igus[®] solutions for the medical industry

D

plastics for longer life[®]... igus

www.igus.eu/medical.

Reduce cost...

... improve technology ...



Dipl.-Ing. (FH) **Ulf Hottung** Industry Manager Medical Technology Tel.: +49 2203 9649-7706 Email: uhottung@igus.eu Maintenance and lubrication-free plastic products for medical technology.

In medical technology, everything is becoming compacter, lighter and more modular. Why? The mobile laboratory of today comes to the doctor in the surgery or directly to the patient. Results are available immediately after evaluation, "to go" as it were.

igus® enables this change of the Point of Care due to:

- Lightweight, compact bearings that are extremely wear-resistant
- Lubrication- and maintenance-free linear technology
- Fail-safe energy chains and cables even in very restricted spaces
- Speedy delivery of small series as well thanks to 3D printing

Analytical diagnostics is becoming faster, while follow-up costs and extra work due to maintenance or failure are avoided.

In the igus® systems with more than 100,000 products from stock, every customer will find the right solution. Injection moulding and mass production guarantee a cost-effective solution for all motion plastics® applications, from rugged energy supply systems and flexible cables to lubrication and maintenance free plain bearings.

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/medical

I look forward to speaking to you.



dry-tech® bearing technology:

- No additional lubricants = no dirt accumulation or contamination
- Resistance against acidic, alkaline and alcoholic cleaning agents
- Easy to clean
- Highest quality stainless steels available for sliding pairs
- FDA- and/or EU-compatible materials possible
- Stability even at high temperatures
- Lightweight construction with the use of aluminium and carbon materials
- 3D printed components to your requirements

www.igus.eu/dry-tech

... with motion plastics[®] from igus[®]...

the-chain: e-chains[®] and chainflex[®] cables

- Reduce downtimes, increase service life of cables and hoses
- Various types of motions and installation orientations
- Cleanroom suitability
- Guide sensitive bus, data and fibre optic cables, as well as air, fluids etc.
- For different environments such as cold, heat, humidity, etc.
- Space-saving installation
- Eliminate downtimes thanks to predictive maintenance

www.igus.eu/the-chain

Dispense with lubrication ...

Lubrication-free ... hygienic ... maintenance-free ... space-saving

Medical assistance system



Laboratory technology



Fittings





iglidur[®] X plain bearing and drylin[®] N linear guide systems

- Lubrication-free, can be disinfected
- Low noise
- Smallest installation space
- No stick-slip
- www.igus.eu/X / www.igus.eu/drylinN



drylin[®] square guide and flange bearing

- Maintenance-free dry running, low noise
- High number of cycles, high accelerations possible
- Overlapping movements possible
- Suitable for short strokes
- www.igus.eu/drylinQ



iglidur[®] X plain bearings

- No additional lubrication, for high loads
- Space-saving and compact
- Metric and imperial dimensions
- Very good media resistance
- www.igus.eu/x

... withstands high stress ...

FDA/EU-compliant ... easy to clean ... high temperatures

Prostheses



Physiotherapy



Medical practice and surgical furniture





iglidur® J plain bearings

- For high loads
- Quiet, vibration dampening
- Best coefficients of friction during dry operation
- Suitable for outdoor use
- ✓ www.igus.eu/j



iglidur® plain bearings and drylin® linear guide

- No risk of contamination
- Long service life, tough, vibration dampening
- Shock resistant, low adjustment forces
- Modular system
- www.igus.eu/drylin hwww.igus.eu/iglidur



pre-tensioned iglidur® JVFM plain bearings

- Spring pretension can be integrated
- Quiet operation
- Tolerates edge loads, high load capacity
- Maintenance-free, low cost
 www.igus.eu/JVFM



... dispense with maintenance ...

... low noise ... universal use ... complete system ...

Body scanner



X-ray machine



Medical simulator





drylin[®] ZLW

- Lubrication- and maintenance-free
- Low noise, smooth movement, flat design
- Modular kit system
- Fast positioning of small loads
- www.igus.eu/ZLW

... fail-safe ... compact ...

... for all movement ... cost-effective ... quick delivery.

Large medical equipment



Medical trolleys and beds





CT and MRI





easychain® and chainflex® cables

- Save installation space, easy to fill
- Cables with 4 x d available
- High cycles in small installation space
- Cost-effective cables
- www.igus.eu/easychain



e-chains® and chainflex® cables

- Smallest installation space, small bend radii
- Non-magnetic
- Ready-to-connect complete systems with chain, cables and pre-assembled connectors
 www.igus.eu/chainflex



e-tube R100

- Sealed and enclosed, can be wiped
- Light, smooth running
- Special colour: white
- Large filling space
- www.igus.eu/R100



- e-chain[®] E4.1/E4.1L
- High loads, long travels
- For almost all applications
- ESD option, cleanroom tested
- Separable, light, quickly openable
- www.igus.eu/E4-1

... the right solution ...

Maintenance-free plain and linear bearing solutions ...

