The evolution of igus® rol e-chain®

igus® rol e-chains® journey over the last 20 years

1999 Revolution
2004 Evolution
2008 Innovation
2018 Sensation

igus.eu
plastics for longer life®
From technical innovation to standard product – development of the rol e-chains® from igus®

For almost 50 years, igus® has been developing energy supply systems that reliably guide cables and hoses and protect them against damage. In the beginning, they were almost exclusively products for the mechanical engineering sector; the invention of the rol e-chain® more than 20 years ago brought about the breakthrough into other branches of industry. The technical basis is the integration of rollers into the e-chain® links to enormously reduce the coefficient of friction on long travels. In this way, up to 57% of the required drive energy can be saved while moving the energy chain system. Noise is also significantly reduced. Thanks to the design, travels of up to 1,200m and more are now possible.

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World record application
615m-long travel in operation for 10 years without failures

In addition to the motor, control and data cables, a water hose is routed in the e-chain® of the 5050RHD series (shown right in the e-chain®), which can be heated.
10 times longer service life for role-chains® ...

More than 20 years of continuous improvement of the igus® role-chains® for long travels and reduced drive force

1999
the revolution
first role-chain®
E400R

2004
the evolution
integrated rollers
4040RHD

2008
the innovation
split rollers
P4

2018
the sensation
smart role-chain®
P4.1

The first igus® role-chain® in Europe with a travel of 130 metres as the main way of supplying power to a crane system.

Heavy-duty role-chain® in a STS crane. The "HD version" of the role-chain® becomes the standard for STS crane applications and ship loaders/unloaders with long travels and high speeds, worldwide.

As an addition to the role-chain® product range, the P4 is for applications involving very high speeds (<240m/min) and installations where noise is a very important factor. In use worldwide for STS crane systems, ASC cranes etc.

P4.1 – The latest generation of role-chains® is the "long distance runner" and supersedes the P4. In the case of ASC cranes, the P4.1 enables the primary supply of power and data and operates at very high speeds (<300m/min). In use worldwide for STS crane systems, ASC cranes etc.

Fail-safe cables
1,354 cable types – tested and with a 36-month guarantee. For light-to-heavy-duty applications. Calculate service life easily online: www.igus.eu/chainflex

igus® system warranty
Every application is different. igus® warranty certificates can be issued for your individual application. Ask for the igus® warranty: "chain, cable, guarantee"

Find online everything you want to know about the evolution of igus® role-chains®. Numerous application examples from the last few years: www.igus.eu/evolution
igus® rol e-chain® evolution ... comparison

The individual development stages of the igus® rol e-chain® family

1999 E400R

Due to rollers in the e-chain® links, the coefficient of friction and therefore the drive energy needed for energy supply systems can be significantly reduced. Especially for long travels of more than 100 metres, this is crucial and led to the success of the rol e-chain® from igus®.

2004 4040RHD

In the second development stage of the rol e-chain®, the chain was strengthened at all critical points. In the case of this “heavy-duty version”, the pin/bore connection in particular was enlarged by 100% while the size of the contact surfaces was increased by more than 30%. As a result, the expected service life doubled compared to the preceding series.

2008 P4

The P4 is a new development. It is characterised by lower noise and vibration due to the double-roller design, which also increases the service life of the system. Due to the same-sized pitch of standard links and roller links, the polygon effect is reduced as well.

2018 P4.1

In the latest development stage of the igus® rol e-chains®, the use of maintenance-free, tribo-polymer plain bearings in the connection of the e-chain® links also considerably lengthens the service life. As an option, they can also be fitted with wear sensors, to reliably predict the expected service life of the system. Compared to the first rol e-chain®, the expected service life has been more than trebled.

More information ► www.igus.eu/evolution
igus® is certified in accordance with ISO 9001:2015 and IATF 16949:2016 in the field of energy supply systems, cables and harnessing, as well as plastic bearings.

Ask for fully harnessed and pre-assembled energy supply systems - immediately increase your cash-flow and profit with readychain®.

Free of charge! Discover more about the latest trends and innovations from the world of igus® motion plastics®. Register here: www.igus.eu/newsletter