

# ULTRASONIC-DOPPLER

## SmartDop 45

### With graphic display, printer and memory

compact, handy and mobile.



#### Features And Benefits

- Great graphic display for flow, data, settings and menu.
- Fast thermo array printer (no movable printer mechanism)
- Flow representation of quantity and quality in bidirectional operating mode.
- Active 8 MHz US-probe with integrated push button for data storage and printer initialization
- Excellent adjustable audio amplifier with great selectivity between flow and noise.
- Automatic amplification of flow signal for optimal representation in the display.
- Signal output for stethoscope/headset and USB-computer interface. (software as option)
- Memory for 30 data sets with 4 seconds signal each.
- Practical multi-functional switch for comfortable menu function.
- Important data as systolic and diastolic flow speed as well as RP, SD, PI and HR are automatically calculated.
- Flow representation in cm/s or kHz.
- 2 separate frequency filter for perfect flow output..
- Alternatively flow representation in 2.56 s/display width or 12.8 s/display width.
- Battery or mains-operated.
- Optional interchangeable probes are available for many applications: 2 MHz, 4 MHz, 5 MHz, 10 MHz, photoplethysmography-probe, intra-operative probe with additional amplifier.

# Smartdop 45



## Technical specifications

**Power supply:** Mains/rechargeable battery (Ni-MH),  
Operation time with charged battery: about 2,5 hours  
Charging time: ca. 3 hours, Life time of rechargeable  
battery: about 300 charging cycles

**Printer:** Thermo-array-printer (fast  
documentation, no movable printer components)  
Resolution: 384 dots/line, 25 mm/s  
Paper: 58 mm x 25 mm

**Graphik-display:** 128 x 64 pixels, STN LCD  
(55 x 30 mm)  
Flow-curve (directional/bi-directional, 2.56/12.8 seconds/  
display-width), flow data (RP, PI, SD, HR (30 - 300 beats/  
min), menu for basic settings, functions and battery  
control

**Flow curve:** Amplitude in cm/s or kHz, directional/bi-  
directional, 2.56 or 12.8 seconds/display width

**Accuracy:** +/- 10% or less

**Speaker:** 250 mW or more

**External output:** Stethoskope/headset, USB  
(universal serial bus)

**Automatic shut off:** No signal: after 2 minutes, memory  
mode: after 5 minutes, other mode: after 15 minutes

**Filter:** 80 Hz, 200 Hz - 5 kHz

**Mode settings:** Memory, flow, direction, time, language,  
units, filters, valibration, shut off and others

**Memory:** 30 data sets

**Production standard:** IEC 601-1

**Protection class against electrical shock:** Class II device  
internally powered device

**Protection grade against electrical shock:**  
Type BF device

**Dimensions:** 115 x 210 x 60 mm (W x D x H)

**Weight:** 560 g, including probe

**Environment:** operating temperature: 10 °C - 40 °C  
Storage temperature: 0 °C - 50 °C  
Relative humidity: 85 %  
(no condensation)

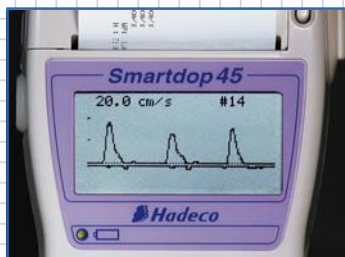
**Specifications subject to change without notice.**

### Standard delivery:

Smartdop 45  
8 MHz probe  
1 battery charger/mains adapter  
1 tube US Gel, 20 g  
1 roll recording paper  
1 case  
1 manual

### Optional accessories:

2 MHz US probe  
4 MHz US-probe  
5 MHz US-probe  
10 MHz US-probe  
Photoplethysmography probe, PG 21  
8 MHz intra-operative probe, VRP-08  
Amplifier for intra-operative probe, BDP08MS8  
PC-software including USB link cable



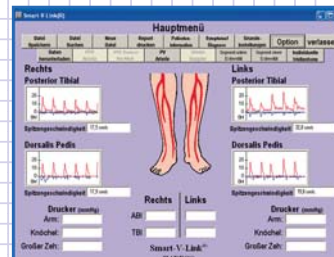
Large graphic display for signal, data  
and settings.



Multi-function-button for nearly all  
functions.



8 MHz intra-operative probe,  
plethysmography probe. (optional)



Comfortable PC-Software for  
investigations at the PC. (optional)

# DEGO

## MEDIZIN-ELEKTRONIK

DEGO GmbH Medizin-Elektronik  
Bahnhofstraße 26 D-72202 Nagold  
Phone: +49 7452 8393 0  
Fax: +49 7452 8393 22  
E-Mail: [dego@degomed.de](mailto:dego@degomed.de)  
Internet: [www.degomed.de](http://www.degomed.de)