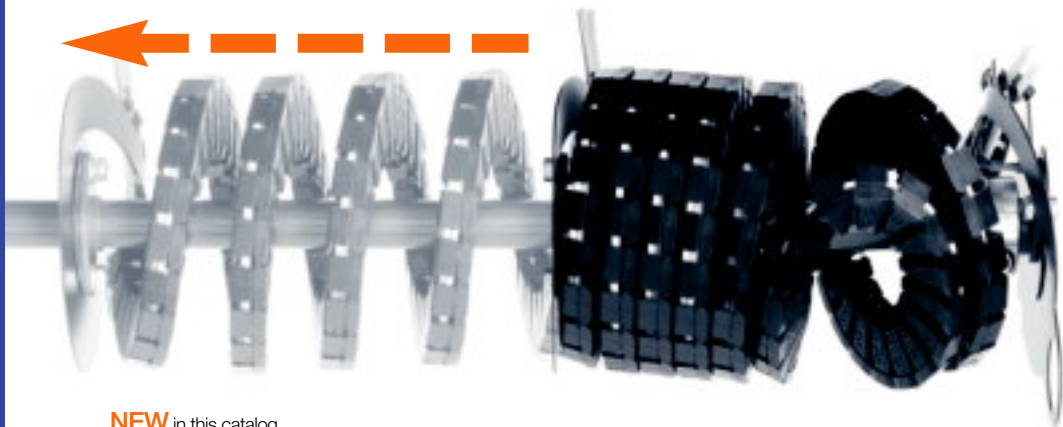






twisterband

Rotary motions
in a small spaces



NEW in this catalog

twisterband: compact, modular and cost-effective

Rotary movements in minimum space - 20 times around its own axis

With the very compact igus® twisterband rotations can be implemented economically and with low wear and low maintenance in a confined space. Energy (in the process), data and media are kept secure.

- 4 sizes available
- Rotary movements up to 7000° (Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible)
- Rotary speeds up to 360°/s possible
- Compact, modular and lightweight
- Ribbons can be shortened easily
- Minimum installation space, builds very close around the rotary axis
- Can be reliably used in various installation positions (horizontal or vertical)
- Cost-effective
- Easy filling
- Limited length compensation possible in combination with igus® chainflex® cables in very limited spaces

Typical industries and applications

- Cable reels ● Robots (robot arms, 1/6 axis, scara robots) ● Tooling machines ● Leisure rides ● Medical equipment ● Radar and telescope equipment ● Aerospace, test, measurement, handling, lifting and installation equipment ● Wind turbines (e.g. blade adjustment) ● Wherever rotary unions are used



product
design
award

2011



reddot design award
winner 2011



In the Netherlands the twisterband will be used at the musical "Soldaat van Oranje" ensuring that a special platform can turn during the show

twisterband Features



An axis is to be centrally installed for angles of rotation from 1500° rotating and horizontal

360°... 3000°



Max. rotation angle: As a rule of thumb: Each section gives 180° = 360° more rotation



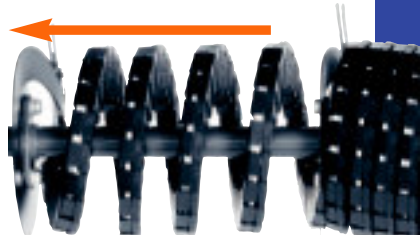
Film hinge: Easy access and quick filling with cables and hoses (TB20.44.18. / TB30.75.22.)



igus® twisterband:
Minimum installation space, builds very close around the rotary axis



Compact, modular, economical - up to 7.000° rotary* motions in smallest spaces (*Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible)



Can be reliably used in various installation positions (horizontal: 7.000° and more possible). Limited length compensation possible

