

igus® Energy Chain
Systems®

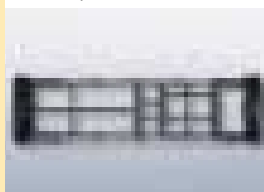
Price Index



31 Widths
11 Bending Radii



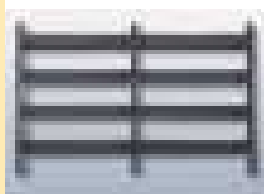
Full range of
interior separation
options



3 options for
mounting brackets



Extension links for
variable width

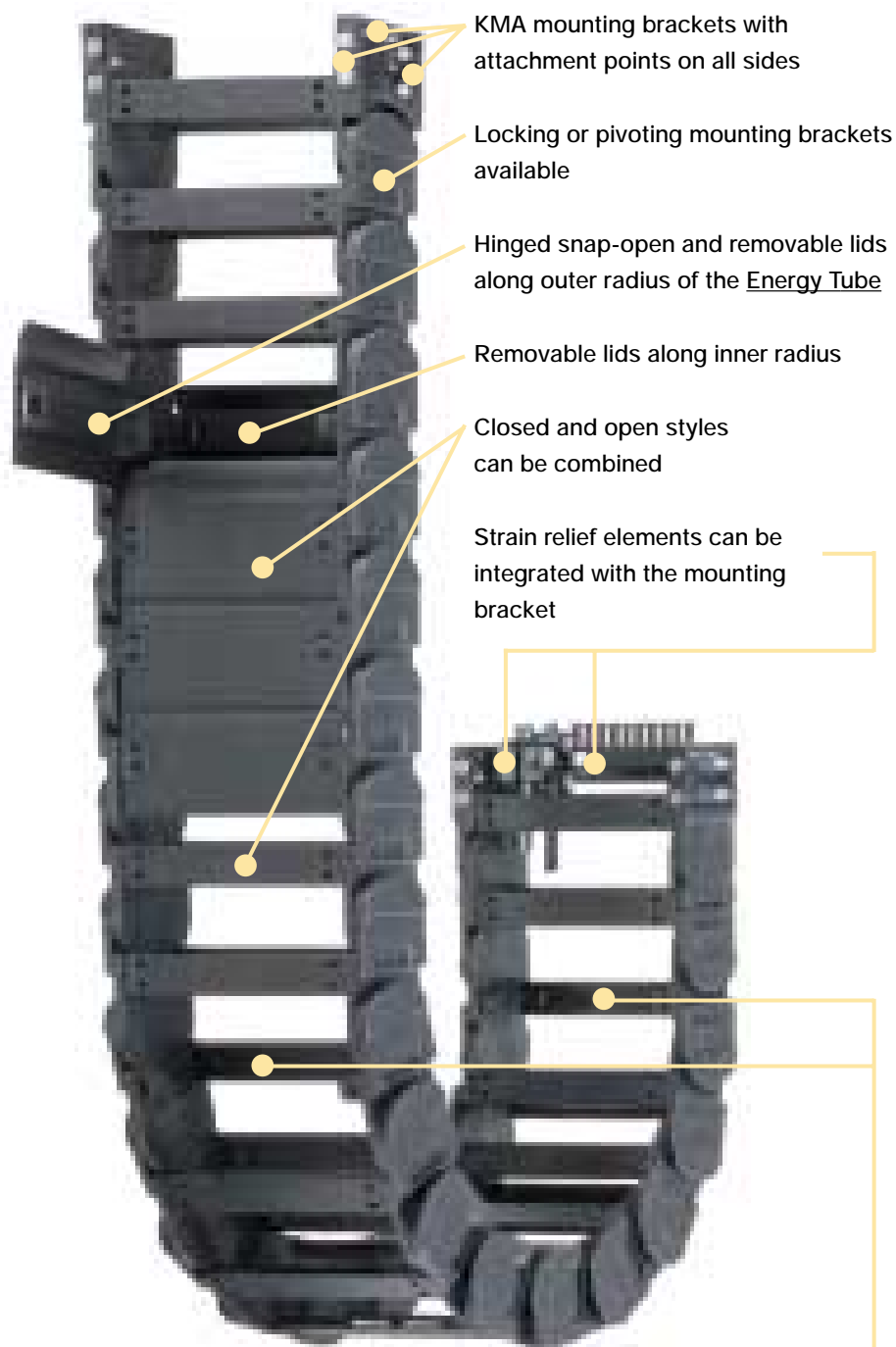


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51127 Cologne

Internet: <http://www.igus.de>
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7.92



