



Visual Field Analyzers

Expanding your field of vision



We make it visible.



Vision in Focus

Visual Field Analyzers

Humphrey® Field Analyzer/HFA™ II-i Series
Humphrey Matrix®
Humphrey FDT®

Offering the industry's broadest selection of perimetry products, Carl Zeiss continues to set the gold standard for quality, precision and innovation worldwide.

Perimeter Software

Guided Progression Analysis™ (GPA™)
SITA-SWAP™

It is a standard that reflects our shared commitment to the enhancement and preservation of vision. A standard that expands the potential of perimetry with new technologies that offer unique insights to support you in glaucoma clinical detection, diagnosis and ongoing management.

Connectivity Software

FORUM® Eye Care Data Management
DICOM Gateway Software
HFA-NET Pro™

Every perimetry product from Carl Zeiss is designed to provide optimized workflow, better patient comfort, and superb value not only today but also far into the future.

Take a moment to find out more about the perimetry solutions from Carl Zeiss for confident early diagnosis and comprehensive disease management.

And see where vision takes you.

// PERIMETRY
MADE BY CARL ZEISS



HFA II-i

The gold standard in perimetry to aid in glaucoma diagnosis and management

Humphrey Field Analyzer – HFA II-i Series

Validated by more than 25 years of research, design and clinical experience, the HFA is the accepted standard of care in glaucoma diagnosis and management. With over 65,000 installed units worldwide, the Humphrey Field Analyzer is the premier automated visual field perimeter.

Complete portfolio of HFA II-i perimeters

Humphrey 750i Visual Field Analyzer

The ultimate in practice efficiency, advanced features and long-term value.

Humphrey 745i Visual Field Analyzer

All the features of the 740i plus SITA-SWAP software for early detection.

Humphrey 740i Visual Field Analyzer

The basic model in automated visual field testing for comprehensive care.

Humphrey 720i Visual Field Analyzer

All purpose model for low volume practices.

// GOLD STANDARD
MADE BY CARL ZEISS

// HUMPHREY FIELD ANALYZER
MADE BY CARL ZEISS



HFA II-i

A legacy of perimetry innovation

Advanced analysis

The HFA is the only perimeter with progression analysis validated in the Early Manifest Glaucoma Trial.¹

- Enhanced Guided Progression Analysis (GPA) software identifies statistically significant progression automatically, and presents “at a glance” visual field progression analysis on a single page report.
- Visual Field Index™ (VFI™) is a simple and intuitive global index to determine percentage of field loss on every visual field.^{2,3}
- Pattern Deviation Plots identify localized field loss, minimizing ocular media effects such as cataracts.
- STATPAC, the language of perimetry, compares results to proprietary age-normative and glaucoma databases.

Early glaucoma detection

- SITA-SWAP software reduces blue-yellow threshold test time to just 4–6 minutes, providing a clinically practical tool for early detection of glaucoma.^{4,5}

Enhanced exam reliability

- Patented system automatically tracks and aligns head and eye position.
- Kinetic, Custom and Social Security Disability testing provide a wide range of special purpose testing protocols.