... extremely low profile



drylin® N low profile guides

- 100% lubrication-free
- Low installation height between 6 and 12 mm
- Verv low weight

bearing guides

• Numerous carriage options – also with pretension

... as an alternative to recirculating ball

√ www.igus.eu/drylinN

... for almost unlimited design freedom



drylin[®] W linear system

- Easy installation, maintenance-free
- Resistant to dirt due to dry operation
- Lightweight and quiet
- Square rail with floating bearing function for 90 degree installation
- Manually adjustable bearing clearance (optional)
- VA stainless steel version or full carbon version: non-magnetic, light and strong

✓ www.igus.eu/drylinW

... Linear drive through rotational motion



drylin® T linear guides

- 100% lubrication-free
- Automatic clearance adjustment
- High static load capacity
- Dirt resistance
- Low vibration and guiet
- ✓ www.igus.eu/drylinT



drylin[®] lead screw technology

- Efficient and durable dryspin[®] technology
- Self-locking trapezoidal and metric threads
- Lead screw nuts made from 5 iglidur[®] materials
- High helix thread from ¼ inch to 20 mm diameter
- and 1/10 inch to 90 mm pitch
- ✓ www.igus.eu/leadscrew-technology

... available from stock.

For example ...

... the best shaft for your linear plain bearings ... complete systems



drylin® R shaft guides and shafts

- 100% lubrication-free
- Dimensions identical to standard commercial ball bearings
- Shafts, shaft support blocks and accessories available from stock
- Replaceable liners
- 8 different shaft materials
- Lightweight, round or supported
- √ www.igus.eu/drylin

... Drive: trapezoidal, high helix thread or toothed belt





- 100% lubrication-free, extensive accessories
- For format adjustments up to quick small parts handling
- NEW: The first lubrication-free linear carriages made of iglidur® I3 material - printed well as injection moulded
- www.igus.eu/drylin-drive



Lift/swivel unit

- Very light and dynamic due to plastic and aluminium
- Lubrication- and maintenance-free
- Compact structure and modular design
- 4-square profile with hollow chamber suitable for supply cables and media
- Delivered ready to install with NEMA stepper motors
- √ www.igus.eu/HSQ

... linear axis with motor and control unit, ready to connect



drylin[®] E drive technology

- Complete systems delivered in 3-4 days
- NEMA stepper motors / DC motors
- Can also be configured online
- With dryve control unit (optional)

www.igus.eu/drylinE www.igus.eu/dryve



More igus[®] products ...

Lubrication-free bearing made easy ...

... moves neatly without lubricants



iglidur® plain bearings

- Wear-resistant polymers
- FDA-compliant and antibacterial materials
- Customised special solutions from a quantity of 1
- High wear resistance
- High load capacity and good coefficients of friction

... Ball bearings with absolute dry running

- Service life can be calculated online
- www.igus.eu/iglidur

... lubrication-free, compact slewing ring bearing



iglidur[®] PRT slewing ring bearing

- Cost-effective, low maintenance, lubrication-free
- Easy to install and replaceable sliding pads
- High wear resistance
- \bullet For very high loads and high stiffness
- \bullet Extensive accessories (e.g. toothing, locking, \dots)

www.igus.eu/PRT

... insensitive to dirt



xiros® polymer ball bearings

- Lubrication- and maintenance-free
- High corrosion resistance for temperatures up to +150°C
- Non-magnetic
- Lightweight





igubal® spherical bearings

- Self-aligning bearing elements, made of plastic
- Different types of designs, e.g. spherical, double, joint, flanged and pillow block bearings
- Different spherical ball materials
- Extremely cost-effective
- Service life can be calculated online
- www.igus.eu/igubal

... and solutions

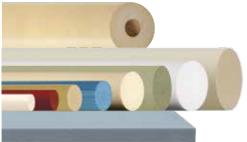
... as you need it.

... material from prototypes to series



iglidur[®] tribo-filament for 3D printing

- Can be processed by commercially available 3D printers
- Choice of 5 materials: iglidur[®] I150 excellent wear resistance. iglidur[®] I170-PF sophisticated processing. iglidur[®] I180-PF good wear resistance. iglidur[®] I210 chemical resistance. iglidur[®] J260PF extremely wearresistant primarily in conjunction with plastic shafts
 www.igus.eu/tribofilament



iglidur® bar stock

- iglidur[®] materials as round bars, tubes and plates
- Currently 26 iglidur[®] materials to choose from
- Cut to required size without offcut removal
- Mechanical processing from a batch size of 1
- Maintenance-free and calculable

√ www.igus.eu/barstock

... special geometries



Special parts made of tribo-plastics

- Special solutions
- Self-lubricating and maintenance-free plain bearing solutions completely according to your wishes
- Specifically tailored to your application
- Mechanically produced or moulded

www.igus.eu/speedimold

... cut and glue



Tribo-tape

- Suitable for a lining surfaces and shapes where wear is an issue
- Easy to cut and glue
- Less space required
- Optional self-adhesive back







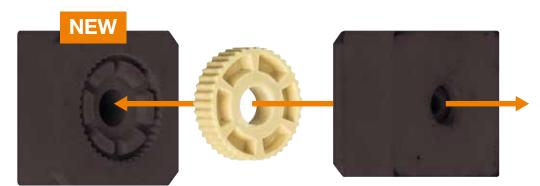
iglidur[®] Tribo -3D printing ...

