

## The KR QUANTEC series

### Product overview

Robot	KR QUANTEC pro	KR 90 R2700 pro	KR 120 R2500 pro	KR 150 R2700 extra	KR 180 R2900 extra	KR 210 R2700 extra
	KR QUANTEC extra	KR 90 R3100 extra	KR 120 R2900 extra	KR 150 R2700 prime	KR 180 R2900 prime	KR 210 R2700 prime
	KR QUANTEC ultra	KR 210 R3100 ultra	KR 240 R2900 ultra	KR 270 R2700 ultra	KR 300 R2500 ultra	
	KR QUANTEC nano	KR 120 R1800 nano	KR 160 R1570 nano	KR 120 R2100 nano F exclusive		
Controller	KR C4					
Teach pendant	KUKA smartPAD					



Extremely compact hydro-pneumatic counterbalancing system.<sup>1</sup>



Reduced interference contour thanks to the hollow shaft in axis 1 for routing all cables.



KR QUANTEC: unbeatable power density, long reach and high payload.

**Compact.** The KR QUANTEC series robots are the most compact in their class with unrivaled power density, reach and payload.

**Streamlined.** The KR QUANTEC series robots have fewer interference contours and are equipped with a thin wrist for improved accessibility, especially for work in confined spaces.

**Versatile.** KR QUANTEC robots are multi-talented. No other robot family is suitable for so many different applications, from jobs like material handling and spot welding to machining small parts.

**Small footprint.** To simplify planning, all models are installed on a compact base frame, with a nearly identical hole pattern for fastening to the mounting base.

**Low maintenance.** These dependable KUKA robots boast the longest maintenance intervals on the market, at around 20,000 operating hours thus ensuring maximum productivity.

**Precise.** Thanks to their robust design KR QUANTEC robots operate with constant precision throughout the work envelope and offer excellent dynamic performance and unmatched repeatability.

<sup>1</sup> The KR QUANTEC nano has no counterbalancing system.

## Handling the next big thing for your business

KUKA robots for high payloads from 90 kg to 300 kg

The KR QUANTEC series offers you a comprehensive range of models with 29 robot types and various mounting options. For the first time, a single robot family covers the entire high payload range from 90 to 300 kg, with reaches from 1,570 to 3,900 mm. It is more versatile and powerful than any previous robot family in this class.

KR QUANTEC robots are all-rounders for a wide variety of customized applications. They also have the most compact dimensions in their class – and the greatest power density. The KR QUANTEC series sets new standards in the technically and economically decisive points: precision, performance, energy efficiency and availability.



To find out more about KUKA robots for high payloads, scan this QR code with your smartphone.

Next to the machine:  
The solution with KUKA robots makes it possible to manufacture lightweight components without the need for an expensive special system.



