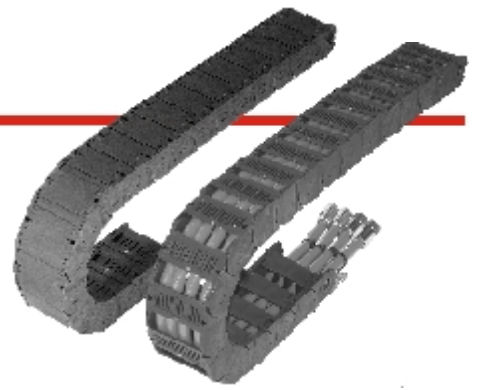


Kolibri Energy chains

The following information is required to proceed with your order:

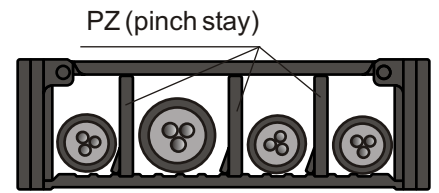
Type / Radius x Length "Arrangement"; Separators



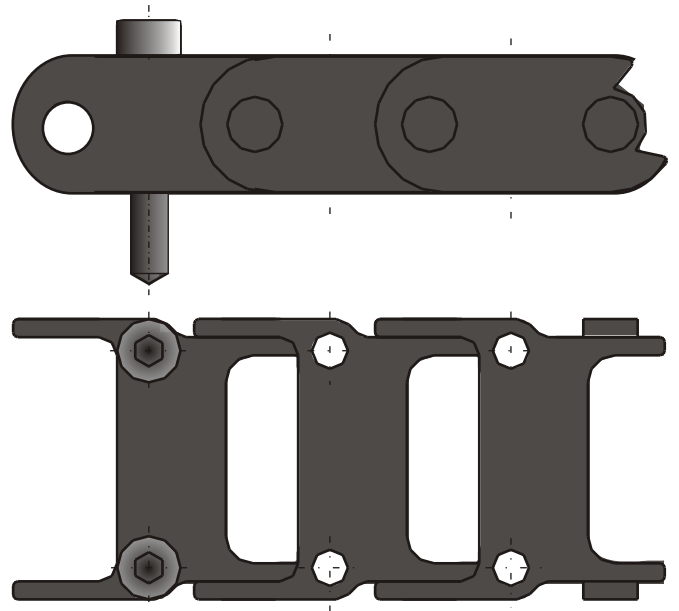
- ① The **Type** is determined by number and diameter of cable and hoses. Allow 10% space for cables and 20% for hoses.
- ② The **R(adius)** is determined by the the bending radius of the cable and hoses. 10 x diameter would always be a good advice.
- ③ Chain **length** is depending on travel. The following formula applies:
half of travel distance + 4 x radius
- ④ The **Arrangement** is only required in special cases.
(see last page)
- ⑤ The **Separator arrangement** depend on the requirements.
(see example)

Example: travel 3m, bending radius 200mm, 1 cable 15mm + 3 cable 18mm, vertical hanging arrangement; separators: 3 PZ each 4th link

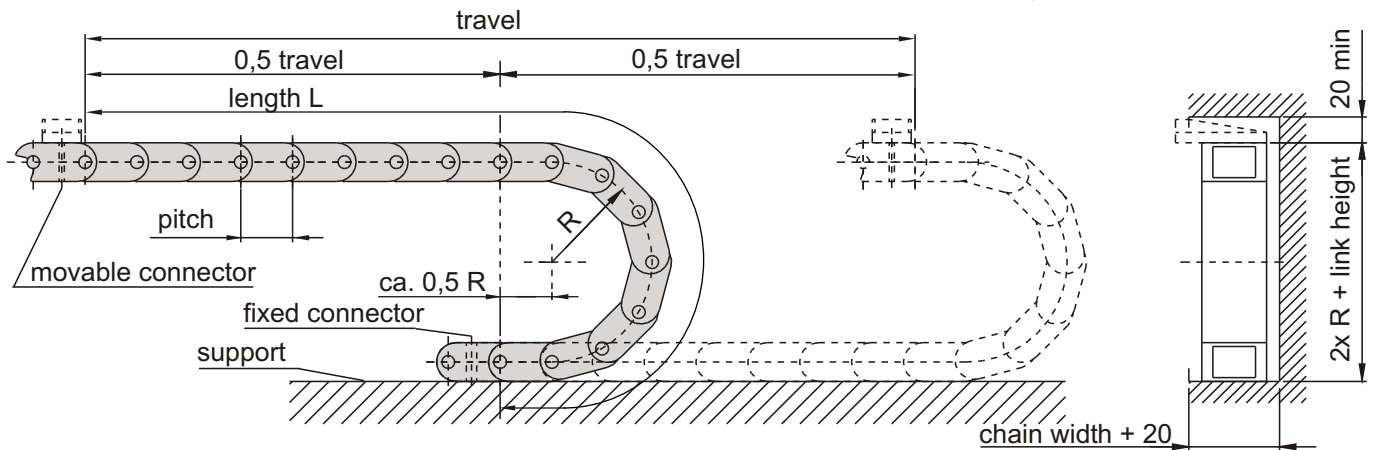
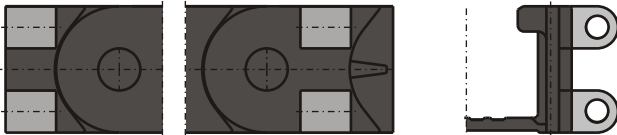
Kolibri 13.0 / 200 x 2.310 "h"; 3 PZ 4th link



