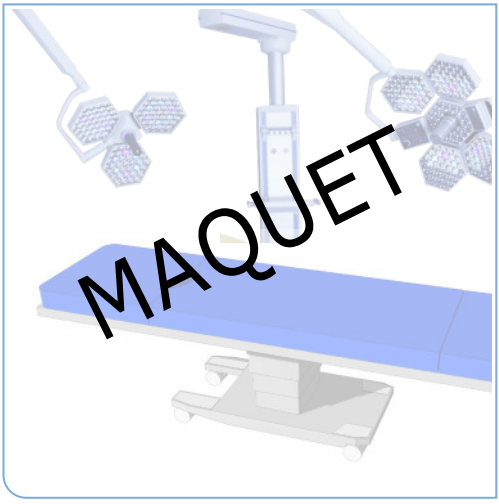
ESWELL

Mattresses for operating tables



Simonsen & Weel

ESWELL

By Simonsen & Weel established in 1817

ESWELL mattresses for operating tables

About ESWELL

Our ESWELL mattresses for operating tables are developed in collaboration with leading experts within the health care sector in Scandinavia and other countries.

The ESWELL mattresses for operating tables are designed to improve the positioning of the patient during surgery, and at the same time they reduce the risk of developing pressure injuries.

Our ESWELL products increase the pressure distribution, and thereby improve circulation of the blood. They secure comfortable positioning of the patient even in awkward positions. The mattresses for operating tables are easy to use and provide help when re-positioning.

The first ESWELL products were introduced in 2006, and today they are used in many hospitals in around 50 countries throughout the world.

The production of ESWELL

The ESWELL production site uses the most recent techniques and production methods at its plants in Denmark and Poland. Every day, more than 1,500 m^3 foam is produced at one of Europe's largest foam machines placed in Denmark. The factory has more than 400 employees and a history of foam manufacturing that goes more than 40 years back.

All products are subject to a quality check, where two specialzed employees control that all specifications and characteristics of the product comply with the standards. The factory is ISO 9001:2015 certified.

The Foam

Our ESWELL mattresses are designed with three different foam layers combining viscoelastic foam and normal PU foam.

Viscoelastic foam is a high-tech material originally developed by NASA. It absorbs body heat and molds itself gently to the body, and thus gives the body improved support during surgery. The pressure distributing properties of the foam provide unique patient comfort and at the same time it ensures a correct anatomical position for the surgeon.

Cover

The cover is a waterproof and breathing Decu-Tex© material, which mainly consists of polyurethane. For optimal hygiene all covers are fully-welded and are fitted with a water-resistant zipper, which makes it possible to remove and wash (up to 95°C). The zipper is protected by the cover in order to reduce irritation of the skin and to prevent liquids entering the foam.

In order to ensure maximum hygene, the part of the cover touching the operating table is a special developed non-slip cover. This makes the use of e.g. velcro® obsolete.

Colours

Our mattresses are manufactured as standard in the colours black. As increasingly more hospital are using colours to classify and categorize the mattressses for different positionings/departments, we can also deliver mattresses in the below colours.



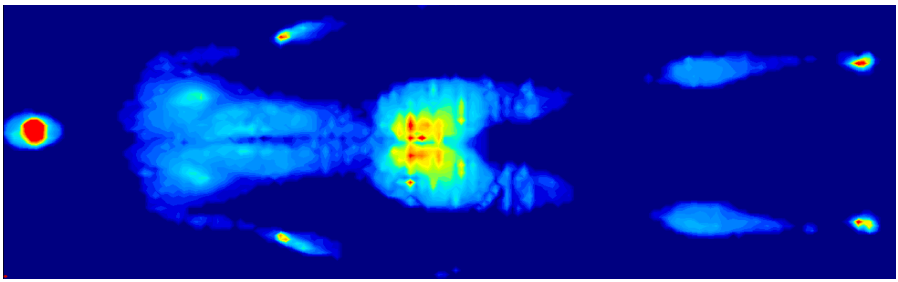
Environment & Allergy Friendly

None of the ESWELL products are allergenic or unhealthy as they do not contain PVC, cadmium, phthalates or latex.

Testing of ESWELL mattresses for operating tables

In order to ensure that our products fulfil the high requirements of our customers, we are testing all products in-house before putting them on the market.

For our mattresses we test them with a specific number of test persons of different age, gender, height and weight in order to get a broad picture of the capability of the mattresses.



