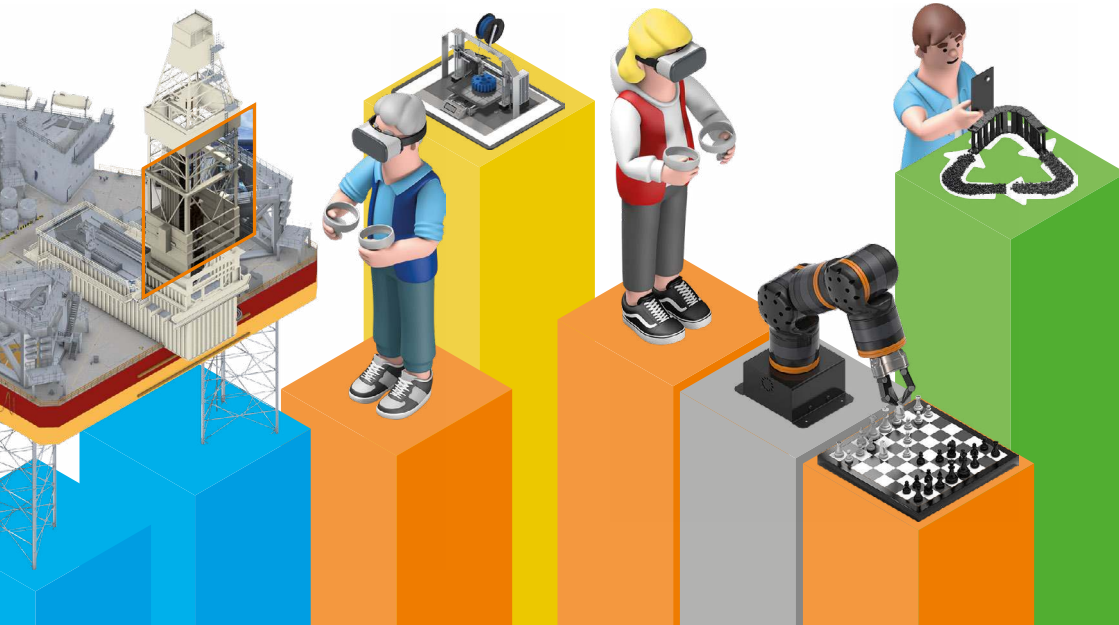


Digital services and solutions

igus® enjoyneering®

... unleash your engineering power with play

#digital



# Dear customers,

**Engineers are often naturally curious and have a strong urge to explore.** Playing and experimenting with new technologies and ideas creates innovative solutions and products. This creative process helps to push the boundaries of what is possible and opens up new perspectives in technology and industry. It is precisely this urge to play and experiment, along with outstanding achievements in industry, technology, and production, that we at igus® would like to promote. Playfully reaching the best engineering achievements - that's what igus® enjoyneering® is about: digital offers that facilitate work for you and your teams and increase creativity.

In the igus® metaverse, you as an engineer can optimise sustainable prototypes with your team. The virtual world helps identify weaknesses at an early stage and implement plant and machine developments at many times your usual speed. The igusGO® app shows you how to design and improve systems and machines to work without lubrication in seconds - just by sending a photo.

We have been supporting you since 2000 by calculating service life and other parameters to make your motion plastics® applications durable and sustainable. kopla, our fully managed service platform, now offers companies our proven technology for developing their own customised online configurators and simulators quickly and cost-effectively.

We are also intensively committed to environmental protection: from the igus:bike® platform for sustainable bicycle components to the recycling platform change® to an energy-efficient heating system that uses machine heat.

Our goal is to offer you enjoyment, fun and even more success at work. Try our enjoyneering® offers and join us on this journey as a user or beta tester. Tell us what you think.

**Have fun engineering!**



Frank Blase

**"One difference between the world's leading architects and the others is: They know how to play."<sup>1</sup>**

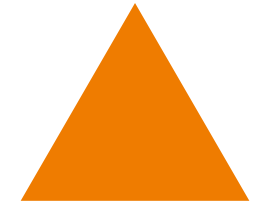
**Dr. Donald McKinnon, UC Berkely, from the book "Creativity" by John Cleese**

The terms "Apiro", "AutoChain", "CFRIP", "chainflex", "change", "chains for cranes", "ConProtect", "cradle-chain", "CTD", "drygear", "drylin", "dryspin", "dry-tech", "dryway", "easy chain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "e-loop", "energy chain", "energy chain systems", "enjoyneering", "e-skin", "e-spool", "fixflex", "flizz", "i.Cee", "ibow", "igear", "iglidur", "igubal", "igumid", "igus", "igus improves what moves", "igus:bike", "igusGO", "igutex", "iguverse", "iguversum", "kineKIT", "kopla", "manus", "motion plastics", "motion polymers", "motionary", "plastics for longer life", "print2mold", "Rawbot", "RBTX", "readycable", "readychain", "ReBeL", "ReCycle", "reguse", "robotink", "Rohbot", "savfe", "speedigus", "superwise", "take the dryway", "tribofilament", "triflex", "twisterchain", "when it moves, igus improves", "xirodur", "xiros", and "yes" are legally protected trademarks of igus® GmbH/ Cologne in the Federal Republic of Germany and possibly in some foreign countries. This is a non-exhaustive list of trademarks (such pending trademark applications or registered trademarks) of igus GmbH or igus affiliated companies in Germany, the European Union, the US, and/or other countries or jurisdictions.

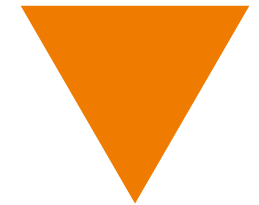
<sup>1</sup> Source: <https://www.themarginallian.org/2016/12/29/the-creative-architect>

**An overview of all services and solutions:**

- 6** **iguverse®**  
Virtual engineering in the industrial metaverse
- 12** **igusGO®**  
Revolutionary AI product search
- 14** **Next best catalogue part**  
Quick product search with CAD file
- 16** **kopla®**  
Service platform for design and calculation tools
- 18** **iIdentify**  
AI spare parts service
- 20** **Augmented Reality**  
Virtually pre-configured models
- 22** **One in all online tool**  
Industrial 3D printing service
- 24** **CNC service**  
Price information and feasibility analysis in one tool
- 26** **Tolerance check**  
Testing for the suitability of plastic-compatible machining
- 28** **ReBel® configurator**  
Quick, easy and always with instant price
- 30** **Apiro® configurator**  
Online up to eight robots  
Configure systems
- 32** **7th axis configurator**  
Combine your robot with a linear axis
- 34** **RBTX®**  
Marketplace for Low Cost Robotix
- 36** **RBTXpert**  
Free online advice for Low-Cost-Robotix
- 38** **Machine planner**  
Configure robotic solutions in less than 1 minute
- 40** **Bonding and dosing configurator**  
To the gluing solution in five clicks
- 42** **AnyApp**  
Control different robots with one software
- 44** **change®**  
Recycled technical plastics platform
- 46** **Online configurators**  
Process-cost-reducing tools
- 48** **smart plastics and factory monitoring**  
Smart solutions for Industry 4.0 and exciting IIoT applications
- 50** **igumania**  
Idle-Game



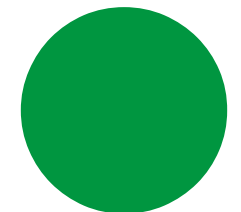
Tech up



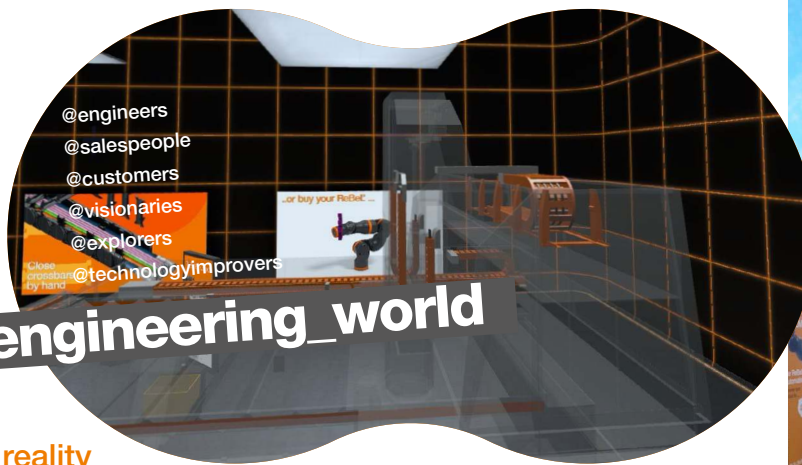
Cost down



Proof



Sustainable benefits



#virtual\_engineering\_world

So that everything fits in reality

# Industrial metaverse: Implement developments of systems and machines 10x the speed<sup>2</sup>?



Welcome to the iguverse® - the igus® metaverse that simplifies your engineering! Save time and money in the virtual engineering world, find the right components quickly, and develop your product digitally with igus® experts. The 1:1 feasibility analysis with 3D models supports your product development, identifying weak points at an early stage and optimising your design - with no physical prototypes. You can also use the iguverse® as a presentation platform or a virtual support for repairs. It is an efficient, user-friendly platform for sustainable product development and rapid prototyping.

#metaverse #newwork  
#collaborative\_engineering  
#virtual\_commissioning

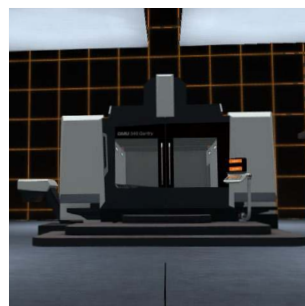
"As an engineer, I would like to optimise our prototype production and make it more sustainable. I explore the iguverse®, an engineering platform in the metaverse. With VR glasses I enter the virtual igus® world, work on projects virtually and network with colleagues to save time, money and CO<sub>2</sub> in order to clearly visualise problems and quickly work out solutions. I find 3D models for my application in the right machine and industry world. Together with igus® experts, I develop prototypes and carry out feasibility studies. Augmented reality also helps me to identify design weaknesses at an early stage. This also saves time, travel expenses and resources. Colleagues and machine users can exchange information in the iguverse®, train as well as support service technicians with repairs."