Practice and patient friendly

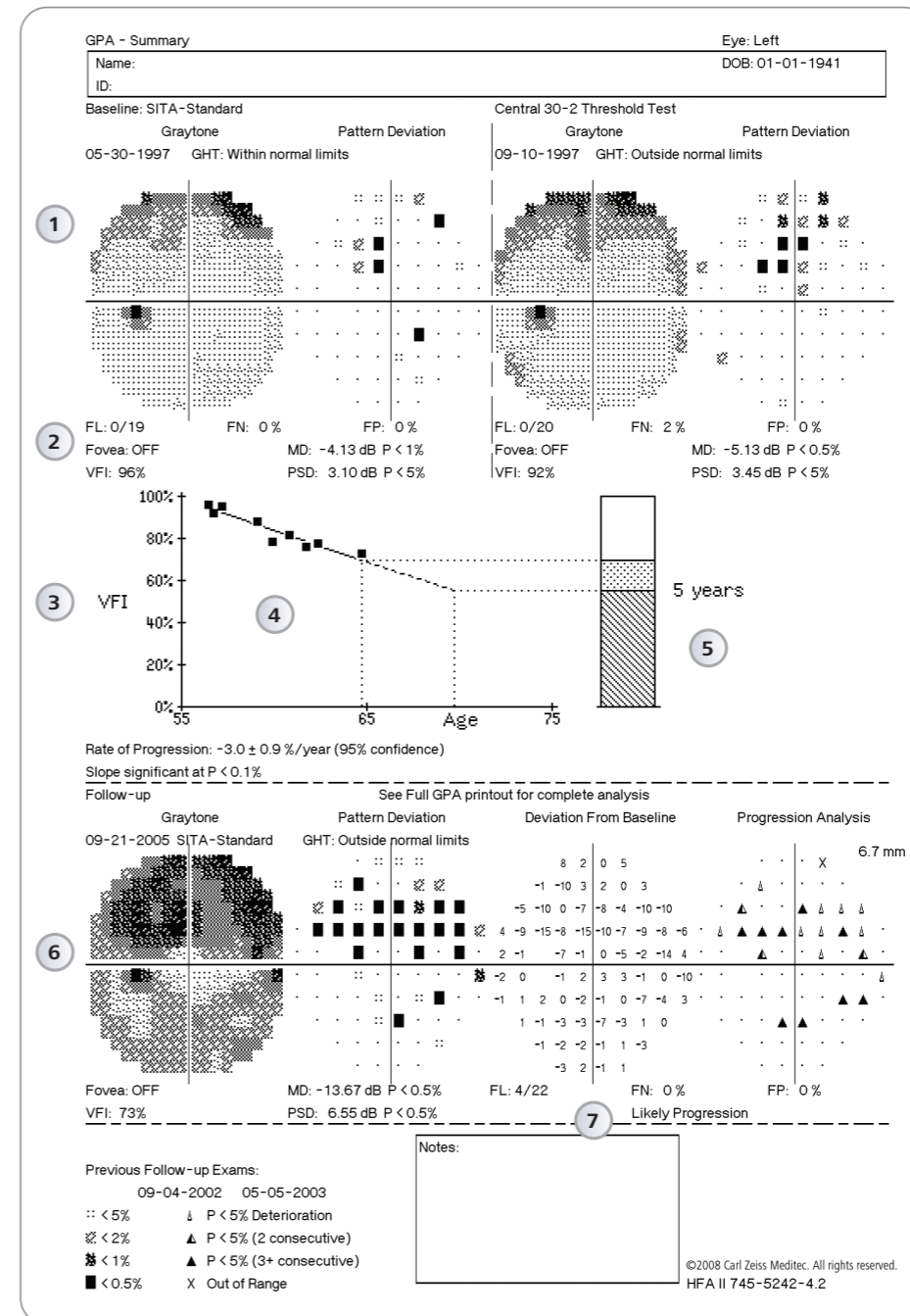
- DICOM Gateway option supports connectivity in DICOM environments such as FORUM® or the U.S. Veterans Administration Hospitals. (Check for availability.)
- HFA-NET Pro with EasyConnect™ RCT provides plug-n-play connectivity solutions to connect to an office network.
- Touch-screen and menu-driven interface simplifies operation.
- Ergonomic design promotes maximum comfort, access and versatility.



GPA – Advancing the Science of Progression Analysis

HFA Guided Progression Analysis (GPA) software accurately differentiates statistically significant progression of visual field loss from random variability, providing an advanced, proven method to enhance the management of glaucoma. The analysis is based upon detailed empirical knowledge of the variability found at various stages of glaucomatous visual field loss through information acquired in extensive multi-center clinical trials worldwide.

GPA Summary Report





HFA II-i and FORUM

Powerful connectivity. Simple integration.

Every HFA ships with the ability to connect to an office network through the FORUM Eye Care Data Management system. FORUM provides seamless connectivity between all ZEISS instruments, and any device using DICOM, the medical standard data protocol*.

HFA II-i and FORUM

HFA connectivity with FORUM delivers centralized data storage, management and retrieval to make your glaucoma patient data instantly available – right at your fingertips.

- View the simultaneous display of reports from multiple instruments such as HFA, Cirrus™ HD-OCT, GDx™ and fundus cameras.
- Share raw data between HFAs through FORUM.
- Correlate structure and function at a glance with the HFA-Cirrus Combined Report.
- Have a truly seamless workflow by connecting FORUM to an EHR.

