Lifting platforms

Solutions for telescopic lifting platforms and telescopic equipment

• plastics for longer life®

igus®.eu...

www.igus.eu/telescopic

Safe and easy energy supply for telescopic applications

Your technical innovator and cost saver.

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Secure guidance of data and signal cables along inclined equipment

Lifting platforms or telescopic equipment offer little space for reliable energy supply, so users like energy chains made of high-performance plastics or hybrid e-chains® made of plastic and steel from igus® to protect and guide their cables and hoses. They protect the cables not only against external influences such as shock, dirt, moisture, but also against wear that occurs during the retraction and extension cycles of the telescopic arms. The structured interior separation of the e-chains® minimises the abrasion of cables and hydraulic hoses and offers additional protection. The energy chains from igus® are very robust and lightweight. They ensure high strength even with larger unsupported lengths. Thanks to their modular design, the energy supply systems are quick to assemble and easy to maintain. The user can save costs by using energy chains from igus®.

Advantages of e-chains® in lifting platforms:

- Lubrication and maintenance-free
- Corrosion-free
- Lighter than metallic chains
- Resistant to dirt and chemicals
- UV and temperature-resistant
- For small installation spaces/space-saving
- Safe for movements in all directions and along all axes
- No screws, rivets or bolts which can become loose under vibration

www.igus.eu/telescopic

igus® YE.1 energy chains for long unsupported lengths

Cherry pickers, construction machinery and lifting platforms have an identical challenge to face: a safe and compact guidance of the cables and hoses

For such scenarios, users usually rely on steel chains. However, these are very heavy and difficult to install, and often need to be completely replaced when service or repair is called for. This means immense costs for machine operators and hiring companies due to equipment downtime. igus® has now developed a hybrid energy chain especially for high unsupported travels. The supporting chain links of the new energy supply solution are made of steel and ensure high rigidity, whereas the pin/bore connection, the outer links and the crossbars are completely made of a tribologically optimised high-performance plastic. Thanks to the plastic - unlike a steel chain - the user saves 50% weight. Compared with a plastic energy chain, the new hybrid energy chain can implement 50% longer unsupported length.

Quickly assembled and maintained with modular design

Another advantage of the new energy chain lies in its modularity. The chain links of the YE.42 are easy to plug together and can be assembled quickly. Thanks to its modular design, screws, rivets or bolts that can become loose under vibration are completely dispensed with. Cables can be quickly replaced due to the removable crossbars: another advantage over classic steel chains, which are usually completely riveted or bolted. The new YE.1 additionally achieves its high stability by means of an undercut design for locking the chain links.

Proven safety and guaranteed service life under the toughest conditions

www.igus.eu/telescopic

Flying high with igus® e-chains®

igus® does not generate its expertise exclusively from the laboratory. Experience of igus® customers in the real world, is just as important. In Ruthmann GmbH, igus® has a partner whose expertise in lifting work platforms has led to the popularity of the brand name "Steiger". The European market leader, which produces telescopic booms with different working heights, requires flexible energy supply systems for the smallest bend radii and installation spaces. In order to achieve the shortest possible throughput times and the lowest possible stock keeping, Ruthmann prefers components which reduce the assembly time.

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Standard steel energy chains vs. igus® YE.1 hybrid chains

Frequently observed problems with steel-only energy supply systems

Steel: corrosion at the joints, resulting in stiffness of the entire energy supply

igus®: plastic-metal joints prevent seizure of the chain links due to corrosion

Steel: deformation of the crossbars leading to seizure/twisting of the energy chain. Sharp edges can also damage the cables

igus®: plastic crossbars do not deform permanently. In addition, they can be replaced individually in the event of a defect. Rounded crossbars protect the cables and hoses

Steel: screws, bolts and circlips can be lost over time and make the whole system unstable

igus®: no screws or rivets connecting the e-chains®

Steel: heavy, because of the metal energy supply system

igus®: up to 50% lighter hybrid chain

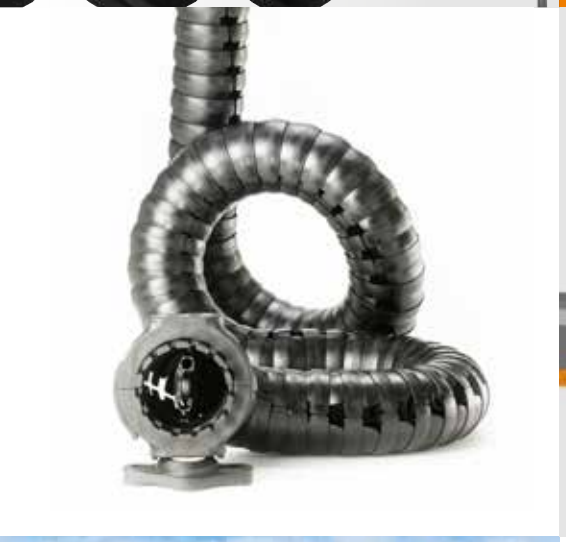
Steel: chain links of steel chains are non-openable and can hardly be partially replaced

igus®: chain links of e-chains® are openable as required. Cables can be added or removed. igus® chainflex® cables for every application: whether high UV resistance or high/low temperatures. 36 month guarantee on all cables

