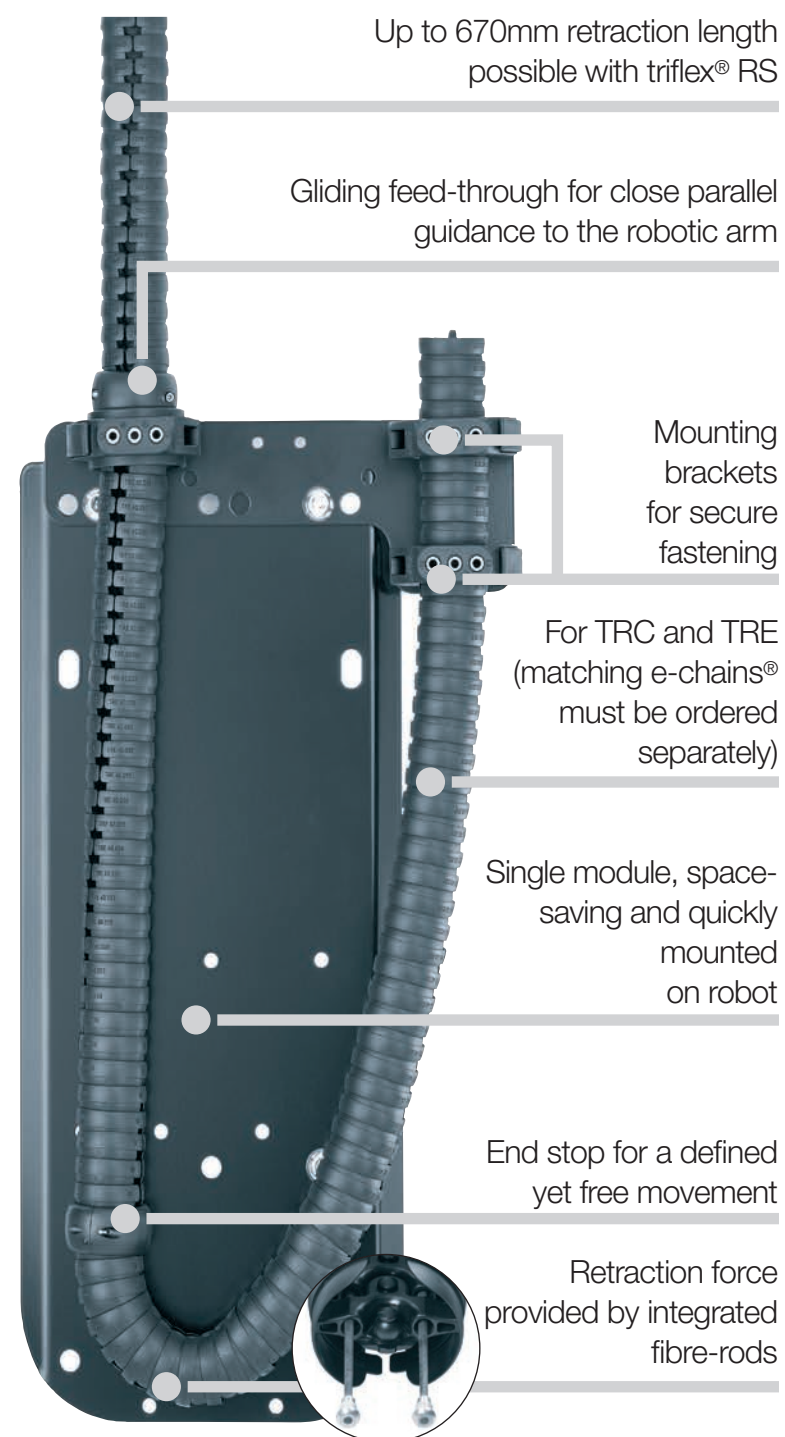


RS retraction system

Modular retraction system



Modular retraction system - triflex® RS

triflex® RS is a retraction system for robots with medium to high payloads. With triflex® RS, the multi-axis triflex® R e-chain® is routed parallel to the robot arm. Integrated fibre rods produce a directed pretension, avoiding the formation of loops in the working area of the robot head. This also allows applications to be implemented in very limited space. triflex® RS offers safe energy supply for tools without stressing the cables, thus minimising downtimes.

- Space-saving, closely routed on the robot arm
- A system solution proven and tested in thousands of applications
- Universal installation
- Integrated fibre-rods - no external mechanical components such as springs or steel cables required!

