



# Stage

Solutions from igus® for  
theater and stage equipment

plastics for longer life® ... igus

# technology

ECS-B21

... [www.igus.com/stage](http://www.igus.com/stage) ...

# Reduce costs ...

igus® solutions for theater and stage machinery are low-noise, maintenance-free, robust, and lightweight, as well as being easy to install and low in cost.

igus® products can help enhance the functionality of your stage, lighting, and audio equipment applications while also helping to cut costs. All igus® products are made of high-performance plastics, which do not require any maintenance or external lubrication. In applications where space is at a premium, or where weight or noise is an issue, igus® products can offer a range of solutions.

We test all igus® products under real-world conditions in the largest test lab of its kind, located in Cologne, Germany. More than 200,000 customers around the world have come to trust igus® for its quality and reliability.

Advantages of igus® products in the theater and stage industries:

## e-chains®

- Supply power, data, light, and air together, safely and reliably in a single system
- Quiet operation and low vibration
- Excellent in small spaces, and under extremely high loads
- High speeds and accelerations possible
- Ready-to-install systems delivered quickly

## chainflex® Cables

- PVC and halogen-free cables to conform to UL standards
- Specifically designed for highly dynamic movements in e-chains®
- Fiber optics, Bus, data, control, and motor cables available, among others
- For very tight bend radii and installation spaces  
36 month guarantee on all chainflex® cables when installed under igus® guidelines

## drylin® linear technology, iglide® bearings, and PRT slewing rings

- Completely self-lubricating and maintenance-free
- Quiet, low-vibration motion
- Robust and easy to install
- Wide range of products and materials available
- Ready-to-install belt or screw-driven linear systems available, including motor
- Customized solutions available with no minimum order

A wide range of online tools are also available to help reduce process costs and design time. igus® products are shipped from stock as early as same-day. Visit our industry page for more information.

 [www.igus.com/stage](http://www.igus.com/stage)

We look forward to talking to you.



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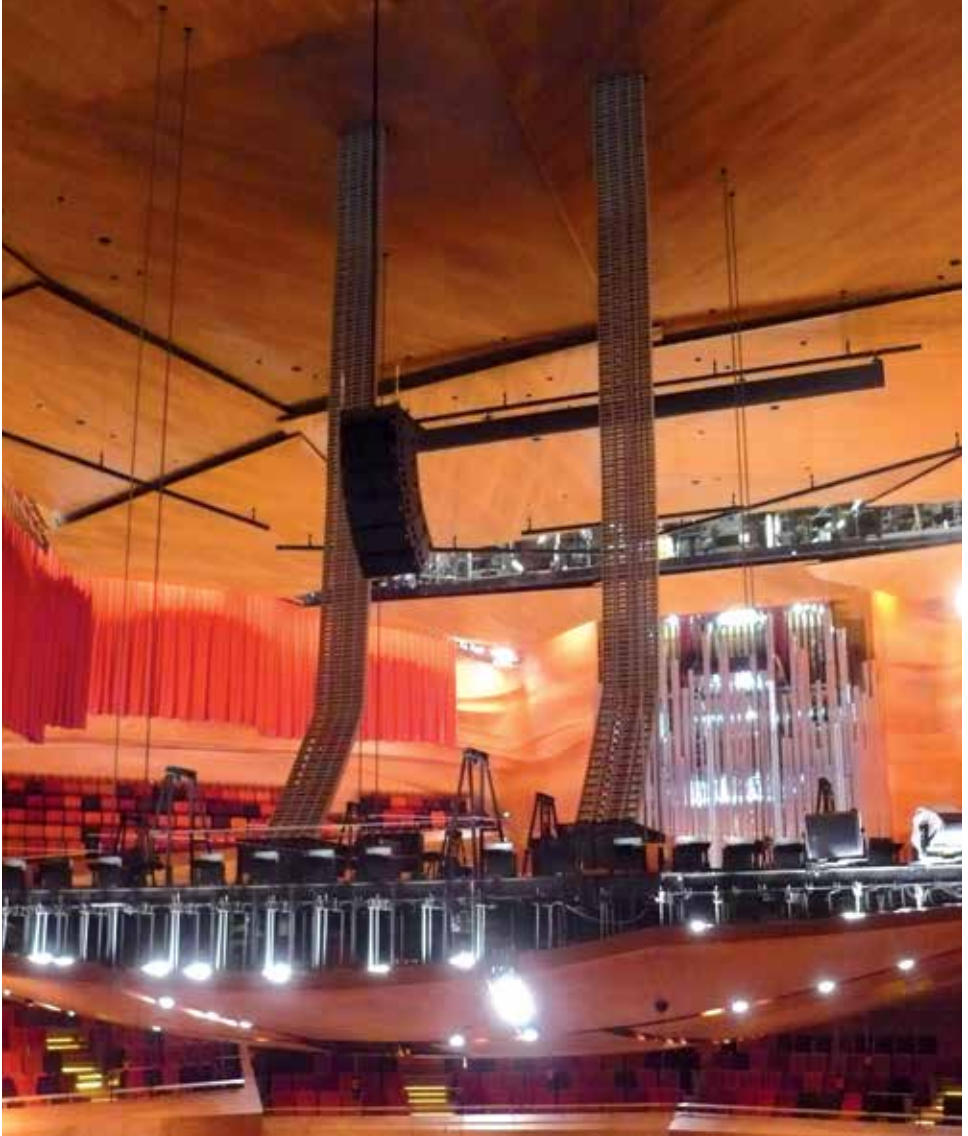
Improve technology ...



... with motion plastics from igus®

# Space-saving vertical installations

Stage technology with igus® zig-zag solutions ...



The modular design of igus® e-chains® offers a unique and space-saving solution for vertical applications. The “folded” e-chain® is stored in a special container located below the stage. When the stage is raised, the e-chain® unfolds, moving upwards with minimal noise. Zig-zag solutions are ideal for modern stage technology where a large number of cables are required to move along with rising platforms.