Crossbars on Energy Chains®
removable along both radii



When to use the Series 38/39/R78:

- If a simpler system is sufficient
- Zig-zag applications



When not to use them:

- If a quieter version is required
▶ S 380/ 390/ R780, Page 7.66
- If a side-mounted chain/tube with a long unsupported length is required
▶ S 3838/ 3938/ R7838, Page 7.84
- If one-sided hinged crossbars are sufficient
▶ S 340/ 350, Page 5.116

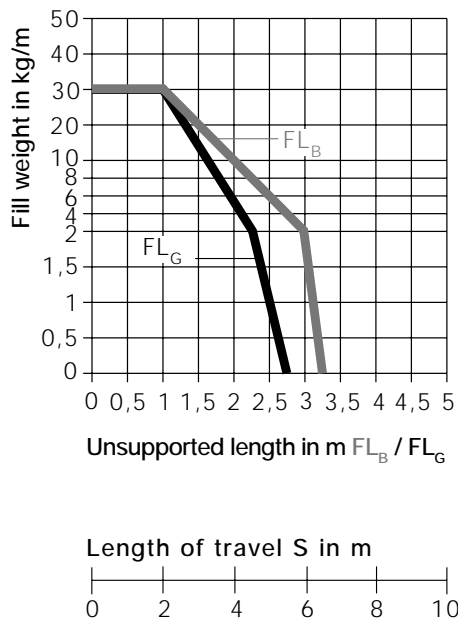
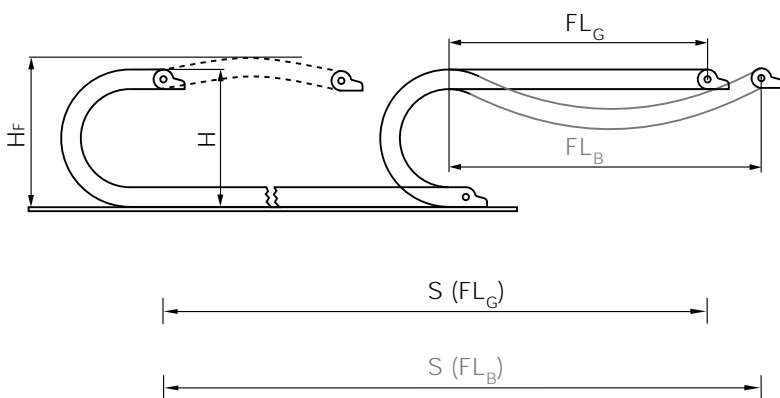
Product Range

Product Range

Inner Widths (Bi) in mm:	50 - 400 + + + (extension links)
Bending Radii (R) in mm:	75, 100, 115, 125, 150, 170, 200, 215, 250, 300, 350
Pitch:	67 mm/link = 15 links/m (1005 mm)

Unsupported length

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



System E4

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Unsupported Energy Chains* ► **Design, Page 1.8**, feature positive camber over short travels. This must be accounted for when specifying the clearance height. Please refer to **Installation Dimensions** for further details.



If the unsupported length is exceeded, the Energy Chain®/Tube must glide on itself. This requires a guide trough ► **Design, Page 1.18** or incorporation of igus' exclusive AUTO-GLIDE System guide elements, which are available for this chain series ► **AUTO-GLIDE System, Page 8.29**.

- Long travel
Max: 250 m

Other Installation Methods

Vertical, hanging	= max. 60 m
Vertical, standing	= max. 6 m
Side-mounted, unsupported	= max. 2 m
Rotary	= requires further calculation

- Accessories for
 - Guide Troughs, Page 8.6, Page 8.18
 - Further information
 - Design, Page 1.1



► Page 7.73



► Page 7.241



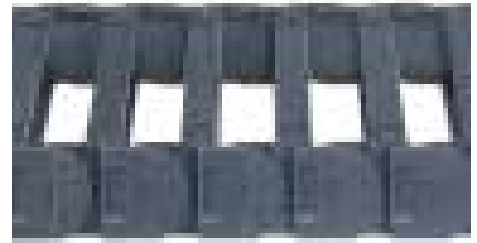
► Page 7.82

Price Index



Series 38, Energy Chain®
(with crossbars every link)

Select Energy Chains® with crossbars every link when using rigid hydraulic hoses or if an application is particularly demanding.



