



# twisterband

Up to 7,000°\* rotary movement in the smallest spaces



#### twisterband advantages:

- Rotary movement up to 7000°\*
- Rotary speeds up to 180°/s possible
- Openable with film hinge or openable "easy" design
- HD version with strong pin and hook connection for an even longer service life
- Compact, modular and lightweight
- Bands can be lengthened and shortened as required
- Minimum installation space, fits tightly around the rotary axis
- Cost-effective and easy to fill



#### When to use another igus® solution:

- For applications with a high fill weight
  - ▶ **twisterchain system, page 1086**
- For applications with multi-axis movements
  - ▶ **triflex® R, page 960**
- **RBR** versions with a high fill weight
  - ▶ **Designing, page 130**
- If a lubrication and maintenance-free slewing ring bearing for "endless" rotation is required
  - ▶ **iglidur® slewing ring bearings, [www.igus.eu/PRT](http://www.igus.eu/PRT)**
- If shielded cables are necessary
  - ▶ **Please contact us**

\*Depending on installation orientation, vertical: up to 3,000°, horizontal: 7,000° and more possible



## Up to 7,000°\* rotary movements in small spaces - twisterband

With the compact igus® twisterband, rotations of up to 7,000°\* can be achieved cost-effectively, even in confined spaces. Energy, data and media are securely guided.

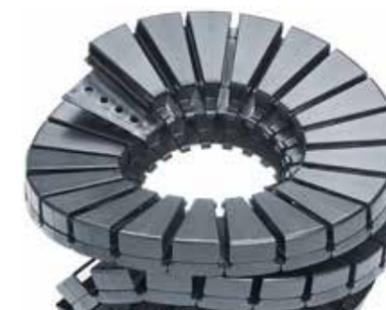
- Rotary movement up to 7000°\*
- Rotary speeds up to 180°/s possible
- Openable with film hinge or openable "easy" design
- HD version with strong pin and hook connection for an even longer service life
- Compact, modular and lightweight
- Bands can be lengthened and shortened as required
- Minimum installation space, fits tightly around the rotary axis
- Cost-effective and easy to fill

### Typical industries and applications

- Cable drums
- Robots (robot arms, 1/6 axis, SCARA robots)
- Machine tools
- 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

\*Depending on installation orientation, vertical: up to 3,000°, horizontal: 7,000° and more possible

Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	∅ <i>X</i> <sub>1</sub> [mm]	∅ <i>X</i> <sub>2</sub> [mm]	≥ <i>R</i> [mm]	≤ <i>R</i> [mm]	≤ <i>d1</i> [mm]	Interior separation	Opening principle	Page
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### twisterband

e-chain® links on a strip.  
Openable with film hinge  
or openable "easy" design

TB12.23.9	9	23	40	140	024	035	7	–	"easy" design	1114
TB20.44.12	12	44	50	220	034	057	9	–	"easy" design	1114
TB20.44.18	18	44	50	220	034	057	14	yes	lock	1114
TB29.27.22	22	27	200	320	069	082	17	yes	lock	1114
TB30.75.22	22	75	90	330	044	077	17	yes	lock	1114



### twisterband HD

e-chain® links with strong pin and hook connection.  
Openable with film-hinge

TBHD12.24.11 <sup>New</sup>	11	24	40	140	024	035	10	yes	lock	1118
TBHD20.44.18 <sup>New</sup>	18	44	50	220	037	063	14	yes	lock	1118
TBHD30.75.22	22	75	90	330	044	077	17	yes	lock	1118
TBHD42.135.30	30	135	90	500	056	119	24	yes	lock	1118

Other sizes available upon request. *X*<sub>1</sub> = inner machine limit *X*<sub>2</sub> = outer machine limit



Available from stock. Ready to ship in 24 - 48hrs.\*

\*Average time before the ordered goods are dispatched.



*Bi* = Inner width e-chain®  
*hi* = Inner height e-chain®

*X*<sub>1</sub> = Inner machine limit  
*X*<sub>2</sub> = Outer machine limit

≥ *R* = Minimum bend radius e-chain®  
≤ *R* = Max. bend radius e-chain®

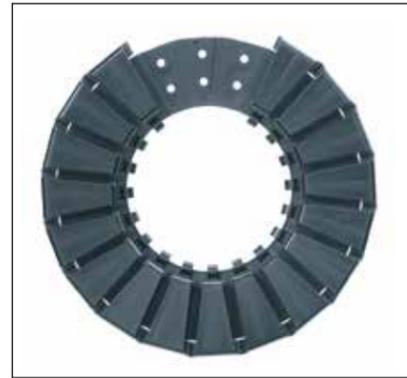
*d1* = Max. cable diameter  
**XX** = Number of strips



A central shaft must be installed for horizontal orientation angles of rotation above 1500°