All Kolibri chains are supplied with the **integrated plastic connector**. Each link can be the end connector:



Front flange connectors are available for several Kolibri types (see page 28):

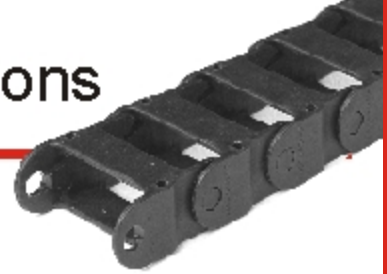


Material:

Polyamide glass fibre reinforced. Excellent resistance against chemical materials.
(Except acid and concentrated lye)

Temperature - 20° up to + 100° Celsius in long term operation. For more information please contact our experienced technical staff.

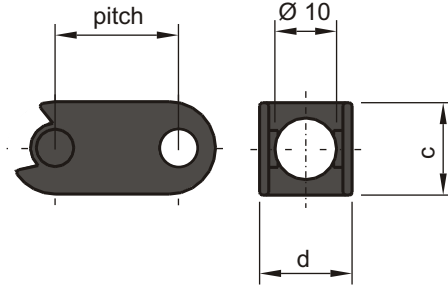
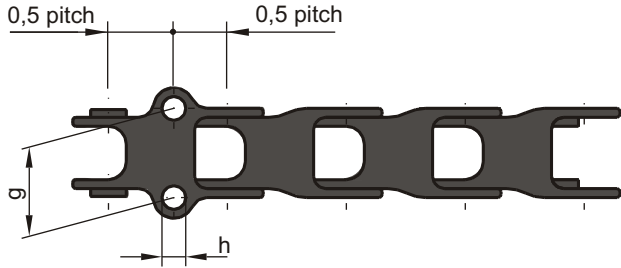
Kolibri 0 / 01 / 1-3 / 02-06 Dimensions



smallest dimensions
easily extendable and shortable
integrated end connectors
highly rigid and wear resistant

Kolibri 0

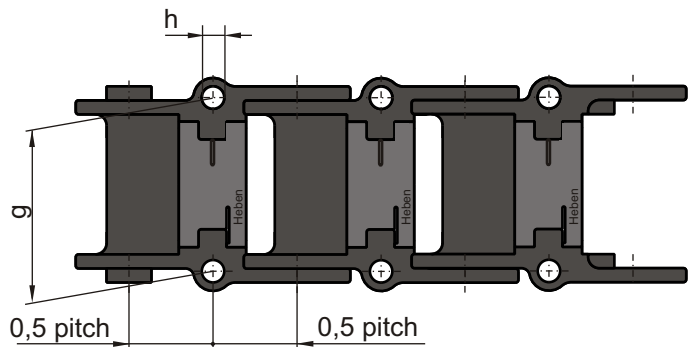
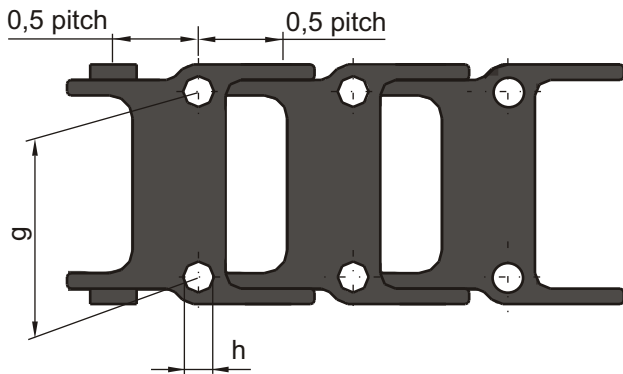
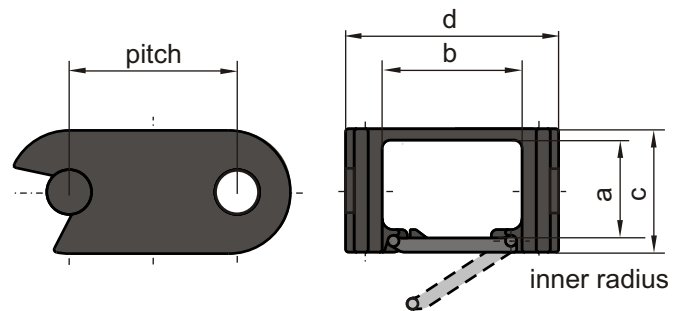
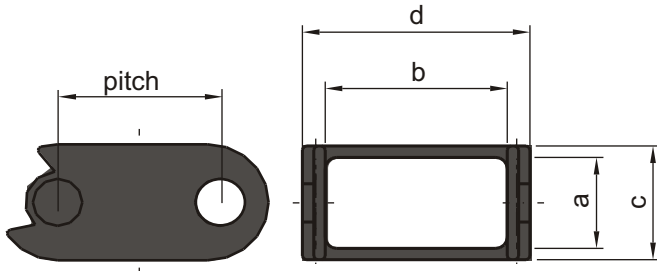
Kolibri 01 is identical with connecting part for Kolibri 0



	bend radius R	pitch	inner dim.		outer dim.		connecting dim.		weight kg / m
			a	b	c	d	g	h	
Kolibri 0	17,5 / 20 / 30	20	Ø 10		15	15	15	4	0,13

