

humeca

Dermatomes

SKIN TRANSPLANTATION TECHNOLOGY



DERMATOMES

MISSION

Our mission is to provide medical experts with materials and equipment for optimum treatment of their patients and to offer them the highest level of support and service. Our goal is continuous improvement of our products, the source of which we believe is intensive communication with experts in the field.





Humeca designed two cordless dermatomes, the D42 and the D80.

The D42 is the result of an attempt to design a small and lightweight battery operated dermatome. The head of the dermatome is 64 mm (2.52") only and it cuts a graft width of max. 42 mm (1.65"), which can be reduced to 36 and 30 mm (1.41 and 1.18") by means of width reducing clamps (other cutting widths are optional).

Through the use of lightweight materials, the total weight was limited to 985 grams (35 oz) only, which is quite exceptional for a battery-operated dermatome.

This very manoeuvrable instrument is an excellent tool in paediatric and general plastic surgery, especially for primary excision and harvesting grafts from curved surfaces. The cordless design assures optimum mobility. Besides it facilitates to harvest the 42x42 mm (1.65x1.65") grafts required for Humeca's MEEK technique.

The small diameter grip of this dermatome holds a rechargeable 7.4 Volts Li-Ion battery with a capacity of 1200 mAh for approx. 45 minutes non-stop cutting.

The larger D80 dermatome was developed for more general use. It cuts a width of max. 80 mm (3.15"), which can be reduced to 65, 50 and 35 mm (2.56, 1.97 and 1.38") by means of width reducing clamps. The D80 dermatome has a wider head (104 mm / 4.09") and the larger grip holds a very powerful 2400 mAh Li-Ion battery for more than 75 minutes non-stop cutting! (These are

averages, as the actual cutting time obviously depends on graft thickness, type of tissue to be cut and the general condition of the battery). If desired, the D42 dermatome can be supplied with larger grip and powerful battery too, but standard version is with 1200 mAh battery, which capacity is considered to be more than enough for such a small dermatome.

The blades of the dermatomes are precision grinded in a double facet shape for minimum resistance and uniform graft thickness. The blade moves at a maximum speed of over 7000 strokes per minute (unloaded). This assures smooth cutting operation and enables also very thin grafting.

Graft thickness varies from 0.0-1.2 mm (0.000-0.048") and is adjusted by means of an adjusting lever with readings on a thickness scale (in mm and inches). The lever is fixed at positions corresponding with thickness increments of approx. 0.1 mm (0.004"). Fixation of the lever prevents accidental change of graft thickness during cutting.

The battery and motor cartridges are not sterilized. To prevent accidental sterilization of these cartridges, a special autoclave case was developed that can only contain the dermatome if the cartridges are removed. Before use, the non-sterile cartridges are connected to each other and put into the power shaft of the dermatome by means of a sterile clamp and a sterile funnel to avoid bacterial contamination of the outside surface of the instrument.

The batteries are fully charged in 2-3 hours. They are protected against short-circuiting, over-charge, over-discharge and overheating by means of a protection circuit board.



D42 AND D80 FEATURES

- Extremely small head of D42 allows precision cutting, especially in problematic zones and paediatric surgery
- Cordless, battery operated and lightweight design offers optimum manoeuvrability and mobility
- Precise thickness of the graft from 0.0 to 1.2 mm (0.000 – 0.048") in 0.1 mm (0.004") increments
- Graft width of 42 mm (1.65") assures optimum performance in combination with the MEEK technique
- The use of width-reducing clamps on the dermatome head allow cutting of smaller graft widths
- Battery and motor of the instrument are not sterilized, thus guaranteeing optimum durability
- Thickness adjustment can be fixed to prevent accidental change of graft thickness during cutting
- Safe and quick blade replacement
- Powerful Li-Ion batteries with no memory effect allow long time cutting without intermediate charging

