

Reliable quality + cost savings: igus® opens its safe to reveal new and tested solutions for machine tools

The time has finally come. igus® is revealing its closely guarded new products and services as part of the "save programme". The key to "cracking" the safe is the using the right combination of potential solutions: confronting **global cost pressures**, **reducing process costs**, and **investing in local production**, while still achieving the **best possible quality** in spite of all the savings. Those who follow us in using these tactics and objectives will also be able to overcome the challenges in the mechanical engineering market. Our diverse safe contents will most certainly assist your efforts. Based on the motto "not only more affordable, but also more reliable", the "igus® safe" is certain to offer you the perfect customised combination for your machine tool. We hope you enjoy the read.



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Yours,



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safe & save 2013: We open the igus safe for you

- 30% cheaper
- 18, 24 or 36 months
- 2 billion strokes, 15.000 technology tests, 3.000 electric tests
- 30% lighter
- smaller and efficient
- no lube, low cost, 10 tons load

safe quality & save money: new tested and proven igus solutions for machine tools

chainflex® M: Cables for global competition

igus® considers itself a system provider. Correspondingly, we provide total solutions, consisting of outstanding, internally-developed igus® products. Energy supply systems have already been produced as ready-to-install modules under the "readychain®" label for 20 years. e-chains®, cables, connectors, connections and the like are all perfectly aligned and undergo continuous technical enhancement. The "chainflex® M" series was designed in the same spirit in an effort to develop a **cost-effective service package for machine tools**. This comprises **control, BUS, servo and data cables** that are primarily characterised by one thing: reliability. Every cable has a **tested service life of at least one million cycles** and has thus earned the quality seal "M". And this at **20% to 30% lower cost!** Particularly producers that supply to cost sensitive markets can continue to improve their competitive position with chainflex® M by obtaining a high-quality energy supply system for their machinery at an affordable purchase price.



Components such as chainflex® M transform their machine tools into cost-efficient, high-performance products that can be sold globally, even to the most demanding customers. Such market potential cannot be tapped into with the cheaper yet significantly lower performance components offered by local suppliers.

The complete chainflex® M product range

► www.igus.eu/EMO/chainflexM

e-chain® E4.1 light and e-tube R4.1 light: weight reduction = cost reduction

The energy supply system segment has launched two new innovations, the E4.1 light and R4.1 light, which rigorously focus on **weight reduction while offering high stability**. Both versions weigh and cost 30% less than their predecessors. They combine simple handling and high dynamics with outstanding robustness. In addition to their weight, their unique design also predestines them for **short assembly times**. The lids snap open and the contours have been kept extremely smooth. This makes the chain quick to open and fill and easy to lay. The crossbar geometry has been further improved, as has the ratio of inner to outer dimensions by using narrower



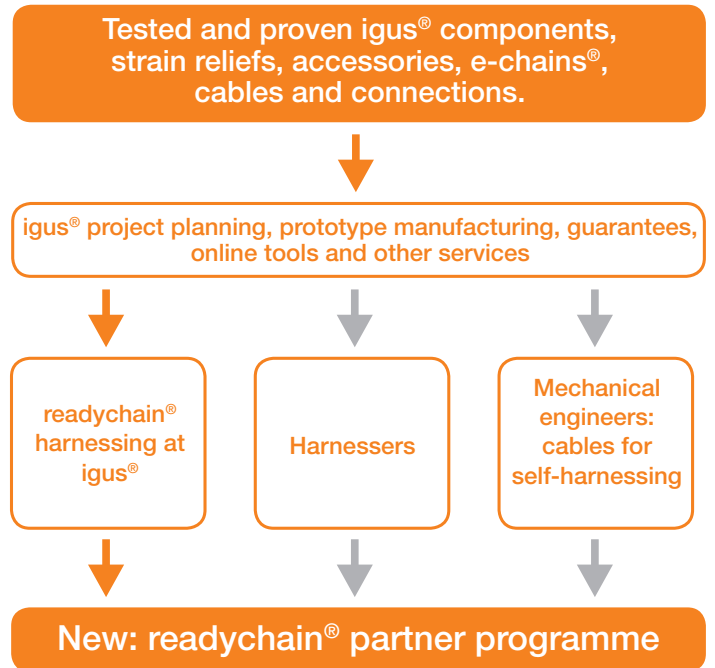
outer links. Thanks to the enhanced lid and base designs, the energy supply system is **extremely tight-fitting with almost no gaps**. This further reduces the risk of dirt or chips into the chain, even under permanent exposure. During test runs in the igus® laboratory, the e-chain® stop dogs even remained completely free of chips!

