FlexLoader™ Vision
Robot Guiding Vision System for Machine Tool Tending Applications

A vision system to guide ABB industrial robots during material handling with outstanding performance. Well-proven with high speed, short teach-in times and reliable production in a user friendly way.

High accuracy with complex geometries
ABB offers a software that identifies the workpiece location and orientation from the picking area and guides the robot with precision in the robot cell. The FlexLoader Vision can handle an unlimited number of workpieces in various sizes and with complex geometries without any need for mechanical fixtures, reducing costs and complexity.

Advanced yet easy to use
The control and communications with the robot are firmly integrated into the software, which allows a complete teach-in that is very simple and intuitive from beginning to end. With one of the easiest-to-use operator interfaces on the market, the teaching of a new workpiece is possible in less than 10 minutes.

2D and 3D vision capabilities
The FlexLoader Vision is open to communicate with a variety of camera sensors. It can be used for both 2D and semi-oriented 3D applications. The system reverts complex 3D images to well-known 2D images in order to increase the usability for the operator. No CAD-files are required to teach-in new components.

Customer Benefits
- Simple and intuitive user interface designed for machine tool tending
- Handles an unlimited number of components without mechanical fixtures
- Teach-in time of new workpieces is less than 10 minutes
- Faster changeover time between components
- Parameterized teach-in interface for lathe applications provides a quick and easy user experience
- Pre-programmed robot code provides short installation time
- Single point of operating control

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Technical information

	Description
PC	Matrox 4SightGPm Baytrail
Dimensions (WxLxH)	26 cm x 15 cm x 7 cm
Operating System	Windows 10 Enterprise 2019 LTSC
Maximum number of sensors	4 (2D or 3D)
Conformity	CE, UL
Power supply	24VDC, 4A

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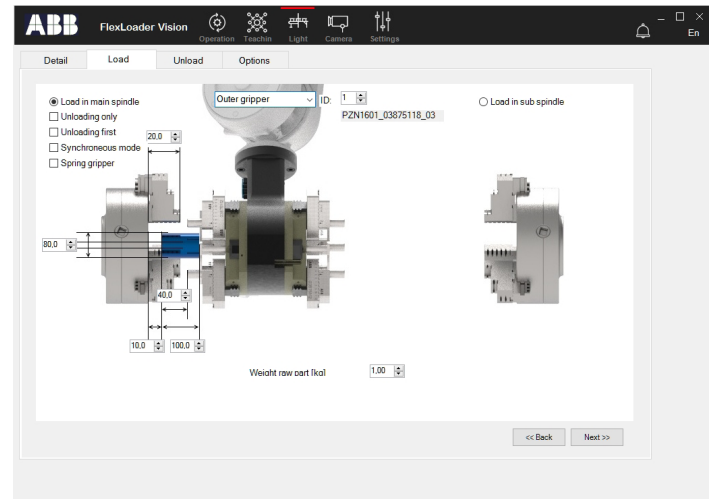01 Teaching of new parts in less than 10 minutes, exemplary integration in external operator interfaces.

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02 Lathe-applications can make use of an even more simplified approach with ready-made application robot code and a parametrized user interface.

Product Features
- PC-based architecture, scalable up to 4 cameras
- Pre-pick collision avoidance
- Supports user-defined grippers
- Out of reach prevention
- Choice of moving and rolling part avoidance
- Multilingual user interface
- User defined parameter to robot or external PLC
- Supports both 2D and 3D sensors
- User configurable cell overview

Included in FlexLoader Vision
- FlexLoader Vision software
- Industrial PC with Windows (EN)
- Vision sensor (2D or 3D)
- Camera lens
- Calibration plate
- RAPID interfacing and usage template
- CE or UL certification

Additional options
- Robot calibration tool
- Additional cameras (up to 4 in total)
- Color camera for contrast enhancement
- High resolution camera
- Automated change of workpiece in production (remote start/stop, batch-based, or barcode-based)
- Illumination stand for camera

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