Kolibri 01 / 1 / 2 / 3

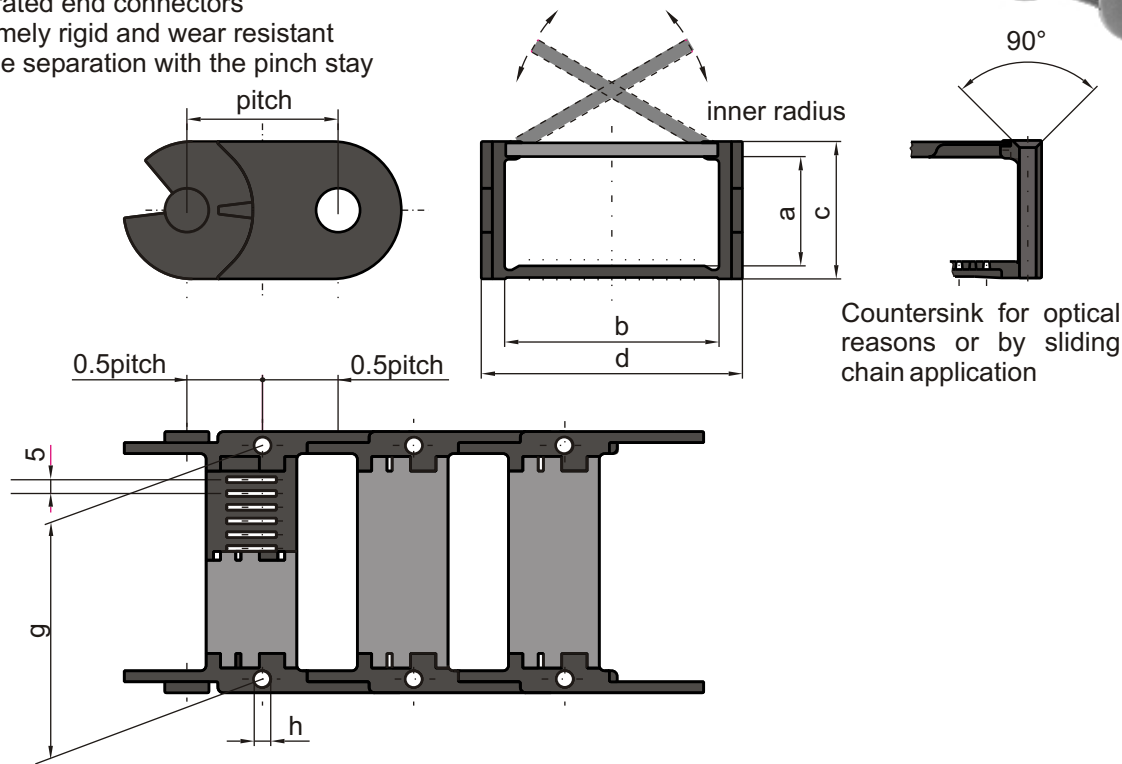
Kolibri 02 / 03 / 05 / 06



	bend radius R	pitch	inner dim.		outer dim.		connecting dim.		weight kg / m
			a	b	c	d	g	h	
Kolibri 01	20 / 30	20	Ø 10		15	22	15	4	0,15
Kolibri 1	40/100/200	40	24	18	30	30	23	4	0,5
Kolibri 2	40/100/150/200	40	24	48	30	60	53	4	0,6
Kolibri 3	40/100/200	40	24	78	30	90	83	4	0,7
Kolibri 02	20 / 30	20	10	24	15	37	30	4	0,20
Kolibri 03	20 / 30	20	10	39	15	51	44	4	0,28
Kolibri 05	35 / 70	30	18	25	22	38	31	4	0,34
Kolibri 06	35 / 70	30	18	36	22	48	41	4	0,37

Kolibri 10.0 - 29.0 Dimensions

easy access by flap open bars
 integrated end connectors
 extremely rigid and wear resistant
 unique separation with the pinch stay