3D printing for wear-resistant parts ...



Wear-resistant plastic parts from the 3D printer

iglidur[®] Tribo-Filaments are the only 3D printing materials specially developed for moving applications. The printed parts can be used directly in the moving application and convince their users due to the typical Tribo characteristics – they are lubrication-free and extremely wear-resistant. The degree of wear is up to 50 times lower than that of other 3D printing materials.



Injection moulding tools, quick and inexpensive from the 3D printer

Due to 3D printing, igus[®] is able to make customised injection moulds in a short time with up to 80% lower costs. Maintenance-free plastic bearings in the desired shape can thus be made quickly and, above all, cost-effectively.

 A wide array of material types: iglidur[®] J – extremely wear-resistant,

as good as injection-moulded

... made of high performance plastics

... makes printing even easier



iglidur® I150

- Very good resistance to wear with a pv value of up to 0.2 Nm/s
- Can be processed even without a heated printing plate
- Recommended printing surface: igus[®] adhesive film or "BuildTak"

Highly abrasion resistant, lubrication-free



iglidur[®] I180-BL

- Wear-resistant
- Can be processed by commercially available 3D printers
- Diameters: 1.75 mm and 3 mm
- Now also in black

Just shop for individual 3D parts.

Wearing parts from the 3D printing service: extremely fast and online.

We print your individual component made of lubrication-free and abrasion-resistant iglidur® plastics; easy to order and quickly installed: everything from the prototype to the complex special part.

... highly abrasion-resistant for printing



iglidur® C210

- Wear-resistant
- Chemical-resistant
- Diameters: 1.75 mm and 3 mm
- Can be processed by commercially available 3D printers

... specifically developed for laser sintering



- At least 3 times more wear-resistant
- Detail accuracy with exact surfaces
- Processing similar to commercially available SLS materials



Explore the printing service at 🖓 www.igus.eu/3dprintservice

ensive from the 3D printer ● iglidur[®] W300 – withstands high stress,

- iglidur[®] A180 FDA-compliant,
- iglidur[®] UW for underwater applications and much more
- Cost-efficient and delivered quickly, from batch size 1
- For simple geometries

Find more information at
www.igus.eu/tribo-printing

... for medical technology

Moving energy made easy ...

... small, strong, flexible



E2.1 micro and chainflex[®] cables

- For confined spaces
- Double stop dogs for high fill weights
- For large unsupported lengths (relative to the size)
- 10 and 15 mm inner height
- Cost-effective cable range

www.igus.eu/E2micro

... Guide capillary hoses



e-cord

- Secure guiding of the smallest hoses < Ø 1 mm</p>
- Modular assembly allowing customised movement
- Predefined radii prevents bending damage to the hoses

www.igus.eu/e-cord



triflex[®] R and chainflex[®] torsion cables

- Multi-axis "3D e-chain®",
- Torsion ± 10° per chain link
- Enclosed version, fully enclosed and openable
- Can be lengthened and shortened as needed
- Range of e-chains[®] suitable torsion cables
- www.igus.eu/triflexR

... the corrugated hose that can do more



e-skin® and chainflex® cables, e.g. CAT7

- Defined direction of motion
- Openable, quick assembly
- Built-in rigidity for unsupported lengths
- Various materials and colours available, even for small quantities
- IPA cleanroom class 1
- A www.igus.eu/e-skin

Cleanroom and hygienic

... FDA-compliant, cleanroom compatible and ESD-suitable

First Hygienic Design e-chain®

The world's first plastic e-chain® designed according to "Hygienic Design" guidelines. Due to the open design, the chain is very easy to clean and, thanks to rounded corners and the absence of threaded connections, dead spaces and the resulting germ formation are avoided. The material is FDA-compliant and is also highly resistant to aggressive cleaning agents and chemicals.

- Easy to clean
- Open design
- Rounded edges means that there are no dead spaces
- No "material on material"
- No threaded connections
- Highly resistant to cleaning agents and chemicals
- FDA-compliant material

www.igus.eu/hygienic



e-chains[®] and chainflex[®] cables in the cleanroom

For over 20 years igus[®] has been one of the forerunners in energy supply systems in cleanrooms. igus[®] offers a broad range of IPA-tested e-chains[®] that allows the machine-specific supply of energy in cleanrooms. Since the quality requirements for cleanroom technology applications are constantly growing, igus[®] is continuously working on improving its products.