Standard

Price Index



Series 39, Energy Chain®
(with crossbars every other link)

This design is the standard Energy Chain® for this size range. For almost all applications, the Series 39 offers the easiest assembly and best stability for the price.



Price Index



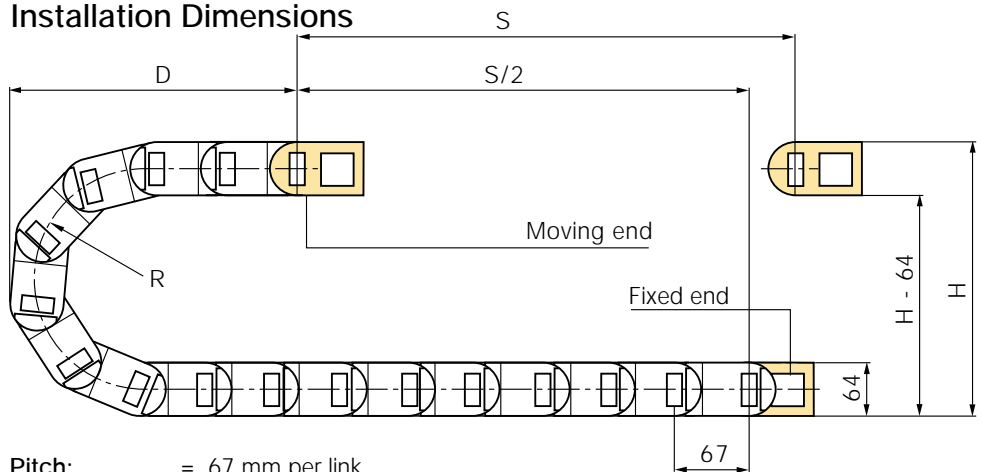
Series R78, Energy Tube
(fully enclosed)

Energy Tubes offer excellent cable protection against dirt, debris and other contaminants as well as hot chips. This design offers conduit accessibility along both radii. Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-

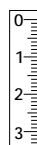


open with a hinge on the other side to keep them attached to the chain or completely removable.

Installation Dimensions



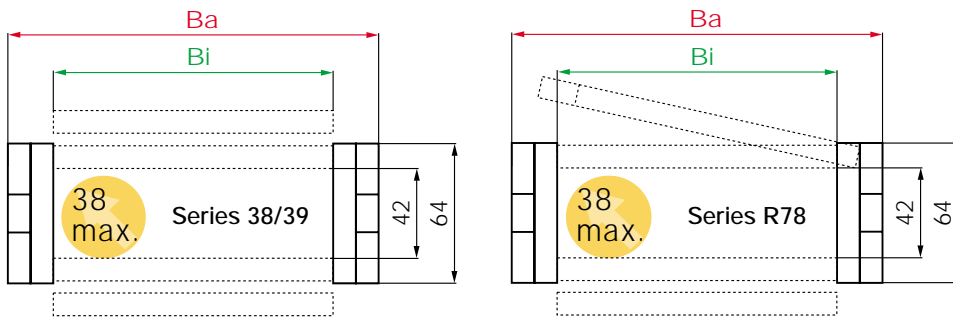
- Pitch: = 67 mm per link
- Links per m: = 15 links
- Tube length: = S
- Chain length: = $\frac{S}{2} + K$



R	75	100	115	125	150	170	200	215	250	300	350
H*) ₊₂₅	215	265	295	315	365	405	465	495	565	665	765
D	150	200	215	225	250	270	300	315	350	400	450
K	400	500	600	650	725	780	875	920	1050	1225	1350

*The required clearance height is HF = H + 40 (with 2 kg/m fill weight)
Please consult igus® if space is particularly restricted.