NEW in this catalog



twisterband

Rotary movements in minimum space - 20 times around its own axis

Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	<i>X</i> ₁ [mm]	<i>X</i> ₂ [mm]	<i>R min.</i> [mm]	<i>R max.</i> [mm]	Interior separation	Opening principle	Page
TB12.23.09.X.01.0	9	23	50	140	24	35	–	"easy" design	2.110
TB20.44.12.X.01.0	12	44	50	220	34	57	–	"easy" design	2.110
TB20.44.18.X.01.0	18	44	50	220	34	57	yes	film-hinge	2.110
TB30.75.22.X.01.0	22	75	90	330	44	77	yes	film-hinge	2.110

More sizes available upon request! *X*₁ = Inner machine construction space *X*₂ = Outer machine construction space



**Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible



twisterband (7000° rotation) | Assembly instructions

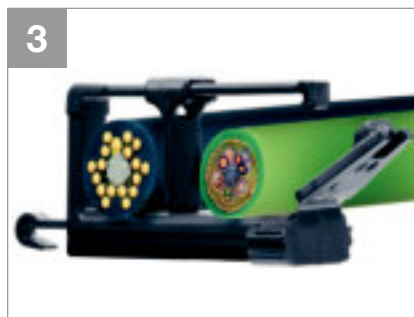
TB20.44.18. / TB30.75.22. | Snap-open along outer radius with film-hinge



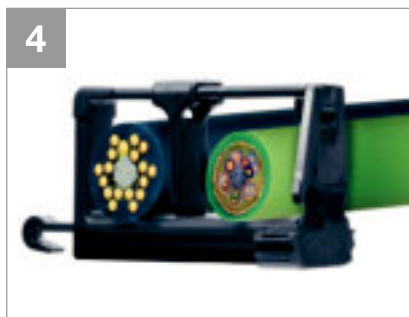
Easy opening and filling of twisterband with a click



Please open lock... insert the cable...

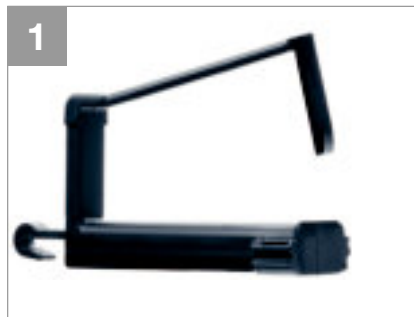


Push the separator on and add more cables



Close film-hinge with a click ...ready!

