

SCARAFLEX®

Add more flexibility to your production

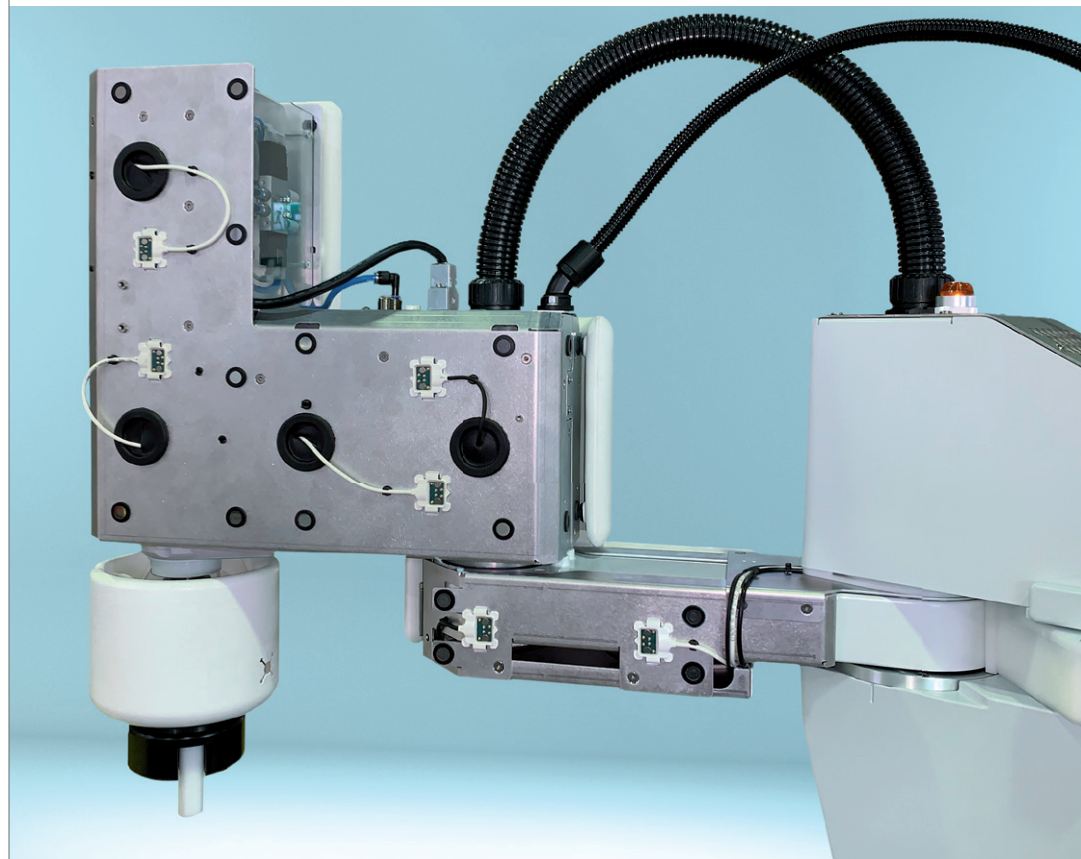




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If you are interested in further SCARAFLEX® documents, please ask us.
You can also download them directly here: scaraflex.com/downloads.



SCARAFLEX®

AN INNOVATION MADE IN AUSTRIA.



A / OVERVIEW

MORE SAFETY. MORE FLEXIBILITY. EPSON INSIDE.

Manufacturers know this problem only too well: Handling processes in automation (like pick & place, joining or assembly) need space to ensure a safe working environment – every square foot incurs costs, nonetheless, the principle of safety is paramount.

