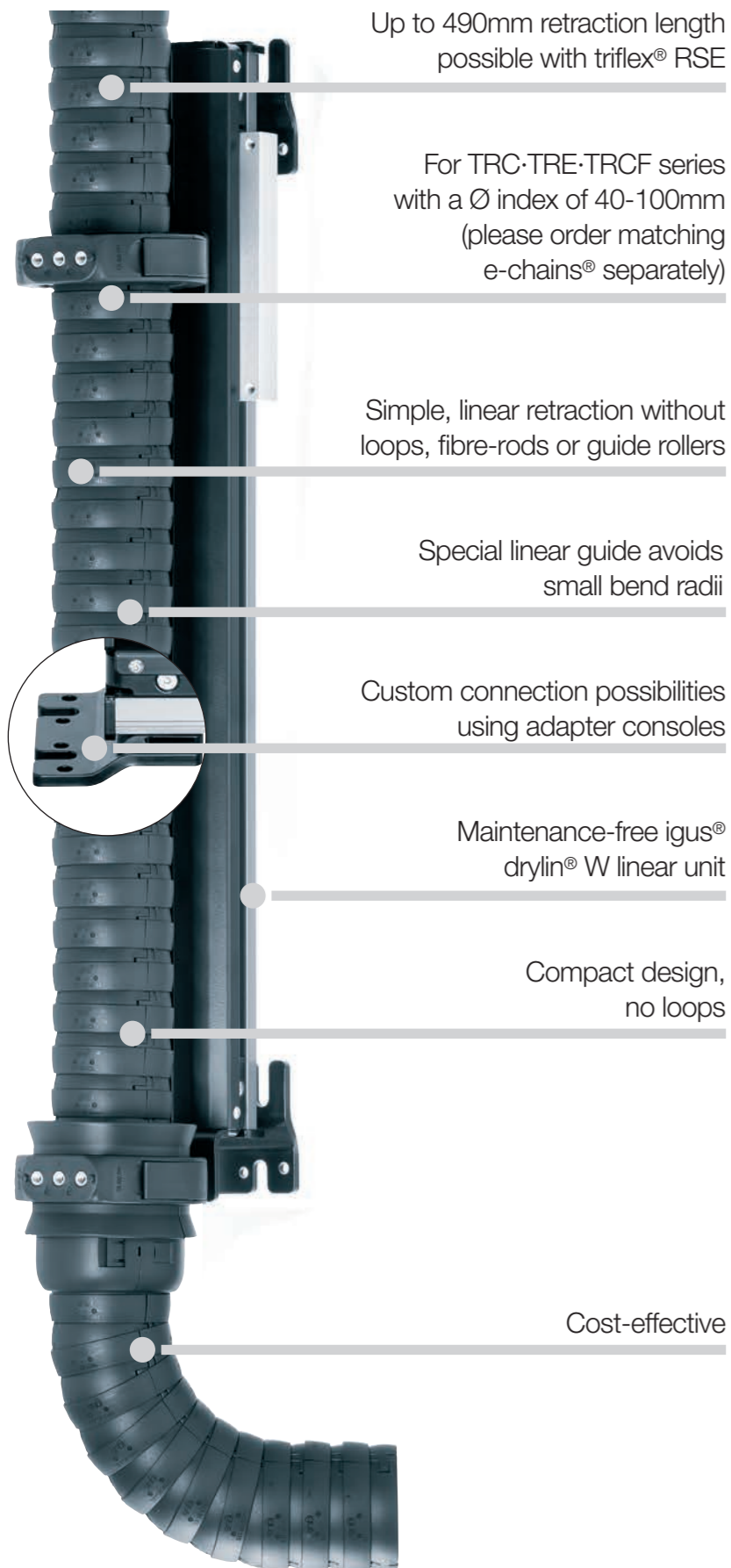


RSE linear retraction system

Linear, space-saving retraction system



Up to 490mm retraction length possible with triflex® RSE

For TRC·TRE·TRCF series with a Ø index of 40-100mm (please order matching e-chains® separately)

