

Sumcab Robotics

Mechatronic Peripherals for Industrial Robots



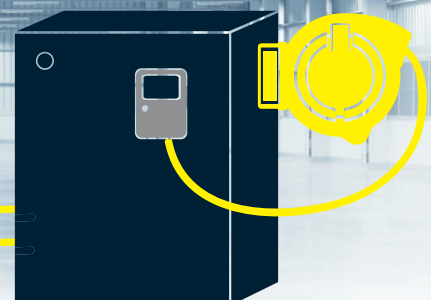
DRESSPACK SYSTEMS

SERVICE & MAINTENANCE



CABLE RETRACTION SYSTEM

SPECIALE CABLES



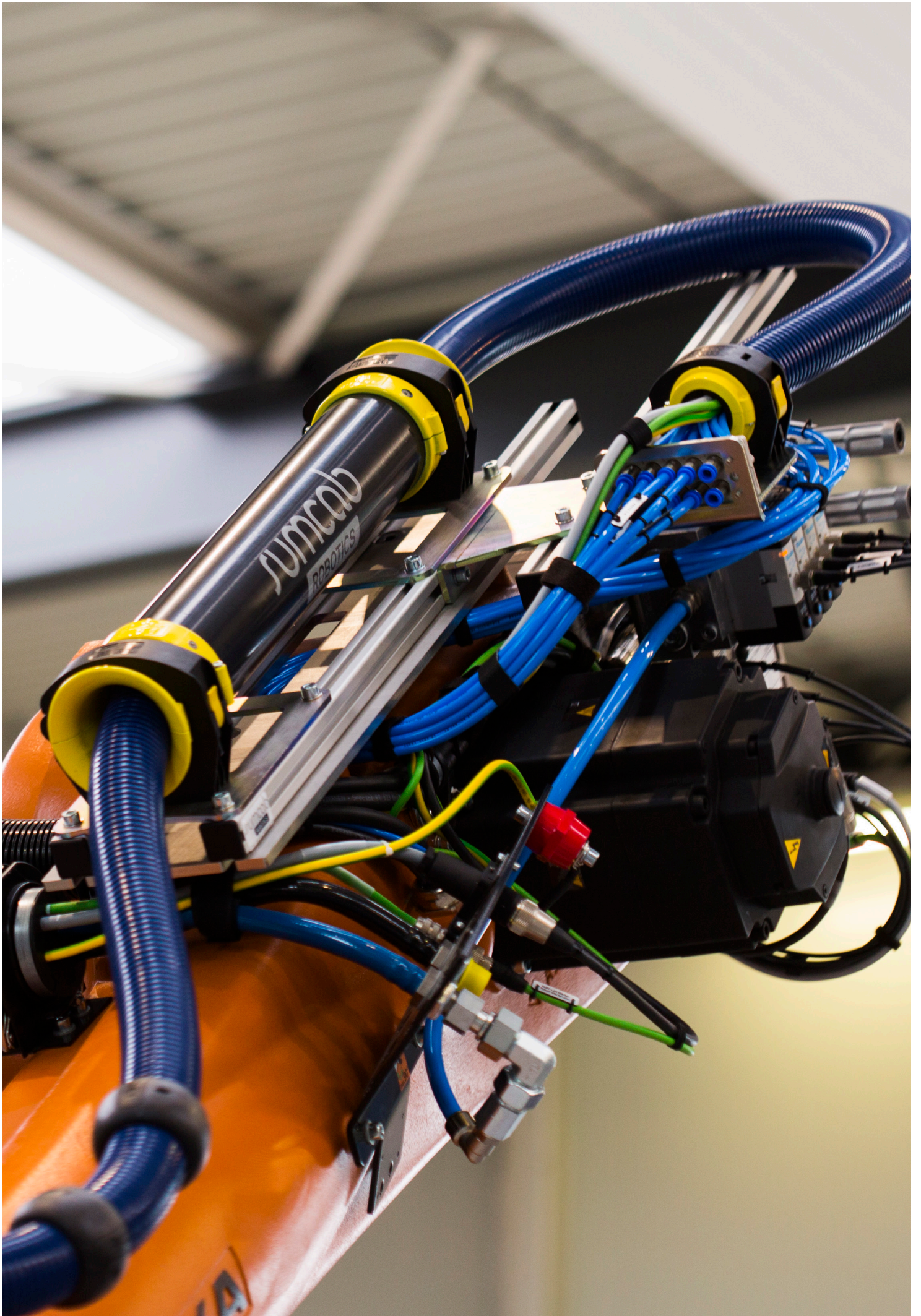
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„Our mission at Sumcab Robotics is to provide our customers with rapid, reliable and customer-oriented technical solutions in the form of high-quality products and services.

We provide a comprehensive, single-source product-service combination including everything from the initial consultation to the development of application-specific products to the installation, optimisation and maintenance of new and existing systems“.

Lothar Schütz,
Geschäftsführer

”



About Sumcab Robotics

Sumcab Robotics was founded in 2008 as a subsidiary of the Spanish Sumcab Specialcable Group.

The objective was to establish the company in the German - and, in the longer term, European and international - market as a specialist for mechatronic peripherals for industrial robots.

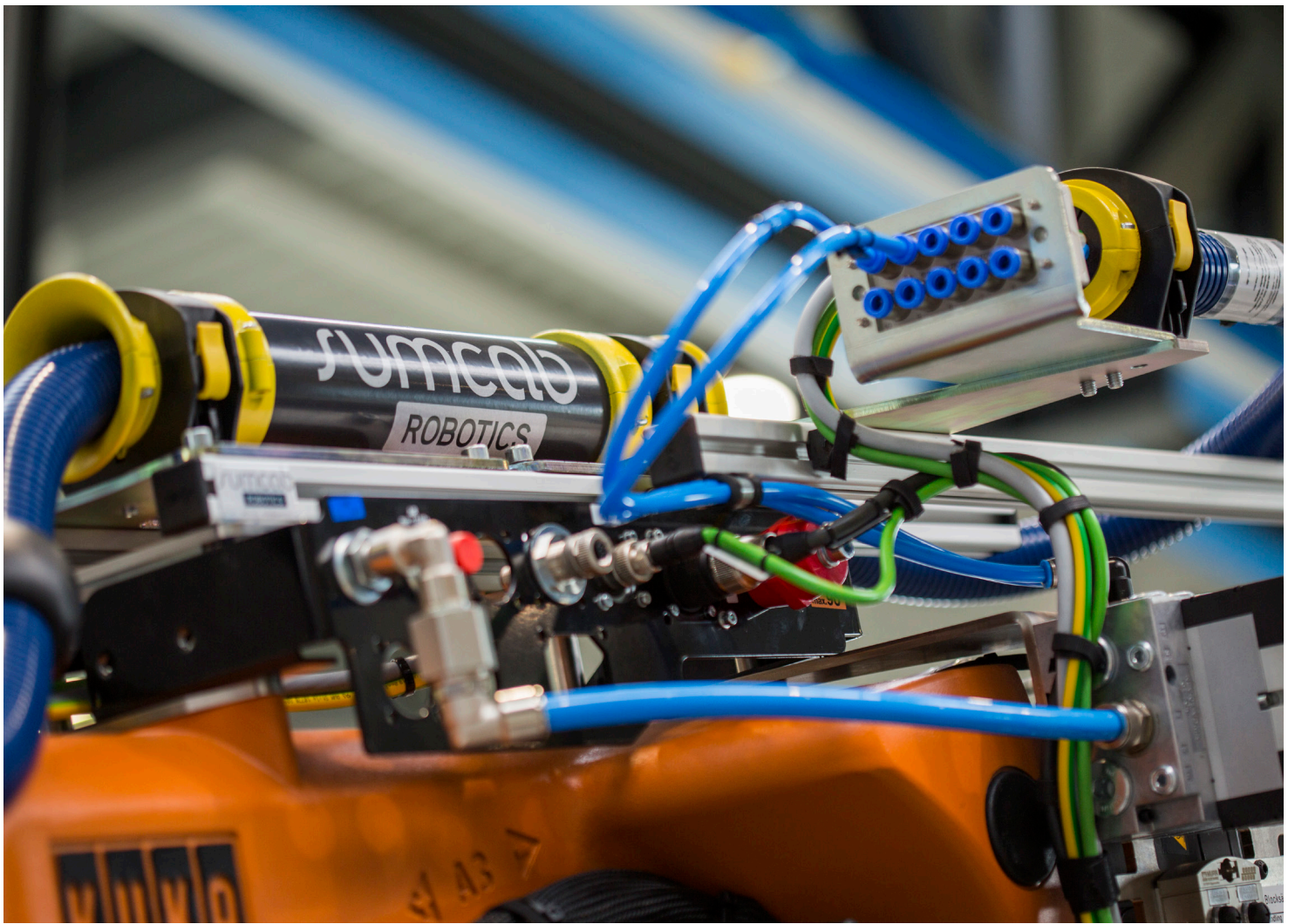
That is why, ever since the company was founded, we have consistently focused on the development of a product and services portfolio specifically adapted to the requirements of manufacturers and operators of industrial robots.

