

#05 ABOUT US
WRS INTERNATIONAL IS BORN

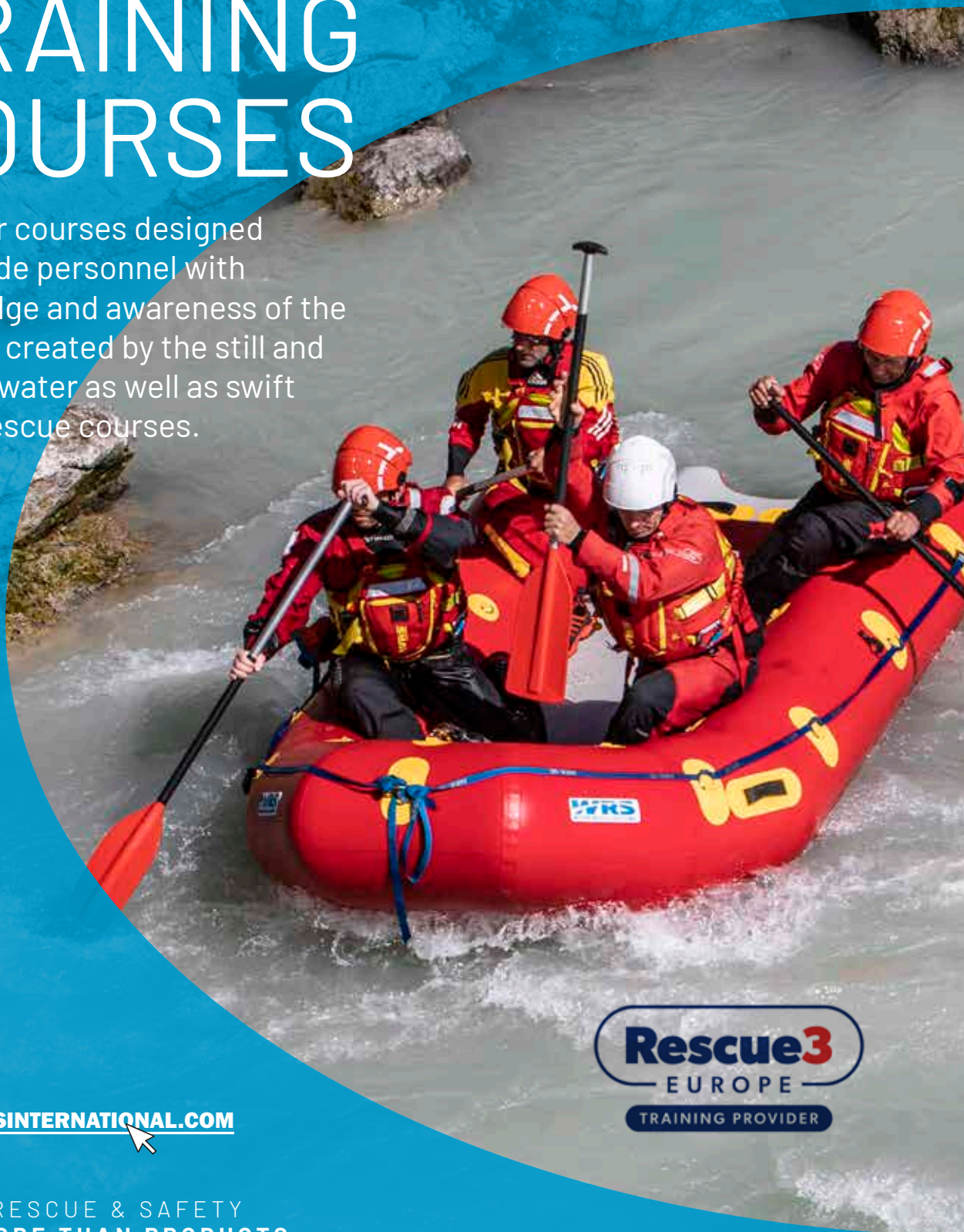
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THE RIVER GURU

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SHRINK IT AND PINK IT

#14 TESTING
HOW STRONG IS A D-RING?

WRS INTERNATIONAL TRAINING COURSES

We offer courses designed to provide personnel with knowledge and awareness of the hazards created by the still and moving water as well as swift water rescue courses.



more info

WWW.WRSINTERNATIONAL.COM



WATER RESCUE & SAFETY
MUCH MORE THAN PRODUCTS

BELGIUM

Krommebeekstraat 44
8930 Menen
+32 56 21 38 62

contact@wrsinternational.com

UNITED KINGDOM

Unit 4D Gatebeck Business Park
Gatebeck, Cumbria, LA80HS
+44 1524 22 02 24

lawrence@wrsinternational.com

WRS®
INTERNATIONAL



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ABOUT US
WRS INTERNATIONAL IS BORN



TESTING
HOW STRONG IS A D-RING



INDUSTRY
INTERVIEW
THE RIVER GURU

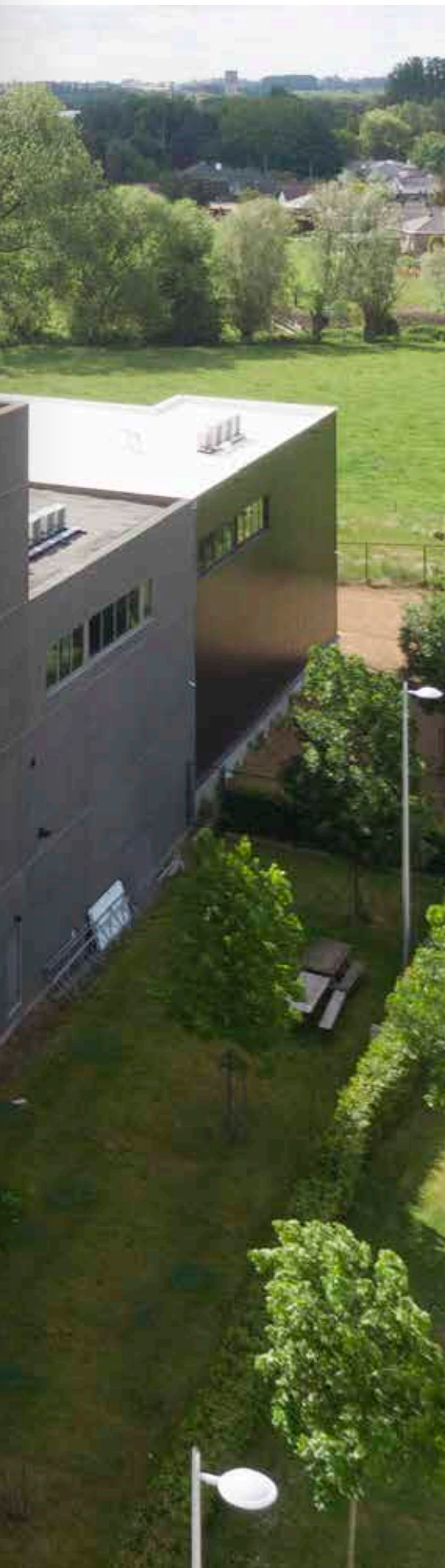


PRODUCT DEVELOPMENT
SHRINK IT AND PINK IT

BELGIUM HQ

Condor Safety &
WRS International





ABOUT US

WRS INTERNATIONAL IS FORMED TO DRIVE THE WRS BRAND

Despite the worlds current challenging circumstances Water Rescue Systems Ltd based in the UK is glad to announce that their brand WRS has a new home with the newly formed "WRS International BV" based in Menen, Belgium.

