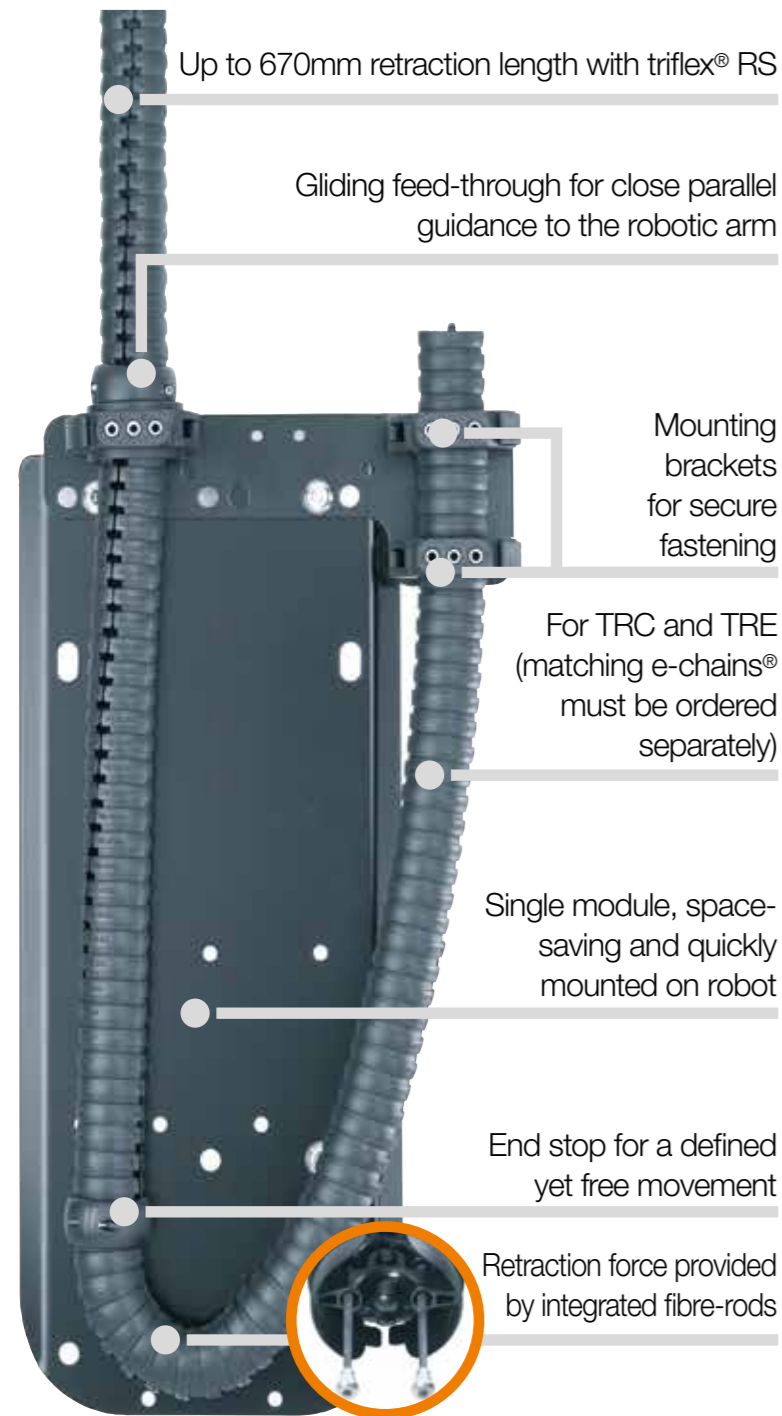


RS retraction system


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.eu/RS_movie



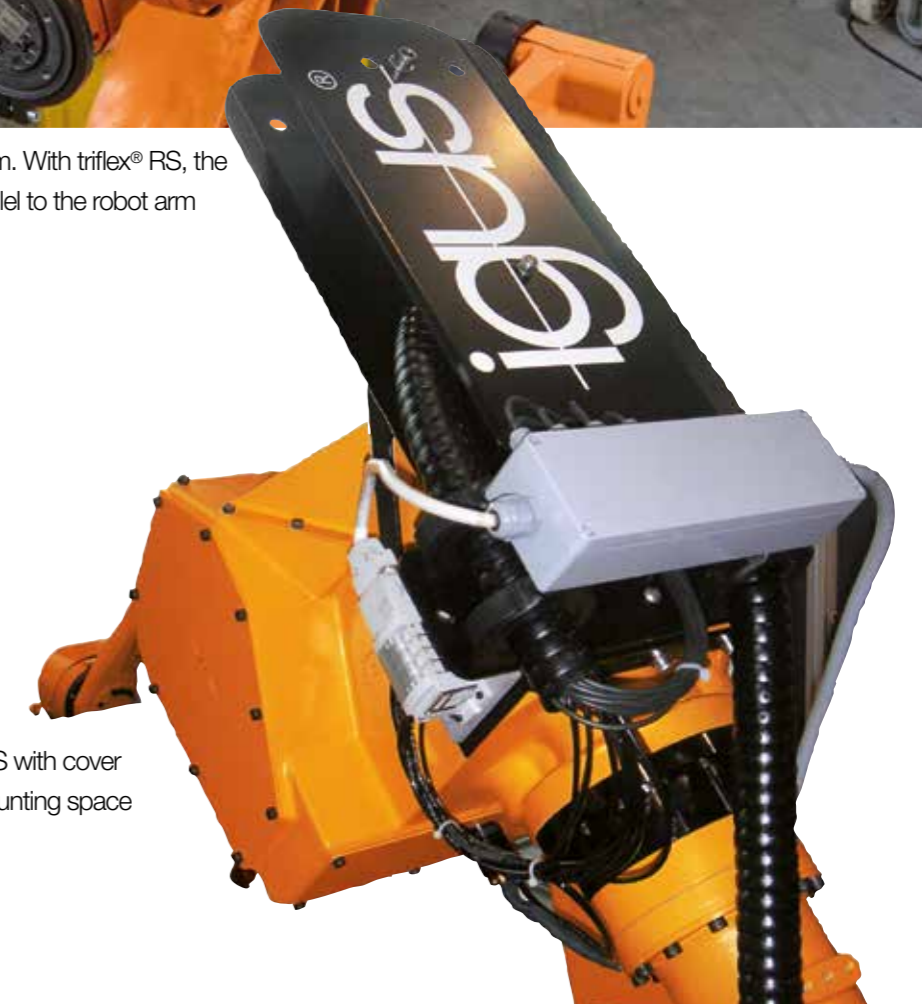
Assembly video online:
Please scan the QR code or visit
▶ www.igus.eu/assembly-RS-system

RS applications

RS - R(etraction) S(ystem)



triflex® RS for a low profile retraction system. With triflex® RS, the multi-axis triflex® R e-chain® is routed parallel to the robot arm



