

KUKA



New. Fast. Precise.

KUKA small robots.

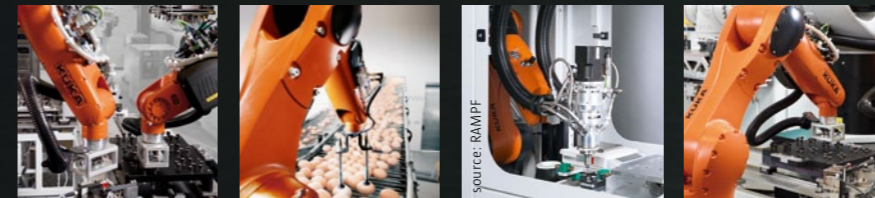
KUKA – YOUR STRONG PARTNER.

Quality made German robots built with the utmost commitment to our customer's needs. KUKA has been the basis for decades of exceptional technology helping companies to achieve process optimization. We were the pioneers in the world of robotics, and now are global leader in innovation. Our passion is finding future-oriented solutions to make even complex automation tasks simple. Whatever your application no matter the difficulty you can implement it with KUKA. Thanks to experienced KUKA system partners we are able to provide robotic solutions industry-wide. We strive to turn your ideas into reality. Use our experience to drive your success.

The new masters of speed. KUKA small robots for 6 kg and 10 kg payloads.

With the KR AGILUS series, KUKA is presenting a comprehensive small robot family. The performance of the KR AGILUS series is unique in its payload category. It sets standards with five or six axes, very high speeds, short cycle times and an integrated energy supply system. The robots master even unusual tasks, whether installed on the floor or ceiling or, in the case of the 6-axis version, also on the wall. All KR AGILUS models are operated uniformly with the service-proven KR C4, the universal control technology for all KUKA robot models.

Unique in this class is the Safe Robot functionality, which radically simplifies the efficient cooperation of humans and machines. This enables totally new automation concepts. KR AGILUS: Unparalleled functionality and reliability made by KUKA.



To find out more about the KUKA small robot family, scan this QR code with your smartphone.

The KR AGILUS series. The future of small robots.

Product overview

Robot	KR AGILUS sixx series	KR 6 R700 sixx, KR 6 R900 sixx, KR 10 R900 sixx, KR 10 R1100 sixx
	KR AGILUS fiveve series	KR 6 R700 fiveve, KR 6 R900 fiveve, KR 10 R1100 fiveve
Controller	KR C4 compact	
Teach pendant	KUKA smartPAD	

INTEGRATED ENERGY SUPPLY SYSTEM [+]

EXTREME PRECISION [+]

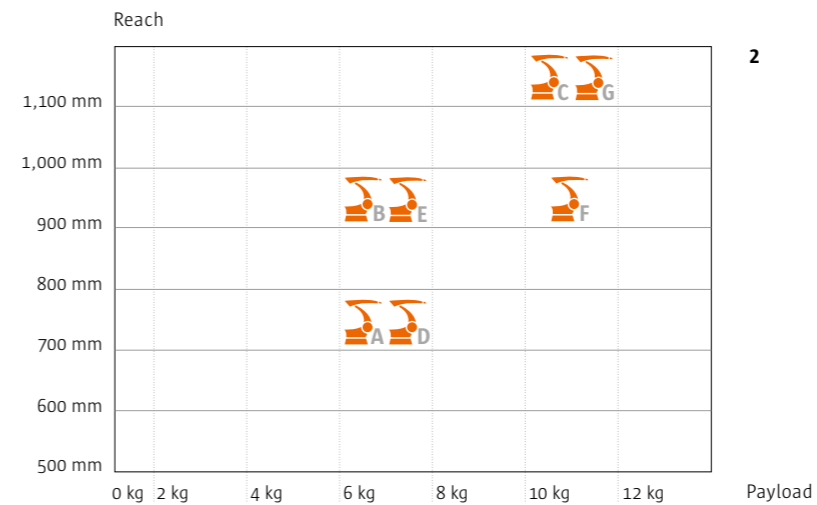
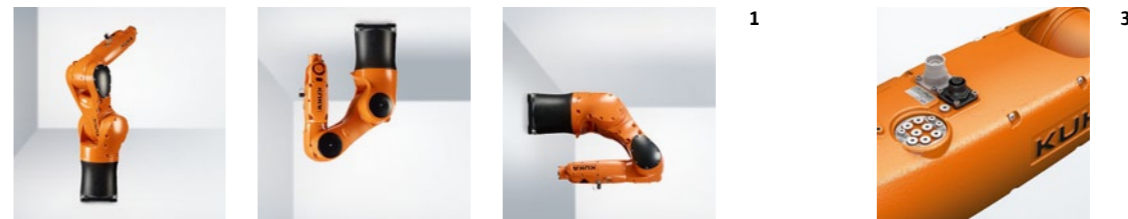
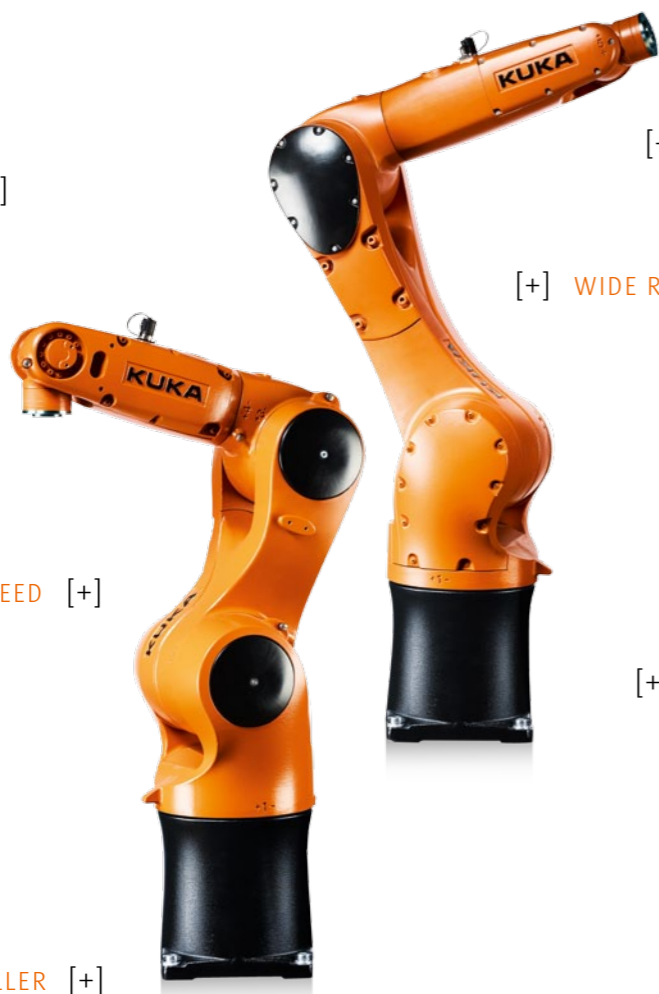
[+] LOW MAINTENANCE

[+] WIDE RANGE OF MOUNTING POSITIONS

HIGH SPEED [+]

[+] OPTIMAL WORK ENVELOPE

SERVICE-PROVEN KUKA CONTROLLER [+]



1 Convincing in any position: KR AGILUS fiveve series for installation on the floor and ceiling, KR AGILUS sixx series additionally for installation on the wall.