<sup>2</sup> See example: Bell Helicopter, HTC VIVE: [youtu.be/9rF2NBEHOow](https://youtu.be/9rF2NBEHOow)



**"The third wave of the internet is about innovatively addressing real world problems."**

**Steve Case, Founder of AOL**



... unleash your engineering power with play

Book an appointment online and find out more  
[www.igus.eu/iguverse](http://www.igus.eu/iguverse)

- ▲ A constantly updating virtual project space that the whole project team can use spatially as a basis for their work.
- More safety through reduced risk
- Repeatability
- Faster integration into the production environment
- Optimised quality of systems and machines
- Good data collection and analysis
- Understanding of complex relationships and early testing
- Faster realisation of the idea to the product

- ▼ Cost reduction through simulation
- Time saving on site
- Minimisation of downtime
- Reduced risk of planning errors
- Lowered travel expenses
- Elimination/reduction of prototyping effort

- When an igus® e-loop® was installed on a drilling platform, important design changes ultimately meant that the product could not be installed as planned. If the installation had been simulated in the iguverse®, the difficulties with the mounting bracket and cable guidance would have been recognised at an early stage and could have been resolved more efficiently. The virtual world had made problems and solutions visible immediately.

- Reduce travel time and CO<sub>2</sub>
- Conserves resources: no need for complex prototype production
- Improves team flexibility and adaptability
- Increase employee satisfaction
- Improve team effectiveness

**Collaborative engineering**

**A digital parallel universe for industry - how engineers, salespeople and customers will work together in the iguverse® in the future.**

Four of many examples of how the **iguverse®** can help you in the real world.

**1. Control robots remotely**

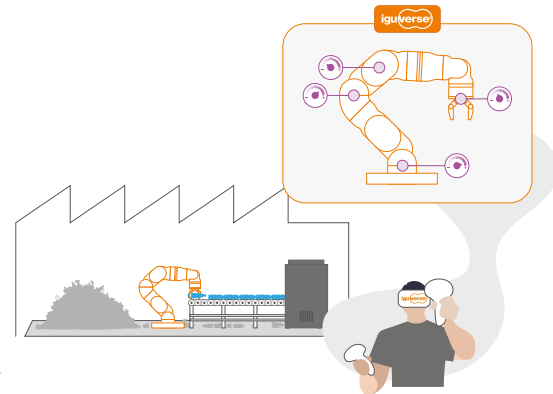


- Reduce hazards
- Improve flexibility and adaptability
- Increase employee satisfaction
- Improve team effectiveness



- Reduce travel time and CO<sub>2</sub>
- Reduce waste and errors

#simulated\_remote\_work #better\_work #virtual\_commissioning #digital\_twin



The iguverse® is an XR collaboration platform that enables companies to immediately use virtual reality and work on machines, systems, and vehicles together. Digital twins of all products are provided in the iguverse®. Users can install these twins directly in the virtual engineering environment. More effective collaboration and faster development cycles improve companies' technical capabilities.

**3. Develop products collaboratively**



- Improve product quality
- Accelerate product development
- Improve innovation
- Enhance flexibility
- Improve risk management



- Use resources more effectively

#metaverse #newwork #collaborative\_engineering #virtual\_commissioning



**2. Simulate assembly and installation**

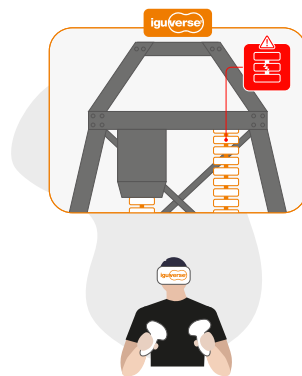


- Cost reduction through simulation
- Time saving on site
- More safety
- Avoids errors
- Repeatability
- Good data collection and analysis



- Reduce travel time and CO<sub>2</sub>
- Use resources in a more targeted manner

#metaverse #newwork #collaborative\_engineering #virtual\_commissioning



**4. Training, remote maintenance and virtual commissioning**

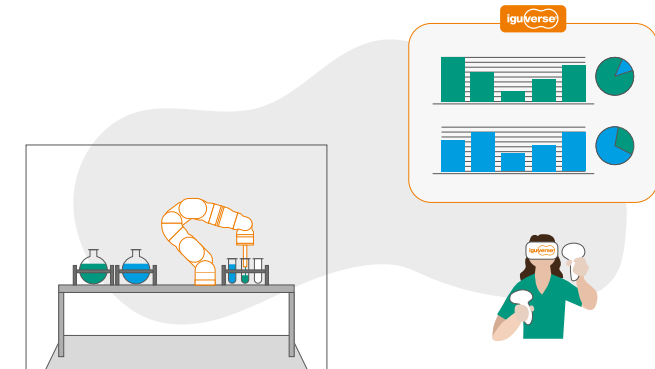


- Time and cost savings
- Increased availability
- Increased safety



- Improve resource use
- Reduce environmental impact

#metaverse #newwork #collaborative\_engineering #virtual\_commissioning



**Find these and other examples online at [www.igus.eu/iguverse](http://www.igus.eu/iguverse) or contact us.**

**Collaborative engineering**  
Practical experience



# Made for customers

igus® has opened the iguverse® as an XR collaboration platform for customers to promote the development of top engineering with greater sustainability and drastically shorter development cycles. Smaller companies can use virtual reality without having to invest their own development work in infrastructure, which means that they don't lose touch with the future of engineering. In the iguverse®, companies can work together in virtual reality, share resources and information and learn from each other, regardless of their geographical location. igus® is available as a development partner and will be able to provide digital twins of all products in the iguverse® that users can install directly in virtual engineering. The iguverse® could also become a new way of presenting and selling products and services. The platform will enable companies to save costs for

a VR infrastructure in future and increase customer benefits thanks to more effective collaboration and faster development cycles.

#metaverse #newwork  
#collaborative\_engineering  
#virtual\_commissioning



Process analysis: igus® delta robot in a virtual SK laser machine

**Faster and smoother than is possible in the physical world alone.**



... unleash your engineering power with play



White paper

## "Industrial metaverse: How to make implementation a success for all SMEs"

Download here free of charge:  
[www.igus.eu/iguverse](http://www.igus.eu/iguverse)

"We spent about an hour in the igus® parallel universe, walked through cars with built-in energy chains and saw an energy chain in action on a virtual drilling platform. With our virtual hands, we were able to make the products larger and smaller and examine them in detail. igus® is taking the first steps towards the metaverse in mechanical and plant engineering, and this has great potential for product presentations."

**Dina Reit**  
CEO of SK LASER,  
Family Entrepreneur of the Year for 2022

"Thanks to the digital twins of our lift systems and hydraulic garages in the iguverse®, we can bring our products to life anytime, anywhere, and also show them in operation. This is hardly possible in real everyday life, e.g. at trade shows. At the same time, we even save costs. Instead of investing in expensive trade show models, we can easily and flexibly integrate new 3D models in virtual reality and thus show much more even without a large stand area."

**Jan Olfenbüttel**  
Head of Sales & Marketing  
h+b technics

#revolutionary

- @productseekers
- @optimisers
- @explorers
- @technologyimprovers

Design lubrication-free applications in seconds

# Discover the optimisation potential for thousands of machines in just a few seconds?

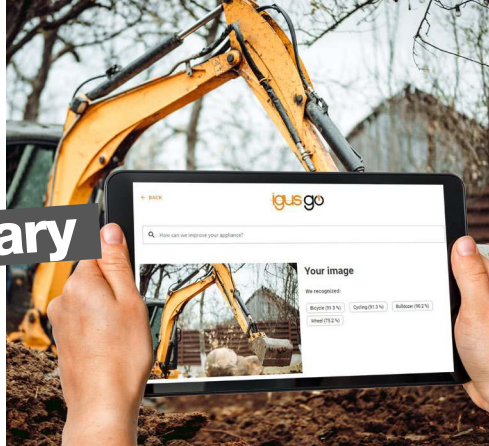
Experience a revolutionary way of searching for products with igusGO® - our cloud platform with artificial intelligence. Simply take a picture of the existing application, including its surroundings, and the igusGO® intelligence will show you which igus® products can help you to design your application without lubrication. The app also shows where there is more potential to improve your machine's technology and even reduce costs at the same time. You will find out more about applications that have already been optimised on comparable machines and components and be taken directly to the shop, where you can view more information and order or submit queries directly.

**New: AI assistant - interactive advisor:**

Ask questions about igus® products and their areas of application and save money with the answers

**Other languages:** German and English available. Chinese, Italian, French, Portuguese, Spanish and Japanese will follow shortly.

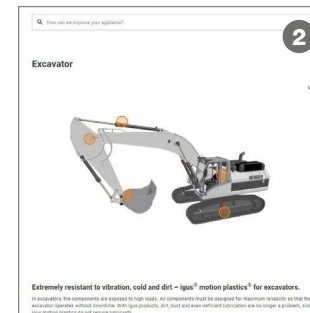
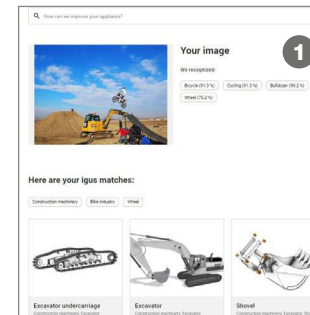
**The benefit calculator** shows you the cost advantage through savings on maintenance costs and lubricants



"As a designer at an agricultural machinery manufacturer, I used the artificial intelligence in the igusGO® cloud platform to make my machine maintenance-free. I wanted to improve the kinematics on a mowing tractor's axle adjustment mechanism. I photographed the product with my smartphone and uploaded the picture to igusGO®. The AI suggested a lubrication-free bearing point to improve my machine and reduce my costs. The app gave me access to applications that had already been implemented, and I could use it to learn and apply best practices. igusGO® enabled me to quickly and easily optimise my product and reduce costs without time-consuming research and consulting."



