

Advanced Technology Solutions_Linear Unit for the KUKA LBR iiwa



Existing systems are mainly designed for the workspace of humans. Therefore an extension of the robot work-space is necessary. KUKA Systems responds to this challenge with a **linear unit**, which can be applied in Human-Robot-Collaboration. The **linear unit** enables a lean integration in the existing assembly. With a stroke up to 5 meters, it can be installed either on the ground or on the ceiling. A transfer movement up to 1.5 m/s allows automation of time-sensitive tasks. The system can be used as well in full automation as in human-robot collaboration.

The mechanical design of the **linear unit** is HRC-capable and protects the human from clamping and pinching on moving parts. The top table is predefined for the KUKA LBR iiwa. The lightweight design of the axis facilitates the installation – even on a gantry system.

Necessary safety measures are already integrated and safety requirements for the interaction between robots and humans are fulfilled. The positioning in monitored areas and the movement speed can be monitored by a safety module. The system disconnects reliable in case of failure. Every function is high performant – Performance Level Category 3.

Overview of advantages

- Space-saving and fast integration
- Compact and lightweight construction
- Modular lengths range up to 5 meters
- Travel speed up to 1.5 m/s
- Integrated power supply
- HRC capability
- Maximum flexibility with a modular system

Scope of supply

- Base profile for installation on ground or ceiling
- Linear unit for one or two robots
- Top table with connector flange
- HRC-cover
- Drive unit with safety-module

Options

- Assembly kit (ceiling/floor)
- Safety-related control unit

Additional portfolio

- KUKA LBR iiwa
- Sunrise Cabinet with connection lines for the robot

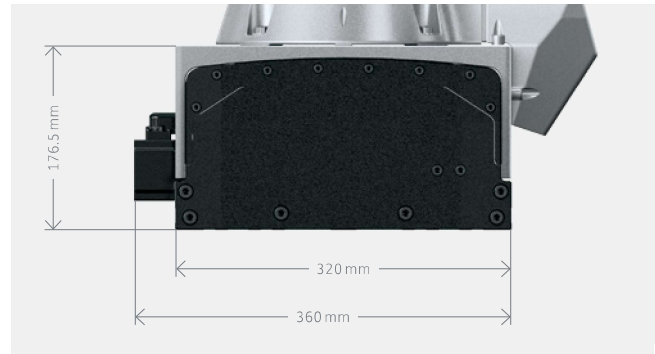
Advanced Technology Solutions_Linear Unit for the KUKA LBR iiwa

Technical data

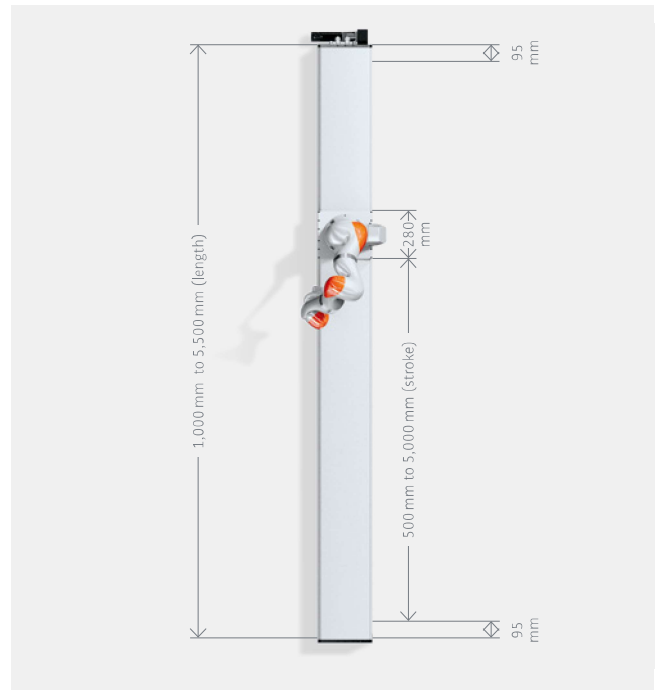
Max. amount of robots	2*
Power transmission	belt
Position of assembly	ground, ceiling
Max. nominal stroke	5,000 mm
Positioning accuracy	± 0.1 mm
Max. static payload	100 kg
Max. velocity	1.5 m/s**
Weight (approx.)	approx. 40 kg/m
Ambient temperature	10 °C – 40 °C
Protection class	IP40

* available on request

** depending on HRC application



Side view



Top view

Features for operations in HRC

- Integrated power supply
- Options for energy supply: electric, pneumatic
- Non clamping and crushing points
- Top table predefined for the KUKA LBR iiwa
- Lightweight design enables flexible positioning and installation
- Safety functions are already integrated (safe velocity, safe position, Safe Torque Off)
- Transfer movement in optimized robot position
- High load capacity of the HRC case

For further information please contact us at
ats@kuka.de