Max. angle of rotation: as a rule of thumb: each segment gives 180° = 360° more rotation



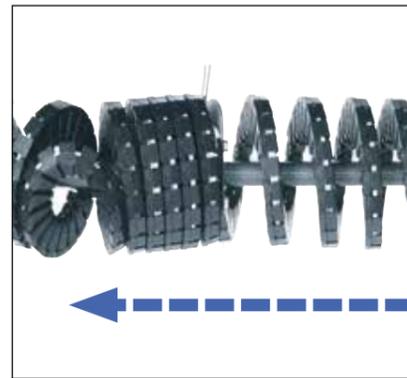
igus® twisterband: minimum installation space, fits very closely around the rotary axis



Film hinge: Easy access and quick filling with cables and hoses



Compact, modular, cost-effective - up to 7,000° rotary movement\* in the most confined spaces



Can be reliably used in various installation positions (horizontal: 7,000° and more). Limited length compensation possible



The twisterband HD is an advanced version of the standard twisterband ...



... instead of bands with integral hinges, the twisterband HD version is composed of separate e-chain® links with the pin/hook connecting system ...



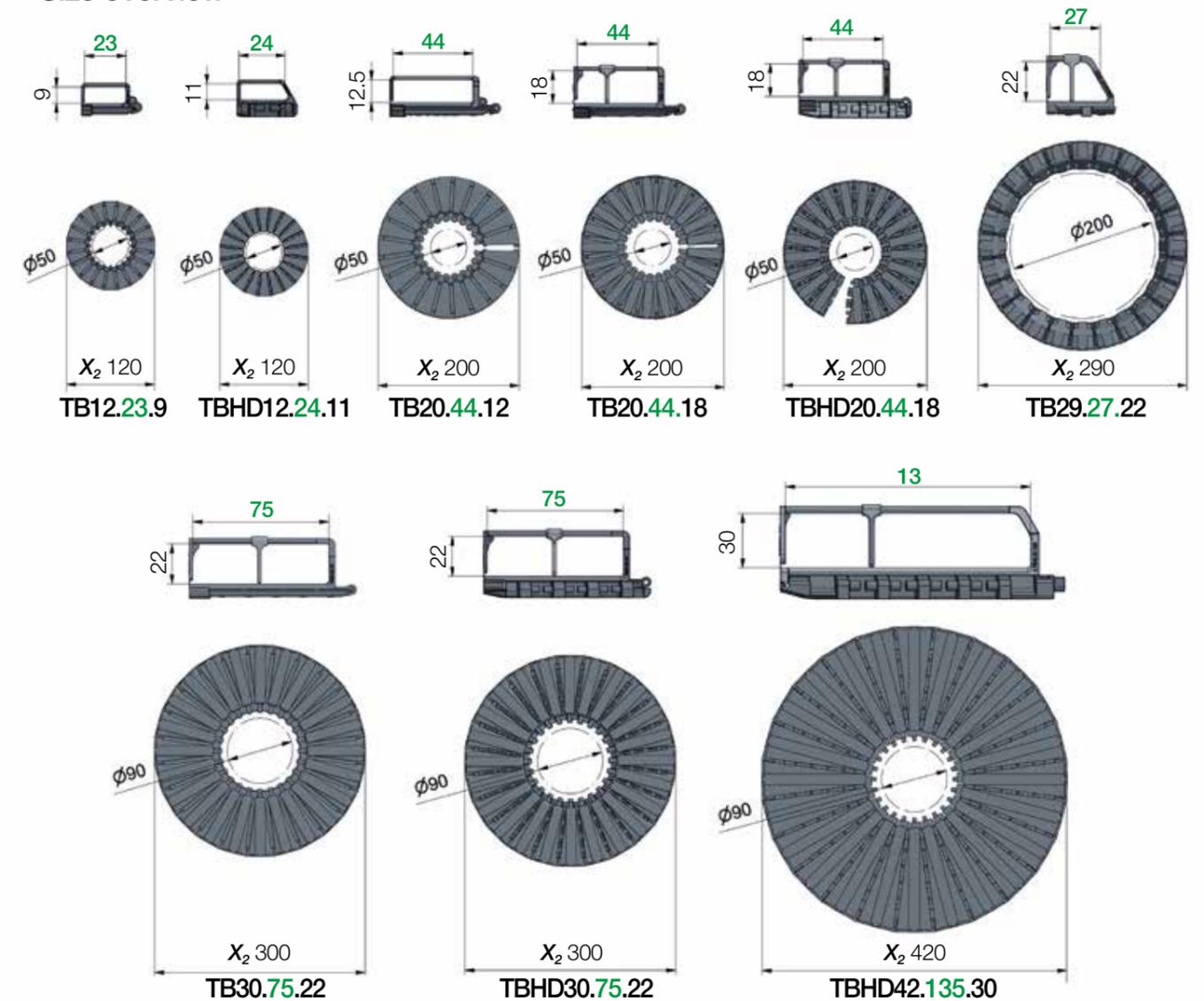
... the advantage is a defined radius with higher strength.

