Liposuction

Liposat® power

Liposat® basic

Vibrasat® power

Vacusat® power

MöllerMedical

Liposuction with *Vibrasat® power*

Vibration liposuction is a tried-and-tested method for fat removal. With this method, the suction cannula is vibrated axially which, in combination with the suction vacuum, cuts and removes the fatty tissue microscopically and gently. The vibrations enable the surgeon to work with greater precision and the separated fat cells are then easier to suction off. This technique offers advantages for both the surgeon and the patient.

- Gentle and homogenous fat removal
- Time savings
- Less force is required to move the cannula, the surgeon is thus able to work with greater precision.

Vibrasat® power is the technologically leading vibration hand grip for liposuction.

- 3,000 to 5,000 strokes/min with a stroke of 2.8 mm
- Exceptionally smooth operation
- Extremely powerful
- Can be fully autoclaved due to special materials in the drive motor and gear unit
- Anatomically shaped hand grip with just the right balance point and low weight for comfortable working, yet with still enough weight to cushion the vibrations towards the hand.
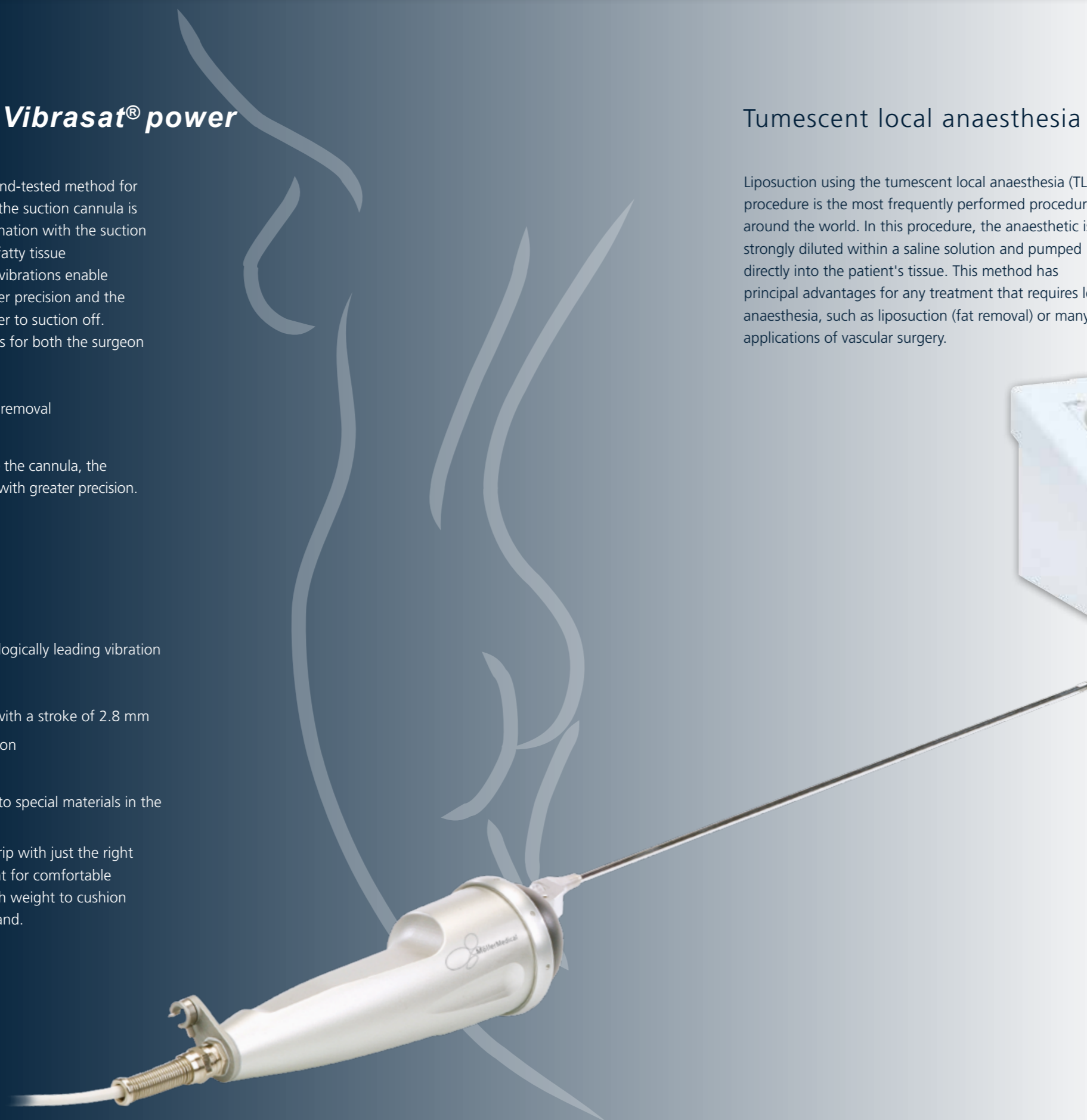
Tumescent local anaesthesia (TLA) with *Liposat® power*

