



ROUGH WATERS HARD GEAR

IMMERSION SUITS FOR PROFESSIONAL AND LEISURE USE



WHEN LEAVING FOR EXTREME CONDITIONS, THE MINIMUM TARGET IS TO RETURN.

The Ursuit® immersion suits are designed for extreme conditions. When we design our suits, the most important aim is the user's safety and survival in all situations. Other important goals are the comfort and usage of the suits, achieved with design details and choice of materials. The continuous product development made in close co-operation with demanding professional users gives to our suits that additional extra, which makes them the first choice in their field, both for work and heavy leisure use.

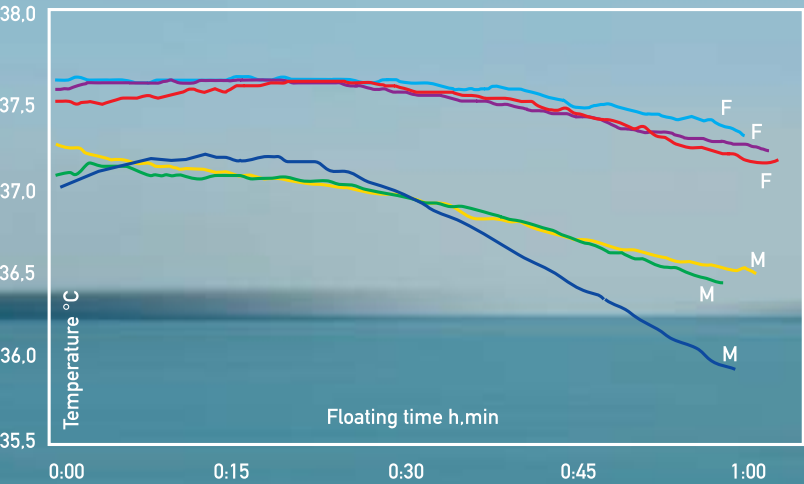
Professionals know: in cold water and rough sea you are just as good as your equipment. When you choose an Ursuit® you are prepared for everything.

THE THERMAL INSULATION OF IMMERSION SUITS

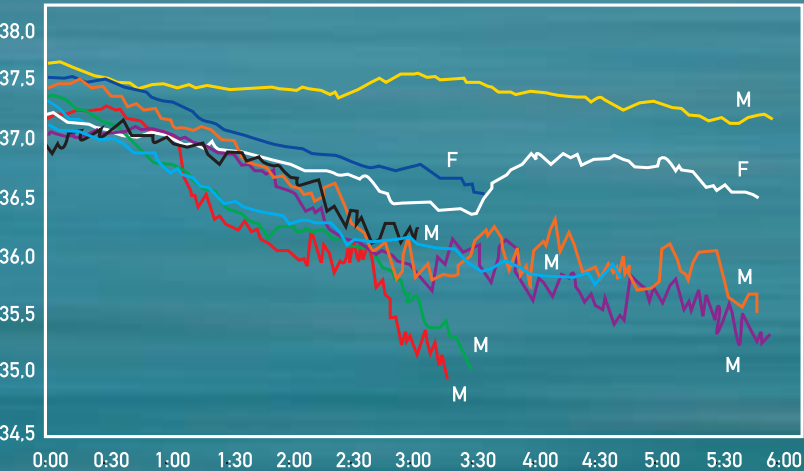
IMMERSION SUIT EN ISO 15027-1					
The warmth of clothing protecting against cold water depends on the thermal properties of the under and intermediate clothing worn under the dry suit.					
Water temperature	< 5 °C	6.0 h	2.5 h	1.5 h	1.0 h
	5 °C–10 °C	9.0 h	4.5 h	2.5 h	1.5 h
	10 °C–15 °C	15.0 h	7.5 h	4.0 h	2.0 h
	> 15 °C	24.0 h	15.0 h	6.0 h	3.0 h
Protection class		A	B	C	D

The protection class of an immersion suit is determined by its protection properties against cold. The figures in the table show the water temperature and the time of floating in cold water. During the tests, the body temperature of the test subjects must not in any single case fall below the limit of hypothermia, which is 35 °C. The diagrams show that cold water resistance varies highly between the test subjects. The Ursuit® immersion suits have been classified in their protection classes according to the lowest test results, to assure a sufficient thermal insulation, independently from the variations between different users.