Simple, linear retraction without loops, fibre-rods or guide rollers

Special linear guide avoids small bend radii

Custom connection possibilities using adapter consoles

Maintenance-free igus® drylin® W linear unit

Compact design, no loops

Cost-effective

Linear, space-saving retraction system - triflex® RSE linear

The more complex the automated production technology, the greater the requirements placed on the energy supply system. It is increasingly the case that not only electric power and fluids have to be supplied to production robots; but also laser cables and supply hoses for rivets, pins and screws. As these often cannot function with small bend radii, the new triflex® RSE relies on very easy linear retraction without loops and spring rods or deflection rollers. The purpose of the triflex® RSE retraction system is to hold the e-chain® as closely as possible to the robot arm in order to prevent the e-chain® from intruding upon or blocking the robot's movements.

- Simple, linear retraction without loops, fibre-rods or guide rollers
- For series TRC·TRE·TRCF with a Ø-index of 40-100mm
- Special linear guide avoids small bend radii
- Up to 490mm retraction length possible
- Space-saving, cost-effective
- Maintenance-free drylin® W linear unit

RSE linear applications

RSE linear - R(etraction) S(ystem) E(lastic) linear



igus® TR.RSE system on test robot



Lightweight, linear retraction system for small robots. RSE linear for sizes TR.RSE.40 to TR.RSE.50 ► from page 94



Linear retraction system for sizes 60-100 with attachment brackets for a wide variety of robot models. RSE linear for sizes TR.RSE.60 to TR.RSE.100 ► from page 96