Product Range



Order Example



38.07.150.0

Standard color
0 = Black

● Other colors
► Design,
Page 1.62

System E4

Part No.		Bi	Ba ⁺²	Bending Radii
38/ 39/ 78.05*	Radius	50	78	75** 100** 115** 125
38/ 39.06	Radius	68	96	150 170 200 215
38/ 39/ 78.07	Radius	75	103	250 300 350
38/ 39.087	Radius	87	116	
38/ 39/ 78.10	Radius	100	128	These bending radii can be combined with every chain width!
38/ 39/ 78.11	Radius	108	136	
38/ 39.112	Radius	112	141	
38/ 39/ 78.12	Radius	125	153	
38/ 39.137	Radius	137	166	
38/ 39/ 78.15	Radius	150	178	
38/ 39.162	Radius	162	191	
38/ 39/ 78.17	Radius	168	196	
38/ 39.18	Radius	175	203	
38/ 39.187	Radius	187	216	
38/ 39/ 78.20	Radius	200	228	
38/ 39.212	Radius	212	241	
38/ 39.23	Radius	225	253	
38/ 39.237	Radius	237	266	
38/ 39/ 78.25	Radius	250	278	
38/ 39.262	Radius	262	291	
38/ 39.28	Radius	275	303	
38/ 39.29	Radius	287	316	
38/ 39/ 78.30	Radius	300	328	
38/ 39.312	Radius	312	341	
38/ 39.325	Radius	325	353	
38/ 39.337	Radius	337	366	
38/ 39.350	Radius	350	378	
38/ 39.362	Radius	362	391	
38/ 39.375	Radius	375	403	
38/ 39.387	Radius	387	416	
38/ 39.400	Radius	400	428	

* Removable lid
only, no hinged
option

** Not available for
R78

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Extender
crossbar for
large diameter
hoses,
► Page 7.71



For wider chains
► Page 7.70

Supplement part no. with required radius
for example 38.07.150.0

Increased Inner Height

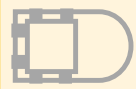
An Energy Chain® with inner height increased to 52 mm, designation 3822, is available for applications in the unsupported area. Please

enquire as regards delivery time and availability of the required size. We recommend the use of steel mounting brackets for this series.

Increased
Inner Height:
● Series 38022



► Page 7.73



► Page 7.241



► Page 7.82

3 options for all applications

Option 1: polymer pivoting

● Standard



Option 2: polymer locking

● Locked connections

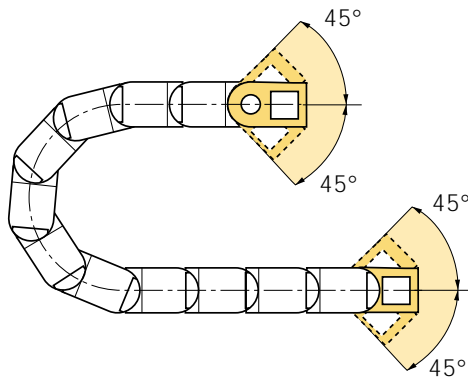


Option 3: steel

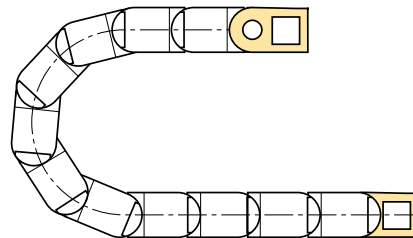
● Electrically conductive
● For all chain widths



