



# Cable drag chain systems

## Overview

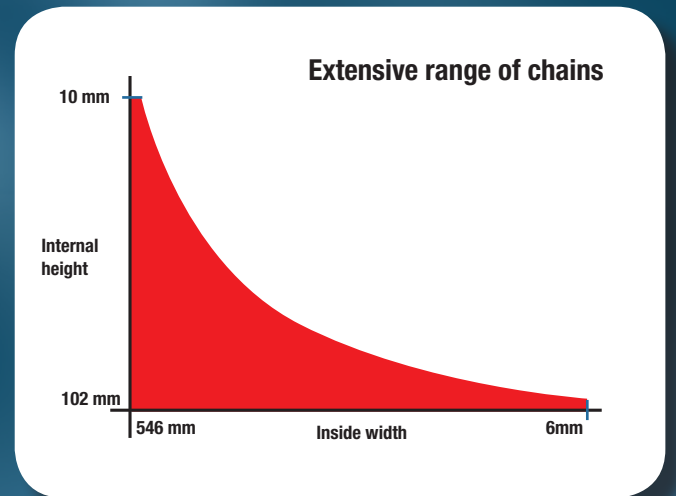
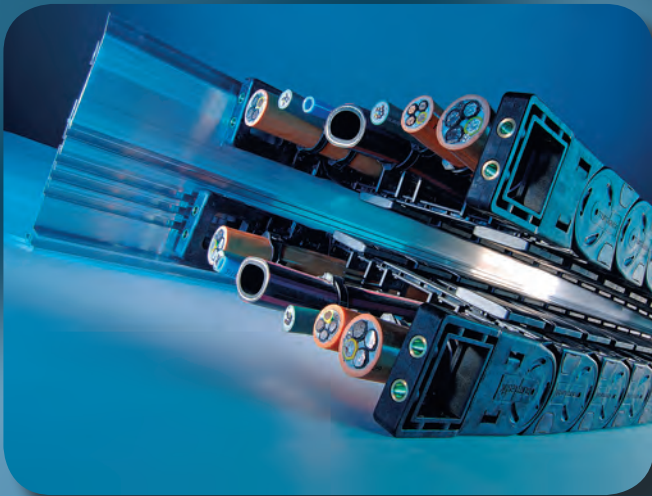
# CABLE DIRECT

Perfect solutions start with specific questions





# AG CHAIN



Murrplastik Systemtechnik has been developing, producing and supplying reliable cable drag chain systems with huge benefits to customers and exceptional reliability for over 25 years. The constant exchange of information with our customers helps us to develop new innovative products and also to continue to extend our product range.

Our complete range of cable drag chains includes: cable drag chains, guide channels, cables, strain relief and their assembly.

Our chains have demonstrated their quality under the most extreme permanent loads and adverse environmental influences.

In constant dialogue with our customers, our expert engineers are continually looking for the perfect solution for every single application. As such, we have developed a procedure, whereby we can determine the customer's requirements quickly and accurately and find the best possible solution from our extensive product range.

## Chain designs



### Click and go!

The chain can be assembled and disassembled quickly and without great force or expenditure of time. An REFA study confirmed that our "Click system" saves a great deal of assembly time over our competitors' products.



### Magnetic chain

This patented system is simple and unique. Magnets are positioned on the inside curve of the chain, which repel each other. Thus the chain components hover above each other and do not come into contact with each other. Components that do not contact each other, produce almost no friction, minimal noise and almost no abrasion or wear. No abrasion - longer service life.



### Extreme stresses

Our cable drag chains combine maximum mechanical resilience with long service lives.

The dynamic features of the design are thus not restricted by the cable drag chain.



### Use in sensitive clean rooms

Our clean room / Atex cable drag chains are manufactured from conductive material specifically developed for this application, which meets the highest strength and resistance classifications. This material combines discharge capability and abrasion resistance in one. These key properties have been tested and confirmed by renowned institutes.