In addition to high-quality products, such as the MTPReel™ cable retraction system, application-specific cable package systems and a wide range of special cables (by the metre or preassembled ready to install), we at Sumcab Robotics offer our customers technical solutions in combination with a comprehensive service portfolio.

Among other things, this development was made possible through a collaboration network comprising several partner companies in Italy (RMD) and Spain (Sumcab Specialcable Group). We develop innovative products by pooling our assembly and production activities, which promotes the transfer of technological solutions and developments to other areas of application.

In 2019, decade after the company was founded, we at Sumcab Robotics were able to look back on an eventful and successful period.

Welcome to Sumcab Robotics!



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service overview

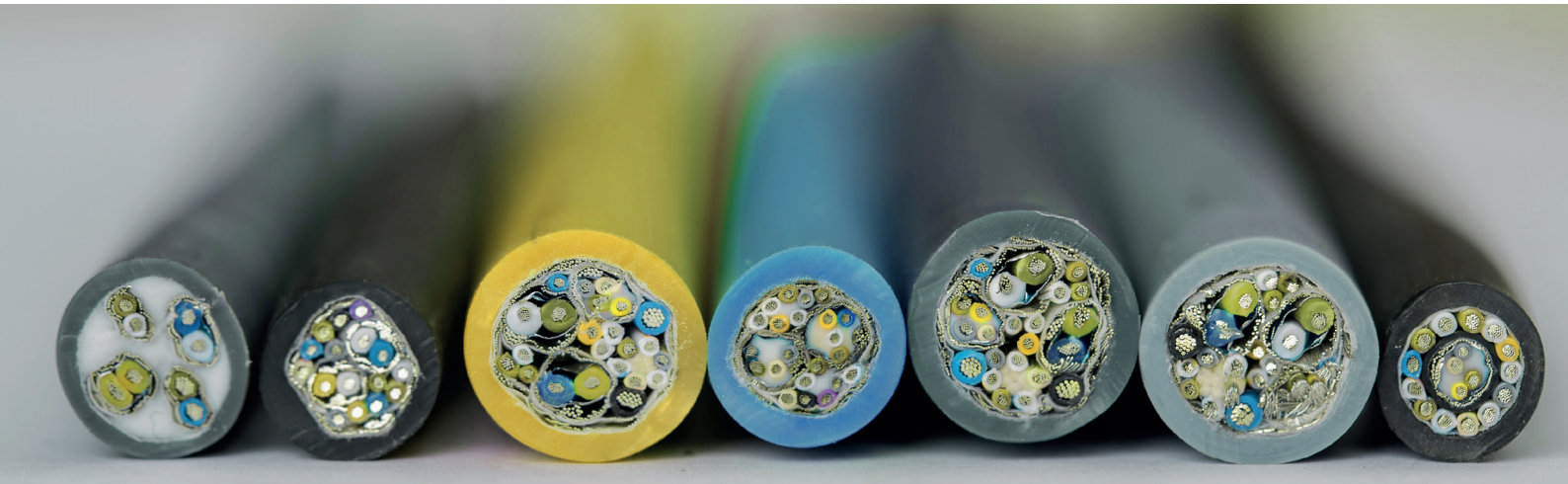
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Special Cables

to Meet the Tough Demands of the Robotics Industry

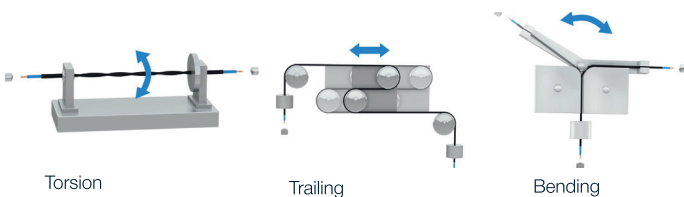
Sumcab Robotics offers a single source for all your requirements from product development to prototyping to the packaged and preassembled connection-ready cable. We design products to the highest possible quality so that you can focus on your core business. Innovative, Reliable and Forward-Looking.

We don't just produce cables - we come up with solutions.



Reliability and Quality

To ensure the reliability of our products, we have a technical laboratory equipped with our own 3D test system, which enables us to test how our cables perform under high acceleration and braking conditions and when subjected to continuous traction, compression, bending and torsion.



Our Scope of Services

Our product and service portfolio includes everything from unpackaged cables (sold by the metre) for chain cable carriers and robotics applications to special connection-ready cables, such as robot connector and positional-axis-arm cables for teach panels, to the development of bespoke cabling systems tailored to specific customer requirements.

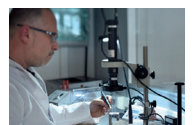
In relation to the latter, we offer a comprehensive service palette covering everything from initial design to prototyping, small-scale and serial production, testing and validation of the finished cables in our in-house test lab and, if desired, on-site component installation at the customer's premises.



Special cables available by the metre



Ready-to-use special cables



Special cables, new developments

All our cables and power leads are constructed, produced, tested and refined with the greatest possible care. We can produce prototypes starting at 100 m and serial products starting at 300 m with extremely short lead times of just 3 weeks!

Special Cables by the Metre

Due to the continuous bending to which they are subjected, power leads for chain cable carriers and robot applications have to have excellent mechanical strength.

