igus[®] solutions for 3D printing

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plastics for longer life[®] ... igus

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www.igus.com/3Dprinting

igus[®] solutions for 3D printing ...



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Maximum 3D printing freedom with the igus[®] motion plastics system – self-lubricating from the bearing surface to the printed product

Clean, quiet printing

Extremely abrasion and wear-resistant trib- plastics for additive manufacturing via selective laser sintering (SLS) or filament (FDM/FFF) allow you to use mechanical printed components or test the function of the part from the prototype stage to production.

Self-lubricating bearings

Through the use of igus[®] high-quality plastics, 3D printers and scanners are maintenance-free and operate without external lubrication. drylin[®] linear plain bearings offer quiet operation without metal balls; dryspin[®] lead screw nuts adjust the print bed efficiently and precisely; igus[®] energy cable chains prevent cable malfunctions and extend machine operating times.

For individual components or assembled systems such as preharnessed energy chains[®] or ready-to-install motorized linear axes, igus[®] products provide the following benefits:

- Self-lubricating
- Silent operation and smooth gliding
- Resistance to dirt
- Long service life
- Corrosion resistance
- A wide array of variants and material types
- Shipped from stock in as little as 24 hours
- No minimum order

Our online tools also enable you to reduce process costs. Also visit our industry website

✓ www.igus.com/3d-print



The print head layers the plastic fibers on the print table. Dry-running drylin[®] R linear bearings ensure accurate travel.



... innovative tribo-plastics from igus®

Printed, injection-molded, machined

Tribo parts, created easily according to your needs – Everything a question of quantity

With around 100 different materials for different requirements, igus[®] now offers the largest selection of tribo-optimized plastics. igus[®] also offers the most common methods of processing these tribo plastics such as 3D printing, extrusion or injection-molding. As a result, the design engineer always has the right quantity of the right parts in each phase of his project development work.



3D printing/SLS

For prototypes and small quantities made from tribo-filaments with the laser sintering method

Wear-resistant materials for 3D printing and the laser sintering method – Print parts yourself or have igus[®] print them for you.

- Up to 50 times more abrasion-resistant than normal 3D printing materials
- Various iglide[®] materials available for FDM/ FFF (filament) and SLS (powder)
- No tool costs; cost effective for as little as 1 piece



Milled/turned/routed

For small batches made from iglide® bar stock

For greater designing freedom: bar stock to do it yourself, or supplied as a finished part.

- As round bar in Ø 10-100 mm
- As plate material in thickness 2-40 mm
- Lengths 100-1,000 mm

for tribologically identical properties



Printed tools

For small batches made from iglide[®] granules

3D-printed injection mold tools. Bearing parts with a simple geometry can be made from most iglide[®] materials.

- Customized parts delivered quickly
- Up to 80% more cost-effective than conventional injection mold tools
- For prototypes and small batch production



Injection molding

For serial production made from iglide[®] granules

Modern injection-molding systems enable the low-cost, controlled manufacture of standard and special parts.

- Can be ordered and calculated online
- 100,000 products from stock

igus[®] solutions for 3D printers ...

Our diverse systems offer a large selection of suitable products for all moving applications in 3D printers: linear guides and energy chains[®] in flat installation heights, the smallest sizes and narrow bend radii. Our self-lubricating and maintenance-free 3D printing components allow you to improve your 3D technology while also reducing costs.



No messy grease or oil required No risk of contaminating printing components and printed products

Quiet and smooth gliding operation

Very quiet operation and perfectly harmonized plastic materials

Lightweight, easy assembly and cost-effective

Using self-lubricating high-performance plastics in plain bearings and energy chains[®] and anodized aluminum in guide rails

Long service life

Prevent cable malfunctions with igus[®] energy chains[®] and flexible chainflex[®] cables that are compatible with energy chains[®]

Variety of sizes and options Suited for even the smallest installation spaces

Shipped in as little as 24 hours

quiet, smooth, self-lubricating



Cable guide for print head igus[®] energy chains[®] and chainflex[®] cables

- Solutions for tight bending radii
- Low weight, high speed



Print table/bed lowering mechanism drylin® lead screw drives

• Self-locking trapezoidal and metric threads



Linear movement of XY axis drylin® R shaft guides

- Superior operating properties, long service life
- Wear resistant, and resistant to dirt



Height-adjustable Z axis drylin[®] linear guides

• Linear modular system based on rails, linear bearings and carriages



drylin[®] R linear bearings with iglide[®] J liner

- Closed, anodized aluminum adapter
- A perfect 1:1 replacement for recirculating ball bearings
- Available also as lowclearance version



drylin® R solid plastic bearings

- Japanese metric dimensions
- The self-lubricating alternative, including to former ball bearings in 3D printers
- Cost-effective
- Lightweight

Self-lubricating for 3D-printers ...