TB12.23.09. / TB20.44.12. | "easy" design - simply press cables in

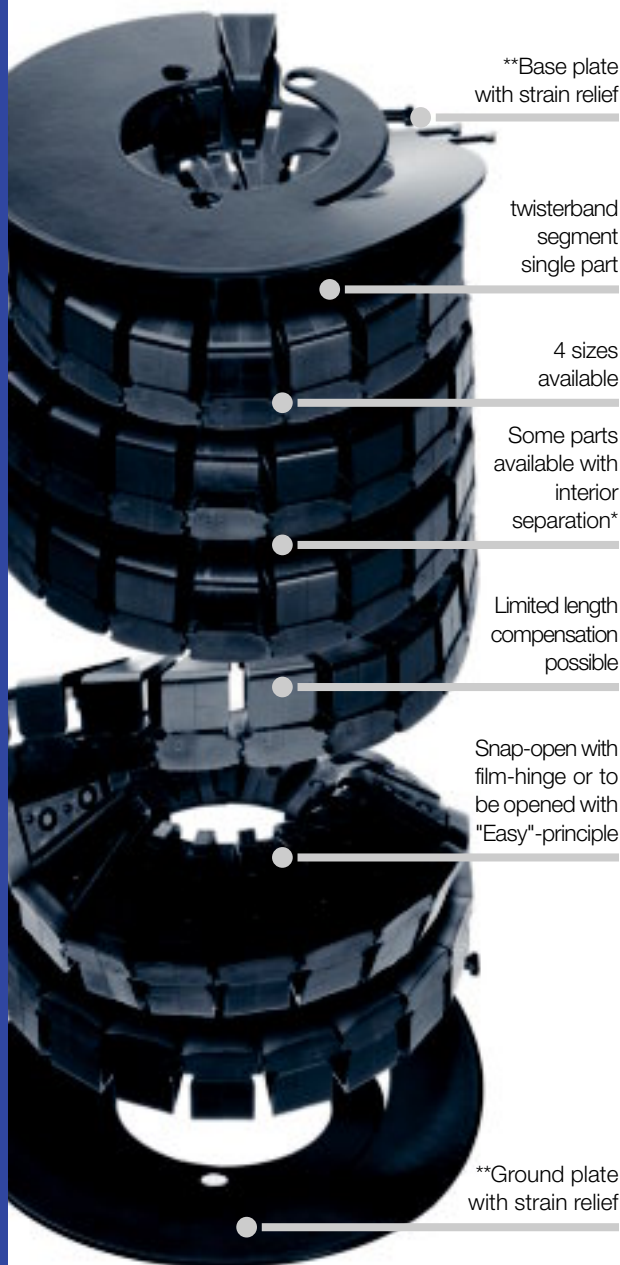


Easy opening and filling of twisterband due to the "easy"-principle



Please lift e-chain® clamp slightly and simply insert cable

NEW in this catalog



**Base plate
with strain relief

twisterband
segment
single part

4 sizes
available

Some parts
available with
interior
separation*

Limited length
compensation
possible

Snap-open with
film-hinge or to
be opened with
"Easy"-principle

**Ground plate
with strain relief

Rotary motions in smallest spaces

When to use the twisterband:

- Rotary movements up to 7000°
(Installation position, vertical: up to 3.000°,
horizontal: 7.000° and more possible)
- For smallest spaces
- Rotary speeds up to
360°/s possible
- 4 sizes available
- Some parts available
with interior separation*
- Easy to fill with film-hinge or to
be opened with "Easy"-principle*
- Limited length adjustment possible
(*depending on Series)



When to use a different igus® Series:

- For higher fill weights
- ▶ **System twisterchain® new,**
page 2.56
- For 3D-movements
- ▶ **triflex® R,** page 2.4
- RBR-versions for
additional fill weights
- ▶ **Design, chapter 1**
- If a smear-and maintenance-free
polymer slewing bearing for "endless"
turning movements is required
- ▶ **iglidur® polymer slewing bearing,**
www.igus.eu/en/PRT
- Use of shielded cables
- ▶ **please ask for support**

****Ground- and base plates are de-
livered by standard. They are part of
the twisterband-module!**

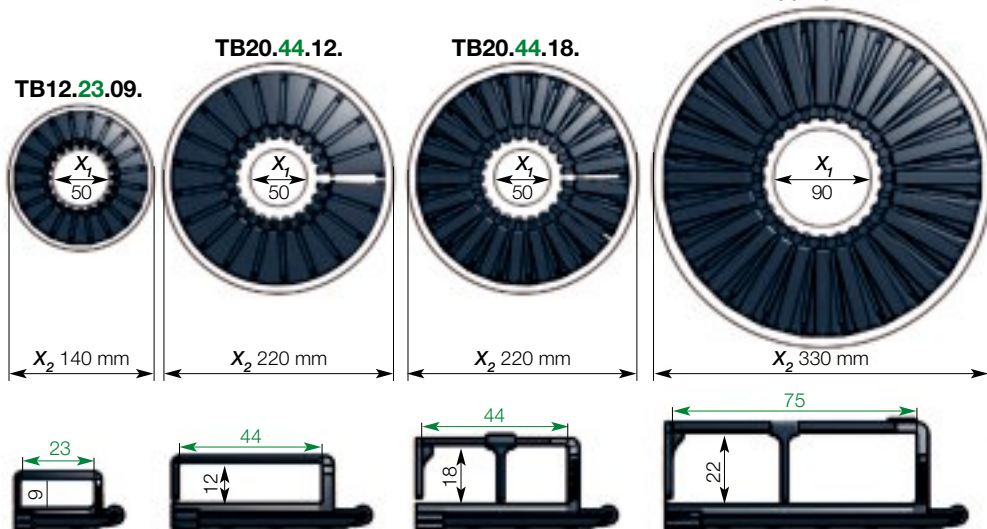


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



TB30.75.22.



