

Fluid

igus® solutions for the fluid technology



technology

plastics for longer life® ... igus

... www.igus.eu/fluid

Reduce costs ...



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Lubrication and maintenance free iglidur® plastic plain bearings in fluid engineering.

Hydraulic and pneumatic components give machinery and equipment power, precision, speed and dynamics. The demands on the installed machine elements are correspondingly high!

The range of uses for iglidur® plain bearings, igubal® spherical bearings and drylin® linear bearings or lead screws in fluid engineering is constantly increasing. They also prove themselves in fittings and valves. From simple linear movements through to rotating applications in the medium, they provide a high wear and abrasion resistance, plus chemical and temperature resistance as well as freedom from maintenance in dry operations.

Advantages of igus® products in the fluid technology

- Absolute media resistant
- Resistant to corrosion
- Temperature resistant
- Lubrication free – lubricants cannot be removed by washing out
- Maintenance free

Our online tools also enable you to reduce process costs. igus® delivers from stock in 24-48 hours! Also, see our industry website.

 www.igus.eu/fluid

I look forward to speaking to you.

... improve technology ...



... with motion plastics® from igus®

igus® solutions ...

Lubrication and maintenance free solutions ...



High service life and efficiency Lead screw units with high efficiency due to optimised thread angle.



Large product range from stock Plain bearings to meet diverse requirements, such as high media and temperature resistance, FDA compliance or rapid rotation speeds.



Easy assembly Clip-on piston rings in defined sizes – low cost and more wear resistant than PTFE stripes.

... for moving applications

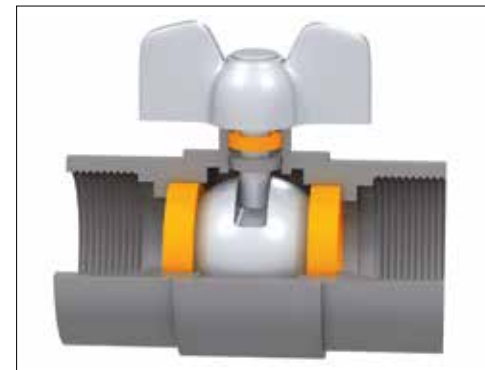
... in valves and pumps ...



Control valves



Flanged ball valves



Media valves



Dosing pumps



Submersible pumps



Pneumatic rotary drives

From easy linear movements ... up to fast rotating applications

Media, temperature and corrosion resistance ...



Fruit valve igidur® J piston rings

This valve is used to fill ice-cream with pieces of fruit in fully-automated packaging machines. iglidur® plain bearings as piston support and guide rings replace O-rings.

- Low wear
- Can be replaced easily
- Suitable for food contact

www.igus.eu/pistonring



Bottling plant igidur® A350 piston rings

Simple O-rings were previously used in the filling valve. These had the disadvantage of requiring special lubricant approved for use in the food industry, which had to be applied at least once a week.

- Maintenance free
- Lubrication free
- Easy to install
- Suitable for food contact

www.igus.eu/pistonring



Piston pump igidur® J

This piston pump is mainly used in the oil, gas and petrochemical sectors, as well as in the shipbuilding industry. Bronze bearings in need of constant lubrication were previously used at the pivot points. Since their replacement with iglidur® J bearings from igus® this maintenance work has become a thing of the past.

- Media resistant
- Maintenance free
- Lubrication free
- Wear resistant

www.igus.eu/j



... lubrication and maintenance free

Filling valve igidur® X

In this application, a bottle filling machine for fizzy drinks, the max. operating temperature is +140°C and the applied material must be resistant to all cleaning agents used in the beverages industry.

- Temperature resistant up to +250 °C
- Resistant-to media
- Maintenance free
- Lubrication free

www.igus.eu/x



Dialysis pump igidur® G

In the earlier version of the device, conventional materials that required a great deal of maintenance were used in the pump. Thanks to the use of iglidur® bearings, no bearing maintenance or lubrication is now required.

- Resistant to media
- Maintenance free
- Lubrication free
- Fail-safe

www.igus.eu/g



Filling equipment drylin® trapezoidal lead screws

The vertical pump movement must occur without judder, precisely and reliably to ensure a perfect end product.

