PROCEAN®



HEATED SYSTEMS MANUAL

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GENERAL INFORMATION

Please read the following manual carefully before using any product from the heated range and keep it for future reference. Be sure to thoroughly read and understand the contents of this manual. Should you have any questions, please contact your nearest dealer or our custumer service department.

The use of diving equipment by untrained person may cause dangerous situations

The heated products schould not be cleaned with solvents or strong detergents. It any information or warning needs further explanation, please contact your nearest dealer or our customer service department.

1.1 MANUFACTURER

Procean
Mulderspark 3A
9351 NR - Leek
The Netherlands

Tel.: 0031594580070

www.procean.nl
info@procean.nl

1.2 CE CERTIFICATION

See amendment page(s)

1.3 TYPE OF HEATED

a. Vest
b. Jacket
c. Undersuit(s)
d. Gloves
e. Socks

1.4 HEATED OPTIONS

Further information about the options and available accessories can be obtained from your Procean authorized dealer.

1.5 IMPORTANT NOTICES

Any critical information or warnings that might affect the performance of the product or results in injury to the user and/or otghers are highlighted with the following symbols

HAND WASH

DO NOT TUMBLE DRY

FLAT DRY

ATTENTION

WARNING This symbol Indicates a potentially hazardous situation which, if not avoided may results in serious injury

WARNING

IMPORTANT NOTICE

- Any use of this equipment is conditional to reading, understanding and following this user guide.
- Products from our Heating Systems range are only to be used for drysuit divers.
- Use with appropriate battery source. Batteries schould not exceed 7,4 Volts!
- Only charge with supplied charger!
- Protect the plug before washing the heating systems (hand washing only).
- The power must be switched off when out of the water.
- Switch off immediately when the drysuit is flooded or when there is a malfunction suspected.
- Do not disassemble or modify the product.
- Do not combine with other Heating Systems. They are not compatible with this product. Combine only with other Procean Heating System products.

Before each dive inspect the product and all electrical connections.
If you notice any malfunction do **NOT** use the product.
Contact Procean customer service department for advice.
If required return the product to a PROCEAN authorized service center

NEVER

NEVER Never - Damage or puncture the battery
Damaged battery must be disposed of in line with EU / local requirements

NEVER Never - Use another battery with the Procean heated systems other than the battery that is supplied with the heating systems products

NEVER Never - Use another charger than the Procean charger supplied with the heating systems products

DO NOT USE any of the Heating products (undersuits, jacket, vest, gloves or socks) when you detect any malfunction in the way that they work / operate.

AVOID Walking on the socks for long distances.
When any malfunction of the socks is detected they should be returned.
The socks have a shorter life span due to the nature of the product type.

ABORT DIVE Abort your dive when any malfunction is experienced.

SAFETY

- When the system gets wet, turn the system off
- Just simply let it dry and everything will work again
- In case of malfunction immediately abort the dive and disconnect battery
- Check connections and function before each dive

WARRANTY

Limited warranty for Procean heating systems products.

With this limited warranty PROCEAN declares that the product is free from defects in fabrics, components and craftsmanship at the time of purchase. Please read all warnings and safety instructions before use and keep the original sales proof. This must be shown when repair should be covered by warranty. The product needs to be claimed by the dealer where it was purchased.

Procean heated products come with 12-mounth limited guarantee against defects in materials and workmanship. The warranty does not cover damage due to: abuse neglect, improper usage, lack of maintenance or normal wear and tear. Any change or modification made by the user or by the third parties, use of incompatible accessories that are not part of Procean products.

If any defect covered by this limited warranty appears within 12 months from the date of purchase Procean reserves the right to repair or replace the product.

The warranty is limited to repair or replacement with Procean authorized dealers and parts .

Registration is mandatory within 4 weeks following datre of purchase

Read the manual and follow the washing instructions for proper care of this product

SIZE CHARTS

4.1 SIZES MAN

WIDTH		XS	S	M	L	XL	2XL	3XL	4XL
2	Neck	40	41	42	43	44	45	46	47
42	Chest middel	89	95	101	107	113	119	125	131
5	Biceps	27	29	31	33	35	38	40	42
6	Waist	77	83	89	95	101	107	113	119
7	Underarm	28	29	30	32	33	35	36	37
8	Wrist	15	17	18	18	19	20	21	22
9	Hips	91	97	103	109	115	122	129	135
11	Upper leg	39	42	45	48	50	53	56	59
13	Lower leg	28	30	32	34	37	39	41	44
15	Ankle	24	26	28	30	32	34	36	38
LENGTH									
32	Neck to wrist	76	79	82	85	89	92	95	98
34	Neck to waist	43	45	46	48	49	51	52	54
35	Body loop	151	157	164	170	177	183	190	196
38	Inner leg to ankle	73	75	78	80	83	86	88	91
39	Inner leg to foot	82	84	85	87	89	91	93	95