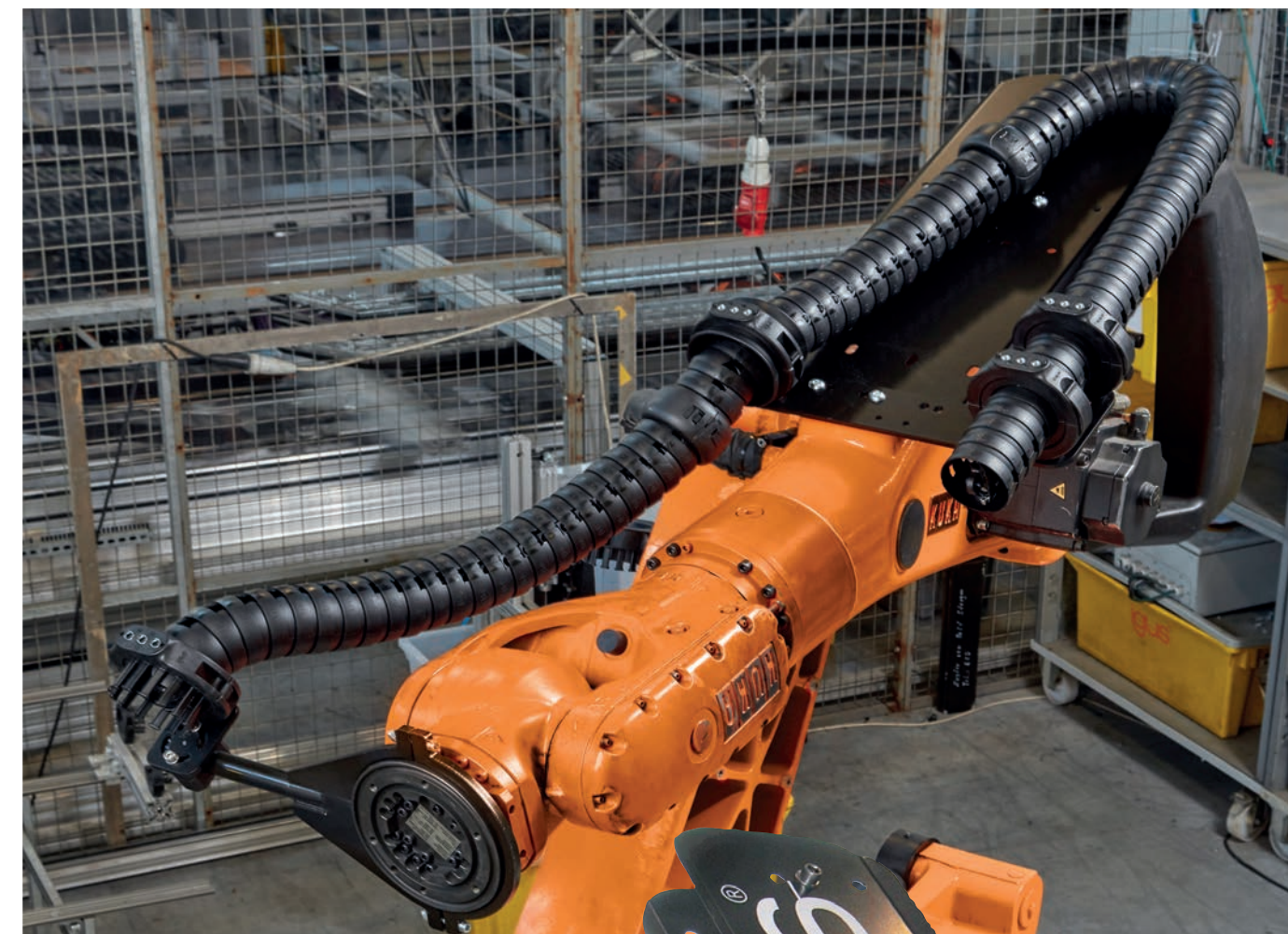


Video online

► www.igus.co.uk/RS_movie

RS applications

RS - R(etraction) S(ystem)



triflex® RS for a low profile retraction system. The triflex® RS retraction unit runs parallel to the robot arm



Option: triflex® RS with cover for more mounting space

RS retraction system

System design with matching e-chain®

Optional cover for additional installation space on the robot: **TR.RS.XX.COVER**

Matching trifix® R e-chains® for RS with integrated fibre-rods

TRC.RS.XX.R.LLLL.0

TRE.RS.XX.R.LLLL.0.B



RSE linear system (without e-chain®) +

Support plate +

Mounting bracket +

Gliding feed-through =

TR.RS.XX.L or **TR.RS.XX.R**

Overall e-chain® length =
additional length from the
gliding feed-through **LLLL** +
the e-chain® length
within the system

Complete, modular retraction system RS with fixed end left and trifix® R e-chain® TRE series. Mounting bracket and gliding feed-through are included. Please order matching trifix® R e-chain® and optional cover separately.