Technical data

	Speed / acceleration*	180°/s
	twisterband - material - permitted temperature °C, igumid TE	0°C / +70°C
	twisterband HD - material - permitted temperature °C, igumid G	0°C / +80°C
	Flammability class, igumid G	VDE 0304 IIC UL94-HB
	Flammability class, igumid TE	VDE 0304 IIC UL94-HB

\*Speed / acceleration for TB29.27. upon request

Size overview



**i** Bi = Inner width e-chain® X<sub>1</sub> = Inner machine limit ≥ R = Minimum bend radius e-chain® d1 = Max. cable diameter  
 hi = Inner height e-chain® X<sub>2</sub> = Outer machine limit ≤ R = Max. bend radius e-chain® **XX** = Number of strips





Base plate with strain relief\*\*

Bands can be lengthened and shortened as required

4 sizes available

Some parts available with interior separation

Openable with film hinge or openable "easy" design

Base plate with strain relief\*\*

## Up to 7,000°\* rotary movements in small spaces - twisterband

With the compact igus® twisterband rotations can be achieved cost-effectively and with low wear and low maintenance, even in confined spaces. Energy, data and media are securely guided. Available in 5 sizes.

- Rotary movement up to 7,000°\*
- Rotary speeds up to 180°/s possible
- Compact, modular and lightweight
- Bands can be lengthened and shortened as required
- Minimum installation space, fits tightly around the rotary axis
- Can be used reliably in various installation positions (horizontal or vertical)
- Cost-effective
- Easy filling
- Ideal in combination with igus® chainflex® cables for rotary movements in very limited installation spaces

### Typical industries and applications

- Cable drums
- Robots (robot arms, 1/6 axis, SCARA robots)
- Machine tools
- 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

\*\*Base plates are delivered as standard as part of the twisterband module!

\*Depending on installation orientation, vertical: up to 3,000°, horizontal: 7,000° and more possible

### e-chain® links on a strip



### twisterband | Openable with film hinge or with "easy" design

Part No.	Bi1	hi	X <sub>1</sub>	X <sub>2</sub>	≥ R	≤ R	≤ d1	Opening principle
twisterband	[mm]	[mm]	ø [mm]	ø [mm]	[mm]	[mm]	[mm]	
TB12. 23 .9. XX .01.0	23	9	40	140	24	35	7	"easy" design
TB20. 44 .12. XX .01.0	44	12	50	220	34	57	9	"easy" design
TB20. 44 .18. XX .01.0	44	18	50	220	34	57	14	lock
TB29. 27 .22. XX .02.0*	27	22	200	320	69	82	17	lock
TB30. 75 .22. XX .01.0	75	22	90	330	44	77	17	lock

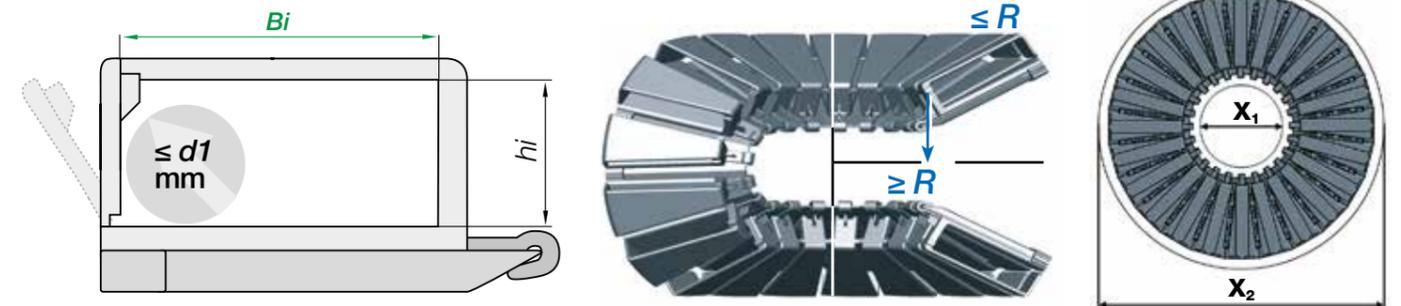
More twisterband sizes upon request! **Note: Series TB29.27.22. Rotary movement up to max. 720°**

Base plates are delivered as standard as part of the twisterband module!

