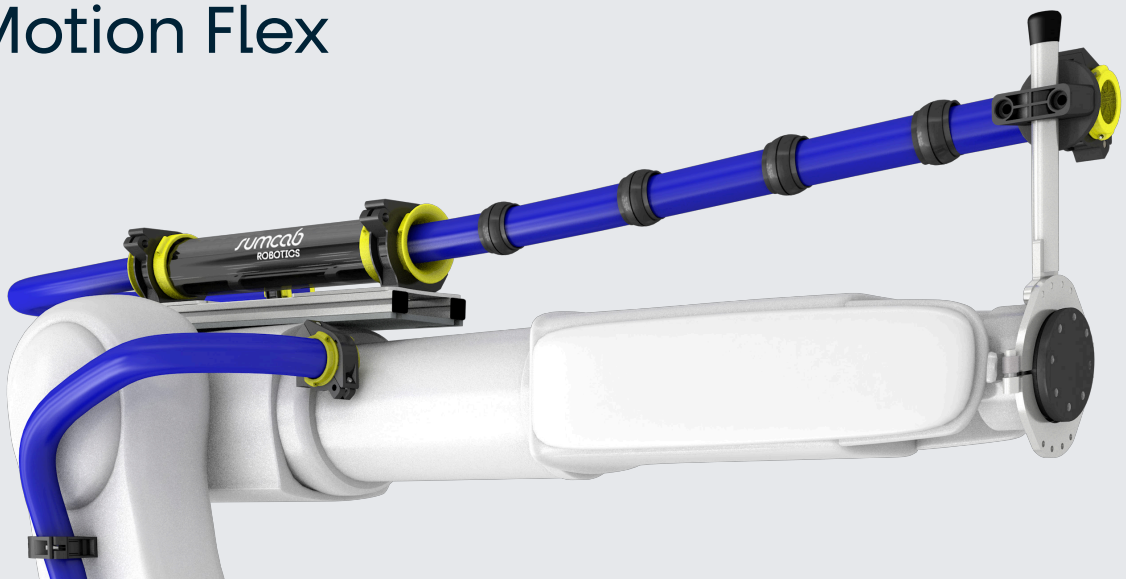
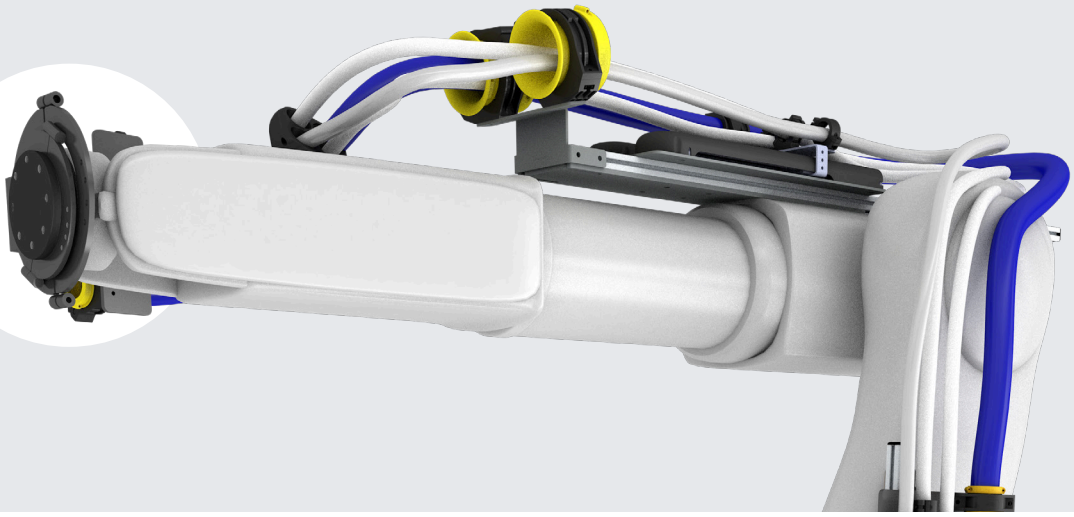
Sumoflex™
Sumcab
Motion Flex