Option: triflex® RS with cover for more mounting space

RS retraction system

System design with matching e-chains®

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

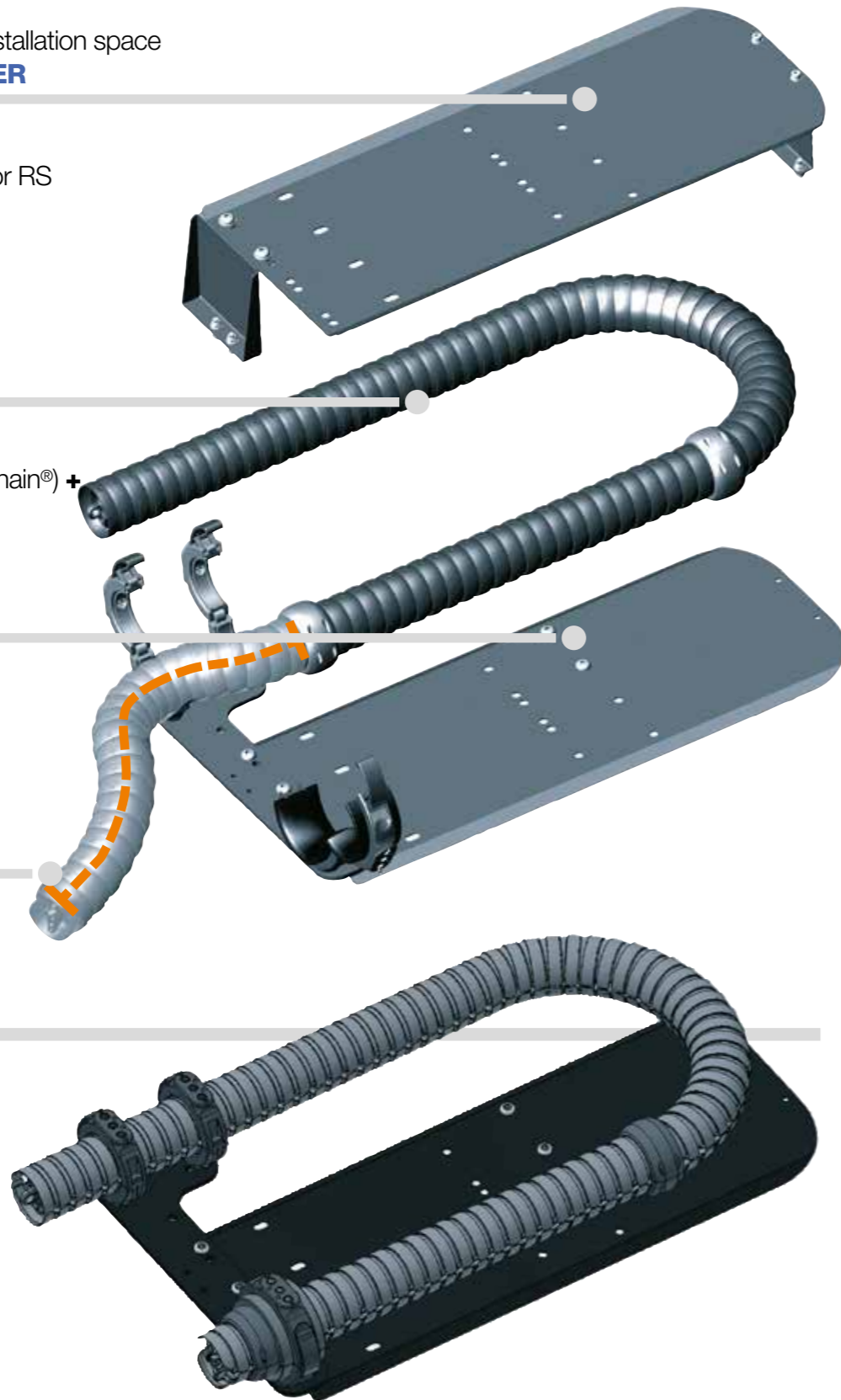
Matching triflex® R e-chains® for RS with integrated fibre-rods
TRC.RS.XX.R.LLLL.0
TRE.RS.XX.R.LLLL.0.B



RSE linear system (without e-chain®) +
 Support plate +
 Mounting bracket +
 Gliding feed-through =
TR.RS.XX.L or **TR.RS.XX.R**

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

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



RS retraction system

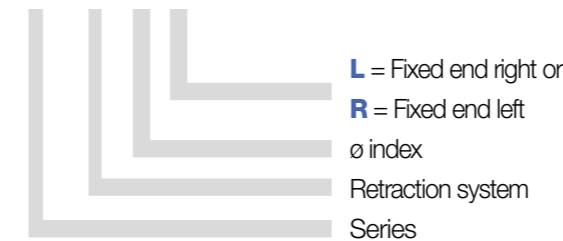
Sample order of a retraction system including e-chain®

