

T3 Light, highly flexible and low-vibration

clean-room



Advantages of the T3 system:

- Very low weight e-chain®
- For high speeds and accelerations
- Virtually no polygon effect
- Small bend radii and installation space
- Fast, easy filling and assembly
- Low noise 33dB(A)¹⁾ - small pitch for low noise, smooth running
- Suitable for cleanrooms according to IPA cleanroom Class 1²⁾

1) Extremely low-noise - tested at the igus® lab 2) Cleanroom - Series T3.29.050.038.0



When to use another igus® e-chain® series:

- When an e-chain® for more fill weight is required
 - ▶ E6.1, page 832
- When larger interior heights are required
 - ▶ E6.1, page 832
- When IPA cleanroom Class 1 is required
 - ▶ E6.1, page 832
- When an enclosed e-chain® for smooth running is required
 - ▶ R6, page 870 ▶ e-skin® corrugated tube SK / SKS / SKY, page 812



Universal:
mounting plates and
strain relief option

Low noise 33dB(A)¹⁾:
small pitch for low noise,
smooth running

Modular design:
t-band in one
segment of 8 links

Modular:
easy to lengthen and
shorten at any point

Easy to use:
clip-on interior
separation clips

IPA cleanroom Class 1²⁾:
virtually no wear or abrasion

Dynamic:
high speeds and
accelerations

Efficient:
lightweight

Smooth running "T-band", quiet, cost-effective T3 system

The T3 system combines low noise operation, simple assembly and economy. The side bands, which snap together, replace a conventional pin and bore connection and prevent relative movements between the joints giving extremely low wear. This means virtually no wear or abrasion (cleanroom). The novel geometrical shape of the t-band, means that hardly any polygon effect is generated in operation. The t-band therefore rolls in a very smooth arc, giving extremely low vibration and noise. In order to reduce the manufacturing and installation costs, the t-band is made in a segment of 8 links. Due to its low mass, the igus® t-band, is suitable for applications with low fill weights and short strokes, combined with high speeds and accelerations.

1) Extremely low-noise - tested at the igus® lab 2) Cleanroom - Series T3.29.050.038.0

Typical industries and applications

- Printer and plotter
- Cleanroom applications
- Production and processing of semiconductors
- Optics
- Pick and place machines
- Measuring technology



IPA Qualification Certificate²⁾ - Report IG 1303-640-1:
ISO Class 2, according to DIN EN ISO 14644-1 for system
T3, series T3.29.050.038 at v = 0.5m/s, 1.0m/s, 2.0m/s

igus® tests at 1m measuring distance:
= 33dB(A)¹⁾ for T3.29.050.038.0 at v = 1m/s
and 26.5dB(A) basic sound level

Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Outer height <i>ha</i> [mm]	Bend radius <i>R</i> [mm]	Unsupported length ≤ [m]	Page
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System T3 -
t-shaped band e-chains®
crossbars removable along
the inner and outer radius

T3.29.	29	30 - 140	55 - 165	35	038	≈ 1.45	940
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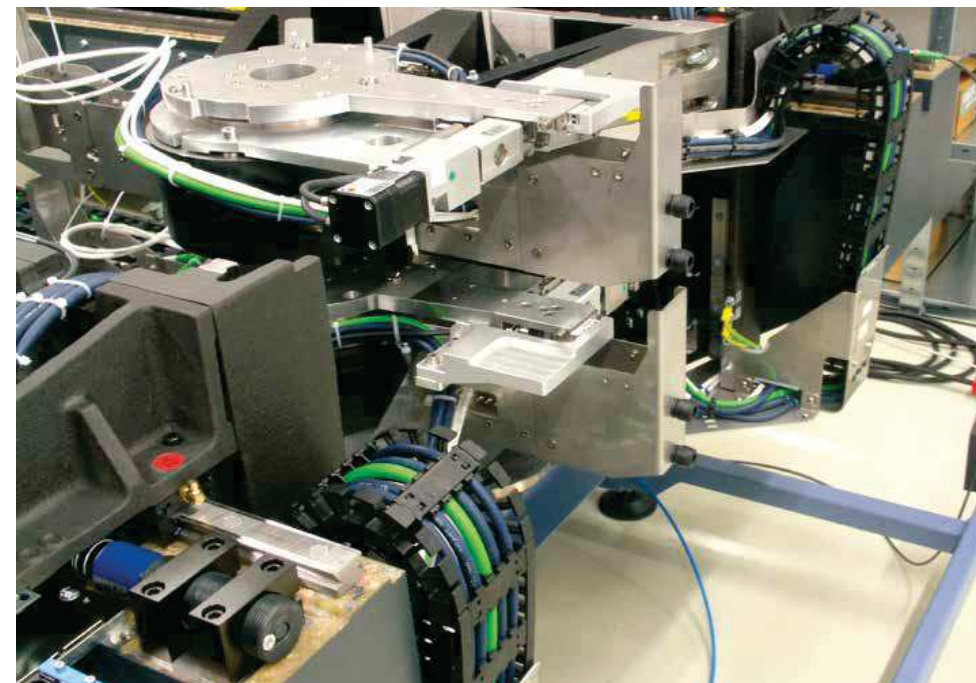