# CHAIN



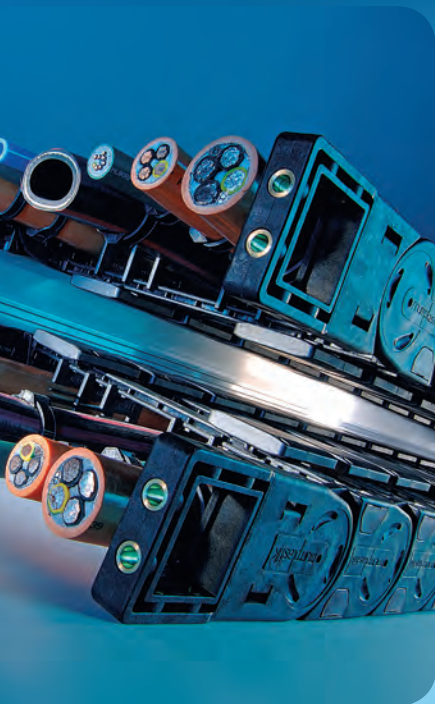
## Cable

All M-Flex cables are designed to meet the current needs and requirements of cable drag chains and can be supplied as fully-assembled systems. The smallest bending radii and high abrasion resistance have been at the forefront of our development.



## Fabrication

Reduce your labour costs and save time by taking advantage of our experience in complete cable drag chain systems gained over many years. Our systems are supplied tailored to fit, ready-to-assemble and synchronous.



## Visual differentiation for different applications

The colour coding system enables you to recognise and classify different materials and hence areas of application safely and easily. Clear classification - Safe and reliable handling.



## Accessories

An extensive and practical range of accessories for cable drag chains enables a wide range of models to be designed, ensuring that many specific requirements and designs can be met.

## Accessories

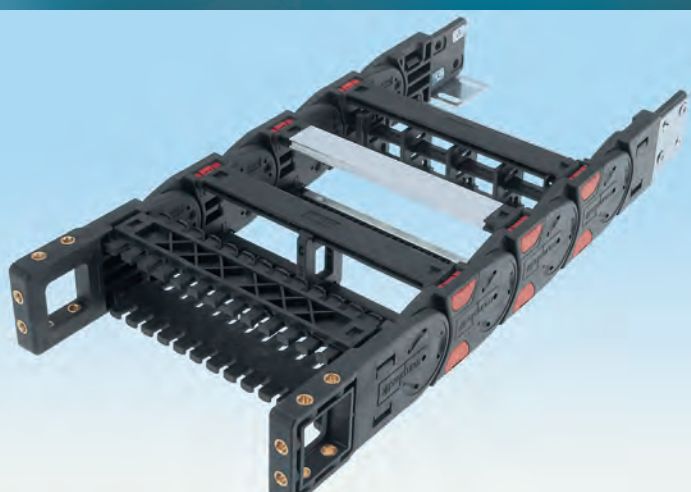
An extensive range of accessories for the cable drag chains complete the large number of options: Cable connectors, separating bars, shelving systems and strain reliefs.

Great emphasis has been placed on functionality and easy-assembly with each and every component part. The wide range of accessories meets almost every requirement.



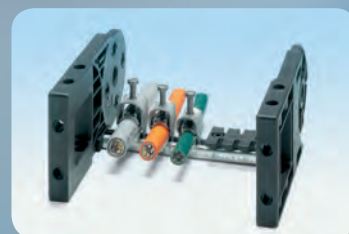
### Chain bracket

- No cold flow deformation
- Threaded bushing for fast installation
- Secure fastening
- Compact



### Integral strain relief

- Easy to assemble
- Compact construction
- Economical
- Space-saving
- Secure strain relief



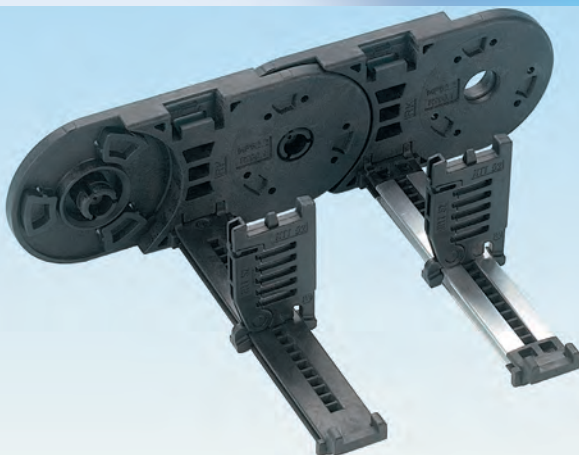
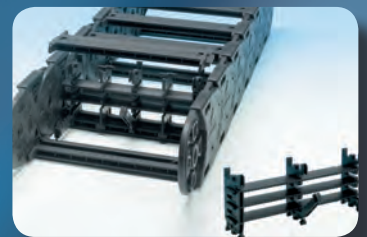


# RIES



## Foldable shelf system

- Simple to assemble
- REFA time and motion study conducted
- Separating bar (engaging), fixed position
- Quick assembly
- Ready-to-install
- Changes can be made