Liposuction using the tumescent local anaesthesia (TLA) procedure is the most frequently performed procedure around the world. In this procedure, the anaesthetic is strongly diluted within a saline solution and pumped directly into the patient's tissue. This method has principal advantages for any treatment that requires local anaesthesia, such as liposuction (fat removal) or many applications of vascular surgery.

- Unwanted side-effects, such as thromboses, risks of embolisms, or nausea, occur much less frequently
- The patient stays awake
- Simple application without the need for an anaesthesiologist
- Little post-surgical pain
- Small cuts, very minimal blood loss
- With correct application, no or only small haematomas
- "Three-dimensional" liposuction possible by repositioning the patient during the procedure

Device configurations

Liposat® power configuration

The combination of the surgical suction device *Vacusat® power* with the infiltration pump *Liposat® power* and the vibration drive *Vibrasat® power* offers an ideal complete solution for liposuction.

Maximum pumping capacity for tumescence solution *Liposat® basic*: 200 ml/min
Maximum pumping capacity for tumescence solution *Liposat® power*: 300 ml/min
The *Liposat® basic* has fewer comfort features, e.g., total volume meter and cannot be operated in conjunction with heating dishes.

The precisely adjustable pump rate of the saline solution into the tissue is atraumatic for the patient and saves time for the surgeon. He can take care of other things during infiltration.
On the one hand, thanks to the use of heating dishes, the set-up is more ordered and clearly arranged and, on the other hand, patient safety is enhanced as the temperature remains consistent.
The vibration drive for the liposuction cannulae rounds off this system.
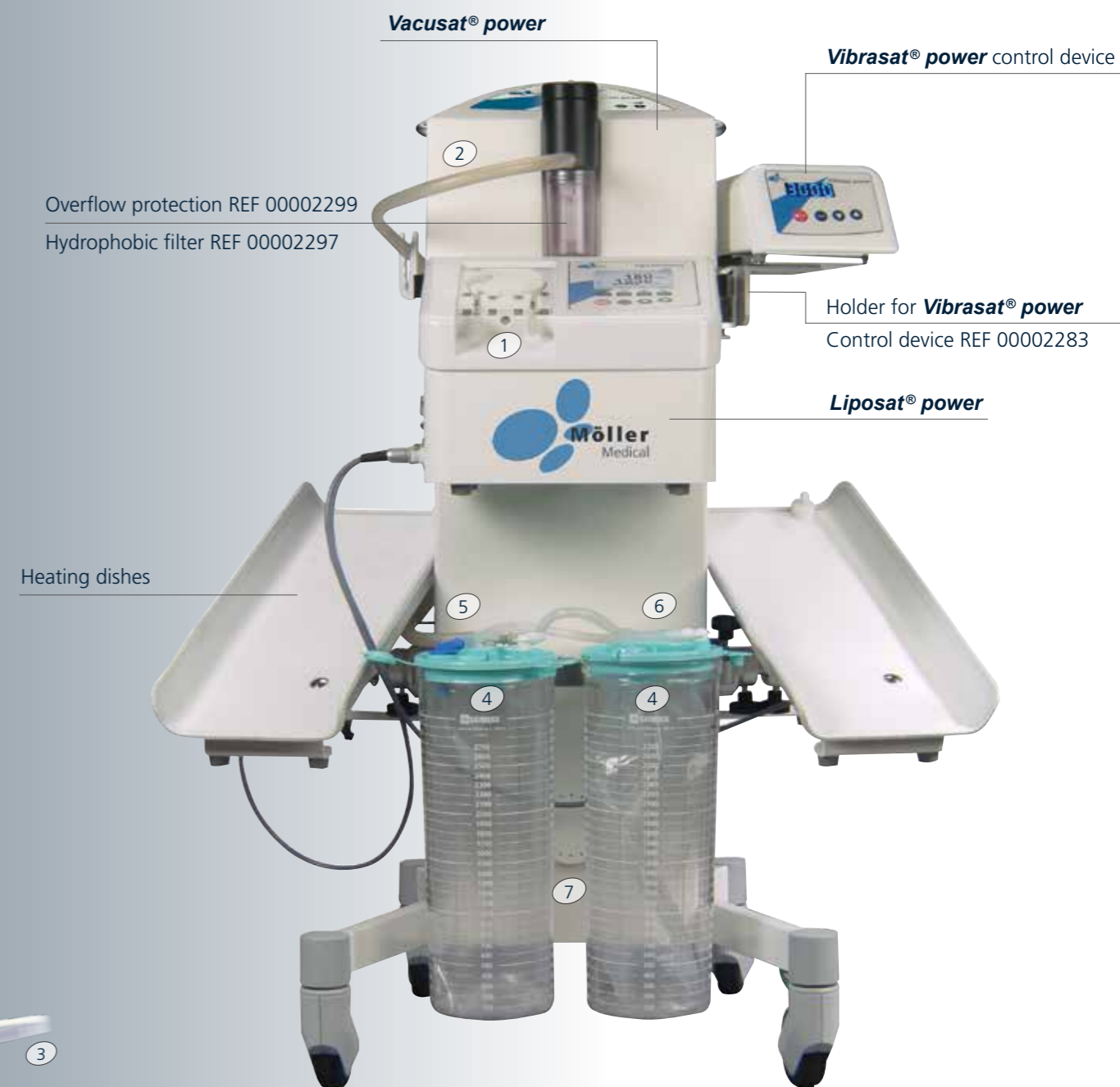
Consisting of:

- 1 *Vacusat® power* with accessories
- 1 *Liposat® power* infiltration pump with accessories
- 1 *Vibrasat® power* with accessories
- 2 heating dishes
- 1 attachment kit