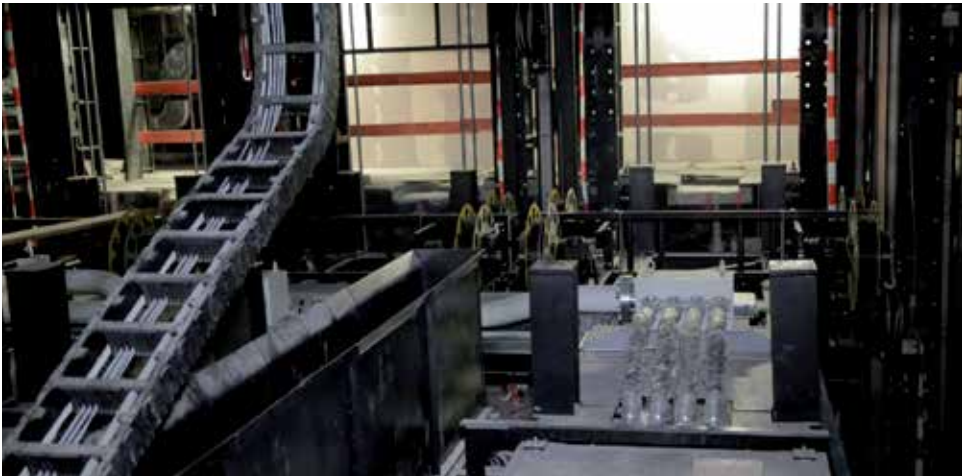
# Zig-zag solutions

improve technology and reduce costs



# Maintenance-free alternative ...

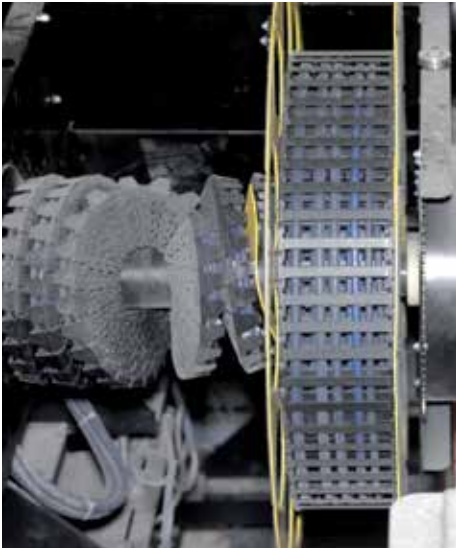
Stage technology ... with igus® e-spool ...



For supplying energy data and media in a single system in a very small space, igus® e-spool offers an extremely compact, space-saving solution. The e-spool system is completely maintenance-free, with no slip ring or sliding contacts.

# to cable drums

improve technology and reduce costs





# In any direction ...

Stage technology... system solutions from igus®...

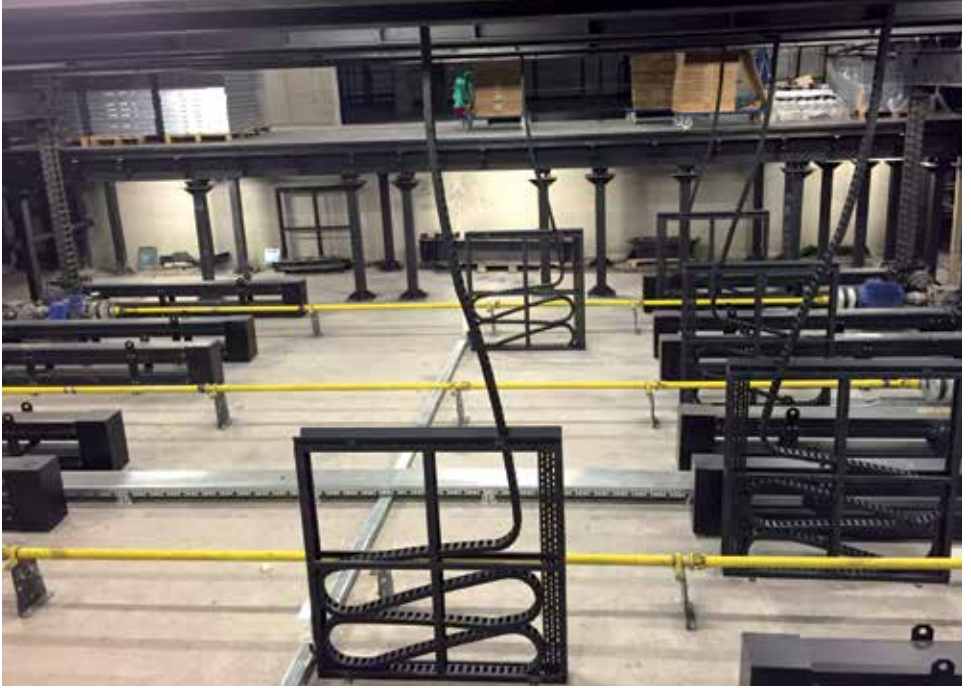


Torun Congress Center



# energy, data, media

improve technology and reduce costs



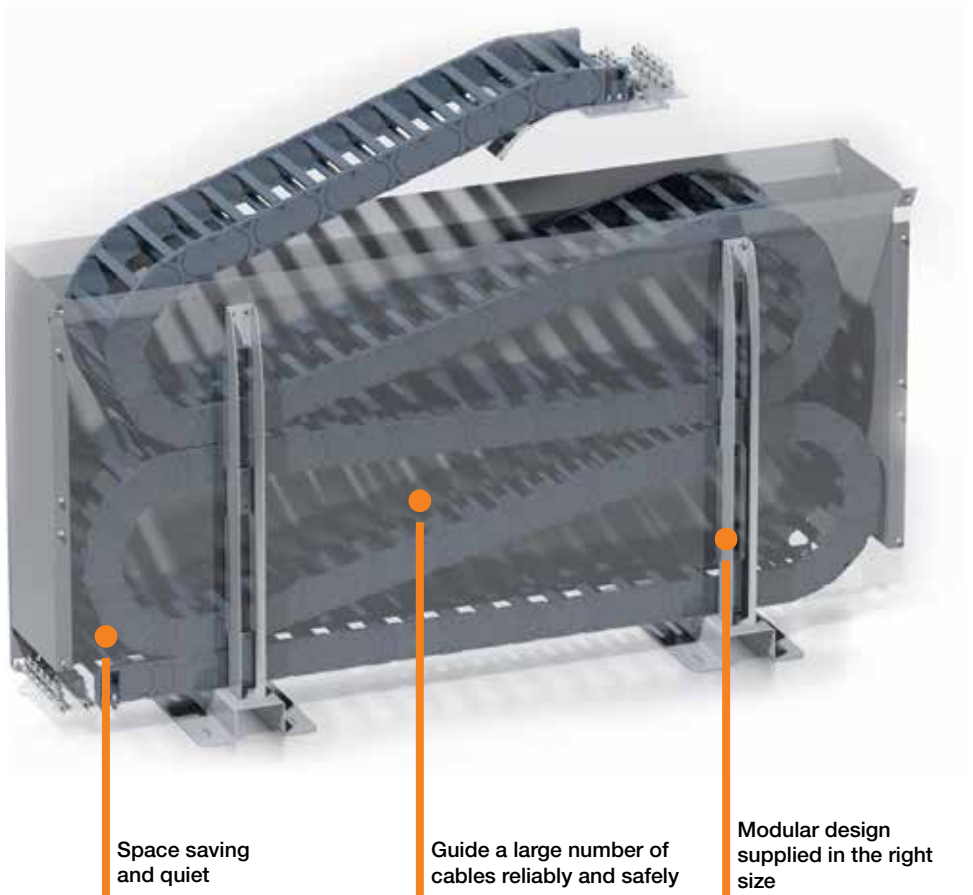
# Zig-zag solutions ...

## Custom made, quickly delivered

**Modular, quiet, and space saving -  
vertical guidance for energy, data, media and more.**

In the case of modern stage machinery, it is important to have the ability to connect a large number of cables while stages and platforms are raised and lowered, while the lack of space almost inevitably presents problems. igus® zig-zag solutions are a modular solution for these issues. While folded, the e-chain® is stored in a special basket beneath the stage, and unfolds quietly to follow the stage when raised. This mode of installation is possible with all E4 e-chains®. Please consult igus® for these types of applications.