2 KR 6 R700 fiveve (A)
KR 6 R900 fiveve (B)
KR 10 R1100 fiveve (C)
KR 6 R700 sixx (D)
KR 6 R900 sixx (E)
KR 10 R900 sixx (F)
KR 10 R1100 sixx (G)

3 Completely integrated energy supply system in the robot arm.

KUKA small robots – the strengths of a new generation

HIGH SPEED. In handling tasks, especially pick-and-place tasks, KUKA small robots demonstrate one of their greatest strengths: extreme speed. This produces impressive results with minimal cycle times.

PRECISION. Where high repeatability and accuracy are required, KUKA small robots are in their element. They enable manufacturing quality at the highest level. Thanks to their robust design, they work with continuous precision throughout the work envelope.

INTEGRATED ENERGY SUPPLY SYSTEM. For extremely streamlined contours, KUKA small robots have the energy supply system routed internally, including EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line, and six inputs and two outputs. Simple gripper integration and fast reaction – for work in confined spaces.

WIDE RANGE OF MOUNTING POSITIONS. The KUKA small robots produce impressive results in every position – thanks to the brakes integrated in all axes. The robots of the KR AGILUS fiveve series for installation on the floor and ceiling, the KR AGILUS sixx series additionally for installation on the wall.

LOW MAINTENANCE. The KUKA small robots require no change of lubricant (lifetime lubrication). This makes them ideally suited to continuous, uninterrupted productivity.

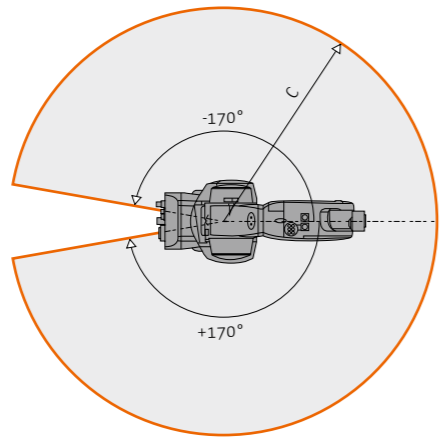
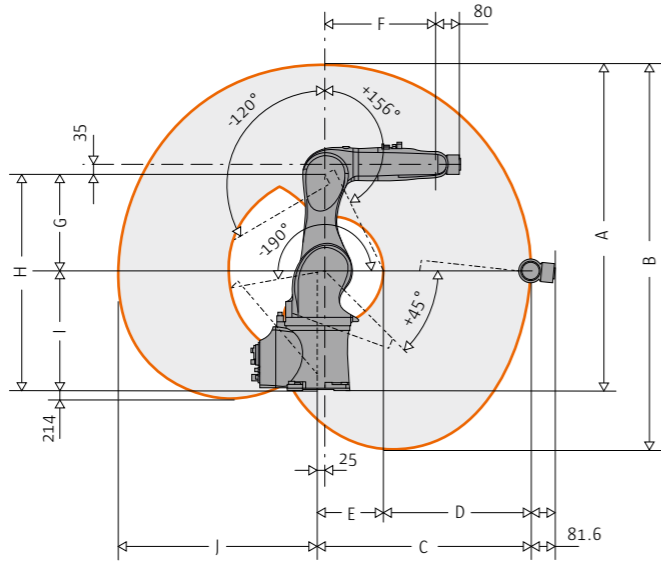
OPTIMAL WORK ENVELOPE. With reaches of up to 1,100 mm and the ability to reach points near to the robot base as well as in the overhead area, the KR AGILUS offers an optimal work envelope. Additional equipment can be attached at the mounting points on axis 3 and axis 4 (e.g. valves and I/O modules). This enables cost-effective, space-saving cell concepts.

KUKA KR C4 CONTROLLER. The KUKA small robot family is operated just like its big brothers, using the same KUKA control technology.

KR AGILUS: KR 6 R700 sixx

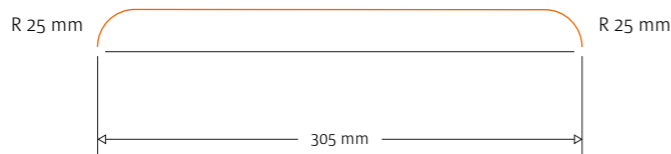
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I Dimensions J

KR 6 R700 sixx — 1,082 mm -1,271 mm — 706.7 mm — 501.1 mm — 205.6 mm — 365 mm — 315 mm — 715 mm — 400 mm — 656.7 mm



Cycle time

KR 6 R700 sixx (25/305/25; 1 kg Payload) ————— 138 cycles/min



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¹⁾ Relative to intersection of axes 4/5.

Features and advantages

MINIMUM CYCLE TIMES. The KR AGILUS sixx has six axes and is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor, ceiling or wall make the KR AGILUS sixx extremely adaptable.

INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.



KR 6 R700 sixx

Max. reach	706.7 mm
Max. payload	6 kg
Pose repeatability	±0.03 mm
Number of axes	6
Mounting position	Floor, ceiling, wall
Variant	WP
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	50 kg

Axis data

Range of motion

Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-190°
Axis 3 (A3)	+156°/-120°
Axis 4 (A4)	+/-185°
Axis 5 (A5)	+/-120°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot ————— +5 °C to +45 °C