We have developed the Sumodrive® and Sumflex® Mechatronic product ranges specifically for this application area. Compared to traditional products, these cables can withstand millions of bend, torsion and traction cycles and are, in addition, resistant to a wide range of environmental influences.

Connection-Reading Special Cables

➤ Connector, Adaptor and Extension Cables for Teach Panels

Our special “connection-ready” cable product range includes a comprehensive assortment of connector, adaptor and extension cables for teach panels – available for the majority of popular robot and machinery control systems.

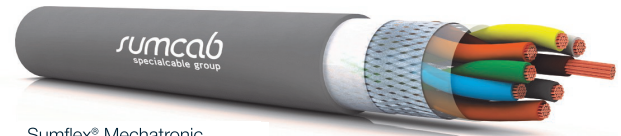
➤ Robot Connection and Positional-Axis-Arm Cables

The Sumflex® Mechatronic Robot Connection Cables were specially developed for the transmission of power output and control signals for the reliable operation of your robot’s servomotors for the six positional axis arms.

In addition, the Robotic Connection Cable range includes an extensive assortment of cables with factory-fitted connections made to original manufacturer standards.

Bespoke Special Cables

Our customers’ requirements are highly complex and different from one another. Our candid and competent consultancy service will help you find the right, application-specific solution for maximum system uptime and efficiency.



Sumflex® Mechatronic cable for robot applications

Range of products

- Signal & data cables
- Supply and control cables
- Encoder & resolver cables
- Engine cables
- Data transmission cables
- Cables for robot applications



SIEMENS extension and adapter cable



KUKA extension and adapter cable



Sumflex® Mechatronic robot connection cable KUKA



Also suitable for use in the cable carrier of the robot travelling axis



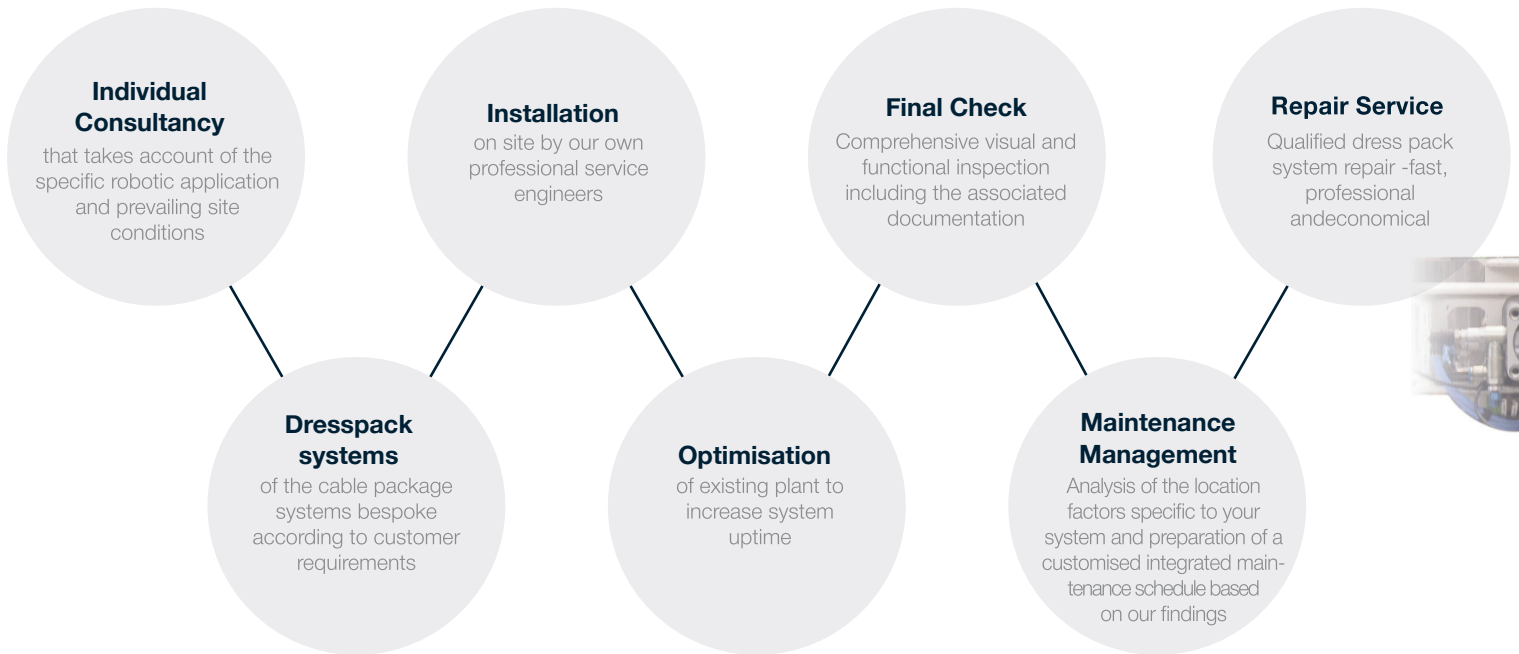
Dresspack systems

for Reliable Production Processes

A reliable power supply and data connection are crucial in the industrial production environment, which is why it's all the more important to ensure that the appropriate robot peripheral products are used in a manner that meets the requirements, as incompetently optimised robot installations can be result in higher wear and tear or even a complete production shutdown.

Due to our extensive experience gathered over many years, we at Sumcab Robotics are familiar with the various types of industrial robots and the areas in which they are deployed. Rather than providing standard products, we make it our business to design bespoke solutions in a rapid and flexible manner.

We develop, optimise and install everything from pre-wired dresspack systems to robotically-guided tools and teach panels for a reliable production process that exploits the full potential of their robot.



New Retraction System Types

for a wide range of applications

We have developed a variable modular concept with our new SUMOSLIDE (Sumcab Motion Slide) and SUMOFLEX (Sumcab Motion Flex) retraction systems that enables us to implement individually tailored hose package installations for a wide range of applications.

