

**Solutions in
Medical
Engineering**



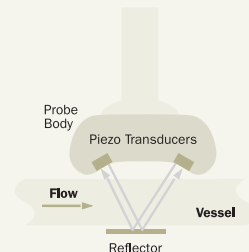
**Vascular Flow
Probes**

..em·tec

Transit- Time Principle

Transit-time flowmeters measure the difference in travel-time between pulses transmitted in a single path along and against the flow.

An ultrasound transducer transmits ultrasonic pulses through a vessel to a metal reflector. The reflected pulses passing the vessel again and are received by a second transducer. Each transducer alternately transmits and receives bursts of ultrasonic energy. The difference in the transit-times in the upstream vs. the downstream direction measured over the same path can be used to calculate the flow through the tube.



Sono TT Vascular Flow Probes

High quality workmanship Ultrasonic Flow Probes for the measurement of blood flow in vessels and grafts. The probes are showing excellent accuracy and stability. Calibration data are stored in the probe.

The probes can be machine washed and sterilized with **steam**, ethylene oxide (EtO), low temperature steam and formaldehyde sterilisation (LTSF) and low temperature plasma (LTP). **We guaranty 50 sterilisation cycles.**

Housing material	Medical Grade Plastic
IP-Code	IPX7 (water-tight)
Safety Class	Type CF applied part, defi-proof
Cable length	2.8 m
Connector plug	14-pin High Density Round Connector
Accuracy	±15 % of the value + Offset Drift
Maximum measurement range	depending on Probe Size

Range of Probes:

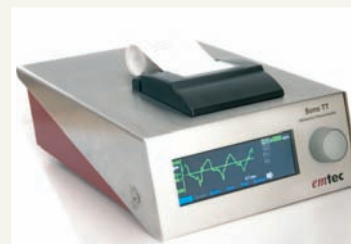
Type with handle	Type without handle	Head size	Size of vessel/graft
VP100-02-10-A	VP100-02-20-A	2 mm	1.5 to 2.5 mm
VP100-03-10-A	VP100-03-20-A	3 mm	2.5 to 3.5 mm
VP100-04-10-A	VP100-04-20-A	4 mm	3.5 to 4.5 mm
VP100-05-10-A	VP100-05-20-A	5 mm	4.5 to 5.5 mm
PP100-06-10-A	PP100-06-20-A	6 mm	5,3 to 7,0 mm
PP100-08-10-A	PP100-08-20-A	8 mm	6,8 to 10,0 mm
PP100-12-10-A	PP100-12-20-A	12 mm	10,0 to 14,4 mm
PP100-18-10-A	PP100-18-20-A	16 mm	14,2 to 18,4 mm
PP100-20-10-A	PP100-20-20-A	20 mm	18,2 to 22,5 mm



Sono TT Ultrasonic Flowcomputer

Transit-Time Flowcomputer with a bright and very readable TFT graphics display.

- bright TFT screen
- easy one-knob operation of all functions
- numeric or graphic display mode
- flow-volume measurement mode
- one or two flow channels
- optional pressure measurement channel
- optional analog channel
- optional graphic printer
- high and low limits settable on all channels
- acoustic alarm



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