FORUM-powered, closed-loop workflow

HFA integration to an EHR through FORUM uses closed-loop workflow. Patient demographics originate in the lead system, the EHR, and are pulled into instruments connected to the EHR (through FORUM) in a standardized format using the FORUM Modality Worklist feature. This closed-loop workflow avoids patient record mismatches. For legacy patient records, FORUM offers FORUM ASSIST match, an easy way to find and merge multiple patient records using a variety of match criteria.

HFA II-i

Key new features available with the latest system software

Improved GPA design

- Presents “at a glance” visual field progression analysis on a single page report.
- Quantifies rate of progression with new global index VFI, optimized for progression analysis.
- Displays rate of vision loss relative to patient age for individualized patient care.
- Projects current rate of progression forward up to 5 years to help assess risk of future vision loss if current trend continues.
- Combines Full Threshold and SITA strategies.
- Automates removal of tests with poor reliability.
- Streamlines clinical interpretation and simplifies patient education.

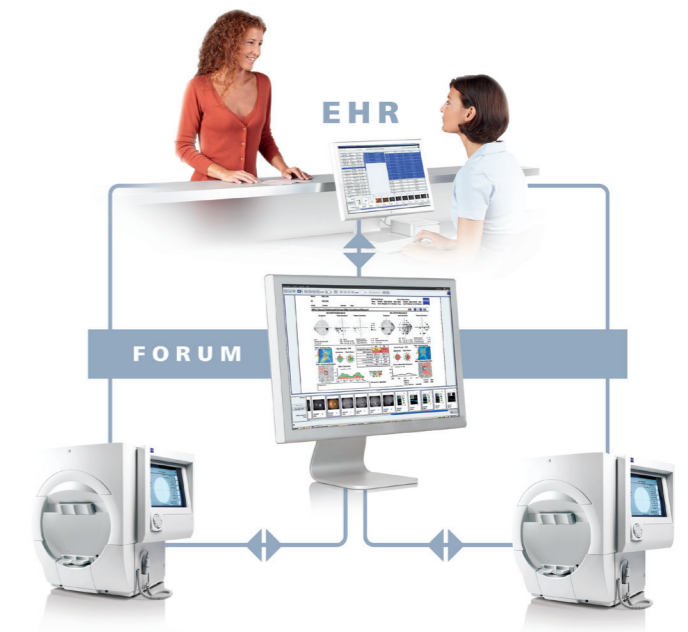
Improved workflow

- Connect to your EHR, office network or any device using DICOM connectivity with the FORUM Eye Care Data Management system.
- Provides VFI as a simple and intuitive new global index to determine the percentage of visual field loss on every test.
- Prints to virtually any network printer with HFA-NET Pro and EasyConnect.
- Allows non-IT specialists to set up networking with EasyConnect RCT.
- Improves database performance – with Archive/Retrieve up to 60X faster.

HFA-EHR integration with FORUM

HFA connectivity to an EHR through FORUM powerfully extends practice efficiency.

With or without an EHR, FORUM offers immediate efficiencies in patient record management. For a practice planning a EHR purchase, FORUM can ease the transition to paperless electronic workflow.



*FORUM can also connect to networked devices without DICOM.

