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# Technical Publications

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LOGIQ 7/LOGIQ 7 Pro Advanced Reference Manual

**R8.x.x**

Operating Documentation

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# Regulatory Requirement

This product complies with regulatory requirements of the following European Directive 93/42/EEC concerning medical devices.



This manual is a reference for the LOGIQ 7/LOGIQ 7 Pro. It applies to all versions of the R8.x.x for the LOGIQ 7/LOGIQ 7 Pro ultrasound system.



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# Revision History

## Reason for Change

REV	DATE	REASON FOR CHANGE
Rev. 1	July 2nd, 2008	Initial Release
Rev. 2	Aug. 19, 2008	Add Note in Chapter 2

## List of Effective Pages

PAGE NUMBER	REVISION NUMBER	PAGE NUMBER	REVISION NUMBER
Title Page	Rev.2	Chapter 2	Rev.2
Revision History	Rev.2	Chapter 3	Rev.2
Table of Contents	Rev.2	Index	Rev.2
Chapter 1	Rev.2		

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# Chapter 1

## Acoustic Output

*Provides Acoustic Output information and tables, as well as possible bioeffects and prudent use.*

## Concerns Surrounding the Use of Diagnostic Ultrasound

During a diagnostic ultrasound examination, high frequency sound penetrates and interacts with tissue in and around the area of anatomy to be imaged. Only a small portion of this sound energy is reflected back to the probe for use in constructing the image while the remainder is dissipated within the tissue. The interaction of sound energy with tissue at sufficiently high levels can produce biological effects (aka bioeffects) of either a mechanical or thermal nature. Although the generation of bioeffect is intentional with therapeutic ultrasound, it is generally undesired in diagnostic applications and may be harmful in some conditions.

*NOTE: The American Institute of Ultrasound in Medicine has published a document entitled "Medical Ultrasound Safety". This three part document covers Bioeffects and Biophysics, Prudent Use and Implementing ALARA.*

Ultrasound users should read the AIUM to become more familiar with Ultrasound safety.

*NOTE: Only for U.S.A.: A copy of this document is included as part of the documentation package (Document 2163920-100).*

To contact the AIUM concerning their publications:

- In the USA, by telephone at 1-800-638-5352.
- To write them, use the following address:

AIUM  
14750 Sweitzer Lane  
Suite 100  
Laurel, MD, USA 20707-5906



# Acoustic Output Data

## Maximum output summary

The following tables list the typical maximum acoustic output levels achievable with LOGIQ 7/LOGIQ 7 Pro for all probes and operational modes. It is intended that this information be useful in making ALARA decisions and selecting the most appropriate probe for the application. In accordance with US FDA Guidelines, the overall maximum acoustic SPTA intensity for LOGIQ 7/LOGIQ 7 Pro is limited to 720 mW/cm<sup>2</sup> and MI is limited to 1.9. Modes for which TI does not exceed 0.1 are indicated by <0.1.

- The accuracy of acoustic output table of this manual: +0%/-50%
- Accuracy of TI and MI is -50%.

Table 1-2 shows all of the probes' operating modes. The following pages contain probe acoustic output tables for those noted in Table 1-2.

Table 1-1: Summary Table

Operating Mode	Transducer Model										
	3C	3.5C	3.5CS	5C	E8C	BE9C	8C	M7C*	7L	10L	M12L
B-mode	YES	YES	YES	YES	<1	<1	<1	YES	<1	YES	YES
M-mode (inc.B-mode)	YES	YES	YES	YES	<1	<1	<1	YES	<1	YES	YES
Color Flow (inc. B-mode)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Pulsed Doppler (inc.B-mode)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
B-Flow	n/a	YES	YES	n/a	n/a	n/a	YES	n/a	YES	YES	YES
Contrast	n/a	YES	YES	n/a	<1	n/a	n/a	n/a	YES	YES	n/a
CW Doppler	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other (specify)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 1-2: Summary Table

Operating Mode	Transducer Model										
	i12L	T739	3S	7S	10S	6T	M3S*	P2D	P6D	4C	12L
B-mode	YES	YES	YES	YES	YES	YES	<1	n/a	n/a	<1	YES
M-mode (inc.B-mode)	YES	YES	YES	<1	YES	YES	<1	n/a	n/a	<1	YES
Color Flow (inc. B-mode)	YES	YES	YES	YES	YES	YES	YES	n/a	n/a	YES	YES
Pulsed Doppler (inc.B-mode)	YES	YES	YES	YES	<1	YES	YES	n/a	n/a	YES	YES
B-Flow	n/a	YES	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	YES
Contrast	n/a	n/a	YES	n/a	n/a	n/a	YES	n/a	n/a	<1	n/a
CW Doppler	n/a	n/a	YES	YES	YES	YES	YES	YES	<1	n/a	n/a
Other (specify)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

NOTE: \* LOGIQ 7 only.

Table 1-3: Summary Table

Operating Mode	Transducer Model					
	9L	3CRF	4D10L	4D3C-L	4DE7C	11L
B-mode	<1	<1	<1	YES	<1	YES
M-mode (inc.B-mode)	<1	<1	<1	YES	<1	YES
Color Flow (inc. B-mode)	YES	YES	YES	YES	YES	YES
Pulsed Doppler (inc.B-mode)	YES	YES	YES	YES	YES	YES
B-Flow	YES	YES	YES	YES	n/a	YES
Contrast	<1	<1	<1	<1	n/a	n/a
CW Doppler	n/a	n/a	n/a	n/a	n/a	n/a
Other (specify)	n/a	n/a	n/a	n/a	n/a	n/a

**Maximum surface temperature**

Table 1-4: Maximum surface temperature (Degree C)

Probe	Max. Temp		Probe	Max. Temp	
	With TMM Phantom (+33/37)	In Air(+23)		With TMM Phantom (+33/37)	In Air(+23)
3C	40.5	37.0	3.5C	41.8	34.9
3.5CS	41.1	37.5	5C	37.2	31.5
M7C	39.7	35.6	E8C	41.6	40.0
BE9C	42.6	40.6	8C	38.1	38.0
3S	42.1	38.8	3S	42.1	38.8
7S	41.8	33.7	M3S	42.2	38.2
7L	41.9	36.2	10S	40.9	34.5
M12L	42.1	36.1	10L	42.3	35.1
739T	42.7	35.4	i12L	42.1	37.2
P2D	33.4	25.4	6T	42.3	39.5
4C	41.0	39.6	P6D	37.1	33.4
4D10L	41.8	40.3	12L	42.2	34.7
9L	42.2	36.1	4D3C-L	40.7	41.7
3CRF	40.0	36.1	4DE7C	41.4	35.1
11L	32.3	41.2			

Note:  
 The LOGIQ 7/LOGIQ 7 Pro monitors surface temperature of transesophageal probe and stops scanning at 42.7 degrees C.  
 Lens temperature was measured under conditions per IEC 60601-2-37 and Amendment 1.

List of Acoustic Output Parameters

Table 1-5: List of Acoustic Output Parameters

FDA	IEC	Meaning—IEC 60601-2-37 / FDA & NEMA UD2, UD3
a	a	Acoustic Attenuation Coefficient / Derating factor (usually 0.3 dB/cm-MHz)
$A_{aprt}$	$A_{aprt}$	-12db Output Beam Area / Active aperture area
	$C_{MI}$	Normalizing Coefficient
$D_{eq}$	$D_{eq}$	Equivalent Aperture Diameter / (same)
$d_{-6}$	$d_{-6}$	Pulse Beam Width / Beam diameter at -6 dB
$d_{eq}$	$d_{eq}$	Equivalent Beam Diameter
$f_c$	$f_{awf}$	Acoustic Working Frequency / Center frequency
$I_{pa}$	$I_{pa}$	Pulse-Average Intensity
$I_{pa,3}$	$I_{pa,a}$	Attenuated Pulse-Average Intensity
PII	$I_{pi}$	Pulse-Intensity Integral
PII <sub>3</sub>	$I_{pi,a}$	Attenuated Pulse-Intensity Integral
$I_{TA}$	$I_{ta}(z)$	Temporal-Average Intensity
$I_{TA,3}(Z)$	$I_{ta,a}(z)$	Attenuated Temporal-Average Intensity / (at depth z)
$I_{SPTA}(Z)$	$I_{zpta}(z)$	Spatial-Peak Temporal-Average Intensity
$I_{SPTA,3}(Z)$	$I_{zpta,a}(z)$	Attenuated Spatial-Peak Temporal-Average Intensity
MI	MI	Mechanical Index
$W_o$	P	Output Power / Time average acoustic power at the source
$W_{,3}(Z)$	$P_a$	Attenuated Output Power / Time average acoustic power derated to depth z
$W_{o1}$	$P_1$	Bounded Output Power / Power emitted from the central 1cm of aperture
PII	$p_i$	Pulse Pressure Squared Integral / Pulse intensity integral
$p_r$	$p_r$	Peak-Rarefactional Acoustic Pressure / (same)
$p_{r,3}$	$p_{ra}$	Attenuated Peak-Rarefactional Acoustic Pressure / (same)
PRF	prr	Pulse Repetition Rate / Pulse repetition frequency
TI	TI	Thermal Index / (same)
TIB	TIB	Bone Thermal Index / (same)
TIC	TIC	Cranial-Bone Thermal Index / (same)
TIS	TIS	Soft-Tissue Thermal Index / (same)
PD	$t_d$	Pulse Duration / (same)
$X_{-12,Y-12}$	X, Y	-12 dB Output Beam Dimensions / (same)
Z	Z	Distance from the Source to a Specified Point / (same)
$Z_{sp}$	$Z_b$	Depth for TIB / Depth at which the relevant index is maximum
$Z_{bp}$	$Z_{bp}$	Break-Point Depth / (same)
$Z_{sp}$	$Z_s$	Depth for TIS / Depth at which the relevant index is maximum

FDA	IEC	用語の意味 (IEC 60601-2-37 / FDA & NEMA UD2, UD3)
a	a	<i>Acoustic Attenuation Coefficient</i> (音響減衰係数) / Derating factor (usually 0.3 dB/cm-MHz) (減衰係数 (通常 0.3 dB/cm <sup>-1</sup> MHz <sup>-1</sup> ))
A <sub>aprt</sub>	A <sub>aprt</sub>	-12db Output Beam Area (-12db 出力ビーム面積) / Active aperture area (アクティブ開口面積)
	C <sub>MI</sub>	<i>Normalizing Coefficient</i> (正常化係数)
D <sub>eq</sub>	D <sub>eq</sub>	<i>Equivalent Aperture Diameter</i> (等価開口直径) / (同じ)
d <sub>-6</sub>	d <sub>-6</sub>	<i>Pulse Beam Width</i> (パルスビーム幅) / Beam diameter at -6 dB (-6 dB におけるビーム直径)
d <sub>eq</sub>	d <sub>eq</sub>	<i>Equivalent Beam Diameter</i> (等価ビーム直径)
f <sub>c</sub>	f <sub>awf</sub>	<i>Acoustic Working Frequency</i> (音響作動周波数) / Center frequency (中心周波数)
I <sub>pa</sub>	I <sub>pa</sub>	<i>Pulse-Average Intensity</i> (パルス平均強度)
I <sub>pa,3</sub>	I <sub>pa,a</sub>	<i>Attenuated Pulse-Average Intensity</i> (減衰パルス平均強度)
PII	I <sub>pi</sub>	<i>Pulse-Intensity Integral</i> (パルス強度積分)
PII <sub>3</sub>	I <sub>pi,a</sub>	<i>Attenuated Pulse-Intensity Integral</i> (減衰パルス強度積分)
I <sub>TA</sub>	I <sub>ta</sub> (z)	<i>Temporal-Average Intensity</i> (時間平均強度)
I <sub>TA,3</sub> (Z)	I <sub>ta,a</sub> (z)	<i>Attenuated Temporal-Average Intensity</i> (減衰時間平均強度) / (at depth z) (深さ z における)
I <sub>SPTA</sub> (Z)	I <sub>zpta</sub> (z)	<i>Spatial-Peak Temporal-Average Intensity</i> (指定した距離 z での水中で測定した空間ピーク時間平均強度)
I <sub>SPTA,3</sub> (Z)	I <sub>zpta,a</sub> (z)	<i>Attenuated Spatial-Peak Temporal-Average Intensity</i> (減衰空間ピーク時間平均強度)
MI	MI	<i>Mechanical Index</i> (メカニカルインデックス)
W <sub>0</sub>	P	<i>Output Power</i> (超音波出力) / Time average acoustic power at the source (発生源における時間平均超音波出力)
W <sub>3</sub> (Z)	P <sub>a</sub>	<i>Attenuated Output Power</i> (減衰超音波出力) / Time average acoustic power derated to depth z (深さ z までに軽減する時間平均超音波出力)
W <sub>01</sub>	P <sub>1</sub>	<i>Bounded Output Power</i> (開口を制限した超音波出力) / Power emitted from the central 1cm of aperture (開口中央 1cm から照射された超音波出力)
PII	p <sub>i</sub>	<i>Pulse Pressure Squared Integral</i> (パルス音圧二乗積分) / <i>Pulse intensity integral</i> (パルス強度積分)
p <sub>r</sub>	p <sub>r</sub>	<i>Peak-Rarefactional Acoustic Pressure</i> (最大負音圧) / (同じ)
p <sub>r,3</sub>	p <sub>ra</sub>	<i>Attenuated Peak-Rarefactional Acoustic Pressure</i> (減衰最大負音圧) / (同じ)
PRF	prr	<i>Pulse Repetition Rate</i> (パルス繰り返し周波数) / <i>Pulse repetition frequency</i> (パルス繰り返し周波数)
TI	TI	<i>Thermal Index</i> (サーマルインデックス) / (同じ)

FDA	IEC	用語の意味 (IEC 60601-2-37 / FDA & NEMA UD2, UD3)
TIB	TIB	<i>Bone Thermal Index</i> (骨のサーマルインデックス) / (同じ)
TIC	TIC	<i>Cranial-Bone Thermal Index</i> (頭がい(蓋)骨のサーマルインデックス) / (同じ)
TIS	TIS	<i>Soft-Tissue Thermal Index</i> (軟部組織のサーマルインデックス) / (同じ)
PD	$t_d$	<i>Pulse Duration</i> (パルス持続時間) / (同じ)
$X_{-12}, Y_{-12}$	X, Y	<i>-12 dB Output Beam Dimensions</i> (-12 dB 出力ビームの大きさ) / (同じ)
Z	Z	<i>Distance from the Source to a Specified Point</i> (音源と対象とする点との距離) / (同じ)
$Z_{sp}$	$Z_b$	<i>Depth for TIB</i> (TIB の深さ) / <i>Depth at which the relevant index is maximum</i> (当該インデックスが最大になる深さ)
$Z_{bp}$	$Z_{bp}$	<i>Break-Point Depth</i> (開始深さ) / (同じ)
$Z_{sp}$	$Z_s$	<i>Depth for TIS</i> (TIS の深さ) / <i>Depth at which the relevant index is maximum</i> (当該インデックスが最大になる深さ)

Símbolos	Unidade	Definição
<b>MI</b>	n/d	Índice mecânico
<b>TIS<sub>scan</sub></b>	n/d	Índice térmico do tecido mole no modo de varredura automática
<b>TIS<sub>non-scan</sub></b>	n/d	Índice térmico do tecido mole no modo de varredura não automática
<b>TIB</b>	n/d	Índice térmico do osso
<b>TIC</b>	n/d	Índice térmico craniano
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Área da abertura ativa
<b>P<sub>r.3</sub></b>	MPa	Pressão de rarefação de pico reduzido (MPa) associada com a elevação fornecida do padrão de transmissão para o valor relatado sob <b>MI</b>
<b>W<sub>o</sub></b>	mW	A energia ultra-sônica, exceto por <b>TIS<sub>varr.</sub></b> , no qual a energia ultra-sônica passa por uma janela de um centímetro
<b>W<sub>.3(z<sub>1</sub>)</sub></b>	mW	Energia ultra-sônica reduzida na distância axial z <sub>1</sub>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Pico espacial reduzido, intensidade média temporal na distância axial z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Distância axial correspondente ao local de máx [mín(W <sub>.3(z)</sub> ), I <sub>TA.3(z)</sub> x 1 cm <sup>2</sup> ], onde z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Diâmetro equivalente do feixe como uma função da distância axial z é igual a [(4/π)(W <sub>o</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , onde I <sub>TA(z)</sub> é a intensidade média temporal como uma função de z
<b>f<sub>c</sub></b>	Mhz	Frequência central Para <b>MI</b> , f <sub>c</sub> é a frequência central associada com a elevação fornecida do padrão de transmissão para o valor máximo relatado de <b>MI</b> . Para <b>TI</b> , para os modos combinados envolvendo padrões de transmissão de frequência central desigual, f <sub>c</sub> é definido como o intervalo total de frequências centrais dos respectivos padrões de transmissão
<b>Dim. of A<sub>aprt</sub></b>	cm	Dimensões da abertura ativa para os planos azimutais e de elevação
<b>PD</b>	µs	Duração do pulso associado à elevação fornecida do padrão de transmissão para o valor relatado de <b>MI</b>
<b>PRF</b>	Hz	Frequência de repetição do pulso associado à elevação fornecida do padrão de transmissão para o valor relatado de <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Pressão de rarefação do pico no ponto onde o campo livre, o integral de pulso do pico espacial é um máximo

<b>Símbolos</b>	<b>Unidade</b>	<b>Definição</b>
<b>d<sub>eq</sub> @ P<sub>II</sub><sub>max</sub></b>	cm	Diâmetro de feixe equivalente no ponto onde o campo livre, o integral de pulso do pico espacial é um máximo
<b>CF</b>	cm	Comprimento focal ou comprimentos de azimute e elevação, se forem diferentes
<b>I<sub>PA.3</sub> @ M<sub>I</sub><sub>max</sub></b>	W/cm <sup>2</sup>	Intensidade média do pulso reduzida no ponto do <b>MI</b> máximo relatado
<b>ROI</b>	n/d	Região de interesse
<b>TB</b>	n/d	Trackball
<b>CF</b>	n/d	Modo de fluxo colorido
<b>CM</b>	n/d	Modo M colorido
<b>PW/CW</b>	n/d	Doppler de onda pulsada/onda contínua



Symboler	Enhed	Definition
<b>MI</b>	n/a	Mekanisk indeks
<b>TIS<sub>scan</sub></b>	n/a	Termisk indeks for blødt væv i automatisk scanningsmode
<b>TIS<sub>non-scan</sub></b>	n/a	Termisk indeks over blødt væv i ikke-automatisk scanningsmode
<b>TIB</b>	n/a	Termisk indeks for knogler
<b>TIC</b>	n/a	Termisk indeks for kranieknogle
<b>A<sub>aptr</sub></b>	cm <sup>2</sup>	Område af den aktive blænde
<b>P<sub>r.3</sub></b>	MPa	Belastningsreduceret, fortyndet maksimumtryk (MPa), der er knyttet til det sendemønster, der giver værdien, som er angivet for <b>MI</b>
<b>W<sub>o</sub></b>	mW	Ultralydeffekt, undtagen for <b>TIS<sub>scan</sub></b> hvor ultralydeffekten passerer gennem et vindue på 1 cm
<b>W<sub>.3(z<sub>1</sub>)</sub></b>	mW	Belastningsreduceret ultralydeffekt ved aksialafstand z <sub>1</sub>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Belastningsreduceret, tidsmæssigt gennemsnitsintensitet med rumligt maksimum ved aksialafstand z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Aksialafstanden svarer til placeringen af maks. [min. ( <b>W<sub>.3(z)</sub></b> , <b>I<sub>TA.3(z)</sub></b> × 1 cm <sup>2</sup> )], hvor z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69( <b>A<sub>blænde</sub></b> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Tilsvarende strålediameter som funktion af aksialafstanden z, og lig med [(4/π)(W <sub>o</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , hvor I <sub>TA(z)</sub> er den tidsmæssige gennemsnitsintensitet som funktion af z
<b>f<sub>c</sub></b>	MHz	Centerfrekvens Vedr. <b>MI</b> er <b>f<sub>c</sub></b> centerfrekvensen, der er knyttet til det sendemønster, der giver den maksimalt rapporterede værdi af <b>MI</b> . Vedr. <b>TI</b> i kombinerede mode, der involverer sendemønstre med ulige centerfrekvens, defineres <b>f<sub>c</sub></b> som det overordnede område af centerfrekvenser for de pågældende sendemønstre
<b>Dim. of A<sub>aptr</sub></b>	cm	Mål for aktiv blænde for azimuth- og elevationsplan
<b>PD</b>	µs	Pulsvarighed, der er knyttet til det sendemønster, der giver værdien, som er angivet for <b>MI</b>
<b>PRF</b>	Hz	Pulsvarighedsfrekvensen, der er knyttet til det sendemønster, der giver værdien, som er angivet for <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Maksimalt fortyndet tryk ved det punkt, hvor det frie, rumlige maksimum for pulsintensitetsintegralet er størst

Symboler	Enhed	Definition
$d_{eq} @ P_{II_{max}}$	cm	Tilsvarende strålediameter ved det punkt, hvor det frie, rumlige maksimum for pulsintensitetsintegralet er størst
FL	cm	Fokuslængde eller azimuth- og elevationslængde, hvis de er forskellige
$I_{PA.3} @ MI_{max}$	W/cm <sup>2</sup>	Belastningsreduceret gennemsnitspulsintensitet ved det maksimalt rapporterede punkt MI
ROI	n/a	Interesseområde
TB	n/a	Trackball
CF	n/a	Farve-Flow-Mode
CM	n/a	Farve-M-Mode
PW/CW	n/a	Pulsed Wave/Continuous Wave Doppler

Symbole	Einheit	Bedeutung
<b>MI</b>	nicht zutreffend	Mechanischer Index
<b>TIS<sub>scan</sub></b>	nicht zutreffend	Soft Tissue Thermal Index im Auto-Scanning-Modus
<b>TIS<sub>non-scan</sub></b>	nicht zutreffend	Soft Tissue Thermal Index im Nicht-Auto-Scanning-Modus
<b>TIB</b>	nicht zutreffend	Bone Thermal Index
<b>TIC</b>	nicht zutreffend	Cranial Thermal Index
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Fläche der aktiven Apertur
<b>P<sub>r.3</sub></b>	MPa	Freigesetzter maximaler Verdünnungs-Druck (MPa) bei dem verwendeten Sendemuster, das zu dem unter <b>MI</b> angegebenen Wert führt
<b>W<sub>0</sub></b>	mW	Ultraschalleistung, außer beim <b>TIS<sub>scan</sub></b> , bei dem es sich um die Ultraschalleistung durch ein Ein-Zentimeter-Fenster handelt
<b>W<sub>3(z<sub>1</sub>)</sub></b>	mW	Freigesetzte Ultraschalleistung bei Axialabstand z <sub>1</sub>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Freigesetzter räumlicher Spitzen- und zeitlicher Mittelwert der Intensität im Axialabstand z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Axialabstand entsprechend der Position von max. [min.(W <sub>3(z)</sub> , I <sub>TA.3(z)</sub> × 1 cm <sup>2</sup> )], wobei z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Aquivalenter Strahldurchmesser als Funktion des Axialabstands z und gleich [(4/π)(W <sub>0</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , wobei I <sub>TA(z)</sub> die zeitlich gemittelte Intensität als Funktion von z ist.
<b>f<sub>c</sub></b>	MHz	Mittenfrequenz Für <b>MI</b> ist f <sub>c</sub> die Mittenfrequenz bei dem Sendemuster, das zum Maximalwert von <b>MI</b> führt. Für <b>TI</b> bei kombinierten Betriebsarten mit Sendemustern von ungleicher Mittenfrequenz ist f <sub>c</sub> definiert als der Gesamtbereich der Mittenfrequenzen der jeweiligen Sendemuster
<b>Dim. of A<sub>aprt</sub></b>	cm	Maße der aktiven Apertur für die Azimutal- und die Elevationsebene
<b>PD</b>	µs	Pulsdauer des Sendemusters, das zum angegebenen Wert von <b>MI</b> führt
<b>PRF</b>	Hz	Pulswiederholungsfrequenz des Sendemusters, das zum angegebenen Wert von <b>MI</b> führt

<b>Symbole</b>	<b>Einheit</b>	<b>Bedeutung</b>
<b><math>P_r @ PII_{max}</math></b>	MPa	Maximaler Verdünnungs-Druck an dem Punkt, an dem der räumliche Spitzenwert des Pulsintensitätsintegrals im freien Feld ein Maximum ist
<b><math>d_{eq} @ PII_{max}</math></b>	cm	Äquivalenter Strahldurchmesser an dem Punkt, an dem der räumliche Spitzenwert des Pulsintensitätsintegrals im freien Feld ein Maximum ist
<b>FL</b>	cm	Fokuslänge bzw. Azimutal- und Elevationslänge, falls unterschiedlich
<b><math>I_{PA.3} @ MI_{max}</math></b>	$W/cm^2$	Reduzierter Pulsmittelwert der Intensität am Punkt des maximalen angegebenen <b>MI</b>
<b>ROI</b>	nicht zutreffend	Einstellbare Ausschnittsgröße
<b>TB</b>	nicht zutreffend	Trackball
<b>CF</b>	nicht zutreffend	Farbfluss-Modus
<b>CM</b>	nicht zutreffend	Farb-M-Modus
<b>PW/CW</b>	nicht zutreffend	Pulsed-Wave-/Continuous-Wave-Doppler

Symboles	Unité	Définition
<b>MI</b>	n/d	Indice mécanique
<b>TIS<sub>scan</sub></b>	n/d	Indice thermique pour les tissus mous en mode d'auto-examen
<b>TIS<sub>non-scan</sub></b>	n/d	Indice thermique pour les tissus mous en mode de non-auto-examen
<b>TIB</b>	n/d	Indice thermique pour les os
<b>TIC</b>	n/d	Indice thermique crânien
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Zone d'ouverture active
<b>P<sub>r.3</sub></b>	MPa	Tensions rares de pic non notées (MPa) associées au schéma de transmission et donnant lieu à la valeur indiquée sous <b>MI</b>
<b>W<sub>o</sub></b>	mW	Puissance échographique, sauf pour l'examen <b>ITS<sub>acq.</sub></b> , auquel cas il s'agit de la puissance échographique passant par une fenêtre d'un cm.
<b>W<sub>.3(z<sub>1</sub>)</sub></b>	mW	Puissance échographique non cotée à distance axiale <b>z<sub>1</sub></b>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Pic spatial non coté, intensité temporelle moyenne à distance axiale <b>z<sub>1</sub></b>
<b>z<sub>1</sub></b>	cm	Distance axiale correspondant à l'emplacement du max [min(W <sub>.3(z)</sub> , I <sub>TA.3(z)</sub> x 1 cm <sup>2</sup> )], où $z \geq z_{bp}$
<b>z<sub>bp</sub></b>		$1.69(A_{aprt})^{1/2}$
<b>d<sub>eq(z)</sub></b>	cm	Diamètre de faisceau équivalent comme fonction de la distance axiale <b>z</b> , et égal à $[(4/\pi)(W_o/I_{TA}(z))]^{1/2}$ , où I <sub>TA</sub> (z) est l'intensité moyenne temporelle fonction de <b>z</b>
<b>f<sub>c</sub></b>	MHz	Fréquence centrale Pour <b>MI</b> , <b>f<sub>c</sub></b> est la fréquence centrale associée au schéma de transmission qui donne lieu à la valeur rapportée maximale de <b>MI</b> . Pour <b>TI</b> , pour des modes combinés impliquant des schémas de transmission de fréquence centrale inégale, <b>f<sub>c</sub></b> est défini comme la gamme totale des fréquences centrales des schémas de transmission respectifs
<b>Dim. of A<sub>aprt</sub></b>	cm	Dimensions d'ouverture active pour les plans azimutaux et d'élévation
<b>PD</b>	μs	Durée de pulsation associée au schéma de transmission donnant lieu à la valeur rapportée de <b>MI</b>
<b>PRF</b>	Hz	Fréquence de répétition associée au schéma de transmission donnant lieu à la valeur rapportée de <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Tension de pic rare au point maximal de champ libre, d'intégrale d'intensité de pic spatial

Symboles	Unité	Définition
$d_{eq} @ P_{II}_{max}$	cm	Diamètre de faisceau équivalent au point maximal de champ libre, d'intégrale d'intensité de pic spatial
FL	cm	Longueur focale ou longueurs azimutales et d'élévation, si elles sont différentes
$I_{PA.3} @ MI_{max}$	W/cm <sup>2</sup>	Intensité moyenne de pulsation non cotée au point maximum reporté MI
ROI	n/d	Région d'intérêt
TB	n/d	Trackball
CF	n/d	Mode de flux de couleurs
CM	n/d	Mode M Couleur
PW/CW	n/d	Doppler à ondes pulsées/continues

Simboli	Unità	Definizione
<b>MI</b>	n/a	Indice Meccanico
<b>TIS<sub>scan</sub></b>	n/a	Indice termico tessuti molli in modalità di scansione automatica
<b>TIS<sub>non-scan</sub></b>	n/a	Indice termico tessuti molli in modalità di scansione non automatica
<b>TIB</b>	n/a	Indice termico delle ossa
<b>TIC</b>	n/a	Indice termico cranico
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Area dell'apertura attiva
<b>P<sub>r.3</sub></b>	MPa	Pressione di rarefazione di picco a prestazioni ridotte (MPa) associata allo schema di trasmissione che genera il valore riportato alla voce <b>MI</b>
<b>W<sub>o</sub></b>	mW	Potenza ultrasuoni, tranne per <b>TIS<sub>scansione</sub></b> nel qual caso corrisponde alla potenza degli ultrasuoni che passa attraverso una finestra di un centimetro
<b>W<sub>3(z<sub>1</sub>)</sub></b>	mW	Potenza ultrasuoni a prestazioni ridotte in corrispondenza della distanza assiale z <sub>1</sub>
<b>I<sub>TA,3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Intensità media temporale, picco spaziale a prestazioni ridotte in corrispondenza della distanza assiale z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Distanza assiale corrispondente alla posizione di max [min(W <sub>3(z)</sub> , I <sub>TA,3(z)</sub> × 1 cm <sup>2</sup> )], dove z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Diametro raggio equivalente in funzione della distanza assiale z e pari a [(4/π)(W <sub>o</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , dove I <sub>TA(z)</sub> è l'intensità media temporale in funzione di z
<b>f<sub>c</sub></b>	MHz	Frequenza della parte centrale Per <b>MI</b> , f <sub>c</sub> è la frequenza della parte centrale associata allo schema di trasmissione che genera il valore massimo riportato di <b>MI</b> Per <b>TI</b> , per le modalità che comportano schemi di trasmissione con frequenza della parte centrale ineguale, f <sub>c</sub> è definito come la gamma totale delle frequenze della parte centrale dei rispettivi schemi di trasmissione
<b>Dim. of A<sub>aprt</sub></b>	cm	Le dimensioni dell'apertura attiva per i piani azimutali e verticali
<b>PD</b>	μs	Durata degli impulsi associata allo schema di trasmissione che genera il valore riportato di <b>MI</b>
<b>PRF</b>	Hz	Frequenza di ripetizione degli impulsi associata allo schema di trasmissione che genera il valore riportato di <b>MI</b>

<b>Simboli</b>	<b>Unità</b>	<b>Definizione</b>
<b><math>P_r @ PII_{max}</math></b>	MPa	Pressione di rarefazione di picco in corrispondenza del punto in cui l'integrale dell'intensità degli impulsi di picco spaziale a campo libero è al massimo
<b><math>d_{eq} @ PII_{max}</math></b>	cm	Diametro del raggio equivalente in corrispondenza del punto in cui l'integrale dell'intensità degli impulsi di picco spaziale a campo libero è al massimo
<b>FL</b>	cm	Lunghezza focale o lunghezze azimutali e verticali, se diverse
<b><math>I_{PA.3} @ MI_{max}</math></b>	W/cm <sup>2</sup>	Intensità della media degli impulsi a prestazioni ridotte in corrispondenza del punto del valore massimo riportato <b>MI</b>
<b>ROI</b>	n/a	Regione di interesse
<b>TB</b>	n/a	Trackball
<b>CF</b>	n/a	Color Flow
<b>CM</b>	n/a	Color M-Mode
<b>PW/CW</b>	n/a	Doppler PW/CW



Símbolos	Unidad	Definición
<b>MI</b>	n/a	Índice Mecánico
<b>TIS<sub>scan</sub></b>	n/a	Índice Termal del Tejido Suave en el modo de auto-examinación
<b>TIS<sub>non-scan</sub></b>	n/a	Índice Termal del Tejido Suave en el modo de no-auto-examinación
<b>TIB</b>	n/a	Índice Termal del hueso
<b>TIC</b>	n/a	Índice Termal Craneal
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Área de la abertura activa
<b>P<sub>r.3</sub></b>	MPa	Presión rarefaccional máxima desratiza (MPa) asociada con el patrón transmitido aumentando el valor reportado bajo <b>MI</b>
<b>W<sub>0</sub></b>	mW	Potencia ultrasónica, con excepción para la <b>Examinación TIS</b> en la cual el caso es que la potencia ultrasónica pasando a través de una ventana de centímetro
<b>W<sub>.3(z<sub>1</sub>)</sub></b>	mW	Potencia ultrasónica desratizada a una distancia axial z <sub>1</sub>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Pico espacial desratizado, intensidad del promedio-temporal en la intensidad axial z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Distancia axial correspondiente a la ubicación de máx [mín(W <sub>.3(z)</sub> , I <sub>TA.3(z)</sub> x 1 cm <sup>2</sup> )], donde z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Diámetro del haz equivalente como una función de distancia axial z, y es igual a [(4/π)(W <sub>0</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , donde I <sub>TA(z)</sub> es la intensidad del promedio temporal como una función de z
<b>fc</b>	MHz	Centro de Frecuencia Para <b>MI</b> , fc es el centro de frecuencia asociado con el patrón de transmisión aumentando al máximo el valor reportado de <b>MI</b> . para <b>TI</b> , los modos combinados incluyendo los patrones transmitidos del centro de la frecuencia desigual, fc es definido como el rango general del centro de frecuencias de los patrones respectivos transmitidos
<b>Dim. of A<sub>aprt</sub></b>	cm	Dimensiones de abertura activa para los planos "azimuthal" y elevacionales
<b>PD</b>	μs	Duración del Pulso asociado con el patrón transmitido aumentando el valor reportado de <b>MI</b>
<b>PRF</b>	Hz	Frecuencia de reproducción del pulso asociado con el patrón transmitido aumentado en el valor reportado de <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Presión rarefaccional máxima al punto del campo libre, intensidad integral pico del pulso espacial es un máximo