WRS International is a joint venture with Lawrence Harris, Director of Water Rescue Systems in the UK and Wouter and Patsy Verplancke the Belgium owners of Condor Safety BV. The new team will drive forward the WRS range of rescue inflatables and accessories along with the creation of further PPE products for the rescue market.

The new company keeps the well-placed UK showroom and service centre in Kendal Cumbria with Lawrence focused on product development and UK sales. On the other side of the channel a modern showroom, conference facility and distribution centre in Menen, Belgium lead by Patsy while Wouter focuses on International Sales. The new WRS team are focused on driving forward world class products and services to the Emergency and Rescue Sector.

Exciting years to come for the developing business, with a growing family of dealers and professional end users. WRS International has streamlined its product offering and built a solid wholesale opportunity and looking for dealers or technical partners from around the world.

www.wrsinternational.com



FERMIN PEREZ
Mino for his
friends, in action

INDUSTRY INTERVIEW

THE RIVER GURU

In each addition we'd like to introduce you to a valuable member of our industry, our first 'Industry Interview' is with Fermin Perez, Mino to his friends.

Hi Mino, what is your business and where are you based?

Hello there! I'm a rescue teacher in Spain working for Rescue 3 Europe. I demonstrate different

river rescue techniques to a variety of river users, including emergency services, commercial businesses, government and outdoor adventure.

Together with my partners, Txomin and Chema, we own RIVER GURU - a magic conglomerate of projects with strong connections to rivers.

These include:

RIVER GURU Aventura, an outdoor adventure centre offering a wide range of activities.

RIVER GURU Shop, both online and physical white-water shop located in Murillo de Gallego.

RIVER GURU Rescue, a Rescue 3 training centre.

We are based in Murillo de Gallego Zaragoza, Aragon, Northern Spain, on the Gallego River. Murillo is the perfect location for training rescue courses and outdoor activities.

What flooding issues do you see?

Due to climate change, we are experiencing big changes in the weather in Spain. It's the firefighters themselves who are seeing this change during their interventions. There is a relative rush to train in water rescue as the new conditions under which firefighters have to work are often unknown challenges. What they find depends on their location.

In Northern Spain, we have large volumes of rain and snow melt, every year during March the accumulated water from these makes the rivers bigger, flooding cities and rural areas.

What is changing more, are the aggressive bursts of rain during autumn and winter. This doesn't

happen every year, but when it does the rain's force and volume makes them difficult to manage. Following long droughts, heavy rain floods anthropic areas creating many vehicle water rescues, with a very difficult shift water environment.

Given the time of year these can occur, we find that after six o'clock, these rescues have to be done in the dark.

This is becoming the reality in Spain; very complicated, unpredictable situations, mainly at night, in challenging environments, where it is difficult to manage risk.

Does this mean the frequency of flooding is increasing in your area?

Absolutely yes and also becoming more complicated.

Which is your favourite piece of WRS equipment and why?

I love all WRS PPE, designed specifically for river rescue, but my favourite is the Mega Sled.

During the challenging conditions I discussed previously, we find it's often too risky to get a rescuer into the water. Tethered boats provide us with a wide range of solutions and



these techniques often provide the lowest risk solutions.

I find the Mega Sled very useful for these techniques as it's very light for transporting; the high volume tubes are good for stability; its open stern allows pick up of water casualties; it's wide enough to accommodate a stretcher and rescuer, plus other extra details that make the Mega Sled very interesting.

What are your three top tips for swift water rescue?

TRAINING

This shouldn't be just educational courses. If a rescuer only practices during a course, when a flood event occurs techniques learned during the course are not easily

recalled. With this in mind, my recommendation is to repeat exercises learned during training with a minimum of 2-3 times per year. Preferably before any anticipated flood period.

GOOD COORDINATION BETWEEN FIRE SERVICES

Flood events are rarely resolved by a single brigade. It's generally necessary to call and be in coordination with other fire brigades. Poor coordination between brigades can lose very important time and resources.

PPE

In Spain, there are still firefighters without personal protective equipment, this is a very basic aspect not covered in many brigades.

When you face up to a flooded city without the minimum PPE you are totally unprepared to start a rescue.

I know the tips are very basic, but we need to start from the bottom in order to construct a wide and stable pyramid to establish a rescuer's knowledge and skills.

www.riverguru.es



DYNAMIC ENVIRONMENTS



DESIGNED FOR THE E

A **Dynamic Environment** is always changing, such as the flood or swift water environments. This type of environment **requires** the use of **equipment** and **techniques** that can better manage **the risk entrapment**, and avoid further escalating working in this dangerous situation.

Working in dynamic environments requires the use of principles such

as the “**clean line theory**” which aims to **reduce** the **risks of entrapment** to the rescuer and victim through eliminating loops, knots or handles being used with rescue ropes. The same concepts of reducing snag hazards on ropes can be utilised when designing rescuers PPE.

Boat design also requires considerations for **dynamic**

environments such as the ease of bailing water from a boat or fitting the boat with multiple air chambers. You can employ spotters for looking **upstream** and additional rescue further **downstream** from the incident, ready and waiting, should the incident location be swept downstream.

STATIC ENVIRONMENTS



ENVIRONMENTS

An incident location tends to be in one place with **a static environment**, although the rescuers and victims may be dynamic, the risk to the rescuers and victim becoming trapped **carries far less risk**.

During work in **a static environment** additional measures do not need to be employed to manage risk of entrapment.

Design features such as **redundancy of air chambers** is less important

yet may be desirable if the team is used in a working environment. These environments may include mud and ice. Be aware, **a relatively static environment** can change and **become dynamic** in an instant.



SHRINK IT AND PINK IT!

Surely a woman is a small man with a penchant for pink right? Wrong, amongst other things, women's bodies are a completely different shape. In any profession, kit should be comfortable as a contributing factor to optimum performance, therefore every effort should be made to meet this in the rescue industry.

WRS International are proud to work alongside global leaders in technical training. This edition focuses on one

of these leaders - Raven. Providing industry leading excellence in technical rescue, safety and medical training throughout Canada, Raven have also helped highlight the importance of women in rescue and how female specific kit aids their roles in the field.

With over twenty years' experience working in the swift water industry, Kirstin Thompson has seen a terrific increase in the number of women working and volunteering within the industry. However, as an SRT, boat and medical instructor for Raven, Kirstin feels there is still some way to go in creating functional female specific PPE, with an emphasis to avoid "shrink it and pink it".

Head's, just like helmets, come in various sizes regardless of gender. Although there may be no specific

changes in a male to female helmet, Kirstin would like to see the ability to adjust a helmet for a good fit using foam with Velcro attachments, this has the added advantage of providing an extra layer in cold weather environments.

Many rescue vests on the market are well set up for a rapid deployment in a rescue setting, with pockets for gear storage, bright colours for visibility and appropriate flotation for both low and high-volume situations. However, Kirstin points out that women typically have shorter torsos, therefore a more specific female cut and sizing would support women in their active roles. The ability to have less padding around the chest area would also be ideal without compromising safety requirements for flotation.



At the top of Kirstin's wish list is a properly fitting dry suit with particular consideration to hip, chest and shoulder measurements for a unique female fit. When considering 'comfort' Kirstin recalls an event volunteering with a British Columbia Search and Rescue Team. All dry suits provided were male orientated with a front relief zip, she recalls there's "nothing worse than responding to an incident working hours on end and having to take off the entire suit to relieve yourself!" Taking this into consideration, a drop seat is a must in a female specific suit with attention paid to a long enough zip to allow for proper positioning when using in the field to avoid any embarrassing and uncomfortable accidents! Kirstin praises the full suit with half-way entry point however, this requires

a long zip making the longevity of the suit reliant on the zip – often the greatest weakness in a suit. A female specific rescue suit with technical components including pockets and an element of knee protection similar to male suits, would set them apart from already on the market paddling suits aimed at women.