4.2 SIZES LADY

WIDTH		2XS	XS	S	M	L	XL	2XL	3XXL	4XL
2	Neck	29	30	31	32	33	34	35	37	38
42	Chest middel	76	82	88	94	99	107	113	120	128
5	Biceps	28	29	30	31	32	33	34	35	36
6	Waist	62	68	74	80	86	92	98	104	110
7	Underarm	26	27	28	29	30	31	32	33	34
8	Wrist	15	15	17	18	18	19	20	21	22
9	Hips	81	87	92	98	103	109	115	120	126
11	Upper leg	47	50	52	56	59	62	65	68	72
13	Lower leg	34	36	38	40	42	44	46	48	50
15	Ankle	23	24	26	27	28	29	30	33	33
LENGTH										
32	Neck to wrist	73	76	79	82	85	87	89	91	93
34	Neck to waist	37	38	38	39	40	40	41	41	42
35	Body loop	134	138	141	145	148	152	156	160	164
38	Inner leg to ankle	70	71	72	75	77	80	83	86	88
39	Inner leg to foot	75	76	77	79	82	85	87	89	91

HEATING UNDERSUITS

Undersuit 1
Undersuit 3





4.1 PRODUCT SPECIFICATIONS

The undersuits have three layers

1. Outher
2. B200 Thinsulate thermal retention layer
3. Polar fleece inner layer

The breathable Thinsulate fabric allows for comfortable body heat retention with or without the active system being used. The undersuits still have a high level of thermal properties even if it is switched off. Through the pre-shaped elbows, knees and slim-fit the product gives you an optimal freedom of movement. Each Vest / Jacket / undersuit has a battery placement pocket for the rechargeable battery. The switch for on / off / setting on the heated suit, enables you to operate from outside the drysuit.

- Zips at wrist and ankles
- All zips have a fleece cover
- Footstraps
- Thumb-loops
- Braces
- Elastic waist
- Pockets with zips
- Double-side zip

4.2 AVAILABLE SIZES

XS, S, M, ML, L, XL, 2XL, 3XL
MADE TO MEASURE

4.3 TECHNICAL INFORMATION

- Works on the supplied batteries with an maximum volatge of 7,4V
- Heated undersuit 1 with battery 4400 mAh
- Heated undersuit 3 with battery 5200 mAh
- Three positions:
  Level 1 = 35 %
  Level 2 = 65 %
  Level 3 = 100 %
- Keeps you warm even when it switched off
- Extra pocket for cable ends of gloves/ socks

4.4 HEATED

Undersuit 1
- Chest heated
- Shoulders heated

Undersuit 3
- Chest heated
- Shoulders heated
- Legs heated

4.5 CONNECTION HEATED SYSTEMS

Undersuit 1
- Connection for gloves

Undersuit 3
- Connection for gloves
- Connection for socks

4.6 TEMPERATURE

The suggested watertemperature for the Procean undersuits.
This is only an indication as comfort and warmth is of course very personal



4.7 WASHING INSTRUCTION


Hand wash, water temp 20 – 25 °C


Cover and protect the pluh while washing


DO NOT SPIN OR TUMBLE DRY


Flat dry

HEATED JACKET





5.1 PRODUCT SPECIFICATIONS

The heated jacket has three layers

1. Outher
2. B200 Thinsulate thermal retention layer
3. Polar fleece inner layer

The breathable Thinsulate fabric allows for comfortable body heat retention with or without the active system being used. The undersuits have a high level of thermal properties if it is switched off. Through the pre-shaped elbows, and slim-fit the product gives you an optimal freedom of movement. The Jacket has a special pocket for the rechargeable battery.

The switch for on/ off / setting, enables you to operate from outside the drysuit

- Zips at wrist
- All zips have a inside cover
- Thumb-loops
- Pockets with zips

5.2 AVAILABLE SIZES

XS, S, M, ML, L, XL, 2XL, 3XL
MADE TO MEASURE

5.3 TECHNICAL INFORMATION

- Works on the supplied batteries with an maximum volatge of 7,4V
- Heated with battery 4400 mAh
- Three positions:
  Level 1 = 35 %
  Level 2 = 65 %
  Level 3 = 100 %
- Keeps you warm even when it switched off
- Extra pocket for cable ends of gloves

5.4 HEATED

- Chest heated
- Shoulders heated

5.5 CONNECTION HEATED SYSTEMS

- Connection for gloves

5.6 TEMPERATURE

The suggested watertemperature for the Procean undersuits.
This is only an indication as comfort and warmth is of course very personal



5.7 WASHING INSTRUCTION

Hand wash, water temp 20 – 25 °C

Use the cover plug while washing

DO NOT SPIN OR TUMBLE DRY

Flat dry

HEATED VEST





6.1 PRODUCT SPECIFICATIONS

The heated Vest has three layers.

