BLUE DANUBE ROBOTICS

WHAT IS AIRSKIN®?

AIRSKIN® is a soft and pressure sensitive safety skin for industrial robotics. It directly covers the entire robot as well as the tool and safely stops the machine in case of a collision. AIRSKIN® allows you to rethink robot safety in new and unconventional ways beyond limiting power and reach or restricting access.

WHY AIRSKIN®?

REMOVE THE FENCE
AND SAVE FLOOR SPACE

INCREASE SPEED FOR
SHORTER CYCLE TIMES

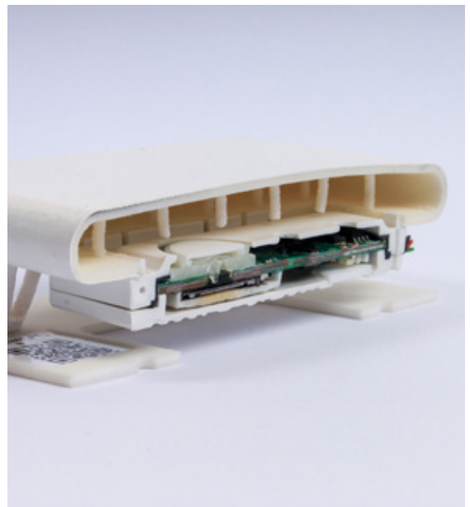
FAST AND EASY
RISK ANALYSIS

HIGHEST SAFETY
LEVEL PLe

FAST INSTALLATION AND
MAINTENANCE

AVAILABLE AND CUSTOMIZABLE
FOR VARIOUS TOOLS/GRIPPERS

HOW IT WORKS



Soft, airtight sensor pads continuously monitor and reliably detect internal pressure changes due to deformations of the hull. Any collision immediately triggers a safe stop signal to the controller and initiates the robot's braking sequence. Remaining mechanical forces due to the stopping distance of the robot are absorbed by the soft padding.

The autonomous pads are connected to the controller's safety IOs by a 6-wire cable carrying two redundant safety channels. Functional safety is ensured by constant self-diagnosis of the sensor pads. **AIRSKIN® fully complies with ISO 13849. It is certified as a PLe Cat.3 safety device by TÜV Austria.**

FEATURES

Electric Connection
24V power supply
2 redundant safety channel

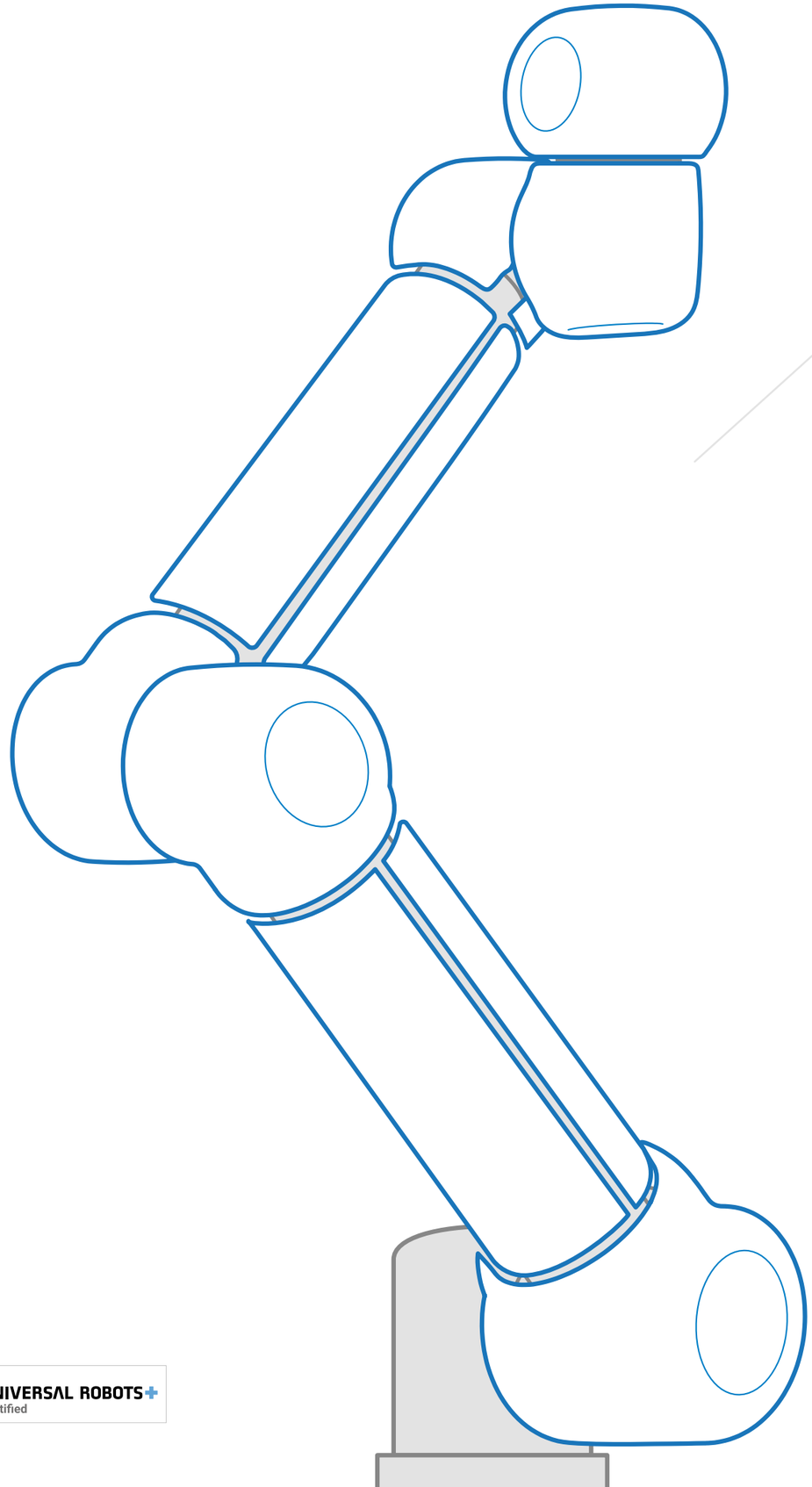
Magnetic Connector
inherently safe electrical wiring