twisterband | Snap-open with film-hinge or to be opened with "easy"-principle

Part No. twisterband	Inner width <i>Bi</i> [mm]	Inner height <i>hi</i> [mm]	<i>X</i> ₁ [mm]	<i>X</i> ₂ [mm]	<i>R min.</i> [mm]	<i>R max.</i> [mm]	Opening principle	<i>d1</i> [mm]
TB12.23.09. X.01.0	23	9	50	140	24	35	easy-principle	7
TB20.44.12. X.01.0	44	12	50	220	34	57	easy-principle	9
TB20.44.18. X.01.0	44	18	50	220	34	57	film-hinge	14
TB30.75.22. X.01.0	75	22	90	330	44	77	film-hinge	17

*Ground- and base plates are delivered by standard. They are part of the twisterband-module! more twisterband sizes upon request!

Supplement Part No. with required number of ribbons **X** (see calculation box) e.g. **TB20.44.12.6.01.0**

Calculation



Number of ribbons

depending on rotation angle

(please always round up number of ribbons)

TB12: $X \approx \frac{\text{Rotation angle}}{360} + 2$ = Example:

$X \approx \frac{1200^\circ}{360} + 2$ = result: **X ≈ 6 ribbons**

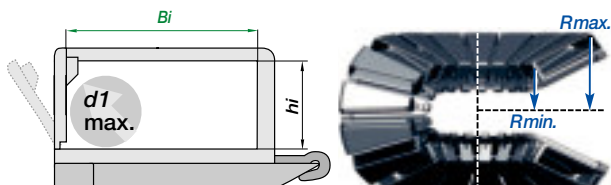
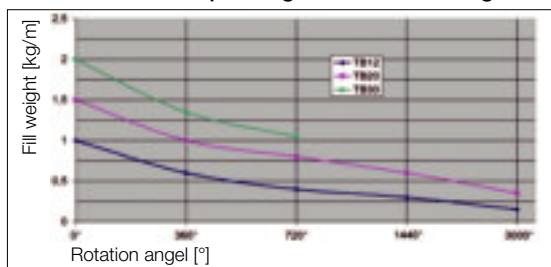
TB20: $X \approx \frac{\text{Rotation angle}}{340} + 2$ = Example:

$X \approx \frac{1200^\circ}{340} + 2$ = result: **X ≈ 6 ribbons**

TB30: $X \approx \frac{\text{Rotation angle}}{180} + 2$ = Example:

$X \approx \frac{1200^\circ}{180} + 2$ = result: **X ≈ 9 ribbons**

Additional loads depending of the rotation angel



Bi = Inner width e-chain*

*X*₁ = Inner machine construction space

R min. = Min. bending radius

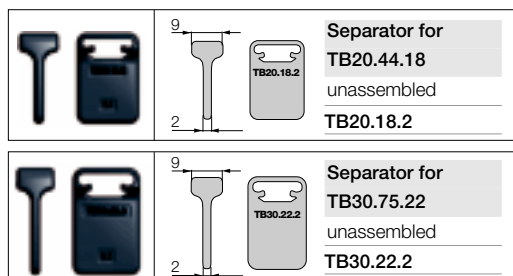
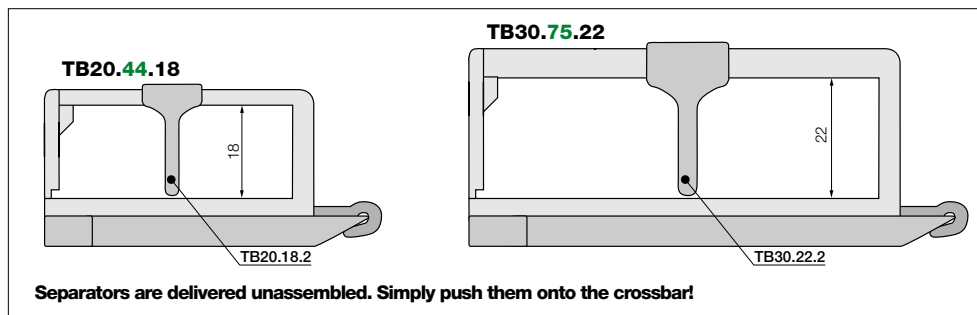
d1 = Max. cable diameter