Protection rating

Protection rating, robot ————— IP 54



Controller

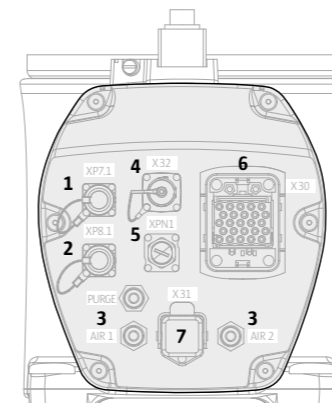


Teach pendant

————— KUKA smartPAD

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection

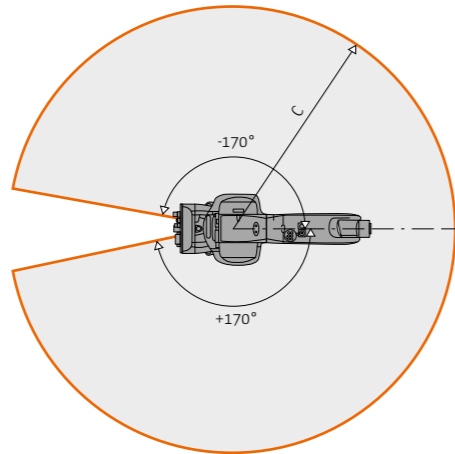
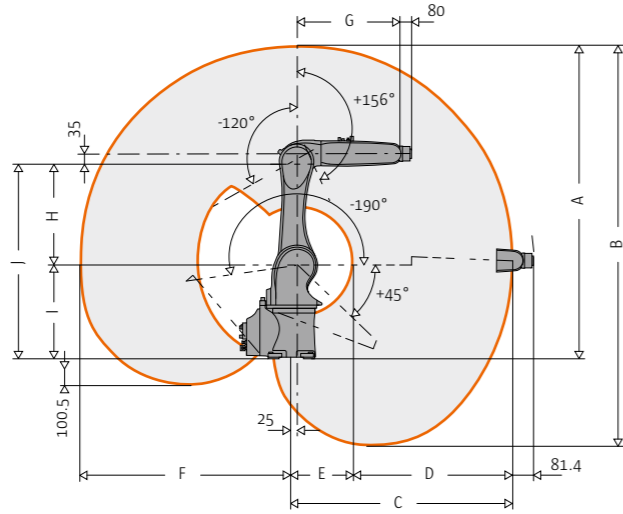


splash-proof

KR AGILUS: KR 6 R900 sixx

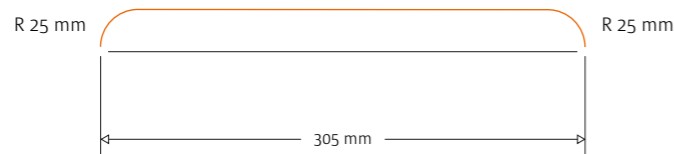
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I Dimensions J

KR 6 R900 sixx — 1,276 mm — 1,620 mm — 901.5 mm — 656 mm — 245.5 mm — 851.5 mm — 420 mm — 455 mm — 400 mm — 855 mm



Cycle time

KR 6 R900 sixx (25/305/25; 1 kg Payload) — 150 cycles/min



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¹⁾ Relative to intersection of axes 4/5.

Features and advantages

MINIMUM CYCLE TIMES. The KR AGILUS sixx has six axes and is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor, ceiling or wall make the KR AGILUS sixx extremely adaptable.

INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.



KR 6 R900 sixx

Max. reach	901 mm
Max. payload	6 kg
Pose repeatability	±0.03 mm
Number of axes	6
Mounting position	Floor, ceiling, wall
Variant	WP
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	52 kg

Axis data

Range of motion	
Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-190°
Axis 3 (A3)	+156°/-120°
Axis 4 (A4)	+/-185°
Axis 5 (A5)	+/-120°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot — +5 °C to +45 °C

Protection rating

Protection rating, robot — IP 54



Controller

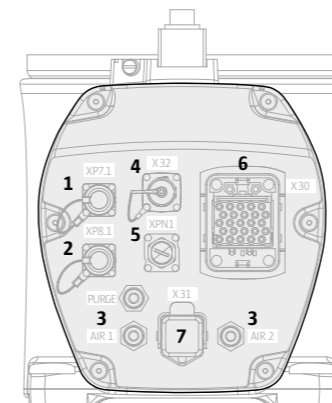


Teach pendant

KUKA smartPAD

The KR AGILUS interface plate

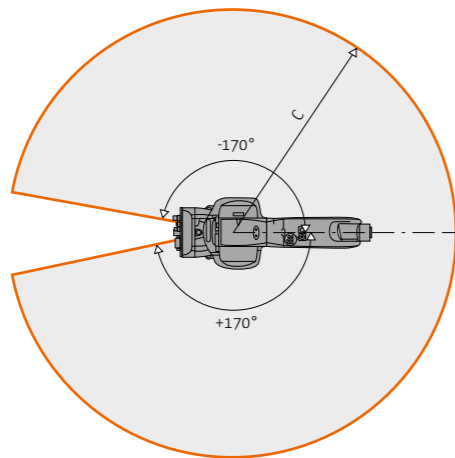
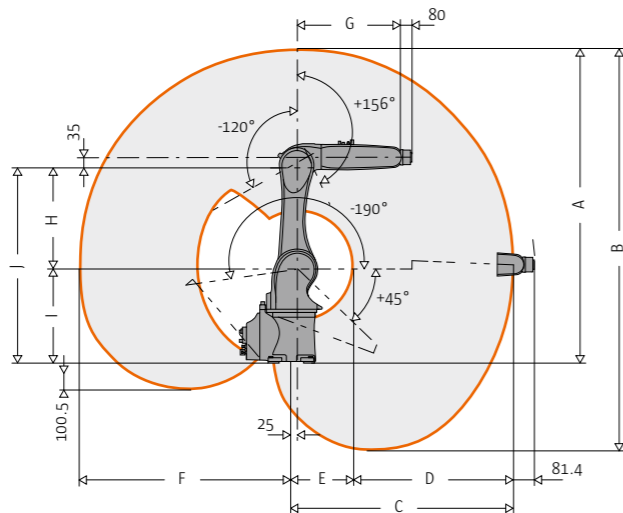
- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection



KR AGILUS: KR 10 R900 sixx

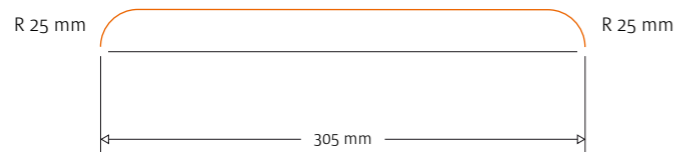
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I Dimensions J

KR 10 R900 sixx — 1,276 mm — 1,620 mm — 901.5 mm — 656 mm — 245.5 mm — 851.5 mm — 420 mm — 455 mm — 400 mm — 855 mm



Cycle time

KR 10 R900 sixx (25/305/25; 1 kg Payload) — 131 cycles/min



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¹⁾ Relative to intersection of axes 4/5.

Features and advantages

MINIMUM CYCLE TIMES. The KR AGILUS sixx has six axes and is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor, ceiling or wall make the KR AGILUS sixx extremely adaptable.