 [www.igus.com/zigzag](http://www.igus.com/zigzag)



# space-saving vertically

Tested for your industry, for example:



## igus® vibration test

Customer and application-specific tests are run every day in the industry's largest test lab. Talk to igus® about your specific application concerns regarding vibration, noise, wear or other factors.

 [www.igus.com/test](http://www.igus.com/test)

Other industry solutions include ...



### liftband –

For vertical applications up to 42.6 ft. (13 m)

- Light , compact installation space
- Vertical applications implemented with ease
- Speeds up to 3.28 ft/s (1 m/s)
- Acceleration up to 6.56 ft/s<sup>2</sup> (2 m/s<sup>2</sup>)



### guidelok slimline –

Safe and reliable vertical guidance

- For hanging applications up to a height of 164 ft. (50 m)
- Fast and easy installation
- Very quiet operation
- Reduced installation times due to snap-on guide strip
- Very high speeds and accelerations possible up to 22.9 ft/s (7m/s) and 32.8 ft/s<sup>2</sup> (10 m/s<sup>2</sup>)

Discover more of our products at  [www.igus.com](http://www.igus.com)



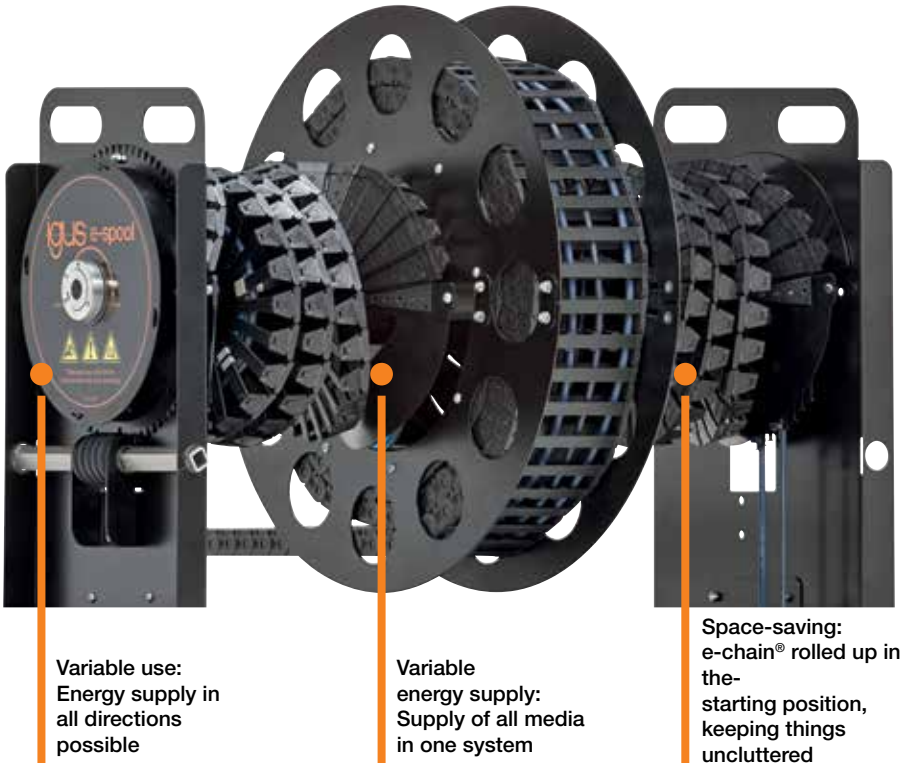
# Cable drum without slip ring ...

## The modular e-spool system – The alternative to the cable drum

Now, route a variety of cables in very restricted spaces with e-spool's unique combination of two energy supply systems in one. A standard e-chain® is guided by a spool, and using an integrated retaining spring, always ensures the correct length and tension of the energy supply line. A twisterband connects the spool to the stationary stand, attaching to the supply side. In the starting position, the e-chain® is completely rolled up to save space.

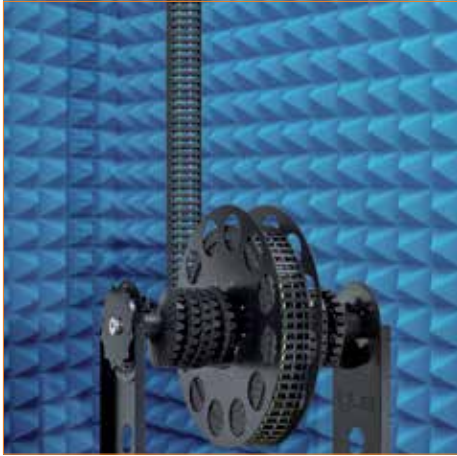
- Different media and diameters possible in a single reel
- Energy supply possible in all directions
- Space-saving with optimized cable routing
- No tensile load placed on cables
- Cable diameters up to .67" (17 mm)
- Cables can be replaced after installation
- Maintenance-free alternative to cable drums
- Max. deployment and retract speed: 3.28 ft/s (1 m/s)

 [www.igus.com/e-spool](http://www.igus.com/e-spool)



# maintenance-free ... low-noise

Tested for your industry, for example:



## igus® noise test

**Objective:** For one particularly noise-sensitive application, a volume of less than 54 dB(A) was required

**Test set-up:** e-spool is moved in a sound-insulated space at a speed of approx. 59 ft/s

**Result:** This was the recorded level of noise generated by the e-spool moving at a speed of 0.3 m/s:

Leq: 42 dB(A) Lpeak: 48 dB(A)

Other solutions for your industry, for example:




### e-spool compact

- For extended cable lengths of up to 78.7" (2,000 mm)
- Energy supply in all directions
- Easy replacement and additional filling
- Space-saving and compact
- Very lightweight design, made of aluminum



### e-spool power

- Travel distances up to 820 ft. (25 m)
- Long service life due to motorized retraction system
- Outdoor use also possible at temperatures below 32°F

Discover more of our products at  [www.igus.com/stage](http://www.igus.com/stage)

# Torsional & circular movement

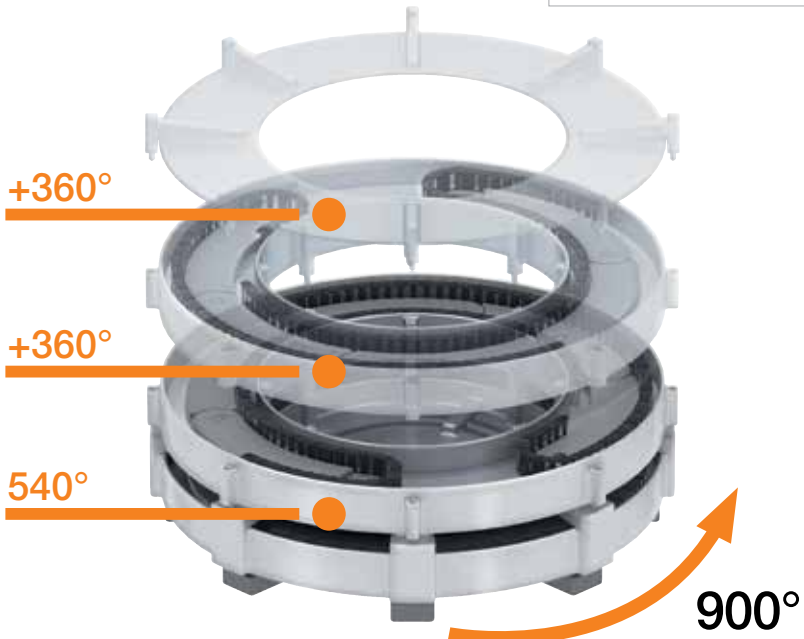
## Standardized rotary systems for rotational applications

