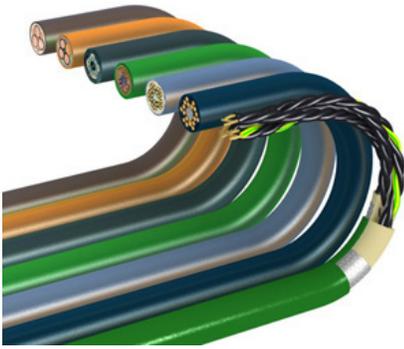


# TECHTALK DESIGN ADVICE SERIES

## WHERE TO USE COST-EFFECTIVE CONTINUOUS-FLEX CABLES



You may have heard us say it before, but helpful tips are always worth repeating: it is important to use cables specifically designed for continuous flexing in demanding, high-cycle applications.

However, not every application is as demanding as the next. In these instances where a low- to medium-duty continuous-flex cable can be used, there are some attractive cost-effective options.

### Applications

First, let's review some specific applications that could benefit from cost-effective continuous-flex cables. Of course, every application has its own set of unique parameters, but generally a less expensive continuous-flex cable can be used in the following areas:

#### 1. Machine tools

Certain types of machine tools, such as water jet and laser cutters, move at slower speeds which subject cables to a lower duty cycle. Also, the configuration of the cable carrier is sometimes short enough where the top section does not need support. Therefore, as long as the cable has an adequate bend radius, an industrial, higher-cost continuous-flex cable is not needed. Instead, a medium-duty continuous-flex cable that is able to withstand light abrasion and exposure to oils is ideal.



### YOUR CONTACT



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## 2. Packaging and handling systems

Depending on the industry, some packaging and handling machines are required to run at reduced speeds. Similar to a machine tool application, a cost-effective continuous-flex cable that is able to withstand light abrasion and occasional exposure to oils is ideal.

## 3. Small gantry cranes

Typically gantry cranes are used to lift and transport smaller items around a working area in a factory or machine shop. Where a larger bridge or overhead cranes may require industrial, higher-cost continuous-flex cables, gantry cranes can often use a cost-effective continuous-flex cable because of their shorter length of travel and slower operational speeds.

## 4. Car washes

An automatic car wash does not put undue stress on cables, as they handle only light to medium loads. While the cables still need to be rated for continuous flexing, a less expensive continuous-flex cable that is suitable for outdoor use in a range of temperatures can be used.

## Cost-effective Continuous-flex Cables

Now that we have discussed potential applications for cost-effective continuous-flex cables, let's review the features and benefits of the cables themselves. Below are some examples of cost-effective continuous-flex cables for medium-duty applications offered by igus®. Based on pricing and performance features, these cables would be considered "economy", while the higher priced, more robust cables also offered by igus® would be considered "standard" or "premium". For an overview of igus® entire line of Chainflex® cables, visit our website.

### Servo Cables

#### Chainflex® CF210 continuous-flex cables

- Ideal for medium loads and unsupported travel lengths
- PVC jacket
- Recommended for indoor applications, but can be used outdoors in temperatures above 41 degrees Fahrenheit
- Withstands light exposure to oils
- Bend radius: 10 times the outer cable diameter
- Applications: wood / stone processing, packaging and handling, adjustment equipment



10 x d



## Chainflex® CF270 continuous-flex cables

- Ideal for medium loads and unsupported travel lengths
- PUR jacket
- Recommended for indoor and outdoor applications without direct sunlight
- Oil and coolant resistant
- Flame retardant
- For temperatures from -40 degrees Fahrenheit to +176 degrees Fahrenheit
- Bend radius: 7.5 times the outer cable diameter
- Applications: machine tools, quick handling, clean room



## Measuring Cables

### Chainflex® CF113 continuous-flex cables

- Ideal for high loads and unsupported / gliding travel lengths up to 1,312 feet
- PUR jacket
- For indoor and outdoor applications (UV resistant)
- Oil and coolant resistant
- Flame retardant
- For temperatures from -40 degrees Fahrenheit to +176 degrees Fahrenheit
- Bend radius: 7.5 times the outer cable diameter
- Applications: machine tools, quick handling, clean room, cranes, car washes



### Chainflex® CF211 continuous-flex cables

- Ideal for medium loads and unsupported travel lengths
- PVC jacket
- Recommended for indoor applications, but can be used outdoors in temperatures above 41 degrees Fahrenheit
- Oil resistant
- Flame retardant
- Bend radius: 7.5 times the outer cable diameter (CF211 standard version)
- Applications: storage and retrieval units, packaging machines, indoor / gantry cranes



7,5 x d



## Useful Links and Tools

[Learn more about Chainflex® continuous-flex cables.](#)

[Learn more about why Chainflex® cables deliver a longer service life in continuous-flex applications.](#)

[Click here to read an archived edition of TechTalk: A Basic Guide to Continuous-flex Cables.](#)

[Click here to read an archived edition of TechTalk: 6 Common Cable Failure Modes.](#)

[Click here to read an archived edition of TechTalk: 7 Guidelines for Continuous-flex Cables.](#)

[Click here to learn how Chainflex® continuous-flex cables are being used in real-world applications.](#)