A complete system for new ideas. igus[®] offers you self-lubricating and maintenance-free components and ready-to-install system solutions – ideal for any installation space. Plain bearings, linear guides, energy chains[®] and suitable cables in many installation sizes and materials inspire creativity in design engineers. energy chains[®] pre-harnessed with cables and plugs or ready-to-install linear axes with motors make assembly easier and reduce the risk of malfunction.





drylin[®] T & drylin[®] N linear guides, as well as drylin[®] lead screw units move in the 3D printer free of external lubrication, without any risk of contamination of the filament or the printed products. [Cobot]



Precise printing: made feasible by a drylin[®] linear guide system from igus[®], which enables precise and smooth movement of the print head. [edu3DP]



This 3D printer runs quietly and precisely. This is made possible by trapezoidal lead screw nuts and plain bearings from igus[®], which are mounted on all axes of the printer. [Reprap Austria]



The use of maintenance-free drylin[®] linear bearings eliminates the regular greasing, and they move quietly and dampen the vibrations occurring during high accelerations while printing [Kühling & Kühling GbR]



drylin® W modular linear construction kit

- For maximum design freedom
- Modular, self-lubricating and strong
- Many rail geometries, bearing types, as pure linear guide or combined with drive and motor.



drylin® lead screw nuts and lead screws

- For height control in the case of motoroperated systems
- With a self-locking mechanism or high-speed dryspin[®] technology
- Self-lubricating, low noise, smooth running and efficient

Efficient for 3D printers ...

The VERTEX K8400 is a reliable open-source 3D printer kit from Velleman. Self-lubricating drylin[®] RJMP bearings guide the print head precisely and drylin[®] trapezoidal threaded nuts and lead screws are responsible for movement of the the print table on the z axis. [Velleman N.V.]





drylin® W bearings with spring preload

- For manual movement without "stick-slip" effect
- Quiet and smooth movements
- Suitable for single and double rails



drylin® lead screw nut with pre-load

- Quite operation and low clearance
- Constant radial pre-loading
- Available for efficient dryspin[®] high helix thread and self-locking trapezoidal thread

guided cleanly and quietly

The TINY from Protoworx is a compact 3D printer, ideal for mobile use and reliable in continuous operation. The drylin[®] W linear system guides the x, y and z axes, a self-lubricating drylin[®] trapezoidal thread adjusts the height and an E2 e-chain[®] guides the cables. [Protoworx UG]





E2.1 micro e-chain® - snap-open outside

- Stronger, quieter, faster assembly*
- Available in 2 inner heights and many widths/ radii
- Chain opener is included



drylin® R linear bearings with iglide® E7 liners

- Service life up to 8 times longer on steel and stainless steel shafts than PTFE-lined bearings
- Precise, wear-resistant and self-lubricating.
- For drylin[®] linear bearings and housing with Ø10-60 mm

Maintenance-free in delta printers

Durable construction with lightweight components, quiet operation based on the "sliding instead of rolling" principle, resistance to contamination thanks to the omission of external lubricants. igus[®] offers a wide variety of solutions for delta attachments – reliable in guiding and connecting the print head – with a flat design for maximum pressure volume.

Low profile and precise drylin[®] N low profile guides and drylin[®] W profile guides Extremely flexible with little wear on cables Multi-axis triflex® R cable carrier Lightweight, durable and resistant igubal[®] rod end bearings Ready-to-install and tested drylin® E linear axes with stepper motors



The drylin[®] N low profile guides and igubal[®] rod end bearings in this 3D printer kit are impressive due to the maintenance-free dry running with suitably matching printing results. [FabLab Karlsruhe e.V.]



This 3D printer prints reliably and precisely thanks to the self-lubricating and maintenance-free plastic components from igus[®]. [GLOBAQ srl and New 3D Printing Life srl]



Objects up to 1 m high can be printed uniformly and precisely thanks to drylin[®] linear guides.