X<sub>1</sub> = ø inner machine installation space X<sub>2</sub> = ø outer machine installation space

Complete Part No. with required number of strips XX. Example: TB20.44.12.6.01.0

### Installation dimensions



**Calculation: number of strips depends on angle of rotation (please always round up number of strips)**

TB12:  $XX \approx \frac{XXXX^\circ}{360} + 2 =$  Example:  $XX \approx \frac{1200^\circ}{360} + 2 =$  Result:  $XX \approx 6$  strips

TB20:  $XX \approx \frac{XXXX^\circ}{340} + 2 =$  Example:  $XX \approx \frac{1200^\circ}{340} + 2 =$  Result:  $XX \approx 6$  strips

TB29:  $XX \approx \frac{XXXX^\circ}{180} + 2 =$  Example:  $XX \approx \frac{720^\circ}{180} + 2 =$  Result:  $XX \approx 6$  strips

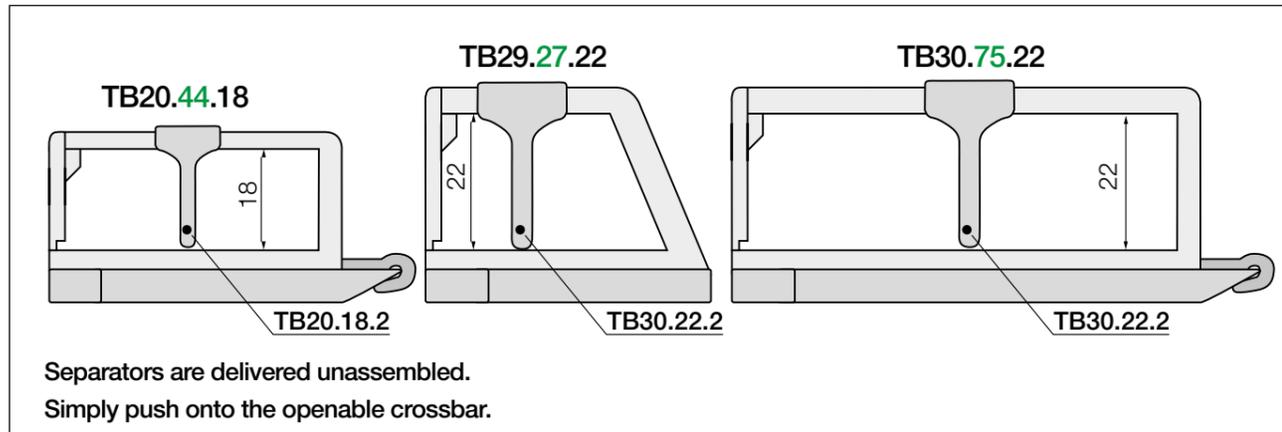
TB30:  $XX \approx \frac{XXXX^\circ}{180} + 6 =$  Example:  $XX \approx \frac{1200^\circ}{180} + 6 =$  Result:  $XX \approx 13$  strips

XXXX° = Angle of rotation

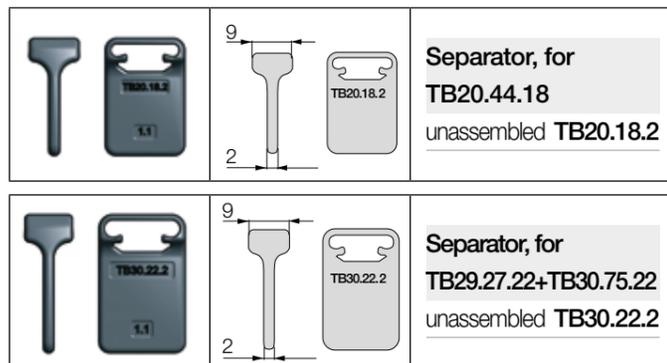
Available from stock. Ready to ship in 24 - 48hrs.\*

\*Average time before the ordered goods are dispatched.

Interior separation for twisterband



Separators are delivered unassembled.  
Simply push onto the openable crossbar.



**Separators**  
To fit, simply open the e-chain®, insert a cable and press the separator onto the crossbar. Then add more cables. The separators provide a clear, cable-friendly interior separation.



