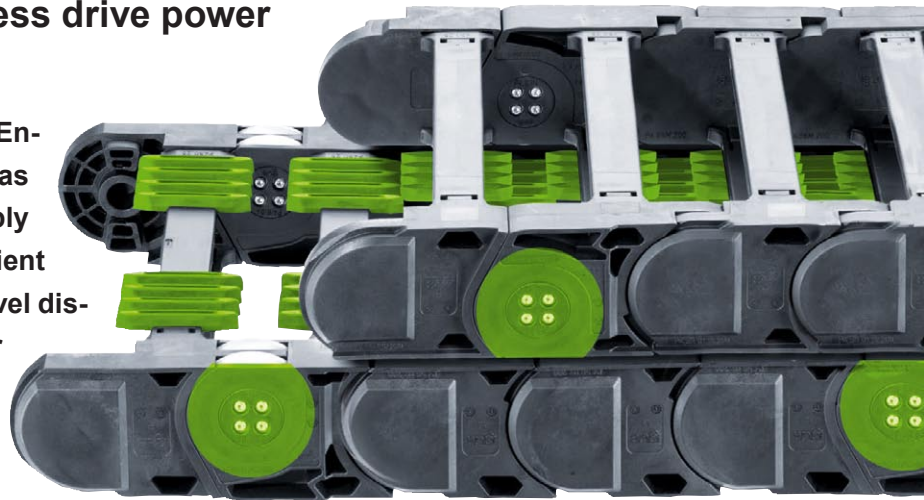


Green automation

Energy efficiency: 57 percent less drive power for 3 m/s and faster

Breakthrough in „green“ automation: Energy chain expert igus GmbH, Cologne, has developed a fast, quiet solution to supply power, data and media for energy-efficient handling and bearing processes. With travel distances from 40 to 50 meters, the costs for power and operation are significantly reduced when automated processes are interlinked.



Processing lines, such as in the woodworking industry are a good example: if heavy manufacturing parts are loaded and unloaded over long distances, this must be done quickly, quietly and with minimal use of power. The same applies to bearing technology, for example with storage and retrieval systems, and for gantry robots. This is what is known as „green automation“.

Transport energy costs matter!

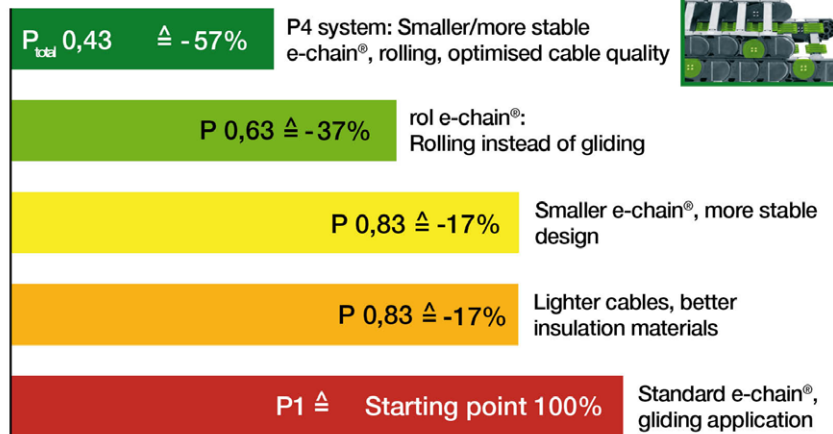
What does this have to do with energy chain systems, cables and hoses? Are there any machine modules whose energy-efficient design promises more significant power savings? First of all the answer is yes says igus. And secondly, as highly dynamic moving machine parts, energy chains are among those engineering items which „must be taken into account, because they can make a very substantial contribution to reducing the power consumption of the drives“. After all, the drives have increased loadson them in order to move the energy chains, and so are therefore essential for operational safety. This transport energy cost could be reduced significantly, since there is still „a lot of untapped savings potential“, says igus Managing Director Frank Blase.

Picture PM1811-01: igus GmbH, Cologne

Green automation: The abrasion-resistant and quiet „P4“ profile roller energy chain from igus, Cologne, requires 57 percent less drive power for handling and bearing processes at 3m/s and faster. When travelling at a distance of 40 to 50 metres, electricity costs are noticeably less and higher speed and acceleration can be achieved without increasing the noise level.

Energy chains for green automation:
75% less friction

► Up to 57% less drive power needed



Picture PM1811-02: igus GmbH, Cologne

Savings in energy costs for transport: With profile roller chains for „green automation“, such as the smaller „P4.32“ and „P4.42“ now available ex stock from the igus factory, Smaller motors and associated parts can now be used.

The „P4“ profile roller chain

That is exactly what igus has been doing recently with its „P4“ profile roller energy chain system for „green“ automation. The first innovation will be seen at the “EMO” and probably also at “Motek”.

Faster, quieter, less electrical consumption

The „P4“ system, originally developed for high-speed container cranes (and already in operation with these worldwide for three years), basically makes 800m of travel possible at a speed of 10m/s and more, with high load weights up to 10kg/m. The „P4“ energy chain kit now also comes in smaller sizes – notably the „P4.32“ and „P4.42“ – for „green“ handling processes. These rolling solutions are superior to purely gliding energy chains for this purpose, says Andreas Hermey, development director at igus: „At 3m/s, especially at 3.5m/s and more, users have big advantages“. Because if they switch to automated processes for roller chains, the rolling friction will be 75 percent less compared to gliding friction, and this means up to 57 percent less driving power is required (taking into account not only friction, but also inertia and chain weight). Secondly many handling processes can now be much faster in velocity and acceleration, without increasing the noise level.

The „P4“ profile roller energy chain is particularly abrasion-resistant and quiet. The upper run rolls pass through the rollers of the lower run – they are offset from one another – which will increase the life of the plastic chain even more. The pitch length of the chain links with and without rollers is the same, so that the energy chain achieves quiet and low vibration operation. The tribologically optimised plastic profile rollers are securely integrated into the side panels.

www.igus.eu/green-automation



Picture PM1811-03: igus GmbH, Cologne

There is a great savings potential, in steel processing for example: Here an energy-efficient „P4“ roller chain (not pictured) supplies a lightning-fast feeder from Schuler Automation, which services the press lines. Normally the „P4“ is placed on its own lower run, and rolls quietly over a continuous surface.

PRESS CONTACT:

André Kluth
Head of Corporate Communications

igus GmbH
Spicher Str. 1a
D-51147 Köln
Phone +49-22 03 / 96 49-0
Fax +49-22 03 / 96 49-222
akluth@igus.de
www.igus.de



DIN ISO 9001:2008

The terms "igus, chainflex, readycable, easychain, e-chain, e-chainsystems, energy chain, energy chain system, flizz, readychain, triflex, twisterchain, drylin, iglidur, igubal, xiros, xirodur, plastics for longer life, manus, vector" are legally protected trademarks in the Federal Republic of Germany and, where applicable, in some foreign countries.