Precision printing even after extended use: igubal[®] spherical bearings and drylin[®] linear bearings in this 3D printer.



igubal® spherical bearings

- Angle-compensation
- Precise guidance of the print head
- Available with inside and outside threads and in many installation sizes and shapes of Ø 2-30 mm



chainflex[®] cables – with guarantee

- Over 1,200 types from stock
- Smallest bend radii
- Abrasion-resistant jacket materials
- Halogen-free and/or flame-retardant

Successful in delta printers ...

This compact and completely self-lubricating 3D printer kit is based on the hard-anodized drylin[®] W high profile for adjustment in the y and z directions. The torsion-resistant linear profile gives the printer the necessary stability without an additional frame structure, while providing a variety of connection options. The torsion-resistant linear profile gives the printer the necessary stability without an additional frame structure, while providing a variety of connection options. The torsion-resistant linear profile gives the printer the necessary stability without an additional frame structure, while providing a variety of connection options. The direct drive via drylin[®] E lead screw motors is precise and saves space. Linear carriage including threaded nuts were printed from the iglide[®] tribo-filament 1180.









drylin[®] N low profile guide

- Extremely compact linear guide in 4 installation sizes for each installation area
- Low coefficients of friction, long service life
- Cost-effective



triflex® R e-chain®

- Thanks to the easy principle, filling and removal of cables is simple
- Multi-axis flexing for movement in all directions

long-lasting, self-lubricating

The LOV3 delta 3D printer from PEL3O has been designed for both commercial and private use. The goal here was to address the creative mind. The LOV3 design is close to perfection.

In order to achieve this goal, drylin[®] N linear guides were used. The 3D printer from PEL3O operates quickly and reliably with drylin[®] N and without the need for maintenance.

drylin[®] N is most often selected because of its extremely low-profile design, as this makes achieving a maximum load more possible. Lightweight carriages can now be operated at higher speeds with quicker accelerations.

Thanks to drylin[®] self-lubrication, printer operation is maintenance-free. This means that operation is easier and there are almost no operational costs. The wear resistance of drylin[®] N guarantees that the LOV3 3D printer will have a long service life. [PEL30]





iglide® plastic plain bearings

- Guarantee low-noise movements
- Robust and wear-resistant, even when subjected to heavy loads and harsh environments
- Lightweight and easy to install



drylin® T low profile linear guide system

- Classic low profile guide in 4 installation sizes (7-15 mm)
- Compact design, robust carriage
- With clearance adjustment if requested

Everything from a single source ...

System solutions for the 3D print industry

In addition, igus[®] energy chains[®] ensure that connection cables are supported during the computercontrolled print process. Due to their low-profile and tight bending radii, the micro-chain series are particularly suited for dynamic applications in any direction of movement on 3D printers. As is the case for linear plain bearings, micro-chain series also have a very low weight. The chainflex[®] control and motor cables guided in these are specifically designed for continuous motion applications, guaranteeing a long service life for 3D printers. Combined with motorized drylin[®] linear axis, which include motor flanges, couplings and drylin[®] E stepper and DC motors, igus[®] can supply a fully complete, ready-to-install operating unit from a single source. [EVO-tech GmbH]







drylin® lead screw motors

- 7 lead screw types with pitches from 0.8 50 mm
- Maximum precision by centering the lead screw
- The lead screw can be attached on either side
- Space saving, versatile



drylin® SLW linear modules

- With self-locking trapezoidal thread or fast, high helix thread
- For any installation space, for manual and electrical adjustment mechanisms with motor

printing in the XXL format

Canal house from the mobile 3D printer in XXL format

With the second generation of the "Kamer Maker 2.0", Actual can print larger elements with high precision and greater speed. The igus[®] gantry system was instrumental in this. Joe Platt, Head of Mechanical Engineering at Actual: "igus[®] gave us excellent support, and the gantry proved to be the best in practice." Among the projects undertaken by Actual at present is the "3D print Canal House", which is currently being built on a town canal in Amsterdam. In this case, a room gantry is used, in which the x- and y-axis have been implemented with drylin toothed belt units and the z-axis with drylin lead screw / nut systems. Ready to install gantries for one, two and three axes with actuators and sensors for position detection. [Actual]







drylin® ZLW toothed belt axes

- Ready-to-install linear axes with toothed belt drive and stepper motors
- Fast and quiet operation



drylin® E linear robots

- Combination of drylin[®] linear axes (with motor configured ready for installation
- For multi-dimensional movements, e.g. for pick & place or print head guidance
- Linear, flat and room linear robots are available

Custom, wear resistant parts ...