RSE linear retraction system

System design with matching e-chain®

Matching triflex® R e-chain® for RSE linear

TRC .XX.R.0

TRE .XX.R.0.B

TRCF.XX.R.0



Overall e-chain® length* =

Excess length in direction **A1** +

Dimension **A** +

Excess length in direction **A6**

Limit protector

RSE linear system

(without e-chain®) +

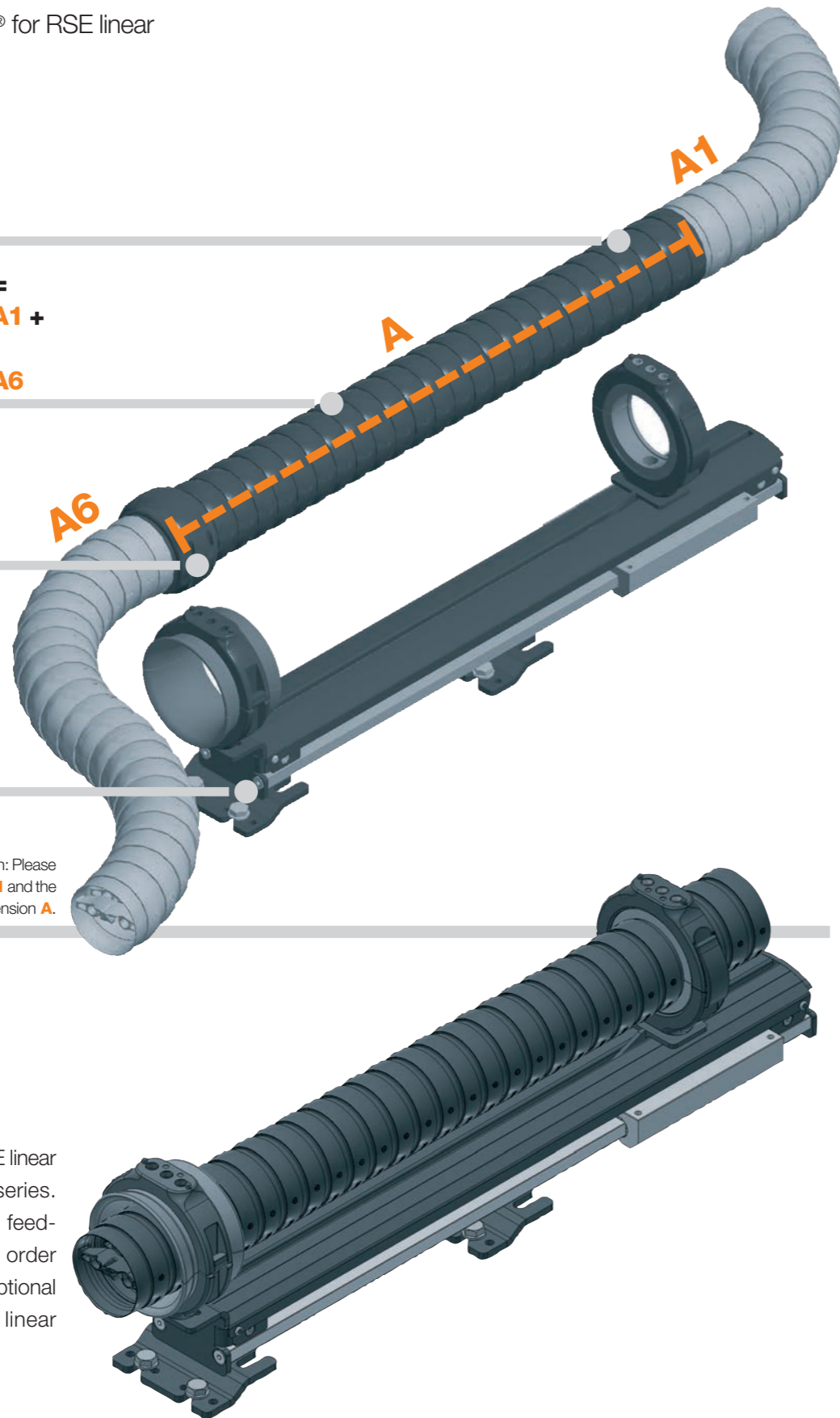
Mounting bracket +

Gliding feed-through =

TR.RSE.XX

*For calculation of the overall e-chain® length: Please add the desired excess length in direction **A1** and the excess length in direction **A6** and the dimension **A**.

Complete retraction system RSE linear and triflex® R e-chain® TRE series. Mounting bracket and gliding feed-through are included. Please order matching triflex® R e-chain®, optional limiting protectors and RSE linear supports separately!



RSE linear retraction system

Order examples for retraction system including e-chain®



Sample order of a complete TR.RSE linear system, Ø index 85, and e-chain® (length: 2 m)

System	Select Ø index	TR.RSE.85
+ e-chain®	Insert Ø index / Insert bend radius R / Insert standard length in metres	2m TRC.85.135.0
+ Protector	Select protector option / specify Ø index	TR.85.30
Order text:	TR.RSE.85. + 2 m TRC.85.135.0 + TR.85.30	