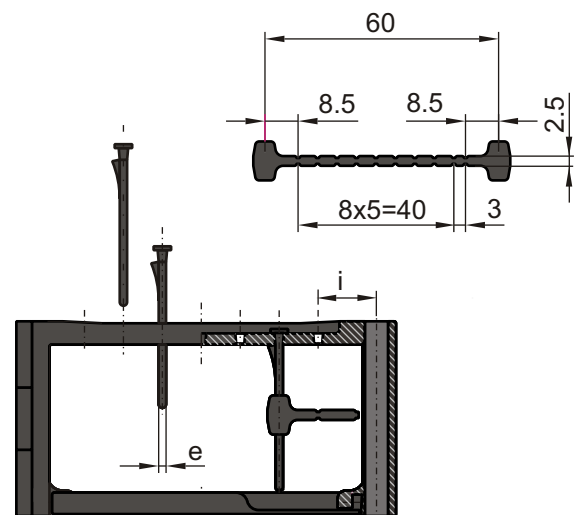
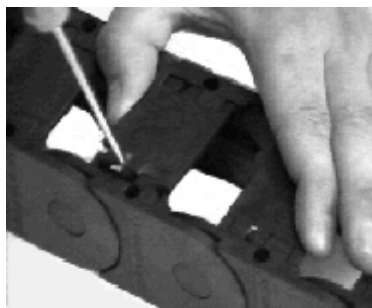
	bend radius				pitch	inner dim.		outer dim.		divider / connector				weight kg/m
	R					a	b	c	d	e	g	h	i	
Kolibri 10.0	40/75/100/150/200				35	23	34	30	50	3	40	5	9,5	0,54
Kolibri 11.0	40/75/100/150/200				35	23	44	30	60	3	50	5	9,5	0,61
Kolibri 12.0	40/75/100/150/200				35	23	64	30	80	3	70	5	9,5	0,65
Kolibri 13.0	40/75/100/150/200				35	23	79	30	95	3	85	5	12	0,75
Kolibri 14.0	40/75/100/150/200				35	23	109	30	125	3	115	5	12	0,87
Kolibri 15.0	60/75/100/150/200				45	29	47	40	62	4	54	5	7,5	1,05
Kolibri 16.0	60/75/100/150/200				45	29	60	40	75	4	67	5	7,5	1,30
Kolibri 17	60/100/125/250				50	30	109	40	125	2	115	5	12	1,30
Kolibri 19.0	75/100/150/175/200				55	40	78	50	95	2	85	6	6,5	1,35
Kolibri 20.0	75/100/150/200/250				55	40	133	50	150	3	140	6	12,5	1,57
Kolibri 21.0	75/100/150/200/250				55	40	48	50	65	2	55	6	9	1,30
Kolibri 22.0	75/100/150/200/250				55	40	108	50	125	3	115	6	6,5	1,52
Kolibri 29.0	100/125/150/200/300				70	50	205	65	225	4	215	6	17,5	2,71

Pinch stay and horizontal stay:

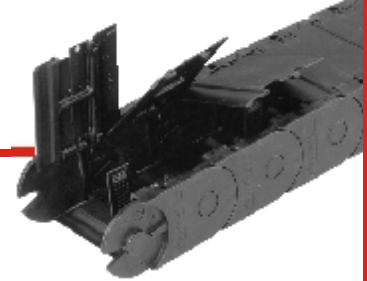
The **pinch stay** and the **horizontal stay** allow quick and easy separation. Even for cable loaded chain.
 Pinch stay with 4mm thickness require **PT 55** or **PT 75** (see page 20) for horizontal separation.

Assembling advice

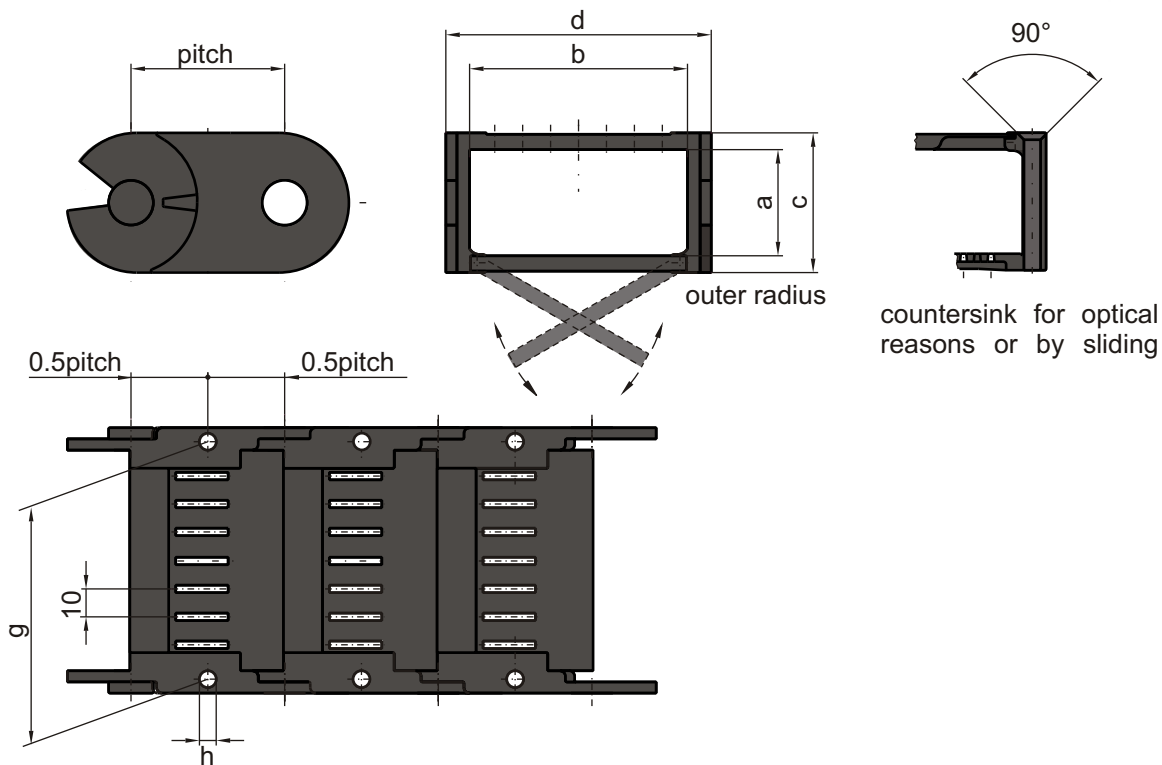
- Opening:
- unlock bar by lifting from gap
 - open by pushing bar slightly sideways
- Closing:
- simply press down bar
- And lock