Afterwards, we do a statistical analysis of the outcome in order to see if the results are statistically significant.

The following test was conducted for our standard mattresses for operating tables with patients lying in supine position.

The hypothesis test is:

H0: mean pressure in exposed area is equal to 32mmHg, y = 32 mmHg

H1: mean pressure in exposed area is lower than 32mmHg, y > 32 mmHg

We use 32 mmHg as reference, as this is the pressure level where the capillaries close of. This leads to local ischemia, where the cells in that area cannot receive nutrients and cannot discharge waste products. Tissue necrosis occurs if this situation is not reversed within a reasonable time frame*.

* Eugene M. Landis et al., Micro-injection studies of capillary blood pressure in human skin. Heart, 15(15):209-228, 1930.

We use the one-sample t-test for this, given by: $t_0 = \frac{\bar{y} - \mu}{S/\sqrt{n}}$

Where n is the sample size and S is the sample standard deviation given by:

$$S^2 = \frac{\sum_{i=1}^{n}(y_i - \bar{y})^2}{n-1}$$

We also find the 95% confidence interval for the true difference, d, in measured mean pressure and the target of 32mmHg. This is given by:

$$(\bar{y} - \mu_0) - t_{\frac{\alpha}{2},n-1}\frac{S}{\sqrt{n}} \leq d \leq (\bar{y} - \mu_0) + t_{\frac{\alpha}{2},n-1}\frac{S}{\sqrt{n}}$$

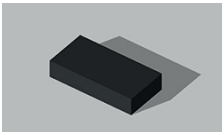
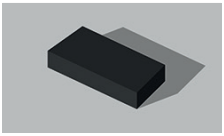
Here α is the probability of a type I error, usually set at 5%.

	Head	Shoulders	Elbows	Sacrum	Heels
Mean [mmHg]	34.32	24.81	17.47	30.51	29.13
Difference to 32 mmHg	2.32	-7.19	-14.53	-1.49	-2.87
Standard deviation	5.91	6.46	2.84	2.49	4.06
t-statistic	1.52	-4.31	-19.83	-2.31	-2.74
p-value	< 0.10	< 0.0005	< 0.0005	< 0.025	< 0.01
95% CI, lower limit	-0.95	-10.77	-16.10	-2.87	-5.11
95% CI, upper limit	5.60	-3.62	-12.96	-0.11	-0.62

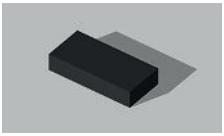
As shown in the above table, shoulders, elbows, sacrum and heels all have a significantly lower average pressure than 32 mmHg (p values below 0.025). The head experiences a pressure that is higher than 32 mmHg; however this difference is not statistically significant.

Maquet 1130 Betamax

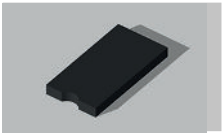
Head

Item no.	Description	Colour	Size: L x W x H i mm	
229668	Mattress for head section	Black	250 x 520 x 100	
249317	Mattress for head section	Black	250 x 530/490 x 100	

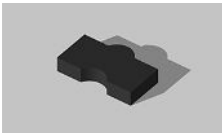
Upper back

Item no.	Description	Colour	Size: L x W x H i mm	
229968	Mattress for upper back	Black	235 x 500 x 100	

Seat/lower back

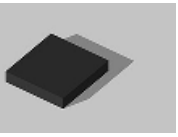
Item no.	Description	Colour	Size: L x W x H i mm	
248722	Mattress for seat/ lower back	Black	1050 x 540 x 100	

Pelvis extension

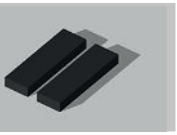
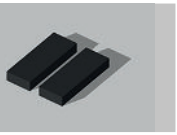
Item no.	Description	Colour	Size: L x W x H i mm	
229586	Mattress for pelvis extension	Black	270 x 540 x 100	

Maquet 1130 Betamax

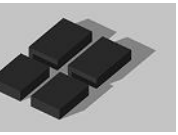
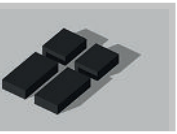
Leg section, 1-part

Item no.	Description	Colour	Size: L x W x H i mm	
229028	Mattress for leg section, 1-part	Black	570 x 540 x 100	