Soft & Durable Material
engineered for industrial environment

3D Printed
custom pads for any tool

Heat dissipation
free airflow under pads

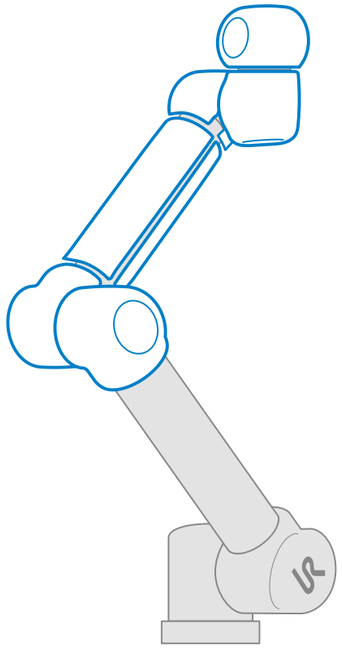
Visual feedback
intuitve status information



UR10 S2W

Shoulder2Wrist Kit

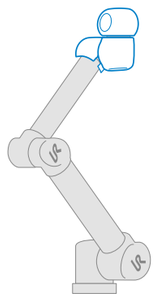
AIRSKIN® covering all moving axes.
Best option to cover a wide variety
of applications.



UR10 E2W

Elbow2Wrist Kit

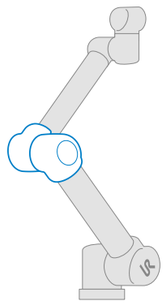
Good choice when the robot reaches
into workspace or mounted overhead.



UR10 3W

Wrist Safety Kit

When additional safety for the
wrist and tool area is needed.



UR10 2E

Elbow Safety Kit

For applications where only the
elbow needs extra protection.

UNIVERSAL ROBOTS+
Certified

AIRSKIN® SAFETYFLANGE

This new safe flange adapter detects collisions in any direction of movement. It allows for real „finger safe" collaborative pick-and-place applications with almost any tool and end effector. AIRSKIN® Safetyflange is mounted between the robot and the EoAT and provides compliance for the tool and the workpiece. The flange is based on AIRSKIN® technology and comes with PLe/Cat3 ISO 13849 safety certification.

APPLICABLE TO VARIOUS TOOLS AND WORKPIECES

4

COMPLIANCE IN 4 DEGREES OF FREEDOM

PALLETIZING

The new benchmark in safe palletizing applications: AIRSKIN® allows for faster movement speeds while completely eliminating clamping and shearing risks. ISO/TS 15066 compliance without a fence has never been easier!