Humphrey Frequency Doubling Technology

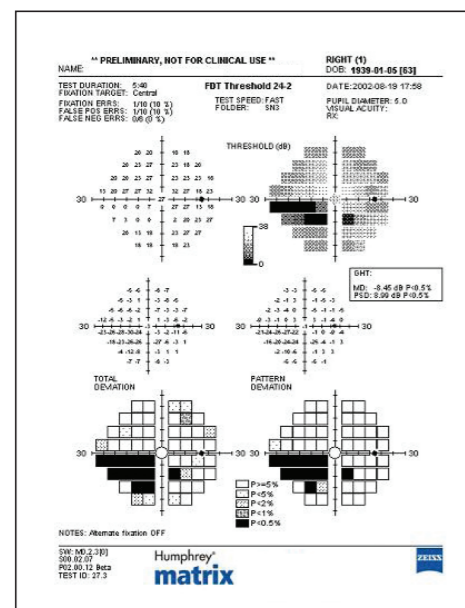
Proven to find early visual field loss

Humphrey Matrix – for visual field loss detection and basic management

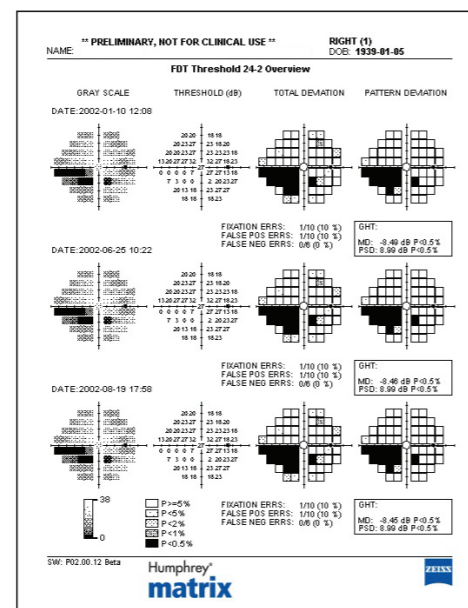
Operating a visual field instrument doesn't get much easier than a Humphrey Matrix. It provides the ideal solution for busy practices seeking a single perimeter for case detection and fast threshold testing when streamlined assessment is an option. In addition to simplifying visual field testing, numerous studies show that frequency doubling perimetry can detect visual field loss missed by other methods.^{7, 8, 9, 10} Its patented stimulus, space-saving user-friendly design and validated clinical performance all make the Humphrey Matrix an ideal solution for many practices.

- Proven diagnostic performance in detecting early visual field loss.^{11, 12}
- Reliable FDT supra-threshold testing and quick threshold testing for high patient throughput.
- 15% faster threshold testing on average and up to 70% faster for more advanced cases.¹³
- Video eye monitoring simplifies patient alignment and fixation monitoring.
- Large patient-friendly stimuli eliminate the need for trial lens correction in most patients.

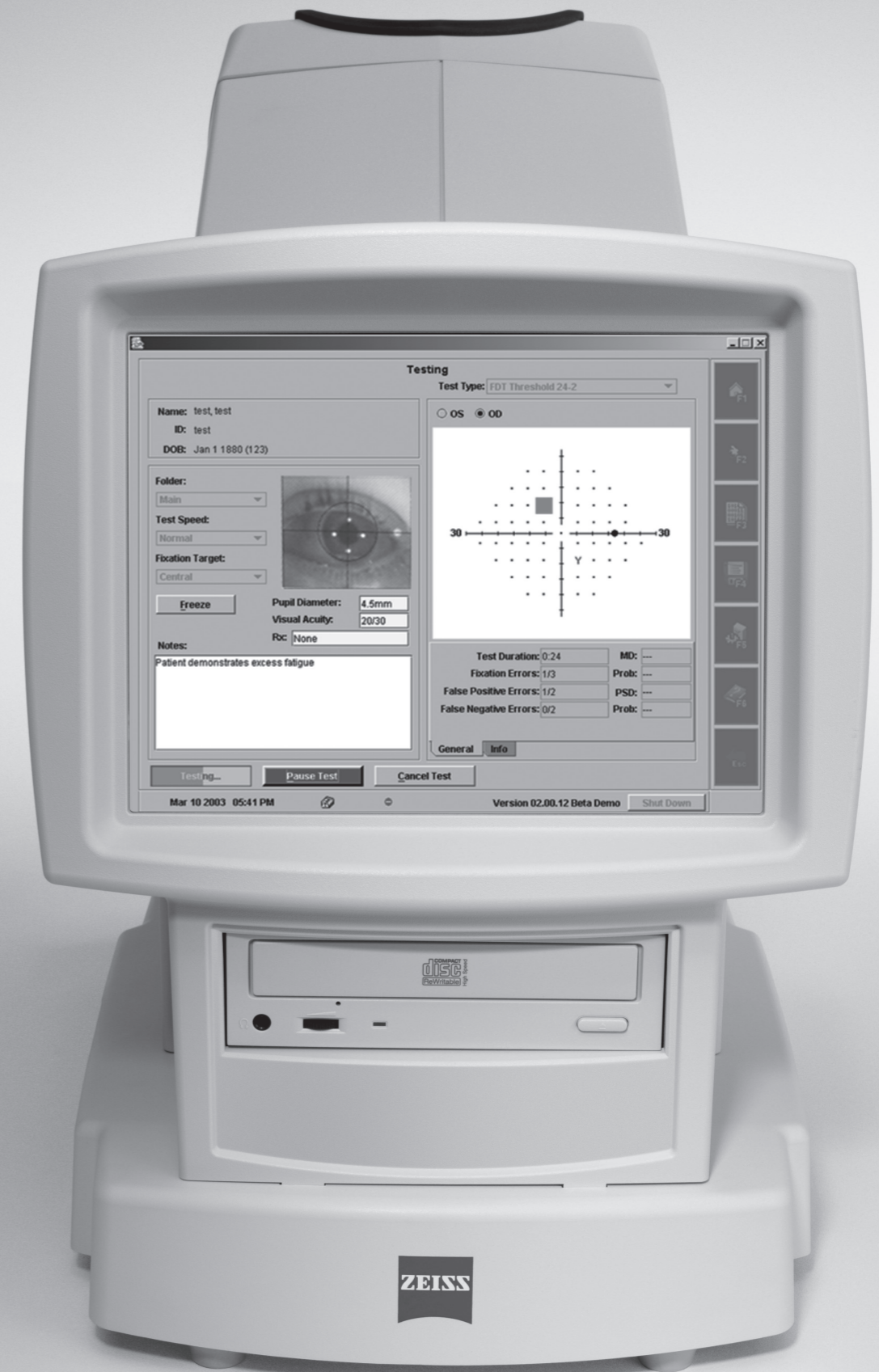
- Simple operation allows less experienced staff members to operate.
- Data output option allows connectivity to OfficeMate®. (Ask for availability.)
- Connect to your EMR, office network or any device using DICOM connectivity with the FORUM system.



