

SCARAFLEX®

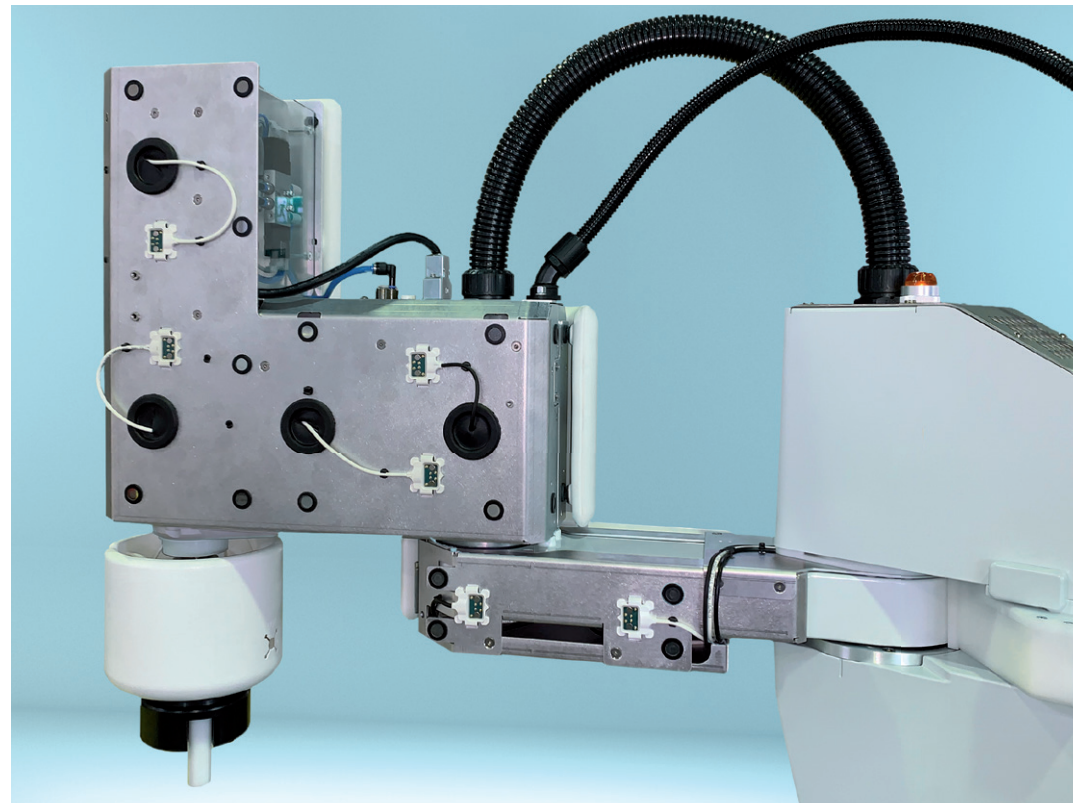
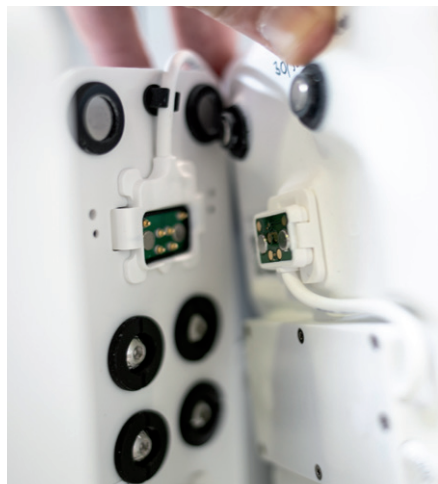
Add more flexibility to your production





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SCARAFLEX® AT A GLANCE

PRODUCT SPECIFICATIONS
& SAFETY CONCEPT



EASY
INSTALLATION

Within
60 minutes

A/INTRODUCTION

WHAT IS SCARAFLEX®?

It is a safety device, that allows the use of an EPSON Scara robot in a fencefree application.

It detects collisions with a soft safety skin, monitors and restricts the Robot speed – and as a consequence safely stops the robot.

