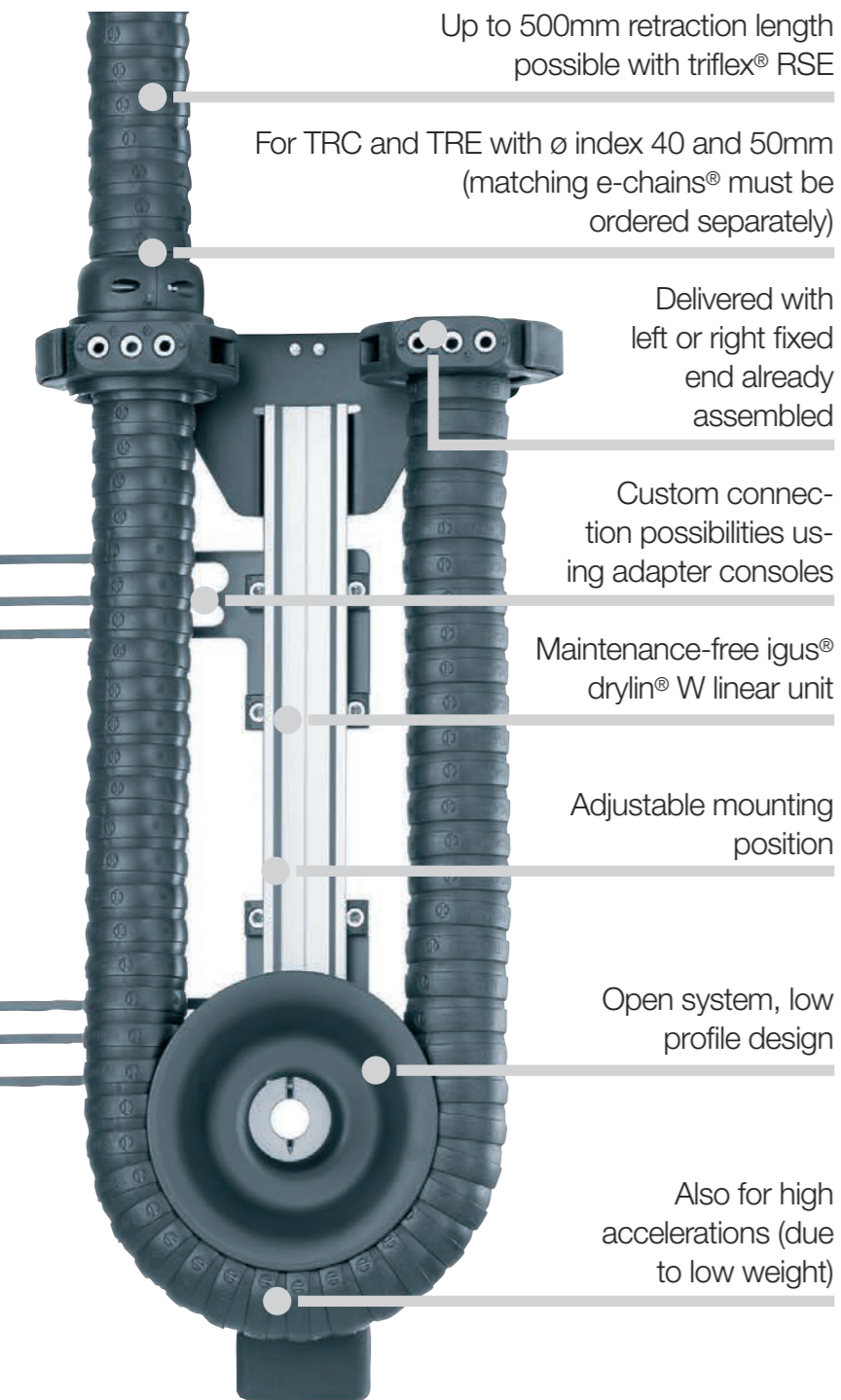


# RSE retraction system

Cost-effective retraction system with deflection



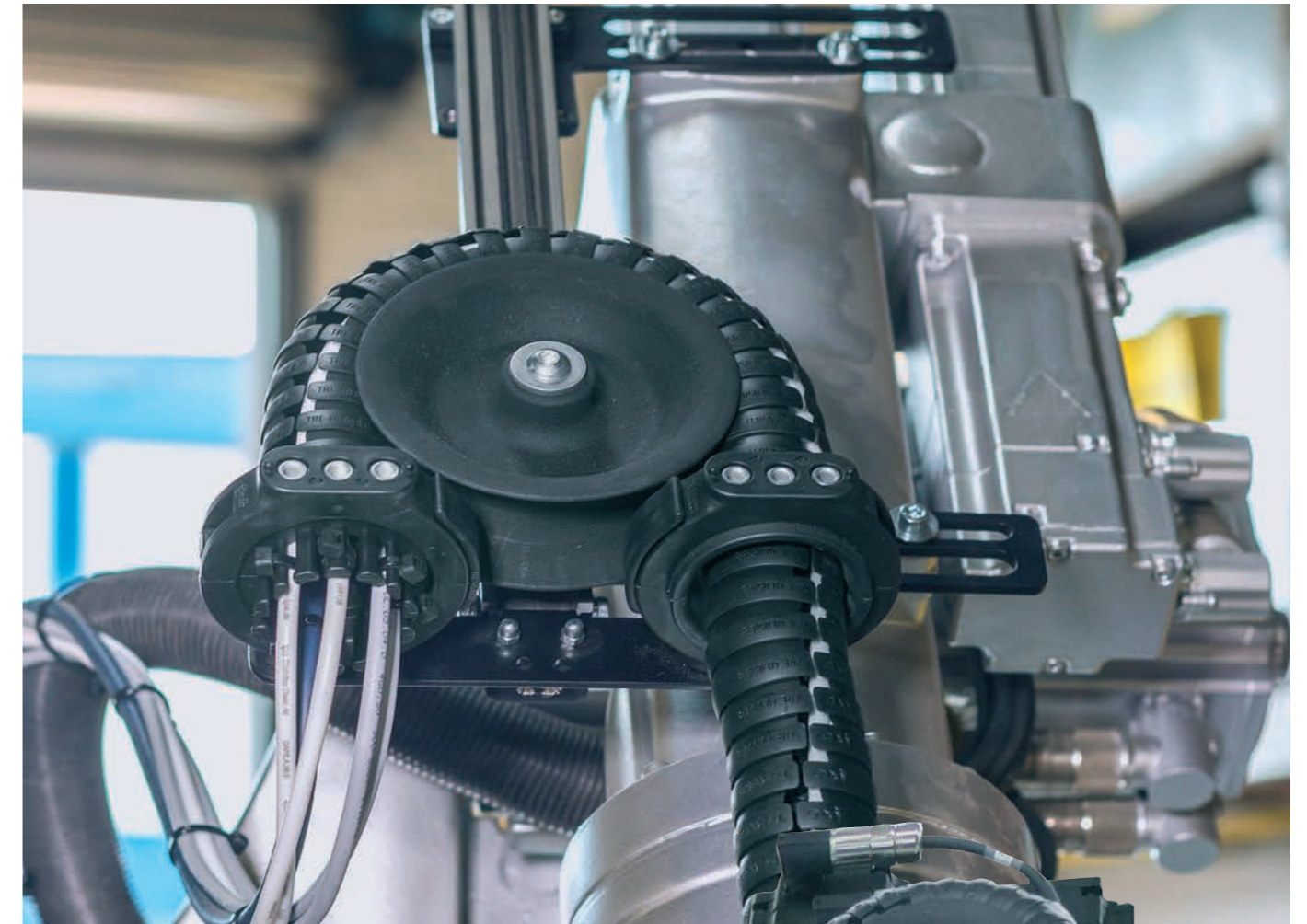
## Cost-effective retraction system with deflection for small robots - triflex® RSE

Specially developed for robots with small to medium cable and hose filling, the igus® triflex® RSE retraction system offers a way to prevent loop formation in the workspace of the robot, even in highly dynamic applications.