US planta to longe life*	spare? 20 print nervice	province for conjunction	
gust 3D print service	1. <u>1</u> .	gos 30 Orluck Service Erest	1993.44
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Wear resistant parts from the 3D printing service

Printed parts extreme wear-resistant– as prototype or in small series. Simply upload your desired part, determine the price and order online (or ask for a quotation).

Thanks to the iglide[®] 3D printing service, from now on 3 quick and easy steps will fetch home your customized component made of self-lubricating and abrasion-resistant iglide[®] plastics.

- 1. Upload STL file
- Inspect the component in the 360° viewing mode and select the dimensional unit
- 3. Select the tribo material and order, or request a quotation

Custom and quick FDM or SLS production

The 3D printing service is being extended with the material iglide[®] I3. Laser sintering (SLS) is used to make parts of this material. Even more bearing applications are therefore possible with 3D printed parts as strength and precision are considerably greater if this method is used.

- Wear-resistant and self-lubricating
- Good mechanical properties
- Detail accuracy with exact surfaces

Test online now!

www.igus.com/3dprintservice





For components printed using iglide[®] tribofilaments, precision with and edge-length of 50 mm is ± 0.2 mm, or $\pm 0.4\%$ for edge lengths greater th 50 mm. For parts printed with the iglide[®] SLS material, precision with an edge-length of 50 mm is ± 0.1 mm, or $\pm 0.2\%$ at lengths greater than 50 mm. Space requirements also for processing iglide[®] tribo-filaments and SLS materials. For filament materials a space of 135 x 145 x 200 mm is adequate; 200 x 200 x 300 mm for SLS processes. For both processes, larger components my have to be created in sections.





igus[®] tribo-filaments ...

3D printing with tribo-filaments – 50 times more abrasion resistant than standard materials for maximum service life

Components made of igus[®] tribo-filament are up to 50 times more wear-resistant than standard materials for 3D printing and therefore have an extremely long service life. Due to their excellent tribological properties, they are suited for 3D printing of replacement parts for bearings, drive nuts, gears and other components. The igus[®] tribo-filaments can be processed on 3D printers that are based on the fused-deposition-modeling method (FDM/FFF) which allow the nozzle temperature to be adjusted as needed.



Materials for all experience levels								
Ambient temperature of application	Beginner	Advanced	Expert					
-22° to +149°F	iglide® 150	iglide® 150 iglide® 180	iglide® I180 iglide® J260 iglide® I170					
-40° to +176°F	iglide [®] I180	iglide [®] I180	iglide [®] I180 iglide [®] J260 iglide [®] I170					
-22° to +212°F			iglide [®] J260 iglide [®] C210					
-148° to +248°F			iglide [®] J260					

Find and order the appropriate tribo-filament online

www.igus.com/tribofilament

... for 3D printing











Material: iglide® I150

Simple printing; high wear resistance

- High abrasion-resistance at low speeds
- Good mechanical properties
- The easiest to process tribo-filament (even without a heated print bed)
- Nozzle temperature: 464°F 482°F

Material: iglide® I180

Best combination of ability to be processed and service life

- High abrasion resistance
- Good mechanical properties
- Nozzle temperature: 482°F 500°F
- Also available in black (iglide® I180-BL)

Material: iglide® J260

Extremely long service life and excellent coefficients of friction

- Outstanding abrasion-resistance of tribofilaments
- Application temperature from -148°F to +248°F
- High-quality processing
- Nozzle temperature: 500°F 518°F

Material: iglide® I170

Longer service life

- Improved abrasion-resistance
- High-quality processing
- Nozzle temperature: 464°F 500°F

Material: iglide® C210

Resistant to chemicals and highly abrasionresistant

- High chemical resistance
- High abrasion resistance
- High-quality processing
- Nozzle temperature: 500°F 518°F

Molded quality from printed components ...

iglide[®] J260 filament

3D print filament impresses during tests with injection molding quality

Our iglide[®] J260 tribo-filament is more wear-resistant than standard print material

Our series of tests show printed plain bearings from our latest filament iglide[®] J260 are equally as wear resistant as our injection-molded parts from the same material. The tests have also proven that iglide[®] 3D print filaments have considerably lower coefficients of friction and are up to 50 times more abrasion-resistant than conventional 3D printing materials.

This makes iglide[®] tribo-filaments the only 3D printing materials to also offer impressive performance in moving applications. You can therefore directly install printed parts such as bearings, drive nuts or worm gears and use them as wearing parts – from the prototype phase to series production.





