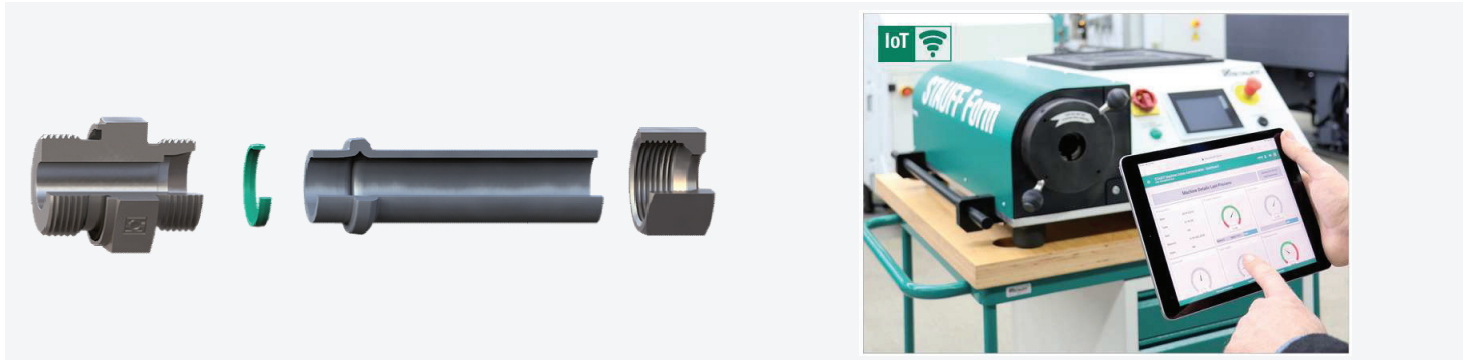




STAUFF INDIA PVT. LTD. | ENGINEERING CASE STUDY

Improving Hydraulic Tube Assembly Efficiency with STAUFF Form EVO

A technology comparison based on ISO 8434-1-compatible hydraulic tube connection architecture



THE CHALLENGE

Hydraulic tube assemblies must provide reliable sealing, mechanical retention and controlled assembly while remaining efficient to manufacture. Conventional welding, cutting-ring and flaring technologies have established applications, but compact routing and repeatable production can create a need for an engineered tube-forming approach.

THE STAUFF FORM EVO APPROACH

STAUFF Form EVO is the further development of the STAUFF Form Tube Forming System introduced in 2015. The system uses four essential components: an ISO 8434-1 fitting body, ISO 8434-1 union nut, STAUFF Form EVO sealing ring and formed tube end. Its positive-locking design combines an elastomer sealing element with an optimized formed tube end intended to preserve flow behaviour.

EFFICIENCY

Low cycle times, short tool changes and intuitive touchscreen operation.

COMPACT DESIGN

Low insertion depth supports complex geometries and smaller bending radii.

SERVICEABILITY

Low assembly torque, short assembly path and repeated reassembly capability.

ENGINEERING IMPACT

The Form EVO concept turns tube-end preparation into a controlled forming process. Dedicated equipment and exchangeable internal tube supports support repeatable production. The supplied brochure states suitability for steel and stainless-steel tubing, metric dimensions from 6–42 mm in the Light Series and 6–38 mm in the Heavy Series, with Heavy Series nominal pressures up to 800 bar. Final qualification remains application-specific.

WHY TUBE FORMING MATTERS

Controlled forming can support consistent connection geometry, reliable sealing, compact tube routing and efficient assembly. The Form EVO sealing ring provides the primary sealing function, while the formed tube geometry provides positive locking and is designed to preserve favourable flow behaviour. This makes tube forming relevant where production repeatability, installation efficiency and serviceability are priorities.

KEY TAKEAWAY STAUFF Form EVO combines ISO 8434-1 fitting components with controlled tube forming, dedicated sealing and efficient final assembly—providing a production-oriented solution for modern hydraulic tube assemblies. Machine features IoT Cloud connection which allows preventive maintenance via remote access and facilitates the documentation of assembly processes.

ABOUT STAUFF INDIA PVT. LTD.

Stauff India Pvt Ltd was established in 2000 and is a member of the Stauff Group which is present in 18 countries. Since its establishment Stauff India has significantly grown in both size and scope of products and services and is a leading supplier for hydraulic accessories.

Stauff India is headquartered in Pune, Maharashtra and has a second office in Ahmedabad, Gujarat along with a national network of STAUFF Line System Partners. Stauff India has expanded its manufacturing capabilities with the establishment of a new production facility at Aequs SEZ, Belagavi, Karnataka. The state-of-the-art facility strengthens Stauff India's production capacity and is strategically positioned to cater to the growing global and domestic demand for high-quality hydraulic products. The new manufacturing plant was officially inaugurated on **9 September 2026** in the esteemed presence of Stauff Management team, **Mr. Bipin Chirmure, Mr. Jörg Deutz, Mr. Boris Milkiyan, and Mr. Carsten Krenz.**



STAUFF INDIA PVT. LTD SEZ UNIT BELGAVI KARNATAKA



STAUFF INDIA PVT. LTD. HEADQUATER PUNE MAHARASTRA