- Maintenance free
- Lubrication free
- Jolt free
- Precise

www.igus.eu/drylinSD



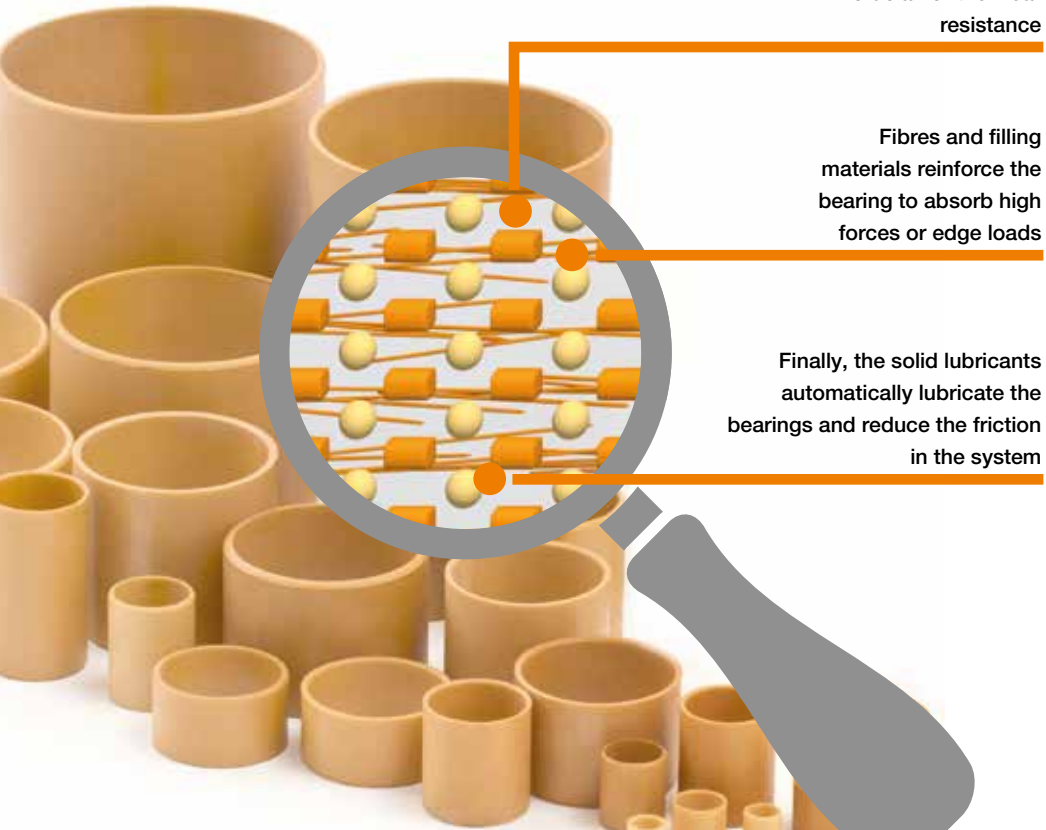
iglidur® bearings technology ...

Lubrication and maintenance free plain bearings made from high-performance plastics – iglidur®.

No 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. iglidur® plastics have been extensively tested with respect to wear and friction values including other relevant material properties. iglidur® polymer plain bearings from igus® signifies the step from the plastic bearing to the tested and therefore predictable machine element.

 www.igus.eu/iglidur

Structure of iglidur® plain bearings



- Media-resistant
- Temperature resistant
- Corrosion free
- Absolutely lubrication free
- Maintenance free
- Very lightweight
- Foodstuff compatible
- Special dimension and designs

... for fluid technology

iglidur® plain bearings ... a brief selection of the 50 materials



iglidur® X

- Chemical resistant
- High temperatures of up to +250°C
- Media-resistant

 www.igus.eu/x



iglidur® C500

- Wear resistant
- High temperatures of up to +250°C
- High media resistance – even in cleaning processes with hydrogen peroxide

 www.igus.eu/C500



iglidur® A500

- Chemical resistant
- Temperature resistant
- FDA-compliant

 www.igus.eu/a500



iglidur® G

- The all-rounder for actuators and other dry-running applications
- Over 650 sizes available from stock

 www.igus.eu/g



iglidur® H370

- Wear resistant; especially under water
- Chemical resistant
- Temperature resistant

 www.igus.eu/H370



NEW: iglidur® L500

- Specially developed for fast continuous operation under low loads
- Continuous operation up to +250°C
- Up to 5 m/s rotating

 www.igus.eu/L500

Piston rings ... an alternative to PTFE strips

Why complicate things if you do not need to? Some things can actually be very easy: replace complex stamped PTFE strips with a single clip-on piston ring, for example in cylinders, control valves and fittings. In addition to the standard iglidur® J range, it is also possible to configure your required piston ring from the entire iglidur® bearing range.

- Maintenance free
- Easy installation
- Cost effective
- More wear resistant than PTFE-strips
- High load capacity
- Wear resistant
- Easy installation
- Tailored to your application

 www.igus.eu/pistonring



More products of the ...