### The igus® system for fast rotary applications as a standard offering

The rotary module consists of two circular guide elements. One area of the guide trough is attached to the static part of the system, the other to the rotating part of the system. As the rotary modules can be turned on both the inner or outer parts, the fixed end for the e-chains® can be selected freely. Used with E4-1 e-chains®

- Maximum angle of rotation in very small installation space
- Rotating speed of up to 360°/s
- Lighter and more compact than stationary guide troughs
- Minimum displacement forces and maximum service life due to divided guide trough
- Modular construction with standardized types of fastening
- Integrated strain relief and cable guides in guide trough

 [www.igus.com/RBR](http://www.igus.com/RBR)





# Rotating 400° and more

Tested for your industry, for example:



## igus® test

We simulate your application at igus® and have the simulation acceptance-tested by you or by an independent tester, if necessary.

You are welcome to talk to us about factory acceptance tests.

Other solutions for your industry, for example:



### twisterband – rotational movement in an extremely small space

- Rotary speeds up to 180°/s
- Compact, modular and lightweight
- 7,000° and more rotary movement horizontally and up to 3,000° vertically



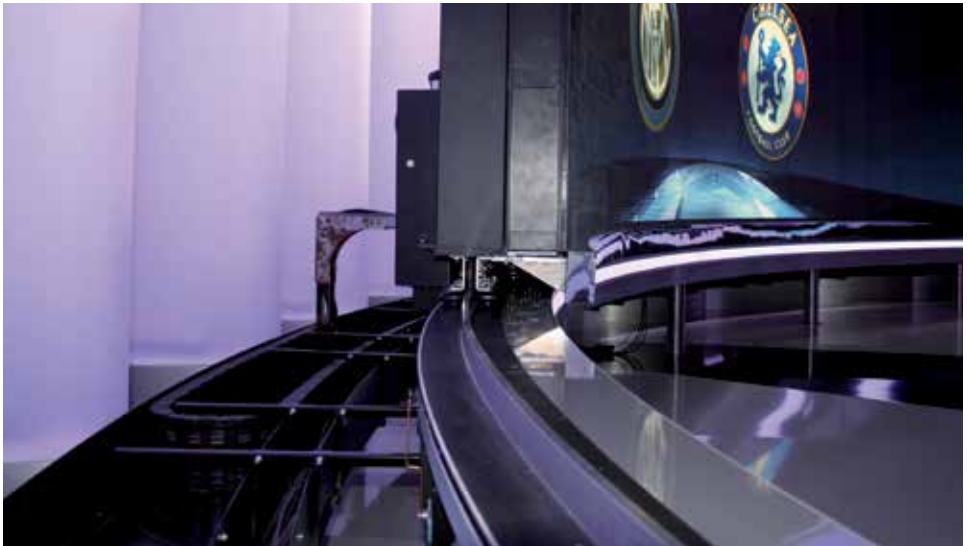
### triflex® R – Moving along all axes

- Secure energy supply for undefined movements
- High torsional stability,  $\pm 10^\circ$  per chain link
- Smooth outer contours
- Small bend radius, can be split up anywhere
- Easy to add or remove links

Discover more of our products at  [www.igus.com](http://www.igus.com)

# Smooth and fast operation ...

Stage and studio equipment with e-chains® ...



For this television studio, a cable trolley system, guided in a semicircle at a speed of  $6.56 \text{ ft/s}^2$  [ $2 \text{ m/s}^2$ ] with accelerations up to  $6.56 \text{ ft/s}^2$  [ $2 \text{ m/s}^2$ ] was developed. Four independently moving LED displays along this path needed energy supply via a number of cables. Due to the technical design, which involved e-chains® installed into two guide chutes, it was possible to halve the length the cables needed to be moved

# low-noise and space-saving

improve technology and reduce costs



The E6 system is characterized by the virtual absence of vibration and very smooth operation, and is very well suited for this camera application. In addition, the e-chain® is ideal for extremely high rates of acceleration and is therefore the perfect solution for filming sporting events. When side mounted, circular motion is also possible, thereby saving space.



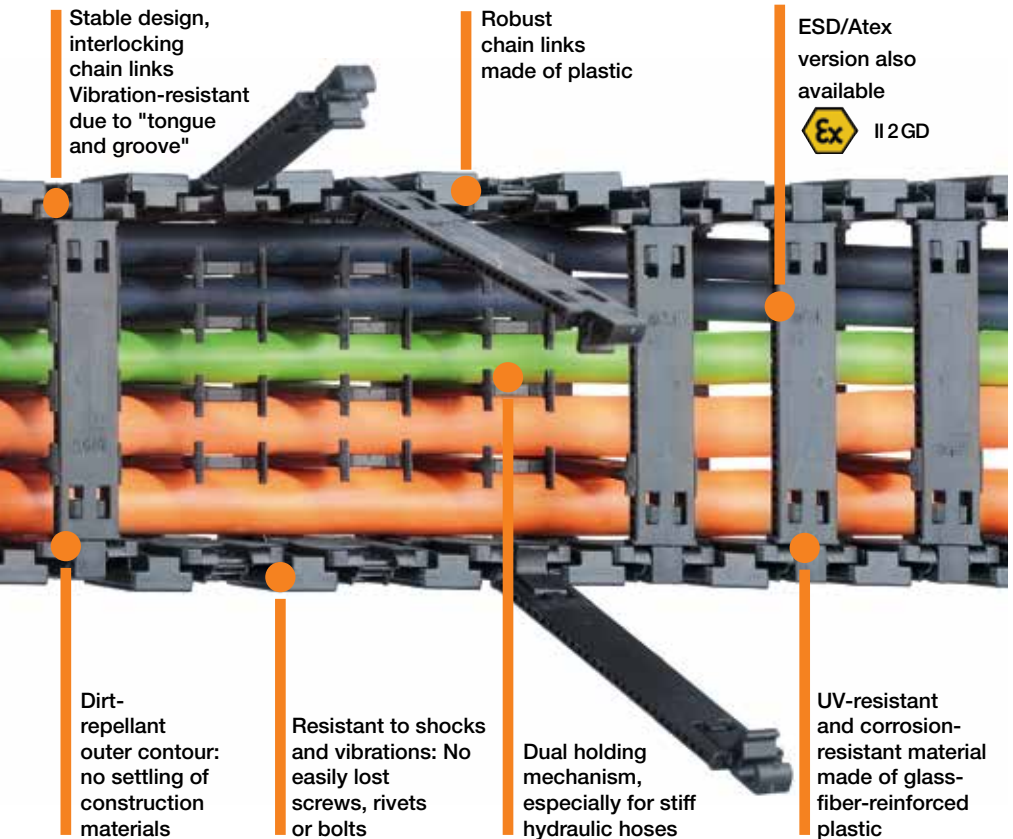
# Light, quiet, clean ...