With this in mind WRS are committed to product development, so watch this space – rest assured it won't be pink!

Huge thanks to Kirstin for her contributions, especially with a newborn – supermum!







Featured Product – WRS Mega Sled

MEGA-SLED



Rescue Sleds have been a great tool allowing rescue teams with an alternative to moving a heavy RIB (rigid inflatable boat) or SIB (small inflatable boat). These traditional boats fitted with a transom limit a teams capability to purely flat water rescue, due to the lack of self bailing capability when not under power. The Mega Sled was built to fit the needs of teams looking for a light weight boat that could keep occupants dry in contaminated flood waters, but also convert into a fully self bailing boat in swift moving water.

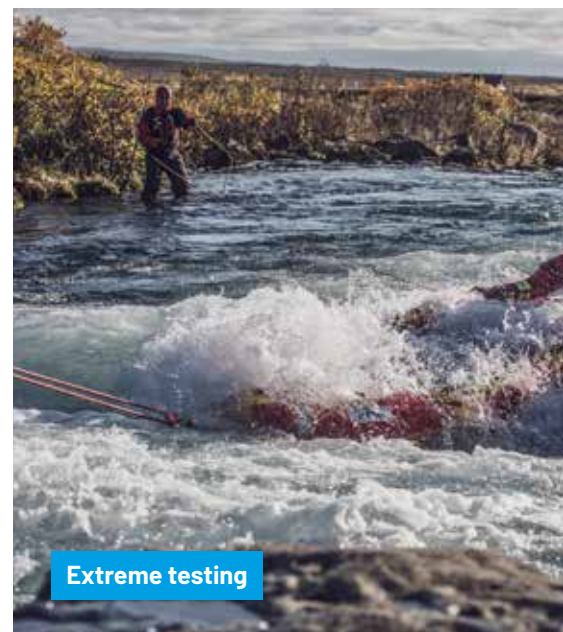
Switching from self-bailing to non-bailing is done using the flexible Transom Flap, when in the upmost position the transom flap seals off the deck area, avoids the risk of occupants being contaminated with dirty water as they are brought to safety. Should the Mega Sled be deployed onto swift water, the Transom Flap is folded down, allowing any excess water to escape through the open back of the boat.

Wide tubes gives the Mega sled a large payload, also offering a stable platform that gives rescue users confidence when casualties are not familiar with leaning to avoid capsize. As with the WRS Sleds, the Mega Sled is fitted with the "Fusion Technology" Air deck, making a strong yet light hull. Over the past 7 years of making sleds we have shaved off a massive 10kg using the Fusion technology.

Load tested D-Rings come with a stated Breaking load of 10kN, this gives teams confidence when using the boat on tethered lines on strong current vectors. Watch our pull test video to find our more.

See this product on page 27.





HOW STRONG IS A D-RING?

Author - Lawrence Harris

Testing Team - Lawrence Harris and Geraint Rowlands

The dynamic environment in which swift water rescue craft find themselves, raises questions about the strength of the connection points we are using on our rescue boats. We are comfortable with the strength of our rigging equipment

used to hold a rescue boat or pull the boat against the flow. We have confidence in our rigging equipment or canyon lines due to EN standards and Safe Working Loads issued by the manufacturer. So where is the weakness in the system of a tethered rescue boat? Which element in the system gives us greatest concern and why?

Historically and perhaps without any real evidence, we have pointed the finger of blame towards the patches, specifically to the strength of the glue used to attach the patch to the boat. The following test allowed us to learn more about our (WRS) fabrics, construction and bonding methods used to attach our D-ring patches. This test does not explore other manufacturers of PVC, Hypalon or PU boats as we did not pull test their patches, but we can draw some learning from our results.

Why is knowing breaking loads important?

Understanding the strengths of all the equipment in a system helps a rescuer assess the risks attached

or ideally lack of risks, when undergoing a rescue. We see rescue boats used for a variety of tasks, some not always thought possible by the equipment manufacturers. Examples of reliance on the strength of a D-ring include:

- › Pulling and lowering a boat in the current and over waves and holes
- › Securing a boat into the bank to transfer passengers
- › Pulling craft out of the water over a steep bank
- › Towing with a PWC or powered boat
- › Ice and mud rescues

Experiencing a D-ring failure during any rescue could result in changing the dynamics of the rescue, potentially putting rescuers and victims at increased risk.





The test subjects

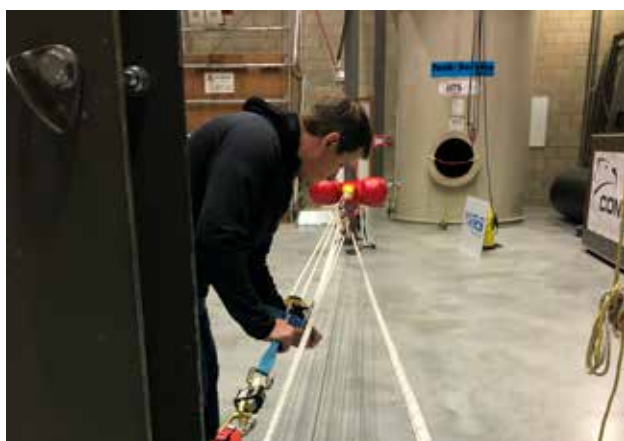
Let's be clear, this testing is not a scientific paper, more an initial test to explore some theories. The results of this test have influenced our data sheets and assist teams with their assessment of risk and equipment checks of WRS inflatables.

There are two hopes from this test, one is to discover the breaking load of our D-rings, the other is to learn more about the potential weak spots of a boat hauling system either used for retrieval or positioning.

The test subject was a PVC tube constructed from the same 0.9mm sheet material found on our X-Sled, Mega Sled, Rescue Raft 3.6m and 4.0m, this thwart was inflated to 3 psi. The tube was strapped horizontally to a steel post. The orientation of the 2 inch D-ring matched that of the D-ring found on the bow of all the above craft, i.e. vertical patch/horizontal D-ring. The construction of the D-ring patch is shown below.

A layer of PVC fabric in contact with the steel D-ring, a layer of black nylon webbing and an outer layer of PVC fabric for protection. The three layers are sewn in place with two lines of stitching either side of the back bar. The D-ring patches are glued using two layers of Hybond Xtrabond 3701 PVC glue.

The Rock Exotica Enforcer was built into each of our test rigs to measure loads, providing feedback to a smart device to capture the data.



TEST 1

Test 1 - Real world test

The first test carried out used standard rope rescue equipment found with the average water rescue team. Ropes are semi static 11mm, non toothed rope grabs, pulleys, steel karabiners and the progress capture provided by a Petzl ID.

This formed our real world test, utilising the above equipment we created a 27:1 (Theoretical) Mechanical Advantage System, with two people pulling.

The peak force achieved was 7.32 kN but the test had to be abandoned due to rope failure from the non toothed device biting into the sheath of the semi static line and exposing the core. The D-ring/patch and tube remained unaffected. As anticipated, the Petzl ID slipped and was not able to hold our peak force of 7.32 kN, the whole system jammed up until we could take the force of the ID back into working remit of the device.

