## KUKA



## **KUKA Cobots**

The intelligent robot as a colleague.





With the arrival of the LBR iiwa – one of KUKA's lightweight cobots specializing in sensitive assembly work – safety fences make way for human-robot collaboration in the workspace.

**Quick reactions.** Thanks to its joint torque sensors, the LBR iiwa detects contact immediately and reduces its level of force and speed instantly. Its position and compliance control enables it to handle delicate components without creating crushing and shearing hazards.

**Able to learn.** Choose from three operating modes and program the LBR iiwa by means of simulation: show it the desired position – it remembers the coordinates of the point on the path. Stop for breaks and control it with simple touch commands.

Sensitive. The lightweight LBR iiwa with its high-performance servo control is able to detect contours quickly under force control. It establishes the correct installation position and mounts components quickly and with the utmost precision with an axis-specific torque accuracy of ±2 percent of the maximum torque. The LBR iiwa can also find small, delicate components in next to no time without your assistance.

**Independent.** The LBR iiwa's controller, KUKA Sunrise Cabinet, simplifies the quick start-up of even complex applications. Give your operator a third hand – and have the LBR iiwa take care of unergonomic, monotonous tasks reliably and independently.





The LBR iiwa does not require a safety fence.

Industrial change is in full swing. IoT and Industrie 4.0 are replacing established structures with a cyber-physical production environment. The active agents in this process of change are intelligent machines with completely new capabilities: robots equipped with sensitivity and superior intelligence. operate more independently and with more sensitivity than ever before. They

are mobile, highly flexible and extremely versatile. At the same time, they provide you with seamless digital networking and autonomous adjustment to the rapidly changing production requirements. KUKA is making the vision of a production environment free from rigid structures into reality. As part of this, Working side-by-side with humans, they lightweight robots (LBR) play a key role as "intelligent industrial work assistants" (iiwa). In short: LBR iiwa.



LBR iiwa	LBR iiwa 14 R820	LBR iiwa 7 R800
Rated payload	14 kg	7 kg
Number of axes	7	7
Reach	820 mm	800 mm
Wrist variant	In-line wrist	In-line wrist
Mounting flange on axis 7	DIN ISO 9409-1-A50	DIN ISO 9409-1-A50
Pose repeatability	±0.15 mm	±0.1 mm
Axis-specific torque accuracy	±2 %	±2 %
Weight	29.9 kg	23.9 kg
Protection rating	IP 54	IP 54
Variants	CR	CR
Installation position	Floor, ceiling, wall	Floor, ceiling, wall

**CR** Suitable for clean rooms



Flexible, intuitive to use, fast to implement and safe in direct contact with human colleagues – the LBR iisy is an all-around cobot for automated production. It combines the know-how, precision and reliability of industrial automation with the intuitive flexibility of a smart device.

In order for robots to be more usable in more applications than ever before, automating tasks should be one thing above all else: simple. This is the mantra of KUKA's new cobot running on iiQKA.OS and supported by the iiQKA Ecosystem.

Intuitive. Simple programming with smooth handguiding

Collaborative. Enables direct, fence-free collaboration with humans

**Sensitive.** Detects colliosions and measures process forces

Flexible. Simple installation of components, fast re-use in new applications





With its new, user-friendly software, the LBR iisy can also work without safety LBR iisy can be operated immediately by anyone, from automation experts to

range of industries with applications

that require precise, fast and sensitive

activities.

Software

Installation position

equally at home in complex automation environments where it interacts with workers. And the best part: LBR iisy is ready for use in a matter of minutes, from unpacking to productive work.

fences directly with human operators and can be handguided smoothly with of the robot arm to help simplify setup and programming.

As the first robot running on iiQKA.OS, LBR iisy sets new standards for easy, straightforward and intuitive integration into production landscapes.



Flexible. Flexible robot system due to easy operation and programming, as well as low weight and many pre-configured elements



Suitable for industry. Fully industrial cobot through the use of proven technologies



Fast time to production. Ready to use from unboxing within a matter of minutes – and just as quickly re-used for new applications





Reach

**Payload** 

KUKA iiQKA.OS

Floor, ceiling, wall, angle

LBR iisy LBR iisy 3 R760 Rated payload 3 kg Number of axes Reach to end of flange on axis 6 760 mm Safety for HRC PL d / Kat 3 +5 °C to +45 °C Temperature range Pose repeatability  $\pm 0.1\,mm$ Protection rating IP 30 Weight 22.8 kg Gbit Ethernet and 8 individual cables Integrated energy supply system KUKA smartPAD pro Operator panel Controller KR C5 micro



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