ONROBOT VG10

SCHMALZ COBOT PUMP

CUSTOMIZE YOUR OWN

UP TO 800 MM/SEC

WITHOUT A FENCE

100%

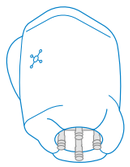
REDUCTION OF CLAMPING AND SHEARING RISKS

2x 2x

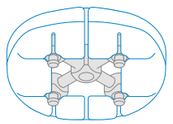
DOUBLE THE SPEED
DOUBLE THE PAYLOAD

PRODUCTS

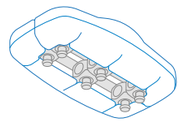
TOOLS



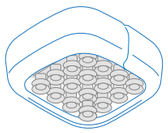
ETA-OPT SH-ZPN



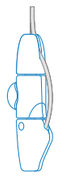
SCHMALZ COBOT PUMP 2x2



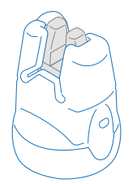
SCHMALZ COBOT PUMP 2x3



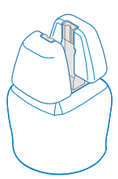
ONROBOT VG10



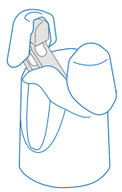
STÖGER CSX12



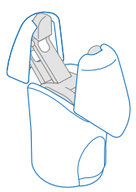
SCHUNK EGP-C



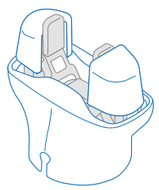
WEISS GRIPKIT-E2



ONROBOT RG2

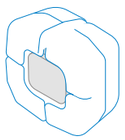


ONROBOT RG6

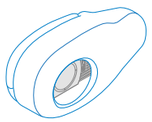


ROBOTIQ 2F-85

CAMERAS

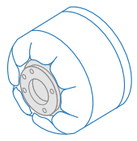


COGNEX IS76



SICK PIM60

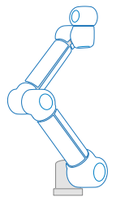
FLANGES



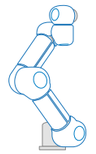
AIRSKIN® SAFETYFLANGE

CUSTOMIZE YOUR OWN

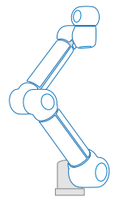
ROBOTS



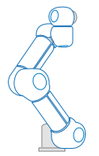
UNIVERSAL ROBOTS UR10



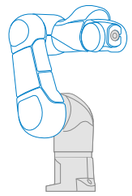
UNIVERSAL ROBOTS UR5

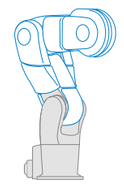


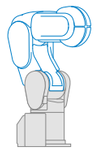
UNIVERSAL ROBOTS UR10e

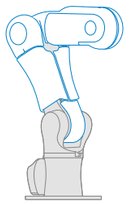


UNIVERSAL ROBOTS UR5e







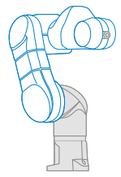


STÄUBLI TX2-90L

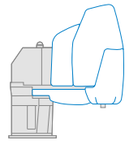
DENSO VS-087

MITSUBISHI RV 4FL

KUKA KR10

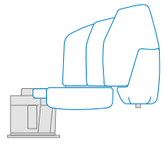


STÄUBLI TX2-60L



coming soon

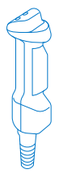
EPSON T3 / LS3