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

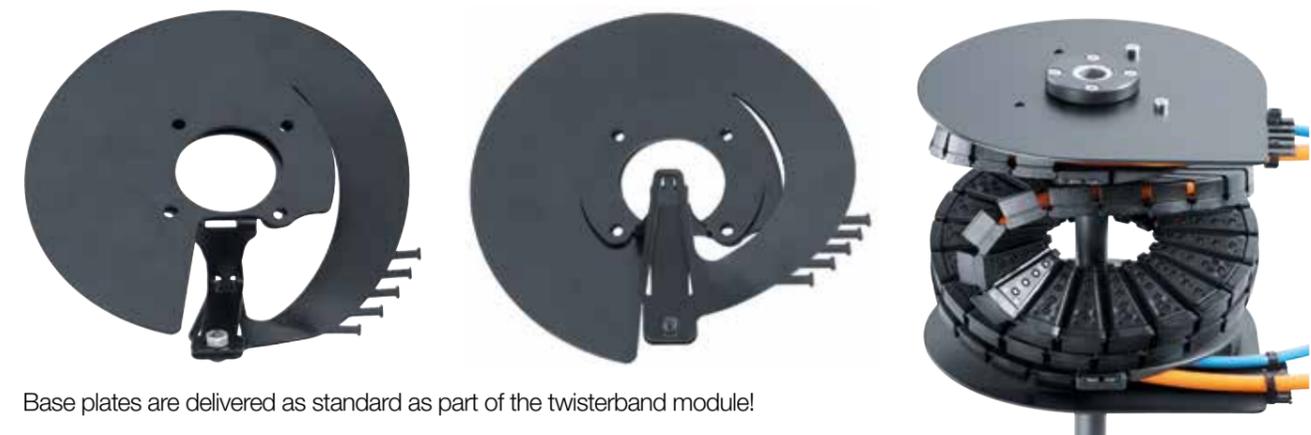
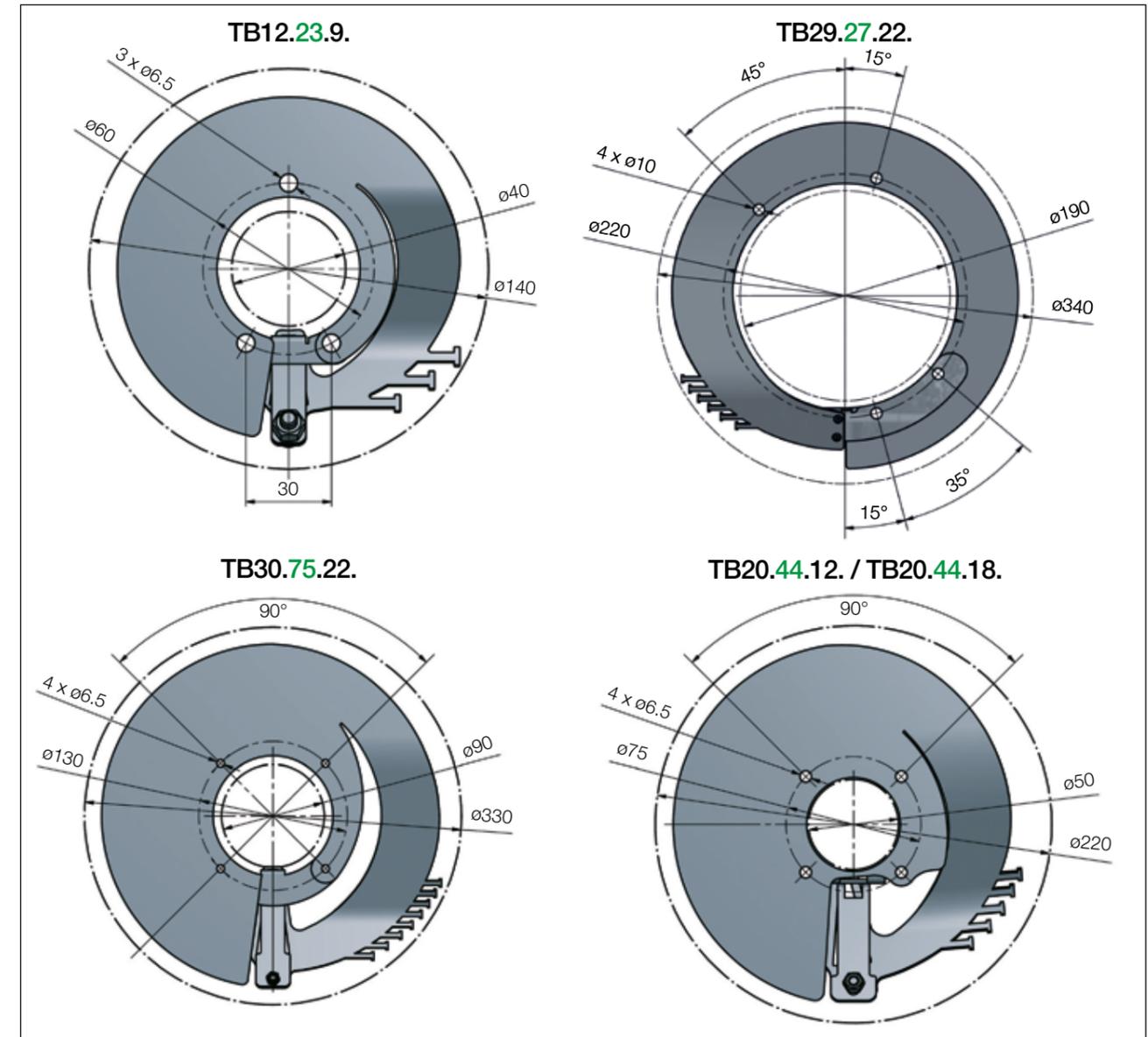


igus® twisterband TB30 for circular movements up to 360°, E2 mini and E2/000 e-chains® are used in this loading and unloading unit