To the app stores and the web version:  
www.igus.eu/igusgo

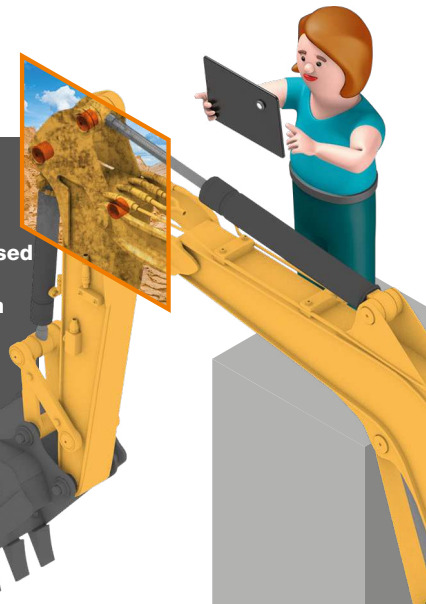


1. Take a photo of the real application
2. Choose from recognised suggestions
3. See a detailed motion plastics® solution
4. Buy parts directly in the shop

- ▲ Reduce maintenance for machines and systems
- Discover potential for improvement within seconds
- Use AI in product development and optimisation

- ▼ Save time, since there is no consulting or searching for the right solution for the movement
- Discover cost reduction potential within seconds
- Access the shop directly to obtain more information or order directly

- Helps make machines and systems lubrication-free
- Lubrication-free solutions to replace lubricated drive units



Profit calculator

Cost advantage due to elimination of lubrication and maintenance

Number of products:

Maintenance time (sec./pc./year):

Lubricant requirement (g/pc.):

Price of lubricant (€/kg):

Labor costs for maintenance (€/h):

Wherever metal moves on metal, regular lubrication is necessary. The costs incurred for lubricants, maintenance and labor cost

Cost-advantage per year: (€)  
**€ 3.316,67**

Service for design engineers

## Next best catalogue part



Quick and easy with CAD file search

# Simply find the right, most cost-effective and fastest available igus® solution

The revolutionary "Next best catalogue part" service allows designers to quickly identify the optimum, most cost-effective and immediately available igus® solution based on a CAD file. This innovative solution uses AI technology to analyse CAD files and determine whether a corresponding standard product is available. If this isn't the case, the service enables a direct transition to the iglidur® Designer tool for 3D printing - without having to upload the CAD file again. The service currently recognises 14 product families, from classic sleeve bearings and piston rings to gears or spherical bearings. We currently offer tools for 3D printing and CNC machining for customised production via CAD file. A further tool for injection moulding production will be added shortly. This saves time and ensures that customers always find the most cost-effective solution for their projects.

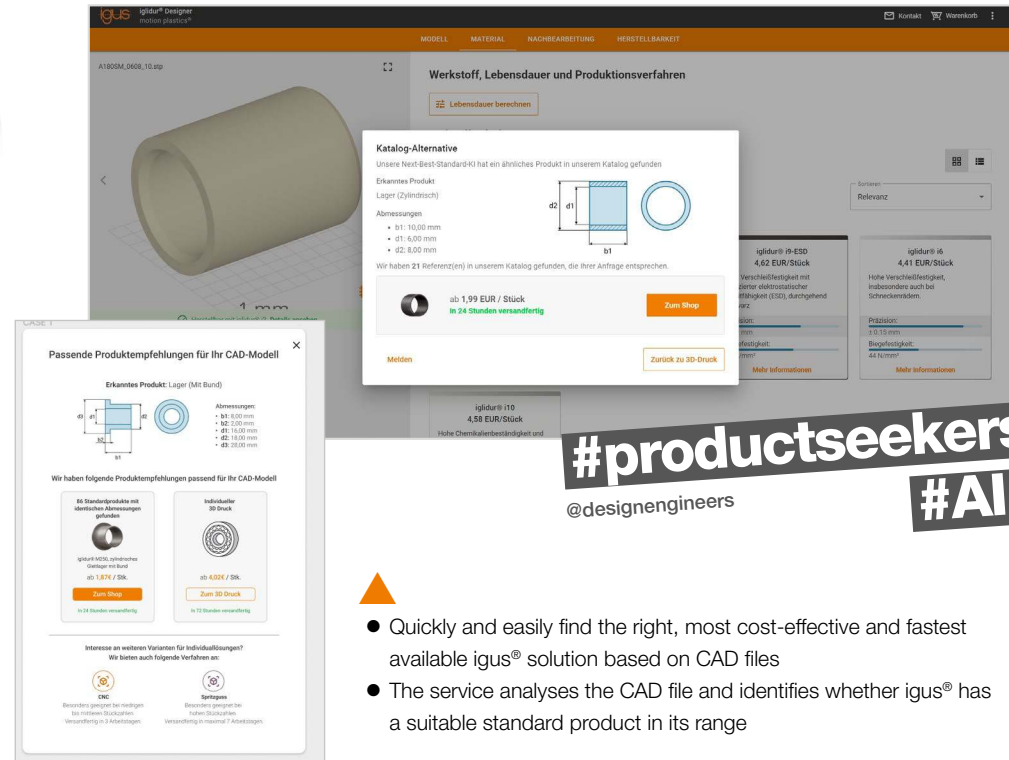


Michael, a design engineer at an electro mobility start-up, is under pressure to deliver quickly and cost-effectively. He needs a tool that automatically checks whether a suitable bearing element exists for his CAD design or whether a customised solution needs to be produced - without losing time due to repeated uploads. The "Next best catalogue part" service from igus® fills precisely this gap by helping Michael to shorten the development time and stay within budget.



... unleash your engineering power with play

**Test it now!**  
**In the configurator: iglidur-designer.igus.tools**  
**In the search field of the homepage: igus.eu**



#productseekers  
 @designengineers  
 #AI

- ▲ Quickly and easily find the right, most cost-effective and fastest available igus® solution based on CAD files
- The service analyses the CAD file and identifies whether igus® has a suitable standard product in its range
- ▼ The service is based on AI technology and is continuously trained in CAD file recognition. The service currently recognises 14 product families. It will soon also be connected to our CNC service and our free-form injection moulding service

**This service is available in the iglidur® Designer 3D printing tool and on the German homepage via the search function. Internationalisation is taking place gradually.**

Service platform

**kopla.io**

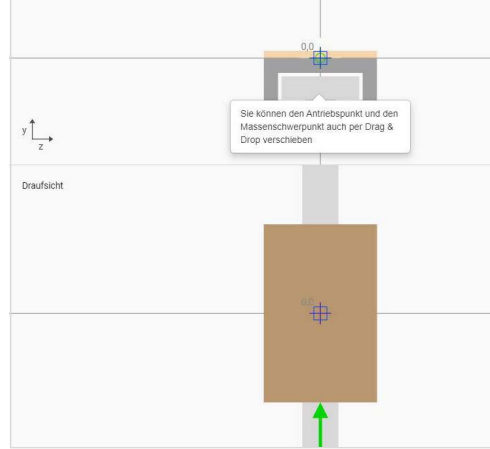
make your products a digital experience

Configure, design, simulate - quickly and easily build your own online configurator

# Offer the right product quickly and easily with digital sales tools

With our fullmanaged service platform kopla®, we provide you with your own configuration solutions according to your specifications - fast and cost-effective. The solution is aimed specifically at medium-sized companies and corporations that operate internationally and want to promote their products online. The modular principle and a fully managed service cloud solution, the time-to-market is reduced. The target group is companies that want to position themselves in a customer-oriented way in the digital age. With years of experience, we offer a comprehensive solution to make products presentable online and increase market opportunities. Contact us today to explore your digital options.

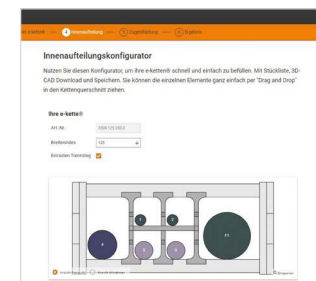
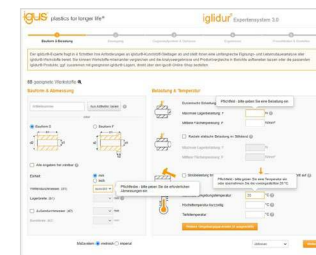
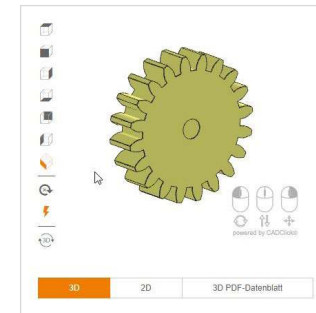
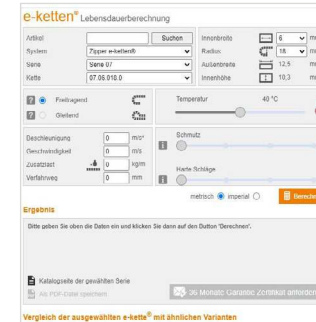
#online\_tools #efficiency #cad\_models



"As the CEO of a medium-sized manufacturing company, I look for ways to better explain my products online and present them in international markets. The kopla® software platform gives me just that - it enables me to create design and calculation tools. The modular principle and a full-managed-service cloud solution reduces my time to market and lets me concentrate on my core business. kopla® has incorporated many years of experience in various product categories, so I can be confident that it is intimately familiar with the required data and best possible uses. As a CEO who is willing to try new things, I want to position my company successfully in the digital age and increase my market opportunities."



Image recognition with 3D technology - rooniq



... unleash your engineering power with play

Send us your query here:  
[www.igus.eu/kopla](http://www.igus.eu/kopla)

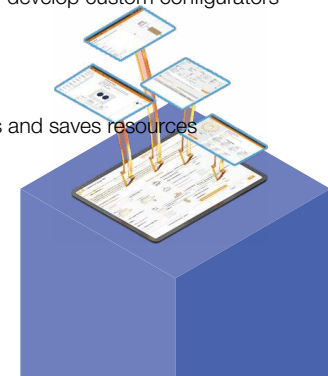
**#fullservice**

- @CEOs
- @marketingmanagers
- @salesmanagers
- @itmanagers
- @costreducers
- @SME
- @midsizedcompanies

- ▲ Modern technology stack based on AWS services, Angular and AI algorithms, image recognition with 3D technology - investment protection
- Experience products digitally - make sales process more efficient through automation, increase the offers quality and become faster
- For your end customers: configure, calculate, simulate - find the right product at any time and order it at the best price
- Offline variant - configurators can be used anywhere at any time

- ▼ Fully managed service platform - develop custom configurators quickly and inexpensively

- Platform concept uses synergies and saves resources



Minimise downtime

# Quick procurement of spare parts with AI

In spare part procurement, every minute counts.