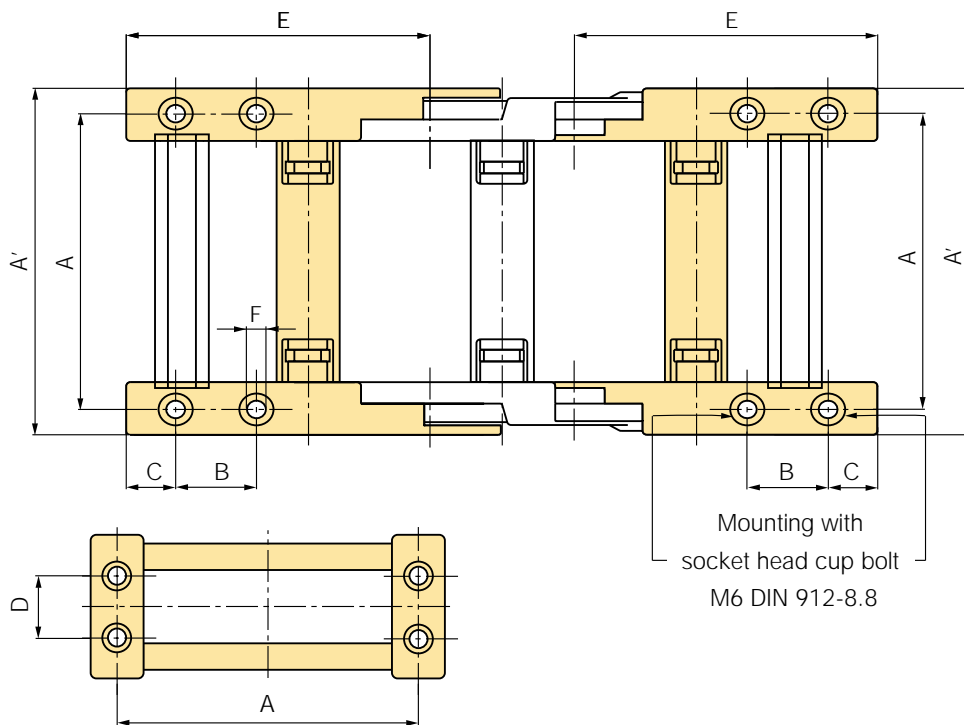
Option 1: Pivoting



Option 2: Locking



- ! Standard
- + C-profile option
- + Universal use
- + Corrosion-resistant
- + Short and long travels
- + Confined installation conditions
- Locked connections
- Vertical hanging/standing, unsupported
- + Universal use
- + C-profile option
- + Corrosion-resistant
- + Locked connections
- + Extreme accelerations
- + Vertical hanging/standing travels
- Gliding applications
- If the 1st chain link must pivot



A	A'	B	C	D	E	F	
Bi + 16	Bi + 32	22,5	15	22	82	6,5	in mm

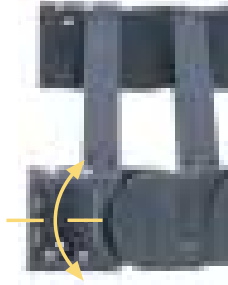
Mounting Brackets

Part No., full set
Series 38/ 39

380....12 pivoting
390....12 locking

Please insert width of selected Energy Chain®.
For example 380.112.12
for Energy Chain® 38/ 39.112.....

380... pivoting



390... locking



Selected
Chain/Tube Bi

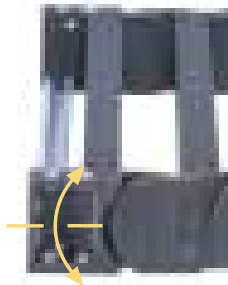
...05	50
...06	68
...07	75
...087	87
...10	100
...11	108
...112	112
...12	125
...137	137
...15	150
...162	162
...17	168
...18	175
...187	187
...20	200
...212	212
...23	225
...237	237
...25	250
...262	262
...28	275
...29	287
...30	300
...312	312
...325	325
...337	337
...350	350
...362	362
...375	375
...387	387
...400	400

Part No., full set, with C-profile
Series 38/ 39

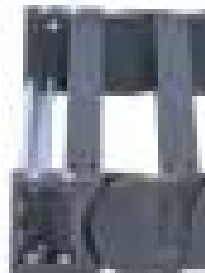
380....12C pivoting
390....12C locking

Please insert width of selected Energy Chain®.
For example 380.112.12C
for Energy Chain® 38/ 39.112.....

380... pivoting



390... locking



Part No., full set
Series 78

780....12 pivoting
790....12 locking

Please insert width of selected Energy Tube.
For example 780.112.12
for Energy Tube 78.112.....

780... pivoting



790... locking



Part No., full set, with C-profile
Series 78

780....12C pivoting
790....12C locking

Please insert width of selected Energy Tube.
For example 780.112.12C
for Energy Tube 78.112.....

