

# Tube handling

Mabema Tracker enables guidance of an industrial robot in depth as well as sideways motion. Its purpose is to bring the robot to the correct picking position of tubes from rack and allows also localization and correction of the end position of the tube after gripping by the robot.



Picking of tubes from rack

Correction of end position



# Tube handling

Mabema Tracker enables guidance of an industrial robot for material handling. The system is used for guidance of the robot to the correct gripping position when picking tubes and also for correction of the gripping position.

The Tracker system forms part of the RobotVision portfolio together with the 3D Bin-picking system and the 2D Finder system. The three standalone systems are used for various tasks within material handling such as picking of tubes.

The Tracker unit measures distance to the tube being handled and its sideways location. Since the Tracker continuously provides data it is very well suited for picking non-fixed and also moving objects. The system is easy to program, flexible and allows for a minimum set-up time when switching components.

## Picking of tubes

When picking shorter tubes, straight or bended, the Finder system is used in cases when the tubes are located on fixed planes such as conveyor belts etc. When picking unsorted tubes directly from a pallet the Bin-Picking system is used.

Long tubes are picked using the Tracker system mounted on the robot. The Tracker measures the tubes in the rack using the robot movement, calculates the best tube to pick and sends the gripping coordinates to the robot. The Tracker system consists of a measuring head mounted on the robot and an industrial PC for robot communication.

## Correction of gripping position

After gripping the tube with the robot a correction of the end position can be done using a tracker system before further processing of the tube is done.

The Tracker system measures the actual position of the tube when gripped by the robot and send correction information to the robot.

The Tracker system consists of a measuring head mounted fixed and an industrial PC for robot communication.

The Tracker system uses a laser-based three-dimensional monochrome scanning technology with a concentrated wavelength, which enables effective suppression of ambient light, thus being insensitive to interference from ambient light and variations in surface quality.



## Technical data for tube handling using the Tracker

DATA (Other configurations can be supplied on request)	
Measure distance std	200 mm to 800 mm
Width at max. distance	350 mm
Object surface	Most materials and surfaces
Tube diameter	Larger than 10 mm
Robot type	ABB, KUKA, Motoman etc



Tracker

Laser class 3R  
SS EN 60825-1