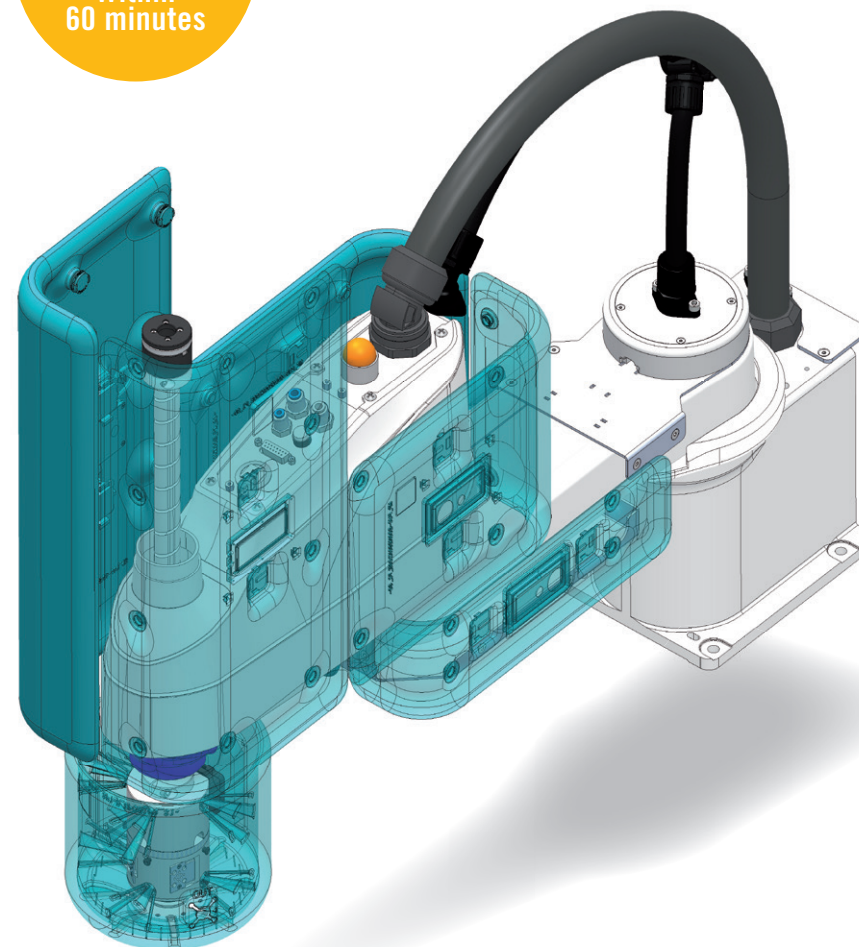
The working sequence of the robot will continue from exactly this point as soon as a person will manually confirm by pushing a reset button.

WHERE CAN SCARAFLEX® BE USED?

Whenever an EPSON Scara Robot can be used – SCARAFLEX® can be used as well.

Typical applications are press feeding or de-feeding, pick and place tasks, product handling for packaging processes or quality control with vision systems.

There are no restrictions using the technical options EPSON Scara offers.