The Finnish Institute of Occupational Health, Department of Physics (FINAS test laboratory T013) has tested the thermal insulation of the Ursuit® and Liukko immersion suits, in accordance with the EN ISO 15027-3 and the LSA Code, with the following results:



The temperatures of six test subjects (M = male, F = female) during the testing of the thermal properties of Ursuit® immersion suits, with standard clothing. During the test the water temperature was 5 °C. The average fall in temperature of the test subjects after 1 h was 0,55 °C, with a thermal insulation of 0,83 clo.



The temperatures of nine test subjects (M = male, F = female) during the testing of the thermal properties of Ursuit® immersion suits, together with the Finnfill thermal underwear. During the test the water temperature was 2 °C. The average fall in temperature of the test subjects after 6 h was 1,1 °C, with a thermal insulation of 1,5 clo.

WITH ADDITIONAL EQUIPMENT YOU CAN IMPROVE THE PROTECTION CLASS.

The Ursuit® immersion suits are aimed for continuous work and demanding leisure usage, especially for conditions where you may get wet or fall into cold water. In such conditions the suits are fit for long term usage, as they are manufactured of a breathable three layer material. Each suit is pressure tested before delivery.

Thermal underwear



Buoyancy vest



Immersion suit

The Ursuit® immersion suits have the following approvals:

- Directive on personal protective equipment 89/68/EEC EN ISO, standard 15027-1
- IMO LSA-Code, directive on marine equipment 96/98/EC



With the addition of optional equipment you can, at a small cost, improve the protection class of your suit.

With an optional thermal underwear you are able to improve the protection level to class B, in accordance with the standard SFS-EN ISO 15027 1-3.

With an optional 70 N buoyancy vest you are able to change your suit in accordance with the directive on marine equipment 96/98/EC (MED) to an AES suit (Anti Exposure Suit).

Without changes in the protection class you can also choose the optimal hood, seal and footwear alternative (see page 19).



URSUIT® SEA HORSE

A top quality suit for the most demanding user. The Sea Horse model includes all of the best properties of an immersion suit. Its ergonomics is of its very own class and the comfort is superior. Thanks to the telescope waist construction it fits well, it is comfortable and light to wear. It keeps you dry regardless of how long you will stay in water. It functions perfectly, in all conditions.

Once you have experienced the comfort and good qualities of the Sea Horse you will hardly accept any other type of immersion suit.

- Material: Gore-Tex® fabric based upon the ePTFE membrane, which lets vapour penetrate but which is completely waterproof.
- Seam construction: double seams so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % watertight.
- Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.
- Knee and back reinforcement: double material.
- Dry zipper: opens from the right hip up to the left shoulder. The position of the zipper as well as its opening direction minimise the disadvantages of a heavy zipper when sitting and moving around.
- Telescope waist: integrated suspenders keep the trouser part up at the same time as the crotch strap keeps the upper part down. Thanks to the telescope design the trousers do not fall down in the way they may do in a one piece overall. Persons of different height can use the same suit without weakening the ergonomic features.
- Supplied in a carrying bag.

Approval: 

Material: 

Seam construction: 



Thermal hood, protects against cold water.



Protective hood, sheltering against wind and rain.



Thigh pockets, which 5-finger thermal gloves.



Chest pocket, with whistle and service kit.



Polyurethane boots with broad fitting and strong non slip soles.



Wrist seals of warming 2.5 mm super stretch neoprene.



Professional use: boating suit for authorities, working suit for cold and wet conditions.
Leisure use: trolling, spinning, ice fishing, fly fishing, bird hunting; for boating in general.

5111

5110

URSUIT® STD 5116

A suit model designed especially for canoeing, dinghy sailing and other activities done in a sitting position. The simple design concentrates on the most essential features: comfort and keeping dry, leaving out excessive details. The suit design considers especially the different measurements of the back and the front parts, to achieve the maximum comfort in a sitting position.

- Material: Vapour permeable and water tight X-TEX.
- Seam construction: double seams so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % watertight.
- Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.
- Neck seal: Patterned 2,5 mm super stretch neoprene. For easy dressing the patterned rubber surface is on the outside.
- Wrist seals: 2,5 mm super stretch neoprene with nylon on both sides. Easy to dress and undress. The neoprene also keeps your wrists warm in cold conditions.
- Thermal hood and gloves: 3 mm neoprene hood protects your head against cold water.
- The gloves are 5-finger type and made of 3 mm neoprene.



Approval: 

Material: 

Seam construction: 



Thigh pocket, with thermal hood and gloves.



Integrated suspenders keep the trouser part up. The trousers do not fall down in the way they may do in a one piece overall.



Socks: made of X-Text fabric, allows the use of footwear of different sizes and types, for different applications.