1. Outer
2. B200 Thinsulate thermal retention layer
3. Polar fleece inner layer

The breathable Thinsulate fabric allows for comfortable body heat retention with or without the active system being used. The undersuits have a high level of thermal properties if it is switched off. The product gives you an optimal freedom of movement. The Vest has a pocket for the rechargeable battery.

The switch for on / off / setting, enables you to operate from outside the drysuit.

- All zips have a fleece cover
- Pockets with zips

6.2 AVAILABLE SIZES

XS, S, M, ML, L, XL, 2XL, 3XL
MADE TO MEASURE

6.3 TECHNICAL INFORMATION

- Works on the supplied batteries with an maximum volatge of 7,4V
- Heated with battery 4400 mAh
- Three positions:

Level 1	=	35 %	4-5 hours
Level 2	=	65 %	3-4 hours
Level 3	=	100 %	2-3 hours

- Keeps you warm even when it switched off

6.4 HEATED

- Chest heated
- Shoulders heated

6.5 CONNECTION HEATED SYSTEMS

- No Connections are available on this product

6.6 TEMPERATURE

The suggested watertemperature for the Procean undersuits.
This is only an indication as comfort and warmth is of course very personal



6.7 WASHING INSTRUCTION


Hand wash, water temp 20 – 25 °C


Use the cover plug while washing


DO NOT SPIN OR TUMBLE DRY


Flat dry

HEATED GLOVES



7.1 PRODUCT SPECIFICATIONS

The heated gloves are made of double fleece

The heated gloves can only be used with
a. Heated undersuit 1
b. Heated undersuit 3
c. Heated jacket

7.2 AVAILABLE SIZES

XS, S, M, ML, L, XL, 2XL
MADE TO MEASURE

7.3 TECHNICAL INFORMATION

- Works on the supplied batteries with an maximum volatge of 7,4V
- Heated with battery 4400 mAh / not supplied with the gloves
- Three positions:
  Level 1 = 35 %
  Level 2 = 65 %
  Level 3 = 100 %
- Keeps you warm even when it switched off

7.4 HEATED

- Top of the hand is heated
- Fingertops are heated

7.5 CONNECTION HEATED SYSTEMS

Can be connected to
- Heating undersuit 1
- Heating undersuit 3
- Heating jacket

7.6 TEMPERATURE

The suggested watertemperature for the Procean undersuits.
This is only an indication as comfort and warmth is of course very personal



7.7 WASHING INSTRUCTION

Hand wash, water temp 20 – 25 °C

Use the cover plug while washing

DO NOT SPIN OR TUMBLE DRY

Flat dry

7.8 IMPORTANT NOTICE

The heated gloves can only be used with the Procean heating systems

HEATED SOCKS



8.1 PRODUCT SPECIFICATIONS

The 2022 heated sock has three layers

1. Outer
2. B200 Thinsulate thermal retention layer
3. Polar fleece inner layer

The heated socks can only be used with

- heated undersuit 3

The above has an special pocket with a cable connection for the battery being used for the heated socks (This is the same location as the heated gloves). The switch for on / off / setting is on the outside of the heated suit. Enables you to operate from outside the drysuit

8.2 AVAILABLE SIZES

XS, S, M, ML, L, XL, 2XL
MADE TO MEASURE

8.3 TECHNICAL INFORMATION

- Works on the supplied batteries with an maximum volatge of 7,4V
- Heated with battery 4400 mAh / not supplied with the product
- Three positions:
  Level 1 = 35 %
  Level 2 = 65 %
  Level 3 = 100 %
- Keeps you warm even when it switched off

8.4 HEATED

- Top of the foot is heated

8.5 CONNECTION HEATED SYSTEMS

Can be connected to
- Heating undersuit 3

8.6 TEMPERATURE

The suggested watertemperature for the Procean undersuits.
This is only an indication as comfort and warmth is of course very personal



8.7 WASHING INSTRUCTION

Hand wash, water temp 20 – 25 °C

Use the cover plug while washing

DO NOT SPIN OR TUMBLE DRY

Flat dry

8.8 IMPORTANT NOTICE

The heated socks can only be used with the Procean heating systems

Socks only to be used while diving

Do not use for more than one year!