<b>Símbolos</b>	<b>Unidad</b>	<b>Definición</b>
$d_{eq} @ P_{II_{max}}$	cm	El diámetro del haz equivalente al punto donde el campo libre, el pico espacial, intensidad integral del pulso es un máximo
<b>FL</b>	cm	Longitud focal o longitudes "azimutal" y elevacional, si es diferente
$I_{PA.3} @ MI_{max}$	W/cm <sup>2</sup>	La intensidad del promedio del pulso desratizado al punto máximo reportado de <b>MI</b>
<b>ROI</b>	n/a	Región de Interés
<b>TB</b>	n/a	"Trackball"
<b>CF</b>	n/a	Modo del Flujo de Color
<b>CM</b>	n/a	Modo de Color
<b>PW/CW</b>	n/a	Onda Pulsada/Onda Doppler Continua

Symboler	Enhet	Definisjon
<b>MI</b>	n/a	Mekanisk Indeks
<b>TIS<sub>scan</sub></b>	n/a	Bløtdel Thermal Index i auto-skanning modus
<b>TIS<sub>non-scan</sub></b>	n/a	Bløtdel Thermal Index i non-auto-skanning modus
<b>TIB</b>	n/a	Bone Thermal Index
<b>TIC</b>	n/a	Kraniell Thermal Index
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Område for den aktive åpningen
<b>P<sub>r.3</sub></b>	MPa	Redusert maksimalt trykk (MPa) assosiert med sendemønstret som gir grunnlag for verdien som angis under <b>MI</b>
<b>W<sub>0</sub></b>	mW	Ultralydeffekt, bortsett fra <b>TIS<sub>scan</sub></b> hvor det er ultralydeffekten som passerer gjennom et 1 centimeter vindu.
<b>W<sub>.3(z<sub>1</sub>)</sub></b>	mW	Redusert ultralydeffekt i aksial avstand z <sub>1</sub>
<b>I<sub>TA.3(z<sub>1</sub>)</sub></b>	mW/ cm <sup>2</sup>	Redusert romlig-peak, temporal-gjennomsnitt intensitet ved aksial avstand z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Aksial distanse svarende til plasseringen av maks [min(W <sub>.3(z)</sub> , I <sub>TA.3(z)</sub> × 1 cm <sup>2</sup> )], hvor z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Ekvivalent strålediameter som en funksjon av aksial distanse z, er lik [(4/π)(W <sub>0</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , hvor I <sub>TA(z)</sub> er den temporale-gjennomsnitt intensiteten som en funksjon av z
<b>f<sub>c</sub></b>	MHz	Senterfrekvensen for <b>MI</b> , f <sub>c</sub> er senterfrekvensen som er forbundet med sendemønstret som er bakgrunnen for den maksimale rapporterte verdien av <b>MI</b> . For <b>TI</b> , for kombinerte moduser som involverer sendemønstre av ulike senterfrekvenser, f <sub>c</sub> er definert som det samlede området av senterfrekvenser for de respektive sendemønstrene
<b>Dim. of A<sub>aprt</sub></b>	cm	Aktive apertur dimensjoner for de azimuthale og opphevede planene
<b>PD</b>	µs	Pulsvarighet assosiert med sendemønstret gir grunnlag for den rapporterte verdien av <b>MI</b>
<b>PRF</b>	Hz	Puls repetisjonsfrekvens assosiert med sendemønstret som gir grunnlag for den rapporterte verdien av <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Peak trykket ved det punkt hvor, romlig-peak pulshintensitet integralet er ved maksimum

Symboler	Enhet	Definisjon
$d_{eq} @ PII_{max}$	cm	Ekvivalent strålediameter ved det punktet hvor romlig-peak pulsintensitet integralet er ved maksimum
FL	cm	Fokal lengde, eller azimutale og høydelengder, er forskjellige
$I_{PA.3} @ MI_{max}$	W/cm <sup>2</sup>	Redusert puls gjennomsnitt intensitet ved punktet for maksimum MI
ROI	n/a	Interesseområde
TB	n/a	Trackball
CF	n/a	Fargedoppler modus
CM	n/a	Farge M Mode
PW/CW	n/a	Pulset/Kontinuerlig Doppler

符号	单位	定义
MI	不适用	机械指数
TIS <sub>scan</sub>	不适用	自动扫描模式下的软组织热敏指数
TIS <sub>non-scan</sub>	不适用	非自动扫描模式下的软组织热敏指数
TIB	不适用	骨组织热敏指数
TIC	不适用	头盖骨热敏指数
A <sub>aprt</sub>	cm <sup>2</sup>	有效孔径区
P <sub>r,3</sub>	MPa	与可以产生 MI 报告值的传送模式关联的减额最大稀薄压 (MPa)
W <sub>o</sub>	mW	超声功率, 除了在使用 TIS <sub>scan</sub> 的情况下, 此时, 它是指一厘米窗口内通过的超声功率
W <sub>3(z<sub>1</sub>)</sub>	mW	减额超声功率 (轴长 z <sub>1</sub> )
I <sub>TA,3(z<sub>1</sub>)</sub>	mW/cm <sup>2</sup>	减额空间峰值、时间平均强度 (轴长 z <sub>1</sub> )
z <sub>1</sub>	cm	与 max [min(W <sub>3(z)</sub> , I <sub>TA,3(z)</sub> x 1 cm <sup>2</sup> )] 位置相对应的轴长, 其中 z ≥ z <sub>bp</sub>
z <sub>bp</sub>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
d <sub>eq(z)</sub>	cm	等效波束直径, 轴长 z 的函数, 等于 [(4/π)(W <sub>o</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , 其中 I <sub>TA(z)</sub> 为时间平均强度, z 的函数
f <sub>c</sub>	MHz	中心频率 对于 MI, f <sub>c</sub> 为与可以产生 MI 最大报告值的传送模式关联的中心频率。 对于 TI, 用于包括不同中心频率传送模式的组合模式时, f <sub>c</sub> 定义为各个传送模式的所有中心频率
Dim. of A <sub>aprt</sub>	cm	用于水平面和垂直平面的有效孔径
PD	μs	与可以产生 MI 报告值的传送模式关联的脉冲持续时间
PRF	Hz	与可以产生 MI 报告值的传送模式关联的脉冲重复频率
P <sub>r @ PII<sub>max</sub></sub>	MPa	自由场、空间峰值脉冲强度积分最大处的峰值稀薄压
d <sub>eq @ PII<sub>max</sub></sub>	cm	自由场、空间峰值脉冲强度积分最大处的等效波束直径
FL	cm	焦距, 或者水平长度和垂直高度 (如果不同)
I <sub>PA,3 @ MI<sub>max</sub></sub>	W/cm <sup>2</sup>	MI 最大报告值处的减额脉冲平均强度
ROI	不适用	兴趣区
TB	不适用	轨迹球
CF	不适用	彩色模式
CM	不适用	彩色 M 模式
PW/CW	不适用	脉冲波 / 连续波多普勒

Symbolit	Laite	Kuvaus
<b>MI</b>	e/k	Mekaaninen indeksi
<b>TIS<sub>scan</sub></b>	e/k	Kudoksen lämpöindeksi automaattisessa skannaustilassa
<b>TIS<sub>non-scan</sub></b>	e/k	Kudoksen lämpöindeksi manuaalisessa skannaustilassa
<b>TIB</b>	e/k	Luun lämpöindeksi
<b>TIC</b>	e/k	Kalloluun lämpöindeksi
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Aktiivisen apertuurin alue
<b>P<sub>r,3</sub></b>	MPa	Alennettu huippuvaimenemisen paine (MPa), joka liittyy siirtotapaan ja nostaa kohdassa <b>MI</b> ilmoitettua arvoa.
<b>W<sub>o</sub></b>	mW	Ultraääniteho, lukuun ottamatta <b>TIS<sub>scan</sub></b> , jolloin se on yhden senttimetrin levyisen ikkunan kautta kulkeva ultraääniteho.
<b>W<sub>3(z<sub>1</sub>)</sub></b>	mW	Alennettu ultraääniteho aksiaalisella etäisyydellä z <sub>1</sub>
<b>I<sub>TA,3(z<sub>1</sub>)</sub></b>	mW/cm <sup>2</sup>	Alennettu spatiaalihiippu, väliaikainen tiheyskeskiarvo aksiaalisella etäisyydellä z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Maksimim sijaintia vastaava aksiaalinen etäisyys [minimi ( <b>W<sub>3(z)</sub></b> , <b>I<sub>TA,3(z)</sub></b> × 1 cm <sup>2</sup> )], jossa z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69( <b>A<sub>aprt</sub></b> ) <sup>1/2</sup>
<b>d<sub>eq(z)</sub></b>	cm	Vastaava säteen halkaisija aksiaalisen etäisyyden z toimintona, joka vastaa [(4/π)(W <sub>o</sub> /I <sub>TA(z)</sub> )] <sup>1/2</sup> , jossa I <sub>TA(z)</sub> on z:n toiminnon lämpökeskiarvon tiheys.
<b>f<sub>c</sub></b>	MHz	Keskustaajuus Kohdan <b>MI</b> , <b>f<sub>c</sub></b> keskustaajuus liittyy siirtotapaan ja nostaa kohdassa <b>MI</b> ilmoitettua maksimiarvoa. <b>TI</b> yhdistelmätiloille, jotka liittyvät erilaisten keskustaajuuksien siirtokuvioihin, <b>f<sub>c</sub></b> määritetään vastaavien keskuskuvioiden kokonaisalueena.
<b>Dim. of A<sub>aprt</sub></b>	cm	Aktiivisen apertuurin mitat atsimutaalisille ja kohotetuille tasoille.
<b>PD</b>	μs	Siirtokuvioon liittyvä pulssin kesto, joka nostaa kohdassa <b>MI</b> ilmoitettua arvoa.
<b>PRF</b>	Hz	Siirtokuvioon liittyvä pulssin toistotaajuus, joka nostaa kohdassa <b>MI</b> ilmoitettua arvoa.
<b>P<sub>r @ PII<sub>max</sub></sub></b>	MPa	Huippuohentumisen paine pisteessä, jossa vapaa-kenttä, spatiaalisen huippupulssin tiheyden integraali, on maksimiarvossa.
<b>d<sub>eq @ PII<sub>max</sub></sub></b>	cm	Vastaava säteen halkaisija pisteessä, jossa vapaa-kenttä, spatiaalisen huippupulssin tiheyden integraali, on maksimiarvossa.

Symbolit	Laite	Kuvaus
<b>FL</b>	cm	Tarkennuspituus tai atsimutaalinen ja kohotettu pituus (jos arvot eroavat).
<b>I<sub>PA,3</sub> @ MI<sub>max</sub></b>	W/cm <sup>2</sup>	Alennetun pulssikeskiarvon tiheys maksimipisteessä, joka ilmoitetaan kohdassa <b>MI</b>
<b>ROI</b>	e/k	Kiinnostusalueet
<b>TB</b>	e/k	Ohjauspallo
<b>CF</b>	e/k	Värvirtaustila
<b>CM</b>	e/k	Väriäinen M-tila
<b>PW/CW</b>	e/k	Pulssi-/jatkuva doppler

Symboler	Enhet	Definition
<b>MI</b>	n/a	Mekaniskt index
<b>TIS<sub>scan</sub></b>	n/a	Termiskt index för mjuk vävnad i automatiskt skanningsmode
<b>TIS<sub>non-scan</sub></b>	n/a	Termiskt index för mjuk vävnad i icke-automatiskt skanningsmode
<b>TIB</b>	n/a	Termiskt index för benvävnad
<b>TIC</b>	n/a	Termiskt index för kranialt
<b>A<sub>aprt</sub></b>	cm <sup>2</sup>	Område för aktiv bländare
<b>P<sub>r.3</sub></b>	MPa	Undervärderat topptryck (MPa) associerat med rörelsemönstret som resulterar i värdet som rapporteras under <b>MI</b>
<b>W<sub>0</sub></b>	mW	Ultraljudskraft med undantag för <b>TIS</b> -skanning då i vilket fall ultraljudskraften passerar genom ett en centimeter tjock fönster
<b>W<sub>3</sub>(z<sub>1</sub>)</b>	mW	Undervärderad ultraljudskraft vid axiell distans z <sub>1</sub>
<b>I<sub>TA.3</sub>(z<sub>1</sub>)</b>	mW/cm <sup>2</sup>	Undervärderad spatial topp, temporal genomsnittsinensitet via axiell distans z <sub>1</sub>
<b>z<sub>1</sub></b>	cm	Axiell distans korresponderande mot lokaliseringen av max [min(W <sub>3</sub> (z), I <sub>TA.3</sub> (z) x 1 cm <sup>2</sup> )], där z ≥ z <sub>bp</sub>
<b>z<sub>bp</sub></b>		1.69(A <sub>aprt</sub> ) <sup>1/2</sup>
<b>d<sub>eq</sub>(z)</b>	cm	Ekvivalent stråldiameter som en funktion av axiell distans z och är lika med [(4/π)(W <sub>0</sub> /I <sub>TA</sub> (z))] <sup>1/2</sup> , där I <sub>TA</sub> (z) är den temporala genomsnittsinensiteten som en funktion av z
<b>f<sub>c</sub></b>	MHz	Centrumfrekvens För <b>MI</b> , f <sub>c</sub> är centrumfrekvensen associerad med överföringsmönstret som ger upphov till det maximala rapportvärdet av <b>MI</b> . För <b>TI</b> , för kombinerade inställningar (mode) som involverar överföringsmönster av olika centrumfrekvens f <sub>c</sub> är definierad som genomsnittintervallet av centrumfrekvenser av respektive överförelsemönster
<b>Dim. of A<sub>aprt</sub></b>	cm	Aktiva bländardimensioner för azimutal- och lutande plan
<b>PD</b>	µs	Pulstryck associerat med överförelsemönstret som ger upphov till det rapporterade värdet i <b>MI</b>
<b>PRF</b>	Hz	Pulsrepetitionsfrekvens associerat med överförelsemönstret som ger upphov till det rapporterade värdet i <b>MI</b>
<b>P<sub>r</sub> @ PII<sub>max</sub></b>	MPa	Ovanligt topptryck när frifältet, spatiala toppvärdet för pulsintensitetens integral är på max
<b>d<sub>eq</sub> @ PII<sub>max</sub></b>	cm	Ekvivalent stråldiameter när frifältet, spatiala toppvärdet för pulsintensitetens integral är på max



Symboler	Enhet	Definition
<b>FL</b>	cm	Fokal längd eller azimuthal- och lutande längder är olika
<b>I<sub>PA,3</sub> @ MI<sub>max</sub></b>	W/cm <sup>2</sup>	Undervärderad pulsgenomsnittintensitet vid maximalt rapporterad <b>MI</b>
<b>ROI</b>	n/a	Studerat område
<b>TB</b>	n/a	Styrkula
<b>CF</b>	n/a	Färgflödesläge
<b>CM</b>	n/a	Färg-M-mode
<b>PW/CW</b>	n/a	Pulsed Wave (PW-)/Continuous Wave (CW)-doppler

3C Probe

Table 1-6: Transducer Model: 3C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.4	-	-	-	2.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		144.7	-		-	144.7
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.6	2.6	-	-	-	2.6
	Dim of $A_{aprt}$	X (cm)			1.4	-	-	-	1.4
Y (cm)			1.0	-	-	-	1.0		
Other Information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	2927.4					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			3.5	-	-		3.5
		FL <sub>Y</sub> (cm)			7.0	-	-		7.0
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	447.4					
Operating Control Conditions	Frequency (MHz)			T4.0	T4.0	-	-	-	T4.0
	Image Depth (cm)			24.0	10.0	-	-	-	10.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3C Probe (continued)

Table 1-7: Transducer Model: 3C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.4	-	<1	1.6	2.4
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		144.7	-		33.5	126.1
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.6	2.6	-	#	2.6	2.6
	Dim of $A_{aprt}$	X (cm)			1.4	-	#	1.4	1.4
Y (cm)			1.0	-	#	1.0	1.0		
Other information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	2927.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			3.5	-	#		3.5
		FL <sub>Y</sub> (cm)			7.0	-	#		7.0
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	448.9					
Operating Control Conditions	Frequency (MHz)			T4.0	T4.0	-	#	T4.0	T4.0
	Image Depth (cm)			24.0	10.0	-	#	24.0	24.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3C Probe (continued)

Table 1-8: Transducer Model: 3C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.4	1.1	-	3.2	2.5
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		144.7	90.3		90.3	152.8
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					3.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.6	2.6	2.5	-	2.6	2.6
	Dim of $A_{aprt}$	X (cm)			1.4	0.9	-	1.4	1.9
Y (cm)			1.0	1.0	-	1.0	1.0		
Other information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			3.5	2.2	-		4.8
		FL <sub>Y</sub> (cm)			7.0	7.0	-		3.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	447.7					
Operating Control Conditions	Frequency (MHz)			D2.5	D2.5	D2.5	-	D2.5	D2.5
	Image Depth (cm)			3.5	4.8	3.5	-	3.5	4.8
	Vel Scale (kHz)			1.80	4.90	1.1	-	1.07	4.90
	Penet			On	On	On	-	On	On
	ROI			60deg	5deg	-	-	-	5deg
	PS			14	14	16.0	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3C Probe (continued)

Table 1-9: Transducer Model Transducer Model: 3C Operating Mode: PWD-Mode  
(inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.4	1.1	-	3.2	2.2
Assoc Acoustic Paramete	IEC	FDA	Units						
	$p_{ra}$	$p_{r,3}$	(MPa)	2.5					
	$P$	$W_o$	(mW)		144.7	90.3		90.3	103.9
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{3(z1), I_{TA,3}(z1)})$ ]							-	
	$z_s$	$z_1$	(cm)					-	
	$z_{bp}$	$z_{bp}$	(cm)					-	
	$z_b$	$z_{sp}$	(cm)					2.6	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	2.6	2.6	2.5	-	2.5	2.5
Dim of $A_{aprt}$	X (cm)			1.4	0.9	-	0.9	0.9	
	Y (cm)			1.0	1.0	-	1.0	1.0	
Other information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	1796.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			3.5	2.2	-		2.2
		FL <sub>Y</sub> (cm)			7.0	7.0	-		7.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	447.4					
Operating Control Conditions	Frequency (MHz)			D2.5	T4.0	D2.5	-	D2.5	D2.5
	Image Depth (cm)			3.5	10.0	2.2	-	2.2	2.2
	Vel Scale (kHz)			0.64	-	1.23	-	1.23	1.23
	SV			3	-	6	-	6	6
	Penet			on	-	on	-	on	on

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5C Probe

Table 1-10: Transducer Model: 3.5C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	-	-	-	2.3
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		#	-		-	216.5
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA.3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.4	#	-	-	-	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	3.3
Y (cm)			#	-	-	-	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	2383.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		4.8
		FL <sub>Y</sub> (cm)			#	-	-		6.6
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	288.4					
Operating Control Conditions	Frequency (MHz)			T5.0	#	-	-	-	T4.0
	Image Depth (cm)			30.0	#	-	-	-	8.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5C Probe (continued)

Table 1-11: Transducer Model: 3.5C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	-	<1	1.0	2.0
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		#	-		34.8	186.2
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.6	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.6	
	$f_{awf}$	$f_c$	(MHz)	2.4	#	-	#	2.4	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.4	3.3
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	2383.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.6	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	288.4					
Operating Control Conditions	Frequency (MHz)			T5.0	#	-	#	T5.0	T5.0
	Image Depth (cm)			30.0	#	-	#	30.0	30.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5C Probe (continued)

Table 1-12: Transducer Model: 3.5C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	2.1	2.3
	IEC	FDA	Units						
Assoc Acoustic Paramete	$\rho_{ra}$	$\rho_{r,3}$	(MPa)	1.8					
	$P$	$W_o$	(mW)		#	-		31.5	214.2
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	5.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	3.1	#	-	#	3.1	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	3.3	3.3
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	635.2					
	$\rho_r$ at max. $I_{pi}$	$\rho_r@PII_{max}$	(MPa)	4.5					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	452.8					
Operating Control Conditions	Frequency (MHz)			D3.3	#	-	#	D3.3	D2.0
	Image Depth (cm)			4.8	#	-	#	4.8	4.8
	Vel Scale (kHz)			1.80	#	-	#	1.23	7.69
	Penet			Off	#	-	#	Off	On
	ROI			70deg	#	-	#	-	5deg
	PS			12	#	-	#	16	12

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



3.5C Probe (continued)

Table 1-13: Transducer Model: 3.5C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	2.1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		#	-		31.5	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.7	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	5.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	3.1	#	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.4	#
Y (cm)			#	-	#	1.3	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	1796.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.5					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	452.3					
Operating Control Conditions	Frequency (MHz)			D3.3	#	-	#	D2.0	#
	Image Depth (cm)			4.8	#	-	#	3.5	#
	Vel Scale (kHz)			0.64	-	-	#	1.23	#
	SV			1	-	-	#	4	#
	Penet			Off	-	-	#	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5C Probe (continued)

Table 1-14: Transducer Model: 3.5C Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	2.0	-	-	-	1.5
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		141.8	-		-	141.8
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.2	3.2	-	-	-	3.2
	Dim of $A_{aprt}$	X (cm)			3.3	-	-	-	3.3
Y (cm)			1.3	-	-	-	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	2383.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			4.8	-	-		4.8
		FL <sub>Y</sub> (cm)			6.6	-	-		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	337.0					
Operating Control Conditions	Frequency (MHz)			CHA 3.0	CHA 3.0	-	-	-	CHA 3.0
	Image Depth (cm)			30.0	8.0	-	-	-	8.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5C Probe (continued)

Table 1-15: Transducer Model: 3.5C Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	2.1	1.8
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.8					
	$P$	$W_o$	(mW)		#	-		31.5	162.4
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	2.7	#	-	#	2.0	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.4	2.5
Y (cm)			#	-	#	1.3	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.9					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>x</sub> (cm)			#	-	#		5.8
		FL <sub>y</sub> (cm)			#	-	#		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	173.6					
Operating Control Conditions	Frequency (MHz)			BF3.3	#	-	#	D2.0	T4.0
	Image Depth (cm)			25.0	#	-	#	3.5	8.0
	Vel Scale (kHz)			-	#	-	#	1.23	-
	SV			-	#	-	#	4	-
	Penet			-	#	-	#	On	-

3.5CS Probe

Table 1-16: Transducer Model: 3.5CS Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	-	-	2.6
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		#	-		-	189.1
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.5	#	-	-	-	2.0
Dim of $A_{aprt}$	X (cm)			#	-	-	-	2.0	
	Y (cm)			#	-	-	-	1.3	
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2290.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		4.8
		FL <sub>Y</sub> (cm)			#	-	-		6.6
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	144.6					
Operating Control Conditions	Frequency (MHz)			T5.0	#	-	-	-	T4.0
	Image Depth (cm)			30.0	#	-	-	-	8.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5CS Probe (continued)

Table 1-17: Transducer Model: 3.5CS Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	<1	<1	2.3
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		#	-		#	164.3
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z1), l_{TA.3}(z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	2.5	#	-	#	#	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	2.0
Y (cm)			#	-	#	#	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2290.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	144.6					
Operating Control Conditions	Frequency (MHz)			T5.0	#	-	#	#	T5.0
	Image Depth (cm)			30.0	#	-	#	#	30.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5CS Probe (continued)

Table 1-18: Transducer Model: 3.5CS Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	<1	1.6	1.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		#	-		50.1	119.6
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.6	
	$f_{awf}$	$f_c$	(MHz)	2.5	#	-	#	3.3	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.0	2.0
Y (cm)			#	-	#	1.3	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2290.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.6	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	144.6					
Operating Control Conditions	Frequency (MHz)			D3.3	#	-	#	D3.3	D2.0
	Image Depth (cm)			4.8	#	-	#	4.8	4.8
	Vel Scale (kHz)			1.80	#	-	#	1.23	7.69
	Penet			Off	#	-	#	Off	On
	ROI			70deg	#	-	#	-	5deg
	PS			12	#	-	#	16	12

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5CS Probe (continued)

Table 1-19: Transducer Model: 3.5CS Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	<1	1.6	1.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		#	-		50.1	84.8
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	2.5	#	-	#	2.0	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.4	1.4
Y (cm)			#	-	#	1.3	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2290.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.7	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	144.6					
Operating Control Conditions	Frequency (MHz)			D3.3	#	-	#	D2.0	D2.0
	Image Depth (cm)			4.8	#	-	#	3.5	3.5
	Vel Scale (kHz)			0.64	-	-	#	1.23	1.23
	SV			1	-	-	#	4	4
	Penet			Off	-	-	#	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3.5CS Probe (continued)

Table 1-20: Transducer Model: 3.5CS Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.3	-	-	-	2.4
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.2					
	$P$	$W_o$	(mW)		193.5	-		-	193.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.1	2.1	-	-	-	2.1
	Dim of $A_{aprt}$	X (cm)			2.5	-	-	-	2.5
Y (cm)			1.3	-	-	-	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	2288.9					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			5.1	-	-		5.1
		FL <sub>Y</sub> (cm)			6.6	-	-		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	288.3					
Operating Control Conditions	Frequency (MHz)			CHA 3.0	CHA 3.0	-	-	-	CHA 3.0
	Image Depth (cm)			30.0	6.0	-	-	-	6.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



3.5CS Probe (continued)

Table 1-21: Transducer Model: 3.5CS Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	1.6	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.8					
	$P$	$W_o$	(mW)		#	-		50.1	81.3
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	2.7	#	-	#	2.0	2.7
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.4	2.0
Y (cm)			#	-	#	1.3	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.9					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.7	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.5
		FL <sub>Y</sub> (cm)			#	-	#		6.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	282.4					
Operating Control Conditions	Frequency (MHz)			BF3.3	#	-	#	D2.0	BF3.3
	Image Depth (cm)			30.0	#	-	#	3.5	5.0
	Vel Scale (kHz)			-	#	-	#	1.23	-
	SV			-	#	-	#	4	-
	Penet			-	#	-	#	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

5C Probe

Table 1-22: Transducer Model: 5C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	1.2	-	-	-	1.6
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		76.9	-		-	76.9
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.5	3.5	-	-	-	3.5
	Dim of $A_{aprt}$	X (cm)			1.3	-	-	-	1.3
Y (cm)			0.9	-	-	-	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	2927.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			4.5	-	-		4.5
		FL <sub>Y</sub> (cm)			6.0	-	-		6.0
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	645.8					
Operating Control Conditions	Frequency (MHz)			4.0	4.0	-	-	-	4.0
	Image Depth (cm)			24.0	15.0	-	-	-	15.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

5C Probe (continued)

Table 1-23: Transducer Model: 5C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	1.2	<1	-	<1	1.4
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		76.0	#		#	66.7
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	3.5	3.5	#	-	#	3.5
	Dim of $A_{aprt}$	X (cm)			1.3	#	-	#	1.3
Y (cm)			0.9	#	-	#	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	2927.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			4.5	#	-		4.5
		FL <sub>Y</sub> (cm)			6.0	#	-		6.0
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	645.8					
Operating Control Conditions	Frequency (MHz)			4.0	4.0	#	-	#	4.0
	Image Depth (cm)			24.0	15.0	#	-	#	24.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

5C Probe (continued)

Table 1-24: Transducer Model: 5C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	1.2	-	<1	1.6	1.2
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		76.9	-		37.8	51.4
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.1	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.6	
	$f_{awf}$	$f_c$	(MHz)	3.9	3.5	-	#	3.9	4.0
	Dim of $A_{aprt}$	X (cm)			1.3	-	#	1.4	0.9
Y (cm)			0.9	-	#	0.9	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	635.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.6	
	Focal Length	FL <sub>X</sub> (cm)			4.5	-	#		2.1
		FL <sub>Y</sub> (cm)			6.0	-	#		6.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	460.1					
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	-	#	D4.0	D4.0
	Image Depth (cm)			3.3	2.1	-	#	3.3	2.1
	Vel Scale (kHz)			1.80	8.53	-	#	2.13	8.53
	Penet			On	On	-	#	On	On
	ROI			60deg	10deg	-	#	-	10deg
	PS			14	14	-	#	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

5C Probe (continued)

Table 1-25: Transducer Model: 5C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	1.2	-	<1	1.6	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		76.9	-		37.8	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	3.9	3.5	-	#	4.0	#
	Dim of $A_{aprt}$	X (cm)			1.3	-	#	4.0	#
Y (cm)			0.9	-	#	0.9	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	635.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			4.5	-	#		#
		FL <sub>Y</sub> (cm)			6.0	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	460.1					
Operating Control Conditions	Frequency (MHz)			D4.0	4.0	-	#	D4.0	#
	Image Depth (cm)			3.3	15.0	-	#	3.3	#
	Vel Scale (kHz)			0.64	-	-	#	0.68	#
	SV			1	-	-	#	3	#
	Penet			On	-	-	#	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

8C Probe

Table 1-26: Transducer Model: 8C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.2	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	5376.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	303.2					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	-	-	#
	Image Depth (cm)			12.0	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

8C Probe (continued)

Table 1-27: Transducer Model: 8C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.2	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	5376.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	303.2					
Operating Control Conditions	Frequency (MHz)			T8.0	#	#	-	#	#
	Image Depth (cm)			12.0	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

8C Probe (continued)

Table 1-28: Transducer Model: 8C Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	<1	-	1.5	< 1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.1					
	$P$	$W_o$	(mW)		#	#		26.7	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	4.7	#	#	-	4.9	2.0
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	2.5
Y (cm)			#	#	-	0.5	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	399.2					
Operating Control Conditions	Frequency (MHz)			BF6.0	-	#	-	D5.0	-
	Image Depth (cm)			2.4	-	#	-	2.4	-
	Vel Scale (kHz)			-	-	#	-	1.23	-
	SV			-	-	#	-	2	-
	Penet			-	-	#	-	Off	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



8C Probe (continued)

Table 1-29: Transducer Model: 8C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	<1	-	1.5	1.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.1					
	$P$	$W_o$	(mW)		#	#		26.7	32.2
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.9	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	4.7	#	#	-	4.7	4.7
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	0.6
Y (cm)			#	#	-	0.5	0.5		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$p_{rr}$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		2.4
		FL <sub>Y</sub> (cm)			#	#	-		2.7
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	399.2					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	D5.0
	Image Depth (cm)			2.4	#	#	-	2.4	2.4
	Vel Scale (kHz)			0.64	#	#	-	1.92	3.84
	Penet			Off	#	#	-	Off	Off
	ROI			130deg	#	#	-	-	5deg
	PS			14	#	#	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

8C Probe (continued)

Table 1-30: Transducer Model: 8C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	<1	-	1.5	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.1					
	$P$	$W_o$	(mW)		#	#		26.7	28.1
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	4.7	#	#	-	4.9	4.9
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	0.6
Y (cm)			#	#	-	0.5	0.5		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		2.4
		FL <sub>Y</sub> (cm)			#	#	-		2.7
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	399.2					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	D5.0
	Image Depth (cm)			2.4	#	#	-	2.4	2.4
	Vel Scale (kHz)			0.64	-	#	-	1.23	1.23
	SV			1	-	#	-	2	2
	Penet			Off	-	#	-	Off	Off

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

E8C Probe

Table 1-31: Transducer Model: E8C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.1	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	469.8					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	-	-	#
	Image Depth (cm)			12.0	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

E8C Probe (continued)

Table 1-32: Transducer Model: E8C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.1	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	469.8					
Operating Control Conditions	Frequency (MHz)			T8.0	#	#	-	#	#
	Image Depth (cm)			12.0	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

E8C Probe (continued)

Table 1-33: Transducer Model: E8C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	<1	-	2.4	1.6
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		#	#		32.0	40.4
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	4.1	#	#	-	4.8	4.8
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	0.6
Y (cm)			#	#	-	0.5	0.5		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		2.4
		FL <sub>Y</sub> (cm)			#	#	-		2.7
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	469.8					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	D5.0
	Image Depth (cm)			2.4	#	#	-	2.4	2.4
	Vel Scale (kHz)			0.64	#	#	-	1.92	3.84
	Penet			Off	#	#	-	Off	Off
	ROI			130deg	#	#	-	-	5deg
	PS			14	#	#	-	16	14

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

E8C Probe (continued)

Table 1-34: Transducer Model: E8C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	<1	-	2.4	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		#	#		32.0	34.1
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.8	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.1	#	#	-	5.0	5.0
	Dim of $A_{aprt}$	X (cm)			#	#	-	1.3	1.3
Y (cm)			#	#	-	0.5	0.5		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		2.4
		FL <sub>Y</sub> (cm)			#	#	-		2.7
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	469.8					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	D5.0
	Image Depth (cm)			2.4	#	#	-	2.4	2.4
	Vel Scale (kHz)			0.64	-	#	-	1.23	1.23
	SV			1	-	#	-	2	2
	Penet			Off	-	#	-	Off	Off

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

E8C Probe (continued)

Table 1-35: Transducer Model: E8C Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.0	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	1.9					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.4	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.3					
	$p_{rr}$	PRF	(Hz)	3859.5					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	170.2					
Operating Control Conditions	Frequency (MHz)			CHA7.5	#	-	-	-	#
	Image Depth (cm)			3.3	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