780... pivoting



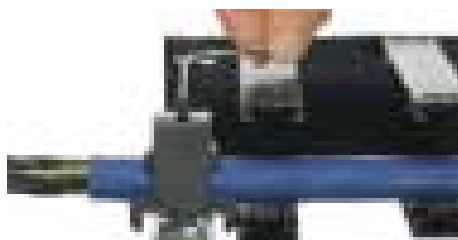
790... locking



- 380.../ 780...12 (C) = Full set, each part with pin/bore
- 380.../ 780...1 (C) = Mounting bracket with bore
- 380.../ 780...2 (C) = Mounting bracket with pin

An integrated strain relief system using the C-profile is an option.

► Strain Relief, Page 9.97



System E4

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► Page 7.73



► Page 7.241



► Page 7.82

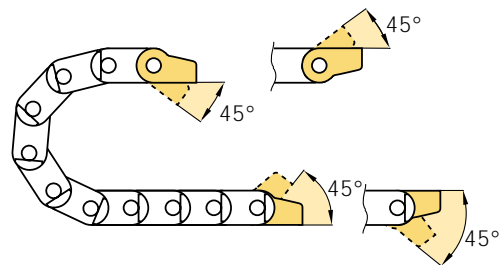
Selected
Chain/Tube **Bi**

...05	50
...06	68
...07	75
...087	87
...10	100
...11	108
...112	112
...12	125
...137	137
...15	150
...162	162
...17	168
...18	175
...187	187
...20	200
...212	212
...23	225
...237	237
...25	250
...262	262
...28	275
...29	287
...30	300
...312	312
...325	325
...337	337
...350	350
...362	362
...375	375
...387	387
...400	400

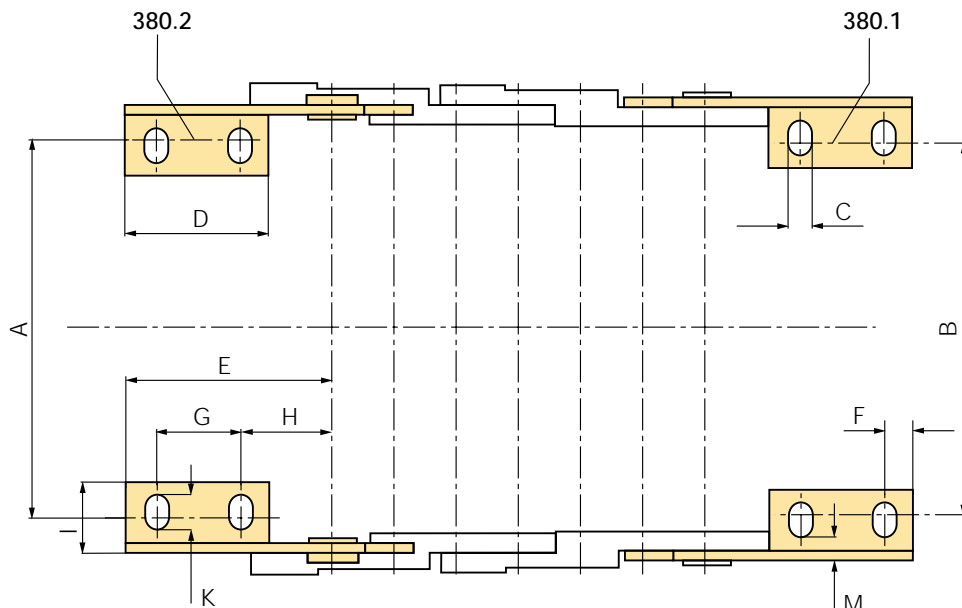
Option 3: Steel

380...1
Moving end

- One part for all chain widths
- Electrically conductive
- Multiple mounting options
- Pre-assembled (consult igus)
- Integrated C-profile

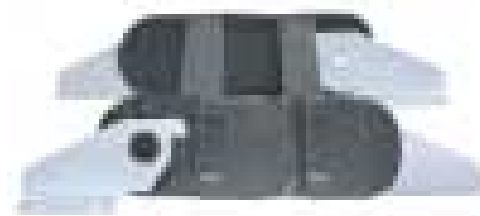


380...2
Fixed end



A = B	C	D	E	F	G	H	I	K	M	
Bi - 18	9	60	77	12	35	30	32	19	8,5	in mm

- 380.12 = Full set, 4 parts, 2 with pin, 2 with bore
- 380.1 = Mounting bracket with bore, 1 part left / right
- 380.2 = Mounting bracket with pin, 1 part left / right