## E6-1 vibration-free e-chains® for clean, quiet operation

The igus® “whispering” cleanroom e-chain® is available in two new sizes. E6-1 chains are characterized by their extremely low, 32 dB(A) operating volume and very low vibration. Thanks to the special ‘spring connector principle,’ these e-chains® offer extreme abrasion-resistance, making them suitable for even cleanroom applications.

- For extremely smooth, quiet operation
- Low-abrasion connector system with no bolts and holes necessary
- Very smooth operation due to near total absence of a polygon effect
- Smooth surfaces and absence of rough edges increase service life of cables and hoses
- Cross bars can be opened and closed along the inner and outer radii (E61-29)
- Free of PVC-and halogens

 [www.igus.com/E61](http://www.igus.com/E61)



# 33 dB(A), smooth operation

Tested for your industry, for example:

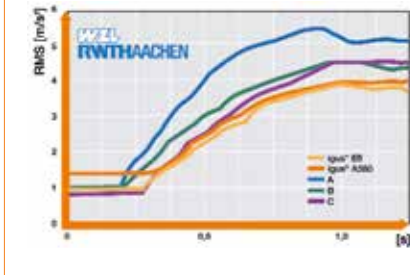


## igus® running test

Selected noise tests – measured values, corrected to take into account external noise

e-chain series	Averaging from the corrected sound pressure levels	test method
igus® E61.29* series	= 32 dB(A)	unsupported v = 1.0 m/s
igus® E6.29* series	= 37 dB(A)	unsupported v = 1.0 m/s
igus® E6.52* series	= 41 dB(A)	unsupported at the side v = 0,5 m/s
igus® E6.52* series	= 46 dB(A)	unsupported v = 2.0 m/s
Chain 1 third-party product	= 77 dB(A)	unsupported v = 2.0 m/s
Chain 2 third-party product	= 68 dB(A)	unsupported v = 2.0 m/s
Chain 3 third-party product	= 73 dB(A)	unsupported v = 2.0 m/s

Source: TÜV Rheinland \*Source: igus® investigations



## E6 system – extremely quiet operation

**Diagram:** Study by the Laboratorium für Werkzeugmaschinen und Betriebslehre (WZL) of the RWTH Aachen on "Vibration tests on energy supply chains". Result: The "E6" energy supply system made by igus® GmbH, Cologne, is characterized by extremely low vibration and very smooth operation.

## Other solutions for your industry, for example:



### E3 system – Extremely quiet, for use in very restricted spaces

Extremely quiet operation for use in restricted spaces. Low-vibration, wear-resistant. For highly dynamic applications; suitable for clean rooms



### E2/000 system – The versatile solution

Easy installation combined with high strength – high degree of stability combined with quiet operation, long service life of the cables and many attachment methods.



### E4-1 system – For nearly all applications

Huge, modular kit. Snap-open along both sides, affordable. "Lying on its side", zig-zag and travel distances of more than 1,312 ft.(400 m), low weight with high additional loads.

Discover more of our products at [www.igus.com](http://www.igus.com)

# chainflex® works ... guaranteed

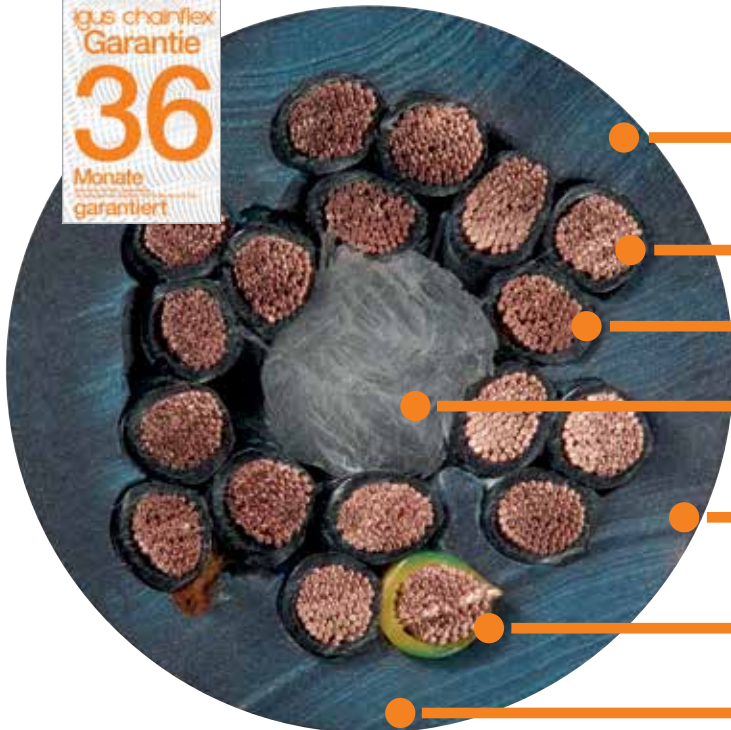
More than 1,000 chainflex® cable varieties available from stock

25 years of specially designed cables for continuous-flex applications in e-chains® - Now with 36 month guarantee\*

Flexible cables in e-chains® need special characteristics to stand up to dynamic applications with high cycles, speeds, and demanding environmental conditions. Electromagnetic compatibility and compliance with standards including NFPA 79, UL, CSA, VDE, along with Inter-and Profibus are often take for granted. The igus® chainflex® product line spans e-chain® compatible control, servo, motor, bus, robot, data, encoder, and fiber-optic cable options, all with a 36 month guarantee.\*

- Operation in temperatures -40°F to +194°F
- For highly dynamic applications in e-chains®
- Special design prevents cable breakage and corkscrewing
- Highly abrasion-resistant jacket materials including PUR and TPE
- 36 months guarantee on all chainflex® varieties\*
- GL certified
- Mud-resistant in accordance with NEK 606
- Appropriate for outdoor applications
- Free of PVC and halogens

 [www.chainflex.com](http://www.chainflex.com)



PUR or TPE outer jacket available depending on the application

Hydrolysis and microbe-resistant

UV resistant

Specially braided conductor element

Over 1,000 varieties available from stock

Highly flexible and durable

Flexible at temperatures down to -40°F

\* Guarantee of 36 months or 10 million cycles (5 million cycles for chainflex® M varieties) is given on cables installed according to igus® guidelines, starting from the date of purchase.

# PVC- and halogen-free

Tested for your industry, for example:



## igus® cold chamber test

Objective: to determine the maximum service life at temperatures of  $-40^{\circ}\text{F}$ .