Leg section, 2-parts

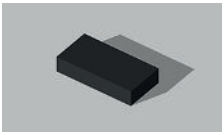
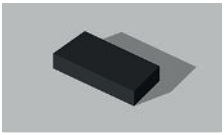
Item no.	Description	Colour	Size: L x W x H i mm	
229949	Mattress for leg section, 2-parts	Black	850 x 250 x 100	
229969	Mattress for leg section, 2-parts	Black	680 x 250 x 100	

Leg section, 4-parts

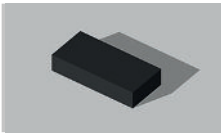
Item no.	Description	Colour	Size: L x W x H i mm	
229584	Mattress for leg section, 4-part	Black	380/450 x 280 x 100	
249319	Mattress for leg section, 4-part	Black	480/310 x 250 x 100	

Maquet 1131 Betastar

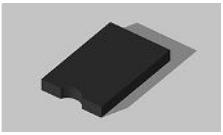
Head

Item no.	Description	Colour	Size: L x W x H i mm	
229668	Mattress for head section	Black	250 x 520 x 100	
249317	Mattress for head section	Black	250 x 530/490 x 100	

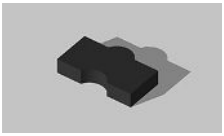
Upper back

Item no.	Description	Colour	Size: L x W x H i mm	
229968	Mattress for upper back	Black	235 x 500 x 100	

Seat/lower back

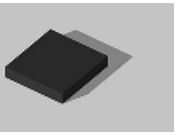
Item no.	Description	Colour	Size: L x W x H i mm	
229148	Mattress for seat/ lower back	Black	830 x 540 x 100	

Pelvis extension

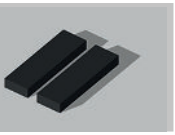
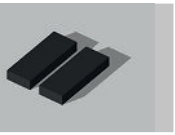
Item no.	Description	Colour	Size: L x W x H i mm	
229586	Mattress for pelvis extension	Black	270 x 540 x 100	

Maquet 1131 Betastar

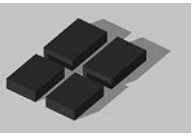
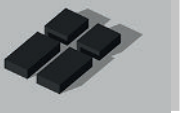
Leg section, 1-part

Item no.	Description	Colour	Size: L x W x H i mm	
229028	Mattress for leg section, 1-part	Black	570 x 540 x 100	

Leg section, 2-parts

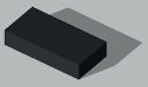
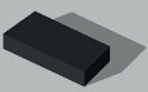
Item no.	Description	Colour	Size: L x W x H i mm	
229949	Mattress for leg section, 2-parts	Black	850 x 250 x 100	
229969	Mattress for leg section, 2-parts	Black	680 x 250 x 100	

Leg section, 4-parts

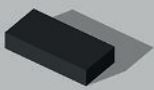
Item no.	Description	Colour	Size: L x W x H i mm	
229584	Mattress for leg section, 4-part	Black	380/450 x 280 x 100	
249319	Mattress for leg section, 4-part	Black	480/310 x 250 x 100	

Maquet 1132 Alphastar

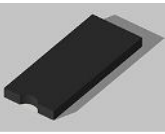
Head

Item no.	Description	Colour	Size: L x W x H i mm	
229668	Mattress for head section	Black	250 x 520 x 100	
249317	Mattress for head section	Black	250 x 530/490 x 100	

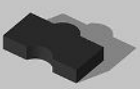
Upper back

Item no.	Description	Colour	Size: L x W x H i mm	
229968	Mattress for upper back	Black	235 x 500 x 100	

Seat/lower back

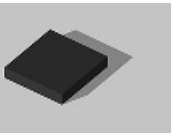
Item no.	Description	Colour	Size: L x W x H i mm	
229124	Mattress for seat/ lower back	Black	1260 x 530 x 100	

Pelvis extension

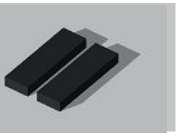
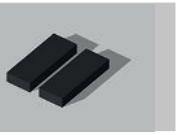
Item no.	Description	Colour	Size: L x W x H i mm	
229586	Mattress for pelvis extension	Black	270 x 540 x 100	

Maquet 1132 Alphastar

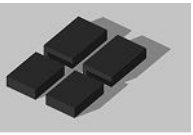
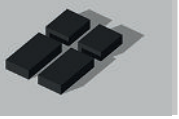
Leg section, 1-part

