



## Fenceless production with AIRSKIN

AIRSKIN enables the open and flexible manufacturing environments of the future by allowing industrial robots to work efficiently without fences. AIRSKIN combines the best of 2 worlds: accuracy, repeatability, speed, reach, payload and durability of KUKA industrial robots together with the fencelessness and flexibility of collaborative robots. AIRSKIN guarantees applications with the highest **speed**, smallest floor **space**, maximum **flexibility**, and the highest **safety level** on the market, PLe / Cat. 3.

## AIRSKIN Cellcore

AIRSKIN Cellcore provides the easiest, safest, and fastest solution to building open and flexible applications. AIRSKIN Cellcore combines an industrial robot and controller on a base, and the integrated AIRSKIN allows fenceless operation. Because the safety system is mounted directly onto the robot, it simply moves with the robot when AIRSKIN Cellcore is moved between different workplaces, and the same risk assessment applies. Due to the unbeaten high collaborative speed of up to 2 m/s in free space, AIRSKIN Cellcore provides fenceless/collaborative robotics without compromises in productivity.

AIRSKIN Cellcore can be equipped with a KUKA Cybertech model of the customer's choice and base pedestals of different heights. Depending on the project, AIRSKIN Cellcore can be ordered as standalone-application or can be integrated into larger projects

## Components

- ↳ KUKA Cybertech-2 robot (all models)
- ↳ KUKA KRC4/5 included
- ↳ Software packages (KUKA.SafeOperation, KUKA.PalletTech)
- ↳ Cellcore Base with floor mounting for easy switching between workplaces
- ↳ AIRSKIN for Cybertech-2
- ↳ AIRSKIN Safetyflange (depending on application)
- ↳ AIRSKIN for tool (depending on application)

## Your advantages

AIRSKIN Cellcore speeds up the planning, building and integration of fenceless and collaborative robot applications significantly. Customers get a turnkey solution for the inner core of any fenceless and collaborative robot application: The base, the robot with the controller and the already implemented safety system, all combined and ready to go. AIRSKIN Cellcore is perfect for any applications in open and flexible production environments, where fences would obstruct the product flow and keep the production rigid and hard to reorganize, and where high productivity is demanded. AIRSKIN Cellcore keeps your production humming with its unchallenged free space speed of up to 2m/s. Example applications are end of the line palletizing, machine tending, support with production peaks between different production lines and many more. Depending on the project, customized EoAT (End of Arm Tooling) safety systems and grippers can be developed and integrated.

## Dimensions

Size	1650 x 940 x 1900 mm
Weight	R1610-2: 800 kg R1810-2: 800 kg R2010-2: 800 kg

## Available platform heights

600 mm	800 mm	1000 mm
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## Robot payload with AIRSKIN

PA (palletizing) mode includes an AIRSKIN Safetyflange 20. Calculated values according to KUKA.Load, assuming a distance of 150 mm between tool COG and TCP.

Payload in kg	Nominal	Normal mode	PA mode
KR 16 R2010-2	16,0	14,8	14,2
KR 20 R1810-2	20,0	18,7	19,1
KR 22 R1610-2	22,0	22,3	24,0

## Robot motion range with AIRSKIN

PA (palletizing) mode includes a Palletizing Safetyflange. All models, in °

	Nominal		with AIRSKIN	
A1	-185	185	-185	185
A2	-185	65	-166	25
A3	-138	175	0	170
A4	-350	350	-210	210
A5	-130	130	-41	107
A6	-350	350	-350	350

## Operating conditions

Ambient temperature during operation	5–50 °C
Humidity level	0–85 %
IP rating	IP54

## Electrical connection

Rated supply voltage	AC 3x380 V, AC 3x400 V AC 3x440 V or AC 3x480 V
Rated connected load	3.30 kVA

## Safety skin

Reaction time	< 9 ms
Actuation force	–5 N

## Certificates

ISO 13849-1	PLe / Cat 3
EN/IEC 62061	SIL CL 3
UL 1740:2018	
ANSI/RIA R15.06-2012	
CAN/CSA-Z434-14 + G11	
Flammability	UL 94 V-2
EC type examination Nr.	TÜV-A-MHF/MG17-00411
TUV Rheinland certificate Nr.	CU 72192170 0001
PFHd [1/h]	<= 2.7e-8
MTTFd	91 Years, DC = 99%