



## 100% leak-free is a must

The question of what might happen if a leak occurs in the hydraulic system sounds very odd to Øyvind Teige: "It is to prevent leaks that we are using the O-Lok® fittings, to have 100% leak-free equipment. The whole world is meanwhile focusing on the protection of the oceans." Then he adds that besides the equipment manufacturers' own responsibilities, the drastic penalties imposed for oil leaks in ports and corresponding stipulations in the customers' contract require special caution.

The appropriate design of the hydraulic system, the use of top-quality components and the reliability of the products but also of the suppliers therefore constitute a

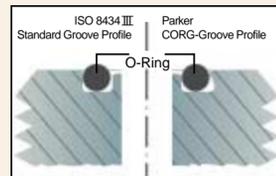
major part in the protection against leakage.

"This is why we made use of the possibility to examine the connection system together with Parker's specialists," reports Øyvind Teige. "Based on this Genuine Parker Products project we were able to reduce the number of fittings used and to optimise the entire system. As I said, we haven't had any leakage problems since we have been using the stainless steel O-Lok® fittings."



VESTDAVIT uses stainless steel O-Lok® fittings by Parker Hannifin everywhere as can be seen here in the control.

## The groove retains the O-ring firmly in place



The groove of the O-Lok® fitting has a rounded overhang edge. This prevents movement or loss of the O-ring during assembly of the tube, and therefore any need for costly repairs or re-work, since the O-ring

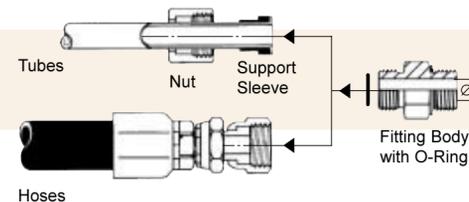
cannot be pinched or damaged.

Further, potential damage when inserting the O-ring is avoided because of the rounded edge, and compared with insertion in a standard groove profile, significantly longer life is achieved.

## O-Lok® in stainless steel: a combination of the finest components



The patented construction consisting of fitting body, supporting sleeve, nut and O-ring provides a lot of advantages to the user. The full stainless steel fitting also guarantees a long service life and maximum protection against leaks.



Where safety and environmental protection are essential, investment in stainless steel always pays. Thanks to the technical and economic advantages of this material it stands up to any calculation against other materials who seem to be less expensive at first sight. This is why VESTDAVIT A/S uses stainless steel for the entire equipment ranging from the sleeve to the nuts of the fitting and up to the tubes. Stainless steel with its excellent corrosion resistance offers high reliability and thus reduces expensive and un-

productive maintenance times to a minimum.

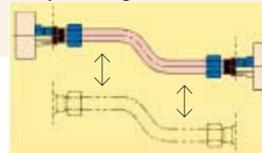
When this long-life material is now used for O-Lok® fittings, one of the finest combinations possible results. The special design of the soft sealing fitting allows only one potential leakage path. And this path is sealed by an O-ring at the head of the fitting.

The fitting consists of four main components: fitting body, support sleeve, nut and the above mentioned O-ring. As the support sleeve is available for both metric and inch tube sizes, it allows

a great variety of applications.

The tube does not enter into the body of the fitting, allowing for zero clearance and drop-in installation of the components. This means easy repair and maintenance.

### Zero clearance for ease of plumbing



And this is also why, at the same time, the fitting requires a low tightening torque:

15° to 30° on rotation angle are sufficient to safely assemble the fitting. In addition to this, the fitting design excludes any component errors during assembly and, thanks to the reusability of the individual parts also reduces inventory levels.



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# Report

## O-Lok®

For environmental protection, VESTDAVIT uses stainless steel O-Lok® fittings





# On the Seven Seas with "Dry Hydraulics"

Oil always constitutes a certain hazard for oceans, lakes and rivers. The Norwegian company VESTDAVIT A/S prevents this hazard already in the design stage of its davits: stainless steel O-Lok® fittings ensure 'dry hydraulics' and satisfied customers.



18,000 kg of hoisting capacity – that's what this davit by VESTDAVIT can handle. Its dynamic shock absorber ensures that the forces involved while the boats are launched are reduced from 1 G to just 0.2 G.



"Leakage is no problem in our equipment in which we use stainless steel O-Lok® fittings", confirms Øyvind Teige, Technical Manager at VESTDAVIT A/S.