- Outstanding abrasion-resistance
- Application temperature from -148°F to +248°F
- High-quality processing
- Available as filament, bar stock or injection-molded part – from the prototype of series production



extensively tested

Parts made of iglide® tribo-filament with the 3D printing method or parts made of iglide® I3 with the SLS method are much more wear-resistant than standard 3D materials.

The following tests also show that, "printed and injection molded", the 3D printed iglide[®] bearings are comparable to conventionally made bearings in respect of wear resistance.

Wear, linear p = 15.95 psi, v = 6.69 fpm, l = 370 mm







iglide[®] I180 printed



Wear. rotating p = 2,901 psi, v = .197 fpm, 304 Stainless









ialide® 13



iglide® I180

Wear, pivoting







ialide[®] G300



iglide[®] I180



ialide® L280

igus[®] tribo-filaments ...

			iglide®		
Unit	1150	l180	J260	1170	C210
g/cm ³	1.30	1.21	1.35	1.21	1.4
	white	white	yellow	yellow	purple
% weight	0.3	0.3	0.2	0.5	0.3
% weight	0.7	0.9	0.4	1.6	0.7
MPa	246,600	145,000	145,000	145,000	232,100
MPa	54/41 ¹⁾	46/331)	41/131)	33/171)	38/301)
	62	66	66	64	70
°F	+149	+176	+248	+167	+212
°F	+167	+194	+284	+185	+356
°F	-22	-40	-148	-40	-22
Ωcm	> 1013	> 1012	> 1012	> 1012	> 1013
Ω	> 1012	> 1011	> 1010	> 1011	> 1012
	Unit g/cm ³ % weight % weight MPa MPa MPa 	Unit I150 g/cm³ 1.30 g/cm³ 1.30 white 0.3 % weight 0.3 % weight 0.3 % weight 0.3 MPa 246,600 MPa 54/41 ¹¹ 62 62 % +149 % +167 % -22 % -22 % -22 _ -210 ¹³ _ >10 ¹³	Unit I150 I180 g/cm³ 1.30 1.21 white white white %weight 0.3 0.3 %weight 0.3 0.3 %weight 0.7 0.9 MPa 246,600 145,000 MPa 54/41 ¹¹ 46/33 ¹¹ 62 66 145 %F +149 +176 %F -22 -400 %F -22 -400 %F -22 -401 %R >10 ¹³ >10 ¹²	iglide Unit 1150 1180 J260 g/cm³ 1.30 1.21 1.35 g/cm³ 1.30 1.21 1.35 %weight 0.3 0.3 0.2 %weight 0.3 0.3 0.2 %weight 0.3 0.3 0.2 Mea 0.7 0.9 0.4 MPa 246,600 145,000 145,000 MPa 264,600 146,331 41/131 62 66 66 66 62 66 66 68 °F +149 +176 +248 °F -22 -40 -148 °F -22 -40 -148 °F -22 -40 -148 °F -22 -40 -148 °F >101° >10° -10°	Unit 1150 I180 J260 I170 g/cm ³ 1.30 1.21 1.35 1.21 g/cm ³ 1.30 1.21 1.35 1.21 white white wellow yellow yellow % weight 0.3 0.3 0.2 0.5 % weight 0.7 0.9 0.4 1.6 MPa 246.60 145,000 145,000 145,000 MPa 264.60 145,000 145,000 33/17 ¹¹ MPa 264.60 145,001 41/13 ¹⁰ 33/17 ¹¹ % Pa 1419 147.63 41/13 ¹⁰ 33/17 ¹¹ % Pa 1419 147.63 41/43 41/13 ¹⁰ % Pa 1419 1476 148 4167 % Pa

1) Printed flat/upright

Wear, pivoting p =145 psi, v = .197 fpm



Wear, short stroke p = 145 psi, v = 19.7 fpm



Product information, processing & accessories

Filament thickness

The iglide[®] tribo-filaments are available with 1.75 mm and 3 mm thickness. The 3 mm filaments can be used without problems in 3D printers that need a 2.85 mm filament.

Spool

iglide[®] tribo-filaments weighing 250g are wound onto a spool with an outer diameter of 105 mm, a width of 55 mm. It has an inner diameter of 55 mm. Test kits with 25g filament are also available; this is not wound onto a spool.