Source: GK Tech-Center



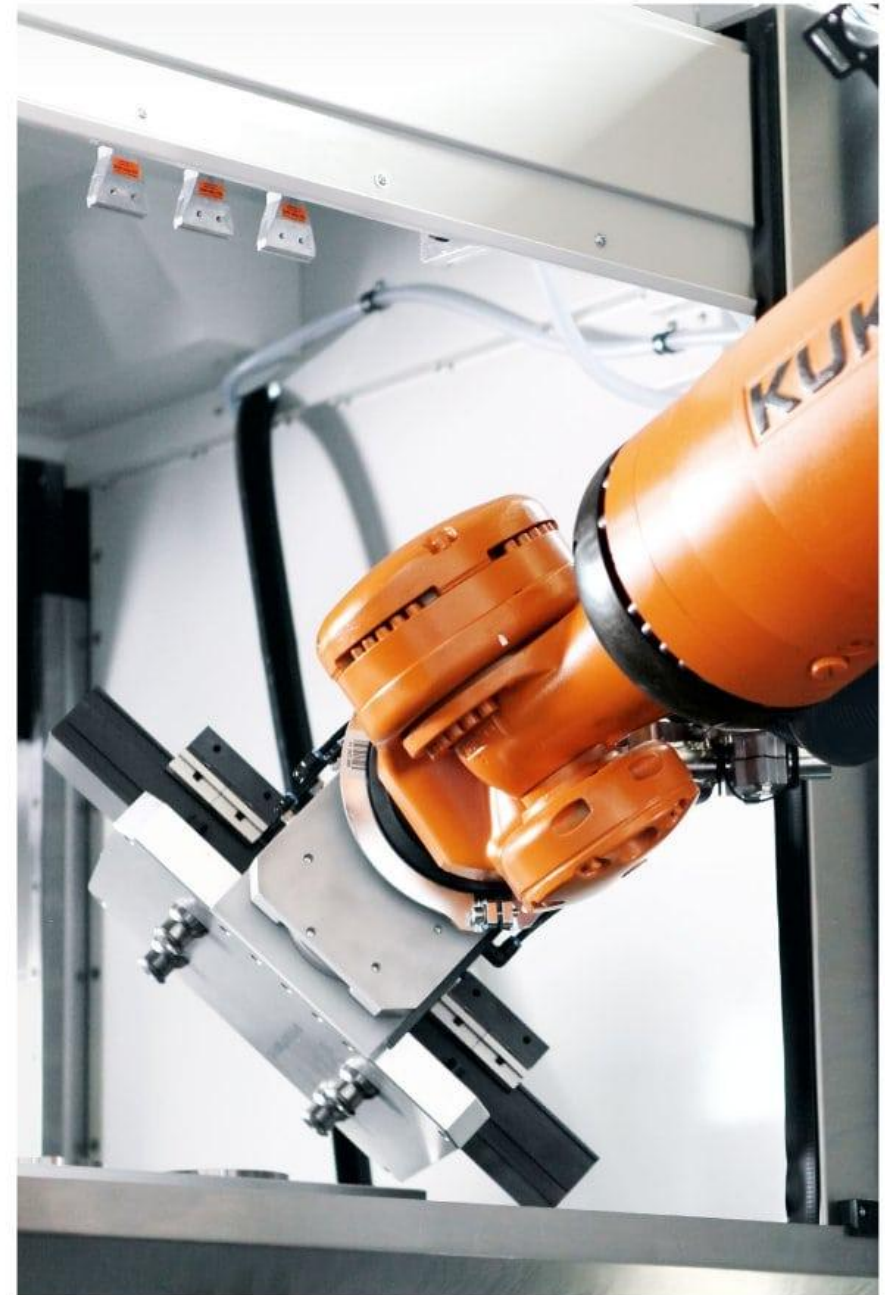
On the machine:  
KUKA QUANTEC shelf-mounted robots for efficient loading, unloading and finishing.



Source: KUKA Group

In the system:  
Innovative and flexible robot swarm for individual machining of blow-molded tanks.

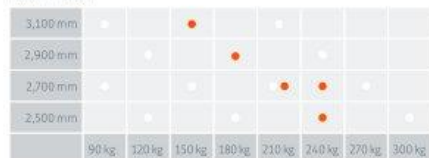
Freedom of motion:  
Even confined machine spaces and access doors pose no problems for the streamlined arms of KUKA QUANTEC robots.



## KR QUANTEC prime

The world's largest range of models in its class

Reach / Payload



KR QUANTEC	KR 240 R2500 prime	KR 240 R2700 prime	KR 210 R2700 prime	KR 180 R2900 prime	KR 150 R3100 prime
Max. reach	2,496 mm	2,696 mm	2,696 mm	2,869 mm	3,095 mm
Rated payload	240 kg	240 kg	210 kg	180 kg	150 kg
Rated suppl. load, arm/link arm/rot. col.	50 kg / - / -	50 kg / - / -	50 kg / - / -	50 kg / - / -	50 kg / - / -
Rated total load	290 kg	290 kg	260 kg	230 kg	200 kg
Pose repeatability	±0.06 mm	±0.06 mm	±0.06 mm	±0.06 mm	±0.06 mm
Number of axes	6	6	6	6	6
Mounting position	Floor	Floor	Floor, ceiling	Floor	Floor
Variant	-	-	<b>A</b> <b>T</b>	-	-
Robot footprint	830 mm × 830 mm	830 mm × 830 mm	830 mm × 830 mm	830 mm × 830 mm	830 mm × 830 mm
Weight (excluding controller), approx.	1,102 kg	1,111 kg	1,111 kg	1,106 kg	1,114 kg