Since 1975, the Norwegian company with its headquarters in the coastal city of Bergen has been producing and marketing davits. Despite some economic troubles in this industry, the specialist has sold more than 1,000 cranes since the company was founded. About 7 million Euro in sales realised with 12 employees in 2001 point out that VESTDAVIT is doing very well in its niche market.

And that for good reasons: the various davits are mainly used in lifeboats and service boats, and their customised models are convincing due to top quality and short delivery periods. Behind all this stands a flexible manufacturing facility with innovative ideas and a proven design.

## Functionality and quality

The compact design of the hydraulic davits, their easy installation and operation as well as the little maintenance they require have made VESTDAVIT well-known world-wide. So approximately 70 percent of the davits are exported and operated mainly in other European countries, the USA and the Middle East.



"Functionality and quality come first for the users of our davits", comments Øyvind Teige. "This is why we make the highest demands on ourselves and our suppliers to ensure our customers are satisfied."

VESTDAVIT's co-operation with Parker started in 1996 when VESTDAVIT equipped its first device with stainless steel O-Lok® fittings. Øyvind Teige remembers well that this requirement came from customers at that time and was implemented with pleasure.

"The possibility of buying tubes, fittings, hose assemblies and valves from Parker as a single source of supply proved to be a big advantage for us", underlines the Technical Manager. In addition to this, VESTDAVIT also uses Parker power packs in some of its equipment.

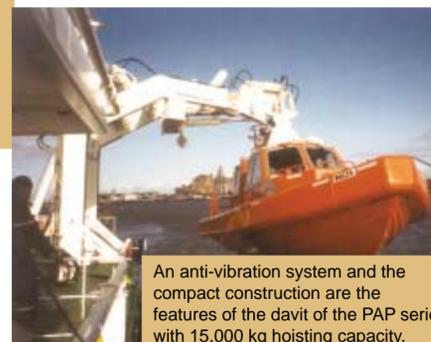
## Everything from one single source of supply – world-wide

"As our davits are used everywhere in the world, Parker's world-wide presence naturally plays a major part. As a global player, we can purchase our components world-wide and thus considerably improve our service locally."



All davits supplied by VESTDAVIT are operated by hydraulic systems. In the process, the hydraulic system on board as well as the electrohydraulic device specifically designed for the task can be used.

The standard model of the davit is a complete, self-contained unit equipped with a hoisting winch, cylinders and tubing on the hydraulics side. According to international requirements in this area, all hydraulic functions have a redundant design and therefore even allow raising a 'dead ship', says Øyvind Teige using the boatsman's words to describe the failure of the hydraulic system.



An anti-vibration system and the compact construction are the features of the davit of the PAP series with 15,000 kg hoisting capacity.

Parker-Hannifin

## Highlights of ship hoisting technology



Safety and environmental protection are at the fore in the design of davits. VESTDAVIT equips the entire hydraulic tubing system with O-Lok® fittings. Some examples are adjustable O-Lok® fittings at the cylinder...

In the P series of the davits, the PLR type is the most striking: the davit with guiding frame provides a hoisting capacity of up to 12,500 kg. Depending on the customer's requirements, this crane as well as the other models of the P series can be equipped with dynamic shock absorbers and a self-tensioning hoisting winch system. "We build the PLR-3250 with a 3250 kg capacity (Safe Working Load) for the US Navy which is also our largest single customer", reports Øyvind Teige with some pride.

"This davit is used for boats of 7 m length in the US Navy and the boats are set in the water using this davit."

The highlights in ship hoisting technology provide an insight into the high performance capability of the VESTDAVIT equipment: they reduce the forces involved when launching a boat from 1 G to just 0.2 G due to the dynamic shock absorbers. The design of the davits allows launching boats at a speed of 18 knots. The speed of the winch system can be adjusted so that they reach a speed of up to 30 m per minute.

"Our davits are operated 100% by hydraulic systems and this is why we use stainless steel O-Lok® fittings in the entire tubing system", reports the Technical Manager and explains what the tasks of the hydraulic system are:

both cylinders for reeling the crane out and in, the entire winch system and all shock absorber functions are operated through the hydraulic system.



... at the hydraulic oil tank ...



... and at the hydraulic accumulator which is used to store energy for peak demands.