Dry-running made easy.

drylin® lead screw technology

- dryspin® technology: Higher efficiency due to optimised thread angle
- Self-locking trapezoidal and metric threads
- Lead screw nuts made from 5 iglidur® materials
- Lubrication and maintenance free

 www.igus.eu/leadscrew-technology



igubal® spherical bearings



igubal® spherical bearings

- Self-aligning bearings components
- Easy to install
- Adapt to all angle variations
- Lubrication and maintenance free
- Different spherical ball materials
- Vibration dampening

 www.igus.eu/igubal

xiros® polymer ball bearings



xiros® polymer ball bearings

- Lubrication and maintenance free
- High chemical and corrosion resistance
- For temperatures up to +150 °C
- Non-magnetic
- Low weight
- Minimal coefficients of rolling friction

 www.igus.eu/xiros

... igus® motion plastics® range

... maintenance free solutions from igus®

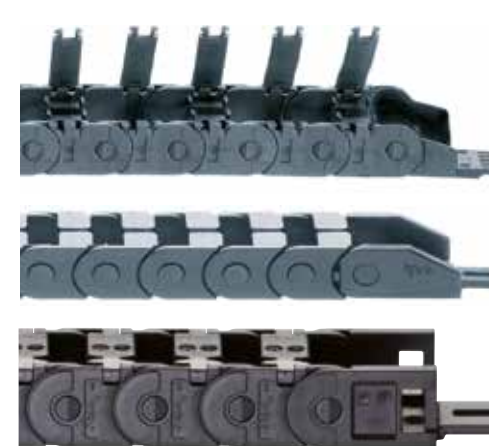
drylin® linear and drive technology

- Principle: Slide instead of roll
- Resistant to corrosion and chemicals
- Resistant to dirt
- Low weight enables highest cycle numbers and maximum acceleration rates
- Resistant to impacts and vibrations, quiet
- Predictable service life
- Lubrication and maintenance free

 www.igus.eu/drylin



energy chains®

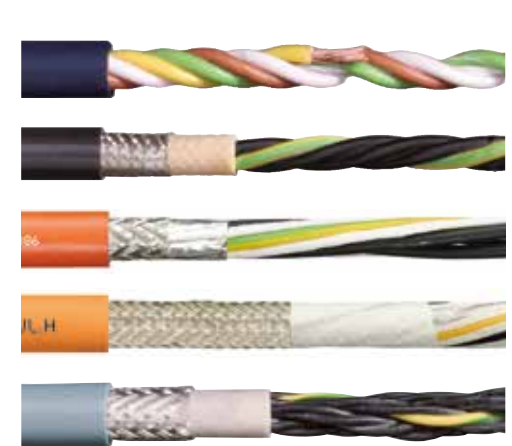


e-chains®

- For smallest installation spaces
- For all axes and installation orientations, rotating, vertical standing, gliding, multi-axis
- Individually configurable from the construction kit
- Resistant to many chemicals and temperatures up to +120 °C

 www.igus.eu/e-chains

chainflex® cables



chainflex® cables

- 1.040 cable types available from stock
- Delivery in 24-48h
- No cutting costs. No minimum order quantity
- Different outer jacket materials: PVC, PUR, TPE
- Oil resistant
- Flame-retardant

 www.igus.eu/chainflex

Tested! Service life ...

9,679 tribological tests of all kinds per year (rotating, pivoting, linear, heated, under water, etc.) for the dry-tech® solutions.
In addition, 661 customised tests at the igus® lab.



Part of the dry-tech® igus® laboratory, Cologne.



Wear tests under the influence of several media.



Endurance test.



Service life and wear test of a drylin® linear guide in the "under-water basin".

... predicted accurately.

Tested at the 1,750 m² lab in Cologne. 4,100 tests, 7,512 findings added to the electronic database, 10 billion e-chains® cycles per year in the e-chain® and cable lab.



Part of the igus® e-chain® laboratory, Cologne.



Test for torsion and twisting with e-chains® and chainflex® cables.



Service life experiments for e-chains® and chainflex® cables.



Cold test at -40°C for chainflex® cables and e-chains®.



Quality assurance: on-going lot testing to ensure the quality level

igus® services ...



Visit our industry web pages for more information, products, application examples and useful online-tools.

www.igus.eu/fluid



Quickly find and configure products and calculate service life - all online.

Using our online product finders you can find the right igus® product and get a service life prediction.

www.igus.eu/online

For any task – in any batch size

Different industries need different solutions. Whether in mechanical engineering, automotive-manufacturing or in the robot industry – igus® offers customised support for specialised applications. igus® already has many years of experience and specialised resources in many industries. igus® already has many years of experience and specialised resources in many industries.

www.igus.eu/industry

... fast and reliable.



The igus® delivery service

Over 97% availability of all catalogue items – no need for you to stock

- Over 100,000 products from stock
- No minimum order value
- No surcharges for small quantities
- No costs for cutting cables
- No packaging costs

www.igus.eu/24



Modern injection moulding technology

The igus® GmbH quality policy is based on the objective of identifying and meeting customer needs, and of always being a professional partner and reliable supplier. igus® has always been committed to producing products of the best possible quality and consistently developing innovative solutions.



The igus® lab

The industry's largest test lab (1,750 m²) conducts more than two billion test cycles per year on a total of 107 test rigs.

- Extensive test databases
- Customised tests on request

www.igus.eu/test

igus® motion plastics®

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



/9001:2008 /16949:2009

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

/newsletter

Free of charge! Discover more about the latest trends and innovations from the world of igus® motion plastics®. Many exciting applications and videos for your industry.

Register here: www.igus.eu/newsletter

/contact

Your contact person for your industry and your country: www.igus.eu/contact

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