**BE9C Probe**

Table Addendum-2: Transducer Model: BE9C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	<1	-	1.6	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.8					
	$P$	$W_o$	(mW)		#	#		18.0	#
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	#	-	4.9	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	1.1	#
Y (cm)			#	#	-	0.5	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	396.7					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	#
	Image Depth (cm)			1.5	#	#	-	1.5	#
	Vel Scale (kHz)			0.30	#	#	-	2.82	#
	Penet			On	#	#	-	On	#
	ROI			Max	#	#	-	-	#
	PS			8	#	#	-	16	#

**NOTE:**

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - This probe is not intended for transcranial or neonatal cephalic uses.
  - This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



BE9C Probe (continued)

Addendum 3: Transducer Model: BE9C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	<1	-	1.6	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.8					
	$P$	$W_o$	(mW)		#	#		18.0	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	#	-	5.0	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	#
Y (cm)			#	#	-	0.5	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	396.7					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	#
	Image Depth (cm)			2.2	#	#	-	2.2	#
	Vel Scale (kHz)			0.70	-	#	-	0.70	#
	SV			1	-	#	-	5	#
	Penet			On	-	#	-	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M7C Probe

Table 1-1: Transducer Model: M7C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.6	-	-	-	2.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		116.6	-		-	116.6
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA,3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.3	3.5	-	-	-	3.5
	Dim of $A_{aprt}$	X (cm)			1.4	-	-	-	1.4
Y (cm)			0.9	-	-	-	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	3012.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			2.2	-	-		2.2
		FL <sub>Y</sub> (cm)			11.5	-	-		11.5
	$l_{pa,a}$ at max. $MI$	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	472.6					
Operating Control Conditions	Frequency (MHz)			6.0	CE6.0	-	-	-	CE 6.0
	Image Depth (cm)			24.0	9.0	-	-	-	9.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M7C Probe (continued)

Table 1-2: Transducer Model: M7C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	1.3	1.0
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		#	-		20.3	75.9
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					2.2	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	3.3	#	-	#	3.3	3.4
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.4	3.1
Y (cm)			#	-	#	0.9	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	3012.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		11.5
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	472.6					
Operating Control Conditions	Frequency (MHz)			6.0	#	-	#	6.0	6.0
	Image Depth (cm)			24.0	#	-	#	24.0	24.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M7C Probe (continued)

Table 1-3: Transducer Model: M7C Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.1	-	<1	2.2	1.2
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		78.9	-		54.2	78.9
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	3.7	3.9	-	#	3.9	3.9
	Dim of $A_{aprt}$	X (cm)			2.3	-	#	2.3	2.3
Y (cm)			0.9	-	#	0.9	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			3.5	-	#		3.5
		FL <sub>Y</sub> (cm)			11.5	-	#		11.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	1425.0					
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	-	#	D4.0	D4.0
	Image Depth (cm)			3.5	3.5	-	#	3.5	3.5
	Vel Scale (kHz)			1.80	7.69	-	#	1.23	7.69
	Penet			On	On	-	#	On	On
	ROI			60deg	5deg	-	#	-	5deg
	PS			12	12	-	#	16	12

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M7C Probe (continued)

Table 1-4: Transducer Model: M7C Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.1	-	<1	2.2	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		78.9	-		54.2	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, l_{TA,3}(z_1))$ )]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	3.7	3.9	-	#	4.0	#
	Dim of $A_{aprt}$	X (cm)			2.3	-	#	2.3	#
Y (cm)			0.9	-	#	0.9	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			3.5	-	#		#
		FL <sub>Y</sub> (cm)			11.5	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	1425.0					
Operating Control Conditions	Frequency (MHz)			D4.0	6.0	-	#	D4.0	#
	Image Depth (cm)			3.5	8.0	-	#	3.5	#
	Vel Scale (kHz)			0.64	-	-	#	0.70	#
	SV			1	-	-	#	3	#
	Penet			On	-	-	#	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3CRF Probe

Table 1-5: Transducer Model: 3CRE Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.1	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	4.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2385.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	177.2					
Operating Control Conditions	Frequency (MHz)			CHI4.5	#	-	-	-	#
	Image Depth (cm)			4.5	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3CRF Probe (continued)

Table 1-6: Transducer Model: 3CRF Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.1	<1	-	<1	<1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		#	-		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA,3}(z_1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	4.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	#	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	#
Y (cm)			#	-	#	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2385.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$l_{pa,a}$ at max. $MI$	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	177.2					
Operating Control Conditions	Frequency (MHz)			CHI4.5	#	-	#	#	#
	Image Depth (cm)			4.5	#	-	#	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3CRF Probe (continued)

Table 1-7: Transducer Model: 3CRF Operating Mode: Pulsed Doppler (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	<1	2.1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$\rho_{ra}$	$\rho_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		40.7	#
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), t_{TA,3}(z_1)$ )]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.7	#	-	#	2.1	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.6	#
Y (cm)			#	-	#	1.2	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.9					
	$prf$	PRF	(Hz)	1300.0					
	$\rho_r$ at max. $I_{pi}$	$\rho_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	258.4					
Operating Control Conditions	Frequency (MHz)			D2.0	#	-	#	D2.0	#
	Image Depth (cm)			4.5	#	-	#	4.8	#
	Vel Scale (kHz)			0.60	-	-	#	0.80	#
	SV			3	-	-	#	6	#
	Penet			On	-	-	#	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



3CRF Probe (continued)

Table 1-8: Transducer Model: 3CRF Operating Mode: Color Flow (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	<1	2.1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		#	-		40.7	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1))$ )]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.2	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.1	#	-	#	2.1	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.6	#
Y (cm)			#	-	#	1.2	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.9					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	413.9					
Operating Control Conditions	Frequency (MHz)			D2.0	#	-	#	D2.0	#
	Image Depth (cm)			4.5	#	-	#	4.5	#
	Vel Scale (kHz)			0.80	#	-	#	1.62	#
	Penet			On	#	-	#	On	#
	ROI			Max	#	-	#	-	#
	PS			10	#	-	#	16	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3CRF Probe (continued)

Table 1-9: Transducer Model: 3CRF Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	<1	2.1	1.0
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		40.7	64.6
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, l_{TA,3}(z_1)))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.7	#	-	#	2.1	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.6	1.6
Y (cm)			#	-	#	1.2	1.2		
Other information	$t_d$	PD	( $\mu$ sec)	1.9					
	$prr$	PRF	(Hz)	1300.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		7.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	258.4					
Operating Control Conditions	Frequency (MHz)			BFC3.3	#	-	#	D2.0	BFC3.3
	Image Depth (cm)			4.8	#	-	#	4.8	4.8
	Vel Scale (kHz)			-	-	-	#	0.80	-
	SV			-	-	-	#	6	-
	Penet			-	-	-	#	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3CRF Probe (continued)

Table 1-10: Transducer Model: 3CRF Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.1					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.1	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.9					
	$prr$	PRF	(Hz)	2216.8					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.0					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	$FL_x$ (cm)			#	-	-		#
		$FL_y$ (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	232.7					
Operating Control Conditions	Frequency (MHz)			CHA4.0	-	-	-	-	-
	Image Depth (cm)			4.5	-	-	-	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7L Probe

Table 1-11: Transducer Model: 7L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	-		<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.5	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	4717.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	902.5					
Operating Control Conditions	Frequency (MHz)			T6.0	#	-	-	-	#
	Image Depth (cm)			14.0	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7L Probe (continued)

Table 1-12: Transducer Model: 7L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), l_{TA.3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	3.5	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	4717.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	( $W/cm^2$ )	902.5						
Operating Control Conditions	Frequency (MHz)			T6.0	#	#	-	#	#
	Image Depth (cm)			14.0	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7L Probe (continued)

Table 1-13: Transducer Model: 7L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.1	<1	-	2.2	2.1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		58.3	#		38.1	58.3
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	3.5	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			0.6	#	-	0.6	0.6
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	4717.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	$FL_x$ (cm)			2.2	#	-		2.2
		$FL_y$ (cm)			3.0	#	-		3.0
$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	902.5						
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	#	-	D4.0	D4.0
	Image Depth (cm)			2.2	2.2	#	-	2.2	2.2
	Vel Scale (kHz)			1.80	7.69	#	-	1.80	7.69
	Penet			On	On	#	-	On	On
	ROI			40mm	5mm	#	-	-	5mm
	PS			14	14	#	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7L Probe (continued)

Table 1-14: Transducer Model: 7L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.3	<1	-	2.2	1.2
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		44.3	#		38.1	39.7
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.5	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			1.9	#	-	0.8	0.8
Y (cm)			0.6	#	-	0.6	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	4717.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			3.2	#	-		3.0
		FL <sub>Y</sub> (cm)			3.0	#	-		3.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	902.5					
Operating Control Conditions	Frequency (MHz)			BF4.0	BF4.0	#	-	D4.0	#
	Image Depth (cm)			14.0	4.0	#	-	3.0	#
	Vel Scale (kHz)			-	-	#	-	1.60	-
	SV			-	-	#	-	2	-
	Penet			-	-	#	-	On	-

7L Probe (continued)

Table 1-15: Transducer Model: 7L Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.5	-	-	-	1.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		82.4	-		-	82.4
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{3(z1), I_{TA,3}(z1)})$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.9	3.9	-	-	-	3.9
	Dim of $A_{aprt}$	X (cm)			1.9	-	-	-	1.9
Y (cm)			0.6	-	-	-	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	4721.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			3.6	-	-		3.6
		FL <sub>Y</sub> (cm)			3.0	-	-		3.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	486.6					
Operating Control Conditions	Frequency (MHz)			CHA 4.0	CHA 4.0	-	-	-	CHA 4.0
	Image Depth (cm)			14.0	3.6	-	-	-	3.6



7L Probe (continued)

Table 1-16: Transducer Model: 7L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.3	<1	-	2.2	1.5
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		44.3	#		38.1	43.2
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	3.5	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			1.9	#	-	0.8	0.8
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	4717,0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$ (cm)			3.2	#	-		3.0
		$FL_y$ (cm)			3.0	#	-		3.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	902.5					
Operating Control Conditions	Frequency (MHz)			D4.0	BF4.0	#	-	D4.0	D4.0
	Image Depth (cm)			3.0	4.0	#	-	3.0	3.0
	Vel Scale (kHz)			0.64	-	#	-	2	2
	SV			1	-	#	-	2	2
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

9L Probe

Table 1-17: Transducer Model: 9L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	-	-		<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.9					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.3	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	4721.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	515.0					
Operating Control Conditions	Frequency (MHz)			CH18.0	#	-	-	-	#
	Image Depth (cm)			2.4	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

9L Probe (continued)

Table 1-18: Transducer Model: 9L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.9					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), l_{TA.3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.3	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	4721.4					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	$FL_x$ (cm)			#	#	-		#
		$FL_y$ (cm)			#	#	-		#
$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	( $W/cm^2$ )	515.0						
Operating Control Conditions	Frequency (MHz)			CHI8.0	#	#	-	#	#
	Image Depth (cm)			2.4	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

9L Probe (continued)

Table 1-19: Transducer Model: 9L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.1	<1	-	2.3	1.7
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		56.1	#		44.6	56.1
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), I_{TA,3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	3.8	4.0	#	-	3.8	4.0
	Dim of $A_{aprt}$	X (cm)			0.8	#	-	1.1	0.8
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$ (cm)			3.0	#	-		3.0
		$FL_y$ (cm)			2.1	#	-		2.1
	$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	572.8					
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	#	-	D4.0	D4.0
	Image Depth (cm)			3.4	3.0	#	-	3.4	3.0
	Vel Scale (kHz)			0.30	5.30	#	-	1.07	5.30
	Penet			On	On	#	-	On	On
	ROI			Max	Min	#	-	-	Min
	PS			12	12	#	-	16	12

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

9L Probe (continued)

Table 1-20: Transducer Model: 9L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.3	<1	-	2.3	1.9
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		68.5	#		44.6	68.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1))$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					3.1	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	4.8	4.0	#	-	3.8	4.0
	Dim of $A_{aprt}$	X (cm)			1.1	#	-	1.2	1.1
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.6					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>x</sub> (cm)			3.2	#	-		3.2
		FL <sub>y</sub> (cm)			2.1	#	-		2.1
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	902.5					
Operating Control Conditions	Frequency (MHz)			BFC4.0	BF4.0	#	-	D4.0	BF4.0
	Image Depth (cm)			3.0	3.2	#	-	4.2	3.2
	Vel Scale (kHz)			-	-	#	-	2.10	-
	SV			-	-	#	-	1	-
	Penet			-	-	#	-	On	-

9L Probe (continued)

Table 1-21: Transducer Model: 9L Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.1					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{3(z1), I_{TA,3}(z1)})$ ]							-	
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.0	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	500.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	537.9					
Operating Control Conditions	Frequency (MHz)			TAD 6M	-	-	-	-	-
	Image Depth (cm)			3.0	-	-	-	-	-

9L Probe (continued)

Table 1-22: Transducer Model: 9L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.3	<1	-	2.3	1.4
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.1					
	$P$	$W_o$	(mW)		68.5	#		44.6	50.6
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z1), I_{TA,3}(z1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					3.1	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	3.8	4.0	#	-	3.8	3.8
	Dim of $A_{aprt}$	X	(cm)		1.1	#	-	1.2	1.2
Y		(cm)		0.6	#	-	0.6	0.6	
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	$FL_x$	(cm)		3.2	#	-		4.2
		$FL_y$	(cm)		2.1	#	-		2.1
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	572.3					
Operating Control Conditions	Frequency (MHz)			D5.0	B5.0	#	-	D4.0	D4.0
	Image Depth (cm)			3.0	5.6	#	-	4.2	4.2
	Vel Scale (kHz)			0.80	-	#	-	2.10	2.10
	SV			1	-	#	-	1	1
	Penet			Off	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10L Probe

Table 1-23: Transducer Model: 10L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	2.2
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		#	-		-	115.1
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.5	#	-	-	-	4.6
Dim of $A_{aprt}$	X (cm)			#	-	-	-	2.2	
	Y (cm)			#	-	-	-	0.6	
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	6807.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		2.2
		FL <sub>Y</sub> (cm)			#	-	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	1357.2					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	-	-	T8.0
	Image Depth (cm)			10.0	#	-	-	-	4.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



10L Probe (continued)

Table 1-24: Transducer Model: 10L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	<1	2.1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.8					
	$P$	$W_o$	(mW)		#	-		#	108.0
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.5	#	-	#	#	4.6
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	2.2
Y (cm)			#	-	#	#	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	5.3					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		2.2
		FL <sub>Y</sub> (cm)			#	-	#		2.5
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	1370.9					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	#	#	T8.0
	Image Depth (cm)			10.0	#	-	#	#	10.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10L Probe (continued)

Table 1-25: Transducer Model: 10L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	5.0	<1	-	2.3	4.4
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.9					
	$P$	$W_o$	(mW)		172.0	#		32.5	172.0
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), I_{TA,3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.9	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.8	
	$f_{awf}$	$f_c$	(MHz)	4.9	5.1	#	-	4.9	5.1
	Dim of $A_{aprt}$	X (cm)			1.2	#	-	0.9	1.2
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.8	
	Focal Length	$FL_x$ (cm)			3.0	#	-		3.0
		$FL_y$ (cm)			2.5	#	-		2.5
$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	1183.5						
Operating Control Conditions	Frequency (MHz)			D5.0	D5.0	#	-	D5.0	D5.0
	Image Depth (cm)			1.4	0.6	#	-	1.4	0.6
	Vel Scale (kHz)			1.80	19.61	#	-	1.80	19.61
	Penet			On	On	#	-	On	On
	ROI (mm)			24.9	5	#	-	-	5
	PS			14	14	#	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10L Probe (continued)

Table 1-26: Transducer Model: 10L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	5.0	<1	-	2.3	1.8
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.9					
	$P$	$W_o$	(mW)		172.0	#		32.5	67.3
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.9	5.1	#	-	5.0	5.1
	Dim of $A_{aprt}$	X (cm)			1.2	#	-	0.9	1.2
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$ (cm)			3.0	#	-		3.0
		$FL_y$ (cm)			2.5	#	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	1183.5					
Operating Control Conditions	Frequency (MHz)			D5.0	T8.0	#	-	D5.0	D5.0
	Image Depth (cm)			2.8	4.0	#	-	2.8	2.8
	Vel Scale (kHz)			0.64	-	#	-	2.60	2.60
	SV			1	-	#	-	3	3
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10L Probe (continued)

Table 1-27: Transducer Model: 10L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	2.2	<1	-	2.3	4.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		207.2	#		32.5	207.2
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	3.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.5	4.5	#	-	5.0	4.5
	Dim of $A_{aprt}$	X (cm)			1.9	#	-	0.9	1.9
Y (cm)			0.6	#	-	0.6	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	1.2					
	$prr$	PRF	(Hz)	4717.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.5					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			3.8	#	-		3.8
		FL <sub>Y</sub> (cm)			2.5	#	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	722.1					
Operating Control Conditions	Frequency (MHz)			BF6.0	BF6.0	#	-	D5.0	BF6.0
	Image Depth (cm)			14.0	14.0	#	-	2.8	14.0
	Vel Scale (kHz)			-	-	#	-	2.60	-
	SV			-	-	#	-	3	-
	Penet			-	-	#	-	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10L Probe (continued)

Table 1-28: Transducer Model: 10L Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	3.3	-	-	-	2.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		132.3	-		-	132.3
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{3(z1), I_{TA,3}(z1)})$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.9	4.2	-	-	-	4.2
	Dim of $A_{aprt}$	X (cm)			2.6	-	-	-	2.6
Y (cm)			0.6	-	-	-	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	4755.1					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.9					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			2.6	-	-		2.6
		FL <sub>Y</sub> (cm)			2.5	-	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	548.1					
Operating Control Conditions	Frequency (MHz)			CHA 8.0	CHA 8.0	-	-	-	CHA 8.0
	Image Depth (cm)			14.0	2.6	-	-	-	2.6

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

11L Probe

Table 1-29: Transducer Model: 11L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				<1	<1	-	-	1.2	
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	#					
	$P$	$W_o$	(mW)		#	-		-	41.0
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	#					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	#	#	-	-	-	5.0
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	1.6
Y (cm)			#	-	-	-	0.4		
Other information	$t_d$	PD	( $\mu$ sec)	#					
	$p_{rr}$	PRF	(Hz)	#					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	#					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		5.4
		FL <sub>Y</sub> (cm)			#	-	-		2.3
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	#					
Operating Control Conditions	Frequency (MHz)			#	#	-	-	-	T12.0
	Image Depth (cm)			#	#	-	-	-	5.4

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

11L Probe (continued)

Table 1-30: Transducer Model: 11L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				<1	<1	<1	-	<1	1.1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	#					
	$P$	$W_o$	(mW)		#	#		#	38.4
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	#					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	#	#	#	-	#	5.0
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	1.6
Y (cm)			#	#	-	#	0.4		
Other information	$t_d$	PD	( $\mu$ sec)	#					
	$p_{rr}$	PRF	(Hz)	#					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	#					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		5.4
		FL <sub>Y</sub> (cm)			#	#	-		2.3
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	#					
Operating Control Conditions	Frequency (MHz)			#	#	#	-	#	T10.0
	Image Depth (cm)			#	#	#	-	#	2.2

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

11L Probe (continued)

Table 1-31: Transducer Model: 11L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	1.5	<1	-	3.0	2.3
Assoc Acoustic Paramete	IEC	FDA	Units						
	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		62.2	#		32.1	62.2
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA,3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					1.0	
	$f_{awf}$	$f_c$	(MHz)	5.0	5.0	#	-	5.0	5.0
Dim of $A_{aprt}$	X (cm)			0.9	#	-	1.2	0.9	
	Y (cm)			0.4	#	-	0.4	0.4	
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					1.0	
	Focal Length	FL <sub>X</sub> (cm)			1.8	#	-		1.8
		FL <sub>Y</sub> (cm)			2.3	#	-		2.3
$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	501.7						
Operating Control Conditions	Frequency (MHz)			D5.0	D5.0	#	-	D5.0	D5.0
	Image Depth (cm)			2.4	1.8	#	-	2.4	1.8
	Vel Scale (kHz)			0.30	0.70	#	-	1.62	0.70
	Penet			On	On	#	-	On	On
	ROI			Max	Zoom Min	#	-	-	Zoom Min
	PS			8	8	#	-	16	8

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



11L Probe (continued)

Table 1-32: Transducer Model: 11L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	4.0	<1	-	3.0	1.4
Assoc Acoustic Paramete	IEC	FDA	Units						
	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		84.9	#		32.1	39.6
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.1	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	5.0	5.3	#	-	5.0	5.0
Dim of $A_{aprt}$	X	(cm)		8.8	#	-	0.9	0.9	
	Y	(cm)		4.0	#	-	0.4	0.4	
Other Information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	4752.9					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.0					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	$FL_x$	(cm)		2.2	#	-		2.8
		$FL_y$	(cm)		2.3	#	-		2.3
$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	473.5						
Operating Control Conditions	Frequency (MHz)			D6.7	D5.0	#	-	D5.0	D5.0
	Image Depth (cm)			2.2	2.8	#	-	2.8	2.8
	Vel Scale (kHz)			0.87	0.66	#	-	0.66	0.66
	SV			1	3.00	#	-	3	3
	Penet			Off	On	#	-	On	On
	PS			-	-	#	-	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

11L Probe (continued)

Table 1-33: Transducer Model: 11L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC	
					scan	non-scan		non-scan		
						Aaprt<	Aaprt>1			
<b>Global Maximum: Index Value</b>				1.5	4.0	<1	-	3.0	<1	
Assoc Acoustic Paramete	IEC	FDA	Units							
	$p_{ra}$	$p_{r,3}$	(MPa)	3.2						
	$P$	$W_o$	(mW)		84.9	#		32.1	#	
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z1), I_{TA,3}(z1))$ ]							-		
	$z_s$	$z_1$	(cm)					-		
	$z_{bp}$	$z_{bp}$	(cm)					-		
	$z_b$	$z_{sp}$	(cm)					2.1		
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.8						
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4		
	$f_{awf}$	$f_c$	(MHz)	5.0	5.3	#	-	5.0	#	
Dim of $A_{aprt}$	X (cm)			8.8	#	-	0.9	#		
	Y (cm)			4.0	#	-	0.4	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.1						
	$prr$	PRF	(Hz)	4752.9						
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.0						
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4		
	Focal Length	FL <sub>X</sub> (cm)			2.2	#	-		#	
		FL <sub>Y</sub> (cm)			2.3	#	-		#	
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	473.5						
Operating Control Conditions	Frequency (MHz)			BF6.0 M	BFC6.7 M	#	-	D5.0	-	
	Image Depth (cm)			2.2	2.2	#	-	2.8	-	
	Vel Scale (kHz)			-	5.4	#	-	0.66	#	
	SV			-	-	#	-	3		
	Penet			-	On	#	-	On	#	

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.  
# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

i12L Probe

Table 1-34: Transducer Model: i12L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	2.2	-	-	-	1.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		74.8	-		-	74.8
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	6.3	6.3	-	-	-	6.3
	Dim of $A_{aprt}$	X (cm)			1.4	-	-	-	1.4
Y (cm)			0.7	-	-	-	0.7		
Other Information	$t_d$	PD	( $\mu$ sec)	0.2					
	$prr$	PRF	(Hz)	6257.8					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			1.4	-	-		1.4
		FL <sub>Y</sub> (cm)			1.3	-	-		1.3
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	579.4					
Operating Control Conditions	Frequency (MHz)			6.0	6.0	-	-	-	6.0
	Image Depth (cm)			10.0	4.0	-	-	-	4.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

i12L Probe (continued)

Table 1-35: Transducer Model: i12L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	2.2	<1	-	<1	1.6
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.2					
	$P$	$W_o$	(mW)		74.8	#		#	69.8
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	6.3	6.3	#	-	#	6.3
	Dim of $A_{aprt}$	X (cm)			1.4	#	-	#	1.4
Y (cm)			0.7	#	-	#	0.2		
Other Information	$t_d$	PD	( $\mu$ sec)	0.2					
	$prr$	PRF	(Hz)	6257.8					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			1.4	#	-		1.4
		FL <sub>Y</sub> (cm)			1.3	#	-		1.3
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	579.4					
Operating Control Conditions	Frequency (MHz)			6.0	6.0	#	-	#	6.0
	Image Depth (cm)			10.0	4.0	#	-	#	10.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

i12L Probe (continued)

Table 1-36: Transducer Model: i12L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	2.2	1.4	-	2.5	2.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		74.8	56.7		56.7	56.2
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.2	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	6.5	6.3	6.5	-	6.5	6.8
	Dim of $A_{aprt}$	X (cm)			1.4	0.6	-	0.6	0.3
Y (cm)			0.7	0.7	-	0.7	0.7		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			1.4	1.4	-		0.6
		FL <sub>Y</sub> (cm)			1.3	1.3	-		1.3
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	1252.9					
Operating Control Conditions	Frequency (MHz)			D6.6	D6.6	D6.6	-	D6.6	D6.6
	Image Depth (cm)			1.4	0.6	1.4	-	1.4	0.6
	Vel Scale (kHz)			1.80	19.61	1.86	-	1.86	19.61
	Penet			On	On	On	-	On	On
	ROI (mm)			24.9	5	-	-	-	5
	PS			14	14	16	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

i12L Probe (continued)

Table 1-37: Transducer Model: i12L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	2.2	1.4	-	2.5	1.9
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		74.8	56.7		56.7	56.6
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.9	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	6.5	6.3	5.3	-	5.3	5.3
	Dim of $A_{aprt}$	X (cm)			1.4	0.9	-	0.9	0.9
Y (cm)			0.7	0.7	-	0.7	0.7		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	1796.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			1.4	2.3	-		2.2
		FL <sub>Y</sub> (cm)			1.3	1.3	-		1.3
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	1252.2					
Operating Control Conditions	Frequency (MHz)			D6.6	6.0	D5.0	-	D5.0	D5.0
	Image Depth (cm)			1.4	4.0	2.2	-	2.2	2.2
	Vel Scale (kHz)			0.64	-	6.25	-	6.25	6.25
	SV			1	-	1	-	1	1
	Penet			On	-	On	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M12L Probe

Table 1-38: Transducer Model: M12L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	-	-	-	1.9
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.7					
	$P$	$W_o$	(mW)		#	-		-	24.3
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA.3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	0.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	6.4	#	-	-	-	5.3
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	0.6
Y (cm)			#	-	-	-	0.2		
Other Information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	6131.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.3					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		0.8
		FL <sub>Y</sub> (cm)			#	-	-		1.5
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	476.4					
Operating Control Conditions	Frequency (MHz)			T10.0	#	-	-	-	T10.0
	Image Depth (cm)			10.0	#	-	-	-	4.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M12L Probe (continued)

Table 1-39: Transducer Model: M12L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	<1	-	<1	1.7
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.7					
	$P$	$W_o$	(mW)		#	#		#	22.6
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	0.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	6.4	#	#	-	#	5.3
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	0.6
Y (cm)			#	#	-	#	2.2		
Other Information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	6131.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		0.8
		FL <sub>Y</sub> (cm)			#	#	-		1.5
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	476.4					
Operating Control Conditions	Frequency (MHz)			T10.0	#	#	-	#	T10.0
	Image Depth (cm)			10.0	#	#	-	#	10.0

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



M12L Probe (continued)

Table 1-40: Transducer Model: M12L Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	2.1	<1	-	1.6	5.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.7					
	$P$	$W_o$	(mW)		69.5	#		16.5	69.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), I_{TA,3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					0.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	0.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	6.4	6.5	#	-	5.1	6.5
	Dim of $A_{aprt}$	X (cm)			0.6	#	-	0.6	0.6
Y (cm)			0.2	#	-	0.2	0.2		
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	6131.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	$FL_x$ (cm)			0.8	#	-		0.8
		$FL_y$ (cm)			1.5	#	-		1.5
	$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	476.4					
Operating Control Conditions	Frequency (MHz)			D5.0	D6.6	#	-	D5.0	D6.6
	Image Depth (cm)			0.8	0.8	#	-	0.8	0.8
	Vel Scale (kHz)			1.80	19.61	#	-	19.61	0.8
	Penet			On	Off	#	-	On	Off
	ROI (mm)			10	10	#	-	-	10
	PS			10	12	#	-	16	12

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M12L Probe (continued)

Table 1-41: Transducer Model: M12L Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	2.9	<1	-	1.6	2.3
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		92.1	#		16.5	29.7
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	5.0	6.5	#	-	5.0	6.5
	Dim of $A_{aprt}$	X (cm)			1.8	#	-	0.5	0.6
Y (cm)			0.6	#	-	0.2	0.2		
Other information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	6192.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	$FL_x$ (cm)			2.4	#	-		0.8
		$FL_y$ (cm)			2.1	#	-		1.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	370.3					
Operating Control Conditions	Frequency (MHz)			D5.0	BF6.0	#	-	D5.0	D5.0
	Image Depth (cm)			1.8	3.0	#	-	1.8	1.8
	Vel Scale (kHz)			0.70	-	#	-	3.90	3.90
	SV			1	-	#	-	2	2
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M12L Probe (continued)

Table 1-42: Transducer Model: M12L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	2.9	<1	-	1.6	2.0
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		92.1	#		16.5	92.1
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.5					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	5.0	6.5	#	-	5.0	6.5
	Dim of $A_{aprt}$	X (cm)			1.8	#	-	0.5	1.8
Y (cm)			0.6	#	-	0.2	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	6192.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			2.4	#	-		2.4
		FL <sub>Y</sub> (cm)			2.1	#	-		2.1
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	370.3					
Operating Control Conditions	Frequency (MHz)			BF6.0	BF6.0	#	-	D5.0	BF6.0
	Image Depth (cm)			10.0	3.0	#	-	1.8	3.0
	Vel Scale (kHz)			-	-	#	-	3.90	-
	SV			-	-	#	-	2	-
	Penet			-	-	#	-	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

T739 Probe

Table 1-43: Transducer Model: T739 Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	1.2
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		#	-		-	60.3
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.5	#	-	-	-	4.5
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	2.2
Y (cm)			#	-	-	-	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	6317.1					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.5					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		2.2
		FL <sub>Y</sub> (cm)			#	-	-		2.5
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	554.6					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	-	-	T8.0
	Image Depth (cm)			10.0	#	-	-	-	2.2

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

T739 Probe (continued)

Table 1-44: Transducer Model: T739 Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	<1	<1	1.1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		#	-		#	56.6
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA,3}(z_1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.5	#	-	#	#	4.5
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	2.2
Y (cm)			#	-	#	#	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	6317.1					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.5					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		2.2
		FL <sub>Y</sub> (cm)			#	-	#		2.5
	$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	554.6					
Operating Control Conditions	Frequency (MHz)			T8.0	#	-	#	#	T8.0
	Image Depth (cm)			10.0	#	-	#	#	10.0

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

T739 Probe (continued)

Table 1-45: Transducer Model: T739 Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	2.1	<1	-	1.8	2.4
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.9					
	$P$	$W_o$	(mW)		91.9	#		25.0	91.9
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), l_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.9	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.8	
	$f_{awf}$	$f_c$	(MHz)	4.9	4.9	#	-	4.9	4.9
	Dim of $A_{aprt}$	X (cm)			1.2	#	-	0.9	1.2
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	700.3					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	5.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.8	
	Focal Length	FL <sub>X</sub> (cm)			3.0	#	-		3.0
		FL <sub>Y</sub> (cm)			2.5	#	-		2.5
	$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	518.7					
Operating Control Conditions	Frequency (MHz)			D5.0	D5.0	#	-	D5.0	D5.0
	Image Depth (cm)			2.2	3.8	#	-	2.2	3.8
	Vel Scale (kHz)			1.70	1.50	#	-	1.80	1.50
	Penet			On	On	#	-	On	On
	ROI (mm)			24.9	5	#	-	-	5
	PS			14	14	#	-	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

T739 Probe (continued)

Table 1-46: Transducer Model: T739 Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	2.2	<1	-	1.8	1.1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.9					
	$P$	$W_o$	(mW)		98.7	#		25.0	41.7
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, l_{TA,3}(z_1))$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.9	4.5	#	-	5.0	4.9
	Dim of $A_{aprt}$	X (cm)			2.6	#	-	0.9	1.2
Y (cm)			0.6	#	-	0.6	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	700.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			3.8	#	-		3.0
		FL <sub>Y</sub> (cm)			2.5	#	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	518.7					
Operating Control Conditions	Frequency (MHz)			D5.0	BF6.0	#	-	D5.0	D5.0
	Image Depth (cm)			2.8	2.2	#	-	2.8	2.8
	Vel Scale (kHz)			0.70	-	#	-	2.60	2.60
	SV			1	-	#	-	3	3
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

T739 Probe (continued)

Table 1-47: Transducer Model: T739 Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	2.2	<1	-	1.8	1.8
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.9					
	$P$	$W_o$	(mW)		98.7	#		25.0	98.7
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z1), l_{TA,3}(z1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.9	4.5	#	-	5.0	4.5
	Dim of $A_{aprt}$	X (cm)			2.6	#	-	0.9	2.6
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	700.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			3.8	#	-		3.8
		FL <sub>Y</sub> (cm)			2.5	#	-		2.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	518.7					
Operating Control Conditions	Frequency (MHz)			D5.0	BF6.0	#	-	D5.0	BF6.0
	Image Depth (cm)			2.8	3.8	#	-	2.8	3.8
	Vel Scale (kHz)			0.70	-	-	-	2.60	-
	SV			1	-	-	-	3	-
	Penet			On	-	-	-	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



3S Probe

Table 1-48: Transducer Model: 3S Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	-	-	-	1.3
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.0					
	$P$	$W_o$	(mW)		#	-		-	89.9
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	-	-	1.8
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	1.8
Y (cm)			#	-	-	-	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	2383.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		4.8
		FL <sub>Y</sub> (cm)			#	-	-		8.0
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	146.4					
Operating Control Conditions	Frequency (MHz)			T3.0	#	-	-	-	T3.0
	Image Depth (cm)			30.0	#	-	-	-	30.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3S Probe (continued)

