

CORE Technology holmatro[®] rescue equipment

Holmatro Rescue Equipment launched its CORE Technology hydraulic hose system in June. **Brendon Morris** looks at how this new technology has been designed to increase flexibility, speed and safety at a rescue scene

THERE ARE TWO separate technologies that make up the CORE Technology™ system. These are the automatic flow return couplers and the coaxial hose itself.

Let's start by looking at the use of new couplers at either end of the CORE hose – there is more to these new couplers than initially meets the eye. The major innovation is that they automatically allow for return of flowing hydraulic oil whenever they are not connected.

What this means for us on the rescue scene is that the days of having to activate hose at the pump are gone. There is now never a need to walk back to, or communicate back to a pump to switch off a hose before you can change tools. Tools can simply be changed at any time even though the hose is under flow with oil being pumped through it.

Easy connection

It is now possible to change tools without having to access the pump. A good example is when working inside a building or large vehicle such as a train or bus. It is not practical to have a pump inside so we would generally use it outside, with a hydraulic hose running through a window or other opening. With the CORE system one can change between any tool inside the vehicle or building without ever having to select neutral on the pump. You simply disconnect the hose from the tool you were using, couple it directly to the tool you want to use and continue.

This will make rescue tool co-ordination on the scene far simpler and more efficient. Since it is no longer necessary to change over at the pump,

the rescuer in your team traditionally assigned to stand near the pump for this purpose is now free to perform other tasks.

This new CORE Technology dramatically changes things, not only with regard to flexibility, but also to being able to work faster and to make more efficient use of manpower.

The second technology that makes up the CORE system involves the hose itself. The new coaxial CORE hose system uses a high pressure line (providing the usual high pressure supply of hydraulic oil to your tool) inside the lower pressure return line. You are left with a combined supply and return line in one as opposed to the traditional system of separate hose running side by side, meaning there is less separate hose to contend with on the extrication scene and in the action circle. The extrication scene will be more organised with less risk of tripping over hose.

Kevlar reinforces the inner high pressure hose and traditional steel reinforcement is not used, so the overall weight of the hose is dramatically reduced by up to 40 per cent.

One further feature of this combined hose system is that handling the hose is much easier; kinking is a thing of the past. This is thanks to the use of Kevlar, the fact that it is one single hose, and that the couplers allow 360° rotation, both at the tool and at the pump, even under pressure.

All this also results in saving crucial time, not only because less hose are used, but also because unrolling and rolling the hose is much easier and faster.

Handling aside, another feature of the system is the increased safety of having the high pressure line totally encased within the low pressure return line. The high pressure hose is not in direct contact with the outside environment, making damage of the inner hose less likely.

In the highly unlikely case that the inner high-



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pressure hose of a CORE system bursts or leaks, the pressure relief valve will instantly reduce pressure, removing any possibility of the user being exposed to high pressure oil.

Simpler and safer

The design ensures that the pressure in the outer hose can never exceed 25 bar, so the user can never be exposed to more than 25 bar. This added safety feature is always appreciated by those of us already working in the hazardous environment of technical rescue.

All in all this new system will make things much simpler and safer, as well as being more efficient. I am sure that as CORE Technology becomes more widely used we will discover even more advantages to this system.

CORE Technology is standard on the Holmatro 4000-series tools. However, if requested, the 4000-series tools can also be supplied with traditional dual hose. The 4000-series was also launched in June and is the successor of the Holmatro 3000-series. But the 4000-series offers even more advantages with other standard features specially developed to increase user-friendliness, performance and working speed. These include carrying handles with integrated LED lighting, the new i-Bolt central bolt construction for a more efficient cutting process and better access in narrow spaces, along with a Speed Valve for quicker tool opening. 

■ You can find more information on the Holmatro 4000-series on Holmatro's website: www.holmatro.com. You can read more about CORE technology on www.coretechnology.info

Author

Brendon Morris is the Consultation and Training manager at Holmatro Rescue Equipment, based in the Netherlands. His responsibilities include training Holmatro users and dealers worldwide on best rescue practices, as well as researching rescue disciplines to ensure that Holmatro keeps pace with future rescue needs. Brendon is a member of CRJ's Editorial Advisory Panel.