The easiest way to procure the parts is to take a picture of your application with your smartphone or tablet. Our artificial intelligence in the web app does the rest. It analyses the photo and searches for the exact part you are looking for among hundreds of thousands of igus® products. You can then order that part immediately with the cloud service. This greatly reduces machine and system downtime. The new cloud service can be operated intuitively - even by non-technicians. Try it, send a photo, and see how the AI-supported spare parts procurement of tomorrow works today.

#spare\_part\_procurement #artificial\_intelligence #downtime\_reduction #speed #maintenance



"As an employee in a production company, I know that production line downtime due to a lack of spare parts can cause high costs. But the igus® solution provides a quick remedy: just send a picture of the required component to igus® with your smartphone or tablet. Our AI will identify the part accurately. The order service can then be set in motion to reduce downtime and the associated costs. Tedious searching through documentation and product catalogues is now a thing of the past. Try it out or share this tip with your colleagues in maintenance!"



Test directly:  
www.igus.eu/identify



#spare\_part\_procurement

@maintainer  
@installer  
@maintenanceengineer  
@costreducers



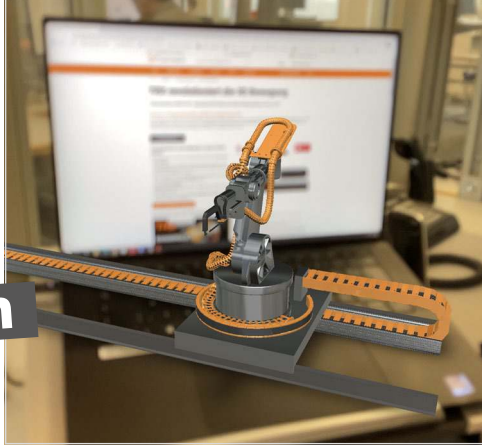
- ▲ Avoid mistakes by having AI support part selection
- Consistent online selection, configuration, optimisation and ordering process
- Quick and easy spare part procurement with a photograph of the application
- ▼ Minimises downtime and associated losses
- Spare parts procurement that saves time and reduces costs
- Intuitive operation for even non-technicians
- Minimises rejects or waste with the precise spare parts procurement
- Uses resources efficiently by quickly restarting machines and systems

Augmented Reality



@designengineers  
 @developers  
 @optimisers

#digital\_twin



Quicker design process

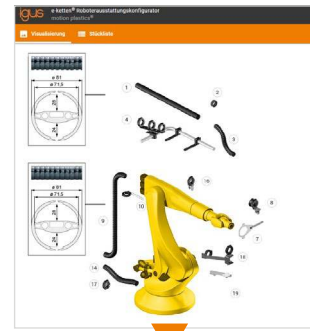
# Augmented reality for maximum transparency and system security

**Imagine:** You are examining your design not just on a screen, but the virtual model in reality. You can really do it with the AR feature that igus® will integrate into the online tool platform. This is how it works: Configure the product, access and test the AR model. **The result** is more transparency and planning security and a faster design process. You can use your smartphone, tablet, or data glasses to view virtual models in the reality. And you can design different models for maximum ease of viewing. Benefit from fast, cost-effective feasibility studies and check product integration in advance. In this way, you save time and costs and recognise possible errors even before a prototype is created - on the virtually projected model of the digital twin.

#ar #3d\_models #security #feasibility\_studies  
 #product\_integration



Ron, a senior engineer at a mechanical engineering company, is currently planning a larger facility. In order to ensure that the robot fits into the production environment and that suboptimal design details are detected and corrected at an early stage, he is testing the igus® augmented reality software for the first time. He looks at the true-to-scale 3D system models in the iguverse® on his tablet and projects them into the real environment as a virtual model. In some cases, feasibility studies help him find the best detailed solution. Ron is enthusiastic and sees igus® inside as a glimpse into the future of system planning, where he can save time and money.

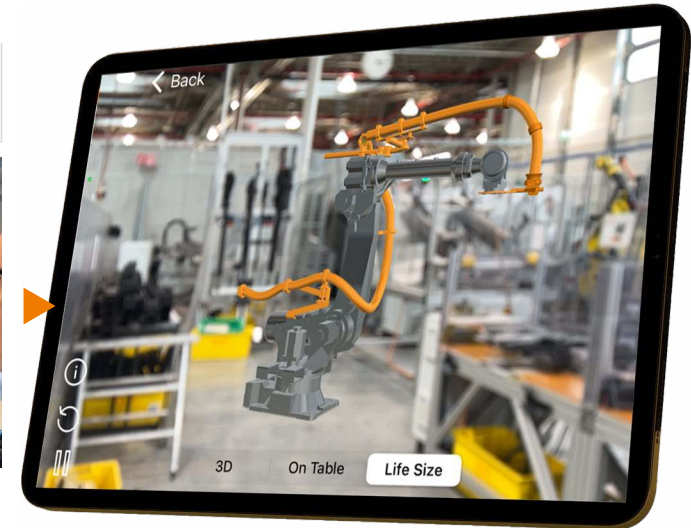


... unleash your engineering power with play

Find out more:  
[www.igus.eu/AR](http://www.igus.eu/AR)



Scan the QR code now and load the 3D model



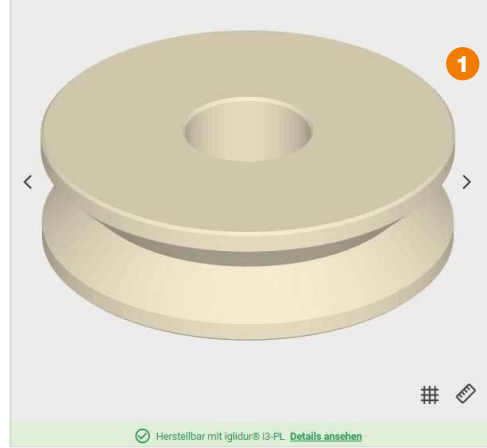
- ▲
  - Examine your design in virtual reality and check it as a virtual model in reality
  - Maximum transparency and security
  - Quicker design process
  - Check product integration in advance
  - Cost-effective, time-saving gateway to the world of Industry 4.0
- ▼
  - Faster and more cost-effective feasibility studies
  - Detect possible errors before a prototype is created
  - Identify potential errors at an early stage to save rework costs during development
  - Fast and more cost-effective feasibility studies instead of complicate, time-consuming CAD visualisation
- - Fewer physical prototypes needed, so less waste and emissions

Solution for individual application on a single page

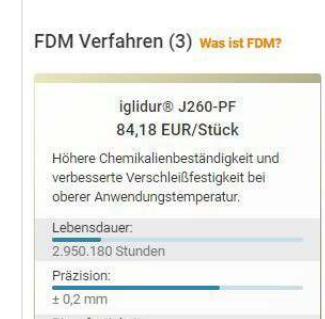
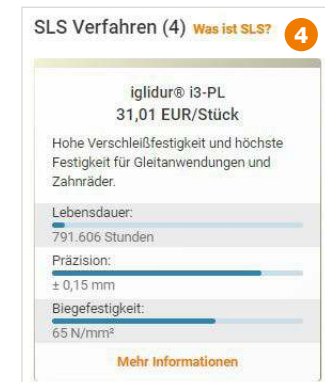
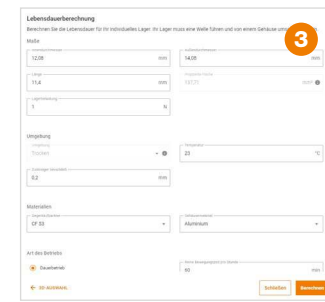
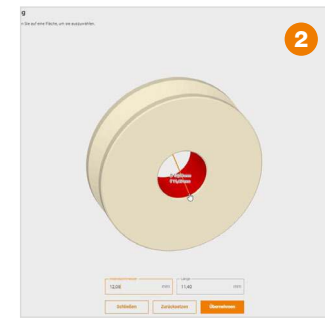
# Simply find the most cost-effective solution that works

**Customised components at rocket speed:** this is the basic concept of the 3D printing service from igus®. Simply upload a 3D model - the manufacturability is automatically checked, prices and delivery times are calculated and the component can be ordered online immediately. You can also calculate the expected service life of the component in your individual application. Various post-processing and finishing options can also be selected for components that have been manufactured via laser sintering. For example, the parts can be coloured or smoothed. Alternatively, a hole or thread can be added. This finishing work can also be selected and ordered directly online. This means that you are now provided with all information and options for your customised component conveniently in an online tool.

#speed #quality #reliability



1. Upload the CAD  
2. Select sliding surface  
3. Calculate the service life  
4. Select manufacturing process with price



Try it now:  
[www.igus.eu/idd](http://www.igus.eu/idd)

## #motion\_on\_demand

- @spareparts
- @workingsamples
- @prototypes
- @smallseries
- @specialparts



Jakob, head of maintenance at a production company, is faced with a challenge: an important machine has broken down, and the spare part cannot be delivered immediately. Fortunately, he remembers the igus® production service and uploads the CAD model for the component to the online tool. Within seconds, he receives a service life prediction and a quote and can place the order. Since he needs only one, the 3D printing service is the perfect solution. Jakob even receives optimisation tips from igus® and implements them. The next day, the 3D-printed component is on site and can be installed. Jakob is enthusiastic about the speed and simplicity of the 3D printing service and knows that he can continue to rely on igus® to get him spare parts quickly.



- ▲ Automatic manufacturability analysis
- Expected component service life calculation
- Technical solution optimisation for your individual application
- ▼ Comparison of prices and delivery times for all additive-manufacturing processes and suitable materials offered by igus® in one tool
- Individual dimensions and quantities
- Simply find the most cost-effective solution that works
- Use the full expected service life of the component instead of replacing it prematurely
- Ordering spare parts and working samples quickly and easily extends machine service life

CNC service

CNC service

– motion on demand –



Order CNC special parts quickly and easily online

# Get price, delivery time and service life in no time

Request or order machined parts from iglidur® online! With our CNC service simply upload a 3D model and you will receive transparent price information and an automatic manufacturing feasibility analysis. The tool provides visual feedback and reviews the 3D model geometries. The price calculation is updated in a matter of seconds. In the case of high complexity or feasibility problems, the tool provides feedback. The integrated service life calculation tells you how long the component will last in your application. And if things have to go faster: with our express option your components will be ready to ship in 3 days.

