

**Rescue** equipment

**Holmatro**

**CORE™ Technology**  
**4000-series**

 **holmatro**  
mastering power

## CORE™ Technology, the next major step forward

- 1965 - 1975** introduction of hydraulics in the field of extrication
- 1975 - 1985** technical shift towards high pressure
- 1985 - 2005** shift to a more patient-orientated rescue
- 2005** introduction of **CORE™ Technology**



### What is CORE™ Technology?

CORE™ Technology (Coaxial Rescue Equipment Technology) refers to the hoses, couplers (and valves) of a rescue system. In other words the way hydraulic oil is directed from the pump to the tool and vice versa. A traditional dual hose system consists of a separate pressure and return hose connecting pump and rescue tool. A CORE™ system consists of only one hose: a high pressure inner hose inside a low pressure outer hose. The hydraulic principle and tool performance of CORE™ Technology and traditional technology are of course identical.

### Why CORE™ Technology?

CORE™ Technology is a revolutionary turning point in rescue tool technology and definitely more than a new piece of equipment. It allows you, as a rescuer, to rethink and simplify your extrication techniques and your standard operating procedures. Once working with CORE™, you will discover the unprecedented benefits it offers. Compared to working with a traditional system, working with CORE™ is **safer, easier & quicker**.



- CORE™ Technology



- Traditional dual hose technology



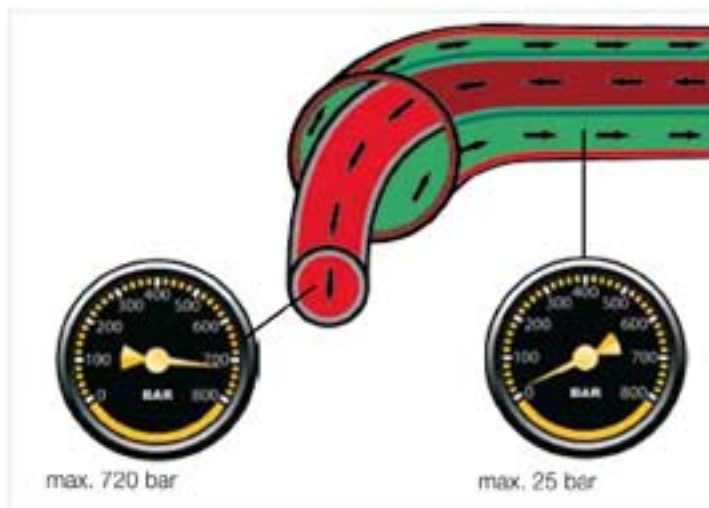
CORE™ Technology is safer, more user-friendly, saves time **and** manpower.



## Safer

### One hose system (hose in hose) - protected power

- increased safety for the rescuer; high pressure hose inside and protected by low pressure outer hose



### Para-aramid fiber reinforced hose (no steel)

- no risk of kinking or pinholes



CORE™ - para-aramid reinforced



Dual - steel reinforced

### According to international safety norms

- 4:1 safety ratio for both pressure and return line
- according to EN 13204 and NFPA 1936 (certificates by independent body available)



### Safety couplers

- one step auto-lock coupler
- two step uncoupling system



- couples and locks in just one push



- accidental uncoupling impossible during operation

### Hose testing

- all testing according to every appropriate safety norm



## Easier & Quicker

### Simple set up



- connect CORE™ hose to pump or tool with or without pump running

### Changing tools under flow during use

- change tools any time without operating a release valve on the pump



- saves precious manpower

### Para aramid reinforced hose

- no kinking



- easy to handle / manoeuvre



- all hoses with standard hose binders for easy storage



- lightweight

CORE™ hose: about 40% weight reduction



Traditional steel reinforced hoses

- easy to roll and unroll



### Maintenance friendly

- less couplers
- less hoses
- no pigtail hoses on tools
- no release valves on pumps