Strain relief package
► Strain Relief, Page 9.97

Technical Data: Series 38/39/R78 E4/0

Chain/ Tube Width	Weight Per Link (kg)			Weight Per Meter (kg)		
	38	39	R78	38	39	R78
.05	0,124		-	1,86	1,78	-
.06	0,126		-	1,89	1,80	-
.07	0,128		0,146	1,92	1,81	2,19
.087	0,132		-	1,99	1,84	-
.10	0,137		0,160	2,06	1,88	2,41
.11	0,140		0,164	2,10	1,90	2,46
.112	0,140		-	2,11	1,90	-
.12	0,142		0,174	2,20	1,95	2,61
.137	0,150		-	2,24	1,97	-
.15	0,156		0,192	2,33	2,02	2,87
.162	0,157		-	2,35	2,02	-
.17	0,161		0,203	2,42	2,06	3,04
.18	0,162		-	2,43	2,06	-
.187	0,167		-	2,50	2,10	-
.20	0,171		0,222	2,57	2,14	3,33
.212	0,176		-	2,64	2,17	-
.23	0,181		-	2,72	2,21	-
.237	0,184		-	2,76	2,23	-
.25	0,190		0,276	2,85	2,28	4,13
.262	0,191		-	2,87	2,28	-
.28	0,198		-	2,97	2,34	-
.29	0,199		-	2,99	2,35	-
.30	0,208		0,313	3,13	2,41	4,69
.312	0,209		-	3,14	2,42	-
.325	0,214		-	3,22	2,46	-
.337	0,217		-	3,26	2,48	-
.350	0,232		-	3,48	2,59	-
.362	0,236		-	3,54	2,62	-
.375	0,239		-	3,59	2,65	-
.387	0,243		-	3,65	2,68	-
.400	0,247		-	3,71	2,70	-

● Weight data tolerance: +/- 5%

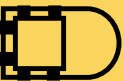


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▶ Page 7.73



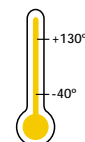
▶ Page 7.241



▶ Page 7.82

The following applies to all series listed here:

Material		igumid G
Permitted temperature	°C	-40/+130
Gliding speed (maximum)	m/s	5
Unsupported v (maximum)	m/s	10
Flammability class		VDE 0304 IIC UL94 HB

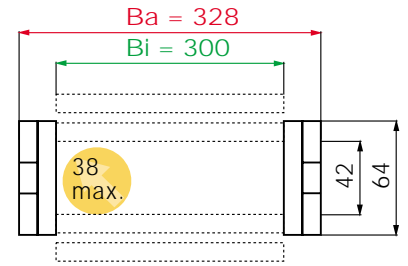
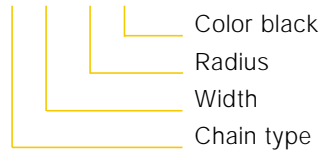


● Details of material properties ▶ Design, Page 1.61

Order Example

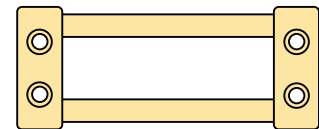
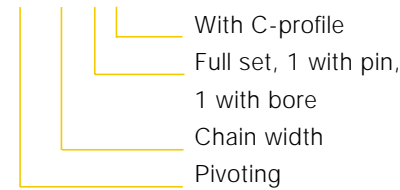
1. Chain selection:

38.30.300.0



2. Mounting brackets:

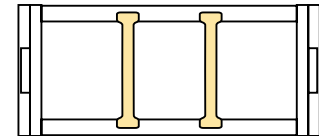
380.12.12C



3. Interior separation:

2 vertical separators, assembled every other chain link (**Part No. 382**)

Alternative interior separation configuration according to design layout possible.



For 2 m chain, color black,
with pivoting mounting brackets and integrated C-profiles:

2 m 38.30.300.0 and 380.30.12C and 2 Part No. 382 assembled every other chain link

30 links (15 links/m)

Guide Troughs



- Further information on Guide Troughs,
- ▶ Page 8.6, 8.18

4. Other technical data on Guide Troughs for

- ▶ Series 380/390/R780, Page 7.82