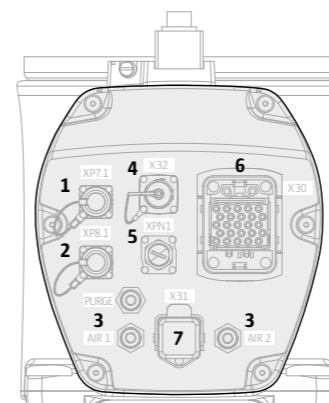
INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection



splash-proof



KR 10 R900 sixx

Max. reach	901.5 mm
Max. payload	10 kg
Pose repeatability	±0.03 mm
Number of axes	6
Mounting position	Floor, ceiling, wall
Variant	WP
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	52 kg

Axis data

Range of motion	
Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-190°
Axis 3 (A3)	+156°/-120°
Axis 4 (A4)	+/-185°
Axis 5 (A5)	+/-120°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot — +5 °C to +45 °C

Protection rating

Protection rating, robot — IP 54



Controller

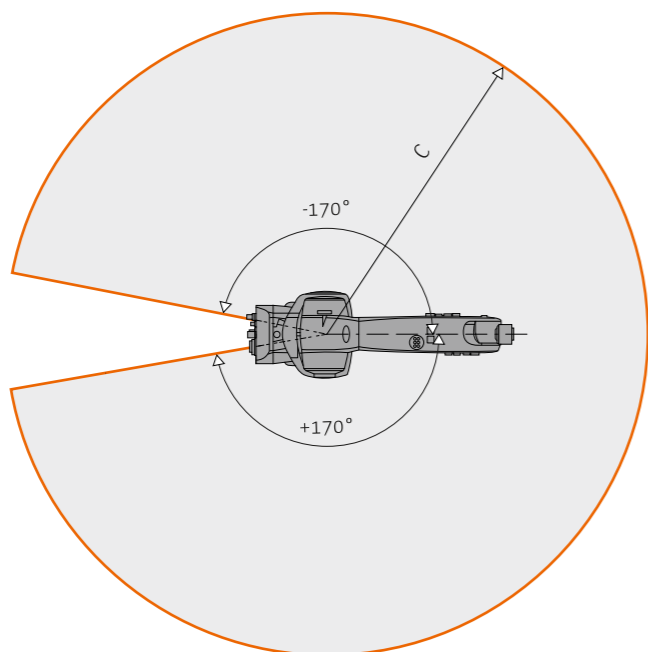
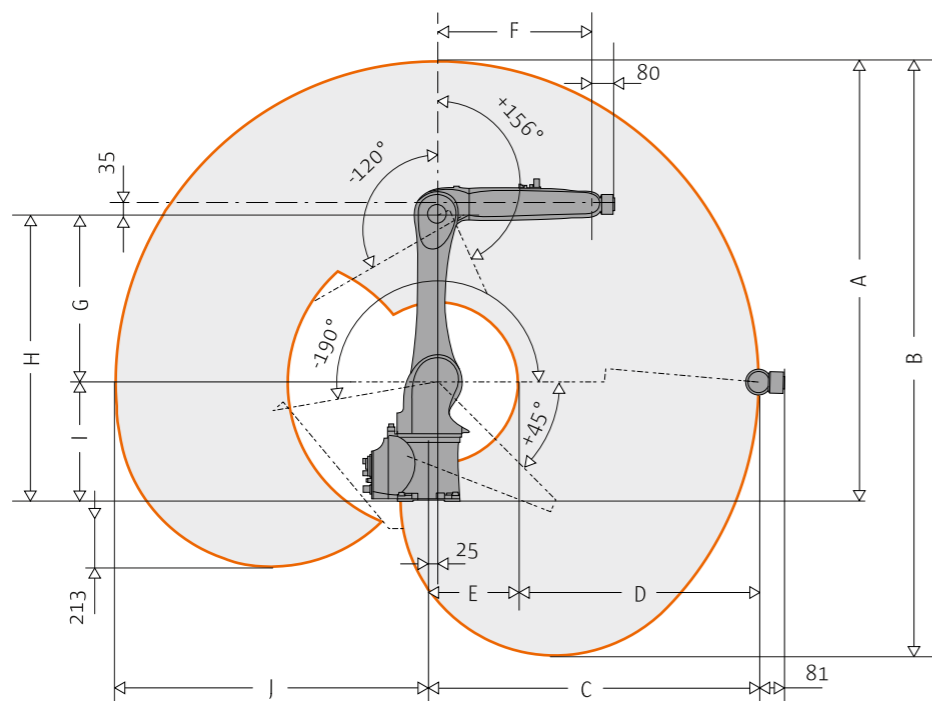


Teach pendant

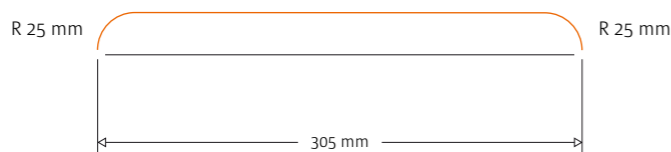
KUKA smartPAD

KR AGILUS: KR 10 R1100 sixx

Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I Dimensions J
 KR 10 R1100 sixx — 1,476 mm — 1,988 mm — 1101 mm — 813 mm — 288 mm — 515 mm — 560 mm — 960 mm — 400 mm — 1,051 mm



Cycle time
 KR 10 R1100 sixx (25/305/25; 1 kg Payload) — 143 cycles/min



Features and advantages

MINIMUM CYCLE TIMES. The KR AGILUS sixx has six axes and is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor, ceiling or wall make the KR AGILUS sixx extremely adaptable.

INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.



KR 10 R1100 sixx

Max. reach	1,101 mm
Max. payload	10 kg
Pose repeatability	±0.03 mm
Number of axes	6
Mounting position	Floor, ceiling, wall
Variant	WP
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	54 kg

Axis data

Range of motion	
Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-190°
Axis 3 (A3)	+156°/-120°
Axis 4 (A4)	+/-185°
Axis 5 (A5)	+/-120°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot — +5 °C to +45 °C

Protection rating

Protection rating, robot — IP 54



Controller

KR C4 compact

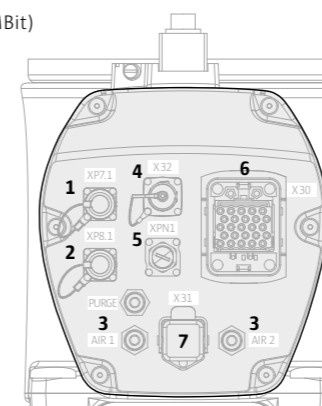


Teach pendant

KUKA smartPAD

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection



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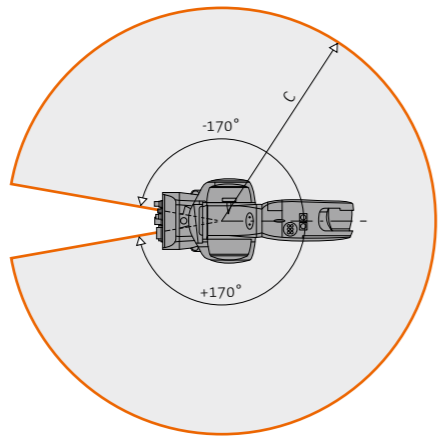
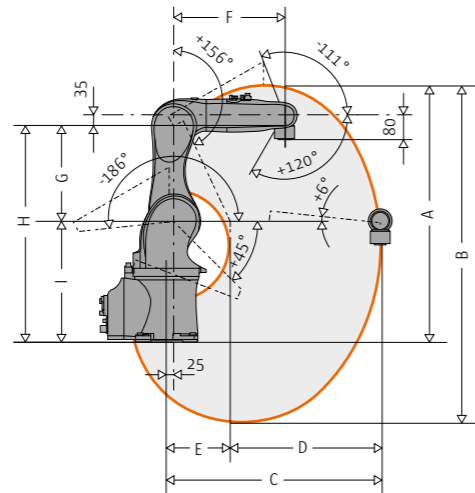
¹⁾ Relative to intersection of axes 4/5.