BATTERY AND CHARGER



9.1 PRODUCT SPECIFICATIONS

Battery pack for the heated systems. The Procean Accu is made of Li-polymer. The battery has a capacity of 4400 mAh or 5200 mAh.

The battery is designed to work with the undersuits, jacket, vest, gloves or socks from the Procean heating system range.

The battery is equipped with a number of safequards to protect against excessive discharge, overload and short circuit.

9.2 BATTERY POWER LEVEL INDICATOR

Level 1	=	35%
Level 2	=	65%
Level 3	=	100%

9.3 TECHNICAL PARAMETERS

- Capacity
- Operating voltage 7,4V
- Cells type: Li-polymer
- Charging time
- Weidth: 84 mm
- Height: 50 mm
- Weight: 162 gr

9.4 OPERATING RECOMMENDATIONS

- Battery should be connected to heated product using only the Procean connector found in the Undersuit / Jacket / Vest battery placement pocket.
- When the heated product is not in use, the battery should be disconnected from the product.

9.5 TRAVELLING

During transportation it must be switched off.

9.6 CHARGING

- Charge the battery using the supplied battery charger.
- Plug the charger to a power source 100-240V.

⚠ Charge the battery only with the original charger

9.7 KEY FACTORS FOR THE SAFETY FOR THE BATTERY AND CHARGER

- Never allow the battery to be discharged below 20% of its capacity
- Do not open the battery or charger or modify their design
- Do not short-circuit the external contacts of the battery and charger
- Do not throw the battery or charger
- Do not put th battery or the charger in a fire
- Indoor charging is recommended while protecting from unexpected weather conditions
- The battery should be stored only when charged to minimum of 70% in a dry place
- Never charge frozen battery or at freezing temperature. It may cause of damage. If the battery was in low temperature for a long time, it should be left in a warm temperature. For several hours before use or charging
- Check the battery level every half a year, never store battery which is fully discharged.
- Keep the battery away from children.
- Procean is not responsible for any damage or loss which are result of inappropriate use of the battery or charger, especially against above recommendations

⚠ DO NOT ACTIVELY HEAT THE BATTERY

9.8 BATTERY CAUTION

- Do not connect improperly
- Do not dispose in fire or excpose to excess heat
- Do not crush puncture, incinerate or short circuit external contacts
- Remove the battery from the undersuits, jacket, vest, gloves or socks before washing
- Only use the specified charger
- Change battery afther 400-500 chargers
- Do not disassemble-do not short circuit

10 IMPORTANT SAFETY INSTRUCTIONS

Garment is supplied with the following products and only these products should be used with the garment.
Lithium Battery Models: LX-DRF01H/2H
Mains Charger Model : SW-084120
Garments operate at 7.4V and exceeding this voltage is dangerous and will damage the product.
Garment should never be worn next to the skin. Always wear at least one layer of clothing underneath the garment.

10.1 GARMENTS ARE TESTED USING THE FOLLOWING TEST STANDARDS

CE marking under EC Council Directive of 2004/108/EC
EN 61000-6-3: 2007 EN 61000-6-1: 2007
Safety Assessment tested with reference to the following standards
EN 60335-1:2002 +A11, A1, A12, A2, A13, A14, A15 EN 60335-2-17:2006, A1, A2
CE marking under EC Council Directive of 2004/108/EC for models
LX-DRF01H LX-DRF02H LX-DRF03H
Batteries tested using test standards
EN 61000-6-1: 2007 EN 61000-6-3: 2007+A1 2011+AC:2012 EN 6100-3-2:2014 EN 61000-3-3:2013
Chargers have been tested using the following test standards for CE
EN55022:2010 EN55024:2010 EN 61000-3-2:2014 EN 61000-3-2:2014
Low Voltage Directive 2006/95/EC
EN 60335-1:2012+A11:2014 EN 60335-2-29:2004+A2:2010 EN 62233:2008

If, after reading this Instruction Manual, you have any questions or comments, please feel free to contact us.

- [ ] UNDERSUIT 1
- [ ] UNDERSUIT 3
- [ ] JACKET
- [ ] VEST
- [ ] GLOVES
- [ ] SOCKS
- [ ] BATTERY
- [ ] CHARGER

SERIAL NUMBER

DATE OF PURCHASE

STAMP AND SIGNATURE OF SELLER

MULDERSPARK 3D
9351 NR LEEK
THE NETHERLANDS
PHONE 0031 594 580070 & 0031 6 53147996

info@procean.nl

www.procean.nl