Order key retraction system

TR.RSE.85



Order key e-chains®

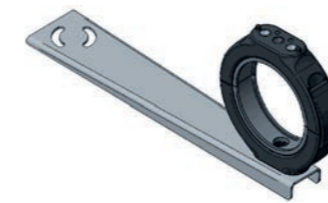
TRC .85.135.0

TRE .85.135.0.B

TRCF.85.135.0



Other optional accessories | RSE linear pneumatic retraction system



RSE linear support

For lateral deflection of the triflex® R, optional

► Page 96



Protectors

with screw connections or quick release

► Page 98



Adapter consoles

For custom mounting options

► Page 111



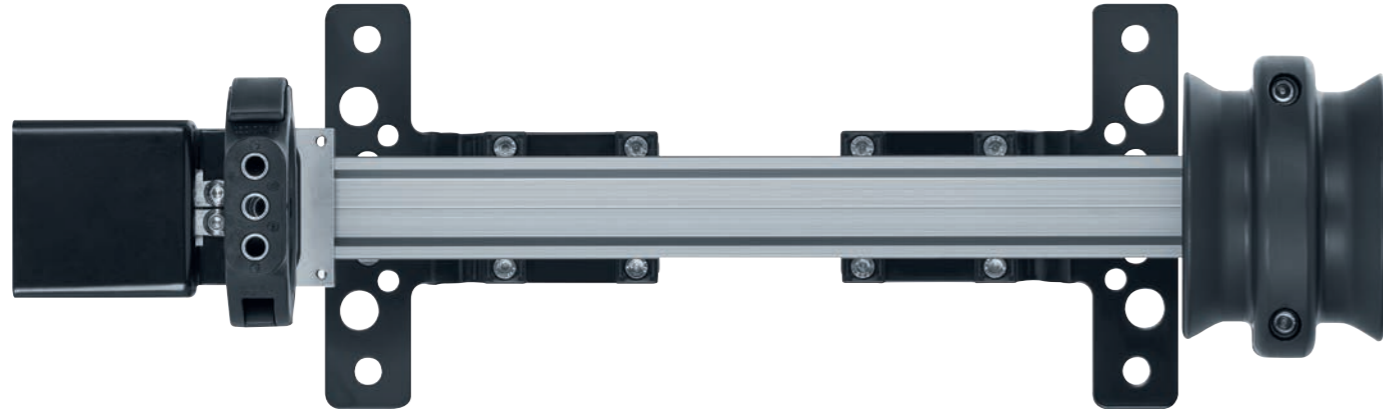
Axis 6 clamp

For triflex® R mounting bracket

► Page 114

RSE linear retraction system

Product range TR.RSE.40 - TR.RSE.50



Product range | RSE linear TR.RSE.40 - TR.RSE.50

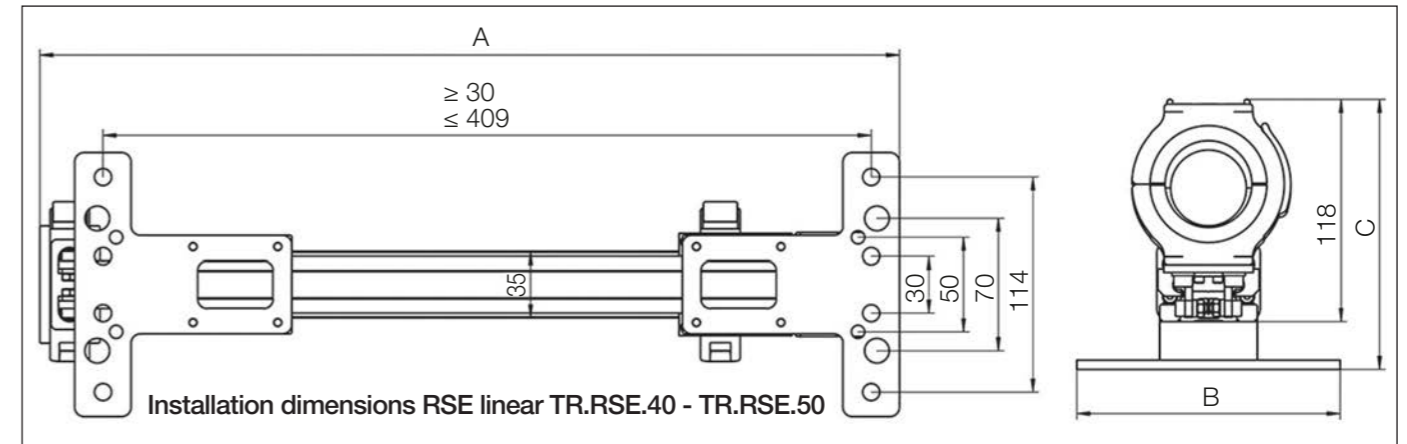
Ø Index	Part No. RSE linear	Retraction length ¹⁾ ≤ [mm]	A [mm]	B [mm]	C [mm]	Weight [kg]
30.	▶ -	-	-	-	-	-
40.	▶ TR.RSE.40	290	457	140	143	1.4
50.	▶ TR.RSE.50	290	475	140	151	1.7

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

RSE linear size TR.RSE.60 to TR.RSE.100 ▶ from page 96

RSE linear retraction system

Installation dimensions TR.RSE.40 - TR.RSE.50



RSE linear retraction system

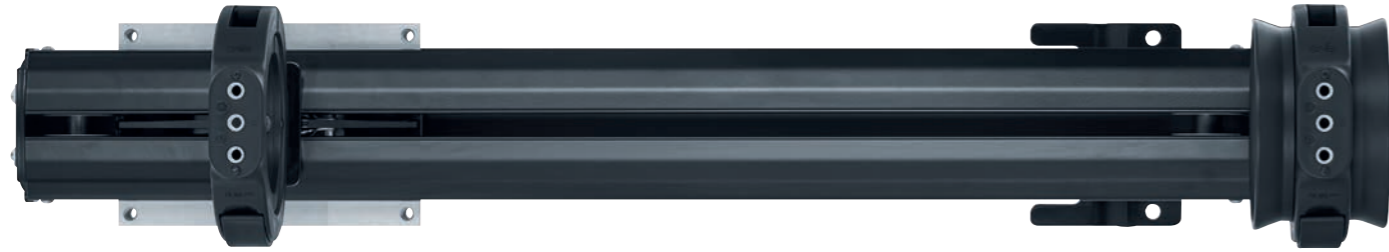
Mounting bracket and gliding feed-through are included.