splash-proof

KR AGILUS: KR 6 R700 five

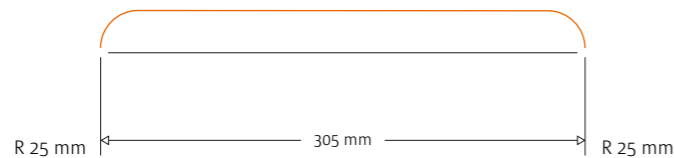
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I

KR 6 R700 five — 848 mm — 1,117 mm — 706.7 mm — 501.2 mm — 205.5 mm — 365 mm — 315 mm — 715 mm — 400 mm



Cycle time

KR 6 R700 five (25/305/25; 1 kg Payload) — 142 cycles/min



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¹⁾ Relative to intersection of axes 4/5.

Features and advantages

MINIMUM CYCLE TIMES. With five axes, the KR AGILUS five is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor or ceiling make the KR AGILUS five extremely adaptable.

INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.



KR 6 R700 five

Max. reach	706.7 mm
Max. payload	6 kg
Pose repeatability	±0.03 mm
Number of axes	5
Mounting position	Floor, ceiling ²⁾
Variant	-
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	48 kg

Axis data

Range of motion	
Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-186°
Axis 3 (A3)	+156°/+6°
Axis 4 (A4)	-
Axis 5 (A5)	+120°/-111°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot — +5 °C to +45 °C

Protection rating

Protection rating, robot — IP 54



Controller



KR C4 compact



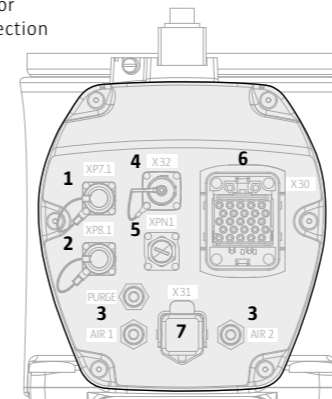
Teach pendant



KUKA smartPAD

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection

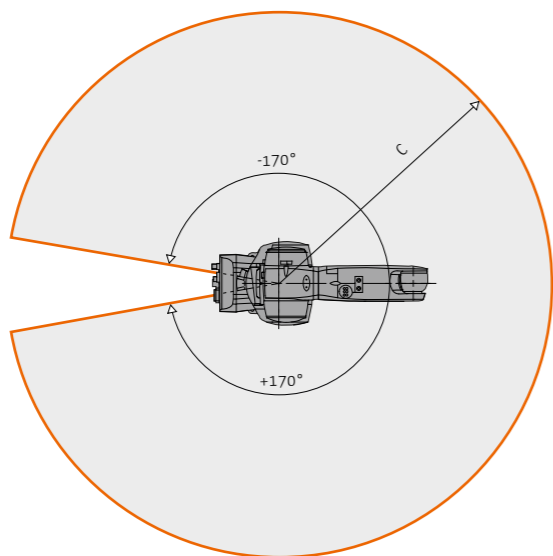
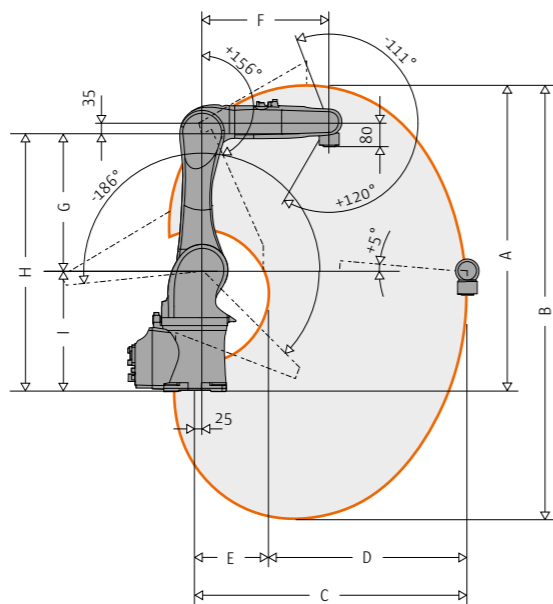


²⁾ Different motion ranges.

KR AGILUS: KR 6 R900 five

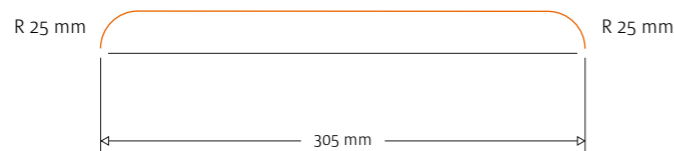
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I

KR 6 R900 five — 1,015 mm — 1,437 mm — 901.5 mm — 656.5 mm — 245 mm — 420 mm — 455 mm — 85 mm — 400 mm



Cycle time

KR 6 R900 five (25/305/25; 1 kg Payload) — 155 cycles/min



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¹⁾ Relative to intersection of axes 4/5.

Features and advantages

MINIMUM CYCLE TIMES. With five axes, the KR AGILUS five is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor or ceiling make the KR AGILUS five extremely adaptable.

INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.



