

Halogen free hydraulic hoses

Page 1

Krampe: Quality on wheels

Page 3

Krampe services

make hydraulics easier

Page 3

Trouble free service life

Page 4

Alfagomma introduces Halogen Free hydraulic hoses

Alfagomma is taking a step towards improving the environmental credentials of its hydraulic hoses through the introduction of a new range of hoses. The new HF series is halogen free, which is not only better for man and the environment, but also has benefits for hose construction.



Manufacturers are taking environmental issues more seriously when developing new products, and the same applies at Alfagomma. To ensure it complies with current environment standards and to meet market demand, the Italian manufacturer decided to produce its latest range of hydraulic hoses from halogen free rubber. Krampe is making the switch to halogen free rubber too, and will include the entire range of hoses and ferrules in its product range.

Advantages throughout the lifecycle

Substances (halogens) such as chlorine, fluorine and iodine have been left out of the rubber compound of the new hoses and replaced by other non aggressive

substances. During combustion, halogens produce toxic gases that are harmful to both humans and animals. These gases also affect electronic components.

By leaving these substances out of the compound, Alfagomma is making sure that fewer hazardous substances are released when shortening the hose, and that the hose can be processed responsibly at the end of its service life. An additional advantage is that the outer sleeve adheres to the steel layer more effectively.

The new, halogen free Alfagomma hoses are easy to recognise from the HF code, which has been added to the hose. The changeover currently affects 1SN, 2SN & 2SC NST, HST, 2SC and 1SC from DN16.

Automatic temperature controlled lubrication

Automatic lubrication has never been so simple. perma NOVA's new, temperature-controlled unit provides single-point lubrication for all applications within a temperature range of -20°C to $+60^{\circ}\text{C}$. It is easy to set the discharge period between 1 and 12 months using the selection button on the NOVA control unit. A built-in temperature sensor measures the ambient temperature and the control unit adjusts the volume of gas generated based on this data, ensuring that discharge is even and controlled. The perma NOVA system consists of a reusable control unit, a lubricant cartridge filled with 130 cm³ of grease or oil, and a protective cap.



ALFAGOMMA HF

Which hoses are being replaced?

Alongside environmental benefits, the switch to new halogen free hoses and new ferrules has various product advantages too. As any changes can potentially cause confusion, we have listed the changes to the hoses and codes for you.

Standard hydraulic hose

1SN -> NST -> NST-HF

2SN -> HST -> HST-HF

We are going to phase out the NST/HST hoses and replace them with the NST-HF and HST-HF. The change does not affect operating pressure, bending radius or other properties, but does mean that a different ferrule and press diameter is required.

Compact hydraulic hose

1SC -> NSK -> No changes

2SC -> HSK -> HSK-PQ

New -> HSK-HF

HSK-HF compact hose also available in HF

One of the main advantages of the new standard 2SC hose is that it is cheaper, which is why we are including it in the range under item numbers HSK-HF. This hose is of course also halogen free and is the perfect addition to the HF range.

HSK becomes HSK-PQ

Our current HSK hose performs better than the standard 2SC hose in terms of operating pressure and bending radius, and it has a durable outer sleeve. Due to the higher quality of the hose, its name has been changed to HSK-PQ, where PQ stands for Premium Quality. This hose is not halogen free due to the use of a different rubber compound.

To summarise:

NST > NST-HF

HST > HST-HF

NSK > No changes

HSK-HF > New to the range

HSK > HSK-PQ

New ferrules increase the quality of the assembled end product

With the introduction of new ferrules that are fully tailored to halogen free hoses, Alfagomma is making a valuable improvement to its products. Instead of one combined ferrule for three hose sizes, the new series now includes two perfectly fitting ferrules that increase the quality of both the assembly and the press.

Along with the introduction of new halogen free hoses, Alfagomma is also introducing new types of ferrules. Both are being made available together, through Kramp. The new swage table means that the switch is now even easier. The changeover means that the "combined ferrules" for the 1SN/2SC + 2SN are no longer required. The two new series of ferrules are better suited to each type of hose and are made of more robust material. Their thicker walls mean that they spring back less and the quality of the assembly increases. It is also possible to use the existing hoses with the new ferrules. See the new swage table, which you can download from the web site.



Sales engineers set to provide additional knowledge and support

Kramp has recently extended the range of services it provides by appointing four sales engineers — all of whom are eager to play an active part in helping you solve your problems and devise new solutions in the fields of hydraulics, drive technology and electro-technology.

"Sales engineers combine the skills of and form the ideal link between account managers, whose skills lie primarily in the commercial aspects of a transaction, and the product specialists working in our offices", explains David King European OEM Business Manager for OEM in the Netherlands. "Sales engineers visit our OEM partners and possess high-level, specialist technical knowledge thanks to their solid training background and many years of experience. This kind of personal contact allows us to work with the customer to develop and implement the very best solutions". The new approach involving the engineers has now been launched in the

Benelux countries and is also set to be rolled out to the other Kramp countries in Europe. The five product & sales engineers appointed for the Benelux countries are Lieuwe Jagersma, Harmannus Bakker, Stef Nieuwenkamp, Eugene Bleumer and Eddie Aerts.