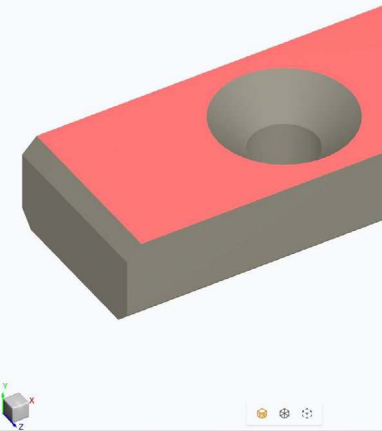
#price\_calculation #feasibility\_analyse #3dmodel #servicelife\_prediction



As a designer, I often need machined CNC components made of igus® iglidur® materials manufactured to my design specifications. In situations where time is critical, it is very helpful to receive price information quickly and easily. With the CNC service, I can upload my 3D model and immediately receive a price calculation, including an automatic feasibility analysis. The tool gives me visual feedback when production-critical points have been found on the model, and it automatically checks technical drawings for tolerances and other information. This gives me the basis for a reliable price calculation, updated in seconds depending on the material, tolerance, quantity and delivery time selected. I can also opt for the express option, and my components made of iglidur® will be sent to me in just three days."



Configure now  
[www.igus.eu/cnc](http://www.igus.eu/cnc)



Material wählen

Material	Lebensdauer	Stückpreis
igidur® J4	8,253 h	70 N/mm²
igidur® A100	26,012 h	19 N/mm²
igidur® A180	12,203 h	89 N/mm²
igidur® A181	17,168 h	48 N/mm²
igidur® A250		
igidur® A350		
igidur® A500		140 N/mm²
igidur® AC500	nicht verfügbar	keine Daten
igidur® AD500	nicht verfügbar	keine Daten
igidur® B100	nicht verfügbar	14 N/mm²
igidur® C500	5,345 h	100 N/mm²
igidur® E	8,584 h	79 N/mm²
igidur® E7	25,247 h	22 N/mm²
igidur® H1	16,661 h	55 N/mm²
igidur® H3	0 h	88 N/mm²

#motion\_on\_demand

@spareparts  
@workingsamples  
@prototypes  
@smallseries  
@specialparts

- Transparent instant calculation
- Thorough analysis of machined parts
- Automated feasibility check (based on 3D model)
- Automated tolerance check (based on technical drawing)
- Integrated service life prediction
- Variety of iglidur® materials for machined components in every application

- Feedback regarding price and technology for fast decision-making
- Improved design for easier operation
- Quotes or orders without stress
- Express delivery service for urgent matters

- igidur® components are lubrication and maintenance-free

mill\_slide plate II.STP

1 Material: iglidur® J4  
Lebensdauer: 8,253 h

2 Stückzahlen und Lieferzeit(en) wählen

MENGE	STANDARD (Preis pro Stück)	EXPRESS (Preis pro Stück)
1	€250,81	€376,22
5	€66,61	€99,91
10	€43,58	€65,37
50	€25,17*	€37,75*
300	€21,31*	Auf Anfrage

← Individuelle Stückzahlen hier angeben

Check technical drawings

Tolerance check



Testing for the suitability of plastic-compatible machining

# Revolutionary recognition of 2D drawings with tolerance recommendations



You have finished designing a machined component, but are not sure whether the tolerances and surface specifications you have provided are suitable for plastics? In comparison to the tolerance of metal components, there are often uncertainties as to how to correctly design plastic components. All you have to do is upload a technical drawing of your component as a PDF or image file. The tool checks all the information in the drawing with regard to our plastic manufacturing standards. In just a few seconds, non-feasible dimensional, shape and position tolerances as well as surface specifications are visually marked on your drawing and correction suggestions are displayed. You can select the alternatives that suit you and even download a corrected version of your original drawing as a PDF file. Technical feedback - automated, fast and easy.

#correction\_suggestion #in\_seconds

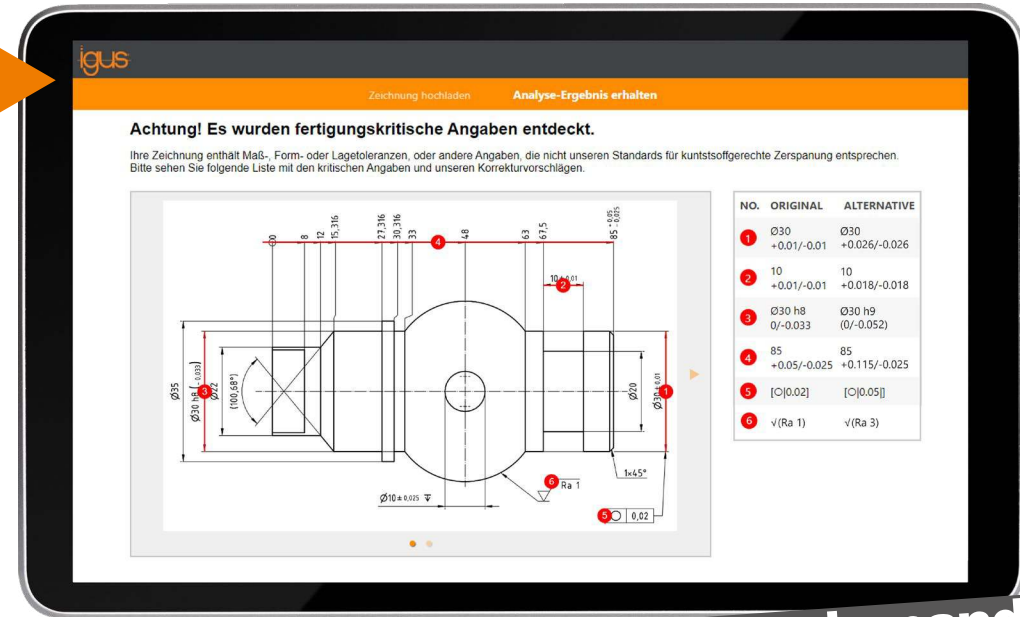
"As a designer of turned and machined components, I often have uncertainties about the tolerances and surface design of my machined parts made of iglidur®. With igus® online tolerance check tool, I can now upload my technical drawing as a PDF or image file and have all the information checked with regard to plastic-specific manufacturing standards in just a few seconds. The tool visually marks unfeasible dimensional, shape and position tolerances as well as surface specifications and shows me correction suggestions. I can select the alternatives that suit me and even download a corrected version of my original drawing as a PDF file. This is how I get automated technical feedback, quickly and easily - without any uncertainties when manufacturing my components."



... unleash your engineering power with play

Try it out now:

[www.igus.eu/tolerance-check](http://www.igus.eu/tolerance-check)



#motion\_on\_demand

@spareparts  
@workingsamples  
@prototypes  
@smallseries  
@specialparts

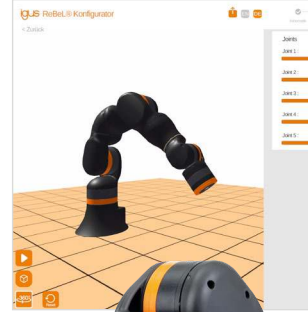
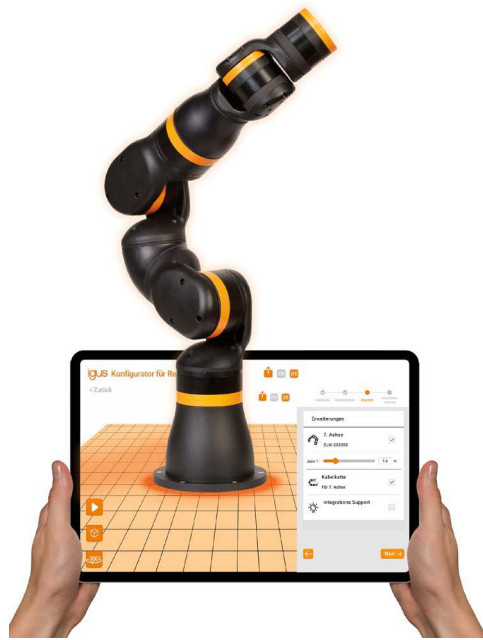
- ▲ Automatic check of dimensional, shape, and positional tolerances online
- Designing to suit plastics

- ▼ Avoid coordination effort
- Avoid complaints
- Save waiting time

- iglidur® components are lubrication and maintenance-free

Uncomplicated, fast and always with a live price.

# It's a ReBeLution



... unleash your engineering power with play

Test here for all:  
[www.igus.eu/rebel-configurator](http://www.igus.eu/rebel-configurator)



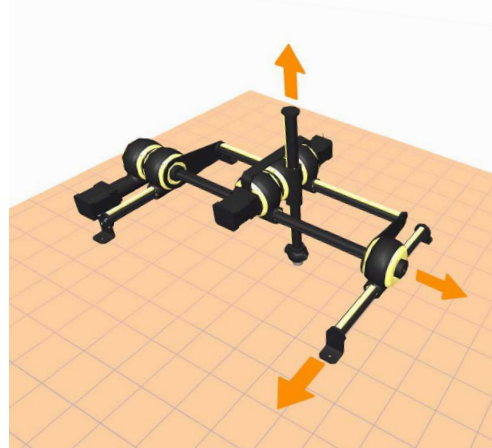
#lowcostrobotics

It's a ReBeLution - because the ReBeL® is the first robot made of high-performance plastic. At just 8kg, it is the lightest in its class: a real lightweight robot. The compact, space-saving design with an integrated control system in the base opens up completely new fields of application for service robotics. In collaboration with people, the ReBeL® takes on tasks in the event and gastronomy sector, for example as a reliable coffee enricher or as a machine loader in production. Configure the working environment for your ReBeL® exactly as you need it: with grippers, energy chain, seventh axis, and robot cell.



"Reducing costs, relieving employee workload, increasing productivity: Everyone is talking about automation. And I've wanted to get on this train for a long time. However, until now, solutions have simply been too expensive. Often complicated to configure and program. So I am enthusiastic about igus® Low Cost Automation. The solutions cost so little that getting started entails almost no risk. And all components are compact and lightweight. It's easy for me to assemble and program them. This is a real game changer, one that I've been waiting for a long time!"