Single Field Analysis



Serial Field Overview



// HUMPHREY MATRIX
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Humphrey Frequency Doubling Technology

Detect vision loss from ocular diseases

Humphrey FDT – for efficient visual field loss detection

Clinically validated

Multiple studies¹⁻¹⁵ have shown that the Humphrey FDT detects visual field loss due to a variety of ocular diseases, including glaucoma. Thus FDT is ideal for clinics desiring to identify patients in need of ophthalmological referral.

- FDT is clinically validated in more than 170 peer-reviewed publications.

Proven performance on virtually all patients

Studies have found that virtually all patients can perform this fast and simple test with reliable results:

- Beijing Eye Study: 98% patient success.¹⁴
- Tajimi Population Screening Study: 98.7% patient success.¹⁵

Easy to operate and interpret

The FDT is optimized for use in non-ophthalmological settings and may be operated by healthcare workers having little or no specialty training in ophthalmology.

- Simplified three touch operation.
- Patients may be tested using their own glasses.
- Short test: ~ 40 seconds per eye.
- Small footprint.
- Simplified interpretation of results.

Both the Matrix and FDT also provide:

- Large, age-related normative database.
- Compact design that fits anywhere in your practice.
- Easy and intuitive operation for users of any level of experience.
- No requirement for trial lenses or eye patches.*
- Dependable performance in ambient light.

*Trial lenses are required beyond ± 3 diopters for the Matrix and beyond ± 7 diopters for the FDT.