Dry zipper, with opening direction from the left shoulder to the right hip, has been designed especially for canoeing. It allows you to ventilate the suit without getting up from the canoe.



Leisure use: canoeing, dinghy sailing, jet ski, etc.

URSUIT® LIUKKO ONE SIZE

- Material: Vapour permeable and water tight X-TEX.
- Seam construction: The double seams have an inside elastic, which allows the suit to expand to the measurements of the user. Inside the seams are heat seal taped and reinforced for 100% water tightness.
- Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.



Hood: Attached X-TEX stretch hood, which can be put down around the neck. Separate 3 mm neoprene hood.



Thermal hood, protecting against cold water.



Socks: made of X-TEX fabric, allowing the use of footwear of different sizes and types, for different applications.



Sleeve pockets, with 5-finger thermal gloves.



Neck seal: made of pleasant elastic X-TEX.



Wrist seals: 2,5 mm super stretch neoprene with nylon lining on both sides. Easy to dress and undress. The neoprene also keeps you warm in cold conditions.

Approvals:



0403

Material:



URSUIT® LIUKKO ONE SIZE – ONE SIZE FOR MANY USERS.

The Liukko One Size is a patented suit (patent no 95554), which adapts itself to the measurements of the user.

Liukko One Size is the suit for adventure travelling and safari excursions. It is also the right choice for companies with rental activities, that wish to take care of the safety of their customers, in all conditions. Thanks to the construction of the model the need for different sizes is minimised.

Liukko One Size is approved in accordance with the directive on marine equipment. It is also fit for the varying personnel and passengers on board merchant vessels.

Liukko One Size grows or gets smaller together with the user. The smallest family members do not have to be left on shore or be sent out to sea without adequate equipment.



GORE-TEX® GOTLAND – a special fabric for special garments

The vapour permeable and at the same time waterproof Gore-Tex® material is based upon an expanded PTFE membrane, which allows vapour to penetrate but keeps water outside. This phenomenon comes from the fact that a water molecule is 20 000 times bigger than the pores of the Gore-Tex membrane. The Gore-Tex® Gotland material used for the immersion suits is designed especially for long term hard work in wet conditions.

Comfort: The weight of the material is only 225 g/m², so it is very lightweight.

Durability: The nylon surface has been chosen for its high strength. Its abrasion strength is even 200 000 runs on the Martindale abrasion test. Extremely high tongue tear and tensile values, and extremely durable seam tape. Cold does not make the material stiff, and does not affect the breathable properties.



Waterproof: Remains waterproof under extreme conditions. High water entry pressure of even 2 bar (The Gore-Tex® Gotland fabric is waterproof up to a pressure of 2 bar).

Breathable: The breathability increases as the workload increases. The good breathing properties prevent build up of sweat inside the suit and also the humidity of the underwear is avoided. This helps to prevent hypothermia.

Conclusion: High durability, lightness, breathability and waterproof qualities have made Gore-Tex® a material used worldwide for professional sailing, military and rescue usage. The products have proved their outstanding performance in extreme conditions.

RETURN OF A CLASSICAL SUIT CONCEPT

Our traditional one piece overall without suspenders, which fits well thanks to the elastic bands at both sides. The overall is easy and fast to take on and off. The thermal lining is attached with zippers and is easy to take off for washing. The lining is equipped with breathable floating material, thanks to which the suit always also feels dry beneath the floating material.

A new type of dry zipper, plastic moulded, creates a comfort of its own class. The zipper opens and closes very easily. The zipper is UV protected and stands pressures up to 1.7 bar.

The Gore-Tex® Gotland material used for the immersion suits is designed especially for long term and extremely hard professional use in wet conditions.



Approval: 

Material: 

Seam construction: 

URSUIT® 5106 PRO ORANGE/URSUIT® 5108 PRO BLUE

- Material: Gore-Tex® fabric based upon the ePTFE membrane, allowing vapour to get through but remaining completely watertight.
- Seam construction: double seams so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % watertight.
- Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.
- Boots: Polyurethane boots with broad fitting and strong non slip soles.
- Knee and back reinforcements: double material.
- Thermal hood: 3 mm neoprene hood, which protects against cold water.
- Attached hood, which protects against wind and rain.
- Supplied in a carrying bag.



The dry zipper opens from the neck and it feels pleasant both completely closed and slightly open.



Elastic waist band: The vertical elastic bands at the sides of the suit keep the trouser part up, preventing their falling down, which is typical for overalls.