Please order matching triflex® R e-chain® separately.



RSE linear retraction system

Product range TR.RSE.60 - TR.RSE.100



Product range | RSE linear TR.RSE.60 - TR.RSE.100

Ø Index	Part No. RSE linear	Retraction length ¹⁾ ≤ [mm]	A [mm]	B [mm]	C [mm]	Weight [kg]	Part No. RSE support	General image
60.	▶ TR.RSE.60	490	868	134	231	9.9	TR.914.973.60	
65.	▶ TR.RSE.65	490	880	134	231	10.0	TR.914.973.65	
65. (R 200)	▶ TR.RSE.65.200*	490	880	134	231	10.0	-	
70.	▶ TR.RSE.70	490	878	155	258	10.0	TR.914.973.70	
85.	▶ TR.RSE.85	490	885	155	258	10.0	TR.914.973.85	For the lateral
85. (R 240)	▶ TR.RSE.85.240	490	885	155	258	10.0	-	deflection of the
100.	▶ TR.RSE.100	490	886	170	264	10.2	TR.914.973.100	energy supply
125.	▶ -	-	-	-	-	-	-	

*Available upon request. Please consult igus® for delivery time.

Please order matching triflex® R e-chain® separately. 1) Maximum retraction length Optional RSE support must be ordered separately.

RSE linear size TR.RSE.40 to TR.RSE.50 ▶ from page 94

Product range | RSE linear support, optional

RSE linear support for lateral deflection of the triflex® R energy supply and generation of the fixed end, optional

Mounting bracket

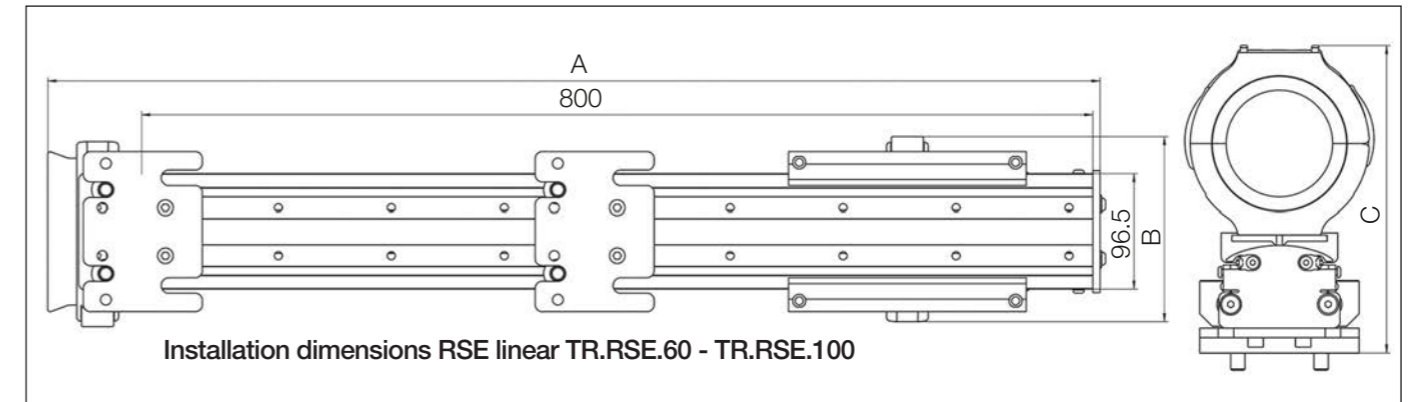
Support

Part Number
TR.914.973.XX

Scope of delivery:
support metal,
mounting bracket and
mounting screws

RSE linear retraction system

Installation dimensions TR.RSE.60 - TR.RSE.100



RSE linear retraction system

Mounting bracket and gliding feed-through are included.

