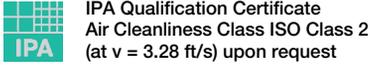# igus®

e-chain system® E-Z chain
Series E03

.20

Special Features / Options

IPA

IPA Qualification Certificate
Air Cleanliness Class ISO Class 2
(at v = 3.28 ft/s) upon request

Flammability Class
VDE 0304 IIC UL94 V2

5 mm

Smallest inner heights .20" (5 mm)
Series E03 E-Z chain

Assembly Tips

Just push the cables into the e-chain using your thumb

Usage Guidelines

➕

- If filling is required without opening and closing
- If price is an issue
- If quiet operation is required

➖

- If a non-opening Energy is needed
➤ **Series 03 E2 Micro**

Features & Benefits

1 Smallest e-chain® -

interior dimensions .20" x .20" (5 x 5 mm)

2 Small pitch for low-noise and smooth operation

3 Very easy to fill, without opening and closing lids

4 Mounting bracket with integrated strain relief

5 Very lightweight - ideal for low fill weight

6 Patented push button design holds the links together

7 For smallest bending radii

chainflex® CF98/CF99 - 4 x d

Order Example: Complete e-chain®
Please indicate chain length or number of links. Example:

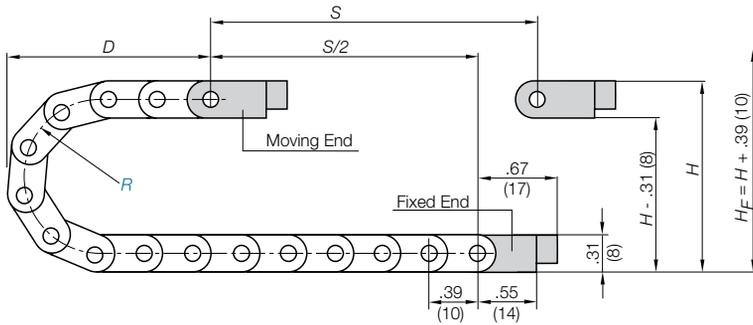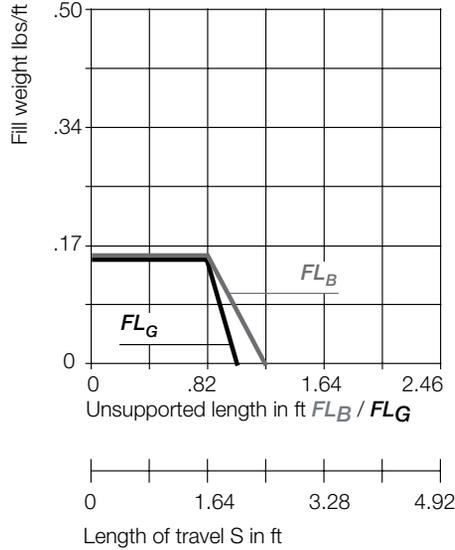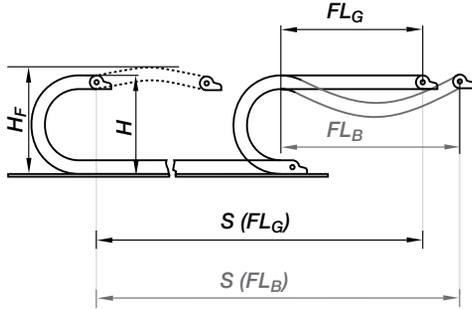|		
3.28 ft (1 m) **E03-05-010-0**		e-chain®
1 Set **E03-05-12Z**		Mounting Bracket

e-chain system® E-Z chain
Series E03
Installation Dimensions

Short travel, unsupported length

● FL_B = unsupported with permitted sag

● FL_G = unsupported with straight upper run

Further information ➤ Design, Chapter 1

Fill weight lbs/ft

Unsupported length in ft FL_B / FL_G

Length of travel S in ft

Short Travels - Unsupported

Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height. Please refer to **Installation dimensions** for further details.