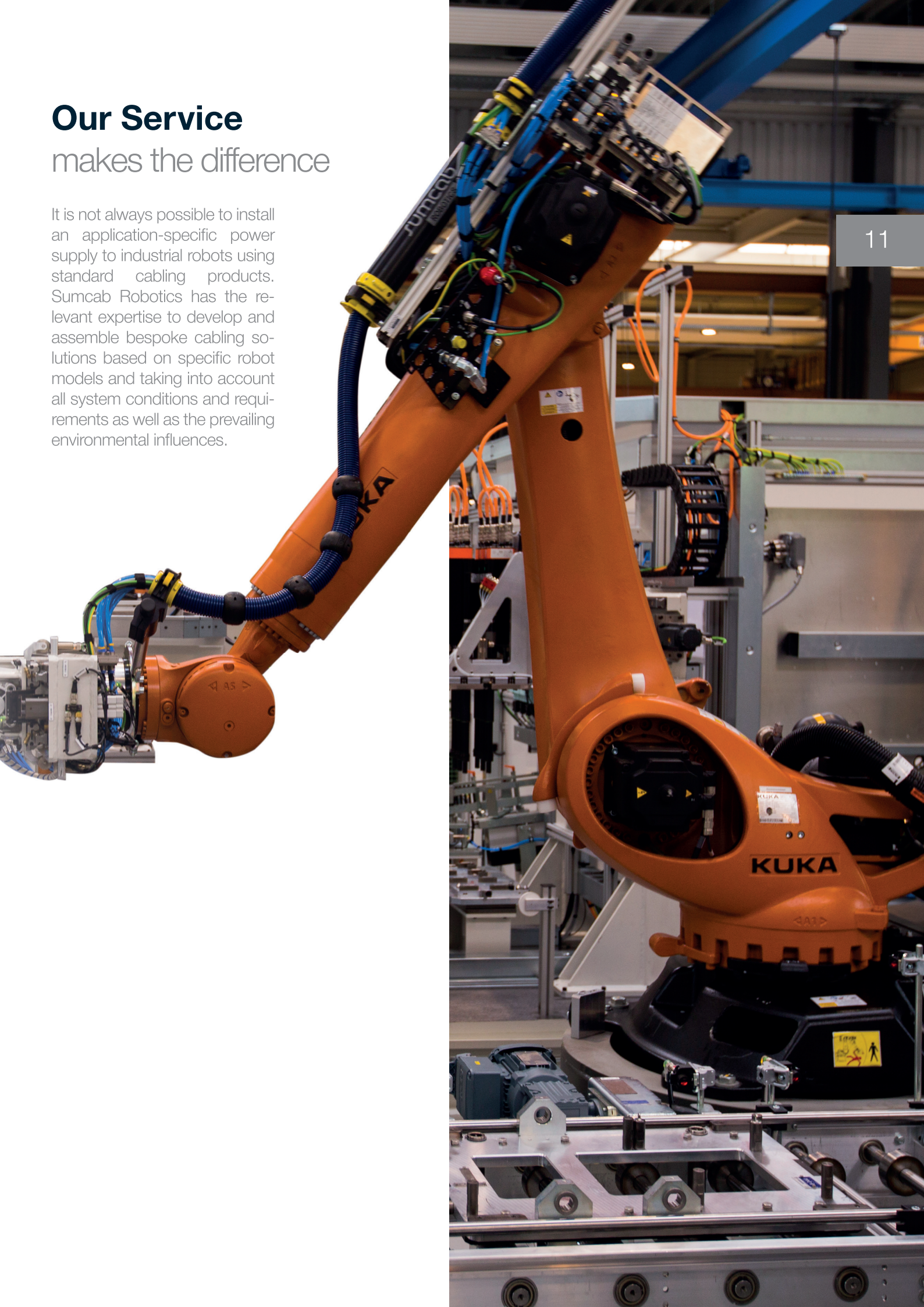
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Assembling the dresspack systems is only part of our service offering. The basis for a reliable dresspack systems can only be ensured by a professional installation. Sumcab Robotics maintains a team of competent and experienced service engineers dedicated to this task.

Our Service

makes the difference

It is not always possible to install an application-specific power supply to industrial robots using standard cabling products. Sumcab Robotics has the relevant expertise to develop and assemble bespoke cabling solutions based on specific robot models and taking into account all system conditions and requirements as well as the prevailing environmental influences.



SUMOFLEX (Sumcab Motion Flex)

Modular system for maximum flexibility



SUMOFLEX is a classic retraction system with a compression spring mounted on the corrugated tube. It is suitable for corrugated pipe diameters of 36, 48 and 70.

The advantage of this system is its modular design: both the corrugated tube diameter and the length of the pluggable retraction tube, and, therefore, also the spring travel, can be selected flexibly.

Thanks to this modular principle, the SUMOFLEX system can be planned in different lengths to cater to any pinch points around the robot. It provides a high degree of adaptability and is available in a wide variety of designs and assembly variants.

Dresspack systems can be replaced without tools using screwless system holders.

Benefits of the System

- Modular system for maximum flexibility: variable corrugated tube diameter and plug-in retraction tube length
- Maintenance-friendly
- Robust and low-wear



System Components at a Glance

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Complete your dresspack system with the right cables! Sumcab Robotics specialises in pre-assembled robot connection and traversing axis cables for industrial robots. The Robotic Connection Cable range includes an extensive assortment of cables with factory-fitted connections made to original manufacturer standards.

SUMOSLIDE (Sumcab Motion Slide)

Compact retraction system for smaller installation spaces



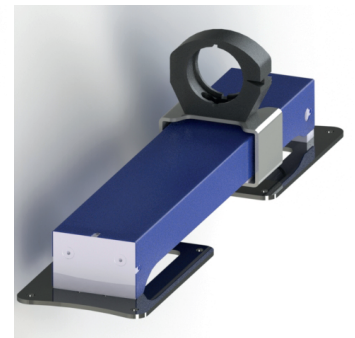
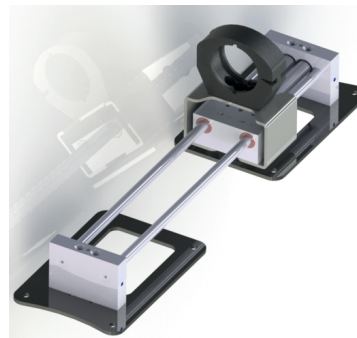
The SUMOSLIDE features an extremely compact design and a linear forward and backward movement of the spring carriage. These design features prevent tight bending radii and looping on the robot. This makes the SUMOSLIDE ideally suited for guiding corrugated tubeless components such as suction hoses, feed hoses or heating hoses.

Due to its compact design, the SUMOSLIDE enables a slim guidance of the hose package on the robot arm, which reduces pinch points and the risk of wear and damage, making it the ideal solution for smaller installation spaces.

The screwless system holder enables the replacement of the guided cable or dresspack without tools.

Benefits of the System

- Ideal for guiding feed hoses
- For smaller installation spaces
- Very few pinch points
- Twin and multiple solutions possible
- Maintenance-friendly



System Components at a Glance

SUMOFLEX (Sumcab Motion Flex)

SUMCAB extends the product portfolio SUMOFLEX in small robotics for industrial robots



1 Dresspack system axis 3-6
suitable for corrugated hose
diameters of NW17, 29, 36
Including the robot-side interface at axis 4

2 Dresspack system axis 1-6
suitable for corrugated pipe
diameters of NW17, 29, 36
optional: hose guide around axis 1

Benefits of the System

- Modular system for maximum flexibility: variable corrugated hose diameter and plug-in retraction tube length
- Maintenance-friendly
- Robust and low-wear
- Compact and lightweight design

Individual Components

for cable packages and components for the Robotic



With the help of the system holder, usually made of polyamid, the dresspack are held and guided in various forms on the robot. The primary target is operational and production safety, durability and lifespan of the complete system. The four nominal sizes for line packages are 29mm, 36mm, 48mm und 70mm.