Sumoslide™
Sumcab
Motion Slide



The small change that changes everything

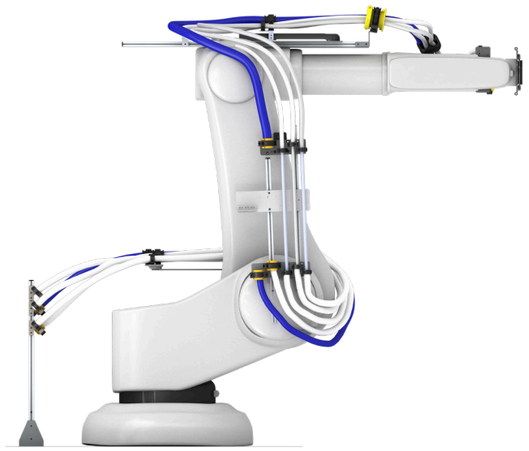
sumcab
ROBOTICS

Sumoflex™
Sumoslide™

Modular solutions for your power & media supply system

SUMOFLEX and SUMOSLIDE are flexible power & media supply systems for all robotic applications that require more than just standard cable packages. The long-proven mechanical retraction systems allow the dresspack to be guided closely on the robot arm. This avoids loops and kinks and minimizes the resulting wear.

Sumoflex



Sumoslide

Dresspack systems and robot-optimized cables from a single supplier.

With the two established solutions SUMOFLEX and SUMOSLIDE, we offer a modular kit with which we develop an optimal dresspack solution for almost all robot applications and types.

In addition, as a subsidiary of the Spanish SUMCAB Specialcable Group, we can also provide cables optimized specifically for your application. Such solutions can, for example, reduce the frequency of cable breakage during complex arm movements.

Sumoflex™

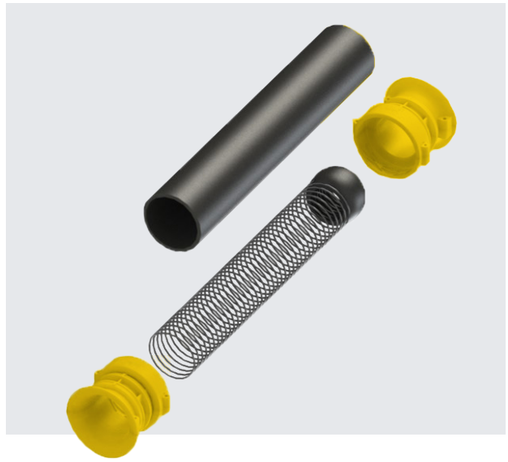
When it needs to be flexible

Patent EP3738729 A1

sumcab ROBOTICS

Flexibly adaptable dresspack guidance

The SUMOFLEX system has a modular design and is available in different nominal corrugated tube diameters (29, 36, 48 and 70 mm) and retraction lengths. This allows SUMOFLEX to be individually optimized to your robot application.



Design and functionality

SUMOFLEX is based on a robust mechanical retraction system. It consists of a tube , inside which there is a compression spring. The dresspack is attached to one end of the spring and is guided through the tube.

With a spring strength of 8 kg, the system is also designed for heavier dresspacks.

And thanks to heat-resistant components, SUMOFLEX is also suitable for applications in the high-temperature environment, e.g. in die casting applications.

When is SUMOFLEX the most suitable solution?

- For challenging path planning
- For heavy dresspacks
- For applications in high-temperature environment
- For reducing damage and wear