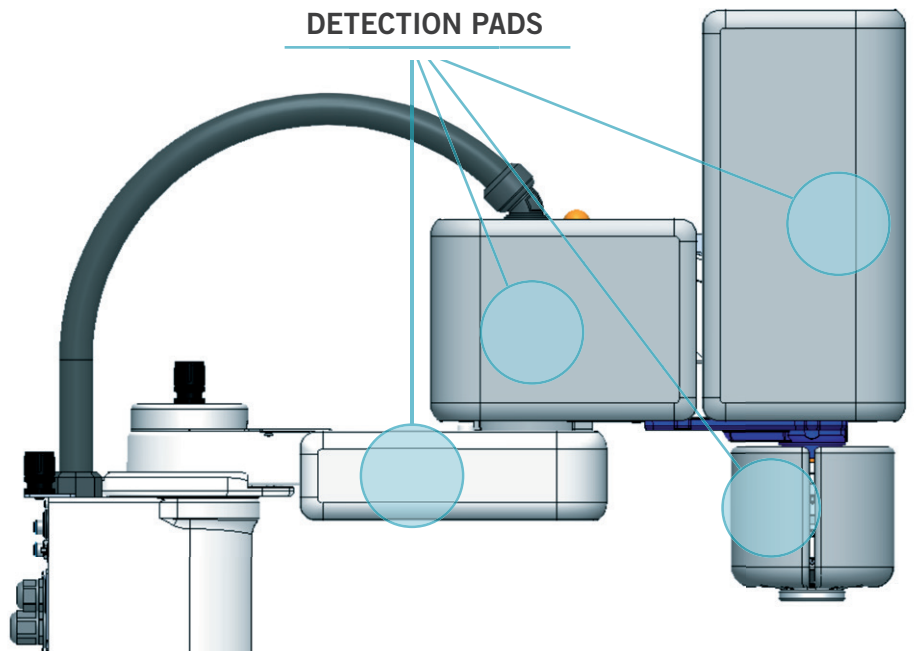


B / CERTIFIED KEY FEATURES →

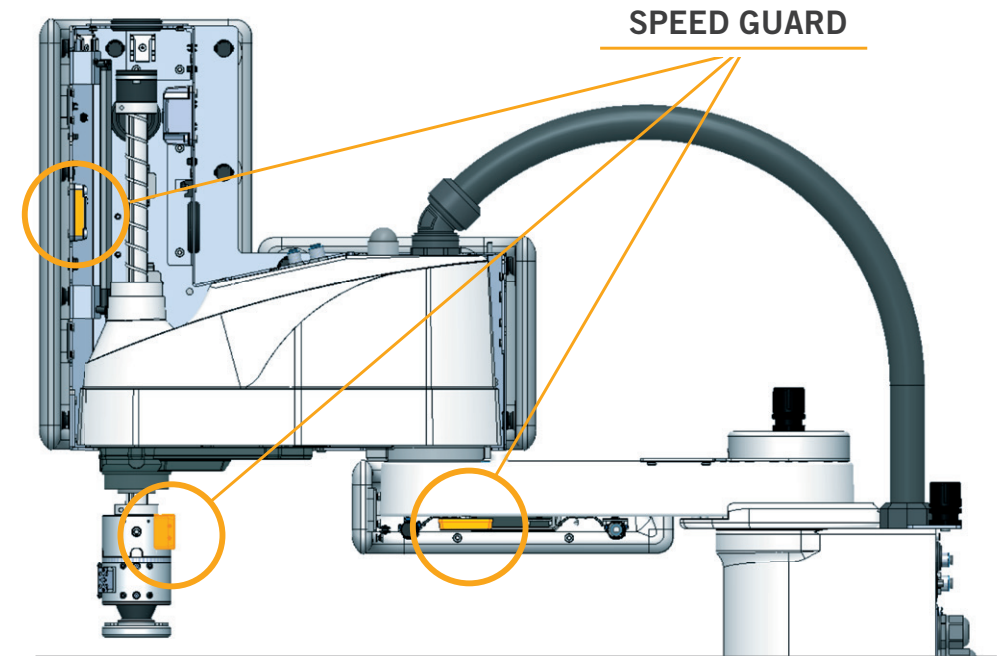
1. DETECTION PADS

The „Detection Pads“ are airtight soft skin pads, which can detect a collision by permanently measuring the air pressure of the inner volume / chamber.

These „Detection Pads“ are individualized AIRSKIN® Pads, patented and manufactured by Blue Danube Robotics.



- 1. DETECTION PADS
- 2. SPEED GUARD
- 3. DETECTION FLANGE



2. SPEED GUARD

The „Speed Guard“ is a 3-axis sensor system that monitors the robot speed including Z-axis permanently .

In case of exceeding the speed limit, the system triggers the stop.