Available from stock. Ready to ship in 72hrs.*

*Average time before the ordered goods are dispatched.







Further information about igus® cleanroom e-chains® and the new, unique igus® cleanroom laboratory for IPA cleanroom Class 1 components ▶ From page 144



T3 system on the Z-axis of a positioning system. It has very low noise and vibration

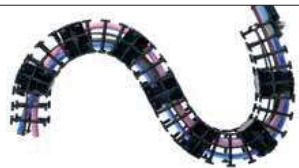
Technical data

 Speed FL_G / acceleration FL_G	≤ 20 [m/s] / ≤ 200 [m/s ²]
 Speed FL_B / acceleration FL_B	≤ 3 [m/s] / ≤ 6 [m/s ²]
 Side band material, igumid TE - permitted temperature °C	upon request
e-chain® link material, igumid G - permitted temperature °C	upon request
 Flammability class	VDE 0304 IIC UL94-HB

■ FL_G = unsupported with straight upper run ■ FL_B = unsupported with permitted sag

T3 e-chains® and modules for circular movement

- T3 e-chains® with Reverse Bend Radii **RBR**
 - Several radii available: 55, 75, 100, 150mm
 - Various installation options
 - Wide range of interior separation layouts
 - Quiet operation
 - Low wear.
- Delivery time upon request - more information
 ► www.igus.eu/circularmovement









T3 RBR module for Reverse Bend Radii

- Consists of 4 elements: T3 **RBR** e-chain®, guiding system, chainflex® cables, iglidur® PRT slewing ring bearing
 - Compact guide trough
 - Inner or outer radius rotation
 - For high speeds
 - Quiet
 - Several mounting options.
- Delivery time upon request - more information ► www.igus.eu/circularmovement




Options with order keys | Examples based on series T3.29

 Standard	<i>NC version - (No Camber) without pretension</i>	<i>Reverse Bend Radius (RBR) for circular movements</i>
Part No. Standard	Part No. NC version	Part No. RBR
		
 T3.29.050.R.0	T3.29.050.R.0.NC	T3.29.050.038/R2.0
 Ready to ship in 72hrs.*	Ready to ship in 12 business days*	Ready to ship in 12 business days*

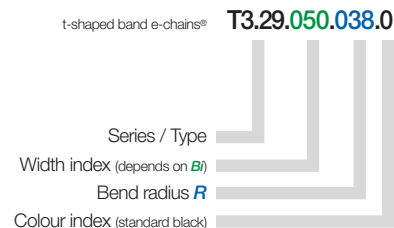
*Average time before the ordered goods are dispatched.

Order example | Order key and colour examples | Examples based on series T3.29








 Order example for complete e-chain® (1.0m), colour black, with mounting brackets and interior separation:

e-chain® (1.0m)	Please indicate e-chain® length or number of links: 1.0m or 67 links	T3.29.050.038.0
+ Mounting brackets	1 set (with tie-wrap plates)	T3.29.050.12PZ
Interior separation	with 2 separators assembled every 2 nd link	2 x .29.1.1
Order text:	1m T3.29.050.038.0 + T3.050.12 + 2 x 29.1.1	

 Order key



Order index for colour options

Colour	Order index	Colour	Order index
 Black	Standard .0	 Orange	Special colour .2
 Silver-grey	Special colour .31	 Yellow	Special colour .4
 White	Special colour .1	 Light grey	Special colour .14
 Grey-white	Special colour .1S		

Black e-chains® ready to ship in 72hrs.*
 Above special colours upon request.