Table 1-49: Transducer Model: 3S Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	-	<1	<1	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.0					
	$P$	$W_o$	(mW)		#	-		#	77.7
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	3.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	#	1.8
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	1.8
Y (cm)			#	-	#	#	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.1					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		8.0
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	146.4					
Operating Control Conditions	Frequency (MHz)			T3.0	#	-	#	#	T3.0
	Image Depth (cm)			30.0	#	-	#	#	30.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3S Probe (continued)

Table 1-50: Transducer Model: 3S Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	4.3	1.7
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		#	-		107.5	105.0
	min of [ $P_a(z_s, t_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), t_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					1.1	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	2.0	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	0.9	1.4
Y (cm)			#	-	#	1.3	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.4					
	$p_{rr}$	PRF	(Hz)	1796.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					1.1	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		3.5
		FL <sub>Y</sub> (cm)			#	-	#		8.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	382.5					
Operating Control Conditions	Frequency (MHz)			D2.0	#	-	#	D2.0	D2.0
	Image Depth (cm)			2.2	#	-	#	2.2	3.5
	Vel Scale (kHz)			1.80	#	-	#	1.07	4.73
	Penet			Off	#	-	#	Off	Off
	ROI			60deg	#	-	#	-	10deg
	PS			14	#	-	#	16	14

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3S Probe (continued)

Table 1-51: Transducer Model: 3S Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	2.1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		#	-		44.9	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.8	#
Y (cm)			#	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.4					
	$prr$	PRF	(Hz)	1796.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	382.5					
Operating Control Conditions	Frequency (MHz)			D2.0	#	-	#	D2.0	#
	Image Depth (cm)			2.2	#	-	#	4.8	#
	Vel Scale (kHz)			0.64	-	-	#	0.64	#
	SV			3	-	-	#	4	#
	Penet			Off	-	-	#	Off	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3S Probe (continued)

Table 1-52: Transducer Model: 3S Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	1.2
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.0					
	$P$	$W_o$	(mW)		#	-		-	84.6
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	1.6	#	-	-	-	1.6
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	1.7
Y (cm)			#	-	-	-	1.3		
Other Information	$t_d$	PD	( $\mu$ sec)	1.4					
	$prr$	PRF	(Hz)	0.3					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		5.8
		FL <sub>Y</sub> (cm)			#	-	-		8.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	186.4					
Operating Control Conditions	Frequency (MHz)			TAD 1.53	-	-	-	-	PI3.0
	Image Depth (cm)			30.0	-	-	-	-	30.0
	Vel Scale (kHz)			0.3	-	-	-	-	-
	ROI			90deg	-	-	-	-	-
	SV			4	-	-	-	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

3S Probe (continued)

Table 1-53: Transducer Model: 3S Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	4.3	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.4					
	$P$	$W_o$	(mW)		#	-		107.5	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					1.1	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	0.9	#
Y (cm)			#	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.4					
	$prr$	PRF	(Hz)	1796.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					1.1	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	582.8					
Operating Control Conditions	Frequency (MHz)			T3.6	#	-	#	CW2.0	#
	Image Depth (cm)			30.0	#	-	#	3.5	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7S Probe

Table 1-54: Transducer Model: 7S Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	-	-		1.0
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	#		#	42.4
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.9	#	-	-	-	4.0
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	1.3
Y (cm)			#	-	-	-	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	3377.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		3.0
		FL <sub>Y</sub> (cm)			#	-	-		3.5
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	364.1					
Operating Control Conditions	Frequency (MHz)			4.0	#	-	-	-	4.0
	Image Depth (cm)			20.0	#	-	-	-	4.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7S Probe (continued)

Table 1-55: Transducer Model: 7S Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.3	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), l_{TA.3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.6					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	3.9	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	3377.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	( $W/cm^2$ )	364.1					
Operating Control Conditions	Frequency (MHz)			4.0	#	#	-	#	#
	Image Depth (cm)			20.0	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



7S Probe (continued)

Table 1-56: Transducer Model: 7S Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.5	<1	-	2.3	1.8
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		75.5	#		29.4	75.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), I_{TA,3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.9	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.0	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			1.4	#	-	1.4	1.4
Y (cm)			0.6	#	-	0.6	0.6		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$ (cm)			3.0	#	-		3.0
		$FL_y$ (cm)			3.5	#	-		3.5
	$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	475.3					
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	#	-	D4.0	D4.0
	Image Depth (cm)			2.7	3.0	#	-	2.7	3.0
	Vel Scale (kHz)			0.30	8.50	#	-	1.80	8.50
	Penet			On	On	#	-	On	On
	ROI			90deg	10deg	#	-	-	10deg
	PS			8	8	#	-	16	8

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7S Probe (continued)

Table 1-57: Transducer Model: 7S Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.5	<1	-	1.9	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		75.5	#		29.4	41.0
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.9	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.0	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X	(cm)		1.4	#	-	1.4	1.0
Y		(cm)		0.6	#	-	0.6	0.6	
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$	(cm)		3.0	#	-		3.0
		$FL_y$	(cm)		3.5	#	-		3.5
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	475.3					
Operating Control Conditions	Frequency (MHz)			D4.0	0.0	#	-	D4.0	D4.0
	Image Depth (cm)			3.0	0.0	#	-	3.0	3.0
	Vel Scale (kHz)			0.64	-	#	-	1.60	1.60
	SV			1	-	#	-	4	4
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

7S Probe (continued)

Table 1-58: Transducer Model: 7S Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.5	1.5	<1	-	2.3	1.5
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		75.5	#		38.7	47.9
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.6	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.0	4.0	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			1.4	#	-	0.6	0.6
Y (cm)			0.6	#	-	0.6	0.6		
Other Information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			3.0	#	-		3.9
		FL <sub>Y</sub> (cm)			3.5	#	-		35.0
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	424.5					
Operating Control Conditions	Frequency (MHz)			4.0	D4.0	#	-	CW4.0	CW4.0
	Image Depth (cm)			20.0	3.0	#	-	3.9	3.9

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10S Probe

Table 1-59: Transducer Model: 10S Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	-	-	1.2
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	-		-	33.3
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	-	-	-	4.7
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	0.9
Y (cm)			#	-	-	-	0.4		
Other Information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		2.2
		FL <sub>Y</sub> (cm)			#	-	-		2.8
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	582.8					
Operating Control Conditions	Frequency (MHz)			8.0	#	-	-	-	8.0
	Image Depth (cm)			12.0	#	-	-	-	12.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10S Probe (continued)

Table 1-60: Transducer Model: 10S Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	<1	-	<1	1.0
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		#	28.6
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), l_{TA.3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	#	-	#	4.7
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	0.9
Y (cm)			#	#	-	#	0.4		
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	$FL_x$ (cm)			#	#	-		2.2
		$FL_y$ (cm)			#	#	-		2.8
$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	( $W/cm^2$ )	582.8						
Operating Control Conditions	Frequency (MHz)			8.0	#	#	-	#	8.0
	Image Depth (cm)			12.0	#	#	-	#	12.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10S Probe (continued)

Table 1-61: Transducer Model: 10S Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	<1	-	1.7	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		23.3	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.7	#	#	-	5.0	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.3	#
Y (cm)			#	#	-	0.4	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	$FL_x$ (cm)			#	#	-		#
		$FL_y$ (cm)			#	#	-		#
	$I_{pa,a}$ at max. $MI$	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	582.8					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	#
	Image Depth (cm)			2.2	#	#	-	2.2	#
	Vel Scale (kHz)			1.80	#	#	-	1.41	#
	Penet			On	#	#	-	On	#
	ROI			60deg	#	#	-	-	#
	PS			14	#	#	-	16	#

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10S Probe (continued)

Table 1-62: Transducer Model: 10S Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	#	-	#	#
	Dim of $A_{aprt}$	X	(cm)		#	#	-	#	#
Y		(cm)		#	#	-	#	#	
Other information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	$FL_x$	(cm)		#	#	-		#
		$FL_y$	(cm)		#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	582.8					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	#	#
	Image Depth (cm)			2.2	#	#	-	#	#
	Vel Scale (kHz)			0.64	-	#	-	#	#
	SV			1	-	#	-	#	#
	Penet			On	-	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

10S Probe (continued)

Table 1-63: Transducer Model: 10S Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	<1	-	1.7	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameters	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		23.3	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	4.9	#	#	-	5.0	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.3	#
Y (cm)			#	#	-	0.4	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.3					
	$prr$	PRF	(Hz)	5379.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	582.8					
Operating Control Conditions	Frequency (MHz)			8.0	#	#	-	CW5.0	#
	Image Depth (cm)			12.0	#	#	-	2.8	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



6T Probe

Table 1-64: Transducer Model: 6T Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	1.2	-	-	-	1.2
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		47.4	-		-	47.7
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	3.4	3.4	-	-	-	3.4
	Dim of $A_{aprt}$	X (cm)			0.8	-	-	-	0.8
Y (cm)			0.9	-	-	-	0.9		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	3470.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			3.9	-	-		3.9
		FL <sub>Y</sub> (cm)			5.6	-	-		5.6
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	398.1					
Operating Control Conditions	Frequency (MHz)			T6.0	T6.0	-	-	-	T6.0
	Image Depth (cm)			20.0	20.0	-	-	-	20.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

6T Probe (continued)

Table 1-65: Transducer Model: 6T Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.2	<1	-	<1	1.1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.0					
	$P$	$W_o$	(mW)		47.7	-		-	42.0
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [( $W_{.3}(z_1), l_{TA.3}(z_1)$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	3.4	3.4	#	-	#	3.4
	Dim of $A_{aprt}$	X (cm)			0.8	#	-	#	0.8
Y (cm)			0.9	#	-	#	0.9		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.6					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	$FL_x$ (cm)			3.9	#	-		3.9
		$FL_y$ (cm)			5.6	#	-		5.6
$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	( $W/cm^2$ )	490.3						
Operating Control Conditions	Frequency (MHz)			T6.0	T6.0	#	-	#	T6.0
	Image Depth (cm)			20.0	20.0	#	-	#	20.0

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

6T Probe (continued)

Table 1-66: Transducer Model: 6T Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC	
					scan	non-scan		non-scan		
						Aaprt<	Aaprt>1			
<b>Global Maximum: Index Value</b>				1.7	1.2	1.1	-	4.5	1.2	
	IEC	FDA	Units							
Assoc Acoustic Paramete	$\rho_{ra}$	$\rho_{r,3}$	(MPa)	3.4						
	$P$	$W_o$	(mW)		47.7	58.3		58.3	45.2	
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]							-		
	$z_s$	$z_1$	(cm)					-		
	$z_{bp}$	$z_{bp}$	(cm)					-		
	$z_b$	$z_{sp}$	(cm)					1.2		
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.0						
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.8		
	$f_{awf}$	$f_c$	(MHz)	3.9	3.4	4.0		-	4.0	3.4
	Dim of $A_{aprt}$	X (cm)			0.8	0.4		-	0.4	0.8
Y (cm)			0.9	0.9		-	0.9	0.9		
Other Information	$t_d$	PD	( $\mu$ sec)	0.7						
	$prr$	PRF	(Hz)	1000.0						
	$\rho_r$ at max. $I_{pi}$	$\rho_r@PII_{max}$	(MPa)	3.9						
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.8		
	Focal Length	FL <sub>X</sub> (cm)			3.9	1.4		-		3.9
		FL <sub>Y</sub> (cm)			5.6	5.6		-		5.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	460.8						
Operating Control Conditions	Frequency (MHz)			D4.0	D4.0	D4.0		-	D4.0	D4.0
	Image Depth (cm)			2.2	1.7	2.2		-	2.2	1.7
	Vel Scale (kHz)			1.90	5.30	2.13		-	2.13	5.30
	Penet			On	On	On		-	On	On
	ROI			Max	Min	-		-	-	Min
	PS			8	8	16		-	16	8

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

6T Probe (continued)

Table 1-67: Transducer Model: 6T Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.2	<1	-	2.8	1.1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.4					
	$P$	$W_o$	(mW)		47.7	#		42.7	44.0
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z1), I_{TA,3}(z1))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	3.9	3.4	#	-	4.0	4.0
	Dim of $A_{aprt}$	X (cm)			0.8	#	-	0.8	0.8
Y (cm)			0.9	#	-	0.9	0.9		
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	1000.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	$FL_x$ (cm)			3.9	#	-		1.7
		$FL_y$ (cm)			5.6	#	-		5.6
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	460.8					
Operating Control Conditions	Frequency (MHz)			D4.0	T6.0	#	-	D4.0	D4.0
	Image Depth (cm)			1.1	20.0	#	-	1.7	1.7
	Vel Scale (kHz)			1.00	-	#	-	2.10	2.10
	SV			1	-	#	-	2	2
	Penet			On	-	#	-	On	On

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

6T Probe (continued)

Table 1-68: Transducer Model: 6T Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	1.2	1.1	-	4.5	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	3.3					
	$P$	$W_o$	(mW)		47.7	58.3		58.3	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1))$ )]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.2	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.4					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.8	
	$f_{awf}$	$f_c$	(MHz)	3.9	3.4	4.0	-	4.0	#
	Dim of $A_{aprt}$	X (cm)			0.8	0.4	-	0.4	#
Y (cm)			0.9	0.9	-	0.9	#		
Other Information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	1860.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.8	
	Focal Length	FL <sub>X</sub> (cm)			3.9	1.4	-		#
		FL <sub>Y</sub> (cm)			5.6	5.6	-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	533.3					
Operating Control Conditions	Frequency (MHz)			D4.0	T6.0	CW4.0	-	CW4.0	#
	Image Depth (cm)			2.2	20.0	1.4	-	1.4	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe

Table 1-69: Transducer Model: M3S Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA.3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2350.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	268.2					
Operating Control Conditions	Frequency (MHz)			T4.0	#	-	-	-	#
	Image Depth (cm)			19.0	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.  
 # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe (continued)

Table 1-70: Transducer Model: M3S Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	<1	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		#	-		#	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	#	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	#
Y (cm)			#	-	#	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. $MI$	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	268.2					
Operating Control Conditions	Frequency (MHz)			T4.0	#	-	#	#	#
	Image Depth (cm)			19.0	#	-	#	#	#

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.  
# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe (continued)

Table 1-71: Transducer Model: M3S Operating Mode: CF-Mode (inch.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	3.9	1.5
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		86.0	94.7
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{.3}(z_1), I_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	5.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	2.0	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.1	2.2
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		5.8
		FL <sub>Y</sub> (cm)			#	-	#		5.8
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	374.3					
Operating Control Conditions	Frequency (MHz)			D2.0	#	-	#	D2.0	D2.0
	Image Depth (cm)			5.8	#	-	#	5.8	5.8
	Vel Scale (kHz)			2.29	#	-	#	1.41	4.13
	Penet			On	#	-	#	On	On
	ROI			90deg	#	-	#	-	10deg
	PS			10	#	-	#	16	10

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



M3S Probe (continued)

Table 1-72: Transducer Model: M3S Operating Mode: PWD-Mode (inch.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	3.3	1.5
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		94.7	94.7
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), I_{TA,3}(z_1))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.1	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	5.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	2.5	2.5
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.5	1.5
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		6.1
		FL <sub>Y</sub> (cm)			#	-	#		5.8
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	374.3					
Operating Control Conditions	Frequency (MHz)			D2.5	#	-	#	D2.5	D2.5
	Image Depth (cm)			7.4	#	-	#	6.1	6.1
	Vel Scale (kHz)			0.64	-	-	#	1.00	1.00
	SV			1	-	-	#	6	6
	Penet			Off	-	-	#	Off	Off

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe (continued)

Table 1-73: Transducer Model: M3S Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	1.5
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		#	-		-	90.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.0	#	-	-	-	1.9
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	1.4
Y (cm)			#	-	-	-	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.7					
	$prr$	PRF	(Hz)	2350.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.0					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		4.5
		FL <sub>Y</sub> (cm)			#	-	-		5.8
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	392.9					
Operating Control Conditions	Frequency (MHz)			CHA 2.0	-	-	-	-	CHA 2.0
	Image Depth (cm)			30.0	-	-	-	-	14.0

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe (continued)

Table 1-74: Transducer Model: M3S Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.7	<1	-	<1	3.9	<1
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.3					
	$P$	$W_o$	(mW)		#	-		86.0	#
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1, I_{TA,3}(z_1)))$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					3.5	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	1.9	#	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.1	#
Y (cm)			#	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2350.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.4					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	268.2					
Operating Control Conditions	Frequency (MHz)			T4.0	#	-	#	CW2.0	#
	Image Depth (cm)			19.0	#	-	#	5.4	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

M3S Probe (continued)

Table 1-75: Transducer Model: M3S Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	<1	<1	1.2
	IEC	FDA	Units						
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	-		#	72.5
	min of [ $P_a(z_s, I_{ta,a}(z_s))$ ] [ $(W_{3(z1), I_{TA,3}(z1)})$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)						
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.8				#	
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	2.7	#	-	#	#	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	1.4
Y (cm)			#	-	#	#	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	1.8					
	$prr$	PRF	(Hz)	2289.9					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.3					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	$FL_x$ (cm)			#	-	#		3.5
		$FL_y$ (cm)			#	-	#		5.8
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	( $W/cm^2$ )	222.4					
Operating Control Conditions	Frequency (MHz)			BF3.3	-	-	#	-	BFC 2.0
	Image Depth (cm)			25.6	-	-	#	-	35.2
	Vel Scale (kHz)			-	-	-	#	-	-
	SV			-	-	-	#	-	-
	Penet			-	-	-	#	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
  - b. This probe is not intended for transcranial or neonatal cephalic uses.
  - c. This formulation for TIS is less than that for an alternate formulation in this mode.
- # No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

P2D Probe

Table 1-76: Transducer Model: P2D Operating Mode: CWD-Mode

Index Label				MI	TIS			TIB	TIC	
					scan	non-scan		non-scan		
						Aaprt<	Aaprt>1			
<b>Global Maximum: Index Value</b>				<1	<1	<1	-	2.2	<1	
	IEC	FDA	Units							
Assoc Acoustic Paramete	$p_{ra}$	$p_{r,3}$	(MPa)	#						
	$P$	$W_o$	(mW)		#	#		53.5	#	
	min of [ $P_a(z_s, l_{ta,a}(z_s))$ ] [ $(W_{,3}(z_1), l_{TA,3}(z_1))$ ]							-		
	$z_s$	$z_1$	(cm)					-		
	$z_{bp}$	$z_{bp}$	(cm)					-		
	$z_b$	$z_{sp}$	(cm)					2.9		
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	#						
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.9		
	$f_{awf}$	$f_c$	(MHz)	#	#	#		-	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	#		-	-	#
Y (cm)			#	#		-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	#						
	$prr$	PRF	(Hz)	#						
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	#						
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4		
	Focal Length	FL <sub>X</sub> (cm)			#	#		-		#
		FL <sub>Y</sub> (cm)			#	#		-		#
	$I_{pa,a}$ at max. MI	$I_{PA,3}@MI_{max}$	(W/cm <sup>2</sup> )	#						
Operating Control Conditions	Frequency (MHz)			#	#	#		-	CW2.0	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4C Probe

Table 1-77: Transducer Model: 4C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	340.7					
Operating Control Conditions	Frequency (MHz)			T4.5	#	-	-	-	#
	Image Depth (cm)			30.0	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4C Probe (continued)

Table 1-78: Transducer Model: 4C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	<1	-	<1	<1	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	4.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	#	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	#	#
Y (cm)			#	-	#	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	340.8					
Operating Control Conditions	Frequency (MHz)			T4.5	#	-	#	#	#
	Image Depth (cm)			30.0	#	-	#	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4C Probe (continued)

Table 1-79: Transducer Model: 4C Operating Mode: Color Flow (inc.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	<1	-	<1	2.5	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		86.6	86.6
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					4.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	2.0	2.0
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.9	1.9
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	800.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		4.8
		FL <sub>Y</sub> (cm)			#	-	#		8.3
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	340.8					
Operating Control Conditions	Frequency (MHz)			T4.5	#	-	#	D2.0	D2.0
	Image Depth (cm)			30.0	#	-	#	4.8	7.4
	Vel Scale (kHz)			-	#	-	#	1.23	3.60
	Penet			-	#	-	#	On	On
	ROI			-	#	-	#	-	5deg
	PS			-	#	-	#	16	12

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



4C Probe (continued)

Table 1-80: Transducer Model: 4C Operating Mode: Pulsed Doppler (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	<1	-	<1	2.5	1.1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		86.6	86.6
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.2	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	4.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	2.9	2.9
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.5	2.5
Y (cm)			#	-	#	1.3	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		5.1
		FL <sub>Y</sub> (cm)			#	-	#		8.3
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	340.7					
Operating Control Conditions	Frequency (MHz)			T4.5	#	-	#	D3.3	D3.3
	Image Depth (cm)			30.0	#	-	#	5.1	5.1
	Vel Scale (kHz)			-	-	-	#	3.50	3.50
	SV			-	-	-	#	1	1
	Penet			-	-	-	#	Off	Off

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4C Probe (continued)

Table 1-81: Transducer Model: 4C Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	<1	-	<1	2.5	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		86.6	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.2	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	4.8					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.5	
	$f_{awf}$	$f_c$	(MHz)	2.3	#	-	#	2.9	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	2.5	#
Y (cm)			#	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.8					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.7					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.5	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	340.7					
Operating Control Conditions	Frequency (MHz)			T4.5	#	-	#	D3.3	#
	Image Depth (cm)			30.0	#	-	#	5.1	#
	Vel Scale (kHz)			-	#	-	#	3.50	#
	SV			-	#	-	#	1	#
	Penet			-	#	-	#	Off	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4C Probe (continued)

Table 1-82: Transducer Model: 4C Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.6					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	4.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.0	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	0.3					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.9					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	682.4					
Operating Control Conditions	Frequency (MHz)			TAD2.0	#	-	-	-	#
	Image Depth (cm)			5.4	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

12L Probe

Table 1-83: Transducer Model: 12L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.1	-	-	-	1.4
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.8					
	$P$	$W_o$	(mW)		43.0	-		-	43.0
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	5.3	5.3	-	-	-	5.3
	Dim of $A_{aprt}$	X (cm)			1.4	-	-	-	1.4
Y (cm)			0.3	-	-	-	0.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	4755.1					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			1.2	-	-		1.2
		FL <sub>Y</sub> (cm)			1.2	-	-		1.2
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	503.6					
Operating Control Conditions	Frequency (MHz)			T9.0	T9.0	-	-	-	T9.0
	Image Depth (cm)			1.2	1.2	-	-	-	1.2

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

12L Probe (continued)

Table 1-84: Transducer Model: 12L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.1	<1	-	<1	1.3
	IEC	FDA	Units						
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.8					
	$P$	$W_o$	(mW)		43.0	#		#	40.3
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	5.3	5.3	#	-	#	5.3
	Dim of $A_{aprt}$	X (cm)			1.4	#	-	#	1.4
Y (cm)			0.3	#	-	#	0.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$p_{rr}$	PRF	(Hz)	800.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			1.2	#	-		1.2
		FL <sub>Y</sub> (cm)			1.2	#	-		1.2
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$		(W/cm <sup>2</sup> )	503.7				
Operating Control Conditions	Frequency (MHz)			T9.0	T9.0	#	-	#	T9.0
	Image Depth (cm)			1.2	1.2	#	-	#	1.2

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

12L Probe (continued)

Table 1-85: Transducer Model: 12L Operating Mode: Color Flow (inc.M-mode)

Index Label				MI	TIS			TIB	TIC	
					scan	non-scan		non-scan		
						Aaprt<	Aaprt>1			
<b>Global Maximum: Index Value</b>				1.8	2.2	<1	-	2.2	3.0	
	IEC	FDA	Units							
Assoc. Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	4.5						
	$P$	$W_o$	(mW)		74.0	#		23.8	74.0	
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]							-		
	$z_s$	$z_1$	(cm)					-		
	$z_{bp}$	$z_{bp}$	(cm)					-		
	$z_b$	$z_{sp}$	(cm)					1.0		
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.0						
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)						0.5	
	$f_{awf}$	$f_c$	(MHz)	6.5	6.4	#	#	6.5	6.4	
	Dim of $A_{aprt}$	X (cm)				0.9	#	#	0.6	0.9
Y (cm)				0.3	#	#	0.3	0.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4						
	$prr$	PRF	(Hz)	300.0						
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	5.1						
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2		
	Focal Length	FL <sub>X</sub> (cm)				1.8	#	-		1.8
		FL <sub>Y</sub> (cm)				1.2	#	-		1.2
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$ (W/cm <sup>2</sup> )			620.5					
Operating Control Conditions	Frequency (MHz)			D6.7	D6.7	#	-	D6.7	D6.7	
	Image Depth (cm)			1.2	1.8	#	-	1.2	1.8	
	Vel Scale (kHz)			0.30	10.20	#	-	1.86	10.20	
	Penet			Off	Off	#	-	Off	Off	
	ROI (mm)			70	10	#	-	-	10	
	PS			12	12	#	-	16	12	

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

12L Probe (continued)

Table 1-86: Transducer Model: 12L Operating Mode: Pulsed Doppler (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.8	2.2	<1	-	2.2	1.6
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	4.5					
	$P$	$W_o$	(mW)		75.0	#		23.8	36.3
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.4	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	6.5	6.4	#	-	6.5	6.5
	Dim of $A_{aprt}$	X (cm)			0.9	#	-	0.7	0.7
Y (cm)			0.3	#	-	0.3	0.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	5.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			1.8	-	#		2.0
		FL <sub>Y</sub> (cm)			1.2	-	#		1.2
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	620.5					
Operating Control Conditions	Frequency (MHz)			D6.7	D6.7	#	#	D6.7	D6.7
	Image Depth (cm)			1.2	1.8	#	#	2.0	2.0
	Vel Scale (kHz)			0.90	10.20	#	#	5.30	5.30
	SV			1	-	#	#	1	1
	Penet			Off	Off	#	#	Off	Off
	PS			-	12	#	-	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

12L Probe (continued)

Table 1-87: Transducer Model: 12L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	1.9	<1	-	2.2	1.9
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.8					
	$P$	$W_o$	(mW)		46.8	#		23.8	46.8
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA.3}(z_1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.4	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	5.3	6.7	#	-	6.5	6.7
	Dim of $A_{aprt}$	X (cm)			0.9	#	-	0.7	0.9
Y (cm)			0.3	#	-	0.3	0.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$p_{rr}$	PRF	(Hz)	4755.1					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.8					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	$FL_X$ (cm)			1.6	#	-		1.6
		$FL_Y$ (cm)			1.2	#	-		1.2
	$l_{pa,a}$ at max. $MI$	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	503.6					
Operating Control Conditions	Frequency (MHz)			BF6.0	BF6.0	#	-	D6.7	BF6.0
	Image Depth (cm)			1.2	1.6	#	-	2.0	1.6
	Vel Scale (kHz)			-	#	#	-	5.30	-
	SV			-	#	#	-	1	-
	Penet			-	#	#	-	Off	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



4D10L Probe

Table-2: Transducer Model: 4D10L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA,3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	5.4	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.2					
	$prr$	PRF	(Hz)	4679.5					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.6					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. MI	$l_{PA,3}@MI_{max}$		(W/cm <sup>2</sup> )	225.4				
Operating Control Conditions	Frequency (MHz)			6.0	#	-	-	-	#
	Image Depth (cm)			1.8	#	-	-	-	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D10L Probe (continued)

Table-3: Transducer Model: 4D10L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.7					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.7					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	5.4	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.2					
	$prr$	PRF	(Hz)	4679.5					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.6					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	225.4					
Operating Control Conditions	Frequency (MHz)			6.0	#	#	-	#	#
	Image Depth (cm)			1.8	#	#	-	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D10L Probe (continued)

Table-4: Transducer Model: 4D10L Operating Mode: Color Flow (inc.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	<1	-	1.9	1.3
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		#	#		24.7	28.4
	min of [ $P_a(z_s, t_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.2	
	$f_{awf}$	$f_c$	(MHz)	5.0	#	#	-	5.0	5.0
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.9	0.6
Y (cm)			#	#	-	0.4	0.4		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.2	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		1.4
		FL <sub>Y</sub> (cm)			#	#	-		1.7
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	453.6					
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D5.0	D5.0
	Image Depth (cm)			1.6	#	#	-	1.6	1.4
	Vel Scale (kHz)			0.30	#	#	-	2.82	5.40
	Penet			On	#	#	-	On	On
	ROI			max	#	#	-	-	min
	PS			12	#	#	-	16	12

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D10L Probe (continued)

Table-5: Transducer Model: 4D10L Operating Mode: Pulsed Doppler (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	<1	-	1.9	1.1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		#	#		24.7	25.6
	min of [ $P_a(z_s, t_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.7	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	5.0	#	#	-	6.6	6.6
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.7	0.7
Y (cm)			#	#	-	0.4	0.4		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		2.2
		FL <sub>Y</sub> (cm)			#	#	-		1.7
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$		(W/cm <sup>2</sup> )	453.6				
Operating Control Conditions	Frequency (MHz)			D5.0	#	#	-	D6.7	D6.7
	Image Depth (cm)			1.8	#	#	-	2.2	2.2
	Vel Scale (kHz)			0.70	-	#	-	8.50	8.50
	SV			1	-	#	-	1	1
	Penet			On	-	#	-	Off	Off

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D10L Probe (continued)

Table-6: Transducer Model: 4D10L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	<1	-	1.9	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.5					
	$P$	$W_o$	(mW)		#	#		24.7	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					1.7	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.3					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.3	
	$f_{awf}$	$f_c$	(MHz)	5.0	#	#	-	6.6	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.7	#
Y (cm)			#	#	-	0.4	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.1					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.3	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	453.6					
Operating Control Conditions	Frequency (MHz)			BF6.7	#	#	-	D6.7	-
	Image Depth (cm)			1.8	#	#	-	2.2	-
	Vel Scale (kHz)			-	#	#	-	8.50	-
	SV			-	#	#	-	1	-
	Penet			-	#	#	-	Off	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D3C-L Probe

Table-7: Transducer Model: 4D3C-L Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.1	1.3	-	-	-	1.3
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		95.9	-		-	95.9
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	5.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.3	2.2	-	-	-	2.2
	Dim of $A_{aprt}$	X (cm)			2.2	-	-	-	2.2
Y (cm)			1.3	-	-	-	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.5					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			7.7	-	-		7.7
		FL <sub>Y</sub> (cm)			7.8	-	-		7.8
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	240.3					
Operating Control Conditions	Frequency (MHz)			CHI5.0	CHI5.0	-	-	-	CHI5.0
	Image Depth (cm)			6.4	7.7	-	-	-	7.7

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D3C-L Probe (continued)

Table-8: Transducer Model: 4D3C-L Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.1	<1	-	<1	<1	1.2
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		95.9	-		#	90.5
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(z_1), l_{TA.3}(z_1))]$ ]							#	
	$z_s$	$z_1$	(cm)					#	
	$z_{bp}$	$z_{bp}$	(cm)					#	
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	5.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	2.3	2.2	-	#	#	2.2
	Dim of $A_{aprt}$	X (cm)			2.2	-	#	#	2.2
Y (cm)			1.3	-	#	#	1.3		
Other information	$t_d$	PD	( $\mu$ sec)	0.6					
	$prr$	PRF	(Hz)	2285.2					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.5					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			7.7	-	-		7.7
		FL <sub>Y</sub> (cm)			7.8	-	-		7.8
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	240.3					
Operating Control Conditions	Frequency (MHz)			CHI5.0	CHI5.0	-	#	#	CHI5.0
	Image Depth (cm)			6.4	7.7	-	#	#	6.4

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D3C-L Probe (continued)

Table-9: Transducer Model: 4D3C-L Operating Mode: Color Flow (inc.M-mode)

Index Label				MI	TIS				TIB	TIC
					scan	non-scan		non-scan		
						Aaprt<	Aaprt>1			
<b>Global Maximum: Index Value</b>				1.2	1.3	-	<1	2.7	1.5	
	IEC	FDA	Units							
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.2						
	$P$	$W_o$	(mW)		95.9	-		51.1	108.5	
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#			
	$z_s$	$z_1$	(cm)				#			
	$z_{bp}$	$z_{bp}$	(cm)				#			
	$z_b$	$z_{sp}$	(cm)					5.2		
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	5.2						
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.6		
	$f_{awf}$	$f_c$	(MHz)	2.1	2.2	-	#	2.1	2.0	
	Dim of $A_{aprt}$	X (cm)			2.2	-	#	1.6	1.9	
Y (cm)			1.3	-	#	1.3	1.3			
Other information	$t_d$	PD	( $\mu$ sec)	1.4						
	$p_{rr}$	PRF	(Hz)	635.2						
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.5						
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.6		
	Focal Length	FL <sub>X</sub> (cm)			7.7	-	#		7.4	
		FL <sub>Y</sub> (cm)			7.8	-	#		7.8	
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	231.4						
Operating Control Conditions	Frequency (MHz)			D2.0	D2.0	-	#	D2.0	D2.0	
	Image Depth (cm)			6.1	7.4	-	#	6.1	7.4	
	Vel Scale (kHz)			0.30	3.60	-	#	2.82	3.60	
	Penet			On	On	-	#	On	On	
	ROI			Max	Min	-	#	-	Min	
	PS			12	12	-	#	16	12	

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.