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	

Retraction system order key

TR.RS.60.L
TR.RS.60.R



e-chains® order key

TRC.RS.60.087.0500.0
TRE.RS.60.087.0500.0.B



Optional accessories | RS modular retraction system



Cover
 for additional installation space and complex movements
 ► Page 78



Adjustment unit
 for accurate adjustment of the system position
 ► Page 122



Adapter consoles
 for custom mounting options
 ► Page 123



Axis 6 clamp
 for triflex® R mounting bracket
 ► Page 126

RS retraction system

Product range



Optional cover for additional installation space

Product range | RS modular retraction system

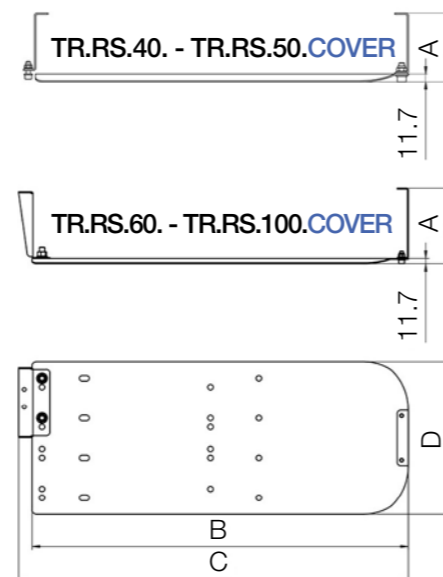
Ø Index	Part No. fixed end left	Part No. fixed end right	Retraction length ¹⁾ ≤ [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [kg]
30.	▶ -	-	-	-	-	-	-	-
40.	▶ TR.RS.40.L	TR.RS.40.R	460	576	301	95	51	3.5
50.	▶ TR.RS.50.L	TR.RS.50.R	460	625	421	103	100	3.9
60.	▶ TR.RS.60.L	TR.RS.60.R	550	900	528	150	65	8.7
65.	▶ -	-	-	-	-	-	-	-
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) Max. retraction length.