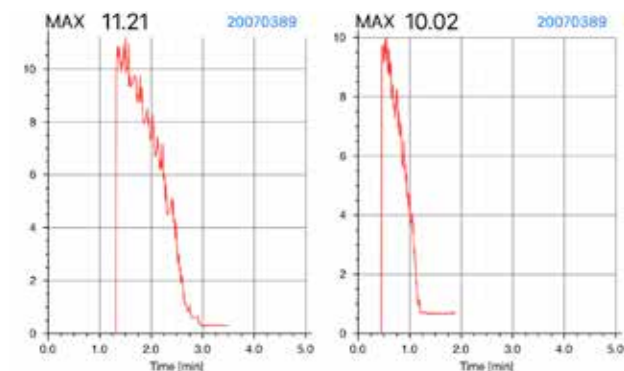
Test 2,3,4 and 5 - More power needed



After discovering we were unable to deform or break the D-ring patch or tube using standard rigging equipment, we employed a 1.6 ton Hoistmaxx wire rope winch.

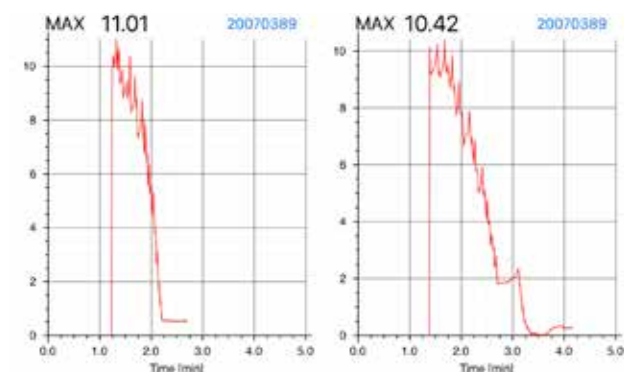
We understand that this equipment would not be used in the real world for positioning or retrieval of a boat, but we were now focused on learning more about potential failures of the patch/D-ring or boat.

Each tube was tested and the following data recorded.



TEST 2

TEST 3



TEST 4

TEST 5

All our tubes have now been pulled to failure and a pattern has formed on point of failure with each of the tubes tested.

Point of Failure

Each tube exceeded 10kN of force, equivalent to 1000kg before failure.

The point of failure was either a tearing of the webbing across the back bar of the D-Ring, seen here in image A or tearing of the webbing through the stitching seen in image B.

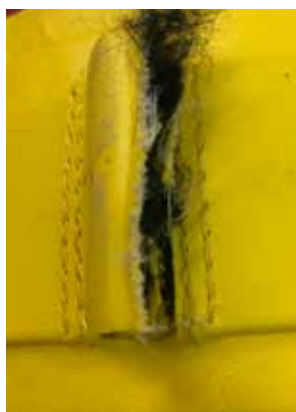


IMAGE A



IMAGE B

We also noticed the 316 stainless steel D-Ring deformed during the tests, this was also apparent when looking at the footage from the tests - this deformed before the webbing released.



Therefore it is a key point to note on inspection of D-rings, any deformation would be an indicator that excessive force has been applied to a patch.

Conclusion

In conclusion, we are confident that the D-rings of WRS boats are of sufficient strength for the desired applications mentioned in the introduction. WRS International is able to specify that the D-rings fitted on our boats have a breaking load of 10kN (1000kg). We know from our "Real World Test" that the equipment generally used in the tensioning of lines or pulling of boats will fail or become unusable before the D-ring patch fails.

We also learned that the area of weakness was the webbing and stitching holding the D-ring in place. This highlights the need for periodic equipment checks, focusing on cuts and abrasions to the stitching and webbing, to prevent undermining the 10 kN potential of this attachment.

It is important to note that each tube remained fully inflated after the webbing failure and this is a key point to consider. A point of weakness factored into a system which is lower than the break/tearing point of the inflated tube, would protect the tube from critical failure and potential escalation of the problem.

Testing proves that the construction of WRS inflatables is stronger than the D-ring attachment. Consequently the tubes are protected from potential failure due to an excessive load in the system.

If you'd like to see the tests in action head to our website for the full video:

www.wrsinternational.com/blogs/news/d-ring-pull-testing

Featured Product – WRS Water Rescue BOA

WRS WATER RESCUE BOOT



The variety of environments that rescue teams find themselves in offers many challenges, being stable and safe on your feet is essential, selecting the correct footwear allows the user more security and safety when working in and near the water. The WRS Water Rescue Boot is designed to give the user both confidence and protection in this difficult environment.

The sole uses a blend of rubbers to increase grip on smooth wet surfaces such as rocks, yet also offering an aggressive tread pattern making it suitable for wet grass and mud. The

toe and heel area are smooth for increased surface area to aid traction on smooth rocks.

The upper construction of synthetic leather and flexible Neoprene bound with non-corrosive thread makes the boots light and quick drying. Specifically designed to be used with a dry suit or Neoprene socks, additional space has been given in the boot to accommodate the thicker layers of socks for thermal protection. Using the highly respected Boa Lace System, the boot can be fitted quickly when time is of the essence. The

combination of the Boa lace system and the Neoprene upper results in a tight fitting seal above the ankle reducing the ingress of sand and gravel into the boot.

Featuring a fiberglass safety toe cap and anti-perforation insole the boots meet the safety rating of EN ISO 20345: 2011 S1P SRC. This feature offers protection to workers stepping into flood debris where the presence of nails in broken wood is likely. The toe cap offers protection when working near vehicles in the water.

ACTIVE WORLD WIDE

WRS International head office is based in Menen, Belgium. We are proud of our technical partners' knowledge of our products. If you have a sales enquiry for any of the below regions please contact our technical partners. For all other regions or general enquiries please contact the head office.

HEAD OFFICE

BELGIUM

Krommebeekstraat 44
8930 Menen
+32 56 21 38 62

contact@wrsinternational.com

UNITED KINGDOM

Unit 4D Gatebeck Business Park
Gatebeck, Cumbria, LA80HS
+44 1524 22 02 24

lawrence@wrsinternational.com

WRS[®]
INTERNATIONAL

TECHNICAL PARTNERS

REPUBLIC OF IRELAND

R3 SAR GEAR
The Old School
Glyndyfrdwy, Denbighshire, LL21 9HH
+353 1978 28 02 52

sales@r3sargear.com

ICELAND

GG SPORT
Smiðjuvegur 8, Grængata,
200 Kópavogur
+354 571 1020

magnus@ggsport.is

FINLAND

LAPIN KOSKIKOULU
Suvannosentie 45 B11
Sirkka 99130
+358 4174 31 56 44

info@lapinkoskikoulu.com

SWITZERLAND

RESCUE PUBLICATIONS GMBH
Bramenstrasse 5
CH-8184, Bachenbulach
+41 43 4440511

info@profiwelt.ch

SPAIN

RIVER GURU
Camino A, 3, 22808
Murillo de Gállego (HUESCA)
+34 974 38 32 87

info@riverguru.es

CANADA

RAVEN RESCUE SAFETY MEDICAL LTD
Highway 16, 3064 Smithers, BC
VO J 2N0
1-800-880-0287

info@ravenrsm.com

ESTONIA

INTERFIRE OÜ
Akadeemia Tee 21/1
12618 Tallinn
+37 26797966

gert.teder@interfire.ee

TECHNICAL ADVISOR

AUSTRIA

SWIFTWATER RESCUE
Moosweg 19
AT-6522 Prutz
+43 547220226

info@swiftwaterrescue.at

QUALITY FABRICS

WRS International believes that selecting the best fabric for the product is key in making high performance inflatables.