230 VAC version: REF 00002253
110 VAC version: REF 00002321

The modular system for vibration-assisted liposuction

Vacusat® power

Vibrasat® power control device

Overflow protection REF 00002299
Hydrophobic filter REF 00002297

Holder for *Vibrasat® power*
Control device REF 00002283

Liposat® power

Heating dishes

Vibrasat® power handpiece

Tube set for tumescence pump	REF 00002251	1	Serial tube 285 mm with elbow, blue REF 00002260	5
Vacuum connecting tube 8 x 14 x 1,000 mm	REF 00002255	2	Vacuum serial tube with T-piece REF 00002259	6
Suction tube	REF 00002264	3	Bacteria filter REF 00002296	7
Container	REF 00002257	4		

Device configurations

Liposat® basic configuration

The combination of the surgical suction device **Vacusat® power** with the infiltration pump **Liposat® basic** and the vibration drive **Vibrasat® power** is a cost-effective alternative to the **Liposat® power** configuration.

The precisely adjustable pump rate of the saline solution into the tissue is atraumatic for the patient and saves time for the surgeon as he can take care of other things during infiltration. The vibration drive for the liposuction cannulae rounds off this complete system.

Consisting of:

■ 1 **Liposat® basic** infiltration pump with accessories

■ 1 **Vacusat® power** with accessories

■ 1 **Vibrasat® power** with accessories

■ 1 attachment kit

230 VAC version: REF 00002410
110 VAC version: REF 00003838

Vibrasat® power handpiece

The cost-effective alternative to the *Liposat® power* configuration

Vacusat® power

Vibrasat® power control device

Overflow protection REF 00002299

Hydrophobic filter REF 00002297

Holder for **Vibrasat® power**
Control device REF 00002283

Liposat® basic

Tube set for tumescence pump REF 00002492	①	Serial tube 285 mm with elbow, blue REF 00002260 ⑤
Vacuum connecting tube 8 x 14 x 1,000 mm REF 00002255	②	Vacuum serial tube with T-piece REF 00002259 ⑥
Suction tube REF 00002264	③	Bacteria filter REF 00002296 ⑦
Container REF 00002257	④	

Design your configuration to match your requirements!

