

ZAN® 500 Plethysmograph

Body Plethysmography



Redefining Accuracy Beyond the Standard

ZAN® 500 Plethysmograph delivers more than reliable test results. By redefining accuracy in every step of the testing process, ZAN 500 provides the diagnostic confidence you need, even when testing your most challenging patients.

Redefining Accuracy — Diagnostic Confidence

ZAN 500 Cabins extraordinary stable aluminum alloy and tempered security glass construction delivers excellent thermal conductivity and frequency response. Electronic control of breathing arm allows easy adjustment during testing for optimal patient positioning, without opening the cabin door.

Redefining Accuracy — Improving Outcomes

The ZAN 500 ZAN-Tech software exceeds the latest ERS/ATS guidelines by providing real time breath frequency coaching for airways resistance increasing the accuracy and consistency of measurements.

Redefining Accuracy — Proven Technology

- **VIP™ Flow Sensor.** The Variable Impedance Pneumotach can be detached and used as a stand-alone, PC-based spirometer with USB connectivity, increasing testing modalities. VIP is insensitive to moisture and temperature changes in exhaled gases.
- **NDC - Numeric Drift Compensation.** Advanced digital signal processing compensates for drift instantly, minimizing warm up time and automatically reducing environmental interferences by 95%. As a result the measurement of complete spirometry, lung volumes and airways resistance takes less than 2 minutes.
- **Cabin Design.** Electromagnetic door locking activates only during testing and automatically opens if power failure is experienced. This, combined with space saving door design and 5-sided tempered glass, provides the ultimate in patient comfort.
- **Automatic Calibration.** Flow, volume and cabin pressure are automatically calibrated in a single routine, increasing laboratory productivity by decreasing calibration time.
- **Flexibility.** With its modular design it is easy to upgrade your cabin to perform a wide range of testing options including: CO Diffusion, Transdiaphragmal Pressures, Compliance, Lung Volumes by helium dilution, Closing Volumes, full internal integrated dosimeter, Mouth Pressures, and Rhinomanometry.
- **Electrically Powered Patient Breathing Arm** allows repositioning of patient without opening cabin door or disturbing testing.
- **Networking/Connectivity.** ZAN-Tech software simplifies workflow, is easily networked, and includes HL7 connectivity to most EMR/HIS systems.

Redefining Accuracy. Beyond Expectations.

While ZAN 500 offers the most accurate plethysmograph solution at the lowest total cost of operation. nSpire Health offerings also include comprehensive clinical, technical, and educational services designed to optimize your testing capabilities and protect your investment.

nSpire Health's Equipment Maintenance and Training Solutions offer unprecedented flexibility to help you maximize your capabilities throughout the instrument's lifecycle. Comprehensive Continuing Education (including accredited CRCE) delivered by nSpire Health experts helps you achieve clinical efficiency and productivity in your PFT lab. Worldwide Customer Services include clinical help desk, on-site field service, factory repair, web-based training, and a complete line of financial service solutions to meet your needs.



Dimensions:

71 x 87 x 174 cm

Weight:

145 kg

Seat:

Adjustable on
3 points

Distributed by:



©Copyright nSpire Health 2007. Due to continual innovations, nSpire Health reserves the right to change specifications without notice. ZAN is a registered trademark of nSpire Health.

Technical Specifications

Physical Data of the Cabin

Material: Aluminum

Painting: RAL9010

Space for Opening the Door: W 8 cm; D 50 cm

Stand: 3-dimensional, adjustable from the outside

Physical Data of the Table

Dimensions: 80 x 55 x 130 cm (with gas bottle holder w=72cm)

Weight: Approx. 67 kg

Material: Welded aluminum frame with powder painting

Painting: Powder painting RAL9010

Wheels: 4 movable big wheels, 2 of them can be fixed

Mouse Table: Ergonomic form, laterally extendable

Standard Model: With fixed ergonomic holder for monitor

Ergo Model: With revolving holder for monitor

Classification According to MDD: Ila 93/42/ EG-Rat of 14/06/93 Appendix IX

Electric Specifications

Protection Class: SK1

Type (IEC 601-1): B

Type Application Unit: BF according to VDE 0750 (DIN EN 60601-1)

Power Supply of Table: AC 230V 50 Hz (via safety transformer)

Power Consumption: Max.1,4A

Power Supply of Body: 12V 5A and 24 V 3A

Protection Type: IPX 0

Interface to PC: USB

Calibration

Cabin Pressure: Automatic using internal electronic calibration pump

Volume: 3-Litre Syringe

Cabin Pressure

Pressure Transducer: Semiconductor (differential pressure)

Pressure Range: +0,25 kPa

Accuracy: 0.05% FS (Full Scale)

Resolution: 21Bit, ADU 16Bit signal resolution and 5Bit Offset

Temperature: Inside Cabin

Accuracy: 0.5°C

BTPS Compensation: Automatic with environmental module

Drift Compensation: Automatic NDC method

Flow

Flow Sensor: VIP (Variable Impedance Pneumotach)

Measuring System: Differential pressure with variable diaphragm

Dimensions: 100mm x 50mm x 50mm

Weight: 57g

Measuring Range: 0,02 l/s to ±20l/s

Max. Linearity Error: <2 %

Resistance: <0.08kPa/l/s < 14l/s

Dead Space: <50 ml

Temperature Sensibility: 0,5 %/°C, is compensated by Software

Humidity Sensibility: <2% at 0-99% Humidity

Flow Resolution: <1 ml/s

Accuracy: 0,05-15l/s ±2%

Pressure Transducer for Flow Measurement: Semiconductor (differential pressure)

Pressure Range: +0,25kPa

Accuracy: 0.05% FS (Full Scale)

Resolution: 21Bit, ADU 16Bit signal resolution and 5Bit Offset

Volume

Volume Range: 0-20L

Volume Resolutions: < 5ml

Accuracy: <2%

Back Pressure: < 1.12kPa at 14l/s

Measurement of Mouth Pressure

Pressure Transducer: Semiconductor (differential pressure)

Pressure Range: +7kPa

Accuracy: 0.2% FS

Resolution: 21Bit, ADU 16Bit signal resolution and 5Bit Offset

Shutter

Additional Dead Space to VIP: 30ml

Additional Resistance to VIP: <0.07kPa/l/s < 14l/s

Environmental Conditions

Operating Conditions

Temperature: 0°C bis +40°C

Humidity: 20% to 90% at +20°C (without condensation)

Atmospheric Pressure: Between 900 and 1060 hPa

Storage and Transport Conditions

Temperature: 0°C bis +40°C

Explosive Area

Humidity: 10% to 90% (without condensation) The device must not be used in an explosive or combustible environment.

Contact Information

nSpire Health Ltd.

Unit 10 Harforde Court

John Tate Road

Hertford, SG13 7NW, UK

Phone: +44 (0) 1992 526300

Email: info@nspirehealth.com

Web: www.nspirehealth.com