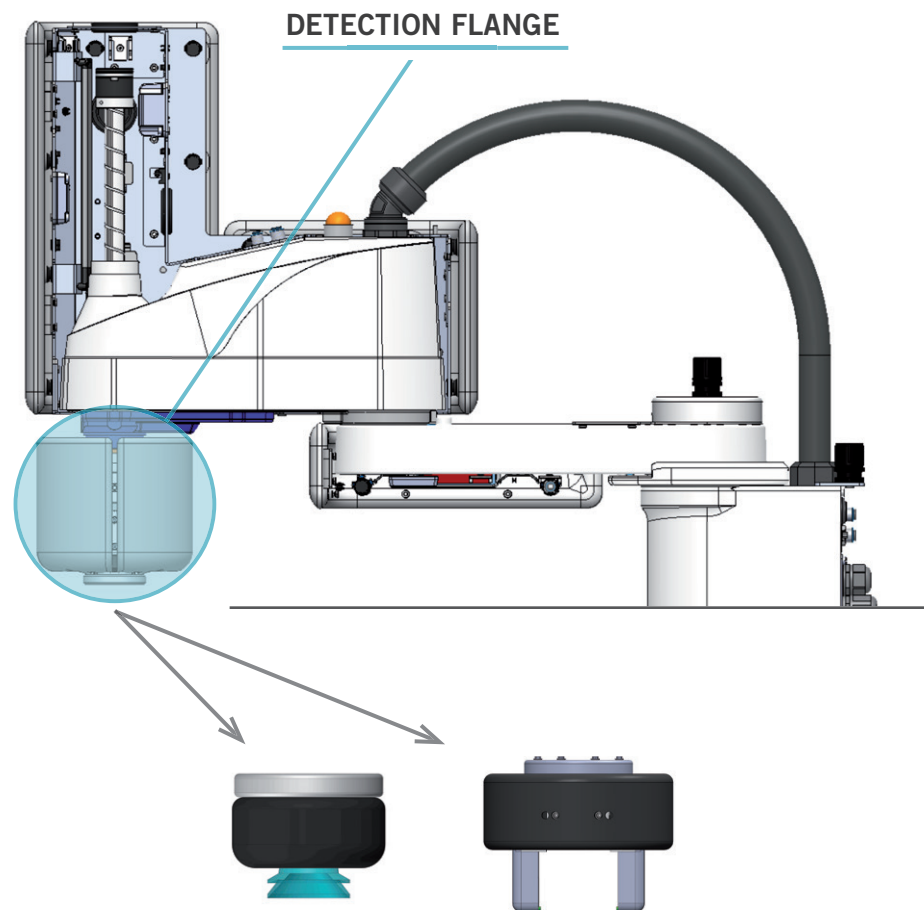
The speed limit will be set by the System Integrator and must be determined by performing the „risk assessment“.

3. DETECTION FLANGE

The „Detection Flange“ is a certified component which is the mechanical interface for a gripper or vacuum suction cup.

It has a flexibility to move when a collision occurs. This movement will be detected which triggers a safe stop.

The Detection Flange is prepared to mount a gripper or a vacuum suction cup.



Sample applications – no parts of SCARAFLEX®

SCARAFLEX® AT A GLANCE

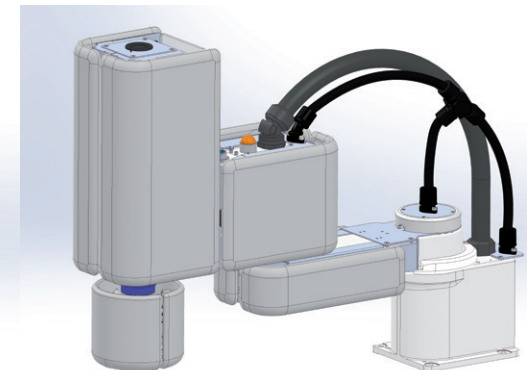
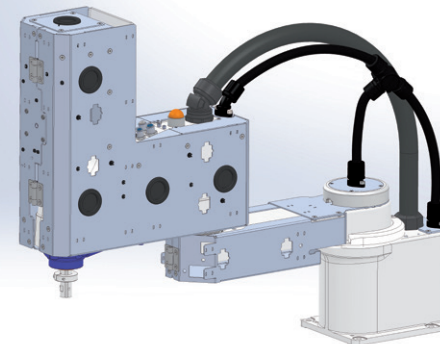
A fence free SCARAFLEX® application is easier and faster to design because of the „Zone Model“ / „Danger / Impact “ and the Guided Risk analysis.