Example: Part No. tribo-filaments I150-PF-0175-0250

for 250g spool with a diameter of 1.75 mm made of the iglide® material I150

Processing instructions

iglide[®] tribo-filaments can be processed on any 3D printer that is equipped with an adjustable temperature heated print bed. The igus[®] adhesive film allows a good adhesion between the iglide[®] tribo-filament and the print bed. Other recommended printing surfaces are "Buildtak" or blue tape with "Pritt Power" stick glue applied.

- Good ventilation should be provided during processing
- When heated above +572°F, hazardous fumes are produced

Accessories

igus® print bed film for your print bed

Thanks to the film available from igus[®] for the print bed, there is very good adhesion between the iglide[®] tribo-filament and the print bed.

- Approximately 20 uses
- "Set" the degree of adhesion by means of print bed temperature
- 3D printer without heating bed? The combination of iglide[®] with this print bed film also makes it possible to make wear-resistant with such 3D printers

3x more material

With the bigger spool size, each spool contains 750g filament (300 m filament in 1.75 mm diameter or 90 m filament in 3 mm diameter).





Example: Part No. Test kits **I150-PF-0175-0025**

for 25g of filament, loose with 1.75 mm diameter made of the iglide® material I150



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Complete processing instructions online:

www.igus.com/tribofilament





Part No. adhesive film for print bed PF-01-0203-0203 (203 x 203 mm) PF-01-0254-0228 (254 x 228 mm) 2

For 3D printing via SLS ...



Tribo plastic for laser sintering

The material iglide[®] I3, specially developed for laser sintering, proved to have an abrasion resistance at least 3 times greater than conventional materials for laser sintering during tribological tests in the igus[®] test laboratory. This means the degree of design freedom for wear resistant parts has been increased yet again.

- Wear resistant
- Good mechanical properties
- Detail accuracy with exact surfaces
- Can be processed using the standard parameter set

	iglide®
Unit	13
g/cm³	1.05
	Yellow
% weight	0.8
% weight	1.9
psi	203,100
psi	9,863/8,8471)
	70
°F	+176
°F	+284
°F	-40
Ωcm	> 10 ¹²
Ω	> 10 ¹¹
	Unit g/cm³ % weight % weight % weight psi psi psi psi % F % % % % % % % % % % % % % % % % %

1) Printed flat/upright

... designed in 3D

Self-lubricating and wear-resistant due to laser sintering with iglide® I3



The first laser sintered drylin® linear module

The drylin® SLTI3 lead screw module was developed with the following goals in mind: guick and easy installation, and wear-resistant design variability. The minimalistic design means assembly takes only seconds, and SLS manufacturing using the wear-resistant iglide® I3 material allows for quick customization. Your custon options can be implemented and sintered in as little as 24 hours.





PA12+Glass balls

Test result: In this rotating wear test, the abrasion resistance of iglide® I3 is higher than that of conventional SLS materials by a factor of 4. In addition, the shafts and bearings that are shown here and were used in the test make it clear that iglide® I3 results in considerably less stress on the mating component, the service life of which is also increased as a result.

Wear, rotating v = 59 fpm p = 145 psi

3D printing online services



/h www.igus.com/3Dprintservice



www.igus.com/3d-printer



Mww.lineartoolkit.com



www.igus.com/online

Reduce process costs ... A selection of our useful online tools



Expert system for drylin[®] linear bearings – system selection & lifetime calculation with CAD www.igus.com/drylin-expert



Configurator for the drylin[®] drive technology



Lifetime calculator for drylin[®] lead screw drives



Service life calculator for e-chains® – unsupported and gliding applications www.igus.com/quickchain100



Product finder for short travels
– up to 13 m unsupported applications

www.igus.com/quickchain13



Expert system for iglide[®] plain bearings – product selection and lifetime calculation www.igus.com/iglide-expert



iglide[®] 3D printing service – material selection and price information www.igus.com/3dprintservice



Since 1987, 36 igus[®] products have been awarded by "iF Forum Design GmbH" in the "Industrial Design" category. www.igus.com/iF



igus[®] service for schools and universities supports students and instructors (the pioneers in the production of our prototypes). www.igus.com/yes

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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

plastics for longer life[®] ...









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

Modern injection 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.



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.





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

tested and reliable



Better products for less – a key element is the industry's largest test lab. 29,600 ft² lab, more than 15,000 tests and 2 billion test strokes per year

The igus® lab and field experience

Cutting costs while also guaranteeing maximum process reliability – only those who conduct intensive research and testing will successfully bridge this gap.

The massive igus[®] lab (29,600 ft²) 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



Tribological testing in the plain bearing lab, igus[®] Cologne

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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