SUMCAB corrugated hose



description	Item number
Corrugated hose NW29 black	90.003.000.004.012
Corrugated hose NW36 blue	91.223.050.036.000
Corrugated hose NW36 black	91.223.050.036.001
Corrugated hose NW48 blue	91.223.050.048.000
Corrugated hose NW48 black	91.223.050.048.001
Corrugated hose NW70 blue	91.223.050.070.000
Corrugated hose NW70 black	91.223.050.070.001

Individual Components

system holder screwed



description	item number
system holder SH 45SC	91.205.060.019.451
system holder SH 70SC	91.205.060.019.701
system holder SH 90SC	91.205.060.019.901
system holder SH 110SC	91.205.060.019.111

system holder screwless



description	item number
system holder SH 45S	91.205.060.019.451
system holder SH 70S	91.205.060.019.701
system holder SH 90S	91.205.060.019.901

pipe clamp & base plate



description	item number
pipe clamp Ø32mm	90.011.000.000.092
base plate for system holder	91.205.191.032.002

SUMOFLEX retraction system

compression spring, tube, counterhold, end piece



description	item number
SUMOFLEX NW29 25cm	91.202.182.229.250
SUMOFLEX NW36 35cm	91.202.182.236.350
SUMOFLEX NW48 35cm	91.202.182.248.350
SUMOFLEX NW48 50cm	91.202.182.248.500
SUMOFLEX NW70 50cm	91.202.182.270.500

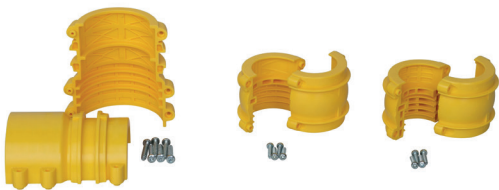
Individual Components

SUMOFLEX end piece



description	item number
SUMOFLEX end piece SR29S NW29	91.205.060.319.450
SUMOFLEX end piece SR36S NW36	91.202.050.619.360
SUMOFLEX end piece SR48S NW48	91.202.050.619.480
SUMOFLEX end piece SR70S NW70	91.202.056.197.000

end piece for corrugated hose



description	item number
end piece corrugated hose KT36S for NW36	91.202.050.600.360
end piece corrugated hose KT48S for NW48	91.202.050.600.480
end piece corrugated hose KT70S for NW70	91.202.050.600.700

protector screwless



description	item number
protector for corrugated hose NW29	91.205.060.016.291
protector for corrugated hose NW36	91.205.060.016.361
protector for corrugated hose NW48	91.205.060.016.481
protector for corrugated hose NW70	91.205.060.016.701

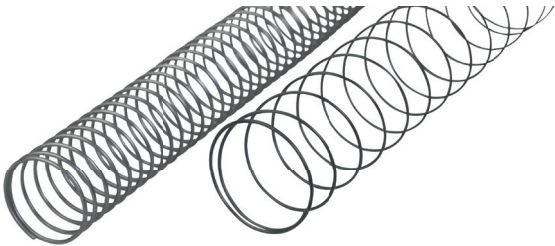
ring & guides



description	item number
ring for corrugated hose NW29	91.205.060.018.290
ring for corrugated hose NW36	91.205.060.018.360
ring for corrugated hose NW48	91.205.060.018.480
ring for corrugated hose NW70	91.205.060.018.700

Individual Components

SUMOFLEX compression spring



description	item number
compression spring NW 29	91.205.060.029.300
compression spring NW 36 - short	91.205.060.036.501
compression spring NW 36 - long	91.205.060.036.500
compression spring NW 48 - short	91.205.060.048.701
compression spring NW 48 - long	91.205.060.048.700
compression spring NW 70	91.205.060.070.900

clamping ring NW36/48



description	item number
clamping ring 36-48	91.205.110.048.XX0
XX = clamping ring inside diameter in mm (varies in 2mm steps)	

clamping ring NW70



description	item number
clamping ring NW 70	91.205.110.070.XX0
XX = clamping ring inside diameter in mm (varies in 2mm steps)	

heat protection sleeve



description	item number
NW60, length 500mm	90.009.000.000.004
NW60, length 1000mm	90.009.000.000.002
NW85, length 500mm	90.009.000.000.005
NW85, length 1000mm	90.009.000.000.006
NW85, length 1500mm	90.009.000.000.007
NW85, length 2000mm	90.009.000.000.008

Individual Components

SUMFLEX Mechatronic Profinet

M12 D-cod. male to M12 D-cod. male



description		item number
SUMFLEX Mechatronic Profinet	4,0m	81.700.000.000.029
SUMFLEX Mechatronic Profinet	5,0m	81.700.000.000.009
SUMFLEX Mechatronic Profinet	6,0m	81.700.000.000.028

Further cable variants on request

SUMFLEX Mechatronic Power Supply

7/8" 5pole male to 7/8" 5pole female



description		item number
SUMFLEX Mechatronic Power	4,0m	81.700.000.000.027
SUMFLEX Mechatronic Power	5,0m	81.700.000.000.007
SUMFLEX Mechatronic Power	6,0m	81.700.000.000.022

Further cable variants on request

Individual Components

PUR - hoses with fabric insert

description	item number
hose with fabric insert, 12.5 x 19.0, green	98.000.050.050.120
hose with fabric insert, 16.5 x 23.0, green	98.000.058.050.120
hose with fabric insert, 19.5 x 27.0, green	98.000.075.050.120
hose with fabric insert, 6.4 x 12.0, green	98.000.025.050.120
hose with fabric insert, 9.5 x 16.0, green	98.000.038.050.120
hose with fabric insert, 12.5 x 19.0, red	98.000.050.050.060
hose with fabric insert, 16.5 x 23.0, red	98.000.058.050.060
hose with fabric insert, 19.5 x 27.0, red	98.000.075.050.060
hose with fabric insert, 6.4 x 12.0, red	98.000.025.050.060
hose with fabric insert, 9.5 x 16.0, red	98.000.038.050.060
hose with fabric insert, 12.5 x 19.0, transparent	98.000.050.050.150
hose with fabric insert, 16.5 x 23.0, transparent	98.000.058.050.150
hose with fabric insert, 19.5 x 27.0, transparent	98.000.075.050.150
hose with fabric insert, 6.4 x 12.0, transparent	98.000.025.050.150
hose with fabric insert, 9.5 x 16.0, transparent	98.000.038.050.150
hose with fabric insert, 12.5 x 19.0, blue	98.000.050.050.030
hose with fabric insert, 16.5 x 23.0, blue	98.000.058.050.030
hose with fabric insert, 19.5 x 27.0, blue	98.000.075.050.030
hose with fabric insert, 6.4 x 12.0, blue	98.000.025.050.030
hose with fabric insert, 9.5 x 16.0, blue	98.000.038.050.030
hose with fabric insert, 12.5 x 19.0, grey	98.000.050.050.080
hose with fabric insert, 16.5 x 23.0, grey	98.000.058.050.080
hose with fabric insert, 19.5 x 27.0, grey	98.000.075.050.080
hose with fabric insert, 6.4 x 12.0, grey	98.000.025.050.080
hose with fabric insert, 9.5 x 16.0, grey	98.000.038.050.080