- For series TRC-TRE with sizes 40 and 50mm
- Extremely fast response, even in highly dynamic robot programs
- Low weight, very little reduction in robot handling capacity
- Universal adjustable installation brackets
- Maintenance and lubrication-free igus® drylin® W linear unit
- For maximum degrees of freedom
- For cable diameters up to 18.8mm

# RSE applications

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





# RSE retraction system

System design with matching e-chain®

Cover for additional installation space on the robot, optional: **TR.RSE.XX.COVER**

Matching triflex® R e-chains® for RSE with integrated fibre-rods

**TRC.RSE.XX.R.LLLL.0**

**TRE.RSE.XX.R.LLLL.0.B**



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

RSE system (e-chain® not included) + Mounting bracket + Gliding feed-through = **TR.RSE.(02).XX.L** or **TR.RSE.(02).XX.R**

Complete retraction system RSE with deflection, fixed end right and triflex® R e-chain® TRC series. Mounting bracket and gliding feed-through are included. Please order matching triflex® R e-chain® and optional cover separately.



# RSE retraction system

Order examples for retraction system including e-chain®

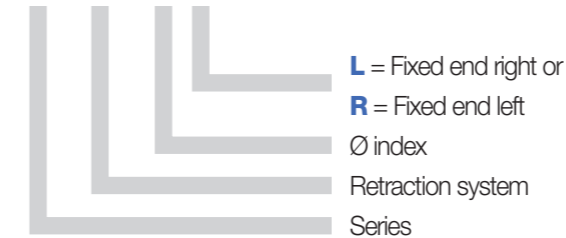
Sample order of a complete TR.RSE system, Ø index 50, fixed end on the left, including cover and e-chain® (standard length: 500mm)

System	Insert Ø index / select fixed end <b>.L</b> / <b>.R</b>	<b>TR.RSE.50.L</b>
+ Cover	Insert Ø index (cover optional)	<b>TR.RSE.50.COVER</b>
+ e-chain®	Insert ø index / Insert bend radius <b>R</b> / Insert standard length <b>LLLL</b>	<b>TRC.RSE.50.080.0500.0</b>
Order text:	<b>TR.RSE.50.L + TR.RSE.50.COVER + TRC.RSE.50.080.0500.0</b>	

Order key retraction system

**TR.RSE.50.L**

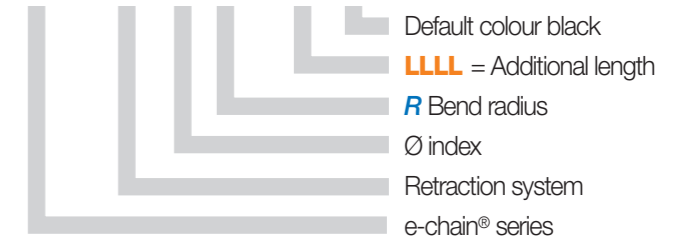
**TR.RSE.50.R**



Order key e-chains®

**TRC.RSE.50.080.0500.0**

**TRE.RSE.50.080.0500.0.B**



## More optional accessories | RS modular retraction system



**Cover**  
For additional installation space and extreme movements  
► Page 86



**Adapter consoles**  
For individual mounting options  
► Page 111



**Axis 6 clamp**  
For triflex® R mounting brackets  
► Page 114

# RSE retraction system

## Product range



Cover for additional installation space, optional

## Product range | RSE cost-effective retraction system with deflection

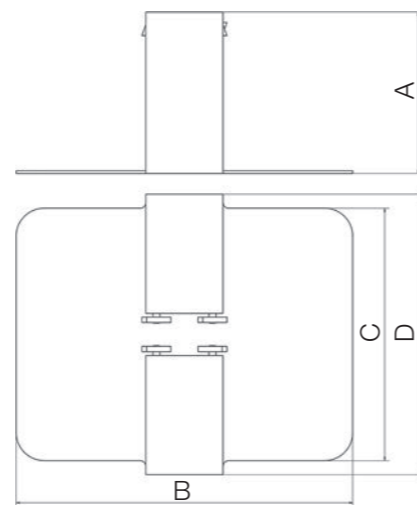
Ø Index	Part No. fixed end left	Part No. fixed end right	Retraction length <sup>1)</sup> ≤ [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [kg]
30.	▶ -	-	-	-	-	-	-	-
40.	▶ TR.RSE.02.40.L	TR.RSE.02.40.R	500	440	220	110	64.7	1.6
50.	▶ TR.RSE.50.L	TR.RSE.50.R	500	497	275	132	79	2.1
60.	▶ -	-	-	-	-	-	-	-
65.	▶ -	-	-	-	-	-	-	-
65. (R 200)	▶ -	-	-	-	-	-	-	-
70.	▶ -	-	-	-	-	-	-	-
85.	▶ -	-	-	-	-	-	-	-
85. (R 240)	▶ -	-	-	-	-	-	-	-
100.	▶ -	-	-	-	-	-	-	-
125.	▶ -	-	-	-	-	-	-	-