Item no.	Description	Colour	Size: L x W x H i mm	
229028	Mattress for leg section, 1-part	Black	570 x 540 x 100	

Leg section, 2-parts

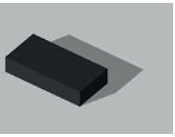
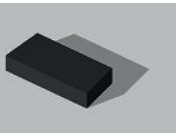
Item no.	Description	Colour	Size: L x W x H i mm	
229949	Mattress for leg section, 2-parts	Black	850 x 250 x 100	
229969	Mattress for leg section, 2-parts	Black	680 x 250 x 100	

Leg section, 4-parts

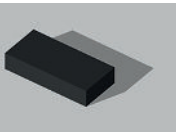
Item no.	Description	Colour	Size: L x W x H i mm	
229584	Mattress for leg section, 4-part	Black	380/450 x 280 x 100	
249319	Mattress for leg section, 4-part	Black	480/310 x 250 x 100	

Maquet 1133 Alphamaxx

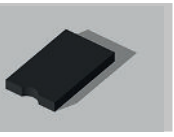
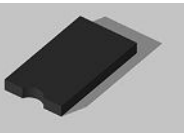
Head

Item no.	Description	Colour	Size: L x W x H i mm	
229668	Mattress for head section	Black	250 x 520 x 100	
249317	Mattress for head section	Black	250 x 530/490 x 100	

Upper back

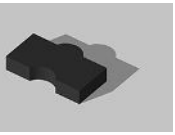
Item no.	Description	Colour	Size: L x W x H i mm	
229968	Mattress for upper back	Black	235 x 500 x 100	

Seat/lower back

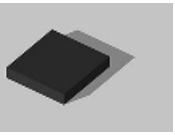
Item no.	Description	Colour	Size: L x W x H i mm	
249318	Mattress for seat/ lower back	Black	870 x 530 x 100	
229482	Mattress for seat/ lower back	Black	960 x 540 x 100	

Maquet 1133 Alphamaxx

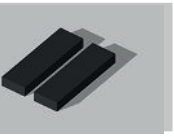
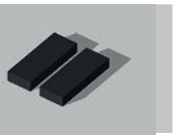
Pelvis extension

Item no.	Description	Colour	Size: L x W x H i mm	
229586	Mattress for pelvis extension	Black	270 x 540 x 100	

Leg section, 1-part

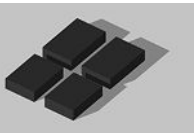
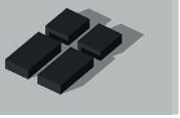
Item no.	Description	Colour	Size: L x W x H i mm	
229028	Mattress for leg section, 1-part	Black	570 x 540 x 100	

Leg section, 2-parts

Item no.	Description	Colour	Size: L x W x H i mm	
229949	Mattress for leg section, 2-parts	Black	850 x 250 x 100	
229969	Mattress for leg section, 2-parts	Black	680 x 250 x 100	

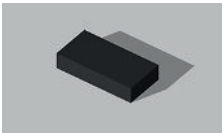
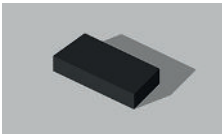
Maquet 1133 Alphamaxx

Leg section, 4-parts

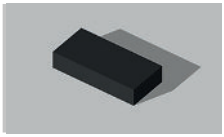
Item no.	Description	Colour	Size: L x W x H i mm	
229584	Mattress for leg section, 4-part	Black	380/450 x 280 x 100	
249319	Mattress for leg section, 4-part	Black	480/310 x 250 x 100	

Maquet 1150 Alphamaquet

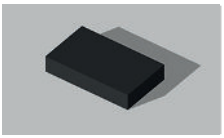
Head

Item no.	Description	Colour	Size: L x W x H i mm	
229668	Mattress for head section	Black	250 x 520 x 100	
249317	Mattress for head section	Black	250 x 530/490 x 100	

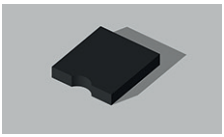
Upper back

Item no.	Description	Colour	Size: L x W x H i mm	
229968	Mattress for upper back	Black	235 x 500 x 100	

Lower back

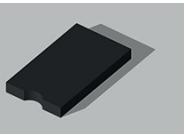
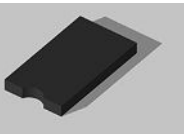
Item no.	Description	Colour	Size: L x W x H i mm	
229967	Mattress for lower back	Black	320 x 540 x 100	