Individual Components

PUR - hoses with fabric insert

description	item number
hose with fabric insert, 12.5 x 19.0, yellow	98.000.050.050.100
hose with fabric insert, 16.5 x 23.0, yellow	98.000.058.050.100
hose with fabric insert, 19.5 x 27.0, yellow	98.000.075.050.100
hose with fabric insert, 6.4 x 12.0, yellow	98.000.025.050.100
hose with fabric insert, 9.5 x 16.0, yellow	98.000.038.050.100
hose with fabric insert, 12.5 x 19.0, black	98.000.050.050.010
hose with fabric insert, 16.5 x 23.0, black	98.000.058.050.010
hose with fabric insert, 19.5 x 27.0, black	98.000.075.050.010
hose with fabric insert, 6.4 x 12.0, black	98.000.025.050.010
hose with fabric insert, 9.5 x 16.0, black	98.000.038.050.010



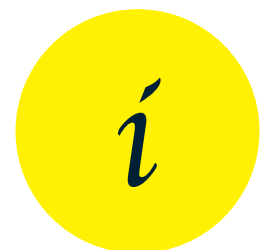
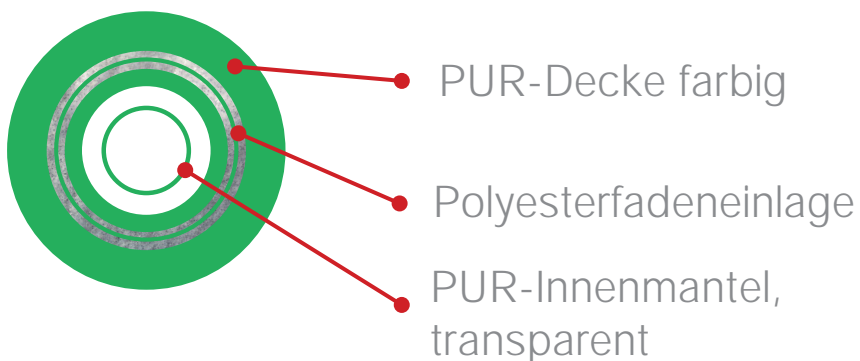
Individual Components

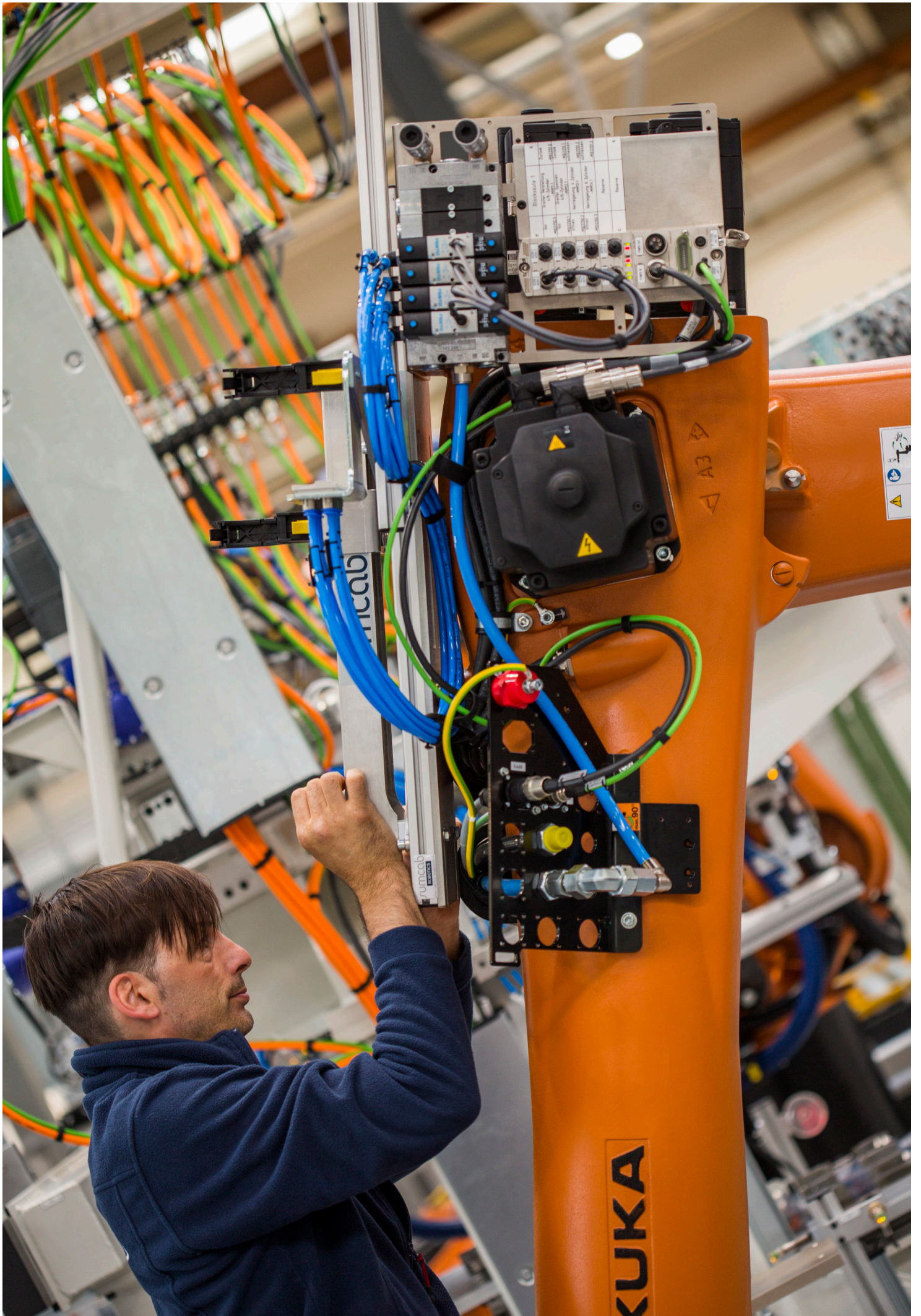
PUR - hoses with fabric insert

outside Ø mm	inside Ø mm	Zoll operating pressure Inches	max. burst pressure BAR	min. BAR	vacuum BAR	weight gr/m	min. bending radius mm
12,0	6,4	1/4	25	95	1	80	25
16,0	9,5	3/8	20	85	1	130	45
19,0	12,5	1/2	20	80	1	200	55
23,0	16,5	5/8	18	50	-	260	75
27,0	19,5	3/4	16	45	-	30	110

Material und Farbe	PUR 85 - Shore A, transparent, Polyesterfadeneinlage (Außendecke farbig)
Temperaturbereich	-40° C - +85°C
Aufdruck Außenmantel	Innen-Ø x Wandstärke, Produktionsdatum
Lieferzeit	Mit Artikel-Nr. aus freibleibendem Lagervorrat, andere Ausführungen auf Anfrage.
Aufmachung	50m Ring
Anwendungsbereiche	Energieketten, Roboter- und Anlagenverschlauchung (Medientrassen) in der Automobilindustrie

Dreischichtiger PUR-Steckschlauch





The MTPReel™ Cable Retraction System

Safety and Order in the Production Environment

Sumcab's patented automatic MTPReel™ cable retraction system was developed with the objective of improving working and safety conditions in the production environment.

How it works

The MTPReel™ cable retraction system was specially designed for the connector cables of handheld teach panels for industrial robots.