Please order matching triflex® R e-chain® separately.



RSE linear e-chains®

Product range



Product range | Matching e-chains® for RSE linear

Ø Index	Part No. TRC enclosed	Part No. TRE "easy" design	Part No. TRCF with snap lock mechanism
30.	▶ -	-	-
40.	▶ TRC.40.058.0	TRE.40.058.0.B	-
50.	▶ TRC.50.080.0	TRE.50.080.0.B	-
60.	▶ TRC.60.087.0	TRE.60.087.0.B	-
65.	▶ -	-	TRCF.65.100.0
65. (R 200)	▶ -	-	TRCF.65.200.0
70.	▶ TRC.70.110.0	TRE.70.110.0.B	-
85.	▶ TRC.85.135.0	TRE.85.135.0.B	TRCF.85.135.0
85. (R 240)	▶ -	-	TRCF.85.240.0
100.	▶ TRC.100.145.0	TRE.100.145.0.B/C ¹⁾	TRCF.100.145.0
125.	▶ -	-	-

1) Available for B- and C-versions

Please note that all triflex® R e-chains can be lengthened and shortened individually and can be customized to meet the needs of your application.

Please order e-chains® as piece parts and purchase a protector for each one.

Product range | Matching protectors for RSE linear

Ø Index	① Part No. protector with screw fastener	② Part No. protector with quick-lock fastener	General image protector options
30.	▶ -	-	
40.	▶ TR.40.10	TR.40.30	
50.	▶ TR.50.10	TR.50.30*	
60.	▶ TR.60.10	TR.60.30	
65.	▶ TR.65.10	-	
65. (R 200)	▶ TR.65.200.10*	-	
70.	▶ TR.70.10	TR.70.30	
85.	▶ TR.85.10	TR.85.30	
85. (R 240)	▶ TR.85.240.10	-	
100.	▶ TR.100.10	TR.100.30	More information on protectors ▶ Page 47
125.	▶ -	-	



*Available upon request. Please consult igus® for delivery time.

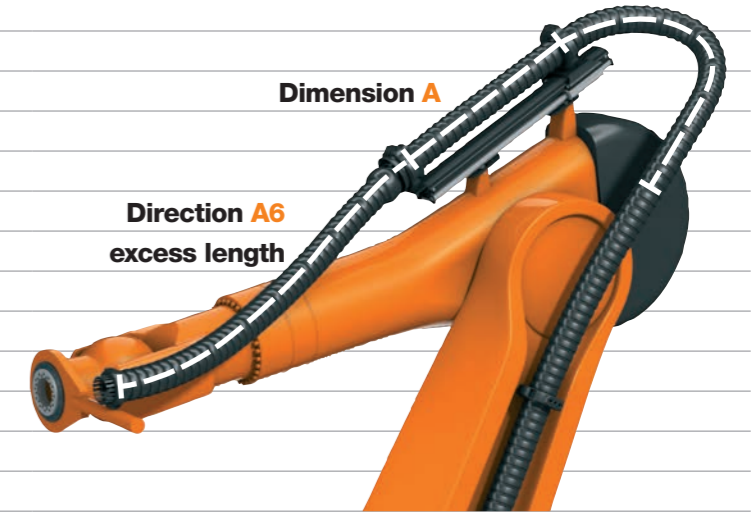
Please order protectors with screw connections or quick release as limit protectors.