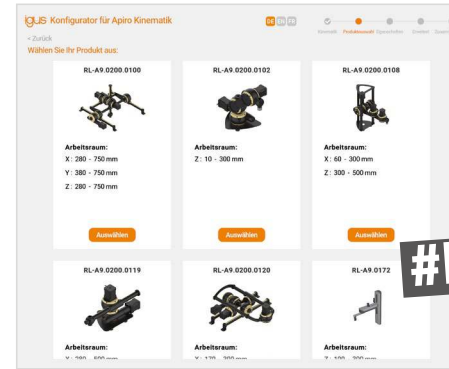
- ▲ Assemble compatible components with just a few clicks
- ▼ Configure complete ReBeL® accessories within three minutes
- Real-time price display provides full cost transparency
- Avoid annoying returns and order matching accessories directly
- Conveniently assemble the RebelL® environment from anywhere



**Configure now:**  
[www.igus.eu/apiro-configurator](http://www.igus.eu/apiro-configurator)

Configure up to eight robot systems online

# Configure robots intuitively



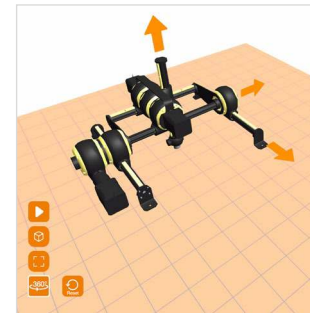
#lowcostrobotics

At igus®, Apiro® stands for inexpensive worm gears and flexible, customer-specific solutions.

The modular gearbox system offers a wide range of products based on the combination of various designs on the gearbox drive and output, various transmission ratios, and a wide range of accessories. In addition to worm gears, bevel and rack systems are also available. A modular design and simple connection of individual components allow cost-effective solutions to an infinite number of application problems. That is where the name comes from – "Apiro" is Greek for "infinite". The online configurator allows eight different igus kinematics to be adjusted to individual requirements – with a live price.



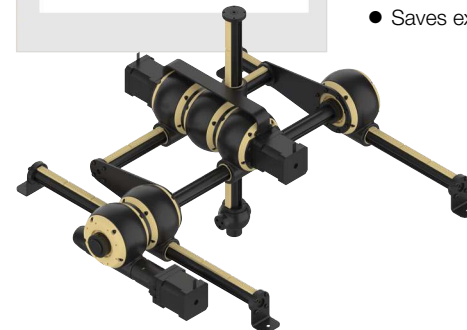
"Building a drive for an automation system can be tricky. I used to have to spend a lot of time and money adapting systems to my needs. The Apiro® configurator from igus® changes all that. I can work online with a 3D model and assemble modular gearbox components to create my individual kinematics in just a few clicks and see the current system price with each change. I can't imagine drive configuration being simpler or more transparent and effective."



Arbeitsraum:  
 Länge (x)  mm  
 Breite (y)  mm  
 Höhe (z)  mm  
 Versandfertig in 24h

Zubehör  
 NEMA23 Motor Preis auf Anfrage  
 Dryve D1 Box Preis auf Anfrage

- ▲ Countless combinations and individual kinematics can be implemented
- ▼ Save time with 24/7 online product advice
- All technical data and information at a glance
- Saves extensive print advertising materials



7th axis configurator

#lowcostrobotics



Try it out here:  
[configurator.rbt.com/7thaxis](http://configurator.rbt.com/7thaxis)



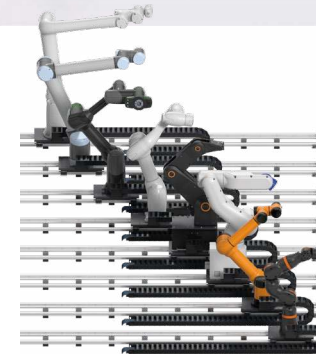
One linear axis for all robots

# Expanding the robot workspace

A seventh axis, also known as a linear axis, increases a robot's radius of action. It allows the robot to move along a horizontal plane, thus extending its reach and enhancing its flexibility. The increased work area allows a greater variety of tasks to be handled, which in turn increases production efficiency. igus® also offers the seventh axis for lightweight robots from other manufacturers such as Epson, Franka Emika, fruitcore, and Universal Robots. Combine your robot with a linear axis in the configurator with just a few clicks. Travel, speed, and orientation can be adapted to your individual requirements.



"A six-axis articulated arm robot has been working well in our production for a long time. The only drawback is its limited range. And we don't have the capability of carrying it back and forth for different jobs. So we are very happy with the igus® seventh axis, which we were able to configure online in just a few clicks. It untethers our robot, which can now move independently to various assembly stations. So we use it almost without interruption, getting the most out of it, reducing employee workload, and increasing productivity."



- ▲ Configure a robot workspace that is up to four times larger with just a few clicks
- ▼ Save enquiring time and effort through direct, non-committal offer and application examples
- Compatibility of all robots and 7th axis combination checked
- Expand the automation system instead of developing it from scratch





#automate

@SME  
@midsizecompanies



Low-cost components and solutions

# RBTX®: Your marketplace for Low Cost Robotix

Components from leading brands | Return on investment of 3-12 months | Automate without knowledge of robotics

RBTX® is a marketplace that brings together users and suppliers of affordable Low Cost Robotics components. Our simple tools and reliable services save you time and money by finding robotics solutions that suit your budget and applications. Compatibility guaranteed.

RBTX® is a registered trademark of igus® GmbH. igus® is a leading manufacturer of energy chain systems and polymer plain bearings. The company is headquartered in Cologne, Germany.

#low\_cost #automation

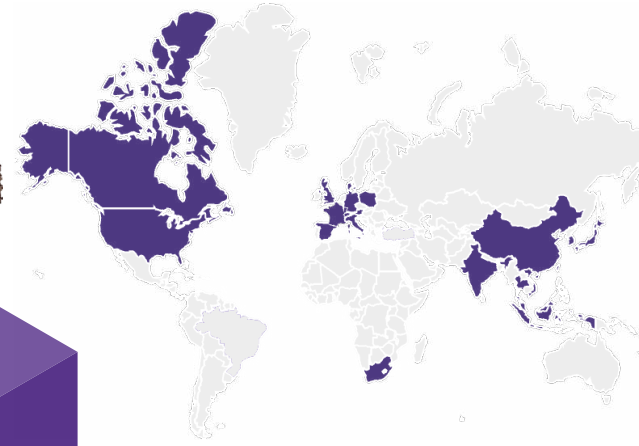
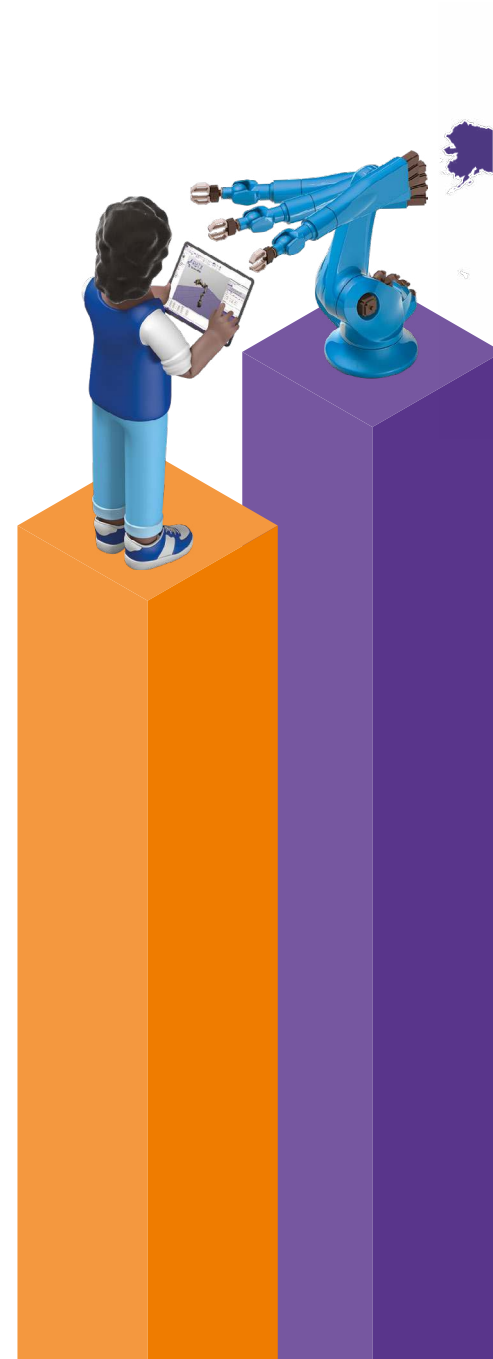


"I had been looking for a risk-free plug-and-play way to get started with automation for a long time. The RBTX® platform gives me just that. I can put together an automation solution online in just a few minutes - without any prior design knowledge and with a reasonable budget. I don't have to communicate with different manufacturers. I don't have to worry about component compatibility or possible sources of error. If I have questions, RBTX® experts are there to help me. It's perfect!"



... unleash your engineering power with play

Discover now:  
[www.rbt.com/en](http://www.rbt.com/en)



- ▲ Growing low-cost product portfolio
- ▼ Focus is on the low-cost price segment - there are over 350 application examples, and 98% of them cost less than €12,000
- Over 2,000 consulting projects and free feasibility studies in 15 customer testing areas in Germany and 22 worldwide
- Durable industrial products from leading manufacturers, more than 100 partners



Service

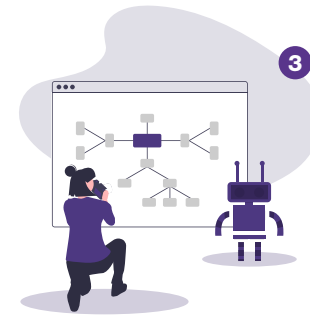
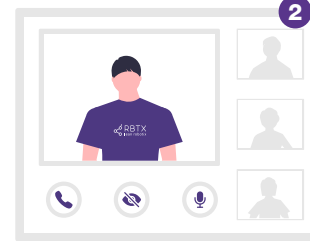
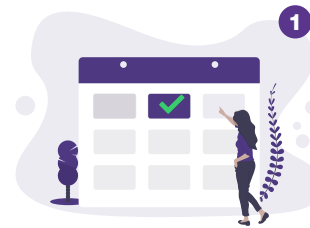
# RBTXpert: Free online consultation for your application

Our RBTXperts are automation experts who will help you automate your application. They have already provided advice on more than 2,000 projects and will support you in selecting the right robot type and compatible components.

Use the calendar tool to book a remote video call for an appointment simply and easily – and at no charge!