## Variable frame bridges

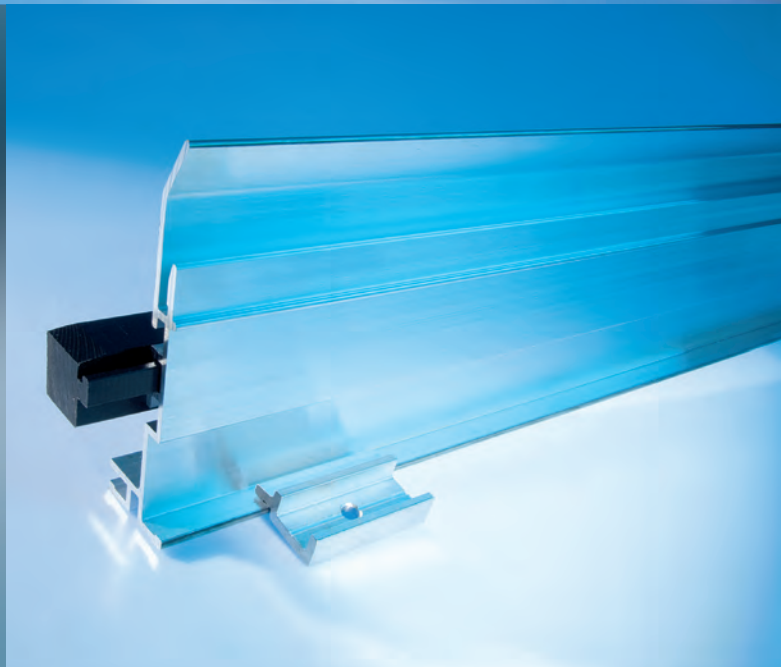
- Flexible adjustment due to closely spaced lock tabs
- Variable length
- Extremely stable
- Correct assembly ensured by using letter coding on the frame bridge



## Aluminium/plastic cable - guide channels



Guide channel systems for cable drag chains serve as trays for short travel distances and, at the same time, as guides for long travel distances. If no guide channel is used, it is possible that the chain links may not be guided correctly. Especially for large bending radii, as the side guidance does not exist. In most applications the cables/conduits enter the chain at a position central to the travel. This gives the shortest length of chain. In this case the chain is about half as long as the travel distance. As the chain is moved, it simply unwinds in the guide channel. If it is moved backwards, then it stacks on top of itself once the unsupported length has been exceeded. If the chain is moved on, the glide rail adjusts the difference in height of the chain link and guarantees the minimum possible friction. This ensures the optimum free and correct running of the cable drag chain.



# GUIDE CHANNELS



# Cables



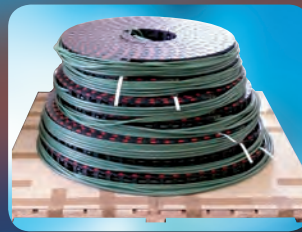
## M-Flex cables

You can obtain the cable length of your choice from us - with no cutting surcharge.



