



SAFE FITTINGS

# HOSE CONNECTIONS IN MOBILE HYDRAULICS

Hose connections are sensitive points in a hydraulic line system. They are exposed to particularly heavy loads in mobile machines. Patrick Oertle from Paul Forrer AG, the leading Swiss supplier of hydraulics, drive technology and motor equipment, recommends the Ecovos hose ends from Stauff.

*Boris Mette, Head of Marketing Communications, Stauff*

**01** The Ecovos hose nipple is slightly conical, which means that the hose can be pushed on with little force



the area, in which the hose, hose nipple and swage ferrule are connected to each other, are significantly longer than with most common connection systems. The mechanical loads caused by movements, pressure changes and vibrations are distributed over a larger area, quasi a stilling section, and reliably absorbed. Protection against torsion – twisting along the longitudinal axis of hydraulic hoses – is also significantly improved. If the hose is not adequately secured on the hose nipple, this can lead to material fatigue, leaks or, in the worst case, to the hose completely

” THE DESIGN OF THE SYSTEM IMMEDIATELY IMPRESSED US

*Patrick Oertle, Head of Sales and Product Management for Fluid and Drive Technology at Paul Forrer AG, Switzerland*



**H**ose lines are often the best choice for hydraulic line systems in construction, agricultural and forestry machinery. However, no matter how flexible and adaptable hoses are, it is essential that they are connected securely to machines and assemblies. In mobile hydraulics in particular, the connections are exposed to strong mechanical forces – not to mention the influences of the weather, temperature changes and dirt within the working environment. Patrick Oertle is responsible for sales and product management of fluid and drive technology at Paul Forrer AG. Since 2024, he has been recommending the Ecovos hose ends from Stauff to his customers: “We were immediately impressed by the special design of the system, and the response from original equipment manufacturers, machine builders, specialist dealers, workshops and service providers is also outstanding. Ecovos significantly increases the reliability of the hydraulics, which is often the weak point of mobile machines.”

## ECOVOS HOSE ENDS

The design of the hose nipple is decisive for the special operational safety of the two-part pressing system. This and especially

tearing off. However, a hydraulic hose that bursts or tears off under high pressure has serious consequences: unplanned machine and production downtime, high repair costs and, above all, an enormous safety risk for people and the environment. Leaking operating media under high pressure and uncontrolled hose ends whipping around also pose a serious hazard to the operating personnel. Users appreciate another feature of Ecovos: installation safety.

## BE CONFIDENT THAT EVERYTHING FITS

The Ecovos hose nipple is slightly conical, which means that the hose can be pushed on with little force. The functionality of straight, pressed fittings can be checked using a simple test mandrel. Patrick Oertle adds: “There is no need for expensive test



**02** Thanks to the special surface coating, no lubricant is required during installation and seepage is prevented

equipment, nor does it require the extensive training of personnel.” Another special feature simplifies handling during installation, whether at the manufacturer’s site or as a service provider at the site: The Stauff zinc/nickel coating, with which all components are coated as standard. It contains special additives so that threads and cones do not need to be lubricated during installation. This saves on lubricant and prevents seepage caused by residual oil “oozing out” during operation. The Stauff zinc/nickel

## INSTALLATION WITHOUT LUBRICATION THANKS TO A ZINC/NICKEL COATING

coating for steel components offers a particularly high level of corrosion protection, which is also reliable in the long term. Extensive test series in the salt spray chamber (DIN EN ISO 9227) demonstrated a resistance to rust of over 720 hours, at the same time minimising the formation of white rust. The strong ductility and plastic deformability ensure better wear resistance, even after pressing. The environmentally friendly (Cr6-free) coating is resistant to all common hydraulic fluids and is less prone to contact corrosion in combination with other metals such as aluminium or stainless steel.

## INTERLOCK WITHOUT DOUBLE STOCKING

For particularly demanding applications where extreme pressure loads or high safety requirements exist, each Ecovos fitting can be quickly and easily retrofitted with mobile interlocking protection (Interlock). This mechanical protection prevents the hose from tearing off uncontrollably in the event of sudden pressure peaks. Up until now, special components were required for tear-proof fittings. Double stocking was required for all nominal sizes once as a standard version and once as an interlock version. With the mobile interlocking protection, only standard Ecovos components are required. From textile hoses to skive and no-skive hoses with wire braiding and interlock applications with multi-spiral hoses, the following applies: Only one fitting for all applications, no double stocking. For Patrick Oertle, the switch to Ecovos has paid off: “Stauff products are well thought



**03** The mobile interlocking protection secures the connection even in the event of sudden pressure peaks

out from a technical, logistical and economical point of view. We are always impressed by the straightforward partnership-based cooperation at all levels.”

## GENERAL DESIGN SAVES ON STOCK HOLDING

Ecovos hose ends can be used to cover many different types of hoses, including braided, textile and multi-spiral hoses. This enables a significant reduction in the variety of variants held in warehouses and simplifies the storage of spare parts. Only standard components are required for retrofitting with mobile interlocking protection. Ecovos fittings are available in the nominal sizes DN 05 to DN 51 (3/16 to 2 inches) and offer all common connection variants. They are suitable for medium and high-pressure applications and are available as straight and elbow fittings (45°, 90°, other angles on request). All leading international hose manufacturers have granted their independent approval for Stauff Ecovos.

Images: Stauff

[www.stauff.com](http://www.stauff.com)

Paul Forrer AG, based in Bergdietikon, is a leading Swiss supplier of hydraulics, drive technology and motor equipment. The company works closely with well-known OEMs and supplies agricultural machinery dealers, machine builders, original equipment manufacturers, specialist motor equipment dealers, vehicle and construction machinery manufacturers as well as workshops. Since 2024, Paul Forrer AG has been relying increasingly on Ecovos hose ends. The focus is particularly on hose nipples with a DKO connection, BSP thread as well as banjo inserts and flange connections in the comparatively small nominal sizes of DN 6, 10 and 12. These sizes are particularly relevant for agricultural and forestry technology as well as for smaller municipal and commercial vehicles and construction machinery.