Gloves: 5-finger, made of 3 mm neoprene.



Pockets: Two thigh pockets, with 5-finger thermal gloves and service kit. Two chest pockets.

Professional use: Boating suit for authorities, working suit for cold and wet conditions. Especially suitable for emergency situations with quick departures.
Leisure use: trolling, spinning, ice fishing , fly-fishing, boating, bird hunting, etc.



5108

5106

URSUIT® 5020 II – THE FAVORITE AMONG PROFESSIONAL USERS.

The non insulated Ursuit® 5020 II is designed for hard professional use. It has been chosen by the defence forces, border guards, sea rescue associations, and merchant vessels in several European countries. Especially for open sea conditions it has proved to be by far the best of immersion suits.

- Material: Gore-Tex® fabric based upon the ePTFE membrane, which lets vapour penetrate but which is completely watertight.
- Seam construction: double seams so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % watertight.
- Dry zipper: opens from the right hip up to the left shoulder. The position of the zipper as well as its opening direction minimise the disadvantages of a heavy zipper when sitting and moving around.
- Telescope waist: integrated suspenders keep the trouser part up at the same time as the crotch strap keeps the upper part

down. Thanks to the telescope design the trousers do not fall down in the way they may do in a one piece overall. Persons of different height can use the same suit without weakening the ergonomic features.

- Neck seal: patterned 2.5 mm super stretch neoprene. For easy donning, the patterned rubber surface is on the outside.
- Wrist seals: 2.5 mm super stretch neoprene with nylon lining on both sides. Easy to take on and off. The neoprene also keeps you warm in cold conditions.
- Thermal hood: 3 mm neoprene, protects against cold water.
- Supplied in a carrying bag.



Attached hood, protects against wind and rain.



Reflective tapes, in accordance with the directive on marine equipment.



Sleeve pockets, with 5-finger thermal gloves.



Phone pocket, with buddy line, whistle, and service kit.



Thigh pocket.



Polyurethane boots with broad fitting and strong non slip soles.



Material:

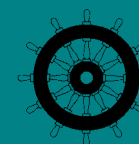


Seam construction:



Professional use: Constant Wear Immersion Suit for work, in difficult conditions, especially at open sea.

Approvals:



0403



Attached hood, protects you against wind and rain.



Sleeve pockets, with 5-finger thermal gloves.



Thigh pocket.



Phone pocket, with buddy line, whistle and service kit.



Wrist seals: 2.5 mm super stretch neoprene with nylon lining on both sides. Easy to take on and off. The neoprene also keeps you warm in cold conditions.



Integrated suspenders keep the trouser part up. This avoids the falling down of the trousers, which is typical for overalls.

URSUIT® BASIC

- Material: Vapour permeable and durable X-TEX three layer fabric.
- Seam construction: double seam so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % watertight.
- Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.
- Thermal hood: 3 mm neoprene, protects against cold water.
- Neck seal: patterned 2.5 mm super stretch neoprene. For easy dressing, the patterned rubber surface is on the outside.
- Polyurethane boots, with broad fitting and strong non slip soles.
- Dry zipper: opens from the right hip up to the left shoulder. The position of the zipper as well as its opening direction minimise the disadvantages of a heavy zipper when sitting and moving around.
- Supplied in a carrying bag.



Material:

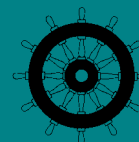


Seam construction:



Professional use: Constant Wear Immersion Suit for work, especially at open sea.

Approvals:



0434

Basic

URSUIT® HEAVY LIGHT RESCUE

The Heavy Light Rescue Suit has been developed for demanding rescue and surface rescue work. The material is a very light but yet durable three layer fabric.



Ergonomically fitting neoprene hood.



Integrated loops for drying.



The special cut of the sleeves add to the ergonomics.



Knee and back reinforcements: double material. In addition, the knees have polyacrylate reinforcements.



Front zipper. Allows you to dress without help. The protective strip of the zipper prevents the BC from rubbing on the zipper teeth, and protects the dry zipper against sand and dirt.



Telescope waist: integrated suspenders keep the trouser part up at the same time as the crotch strap keeps the upper part down. Thanks to the telescope design the trousers do not fall down in the way they may do in a one piece overall. Persons of different height can use the same suit without weakening the ergonomic features.



Reflective tapes: The suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment. The reflective triangle on the back shows the direction of the diver.



5 mm neoprene boots with latex surface, reduce the need for extra insulation. Right sizing prevent additional air from getting into the boots, which would create buoyancy. Heel strap retainers keep the fins safely in place.