Axis data/ Range of motion	Speed with rated payload 240 kg	Speed with rated payload 240 kg	Speed with rated payload 210 kg	Speed with rated payload 180 kg	Speed with rated payload 150 kg
Axis 1 (A1)	+/-185°	105°/s	105°/s	105°/s	105°/s
Axis 2 (A2)	-5/-140°	107°/s	107°/s	107°/s	107°/s
Axis 3 (A3)	+155°/-120°	114°/s	114°/s	114°/s	114°/s
Axis 4 (A4)	+/-350°	136°/s	179°/s	179°/s	179°/s
Axis 5 (A5)	+125°/-123.5°	129°/s	129°/s	172°/s	172°/s
Axis 6 (A6)	+/-350°	206°/s	219°/s	219°/s	219°/s

### Operating conditions

Ambient temperature	+10 °C to +55 °C
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### Protection rating

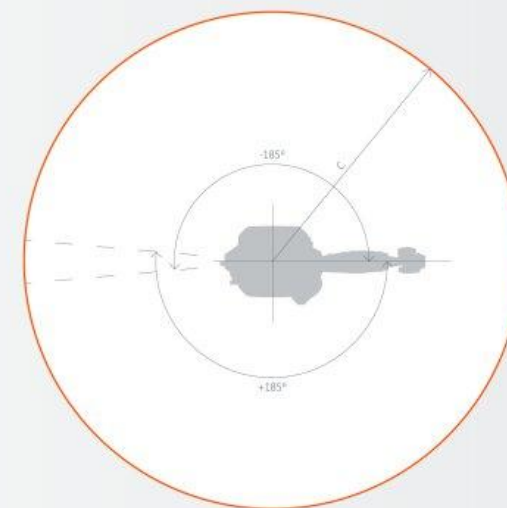
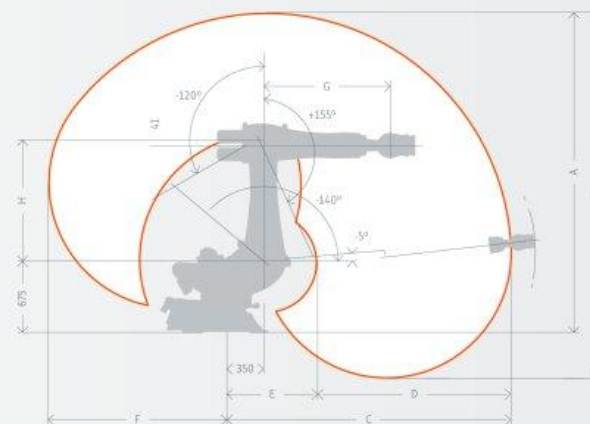
Protection rating, robot	IP 65
Protection rating, in-line wrist	IP 65
Protection rating, foundry in-line wrist	IP 67

Controller	KR C4
Teach pendant	KUKA smartPAD

- A** suitable for cleanrooms
- T** Variant for environments with a high degree of fouling and high temperatures.

### Work envelope<sup>1</sup>

	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Dimensions E	Dimensions F	Dimensions G	Dimensions H	Volume
KR 240 R2500 prime	2,826 mm	3,051 mm	2,496 mm	1,699 mm	797 mm	1,532 mm	1,000 mm	1,150 mm	42 m <sup>3</sup>
KR 240 R2700 prime	3,026 mm	3,451 mm	2,696 mm	1,874 mm	822 mm	1,732 mm	1,200 mm	1,150 mm	55 m <sup>3</sup>
KR 210 R2700 prime	3,026 mm	3,451 mm	2,696 mm	1,874 mm	822 mm	1,732 mm	1,200 mm	1,150 mm	55 m <sup>3</sup>
KR 180 R2900 prime	3,226 mm	3,634 mm	2,896 mm	2,016 mm	880 mm	1,885 mm	1,200 mm	1,350 mm	66 m <sup>3</sup>
KR 150 R3100 prime	3,426 mm	4,034 mm	3,095 mm	2,187 mm	908 mm	2,085 mm	1,400 mm	1,350 mm	84 m <sup>3</sup>



<sup>1</sup> Relative to intersection of axes 4/5.



## KL 4000

### Product overview

Linear unit	KL 4000
Designed for robot categories	high payloads, heavy payloads
Controller	KR C4
Teach pendant	KUKA smartPAD

**Flexible.** Long travel of up to 30 m extends the work envelope by several times the reach of the robot, ideal for linking production lines.