RS retraction system

Order examples for retraction system including e-chain®



Sample order of a complete TR.RS system, Ø-Index 60, fixed end on the left, including cover and e-chain® (standard length: 500mm)

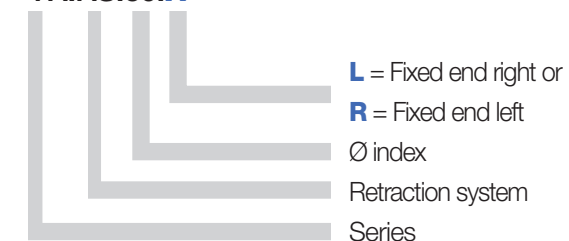
System	Insert Ø index / select fixed end .L / .R	TR.RS.60.L
+ Cover	Insert Ø index (cover optional)	TR.RS.60.COVER
+ e-chain®	Insert Ø index / Insert bend radius R / Insert standard length LLLL	TRC.RS.60.087.0500.0
Order text:	TR.RS.60.L + TR.RS.60.COVER + TRC.RS.60.087.0500.0	



Order key
retraction system

TR.RS.60.L

TR.RS.60.R



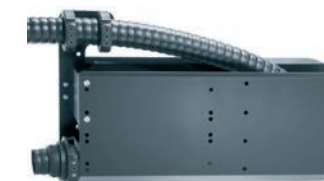
Order key
e-chains®

TRC.RS.60.087.0500.0

TRE.RS.60.087.0500.0.B



More optional accessories | RS modular retraction system



Cover

For additional installation space and extreme movements

► Page 70



Adjustment unit

For accurate adjustment of the system position

►Page 110



Adapter consoles

for custom mounting options

► Page 111



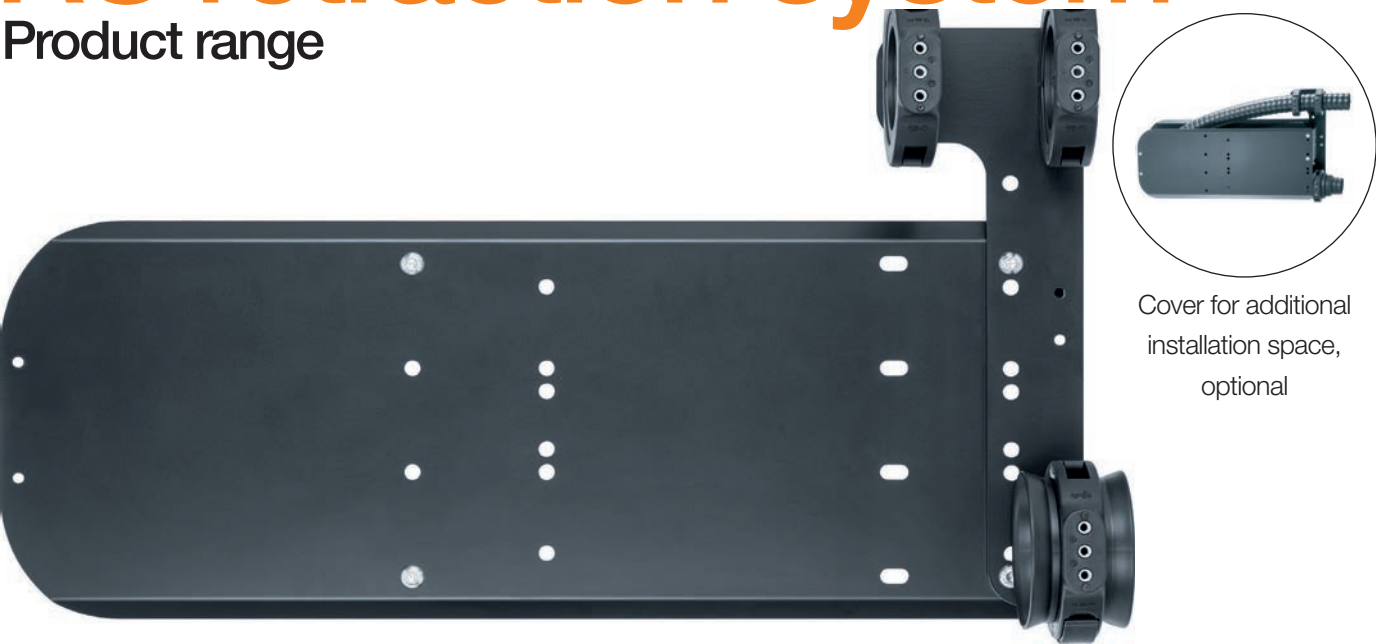
Axis 6 clamp

for trifix® R mounting brackets

► Page 114

RS retraction system

Product range



Cover for additional installation space, optional

Product range | RS modular retraction system