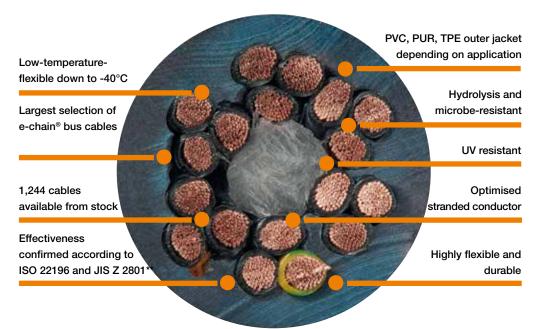
- All 1,125 chainflex[®] catalogue cables certified according to ISO class 1 or class 2 IPA. (chainflex[®] cables with tested outer jacket material available from stock)
- 9,047 e-chains[®] series for cleanroom applications certified according to ISO class 1 to class 5 IPA
- 197 drylin[®] linear guides for cleanroom applications certified according to ISO class 3 to class 6 IPA
- e-chainsystems[®] E6.1, E3 and E6.29.CR certified according to ISO class 1 IPA

www.igus.eu/cleanroom



chainflex[®] works ... with guarantee ... antimicrobial

More than 1,354 chainflex[®] cable types from stock



More than 25 years of chainflex[®] – cables with the special structure for a very long service life in energy chains[®] and the unique 36-month guarantee*.

Flexible cables in energy chains need special features to last through many cycles, high speeds and accelerations, as well as demanding environmental conditions. Electromagnetic compatibility and compliance with standards and guidelines such as DIN EN 45545, NFPA 79, UL, CSA, VDE, Inter- and Profibus are also taken for granted today. The igus® chainflex® product line ranges from control cables, servo cables, motor cables and robot cables to bus cables, data cables, encoder cables and fibre optic cables; all have been specially developed for e-chains®.

- Temperatures -40°C to +90°C
- For highly dynamic applications in energy chains[®]
- Special design prevents cable failure and "corkscrewing"
- Highly abrasion-resistant jacket materials (PUR, PVC, TPE)

• 36 month guarantee for chainflex[®] cables

- Effectiveness in line with ISO 22196 and
- JIS Z 2801 and achieved an R value ≥2 in the test** Cleanroom compatible, ISO Class 1 or 2



Special solutions for your industry, for example:



e.g. chainflex[®] CF9 / CF10 - shielded TPE control cables for extreme demands in outdoor applications, for small bend radii, hydrolysis and microbe-resistant √ www.igus.eu/CF10



e.g. chainflex® CF98 / CF99 - for heavy duty use and especially for small radii. TPE- outer jacket, PVC- and √ www.igus.eu/CF99 halogen free, cold-flexible, resistant to hydrolysis and microbes.



e.g. chainflex[®] CFBUS.052 - largest selection of e-chain[®] bus cables for extremely small radii, e.g. CAT7, CAN bus. USB 3.0. DVI cable etc. √ www.igus.eu/CFBUS

e.g. chainflex[®] CFLG88 – preferably indoor applications, PVC outer jacket, maximum EMC protection,

√ www.igus.eu/CFLG88

e.g. chainflex[®] CFSPECIAL.544 – antimicrobial, for use in moving applications with greater hygiene requirements, effectiveness in line with ISO 22196 and JIS Z 2801 and achieved an R value ≥2 in the test www.igus.eu/CFSPECIAL544

Save money with reliability and innovation ... 3 year igus® guarantee for every chainflex® cable.

Guarantee statements reduce risk plant engineering. With our unique igus®

guarantee for ALL chainflex® cables, we are providing predictable security for 36

months, or up to 10 million double strokes (5 million double strokes for very cost-



Explore more products at
www.igus.eu/chainflex

effective chainflex® M cables).

flame-retardant

Harnessed systems ...

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







igus® drylin® linear systems completely assembled with cables and e-chains®



readychain[®] – fully harnessed systems in 3-10 days

1,600 systems produced per week in 12 readychain[®] factories around the world – assembly time optimised to increase your cash-flow. The largest factory for harnessed readychain[®] systems with 4,700 m² and 160 employees in Cologne.

- 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%
- Minimise your machine downtime
- System guarantee depending on the application

www.readychain.eu

readychain[®] assembly rack

80% savings during prototyping. Assembly transport rack for ready-to-install energy supply systems.

... delivered ready to install

readycable®: harnessed drive cables ... in 24-48 hrs



readycable® - in 24-48 hrs or today

igus[®] provides more than 4,200 harnessed cables for drives according to 24 different manufacturer standards. Professionally produced, 100% tested.

- Servo, motor and signal/encoder cables
- No cutting costs, no surcharges for small quantities and packaging

- Cable length accurate to the centimetre as per customer specifications
- Smallest bend radii from 7.5 x d
- Reduce storage costs and increase cash flow

www.readycable.eu





Intercontec SpeedTec

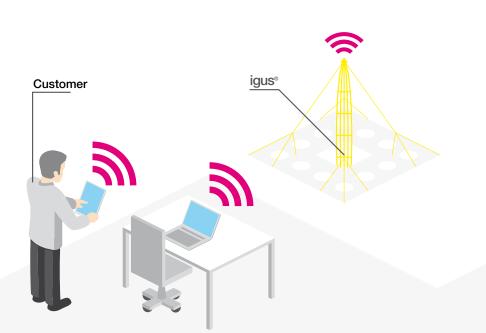
Service packs (starting at 1 piece) or harnessed directly to customer specifications. Also available as overmoulded version.