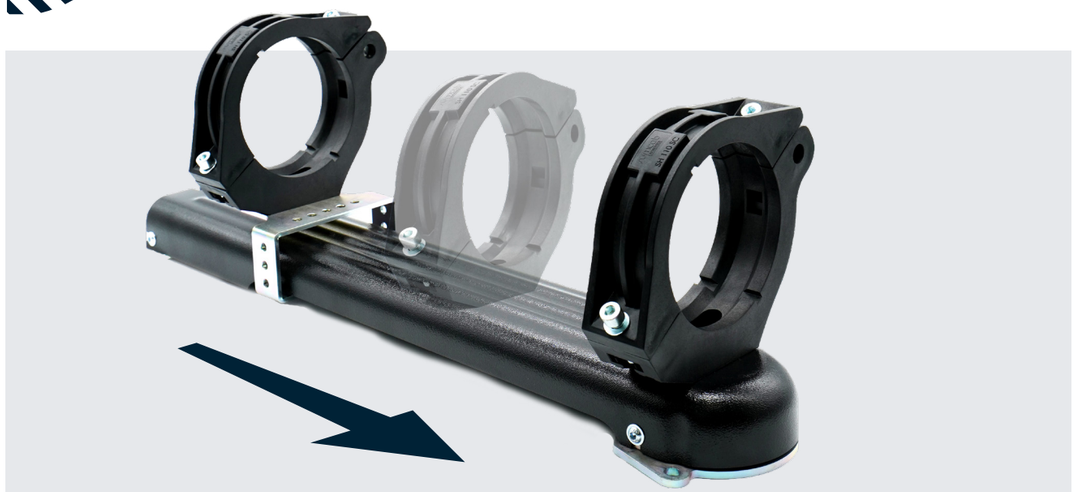
Sumoslide™

When it needs to stay visible

Patent
DE102019112399A1
EP3741522

Visible hose guide without corrugated tube

SUMOSLIDE is a tubeless retraction system where the dresspack always remains visible. It also does not rely on the use of a corrugated tube as a dresspack guide. This makes it particularly suitable for applications such as stud welding or bonding operations where corrugated tubes cannot be used, and visibility of the feed hose must always be ensured.



Design and functionality

SUMOSLIDE consists of a lightweight aluminum slide with a tension spring as a mechanical retraction element.

The dresspack is guided on the slide with two clamps. One of the two clamps is connected to the tension spring and can move along the carriage. The cable package is fixed to it. The second clamp is stationary and serves as a guide element for the cable assembly.

Selectable spring strength

The SUMOSLIDE system is available in three different spring strengths and can thus be optimally adapted to the size and weight of the cable package.

When is SUMOSLIDE the most suitable solution?

- For challenging path planning
- For visible dresspacks
- For narrow workpiece geometries
- For reducing damage and wear

sumcab ROBOTICS

Use cases from the automotive industry:

SUMOFLEX
For Laser welding

Situation & challenge

Laser welding processes are used more and more to join different workpieces together. In this process, the laser is guided to the robot hand with an optical waveguide in the dresspack. In conventional systems, the dresspacks are fixed to the robot arm. When the robot moves, this causes cable loops or kinks in the corrugated hose. These are particularly problematic with sensitive and expensive optical components such as optical waveguides. Due to the high stress, the optical fiber sometimes had to be replaced after only 14 days of operation.

Solution

On a customer's the laser welding robot, the SUMOFLEX system was installed. For this purpose, the suitable diameter and the optimal length of the retraction were first selected from the various SUMOFLEX options. Then the Sumcab technicians adapted the system optimally to the movement of the robot with the help of protectors.

The result: Instead of being replaced every 2 weeks, the optical waveguide has now been in operation for over 6 months without requiring any maintenance.

SUMOSLIDE
For Bonding

Situation & challenge

During battery production, in order to bond individual cells together, the adhesive must be fed to the robot hand using a visible feed hose. This hose is typically fixed to the robot arm, but the movement of the robot causes kinks. As a result, the hose is subjected to high stress and often breaks. This not only leads to high maintenance costs, but also to longer downtimes and thus lower profitability.