**Powerful.** Higher performance and energy efficiency due to the reduced mass of the beam and the carriage.

**Modular.** Thanks to the modular design of the linear unit, the length can be altered as desired using standard components.

**Positionally accurate.** Up to four robots can be operated on a linear axis. Multiple robot positions on the linear axis allow optimal adaptation to existing requirements and workspaces.

**Greatly simplified installation.** Since no welding work is required during installation of the linear unit, installation is significantly faster. There is no need for a welding certificate for the hall or for specialist welding personnel.

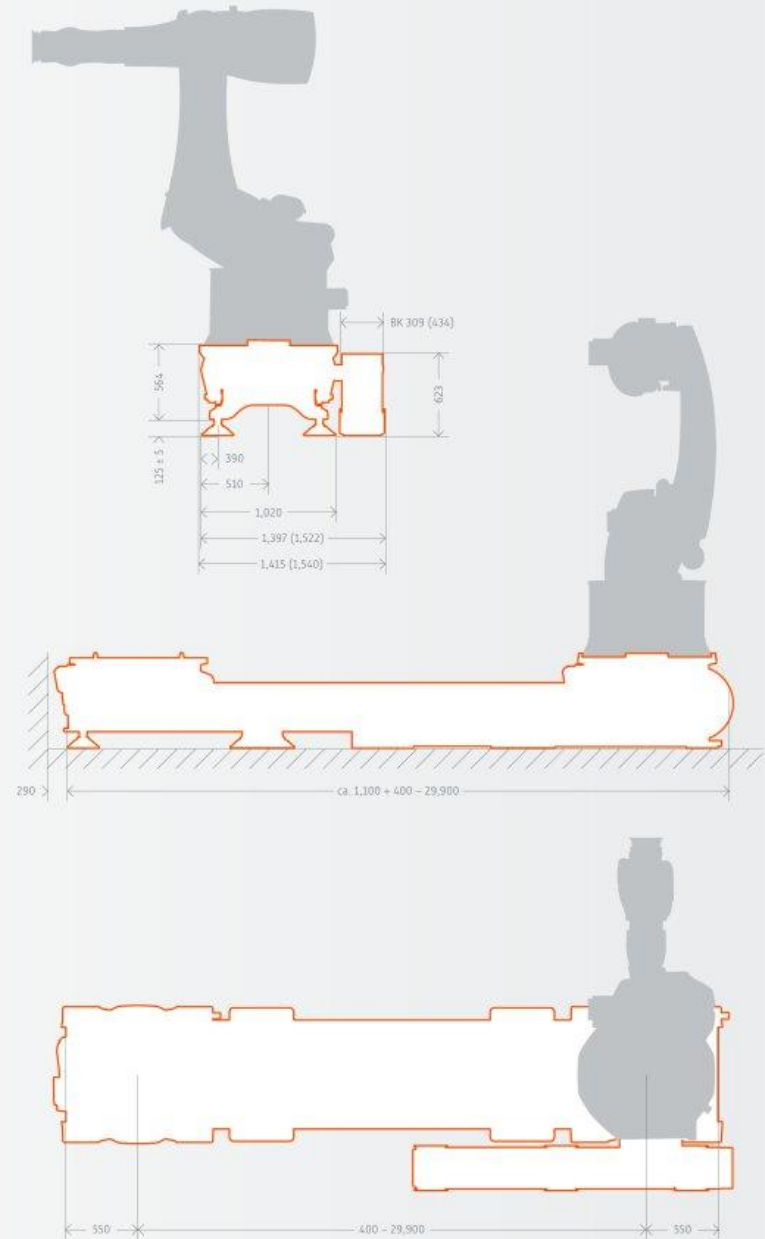


Linear unit	KL 4000
Number of carriages	4
Maximum rated travel	30,400 mm
Maximum velocity	1.89 m/s
Pose repeatability	<±0.02 mm
Number of axes	1
Variant	
Mounting position	Floor, ceiling
Mass of carriage	508 kg
Mass of rated payload	4,000 kg
Mass of beam per meter	235 kg
Minimum rated travel	0.4 m
Gradation of rated travel	0.5 m
Transmission of force	Rack

### Operating conditions

Ambient temperature	+10 °C to +55 °C
Controller	KR C4
Teach pendant	KUKA smartPAD

 Speed





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