Liposat® power

The infiltration pump **Liposat® power** has been specially developed for tumescent local anaesthesia. The pump rate can be adjusted to the specific application. Once the set volume has been reached, the pump stops automatically.

Accessories included:
Footswitch, 1 pedal REF 93003545

Optional: Heating dish

Technical data

Dimensions (W x H x D)	270 x 220 x 180 mm
Weight	10 kg
Pumping rate	40-300 ml/min (variable adjustment)
Medical device class	IIa
Accuracy of pumping rate	±15 %
Power supply	100-240 VAC, 50/60 Hz
Stromaufnahme	1.5 to 0.7 A

REF 00002274

Liposat® power

Liposat® basic

The infiltration pump **Liposat® basic** is a small infiltration pump which has been developed for local anaesthesia. The pumping rate can be adjusted in increments of 20 ml according to the specific application. Once the set volume has been reached, the pump stops automatically.

Accessories included:
Footswitch, 1 pedal REF 93003711

Technical data

Dimensions (W x H x D)	170 x 200 x 140 mm
Weight	2.5 kg
Pumping rate	20 ml/min to 200 ml/min (can be adjusted in increments of 20)
Medical device class	IIa
Accuracy of pumping rate	±15 %
Power supply	230 VAC, 50 Hz
Current consumption	0.1 A

**REF 00002498**

Liposat® basic

Vibrasat® power

The vibration drive **Vibrasat® power** makes it easier to suction away fat thanks to very fast and short longitudinal movements. The process is therefore less traumatic for patients and less tiring for the doctor. The ergonomic form of the hand grip makes working extremely pleasant.

Accessories included:
Footswitch, 3 pedals REF 93003517

Vibrasat® power hand grip

A second hand grip is recommended in order to be able to continue operating whilst the other grip is being sterilised / cooling down.
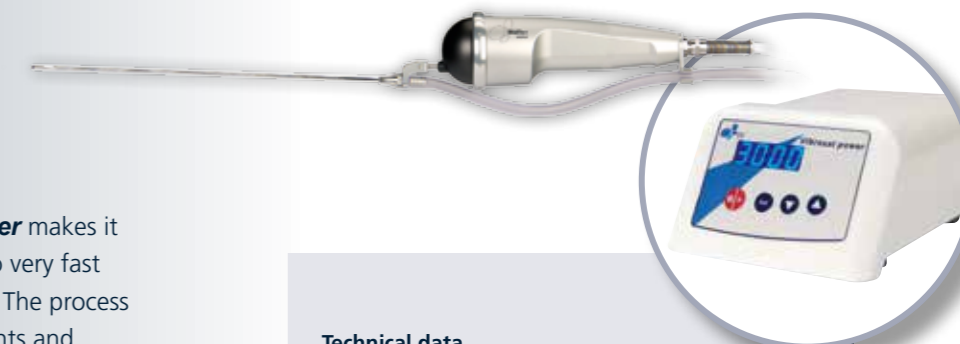
Technical data

Dimensions (W x H x D)	150 x 100 x 200 mm
Handpiece (dia. x L)	55 x 180 mm
Weight of control	2.80 kg
Handpiece	0.75 kg
Medical device class	IIa
Stroke length:	2.8 mm
Stroke frequency:	3,000-5,000/min
Power supply	100-240 VAC, 50/60 Hz
Current consumption	1.6 to 0.6 A

REF 00002246
REF 00002327 second hand grip

Vibrasat® power

Vacusat® power

The surgical suction device **Vacusat® power** is an extremely powerful and untiring piece of equipment which is both quick and simple to operate. Thanks to its innovative insulation technology, it is audibly quieter when operated.