Kolibri 02.5 - 27.5 Closed type



hinged covers
high rigidity
integrated end connector



	bend radius R	pt.	inner dim.		outer dim.		e	connector		weight kg / m
			a	b	c	d		g	h	
Kolibri 02.5	30 / 50	18	10	24	15	36		30	4	0,28
Kolibri 07.5	50 / 70 / 100	26	17	48	22	60		53	4	0,54
Kolibri 10.5	60/75/100/150/200	35	21	34	30	50	2	40	5	0,65
Kolibri 15.5	75/100/150/200	45	30	48	40	62	2	54	5	0,91
Kolibri 19.5	100/150/200/250	55	38	78	50	95	2	85	6	1,50
Kolibri 20.5	100/150/200/250	55	38	134	50	150	2	140	6	1,90
Kolibri 21.5	100/150/200/250	55	38	48	50	65	2	55	6	1,30
Kolibri 24.5	125/150/200/300	70	50	77	65	95	4	85	6	2,20
Kolibri 25.5	125/150/200/300	70	50	117	65	135	4	125	6	2,60
Kolibri 27.5	125/150/200/300	70	50	177	65	195	4	185	6	3,00

Pinch stay and horizontal stay:

The **pinch stay** and the **horizontal stay** allow quick and easy separation. Even for cable loaded chain.
Pinch stay with 4mm thickness require **PT 55** or **PT 75** (see page 20) for horizontal separation.

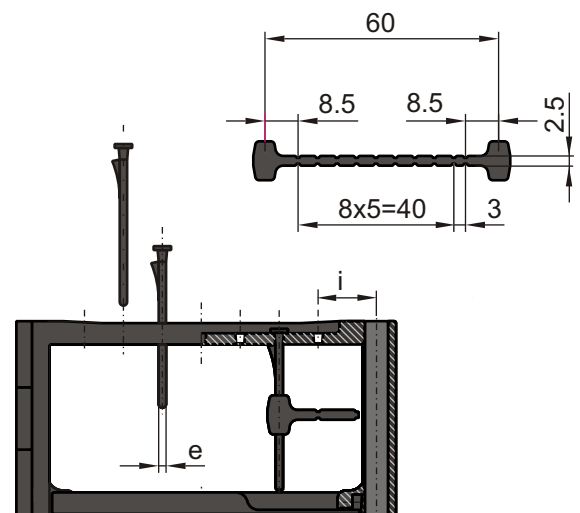
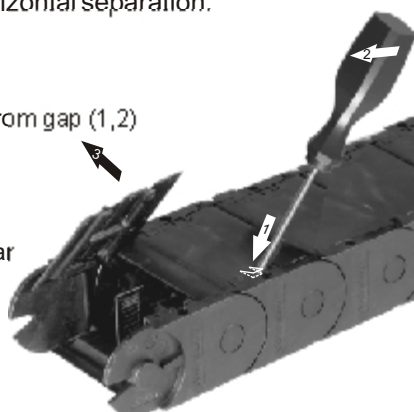
Assembling advice

Opening:

- unlock bar by lifting from gap (1,2)
- open by pushing bar slightly sideways (3)

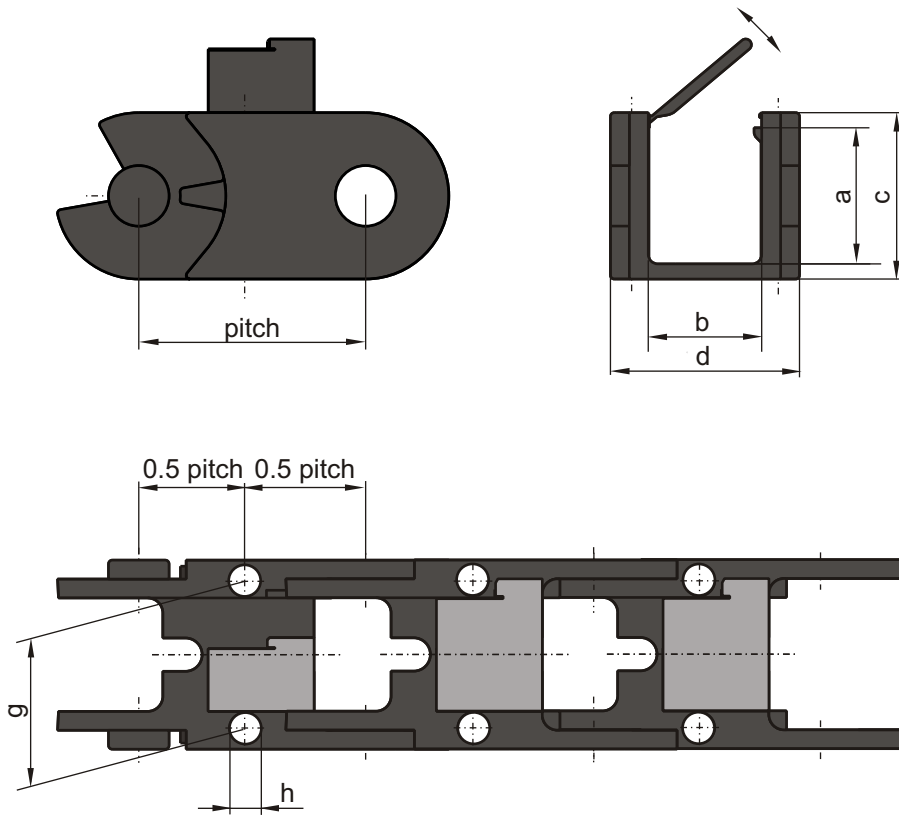
Closing:

- simply press down bar
- And lock

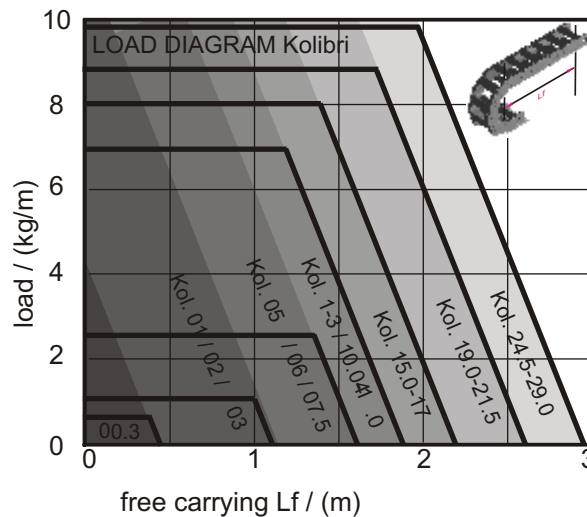


Kolibri 00.3 / 0.3 / 04.3 Film stay

openable in inner radius
rigid design for small chains

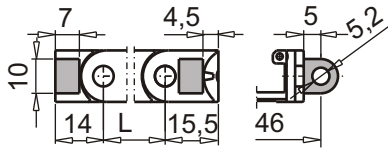


	bend radius R	pitch	inner dim.		outer dim.		connector		weight kg / m
			a	b	c	d	g	h	
Kolibri 00.3	15 / 30 / 50	15	Ø 7		10	12	12	3	0,06
Kolibri 0.3	20 / 30	20	Ø 10		15	15	15	4	0,10
Kolibri 04.3	35 / 70 / 100	30	17	15	22	25	19,4	4	0,20

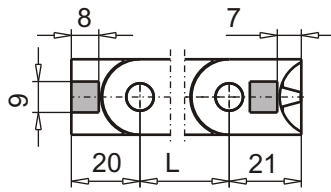


Kolibri Front flange connector

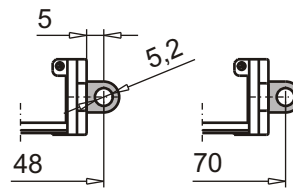
Kolibri 02.5



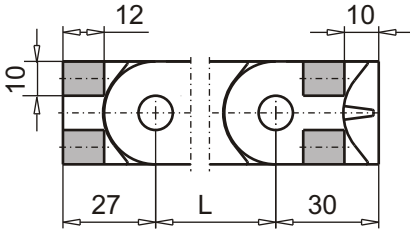
Kolibri 05.0



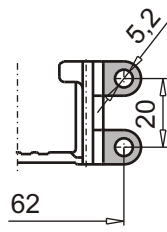
Kolibri 07.5



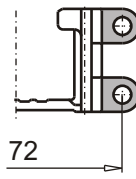
Kolibri 10.0



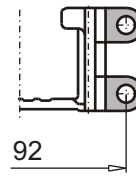
Kolibri 11.0



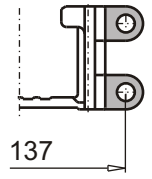
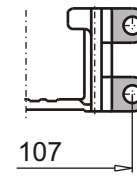
Kolibri 12.0



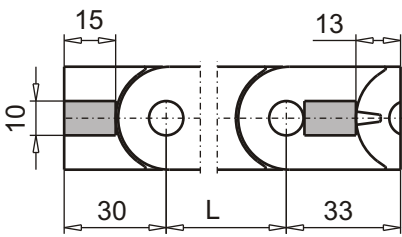
Kolibri 13.0



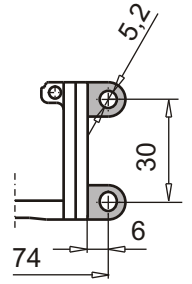
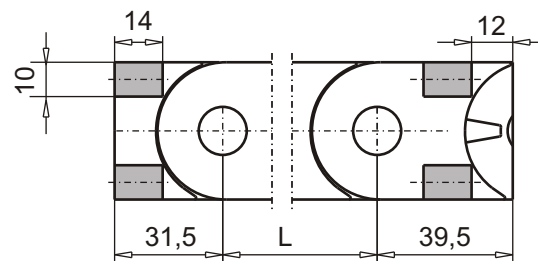
Kolibri 14.0



