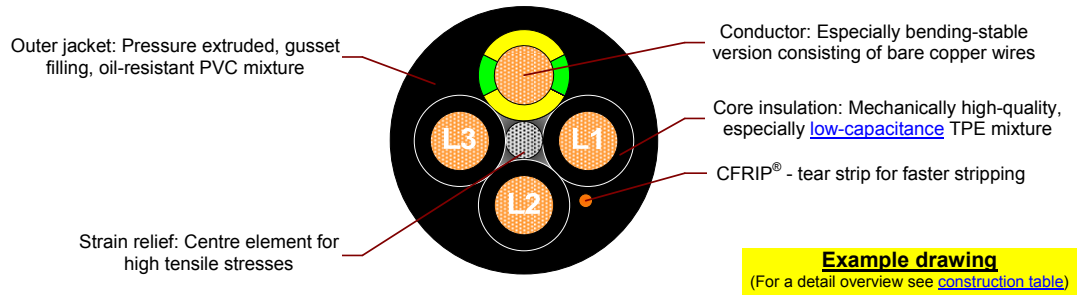
Image exemplary

chainflex® cable works.

CF30

PVC - e-chain® - power cable for high load requirements (class 5.5.2): oil-resistant and flame-retardant.



Example drawing
(For a detail overview see construction table)

Core design:

Conductor:
≤ 6 mm²: Fine-wire strand in especially bending-stable version consisting of bare copper wires (following DIN EN 60228).
≥ 10 mm²: Conductor strand in especially bending-stable version made of bare copper wires (following DIN EN 60228).

Core insulation: Mechanically high-quality, especially low-capacitance TPE mixture.

Core identification:
Mainly: 3 or 4 black cores with white printing & one core greenyellow:
1. core: U/L1/C/L+ **2. core:** V/L2 **3. core:** W/L3/D/L- **4. core:** 4/N
CF31.15.07: Black cores with white numerals 1 - 6 & one core greenyellow

Jacket design:

Outer jacket:
Low-adhesion mixture on the basis of PVC (following DIN VDE 0281-13), abrasion- and bending-stable, adapted to suit the requirements in e-chains®.
- oil-resistant (following DIN EN 50363-4-1)
- flame-retardant (according to IEC 60332-1-2, CEI 20-35, VW-1, FT-1)
- silicon-free (following PV 3.10.7 - status 1992)
- lead-free (following 2011/65/EU (RoHS-II))
- clean room ISO class 2 (according to DIN ISO 14644-1 tested by IPA)
- UV-resistance: Medium

Colour outer jacket: Jet Black (similar to RAL 9005)

Cable marking (White):
„00000 m“* igus chainflex CF30.--.--① ----② 600/1000V E310776
cRUus AWM Style 2570 VW-1 AWM I/II A/B 80°C 1000V FT-1 EAC/CTP
CE RoHS-II conform www.igus.de +++ chainflex cable works +++

** **Length printing:** Not calibrated. Only intended as an orientation aid.*
① / ②: Cable identification according to part no. (see technical table for details).
Ex.: CF30.15.04: ⇒ …igus chainflex CF30.15.04 4G1,5 600/1000V…

General mechanical values:
(for individual details see technical table)

Guaranteed lifetime for this series according to the "chainflex® guarantee club" conditions (see chainflex® catalogue and www.igus.eu/chainflex-guarantee)				
Double strokes*		**5 million**	**7,5 million**	**10 million**
Temperature (from/to) [°C]	**Travel distance (TD)**	Min. bending radius for e-chain® use [Factor multiplied by outer diameter (d)] (Ex.: CF30.15.04 at 20°C: 7,5 x 8,5 mm ➔ Min. bending radius 63,75 mm)		
+5✦ / +15	≤ 100 m	10,0	11,0	12,0
+15 / +60		7,5	8,5	9,5
+60 / +70		10,0	11,0	12,0

**: Minimum guarantee lifetime of the cable under the specified conditions. ✦: -5 °C at ≤ 50.000 strokes (following DIN EN 60811)*
The installation of the cable is recommended within the middle temperature range.

Temperature range	**-20 °C ←**	**+5 °C ←**	**+15 °C ←→ +60 °C**	**→ +70 °C**
Min. bending radius for fixed installation	7,5 x d	6,8 x d	4,0 x d	6,8 x d
Torsion (at 1 m cable length)	---	±45 °	±90 °	±45 °

General electrical values:
(for individual details see technical table)

Nominal voltage: 600 / 1000 V (following DIN VDE 0250)
Test voltage: 4 kV (following VDE 0281-2)
Certifications: cRUus: (E310776: Style 10492 & 2570, 1000 V / 80 °C)
Guidelines: CE, NFPA (following 79-2012 chapter 12.9), EAC & TR (CTP)

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Dynamic values:

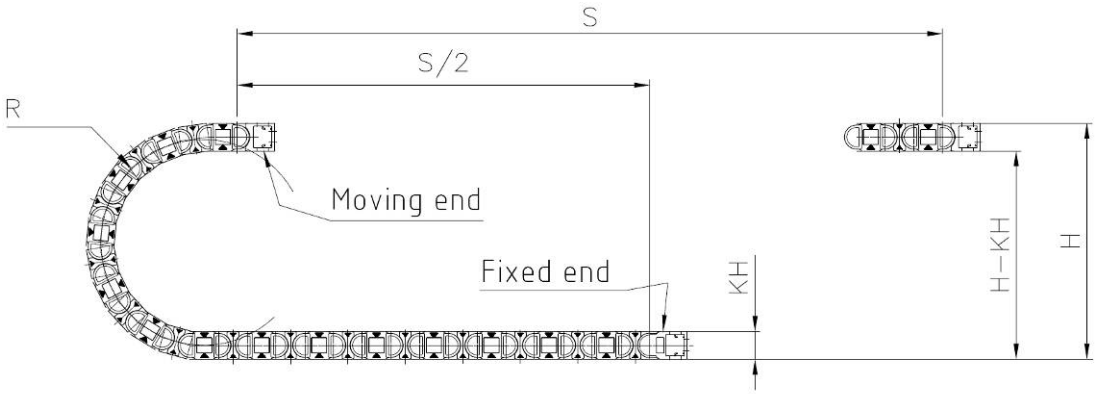
Max. speed in e-chain® use:** **Unsupported:** v = 10 m / s **Gliding (up to 100 m):** v = 5 m / s

Max. acceleration in e-chain® use:** a = 80 m / s^2

** *These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.*

Typical lab test setup for this cable group:

Test bending radius R:	approx. 55 - 250 mm
Test travel S:	approx. 1 - 15 m
Test period:	min. 2 - 4 million double strokes
Test speed:	approx. 0,5 - 2 m / s
Test acceleration:	approx. 0,5 - 1,5 m / s^2



e-chain® - power cable for high load requirements:

- for areas of application of low oil influence
- for unsupported travel distances and up to 100 m in gliding applications
- CE, RoHS-II, cULus, NFPA, EAC & TR (CTP)

Typical application areas:
Preferably indoor applications, but also outdoor ones at temperatures > 5 °C.
Storage and retrieval units for high-bay warehouses, machining units / packaging machines, quick handling, indoor cranes.

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Image exemplary

+++ chainflex® cable works +++

igus® chainflex® CF30

CF30

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Technical tables:

Mechanical values:

① Part no.	② Number of cores & nominal cross section [mm²]***	External diameter (d)**** [max. mm]	Copper index [kg / km]	Weight [kg / km]
CF30.15.04	4G1,5	8,5	64	106
CF30.15.07	7G1,5	11,0	114	181
CF30.25.04	4G2,5	10,5	106	160
CF30.25.05	5G2,5	11,5	132	210
CF30.40.04	4G4,0	12,0	174	258
CF30.40.05	5G4,0	13,0	218	315
CF30.60.04	4G6,0	14,0	253	362
CF30.60.05	5G6,0	15,5	317	444
CF30.100.04	4G10,0	17,5	435	614
CF30.100.05	5G10,0	20,0	547	758
CF30.160.04	4G16,0	21,0	697	918
CF30.160.05	5G16,0	24,0	879	1164
CF30.250.04	4G25,0	25,5	1094	1417
CF30.350.04	4G35,0	29,0	1551	1936
CF30.500.04	4G50,0	35,0	2222	2764

*** *G ⇒ Cable contains a greenyellow core.*
**** *External diameters are maximum values and may tend toward lower tolerance limits.*

Electrical values (resistance & max. load):

Nominal cross section [mm²]	Conductor resistance [approx. Ω / km] at 20 °C	Max. current rating [A] at 30 °C♦
(following)	DIN EN 50289-1-2	DIN VDE 0298-4
1,5	13,3	21
2,5	7,98	30
4,0	4,95	41
6,0	3,3	53
10,0	1,91	74
16,0	1,21	99
25,0	0,78	131
35,0	0,554	162
50,0	0,386	202

♦ *The max. current rating depends on factors such as the individual environmental conditions and the type of installation.*

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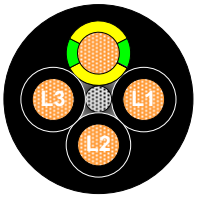
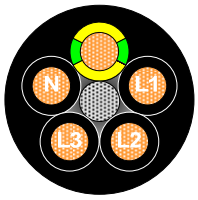
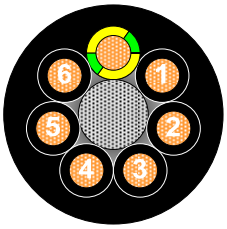
Electrical values (capacitance):

Part no.	core / core	core / shield
	capacitance [approx. pF / m]◆◆	
CF30.15.04	100	
CF30.15.07	100	
CF30.25.04	100	
CF30.25.05	100	
CF30.40.04	110	
CF30.40.05	110	
CF30.60.04	110	
CF30.60.05	110	
CF30.100.04	140	
CF30.100.05	140	
CF30.160.04	170	
CF30.160.05	170	
CF30.250.04	170	
CF30.350.04	180	
CF30.500.04	200	

◆◆ *Theoretically calculated values.*

Construction table:

Part no. / No. of cores	Cable construction	Part no. / No. of cores	Cable construction
CF30.XX.04		CF30.XX.05	
4		5	
CF30.XX.07			
7			