Accessories included:
1 footswitch, 1 pedal REF 00002656
1 vacuum connecting tube REF 00002255
1 serial tube REF 00002260
1 vacuum serial tube with T-piece REF 00002259
2 holders for containers REF 00002258
2 containers for inner containers REF 00002257
2 disposable inner containers, non-sterile, 3 litres REF 00002256

Protection against oversuction with the additional overflow protection REF 00002299.
Enhanced safety from use of the filter REF 00002297.

Technical data

Weight	26 kg
Medical device class	I
Dimensions (W x H x D)	500 x 1,000 x 560 mm
Suction power	58 l/min ± 6 l/min at 50 Hz 65 l/min ± 6 l/min at 60 Hz
Vacuum	-90 kPa on NN (normal null; 100 kPa = 1 bar = 1,000 mbar)
Power supply	230 VAC, 50/60 Hz 110 VAC, 50/60 Hz
Current consumption	1.1 A
Fuses	T 1.6 AH

230 VAC voltage supply
REF 00002252

110 VAC voltage supply
REF 00002318

Vacusat® power with accessories

Accessories

The heating dish keeps the temperature of the saline solution at a constant 37°C. At a temperature higher than 42°C the pump stops automatically to protect the patient from injuries.

REF 00002542

Technical data

Dimensions with packaging
(W x H x D):   300 x 300 x 540 mm
Weight: 4.8 kg

Heating dish

To hold the container 00002257 on the *Vacusat® power* suction tower 00002252

REF 00002258

Holding clamp

Ergonomic manual hand grip for *Vibrasat®* suction cannulae, anodised aluminium, natural
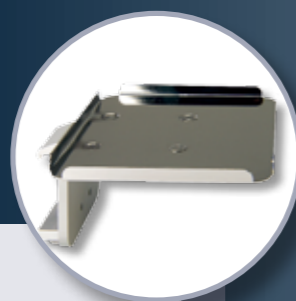
REF 00002254

Hand grip

Container for non-sterile disposable bag, mint (00002256)

Capacity 3 litres

REF 00002257

Container

Holder for the *Vibrasat® power* - control device for attachment on the *Vacusat® power*

REF 00002283

Attachment kit

Foot switch for *Liposat® basic* with three pedals (pump on/off, pump quicker/slower). This is more comfortable and convenient to use than the standard foot switch

REF 00002612

Foot switch

Filter against moisture in the exhaust gas flow and microorganisms

Consumables
REF 00002297

Use with overflow protection
REF 00002299

Hydrophobic filer

Overflow protection with chamber for hydrophobic filter

REF 00002299

Use with *Vacusat® power* REF 00002252 or REF 00002318

Overflow protection

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Consumables

Liposat® power
tumescence tube set
consisting of:

Tube set 1
1,500 mm long
Tube set 2
2,500 mm long

Single-use item
REF 00002251

Tube set

Liposat® basic
tumescence tube set
4,050 mm long

Single-use item
REF 00002492

Tube set

Suction tube,
PVC, sterile

With one red funnel:
3,000 mm long
outer diameter of
funnel 16 mm
inside diameter of
funnel 10 mm
Suitable for using the
suction tube together with
the **Vibrasat® power** hand
grip (00002246) or the
hand grip (00002254).

Single-use item
REF 00002264

Suction tube, red

Suction tube,
PVC, sterile

With two blue funnels:
3,000 mm long
outer diameter of
funnel 16 mm
inside diameter of
funnel 10 mm
Suitable for connecting
the suction tube directly
to a liposuction cannula.
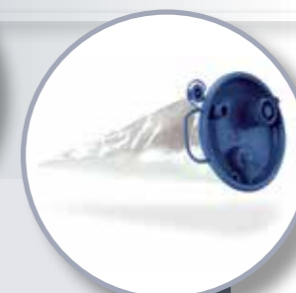
Single-use item
REF 00002430

Suction tube, blue

Inner bag,
non-sterile
for container
(00002257)

Single-use item
REF 00002256 mint
REF 00002331 blue*

Disposable inner bag

Exhaust air filter for
Vacusat® power

Consumables
REF 00002296

Bacteria filter

Sterican
injection
cannulae

For puncturing the skin
and infiltration of the tumes-
cence solution. To be used
together with the tap
(00002278 or 00002279)
Pack of 100

