

SPECIAL-PURPOSE PART MOBILE MACHINERY

MOBILE HYDRAULICS PARTNER

“CONNECT WITH STAUFF”

The global Stauff Group, headquartered in the South Westphalian region of Germany, has gained significant market share in the international hydraulic market in eight years with its proprietary “Stauff Connect” tube connector range. The company’s product range is also in demand from manufacturers of mobile machinery. Alongside its other products, Stauff will be presenting innovations that have been developed with mobile hydraulics in mind at the Hanover Fair. In an interview, Managing Director Dr. Dominik F. P. Joachim also discusses the aspects promoted by the “Connect with Stauff” mission statement.

Boris Mette, Head of Marketing Communications, STAUFF, Werdohl, Germany



Mobile machines are the “heavy duty” equipment used for hydraulic line systems. They require good resistance to environmental factors, such as extreme temperatures, temperature fluctuations, dirt, moisture, ozone and UV. They also need excellent mechanical durability due to high static operating pressures, dynamically varying pressure loads, pressure shocks and peaks, as well as serious vibrations. Stauff’s ultra-robust, shock and impact-resistant connection and fastening components enable manufacturers of mobile machines to equip their high-end products with a reliable, leak-free hydraulic line system.

REDUCING NOISE AND VIBRATION

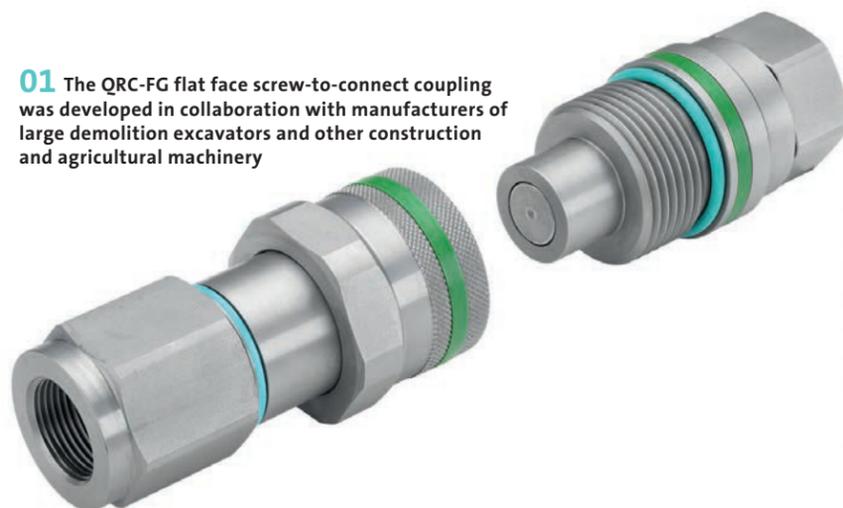
Stauff NRC clamps significantly reduce noise emissions from mobile machines and stationary loading systems, which can be harmful to people and the environment. Stauff Engineering developed the “Noise Reduction Clamp” specifically for the vibration-damping, and thus also noise-damping, fastening of tubes. A two-part elastomer insert mechanically dampens the vibrations in the line. The contour of the insert is designed in such a way that there is only a minimal contact face between the tube and the clamp body, thereby very efficiently reducing the propagation of sound through the tube network.

Stauff NRC clamps for high-pressure hydraulic hoses are also designed on the basis of the same principle. The contour and elasticity of the insert have been adapted to ensure that hoses can be securely guided and also have a certain radial “freedom of movement”. This, in turn, reduces vibration transmission and noise development, at the same time increasing the service life of the hose itself.

COUPLING UNDER RESIDUAL PRESSURE

A new range of QRC-FG flat face screw-to-connect couplings for the connection of hydraulic hoses was developed at the express request of manufacturers of large demolition excavators and other construction and agricultural machinery. The principle of the previous model, that is connecting hose lines that need to with-

01 The QRC-FG flat face screw-to-connect coupling was developed in collaboration with manufacturers of large demolition excavators and other construction and agricultural machinery



stand extreme vibrations and pressure peaks, with screw couplings in place of push-to-connect couplings, has already proven its worth on the market for a decade. The smooth front face has also been retained as it minimises dripping and prevents dirt particles and air from entering the hydraulic system. Stauff designers have now made the most of the potential to improve the product: the new QRC-FG range boasts a higher flow rate, and both sides can be easily coupled manually under residual pressure.

REDUCING THE INSTALLATION SPACE AND COMPLEXITY OF ASSEMBLY

Stauff Multi-Line clamps enable multiple tubes or hose lines to be fastened with just a single clamp. This saves installation space and reduces the number of clamps required, as well as all predominantly metallic components used to secure them. Installation is thus less complex and the weight is reduced.

Multi-line clamps are ideal for use in large hydraulic excavators, road construction machines, tunnel boring machines, open-pit mining machines, or material handling excavators. STAUFF MLC clamps are available for two, three, four or six tubes or hose lines with identical or different diameters. They are also ideal for

the secure fixing and routing of supply lines, such as electrical cables, pneumatic and low pressure lines.