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

## Product range | RSE cover, optional

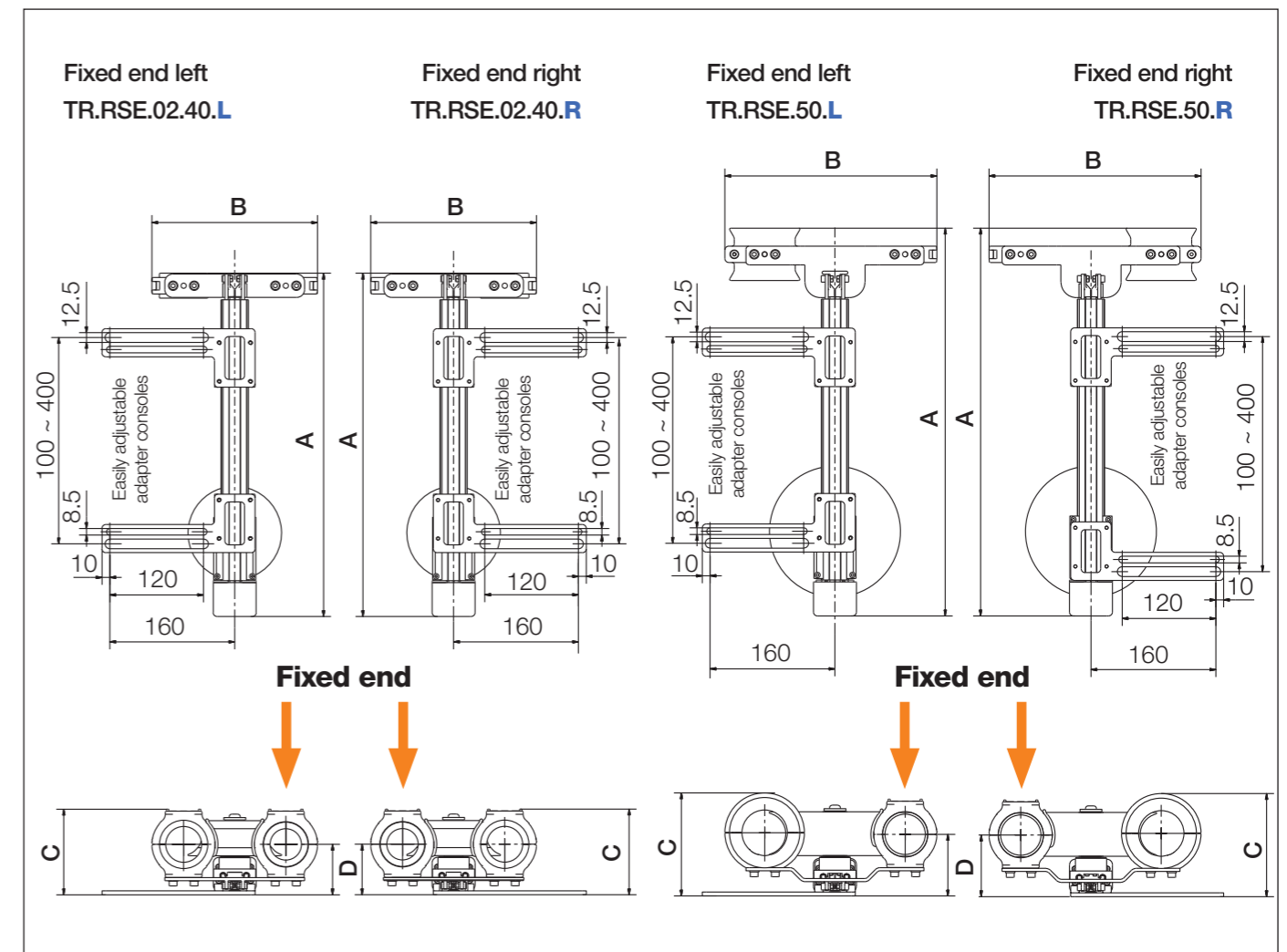
Ø Index	Optional cover retrofit kit	A [mm]	B [mm]	C [mm]	D [mm]	Load* ≤ [kg]	Weight [kg]
30.	▶ -	-	-	-	-	-	-
40.	▶ TR.RSE.40.COVER	115	240	180	200	1.5	1.1
50.	▶ TR.RSE.50.COVER	126	300	248	248	1.5	1.7
60.	▶ -	-	-	-	-	-	-
65.	▶ -	-	-	-	-	-	-
65. (R 200)	▶ -	-	-	-	-	-	-
70.	▶ -	-	-	-	-	-	-
85.	▶ -	-	-	-	-	-	-
85. (R 240)	▶ -	-	-	-	-	-	-
100.	▶ -	-	-	-	-	-	-
125.	▶ -	-	-	-	-	-	-