Approval:



Seam construction:



Professional use: Rescue diving, surface rescuing.

URSUIT® 5113 DRY INTERMEDIATE SUIT

The Ursuit® 5113 is a very lightweight dry suit, to be worn under an outer garment. Thanks to the breathable Gore-Tex® fabric, the suit will keep your underwear dry, even when worn together with outer clothing that does not breath, for instance a floating overall. The suit is worn in situations where the outer garments have to be changed according to varying conditions.

- Seam construction: double seams so that the seam will not open even when worn. Inside the seams are heat seal taped and reinforced to be 100 % water tight.
- Socks: made of Gore-Tex® Gotland.
- Dry zipper: A very light new type of dry zipper, opening from the right hip to the left shoulder.
- Neck seal: Patterned 2.5 mm super stretch neoprene. For easy dressing and undressing the patterned rubber surface is on the outside.
- Wrist seals: 2.5 mm super stretch neoprene with nylon lining on both sides. Easy to take on and off. The neoprene also keeps you warm in cold conditions.

Material:



Seam construction:



Professional use: As a dry intermediate suit, for instance under a uniform or fire protection suit.

Leisure use: For pleasure boats, sailing, canoeing, sports fishing, under a floating overall or similar outer garment.

Approval:



URSUIT® 5001 SURVIVAL SUIT

- Material: flame retardant 5 mm cell neoprene
- Seams: glued and sewn
- Colour: red
- Reflective tapes: placed in accordance with the directive on marine equipment
- Ergonomic qualities: one size, fits persons up to 195 cm
- Oil resistant rubber soles
- Adjustment straps at the ankles
- Dry zipper: opens at the left ear
- 1 chest pocket with velcro fastener
- Whistle
- Buddy line on the left sleeve
- Attached 5-finger thermal gloves, with polyurethane surface
- Attached neoprene hood with face seal
- Supplied in a carrying bag

- Optional equipment:
 - Thermal insulation at the small part of the back
 - Signal light
 - Thigh pockets
 - Phone pocket
 - Lifting strap with carbine hook
 - Reinforcements on the knees
 - Dry zipper on the right sleeve –allows working with one bare hand
- On special request: sizes S and XXL

Application:

For the merchant fleet: Abandonment suit for the crew on board merchant vessels and open rescue boats. **Fishing vessels:** Isolated survival and rescue suit for the crew on board fishing boats.

URSUIT® 5003 RESCUE SUIT

- Material: flame retardant 5 mm cell neoprene
- Seams: glued and sewn
- Colour: red
- Reflective tapes: placed in accordance with the directive on marine equipment
- Sizes: S, M, L, XL, and XXL
- Oil resistant rubber soles
- Dry zipper: opens at the left ear
- 1 chest pocket with velcro fastener
- Whistle
- Buddy line
- Lifting strap with carbine hook
- Attached 5-finger thermal gloves, with polyurethane surface
- Attached neoprene hood with face seal
- Supplied in a carrying bag

- Optional equipment:
 - Thermal insulation at the small part of the back
 - Signal light
 - Thigh pockets
 - Phone pocket
 - Reinforcement on the knees
 - Dry zipper on the right sleeve – allows working with one bare hand

Application:

For the merchant fleet: Isolated rescue suit for persons working on rescue boats.



5001



5003

Approval:



0434

URSUIT® 5027 PILOT INSULATION SUIT

- Material: Nomex Gore-Tex®
- Seams: double seams so that the seam does not open even if worn. Inside heat seal taping and reinforcement that guarantees 100% water tightness
- Colour: green
- Sizes: 46–58
- Adjustable waist elastic
- Gore-Tex® socks, leg zippers
- Dry zipper from the left side of the chest around the neck to the left hip
- 2 large thigh pockets with velcro fasteners, velcro fasteners for chart pockets
- 1 knife pocket on the right thigh
- 1 phone pocket on the left thigh
- 2 chest pockets with zippers
- 1 pen pocket on the chest
- Velcro straps for badges on the left shoulder
- Form pleats at the knees
- Outlet for G-suit
- 2 leg pockets
- Wrist seals of super stretch neoprene: keep the wrists warm.
- Attached hood of Gore-Tex® Stretch material