Legend

S = Length of travel

R = Bending radius

H = Nominal clearance height

D = Overlength e-chain® radius in final position

K = π • R + *safety buffer*

H_F = Required clearance height

Pitch per link: = .39" (10 mm)

Links per ft (m): = 30.47 (100)

For center mount applications:

Chain length = $\underline{}^s/2 + K$

The required clearance height: $H_F = H + .39$ **in. (10 mm)** (with .067 lbs/ft (0.1 kg/m) fill weight.

Please consult igus® if space is particularly restricted.

R	.39 (010)	.47 (012)	.59 (015)	.71 (018)	1.10 (028)
H	1.10 (28)	1.26 (32)	1.50 (38)	1.73 (44)	2.52 (64)
D	1.14 (29)	1.22 (31)	1.34 (34)	1.46 (37)	1.85 (47)
K	2.17 (55)	2.36 (60)	2.76 (70)	3.15 (80)	4.33 (110)

Speed / acceleration FL_G	max. 65.6 ft/s (20 m/s) / max. 656 ft/s² (200 m/s²)
Speed / acceleration FL_B	max. 9.84 ft/s (3 m/s) / max. 19.69 ft/s² (6 m/s²)
Gliding speed / acceleration (maximum)	max. 9.84 ft/s (3 m/s) / max. 32.8 ft/s² (10 m/s²)
Material (e-chain®) - permitted temperature	igumid NB / -40°F (-40°C) up to +176°F (+80° C)
Material (mounting brackets)* - permitted temperature	igumid G / -40°F (-40°C) up to +248°F (+120° C)
Flammability Class (e-chain®), igumid NB	VDE 0304 IIC UL94 V2
Flammability Class (mounting brackets), igumid G*	VDE 0304 IIC UL94 HB

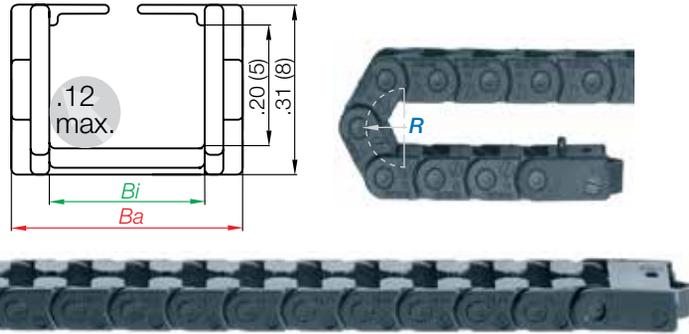*Available in igumid NB upon request, please consult igus® for delivery time
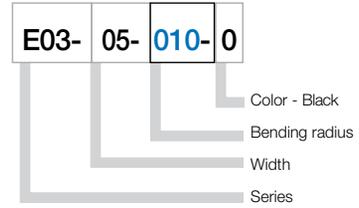
Technical Data

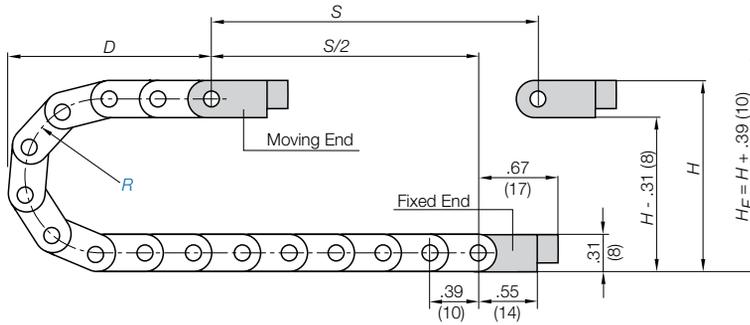Details of material properties

➤ Chapter 1

e-chain system® E-Z chain
Series E03

Series E03 - Split crossbar along the outer radius

.12 max.