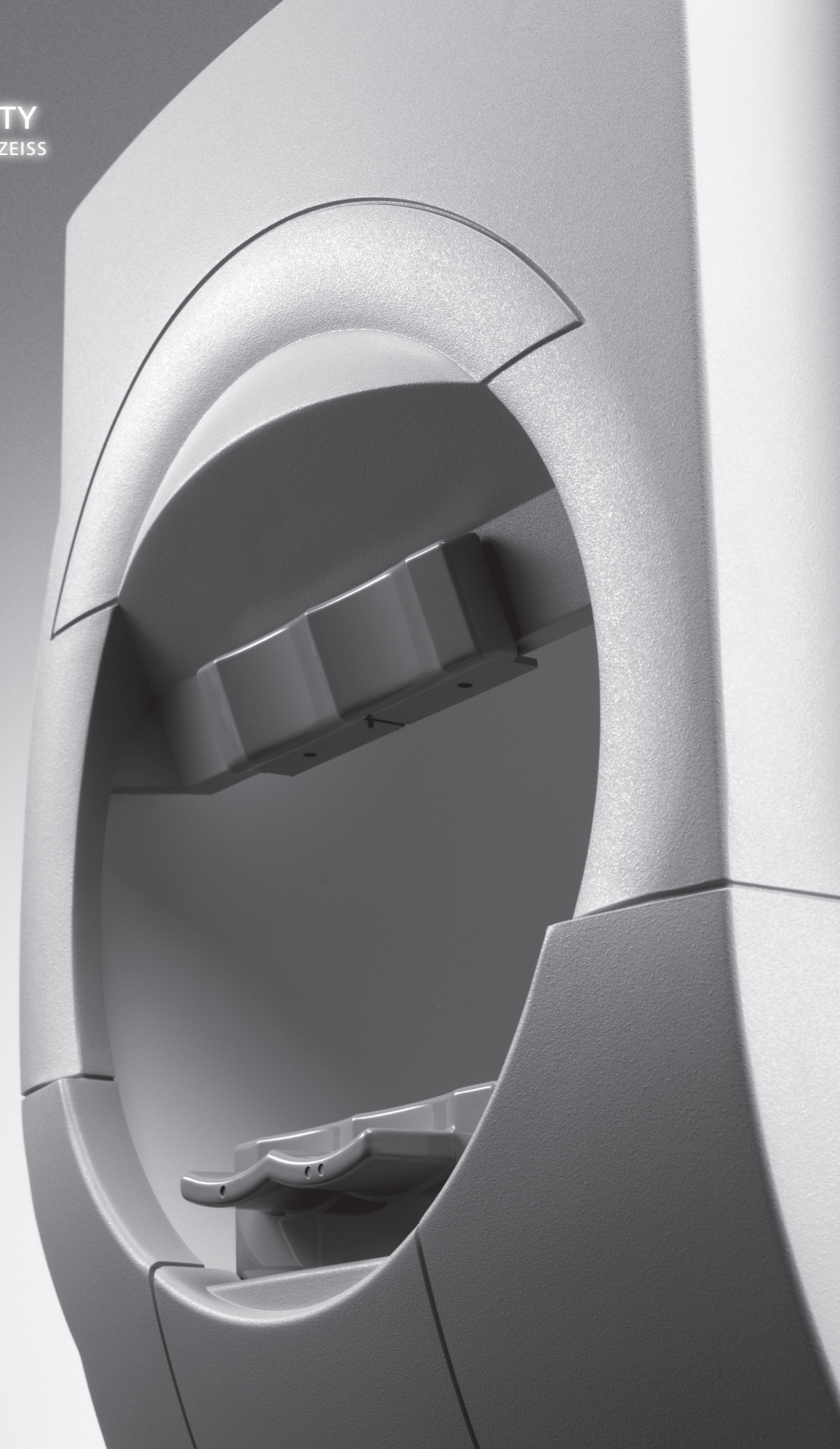
// HUMPHREY FDT
MADE BY CARL ZEISS

Technical Data

Specifications

Specifications	FDT	Matrix	HFA II-i			
			720i	740i	745i	750i
Test specifications						
Maximum temporal range (degrees)	30	30	89	89	89	89
Stimulus duration	300 ms	300 ms	200 ms	200 ms	200 ms	200 ms
Visual field testing distance	Infinity	Infinity	30 cm	30 cm	30 cm	30 cm
Background illumination	100 cd/m ²	100 cd/m ²	31.5 ASB	31.5 ASB	31.5 ASB	31.5 ASB
Threshold test library						
N-30	■	■				
C-20	■					
24-2, 30-2, 10-2, Macula		■	■	■	■	■
60-4, Nasal step			■	■	■	■
Threshold test strategies						
MOBS	■	■				
ZEST		■				
SITA Standard, SITA Fast, Full Threshold, FastPac			■	■	■	■
SITA-SWAP					■	■
Screening test library						
C40, C64, C76, C80, C-Armal			■	■	■	■
C-20	■					
N-30	■	■				
24-2		■				
Peripheral test patterns			■	■	■	■
Screening test modes						
Age corrected	■	■	■	■	■	■
Threshold related, Single intensity			■	■	■	■
Specialty test library						
Social Security Disability, monocular, binocular			■	■	■	■
Superior 36, 64			■	■	■	■
Kinetic testing				Option	Option	■
Custom testing				■	■	■

