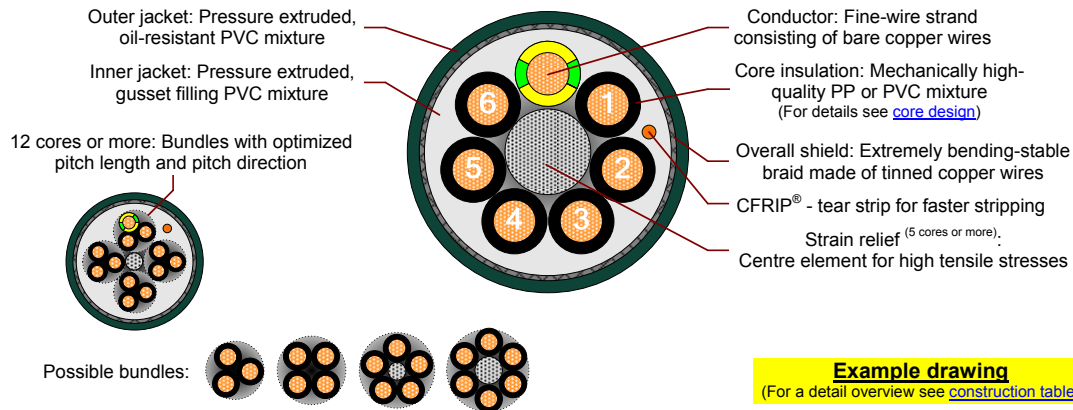


## PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2): shielded, oil-resistant as well as flame-retardant.



### Core design:

<b>Conductor:</b>	Fine-wire strand consisting of bare copper wires (following DIN EN 60228).
<b>Core insulation:</b>	<p>≤ 0,5 mm<sup>2</sup>: Mechanically high-quality PP mixture.</p> <p>≥ 0,75 mm<sup>2</sup>: Mechanically high-quality PVC mixture.</p>
<b>Core identification:</b>	<p>≤ 0,34 mm<sup>2</sup>: Colour code in accordance with DIN 47100. (see <a href="#">colour code table</a>)</p> <p>≥ 0,5 mm<sup>2</sup>: Black cores with white numerals &amp; one core greenyellow*.</p> <p>* 3 cores or more.</p>

### Shield design:

<b>Material:</b>	Extremely bending-stable braid made of tinned copper wires.
<b>Shield coverage:</b>	<b>Linear:</b> approx. 70 % <b>Optical:</b> approx. 90 %

### Jacket design:

<b>Inner jacket:</b>	PVC mixture adapted to suit the requirements in e-chains <sup>®</sup> .
<b>Outer jacket:</b>	<p>Low-adhesion mixture on the basis of PVC (following DIN VDE 0281-5), abrasion- and bending-stable, adapted to suit the requirements in e-chains<sup>®</sup>.</p> <ul style="list-style-type: none"> <li>oil-resistant (following DIN EN 50363-4-1)</li> <li>flame-retardant (following IEC 60332-1-2, CEI 20-35, FT-1 &amp; VW-1)</li> <li>silicon-free (following PV 3.10.7 - status 1992)</li> <li>lead-free (following 2011/65/EU (RoHS-II))</li> <li>clean room ISO class 2 (following DIN ISO 14644-1 tested by IPA)</li> <li>UV-resistance: Medium</li> </ul>

**Colour outer jacket:** Moss green (similar to RAL 6005)

**Cable marking (White):** „00000 m\*\*\* igus chainflex CF6...-...<sup>⊕</sup> -----<sup>⊗</sup> 300/500V E310776

cA<sub>us</sub> AWM Style 2570 VW-1 AWM I/II A/B 80°C 600V FT-1 CE

RoHS-II conform www.igus.de +++ chainflex cable works +++

\*\* **Length printing:** Not calibrated. Only intended as an orientation aid.

⊕ / ⊗: Cable identification according to part no. (see [technical table](#) for details).

Ex.: CF6.02.04: ⇒ ...igus chainflex CF6.02.04 (4x0,25)C 300/500V...

### General mechanical values:

(for individual details see [technical table](#))

Guaranteed lifetime for this series according to the "chainflex <sup>®</sup> guarantee club" conditions (see chainflex <sup>®</sup> catalogue and <a href="http://www.igus.eu/chainflex-guarantee">www.igus.eu/chainflex-guarantee</a> )													
		5 million		7,5 million		10 million							
Temperature (from/to) [°C]	Travel distance (TD)	Min. bending radius for e-chain <sup>®</sup> use [Factor multiplied by outer diameter (d)]											
		TD < 10 m		TD ≥ 10 m		TD < 10 m		TD ≥ 10 m					
+5 <sup>+</sup> / +15	≤ 100 m	7,5		10,0		8,5		11,0		9,5		12,0	
		6,8		7,5		7,8		8,5		8,8		9,5	
		7,5		10,0		8,5		11,0		9,5		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)	---	±0 °	±30 °	±0 °

Subject to misprints and errors. Technical modifications are possible at any time.  
Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex<sup>®</sup> catalogue.