\*Maximum fill weight to be used with the cover



# RSE retraction system

## Installation dimensions



## RSE - retraction system with guide roller for small robotics (picture shows fixed end on the left)

Mounting bracket and gliding feed-through are included.

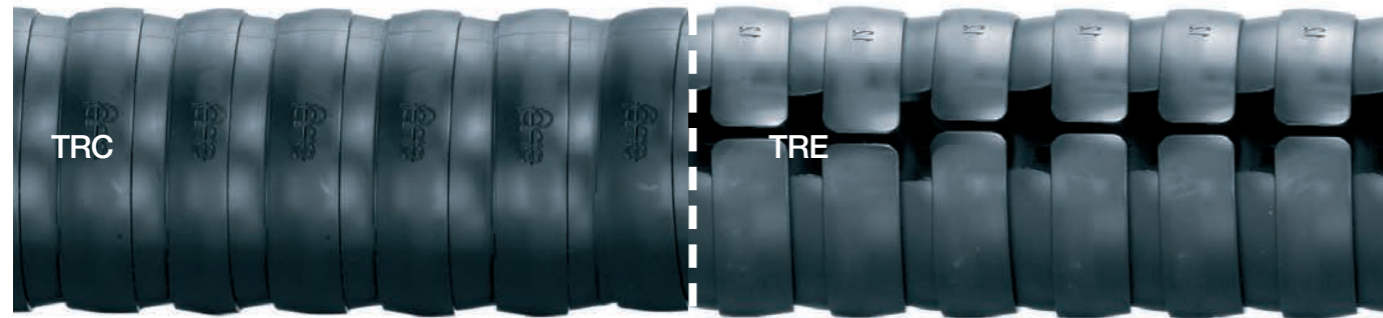
Please order matching triflex® R e-chain® separately.





# RSE e-chains®

## Product range



### Product range | Matching e-chains® for RSE

Ø Index	Part No. TRC enclosed	Part No. TRE "easy" design
30.	-	-
40.	TRC.RSE.40.058. LLLL.0	TRE.RSE.40.058. LLLL.0.B
50.	TRC.RSE.50.080. LLLL.0	TRE.RSE.50.080. LLLL.0.B
60.	-	-
65.	-	-
65. (R 200)	-	-
70.	-	-
85.	-	-
85. (R 240)	-	-
100.	-	-
125.	-	-

\*Standard lengths from the gliding feed-through outside the system - special lengths upon request.

#### e-chains® standard lengths\*

LLLL [mm] | 0500 | 0750 | 1000 | 1250 |

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.RSE.40.058.0500.0

# RSE e-chains®

## Cable length calculation

### Calculating the overall e-chain® length | RSE 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	904	65	LLLL + 904
50.	080	1044	60	LLLL + 1044
60.	-	-	-	-
65.	-	-	-	-
65. (R 200)	-	-	-	-
70.	-	-	-	-
85.	-	-	-	-
85. (R 240)	-	-	-	-
100.	-	-	-	-
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 | RSE 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