We use a wide range of fabrics from our suppliers. Each has unique properties making it suitable for a particular task. All our products come with a 3-year warranty regardless of the fabric.

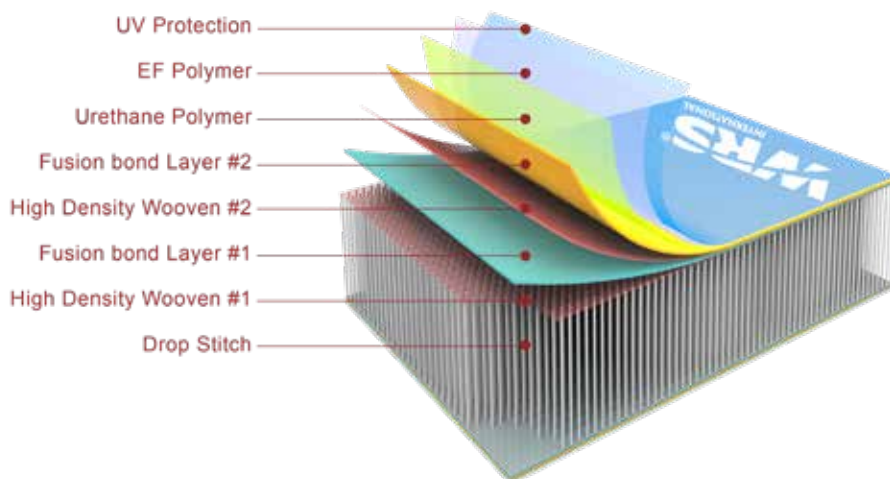
PVC Fabric - seen for years as the cheap alternative, - has developed into a modern fabric with some unique characteristics. Our PVC tubes are heat welded and then the seams are double glued. This creates an extremely reliable air tight structure, and production time is reduced due to the use of specialist machinery, keeping labour costs lower than traditional hand glued seams. PVC is very easy to perform emergency repairs and using our Emergency Repair Kit, it can even be repaired in wet conditions, which no other fabric is capable of.

New PVC Fusion Drop Stitch

The weight and pack size of a product is an important factor to rescue teams, as is durability. WRS International harnessed the use of Fusion to bond the 2 layers of fabric together used on all of our PVC Drop Stitch products. Fusion bonding layers eliminates the need for large quantities of glue, used in standard double layer drop stitch products. Using 2 Layers of fabric gives increased rigidity, improving performance and casualty transport. Fusion Drop Stitch offers this with reduced pack size and weight. No other fabric choice gives this level of rigidity to the product.

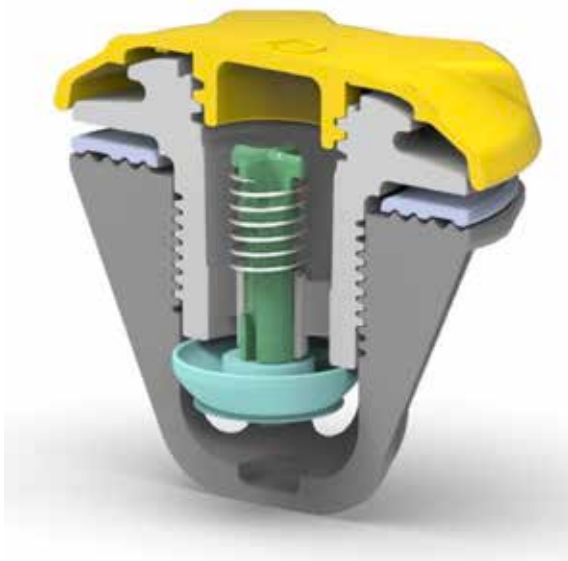
Only Woven Fabric

Not all drop stitch is made equal. WRS International use the best quality woven base fabrics on our drop stitch fabrics. Woven fabrics increase rigidity and strength, outperforming the knitted alternatives found in some rescue and leisure inflatables. Think of a knitted jumper, it lacks strength and is stretchy in comparison with a woven polyamide sling which is much stronger and does not stretch.



Polyurethane Fabric and Drop Stitch

We can use high quality durable Polyurethane (PU) fabrics used in our Pathway and Evacuation Sled products. PU fabric is highly resistant to abrasion and capable of being both welded and glued. PU is used on products that may be operated in areas bridging the gap between water and land. PU is not currently available using the Fusion process to increase rigidity, making PU more flexible than our Fusion PVC. PU fabrics remain flexible in varied temperatures making the products easy to roll.

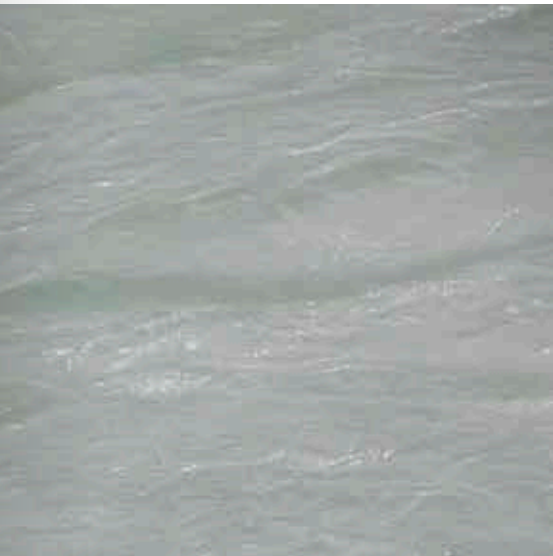


Only Leaffield Valves

WRS International works with the British based valve manufacture, Leaffield. Leaffield offers highly reliable valves. All the chambers of our inflatables are protected with the Leaffield A6 pressure relief valve. This provides protection against air expansion and the use of high pressure inflation devices.

The C7 and D7 inflation valves are standard on our products, with the D7 designed specifically for inflation of drop stitch products.





TEAM EQUIPMENT

MEGA-SLED

X-SLED

RESCUE RAFT 3.6M - 4M

EVACUATION SLED

PATHWAYS

RAPID D-BOARD

ACCESSORIES





DETAILED FEATURES

High Volume Side Tubes

With a raised bow height the sled is able to handle swift water tethers and rescues. This reduces the risk of the bow or side tubes from diving when loaded with rescuers or casualties. The high volume sled maximises stability and confidence.

Leaffield inflation and overpressure valves

The Mega Sled is fitted with Leaffield C7/D7 inflation valves. The A6 overpressure valve is fitted to each chamber offering protection against overinflation.

Low profile grab handles

Fitted with 7 low profile grab handles, aiding team carries and in-water casualty management.

15 cm Airdeck hull

The new 15 cm PVC Fusion Dropstitch offers high floatation, dry deck and a rigid platform.

3 Chambers

The sled is built with 3 separate inflatable chambers, providing added security should one of the chambers become compromised.

Patent Pending "Transom Flap"

The transom flap enables the sled to be converted from an open back self bailing craft to a sealed dry deck area for transportation of flood victims. This makes it a versatile swift water and float rescue craft.

6 Person craft

The sled has been designed to carry 6 occupants in swift water with the Transom Flap down. When Transom Flap is in use the capacity is 1000kg or approx 8-10 people



DIMENSIONS

↔	LENGTH	363 cm
↗	WIDTH	180 cm
⚖	WEIGHT	32 kg
⊞	PACK SIZE	120 x 60 x 35 cm



PROPERTIES

MATERIAL	PVC Fusion Dropstitch
FLOOR THICKNESS	15 cm
TUBE WIDTH	50 cm
CHAMBERS	3
D-RINGS	18, stainless steel 316
PROPULSION	Canoe style paddles (not included), Tow
VALVES	Leaffield C7/D7 + A6 pressure relief valves on each chamber
WARRANTY	3 years
CAPACITY	600 kg (swift water) 1000 kg (flood water with transom flap up)

Bag included





DETAILED FEATURES

High Volume Bow and Rocker

With a raised bow height the X-Sled is able to handle tethers in swift water whilst reducing the risk of the bow diving when loaded. The increased volume maintains stability when occupied by a casualty or rescuer.