hi = Inner height e-chain*

*X*₂ = Outer machine construction space

R max. = Max. bending radius

X = Number of ribbons



Separators

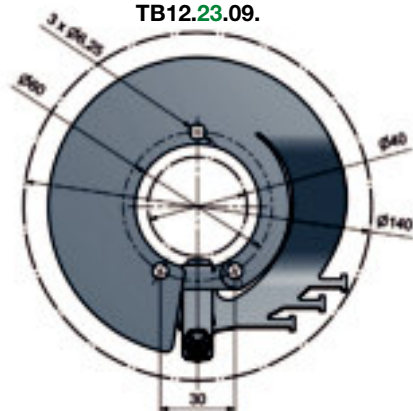
For Series TB20 with an inner height of 18 mm and Series TB30 (inner height: 22 mm). For installation simply open the e-chain®, insert a cable and push the separator onto the crossbar. Then add more cables. The separators provide a clear, cable-friendly interior separation.



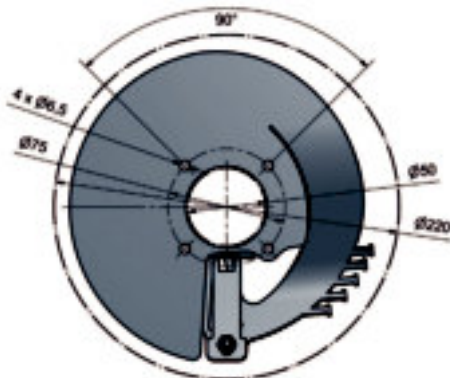
Easy opening and filling of the twisterbandes with a click or with the "easy"-principle. Simply push separators on and add more cables. The separators provide a clear, cable-friendly interior separation.

Dimensions - ground / base plate made of steel with strain relief for the following Series:

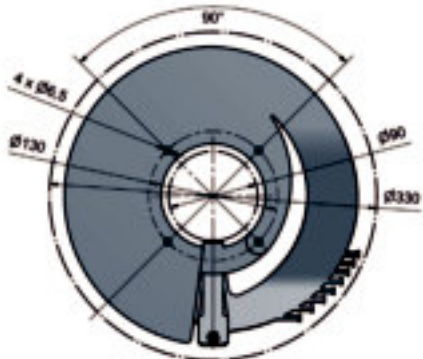
TB12.23.09.



TB20.44.12. / TB20.44.18.



TB30.75.22.



Ground plate and base plate are delivered by standard. They are part of the twisterband-module!



twisterband application of two systems mounted above one another. This space-saving solution allows double filling space with a constant outer diameter of the system



Endurance test of a twisterband module in the igus® test laboratory



Customer application with twisterband TB20.44.18 - consuming and expensive rotary joints could be replaced here



Suitable igus® chainflex® cables for smallest bending radii at ► www.igus.eu/en/chainflex

Date:	Phone: +49- (0) 22 03 96 49 - 800 Fax: +49- (0) 22 03 96 49 - 222
From: Phone: Fax:	To: igus® GmbH - Technical Sales e-chainsystems® P.O. Box 90 61 23 51147 Cologne (Porz-Lind)

Short description of application

Which task should be performed	Solution at the moment
Rotating angle [°]	min. service life [cycles]
Frequency [°/s]	<input type="checkbox"/> Continuous rotation <input type="checkbox"/> Stop & Go

Cable specification

Quantity Type (control, data, servo, hoses, etc.) Outer diameter [ø mm] min. bending radius [mm]

Environment

Ambient temperature [C°]

☐ ATEX/ESD ☐ Cleanroom

Sketch please enter your dimensions [mm]

Your data

Company

Name

Adress

Phone/Fax

E-mail

