

GSI TYMPSTARTM Middle Ear Analyzer

PRODUCT SPECIFICATIONS

The following specifications apply to both Version 1 and Version 2 of the GSI TympStar. > **Bold arrowed type indicates the additional capabilities of Version 2.**

GENERAL SPECIFICATIONS

W x D x H: 52 cm x 38 cm x 32 cm
Weight: 7.5 Kg
Shipping Weight: 13.4 Kg
Power Consumption: 120 Watts maximum
Test Types: Tympanometry, Acoustic Reflex Threshold, Reflex Decay, Eustachian Tube Function (*Intact & Perforated*)
Protocols: Diagnostic, Screening, User-defined
> **Special Tests: Two-component Tympanometry, Multiple Frequency Tympanometry, Acoustic Reflex Latency Test, Reflex Sensitization**
Display: Internal or External VGA Monitor
Interface: RS232, parallel and keyboard output
Printout: Internal or External Deskjet or Laserjet Printer

PROBE TONE

226 Hz (85 dB SPL \pm 1.5 dB)
> **678 Hz (85 dB SPL \pm 3.0 dB)**
> **1000 Hz (75 dB SPL \pm 3.0 dB)**
Accuracy: \pm 1%
Harmonic Distortion: Less than 5%

ADMITTANCE MEASUREMENTS

Range: 226 Hz (-1.0 to +7.0)
> **678 Hz (-5.0 to +25)**
> **1000 Hz (-5.0 to +30)**
Sensitivity Scale: Auto Scales to Appropriate Range, Manual selection also possible in Reflex Modes only
Accuracy (226 Hz):
Tymp Mode: \pm 5% of reading or \pm 0.1 ml, whichever is greater
Reflex Mode: \pm 5% of reading or \pm 0.2 ml, whichever is greater

PRESSURE MEASUREMENTS

(load volume of 0.2 to 7.0 ml)
Range: Normal = +200 to -400 daPa
Wide = +400 to -600 daPa
Accuracy: \pm 10% of reading or \pm 10 daPa, whichever is greater
Sweep Rate: 12.5, 50.0 and 600/200 daPa/sec,
> **200 daPa/sec.**
Sweep Accuracy: 10% of nominal rate
Maximum limits (in 0.5cc cavity): -800 daPa & +600 daPa

REFLEX MEASUREMENTS

Stimuli: > 250, 500, 1k, 2k, 4k, BBN, LBN, HBN,
> **Click (100 microseconds pulse), External Input, Non-acoustic**
Frequency Accuracy: \pm 3%
Harmonic Distortion (THD): Less than 5% (measured acoustically)
Noise Signals: (3 dB bandwidths)
Low Band: 125 -1,600 Hz
High Band: 1,600 -4,000 Hz
Broad Band: 125 -4,000 Hz
Intensity Range: 35 to 120 dB HL

Step Size: 5 dB, >1 dB and 2 dB
Calibration Accuracy: \pm 3 dB
Step Accuracy: \pm 0.5 dB
ON/OFF Ratio: 70 dB minimum

ENVIRONMENTAL

Temperature:
Storage: -40°C to +75°C
Operating: +15°C to +35°C
Humidity: 90% at 35°C (non-condensing)

ACCESSORIES SUPPLIED

Probe assembly (including contralateral insert phone)
Eartips (1 pkg. each standard, special, screening)
Printer paper, 2 rolls thermal, 1 roll self-adhesive
Calibration test cavity, Cleaning kit, Probe mount kit (shoulder, clip, wrist band), Quick User Guide, Reference Instruction Manual, Remote (RS232 link)
Dust Cover

OPTIONAL ACCESSORIES

Deskjet printer	1700-9613
External VGA monitor	1700-9614
External keyboard	1700-9615
Isolation Transformer	1700-9617
Service Manual	2000-0110
Conversion Kit (V1 to V2)	2000-9650

LANGUAGE KITS

GSI TympStar Version 1	
English	2000-9645E
French	2000-9645F
German	2000-9645G
Spanish	2000-9645S
Italian	2000-9645I
GSI TympStar Version 2	
English	2000-9646E
French	2000-9646F
German	2000-9646G
Spanish	2000-9646S
Italian	2000-9646I

QUALITY SYSTEM

Manufactured, designed, developed and marketed by VIASYS Healthcare Inc. NeuroCare Group under ISO 13485, ISO 9001 certified quality system.

COMPLIANCE / REGULATORY STANDARDS

Designed, tested and manufactured to meet the following domestic (USA), Canadian, European and International Standards:

UL 2601-1 American Standards for Medical Electrical Equipment.

IEC 601-1, EN 60601-1 International Standards for Medical Electrical Equipment.

CSA C22.2 # 601-1-M90

Medical Device Directive (MDD) (ID No.: 0344) to comply with "EC Directive" 93/42/EEC

ANSI S3.39, ANSI S3.6, IEC 645-1, IEC 1027, ISO 389

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GRASON-STADLER

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