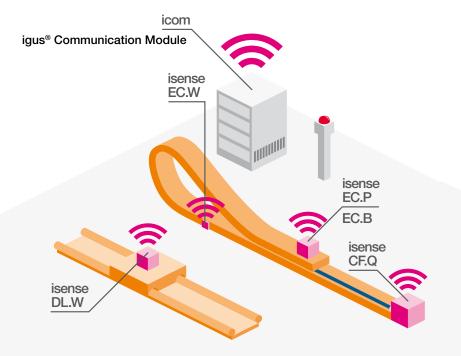
igus[®] smart plastics ...

predictive maintenance ...

... eliminate downtime

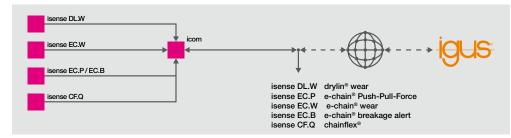
... with intelligent igus[®] products





smart plastics eliminate downtimes. Intelligent products announce maintenance date ahead of time and can be integrated in your processes of predictive maintenance.

The isense family of igus[®] products consists of various intelligent sensors and monitoring modules. They measure wear during the operation and alert the user early enough to plan a repair or an exchange. The igus[®] Communication Module (icom) makes the seamless integration into your IT infrastructure possible. This allows scenarios like the continuous monitoring or automatic triggering of in-house maintenance jobs. An optional connection with the igus[®] data centre widens the options: individual lifetime optimizations and faster operational processes like automatic ordering of external maintenance crews or ordering of spare parts. These include maintenance costs go down. Improved safety is an additional benefit.



- Reduce maintenance costs
- Eliminate unplanned downtime
- Long service life
- Increase equipment efficiency
- Save time Faster detection of the reasons for anomalies
- Reduction of energy consumption
- Typical application areas:
- Wherever predictive maintenance is required, e.g. harbour installations, cranes, car plants, etc.

igus[®] robolink[®]

Joint kit for robots

for building robots at a low cost

light ... compact ... free

components



Mechanical robot arms

robolink[®]



Electro-mechanical robotic arms



Individual

www.igus.eu/robolink More information

For robot makers, mechanical engineers, etc.

For mechanical engineers,

automation suppliers, etc.

For automation suppliers, integrators, mechanical

engineers, etc.









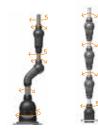


Rope drive Rope drive for rotating swivel joint joint

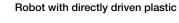
Joint with plastic worm gear

Low-cost joint with plastic worm gear

Plastic strain wave gear



Rope-driven robotic arms





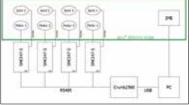
Robot with directly driven plastic gear

... various connecting modules ...



... User interface from igus® for operation of the individual control systems

Control system by you



With rope drive ... Direct drive ...

Open source...

22

igus[®] services ...



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

Market www.igus.eu/medical

15 manual transp		Auron	Report System 2-1	100000
Desg Baar		-	- 0	
	anni dan telah tenangan an anna darika tertengan antari dar bastan eta sana	alatin anton in part or o name that grad an lar d manage, after a states	the second	
and the second state				
-	-	4		10
Alaria -	100	A berry	-	-
D-	1	\$\$ 		<u>16</u>
	÷=	partir more	-	
	100 mm			**
				79 76
	1000	and the second		



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, automotivemanufacturing 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.

√ www.igus.eu/industry



... quick and reliable







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.



The igus® delivery service

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

- Over 100,000 products from stock
- No minimum order
- 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 (2,750m²) conducts more than two billion test cycles per year on a total of 107 test rigs.