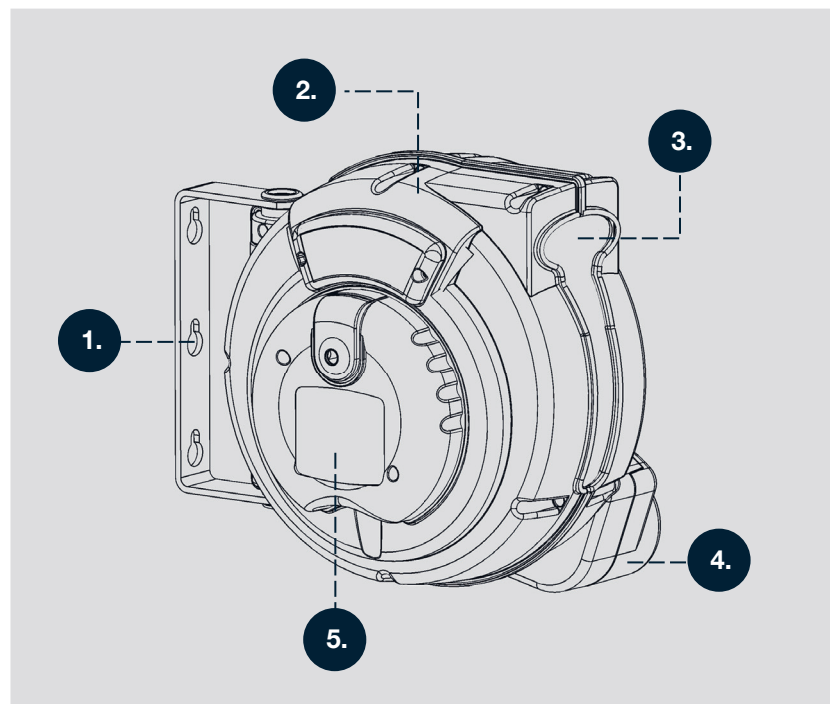
The system facilitates the safe and orderly storage of the connector cable when the teach panel is no longer in use, preventing premature wear and tear on the cable and eliminating a trip hazard.

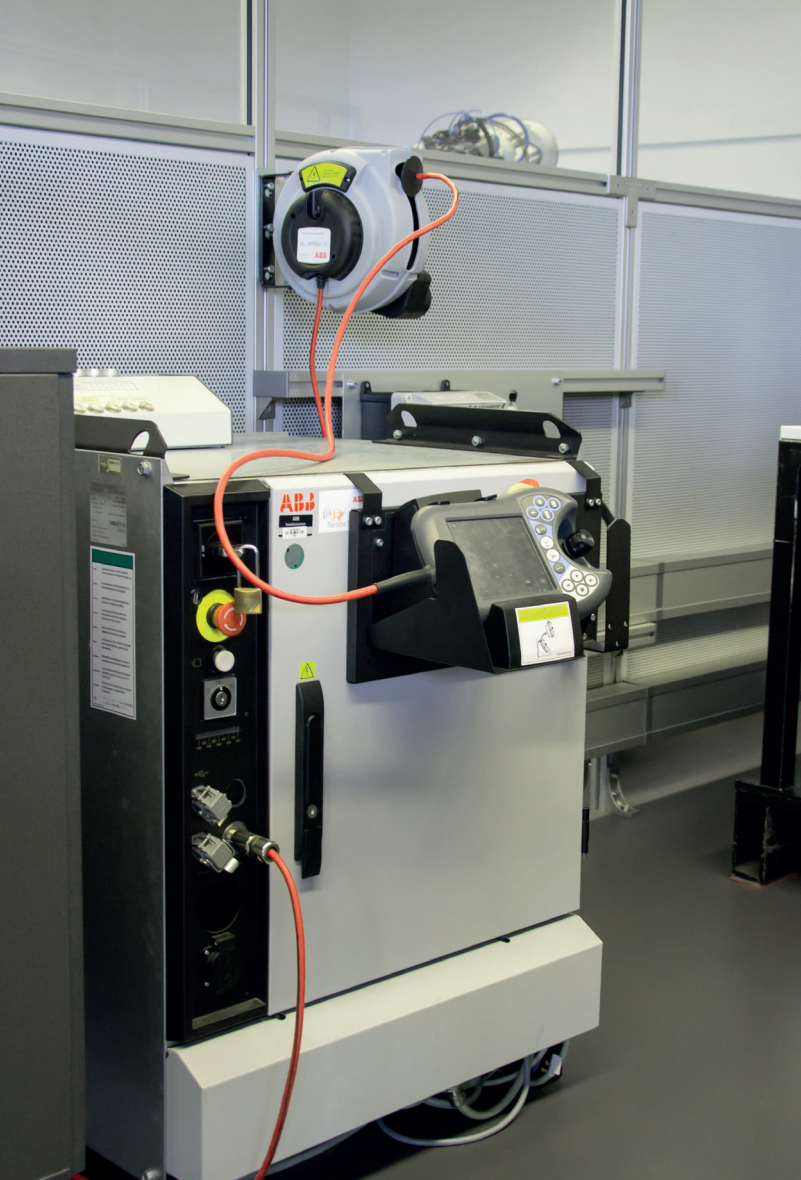
Features

1. A robust sheet steel mounting bracket allows the MTPReel™ to be orientated in the direction of extraction
2. A robust casing made of shockproof plastic
3. Flexible, fire resistant and resilient polyurethane connector cable
4. Integrated brake module for careful and controlled cable retraction
5. Integrated:
 - Spring-loaded guide pulley for convenient cable retraction
 - Detachable automatic cable extraction and retraction arrestor every 50 cm
 - Redating contact system for reliable data transmission



The MTPReel™ is available in various sizes with a range of cable lengths for almost all robot control systems on the market. Any conceivable variation can be designed using the MTPReel™ configuration tool on our website.





Benefits

An end to cable spaghetti!

Safety and Order

Through the orderly storage of the connector cable after using the teach panel, eliminating trip hazards and enabling a more effective use of floor space.

Conservation of Resources

Through the orderly storage of the connector cable within the MTPReel™, which protects the cable from contamination and damage and ensures that the teach panel can always be operated without problems.

Time and Cost Savings

Through the simple operation of the system. The detachable automatic cable extraction and retraction arrester enables a rapid but careful retraction of the connector cable.



Trip hazards due to cables lying around on the floor are a thing of the past with the MTPReel™.

Service Portfolio

for reliable production processes

Our mission at Sumcab Robotics is to provide our customers with rapid, reliable and customer-oriented technical solutions in the form of high-quality products and services. We provide a comprehensive, single-source product-service combination including everything from the initial consultation to the development of application-specific products to the installation, optimisation and maintenance of new and existing systems.

Service & Support

Our customers' requirements are highly complex and different from one another. Our candid and competent consultancy service will help you find the right, application-specific solution for maximum system uptime and efficiency.

Development & Production

Together with our customers, we develop a technical implementation plan, which includes comprehensive documentation, CAD-based construction drawings and, if desired, sampling and prototyping. We view it as an equal partnership.

Installation & Final Check

A competent team of experience service engineers ensures that our products are professionally installed and commissioned at the customer's site. Following a detailed visual and functional inspection and the preparation of the relevant documentation, our final check provides you with confirmation that the system is working correctly within the robot production line.