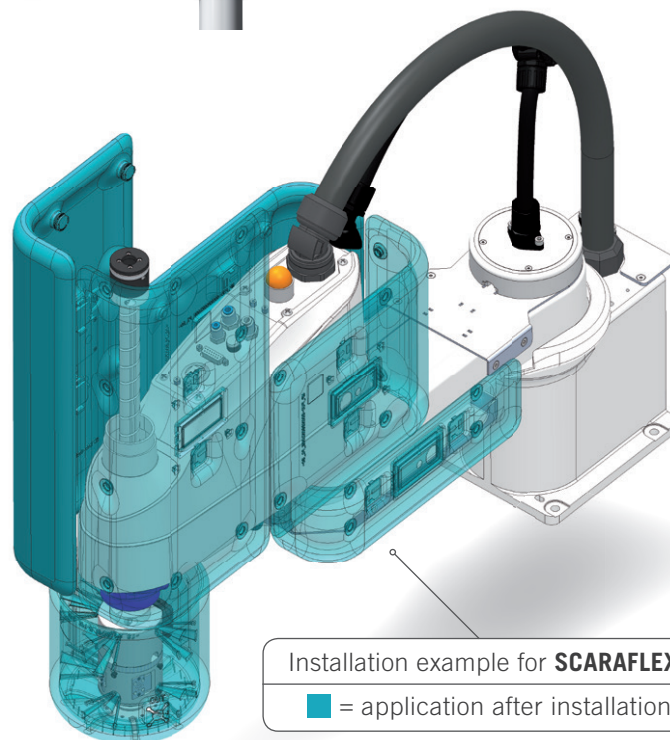
SCARAFLEX® is a newly developed safety feature for robot applications, more specifically, for the area of the Scara robots. Normally, they have to operate within protective mechanical housing so as not to endanger nearby persons, which in turn increases the need for space – this is where **SCARAFLEX®** comes in because **SCARAFLEX®** lets Scara robots work without a fence, completely free of protective housing. This solves two problems with one approach – less space is required and safety is maximised.

HOW DOES SCARAFLEX® WORK?

SCARAFLEX® is first and foremost an air-filled, soft synthetic skin, which envelops the Scara robot. Intelligent air pressure sensors immediately detect the slightest touch or impact (e.g. with a person) and respond instantly – the robot immediately stops moving before any risk arises.



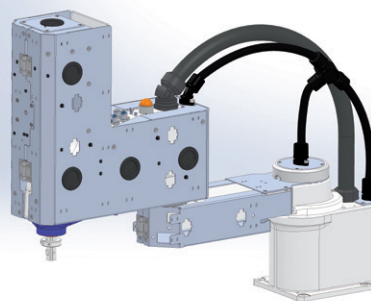
Scara robot without **SCARAFLEX®**



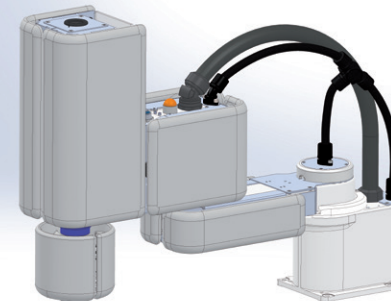
Installation example for **SCARAFLEX®**

■ = application after installation

SCARAFLEX® – Indoor area



SCARAFLEX® – fully installed



B / MAXIMUM SAFETY FOR SCARA ROBOTS

AT **SCARAFLEX®**, safety is paramount – after all, the goal is the safe fence-free and flexible use of robot applications.

These three key safety aspects define SCARAFLEX®:

1. Pads for collision recognition

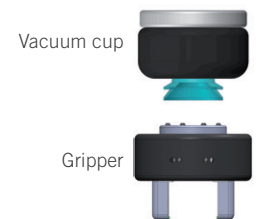
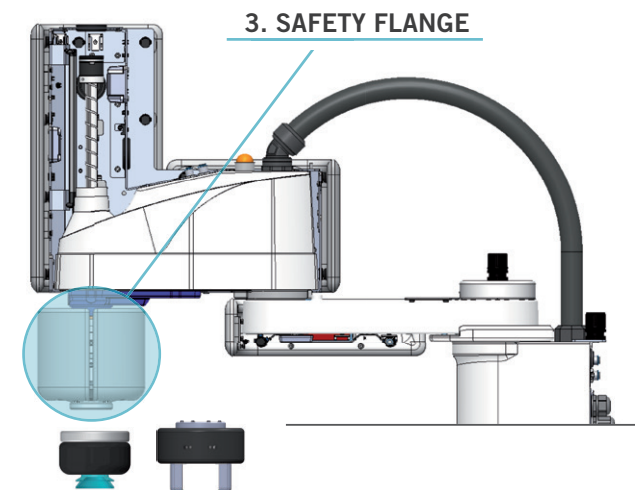
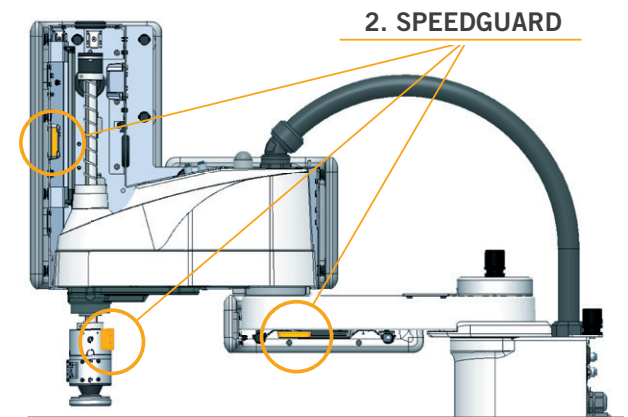
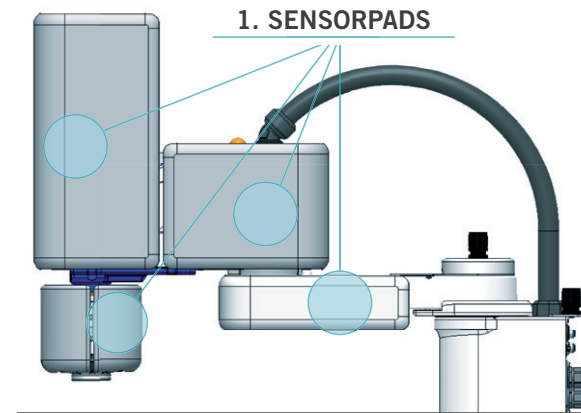
The sensor pads are air-tight, soft sensory cushions and/or pads, which are capable of detecting collisions by permanently measuring the air pressure inside the measuring chamber. These sensor pads are individually adapted and patented AIRSKIN® Pads, manufactured by Blue Danube Robotics.

2. SpeedGuard

The **SCARAFLEX® Speedguard** is a patented development of Economa Engineering GmbH (more on this on page 8). The Speedguard is a 3-axis sensor system, which continuously measures the speed of the robot on the X, Y and Z axis. If a defined maximum speed is exceeded during the work process, the **SCARAFLEX®** Speedguard automatically triggers the stop.

3. Safety flange

The **SCARAFLEX® safety flange** forms the mechanical interface between the robot and the gripper (and/or a vacuum cup). It is a certified, spring-loaded component, which also immediately causes the robot to stop in the event of a collision.



(Example applications – not part of SCARAFLEX®)

C / THE TEAM BEHIND SCARAFLEX®

ECONOMA Engineering is an automation specialist located in South Vienna and is a big name when it comes to high-tech developments. Numerous high-profile manufacturers like Melecs EWS, but also institutions like Münze Österreich AG rely on expertise from this Viennese family-owned and operated company.

Equipped with decades of experiences in the field of robot applications and a close partnership with **EPSON**, **ECONOMA Engineering** has successfully introduced this innovative safety feature to the market after nearly four years of development.

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D / SUMMARY

SCARAFLEX® – can be used for flexible applications. It is one-of-a-kind and cost-efficient. Every manufacturer who relies on Scara robots for the manufacture of their goods not only benefits from the speed and attractive pricing of EPSON Scaras, but can also expand their range of services even more with **SCARAFLEX®**.

SCARAFLEX® can be used with existing robots (through retrofitting) or combined with the purchase of a new Scara – and all this together with proven EPSON features (such as image processing, etc.). When no longer needed, every **SCARAFLEX®** unit can also be quickly and easily dismantled.

By the way: Installing **SCARAFLEX®** is just as easy and fast – in just 30 minutes. And just like that, the Scara robot is ready for production – with an innovation *made in Austria*. **SCARAFLEX®. Safe motion.**

ECONOMA Engineering



EPSON



Certified to
> ISO 13849
> Cat 3 / PLe
> IEC 62061
> SILCL 3

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Sales partner for SCARAFLEX®

If you are interested in SCARAFLEX® and would like to purchase one of our products, please visit our sales page:

www.scaraflex.com/sales

Do you have any questions about SCARAFLEX®?

Then simply contact us by e-mail or phone - we as the manufacturer are happy to be there for you! For all questions and concerns about sales, please note the information above or visit our sales page right away.

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