RSE linear e-chains®

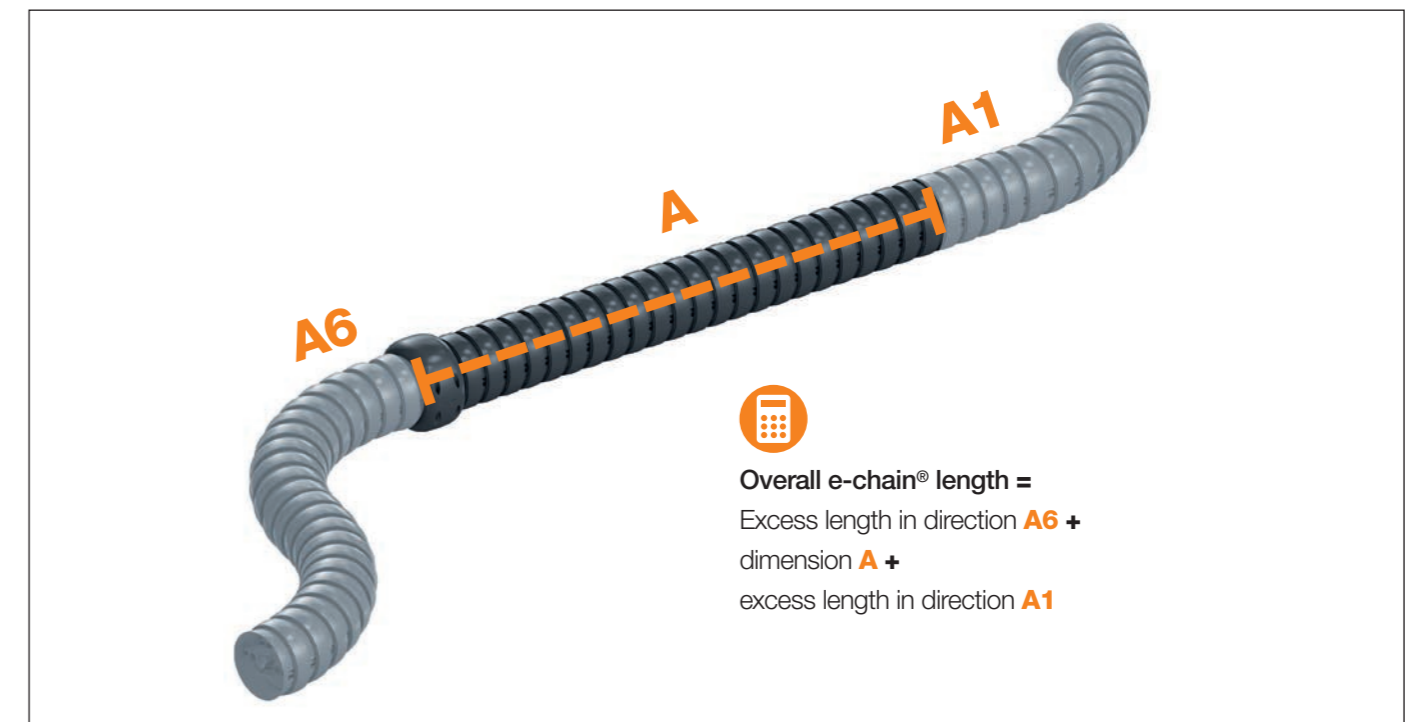
Cable length calculation

Calculation of the overall e-chain® length | RSE linear e-chains®

Ø Index	Bend radius R [mm]	Dimension A [mm]	General image overall e-chain® length	Direction A1 excess length
30.	▶ -	-		
40.	▶ 058	390		
50.	▶ 080	390		
60.	▶ 087	750		
65.	▶ 100	750		
65. (R 200)	▶ 200	750		
70.	▶ 110	750		
85.	▶ 135	750		
85. (R 240)	▶ 240	750		
100.	▶ 145	750		
125.	▶ -	-		



For calculation of the overall e-chain® length: Please add the desired excess length in direction A1 and the excess length in direction A6 and the dimension A. Additionally, at least 1 limit protector must be ordered.