KR 6 R900 five

Max. reach	901 mm
Max. payload	6 kg
Pose repeatability	±0.03 mm
Number of axes	5
Mounting position	Floor, ceiling ²⁾
Variant	-
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	51 kg

Axis data

Range of motion

Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-186°
Axis 3 (A3)	+156°/+5°
Axis 4 (A4)	-
Axis 5 (A5)	+120°/-111°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot — +5 °C to +45 °C

Protection rating

Protection rating, robot — IP 54



Controller

— KR C4 compact

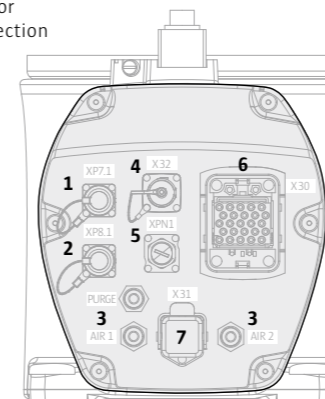


Teach pendant

— KUKA smartPAD

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection

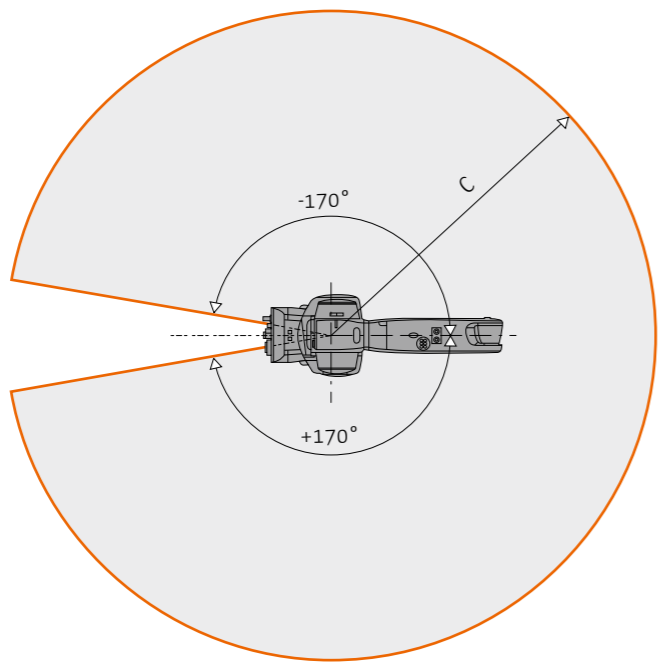
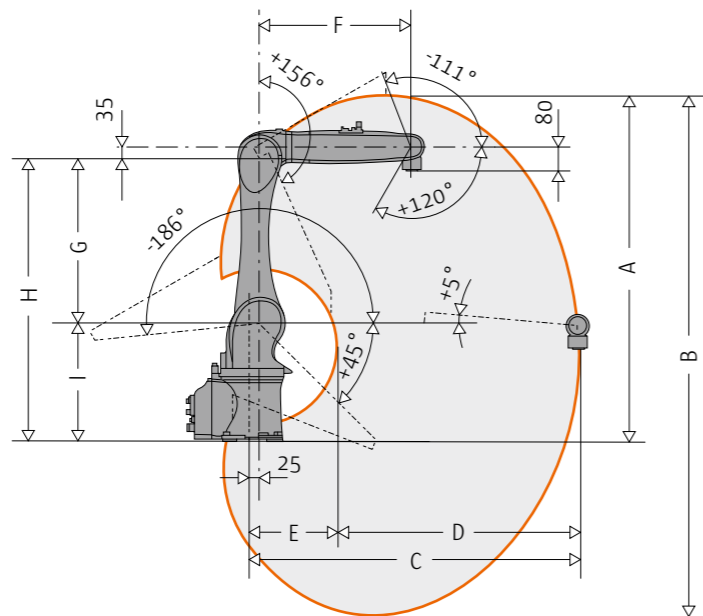


²⁾ Different motion ranges.

KR AGILUS: KR 10 R1100 five

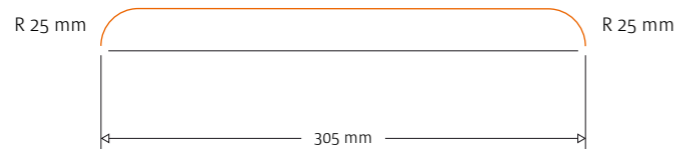
Work envelope¹⁾ Dimensions A Dimensions B Dimensions C Dimensions D Dimensions E Dimensions F Dimensions G Dimensions H Dimensions I

KR 10 R1100 five — 1,168 mm — 1,757 mm — 1,101 mm — 813 mm — 288 mm — 515 mm — 560 mm — 960 mm — 400 mm



Cycle time

KR 10 R1100 five (25/305/25; 1 kg Payload) ————— 147 cycles/min



Features and advantages

MINIMUM CYCLE TIMES. With five axes, the KR AGILUS five is consistently rated for particularly high working speeds. At the same time, it offers high precision.

SPACE-SAVING INTEGRATION. Low space requirements and the choice between installation on the floor or ceiling make the KR AGILUS five extremely adaptable.

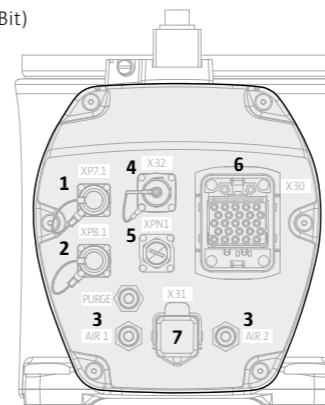
INTEGRATED ENERGY SUPPLY SYSTEM. Routed internally in the KUKA small robots, thereby saving space. Includes EtherCAT/EtherNet (bus cable), three 5/2-way valves (compressed air), direct air line and inputs/outputs.

KR C4 ARCHITECTURE AND FUNCTIONALITIES. KUKA small robots are every bit as versatile as their larger relatives. They are operated via the KR C4 compact controller, with the same range of functions as the service-proven KR C4 controller.

KUKA.SAFEOPERATION. KUKA small robots set standards in safety. Only they offer the KUKA.SafeOperation functionality, which radically simplifies the effective cooperation of humans and machines.

The KR AGILUS interface plate

- 1 Resolver input for axis 7
- 2 Resolver input for axis 8
- 3 Pneumatic connections (Air 1, Air 2, cleaning air)
- 4 Micro EMD
- 5 Extension Interface (100 MBit)
- 6 Motor connector
- 7 Interface connection



Details provided about the properties and usability of the products are purely for information purposes and do not constitute a guarantee of these characteristics. The extent of goods delivered and services performed is determined by the subject matter of the specific contract. No liability accepted for errors or omissions.

¹⁾ Relative to intersection of axes 4/5.
²⁾ Different motion ranges.



KR 10 R1100 five

Max. reach	1,101 mm
Max. payload	10 kg
Pose repeatability	±0.03 mm
Number of axes	5
Mounting position	Floor, ceiling ²⁾
Variant	-
Robot footprint	209 mm × 207 mm
Weight (excluding controller), approx.	53 kg

Axis data

Range of motion	
Axis 1 (A1)	+/-170°
Axis 2 (A2)	+45°/-186°
Axis 3 (A3)	+156°/+5°
Axis 4 (A4)	-
Axis 5 (A5)	+120°/ -111°
Axis 6 (A6)	+/-350°

Operating conditions

Ambient temperature, robot ————— +5 °C to +45 °C

Protection rating

Protection rating, robot ————— IP 54



Controller

————— KR C4 compact



————— Teach pendant

————— KUKA smartPAD

An unbeatable team.