- Extensive test databases
- Customised tests upon request

√ www.igus.eu/test

igus® worldwide

igus wonuwide		
igus [®] offices	10 Canada	
igus® distributors	igus [®] Office Canada 201 Millway Ave. UNIT 25	
1 Germany	Concord	
igus® GmbH Spicher Str. 1a 51147 Köln P.O. Box 90 61 23	Ontario L4K 5K8 Phone +1 905 7608448 Fax +1 905 7608688 webmaster@igus.com	
51127 Köln Phone 02203 9649-0	11 Chile	
Fax 02203 9649-0 Fax 02203 9649-222 info@igus.de, www.igus.de	Vendortec Avda. Los Pajaritos 3195 Oficina 1410 Edificio Centro Maipú	
2 Argentina	Maipú – Santiago	
Borintech SRL Av. Elcano 4971 C1427CIH Buenos Aires Phone +5411 4556 1000 Fax +5411 4556 1000	Phone +56 22 710 58 25 +56 23 245 02 00 ventas@vendortec.cl	
igus@borintech.com	12 China	
3 Australia Treotham Automation Pty. Ltd. 14 Sydenham Road Brookvale NSW 2100 Phone +61 2 9907-1788 Fax +61 2 9907-1778 Info@treotham.com.au	igus [®] Shanghai Co., Ltd No.46 Warehouse, 11 Debao Road, WGQ FT2 Shanghai 200131, P. R. China Phone +86 21 51303100 Fax +86 21 51303200 master@igus.com.cn	
	13 Colombia	
4 Austria	Colsein Ltda	
igus® polymer Innovationen GmbH Ort 55 4843 Ampflwang Phone +43 7675 4005-0 Fax +43 7675 3203 igus-austria@igus.at	Parque Industrial Gran Sabana Edificio / Building 32 Tocancipá, CUN 251017 Phone +57-1-519-0967 Iriano@colsein.com.co	
5 Delement	14 Costa Rica	
5 Belarus SOOO Hennlich Puschkin ave. 39 amt 5 BY 220092 Minsk Republik Belarus Phone 4375 17 207-3821 info@hennlich.by	Enesa Equipos Neumaticos S.A. Del Colegio Marista 100 este, 200 sur, 25 est Urbanizacion Ciruelas Alajuela, Costa Rica Phone +506 2440-2393 equiposneumaticos@enes	
6 Belgium/Luxembourg	15 Croatia	
igus [®] B.V.B.A. Jagersdreef 4A		
2900 Schoten Phone +32 3 330 13 60 Fax +32 3 313 79 71 info@igus.be	Hennlich, Industrijska d.o.o. Stupničkoobreška 17 Stupnički Obrež 10255 Gornji Stupnik Phone +385 1 3874334 Fax +385 1 3874336	
7 Bosnia + Herzegovina	Fax +385 1 3874336	
Hennlich d.o.o.	hennlich@hennlich.hr	
Dzemala Bijedica 185	16 Czech Republic	
Avaz Business Centar 71000 Sarajevo		
Phone +387 33 45 14 39 Fax +387 33 45 14 39	HENNLICH s.r.o. Českolipská 9 412.01 Litoměřice	

info@hennlich.ba 8 Brazil

igus[®] do Brasil Ltda. Avenida Marginal Norte da via Anhanguera 53.780 Vila Rami – Jundiaí CEP 13206-245 - SP Phone +55 11 3531-4487 Fax +55 11 3531-4488 vendas@igus.com.br

412 01 Litoměřice

lin-tech@hennlich.cz

Nordre Strandvej 119A DK-3150 Hellebæk

Phone +45 86 603373

Fax +45 86 603273

Phone +593 2 2253757

Fax +593.2.2461833

Flat 10 - 2nd Floor-Zamalek

mohamed.fayed@fedicom.com

Cairo - A B of Equat

Phone +202 27362537

Fax +202 27363196

Phone e-chains

17 Denmark

igus® ApS

info@iaus.dk

18 Ecuador

Ecuainsetec

Quito

19 Egypt

Fedicom Trading

9 Bulgaria iqus® EOOD

2, Lui Ayer str., fl.4, off. 4 1404 Sofia, Bulgaria Phone +359 2 850 8409 Fax +359 2 850 8409 info@igus.bg

9 Bulgaria Hennlich OOD, BG

4003 Plovdiv, Bulgaria 147A, Brezovsko shose Str., Rota center, fl. 3 Phone +359 32 511 326 Fax +359 32 621 929 office@hennlich.ba