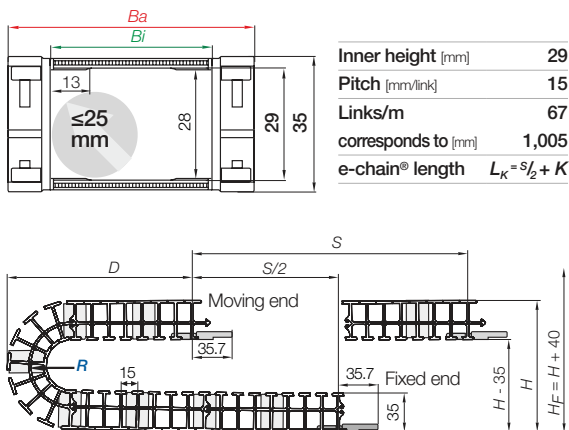
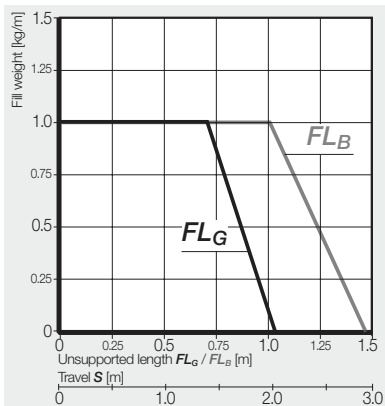


e-chains® | Series T3.29 | Crossbars removable along the inner and outer radius

Part No.	Bi	Ba	R Available bend radii	T3.29
e-chains®	[mm]	[mm]	[mm]	[kg/m]
T3.29.030.R.0	30	55	038	≈ 0.40
T3.29.040.R.0	40	65	038	≈ 0.42
T3.29.050.R.0	50	75	038	≈ 0.44
T3.29.060.R.0	60	85	038	≈ 0.46
T3.29.070.R.0	70	95	038	≈ 0.48
T3.29.080.R.0	80	105	038	≈ 0.50
T3.29.090.R.0	90	115	038	≈ 0.51
T3.29.100.R.0	100	125	038	≈ 0.53
T3.29.110.R.0	110	135	038	≈ 0.55
T3.29.120.R.0	120	145	038	≈ 0.57
T3.29.140.R.0	140	165	038	≈ 0.59

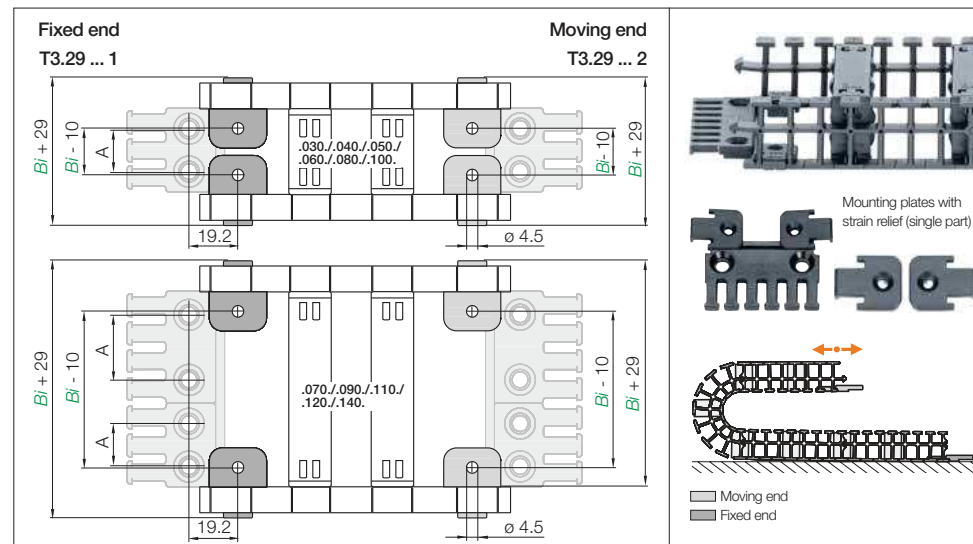
Complete Part No. with required radius (R). Example: T3.29.100.038.0