Date	Author
10 May 2014	D. Zorsberg

## PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2): shielded, oil-resistant as well as flame-retardant.

### General electrical values:

(for individual details see [technical table](#))

<b>Nominal voltage:</b>	300 / 500 V (following DIN VDE 0245)
<b>Test voltage:</b>	2 kV (following VDE 0281-2)
<b>Certifications:</b>	$\leq 0,5 \text{ mm}^2$ : cRUus: (E310776: Style 10492 & 2570, 600 V / 80 °C) $\geq 0,75 \text{ mm}^2$ : cRUus: (E310776: Style 11113 & 2570, 600 V / 80 °C)
<b>Guidelines:</b>	CE, NFPA (following 79-2012 chapter 12.9), EAC & TR (CTP)

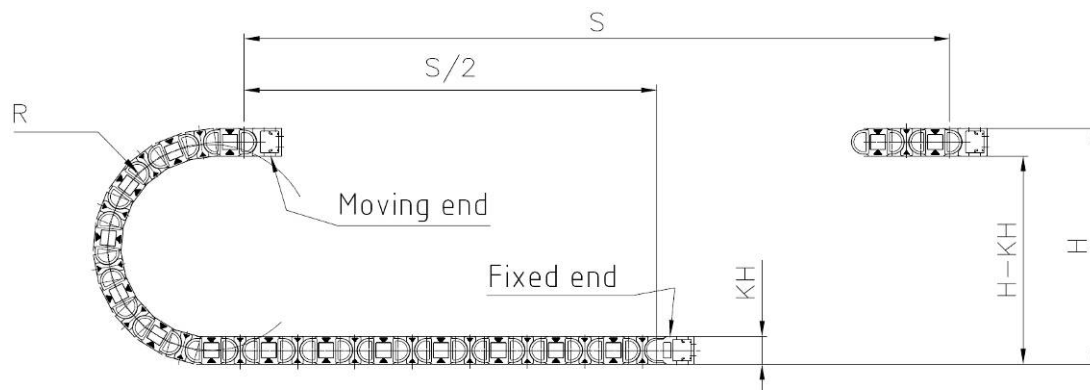
### Dynamic values:

<b>Max. speed in e-chain<sup>®</sup> use:***</b>	<b>Unsupported:</b> $v = 10 \text{ m / s}$ <b>Gliding (up to 100 m):</b> $v = 5 \text{ m / s}$
<b>Max. acceleration in e-chain<sup>®</sup> use:***</b>	$a = 80 \text{ m / s}^2$

\*\*\* 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:

<b>Test bending radius R:</b>	approx. 38 - 200 mm
<b>Test travel S:</b>	approx. 1 - 15 m
<b>Test period:</b>	min. 2 - 4 million double strokes
<b>Test speed:</b>	approx. 0,5 - 2 m / s
<b>Test acceleration:</b>	approx. 0,5 - 1,5 m / s <sup>2</sup>



### e-chain<sup>®</sup> - control 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, cRUus, NFPA, EAC & TR (CTP)

### Typical application areas:

Preferably indoor applications, but also outdoor ones at temperatures  $> 5 \text{ °C}$ .  
Storage and retrieval units for high-bay warehouses, machining units / packaging machines, quick handling, indoor cranes.

**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2):  
shielded, oil-resistant as well as flame-retardant.**

### Technical tables:

#### Mechanical values:

① Part no.	② Number of cores & nominal cross section [mm <sup>2</sup> ]****	External diameter (d)***** [max. mm]	Copper index [kg / km]	Weight [kg / km]
CF6.02.04	(4x0,25)C	7,0	28	75
CF6.02.24	(24x0,25)C	13,5	113	231
CF6.02.25	(25x0,25)C	14,0	118	267
CF6.03.05	(5x0,34)C	7,5	38	96
CF6.05.02	(2x0,5)C	7,0	31	78
CF6.05.05	(5G0,5)C	9,0	51	121
CF6.05.07	(7G0,5)C	10,0	67	131
CF6.05.09	(9G0,5)C	12,0	98	226
CF6.05.12	(12G0,5)C	13,0	104	238
CF6.05.18	(18G0,5)C	15,0	154	295
CF6.05.24	(24G0,5)C	17,5	200	399
CF6.05.25	(25G0,5)C	17,5	205	412
CF6.07.03	(3G0,75)C	8,0	49	101
CF6.07.04	(4G0,75)C	8,5	59	116
CF6.07.05	(5G0,75)C	9,0	71	132
CF6.07.07	(7G0,75)C	10,5	91	157
CF6.07.12	(12G0,75)C	14,0	137	275
CF6.07.18	(18G0,75)C	17,5	209	413
CF6.07.24	(24G0,75)C	19,5	266	530
CF6.07.25	(25G0,75)C	19,5	283	554
CF6.10.03	(3G1,0)C	8,0	57	110
CF6.10.04	(4G1,0)C	9,0	68	120
CF6.10.05	(5G1,0)C	9,5	81	141
CF6.10.07	(7G1,0)C	12,0	109	211
CF6.10.12	(12G1,0)C	15,0	172	330
CF6.10.18	(18G1,0)C	19,0	261	498
CF6.10.24	(24G1,0)C	21,0	335	586
CF6.10.25	(25G1,0)C	21,0	344	617
CF6.15.03	(3G1,5)C	9,0	76	126
CF6.15.04	(4G1,5)C	9,5	92	160
CF6.15.05	(5G1,5)C	10,5	112	184
CF6.15.07	(7G1,5)C	13,0	156	268
CF6.15.12	(12G1,5)C	17,0	240	390
CF6.15.18	(18G1,5)C	21,0	368	604
CF6.15.25	(25G1,5)C	24,0	493	896
CF6.15.36	(36G1,5)C	30,0	728	1346
CF6.25.04	(4G2,5)C	11,5	140	231