E2 hydraulic hose guidance on side wall of supporting legs

- Special inner contours and clamps for hose-friendly guidance of two hydraulic hoses
- Long unsupported lengths thanks to stable stop-dog system and pin/bore connection
- Single-piece clamp design for extremely stable hydraulic hose guidance requiring little installation space

www.igus.eu/hydraulic-chain



triflex® R on carrying basket joint: energy supply ideal for multi-axis movements:

- Defined torsion stop-dog and minimum bend radius
- Easy to lengthen and shorten
- Matching torsion-resistant chainflex® cables

www.igus.eu/triflexR

E2/000 e-chain® in telescopic forklifts: space-saving and lightweight

- Corrosion and weather-resistant
- Weight reducing
- Assembly-friendly

www.igus.eu/E2000

chainflex® cables: narrow space, high UV resistance

- Control, data and bus cables
- Heavy duty for outdoor applications
- 36 month guarantee

www.igus.eu/chainflex

Guarantee igus chainflex 36 month guarantee

readychain® modules: for direct installation

- Optimally matched components
- Delivered ready to install
- With cables, hoses, attachments and energy chain

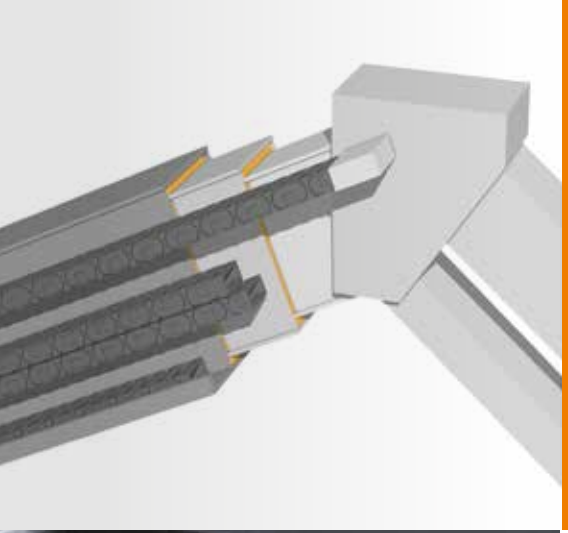
www.igus.eu/readychain

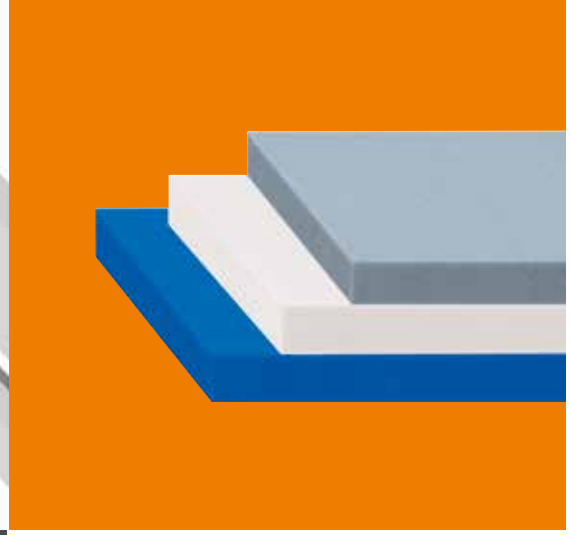
e-chain® E4.1L: save weight and increase payload of the basket

- Reduce weight - more payload
- Easy to open and to install
- Strong and compact

www.igus.eu/E4.1L

www.igus.eu/telescopic

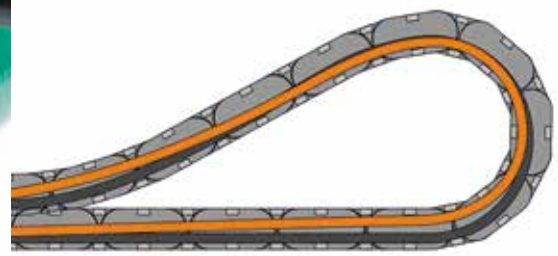




iglidur® bar stock: customised telescopic bearing for high loads on support legs

- Maintenance-free and lubrication-free
- Easy to machine, available as round bar and plate material with online predictable service life
- As a plastic bar stock for DIY or in mechanically finished required shapes and sizes

www.igus.eu/barstock



Rollclip: reliable guidance of hoses

- Reduce abrasion, enhance reliability
- Secure guidance even at high pressures
- Hose-friendly under constant motion

www.igus.eu/hydraulics

Roller crossbar: against abrasion for a longer cable life

- Cable and hose protection due to rolling support surface
- Retrofit possible for many e-chain® series
- Usable along the inner and/or outer radius

www.igus.eu/roller-crossbar

When it is all about lifting platforms – igus® catalogue parts, special parts, bar stock and 3D printed solutions

We can also go your way: customised solutions, special designs and special materials - (virtually) everything is possible. Standard parts do not suit every application. Therefore, igus® also manufactures a number of customised special designs. Structural and material specials are equally possible, whether it is plain bearings for multiple-edge shafts, bearings with reduced clearance or anti-rotation features, special lead screw support blocks and glide pads, and so on, igus® will adapt to your needs. Starting from medium quantities we make almost everything possible.

