

New plastic strain wave gearing enables low priced 6-axis robot

igus expands the robolink modular kit for industrial low-cost automation

Simple, modular, light and cost-effective – that is robolink. igus has expanded this modular kit of plastic components for low-cost robotics and displays many new products at the Hannover Messe: from a new gearbox design and a complete robot arm up to a simple robolink online configurator. Therefore robot manufacturers can build inexpensive robots and users are able to automate simple tasks.

The robolink D modular kit from the motion plastics specialist igus offers users the ability to assemble cost-effective custom robotic systems. The separate joints, which are driven by a motor directly on the axis, are available in various installation sizes. Now igus has further expanded its range and presents at Hannover more components that offer still more scope for design. This gives the ability to combine motors and joints in several sizes with the standard controls to make a complete 6-axis low-cost robot made of plastic and aluminium. In Hall 17 igus exemplarily displays an application that can move up to 3 kg load, with Beckhoff control.

New strain wave gearing for lighter arms

A special feature is the new robolink strain wave gearing, which can be, for example, very easy to use as the sixth axis of the robot arm, that is, as a radial connection between arm and gripper. It is very lightweight and efficient and is offered by igus in two installation sizes as a single component, or with a Nema17 or NEMA23 stepper motor. "The strain wave gearing has the advantage that it has minimal backlash and thus ensures a precise adjustment with incredible smoothness," explains Martin Raak, robolink product manager at igus. "It is very compact and has a high transmission ratio." The gearbox consists of an outer ring gear and a flexible wear-resistant inner ring gear made of iglidur high-performance plastic.

PRESS RELEASE

Quick and easy to configure with new online tool

In Hannover, igus displays a complete 6-axis arm with strain wave gearing. The worm wheels for the new transmission ratios 1:30 and 1:70 of the robolink D worm gear also utilise iglidur materials. For these, igus now also offers a decoupled option of motor and joint. The two components are connected to each other by an aluminium profile – the result is a better weight distribution on the axis, whereby more load can be lifted. The new universal gripper adapter allows the attachment of different grippers on the robolink D joints. The robolink D modular kit is rounded off with a new online configurator, by which users can assemble their robolink D joints from the start of the Hannover Messe and thus can configure their low priced robotic arms.

From € 243 per axis

The system is modular and therefore cost effective through the use of iglidur plastics. A robolink joint without a motor is already available from Euro 243, when ordering one piece. Motors, encoders, cabling and other accessories are available as options. igus also supplies mounted arms; all gears are offered to robot manufacturers in series production.

Caption:



Picture PM1516-1

With the new plastic strain wave gearing, a complete robot arm having six axes can be assembled at a very low price – from 243 euros for a robolink joint without motor. (Source: igus GmbH)

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ABOUT IGUS:

igus GmbH is a globally leading manufacturer of energy chain systems and polymer plain bearings. The Cologne-based family business has offices in 35 countries and employs around 2,950 people around the world. In 2015, igus generated a turnover of 552 million euros with motion plastics, plastic components for moving applications. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms "igus", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "e-skin", "energy chain", "energy chain systems", "flizz", "iglide", "iglidur", "igubal", "invis", "manus", "motion plastics", "pikchain", "readychain", "readycable", "speedigus", "triflex", "twisterchain", "plastics for longer life", "robolink", "xiros", "xirodur" und "vector" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.