D42 AND D80 TECHNICAL DATA

Dermatome		Charger for D42 / D80	
Total weight D42, small / large grip	985 / 1.115 g (35 / 39 oz)	Power supply primary	100-240V / 50-60Hz
Total weight D80, large grip	1.330 g (47 oz)	Charge current for D42 / D80	400 / 1200 mA
Weight motor cartridge	325 g (11.5 oz)	Nominal output voltage	7.4 VDC
Weight battery cartr. 1200 / 2400 mAh	149 / 240 g (5.3 / 8.5 oz)	Time to charge empty battery	2.0 / 3.0 h
Length dermatome with small / large grip	272 / 295 mm (10.7 / 11.6")	Charger is supplied with 4 international adapters	
Width head type D42 / D80	64 / 104 mm (2.52 / 4.09")	Disposable blades	
Maximum diameter small / large grip	40 / 45 mm (1.57 / 1.77")	Type	Double facet grinded
Standard cutting width D42 / D80	42 / 80 mm (1.65 / 3.15")	Width / Thickness	19 / 0.38 mm (0.748 / 0.015")
Cutting width using clamps D42	36 and 30 mm (1.41 / 1.18")	Length D42 / D80	50 / 90 mm (1.97 / 3.54")
Cutting width using clamps D80	65, 50 and 35 mm (2.56 / 1.97 / 1.38")	Material	Stainless steel
Graft thickness / increments	0.012 / 0.1 mm (0.000 – 0.048" / 0.004")	Autoclave case	
Stroke of blade	3.0 mm (0.118")	Dimensions for D80 (lxwxh)	375x130x52 mm (14.6x5.12x2.05")
Motor capacity / rpm	15 W / 7.030 min ⁻¹	Dimensions for D42 (lxwxh)	375x90x52 mm (14.8x3.54x2.05")
Battery		Weight of case for D42 / D80	717 / 910 g (25 / 32 oz)
Voltage / capacity battery pack, small	7.4V / 1200 mAh		
Voltage / capacity battery pack, large	7.4V / 2400 mAh		
Battery chemistry	Li-Ion (no memory effect)		



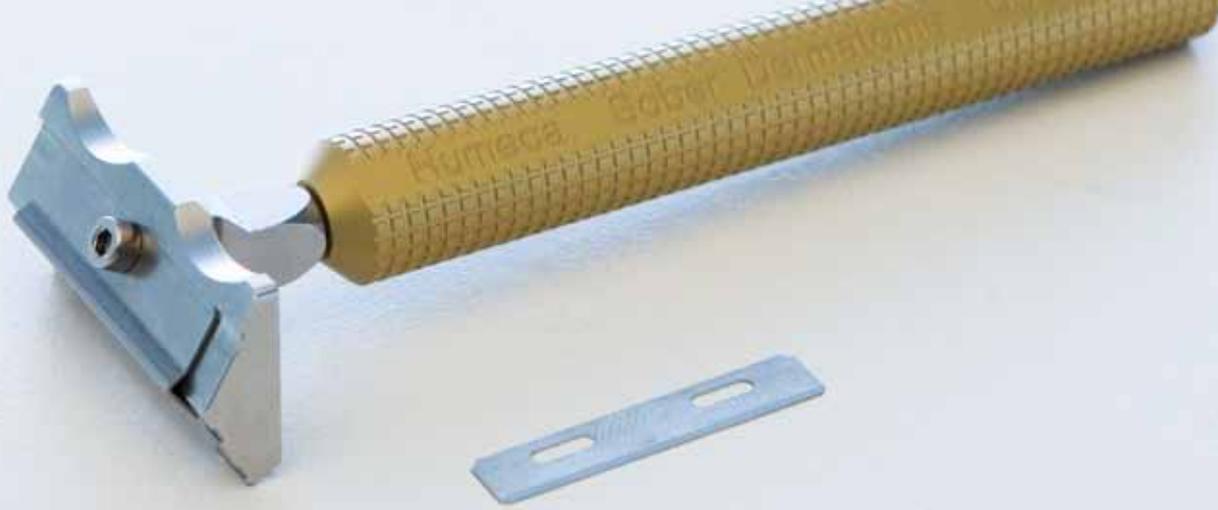
With reducing clamp on a D80 Dermatome



Motor and battery cartridge coupled



Charger with support unit



SOBER HAND DERMATOME

The ability to cut a split-thickness skin graft free-handedly has been regarded as a skill acquired only by long experience. Several devices have been improvised to simplify this task. However, the size and elaborate arrangements of dermatomes often preclude their use, especially if the need is in an emergency room, a clinic or at the patient's bedside. Besides sophisticated dermatomes are costly and more adequate for harvesting larger skin grafts.

In co-operation with the Dutch surgeon dr. Willem Nugteren, Humeca developed a dermatome for freehanded harvesting of a 30 mm (1¼") wide split skin graft with a pre-determined thickness of about 0.25 mm (0.01"). The product is called the 'SOBER' dermatome (from an English translation of the phonetic last name of the inventor).

Based on his experience with surgery in third world countries, it became clear that a portable, economical and simple, yet efficient dermatome would be a very useful tool for skin grafting.

As can be seen from the picture above, the shape of the SOBER dermatome was derived from a safety razor. The dermatome is held firmly against the tautly held skin at a pre-determined angle and a graft of the desired length is quickly cut. No lateral movements are required.

The blade in the dermatome is a double facet grinded type, similar to the Humeca® D42 and D80 blades. It is inserted in the SOBER dermatome by loosening a screw. The tool to do this is integrated in the grip, so it can never be lost and it is always ready at hand.