19 Egypt 28 Iran **IEE International Company** for Electrical Engineering 2nd floor, 25 Orabi St Down Town, Cairo Phone +202 25767370 Fax +202 25767375 kamel@iee-egypt.com 20 Esto igus® OÜ igus® Ireland .õõtsa 4A Paiaritos 3195 Tallinn 11415 Caswell Rd Phone +372 667 5600 Fax +372 667 5601 info@igus.ee sales@igus.ie 3 23 245 02 00 21 Finland 30 Israel SKS Mekaniikka Oy Martinkyläntie 50 Conlog LTD 01720 Vantaa P.O. Box 3265 nghai Co., Ltd. Phone +358 20 7646522 rehouse, Road, WGQ FTZ, Fax +358 20 7646824 mekaniikka@sks.fi 22 Frar 5 21 51303100 5 21 51303200 igus[®] SARL 49, avenue des Pépinières Parc Médicis 1 Ital 94260 Fresnes igus[®] S.r.l. Phone +33 1 49840404 Fax +33 1 49840394 info@igus.fr Fax 23 Greece Chrismotor s.a. 71 Sn. Patsi str. 118 55 Athens igus® k.k. Phone +30 210 34 25574 Fax +30 210 3425595 info@chrismotor.gr Zip 130-0013 23 Greece 200 sur, 25 este J. & E. Papadopoulos S.A. 12 Polidefkous str 33 Jordan Piraeus, 185 40 Phone +30 210 4113133 Fax +30 210 4116781 umaticos@enesa.net sales@papadopoulos-sa.com Amman 24 Hong Kong Sky Top Enterprises Ltd. Room 1806 ; Block C; Wah 34 Latvia Tat Industrial Center: Wah Sing Street: Kwai Chung Hong Kong igus® OÜ Phone +852 23318928 Lõõtsa 4A Fax +852 24269738 Tallinn 11415 info@skytop.com.cn info@igus.ee 25 Hungar igus® Hungária Kft. 35 Lebanon Inari Park u 10 1044 Budapest Phone +36 1 3066486 Gebran Safi +420 416 7113 32 Fax +36 1 4310374 info@igus.hu Phone Plain bearings +420 416 7113 39 Beirut. +420 416 711999 25 Hungary Tech-Con Kft Véső utca 9-11 36 Lithuania 133 Budapest Phone +36 1 4124161 Fax +36 1 4124171 Hitech UAB Terminalo g. 3 tech-con@tech-con.hu Kauno raj. 26 India igus® (India) Pvt. Ltd. info@hitech.lt 36/1. Šv No. 17/3 Euro School Road Dodda Nekkundi Industrial Kosovo Yugoeslavia N34-110 y Azuay Area, - 2nd Stage Mahadevapura Post Bangalore 560048 Boris Kidric 88 Phone +91 80 45127800 Fax +91 80 45127802 infouio@ecuainsetec.com.ec info@iaus.in 27 Indonesia Mohamed Fayed Sami & Co. PT igus[®] Indonesia 12, El Mahaad El Swissri St., German Centre Suite 6040-6050 igus® Malaysia Sdn Bhd

Jalan Kapten Subijanto Di.

Phone +62 21 537 61 83 / 84

47301 Kelana Jaya, Selangor

Phone +603 7803 0618 Fax +603 7886 1328

info@igus.my

Fax +351 22 8328321

info@igus nt

BSD City

Tangerang 15321

info@igus.co.id

Tamin Ehtiajat Fanni Tehran AFIT 5, Rue Amir Abdelkader (TAF CO.) No. 36, West 4th St., Et 20300 Casablanca tehad Ave. Damavand Rd. Phone +212 522 633769 Fax +212 522 618351 Tehran - 1658674583, Iran Phone +98-21-7712 0809 souria.vu@premium.net.ma Fax +98-21-7679 0430 info@taf-co.com 10 Mavia Alemán 160 Int. 135 Northampton NN4 7PW Phone +52 728284 3185 Phone +44-1604 677240 Fax +52 728284 3187 Fax +44-1604 677242 fmarguez@igus.com 41 Myanmar Sea Lion Co. Ltd. 181 Bo Mvat Tun St 17 Hamefalssim Str Botataung Yangon 11161 Myanmar Industrial Zone Kiryat Arie Phone +95 (0)1 29 97 97 Fax +95 (0)1 20 27 51 Petach-Tikva 49130 Phone +972 3 9269595 Fax +972 3 9233367 conlog@conlog.co.il 12 Netherlands igus® B.V. Sterrenbergweg 9 3769 BS Soesterberg Phone +31 346 353932 Fax +31 346 353849 Via delle Rovedine, 4 23899 Robbiate (I C) Phone +39 039 5906.1 +39 039 5906.222 igus.nl@igus.de igusitalia@igus.it 42 Netherlands -Plain bearing Elcee Holland BV Arcacentral 15F, 1-2-1 Kinshi, Kamerlingh Onnesweg 28 NI -3316 GL Dordrecht Sumida-ku Tokyo JAPAN Phone +31 78 6544777 Phone +81 358 192030 Fax +81 358 192055 Fax +31 78 6544733 info@elcee nl info@igus.co.jp 43 New Zealand Al Hezam Adtech 26 Tawn Place PO Box 5656 Abu Alanda Street ,Building No. 1 Hamilton Phone +962 64 170100 Phone +64 7 8490281 Fax +962 64 169993 Fax +64 7 8492422 info.jod@adtech-trading.com sales@autoequip.co.nz 44 Norway ASI Automatikk AS Ingv. Ludvigsensgate 23 3007 Drammen Phone +372 667 5600 Phone +47 9006 1100 Fax +372 667 5601 info@asiflex.no 45 Peru PROIGUS S.A.C. Calle Bolivar 388/of. 203 Mecanix Shops Miraflores Charles Helou Avenue Lima 18 - Perú Phone +51 1 2414370 Phone +961 1 486701 Fax +51 1 2428608 Fax +9611 490929 mecanix@dm.net.lb 46 Philippines Silicon Exponents Corp. A. Santos Avenue Brav, BF 54469 Biruliskiu k. (Kauno LEZ) 1700 Philipppines Phone +370 37 323271 Phone +63 2 8250126/-135 Fax +63 2 8250141 Fax +370 37 203273 ryemrigor@sieplus.ph 47 Poland 37 Macedonia, Albania, igus® Sp. z o.o. ul. Działkowa 121C Hennlich DOOEL 02-234 Warszawa Phone +48 22 8635770 Fax +48-22 8636169 1200 Tetovo MK Phone +389 44614411 info@igus.pl Mob. +389 76 200 770 dritan.qamili@hennlich.mk 48 Portugal igus® Lda. R. Eng. Ezequiel Suite 1601-1, Level 16 Campos, 239 4100-231 Porto Tower 2 Wisma AmEirst Jalan SS 7/15 (Jalan Stadium),

