

Securely guide hydraulic hoses in the smallest spaces with igus E2 hydraulic chain

New energy chain reduces maintenance intervals of construction machinery and mobile cranes

With the new E2 hydraulic chain we now have an energy and media guide even for smallest installation spaces on support legs. Strong, space-saving and easy to install, the igus e-chain guides two hydraulic hoses in addition to power and control cables. The E2 hydraulic chain is an ideal solution for special mechanical engineering, and its use significantly reduces the costs of maintenance and downtime.

Special challenges require innovative solutions. This is particularly true for support legs on many construction machines, such as concrete pumps or mobile cranes, which are characterised by a large variety of models, not least in the components. The safe guidance of hydraulic hoses is of crucial importance here, because they need to provide the machines constantly and reliably even under high mechanical stress and strong weather conditions. Efficient protection is provided by the E2 hydraulic chain from igus. It not only protects the internal cables, but also prevents torsion and bending of the hoses through the predefined minimum bend radius.

Proven technology even for heavy construction machinery

For a long time, igus has been using the principle of the "extender crossbars" when it comes to creating more interior space for the guidance of hoses. For the E2/000 series and the E4.1 and E4.1L systems, extender crossbars, in addition to normal crossbars, can be used with high holding power to accommodate additional hoses with larger diameters. Thus the entire energy and media guidance can be provided by one system. For the new E2 hydraulic chain, the concept was applied to the installation space-specific conditions of support legs on concrete pumps and mobile cranes. A one-piece, very solid extender crossbar design and the heavy-duty pin/bore connection ensure high strength, even for large unsupported lengths. The extender crossbars are injection moulded directly on the side link and thus offer optimal hose guidance and stability. It is also possible to place two hoses safely one above the other.

Since energy and hydraulics can be guided within a single hydraulic chain, the requirement for installation space is greatly reduced. The hydraulic chain has an external width of just 41.2mm and an external height of 57.5mm. The predefined minimum bend radius is 75mm. The total required installation height for the chain is only 255mm. Thus, the E2 hydraulic chain can be integrated into almost any application, such as close to the base or on the side wall of support legs, a concrete pump or a mobile crane.

Gentle hose guidance for less maintenance

Since hydraulic hoses, which are usually operated at extremely high pressure, have to endure a lot in dynamic applications, they are very maintenance-intensive. The E2 hydraulic chain meets this challenge in two ways: The extender crossbars and e-chain are made of tribologically optimised plastic. This reduces the abrasion and protects the hoses. In addition to this material advantage of tribo-polymers, its special design also reduces wear to a minimum. Both the extender crossbars and the interior of the chain are designed to protect the hose. Rounded contours and wide and smooth contact surfaces keep abrasion and wear of the hydraulic hoses low. The segmentation of the cable types also reduces the strain on the cables. Electrical and hydraulic guidances are completely separated by chambers. This follows the principle that cables and hoses with very different diameters should always be run separately. This is important because power or control cables have a thickness of maximum 5 millimetres, whilst the hydraulic hoses can be up to 20 millimetres. Normally a clearance space of 20% must be allowed for, since hydraulic hoses expand transversely and lengthwise when pressurised. Designed to the last detail, the E2 hydraulic chain can offer freedom from maintenance.

Caption:



Picture PM5918-1

Cables and two hydraulic hoses can be safely guided with the E2 hydraulic chain. This increases the service life and reduces maintenance intervals.

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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 3.800 people around the world. In 2017, igus generated a turnover of 690 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.

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