

## The trick with the rear grip

### New energy chain E4/4-light: light, quiet and even more stable

Wherever energy must be moved and protected efficiently and reliably over short and, often, high-speed distances of travel, users require a flexible energy supply system that combines minimum weight with high stability. For machine tools, for instance, or for lathes and gantries - wherever increasingly higher loads need to be guided over large self-supporting lengths. For these numerous applications, igus (Cologne) has now developed the new energy chain system E4/4-light. Thin-walled but still designed as a very compact system, the E4/4-light now closes the narrow gap between the igus systems E4/4 (high stability) and E4-light (minimum weight).

#### Stability due to interlinking

The additional stability of the E4/4-light system is provided by a specially developed (patented), form-fit back grip - a second, very solid bolt in the drilled hole. Like two interlocking hands, this provides enhanced interlinking of the chain links. Result: the lateral stability is increased considerably and the chain links can not gape, because the chain is prevented from sagging. With increased stability in longitudinal direction and in the sagging area, the E4/4-light system is therefore particularly suited to applications when it is lying on its side (machine tools, etc.), as well as for applications that require very high torsional stiffness.

#### Minimum construction space requirements

A further feature of the energy chain system is the optimum ratio between inner and outer dimensions. With given inner heights (56 to 112 mm) and inner widths (50 to 600 mm) - dimensioned exactly as small as the E4-light energy chain - the new igus energy chain also features very thin wall thickness thanks to the enlarged inner limit stop on the back grip. Result: The E4/4-light energy chain possesses only very



Picture PM0105-01: igus GmbH, Cologne

*Light and stable: E4/4-light is particularly suited to applications when it must lie on its side (rotated by 90 degrees), with large self-supporting lengths*

little weight, remains quiet, provides increased driving power and thus - ultimately - production or industrial growth.

#### Quick installation - modular interior divisions

The chain links, which consist of four parts, can be "opened very easily with only two movements of the hand," according to Michael Blass, igus Sales Director Energy Chain Systems. This means that the technician does not need to use the expensive method of getting into the chain from the inside through the filling material. An opening link at the top and one at the bottom provide safety and convenience. "The spacious width of the interior divisions of the E4/4-light energy chain can also be used for a wide range of diverse variations. The modular construction kit includes sliding separating links as well as lat-

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ching separating links, which can be arranged in millimetre increments at any location in the chain cross-section. Intermediate bottoms, smaller specialised technical and further elements make numerous vertical and horizontal subdivisions of the chain possible. Even thick cables or hydraulic hoses can be guided reliably and efficiently.

### Integrated strain relief

Furthermore, igus offers the E4/4-light energy chain with a pre-assembled C-rail. This rail serves the purpose of providing integrated strain relief and makes extremely dynamic flexible energy supply systems highly resistant to tensile stress. This rail can also be easily inserted into or screwed onto the chain comb, which can be retrofitted at any time.

### Front side attachment possible

The E4/4-light energy chain is now available as an open variant and as a closed variant (energy tube) in 42 widths and for more than 10 bending radii, including pre-tension adaptation available upon request. The dirt-repellent chain, which is wear-resistant in tough environments and for longer distances of travel, is available with various accessories (plastic-metal connecting elements for all-round or front-side attachment directly onto the machine, rigid or, for extreme accelerations, floating connecting elements, strain relief elements, etc.). Like all energy chains made by igus, the E4/4-light energy chain is also available upon request in a complete, pre-harnessed form ("ReadyChain") with cables, hoses and plugs included as required.



Picture PM0105-03:

igus GmbH, Cologne

*Back grip principle: Interlinking of the chain links works like interlocking hands*



Picture PM0105-04:

igus GmbH, Köln

*Energy chain can be easily opened on the cover or from underneath.*



Picture PM0105-05:

igus GmbH, Cologne

*Ready in seconds - easy to install opening links*



Picture PM0105-06:

igus GmbH, Cologne

*Modular construction kit with links and bottoms provides numerous vertical and horizontal subdivisions*



Picture PM0105-07:

igus GmbH, Cologne

*E4/4-light: Available with connecting elements, C-rail for integrated strain relief, and further accessories*



Picture PM0105-08:

igus GmbH, Cologne

*Michael Blass, Sales Director Energy Chain Systems Germany at igus: "Our new E4/4-light combines the stability of the reliable E4/4 chain with the lightness of our quiet E4-light."*



Picture PM0105-02:

igus GmbH, Cologne

*E4/4-light: Back grip provides very high lateral stability*

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