4D3C-L Probe (continued)

Table-10: Transducer Model: 4D3C-L Operating Mode: Pulsed Doppler (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	1.3	-	<1	2.7	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		95.9	-		51.1	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.3	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	5.2					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	2.1	2.2	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			2.2	-	#	1.6	#
Y (cm)			1.3	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.4					
	$prr$	PRF	(Hz)	300.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.5					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.7	
	Focal Length	FL <sub>X</sub> (cm)			7.7	-	#		#
		FL <sub>Y</sub> (cm)			7.8	-	#		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	231.2					
Operating Control Conditions	Frequency (MHz)			D2.0	D2.0	-	#	D2.0	#
	Image Depth (cm)			6.1	7.4	-	#	6.1	#
	Vel Scale (kHz)			0.64	3.60	-	#	0.78	#
	SV			1	-	-	#	9	#
	Penet			On	On	-	#	On	#
	PS			#	12	-	#	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D3C-L Probe (continued)

Table-11: Transducer Model: 4D3C-L Operating Mode: B-Flow

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	<1	2.7	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.7					
	$P$	$W_o$	(mW)		#	-		51.1	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					5.3	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	5.1					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.7	
	$f_{awf}$	$f_c$	(MHz)	2.1	#	-	#	2.0	#
	Dim of $A_{aprt}$	X (cm)			#	-	#	1.6	#
Y (cm)			#	-	#	1.3	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.9					
	$prr$	PRF	(Hz)	635.2					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	2.6					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.7	
	Focal Length	FL <sub>X</sub> (cm)			#	-	#		#
		FL <sub>Y</sub> (cm)			#	-	#		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	310.3					
Operating Control Conditions	Frequency (MHz)			BFC3.3	#	-	#	D2.0	-
	Image Depth (cm)			3.5	#	-	#	6.1	-
	Vel Scale (kHz)			#	#	-	#	078	-
	SV			#	#	-	#	9	-
	Penet			#	#	-	#	On	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4D3C-L Probe (continued)

Table-12: Transducer Model: 4D3C-L Operating Mode: Contrast

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.4	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	1.8					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	2.1	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	1.0					
	$prr$	PRF	(Hz)	2216.8					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	2.0					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	83.2					
Operating Control Conditions	Frequency (MHz)			CHA2.0	-	-	-	-	-
	Image Depth (cm)			3.2	-	-	-	-	-

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4DE7C Probe

Table-13: Transducer Model: 4DE7C Operating Mode: B-Mode

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	-	-	-	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.5					
	$P$	$W_o$	(mW)		#	-		-	#
	min of [ $P_a(z_s, I_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					-	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					-	
	$f_{awf}$	$f_c$	(MHz)	4.3	#	-	-	-	#
	Dim of $A_{aprt}$	X (cm)			#	-	-	-	#
Y (cm)			#	-	-	-	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	4721.4					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					-	
	Focal Length	FL <sub>X</sub> (cm)			#	-	-		#
		FL <sub>Y</sub> (cm)			#	-	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	324.4					
Operating Control Conditions	Frequency (MHz)			CHI11.0	#	-	-	-	#
	Image Depth (cm)			2.4	#	-	-	-	#

NOTE:

- This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- This probe is not intended for transcranial or neonatal cephalic uses.
- This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4DE7C Probe (continued)

Table-14: Transducer Model: 4DE7C Operating Mode: M-Mode (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.2	<1	<1	-	<1	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	2.5					
	$P$	$W_o$	(mW)		#	#		#	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					#	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	2.0					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					#	
	$f_{awf}$	$f_c$	(MHz)	4.3	#	#	-	#	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	#	#
Y (cm)			#	#	-	#	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.4					
	$prr$	PRF	(Hz)	4721.4					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	3.2					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					#	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	324.4					
Operating Control Conditions	Frequency (MHz)			CHI 11.0	#	-	#	#	#
	Image Depth (cm)			2.4	#	-	#	#	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4DE7C Probe (continued)

Table-15: Transducer Model: 4DE7C Operating Mode: Color Flow (inc.M-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	<1	-	2.2	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		15.6	#
	min of [ $P_a(z_s, t_{ta,a}(z_s)) [(W_{.3}(Z1), I_{TA.3}(Z1))]$ ]						#		
	$z_s$	$z_1$	(cm)				#		
	$z_{bp}$	$z_{bp}$	(cm)				#		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $I_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	5.0	#	#	-	4.3	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	#
Y (cm)			#	#	-	0.6	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $I_{pi}$	$p_r@PII_{max}$	(MPa)	4.7					
	$d_{eq}$ at max. $I_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$I_{pa,a}$ at max. MI	$I_{PA.3}@MI_{max}$		(W/cm <sup>2</sup> )	666.2				
Operating Control Conditions	Frequency (MHz)			D4.0	#	#	-	D4.0	#
	Image Depth (cm)			2.2	#	#	-	2.2	#
	Vel Scale (kHz)			0.30	#	#	-	19.61	#
	Penet			On	#	#	-	On	#
	ROI			Max	#	#	-	-	#
	PS			16	#	#	-	16	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.

4DE7C Probe (continued)

Table-16: Transducer Model: 4DE7C Operating Mode: Pulsed Doppler (inc.B-mode)

Index Label				MI	TIS			TIB	TIC
					scan	non-scan		non-scan	
						Aaprt<	Aaprt>1		
<b>Global Maximum: Index Value</b>				1.6	<1	<1	-	2.2	<1
	IEC	FDA	Units						
Assoc Acoustic Parameter	$p_{ra}$	$p_{r,3}$	(MPa)	3.6					
	$P$	$W_o$	(mW)		#	#		15.6	#
	min of [ $P_a(z_s, l_{ta,a}(z_s)) [(W_{.3}(Z1), l_{TA.3}(Z1))]$ ]						-		
	$z_s$	$z_1$	(cm)				-		
	$z_{bp}$	$z_{bp}$	(cm)				-		
	$z_b$	$z_{sp}$	(cm)					2.0	
	$z$ at max. $l_{pi,a}$	$z_{sp}$	(cm)	1.9					
	$d_{eq}(z_b)$	$d_{eq}(z_{sp})$	(cm)					0.4	
	$f_{awf}$	$f_c$	(MHz)	5.0	#	#	-	4.0	#
	Dim of $A_{aprt}$	X (cm)			#	#	-	0.6	#
Y (cm)			#	#	-	0.6	#		
Other information	$t_d$	PD	( $\mu$ sec)	0.5					
	$prr$	PRF	(Hz)	700.0					
	$p_r$ at max. $l_{pi}$	$p_r@PII_{max}$	(MPa)	4.7					
	$d_{eq}$ at max. $l_{pi}$	$d_{eq}@PII_{max}$	(cm)					0.4	
	Focal Length	FL <sub>X</sub> (cm)			#	#	-		#
		FL <sub>Y</sub> (cm)			#	#	-		#
	$l_{pa,a}$ at max. MI	$l_{PA.3}@MI_{max}$	(W/cm <sup>2</sup> )	666.2					
Operating Control Conditions	Frequency (MHz)			D4.0	#	#	-	D4.0	#
	Image Depth (cm)			2.2	#	#	-	2.4	#
	Vel Scale (kHz)			0.70	-	#	-	1.00	#
	SV			1	-	#	-	2	#
	Penet			Off	-	#	-	On	#

NOTE:

- a. This index is not required for this operation mode; see section 4.1.3.1 of the Output Display Standard (NEMA UD-3)
- b. This probe is not intended for transcranial or neonatal cephalic uses.
- c. This formulation for TIS is less than that for an alternate formulation in this mode.

# No data are reported for this operating condition since the global maximum index value is not reported for the reason listed.





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## Chapter 2

# Measurement Formulas

*Reference for measurement formula tables for the various applications.*

# Cardiac Measurement

## Cardiac measurement abbreviation list

The following table shows the cardiac measurements available on the LOGIQ 7/LOGIQ 7 Pro.

When you make a measurement, on the Touch Panel you select the abbreviation for the measurement. Most abbreviations are made using acronyms. The following table lists acronyms used for naming cardiac measurements.

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
%FS	LV Fractional Shortening, 2D	%
%FS	LV Fractional Shortening, M-mode	%
%IVS Thck	IVS Fractional Shortening, 2D	%
%IVS Thck	IVS Fractional Shortening, M-mode	%
%LVPW Thck	LV Posterior Wall Fractional Shortening, 2D	%
%LVPW Thck	LV Posterior Wall Fractional Shortening, M-mode	%
Ao Arch Diam	Aortic Arch Diameter	cm
Ao asc	Ascending Arch Diameter	cm
Ao Desc Diam	Descending Aortic Diameter	cm
Ao Isthmus	Aortic Isthmus	cm
Ao Root Diam	Aortic Root Diameter	cm
Ao Root Diam	Aortic Root Diameter, M-mode	cm
AR ERO	PISA:Regurgitant Orifice Area	cm <sup>2</sup>
AR Flow	PISA:Regurgitant Flow	ml/s
AR PHT	AV Insuf. Pressure Half Time	ms
AP Rad	PISA:Radius of Aliased Point	cm
AR RV	PISA:Regurgitant Volume Flow	ml
AR Vel	PISA:Aliased Velocity	m/s

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
AR Vmax	Aortic Insuf. Peak Velocity	m/s
AR VTI	Aortic Insuf. Velocity Time Integral	cm
ARed max PC	Aortic Insuf. End-Diastole Pressure Gradient	mm Hg
ARed Vmax	Aortic Insuf. End-Diastole Velocity	m/s
AV Acc Slope	Aortic Valve Flow Acceleration	m/s <sup>2</sup>
AV Acc Time	Aortic Valve Acceration Time	ms
AV AccT/ET	AV Acceleration to Ejection Time Ratio	
AV CO	Cardiac Output by AOrtic Flow	Vmin
AV Cusp	Aortic Valve Cusp Separation, 2D	cm
AV Cusp	Aortic Valve Cusp Separation, M-mode	cm
AV Dec Time	Aortic Valve Deceleration Time	ms
AV Diam	Aortic Diameter, 2D	cm
AV max PG	Aortic Valve Peak Pressure Gradient	mm Hg
AV mean PG	Aortic Valve Mean Pressure Gradient	mm Hg
AV SV	Stroke Volume by Aortic Flow	ml
AV Vmax	Aortic Valve Peak Velocity	m/s
AV VTI	Aortic Valve Velocity Time Integral	cm
AVA (Vmax)	AV Area by Continuity Equation by Peak V	cm <sup>2</sup>
AVA (VTY)	AV Area by Continuity Equation VTI	cm <sup>2</sup>
AVA Planimetry	Aortic Valve Area	cm <sup>2</sup>
AVET	Aortic Valve Ejection Time	ms
AVET	Aortic Valve Ejection Time, M-mode	ms
CO (A-L A2C)	CO 2CH, Single Plane, Area-Length	l/min
CO (A-L A4C)	CO 4CH, Single Plane, Area-Length	l/min
CO (Biplane)	CO, Bi-Plane, MOD	l/min
CO (Bullet)	CO, Bi-Plane, Bullet	l/min
CO (MOD A2C)	CO 2CH, Single Plane, MOD (Simpson)	l/min
CO (MOD A4C)	CO 4CH, Single Plane, 4CH, MOD (Simpson)	l/min
CO (Cube)	Cardiac Output, 2D, Cubic	l/min

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
CO (Cube)	Cardiac Output, M-mode, Cubic	l/min
CO (Tech)	Cardiac Output, 2D, Teicholtz	l/min
CO (Tech)	Cardiac Output, M-mode, Teicholtz	l/min
D-E Excursion	MV Anterior Leaflet Excursion	cm
D-E Excursion	Mitral Valve D-E Slope	cm
EDV (Bullet)	LV Volume, Diastolic, Bi-Plane, Bullet	ml
EDV (Cube)	Left Ventricle Volume, Diastolic, 2D, Cubic	ml
EDV (Cube)	Left Ventricle Volume, Diastolic, M-mode, Cubic	ml
EDV (Teich)	Left Ventricle Volume, Diastolic, 2D, Teicholtz	ml
EDV (Teich)	Left Ventricle Volume, Diastolic, M-mode, Teicholtz	ml
E-F (A-L A2C)	Ejection Fraction, 2CH, Single Plane, Area-Length	%
EF (A-L A4C)	Ejection Fraction, 4CH, Single Plane, Area-Length	%
EF (Biplane)	Ejection Fraction, Bi-Plane, MOD	%
EF (Bullet)	Ejection Fraction, 2CH, Bi-Plane, Bullet	%
EF (MOD A2C)	Ejection Fraction, 2CH, Single Plane, MOD	%
EF (MOD A4C)	Ejection Fraction, 4CH, Single Plane, 4CH, MOD (Simpson)	%
E-F Slope	Mitral Valve E-F Slope	m/s
EF (Cube)	Ejection Fraction, 2D, Cubic	%
EF (Cube)	Ejection Fraction, M-mode, Cubic	%
EF (Teich)	Ejection Fraction, 2D, Teicholtz	%
EF (Teich)	Ejection Fraction, M-mode, Teicholtz	%
EPSS	E-Point-to-Septum Separation, M-mode	cm
EPSS 2D	E-Point-to-Septum Separation, 2D	cm
ERC	Effective Regurgitant Orifice	cm <sup>2</sup>
ESV (Bullet)	LV Volume, Systolic, Bi-Plane, Bullet	ml
ESV (Cube)	Left Ventricle Volume, Systolic, 2D, Cubic	ml
ESV (Cube)	Left Ventricle Volume, Systolic, M-mode, Cubic	ml
ESV (Teich)	Left Ventricle Volume, Systolic, 2D, Teicholtz	ml
ESV (Teich)	Left Ventricle Volume, Systolic, M-mode, Teicholtz	ml

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
HR	AV Heart Rate, Dop	bpm
HR	Heart Rate, 2D, Teicholtz	bpm
HR	Heart Rate for 2CH study	bpm
HR	Heart Rate for 4CH study	bpm
HR	Heart Rate for 2CH AL study	bpm
HR	Heart Rate for 2CH MOD study	bpm
HR	Heart Rate for 4CH AL study	bpm
HR	Heart Rate for 4CH MOD study	bpm
HR	Heart Rate for Bullet study	bpm
HR	Heart Rate for Bi-Plane MOD study	bpm
HR	LV Heart Rate, Dop	bpm
HR	Heart Rate, M-mode, Teicholtz	bpm
HR	Heart Rate	bpm
IVC	Inferior Vena Cava	cm
IVCT	Isovolumic Contraction Time	ms
IVRT	Isovolumic Relaxation Time	ms
IVSd	Interventricular Septum Thickness, Diastolic, 2D	cm
IVSd	IVS Thickness, Diastolic, M-mode	cm
IVSs	Interventricular Septum Thickness, Systolic, 2D	cm
IVSs	IVS Thickness, Systolic, M-mode	cm
LA Diam	Left Atrium Diameter, 2D	cm
LA Diam	Left Atrium Diameter, M-mode	cm
LA Diam	Right Atrium Diameter, 2D	cm
LA Major	Left Atrium Major	cm
LA Minor	Left Atrium Minor	cm
LA/Ao	LA Diameter to AoRoot Diameter Ratio, 2D	
LA/Ao	LA Diameter to AoRoot Diameter Ratio, M-mode	
LAEDV (MOD A4C)	LA Volume, Single Plane, MOD	ml
LAESV (MOD A4C)	LA Volume, Systolic, Single Plane MOD	ml

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
LIMP	Left Index of Myocardial Performance	
LVA(s)	Left Ventricular Area, Systolic, 2CH	cm <sup>2</sup>
LVAd (A2C)	Left Ventricular Area, Diastolic, 2CH	cm <sup>2</sup>
LVAd (A4C)	Left Ventricular Area, Diastolic, 4CH	cm <sup>2</sup>
LVAd (sax)	LV area, SAX, Diastolic	cm <sup>2</sup>
LVAend (d)	LV Endocardial Area, SAX	cm <sup>2</sup>
LVAepi (d)	LV Epicardial Area, SAX	cm <sup>2</sup>
LVA(s) (A4C)	Left Ventricular Area, Systolic, 4CH	cm <sup>2</sup>
LVA(s) (sax)	LV Area, SAX, Systolic	cm <sup>2</sup>
LVd Mass	LV Mass, Diastolic, 2D	g
LVd Mass	LV Mass, Diastolic, M-mode	g
LVd Mass Index	LV Mass Index, Diastolic, 2D	g/m <sup>2</sup>
LVd Mass Index	LV Mass Index, Diastolic, M-mode	g/m <sup>2</sup>
LVEDV (A-L A2C)	LV Volume, Diastolic, 2CH, Area-Length	ml
LVEDV (A-L A4C)	LV Volume, Diastolic, 4CH, Area-Length	ml
LVEDV (MOD A2C)	LV Volume, Diastolic, Single Plane, 2CH, MOD	ml
LVEDV (MOD A4C)	LV Volume, Diastolic, Single Plane, 4CH, MOD	ml
LVEAD (MOD BP)	LV Volume, Diastolic, Bi-Plane, MOD	ml
LVESV (A-L A2C)	LV Volume, Systolic, 2CH, Area-Length	ml
LVESV (A-L A4C)	LV Volume, Systolic, 4CH, Area-Length	ml
LVESV (MOD A2C)	LV Volume, Systolic, Single Plane, 2CH, MOD	ml
LVESV (MOD A4C)	LV Volume, Systolic, Single Plane, 4CH, MOD	ml
LVESV (MOD BP)	LV Volume, Systolic, Bi-Plane, MOD	ml
LVESV (MOD LAX)	LV Volume, Diastolic, Apical View, LAX MOD	ml
LV ESV (MOD LAX)	LV Volume, Systolic, Apical View, LAX, MOD	ml

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
LVET	Left Ventricle Ejection Time	ms
LVIDd	LV Internal Dimension, Diastolic, 2D	cm
LVIDd	LV Internal Dimension, Diastolic, M-mode	cm
LVIDs	LV Internal Dimension, Systolic, 2D	cm
LVIDs	LV Internal Dimension, Systolic, M-mode	cm
LVLd (Apical)	Left Ventricular Length, Diastolic, 2D	cm
LVLs (Apical)	Left Ventricular Length, Systolic, 2D	cm
LVOT Area	Left Ventricle Outflow Tract Area	cm <sup>2</sup>
LVOT CO	Cardiac Output by Aortic Flow	l/min
LVOT Diam	Left Ventricular Outflow Tract Diameter	cm
LVOT max PG	LVOT Peak Pressure Gradient	mmHg
LVOT mean PG	LVOT Mean Pressure Gradient	mmHg
LVOT SI	Stroke Volume Index by Aortic Flow	ml/m <sup>2</sup>
LVOT SV	Stroke Volume by Aortic Flow	ml
LVOT Vmax	LVOT Peak Velocity	m/s
LVOT Vmean	LVOT Velocity Time Integral	cm
LVPWd	Left Ventricular Posterior Wall Thickness, Diastolic, 2D	cm
LVPWd	Left Ventricular Posterior Wall Thickness, Diastolic, M-mode	cm
LVPWs	Left Ventricular Posterior Wall Thickness, Systolic, 2D	cm
LVPWs	Left Ventricular Posterior Wall Thickness, Systolic, M-mode	cm
LVs Mass	LV Mass, Systolic, 2D	g
LVs Mass	LV Mass, Systolic, M-mode	g
LVs Mass Index	LV Mass Index, Systolic, 2D	g/m <sup>2</sup>
LVs Mass Index	LV Mass Index, Systolic, M-mode	g/m <sup>2</sup>
LAAAd (A2C)	Left Atrium Area, Apical 2C	cm <sup>2</sup>
LAAAd (A4C)	Left Atrium Area, Apical 4C	cm <sup>2</sup>
MCO	Mitral Valve Closure to Opening	ms
MP Area	Mitral Valve Prosthesis	cm <sup>2</sup>

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
MR Acc Time	MV Regurg. Flow Acceleration	g
MR ERO	PISA: Regurgitant Orifice Area	cm <sup>2</sup>
MR Flow	PISA: Regurgitant Flow	ml/g
MR max PG	Mitral Regurg. Peak Pressure Gradient	mmHg
MR Rad	PISA: Radius of Aliased Point	cm
MR RV	PISA: Regurgitant Volume Flow	ml
MR Vel	PISA: Aliased Velocity	m/s
MR Vmax	Mitral Regurg. Peak Velocity	m/s
MR Vmax	PISA: CW Peak Velocity	m/x
MR Vmean	Mitral Regurg. Mean Velocity	m/s
MR VTI	Mitral Regurg. Velocity Time Integral	cm
MR VTI	PISA: CW Velocity Time Integral	cm
MV A Dur	Mitral Valve A-Wave Duration	ms
MV A Velocity	MV Velocity Peak A	m/s
MV Acc Slope	Mitral Valve Flow Acceleration	m/s <sup>2</sup>
MV Acc Time	Mitral Valve Acceleration Time	ms
MV Acc/Dsc Time	MV: Acc.Time/Decel. Time Ratio	
MV an diam	Mitral Valve Annulus Diameter, 2D	cm
MV CO	Cardiac Output by Mitral Flow	l/min
MV Dec Slope	Mitral Valve Flow Deceleration	m/s <sup>2</sup>
MV Dec Time	Mitral Valve Deceleration Time	ms
MV E Velocity	MV Velocity Peak E	m/s
MV E/A Ratio	Mitral Valve E-Peak to A-Peak Ratio	
MV max PG	Mitral Valve Peak Pressure Gradient	mmHg
MV mean PG	Mitral Valve Mean Pressure Gradient	mmHg
MV PHT	Mitral Valve Pressure Half Time	ms
MV SI	Stroke Volume Index by Mitral Flow	ml/m <sup>2</sup>
MV SV	Stroke Volume by Mitral Flow	ml
MV Time to Peak	Mitral Valve Time to Peak	ms



Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
MV Vmax	Mitral Valve Peak Velocity	m/s
MV Vmean	MV Mean Velocity	m/s
MV VTI	Mitral Valve Velocity Time Integral	cm
MVA	Mitral Valve Area	cm <sup>2</sup>
MVA by PHT	Mitral Valve Area according to PHT	cm <sup>2</sup>
MVA by plan	Mitral Valve Area, 2D	cm <sup>2</sup>
MVET	Mitral Valve Ejection Time	ms
P Vein A	Pulmonary Vein Velocity Peak A (reverse)	m/s
P Vein A Dur	Pulmonary Vein A-Wave Duration	ms
P Vein D	Pulmonary Vein End-Diastolic Peak Velocity	m/s
P Vein S	Pulmonary Vein Systolic Peak Velocity	m/s
PAEDP	Pulmonary Artery Diastolic Pressure	mmHg
PE(d)	Pericard Effusion, M-mode	cm
PEs	Pericard Effusion, 2D	cm
PR max PG	Pulmonic Insuf. Peak Pressure Gradient	mmHg
PR mean PG	Pulmonic Insuf. Mean Pressure Gradient	mmHg
PR PHT	Pulmonic Insuf. Pressure Half Time	ms
PR Vmax	Pulmonic Insuf. Peak Velocity	m/s
PR VTI	Pulmonic Insuf. Velocity Time Integral	cm
PRend max PG	Pulmonic Insuf. End-Diastole Pressure Gradient	mmHg
PRend Vmax	Pulmonic Insuf. End-Diastolic Velocity	m/s
Pulmonic Diam	Pulmonary Artery Diameter, 2D	cm
PV Acc Slope	Pulmonic Valve Flow Acceleration	m/s <sup>2</sup>
PV Acc Time	Pulmonic Valve Acceleration Time	ms
PV Acc Time/ET Ratio	PV Acceleration to Ejection Time Ratio	
PV an Diam	Pulmonic Valve Annulus Diameter, 2D	cm
PV Ann Area	Pulmonic Valve Area	cm <sup>2</sup>
PV CO	Cardiac Output by Pulmonic Flow	l/min
PV max PG	Pulmonic Valve Peak Pressure Gradient	mmHg

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
PV mean PG	Pulmonic Valve mean Pressure Gradient	mmHg
PV SV	Stroke Volume by Pulmonic Flow	ml
PV Vmax	Pulmonary Artery Peak Velocity	m/s
PV Vmax	Pulmonic Valve Peak Velocity	m/s
PV Vmean	PV Mean Velocity	m/s
PV VTI	Pulmonic Valve Velocity Time Integral	cm
PVA (VTI)	Pulmonary Artery Velocity Time Integral	cm <sup>2</sup>
PVein S/D Ratio	Pulmonary Vain SD Ratio	
PVET	Pulmonic Valve Ejection Time	ms
PVPEP	Pulmonic Valve Pre-Ejection Period	ms
PVPEP/ET Ratio	PV Pre-Ejection to Ejection Time Ratio	
Qp/Qs	Pulmonic-to-Systemic Flow Ratio	
RA Major	Right Atrium Major, 2D	cm
RA Minor	Right Atrium Minor, 2D	cm
RAEDV A2C	Right Atrium End Diastolic Volume, Apical chamber	cm <sup>2</sup>
RAEDV A-L	RA End Diastolic Volume (A-L)	ml
RAEDV MOD	RA Volume Diastoric, Single Plan, MOD	ml
RAEDV MOD	RA End Diastoric Volume (MOD)	ml
RAESV A-L	RA End Systolic Volume (A-L)	ml
RAESV MOD	RA Volume Systolic, Single Plan, MOD	ml
RAESV MOD	RA End Systolic Volume (MOD)	ml
RALd	Right Atrium Length, Diastole	cm
RALs	RA Length, Systole	cm
RIMP	Right Index of Myocardial Performance	
RJA (A4C)	Regurgitant Jet Area	cm <sup>2</sup>
RJA/LAA	Regurgitant Jet Area ratio RJA/LAA	
RV Major	Right Ventricle Major	cm
RV Minor	Right Ventricle Minor	cm
RVAWd	Right Ventricle Wall Thickness, Diastolic, 2D	cm
RVAWs	Right Ventricle Wall Thickness, Systolic, 2D	cm

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
RVET	Right Ventricle Ejection time	s
RVIDd	Right Ventricle Diameter, Diastolic, 2D	cm
RVIDd	Right Ventricle Diameter, Diastolic, M-mode	cm
RVIDs	Right Ventricle Diameter, Systolic, 2D	cm
RVIDs	Right Ventricle Diameter, Systolic, M-mode	cm
RVOT Area	Right Ventricle Outflow Tract Area	cm <sup>2</sup>
RVOT Diam	RV Output Tract Diameter, 2D	cm
RVOT Diam	RV Output Trace Diameter, M-mode	cm
RVOT max PG	RVOT Peak Pressure Gradient	mmHg
RVOT mean PG	RVOT Mean Pressure Gradient	mmHg
RVOT SI	LV Stroke Volume Index by Pulmonic Flow	ml/m <sup>2</sup>
RVOT SV	Stroke Volume by Pulmonic Flow	ml
RVOT Vmax	RVOT Peak Velocity	m/s
RVOT Vmean	RVOT Mean Velocity	m/s
RVOT VTI	RVOT Velocity Time Integral	cm
RVSP	Right Ventricle Systolic Pressure	mmHg
RVWd	Right Ventricle Wall Thickness, Diastolic, M-Mode	cm
RVWs	Right Ventricle Wall Thickness, Systolic, M-mode	cm
RAA(d)	Right Atrium Area, 2D, Diastole	cm <sup>2</sup>
RAA(s)	Right Atrium Area, 2D, Systole	cm <sup>2</sup>
SI (A-LA2C)	LV Stroke Index, Single Plane, 2CH, Area-Length	ml/m <sup>2</sup>
SI (A-LA4C)	LV Stroke Index, Single Plane, 4CH, Area-Length	ml/m <sup>2</sup>
SI (Biplane)	LV Stroke Index, Biplane, MOD	ml/m <sup>2</sup>
SI (Bullet)	LV Stroke Index, Biplane, Bullet	ml/m <sup>2</sup>
SI (MOD A2C)	LV Stroke Index, Single Plane, 2CH, MOD	ml/m <sup>2</sup>
SI (MOD A4C)	LV Stroke Index, Single Plane, 4CH, MOD	ml/m <sup>2</sup>
SI (Teich)	LV Stroke Index, Teicholtz, 2D	ml/m <sup>2</sup>
SI (Teich)	LV Stroke Index, Teicholtz, M-mode	ml/m <sup>2</sup>
SV (A-LA2C)	LV Stroke Volume, Single Plane, 2CH, Area-Length	ml

Table 2-1: Cardiac Measurements

Abbreviations	Definition	Unit
SV (A-LA4C)	LV Stroke Volume, Single Plane, 4CH, Area-Length	ml
SV (Biplane)	LV Stroke Volume, Biplane, MOD	ml
SV (Bullet)	LV Stroke Volume, Biplane, Bullet	ml
SV (MOD A2C)	LV Stroke Volume, Single Plane, 2CH, MOD (Simpson)	ml
SV (MOD A4C)	LV Stroke Volume, Single Plane, 4CH, MOD (Simpson)	ml
SV (Cube)	LV Stroke Volume, 2D, Cubic	ml
SV (Cube)	LV Stroke Volume, M-mode, CUBic	ml
SV (Teich)	LV Stroke Volume, 2D, Teicholtz	ml
SV (Teich)	LV Stroke Volume, M-mode, Teicholtz	ml
Systemic Diam	Systemic Vein Diameter, 2D	cm
Systemic Vmax	Systemic Vein Peak Velocity	m/s
Systemic VTI	Systemic Vein Velocity Time Integral	cm
TCO	Tricuspid Valve Closure to Opening	ms
TR max PG	Tricuspid Regurg. Peak Pressure Gradient	mmHg
TR mean PG	Tricuspid Regurg. Mean Pressure Gradient	mmHg
TR Vmax	Tricuspid Regurg. Peak Velocity	m/s
TR Vmean	Tricuspid Regurg. Mean Velocity	m/s
TR VTI	Tricuspid Regurgitation Velocity Time Integral	cm
TV A Dur	Tricuspid Valve A-Wave Duration	ms
TV A Velocity	Tricuspid Valve A Velocity	m/s
TV Acc Time	Tricuspid Valve Time to Peak	ms
TV Ann Area	Tricuspid Valve Area	cm <sup>2</sup>
TV Ann Diam	Tricuspid Valve Annulus Diameter, 2D	cm
TV Area	Tricuspid Valve Area, 2D	cm <sup>2</sup>
TV CO	Cardiac Output by Tricuspid Flow	l/min
TV Dec Slope	Tricuspid Valve Flow Deceleration	m/s <sup>2</sup>
TV E Velocity	TV Valve E Velocity	m/s
TV E/A Ratio	Tricuspid Valve E-Peak to A-Peak Ratio	
TV max PG	Tricuspid Valve Peak Pressure Gradient	mmHg
TV mean PG	Tricuspid Valve Mean Pressure Gradient	mmHg

Table 2-1: Cardiac Measurements

<b>Abbreviations</b>	<b>Definition</b>	<b>Unit</b>
TV PHT	Tricuspid Valve Pressure Half Time	ms
TV SV	Stroke Volume by Tricuspid Flow	ml
TV Vmean	TV Mean Velocity	m/s
TV VTI	Tricuspid Valve Velocity Time Integral	cm
VSD max PG	VSD Peak Pressure Gradient	mmHg
VSD Vmax	VSD Peak Velocity	m/s

# Measurement Formulas

## Formulas–Generic

Table 2-2: Generic Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula
MaxPG	Maximum Pressure Gradient	two Doppler blood flow peak velocities	$\text{MaxPG}[\text{mmHg}] = 4 \times (v_1^2 - v_2^2)$
MeanPG	Mean Pressure Gradient	flow velocities from one time marker to another time marker in a Doppler display	$\text{MeanPG}[\text{mmHg}] = \frac{4 \times \sum_{i=1}^n (V_i^2)}{n}$
% Stenosis	Stenosis Ratio	two areas (by ellipse, trace, circle or distance)	$\% \text{ Stenosis} = [1 - (A_{\text{residual}} / A_{\text{lumen}})] \times 100$
PI	Pulsatility Index	two Doppler blood flow peak velocities and TAMAX	$\text{PI} = (V_{\text{max}} - V_{\text{diastole}}) / \text{TAMAX}^a$
RI	Resistivity Index	two Doppler blood flow peak velocities	$\text{RI} = (V_{\text{max}} - V_{\text{diastole}}) / V_{\text{max}}^a$ or $\text{RI} = (V_{\text{max}} - V_{\text{min}}) / V_{\text{max}}^a$
HR	Heart Rate (beats/minute)	one 2 beat time interval	$\text{HR}[\text{BPM}] = 120[\text{sec}] / 2\text{beat time} [\text{sec}]$
A/B Ratio	Velocities Ratio	two Doppler blood flow peak velocities	$A/B = V_1 / V_2$
TAMAX	Time Averaged Maximum Velocity (Trace Method is Peak or manual)	two time marks in a Doppler display	$\text{TAMAX} = \sum\{V_t\} \text{ from } t_1 \text{ to } t_2 / (t_2 - t_1) [\text{cm/s or m/s}]$
TAMIN	Time Averaged Minimum Velocity (Trace method is Floor)	two time marks in a Doppler display	$\text{TAMIN} = \sum\{V_t\} \text{ from } t_1 \text{ to } t_2 / (t_2 - t_1) [\text{cm/s or m/s}]$
TAMEAN	Time Averaged Mean Velocity (Trace method is Mean)	two time marks in a Doppler display	$\text{TAMEAN} = \sum\{V_t\} \text{ from } t_1 \text{ to } t_2 / (t_2 - t_1) [\text{cm/s or m/s}]$

a. Vdiastole = Vmin or V<sub>end</sub>-diastole (depends on preset selection)

**Formulas–Generic (continued)**

Table 2-3: Volume Calculation Formulas

Calc Name	Input Measurements	Formula
Volume (spherical)	one distance	$Vol[m] = (\pi/6) \times d^3$
Volume (prolate spheroidal)	two distances, $d1 > d2$	$Vol[m] = (\pi/6) \times d1 \times d2^2$
Volume (prolate spheroidal)	one ellipse, $d1$ major axis, $d2$ minor axis	$Vol[m] = (\pi/6) \times d1 \times d2^2$
Volume (spheroidal)	three distances	$Vol[m] = (\pi/6) \times d1 \times d2 \times d3$
Volume (spheroidal)	one distance $d1$ , one ellipse, $d2$ major axis, $d3$ minor axis	$Vol[m] = (\pi/6) \times d1 \times d2 \times d3$

