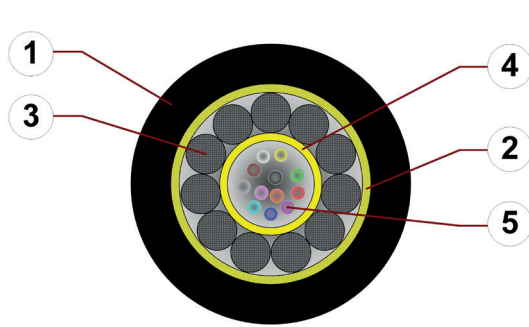


# Data sheet

## 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)

### Example image

For detailed overview please see design table

### Cable structure

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



igus 4-year  
chainflex cable  
guarantee and  
service life  
calculator based  
on 2 billion test  
cycles per year



Example image






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### Dynamic information

	<b>Bend radius</b>	e-chain® linear flexible fixed	minimum 10 x d minimum 8 x d minimum 5 x d
	<b>Temperature</b>	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)
	<b>v max.</b>	unsupported gliding	10m/s 6m/s
	<b>a max.</b>		20m/s <sup>2</sup>
	<b>Travel distance</b>		Unsupported travels and up to 50m 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. [x d]	R min. [x d]	R min. [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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### 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
	PTFE-free	The design of these products does not contain PTFE
	UL-verified	Certificate No. V293650: „igus 4-year 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
	Dry cleanroom	Tested in „dry cleanroom“ according to DIN EN ISO 14644-1, Report No. IG 2405-1526
	CE	Following 2014/35/EU



Example image



# Data sheet

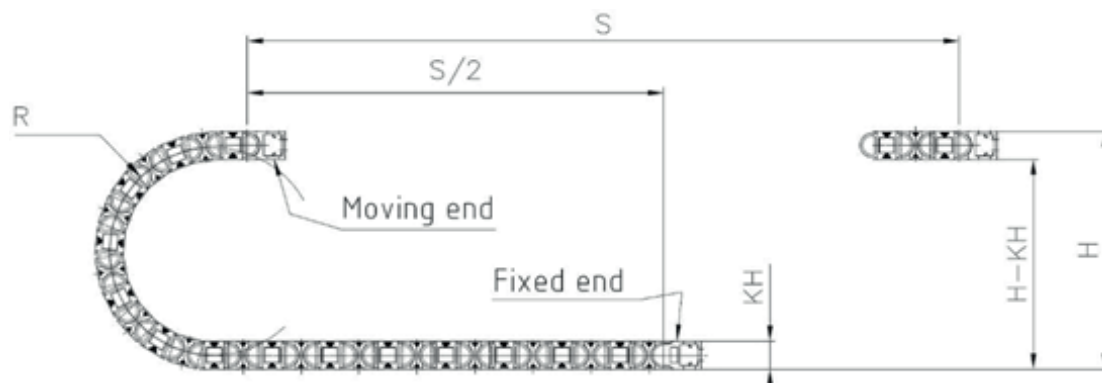
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### Typical lab test setup for this cable series

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 <sup>2</sup>



### Typical application areas

- For heavy-duty applications, Class 7
- Unsupported travels and up to 50m 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 technology, low temperature applications

Example image



igus 4-year  
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### Technical tables:

#### Mechanical information

Part No.	Number of fibres/ Fibre diameter	Outer diameter (d) max. [mm]	Weight [kg/km]
<b>Monomode</b>			
CFLG.12E.9/125.TC	12x9/125	10.0	75
<b>Multimode (Graded index)</b>			
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	≥ 1500	≤ 3.0	-
50/125	1300	≥ 500	≤ 1.0	-
62.5/125	850	≥ 200	≤ 3.5	-
62.5/125	1300	≥ 500	≤ 1.0	-

Example image

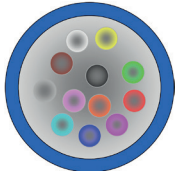


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### Design table

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)	