SCARAFLEX®

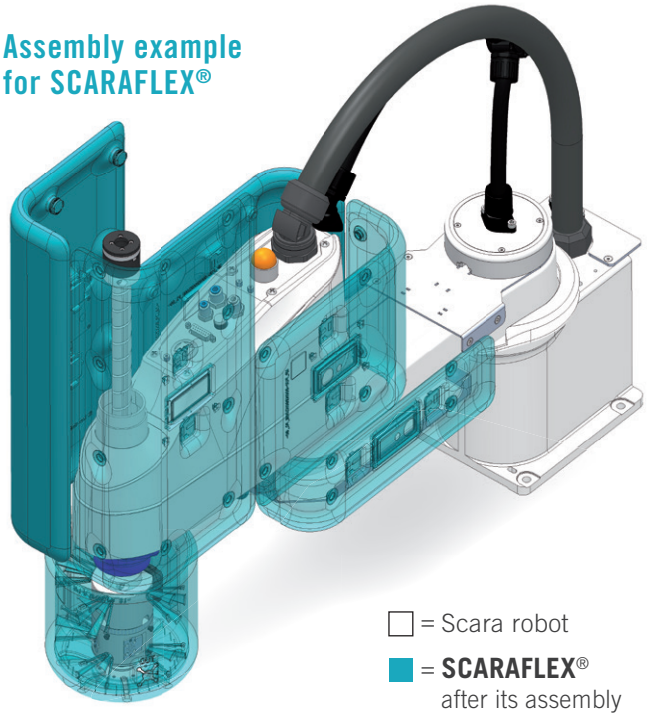
AN INNOVATION MADE IN AUSTRIA

SCARAFLEX® is a newly developed safety service for EPSON Scara robots, which makes it possible to also operate them without a protective fence or housing.

SCARAFLEX® AT A GLANCE

- **SCARAFLEX®** is first and foremost an air-filled, soft synthetic skin, which envelops the Scara robot. Intelligent air-pressure sensors continuously measure its inner air pressure. If the inner air pressure changes, for example, when touched by a person, **SCARAFLEX®** will stop the robot in an instant – even before a collision occurs (more information is provided under the *Sensorpads* point).
- **SCARAFLEX®** was developed by Viennese automation specialist **Economa Engineering GmbH**.
- The fields of application of **SCARAFLEX®** span all industries – here are a few typical applications: Loading and unloading of trays, supply and removal of punched parts, handling of products in production flow, quality controls, transfer to packaging, a wide range of assembly applications, joining processes, mobile robotics, etc.
- **SCARAFLEX®** can be installed in existing robots (by means of retrofitting), but also be combined with the new procurement of a Scara – in just 30 minutes.

Assembly example for SCARAFLEX®



☐ = Scara robot

■ = **SCARAFLEX®** after its assembly

THE TEAM BEHIND SCARAFLEX®

Economa Engineering is an automation specialist in South Vienna whose company history spans decades. This family-owned and operated company focuses on developing high-tech solutions. **Economa** currently employs a workforce of 25 at its location in Vienna.

- **SCARAFLEX®** offers outstanding value for money while also offering distributors the possibility of specialising.
- **SCARAFLEX®** is a certified product – with high speeds of up to 650 mm/s (depending on the application and environment).
- **SCARAFLEX®** is currently the only available product for fenceless Scara applications.

These three key safety aspects define SCARAFLEX®:

1. Sensorpads for collision detection

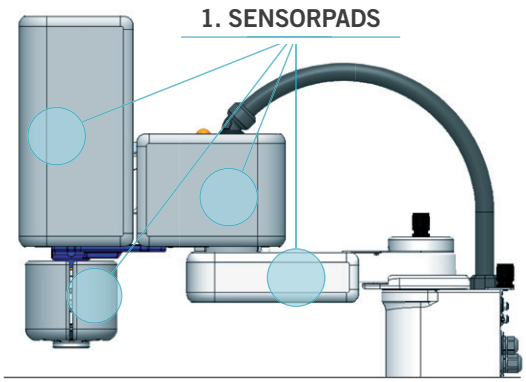
As mentioned, the **Sensorpads** are air-tight, soft sensory cushions and/or pads, which are capable of detecting collisions by permanently measuring the air pressure inside the measuring chamber. They are individually adapted patented AIRSKIN® Pads, manufactured by Blue Danube Robotics.

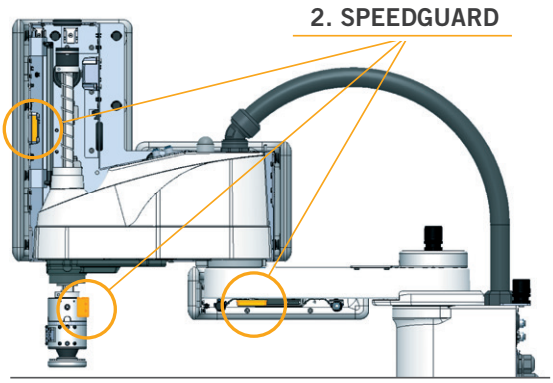
2. SpeedGuard

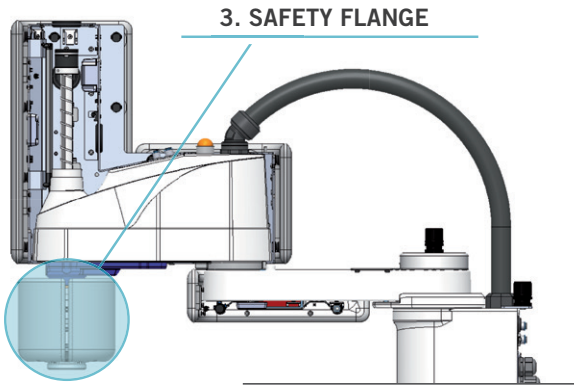
The **SCARAFLEX® Speedguard** is a patented development of Economa Engineering. This is a 3-axis sensor system, which continuously measures the speed of the robot on the X, Y and Z axis. If a defined maximum speed is exceeded during the work process, the **SCARAFLEX® Speedguard** automatically triggers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








Vacuum cup


Gripper

(Example applications – not part of **SCARAFLEX®**)

Safety level

The total safety level that can be reached through a combination of **SCARAFLEX®** with an Epson Scara is PI-d.

Certified to

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

SCARAFLEX safe motion

EPSON

Any questions about SCARAFLEX®?

Then just contact us by email or phone – as a manufacturer, we are happy to serve you!
SCARAFLEX® – an innovation made in Austria.

E-Mail: info@scaraflex.com
Phone: +43 1 596 1000

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