www.igus.eu/speedigus
www.igus.eu/barstock

3D printing service – for individual parts made of high-performance plastics.
In two simple steps to the 3D printed component - with instant price. We print custom components using lubrication-free, wear-resistant iglidur® high-performance plastics. Upload the drawing in the STEP (STP) format, check the 360° view and select the filament material. Upon order, it is printed and shipped - depending on the complexity - from 24 hours.

www.igus.eu/3D-printservice

www.igus.eu/telescopic

Long-term durability:
10 billion e-chain® cycles per year in e-chains® and the chainflex® laboratory

Cable torsion ...

Cable for torsion and e-chain®

- Service life test in long and short distances
- Motion test in torsion
- +/- 180° rotation angle
- Travel up to 100m

Test weight load capacity at high unsupported lengths

Extensive test database

www.igus.eu/telescopic

Resistance to low temperatures ...

- Extreme test in the cold chamber
- Tested in moving energy chain down to -40°C
- More than 250 tests conducted in parallel in 58 test facilities

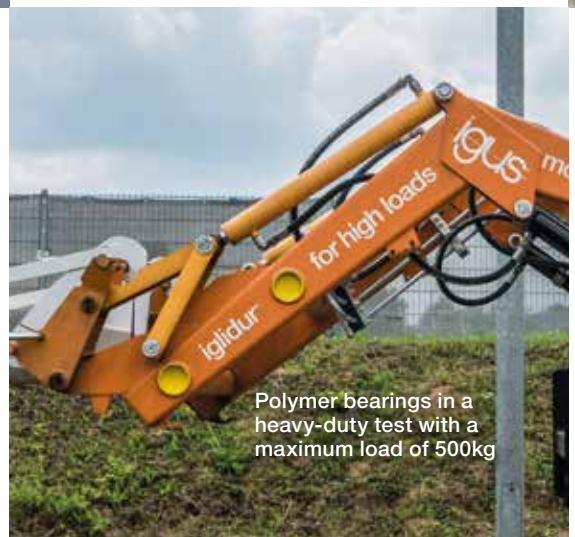
Investigation of coefficient of friction ...

- Constant load test
- Tests of wear and coefficient of friction
- Test of functioning, service life, strength and failure scenarios

Vibration test
In this test, energy chains are subjected to vibrations between 30 and 60Hz

Front loader test rig ...

- More than 3 billion test cycles per year
- Special test set-ups for specific industries
- Further information at www.igus.eu/frontloadertest



Polymer bearings in a heavy-duty test with a maximum load of 500kg

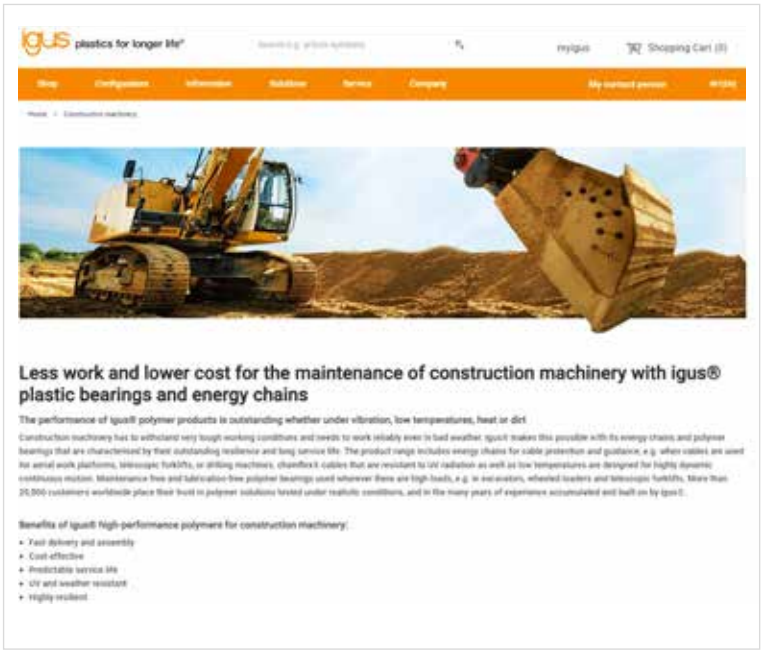
From more than 15,000 tests performed per year, we have created what is probably the world's largest test database. This database gives us the ability to always select the right product for your specific application. Individual tests for your industry are also possible.

www.igus.eu/test

igus.eu/24

Buy online - 24hrs!

Visit our industry web pages for more information, products, application examples and useful online tools. Quickly find and configure products and calculate service life - all online. With the help of our product finders, you can quickly find the right component or assembly and obtain an exact prediction of service life. All online tools also enable you to reduce process costs. igus® delivers from stock in 24-48 hours!



Always the right solution for elevating work platforms.
igus® is certified in accordance with ISO 9001:2015 and IATF 16949:2016 in the field of energy supply systems, cables and harnessing, as well as plastic bearings.

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