39 Morocco igus® México S. de R.L. de C.V. Boulevad Aeropuerto Miquel Col. Corredor Industrial Toluca Lerma Lerma, Estado de México C.P. 52004 zaw.m.thant@sealionmyanmar.com Automation Equipment Ltd. profacoventas@profaco.com Unit 1-B, 8414 LMN Bldg. Dr. Homes Sucat Parañaque City Phone +351 22 6109000

AFI



	3 2004 15 52 43 7 37 31 23 64	68		
	60 Switzerland	66 United Arab	71 Venezuela	
(a)6-10)6-20	igus® Schweiz GmbH Winkelstr. 5 4622 Egerkingen Phone +41 62 3889797 Fax +41 62 3889799 info@igus.ch 61 Syria	Emirates Unigroup FZE Plot of Land M6-01 Sharjah Airport Free Zone PO. Box 120300 Sharjah - U.A.E. Phone +971 6 5578387 Fax +971 6 5578387 eutomotion@unigroup an	Neumatica Rotonda C.A. Prolong Av, Michelena C.C. Atlas Locales B-10 y B-11 Valencia, Edo. Carabobo Phone +58 241 832.64.64 +58 241 832.85.0 +58 241 832.82.60 +58 241 832.82.83	
ark rds Drive 348 594	ETTA Systems AI-Hamra St. Shalan Building 12550 Damascus Phone +96 311 332 5519 Fax +96 311 334 2639 info@ettasystems.com 62 Taiwan igus® Taiwan Company Ltd. 5F, No. 35, 24th Road	automation@unigroup.ae 67 United Kingdom igus® Caswell Rd Northampton NN4 7PW Phone +44 1604 677240 Fax +44 1604 677242 sales@igus.co.uk 68 Ukraine	ventas@neumaticar.com 72 Vietnam igus® Vietnam Company Ltd An Khanh Plaza, 3A Floor G3 Pham Ngoc Thach Street Ward 6, District 3, Ho Chi Minh City, Vietnam Phone +84 838204466 Fax +84 838204460	
i d. ong, 346 9-11 9-13	Taichung Industrial Park Taichung 40850 Phone +886 4 2358-1000 Fax +886 4 2358-1100 info@igus.tw 63 Thailand igus® Thailand Co., Ltd 10 Floor, Unit C1	Cominpro Ltd. Romena Rollana 12, Office 220 61058 Kharkov Phone +38 0577174914 Fax +38 0577174914 cominpro@gmail.com	info@igus.vn	
icre - BCN 1950 1951	Thanapoom Tower 1550 New Petchaburi Road Makkasan Ratthawi Bangkok 10400 Thailand Phone + 66 (0)2 652 7325 Fax + 66 (0)2 652 7326 info@igus.co.th	68 Ukraine Hennlich Ukraine LLC (HQ) Kramatorska Street 15 84100 Slovyansk City, Donetsky Region Phone +38 06262 33540 hennlich@hennlich.com.ua		
1 270 85	64 Tunisia BOUDRANT 53, Avenue de Carthage 1000 Tunis – Tunisia Phone +216 71340244 Fax +216 71348910 info@boudrant.com.tn	69 Uruguay Larrique Rulemanes SA Galicia 1204 Montevideo-Uruguay Phone +598 29021773 Fax +598-29084824 Iarrique@larrique.com.uy		
chain B 1 4 100 159	65 Turkey igus® Turkey Güzeller Org. San. Bölg. Galvano Teknik San. Sit. Cumhuriyet Cad. 2/32 P.K. 41400 Gebze / Kocaeli Phone +90 262 502 14 08 Fax +90 262 502 14 19 info@igus.com.tr	70 USA igus® inc. 257 Ferris Avenue PO. Box 14349 200 East Providence 102914 Phone +1 401 4382200 Fax +1 401 4387270 webmaster@igus.com 300		
tech® s AB 00 341	65 Turkey HIDREL Hidrolik Elemanlar Sanayi ve Ticaret A.S. Percemli Sk. No. 7 Tünel Mevkii 34420 Karaköy / Istanbul Phone +90 212 2494881 Fax +90 212 2920850			

26

/9001:2008 /16949:2009

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.

Newsletter Free of charge! Discover more about the latest

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



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



igus® GmbH Spicher Str. 1a 51147 Cologne Phone +49 2203 9649-145 Fax +49 2203 9649-334 info@igus.de www.igus.eu

© 2017 igus® GmbH

Published by igus[®] GmbH, Germany MAT0071581.20 As of 05/2017 Subject to technical alterations.