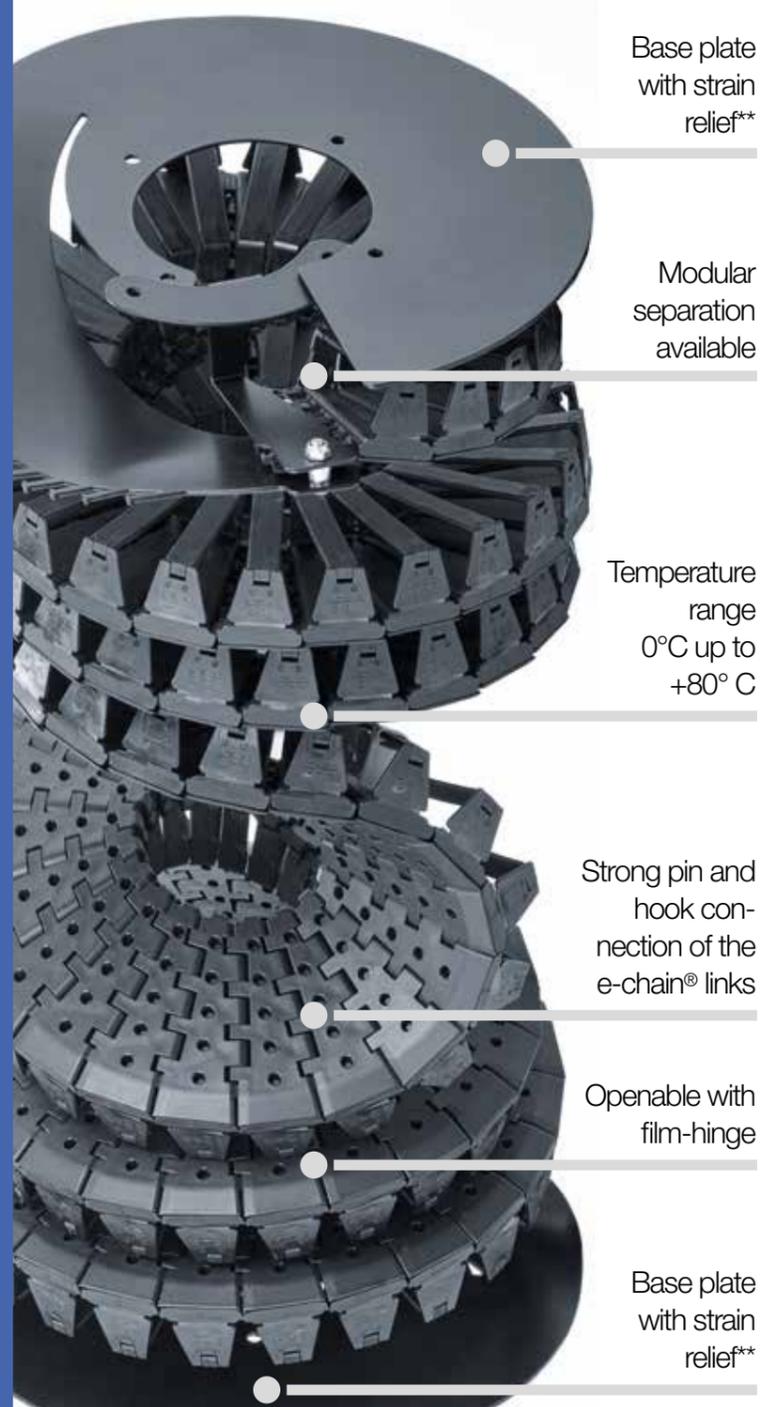


Two systems stacked above one another - this space-saving solution allows double filling space with a constant outer diameter of the system

Steel base plate dimensions



Base plates are delivered as standard as part of the twisterband module!



Base plate with strain relief\*\*

Modular separation available

Temperature range 0°C up to +80° C

Strong pin and hook connection of the e-chain® links

Openable with film-hinge

Base plate with strain relief\*\*

# Rotary movement in the most confined spaces, now even stronger - twisterband HD

Instead of strips, the twisterband HD has a strong pin/hook connection between the e-chain® links. Longer service life and higher filling are possible.