Any mechanical engineers who have already been won over by the performance capabilities of polymer-based energy supply systems will find the E4.1 light e-chain® and the R4.1 light e-tube exhibited at this year's EMO to be two igus® components that will noticeably improve the quality, reliability and ultimately the value of their machine tools.

▲ Available in three inner heights (31, 38, 48 mm) and two versions (e-chain®/e-tube)

The readychain® partner programme: certified reliability

igus® has launched its new "partner programme" for all harnessed energy supply system packages. This enables customers who assemble products themselves to access igus® technical consulting resources for project planning and production. Moreover, **regardless of who actually performs the assembly (you, your harnesser, or igus®), we will provide a system warranty** for the fully harnessed energy supply system! We therefore think of the readychain® partner programme as full-service option comprising consulting, training, a warranty and the provision of online tools, so that all of customers' needs are met. Anyone with the corresponding igus® certificates is using reliable cables and proven expertise.



More facts and figures:

▶ www.igus.eu/EMO/safe-chain

New products and services for saving time and costs

igus® is also rigorously pursuing its system-based approach with the new **fluid module**, including e-chain®. This **fully integrates control technology, hydraulic, pneumatic, magnet tech-**

More facts and figures:

▶ www.igus.eu/EMO/E41light

nology and fluid sensor modules. In pursuit of this objective, igus® is working with leading representatives from these specialty fields to enable it to use the best individual components and harnessed e-chains® to provide the best possible total solution for drive systems and pumps for high pressure, submerged applications. The individually adjustable readychain® rack light makes the transportation and assembly of energy supply systems even faster and more reliable. readychain®



New: readychain® rack light ▲

modules are fully harnessed and ready to install. They can also be assembled with even less effort using the mobile and telescopic readychain® rack light, which reduces costs by up to 50% across the entire process.

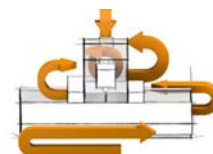
Since igus® is primarily a system provider, we will of course offer a full assembly service on customer request. We will also gladly demonstrate the use of the readychain® rack light at your facility. Simply request our readychain® truck, the “igus® factory on wheels”.



On customer request, igus® will issue a standardised warranty for the durability of all cables from the chainflex® product range – a first in the industry. The chainflex® warranty programme therefore goes far beyond the requirement for a statutory 12-month product warranty, provided that cables are used in line with the specified usage conditions. Three different warranty certificates can be issued, all based on the purchase date or the number of double strokes performed. With the exception of chainflex® M, for which the warranty is limited to 1 million double strokes, all chainflex® cables with a basic warranty (“orange”) have a guaranteed service life of 18 months or 5 million double strokes. The intermediate level (“silver”) provides a warranty for 24 months or 7.5 million double strokes, and the premium level (“gold”) even covers 36 months or 10 million double strokes. warranty level depends on the annual turnover with chainflex® piece goods. The guarantee scope contains immediate replacement of the respective chainflex cable length. In the event of justified warranty claims, igus® will immediately replace the applicable cable length. in the case of a guarantee incident. The chainflex® warranty programme provides mechanical engineers with the highest possible level of

long-term planning reliability. The warranty commences upon receipt of the igus® warranty certificate and successful registration. All products and any services marked with the new quality seal, "save", provide customers with the best possible value for money on the market.