"I remember it well: I was standing in our production facility and suddenly had an idea for automation. But it was not clear to me which LCA robot would work best. So I booked an appointment for a video call with an LCA specialist on the RBTX® online platform. A short time later, I used my smartphone camera to help the expert familiarise himself with the environment. It was the perfect way to find the right type of robot as quickly as possible. Fantastic!"



1. Book a free video call with an RBTXpert
2. Show us your application
3. We help you select all components
4. You receive a fixed-price offer



... unleash your engineering power with play

Book now:  
[www.rbtix.com/en](http://www.rbtix.com/en)

- ▲ Easily automate your manual processes
- ▼ Free consultation from our RBTXperts
- Over 2,000 consulting projects
- Automation with little effort



As simple as in a furniture store:  
Configure robotics solutions in less than 1 minute

# Machine planner

At RBTX.com, our low-cost Robotix marketplace, you can assemble your own low-cost solution with our new configurator. Your solution can consist of various robots, conveyor belts, grippers, housings, and much more. You can then share your configuration with the robot community or access community designs directly. And of course this service is covered by our compatibility guarantee.



"Honestly, it's terribly frustrating to order a robotic solution that turns out to be unsuitable when you set it up. RBTXperience prevented such a nasty surprise. Before ordering, I simulated and tested the automation solution in the online tool with a 3D model – including all components such as robots, grippers, and the machine frame. I was able to keep an eye on all dimensions and the price at all times. This play-before-pay principle allowed me to look forward to the delivery, knowing for sure that everything would be compatible and suitable!"



... unleash your engineering power with play

Test it here:  
[configurator.rbt.com/de/en/machine-planner/](http://configurator.rbt.com/de/en/machine-planner/)

**1. Configuration**  
**2. Order**  
**3. Setup**

Hardwarepreis: 24.946,63 €  
inkl. Aufbau und Inbetriebnahme: 27.446,13 €

**Roboter**

<p>ReBel Cobot - 6 Freiheitsgrade, Reichweite 664 mm</p> <p>€ 4.970,00 € 2 kg Nutzlast 664 mm Reichweite</p>	<p>ReBel KID Cobot - 5 Freiheitsgrade</p> <p>€ 3.999,00 € 0,5 kg Nutzlast 300 mm Reichweite</p>
<p>Scara Roboter - 4 Freiheitsgrade, Reichweite 560mm</p> <p>€ 7.933,70 € 2 kg Nutzlast 560 mm Reichweite</p>	<p>Delta-Roboter - Vormontiert, Arbeitsraumdurchmesser 360 mm</p> <p>€ 8.695,00 € 5 kg Nutzlast</p>
<p>Flächenportal - Schrittmotoren mit Litzenversion ohne</p>	<p>EPSON SCARA T6- B6025, Reichweite 600</p>

Hardwarepreis: 32.854,19 €  
inkl. Aufbau und Inbetriebnahme: 39.261,74 €

**Zubehör**

<p>FlexiBowl® 900</p> <p>€ 11.050,00 €</p>	<p>RBTX Wendelförderer</p> <p>€ 1.190,00 €</p>
<p>Kleinförderer GUF-P 3000 AE</p> <p>€ 1.000,00 €</p>	<p>Miniatür-Lichtschranke GLE-P3211</p> <p>€ 76,00 €</p>

**Free CAD download**

- ▲ Design a CE-compliant machine - without a CAD tool - in the browser
- ▼ Download CAD data free of charge
- Tested for compatibility of the components used
- Test online whether your application can be realised
- Return to your configuration at any time and continue planning

**Zusammenfassung deiner Planung**

Mit Zelle



Automated bonding and dosing

# To the gluing solution in five clicks

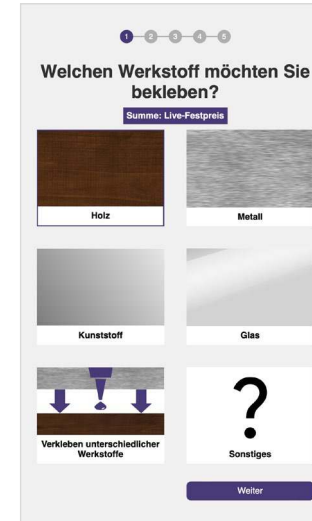
Bonding and dosing robots increase productivity and efficiency by replacing manual adhesive application. Bonding robots also apply glue more consistently, increasing quality. The robot applies precisely and in even layers, resulting in even adhesive distribution and a higher-quality end product. You can assemble your adhesive solution in just five clicks, always have the price in view, and immediately receive an offer without obligation.



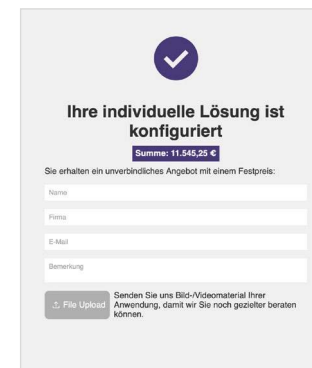
"I would never have thought that configuring a complete robot system for automated bonding could be so quick and easy. Thanks to the new igus® online tool, it took me just five clicks to configure my individual solution, including the robot cell. One more click and I received a fixed-price offer, without obligation. Construction effort could hardly be less. The robot is now in use. It delivers precise, consistent results and reduces my employees' workload!"

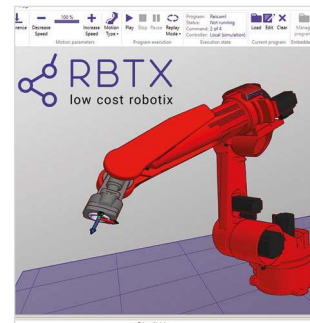
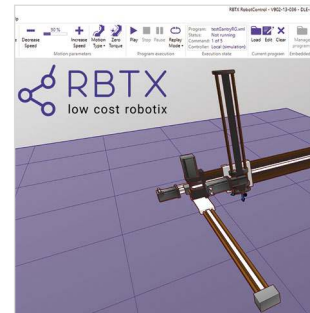
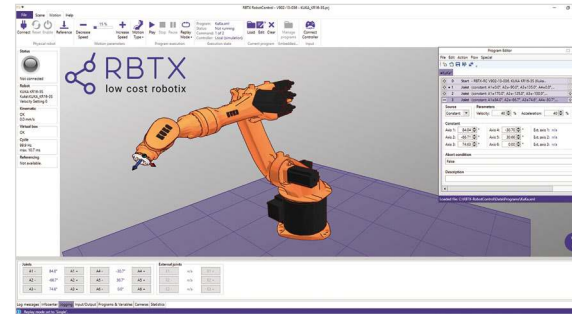
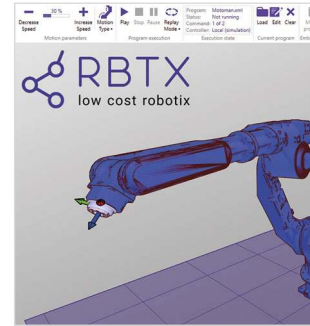
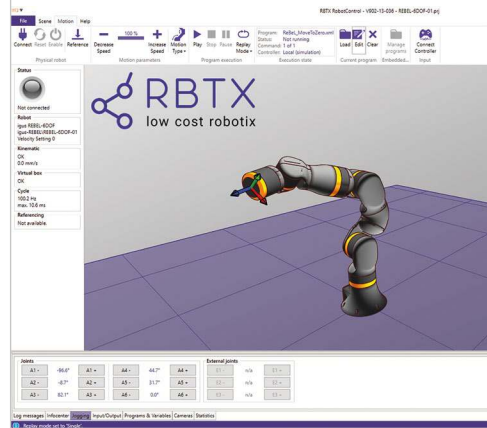


Click here for the configurator:  
gluing.rbt.com



- ▲ Easily automate gluing and dosing processes
- ▼ Save individual design effort
- Compatibility of all built-in components guaranteed
- Minimum use of resources through standardised systems





Try it now:  
[rbtx.com/de-DE/components/software](http://rbtx.com/de-DE/components/software)

One software for all robots

# Programming in just five minutes – control different robots with one software program

**Time is money.** That's why we have made programming robots easier for you. AnyApp can be used to program robots from a wide variety of manufacturers with a single universal software package.

Employees no longer have to laboriously familiarise themselves with or be trained on different programming languages. A single software program also makes it possible to react more quickly to changing requirements and adapt robots to new tasks quickly and flexibly.



"Robots from several manufacturers work in my production facility. Orchestration used to be quite a hassle. Our engineers had to master and operate several control software programs. This is much easier today with AnyApp, which builds a bridge between manufacturers. We can control robots across manufacturers with just one piece of software. This saves us lots of time!"

- ▲ Program robots from a wide variety of manufacturers with just one app
- ▼ Reduce integration cost and effort
- Tested on five different manufacturers
- Counteracts a fragmented software landscape

Platform

**Change**  
engineering plastics recycling

**#recycling**

- @circulareconomy
- @recyclates
- @regranulate
- @regrinds



Recycling made easy

# Marketplace for recycled technical plastics



## What happens to our products at the end of their life cycle?

This question has stayed with us and it gave us the idea for our change® program. We want to provide our customers an easy way to recycle industrial plastics. If you too would like to contribute to the material flow and the circular economy, simply submit an inquiry for your recyclable plastic.

In our marketplace [change.igus.eu/marketplace](https://change.igus.eu/marketplace), you can find the recycled material that suits you. We offer recyclates, regranulates, and regrinds that enable you to create new products according to your needs.

#sustainability #recycling

"During new product development, sustainability is very high on my list of requirements. I was able to search for recycled material on the change® website and found the material that best suited my needs. I want to have recyclates, regranulates and regrinds available to create new products that meet the needs of my industry. I also want to make sure that the materials I use come from trusted, sustainable sources that respect the environment. If I have questions or need other information, I want to be able to contact the change® team directly to ask for help."