Technical data

0.9 x 70 mm
20G x 2 2/3" (yellow)

Single-use item
REF 00002535

Injection cannulae

Tap with
infiltration tubes,
sterile
80 cm long

For connection to
Liposat® power
tumescence tube set
(00002251) or
Liposat® basic
tumescence tube set
(00002492)

Single-use item
REF 00002278

3-way tap

Tap with
infiltration tubes,
sterile
80 cm long

For connection to the
Liposat® power tumescence
tube set (00002251) or
Liposat® basic tumescence
tube set (00002492)

Single-use item
REF 00002279

5-way tap

* Can only be used if there
  is a matching container.

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Single-use cannulae with plastic socket

Vibrasat liposuction cannulae 3-hole cannulae *

REF	Dia. in mm	Length in mm
00002855	4.00	250
00002856	4.00	350
00002857	3.00	250
00002858	3.00	350
00002859	2.50	150

Rapid extraction cannulae 9-hole cannulae *

REF	Dia. in mm	Length in mm
00002893	4.00	250
00002892	4.00	350
00002891	3.00	250
00002890	3.00	350

Perspiratory gland cannula *

REF	Dia. in mm
00002889	3.00

Single-use cannulae with steel socket **

Vibrasat liposuction cannulae 3-hole cannulae *

REF	Dia. in mm	Length in mm
00001534	4.00	250
00001535	4.00	350
00001536	3.00	250
00001537	3.00	350
00001538	2.50	150
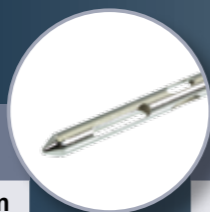
Rapid extraction cannulae 9-hole cannulae *

REF	Dia. in mm	Length in mm
00002325	4.00	250
00002326	4.00	350
00002323	3.00	250
00002324	3.00	350

Perspiratory gland cannula *

REF	Dia. in mm
00001599	3.00

Single-use lipotransfer cannulae

Removal cannula *

Cannula for manual fat removal (sterile)

REF 10001180

Scar cannula *

Cannula with V-shaped blade (sterile)

REF 10001181

Injection cannula 1 *

Straight cannula for injecting in fat (sterile)

REF 10001182

Injection cannula 2 *

Curved concave cannula for injecting in fat (sterile)

REF 10001183

Injection cannula 3 *

Curved convex cannula for injecting in fat (sterile)
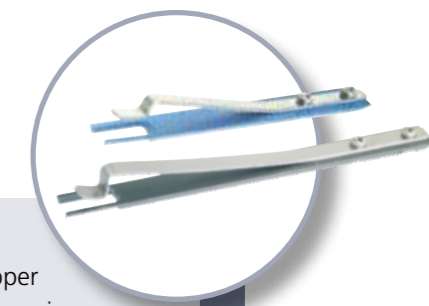
REF 10001184

Accessories

Single-use syringes, in sterile packaging, 3 versions

1 ml injection
REF 00002417

10 ml injection
(B. Braun Omnifix)
REF 00002418

20 ml injection
(B. Braun Omnifix)
REF 00002419

Syringes

Syringe stopper for fixing the syringe plunger for B. Braun Omnifix syringes, in 2 versions:

for 10 ml syringe
REF 00002452

for 20 ml syringe
REF 00002453

Syringe stopper

*   as per Dr. Afschin Fatemi
**   Single-use cannulae with steel sockets are not available in all markets.

THE COMPANY
MÖLLER MEDICAL

Möller Medical was founded in 1949 and sells products, including the ones in this brochure, under its own brand around the world. Möller Medical is also active within the demanding OEM business; the company develops components, systems and finished devices for human medicine, in vitro diagnostics (IVD) and precision engineering.
Customers include many renowned medical devices/IVD companies. Our products are manufactured in-house, take for example the **Vibrasat® power** which we developed, programmed and produced on site.

Möller Medical is certified to EN ISO 13485 and EN ISO 9001. The medical products shown here are CE-compliant in accordance with the EU Directive 93/42/EEC and, in part, FDA 510 (k) listed.

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