Inflation and overpressure valves

Leaffield valves are used and are widely recognised as world leaders in valve manufacturing. Our valves all work with our boat inflation kit and pump.

Low profile grab handles

Fitted with 15 low profile grab handles, aiding team carries and in-water casualty management.

15 cm Airdeck hull

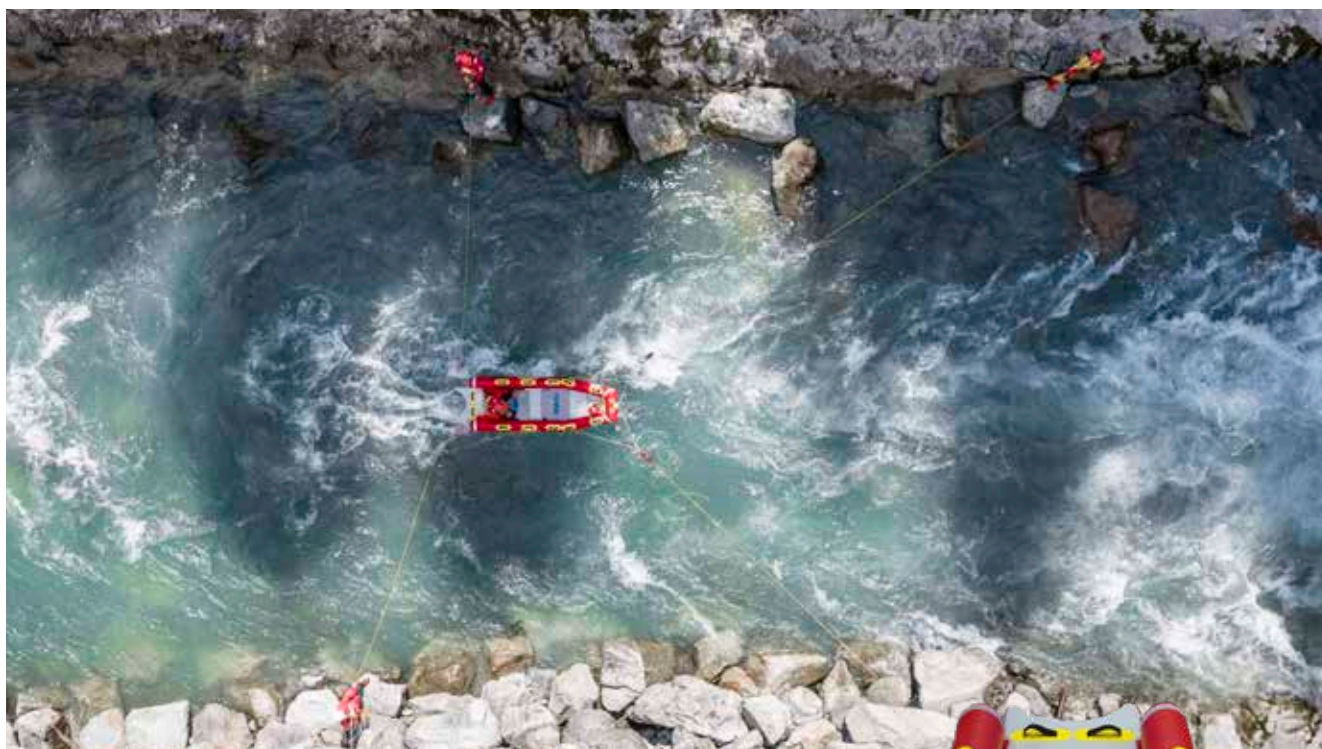
The new 15 cm PVC Fusion Dropstitch offers high floatation, dry deck and a rigid platform.

3 Chambers

The sled is built with 3 separate inflatable chambers, providing added security should one of the chambers become compromised.

3 Person craft

The X-Sled has been designed to carry 2 rescuers and 1 casualty. Although the sled will float up to 5 people successfully, this does affect its use in turbulent water.



DIMENSIONS

↔	LENGTH	355 cm
↗	WIDTH	122 cm
⚖	WEIGHT	20 kg
⊕	PACK SIZE	95 x 50 x 28 cm

PROPERTIES

MATERIAL	PVC Fusion Dropstitch
FLOOR THICKNESS	15 cm
TUBE WIDTH	24 cm
AIR CHAMBERS	3 compartments
BOW RISE	54 cm
D-RINGS	5, stainless steel 316
PROPULSION	Kayak or canoe style paddles (not included), Tow
VALVES	Leaffield C7/D7 + A6 pressure relief valves on each chamber
WARRANTY	3 years
CAPACITY	350 kg

Bag included



RESCUE RAFT



REF

3.6 M	WARRPU360+BAG
4 M	WARRPU400+BAG



DETAILED FEATURES

Extra wide side tubes for added stability and capacity

The Rescue Raft is fitted with stable high volume side tubes making it an ideal platform for rescue.

Removable central thwarts

The option to remove central thwarts gives rescuers options with the transportation of victims. When fully removed a victim in a stretcher is held in the bottom of the raft with a low centre of gravity.

Overpressure release valves

All chambers are fitted with overpressure valves as standard, providing protection against overinflation and air expansion in chambers.

Rated for 5 or 8 passengers

The Raft is able to safely transport 5 or 8 people or 700kg or 1000kg.

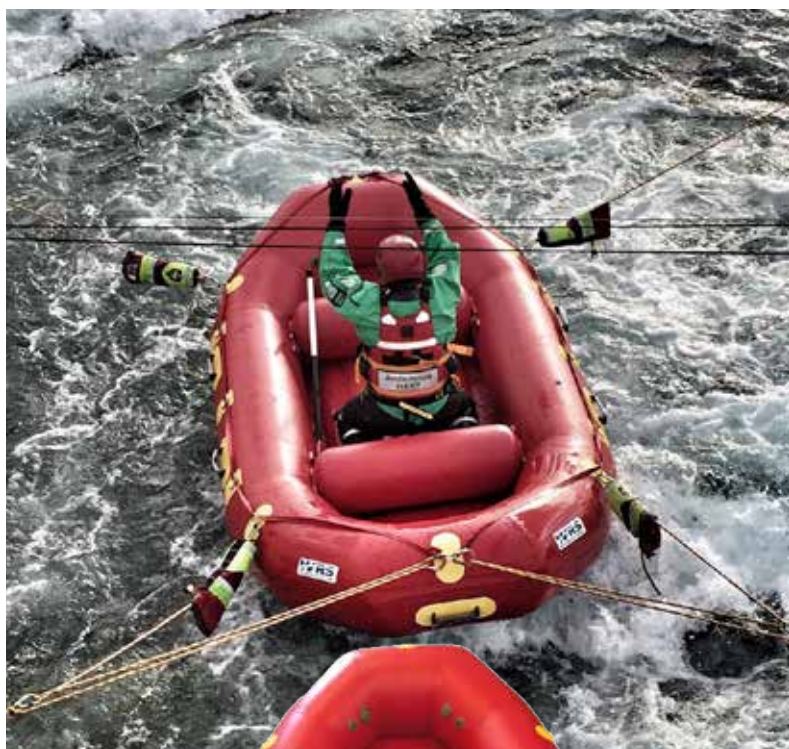
Fully inflatable I beam floor

The Rescue Raft is fitted with the I-Beam floor as it offers a safe floor option, eliminating the foot entrapment dangers that come with drop-thread floors commonly used in Rafts. The I beam floor is self-bailing.