**Formulas-Urology**

Table 2-4: Urology Calculation Formulas

Calc Name	Input Measurements	Formula
Bladder Volume	three distance	$Vol[m] = 0.7 \times L \times W \times H$ or $Vol[m] = (\pi/6) \times L \times W \times H$
Prostate Volume	three distance	$Vol[m] = (\pi/6) \times L \times W \times H$
PSAD		PSA/Urology Volume
PPSA1		Urology Volume x PPSA-Coefficient1
PPSA2		Urology Volume x PPSA-Coefficient2

**NOTE:** PPSA is Predicted PSA.

**NOTE:** PSA is Prostatic Specific Antigen concentration.

**NOTE:** You must type manually PSA/PPSA-Coefficient1/PPSA-Coefficient2 in the Patient menu screen.

## Formulas-Abdominal/Small Parts

Table 2-5: Abdominal/Small Parts Calculation Formulas

Calc Name	Input Measurements	Formula
Thyroid Volume	three distance	$\text{Vol}[\text{ml}] = 0.479 \times \text{L} \times \text{W} \times \text{H}$
Testicle Volume	three distance	$\text{Vol}[\text{ml}] = 0.523598775 \times \text{L} \times \text{W} \times \text{H}$
Renal Volume	three distance	$\text{Vol}[\text{ml}] = 0.49 \times \text{L} \times \text{W} \times \text{H}$ or $\text{Vol}[\text{ml}] = (\frac{\pi}{6}) \times \text{L} \times \text{W} \times \text{H}$



Formulas–OB

Table 2-6: OB Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula	Author Reference
AC	Abdominal Circumference	circumference by trace, ellipse, circle or two distances	$AC = -13.3 + 1.61 (GA) - 0.00998 (GA)^2$	Hadlock et al, Radiology, 152:497-501, 1984
BPD	Biparietal Diameter	one distance	$BPD = -3.08 + 0.41 (GA) - 0.000061 (GA)^3$	
CRL	Crown Rump Length	one distance	$CRL = 1.684969 + 0.315646 \times d1 + 0.049306 \times d1^2 + 0.004057 \times d1^3 + 0.000120456 \times d1^4$	
FL	Femur Length	one distance	$FL = -3.91 + 0.427 (GA) - 0.0034 (GA)^2$	
HC	Head Circumference	circumference by trace, ellipse, circle or two distances	$HC = -11.48 + 1.56 (GA) - 0.0002548 (GA)^3$	
GS	Gestational Sac	three distances	$GS [wk] = 1.42450142 * (d1+d2+d3)/3 + 3.6225$	Hellman A/OG 103: 789, 1969
HC	Head Circumference	one ellipse	$HC [mm] = 2.325 * (BPD [mm]^2 + OFD [mm]^2)^{0.5}$	Hansmann, Ultrasound Diagnosis in Obstetrics and Gynecology, 438-9, 1985
CTAR	Cardio-Thoracic Area Ratio	two areas by ellipse	$CTAR[\%] = CTAR(Area1) / CTAR(Area2)$	n/a
EF	Ejection Fraction	two distances on M-Mode (End-diastolic dimension and End-systolic dimension on M-Mode)	$EF = (1 - Ds^3 / Dd^3)$	n/a

Table 2-7: CUA Hadlock Formulas

Calc Mnemonic	Calc Name	Formula	Author Reference
CUA <sup>a</sup>	Composite Ultrasound Age	<ol style="list-style-type: none"> <li>1. CUA (BPD) = 9.54 + 1.482 * BPD + 0.1676 * BPD<sup>2</sup></li> <li>2. CUA (HC) = 8.96 + 0.540 * HC + 0.0003 * HC<sup>3</sup></li> <li>3. CUA (AC) = 8.14 + 0.753 * AC + 0.0036 * AC<sup>2</sup></li> <li>4. CUA (FL) = 10.35 + 2.460 * FL + 0.170 * FL<sup>2</sup></li> <li>5. CUA (BPD, HC) = 10.32 + 0.009 * HC<sup>2</sup> + 1.3200 * BPD + 0.00012 * HC<sup>3</sup></li> <li>6. CUA (BPD, AC) = 9.57 + 0.524 * AC + 0.1220 * BPD<sup>2</sup></li> <li>7. CUA (BPD, FL) = 10.50 + 0.197 * BPD * FL + 0.9500 * FL + 0.7300 * BPD</li> <li>8. CUA (HC, AC) = 10.31 + 0.012 * HC<sup>2</sup> + 0.3850 * AC</li> <li>9. CUA (HC, FL) = 11.19 + 0.070 * HC * FL + 0.2630 * HC</li> <li>10. CUA (AC, FL) = 10.47 + 0.442 * AC + 0.3140 * FL<sup>2</sup> - 0.0121 * FL<sup>3</sup></li> <li>11. CUA (BPD, HC, AC) = 10.58 + 0.005 * HC<sup>2</sup> + 0.3635 * AC + 0.02864 * BPD * AC</li> <li>12. CUA (BPD, HC, FL) = 11.38 + 0.070 * HC * FL + 0.9800 * BPD</li> <li>13. CUA (BPD, AC, FL) = 10.61 + 0.175 * BPD * FL + 0.2970 * AC + 0.7100 * FL</li> <li>14. CUA (HC, AC, FL) = 10.33 + 0.031 * HC * FL + 0.3610 * HC + 0.0298 * AC * FL</li> <li>15. CUA (BPD, HC, AC, FL) = 10.85 + 0.060 * HC * FL + 0.6700 * BPD + 0.1680 * AC</li> </ol>	Hadlock, Radiology, 1984 152:497-501

a. Formulas are used only if Hadlock HC, FL, AC and BPD are used and CUA is selected as the preset in the CUA/AUA for Hadlock preset in the System M&A Preset Menu. If other authors are used, CUA automatically changes to AUA and an average value is displayed.

Table 2-8: EFW Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula	Author Reference
EFW	Estimated Fetal Weight	AC and HC	$EFW [kg] = 10^{(1.182 + (0.0273 * HC [cm]) + (0.07057 * AC [cm]) - (0.00063 * AC [cm]^2) - (0.0002184 * AC [cm] * HC [cm]))}$	Hadlock, Radiology, 150:535, 1984
EFW	Estimated Fetal Weight	BPD, AC, and FL	$EFW [g] = 10^{(1.335 - (0.0034 * AC [cm] * FL [cm]) + (0.0316 * BPD [cm]) + (0.0457 * AC [cm]) + (0.1623 * FL [cm]))}$	Hadlock, AJOG, 151:333, 1985

Table 2-8: EFW Calculation Formulas (Continued)

Calc Mnemonic	Calc Name	Input Measurements	Formula	Author Reference
EFW	Estimated Fetal Weight	AC, HC, and FL	$EFW [g] = 10^{(1.326 - (0.00326 * AC [cm] * FL [cm]) + (0.0107 * HC [cm]) + (0.0438 * AC [cm]) + (0.158 * FL [cm]))}$	Hadlock, AJOG, 151:333, 1985
EFW	Estimated Fetal Weight	AC, HC, BPD, FL	$EFW [g] = 10^{(1.3596 - (0.00386 * AC [cm] * FL [cm]) + (0.0064 * HC [cm]) + (0.00061 * BPD [cm] * AC [cm]) + (0.0424 * AC [cm]) + (0.174 * FL [cm]))}$	Hadlock, AJOG, 151:333, 1985
EFW	Estimated Fetal Weight	AC and FL	$EFW [g] = 10^{(1.3598 + 0.051 * AC [cm] + 0.1844 * FL [cm] - 0.0037 * AC [cm] * FL [cm])}$	Hadlock, Radiology, 150:535, 1984
EFW	Estimated Fetal Weight	AC and BPD	$EFW [g] = -3200.40479 + 157.07186 * AC [cm] + 15.90391 * BPD [cm]^2$	Merz
EFW	Estimated Fetal Weight	BPD and TTD	$EFW [g] = 0.515263 - 0.105775 * BPD [mm] + (0.000930707 * BPD [mm]^2 + 0.0649145 * TTD [mm] - 0.00020562 * TTD [mm]^2)$	Hansmann
EFW	Estimated Fetal Weight	AC and BPD	$EFW [kg] = 10^{(-1.7492 + 0.166 * BPD [cm] + 0.046 * AC [cm] - 2.646 * AC [cm] * BPD [cm]/1000)}$	Shepard, AJOG, 142:47, 1982
EFW	Estimated Fetal Weight	BPD [cm] and AC [cm]	$EFW [g] = 10^{(1.7288 + 0.09184 * BPD [cm] + 0.02581 * AC [cm] + 0.00011 * BPD [cm] * AC [cm])}$	Shepard/Warsoff
EFW	Estimated Fetal Weight	BPD [cm] and AC [cm]	$EFW [g] = 10^{(3 - 1.7492 + (0.166 * BPD [cm]) + (0.046 * AC [cm]) - (0.002646 * AC [cm] * BPD [cm]))}$	Richards/Berkowitz
EFW	Estimated Fetal Weight	BPD, APTD, TTD and FL	$EFW [g] = 1.07 * BPD [cm]^3 + 3.42 * APTD [cm] * TTD [cm] * FL [cm]$	Tokyo University
EFW	Estimated Fetal Weight	BPD, AxT, FL [cm]	$EFW1 [g] = 1.07 * BPD [cm]^3 + 3.42 * AxT [cm]^2 * FL [cm]$	Tokyo Shinozuka

Table 2-8: EFW Calculation Formulas (Continued)

Calc Mnemonic	Calc Name	Input Measurements	Formula	Author Reference
EFW	Estimated Fetal Weight	BPD, AC, FL [cm]	$EFW2 [g] = 1.07 * BPD [cm]^3 + 0.30 * AC [cm]^2 * FL [cm]$	Tokyo Shinozuka
EFW	Estimated Fetal Weight	BPD, AxT, SL [cm]	$EFW3 [g] = 1.07 * BPD [cm]^3 + 2.91 * AxT [cm^2] * SL [cm]$	Tokyo Shinozuka

NOTE: OB/Tokyo/LV represents as "SL" on the system.

**Amniotic Fluid Index (AFI)**

The normal values are considered to be:

36-40 weeks

0-5 cm = very low

5.1-8.0 cm = low

8.1 - 18.0 cm = normal

>18.0 = high

Dr. Rutherford/Dr. Phelan, *Obstetrics and Gynecology*, Volume 70, No. 3, Part 1, p.353-6, Sept. 1987.

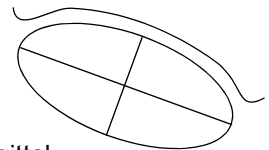
28-40 weeks

15.0 cm = average

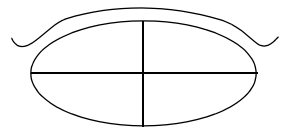
>20.0 - 24.0 = hydramnios

<5.0-6.0 = Oligohydramnios

Dr. C.C. Smith, *The Female Patient*, Volume 15, p.85-97, March 1990.



Sagittal



Transverse

Formulas–GYN

Table 2-9: GYN Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula
UT-L	Uterine Length	one distance	Ut-L[cm or mm]=d1
UT-H	Uterine Height	one distance	Ut-H[cm or mm]=d1
UT-W	Uterine Width	one distance	Ut-W[cm or mm]=d1
UT-Volume	Uterine Volume	three distance	Vol[m]=0.5236xLxWxH
UtPFD	Uterus Portio-Fundus Distance	one distance	Ut PFD [cm or mm]=d1
UtAP	Anterior-Posterior Uterus Diameter	one distance	Ut AP[cm or mm]=d1
UtQ	Transverse Uterus Diameter	one distance	Ut Q[cm or mm]=d1
Endo	Endometrium Thickness	one distance	Endo[cm or mm]=d1
Lt. Ov-L	Left Ovarian Length	one distance	Lt. Ov-L[cm or mm]=d1
Lt. Ov-H	Left Ovarian Height	one distance	Lt. Ov-H[cm or mm]=d1
Lt. Ov-W	Left Ovarian Width	one distance	Lt. Ov-W[cm or mm]=d1
Lt. Ov-Volume	Left Ovarian Volume	three distance	Vol[m]=0.5236xLxWxH
Rt. Ov-L	Right Ovarian Length	one distance	Rt. Ov-L[cm or mm]=d1
Rt. Ov-H	Right Ovarian Height	one distance	Rt. Ov-H[cm or mm]=d1
Rt. Ov-W	Right Ovarian Width	one distance	Rt. Ov-W[cm or mm]=d1
Rt. Ov-Volume	Right Ovarian Volume	three distance	Vol[m]=0.5236xLxWxH
Lt. Ov-RI	Left Ovarian Vessel Resistive Index	two Doppler blood flow peak velocities	Lt. Ov-RI= $(V_{max}-V_{diastole})/V_{max}^a$
Ut-RI	Uterine Vessel Resistive Index	two Doppler blood flow peak velocities	Ut-RI= $(V_{max}-V_{diastole})/V_{max}^a$
Rt. Ov-RI	Right Ovarian Vessel Resistive Index	two Doppler blood flow peak velocities	Rt. Ov-RI= $(V_{max}-V_{diastole})/V_{max}^a$
LtOvFo[m]	Left Ovary Follicles	One distance <sup>b</sup>	$D1[cm]^3 \times \pi/6$
		Two distances <sup>b</sup>	$D1[cm]^2 \times D2[cm] \pi/6$ : (D1 < D2)
			$D1[cm] \times D2[cm]^2 \times \pi/6$ : (D2 < D1)
		Three distances	$D1[cm] \times D2[cm] \times D3[cm] \times \pi/6$

Table 2-9: GYN Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula
RtOvFo[ml]	Right Ovary Follicles	One distance <sup>b</sup>	$D1[\text{cm}]^3 \times \pi/6$
		Two distances <sup>b</sup>	$D1[\text{cm}]^2 \times D2[\text{cm}] \times \pi/6$ : (D1 < D2)
			$D1[\text{cm}] \times D2[\text{cm}]^2 \times \pi/6$ : (D2 < D1)
		Three distances	$D1[\text{cm}] \times D2[\text{cm}] \times D3[\text{cm}] \times \pi/6$

a.  $V_{\text{diastole}} = V_{\text{min}}$  or  $V_{\text{end-diastole}}$  (depends on preset selection)

b. To calculate LtOvFo or RtOvFo with one (or two distances), press the **Clear** key after the first (or second distance) measurement(s).

**Formulas–Vascular**

Table 2-10: Vascular Calculation Formulas

Calc Mnemonic	Calc Name	Input Measurements	Formula
RT ECA	Right External Carotid Artery Velocity	one Doppler blood flow peak velocity	RT ECA=v1 [cm/s or m/s]
RT CCA	Right Common Carotid Artery Velocity	one Doppler blood flow peak velocity	RT CCA=v1 [cm/s or m/s]
RT BIFURC	Right Carotid Bifurcation Velocity	one Doppler blood flow peak velocity	RT BIFURC=v1 [cm/s or m/s]
RT ICA	Right Internal Carotid Artery Velocity	one Doppler blood flow peak velocity	RT ICA=v1 [cm/s or m/s]
RT ICA/CCA	Right Internal Carotid Artery Velocity/Common Carotid Artery Velocity Ratio	two Doppler blood flow peak velocities	RT ICA/CCA= $V_{ICA}/V_{CCA}$
LT ECA, LT CCA, LT BIFURC, LT ICA, LT ICA/CCA	Same as above, for Left Carotid Artery	Same as above	Same as above
A/B Ratio	Velocities Ratio	two Doppler blood flow peak velocities	$A/B = V_1/V_2$
% Stenosis	Stenosis Ratio	two areas (by ellipse, trace, circle or distance)	% Stenosis= $[1 - (A_{residual}/A_{lumen})] \times 100$
S/D Ratio	Systolic Velocity/Diastolic Velocities Ratio	two Doppler blood flow peak velocities	$S/D = V_{systole}/V_{diastole}^a$
PI	Pulsatility Index	two Doppler blood flow peak velocities and TAMAX	$PI = (V_{max} - V_{diastole}) / TAMAX^a$
RI	Resistivity Index	two Doppler blood flow peak velocities	$RI = (V_{max} - V_{diastole}) / V_{max}^a$ or $RI = (V_{max} - V_{min}) / V_{max}^a$
HR	Heart Rate (beats/minute)	one 2 beat time interval (measured manually or automatically)	HR[BPM]= $120[\text{sec}] / 2 \text{ beat time}[\text{sec}]$
Vol. Flow	Volume Flow		$dT_{mean} \times dDiam \times dDiam \times 0.785$ or $dT_{max} \times dDiam \times dDiam \times 0.785$
Vol. Flow (ml/min)	Volume Flow with coefficient		$[Diam (cm)/2]^2 \times \pi \times TAMAX \times (\text{coefficient}) \times 60$

a.  $V_{diastole} = V_{min}$  or  $V_{end-diastole}$  (depends on preset selection)

Formulas-Cardiac

The following table lists the cardiac calculations. The folders where to find the calculations and related measurements are indicated in brackets “[ ]”.

Table 2-11: Cardiac Calculation Formulas

<p>%FS [Dimension, Cube/Teicholz]  Mode: 2D, CF, VR2D  Formula: <math>\frac{((\{LFIDd\}-\{LVIDs\})/\{LVIDd\})}{\{LVIDd\}}</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCaliper], EF (Cube) [AutoCalc]</p>
<p>%FS [Generic, Dimension]  Mode: MM, CM, AMM, CMM, VRMM  Formula: <math>\frac{((\{LFIDd\}-\{LVIDs\})/\{LVIDd\})}{\{LVIDd\}}</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension]  Measured by: LVs [</p>
<p>%IVS Thck [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>\frac{((\{IVSs\}-\{IVSd\})/\{IVSd\})}{\{IVSd\}}</math>  Needs measurement: IVSs [Dimension], IVSd [Dimension]  Measured by: LVs [2DLV], IVSs [2DCALIPER]</p>
<p>%IVS Thck [Dimension]  Mode: MM:CM:AMM:CMM:VRMM  Formula: <math>\frac{((\{IVSs\}-\{IVSd\})/\{IVSd\})}{\{IVSd\}}</math>  Needs measurement: IVSs [Dimension], IVSd [Dimension]  Measured by: IVSs [MMDISCALIPER]</p>
<p>%LVPW Thck [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>\frac{((\{LVPWs\}-\{LVPWd\})/\{LVPWd\})}{\{LVPWd\}}</math>  Needs measurement: LVPWs [Dimension], LVPWd [Dimension]  Measured by: LVs [2DLV], LVPWs [2DCALIPER]</p>
<p>%LVPW Thck [Dimension]  Mode: MM:CM:AMM:CMM:VRMM  Formula: <math>\frac{((\{LVPWs\}-\{LVPWd\})/\{LVPWd\})}{\{LVPWd\}}</math>  Needs measurement: LVPWs [Dimension], LVPWd [Dimension]  Measured by: LVPWs [MMDISCALIPER]</p>
<p>Ao st junct/Ao [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>\frac{\{Ao\ st\ junct\}}{\{Ao\ Diam\}}</math>  Needs measurement: Ao st junct [Dimension], Ao Diam [Dimension]  Measured by: Ao st junct [2DCALIPER]</p>
<p>Ao/LA [Generic, Dimension]  Mode: MM:CM:AMM:CMM:VRMM  Formula: <math>\frac{\{Ao\ Diam\}}{\{LA\ Diam\}}</math>  Needs measurement: Ao Diam [Generic, Dimension], LA Diam [Generic, Dimension]  Measured by: LA/Ao [MMLAAO]</p>



Table 2-11: Cardiac Calculation Formulas

<p>AP Area [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{LVOT\ Diam\}^2 * 0.785 * \{LVOT\ VTI\} / \{AP\ VTI\}</math>  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic], AP VTI [Aortic]  Measured by: AP Area [SDMANTRACE]</p>
<p>AR ERO [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{AR\ Flow\} / \{AR\ Vmax\}</math>  Needs measurement: AR Flow [PISA], AR Vmax [PISA]  Measured by: AR Trace [AUTOCALC]</p>
<p>AR RV [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{AR\ Flow\} / \{AR\ Vmax\} * \{AR\ VTI\}</math>  Needs measurement: AR Flow [PISA], AR Vmax [PISA], AR VTI [PISA]  Measured by: AR Trace [AUTOCALC]</p>
<p>AV Acc Time/ET Ratio [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{AV\ AccT\} / \{AVET\}</math>  Needs measurement: AV AccT [Aortic], AVET [Aortic]  Measured by: AVET [SDTIMECALIPER]</p>
<p>AV Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14 / 4 * \{AV\ Diam\}^2</math>  Needs measurement: AV Diam [Dimension]  Measured by: AV Diam [2DCALIPER]</p>
<p>AV CI [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{(\{AV\ Diam\}^2 * 0.785 * \{AV\ VTI\}) * \{HR\} / 60\} / \{BSA\}</math>  Needs measurement: AV Diam [Aortic], AV VTI [Aortic], HR [Aortic]  Measured by: AV Trace [SDMANTRACE]</p>
<p>AV CO [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{(\{AV\ Diam\}^2 * 0.785 * \{AV\ VTI\}) * \{HR\} / 60\}</math>  Needs measurement: AV Diam [Aortic], AV VTI [Aortic], HR [Aortic]  Measured by: AV Trace [SDMANTRACE]</p>
<p>AV SI [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{(\{AV\ Diam\}^2 * 0.785 * \{AV\ VTI\}) / \{BSA\}\}</math>  Needs measurement: AV Diam [Aortic], AV VTI [Aortic]  Measured by: AV Trace [SDMANTRACE]</p>
<p>AV SV [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{AV\ Diam\}^2 * 0.785 * \{AV\ VTI\}</math>  Needs measurement: AV Diam [Aortic], AV VTI [Aortic]  Measured by: AV Trace [SDMANTRACE]</p>

Table 2-11: Cardiac Calculation Formulas

<p>AVA (VTI) [Aortic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT\ Diam\}^2 * \{LVOT\ VTI\} / \{AV\ VTI\}</math>  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic], AV VTI [Aortic]  Measured by: AV Trace [AUTOCALC]</p>
<p>AVA Vmax [Aortic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT\ Diam\}^2 * \text{abs}(\{LVOT\ Vmax\} / \{AV\ Vmax\})</math>  Needs measurement: LVOT Diam [Aortic], LVOT Vmax [Aortic], AV Vmax [Aortic]  Measured by: AV Vmax [AUTOCALC]</p>
<p>AVA Vmax [Aortic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT\ Diam\}^2 * \text{abs}(\{LVOT\ Vmax\} / \{AV\ Vmax\})</math>  Needs measurement: LVOT Diam [Aortic], LVOT Vmax [Aortic], AV Vmax [Aortic]  Measured by: AV Trace [AUTOCALC]</p>
<p>AVA Vmax, Pt [Aortic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT\ Diam\}^2 * \text{abs}(\{LVOT\ Vmax\} / \{AV\ Vmax\})</math>  Needs measurement: LVOT Diam [Aortic], LVOT Vmax [Aortic], AV Vmax [Aortic]  Measured by: AV Vmax [AUTOCALC]</p>
<p>AVA Vmax, Pt [Aortic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT\ Diam\}^2 * \text{abs}(\{LVOT\ Vmax\} / \{AV\ Vmax\})</math>  Needs measurement: LVOT Diam [Aortic], LVOT Vmax [Aortic], AV Vmax [Aortic]  Measured by: AV Trace [AUTOCALC]</p>
<p>CI A-L A2C [Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\{LVEDV\ A-L\ A2C\} - \{LVESV\ A-L\ A2C\}) * \{HR\} / 60) / \{BSA\}</math>  Needs measurement: LVEDV A-L A2C [Single Plane A2C, AutoBiplane], LVESV A-L A2C [Single Plane A2C, AutoBiplane], HR [Single Plane A2C, AutoBiplane]  Measured by: R-R [2DCALIPER], A2C [2DAUTOVOLUME]</p>
<p>CI A-L A2C [Single Plane A2C]  Mode: 2D:CF:VR2D  Formula: <math>((\{LVEDV\ A-L\ A2C\} - \{LVESV\ A-L\ A2C\}) * \{HR\} / 60 / \text{Auto}) / \{BSA\}</math>  Needs measurement: LVEDV A-L A2C [Single Plane A2C], LVESV A-L A2C [Single Plane A2C], HR [Single Plane A2C]  Measured by: LVESV A2C [2DVOLUMETRACE]</p>
<p>CI A-L A4C [Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\{LVEDV\ A-L\ A4C\} - \{LVESV\ A-L\ A4C\}) * \{HR\} / 60) / \{BSA\}</math>  Needs measurement: LVEDV A-L A4C [Single Plane A4C, AutoBiplane], LVESV A-L A4C [Single Plane A4C, AutoBiplane], HR [Single Plane A4C, AutoBiplane]  Measured by: R-R [2DCALIPER], A4C [2DAUTOVOLUME]</p>
<p>CI A-L A4C [Single Plane A4C]  Mode: 2D:CF:VR2D  Formula: <math>((\{LVEDV\ A-L\ A4C\} - \{LVESV\ A-L\ A4C\}) * \{HR\} / 60) / \{BSA\}</math>  Needs measurement: LVEDV A-L A4C [Single Plane A4C], LVESV A-L A4C [Single Plane A4C], HR [Single Plane A4C]  Measured by: LVESV A4C [2DVOLUMETRACE]</p>

Table 2-11: Cardiac Calculation Formulas

<p>CI A-L LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>\frac{((\text{LVEDV A-L LAX}) - \text{LVESV A-L LAX}) * \text{HR}}{60} / \text{BSA}</math>  Needs measurement: LVEDV A-L LAX [Single Plane LAX, AutoBiplane], LVESV A-L LAX [Single Plane LAX, AutoBiplane], HR [Single Plane LAX, AutoBiplane]  Measured by: R-R [2DCALIPER], AutoVolume [2DAUTOVOLUME]</p>
<p>CI Biplane [Biplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>d = \text{biplane}(\{\text{LVLd A4C}\}, \{\text{LVDisks}\}, \{\text{LVLd A2C}\}, \{\text{LVDisks}\})</math>  Needs measurement: LVLd A4C [Biplane], LVLd A2C [Biplane], LVLS A4C [Biplane], LVLS A2C [Biplane], HR [Biplane]  Measured by: R-R [2DCALIPER]</p>
<p>CI bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D:Trace  Formula: <math>\frac{((d-s) * \{\text{ECG/HeartRate}\} / 60) / \text{BSA}}{\text{where: } s = \frac{8}{(3 * 3.14159)} * \{\text{LVAs(A4C)}\} * \{\text{LVAs(sax MV)}\} / \{2D / \text{LVIDs}\}}</math>  <math>d = \frac{8}{(3 * 3.14159)} * \{\text{LVAd A4C}\} * \{\text{LVAd (sax MV)}\} / \{\text{LVIDd}\}</math>  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse], LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse], HR [Biplane Ellipse]  Measured by: R-R [2DCALIPER]</p>
<p>CI bullet [Bullet]  Mode: 2D:CF:VR2D:Trace  Formula: <math>\frac{((d-s) * \{\text{ECG/HeartRate}\} / 60) / \text{BSA}}{\text{where: } s = \frac{5}{6} * \{\text{LVAs(sax)}\} * \{\text{LVLS(apical)}\}}</math>  <math>d = \frac{5}{6} * \{\text{LVAd sax}\} * \{\text{LVLd apical}\}</math>  Needs measurement: LVAd sax [Bullet], LVLd apical [Bullet], LVAs sax [Bullet], LVLS apical [Bullet], HR [Bullet]  Measured by: R-R [2DCALIPER]</p>
<p>CI MOD A2C [Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>\frac{((\text{LVEDV MOD A2C}) - \text{LVESV MOD A2C}) * \text{HR}}{60} / \text{BSA}</math>  Needs measurement: LVEDV MOD A2C [Single Plane A2C, AutoBiplane], LVESV MOD A2C [Single Plane A2C, AutoBiplane], HR [Single Plane A2C, AutoBiplane]  Measured by: R-R [2DCALIPER], A2C [2DAUTOVOLUME]</p>
<p>CI MOD A2C [Single Plane A2C]  Mode: 2D:CF:VR2D  Formula: <math>\frac{((\text{LVEDV MOD A2C}) - \text{LVESV MOD A2C}) * \text{HR}}{60} / \text{BSA}</math>  Needs measurement: LVEDV MOD A2C [Single Plane A2C], LVESV MOD A2C [Single Plane A2C], HR [Single Plane A2C]  Measured by: LVESV A2C [2DVOLUMETRACE]</p>
<p>CI MOD A4C [Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>\frac{((\text{LVEDV MOD A4C}) - \text{LVESV MOD A4C}) * \text{HR}}{60} / \text{BSA}</math>  Needs measurement: LVEDV MOD A4C [Single Plane A4C, AutoBiplane], LVESV MOD A4C [Single Plane A4C, AutoBiplane], HR [Single Plane A4C, AutoBiplane]  Measured by: R-R [2DCALIPER], A4C [2DAUTOVOLUME]</p>
<p>CI MOD A4C [Single Plane A4C]  Mode: 2D:CF:VR2D  Formula: <math>\frac{((\text{LVEDV MOD A4C}) - \text{LVESV MOD A4C}) * \text{HR}}{60} / \text{BSA}</math>  Needs measurement: LVEDV MOD A4C [Single Plane A4C], LVESV MOD A4C [Single Plane A4C], HR [Single Plane A4C]  Measured by: LVESV A4C [2DVOLUMETRACE]</p>

Table 2-11: Cardiac Calculation Formulas

<p>CI MOD LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\text{LVEDV MOD LAX}) - \{\text{LVESV MOD LAX}\}) * \{\text{HR}/60\} / \{\text{BSA}\}</math>  Needs measurement: LVEDV MOD LAX [Single Plane LAX, AutoBiplane], LVESV MOD LAX [Single Plane LAX, AutoBiplane], HR [Single Plane LAX, AutoBiplane]  Measured by: R-R [2DCALIPER], AutoVolume [2DAUTOVOLUME]</p>
<p>CI mod sim [Modified Simpson]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((d-s) * \{\text{ECG/HeartRate}/60\} / \{\text{BSA}\})</math> where: <math>s = (\{\text{LVls(apical)}\} / 9) * ((4 * \{\text{LVAs(sax MV)}\}) + (2 * \{\text{LVAs(sax PM)}\}) + \text{sqrt}(\{\text{LVAs(sax MV)}\} * \{\text{LVAs(sax PM)}\}))</math> <math>d = (\{\text{LVld apical}\} / 9) * ((4 * \{\text{LVAd (sax MV)}\}) + (2 * \{\text{LVAd sax PM}\}) + \text{sqrt}(\{\text{LVAd (sax MV)}\} * \{\text{LVAd sax PM}\}))</math>  Needs measurement: LVld apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM [Modified Simpson], LVls apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson], HR [Modified Simpson]  Measured by: R-R [2DCALIPER]</p>
<p>CI(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((d-s) * \{\text{ECG/HeartRate}/60\} / \{\text{BSA}\})</math> where: <math>s = \{2D/LVIDs\}^3</math> <math>d = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz], HR [Dimension, Cube/Teicholz]  Measured by: R-R [2DCALIPER]</p>
<p>CI(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((dv-sv) * \{\text{MM/HeartRate}/60\} / \{\text{BSA}\})</math> where: <math>sv = \{\text{MM/LVIDs}\}^3</math> <math>dv = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension], HR [Generic, Dimension]  Measured by: Heartrate [MMTIMECALIPER]</p>
<p>CI(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((d-s) * \{\text{ECG/HeartRate}/60\} / \{\text{BSA}\})</math> where: <math>s = 7 / (2.4 + \{2D/LVIDs\}) * \{2D/LVIDs\}^3</math> <math>d = 7 / (2.4 + \{LVIDd\}) * \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz], HR [Dimension, Cube/Teicholz]  Measured by: R-R [2DCALIPER]</p>
<p>CI(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((dv-sv) * \{\text{MM/HeartRate}/60\} / \{\text{BSA}\})</math> where: <math>sv = 7 / (2.4 + \{\text{MM/LVIDs}\}) * \{\text{MM/LVIDs}\}^3</math> <math>dv = 7 / (2.4 + \{LVIDd\}) * \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension], HR [Generic, Dimension]  Measured by: Heartrate [MMTIMECALIPER]</p>
<p>CO A-L A2C [Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(\{\text{LVEDV A-L A2C}\} - \{\text{LVESV A-L A2C}\}) * \{\text{HR}/60\}</math>  Needs measurement: LVEDV A-L A2C [Single Plane A2C, AutoBiplane], LVESV A-L A2C [Single Plane A2C, AutoBiplane], HR [Single Plane A2C, AutoBiplane]  Measured by: R-R [2DCALIPER], A2C [2DAUTOVOLUME]</p>