Seat

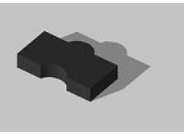
Item no.	Description	Colour	Size: L x W x H i mm	
229966	Mattress for seat section	Black	590 x 540 x 100	

Maquet 1150 Alphamaquet

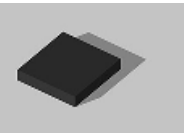
Seat/lower back

Item no.	Description	Colour	Size: L x W x H i mm	
229665	Mattress for seat/ lower back	Black	930 x 540 x 100	
229482	Mattress for seat/ lower back	Black	960 x 540 x 100	

Pelvis extension

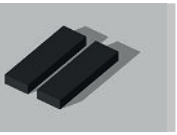
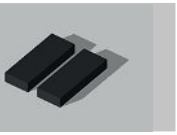
Item no.	Description	Colour	Size: L x W x H i mm	
229586	Mattress for pelvis extension	Black	270 x 540 x 100	

Leg section, 1-part

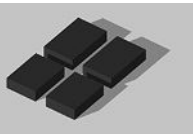
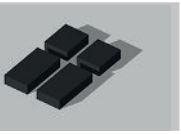
Item no.	Description	Colour	Size: L x W x H i mm	
229028	Mattress for leg section, 1-part	Black	570 x 540 x 100	

Maquet 1150 Alphamaquet

Leg section, 2-parts

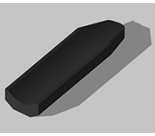
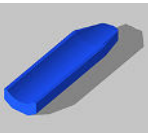
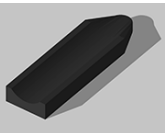
Item no.	Description	Colour	Size: L x W x H i mm	
229949	Mattress for leg section, 2-parts	Black	850 x 250 x 100	
229969	Mattress for leg section, 2-parts	Black	680 x 250 x 100	

Leg section, 4-parts

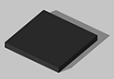
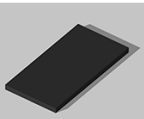
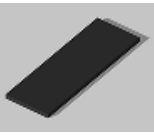
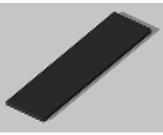
Item no.	Description	Colour	Size: L x W x H i mm	
229584	Mattress for leg section, 4-part	Black	380/450 x 280 x 100	
249319	Mattress for leg section, 4-part	Black	480/310 x 250 x 100	

Various mattresses/pads

Pads for Stockholm armholder

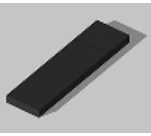
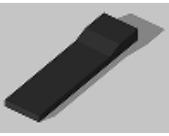
Item no.	Description	Colour	Size: L x W x H i mm	
248019	Pad for Stockholm arm holder, curvet	Black	625 x 160 x 80	
250015	Pad for Stockholm arm holder, curvet	Blue	625 x 160 x 80	
248059	Pad for Stockholm arm holder, flat	Black	625 x 180 x 70	

Mattress toppers

Item no.	Description	Colour	Size: L x W x H i mm	
249139	Mattress topper 50	Black	500 x 520 x 50	
249140	Mattress topper 100	Black	1000 x 520 x 50	
249141	Mattress topper 150	Black	1500 x 520 x 50	
249142	Mattress topper 200	Black	2000 x 520 x 50	

Various mattresses/pads

Mattresses for lateral position

Item no.	Description	Colour	Size: L x W x H i mm	
248598	Mattress for lateral position, two parts	Black	2000 x 540 x 70/100	
248352	Mattress for lateral position, two parts, flat	Black	2000 x 540 x 120	

Notes

Documentation

ISO 9001:2015
Quality Management System

The company behind ESWELL, Simonsen & Weel A/S, is certified according to ISO 9001:2015.


CERTIFICATE

intertek

This is to certify that the management system of:

Simonsen & Weel A/S

has been registered by Intertek as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

Supplier of equipment, projects, instruments, consumables, services and solutions to the Danish health care sector.

Thomas Andersson

ISO 14001:2015
Environment Management System

The company behind ESWELL, Simonsen & Weel A/S, is certified according to ISO 14001:2015.