RENTING INSTEAD OF BUYING

Thanks to the further development of the digital connectivity of the SFO-IOT forming machine, STAUFF can now offer OEMs and hydraulic service providers new ways of using the system. They have the option of a weekly rental price plus a fee per forming operation (Pay Per Use) or a flat-rate weekly rental price. Customers can thus use the Stauff Form Evo tube connection system without having to invest in the machine, for instance if their initial contract value is low or hard to calculate. The latest generation of the SFO-IOT forming machine is regarded as a pioneer in the industry in terms of its handling, service and digital connectivity.



It is equipped with a communication module with a SIM card as standard. There are a number of specific benefits to this direct networking with the Stauff Technology Centre. Software updates for specific tube materials can be transmitted or machine parameters analysed with remote intervention, among other benefits.

RAPID PROTOTYPING

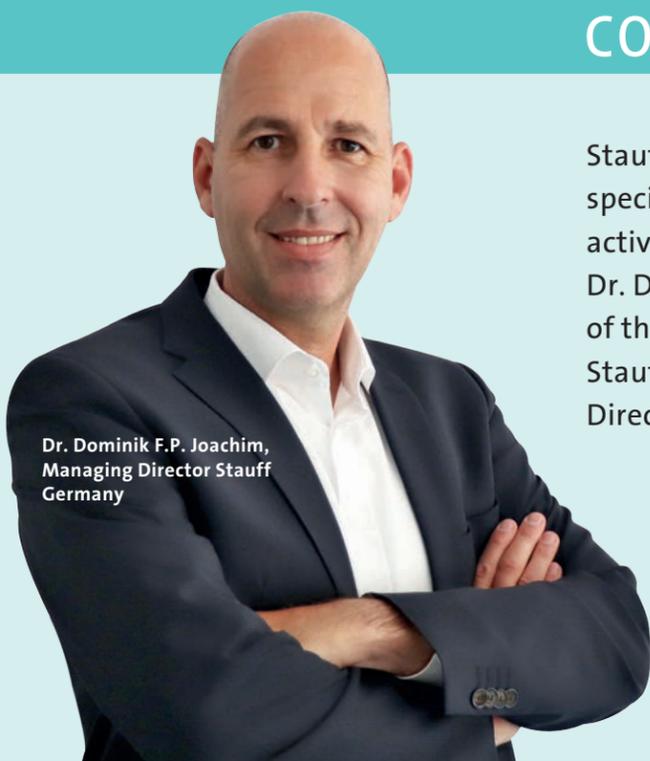
Additive manufacturing for the rapid production of models and tools has established itself in the off-highway industry. Many agricultural and construction machinery manufacturers have included the first additive manufactured components in their supply chains. Working in collaboration with one of the market leaders in industrial 3D printing, Stauff is now offering individual Custom Designed Special Clamps, small quantities of special catalogue items, or prototypes that have been manufactured from polyamide-based plastics at short notice using “selective laser sintering”. These components are capable of withstanding comparable stress to “traditional” injection-moulded components. Customers upload the CAD data of the component they require onto the online platform set up by Stauff, receive a quotation for the requested quantity directly (instant quoting), and can then order it immediately. Production takes a maximum of three days within Germany, including the delivery time.

Images: Stauff

www.stauff.com

02 Multi-line clamps are ideal for use in large hydraulic excavators, road construction machines, tunnel boring machines, open-pit mining machines or material handling excavators

COOPERATION WITH STAUFF



Dr. Dominik F.P. Joachim,
Managing Director Stauff
Germany

Stauff invites original equipment manufacturers, specialist dealers and hydraulic service providers to actively collaborate with them. We discussed this with Dr. Dominik F. P. Joachim, who has been a member of the Management Board of the international Stauff Group since the beginning of 2023, and Managing Director and spokesperson for Stauff Germany.

Dr. Joachim, what are the benefits of intensive collaboration with Stauff for manufacturers of mobile machines?

The construction and agricultural machinery industries and other mobile hydraulics industries are extremely innovative. Today, machines are increasingly being tailored to specific

functions and operating conditions, and the hydraulic line system requirements are just as diverse. Since the introduction of its Stauff Connect proprietary tube connector system, Stauff has been a full liner and also regards itself as a provider of solutions. Ideally, collaboration with customers starts with the planning and design of the hydraulic line system. We are innovation leaders because we listen, address our customers’ challenges, and develop new solutions in partnership with them. We need demanding customers who challenge us!

Stauff emphasises the fact that its products are “in-house developed and produced”. What is the significance of this for your customers?

This aspect is particularly important for us. Our in-house development and production capacities mean that we know and understand unequivocally how Stauff products “behave” when they are used. We are able to offer our customers a

leak-tightness guarantee, as our high-quality individual components are perfectly coordinated to each other. Our success is based on the performance of our products in a diverse range of demanding applications, including under extreme conditions in mobile hydraulics. After all, engineering is not an end in itself; the products and assemblies also need to be technically perfect and also cost-effectively manufactured. OEMs are now quite rightly demanding one-stop development and production.

How is Stauff internationally organised?

Stauff has its own subsidiaries and branches worldwide. This enables us to offer our international customers the same high level of services at all their sites. Our subsidiaries guarantee exceptionally good delivery performance, even with complete assemblies including bent tubes. Our Stauff Line system partners cover regions in which we do not have our own representatives.