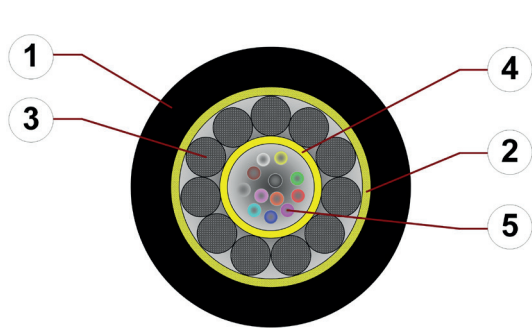


Data sheet

chainflex® CFLG.G



Fibre Optic Cable (Class 7.4.4.1) ● Glass-fibre cable for heaviest duty applications ● TPE outer jacket ● Oil and bio-oil resistant ● PVC and halogen-free ● Low-temperature-flexible ● Hydrolysis and microbe-resistant



- 1. Outer jacket: Pressure extruded, halogen-free TPE mixture
- 2. Reinforcement: Tensile strength aramid braiding
- 3. Torsion protection: Stranded fibre reinforced plastic rods (GRP rods)
- 4. Fibre tube: Highly flexible, gel filled loose tube
- 5. Fibre: Glass optical fibre (GOF)



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Example image
For detailed overview please see design table

Cable structure

	Fibre	9/125 µm, 50/125 µm, 62.5/125 µm fibres in gel-filled tube.
	Core structure	Gel-filled fibre sheath surrounded by GRP rods and torsion protection braid in the outer jacket.
	Core identification	Fibres ► Product range table
	Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Jet black (similar to RAL 9005) Printing: white

„00000 m** igus chainflex CFLG.---,-----① -----② 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).
Example: ... chainflex CFLG.12E.9/125.TC 12x9/125 ...



Example image

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
Data sheet

chainflex® CFLG.G



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Dynamic information

	Bend radius	e-chain® linear flexible fixed	min. 10 x d min. 8 x d min. 5 x d
	Temperature	e-chain® linear flexible fixed	-40 °C up to +80 °C -50 °C up to +80 °C (following DIN EN 60811-504) -55 °C up to +80 °C (following DIN EN 50305)
	v max.	unsupported gliding	10 m/s 6 m/s
	a max.		20 m/s ²
	Travel distance		Unsupported travel distances and up to 50 m for gliding applications, Class 4

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

Guaranteed service life according to guarantee conditions

Double strokes	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-40/-30	12.5	13.5	14.5
-30/+70	10	11	12
+70/+80	12.5	13.5	14.5

Minimum guaranteed service life of the cable under the specified conditions.
The installation of the cable is recommended within the middle temperature range.



Example image



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Data sheet

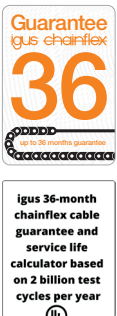
chainflex® CFLG.G



Fibre Optic Cable (Class 7.4.4.1) ● Glass-fibre cable for heaviest duty applications ● TPE outer jacket ● Oil and bio-oil resistant ● PVC and halogen-free ● Low-temperature-flexible ● Hydrolysis and microbe-resistant

Properties and approvals

	UV resistance	High
	Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	Halogen-free	Following DIN EN 60754
	UL verified	Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“
	REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
	Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
	Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1
	CE	Following 2014/35/EU
	UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)