**Test set-up:** 22.97 ft. (7 m) travel distance, speed of 4.92 ft/s (1.5 m/s) at  $-40^{\circ}\text{F}$ , igus® CF35 TPE cables in an e-chain®

**Result:** the test was ended after 3.7 million cycles. The cable exhibits little wear and is fully functional.

## Special solutions for your industry, for example:



### Halogen-free power cable

The halogen-free TPE power cable for extra high levels of mechanical stress



### Four-wire power cable

Shielded motor cable for inverter function up to 600/1000 V and up to  $70\text{ mm}^2$



### Single core motor cable

Shielded and unshielded single conductor motor cables for demanding requirements



### Data cables

For all throughput data systems in e-chains® applications, even in the case of large cross-sections



### Control cables

Shielded and unshielded cables

Discover more of our products at  [www.igus.com](http://www.igus.com)



# Quiet, sliding, maintenance-free...

Stage, studio and lighting equipment ...  
with drylin® linear technology ...



Vibration-free lambda scissors bearing with self-lubricating drylin® W stainless-steel guide for stages and platforms - hoist in the Berlin Konzerthaus

# and self-lubricating

... improve technology and reduce costs



With drylin® W hybrid bearings, scenery and other on-stage objects can be moved easily, quickly and quietly



Due to drylin® W hybrid bearings with integrated roller, monitors are moved up to 8 meters to the side



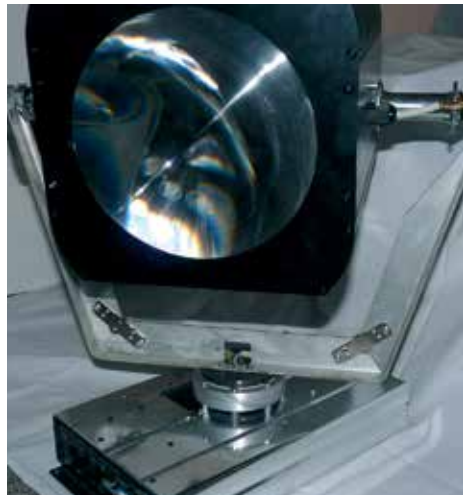
The use of maintenance-free drylin® profile guides reduces the need for maintenance in the case of video walls

# Fit and forget ... self-lubricating

Stage, studio and lighting equipment ...  
with **dry**-tech bearing technology ...



Move screen lifters for large displays vertically  
with drylin® linear bearings and pivot them  
with PRT slewing ring bearings



Moving-head spotlights are rotated with self-lubricating and maintenance-free PRT

# and maintenance-free

improve technology and reduce costs



The drylin® N low-profile guides for spotlight and camera settings are extremely flat, light and quiet



Lightweight design and judder-free 3D camera-position adjustment thanks to drylin® linear guides



# drylin® linear technology ... quiet ...

## Self-lubricating and maintenance-free modular linear technology system

drylin® is a product range of self-lubricating linear plain bearings based on the principle of sliding instead of rolling. Tribologically optimized iglide® high performance plastic materials are used as sliding surfaces. The drylin® linear systems use dry operation and are maintenance-free. Linear guides on rails or round shafts are available. The drylin® drive technology can supply ready-to-connect systems with lead screw drives or toothed belt drives, with or without motor. Besides the freedom from maintenance and external lubrication, the focus is on the ruggedness and insensitivity to influences such as dirt, water, chemicals, heat or impacts.

- Insensitive to dirt due to dry operation
- Quiet operation
- Vibration dampening
- Insensitive to impacts and vibrations
- High stationary load bearing capacity
- Low weight
- Suitable for short-stroke applications
- Special designs according to customer requirements
- Metric and imperial dimensions
- Available from stock

 [www.igus.com/drylin](http://www.igus.com/drylin)

**Quiet operation through sliding motion**

**No external lubricant required**

**Profiles available in various geometries, installation sizes and clearances**

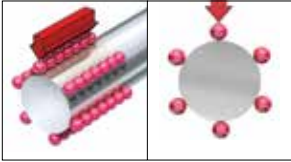
**Smooth operation through sliding elements of iglide® J/J200**

**Maintenance free due to integrated lubricants**



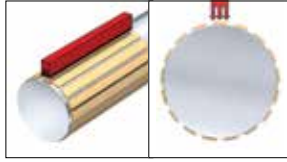
# maintenance-free ... self-lubricating

## Tested for your industry, for example:



### "Conventional" rolling bearings – point contact

Force is transmitted via balls at certain points. The system requires lubrication to ensure proper functionality.



### drylin® bearings – surface contact

The force is transmitted two-dimensionally over liners or sliding elements. The system is self-lubricating and maintenance-free over the entire service life.



Resistant to dirt, dust and moisture – due to self-lubricating operation and dirt channels.

## Other solutions for your industry, for example:



### drylin® lead screw technology

- Efficient and durable dryspin® technology
- Self-locking trapezoidal and metric thread
- Lead screw nuts made from 5 iglide® materials



### drylin® linear module system

- Easy installation, maintenance-free
- Resistant to dirt due to dry operation
- Low weight and quiet operation
- Angular rail with floating bearing function for corner mounting
- Interchangeable with ball bearing/recirculating ball bearing



### drylin® drive technology

- Linear modules with lead screw drive or toothed belt
- For manual or electrical adjustments
- Linear axes with stepper motors/ DC motors
- Failsafe thanks to the use of encoders and initiators

Discover more of our products at  [www.igus.com](http://www.igus.com)

# iglide® plastic plain bearings ...

## Plain bearings made of high-performance plastic materials – iglide®

No external lubrication or maintenance required, while cutting costs and increasing service life, everything from stock and delivered promptly – that is the central idea of all igus® products. iglide® plastics have been extensively tested with respect to wear and friction values including other relevant material properties. iglide® polymer plain bearings from igus® signifies the step from the plastic bearing to the tested and therefore predictable machine element.

- 100% self-lubricating
- Vibration dampening
- Maintenance-free
- Very low weight
- High static loads
- Corrosion-free
- Special dimensions and designs
- Metric and imperial dimensions
- Available from stock

