

KUKA



Delta and Scara





_Small robots

Little helpers – a big help. The versatile world of KUKA small robots.

When it comes to compact solutions and payloads of up to 10 kilograms, small robots from KUKA steal the show. Our portfolio in the field of small robots will impress you with a large number of variants and possible applications.

All robots in this class are characterized by impressive precision and speed and combine this with minimal space requirements.

KUKA offers an ideal solution for every automation project – from six-arm robots and robots with internal media supply to parallel-arm robots with parallel kinematic systems. Small robots from KUKA are synonymous with freedom for automation. The flexible installation positions, for example, enable the implementation of a wide variety of production cell concepts.

The breadth of KUKA's portfolio of small robots is probably demonstrated most clearly, however, by the wide range of applications. These range from cleanrooms to hygienically sensitive areas such as the food or pharmaceutical industries, and from ESD-compliant electrical assembly tasks to fields of work involving water spray or explosion hazards. Safe Robot functionalities are also already available for some small robots.



KR DELTA



KR SCARA



KR 4 AGILUS



KR AGILUS

 **KR DELTA.** A big performer for small spaces.



With the new KR C5 micro robot controller for small robots, KUKA is taking automated production to a new level: durable and future-proof.

The KR DELTA delivers with speed, precision, range, reliability, versatility – all with its small footprint. This parallel arm robot was created for pick-and-place tasks focusing on short cycle times and the rapid recognition and handling of objects. With a payload capacity of three kilograms, it is ideal for the automation of order – picking and packing tasks – for example in the electronics industry. One particular strength of all robots in the KR DELTA family is their low maintenance requirements. The ball joints are self-lubricating so that replacement of the lubricant in the reduction gears is never required.

In addition to the cost-effective standard version, the KR DELTA is also available in the Hygienic Machine variant. In this hygiene robot version, the KR DELTA HM can also be used in demanding food or medical applications. Here, the entire body of the robot is made of stainless steel. Due to its IP 67 protection rating, it can be cleaned and sterilized with high-pressure cleaners as well as with various industrial chemicals. Both the materials used for the robot body and those used for lubrication comply with the regulations for food contact materials published by the FDA and in the LFGB.

High speed. The KR DELTA enables extremely short cycle times as fast as 0.32 seconds.

Flexible flange. The flange of the KR DELTA is suitable for easy mounting of a wide variety of tools.

Large workspace. The industrial robot operates reliably in a cylindrical workspace with a height of 350 millimeters and a diameter of 1,200 millimeters.

Small footprint. The ceiling-mounted robot has an installation area with a diameter of 350 millimeters.

High cost-effectiveness, low maintenance

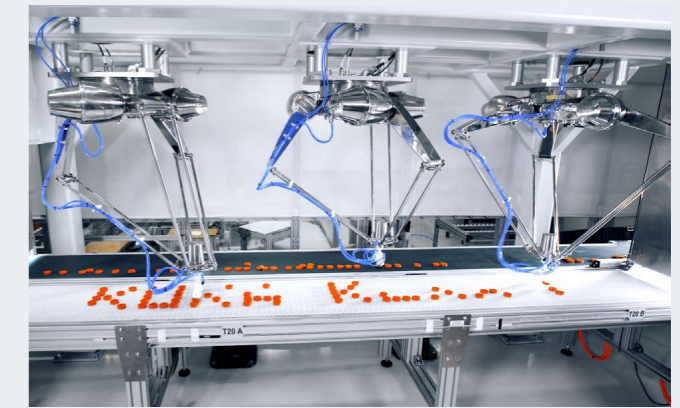
- No replacement of the lubricant in the reduction gears is ever required.
- With an encapsulated gear unit and self-lubricating ball joints, the maintenance requirements of the KR DELTA are particularly low.
- The KR C5 micro, the latest generation of KUKA controllers, is included in the scope of supply. This requires less space and consumes little energy at only 230 volts.
- Direct cleaning with high-pressure cleaners is possible, greatly reducing cleaning-related downtime.

Powerful and easily accessible application system

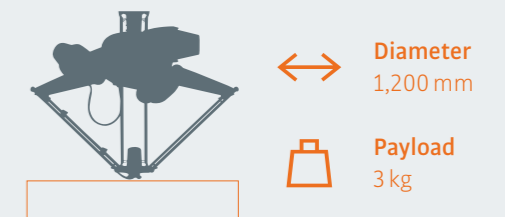
- With the visualization application KUKA.VisionTech and the dedicated KUKA.PickControl software package, the seamless integration of up to ten robots and conveyor systems can be implemented with ease.
- The wide range of applications includes processing, order picking, sorting, packaging, stacking and many other applications in the electronics, food, medical, household chemical and other industries.

