces in just a few minutes.

To operate the function package, the operator places the pallet with work-pieces to be processed under the vision sensor for identification while the robot picks a work-piece from the pallet and feeds to one or more processing machines. This provides the opportunity of unmanned production for long periods of time.

### High availability

Thanks to the high amount of flexibility and standardization, FlexLoader FP 800 offers one of the highest availability of 3D bin-picking solutions on the market.

### Features

- Specifically designed for robot guidance
- Tight integration of control and communication with robot
- Semi-oriented bin-picking with 3D sensor
- Scalable up to four 2D cameras or 3D sensors
- Automatic gripping tool collision avoidance
- Simplified parametric teach-in for tending lathes
- High performance FlexLoader Vision algorithms from Matrox Imaging
- Identification and discrimination of different objects by using tools for image preparation, enhancement and various verification methods
- Proven and ready to use RAPID application code templates

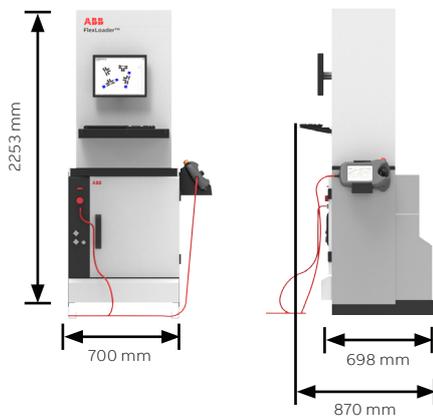
### Included in FlexLoader FP 800

- FlexLoader Vision for machine tool tending
- Stand for vision sensor or camera
- 3D vision sensor or 2D camera
- Calibration tools
- A suitable ABB robot depending on payload and reach
- Integrated robot controller and electrical equipment
- RAPID code for FlexLoader Vision and FlexLoader FP 800 as well as application code templates
- CE or UL certification

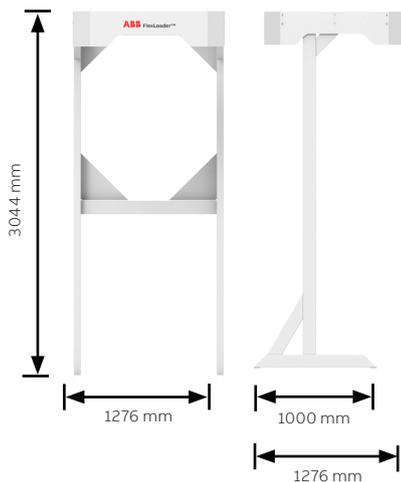
## Benefits

- Suitable for heavy work-pieces on pallets, from an ergonomic point of view
- Well proven with large installed base
- Small footprint
- High availability
- No need for special fixtures
- Integrated safety functions
- Can pick work-pieces in layers from pallets
- Large range of post-processing accessories such as cleaning station, marking station, washing station, etc.
- Teach-in time of new work-pieces is less than 10 minutes
- No cad-models are required for teach-in
- Reduces the operator time up to 90% compared to manual tending

## Controller cabinet footprint



## 3D illumination stand footprint



## Technical information

	Description
Standard robots - payload (kg) /reach (m)	IRB 2600-20/1.65m IRB 4600-20/2.50m IRB 4600-40/2.55m IRB 4600-60/2.05m Other robots available on request.
Controller Cabinet Height (mm)	2253
Controller Cabinet Width (mm)	700
Illumination 2D Stand Height (mm)	3146
Illumination 2D Stand Width (mm)	1020
Illumination 2D Stand Length (mm)	900 base, 1379 top
Illumination 3D Stand Height (mm)	3146
Illumination 3D Stand Width (mm)	1276
Illumination 3D Stand Length (mm)	1000 base, 1276 top
Certificates	Prep. for CE labelling 2B (Declaration of incorporation according to Machinery directive 2006/42/EG) UL/CSA
Mains voltage	3x400V, 48.5 - 61.8 Hz
Power consumption	Less than 2kW depending on IRB selection
Operating temperature	Max 45°C
Airborne noise level	< 74 dB (A) Leq / 1m

## 2D Camera and illumination stand footprint

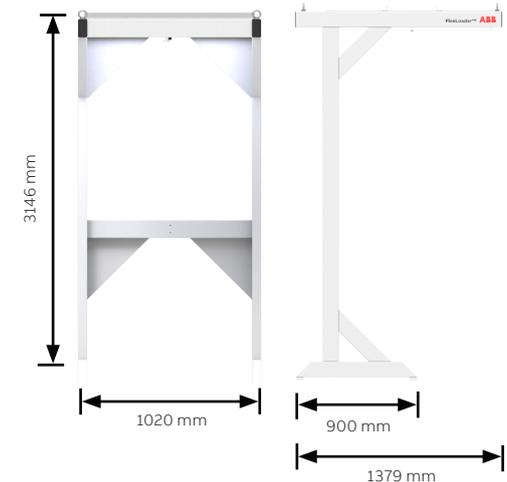


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