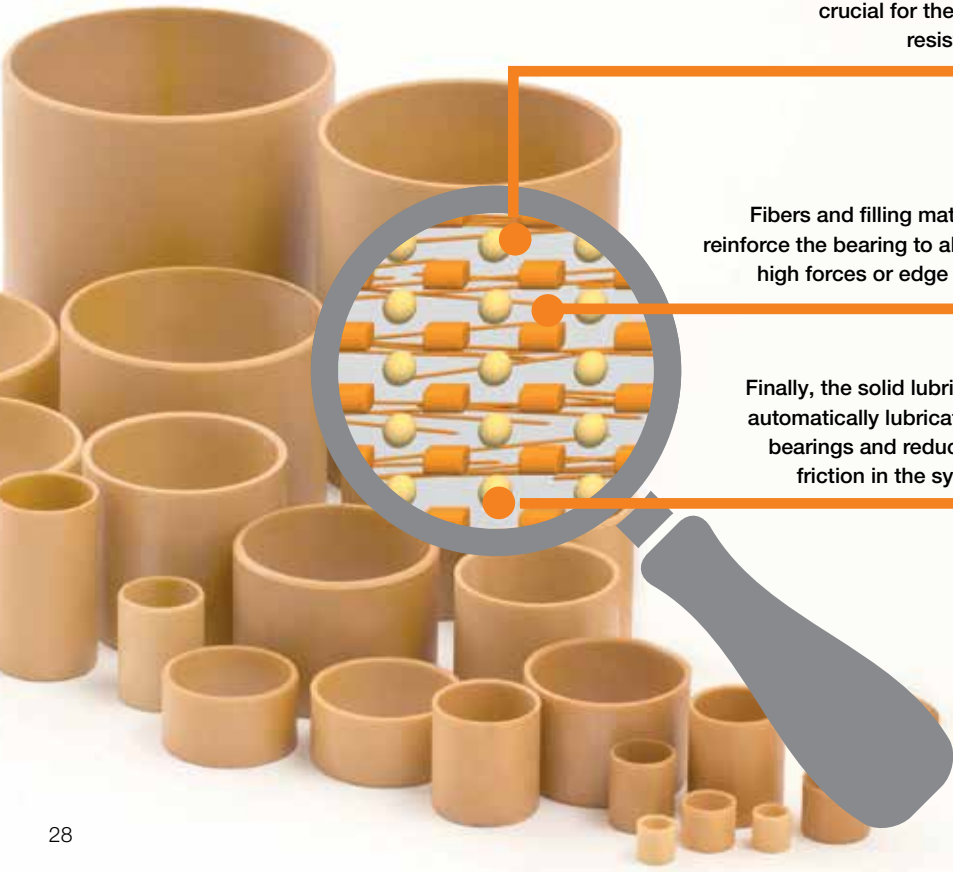
 [www.igus.com/iglide](http://www.igus.com/iglide)

Structure of iglide® plain bearings:

The base polymer is crucial for the wear resistance

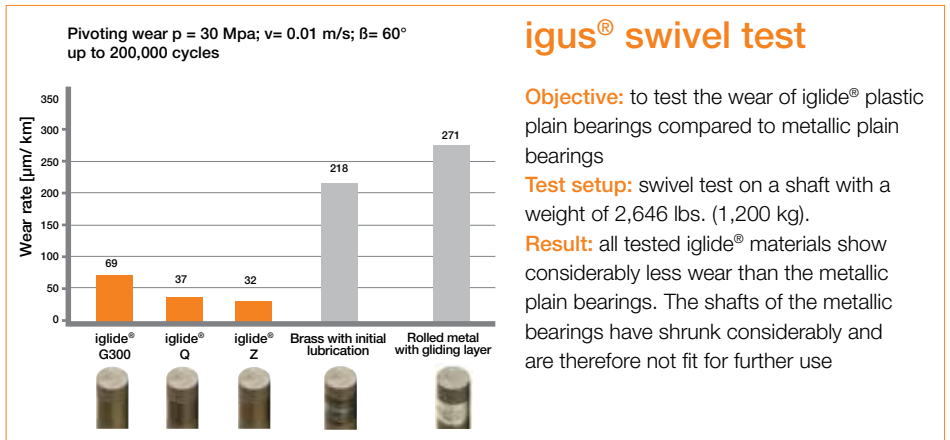
Fibers and filling materials reinforce the bearing to absorb high forces or edge loads

Finally, the solid lubricants automatically lubricate the bearings and reduce the friction in the system.



# self-lubricating ... light

Tested for your industry, for example:



Special solutions for your industry, for example:



### iglide® G300 plastic plain bearings

- Maintenance-free dry operation
- High abrasion resistance
- Insensitive to dust and dirt

### iglide® J plastic plain bearings

- Low friction during dry operation
- Vibration dampening
- Good resistance to chemicals
- Low moisture absorption



### iglide® PRT slewing ring bearing

- Low weight due to aluminum and plastic
- Very quiet rotary motion
- For high loads
- Robust
- Extensive accessories available



### igubal® spherical bearings

- Different designs, available including, spherical, double spherical, flange and pillow block bearings
- Different spherical ball materials available
- Extremely cost-effective
- Service life can be calculated online

Discover more of our products at  [www.igus.com](http://www.igus.com)



# igus® special parts ...

Customized special parts from quantities as low as 1



## Special parts made from tribo-plastics according to customer requirement

speedimold is very simple! Constructive special solutions just as you need it, virtually everything is possible. iglide® offers you self-lubricating and maintenance-free solutions, all according to your needs, "off the shelf" or "custom made", especially for your applications: Choose from 8 iglide® tribo-plastic materials iglide® G300, iglide® J, iglide® L280,

iglide® T500, iglide® M250, iglide® P, iglide® A180, iglide® H2 and igumid G. You will get, depending on the complexity of parts, injection molded parts in 1 to 10 days with no minimum order value.

 [www.igus.com/speedimold](http://www.igus.com/speedimold)



## Special parts made from iglide® materials

speedicut uses the entire range of iglide® bar stock materials and produces parts according to customer requirements very quickly. Like the proven speedigus® rapid tooling system, speedicut easily and quickly creates a cost estimate based on a 3D model. The parts are then delivered within a few days.

 [www.igus.com/speedicut](http://www.igus.com/speedicut)



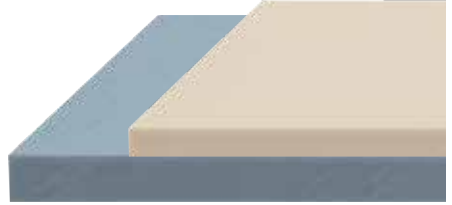
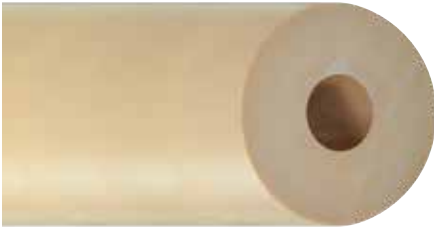
## Additional parts according to customer requirements, e.g. machined drylin® W rails

Just ask and together we will develop the "one" component that is optimally suited for your application.

 [www.igus.com/drylin](http://www.igus.com/drylin)

# for free design

## iglide® bar stock optimized for friction and wear coefficients



### iglide® for free design. Bar stock made of tribo-optimized plastic.

As plastic bar stock for own machining or supplied directly with the desired mechanically finished geometry, from plain bearings to special profiles – for prototypes, test samples and series-production requirements. All bar stock materials available from stock, including iglide® A180, which meets the requirements of the Food and Drug Administration (FDA) for direct use in environments (or in contact) with food.

- Very high media-resistance
- Low-cost
- Wear-resistant
- Compliance with EC Directive 10/2011 EC possible
- FDA-compliance possible

 [www.igus.com/barstock](http://www.igus.com/barstock)



### iglide® Tribo-Tape. iglide® off the reel:

igus® Tribo-Tape is designed for lining areas of wear and where frequent maintenance is required, an example is for machine beds etc. At just 0.5 mm thick (0.65 mm including the adhesive back), the space requirement is extremely low. The ease of use (the tape can simply be cut using scissors) and optional self-adhesive back open up almost endless possibilities for use.