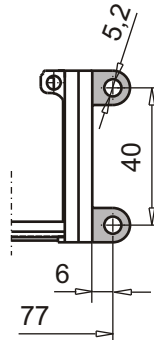
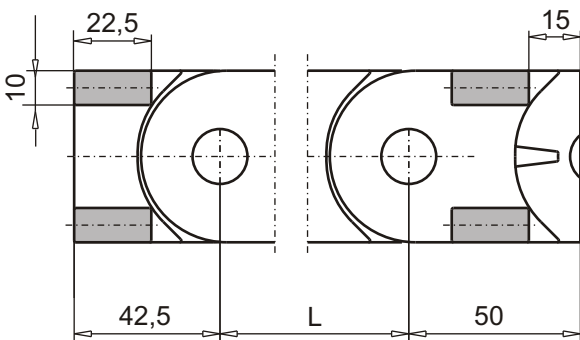
Kolibri 10.5



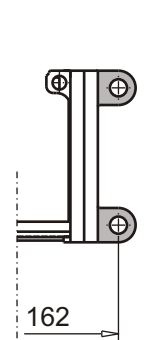
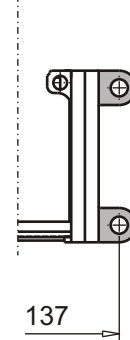
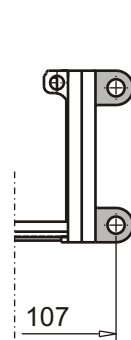
Kolibri 15.5



Kolibri 21.0 + 21.5



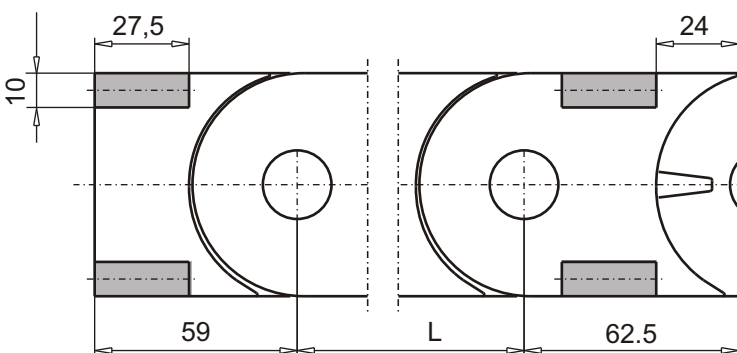
Kolibri 22.0



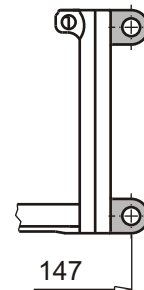
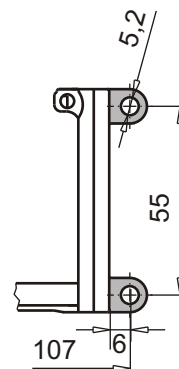
Kolibri 19.0 + 19.5

Kolibri 20.0 + 20.5

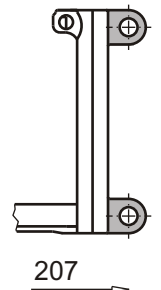
Kolibri 24.5



Kolibri 25.5

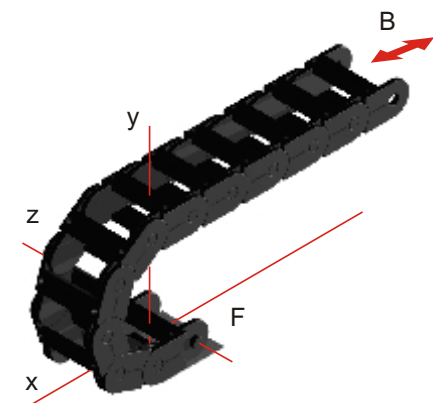


Kolibri 27.5

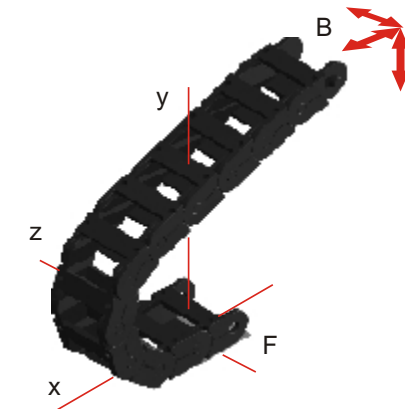


Arrangements

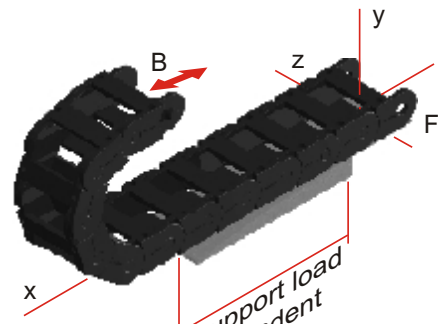
B = moved connector
F = fixed connector (mid of travel)



normal (no order comment)