Krampe: Quality on wheels

Krampe builds its high quality trailers on a former barracks near Coesfeld (Germany). A clear trend in the production department is that designs are becoming lighter and lighter, while intelligence increases. Krampe helps Krampe to achieve its objectives as effectively as possible.

“We build modern, innovative products that really do add value for our customers”, says August Krampe, summarising his company’s activities. “The trend is towards vehicles becoming larger, lighter and smarter. In order to make this vision a reality, you need partners who are able to contribute to your thought processes.”

One of those partners is Kramp. When Kramp needed an auxiliary drive that was as light as possible for use in its sand/gravel dumper, Black Bruin’s hydraulic motor fitted the bill. “Compared to the traditional drive shaft, the wheel motor is a bit lighter and easier to assemble”, says Winfried Wieschemayer from the final assembly department. “You don’t need a PTO shaft, and neither do you need a heavy differential or the compulsory pneumatic brake. Three hydraulic hoses are sufficient and you have far fewer moving mechanical parts.” August Krampe explains: “Modern tractors have sufficient oil to keep this auxiliary drive running well. And if we are able to build lighter parts, the customer can transport greater quantities of material.”

In addition to the wheel motors, Kramp also supplies the necessary controls, hydraulic blocks, hoses and attachment materials that are used for the trailers. With 100 employees working across five product groups, Kramp builds a range of trailers for tractors and lorries. The latest innovative product to be produced is the new “conveyor belt trailer”, which will be launched at the upcoming IAA in Hanover.



Photo: August Krampe (left) and Winfried Wieschemayer (right)

Krampe services make hydraulics easier

Krampe provides a number of services to make hydraulics easier. Here’s how we can help.

Assembly

Do you want us to assemble, rinse (clean) and pack your hoses? Anything is possible, even combined with set deliveries in Two Bin or Just in Time systems, or with other components such as cylinders, a Mini Power Pack and proportional control valves. Pre-assemblies are available in various formats and arrangements. All you have to do is tell us your requirements.

Protective film

We can cover the hoses in an additional protective film so that it is easy for you to spray your machine or vehicle once you have attached the hose. The film can be applied up to the ferrule or over the entire hose.

Hose protection

We can also apply protection to hoses during assembly and deliver them.

Certified hoses

On our test bench, we can subject hydraulic hoses to a static load up to an operating pressure of 2500 bar. These hoses are supplied with a certificate and the corresponding number is engraved on the ferrule.

Curved pipes

In addition to hoses, we also have hydraulic pipes in our range, from individual items to series, supplied with or without hoses. Based on your drawings and choice of material (black phosphate or zinc-plated), we can deliver custom made hydraulic piping. For series from around 30 items, CNC curved piping is also available as an option. These pipes are supplied equipped with the right couplings and sealed. VossForm joints, a better alternative to profile rings, are also available.



Hydraulic hose with protective film

Prevent loss of pressure and save energy

In practice, there is usually a great deal of guesswork involved in selecting a hydraulic hose bore, and because thinner hoses are cheaper, the diameter selected is often too small. But selecting a hose with an adequate diameter can save a great deal of energy.

Example:

A machine needs to be fitted with a 5 metre hose with a flow capacity of around 40 litres. The resistance of a 3/8" hose with a flow speed of 40 litres/min. is 1496 millibars per metre (rounded off to 1.5 bar). Over a 10 metre distance (press and return), the resistance is therefore 15 bar.

The formula shows $\frac{P \cdot V}{600}$ that the energy loss is $\frac{\text{pressure} \cdot \text{flow}}{600} = \frac{15 \cdot 40}{600} = 1 \text{ kW.}$

For a 1/2" hose, the resistance is only 379 millibars and the energy loss only 250 W, which equates to a difference of 0.75 kW.

One litre of diesel produces energy of around 14.8 kW. You can save a litre of diesel in just 19 operating hours — simply by using the correct hose.

And this is all calculated based just on the hose: The long couplings, adapters etc. have the potential to account for an even greater amount of the energy loss. You can make considerable energy savings within just one season, despite using more expensive components.

See our web shop for the extensive table.

Kramp service: conversion of PTO shafts

If you are looking to convert an existing PTO shaft for a different application, Kramp can offer the professional service you are looking for. Our specialists not only have a wealth of experience, but also the expertise necessary to make sure your conversion is a success. Whatever your specific requirements are, you can trust Kramp to get the job done properly, including the installation and adjustment of overrunning and cam-type cut out clutches.



Trouble free service life

If you want your PTO shaft to have a long and trouble free service life, you must lubricate it regularly, including the profile tubes and the cross journals. Unfortunately this maintenance work is occasionally forgotten, particularly if the lubrication nipple is located in a difficult to reach place. Luckily, Walterscheid couplings can prevent this problem.

By placing the grease nipple on the cap of the cross rather than in the middle of the cross, it has become much easier to keep the coupling properly lubricated. This makes maintenance easy and ensures that the PTO shaft runs smoothly for longer. The cap lubricated cross journals are available in various dimensions, seal types and maintenance classes. For more information, please visit the web shop or call one of our Product Specialists.



Easy access for efficient lubrication