- Materials: iglide® A160, iglide® V400, iglide® B160
- Self-lubricating and maintenance-free
- Easy to cut
- Can be glued
- Less installation space required

 [www.igus.com/tribotape](http://www.igus.com/tribotape)

# Ready to install ... from a single source

**readychain®: chain - cable - guarantee ...  
delivered in 3-10 days**



**readychain® – fully harnessed  
systems in 3-10 days**

More than 1,000 systems produced per week in 12 readychain® factories around the world – assembly time optimized to increase your cash-flow

- Eliminate storage costs for cables, e-chains® and connectors
- Cut turnaround times by half
- Flexibility when orders vary
- Reduce the number of suppliers and orders by 75%
- Minimize your machine downtimes
- System guarantee - depending on application

 [www.readychain.com](http://www.readychain.com)

**readychain® assembly rack**

Save 80% at prototyping. Assembly transport rack for ready-to-install energy supply systems.

**Assembled igus® readychain®  
systems: individual or serial  
production**



**readycable: harnessed drive cables ...  
in as little as 24 hours**



**readycable**

igus® provides more than 3,200 harnessed cables for drive technology to 22 different manufacturer standards. Professionally produced, 100% tested.

 [www.readycable.com](http://www.readycable.com)

# Installation ... Assembly

Save time and money on maintenance and installation of your e-chain systems®

**Design, harnessing, delivery up to complete assembly of e-chains® with all components.**

Machines must work reliably and without problems. This requires reliable e-chain systems® and cables, which guarantee a long service life and a quick service, by which machine downtimes can be avoided or reduced in case of emergency.

 [www.igus.com/service](http://www.igus.com/service)

## Our service:

- Predictable fixed cost for the assembly, maintenance or inspection of energy supply systems on your system
- Fast and fault-free installation and maintenance of all components by qualified specialists
- Minimal downtime
- Products and services e-chains®, cables, strain relief, guide troughs, etc) from a single source – less logistics costs for you



New installation



Upgrades / Replacement



Chain monitoring



Repairs



# Tested! Service life ...

Thousands of tribological tests (rotating, pivoting, linear, heated, underwater etc.) performed every year for **dry-tech** bearing solutions, and hundreds of customized tests at the igus® lab.



A section of the igus® **dry-tech** test laboratory, Cologne



Endurance tests



Wear tests under the influence of different media



Plastic bearings technology: tested a thousand times ... under real conditions.



Load tests

# predicted accurately.

Thousands of tests and billions of cycles performed each year at the 29,600 ft<sup>2</sup>. Cologne test lab, with results added constantly to the igus<sup>®</sup> electronic database.



A section of the igus<sup>®</sup> e-chain<sup>®</sup> test laboratory, Cologne



Test for torsion with e-chains<sup>®</sup> and chainflex<sup>®</sup> cables.



Service-life tests for e-chains<sup>®</sup> and chainflex<sup>®</sup>-cables



Many types with fire class UL94-V2 or V0



Control cable CF98-05-04 tested in e-chain<sup>®</sup>. More than 138 million strokes with a bending factor of 3.2 x d

# Services from igus® ...

## The igus® delivery service

More than 97% of components from the igus® catalog are available from stock.

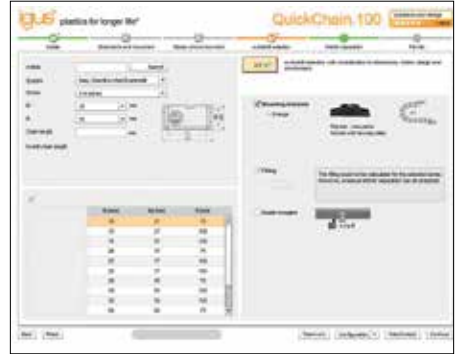
- More than 100,000 products from stock
- No minimum order quantity
- No minimum order price
- No cutting charges for cables
- No packaging costs



## Quickly find products online, configure them and calculate their service life.

With our igus® product finder, quickly find the right product and calculate the estimated service life of igus® products in your application.

 [www.igus.com/online](http://www.igus.com/online)



## For any task – in any batch size

Different industries need different solutions. No matter your industry igus® offers customized support for special applications. igus® has more than 50 years of experience and specialized resources in many industries.

 [www.igus.com/industries](http://www.igus.com/industries)



## Better for the environment



Because iglide® is free of external lubricants, no contaminants are discharged into the environment.

Additionally, the low weight of iglide® plastic plain bearings reduces power requirements, making them better for the environment



The **yes** – Young Engineers' Support – program is designed to support the design ideas of students, and educate them on the merits and benefits of plastic components.

 [www.igus.com/yes](http://www.igus.com/yes)



Since 1987, More than 30 igus® products have been awarded by "IF Forum Design GmbH" in the "Industrial Design" category.



# quick & reliable



## igus® quality assurance

The goal of quality management at igus® is to recognize and fulfill customer expectations and to always be an expert partner and reliable supplier. To reach this goal, igus® always applies the highest standards in the production of products and is constantly developing new and innovative solutions.



## Modern and economic molding technology

igus® utilizes high tech, cost-effective solutions. Modern injection molding technology allows thousands of standard and countless custom components to be manufactured with high precision and quality.



## The igus® lab

The industry's largest test lab (29,600 ft<sup>2</sup>) conducts more than two billion test cycles per year on more than 100 test rigs.

- Extensive test databases
- Customized tests on request

 [www.igus.com/test](http://www.igus.com/test)

## igus® motion plastics

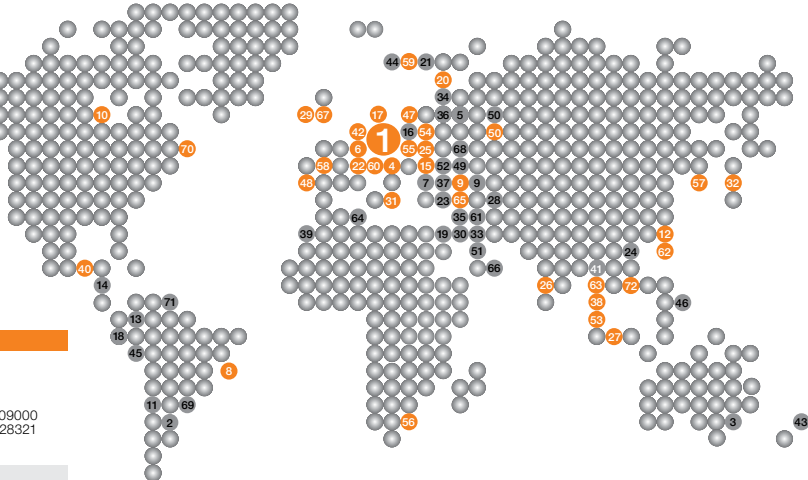
One vision has been driving us for more than 50 years – motion plastics: innovative moving parts made of plastic that cost less and last longer. Our core technology consists of – high-performance plastics which have been optimized for friction and wear. This technology has made us into a world-wide leader for developing and manufacturing energy supply systems and plain bearings.





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# 9001:2008

igus® is certified in accordance with ISO 9001:2008 and ISO/TS 16949:2009 in the field of energy supply systems, cables and harnessing, as well as plastic bearings.



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