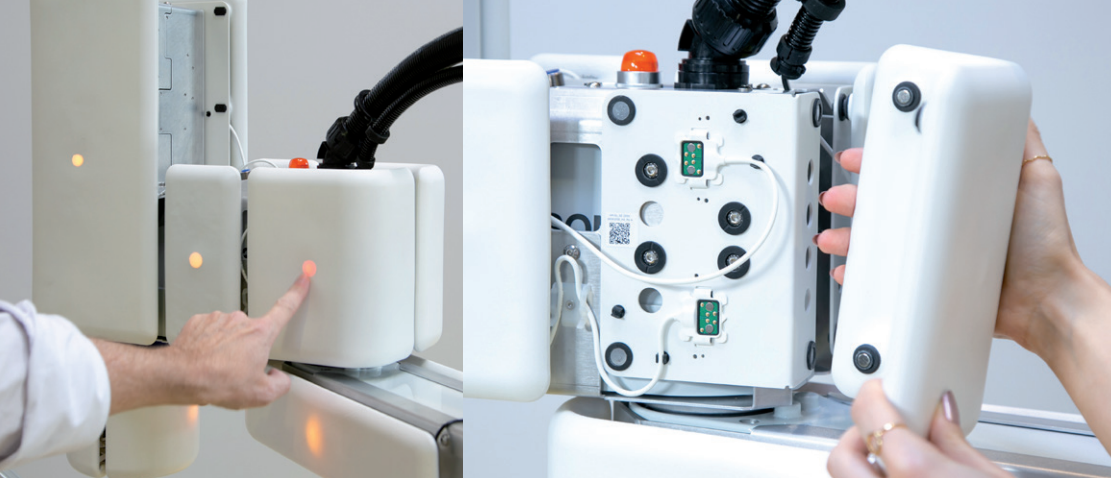
Depending on the application a speed up to 650 mm/s can be achieved – and it is still safe.

SCARAFLEX® is a safety component. To build a safe application, all safety devices of the application need to be appropriate. The weakest part specifies the performance level.

It remains the responsibility of the integrator to design and build the complete application considering the applicable technical standards and regulations.

Better safe than sorry





SCARAFLEX® – WHAT IS UNIQUE?

It is possible to use an EPSON Scara in a fence free application. The best of both worlds: the precision and stability of EPSON Scara and fast and safe without fence.

AIRSKIN and SpeedGuard technology are safety certified and secured by a patent / patent pending.

Excellent price product ratio – with the opportunity for distributors to specialise as an expert.

Guided risk analysis allows easier design work and risk assessment for Integrators.

It is ready to retrofit and it is reverseable.

High Speed up to 650 mm/s – depending on application and environment.

A certified product – manufactured and assembled in EU under high quality standards.

SCARAFLEX® is currently the only available product for fence free Scara applications from a serial production.

C / SAFETY

All active components of SCARAFLEX® have the certification as a Safety Part

Product: AIRSKIN® by Blue Danube Robotics

ISO 13849-1 Cat 3 / Plc
IEC 62061 SILCL 3



AIRSKIN
A BLUE DANUBE ROBOTICS PRODUCT

The overall safety level that can be achieved in combination of SCARAFLEX® with an EPSON Scara is PI-d.

SCARAFLEX® is a safety device which can be used to build safe and fence free applications (can be compared with a safety switch).

It still is the responsibility of the integrator to design and create the complete application considering the applicable technical standards and regulations.