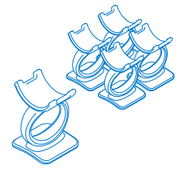
coming soon

EPSON T6 / LS6

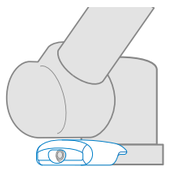
ADD ON



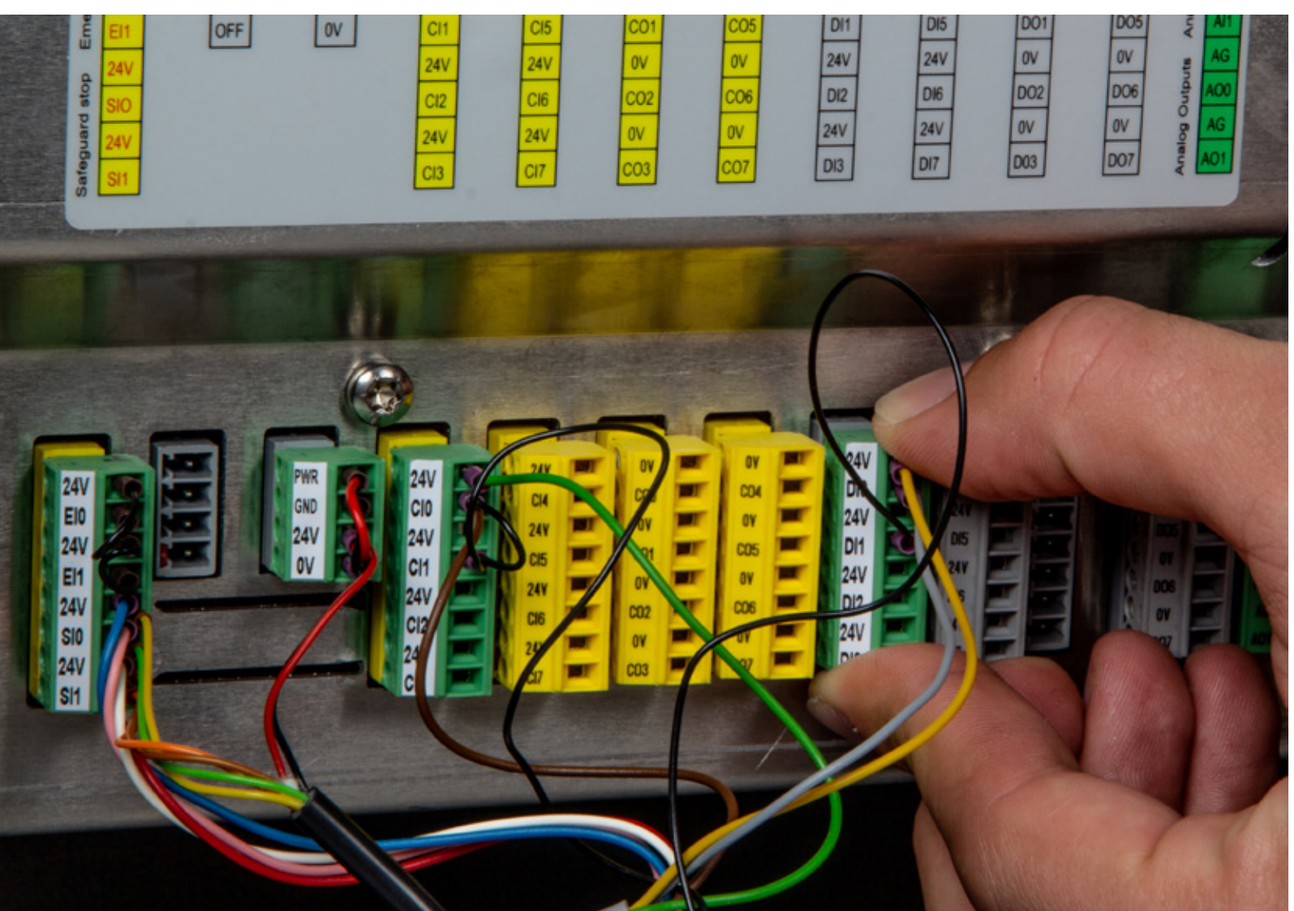
UR ENABLE SWITCH



UR CABLE CLAMP



CONNECTOR COVER



SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Reaction time

< 9 ms

Weight of a complete AIRSKIN® Set

For a full UR10 robot with 10 pads: 3.7 kg

Thickness on a robot

Variable thickness of 20 - 80 mm possible

Thickness on UR10

20 mm, on average

Mounting method / serviceability

Support structure with snap-on AIRSKIN® pads

Installation time

30 min

ELECTRICAL SPECIFICATIONS

Voltage supply

24 V DC (ground bonding required)

Electrical connection

Directly from robot controller on UR10

Operating current per AIRSKIN® pad

10 mA, max. 35 mA

Interface

OSSD (6 Wires: 2 Safety Channels IN/OUT, 24V, Ground)

Connection of AIRSKIN® to controller/PLC

AIRSKIN® Connection Module with push-in contacts

AIRSKIN® topology

Daisy chain, max. 15 AIRSKIN® pads in a row

Wiring

Included in support layer with magnetic connectors

FEATURES

IP classification

IP50

Chemical resistance

Common cleaning solutions, oil, alcohol, sanitizer

UV resistance

100 %

Tensile strength

15 MPa, DIN 53504

Skin shore hardness A

~88, ISO 868

Colours

Standard white / grey. RAL on request

Ambient temperature range

5-40 °C

Humidity level

0 - 85 %

Visual feedback

RGB status LED per AIRSKIN® pad

STANDARDS AND NORMS

Product classification

ISO 13849 PLe / Cat 3
EN 62061 SIL3

PFHd [1/h] with up to 15 AIRSKIN® pads

<= 2.7e-8

EC type examination No

TÜV-A-MHF/MG/17-00411

UL VDE (TPU skin)

UL 94 V-2

Flammability (TPU skin)

UL 94 V-2

TÜV AUSTRIA

BLUE DANUBE ROBOTICS

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