Hull in PU

The PU hull offers a good protection against abrasion.





DIMENSIONS

	3.6 M	4 M
↔ LENGTH	360 cm	400 cm
↗ WIDTH	180 cm	180 cm
⚖ WEIGHT	55 kg	60 kg
⊕ PACK SIZE	100 x 100 x 40 cm	100 x 100 x 50 cm

PROPERTIES

MATERIAL	PVC / PU (hull)
FLOOR THICKNESS	15 cm I beam
TUBE WIDTH	48 cm (3.6 m) 52 cm (4 m)
CHAMBERS	5
THWARTS	2 (3.6 m) 3 (4 m)
D-RINGS	12 stainless steel 316
PROPULSION	Canoe paddles, tow
VALVES	Leaffield C7 + A6 pressure relief valves on each chamber
CAPACITY	700 kg (3.6 m) 1000 kg (4 m)
WARRANTY	3 years



Bag included



EVACUATION SLED



REF

XL HOES2



DIMENSIONS

XL

↔	LENGTH	200 cm
↗	WIDTH	64 cm
↑↓	HEIGHT	40 cm
⚖	WEIGHT	8,5 kg
📏	PACK SIZE	57 x 28 x 22 cm

PROPERTIES

FLOOR THICKNESS	6,7 cm
AIR CHAMBERS	1 compartment
D-RINGS	6, stainless steel 316
VALVES	Leaflet D7 + A6 pressure relief valves
WARRANTY	3 years
CAPACITY	160 kg

DETAILED FEATURES

- Fits through doorway, 660mm wide
- 6 webbing carry handles
- Registered folding design can be used to scoop casualty
- Fully Inflatable
- Small Pack Size and light weight
- Casualty will remain dry when sled is fully folded and sealed.

Bag included



	REF
2 M	PAW4
3 M	PAW2+BAG
5 M	PAW1+BAG



DIMENSIONS

↔	LENGTH	200 cm	300 cm	500 cm
↗↘	WIDTH	100cm	140 cm	140 cm
↑↓	HEIGHT	15 cm	15 cm	15 cm
⚖	WEIGHT	7,4 kg	13,3 kg	23 kg
📦	PACK SIZE	60 x 55 x 15 cm	80 x 40 x 25 cm	80 x 55 x 30 cm



PROPERTIES

MATERIAL	TPU Dropstitch
FLOOR THICKNESS	15 cm
AIR CHAMBERS	1
D-RINGS	8, stainless steel 316
VALVES	Leafield D7 + A6 pressure relief valves
WARRANTY	3 years
CAPACITY	Dependant on length

DETAILED FEATURES

- Fitted with carry handles and D-rings
- Curved design for mud rescue
- Leafield valves compatible with boat inflation kits and pump
- 4 low profile carry handles

Bag included
(for 3m and 5m)



RAPID D-BOARD

REF

RADB1



DETAILED FEATURES

Towable inflatable rescue board for Jet bike

Inflation and overpressure valves

The single chamber is fitted with an overpressure valve as standard, providing protection against overinflation and air expansion in the chamber.

Rubberised grab handles

Fitted with 10 easy to grab handles.

3 towing points

Stainless steel 316 D-rings for connection to PWC.

Reinforced hull

Hull is clad in super tough Polymer to increase durability in service, the Polymer extends to cover the sides of the board.

DIMENSIONS

↔	LENGTH	160 cm
↗	WIDTH	95 cm
⚖	WEIGHT	13,5 kg
⊞	PACK SIZE	100 x 55 x 15 cm

PROPERTIES

MATERIAL	PVC Dropstitch
FLOOR THICKNESS	12 cm
D-RINGS	3, stainless steel 316
PROPULSION	Swim or tow
VALVES	Leaffield D7 + A6 overpressure relief valve
WARRANTY	3 years

ACCESSORIES



WRS pump

- High Volume and High Pressure Setting
- Pressure gauge
- Compatible with all WRS Inflatables
- Provided with push fit adaptor

REF

PU2+PUFVA1



REF

INK1

Inflation kit

- For use with either DIN 300bar or 200bar cylinders
- Screw fitting for Leaffield valves
- 90 cm EN 250 hose
- Compatible with all WRS Inflatables



REF

EMPFRK1

Emergency Patch Field Repair Kit

- Easy to apply tapes for PVC/PU/Hypalon
- Bonds to PVC when wet
- Watertight box
- No glue so can be inflated immediately

Connector Split Paddle

REF

PA2

- Single kayak paddle 245cm
- Splits into 2 canoe paddles 143cm
- Converts to wading/reach pole 176cm
- Tough HDPE blades and anodized aluminium shaft
- Bag included



Combination Paddle

REF

PA3

- Single Kayak Paddle 210cm
- Splits into 2 Canoe Paddles (145cm + 155cm)
- Tough HDPE blades
- Foam filled anodized aluminium shaft







PERSONAL EQUIPMENT

RESCUE WRAP PFD

PFD ACCESSORIES

TECHNICAL RESCUE HELMET

HELMET ACCESSORIES

AGRESSOR DRYSUIT

WATER RESCUE BOOT

CHAOS THROWBAG & BELT



RESCUE WRAP PFD

REF

REWPFD2
S/M - L/XL - XXL



DETAILED FEATURES

Whistle Clip

Close at hand shoulder whistle clip.

Cowstail Park

Left and right handed split D-rings for cowstail attachments.

Knife Pocket

Horizontal zip, easy access knife pocket with gear clip.
Durable metal zip slider.

Radio Pocket

Huge 3D pocket suitable for a radio, with plastic gear clip and durable metal zip slider.

Gloves Pocket

3D pocket specific for gloves, with plastic gear clip & durable metal zip slider.

Gear Pocket

Huge 3D pocket suitable for safety gear, with plastic gear clip & durable metal zip slider.

Rear ID Panel

Velcro loop panel for team ID badges.

Front Role Panel

Velcro loop panel for ID or role badges.

Glowstick

Shoulder mounted plastic gear clip, with elastic loop to house a glowstick.

Lash Tab

Rear and front positioned sewn tab for light beacon attachment.

Harness

Adjustable quick release webbing for super quick and safe releasing when needed most.

Leg Loops

Slim line, removable, adjustable loops to aid a better fitting of the PFD provided with automatic plastic buckles.