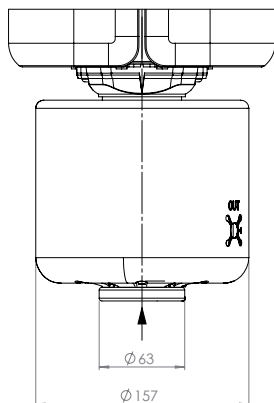


		EPSON LS6-B602S	SCARAFLEX® LS6 / 600	EPSON LS6-B702S	SCARAFLEX® LS6 / 700
a	Length of arm no.1 & arm no. 2 (mm)	600		700	
b	Length of arm no. 1 (mm)	325		425	
c	Length of arm no. 2 (mm)	275		275	
d	(J1) Movement angle (degrees)	132°	112,5°	132°	112,5°
e	(J2) Movement angle (degrees)	150°	141°	150°	141°
f	Movement range (mm)	162,6	205	232	275
g	Movement range back (mm)	492,6	399,4	559,4	437,6
h	Angle of the (J1) mechanical stop (degrees)	2,8	n.a.	2,8	n.s.
i	Angle of the (J2) mechanical stop (degrees)	2,8	n.s.	2,8	n.s.
j	Mechanical stop area (mm)	142,5	n.s.	214	n.s.
k	Mechanical stop area back (mm)	504	n.s.	574,5	n.s.
m	(J3) Movement range (mm)	200		200	
n	Distance from the mounting base (mm)	51	66,65	51	66,65
p	(J3) Upper mechanical stop range (mm)	10		10	
p	(J3) Bottom mechanical stop range (mm)	11,8		11,8	
z	Room without collision (mm)	n.a.	710	n.a.	810

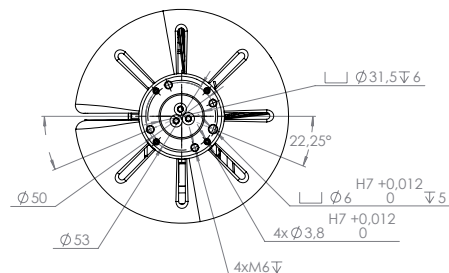
A = Middle of axis 3 (tool center point)
 B = Movement range
 C = Maximum range
 D = Mounting base
 E = Area limited by mechanical stop

Detection flange

Side view

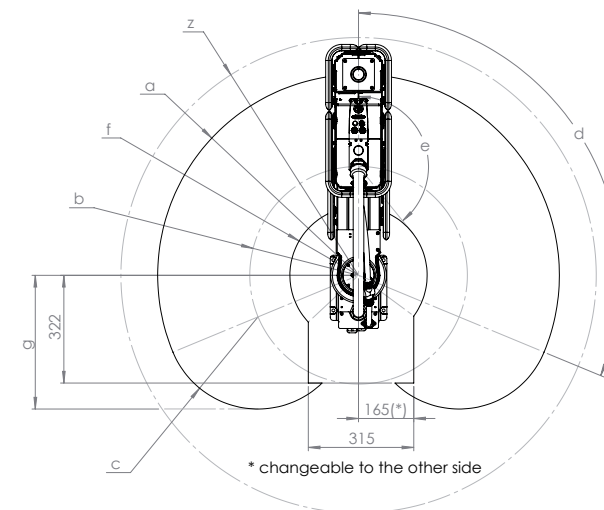


View from below

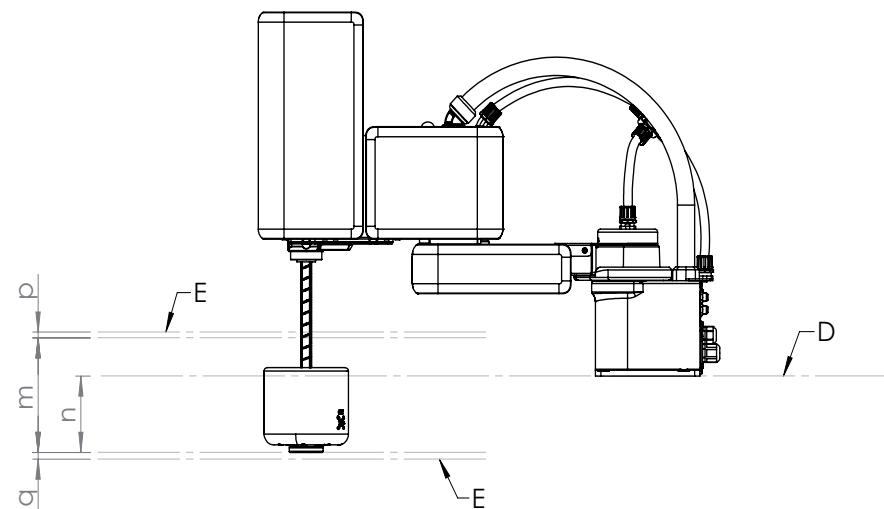


Work area

Overhead view



Side view



CONTACT US

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.

E-Mail: info@scaraflex.com

Phone: + 43 1 596 1000

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www.scaraflex.com

EPSON



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