### Three steps to Circular economy:

1. Enter material information
2. Enter contact details
3. Submit inquiry and start recycling

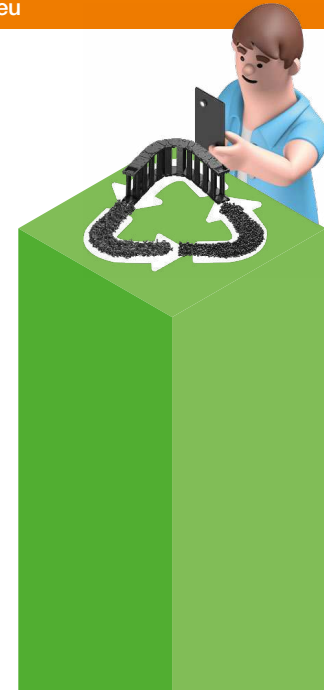


**Since 2020, over 115 tonnes of material have been recycled**



... unleash your engineering power with play

Join now and become part of our growing network.  
[change.igus.eu](https://change.igus.eu)

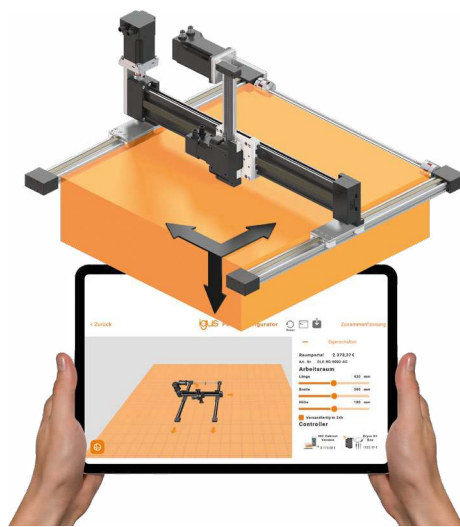


Our raw materials are too valuable to be incinerated. We must take a different path, away from a linear economy and towards a circular one. igus® therefore supports innovative recycling. Many industrial components end up as waste at the end of their service life. Thus a linear economy wastes valuable resources. So we are doing our best to simplify industrial plastic component recycling. A current example is our change® recycling program: users simply send us their worn-out energy chains, regardless of manufacturer. We take care of sorting and recycling and thank participants with a voucher for a purchase from igus®. This benefits customers and the environment equally. igus® also invests in the HydroPRS recycling technology from Mura Technology Limited, which converts unsorted plastic back to oil in just 20 minutes using just water, high temperatures, and pressure.

Online configurator tools

igus® online tools

Simulate – configure – digital twins



Discover igus® online tools

# Reduce process costs and configure products more efficiently

Experience the faster, more efficient way of configuring the product with the igus® online tools. Find the ideal tribo-component for your application and configure it to your requirements in seconds. At igus®, you can design and configure energy chains, cables, drive technology, low-cost robots, smart plastics and 3D printed components fully digitally online. Prices, delivery times and expected service life are calculated throughout and enable the ideal solution to be developed. Download data sheets, CAD models and technical drawing and order the configured product online.

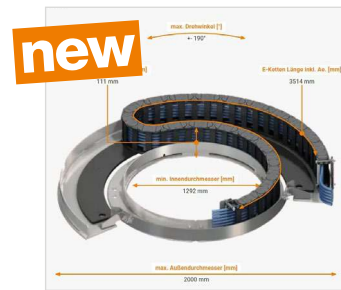
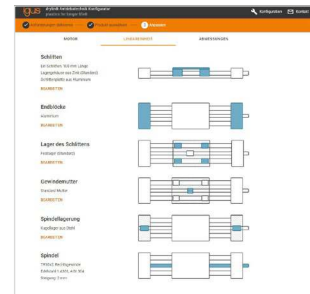
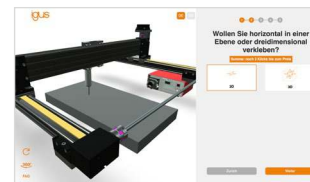
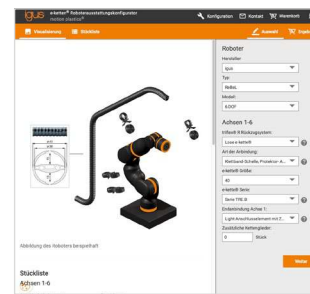
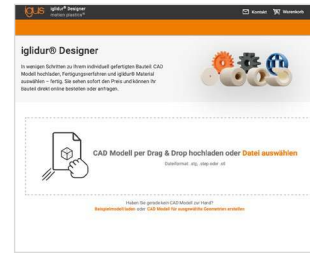
**New: Rotary module configurator:** Lightning-fast and reliable design of customised rotary modules for your application

#product\_configuration #individual\_application #design\_optimisation

“As a development engineer, I have to find and configure the right parts for my design every day. This used to cost me a lot of time, but since I discovered the online tools from igus® it's faster and the result is better. The tools are intuitive and for different product groups. In just a few steps, I can find the ideal product for my application. I can configure according to my individual requirements, can compare prices and delivery times and can order online immediately, even if it's just one part. And all within seconds. The service life calculation also allows me to make a good assessment of the durability. I can also download CAD models and technical drawings free of charge - I save time and costs.”



- Configurators
- Simulators
- Service life calculator
- Product finder
- 3D CAD



... unleash your engineering power with play

Try it now:  
[www.igus.eu/tools](http://www.igus.eu/tools)

## #enhanced\_efficiency

@engineers  
@designengineers

- ▲ Consistent online product selection, configuration and ordering process
- Fast realisation of the idea to the ready, optimal product
- Service life simulation and calculation
- CAD data for integration into your own design
- ▼ Service life calculation and simulation prevent expensive product failures
- Find the most cost-effective solution that works
- Wireless and intuitive operation for time-saving
- Entirely digital design and configuration reduce resource consumption
- Service life calculation and simulation prevent expensive product failures

#internetofthings

@industry4.0



Top engineering made smart

# Record operating states, evaluate machine data, and extend product service life

\$1,500,000,000,000 ... Yes, \$1.5 trillion ... that's the cost of production losses industrial companies suffer each year according to a study by Senseye, an analysis software manufacturer from the UK. Companies have to work productively and cost-effectively and avoid failures. Automation and the Industrial Internet of Things (IIoT) are powerful aids. Our smart plastics are a cost-effective ticket to the world of Industry 4.0. Plain bearings, energy chains, and cables are equipped with monitoring sensors. They communicate wirelessly with IT modules and reveal their status in real time. This avoids expensive system failures (condition monitoring) and allows optimal maintenance planning (predictive maintenance). The goal is increased productivity, reduced costs, and enhanced competitiveness - in our own factory and for our customers.

#automation #reliability



"As a maintenance officer, it's my job to make sure that my production line doesn't break down. The superwise service takes out some of my worries. I can view the status of my systems at any time in the portal. I receive a concrete statement about the service life of my energy chain based on sensor data. Maintenance and servicing measures can thus be optimally planned and don't disrupt the process. If there are any anomalies, there is an alarm system that notifies me immediately. At the same time, a message goes out to the igus team and they get in touch with me at once with the right solution. The superwise gold package includes all of this at no extra cost."



Find you smart solution:  
[www.igus.eu/smartplastics](http://www.igus.eu/smartplastics)

Three service packages

### superwise Silber

- ... precise statement on the individual application
- ... Call from technical sales with suggested solutions
- ... i.Sense: Alarm or info message when defined values are exceeded
- ... i.Cee: Information is sent via a local network or online to a cloud (IoT)

### superwise Gold

- ... sensorbased data for precise service life information
- ... Maintenance, inspection and replacement of the energy system run automatically without additional costs

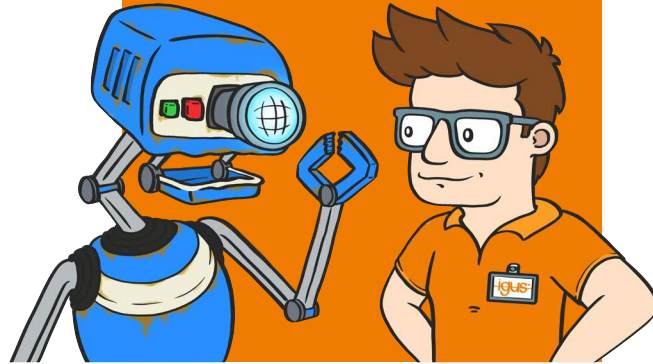
### superwise Basic

- ... contains component overview
- ... saves installation history
- ... indicates the service life statistically
- ... includes Next-Service-Reminder

"Predictive maintenance can reduce maintenance costs by up to 30% and machine downtime by up to 70%."<sup>3)</sup>



- ▲ Sensor integration into smart plastics components
- Service life transparency (condition monitoring)
- Predictive maintenance
- Real-time monitoring and early replacement increase productivity
- ▼
- Avoid system failures with optimised maintenance planning
- 
- Numerous proven smart plastics projects as well as ongoing maintenance contracts
- 
- No premature replacement "to be on the safe side": use the full component service life without increasing the risk of failure



Experience the motion plastics® game

# Fight against maintenance and plant downtime and unlock new solutions



Immerse yourself in the world of igumania and, as the production manager of a Mars Rover factory, combat unplanned maintenance and plant downtimes with your assistant, Rusty. A joint success story with motion plastics® begins with a visit from Dave, the technical consultant from igus®. The more problems you solve on the shop floor, the more lubrication-free motion plastics® solutions you can unlock in the igus® laboratory technology tree. Experience the IMPS (igus® motion plastics® show) in a playful way and learn more about our products. Achievements unlock more perks, helping you become the hero of your Mars Rover factory.

#computer\_game #gaming #manufacturing #production #maintenance #hero

Peter, the production manager at a Mars Rover factory, often struggles with unscheduled maintenance and plant downtime. Dave, the igus® sales consultant, visits him and shows him how motion plastics® can be used to minimise service and downtime for his systems. Peter then begins to tackle maintenance costs and unexpected machine breakdowns in the "motion plastics® game" and unlocks new solutions with each success to improve production processes, reduce downtime, and avoid using lubricants. He playfully learns more about igus® products in the IMPS (igus® motion plastics® show), and his achievements unlock more perks. Become a production hero with igus® motion plastics®.

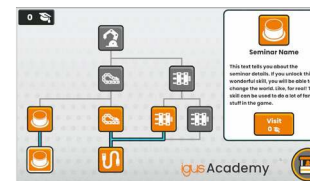


... unleash your engineering power with play

Play here now!  
[www.igus.eu/igumania](http://www.igus.eu/igumania)

#gaming

@gamers  
@interestedusers





# igus.eu/enjoyneering

# igus®

igus® GmbH  
Spicher Straße 1a  
51147 Cologne  
Phone +49 2203 9649-0  
www.igus.eu



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Subject to technical alterations.

Issue 03/2024

MAT0075540.20