CERTIFICATE

intertek

This is to certify that the management system of:

Simonsen & Weel A/S

has been registered by Intertek as conforming to the requirements of:

ISO 14001:2015

The management system is applicable to:

Supplier of equipment, projects, instruments, consumables, services and solutions to the Danish health care sector.

Thomas Andersson

Oeko-Tex Standard 100

The OEKO-TEX® Standard 100 is an independent test and certification system for textile raw, intermediate and end products at all stages of processing. Our Decu-Tex cover fulfils this standard.

Flammability (EN-597-1 & EN-597-2)

This standard lays down a test method to assess the ignitability of mattresses, upholstered bed bases or mattress pads when subjected to a smouldering ignition cigarette. All ESWELL products fulfil these standards.

CE certification

All ESWELL products are designed and produced in compliance with Council Regulation 2017/745 concerning medical devices with later amendments.

CE

Biocompatibility (EN ISO 10993-5:2009)

The test is designed to determine the presence of leachable, toxic substances in materials and is carried out in accordance with BS EN ISO 10993-5. The result of the test was that our Decu-Tex cover is cytotoxic to those cells used under the conditions of the test.

Water Penetration Resistance (BS 3424 part 26)

The test according BS 3424 part 26 determines the resistance of a material to penetration by water for a specified period of time and pressure sequence. A visual observation is made to determine when, or if, penetration occurs. Our Decu-Tex cover has been tested and has passed the test.

Microclimate

This test evaluates the microclimatic ability of the mattress and cover to wick away and eliminate heat and moisture. The measuring of the micro-climatic ability of a product is very dependent on individual factors such as age, gender, nutritional state, and hormonal situation, but also on external factors such as temperature and humidity. Therefore, a very sensible standardization is necessary. Our products have been tested according to the thermal insulating effect (heat) and the moisture conducting properties (moisture).

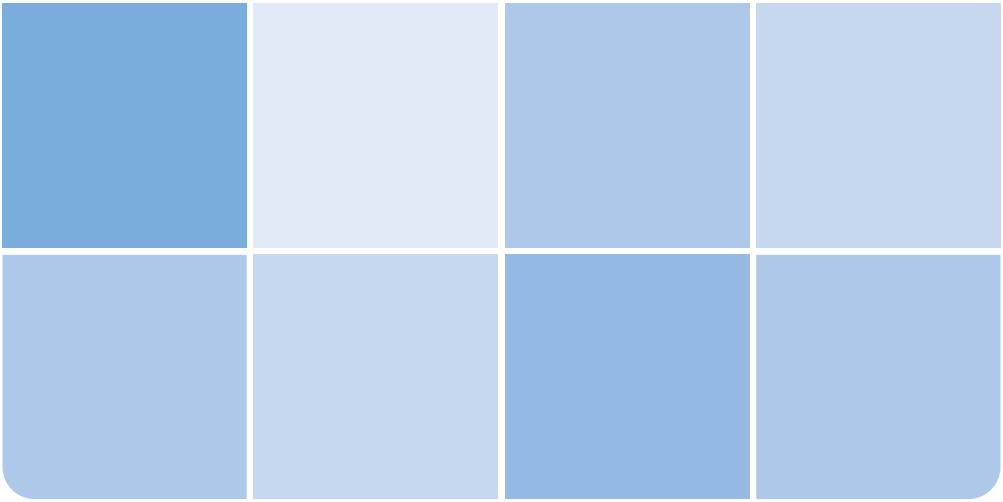
Simonsen & Weel A/S is Denmark's oldest supplier of equipment to the Danish health-care sector, with a history dating back to 1817. We sell products from several of the world's leading manufacturers in areas such as surgical equipment, hospital and clinic equipment, medical technology, compression stockings, nutrition products and much more.

Today we have around 50 employees and most work from our head office just outside Copenhagen. The majority of our employees work as product specialists and consultants, covering the whole country including the Faroe Islands and Greenland.

In-house, we have a competent customer service department and a technical service department with specialists within each area.

It is Simonsen & Weel's philosophy that we only cooperate with leading manufacturers, thereby helping to strengthen our position as the Danish health sector's preferred partner.

Simonsen & Weel A/S
Vejleaavej 66
DK-2635 Ishoej
Denmark
Tel.: +45 70 25 56 10
Fax: +45 70 25 56 20
E-mail: eswell@sw.dk
www.eswell.eu



03 2023

Simonsen & Weel

ESWELL

By Simonsen & Weel established in 1817