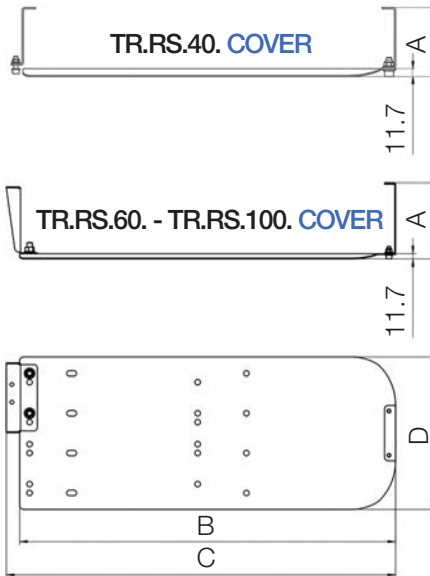
Ø	Part No.	Part No.	Retraction length ¹⁾	A	B	C	D	Weight
Index	fixed end left	fixed end right	≤ [mm]	[mm]	[mm]	[mm]	[mm]	[kg]
30.	▶ –	–	–	–	–	–	–	–
40.	▶ TR.RS.40.L	TR.RS.40.R	460	576	301	95	51	3.5
50.	▶ –	–	–	–	–	–	–	–
60.	▶ TR.RS.60.L	TR.RS.60.R	550	900	528	150	65	8.7
65.	▶ –	–	–	–	–	–	–	–
65. (R 200)	▶ –	–	–	–	–	–	–	–
70.	▶ TR.RS.70.L	TR.RS.70.R	620	900	545	167	65	9.2
85.	▶ TR.RS.85.L	TR.RS.85.R	670	900	565	167	65	9.5
85. (R 240)	▶ –	–	–	–	–	–	–	–
100.	▶ TR.RS.100.L	TR.RS.100.R	580	938	614	167	108	11.5
125.	▶ –	–	–	–	–	–	–	–

Please order matching triflex® R e-chain® separately. 1) Maximum retraction length

Product range | Cover, optional

Ø	Optional cover	A	B	C	D	Load*	Weight
Index	retrofit kit	[mm]	[mm]	[mm]	[mm]	≤ [kg]	[kg]
30.	▶ –	–	–	–	–	–	–
40.	▶ TR.RS.40.COVER	101.7	550	567.5	244.6	1.5	2.6
50.	▶ –	–	–	–	–	–	–
60.	▶ TR.RS.60.COVER	170.7	850	880	344.6	3.5	7.2
65.	▶ –	–	–	–	–	–	–
65. (R 200)	▶ –	–	–	–	–	–	–
70.	▶ TR.RS.70.COVER	170.7	850	880	344.6	3.5	7.2
85.	▶ TR.RS.85.COVER	170.7	850	880	344.6	3.5	7.2
85. (R 240)	▶ –	–	–	–	–	–	–
100.	▶ TR.RS.100.COVER	172	853	910.5	397.6	3.5	7.1
125.	▶ –	–	–	–	–	–	–