URSUIT® 5030 OVER WATER FLIGHT SUIT

- Material: most durable Gore-Tex® Gotland three layer fabric which breathes
- Seams: double seams so that the seam does not open even if worn. Inside heat seal taping and reinforcement that guarantees 100% water tightness
- Colour: orange or green
- Sizes: 46–58
- Reflective tapes: the suit is equipped with several reflective tapes in right places, which assure visibility in all conditions. The soft and durable reflective tapes are developed by 3M in accordance with the directive on marine equipment.
- Adjustable waist elastic
- Gore-Tex® socks, leg zippers
- Reinforcement on the knees
- Reinforcement at the backside
- Dry zipper from the left shoulder to the right hip
- Integrated suspenders
- 2 large thigh pockets with velcro fasteners, velcro fasteners for chart pockets
- 1 knife pocket on the right thigh
- 1 phone pocket on the left thigh
- 2 chest pockets with zippers
- 2 velcro fasteners for the attachment of badges on both shoulders
- 2 light pockets on the sleeves
- 2 pen pockets on the sleeves
- 2 leg pockets
- Wrist seals of 2.5 mm super stretch neoprene: keep the wrists warm.
- Thermal 5-finger gloves of neoprene, with velcro fasteners
- Thermal hood of 3 mm neoprene
- Supplied in a carrying bag

Material:



Seam construction:



Approval:



5027: Special suit for pilots on military planes.
5030: Working suit for helicopter crew and ground staff.



5030

17

UNDERWEAR

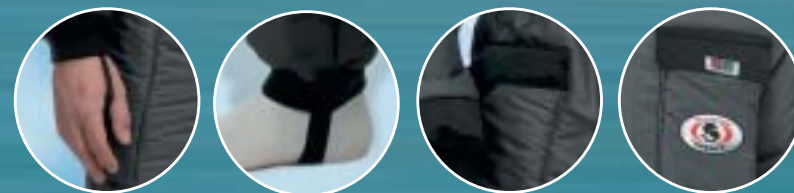
THE THINSULATE® THERMAL UNDERWEAR IS PRESSURE PROOF

The outstanding Thinsulate® fibre does not lose any of its properties under pressure. The surface fabric is slippery and durable polyester, the inner lining is fleece.

- Front zipper with double locks
- Chest pocket with zipper
- Large hip pockets
- Elastic fabric in the collar, cuffs and legs
- Thumb and leg retainers
- Strong elastic waist band

THE FINNFILL THERMAL UNDERWEAR GETS EVEN BETTER WHEN WASHED

The Finfill material does not lose any of its properties even when washed frequently in water. Chemical wash even improves its Clo value. The fibre does not break up or get lumpy even after a long time of usage, but keeps its properties from year to year. The insulating material is a 200 g Finfill fibre, made in Finland.



THERMAL UNDERWEAR OF QUILTED FABRIC

The square patterned quilted underwear has a slippery outer surface and is equipped with breathable floating panels on the chest and back. Thanks to the breathing properties, the suit also always feels dry beneath the floating material.

- Front zipper with double locks
- Chest pocket with zipper
- Elastic waist band
- Attached socks
- Elastic fabric in the collar and cuffs



Quilted fabric

Finfill

Thinsulate®

OPTIONAL EQUIPMENT

- Special reinforcements of durable polyacrylate on knees, back, elbows or shoulders
- Breathable 5 mm knee pads under the knee reinforcements
- Breathable 3 mm padding under the back reinforcement
- All suits equipped with boots can be made with socks
- All suits equipped with socks can be made with boots
- Steel toe cap work boots
- Customer's own boots can in most cases be attached to the suits
- The suit pockets can be adjusted for special requirements
- Signal light
- Neck and wrist seals of latex



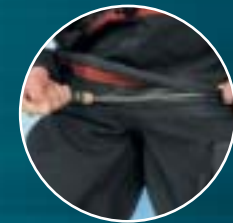
Carrying bag



Sailor's sack
type bag



Cuff rings for
dry gloves



Relief zipper



Attached stretch hood
and neck seal



Buoyancy vest 70 N
for the AES suit



Safety boots



Neoprene boots

URSUIT® IMMERSION SUITS:

Suit size	Height	Chest	Boots
			38 on special request
01/S	152-164 cm	88-96 cm	40
02/M	164-170 cm	96-104 cm	42
03/L	170-182 cm	104-112 cm	44
04/XL	182-194 cm	112-120 cm	46
05/XXL	194-200 cm	120-128 cm	48

LIUKKO ONE-SIZE

Suit size	Height	Chest	Socks
S (small)	120-160cm	60-80 cm	S
M (medium)	160-190 cm	80-100 cm	M
L (large)	190-210 cm	100-120 cm	L



URSUIT®