Product overview

[+] FASTER AS A TEAM



Small robots

EXTREMELY FAST, STREAMLINED AND ROBUST: THE KR AGILUS SMALL ROBOT FAMILY. Solve automation tasks more flexibly. Minimize cycle times. Open up totally new areas of application. The extensive KUKA small robot series is 100 percent KUKA: reliable quality and durability, combined with maximum functional diversity and flexibility. Fastest small robots and the KUKA.SafeOperation function – this combination is what gives the KR AGILUS series its major competitive advantage.

[+] SAFER AS A TEAM



System controller: KR C4 compact

THE SMALL ROBOT CONTROL SYSTEM OF THE FUTURE. With its compact dimensions and the powerful technology of the service-proven KR C4, the KR C4 compact offers maximum performance in minimum space. The revolutionary concept provides a firm foundation for the automation of tomorrow. Only KUKA offers integrated safety functions as a standard, together with open interfaces enables truly simple integration into the overall system. This significantly reduces the costs in automation for integration, maintenance and servicing. At the same time, the long-term efficiency and flexibility of the systems are increased. Benefit from the openness you need to meet tomorrow's requirements.

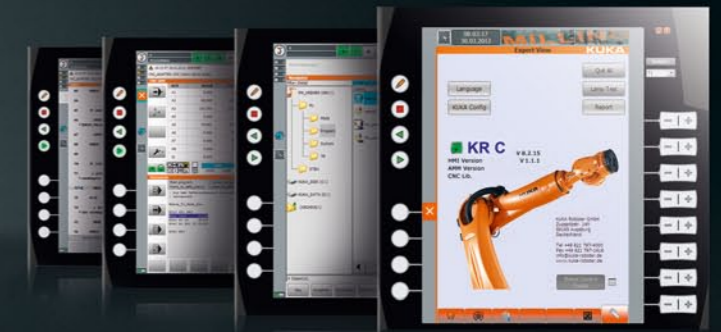
[+] SIMPLER AS A TEAM



Teach pendant: KUKA smartPAD

THE SIMPLEST WAY OF OPERATING ROBOTS. Touch screen. Graphics support. Flexible interaction. With its large touch screen, the KUKA smartPAD allows operation of both the robots and entire systems, all visually represented on the screen. The display adapts to show the user only those operator control elements that are needed at any given moment. Attention is always focused on what is important, allowing users to work more intuitively, quickly, easily and efficiently.

[+] MORE VERSATILE AS A TEAM



Function and technology packages

AN OPTIMALLY PREPARED, EFFICIENT SOFTWARE SOLUTION FOR EVERY TASK. KUKA function and technology packages breathe life into the KUKA robots. They enable them to carry out particular industry-specific functions within an automation solution. Handling, machining, measuring, or function packages for conveyor synchronization or vision-controlled part detection. KUKA function and technology packages make automation easy.

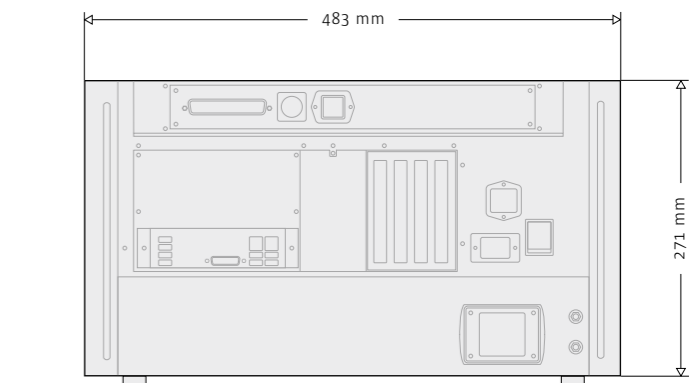
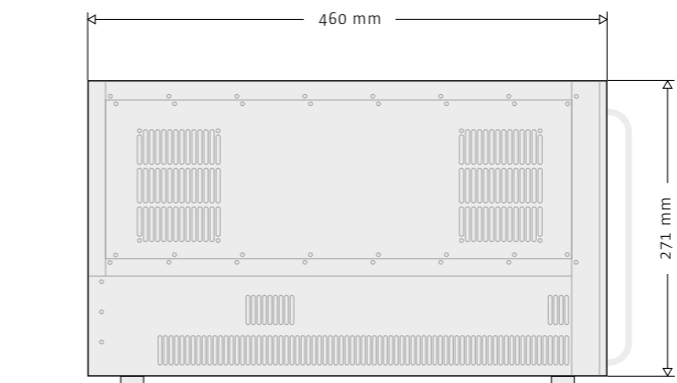
99.99%

AVAILABILITY. ROBUST AND LOW ON MAINTENANCE, THIS UNBEATABLE TEAM WORKS NON-STOP ON YOUR SUCCESS.

KR C4 compact

The small robot control system of the future

MORE POWERFUL, SAFER, MORE FLEXIBLE, AND MORE INTELLIGENT. The KR C4 compact offers the high performance and reliability of the KR C4 technology in a compact design. Its flexible configuration and expansion capability make it a real all-rounder. The number of hardware components, cables and connectors has been significantly reduced and replaced by software-based solutions. The robust, high-quality controller is designed for low maintenance; the temperature-controlled fan technology only switches on briefly when needed, and is barely audible.



SPACE-SAVING [+]

[+] UNIVERSAL APPLICATION



ROBUSTNESS [+]

[+] ENERGY-EFFICIENT

COMMUNICATION TALENT [+]

[+] ALL-ROUNDER

Features and advantages

SPACE-SAVING. The compact dimensions of the housing enable space-saving installation in 19" enclosures or in small protective housings. Despite its compact size, the KR C4 compact offers the entire range of functions of the KR C4 controller.

ALL-ROUNDER. Safety, Robot, Logic, Motion and ProcessControl – the KR C4 combines everything in a single controller. And allows effortless control of the entire system.

UNIVERSAL APPLICATION. The open architecture of the KR C4 compact can control not only KUKA robots but also external axes – for maximum flexibility, scalability, performance and openness, in minimum space.

COMMUNICATION TALENT. In addition to its own robot language KRL, the KR C4 also understands the language of the CNC machining world (G-code) and the language of PLCs, enabling it to communicate directly with your Siemens® or Rockwell® controller, for example.

ROBUSTNESS. The consistent choice of durable components and the well-designed cabinet ensure long-term, reliable operation, even under extreme conditions.

ENERGY-EFFICIENT. The energy management system allows the energy consumption of the controller to be reduced by up to 95 % in standby mode. The improved cooling concept, combined with a temperature-controlled fan, further reduces the power dissipation of the controller, while making operation considerably quieter.