// RELIABILITY
MADE BY CARL ZEISS



Visual Field Analyzers

Technical Data

Specifications	FDT	Matrix	HFA II-i			
			720i	740i	745i	750i
Test specifications						
Maximum temporal range (degrees)	30	30	89	89	89	89
Stimulus duration	300 ms	300 ms	200 ms	200 ms	200 ms	200 ms
Visual field testing distance	Infinity	Infinity	30 cm	30 cm	30 cm	30 cm
Background illumination	100 cd/m ²	100 cd/m ²	31.5 ASB	31.5 ASB	31.5 ASB	31.5 ASB
Threshold test library						
N-30	■	■				
C-20	■					
24-2, 30-2, 10-2, Macula		■	■	■	■	■
60-4, Nasal step			■	■	■	■
Threshold test strategies						
MOBS	■	■				
ZEST		■				
SITA Standard, SITA Fast, Full Threshold, FastPac			■	■	■	■
SITA-SWAP					■	■
Screening test library						
C40, C64, C76, C80, C-Armal			■	■	■	■
C-20	■					
N-30	■	■				
24-2		■				
Peripheral test patterns			■	■	■	■
Screening test modes						
Age corrected	■	■	■	■	■	■
Threshold related, Single intensity			■	■	■	■
Specialty test library						
Social Security Disability, monocular, binocular			■	■	■	■
Superior 36, 64			■	■	■	■
Kinetic testing				Option	Option	■
Custom testing			■	■	■	■

Features	FDT	Matrix	HFA II-i			
			720i	740i	745i	750i
Fixation control						
Heijl Krakau blind spot monitor	■	■	■	■	■	■
Video eye monitor		■	■	■	■	■
Gaze tracking			■	■	■	■
Head tracking						■
Vertex monitoring						■
Remote video eye monitor capability			■	■	■	■
Operator interface						
Display	LCD	LCD			Touch-screen CRT	
Keyboard		■	■	■	■	■
Stimulus						
Frequency doubling	■	■				
White-on-white			■	■	■	■
Red- or blue-on-white				■	■	■
Blue-on-yellow (SWAP)					■	■
General testing features						
Stimulus sizes	10°	2°, 5°, 10°	Goldmann III	Goldmann I-V	Goldmann I-V	Goldmann I-V
Foveal threshold testing				■	■	■
Automatic Pupil measurement						■
Test storage						
User-defined		■	■	■	■	■
Software features						
STATPAC 2—single field analysis			■	■	■	■
Glaucoma Hemifield Test (GHT)		■	■	■	■	■
Visual Field Index (VFI)			■	■	■	■
Guided Progression Analysis (GPA)				■	■	■
Serial field overview		■		■	■	■
Networking			■	■	■	■
FORUM Connectivity			■	■	■	■
DICOM Connectivity			■	■	■	■
EasyConnect RCT / HFA-NET Pro			■	■	■	■
Printer						
	Thermal printer	External color printer	Native generic PCL 3, PCL 5 and postscript printer support for local, shared and networked printers			
Data storage, retrieval and analysis						
Hard drive		40 GB		40 GB	40 GB	40 GB
USB			■	■	■	■
CD-R/W drive		■				
Dimensions						
Height	17" (43 cm)	17" (43 cm)	24" (60 cm)			
Width	10" (25 cm)	11" (28 cm)	23" (58 cm)			
Depth	19" (48cm)	24" (61cm)	20" (51 cm)			
Weight	19 lbs (8.6 kg)	35 lbs (16 kg)	88 lbs (40 kg)			
Electrical requirements						
	100-120 V, 50/60 Hz 230 V, 50/60 Hz	100-240 V, 50/60 Hz	100-120 V, 50/60 Hz			
Standards						
Meets UL, CSA and CE standards	■	■	■	■	■	■



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