Installation dimensions



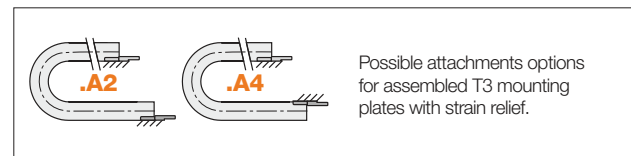
R ≥	038
H ≥	216
D	111
K	210

The required clearance height: $H_f = H + 40\text{mm}$ (with 1.0kg/m fill weight)



Width index	Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A [mm]	Bi [mm]	Number of teeth
030. ►	T3.29.030.12PZ	T3.29.030.12	15	30	3
040. ►	T3.29.040.12PZ	T3.29.040.12	20	40	4
050. ►	T3.29.050.12PZ	T3.29.050.12	30	50	5
060. ►	T3.29.060.12PZ	T3.29.060.12	40	60	6
070. ►	T3.29.070.12PZ	T3.29.070.12	15 + 20*	70	7
080. ►	T3.29.080.12PZ	T3.29.080.12	60	80	8
090. ►	T3.29.090.12PZ	T3.29.090.12	20 + 30*	90	9
100. ►	T3.29.100.12PZ	T3.29.100.12	80	100	10
110. ►	T3.29.110.12PZ	T3.29.110.12	30 + 40*	110	11
120. ►	T3.29.120.12PZ	T3.29.120.12	40 + 40*	120	12
140. ►	T3.29.140.12PZ	T3.29.140.12	60 + 40*	140	14

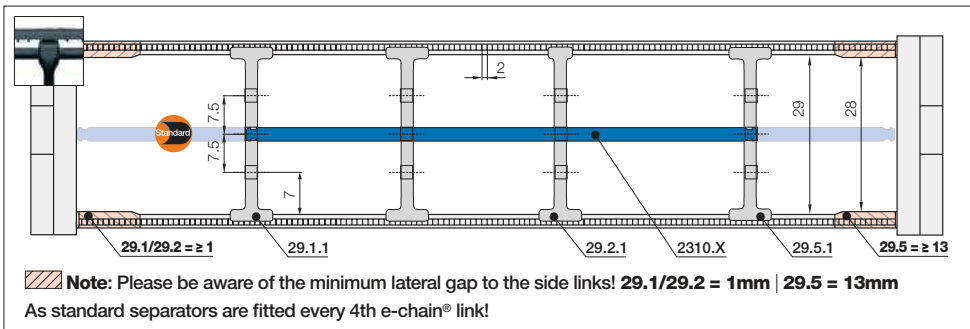
*Strain relief consisting of 2 tiewrap plates



Possible attachments options for assembled T3 mounting plates with strain relief.



Strain relief e.g. clamps, tiewrap plates, nuggets and clips are available from stock. The complete chainfix range with ordering options ► From page 1392



Standard separator, wide base

unassembled	29.1
assembled	29.1.1

Standard - for any application
Separator with a wide base for maximum holding force.

Separator, narrow top

unassembled	29.2
assembled	29.2.1

For even faster installation
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

Notch separator for notched crossbar

unassembled	29.5
assembled	29.5.1

Locks securely in preset increments
Notch separator for exact positioning. Recommended for side-mounted applications.

Shelf, lockable

unassembled	2300.X
assembled	2310.X

Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]			
	unassembled	assembled	unassembled	assembled	unassembled	assembled		
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.87	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.90	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Separator with integrated strain relief teeth

- Can be integrated into the mounting bracket or placed at any point
 - Combines strain relief and interior separation, for restricted space conditions
 - Strain relief separator is easy to assemble without any screws
- Part No. E6.35.02.Z - more information ► From page 1428



Cleanroom-suitable igus® chainflex® cables are safely guided in a T3 e-chain®. 1,125 IPA certified chainflex® cables according to ISO Class 1 or Class 2 are available from stock