Table 2-11: Cardiac Calculation Formulas

<p>CO A-L A2C [Single Plane A2C]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ A2C\} - \{LVESV\ A-L\ A2C\}) * \{HR\} / 60</math>  Needs measurement: LVEDV A-L A2C [Single Plane A2C], LVESV A-L A2C [Single Plane A2C], HR [Single Plane A2C]  Measured by: LVESV A2C [2DVOLUMETRACE]</p>
<p>CO A-L A4C [Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(\{LVEDV\ A-L\ A4C\} - \{LVESV\ A-L\ A4C\}) * \{HR\} / 60</math>  Needs measurement: LVEDV A-L A4C [Single Plane A4C, AutoBiplane], LVESV A-L A4C [Single Plane A4C, AutoBiplane], HR [Single Plane A4C, AutoBiplane]  Measured by: R-R [2DCALIPER], A4C [2DAUTOVOLUME]</p>
<p>CO A-L A4C [Single Plane A4C]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ A4C\} - \{LVESV\ A-L\ A4C\}) * \{HR\} / 60</math>  Needs measurement: LVEDV A-L A4C [Single Plane A4C], LVESV A-L A4C [Single Plane A4C], HR [Single Plane A4C]  Measured by: LVESV A4C [2DVOLUMETRACE]</p>
<p>CO A-L LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(\{LVEDV\ A-L\ LAX\} - \{LVESV\ A-L\ LAX\}) * \{HR\} / 60</math>  Needs measurement: LVEDV A-L LAX [Single Plane LAX, AutoBiplane], LVESV A-L LAX [Single Plane LAX, AutoBiplane], HR [Single Plane LAX, AutoBiplane]  Measured by: R-R [2DCALIPER], AutoVolume [2DAUTOVOLUME]</p>
<p>CO A-L LAX [Single Plane LAX]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ LAX\} - \{LVESV\ A-L\ LAX\}) * \{HR\} / 60</math>  Needs measurement: LVEDV A-L LAX [Single Plane LAX], LVESV A-L LAX [Single Plane LAX], HR [Single Plane LAX]  Measured by: LVESV LAX [2DVOLUMETRACE]</p>
<p>CO Biplane [Biplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>d = \text{biplane}(\{LVLd\ A4C\}, \{LVDisks\}, \{LVLd\ A2C\}, \{LVDisks\})</math>  Needs measurement: LVLd A4C [Biplane], LVLd A2C [Biplane], LVLs A4C [Biplane], LVLs A2C [Biplane], HR [Biplane]  Measured by: R-R [2DCALIPER]</p>
<p>CO bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(d-s) * \{ECG/HeartRate\} / 60</math> where: <math>s = (8 / (3 * 3.14159)) * \{LVAs(A4C)\} * \{LVAs(sax\ MV)\} / \{2D/LVIDs\}</math>  <math>d = (8 / (3 * 3.14159)) * \{LVAd\ A4C\} * \{LVAd\ (sax\ MV)\} / \{LVIDd\}</math>  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse], LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse], HR [Biplane Ellipse]  Measured by: R-R [2DCALIPER]</p>
<p>CO bullet [Bullet]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(d-s) * \{ECG/HeartRate\} / 60</math> where: <math>s = 5/6 * \{LVAs(sax)\} * \{LVLs(apical)\}</math>  <math>d = 5/6 * \{LVAd\ sax\} * \{LVLd\ apical\}</math>  Needs measurement: LVAd sax) [Bullet], LVLd apical [Bullet], LVLs apical [Bullet], HR [Bullet]  Measured by: R-R [2DCALIPER]</p>

Table 2-11: Cardiac Calculation Formulas

<p>CO MOD A2C [Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\text{LVEDV MOD A2C}) - \{\text{LVESV MOD A2C}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD A2C [Single Plane A2C, AutoBiplane], LVESV MOD A2C [Single Plane A2C, AutoBiplane], HR [Single Plane A2C, AutoBiplane]  Measured by: R-R [2DCALIPER], A2C [2DAUTOVOLUME]</p>
<p>CO MOD A2C [Single Plane A2C]  Mode: 2D:CF:VR2D  Formula: <math>((\text{LVEDV MOD A2C}) - \{\text{LVESV MOD A2C}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD A2C [Single Plane A2C], LVESV MOD A2C [Single Plane A2C], HR [Single Plane A2C]  Measured by: LVESV A2C [2DVOLUMETRACE]</p>
<p>CO MOD A4C [Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\text{LVEDV MOD A4C}) - \{\text{LVESV MOD A4C}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD A4C [Single Plane A4C, AutoBiplane], LVESV MOD A4C [Single Plane, A4C, AutoBiplane], HR [Single Plane A4C, AutoBiplane]  Measured by: R-R [2DCALIPER], A4C [2DAUTOVOLUME]</p>
<p>CO MOD A4C [Single Plane A4C]  Mode: 2D:CF:VR2D  Formula: <math>((\text{LVEDV MOD A4C}) - \{\text{LVESV MOD A4C}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD A4C [Single Plane A4C], LVESV MOD A4C [Single Plane A4C], HR [Single Plane A4C]  Measured by: LVESV A4C [2DVOLUMETRACE]</p>
<p>CO MOD LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D:Trace  Formula: <math>((\text{LVEDV MOD LAX}) - \{\text{LVESV MOD LAX}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD LAX [Single Plane LAX, AutoBiplane], LVESV MOD LAX [Single Plane LAX, AutoBiplane], HR [Single Plane LAX, AutoBiplane]  Measured by: R-R [2DCALIPER], AutoVolume [2DAUTOVOLUME]</p>
<p>CO MOD LAX [Single Plane LAX]  Mode: 2D:CF:VR2D  Formula: <math>((\text{LVEDV MOD LAX}) - \{\text{LVESV MOD LAX}\}) * \{\text{HR}\} / 60</math>  Needs measurement: LVEDV MOD LAX [Single Plane LAX], LVESV MOD LAX [Single Plane LAX], HR [SinglePlane LAX]  Measured by: LVESV LAX [2DVOLUMETRACE]</p>
<p>CO mod sim [Modified Simpson]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(d-s) * \{\text{ECG/HeartRate}\} / 60</math> where: <math>s = ((\text{LVLs(apical)}) / 9) * ((4 * \{\text{LVAs(sax MV)}\}) + (2 * \{\text{LVAs(sax d} = ((\text{LVLd apical}) / 9) * ((4 * \{\text{LVAd (sax MV)}\}) + (2 * \{\text{LVAd sax PM}\}) + \text{sqrt}(\{\text{LVAd (sax MV)}\} * \{\text{LVAd sax PM}\})))</math>  Needs measurement: LVLd apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM [Modified Simpson], LVLs apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson], HR [Modified Simpson]  Measured by: R-R [2DCALIPER]</p>
<p>CO(A-L) [Generic]  Mode: 2D:CF:Trace  Formula: <math>((\text{EDV(A-L)}) - \{\text{ESV(A-L)}\}) * \{\text{HR}\} / 60</math>  Needs measurement: ESV(A-L) [Generic], HR [Generic]  Measured by: R-R [2DCALIPER]</p>

Table 2-11: Cardiac Calculation Formulas

<p>CO(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(d-s) \cdot \{ECG/HeartRate\}/60</math> where: <math>s = \{2D/LVIDs\}^3</math> <math>d = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz], HR[Dimension,Cube/Teicholz]  Measured by: R-R [2DCALIPER]</p>
<p>CO(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(dv-sv) \cdot \{MM/HeartRate\}/60</math> where: <math>sv = \{MM/LVIDs\}^3</math> <math>dv = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension], HR [Generic, Dimension]  Measured by: Heartrate [MMTIMECALIPER]</p>
<p>CO(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D:Trace  Formula: <math>(d-s) \cdot \{ECG/HeartRate\}/60</math> where: <math>s = 7/(2.4+\{2D/LVIDs\}) \cdot \{2D/LVIDs\}^3</math> <math>d = 7/(2.4+\{LVIDd\}) \cdot \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz], HR[Dimension,Cube/Teicholz]  Measured by: R-R [2DCALIPER]</p>
<p>CO(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(dv-sv) \cdot \{MM/HeartRate\}/60</math> where: <math>sv = 7/(2.4+\{MM/LVIDs\}) \cdot \{MM/LVIDs\}^3</math> <math>dv = 7/(2.4+\{LVIDd\}) \cdot \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension], HR [Generic, Dimension]  Measured by: Heartrate [MMTIMECALIPER]</p>
<p>EDV bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D  Formula: <math>(8/(3^3 \cdot 14159)) \cdot \{LVAd A4C\} \cdot \{LVAd (sax MV)\} / \{LVIDd\}</math>  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse]  Measured by: LVEF BP-EL [AUTOCALC]</p>
<p>EDV bullet [Bullet]  Mode: 2D:CF:VR2D  Formula: <math>5/6 \cdot \{LVAd sax\} \cdot \{LVLd apical\}</math>  Needs measurement: LVAd sax) [Bullet], LVLd apical [Bullet]  Measured by: LVEF Bullet [AUTOCALC]</p>
<p>EDV mod sim [Modified Simpson]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVLd apical\}/9) \cdot ((4 \cdot \{LVAd (sax MV)\}) + (2 \cdot \{LVAd sax PM\}) + \sqrt{(\{LVAd (sax MV)\} \cdot \{LVAd sax PM\})})</math>  Needs measurement: LVLd apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM[Modified Simpson]  Measured by: EF mod sim [AUTOCALC]</p>
<p>EDV(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>\{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz]  Measured by: LVd [2DLV], LVIDd [2DCALIPER], EF(Cube) [AUTOCALC]</p>

Table 2-11: Cardiac Calculation Formulas

<p>EDV(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: {LVIDd}<sup>3</sup>  Needs measurement: LVIDd [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDd [MMDISCALIPER]</p>
<p>EDV(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: 7/(2.4+{LVIDd})*{LVIDd}<sup>3</sup>  Needs measurement: LVIDd [Dimension, Cube/Teicholz]  Measured by: LVd [2DLV], LVIDd [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>EDV(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: 7/(2.4+{LVIDd})*{LVIDd}<sup>3</sup>  Needs measurement: LVIDd [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDd [MMDISCALIPER]</p>
<p>EF A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: ({LVEDV A-L A2C}-{LVESV A-L A2C})/{LVEDV A-L A2C}  Needs measurement: LVEDV A-L A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>EF A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: ({LVEDV A-L A4C}-{LVESV A-L A4C})/{LVEDV A-L A4C}  Needs measurement: LVEDV A-L A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>
<p>EF A-L LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: ({LVEDV A-L LAX}-{LVESV A-L LAX})/{LVEDV A-L LAX}  Needs measurement: LVEDV A-L LAX [Single Plane LAX, AutoBiplane], LVESV A-L LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>EF Biplane [Biplane, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: d = biplane({LVLd A4C},{LVDisks},{LVLd A2C},{LVDisks})  Needs measurement: LVLd A4C [Biplane, AutoBiplane], LVLd A2C [Biplane, AutoBiplane], LVLs A4C [Biplane,AutoBiplane], LVLs A2C [Biplane, AutoBiplane]  Measured by: EF Biplane [AUTOCALC]</p>
<p>EF mod sim [Modified Simpson]  Mode: 2D:CF:VR2D  Formula: ({LVLd apical}/9)*((4*{LVAd (sax MV)})+(2*{LVAd sax PM}))+sqrt(({LVAd (sax MV)}*{LVAd sax PM}))  Needs measurement: LVLd apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM [Modified Simpson], LVLs apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson]  Measured by: EF mod sim [AUTOCALC]</p>



Table 2-11: Cardiac Calculation Formulas

<p>EF(A-L) [Generic]  Mode: 2D:CF:VR2D  Formula: <math>\frac{({EDV(A-L)} - {ESV(A-L)})}{{EDV(A-L)}}</math>  Needs measurement: ESV(A-L) [Generic], EDV(A-L) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>EF(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>\frac{(d-s)}{d}</math> where: <math>s = \frac{2D}{LVIDd}^3</math> <math>d = \frac{LVIDd^3}{3}</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>EF(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>\frac{(dv-sv)}{dv}</math> where: <math>sv = \frac{MM}{LVIDs}^3</math> <math>dv = \frac{LVIDd^3}{3}</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>EF(MOD) [Generic]  Mode: 2D:CF:VR2D  Formula: <math>\frac{({EDV(MOD)} - {ESV(MOD)})}{{EDV(MOD)}}</math>  Needs measurement: EDV(MOD) [Generic], ESV(MOD) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>EF(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>\frac{(d-s)}{d}</math> where: <math>s = \frac{7}{(2.4 + \frac{2D}{LVIDs})} \cdot \frac{2D}{LVIDs}^3</math> <math>d = \frac{7}{(2.4 + \frac{LVIDd}{LVIDd})} \cdot \frac{LVIDd^3}{3}</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>EF(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>\frac{(dv-sv)}{dv}</math> where: <math>sv = \frac{7}{(2.4 + \frac{MM}{LVIDs})} \cdot \frac{MM}{LVIDs}^3</math> <math>dv = \frac{7}{(2.4 + \frac{LVIDd}{LVIDd})} \cdot \frac{LVIDd^3}{3}</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>ESV bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D  Formula: <math>\frac{(8 / (3 \cdot 3.14159)) \cdot \{LVAs A4C\} \cdot \{LVAs sax MV\}}{\{LVIDs\}}</math>  Needs measurement: LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse]  Measured by: LVEF BP-EL [AUTOCALC]</p>
<p>ESV bullet [Bullet]  Mode: 2D:CF:VR2D  Formula: <math>\frac{5}{6} \cdot \{LVAs sax\} \cdot \{LVLs apical\}</math>  Needs measurement: LVAs sax) [Bullet], LVLs apical [Bullet]  Measured by: LVEF Bullet [AUTOCALC]</p>
<p>ESV mod sim [Modified Simpson]  Mode: 2D:CF:VR2D  Formula: <math>\frac{(\{LVLs apical\} / 9) \cdot ((4 \cdot \{LVAs sax MV\}) + (2 \cdot \{LVAs sax PM\}) + \sqrt{(\{LVAs sax MV\} \cdot \{LVAs sax PM\}))}}{1}</math>  Needs measurement: LVLs apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson]  Measured by: EF mod sim [AUTOCALC]</p>

Table 2-11: Cardiac Calculation Formulas

<p>ESV(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: {LVIDs}<sup>3</sup>  Needs measurement: LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>ESV(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: {LVIDs}<sup>3</sup>  Needs measurement: LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>ESV(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>7 / (2.4 + \{LVIDs\}) * \{LVIDs\}^3</math>  Needs measurement: LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>ESV(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>7 / (2.4 + \{LVIDs\}) * \{LVIDs\}^3</math>  Needs measurement: LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>HR (Generic, Dimension, Biplane, Modified Simpson, Cube/Teicholz, Single Plane A4C, Single Plane A2C, Single Plane LAX, Bullet, Biplane Ellipse)  Mode: 2D:CF:Trace:VR2D  Formula: <math>60 / \{R-R\}</math>  Needs measurement: R-R [Generic, Dimension, Biplane, Modified Simpson, Cube/Teicholz, Single Plane A4C, Single Plane A2C, Single Plane LAX, Bullet, Biplane Ellipse]  Measured by: R-R [2DCALIPER]  Used to calculate: CO(A-L),CO(Teich),CI(Teich),CO(Cube),CI(Cube),CO Biplane,CI Biplane,CO mod sim,CI mod sim,CI A-L A4C,CO MOD A4C,CI MOD A4C,CI A-L A2C,CO A-L A2C,CI A-L A2C,CO MOD A2C,CI MOD A2C,CO A-L LAX,CI A-L LAX,CO MOD LAX,CI MOD LAX,CO bullet,CI bullet,CO bp el,CI bp el</p>
<p>HR [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>60 / \{Time\}</math>  Needs measurement: Time [Generic, Dimension]  Measured by: Heartrate [MMTIMECALIPER]  Used to calculate: CO(Cube),CO(Teich),CI(Teich),CI(Cube)</p>
<p>HR [Generic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>60 / \{Time\}</math>  Needs measurement: Time [Generic]  Measured by: Heartrate [SDTIMECALIPER]</p>
<p>IVSd/LVPWd [Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: {IVSd}/{LVPWd}  Needs measurement: IVSd [Dimension], LVPWd [Dimension]  Measured by: LVPWd [MMDISCALIPER]</p>

Table 2-11: Cardiac Calculation Formulas

<p>LA/Ao [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: {LA Diam}/{Ao Diam}  Needs measurement: LA Diam [Generic, Dimension], Ao Diam [Generic, Dimension]  Measured by: LA/Ao [MMLAAO]</p>
<p>LIMP [Mitral Valve, Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: ({MCO}-{AVET})/{AVET}  Needs measurement: MCO [Mitral Valve, Aortic], AVET [Mitral Valve, Aortic]  Measured by: LIMP [AUTOCALC]</p>
<p>LVCi Dopp [Aortic]  Mode: PW:VRPW  Formula: ({LVOT Diam}<sup>2</sup>*0.785*{LVOT VTI}*{HR}/60)/{BSA}  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic], HR [Aortic],  Measured by: LVOT Trace [SDMANTRACE]</p>
<p>LVCO Dopp [Aortic]  Mode: PW:VRPW  Formula: {LVOT Diam}<sup>2</sup>*0.785*{LVOT VTI}*{HR}/60  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic], HR [Aortic]  Measured by: LVOT Trace [SDMANTRACE]</p>
<p>LVd Mass (ASE) [Generic]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: ((1.04*({IVSd}+{LVIDd}+{LVPWd})<sup>3</sup>-({LVIDd})<sup>3</sup>))*0.8+0.6)/1000  Needs measurement: IVSd [Generic], LVIDd [Generic], LVPWd [Generic]  Measured by: LV Study [MMLV]</p>
<p>LVd Mass [Dimension]  Mode: 2D:CF:VR2D  Formula: ((1.04*({IVSd}+{LVIDd}+{LVPWd})<sup>3</sup>-({LVIDd})<sup>3</sup>))-13.6)/1000  Needs measurement: IVSd [Dimension], LVIDd [Dimension], LVPWd [Dimension]  Measured by: LVPWd [2DCALIPER]</p>
<p>LVd Mass [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: ((1.04*({IVSd}+{LVIDd}+{LVPWd})<sup>3</sup>-({LVIDd})<sup>3</sup>))-13.6)/1000  Needs measurement: IVSd [Generic, Dimension], LVPWd [Generic, Dimension], LVIDd [Generic, Dimension]  Measured by: LV Study [MMLV], LVPWs [MMDISCALIPER]</p>
<p>LVd Mass A-L [Mass]  Mode: 2D:CF:VR2D  Formula: 1.05*5/6*({LVAd(sax epi)}*({LVLd(apical)}+t)-{LVAd(sax PM)}*{LVLd(apical)})/1000  where: t =sqrt({LVAd sax EPI}/3.14159)-sqrt({LVAd sax PM}/3.14159)  Needs measurement: LVAd sax EPI [Mass], LVAd sax PM [Mass], LVLd apical [Mass]  Measured by: LVMass(d) [AUTOCALC]</p>
<p>LVd Mass I A-L [Mass]  Mode: 2D:CF:VR2D  Formula: m/{BSA} where: m = 1.05*5/6*({LVAd(sax epi)}*({LVLd(apical)}+t)-{LVAd(sax PM)}*{LVLd(apical)})/1000  t = sqrt({LVAd sax EPI}/3.14159)-sqrt({LVAd sax PM}/3.14159)  Needs measurement: LVAd sax EPI [Mass], LVAd sax PM [Mass], LVLd apical [Mass]  Measured by: LVMass(d) [AUTOCALC]</p>

Table 2-11: Cardiac Calculation Formulas

<p>LVd Mass Ind (ASE) [Generic]                  Mode: MM:CM:AMM:CAMM:VRMM                  Formula: <math>((1.04 * ((\text{IVSd}) + \{\text{LVIDd}\} + \{\text{LVPWd}\})^3 - (\{\text{LVIDd}\})^3) * 0.8 + 0.6) / 1000 / \{\text{BSA}\}</math>                  Needs measurement: IVSd [Generic], LVIDd [Generic], LVPWd [Generic]                  Measured by: LV Study [MMLV]</p>
<p>LVd Mass Index [Dimension]                  Mode: 2D:CF:VR2D                  Formula: <math>m / \{\text{BSA}\}</math> where <math>m = ((1.04 * ((\text{IVSd}) + \{\text{LVIDd}\} + \{\text{LVPWd}\})^3 - (\{\text{LVIDd}\})^3) - 13.6) / 1000</math>                  Needs measurement: IVSd [Dimension], LVIDd [Dimension], LVPWd [Dimension], LVIDd [Dimension]                  Measured by: LVPWd [2DCALIPER]</p>
<p>LVd Mass Index [Generic, Dimension]                  Mode: MM:CM:AMM:CAMM:VRMM                  Formula: <math>((1.04 * ((\text{IVSd}) + \{\text{LVIDd}\} + \{\text{LVPWd}\})^3 - (\{\text{LVIDd}\})^3) - 13.6) / 1000 / \{\text{BSA}\}</math>                  Needs measurement: IVSd [Generic, Dimension], LVIDd [Generic, Dimension], LVPWd [Generic, Dimension]                  Measured by: LV Study [MMLV], LVPWs [MMDISCALIPER]</p>
<p>LVEDV MOD BP [Biplane, AutoBiplane]                  Mode: 2D:CF:VR2D                  Formula: <math>\text{biplane}(\{\text{LVLd A4C}\}, \{\text{LVDIsks}\}, \{\text{LVLd A2C}\}, \{\text{LVDIsks}\})</math>                  Needs measurement: LVLd A4C [Biplane, AutoBiplane], LVLd A2C [Biplane, AutoBiplane]                  Measured by: EF Biplane [AUTOCALC]</p>
<p>LVEF BP-EL [Biplane Ellipse]                  Mode: 2D:CF:VR2D                  Formula: <math>(d-s)/d</math> where: <math>s = (8 / (3 * 3.14159)) * \{\text{LVAs(A4C)}\} * \{\text{LVAs(sax MV)}\} / \{2D/LVIDs\}</math>  <math>d = (8 / (3 * 3.14159)) * \{\text{LVAd A4C}\} * \{\text{LVAd (sax MV)}\} / \{\text{LVIDd}\}</math>                  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse], LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse]                  Measured by: LVEF BP-EL [AUTOCALC]</p>
<p>LVEF Bullet [Bullet]                  Mode: 2D:CF:VR2D                  Formula: <math>(d-s)/d</math> where: <math>s = 5/6 * \{\text{LVAs(sax)}\} * \{\text{LVLs(apical)}\}</math> <math>d = 5/6 * \{\text{LVAd sax}\} * \{\text{LVLd apical}\}</math>                  Needs measurement: LVAd sax) [Bullet], LVLd apical [Bullet], LVLs apical [Bullet]                  Measured by: LVEF Bullet [AUTOCALC]</p>
<p>LVEF MOD A2C [Biplane, Single Plane A2C, AutoBiplane]                  Mode: 2D:CF:VR2D                  Formula: <math>(\{\text{LVEDV MOD A2C}\} - \{\text{LVESV MOD A2C}\}) / \{\text{LVEDV MOD A2C}\}</math>                  Needs measurement: LVEDV MOD A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV MOD A2C [Biplane, Single Plane A2C, AutoBiplane]                  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>LVEF MOD A4C [Biplane, Single Plane A4C, AutoBiplane]                  Mode: 2D:CF:VR2D                  Formula: <math>(\{\text{LVEDV MOD A4C}\} - \{\text{LVESV MOD A4C}\}) / \{\text{LVEDV MOD A4C}\}</math>                  Needs measurement: LVEDV MOD A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV MOD A4C [Biplane, Single Plane A4C, AutoBiplane]                  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>

Table 2-11: Cardiac Calculation Formulas

<p>LVEF MOD LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ MOD\ LAX\} - \{LVESV\ MOD\ LAX\}) / \{LVEDV\ MOD\ LAX\}</math>  Needs measurement: LVEDV MOD LAX [Single Plane LAX, AutoBiplane], LVESV MOD LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>LVESV MOD BP [Biplane, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>\text{biplane}(\{LVLs\ A4C\}, \{LVDisks\}, \{LVLs\ A2C\}, \{LVDisks\})</math>  Needs measurement: LVLs A4C [Biplane, AutoBiplane], LVLs A2C [Biplane, AutoBiplane]  Measured by: EF Biplane [AUTOCALC]</p>
<p>LVIDd Index [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>\{LVIDd\} / \{BSA\}</math>  Needs measurement: LVIDd [Dimension],  Measured by: LVIDd [2DCALIPER]</p>
<p>LVIDd Index [Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>\{LVIDd\} / \{BSA\}</math>  Needs measurement: LVIDd [Dimension]  Measured by: LVIDd [MMDISCALIPER]</p>
<p>LVIDs Index [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>\{LVIDs\} / \{BSA\}</math>  Needs measurement: LVIDs [Dimension]  Measured by: LVIDs [2DCALIPER]</p>
<p>LVIDs Index [Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>\{LVIDs\} / \{BSA\}</math>  Needs measurement: LVIDs [Dimension]  Measured by: LVIDs [MMDISCALIPER]</p>
<p>LVOT Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14 / 4 * \{LVOT\ Diam\}^2</math>  Needs measurement: LVOT Diam [Dimension]  Measured by: LVOT Diam [2DCALIPER]</p>
<p>LVOT Diam [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{LVOT\ Diam\}</math>  Needs measurement: LVOT Diam [Aortic]  Measured by: AP Area [SDMANTRACE]  Used to calculate: AP Area</p>
<p>LVOT Diam [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{LVOT\ Diam\}</math>  Needs measurement: LVOT Diam [Mitral Valve]  Measured by: MP Area [SDMANTRACE]  Used to calculate: MP Area</p>

Table 2-11: Cardiac Calculation Formulas

<p>LVOT VTI [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: {LVOT VTI}  Needs measurement: LVOT VTI [Aortic]  Measured by: AP Area [SDMANTRACE]  Used to calculate: AP Area</p>
<p>LVOT VTI [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: {LVOT VTI}  Needs measurement: LVOT VTI [Mitral Valve]  Measured by: MP Area [SDMANTRACE]  Used to calculate: MP Area</p>
<p>LVPEP/ET [Aortic]  Mode: CW:PW:VRCW:VRPW  Formula: {LVPEP}/{LVET}  Needs measurement: LVPEP [Aortic], LVET [Aortic]  Measured by: LVET [SDTIMECALIPER]</p>
<p>LVPEP/ET [Time]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: {LVPEP}/{LVET}  Needs measurement: LVPEP [Time], LVET [Time]  Measured by: LVET [MMTIMECALIPER]</p>
<p>LVs Mass (ASE) [Generic]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((1.04 * ((IVSs) + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3) * 0.8 + 0.6) / 1000</math>  Needs measurement: IVSs [Generic], LVIDs [Generic], LVPWs [Generic]  Measured by: LV Study [MMLV]</p>
<p>LVs Mass [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>((1.04 * ((IVSs) + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3) - 13.6) / 1000</math>  Needs measurement: IVSs [Dimension], LVIDs [Dimension], LVPWs [Dimension]  Measured by: LVPWs [2DCALIPER]</p>
<p>LVs Mass [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((1.04 * ((IVSs) + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3) - 13.6) / 1000</math>  Needs measurement: IVSs [Generic, Dimension], LVIDs [Generic, Dimension], LVPWs [Generic, Dimension]  Measured by: LV Study [MMLV], LVPWs [MMDISCALIPER]</p>
<p>LVs Mass A-L [Mass]  Mode: 2D:CF:VR2D  Formula: <math>1.05 * 5/6 * (\{LVAs(sax\ epi)\} * (\{LVLs(apical)\} + t) - \{LVAs(sax\ PM)\} * \{LVLs(apical)\}) / 1000</math>  where: <math>t = \sqrt{(\{LVAs\ sax\ EPI\} / 3.14159) - \sqrt{(\{LVAs\ sax\ PM\} / 3.14159)}}</math>  Needs measurement: LVAs sax EPI [Mass], LVAs sax PM [Mass], LVLs apical [Mass]  Measured by: LVMass(s) [AUTOCALC]</p>
<p>LVs Mass Ind (ASE) [Generic]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((1.04 * ((IVSs) + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3) * 0.8 + 0.6) / \{BSA\}</math>  Needs measurement: IVSs [Generic], LVIDs [Generic], LVPWs [Generic]  Measured by: LV Study [MMLV]</p>

Table 2-11: Cardiac Calculation Formulas

<p>LVs Mass Ind A-L [Mass]  Mode: 2D:CF:VR2D  Formula: <math>m/\{BSA\}</math> where: <math>m = 1.05 \cdot 5/6 \cdot (\{LVAs(sax\ epi)\} \cdot (\{LVls(apical)\} + t) - \{LVAs(sax\ PM)\} \cdot \{LVls(apical)\}) / 1000</math>  <math>t = \sqrt{\{LVAs\ sax\ EPI\} / 3.14159} - \sqrt{\{LVAs\ sax\ PM\} / 3.14159}</math>  Needs measurement: LVAs sax EPI [Mass], LVAs sax PM [Mass], LVls apical [Mass]  Measured by: LVMass(s) [AUTOCALC]</p>
<p>LVs Mass Index [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>m/\{BSA\}</math> where: <math>m = ((1.04 \cdot ((\{IVSs\} + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3)) - 13.6) / 1000</math>  Needs measurement: IVSs [Dimension], LVIDs [Dimension], LVPWs [Dimension]  Measured by: LVPWs [2DCALIPER]</p>
<p>LVs Mass Index [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>((1.04 \cdot ((\{IVSs\} + \{LVIDs\} + \{LVPWs\})^3 - \{LVIDs\}^3)) - 13.6) / 1000 / \{BSA\}</math>  Needs measurement: IVSs [Generic, Dimension], LVIDs [Generic, Dimension], LVPWs [Generic, Dimension]  Measured by: LV Study [MMLV], LVPWs [MMDISCALIPER]</p>
<p>LVSI Dopp [Aortic]  Mode: PW:VRPW  Formula: <math>\{LVOT\ Diam\}^2 \cdot 0.785 \cdot \{LVOT\ VTI\} / \{BSA\}</math>  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic],  Measured by: LVOT Trace [SDMANTRACE]</p>
<p>LVSV Dopp [Aortic]  Mode: PW:VRPW  Formula: <math>\{LVOT\ Diam\}^2 \cdot 0.785 \cdot \{LVOT\ VTI\}</math>  Needs measurement: LVOT Diam [Aortic], LVOT VTI [Aortic]  Measured by: LVOT Trace [SDMANTRACE]</p>
<p>MP Area [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{LVOT\ Diam\}^2 \cdot 0.785 \cdot (\{LVOT\ VTI\} / \{MP\ VTI\})</math>  Needs measurement: LVOT Diam [Mitral Valve], LVOT VTI [Mitral Valve], MP VTI [Mitral Valve]  Measured by: MP Area [SDMANTRACE]</p>
<p>MR ERO [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{MR\ Flow\} / \{MR\ Vmax\}</math>  Needs measurement: MR Flow [PISA], MR Vmax [PISA]  Measured by: MR Trace [AUTOCALC]</p>
<p>MR RV [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{MR\ Flow\} / \{MR\ Vmax\} \cdot \{MR\ VTI\}</math>  Needs measurement: MR Flow [PISA], MR Vmax [PISA], MR VTI [PISA]  Measured by: MR Trace [AUTOCALC]</p>
<p>MV AccT/DecT [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV\ AccT\} / \{MV\ DecT\}</math>  Needs measurement: MV AccT [Mitral Valve], MV DecT [Mitral Valve]  Measured by: MV AccT [SDCALIPER]</p>

Table 2-11: Cardiac Calculation Formulas

<p>MV Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14/4 * \{MV \text{ Ann Diam} \}^2</math>  Needs measurement: MV Ann Diam [Dimension]  Measured by: MV Ann Diam [2DCALIPER]</p>
<p>MV CI [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV \text{ Ann Diam} \}^2 * 0.785 * \{MV \text{ VTI} \} * \{HR \} / 60 / \{BSA \}</math>  Needs measurement: MV Ann Diam [Mitral Valve], MV VTI [Mitral Valve], HR [Mitral Valve]  Measured by: MV Trace [SDMANTRACE]</p>
<p>MV CO [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV \text{ Ann Diam} \}^2 * 0.785 * \{MV \text{ VTI} \} * \{HR \} / 60</math>  Needs measurement: MV Ann Diam [Mitral Valve], MV VTI [Mitral Valve], HR [Mitral Valve]  Measured by: MV Trace [SDMANTRACE]</p>
<p>MV E/A Ratio [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV \text{ E Vel} \} / \{MV \text{ A Vel} \}</math>  Needs measurement: MV E Vel [Mitral Valve], MV A Vel [Mitral Valve]  Measured by: MV A Vel [SDPTCALIPER], MV A Vel [AUTOCALC]</p>
<p>MV SI [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV \text{ Ann Diam} \}^2 * 0.785 * \{MV \text{ VTI} \} / \{BSA \}</math>  Needs measurement: MV Ann Diam [Mitral Valve], MV VTI [Mitral Valve],  Measured by: MV Trace [SDMANTRACE]</p>
<p>MV SV [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{MV \text{ Ann Diam} \}^2 * 0.785 * \{MV \text{ VTI} \}</math>  Needs measurement: MV Ann Diam [Mitral Valve], MV VTI [Mitral Valve]  Measured by: MV Trace [SDMANTRACE]</p>
<p>MVA (VTI) [Mitral Valve]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{LVOT \text{ Diam} \}^2 * \{LVOT \text{ VTI} \} / \{MV \text{ VTI} \}</math>  Needs measurement: LVOT Diam [Mitral Valve], LVOT VTI [Mitral Valve], MV VTI [Mitral Valve]  Measured by: MV Trace [AUTOCALC]</p>
<p>MVA By PHT [Mitral Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>22 / \{MV \text{ PHT} \}</math>  Needs measurement: MV PHT [Mitral Valve]  Measured by: MV E/A Velocity [SDEA3], MV PHT [SDCALIPER]</p>
<p>P Vein S/D Ratio [Pulmonary Vein]  Mode: PW:VRPW  Formula: <math>\{P \text{ Vein S} \} / \{P \text{ Vein D} \}</math>  Needs measurement: P Vein S [Pulmonary Vein], P Vein D [Pulmonary Vein]  Measured by: P Vein D [SDPTCALIPER]</p>