*Maximum fill weight to be used with the cover

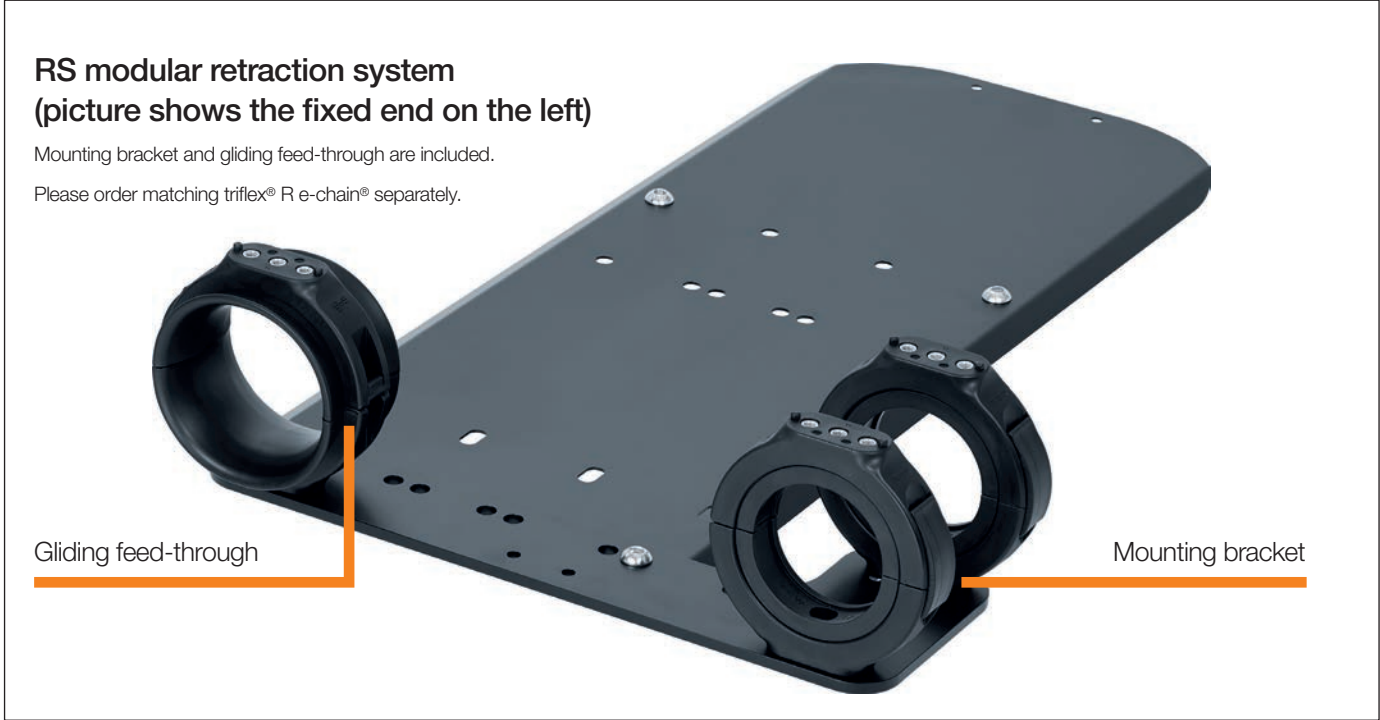
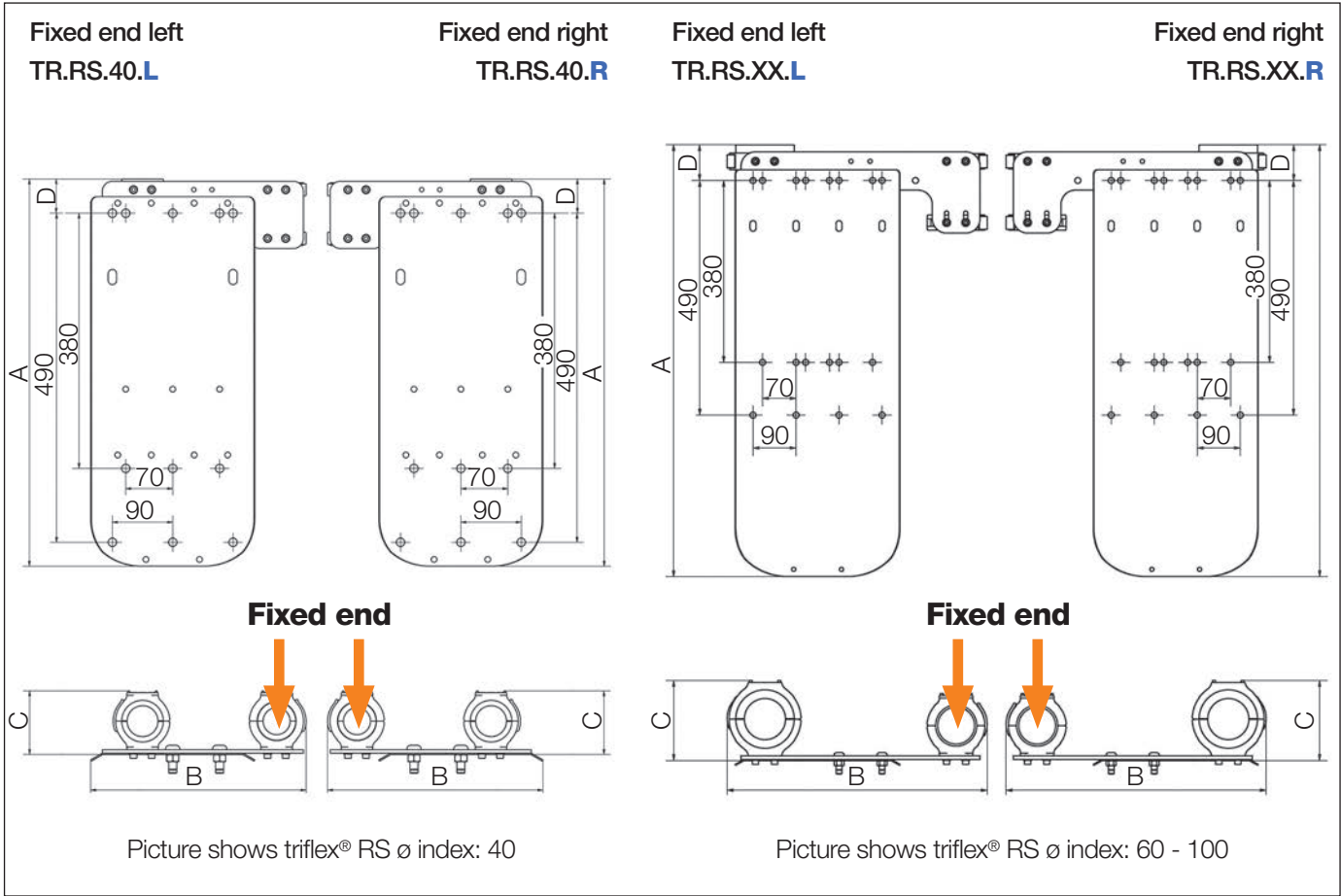