KR C4 compact controller

Type	KR C4 compact
Processor	Multi-core technology
Hard drive	HDD, SSD optional
Interface	USB, EtherNet, DVI-I
Field buses	PROFINET, EtherNet/IP, PROFIBUS, DeviceNet, EtherCAT
Max. number of axes	6 + 6 (with additional axis box)
Protection rating	IP 20
Dimensions (D x W x H)	460 mm x 483 mm x 271 mm
Weight	33 kg

Power supply connection

Rated supply voltage	1 x 208 to 230 V AC
Permissible tolerance of rated voltage	-10 to +10 %
Mains frequency	49 to 61 Hz
Mains-side fusing	1 x 16 A slow-blowing

Operating conditions

Ambient temperature	+5 °C to +45 °C
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KUKA smartPAD

KUKA smartPAD – Making robot operation really easy

TOUCH SCREEN. GRAPHICS SUPPORT. FLEXIBLE INTERACTION. The more diverse the robots' abilities become, the greater the importance of intuitive user interfaces for their operation. The KUKA smartPAD brilliantly demonstrates, on a large antireflection touch screen, just how simple it can be. Intelligent, interactive dialogs provide the user with those operator control elements that are currently required. This makes work easier, faster, more efficient and simply smarter all-round.

[+] INTEGRATED USB CONNECTION

[+] UNIVERSAL APPLICATION

ANTIREFLECTION TOUCH DISPLAY [+]

ERGONOMICALLY OPTIMIZED [+]



[+] HOT-PLUGGABLE

[+] HAPTIC JOG KEYS



2

1 Simple, intuitive operator control via touch screen

2 Ergonomic 6D mouse

Features and advantages

UNIVERSAL APPLICATION. Operate all KUKA robots and KR C4 controllers with the KUKA smartPAD.

ANTIREFLECTION TOUCH DISPLAY. Simple operation via the well-lit 8.4" screen with intuitive user interface.

ERGONOMICALLY OPTIMIZED. Designed to be user-friendly. High mobility and lightweight with an overall weight of just 1,100 grams.

HOT-PLUGGABLE. If the KUKA smartPAD is not being used, it can be simply unplugged during ongoing operation and used for any other KR C4 controller.

INTEGRATED USB CONNECTION. Direct saving and loading of configurations via USB port on the KUKA smartPAD itself.

HAPTIC JOG KEYS. The combination of haptic jog keys and a haptically controlled mouse enables intuitive maneuvering with constant visual contact with the robot.



KUKA smartPAD teach pendant

Type	KUKA smartPAD
Display	scratch-resistant industrial touch display
Display size	8.4"
Dimensions (D x W x H)	80 mm x 330 mm x 260 mm
Weight	1,100 g

KUKA function and technology packages

Function and technology packages for the KR C4 compact

KUKA function and technology packages help you to solve specific automation tasks efficiently, with a minimum of programming. That's because the portfolio of KUKA software solutions cover nearly all the common areas of application. On the basis of these packages, our KUKA system partners implement tailored solutions to meet every customer requirement.



KUKA function and technology packages	
KUKA.WorkVisual	Engineering environment for all KUKA robots for system configuration, programming, data backup, diagnosis, and more.
KUKA.Load	Supports the evaluation of the load on a KUKA robot or the selection of a suitable robot for a given load.
KUKA.UserTech	Fast programming of motion and program sequences using freely definable buttons, input masks and parameter lists.
KUKA.ExpertTech	Faster, simpler programming even for non-experts in KRL code via menu-guided command selection.
KUKA.HMI Zenon	Creation of customized, application-specific user interfaces for visualization and operator control without programming knowledge. Display and operation using the touch panel and keys of the KUKA smartPAD.
KUKA.RemoteView	Allows remote access to the robot via a secure Internet connection, thereby offering the possibility of remote diagnosis or start-up support.
KUKA.VirtualRemotePendant	Allows the use of EtherNet communication to run the user interface of the KUKA smartPAD on an external PC and to operate the robot.
KUKA.RobotSensorInterface	Supports simple and flexible interfacing with sensors in the KR C4. It is also possible to integrate a number of channels with hard real-time requirements.
KUKA.VisionTech	"onBoard" vision system including image processing, camera and sensors. Extensive configuration options enable the flexible use of the robot in an unstructured environment.
KUKA.ConveyorTech	Organizes the cooperation of robots and conveyors. Allows efficient, dynamic handling of parts, even for complex applications.
KUKA.ForceTorqueControl	Takes account of process forces and torques exerted on the workpiece during machining, and controls and adjusts these as specified in the program sequence. In applications such as grinding, polishing, bending or even assembly, this technology package is an indispensable help.
KUKA.SafeOperation	Flexible programming of safe cooperation between humans and machines. Definition of safe workspaces, velocities, envelopes around robot tools, and cooperation with the operator.
KUKA.SafeRangeMonitoring	Beginners' tool for limiting and monitoring the safety and work areas of the robot. The monitoring and limitation of statically defined axis ranges creates an adequate degree of work safety for many applications.

KUKA function and technology packages	
KUKA.Gripper & SpotTech	Programming of grippers and weld guns via easy-to-use inline forms for many industrial applications.
KUKA.RoboTeam	Coordinates and enables the high-precision interaction of a team of robots for handling a shared load or for working together on a moving workpiece.
KUKA.EtherNet KRL	Makes it possible to exchange data with external computers via the EtherNet interface. The robot can function here both as a client and as a server.
KUKA.OPC-Server	Basic technology for standardized data exchange between robots and external controllers for non-real-time information streams. Ideal for interfacing with external visualization and MES systems.
KUKA.PLC Multiprog	Programming environment for an extremely fast Soft PLC conforming to the IEC61131 standard. Expands the functionality of the KR C4 and offers virtually unlimited openness in the programming of automation cells and applications.
KUKA.PLC ProConOS	Runtime system of the KUKA.PLC Multiprog Soft PLC. PLC programs created with KUKA.Multiprog are run directly on the KR C4, with full access to the entire I/O system of the robot. Reading and processing of variables such as axis positions and velocity via function blocks.
KUKA.PLC mxA	Allows direct commanding and positioning of the robot by external controllers (Siemens®, Rockwell®, etc.). The user thus requires no knowledge of robot programming in the KUKA-specific robot language KRL.
KUKA.CNC	Complete software-based CNC implementation for execution of machine tool code (G-code) directly on the robot controller. This turns the robot, with its accuracy and stiffness, into a machining center for path-supported processes.
KUKA.Sim	The simulation programs of KUKA.Sim allow robotic cells to be planned with true-to-life accuracy.

KUKA

Contact KUKA at:



www.contact.kuka-robotics.com



www.facebook.com/KUKA.Robotics



www.youtube.com/kukarobotgroup



New. Fast. Precise.
KUKA small robots.

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