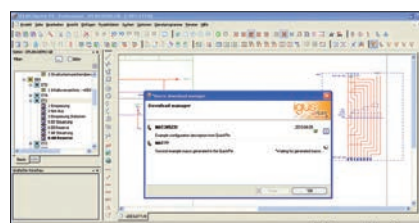
Reliability at the lowest possible cost.



▲ Time and cost savings are also ensured by the "OpenSpace" design service. You provide us with the installation space and specifications, and we will design an energy supply system to meet your needs!



In the age of lean production machine tool producers are also facing considerable logistical demands with respect to the fastest possible ordering and shipment of machinery components. Long storage periods and even plant downtime are cost drivers that nobody can now afford. Our free EPLAN macro can be used to determine the correct cable type within seconds on the basis of criteria such as material, oil-resistance or bending radius.



igus® also operates a 24-hour ordering service and an exemplary shipping service so that products leave our warehouse within one day and reach customers by express shipment on request. In spite of this, we are also still pursuing various strategies to further reduce worldwide shipping times – always at competitive rates. As a global competitor, igus® can only provide these services because our 11 production facilities and approximately 700 development and sales engineers give us a continuous local presence worldwide, either through our 31 global branch offices or through one of our 47 certified partners. Our reliability guarantee therefore covers the entire product lifecycle, from production, delivery, and assembly through to maintenance and operation.

More facts and figures:

- ▶ www.igus.eu/EMO/openspace
- ▶ www.igus.eu/EMU/CFGarantie

A focus on research: making all products reliable and calculable

The challenge of reducing costs and guaranteeing the best possible process reliability – is one that can only be tackled by those who invest considerable resources into research and testing: day by day, (travel) metre by metre, the corporate vision of "plastics for longer life®" is becoming a reality. **The largest test laboratory in the industry** conducts more than **two billion test cycles per year on 180 test stations**. All results are recorded, reviewed and analysed in the company's in-house database. We provide this enormous data pool, developed over decades of work, to all users who wants to conduct an **online calculation of the service life of their igus® products**, whether cables, e-chains® or plain bearings. Our mechanical engineering components pass the endurance test of production reality as they have already experienced this before leaving the igus® warehouse. It is for this reason alone that we can make such a far-reaching warranty commitments. Our test laboratory and modern plastics, along with our production methods prove that a square peg can be made to fit into a round hole: "low-cost, but high performance".

More facts and figures:

► www.igus.eu/EMO/Labor



Continuous operation, guidelok horizontal



drylin® axis/motor testing

More facts and figures (Version 2012)

The largest test lab:

- 1,500 m² (e-chains®, chainflex®) + 250 m² (plain bearings)
- More than 15,000 tests per year

Testing machines:

- 65 in the e-chain® lab and 42 in the plain bearing lab.

e-chains®:

- 4,100 tests, 7,512 results in the electronic database chainflex®:

- 232 tests established (with 1,953 cables)
- Average 650 tests run in parallel for chainflex® cables
- > 2.0 billion test strokes per year
- > 770 manufacturing monitoring tests conducted per year
- > 223 million tests strokes for manufacturing monitoring
- Up to 1.4 million electrical measurements during tests

Plain bearings:

- 142 plastic compounds developed and tested
- 9,679 tribological tests of various types (rotating, pivoting, linear, heated, submerged, etc.)
- 661 customer-specific tests

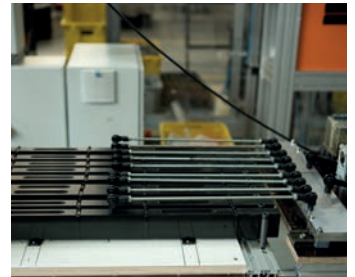
Number of tests run in parallel:

- 253 for e-chains® & chainflex® and 150 for plain bearing technology

Examples from the igus® lab



Tightness testing on e-tubes



Abrasion testing on cables



Oil-resistance testing on cables



Heavy-duty test rig for plain bearings

More information and services

Are you in need of free samples, catalogues or other information? – then call us or send us an email.

- www.igus.eu/catalogue
- mkogelmann@igus.de

Who else on your team would like the Electro Newsletter?



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