Solution

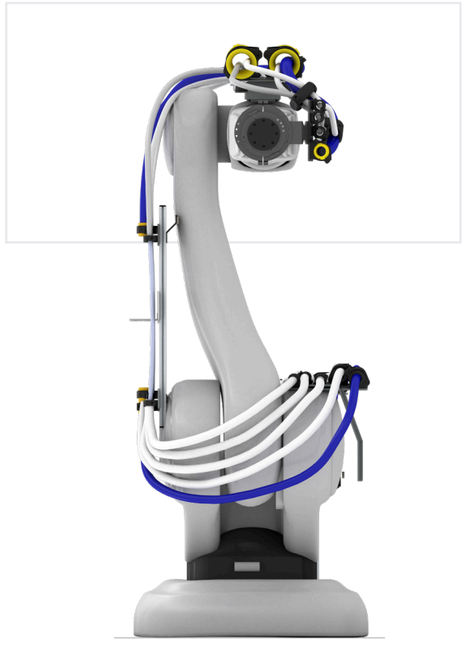
By switching to the SUMOSLIDE system, it was possible to implement a mechanical retraction system instead of additional dresspack length for an adaption to the movement. And the feed hose nevertheless remains visible.

The result: As the SUMOSLIDE could minimize the kinks during movements, the feed hose remains intact for significantly longer and maintenance costs and downtimes are reduced.

Further Options & Extensions

Versatile adapter plates e.g. for twin solutions

Thanks to a variety of different adapter plates, very individual solutions can be realized quickly and flexibly. For example, SUMOFLEX and SUMOSLIDE can be combined on one robot arm to ensure optimum dresspack guidance.

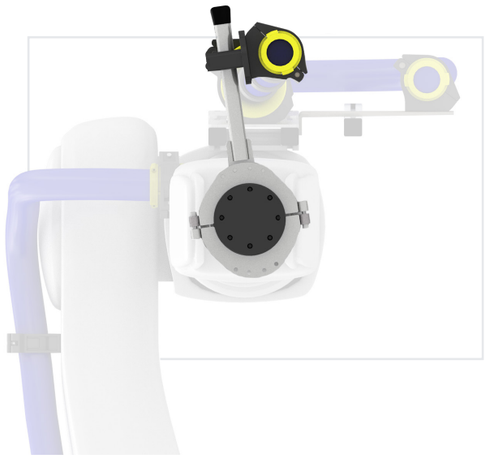


Pivoting device

For process-safe dresspack guidance to the connection point on axis 3, SUMCAB Robotics offers a pivoting device. It is mounted on the and replaces a hall installation gallow. This makes the feed less susceptible to faults and allows the degrees of freedom of axis 1 to be used without much restriction.

Rod bracket for the hand axis

The rod bracket is used to mount the dresspack on the hand axis of the robot. The ball joint bracket ensures that the dresspack is not only kept at a distance, but also remains movable.



Consulting and service for optimized robot movements

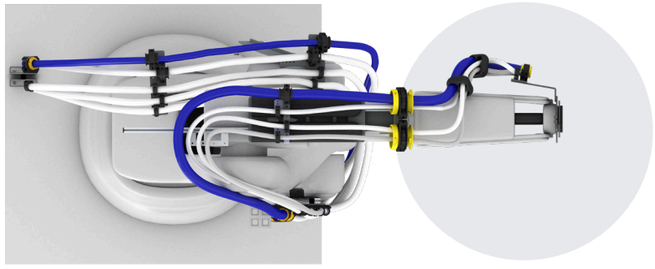
Installation, path optimization and maintenance by our SUMCAB Robotics experts

Every application brings its own challenges. That is why we support our customers in selecting the appropriate energy and media supply system and also carry out the installation at your site.

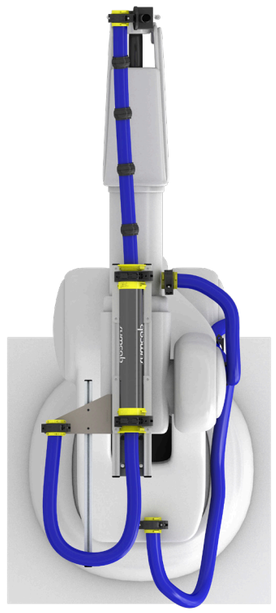
Together with our customers, we optimize the arm movement of the robot to the possibilities offered by a retraction system that is tailored to the application.

Because a well-guided robot motion reduces wear and maintenance, allows to shorten process cycle times and increases the productivity of the process.

And after installation, we stay in touch with our customers for support and work to ensure that the system is working 100 percent.



Sumoslide



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