## M-Flex connection

The cables are prefabricated to your specification and international standards



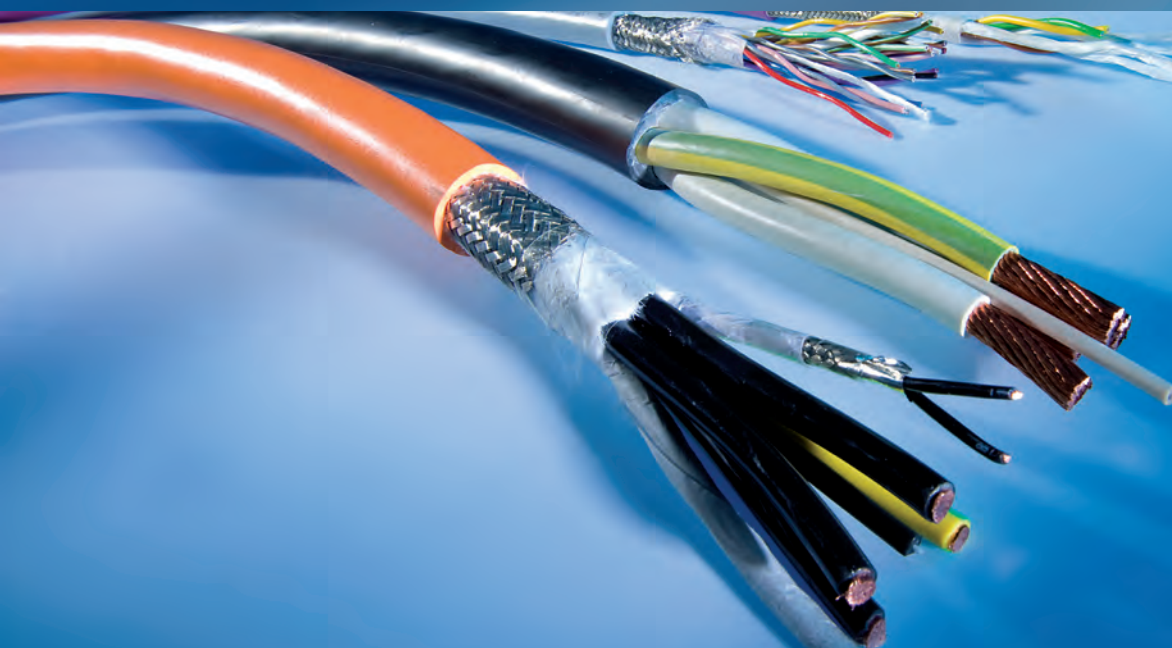
## M-Flex assembly

Cable bundles are incorporated in the cable drag chains based on a drawing. The cable length and overhang at the ends can be selected at random.



## Plug & Play

Fully assembled cable drag chain systems - individually configurable and ready-to-install.



Murrplastik Systemtechnik has been one of the leading manufacturers of cable drag chains for many decades. The positive experiences of many users worldwide are proof that Murrplastik cable drag chains are some of the most durable and technically well-engineered systems on the market. These high quality standards are also pointing the way forward for our range of Murrplastik cables. All M-Flex cables are specifically designed for use with Murrplastik cable drag chains and can be supplied as fully-assembled systems complete with plug connection. We guarantee our high quality standards with fatigue and extreme testing on our in-house test bed. This means that our customers are guaranteed that they are always using the 100% perfect energy supply for their application.

Irrespective of whether you are using a cable drag chain with a long travel distance or one with a large number of reverse bending cycles and high UV exposure - our cable range always offers the best, and at the same time, the most cost-effective solution. The Murrplastik M-Flex cable range covers the complete range of modern applications. Supply cables for servos, single line cables for high high performance, highly-flexible control cables for the narrowest bending radii, cables for diverse bus systems to rubber cables for exacting outdoor applications. And of course all of our cables have UL/CSA certification. Give us a call: your personal contact will be happy to provide advice and information on all of your applicational or more detailed questions.



# APPLICATIONS

## References

### Platform engineering



Murrplastik Systemtechnik GmbH, based in Oppenweiler, developed technically unparalleled cable drag chains for a globally unique lighting system for the ZDF Central Studio in Berlin. The self-supporting chains had to overcome a vertical travel distance of over 20 metres.

- Chain MP 52.2
- Non-standard colour
- Shelving system
- 20 m vertical travel distance
- Folding technique
- High stability

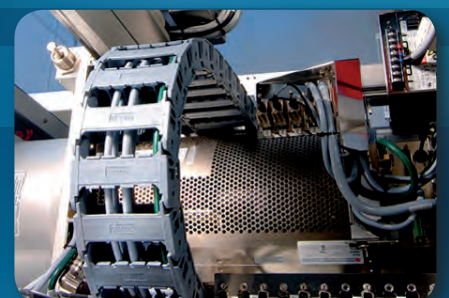


### Clean room



Our products are ideal for use in clean rooms and ultra-clean rooms, thanks to the right choice of material, which can also be immediately seen. Proven design ensures a long service life and thus also high production figures without the need for service.

- MP 3000 - ESD
- Suitable for clean rooms
- Shelving system
- Side self-supporting application





# IONS

## Crane systems



The newest Murrplastik product development has been designed specifically for long travel distances requiring a long service life. Murrplastik Magnetic Chain Technology (MMT) significantly reduces machine-caused friction and thus also, to a large extent, wear and tear.

- Chain MP 52.2
- Shelving system
- 220 m travel distance V16
- 16/kg/m payload
- VAW guide system
- M-Flex cables



## Crash test



Very high stresses are transmitted to the cable drag chain system in necessary crash tests. Acceptable service life can only be achieved with the system with the most stable system components.

- MP 62.2 - Heavy Line
- Shelving system
- VAW guide system
- M-Flex cables
- Acceleration  $\sim 60g$
- 8 kg/m payload



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