70 More information ▶ www.igus.co.uk/triflex-RS



RS retraction system

Installation dimensions



igus 3D CAD, configurators, service life calculation and more ▶ www.igus.co.uk/triflexR

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RS e-chains®

Product range



Product range | Matching e-chains® for RS

Ø Index	Part No. TRC enclosed	Part No. TRE "easy" design
30.	–	–
40.	TRC.RS.40.058. LLLL.0	TRE.RS.40.058. LLLL.0.B
50.	–	–
60.	TRC.RS.60.087. LLLL.0	TRE.RS.60.087. LLLL.0.B
65.	–	–
65. (R 200)	–	–
70.	TRC.RS.70.110. LLLL.0	TRE.RS.70.110. LLLL.0.B
85.	TRC.RS.85.135. LLLL.0	TRE.RS.85.135. LLLL.0.B
85. (R 240)	–	–
100.	TRC.RS.100.145.LLLL.0	TRE.RS.100.145.LLLL.0.B/C
125.	–	–

1) Available for B- and C-versions
*Standard lengths from the gliding feed-through outside the system - special lengths upon request.

e-chains® standard lengths*
LLLL [mm] | 0500 | 1000 | 1500 | 2000 |
Part No. with LLLL standard length value (measured from the gliding feed-through) corresponds to the robot arm length from axis 3. For example: TRC.RS.60.087.0500.0

RS e-chains®

Cable length calculation

Calculating the overall e-chain® length | RS e-chains®

Ø Index	Bend radius R [mm]	e-chain® length* [mm]	Number of e-chains® links	Overall e-chain® length [mm]
30.	–	–	–	–
40.	058	1251	90	LLLL + 1251
50.	–	–	–	–
60.	087	1734	85	LLLL + 1734
65.	–	–	–	–
65. (R 200)	–	–	–	–
70.	110	1895	74	LLLL + 1895
85.	135	2080	68	LLLL + 2080
85. (R 240)	–	–	–	–
100.	145	2105	61	LLLL + 2105
125.	–	–	–	–

*Values are related to the e-chain® length within the system
To calculate the overall e-chain® length: Please add the e-chains® length* within the system to the standard length LLLL (measured from the gliding feed-through)



- More information and installation height | RS e-chains®
- TRC series - enclosed design, chip protection, smooth outer contour ► from page 28
 - TRE series - "easy" design, very easy to fill, simply press cables in ► from page 30