## Easier & Quicker

### Unique CORE™ couplers

- 360° rotating couplers on tool and on pump; no hose entanglement



- maintenance friendly flat face couplers



- easy to clean



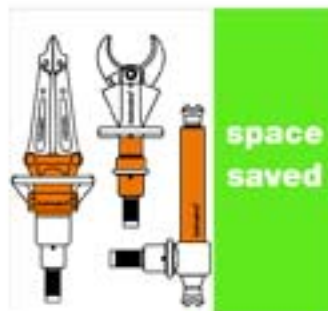
- no dirt inside couplers

### Coupler mounted directly on the tools

- no pigtail hoses necessary



- compact, space saving in rescue vehicle



space  
saved

- tool couplers not lying in the dirt



- no swinging couplers



Dual hoses



CORE™ Technology

### One hand coupling

- tool (dis-)connecting with one hand possible while standing



- hose grips at both hose ends



## 4000-series

The following innovative features are standard on almost all Holmatro 4000-series rescue tools, both CORE™ Technology and traditional dual hose versions.

### Carrying handles with integrated lighting



- Standard on almost all Holmatro 4000-series cutters, combi tools and spreaders.
- Never work in your own shadow again, neither at night or during daytime when bright sunshine can cause dark shady areas.
- The integrated LED lighting also provides illumination in those cases where rescue scene lighting is absent (e.g. certain rapid interventions situations).
- On one standard AA battery, the LED's work about 6 hours continuously.
- The battery can be replaced in less than 60 seconds.



### i-Bolt Technology

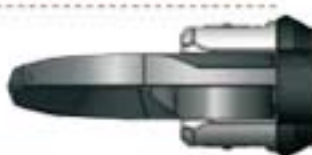


#### The new revolutionary central bolt construction

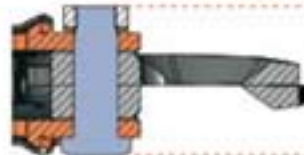
- Standard on almost all Holmatro 4000-series cutters and combi tools.
- The i-Bolt is sunk into the blade holder; this results in a much flatter design which provides better access in narrow spaces.
- The blades are squeezed together directly. This as opposed to conventional bolt constructions where the bolt sits on top of the blade holder and squeezes the ("softer") aluminium blade holder together, with the blades in between. i-Bolt Technology therefore results in less blade separation and a more efficient cutting process. A cutter with i-Bolt Technology outperforms an identical cutter with a conventional bolt construction.
- The bolt and blade holder are protected by a stainless steel cover. Direct damage of bolt and blade holder during an extrication process is therefore no longer possible.



1. Traditional bolt construction



2. i-Bolt construction



1. Squeezes ("softer" aluminium) blade holder. Blades are squeezed indirectly only.



2. Squeezes blades directly for a superior cutting performance.



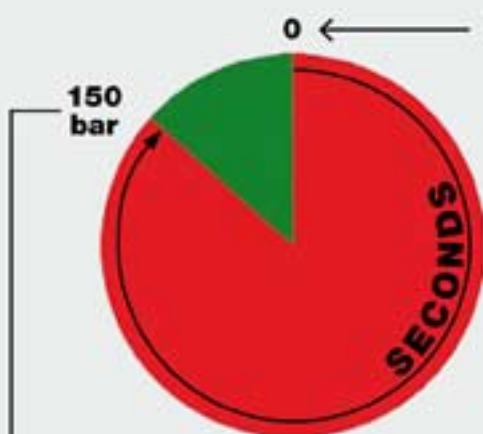
### Speed Valve

- Standard on all 4000-series spreaders and rams.
- With the Speed Valve tools open up significantly faster, at pressures below 150 bar. This allows for faster, more efficient tool placement, thus shortening the duration of the extrication time required. At 150 bar working pressure the valve automatically reduces the opening speed back to 'normal' to ensure a controlled and safe extrication process. The control handle of course allows for accurate and proportional opening and closing at both high and low speeds.



### Opening times spreaders and rams at working pressures below 150 bar

#### without Speed Valve



#### with Speed Valve



0 ← start of operation at 0 bar → 0

150  
bar

150  
bar

start of spreading, pulling, squeezing,  
lifting, pushing at 150 bar





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