Product range | Cover, optional

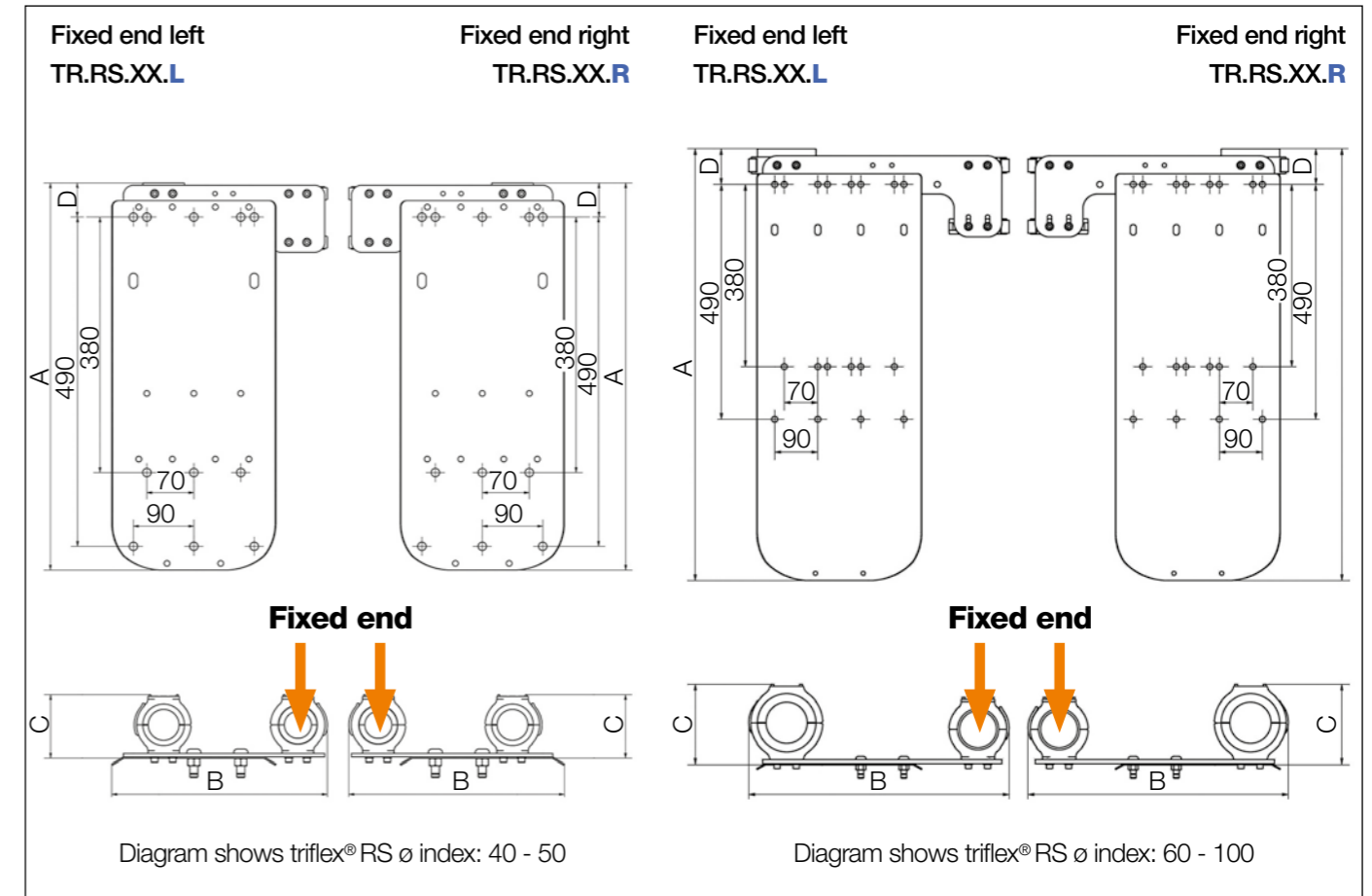
Ø Index	Optional cover retrofit kit	A [mm]	B [mm]	C [mm]	D [mm]	Load* ≤ [kg]	Weight [kg]
30.	▶ -	-	-	-	-	-	-
40.	▶ TR.RS.40.COVER	101.7	550	567.5	244.6	1.5	2.6
50.	▶ TR.RS.50.COVER	101.7	550	567.5	244.6	1.5	2.6
60.	▶ TR.RS.60.COVER	170.7	850	880	344.6	3.5	7.2
65.	▶ -	-	-	-	-	-	-
65. (R 200)	▶ -	-	-	-	-	-	-
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



RS retraction system

Installation dimensions



RS modular retraction system (diagram shows the fixed end on the left)

Mounting bracket and gliding feed-through are included.
Please order matching triflex® R e-chain® separately.



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.	TRC.RS.50.080.LLLL.0	TRE.RS.50.080.LLLL.0.B
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

Calculation of the e-chain® total length | RS e-chain®

Ø Index	Bend radius R [mm]	e-chain® length* [mm]	Number of e-chains® links	e-chain® overall length [mm]
30.	–	–	–	–
40.	058	1,251	90	LLLL + 1,251
50.	080	1,409	81	LLLL + 1,409
60.	087	1,734	85	LLLL + 1,734
65.	–	–	–	–
65. (R 200)	–	–	–	–
70.	110	1,895	74	LLLL + 1,895
85.	135	2,080	68	LLLL + 2,080
85. (R 240)	–	–	–	–
100.	145	2,105	61	LLLL + 2,105
125.	–	–	–	–

*Values are related to the e-chain® length within the system

To calculate the total e-chain® length: please add the e-chain® length* within the system to the LLLL standard additional length (measured from the gliding feed-through)



More information and installation dimensions | RS e-chains®

- TRC series - closed design, chip protection, smooth outer contour ► From page 28
- TRE series - "easy" design, very easy to fill, simply press cables in ► From page 30