.20 (5)
.31 (8)

Bi
Ba

R

Part Number Structure

| E03- | 05- | 010- | 0 |

Color - Black
Bending radius
Width
Series

S
S/2
D

Moving End

R

Fixed End

.67 (17)
.39 (10)
.55 (14)
.31 (8)

H - .31 (8)
H
H_E = H + .39 (10)

Supplement part number with required radius. Example: E03-05- 028 -0
Pitch: .39 in. (10 mm) per link links/ft (m) = 30.47 (100)

Part Number			Bi in. (mm)	Ba in. (mm)	Weight lbs/ft (kg/m)	Crossbar gap in. (mm)
E03-05-	☐	-0*	.20 (5)	.34 (8.7)	≈ 0.020 (0.03)	.04 (1)
E03-07-	☐	-0*	.28 (7)	.42 (10.7)	≈ 0.026 (0.04)	.08 (2)
E03-10-	☐	-0*	.39 (10)	.54 (13.7)	≈ 0.033 (0.05)	.08 (2)

Choose from the radii below for all of the above sizes
Radius (mm)   Example: 03-05- 028 -0

	010	012	015	018	028
R	.39 (010)	.47 (012)	.59 (015)	.71 (018)	1.10 (028)
H	1.10 (28)	1.26 (32)	1.50 (38)	1.73 (44)	2.52 (64)
D	1.14 (29)	1.22 (31)	1.34 (34)	1.46 (37)	1.85 (47)
K	2.17 (55)	2.36 (60)	2.76 (70)	3.15 (80)	4.33 (110)

0=Standard color black. For other colors see Chapter 1
*Please note: For this series the crossbars do not overlap. Please see table for gap amount.
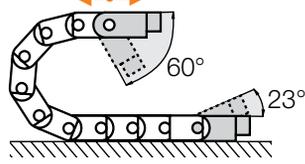
e-chain system® E-Z chain
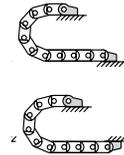# Series E03
Mounting Brackets

Polymer, one-piece

- One-piece mounting bracket
- Corrosion resistant
- Available preassembled
- Inner and outer attachment possible
- Adaptor plate for rapid installation

Moving end with bore
03 ...1Z

60°

23°

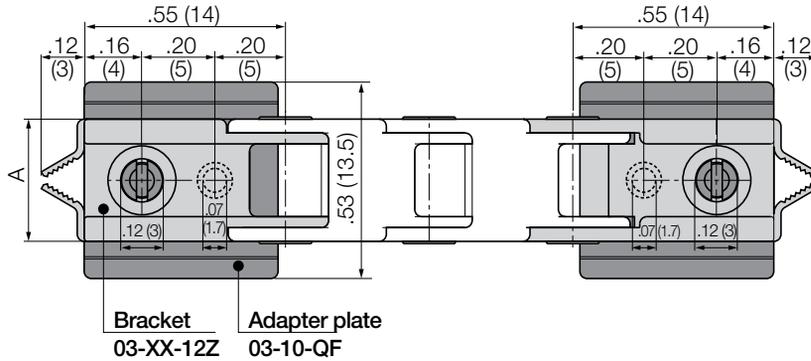**Fixed end with pin**
03...2Z

Possible installation configurations -

Part Number Structure

| 03- | 05- | 12Z |

— Complete Set
— Width
— Mounting bracket for selected chain type

.55 (14)

| .12 (3) | .16 (4) | .20 (5) | .20 (5) |

A

.53 (13.5)

.07 (1.7)

.12 (3)

Bracket
03-XX-12Z

Adapter plate
03-10-QF

.55 (14)

| .20 (5) | .20 (5) | .16 (4) | .12 (3) |

.07 (1.7)

.12 (3)

Full set, for both ends:

| 03- | 05- | 12Z | Full set, **each part with pin/bore** |

Single-part order:

| 03- | 05- | 1Z | Mounting bracket **with bore** |

| 03- | 05- | 2Z | Mounting bracket **with pin** |

Width Index	Part No. Full Set	Dimension A	
		in.	(mm)
-05	**03-05-12PZ**	.34	(8.7)
-07	**03-07-12PZ**	.42	(10.7)
-10	**03-10-12PZ**	.54	(13.7)

Additional Accessories

03-10-QF = Adapter plate for all sizes

The adapter has broken edges, so that it can be adapted to the respective chain width. It is not absolutely necessary for attaching the mounting brackets. The mounting brackets can also be screwed on without the adapter plate.

.55 (14)

| .12 (3) | .16 (4) | .20 (5) | .20 (5) |

ø .12 (3)

ø .09 (2,4)

.07 (1.7)

| .12 (3) | .24 (6) | .12 (3) |