\*\*\*\* G ⇒ Cable contains a greenyellow core.

\*\*\*\*\* External diameters are maximum values and may tend toward lower tolerance limits.

**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2): shielded, oil-resistant as well as flame-retardant.**

**Electrical values:**

Nominal cross section [mm <sup>2</sup> ] (following)	Conductor resistance [approx. Ω / km] at 20 °C DIN EN 50289-1-2	Max. current rating [A] at 30 °C <sup>*</sup> DIN VDE 0298-4
0,25	79	5
0,34	57	7
0,5	39	10
0,75	26	12
1,0	19,5	15
1,5	13,3	18
2,5	8	26

<sup>\*</sup> The max. current rating depends on factors such as the individual environmental conditions and the type of installation.

**DIN 47100 colour code:**

No.	Colour	No.	Colour	No.	Colour
01	white	22	brownblue	43	blueblack
02	brown	23	whitered	44	redblack
03	green	24	brownred	45	whitebrownblack
04	yellow	25	whiteblack	46	yellowgreenblack
05	grey	26	brownblack	47	greypinkblack
06	pink	27	greycolor	48	redblueblack
07	blue	28	yellowgrey	49	whitegreenblack
08	red	29	pinkgreen	50	browngreenblack
09	black	30	yellowpink	51	whiteyellowblack
10	violet	31	greenblue	52	yellowbrownblack
11	greypink	32	yellowblue	53	whitegreyblack
12	redblue	33	greenred	54	greybrownblack
13	whitegreen	34	yellowred	55	whitepinkblack
14	browngreen	35	greenblack	56	pinkbrownblack
15	whiteyellow	36	yellowblack	57	whiteblueblack
16	yellowbrown	37	greyblue	58	brownblueblack
17	whitegrey	38	pinkblue	59	whiteredblack
18	greybrown	39	greyred	60	brownredblack
19	whitepink	40	pinkred	61	blackwhite
20	pinkbrown	41	greyblack		
21	whiteblue	42	pinkblack		

+++ chainflex<sup>®</sup> cable works +++





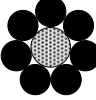
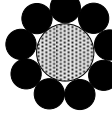
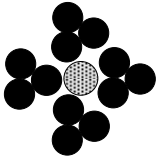
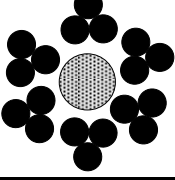
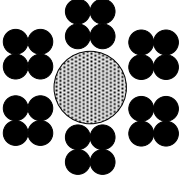
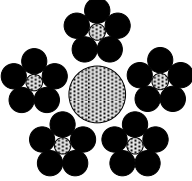

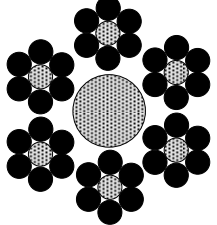
igus<sup>®</sup> chainflex<sup>®</sup> CF6



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**PVC - e-chain<sup>®</sup> - control cable for high load requirements (class 5.5.2):  
shielded, oil-resistant as well as flame-retardant.**

**Construction table:**

Part no.	Core stranding	Part no.	Core stranding
No. of cores		No. of cores	
CF6.XX.02		CF6.XX.03	
2		3	
CF6.XX.04		CF6.XX.05	
4		5	
CF6.XX.07		CF6.XX.09	
7		9	
CF6.XX.12		CF6.XX.18	
4x3		6x3	
CF6.XX.24		CF6.XX.25	
6x4	The 4 core bundles are in star quad design: Ex.: 	5x5	
CF6.XX.36			
6x6			

+++ chainflex<sup>®</sup> cable works +++

igus<sup>®</sup> chainflex<sup>®</sup> CF6



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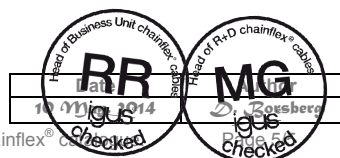


Image exemplary