- Continuous cable guidance in rotational movements
- Strong pin/hook connection for high load and long service life
- For routing of electrical, fibre optic and pneumatic cables in one system
- Stop-dogs for defined bend radius
- Cable-friendly due to defined radius stop
- Max. rotating speed: 180°/s

**Typical industries and applications**

- Machining heads on machine tools
- Rotary tables
- Axis 6 on robots
- Generally all applications that currently work with slip rings



twisterband | Openable with film hinge

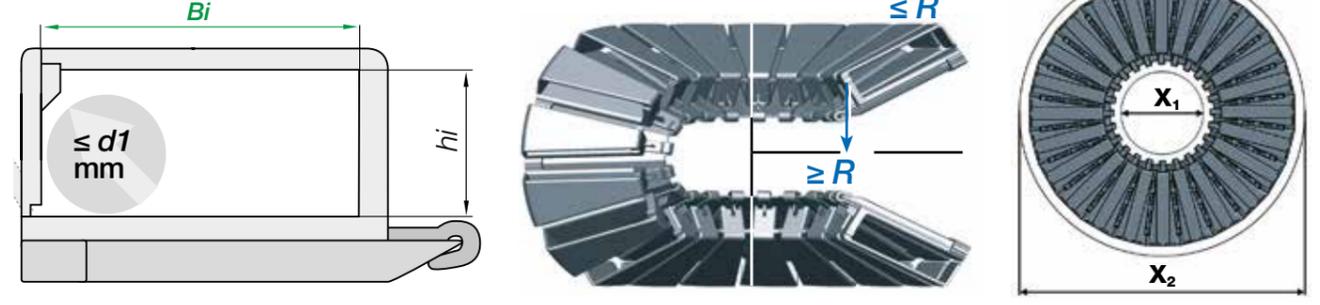
Part No.	<i>Bi</i> 1	<i>hi</i>	<i>X</i> <sub>1</sub>	<i>X</i> <sub>2</sub>	≥ <i>R</i>	≤ <i>R</i>	≤ <i>d1</i>	Opening principle
twisterband	[mm]	[mm]	ø [mm]	ø [mm]	[mm]	[mm]	[mm]	
TBHD12.24 .11. <b>XXX</b> .01.0	24	11	40	140	024	035	10	lock
TBHD20.44 .18. <b>XXX</b> .01.0	44	18	50	220	037	063	14	lock
TBHD30.75 .22. <b>XXX</b> .01.0	75	22	90	330	044	077	17	lock
TBHD42.135.30. <b>XXX</b> .01.0	135	30	90	500	056	119	24	lock

Base plates are delivered as standard as part of the twisterband module!

*X*<sub>1</sub> = ø inner machine installation space *X*<sub>2</sub> = ø outer machine installation space

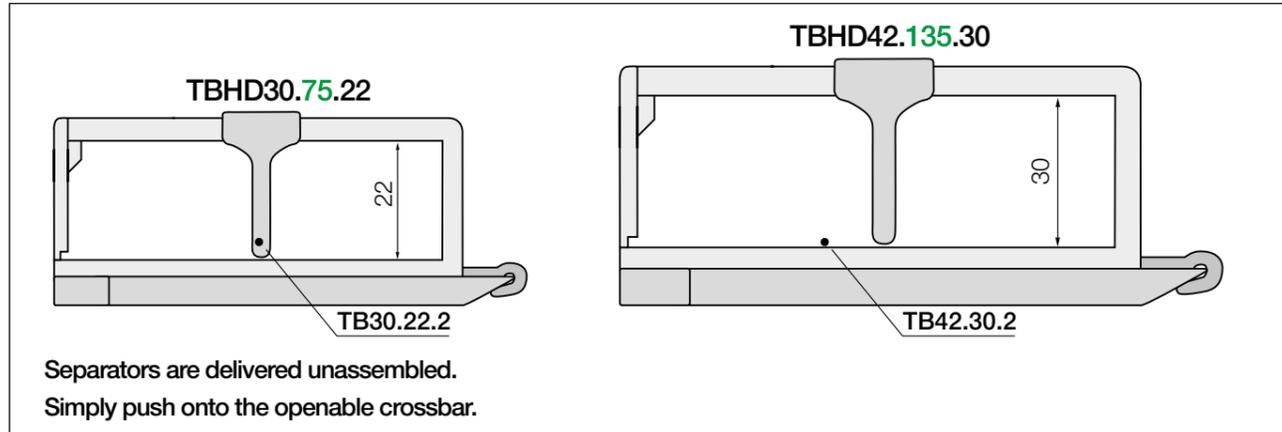
Complete Part No. with required number of strips **XXX**. Example: TBHD30.75.22.180.01.0

## Installation dimensions

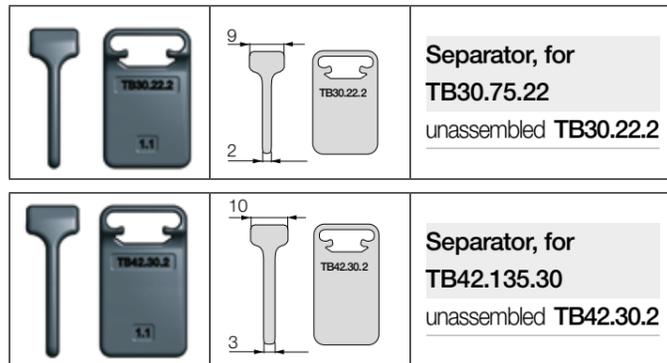


\*\*Base plates are delivered as standard as part of the twisterband module!