Maintenance & Repair

Industrial robot failures are inefficient and expensive. A bespoke maintenance plan can be prepared, which usually more cost effective than paying for repairs as and when faults occur and increases process reliability. Our service includes a thorough analysis of the site conditions in which your system is operating and the preparation of a customised integrated maintenance schedule based on our findings.

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Assembling the dresspack systems is only part of our service offering. The basis for a reliable dresspack systems can only be ensured by a professional installation. Sumcab Robotics maintains a team of competent and experienced service engineers dedicated to this task.

Preventative Maintenance

Carefully coordinated with the site factors for your system

Industrial robot failures are inefficient and expensive. Sumcab Robotics preventive maintenance service facilitates planning, is usually more cost effective than paying for repairs as and when faults occur and increases process reliability.

Our Services

- Thorough analysis of the site factors for your system (such as movement sequences, ambient temperatures and external media influences)
- Review of the functionality and condition of the dresspack systems / MTPReels™
- Removal of any contamination that is affecting the functionality of the system
- Review the mechanical stability of abrasion protection and clamping rings, ball fantails and supports
- Preparation of a maintenance report including

Benefits of the System

- Cost efficiency
- Predictability
- Reduction of downtimes
- Consumables management
- Spare parts discount
- Extended warranty period
- Comprehensive service documentation

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Repair Service for Dresspack Systems

Rapid, professional and cost effective

Minimize downtime with Sumcab Robotics' powerful repair service: we not only fix the problem, but also carry out all necessary maintenance and inspections.

Our Services

- Repair of the following dresspack variants
 - Inline measurement
 - Handling
 - Handling welding
- Repairs carried out by qualified personnel
- Binding repair costs
- Use of original spares
- All dresspacks inspected for function and electrical safety



And here's how it works:

1. Fill out the repair order
(www.sumcab.en/media-center/)
and send it to us together with the defective
dresspack:

Sumcab Specialcable GmbH
Allmendstraße 10/1
74629 Pfedelbach

2. We will repair your dresspack without delay and
check it for function and electrical safety.

3. We then return the repaired and tested dresspack to
you along with a repair report.

Our Strength

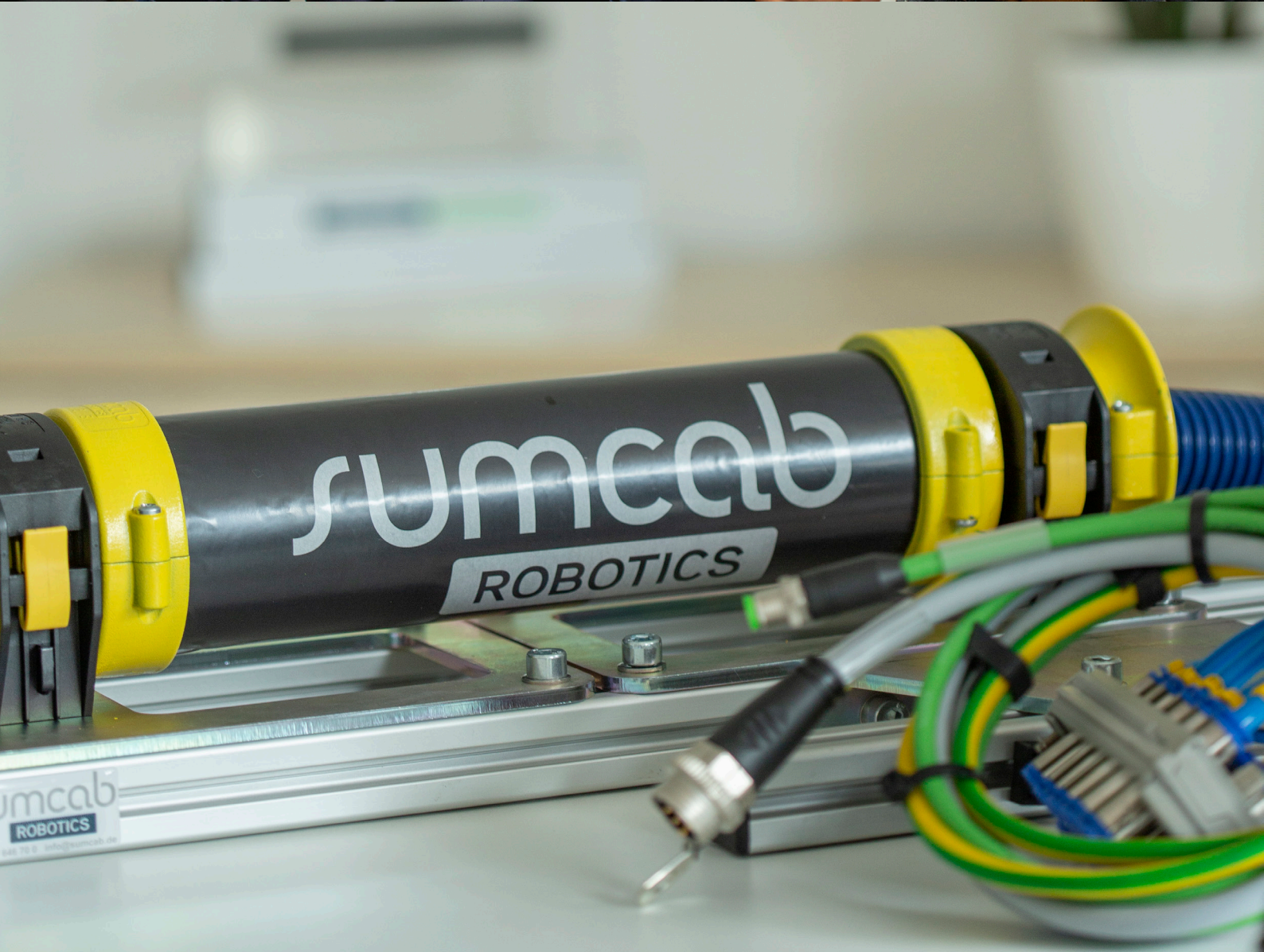
Speed & Flexibility


Whether it's a new or existing customer, initial installation or system modification, major order or small project, we deal with every issue in a quick, flexible and non-bureaucratic manner.

What allows us to guarantee this is a perfectly tuned team drawn from members of the Services, Technical and Marketing Departments.

Our experts know their trade and do everything in their power to help our customers achieve a solution in a rapid and efficient manner – the fact that our highest priority is to maximise our customers' system uptime is always uppermost in their minds.







“We’re extremely satisfied with Sumcab Robotics products. The company’s engineers do an excellent job and do everything in their power to find solutions as rapidly as possible. They really do a lot on site to ensure customer satisfaction. They only leave the assembly site when the system is working 100 per cent as it should do. We’re planning a few more joint projects”.

Rudolf Lietz,
Röchling

“Sumcab Robotics supports us in finding solutions to difficult issues. It’s not always possible to provide power to industrial robots using standard cabling products. If there are pinch points or clash conditions in a given system, appropriate solutions need to be installed on the robot. A partner, who can deal with such issues, is welcome indeed”.



Jürgen Ehleiter,
Daimler



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