The HM version meets the hygiene standards according to the regulations for contact with foodstuffs

- The entire body is made of stainless steel, and is smooth, dirt-repellent and corrosion-resistant, making it easy to clean and disinfect.
- The protection rating for the robot body is IP 67, while the fourth axis meets the high protection rating IP 69K.
- The materials used for the robot body and for lubrication comply with the regulations for food contact materials published by the FDA and in the LFGB.
- Direct contact of the robot body with food and medicines is permissible. This robot variant is particularly suitable for food processing, primary packaging and similar applications.



With flexible DELTA robots – shown here in the HM variant – and matching hardware and software, KUKA offers cost-effective solutions for automated order picking and packing.



KR DELTA	KR 3 D1200	KR 3 D1200 HM	KR 3 D1200-2 HM
Controller	KR C5 micro	KR C5 micro	KR C5 micro
Number of axes	4	4	4
Rated payload	3 kg	3 kg	3 kg
Reach	600 mm	600 mm	600 mm
Diameter	1,200 mm	1,200 mm	1,200 mm
Pose repeatability	±0.05 mm	±0.1 mm	±0.05 mm
Weight	105 kg	95 kg	95 kg
Variants	–	HM	HM
Installation position	Ceiling	Ceiling	Ceiling

HM Hygienic Design

_Small robots



KR SCARA.

Extremely fast,
extremely precise.



Strong, fast, highly efficient. From the assembly of small parts to material handling or inspection – the ultra-compact KR SCARA robots immediately deliver maximum efficiency and cost-effectiveness. With integrated media supply systems, they can master almost any application straight out of the box.

The KR SCARA robots have an internally-routed media supply for air, power and data – a complete package for smart integration of peripheral devices and quick adaptation of the KR SCARA robot to almost any desired application. From the assembly of small parts to material handling or inspection – the 4-axis KR SCARA robots are characterized by flexible installation, highly precise motion and low maintenance requirements.



The KR 12 R850 has a payload capacity of 12 kilograms and a reach of 850 millimeters.

click for more



Unbeatable price/performance ratio. 6 or 12-kilogram payload, utmost precision, extremely short cycle times, high speed, low weight – and all at an affordable price.

Optimally adaptable to almost any task. Media supply in the complete package to enable fast adaptation of the robot to virtually any desired application.

Robust in many working environments. Operational in the entire temperature range from 5° to 40° Celsius, protection rating IP 20.

Fast integration of peripheral equipment. Factory-prepared for the safe, quick and simple integration of peripheral equipment.

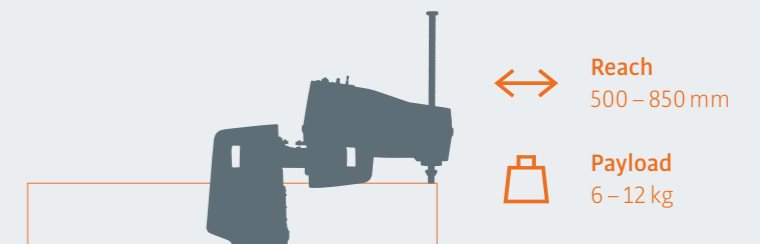
Certified quality. The KR SCARA robot is internationally certified according to the applicable EU standard.



Thanks to the cleanroom variant, companies with ultraclean production environments – such as those in the semiconductor industry – can also benefit from the strengths of the KR SCARA.



As a robot of the latest generation, the KR SCARA has an internally-routed media supply for air, power and data. A coordinated complete package for the simple integration of peripheral devices and fast adaptation of the robot to virtually any desired application.



KR SCARA	KR 6 R500 Z200-2	KR 6 R700 Z200-2	KR 12 R650 Z400	KR 12 R750 Z400	KR 12 R750 Z600	KR 12 R850 Z400
Controller	KR C5 micro	KR C5 micro	KR C5 micro	KR C5 micro	KR C5 micro	KR C5 micro
Number of axes	4	4	4	4	4	4
Payload (maximum/rated)	6 kg / 3 kg	6 kg / 3 kg	12 kg / 6 kg	12 kg / 6 kg	12 kg / 6 kg	12 kg / 6 kg
Reach	500 mm	700 mm	650 mm	750 mm	750 mm	850 mm
Pose repeatability	±0.02 mm	±0.02 mm	±0.02 mm	±0.02 mm	±0.02 mm	±0.02 mm
Weight	20 kg	22 kg	49 kg	50 kg	50.5 kg	51 kg
Variants	–	–	CR	CR	CR	CR
Installation position	Floor	Floor	Floor	Floor	Floor	Floor

The technical data in the table applies exclusively to standard versions.



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