The SOBER dermatome offers the surgeon a low-cost alternative to the more elaborate mechanical dermatomes, whenever small grafts are needed. The low price and robust, durable construction make the instrument a very suitable tool for use in third world countries and remote clinics.



Donorsites on the upper leg of a child



Harvesting a graft with a Sober dermatome from the lower leg



Practizing SOBER dermatome on fruits



SOBER dermatome set with blades and extra key, as supplied by Humeca

DERMATOME BLADES

Humeca supplies a range of high quality dermatome blades for different types of dermatomes.

For the Humeca® D42, D80 and SOBER dermatomes Humeca supplies symmetrical and double facet grinded blades. These blades fit in the dermatome both upper and bottom side down.

Humeca supplies blades that are compatible with Aesculap® / B.Braun® cordless dermatomes (Acculan®).

Humeca supplies blades that are compatible with Integra® / Padgett® dermatomes type B, C and S.

Finally Humeca supplies blades that are compatible with Zimmer dermatomes, type 8801 (air) and 8821 (electric).

Ordering information

Ordering information is given at page 7.

We emphasize that all blades mentioned here are Humeca blades and suppliers of the original brand blades cannot be held responsible for their performance.

BLADES FEATURES

- Precision facet grinded without burrs for durable performance.
- Separately packed in a pouch with safety sleeve.
- Radiation sterilized.
- Supplied in boxes of 10 pcs.
- Attractively priced



SOBER



Humeca® Blade for Aesculap® / B. Braun®



Humeca® D80



Humeca® Blade for Padgett®



Humeca® D42



Humeca® Blade for Zimmer®

For ordering, please contact your local dealer. You can find dealers via the link in www.humeca.nl
 If Humeca has no dealer in your territory, please contact Humeca for inquiry, preferably via email info@humeca.nl

In order to provide Humeca quickly with brief and most adequate information and to assure soonest reply, the preferred method is to fill in the contact form that is displayed when using the contact link in the Humeca site www.humeca.nl

Humeca is a small organization with short communication lines. This allows very quick response and a high level of service.
 In case of ordering or request for quotation, please refer to the article codes given below.

ORDERING INFO

HUMECA® DERMATOMES

Equipment

4.D42STS	D42 dermatome, complete set, 1200mAh Li-Ion battery
4.D42STSx	D42 dermatome, complete set, 2400mAh Li-Ion battery
4.D80STS	D80 dermatome, complete set, 2400mAh Li-Ion battery
4.D42	D42 dermatome without battery- and motor cartridge with small grip for 1200mAh battery
4.D42x	D42 dermatome without battery- and motor cartridge with large grip for 2400mAh battery
4.D80	D80 dermatome without battery- and motor cartridge with large grip for 2400mAh battery
4.ANS-HC	Dermatome charger for Li-Ion battery of 2400 mAh with 4 international adapters
4.ANS-LC	Dermatome charger for Li-Ion battery of 1200 mAh with 4 international adapters
4.SU01	Dermatome charger support unit
4.BC7.4V2400	Dermatome battery cartridge 7.4V, 2400 mAh
4.BC7.4V1200	Dermatome battery cartridge 7.4V, 1200 mAh
4.MCX15	Dermatome motor cartridge
4.D42CL30	D42 width reducing clamp 30 mm (1.18")
4.D42CL36	D42 width reducing clamp 36 mm (1.42")
4.D80CL35	D80 width reducing clamp 35 mm (1.38")
4.D80CL50	D80 width reducing clamp 50 mm (1.97")
4.D80CL65	D80 width reducing clamp 65 mm (2.56")
4.D42AC1	D42 sterilization case
4.D80AC1	D80 sterilization case
4.SCL	Sterile clamp
4.SF01	Sterile funnel for small diameter grip
4.SF02	Sterile funnel for large diameter grip
4.SB01	SOBER hand dermatome, complete set

Disposables

5.D42BL10	D42 dermatome blades, box 10 pcs.
5.D80BL10	D80 dermatome blades, box 10 pcs.
5.BL4245	Humeca® Blades for Aesculap® / B.Braun® (Acculan®) cordless dermatomes, box 10 pcs.
5.BLPG10	Humeca® Blades for Padgett® dermatomes, model B, C and S, box 10 pcs.
5.BLZM10	Humeca® Blades for Zimmer® dermatomes, type 8801 (air) and 8821 (electric)
5.BLSB10	Humeca® Blades for SOBER hand dermatome, box 10 pcs.
2.JG598	STERILIT® oil for surgical instruments, bottle 50 ml. (1.7 fl.oz)

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Office address

Het Bijvank 251-a
NL-7544 DB Enschede
The Netherlands

Postal address

P.O.Box 40175
NL-7504 RD Enschede
The Netherlands

Humeca BV

Phone +31 53 476 26 19
Fax +31 53 477 19 05
E-mail info@humeca.nl