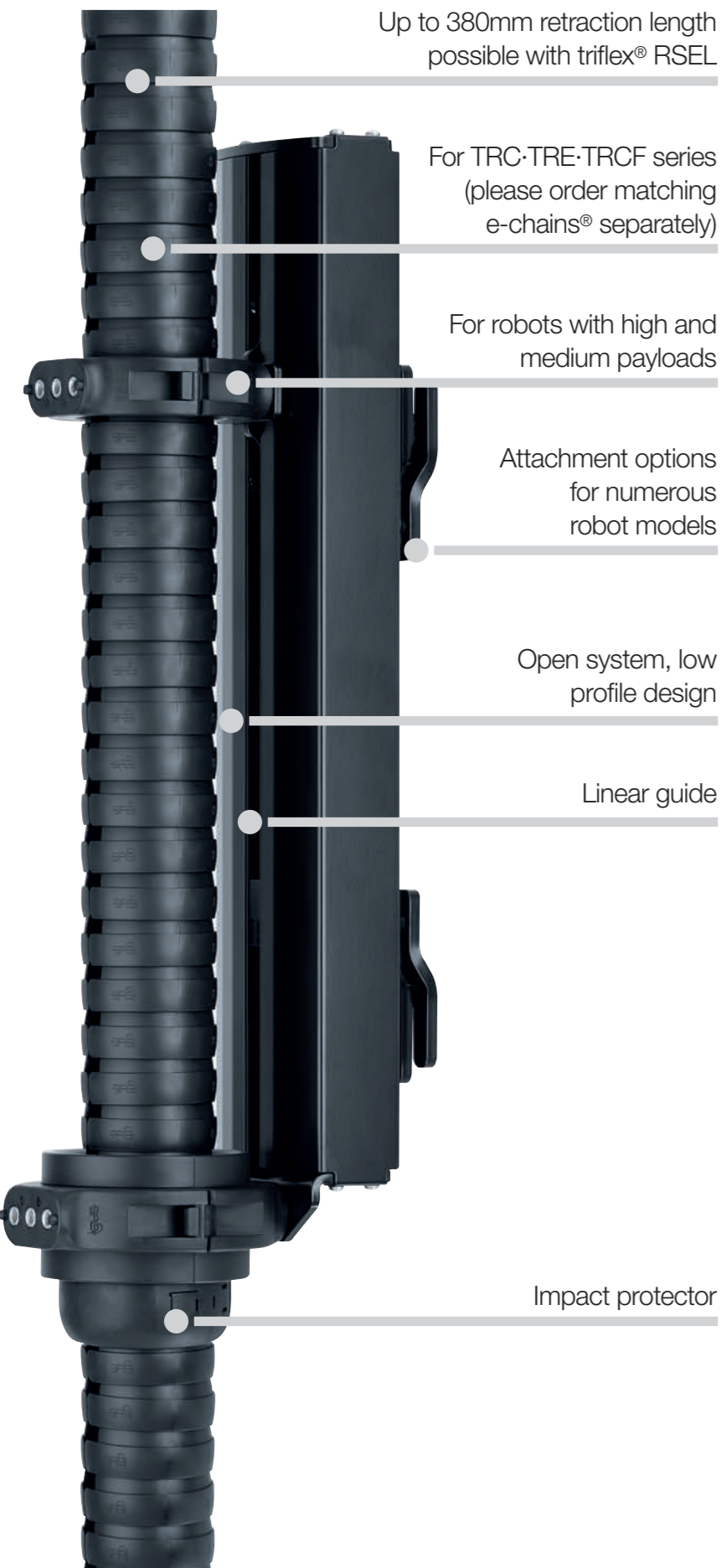


More information and installation height | RSE linear e-chains®

- 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
- TRCF series - enclosed design with snap-lock mechanism, chip-repellent, smooth outer contour ▶ from page 32

RSEL retraction system

Cost-effective linear retraction system **New**



Cost-effective, linear retraction system - triflex® RSEL

Avoid looping on the robot head - even more cost-effective and even for corrugated tubes, with the RSEL retraction system. Especially designed for robots with medium to high payload, the igus® triflex® RSEL retraction system offers an option to actively avoid looping in the working area of the robot by keeping the e-chain® as close as possible to the robot arm.

- Cost-optimised retraction system, easy to retrofit
- Due to its standard dimensions and the very compact design, the RSEL retraction system can be mounted directly on the 3rd axis of all common types of robots
- Retraction element with elastomer band
- Prevents the e-chain® from looping or blocking the motion, even in highly dynamic applications
- Short type
- Attachment options for numerous robot models
- For robots with high and medium payloads
- The fixed end of the e-chain® can be freely selected due to the linear design of the RSE retraction system

RSEL applications

RSEL - R(etraction) S(ystem) E(lastic) L(inear)



triflex RSEL - cost-effective and space-saving guidance of the e-chain®

Cable routing from axis 2 to axis 6 on a robot