ACCESSORIES

Cowstail

- Reduced length to reduce snag hazard and fit the form of the user
- Elasticated
- Tough tubular webbing
- 316 Stainless steel ring
- Load bearing bar tacked construction
- Easy visible red colour (does not include karabiner)
- 38cm Relaxed
- 50cm when fully stretched
- 13 kN



REF
COT1

Reflective badge

- 30 x 10 cm
- Hook and loop attachment
- MOQ: 10 pcs



REF

Carabiner

- Twist-lock
- 30 kN
- Gate opening: 23 mm
- Weight: 96 g



REF
TL KHD33

SAR Leds

- Green - Red - Orange - White
- LED
- Flashmodus: 500 h
- Hook and loop attachment



REF	
GR	SALS1.GR
RE	SALS1.RE
OR	SALS1.OR
WH	SALS1.WH

TECHNICAL RESCUE HELMET



Standards

- EN 16471
- EN 12492
- PAS 028*
- EN 16473
- EN 1385

*Weight exceeds PAS 028 stipulation

Standard Visor

- EN 166
- EN 14458

PROPERTIES

- High resistance to mechanical impact (frontal, rear, vertical and lateral)
- High resistance to penetration
- Classification low temperature -20°C
- Electrical isolation capacity E2 (cfr. electrical protection level of a fire helmet)
- Silver retro-reflective striping for more visibility
- Anti-scratch and anti-fog coating (EN 166 and EN 14458)
- Limited protection against certain chemicals
- Limited protection against radiant heat
- Limited protection against flames
- Adjustable headband (52 – 64 cm) that can be positioned low on the neck. This increases the stability of the helmet on the head.
- Ventilation holes on the top of the helmet protected by a metal mesh
- Small openings on the back of the helmet for water drainage during water rescues
- Chin strap with automatic buckle that can be operated with gloves
- 765 g with internal visor included
- Thermo plastic, resistant to high temperatures
- Optional: full face visor

COLOURS

- White
- Red
- Orange
- Fluorescent yellow
- Blue
- Yellow
- Green
- White luminescent

REF		
INT. VISOR		
	UK	INTERNATIONAL
YELLOW	HEWRS1.GE	HEWRS3.GE
GREEN	HEWRS1.GR	HEWRS3.GR
RED	HEWRS1.RO	HEWRS3.RO
WHITE	HEWRS1.WI	HEWRS3.WI
BLUE	HEWRS1.BL	HEWRS3.BL
H-VIS YELLOW	HEWRS1.GEF	HEWRS3.GEF
WHITE LUMINO	HEWRS1.LU	HEWRS3.LU

EXT. AND INT. VISOR		
	UK	INTERNATIONAL
YELLOW	HEWRS2.GE	HEWRS4.GE
GREEN	HEWRS2.GR	HEWRS4.GR
RED	HEWRS2.RO	HEWRS4.RO
WHITE	HEWRS2.WI	HEWRS4.WI
BLUE	HEWRS2.BL	HEWRS4.BL
H-VIS YELLOW	HEWRS2.GEF	HEWRS4.GEF
WHITE LUMINO	HEWRS2.LU	HEWRS4.LU



ACCESSORIES

Petzl Pixa 3R

- Output: 90 lumens
- Rechargeable battery included
- IP 67



REF

HLP20

Fenix HMR65

- Output: 400 lumens, Boostmode 1400 lumens
- Rechargeable battery included
- IP 68



REF

LFE1

Petzl Pixa Adapt

- Adhesive water based patch



REF

AKP2

Uni Adapt

- Adhesive water based patch
- Set of 4 pcs



REF

HKP1



Patch Loop for SAR LED

- Adhesive water based patch

Fenix Mount adapter

- Tesa adhesive water based patch



REF

AKF1

AGRESSOR DRY SUIT



FEATURES

A fully breathable suit offering comfort to water rescue teams working in both flood and swift water environments for long periods. The Agressor Dry Suit offers great freedom of movement and breathability, with an easy entry chest zipper making self-donning simple and secure.

- 3-layer breathable fabric
- Large front entry YKK chest zipper
- Twin Latex and adjustable over cuffs, and neck seals
- Articulated padded knees
- Tough nylon fabric on seat area
- Internal adjustable braces
- Integrated latex dry sock
- Reflective SOLAS tape on cuffs
- Articulated arms
- Convenience zipper
- Smart phone pocket on arm and chest

DIMENSIONS

+	SIZES	M, M+, L, L+, XL, XL+, XXL
🌈	COLOUR	Red

PROPERTIES

UPPER FABRIC	Breathable Nylon trilaminate
TROUSER FABRIC	Breathable Nylon trilaminate
ZIP	YKK Aquaseal chest zipper, YKK Fly zipper
CUFFS	Latex and over cuffs with velcro closure
SOCKS	Latex
MARKINGS	Reflective cuffs, logo arm patch

WATER RESCUE BOOT



Drainage holes



Nitrile
rubber sole





Oil resistant

FEATURES

A Fibreglass safety toe offers rescuers protection from moving boulders in natural environments and protection from rolling vehicles in urban flood rescues. A Neoprene upper clamping securely around the ankle with the world leading BOA® Fit System.

- Synthetic leather and Neoprene upper
- Anti corrosion thread
- Nitrile Rubber sole for added grip on wet smooth surfaces
- Multi directional tread pattern for slippery terrain
- BOA® fit system for secure and quick fitting
- Fibreglass safety toe
- Kevlar® fibre protective midsole
- Formed cuff to reduce gravel ingress
- Drainage holes
- Oil resistant sole
- Bright colour for under water identification
- Reflective detail on tongue
- Certified: EN ISO 20345:2011 S1P SRC

DIMENSIONS

	WEIGHT	750 gr for one boot, size 42 (UK 8)
	UK SIZES	3 - 13
	EU SIZES	36 - 48
	COLOUR	Red/Yellow/Black combo

CHAOS BAG



New Chaos throwbag and quick release belt has been specifically designed for Water Rescue Technicians. Sold both empty or with our 8 or 10mm ropes. The oval shape fits close to the body. The bag is easy to pack, throw and stows with ease into the belt pocket.

BAG FEATURES

Oval shape

The tough Nylon fabric is shaped to fit the bodyprofile.

Webbing rim

A webbing rim holds the bag open for quick repacking.

Light stick pocket

Reducing snag hazard found with external holders.

Any rope concept

Sold either with your choice of rope diameter/length or sold empty of rope allowing you to fit your desired rope.

Krab slot

Tuck a connected karabiner in the bottom of the bag, for ease of deployment when urgently needed.

Reflective markings

Highly visible in both low light and night operations

PROPERTIES



BODY FABRIC	Tough wearing Nylon
DRAINAGE	Drain slot at base, drainage mesh on side
FASTENING	Webbing wrap closure and plastic pop stud
ATTACHEMENT	Belt loops or slot into Chaos Rescue Belt
FLOATING ROPE CAPACITY	Max 25 m of 8 mm floating rope Max 20 m of 10 mm floating rope
MARKINGS	User markings, length, chevron pattern
NIGHT OPS	Reflective banding and logo, light stick pocket
COLOUR	Red with yellow markings
WARRANTY	1 year

CHAOS BELT



BELT FEATURES

Tough Nylon fabric

Hard wearing fabric for years of service

Tensioner belt and buckle

Fits like a ruck sack waist band for a secure fit

Dual sides bag release

Single handed release clips access the bag quickly with either hand

Quick release buckle

Quick release buckle quickly releases the whole bag and belt system for user safety and maintains a managed tail length to avoid jamming during release

Reflective markings

Reflective logo and stripes for night operations

PROPERTIES

BELT FABRIC	Nylon webbing, soft foam padding
POUCH FABRIC	Tear resistant Nylon
SAFETY RELEASE	Quick release buckle
USER SIZE RANGE	71 cm to 152 cm waist
COMPATIBLE BAG SIZE	38 - 43 cm circumference
COLOUR	Grey and red
MARKINGS	Reflectice WRS logo and dual stripes
WARRANTY	1 year







CONTACT

Krommebeekstraat 44
8930 Menen
Belgium
+32 56 21 38 62
contact@wrsinternational.com

Unit 4D Gatebeck Business Park
Gatebeck, Cumbria, LA80HS
United Kingdom
+44 1524 22 02 24
lawrence@wrsinternational.com

WWW.WRSINTERNATIONAL.COM