



Ultrasound Diagnostic Equipment

Mode	: B-mode, (A-mode Display), Color Flow mode,
Scanning Method	: Electric linear scan
Focus method	: Digital beam forming
Scanning Depth	: 30 mm
Adjustment	: B-mode gain, Beam focus
Display	: 15 inch color LCD
Operation	: Touch screen or Mouse
Data Storage	: SSD (solid state drive)
Measurement	: Distance measurement by cursor
Data process	: Calculation of the change of distance
US Transducer	: Electric linear array transducer
Applications	: Peripheral blood vessels (limited to percutaneous)
Transducer Frequency	: 10 MHz
Parameter Display	: Year, Date, Time, Patient ID
Transducer Holder	: Universal joint and 3-Axis Actuator
Handheld Transducer Holder controller	: 13 buttons
Occlusion Cuff	: Forearm or Brachial for Adult
Pressure Display Range	: 0 to 300 mmHg (±3 mmHg)
Pressure Range	: 120 to 300 mmHg
Maximum Pressure	: 350 mmHg
Pressure Time Range	: 30 to 300 seconds
Maximum Pressure Time	: 360 seconds
Power supply	: 100-240V~, 50/60Hz, 135VA
Protection	: Class I, type BF
Operational Temperature and Humidity	: 10 to 40°C, 30 to 85% (no condensation)
Storage Temperature and Humidity	: -5 to 50°C, 30 to 85% (no condensation)
Dimensions (not including protrusions)	: 480 (W) x 1200(H) x 520 (D) mm
Weight (approx. weight)	: 35 kg
Durable years for use	: 6 years after installation (Voluntary standards)

Standards

1. EN ISO 13485:2012 /AC:2012 (ISO 13485:2003 + Cor 1:2009)
2. IEC 60601-1:Edition 3.1:2012
3. IEC 60601-2-37:2007
4. IEC 60601-1-2:2007:
5. EN ISO 10993-1:2009:
 - ISO 10993-5:2009:
 - ISO 10993-10:2009:
6. EN ISO 14971:2012 (ISO 14971:2007, Corrected version 2007-10-01)

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FMD is the Gold Standard
of
Endothelial Function Examination

UNEX EF



FEATURES OF UNEXEF

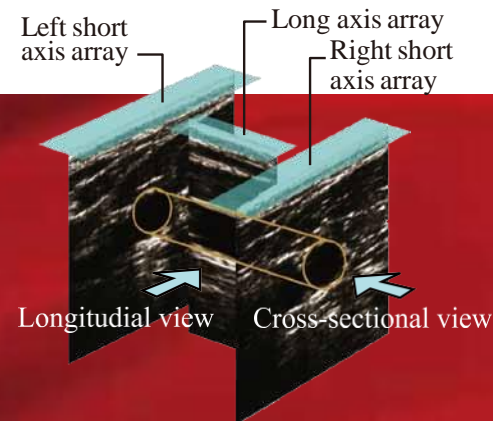
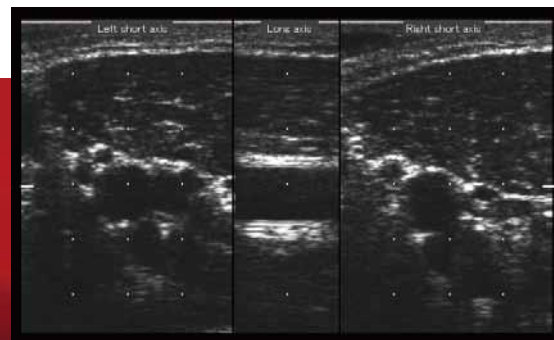
-The specialized device for FMD (Flow-Mediated Dilation) Test -

Endothelial Dysfunction is thought to be an important factor in the pathogenesis of Cardio Vascular Diseases. FMD (Flow Mediated Dilation) Test was innovated for checking Endothelial Vascular Function. The increase of blood flow provokes the release of nitric oxide (NO) from Vascular Endothelial cells and it results in vasodilation of the artery that can be quantified as an index of the amount of NO released. The measurement of the artery diameter in vasodilation is used for FMD Test.

UNEX EF enables the beat by beat measurement of the artery diameter with the automatic tracking of the artery image to adjust the probe position properly. UNEX EF provides the solution to apply FMD test to a clinical research study and a clinical usage.

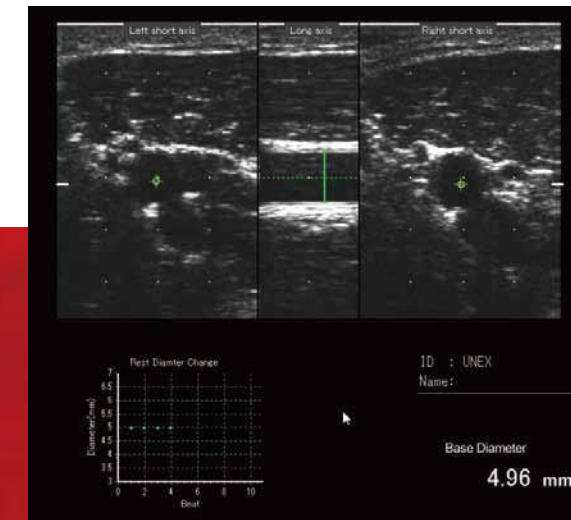
1 H-SHAPED PROBE CAPTURES ALONG- AND TWO SHORT-AXIS IMAGES SIMULTANEOUSLY.

Three images give an image of the relative positioning between the probe and the artery, and the use of three images realizes the automatic correction of the probe position.



3 THE ALIGNMENT OF THE BLOOD VESSEL IMAGES IS AUTOMATIC.

The tracking system with the software operated functions allows artery images to be steady. It starts tracking almost automatically.



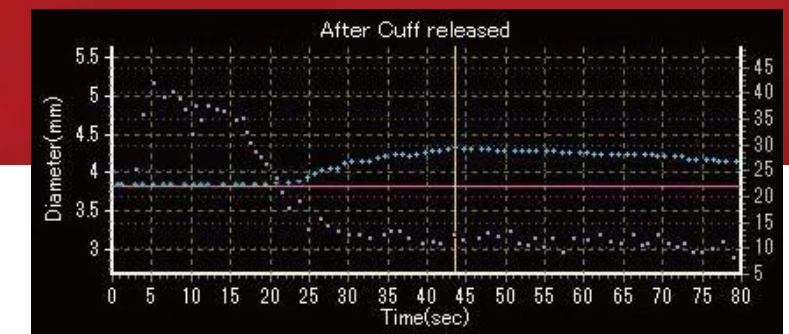
2 HYBRID-ARM IS A PROBE-HOLDING UNIT EQUIPPED WITH TRACKING SYSTEM.



Traditional ultrasound assessment for FMD requires a significant learning curve to establish high quality and accuracy in the method. The Hybrid-arm can solve the technical skill issue by its software operated functions; alignment and tracking of the images.

4 TRUE MAXIMUM DIAMETER IS DETECTED TO CALCULATE FMD.

The true maximum arterial diameter is detected through the trend-graph that shows the diameter change measured per beat after deflation.



FLOW OF SIMPLIFIED FMD MEASUREMENT

1. Wrap the cuff on the forearm
2. Set the probe on the upper arm
3. Set the ECG crips on both arms
4. Tap the center of two short axis images of the artery
5. Tap the [Occlusion] button
6. Wait for the announcement of the end
7. A result is printed right after