Example image



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Data sheet

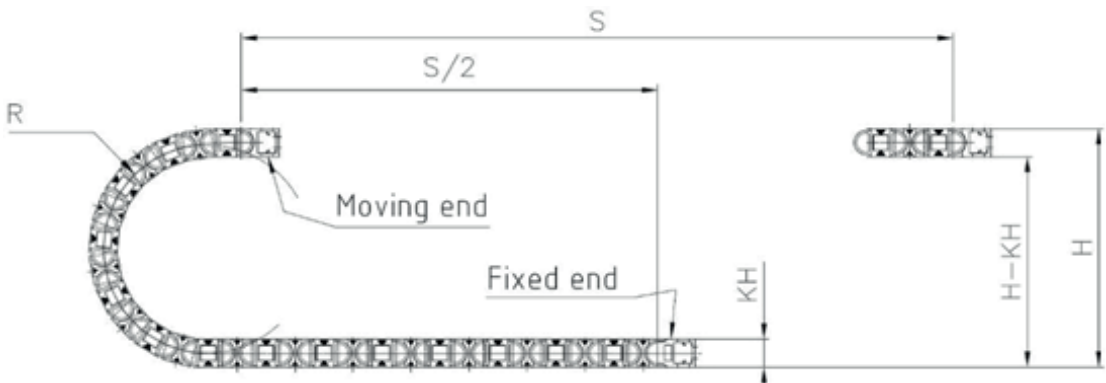
chainflex® CFLG.G



Fibre Optic Cable (Class 7.4.4.1) ● Glass-fibre cable for heaviest duty applications ● TPE outer jacket ● Oil and bio-oil resistant ● PVC and halogen-free ● Low-temperature-flexible ● Hydrolysis and microbe-resistant

Typical lab test setup for this cable series

Test bend radius R	approx. 150 mm
Test travel S	approx. 1 - 15 m
Test duration	minimum 2 - 4 million double strokes
Test speed	approx. 0.5 - 2 m / s
Test acceleration	approx. 0.5 - 1.5 m / s ²



Typical application areas

- For heaviest duty applications, Class 7
- Unsupported travel distances and up to 50 m for gliding applications (horizontal), Class 4
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Maximum EMC protection, with high transmission qualities
- Indoor and outdoor applications
- crane applications, Conveyor technique, low temperature applications



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image



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Data sheet

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Technical tables:

Mechanical information

Part No.	Number of fibres/ Fibre diameter	Outer diameter (d) max. [mm]	Weight [kg/km]
Monomode			
CFLG.12E.9/125.TC	12x9/125	10.0	75
Multimode (Graded index)			
CFLG.6G.50/125.TC	6x50/125	10.0	60
CFLG.12G.50/125.TC	12x50/125	10.0	75
CFLG.6G.62.5/125.TC	6x62,5/125	10.0	80
CFLG.12G.62.5/125.TC	12x62,5/125	10.0	80

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

Optical features

Fibre diameter [μm]	Wave length [nm]	Bandwidth [MHz x km]	Attenuation [dB/km]	Chromatic dispersion [ps/nm x km]
9/125	1310	-	≤ 0.4	3.5
9/125	1550	-	≤ 0.3	18
50/125	850	≥ 500	≤ 3.0	-
50/125	1300	≥ 500	≤ 1.0	-
62.5/125	850	≥ 200	≤ 3.5	-
62.5/125	1300	≥ 500	≤ 1.0	-



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image



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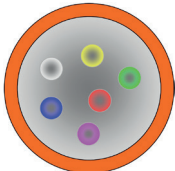
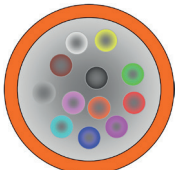
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Design table

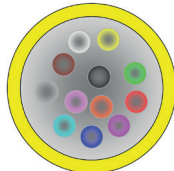
Fibre diameter: 50/125

Part No. (No. of cores)	Core design
CFLG.6G.50/125.TC (6x50/125)	
CFLG.12G.50/125.TC (12x50/125)	

Fibre diameter: 62.5/125

Part No. (No. of cores)	Core design
CFLG.6G.62.5/125.TC (6x62,5/125)	
CFLG.12G.62.5/125.TC (12x62,5/125)	

Fibre diameter: 9/125

Part No. (No. of cores)	Core design
CFLG.12E.9/125.TC (12x9/125)	

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