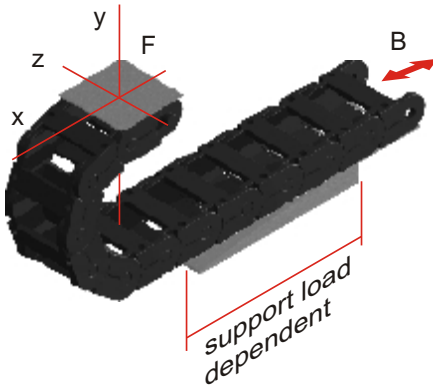


"m" multiaxial



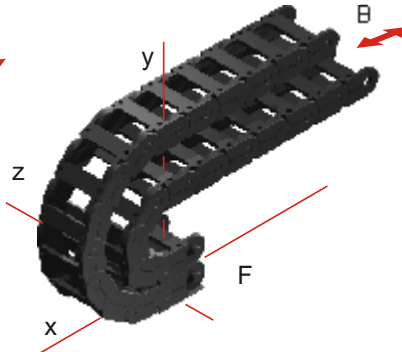
"f" free overhung

support load dependent

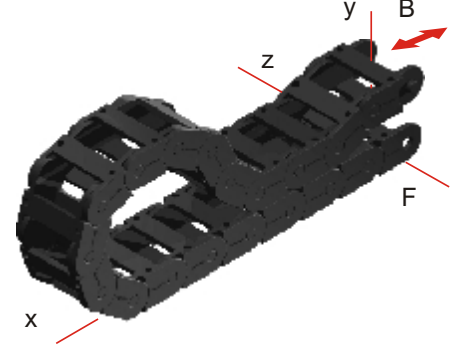


"u" moved end downside

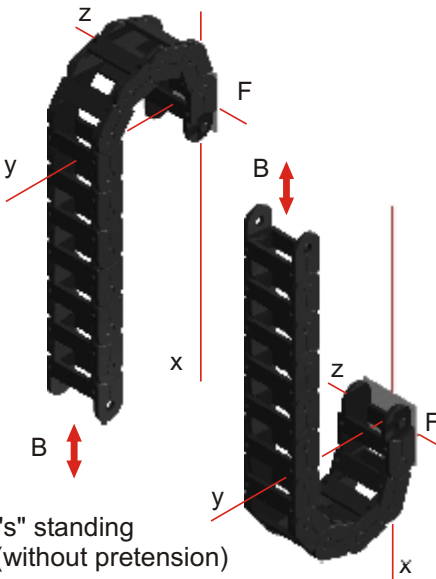
support load dependent



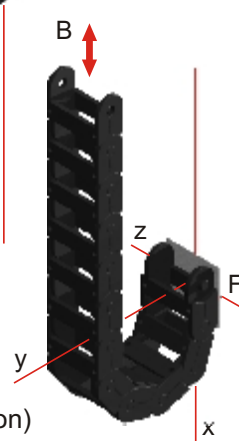
"i" into each other



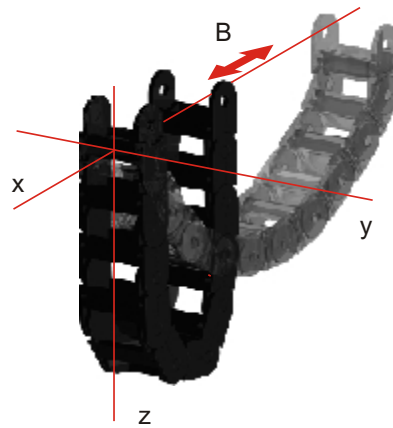
"g" sliding



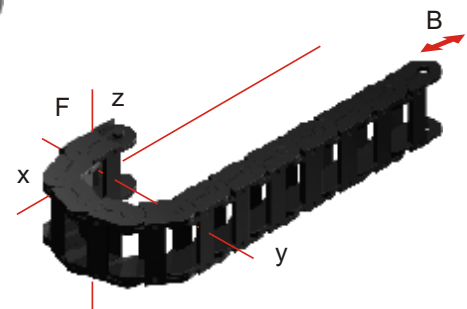
"s" standing (without pretension)



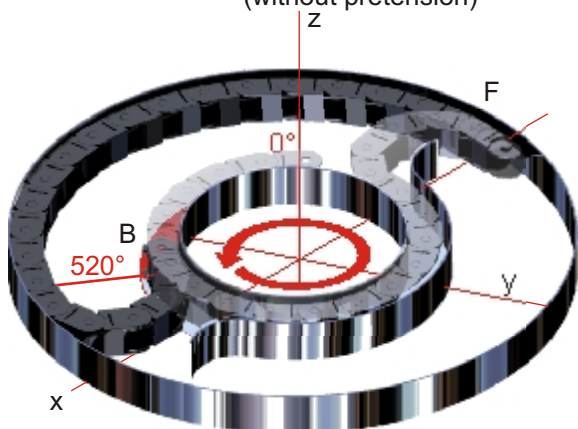
"h" hanging (without pretension)



"a" moving apart



"w" horizontal, laying on side (without pretension)



"k" circular, laying on side (on request)

2D CAD and 3D-CAD files
in different file formats
will be offered on
request or download:



ekd-gelenkrohr@t-online.de
www.ekd-gelenkrohr.de

EDITION 11/2008