Available from stock. Ready to ship in 24 - 48hrs.\*  
\*Average time before the ordered goods are dispatched.



Separators are delivered unassembled.  
Simply push onto the openable crossbar.



**Separators**

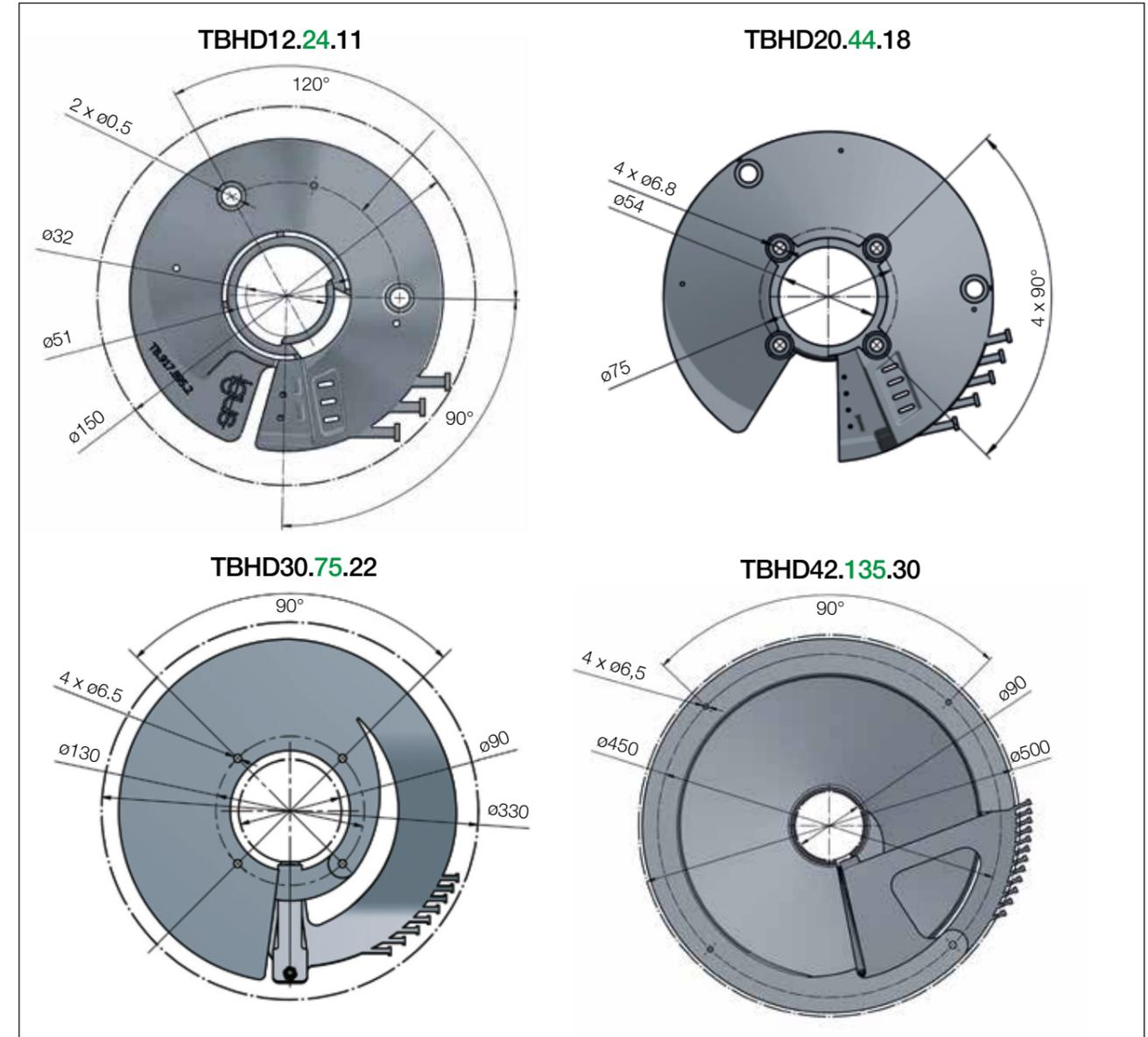
To fit, simply open the e-chain®, insert a cable and press the separator onto the crossbar. Then add more cables. The separators provide a clear, cable-friendly interior separation.



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



igus® twisterband and other e-chains® in a wood working machine



Base plates are delivered as standard as part of the twisterband module!