Table 2-11: Cardiac Calculation Formulas

<p>PAEDP [Pulmonic]  Mode: CW:PW:VRCW:VRPW  Formula: {PRend PG}+{RAP}  Needs measurement: PRend PG [Pulmonic], RAP [Pulmonic]  Measured by: PRend Vmax [AUTOCALC]</p>
<p>PR ERO [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: {PR Flow}/{PR Vmax}  Needs measurement: PR Flow [PISA], PR Vmax [PISA]  Measured by: PR Trace [AUTOCALC]</p>
<p>PR RV [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: {PR Flow}/{PR Vmax}*{PR VTI}  Needs measurement: PR Flow [PISA], PR Vmax [PISA], PR VTI [PISA]  Measured by: PR Trace [AUTOCALC]</p>
<p>Pulmonic CO [Shunts, Congenital Heart]  Mode: CW:PW:VRCW:VRPW  Formula: {Pulmonic SV}*{Pulmonic HR}/60  Needs measurement: Pulmonic SV [Shunts, Congenital Heart], Pulmonic HR [Shunts, Congenital Heart]  Measured by: Pulmonic VTI [SDMANTRACE]</p>
<p>Pulmonic SV [Shunts, Congenital Heart]  Mode: CW:PW:VRCW:VRPW  Formula: <math>3.14159/4 * \{Pulmonic\ Diam\}^2 * \{Pulmonic\ VTI\}</math>  Needs measurement: Pulmonic Diam [Shunts, Congenital Heart], Pulmonic VTI [Shunts, Congenital Heart]  Measured by: Pulmonic VTI [SDMANTRACE], Pulmonic VTI [SDMANTRACE]  Used to calculate: Pulmonic CO</p>
<p>PV A/MV A Dur [Pulmonary Vein]  Mode: PW:VRPW  Formula: {P Vein A Dur}/{MV A Dur}  Needs measurement: P Vein A Dur [Pulmonary Vein], MV A Dur [Pulmonary Vein]  Measured by: P Vein A Dur [SDTIMECALIPER]</p>
<p>PV A/MV VTI [Pulmonary Vein]  Mode: PW:VRPW  Formula: {P Vein A Dur}/{MV VTI}  Needs measurement: P Vein A Dur [Pulmonary Vein], MV VTI [Pulmonary Vein]  Measured by: P Vein A Dur [SDTIMECALIPER]</p>
<p>PV AccT/ET [Pulmonic]  Mode: CW:PW:VRCW:VRPW  Formula: {PV AccT}/{PVET}  Needs measurement: PV AccT [Pulmonic], PVET [Pulmonic]  Measured by: PVET [SDTIMECALIPER]</p>
<p>PV A-MV A Dur [Pulmonary Vein]  Mode: PW:VRPW  Formula: {P Vein A Dur}-{MV A Dur}  Needs measurement: P Vein A Dur [Pulmonary Vein], MV A Dur [Pulmonary Vein]  Measured by: P Vein A Dur [SDTIMECALIPER]</p>

Table 2-11: Cardiac Calculation Formulas

<p>PV Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14/4 * \{PV \text{ Ann Diam}\}^2</math>  Needs measurement: PV Ann Diam [Dimension]  Measured by: PV Ann Diam [2DCALIPER]</p>
<p>PV CI [Pulmonic, Valvular PS]  Mode: CW:PW:VRCW:VRPW  Formula: <math>((\{PV \text{ Ann Diam}\}^2 * 0.785 * \{PV \text{ VTI}\}) * \{HR\} / 60) / \{BSA\}</math>  Needs measurement: PV Ann Diam [Pulmonic, Valvular PS], PV VTI [Pulmonic, Valvular PS], HR [Pulmonic, Valvular PS]  Measured by: PV Trace [SDMANTRACE]</p>
<p>PV CO [Pulmonic, Valvular PS]  Mode: CW:PW:VRCW:VRPW  Formula: <math>(\{PV \text{ Ann Diam}\}^2 * 0.785 * \{PV \text{ VTI}\}) * \{HR\} / 60</math>  Needs measurement: PV Ann Diam [Pulmonic, Valvular PS], PV VTI [Pulmonic, Valvular PS], HR [Pulmonic, Valvular PS]  Measured by: PV Trace [SDMANTRACE]</p>
<p>PV SI [Pulmonic, Valvular PS]  Mode: CW:PW:VRCW:VRPW  Formula: <math>(\{PV \text{ Ann Diam}\}^2 * 0.785 * \{PV \text{ VTI}\}) / \{BSA\}</math>  Needs measurement: PV Ann Diam [Pulmonic, Valvular PS], PV VTI [Pulmonic, Valvular PS]  Measured by: PV Trace [SDMANTRACE]</p>
<p>PV SV [Pulmonic, Valvular PS]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{PV \text{ Ann Diam}\}^2 * 0.785 * \{PV \text{ VTI}\}</math>  Needs measurement: PV Ann Diam [Pulmonic, Valvular PS], PV VTI [Pulmonic, Valvular PS]  Measured by: PV Trace [SDMANTRACE]</p>
<p>PVA (Vmax) [Pulmonic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{RVOT \text{ Diam}\}^2 * \{RVOT \text{ Vmax}\} / \{PV \text{ Vmax}\}</math>  Needs measurement: RVOT Diam [Pulmonic], RVOT Vmax [Pulmonic], PV Vmax [Pulmonic]  Measured by: PV Vmax [AUTOCALC]</p>
<p>PVA (Vmax) [Pulmonic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{RVOT \text{ Diam}\}^2 * \{RVOT \text{ Vmax}\} / \{PV \text{ Vmax}\}</math>  Needs measurement: RVOT Diam [Pulmonic], RVOT Vmax [Pulmonic], PV Vmax [Pulmonic]  Measured by: PV Trace [AUTOCALC]</p>
<p>PVA (VTI) [Pulmonic]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 * \{RVOT \text{ Diam}\}^2 * \{RVOT \text{ VTI}\} / \{PV \text{ VTI}\}</math>  Needs measurement: RVOT Diam [Pulmonic], RVOT VTI [Pulmonic], PV VTI [Pulmonic]  Measured by: PV Trace [AUTOCALC]</p>
<p>Qp/Qs [Shunts, Congenital Heart]  Mode: CW:PW:VRCW:VRPW  Formula: <math>3.14159/4 * \{Pulmonic \text{ Diam}\}^2 * \{Pulmonic \text{ VTI}\} / (3.14159/4 * \{Systemic \text{ Diam}\}^2 * \{Systemic \text{ VTI}\})</math>  Needs measurement: Pulmonic Diam [Shunts, Congenital Heart], Pulmonic VTI [Shunts, Congenital Heart], Systemic Diam [Shunts, Congenital Heart], Systemic VTI [Shunts, Congenital Heart]  Measured by: Qp/Qs [AUTOCALC]</p>

Table 2-11: Cardiac Calculation Formulas

<p>RIMP [Pulmonic, Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\frac{(TCO)-(PVET)}{(PVET)}</math>  Needs measurement: TCO [Pulmonic, Tricuspid Valve], PVET [Pulmonic, Tricuspid Valve], PVET [Pulmonic, Tricuspid Valve]  Measured by: RIMP [AUTOCALC]</p>
<p>RVOT Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14/4 * \{RVOT\ Diam\}^2</math>  Needs measurement: RVOT Diam [Dimension]  Measured by: RVOT Diam [2DCALIPER]</p>
<p>RVOT CI [Pulmonic, Valvular PS]  Mode: PW:VRPW  Formula: <math>\frac{((RVOT\ Diam)^2 * 0.785 * \{RVOT\ VTI\}) * \{HR\} / 60}{\{BSA\}}</math>  Needs measurement: RVOT Diam [Pulmonic, Valvular PS], RVOT VTI [Pulmonic, Valvular PS], HR [Pulmonic, Valvular PS],  Measured by: RVOT Trace [SDMANTRACE]</p>
<p>RVOT CO [Pulmonic, Valvular PS]  Mode: PW:VRPW  Formula: <math>\{RVOT\ Diam\}^2 * 0.785 * \{RVOT\ VTI\} * \{HR\} / 60</math>  Needs measurement: RVOT Diam [Pulmonic, Valvular PS], RVOT VTI [Pulmonic, Valvular PS], HR [Pulmonic, Valvular PS]  Measured by: RVOT Trace [SDMANTRACE]</p>
<p>RVOT SI [Pulmonic, Valvular PS]  Mode: PW:VRPW  Formula: <math>\frac{\{RVOT\ Diam\}^2 * 0.785 * \{RVOT\ VTI\}}{\{BSA\}}</math>  Needs measurement: RVOT Diam [Pulmonic, Valvular PS], RVOT VTI [Pulmonic, Valvular PS],  Measured by: RVOT Trace [SDMANTRACE]</p>
<p>RVOT SV [Pulmonic, Valvular PS]  Mode: PW:VRPW  Formula: <math>\{RVOT\ Diam\}^2 * 0.785 * \{RVOT\ VTI\}</math>  Needs measurement: RVOT Diam [Pulmonic, Valvular PS], RVOT VTI [Pulmonic, Valvular PS]  Measured by: RVOT Trace [SDMANTRACE]</p>
<p>RVPEP/ET [Pulmonic]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\frac{\{RVPEP\}}{\{RVET\}}</math>  Needs measurement: RVPEP [Pulmonic], RVET [Pulmonic]  Measured by: RVET [SDTIMECALIPER]</p>
<p>RVPEP/ET [Time]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>\frac{\{RVPEP\}}{\{RVET\}}</math>  Needs measurement: RVPEP [Time], RVET [Time]  Measured by: RVET [MMTIMECALIPER]</p>
<p>RVSP [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{TR\ maxPG\} + \{RAP\}</math>  Needs measurement: TR maxPG [Tricuspid Valve], RAP [Tricuspid Valve]  Measured by: TR Vmax [AUTOCALC]</p>

Table 2-11: Cardiac Calculation Formulas

<p>SI A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ A2C\} - \{LVESV\ A-L\ A2C\}) / \{BSA\}</math>  Needs measurement: LVEDV A-L A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>SI A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ A4C\} - \{LVESV\ A-L\ A4C\}) / \{BSA\}</math>  Needs measurement: LVEDV A-L A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>
<p>SI A-L LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ A-L\ LAX\} - \{LVESV\ A-L\ LAX\}) / \{BSA\}</math>  Needs measurement: LVEDV A-L LAX [Single Plane LAX, AutoBiplane], LVESV A-L LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>SI Biplane [Biplane, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>d = \text{biplane}(\{LVLd\ A4C\}, \{LVD\text{Disks}\}, \{LVLd\ A2C\}, \{LVD\text{Disks}\})</math>  Needs measurement: LVLd A4C [Biplane, AutoBiplane], LVLd A2C [Biplane, AutoBiplane], LVLs A4C [Biplane, AutoBiplane], LVLs A2C [Biplane, AutoBiplane]  Measured by: EF Biplane [AUTOCALC]</p>
<p>SI bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D  Formula: <math>(d-s) / \{BSA\}</math> where: <math>s = (8 / (3 * 3.14159)) * \{LVAs(A4C)\} * \{LVAs(sax\ MV)\} / \{2D / LVIDs\}</math>  <math>d = (8 / (3 * 3.14159)) * \{LVAd\ A4C\} * \{LVAd\ (sax\ MV)\} / \{LVIDd\}</math>  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse], LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse]  Measured by: LVEF BP-EL [AUTOCALC]</p>
<p>SI bullet [Bullet]  Mode: 2D:CF:VR2D  Formula: <math>(d-s) / \{BSA\}</math> where: <math>s = 5/6 * \{LVAs(sax)\} * \{LVLs(apical)\}</math> <math>d = 5/6 * \{LVAd\ sax\} * \{LVLd\ apical\}</math>  Needs measurement: LVAd sax) [Bullet], LVLd apical [Bullet], LVLs apical [Bullet],  Measured by: LVEF Bullet [AUTOCALC]</p>
<p>SI MOD A2C [Biplane, Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ MOD\ A2C\} - \{LVESV\ MOD\ A2C\}) / \{BSA\}</math>  Needs measurement: LVEDV MOD A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV MOD A2C [Biplane, Single Plane A2C, AutoBiplane]  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>SI MOD A4C [Biplane, Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ MOD\ A4C\} - \{LVESV\ MOD\ A4C\}) / \{BSA\}</math>  Needs measurement: LVEDV MOD A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV MOD A4C [Biplane, Single Plane A4C, AutoBiplane]  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>

Table 2-11: Cardiac Calculation Formulas

<p>SI MOD LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>(\{LVEDV\ MOD\ LAX\} - \{LVESV\ MOD\ LAX\}) / \{BSA\}</math>  Needs measurement: LVEDV MOD LAX [Single Plane LAX, AutoBiplane], LVESV MOD LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>SI mod sim [Modified Simpson]  Mode: 2D:CF:VR2D  Formula: <math>d - s / \{BSA\}</math> where: <math>s = (\{LVLs(apical)\} / 9) * ((4 * \{LVAs(sax\ MV)\}) + (2 * \{LVAs(sax\ PM)\}) + \sqrt{(\{LVAs(saxMV)\} * \{LVAs(sax\ PM)\})})</math> <math>d = (\{LVLd\ apical\} / 9) * ((4 * \{LVAd\ (sax\ MV)\}) + (2 * \{LVAd\ sax\ PM\}) + \sqrt{(\{LVAd\ (saxMV)\} * \{LVAd\ sax\ PM\})})</math>  Needs measurement: LVLd apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM [Modified Simpson], LVLs apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson]  Measured by: EF mod sim [AUTOCALC]</p>
<p>SI(A-L) [Generic]  Mode: 2D:CF:VR2D  Formula: <math>(\{EDV(A-L)\} - \{ESV(A-L)\}) / \{BSA\}</math>  Needs measurement: ESV(A-L) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>SI(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>(d - s) / \{BSA\}</math> where: <math>s = \{2D/LVIDs\}^3</math> <math>d = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>SI(Cube) [Generic]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(dv - sv) / \{BSA\}</math> where: <math>sv = \{MM/LVIDs\}^3</math> <math>dv = \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic], LVIDs [Generic],  Measured by: LV Study [MMLV]</p>
<p>SI(MOD) [Generic]  Mode: 2D:CF:VR2D  Formula: <math>(\{EDV(MOD)\} - \{ESV(MOD)\}) / \{BSA\}</math>  Needs measurement: EDV(MOD) [Generic], ESV(MOD) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>SI(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: <math>(d - s) / \{BSA\}</math> <math>s = 7 / (2.4 + \{2D/LVIDs\}) * \{2D/LVIDs\}^3</math> <math>d = 7 / (2.4 + \{LVIDd\}) * \{LVIDd\}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>SI(Teich) [Generic]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(dv - sv) / \{BSA\}</math> where: <math>sv = 7 / (2.4 + \{MM/LVIDs\}) * \{MM/LVIDs\}^3</math> <math>dv = 7 / (2.4 + \{LVIDd\}) * \{LVIDd\}^3</math>  Needs measurement: LVIDd [Generic], LVIDd [Generic], LVIDs [Generic]  Measured by: LV Study [MMLV]</p>

Table 2-11: Cardiac Calculation Formulas

<p>SV A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV A-L A2C}-{LVESV A-L A2C}  Needs measurement: LVEDV A-L A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV A-L A2C [Biplane, Single Plane A2C, AutoBiplane]  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>SV A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV A-L A4C}-{LVESV A-L A4C}  Needs measurement: LVEDV A-L A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV A-L A4C [Biplane, Single Plane A4C, AutoBiplane]  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>
<p>SV A-L LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV A-L LAX}-{LVESV A-L LAX}  Needs measurement: LVEDV A-L LAX [Single Plane LAX, AutoBiplane], LVESV A-L LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>SV Biplane [Biplane, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: <math>d = \text{biplane}(\{LVLd A4C\}, \{LVDisks\}, \{LVLd A2C\}, \{LVDisks\})</math>  Needs measurement: LVLd A4C [Biplane, AutoBiplane], LVLd A2C [Biplane, AutoBiplane], LVLs A4C [Biplane, AutoBiplane], LVLs A2C [Biplane, AutoBiplane]  Measured by: EF Biplane [AUTOCALC]</p>
<p>SV bp el [Biplane Ellipse]  Mode: 2D:CF:VR2D  Formula: <math>d = (8/(3*3.14159))*\{LVAd A4C\}*\{LVAd (sax MV)\}/\{LVIDd\}</math>  Needs measurement: LVAd A4C [Biplane Ellipse], LVAd (sax MV) [Biplane Ellipse], LVIDd [Biplane Ellipse], LVAs A4C [Biplane Ellipse], LVAs sax MV [Biplane Ellipse], LVIDs [Biplane Ellipse]  Measured by: LVEF BP-EL [AUTOCALC]</p>
<p>SV bullet [Bullet]  Mode: 2D:CF:VR2D  Formula: <math>d-s</math> where: <math>s = 5/6*\{LVAs(sax)\}*\{LVLs(apical)\}</math> <math>d = 5/6*\{LVAd sax\}*\{LVLd apical\}</math>  Needs measurement: LVAd sax [Bullet], LVLd apical [Bullet], LVLs apical [Bullet]  Measured by: LVEF Bullet [AUTOCALC]</p>
<p>SV MOD A2C [Biplane, Single Plane A2C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV MOD A2C}-{LVESV MOD A2C}  Needs measurement: LVEDV MOD A2C [Biplane, Single Plane A2C, AutoBiplane], LVESV MOD A2C [Biplane, Single Plane A2C, AutoBiplane]  Measured by: EF SP A2C [AUTOCALC], LVESV A2C [2DVOLUMETRACE], A2C [2DAUTOVOLUME]</p>
<p>SV MOD A4C [Biplane, Single Plane A4C, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV MOD A4C}-{LVESV MOD A4C}  Needs measurement: LVEDV MOD A4C [Biplane, Single Plane A4C, AutoBiplane], LVESV MOD A4C [Biplane, Single Plane A4C, AutoBiplane]  Measured by: EF SP A4C [AUTOCALC], LVESV A4C [2DVOLUMETRACE], A4C [2DAUTOVOLUME]</p>

Table 2-11: Cardiac Calculation Formulas

<p>SV MOD LAX [Single Plane LAX, AutoBiplane]  Mode: 2D:CF:VR2D  Formula: {LVEDV MOD LAX}-{LVESV MOD LAX}  Needs measurement: LVEDV MOD LAX [Single Plane LAX, AutoBiplane], LVESV MOD LAX [Single Plane LAX, AutoBiplane]  Measured by: LVESV LAX [2DVOLUMETRACE], EF SP LAX [AUTOCALC], AutoVolume [2DAUTOVOLUME]</p>
<p>SV mod sim [Modified Simpson]  Mode: 2D:CF:VR2D  Formula: <math>\{ \{ \text{LVld apical} \} / 9 \} * ( ( 4 * \{ \text{LVAd (sax MV)} \} ) + ( 2 * \{ \text{LVAd sax PM} \} ) + \text{sqrt} ( \{ \text{LVAd (sax MV)} \} * \{ \text{LVAd sax PM} \} ) )</math>  Needs measurement: LVld apical [Modified Simpson], LVAd (sax MV) [Modified Simpson], LVAd sax PM [Modified Simpson], LVLs apical [Modified Simpson], LVAs sax MV [Modified Simpson], LVAs sax PM [Modified Simpson]  Measured by: EF mod sim [AUTOCALC]</p>
<p>SV(A-L) [Generic]  Mode: 2D:CF:VR2D  Formula: {EDV(A-L)}-{ESV(A-L)}  Needs measurement: ESV(A-L) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>SV(Cube) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: d-s where: <math>s = \{ 2D / \text{LVIDs} \}^3</math> <math>d = \{ \text{LVIDd} \}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>SV(Cube) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: dv-sv where: <math>sv = \{ \text{MM} / \text{LVIDs} \}^3</math> <math>dv = \{ \text{LVIDd} \}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>SV(MOD) [Generic]  Mode: 2D:CF:VR2D  Formula: {EDV(MOD)}-{ESV(MOD)}  Needs measurement: EDV(MOD) [Generic], ESV(MOD) [Generic]  Measured by: EF Volume [AUTOCALC]</p>
<p>SV(Teich) [Dimension, Cube/Teicholz]  Mode: 2D:CF:VR2D  Formula: d-s where: <math>s = 7 / ( 2.4 + \{ 2D / \text{LVIDs} \} ) * \{ 2D / \text{LVIDs} \}^3</math> <math>d = 7 / ( 2.4 + \{ \text{LVIDd} \} ) * \{ \text{LVIDd} \}^3</math>  Needs measurement: LVIDd [Dimension, Cube/Teicholz], LVIDs [Dimension, Cube/Teicholz]  Measured by: LVs [2DLV], LVIDs [2DCALIPER], EF(Cube) [AUTOCALC]</p>
<p>SV(Teich) [Generic, Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: dv-sv where: <math>sv = 7 / ( 2.4 + \{ \text{MM} / \text{LVIDs} \} ) * \{ \text{MM} / \text{LVIDs} \}^3</math> <math>dv = 7 / ( 2.4 + \{ \text{LVIDd} \} ) * \{ \text{LVIDd} \}^3</math>  Needs measurement: LVIDd [Generic, Dimension], LVIDs [Generic, Dimension]  Measured by: LV Study [MMLV], LVIDs [MMDISCALIPER]</p>
<p>Systemic CO [Shunts, Congenital Heart]  Mode: CW:PW:VRCW:VRPW  Formula: {Systemic SV}*{Systemic HR}/60  Needs measurement: Systemic SV [Shunts, Congenital Heart], Systemic HR [Shunts, Congenital Heart]  Measured by: Systemic VTI [SDMANTRACE]</p>

Table 2-11: Cardiac Calculation Formulas

<p>Systemic SV [Shunts, Congenital Heart]  Mode: CW:PW:VRCW:VRPW  Formula: <math>3.14159/4 * \{\text{Systemic Diam}\}^2 * \{\text{Systemic VTI}\}</math>  Needs measurement: Systemic Diam [Shunts, Congenital Heart], Systemic VTI [Shunts, Congenital Heart]  Measured by: Systemic VTI [SDMANTRACE], Systemic VTI [SDMANTRACE]  Used to calculate: Systemic CO</p>
<p>TR ERO [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{\text{TR Flow}\} / \{\text{TR Vmax}\}</math>  Needs measurement: TR Flow [PISA], TR Vmax [PISA]  Measured by: TR Trace [AUTOCALC]</p>
<p>TR RV [PISA]  Mode: CF:CW:PW:VRCW:VRPW  Formula: <math>\{\text{TR Flow}\} / \{\text{TR Vmax}\} * \{\text{TR VTI}\}</math>  Needs measurement: TR Flow [PISA], TR Vmax [PISA], TR VTI [PISA]  Measured by: TR Trace [AUTOCALC]</p>
<p>TV AccT/DecT [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{\text{TV AccT}\} / \{\text{TV Dec Time}\}</math>  Needs measurement: TV AccT [Tricuspid Valve], TV Dec Time [Tricuspid Valve]  Measured by: TV AccT [SDCALIPER]</p>
<p>TV Area [Dimension]  Mode: 2D:CF:VR2D  Formula: <math>3.14/4 * \{\text{TV Ann Diam}\}^2</math>  Needs measurement: TV Ann Diam [Dimension]  Measured by: TV Ann Diam [2DCALIPER]</p>
<p>TV CI [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>(\{\text{TV Ann Diam}\}^2 * 0.785 * \{\text{TV VTI}\}) * \{\text{HR}\} / 60 / \{\text{BSA}\}</math>  Needs measurement: TV Ann Diam [Tricuspid Valve], TV VTI [Tricuspid Valve], HR [Tricuspid Valve]  Measured by: TV Trace [SDMANTRACE]</p>
<p>TV CO [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>(\{\text{TV Ann Diam}\}^2 * 0.785 * \{\text{TV VTI}\}) * \{\text{HR}\} / 60</math>  Needs measurement: TV Ann Diam [Tricuspid Valve], TV VTI [Tricuspid Valve], HR [Tricuspid Valve]  Measured by: TV Trace [SDMANTRACE]</p>
<p>TV E/A Ratio [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{\text{TV E Vel}\} / \{\text{TV A Vel}\}</math>  Needs measurement: TV E Vel [Tricuspid Valve], TV A Vel [Tricuspid Valve]  Measured by: TV A Vel [SDPTCALIPER]</p>
<p>TV SI [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>(\{\text{TV Ann Diam}\}^2 * 0.785 * \{\text{TV VTI}\}) / \{\text{BSA}\}</math>  Needs measurement: TV Ann Diam [Tricuspid Valve], TV VTI [Tricuspid Valve]  Measured by: TV Trace [SDMANTRACE]</p>



Table 2-11: Cardiac Calculation Formulas

<p>TV SV [Tricuspid Valve]  Mode: CW:PW:VRCW:VRPW  Formula: <math>\{TV \text{ Ann Diam}\}^2 \times 0.785 \times \{TV \text{ VTI}\}</math>  Needs measurement: TV Ann Diam [Tricuspid Valve], TV VTI [Tricuspid Valve]  Measured by: TV Trace [SDMANTRACE]</p>
<p>TVA (Vmax) [Tricuspid Valve]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 \times \{RVOT \text{ Diam}\}^2 \times \{RVOT \text{ Vmax}\} / \{TV \text{ Vmax}\}</math>  Needs measurement: RVOT Diam [Tricuspid Valve], RVOT Vmax [Tricuspid Valve], TV Vmax [Tricuspid Valve]  Measured by: TV Vmax [AUTOCALC]</p>
<p>TVA (Vmax) [Tricuspid Valve]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 \times \{RVOT \text{ Diam}\}^2 \times \{RVOT \text{ Vmax}\} / \{TV \text{ Vmax}\}</math>  Needs measurement: RVOT Diam [Tricuspid Valve], RVOT Vmax [Tricuspid Valve], TV Vmax [Tricuspid Valve]  Measured by: TV Trace [AUTOCALC]</p>
<p>TVA (VTI) [Tricuspid Valve]  Mode: 2D:CW:PW:VRCW:VRPW  Formula: <math>3.14/4 \times \{RVOT \text{ Diam}\}^2 \times \{RVOT \text{ VTI}\} / \{TV \text{ VTI}\}</math>  Needs measurement: RVOT Diam [Tricuspid Valve], RVOT VTI [Tricuspid Valve], TV VTI [Tricuspid Valve]  Measured by: TV Trace [AUTOCALC]</p>
<p>Vcf mean [Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(\{LVIDd\} - \{LVIDs\}) / (\{LVIDd\} \times \{LVET\})</math>  Needs measurement: LVIDd [Dimension], LVIDs [Dimension], LVET [Dimension]  Measured by: Vcf [MMTIMECALIPER]</p>
<p>Vcf mn (corr) [Dimension]  Mode: MM:CM:AMM:CAMM:VRMM  Formula: <math>(\{LVIDd\} - \{LVIDs\}) / (\{LVIDd\} \times (\{LVET\} / \sqrt{\{Time\}}))</math>  Needs measurement: LVIDd [Dimension], LVIDs [Dimension], LVET [Dimension], Time [Dimension]  Measured by: Vcf [MMTIMECALIPER]</p>

# DICOM SR Measurements

DICOM Structured Reporting (SR) is a standardized format for medical results. LOGIQ 7/LOGIQ 7 Pro supports the following templates.

- OB-GYN REPORT TEMPLATES
- VASCULAR ULTRASOUND REPORT TEMPLATES
- ECHOCARDIOGRAPHY PROCEDURE REPORT TEMPLATES

These templates do not support all M&A results from LOGIQ 7/ LOGIQ 7 Pro.

## Supported parameters

range of lower measurement uncertainty	Est RVSP	OB/ASUM2000/BPD	Origin of vessel
% Area Reduction	estimated	OB/ASUM2000/BPD-GA	other
% Diameter Reduction	ESV(bp el)	OB/ASUM2000/BPD-Max	Ovarian Artery
range of upper measurement uncertainty	ESV(bullet)	OB/ASUM2000/BPD-Min	Ovarian vein
range of measurement uncertainty	ESV(mod sim)	OB/ASUM2000/CRL	P_Vein A
2 sigma deviation	expiration	OB/ASUM2000/CRL-GA	P_Vein A Dur
2D	External Carotid Artery	OB/ASUM2000/FL	P_Vein D
2D/%FS	External Iliac Artery	OB/ASUM2000/HC	P_Vein D VTI
2D/%IVS Thck	External Iliac Vein	OB/ASUM2000/HC-GA	P_Vein S
2D/%LVPW Thck	fetal biometry	OB/ASUM2000/HL	P_Vein S VTI
2D/Ao Arch Diam	fetal biometry ratios	OB/ASUM2000/HL-GA	P_Vein S/D Ratio
2D/Ao Asc Diam	fetal cranium	OB/ASUM2000/OFD	PA

2D/Ao Desc Diam	fetal long bones	OB/ASUM2000/OFD-GA	pat characteristics
2D/Ao Isthmus	fetus summary	OB/Biophysical/breathing	Peak Systolic Velocity
2D/Ao Root Diam	Fifth Lumbar Artery	OB/Biophysical/fluid	pelvis and uterus
2D/Ao/LA	finding site	OB/Biophysical/movement	percentile ranking
2D/ASD Diam	findings	OB/Biophysical/reactiveNst	Perforating Artery of Kidney
2D/AV Area	First Lumbar Artery	OB/Biophysical/score	Peroneal Artery
2D/AV Cusp	flow direction	OB/Biophysical/tone	Peroneal Vein
2D/AV Diam	Fourth Lumbar Artery	OB/Campbell/Ratio HC/AC	phase
2D/AVA Planimetry	Full Bernoulli	OB/Campbell/Ratio HC/AC-Max	PHT
2D/AVA/AV Diam	Gastric Artery	OB/Campbell/Ratio HC/AC-Min	PISA
2D/CI(Cube)	Gastric vein	OB/Eriksen/TAD	PISA/AR/ERO
2D/CI(Teich)	Gastrocnemius vein	OB/Eriksen/TAD-GA	PISA/AR/Flow
2D/CO(Cube)	Gastroduodenal Artery	OB/Eriksen/TAD-Max	PISA/AR/RF
2D/CO(Teich)	Giacomini vein	OB/Eriksen/TAD-Min	PISA/AR/RV
2D/EDV(A-L)	Great Saphenous Vein	OB/Goldstein/TCD	PISA/AR/Vmax
2D/EDV(Cube)	growth percentile rank	OB/Goldstein/TCD-GA	PISA/AR/VTI
2D/EDV(MOD)	growth Z-score	OB/Hadlock/AC	PISA/MR/ERO
2D/EDV(Teich)	Gyn/2D/Endo	OB/Hadlock/AC-GA	PISA/MR/Flow
2D/EF(A-L)	Gyn/2D/OvFoVolume/Distance1	OB/Hadlock/AC-GP	PISA/MR/RF
2D/EF(Cube)	Gyn/2D/OvFoVolume/Distance2	OB/Hadlock/AC-Max	PISA/MR/RV
2D/EF(MOD)	Gyn/2D/OvFoVolume/Distance3	OB/Hadlock/AC-Min	PISA/MR/Vmax
2D/EF(Teich)	Gyn/2D/OvFoVolume/MeanDistance	OB/Hadlock/BPD	PISA/MR/VTI
2D/ESV(A-L)	Gyn/2D/OvFoVolume/Volume	OB/Hadlock/BPD-GA	PISA/PR/ERO
2D/ESV(Cube)	Gyn/2D/UtH	OB/Hadlock/BPD-GP	PISA/PR/Flow
2D/ESV(MOD)	Gyn/2D/UtL	OB/Hadlock/BPD-Max	PISA/PR/RV

## Measurement Formulas

2D/ESV(Teich)	Gyn/2D/UtVolume	OB/Hadlock/BPD-Min	PISA/PR/Vmax
2D/IVC	Gyn/2D/UtW	OB/Hadlock/CI	PISA/PR/VTI
2D/IVC Diam Exp	Heart Rate	OB/Hadlock/CRL	PISA/TR/ERO
2D/IVC Diam Ins	Hepatic Vein	OB/Hadlock/CRL-GA	PISA/TR/Flow
2D/IVSd	Highly significant	OB/Hadlock/CRL-Max	PISA/TR/RV
2D/IVSs	Hilar Artery	OB/Hadlock/CRL-Min	PISA/TR/Vmax
2D/LA	ICA/CCA velocity ratio	OB/Hadlock/ EFW(AC,BPD,FL)	PISA/TR/VTI
2D/LA/Ao	identifier	OB/Hadlock/ EFW(AC,BPD,FL)- EQUATION	Planimetry
2D/LAA systole	Ileal vein	OB/Hadlock/ EFW(AC,BPD,FL,HC)	Plantar Arterial Arch
2D/LAX/Trans AoD diastole	image library	OB/Hadlock/ EFW(AC,BPD,FL,HC)- EQUATION	Plax
2D/LAX/Trans AoD systole	Inferior	OB/Hadlock/ EFW(AC,FL)	Popliteal Artery
2D/LAX/Trans AVA diastole	Inferior Mesenteric Artery	OB/Hadlock/ EFW(AC,FL)- EQUATION	Popliteal Vein
2D/LAX/Trans AVA systole	Inferior Mesenteric Vein	OB/Hadlock/ EFW(AC,FL,HC)	population description
2D/LPA	Inferior Right Hepatic Vein	OB/Hadlock/ EFW(AC,FL,HC)- EQUATION	Portal Vein
2D/LVA diastole	Inferior Vena Cava	OB/Hadlock/ EFW(AC,HC)	Posterior arch vein
2D/LVA systole	Infra-renal Aorta	OB/Hadlock/ EFW(AC,HC)- EQUATION	Posterior Cerebral Artery
2D/LVd Mass	Innominate Artery	OB/Hadlock/FL	Posterior Communicating Artery
2D/LVd Mass/ASE	Innominate vein	OB/Hadlock/FL-GA	Posterior Tibial Artery
2D/LVIDd	inspiration	OB/Hadlock/FL-GP	Posterior Tibial Vein
2D/LVIDs	Interlobar Artery of Kidney	OB/Hadlock/FL-Max	pound
2D/LVOT Area	Internal Carotid Artery	OB/Hadlock/FL-Min	PR Dec Slope
2D/LVOT Diam	Internal Carotid Artery	OB/Hadlock/HC	PR Dec Time

2D/LVPWd	Internal Iliac Artery	OB/Hadlock/HC-GA	PR maxPG
2D/LVPWs	Internal Jugular vein	OB/Hadlock/HC-GP	PR meanPG
2D/LVs Mass	IVCT	OB/Hadlock/HC-Max	PR PHT
2D/LVs Mass/ASE	IVRT	OB/Hadlock/HC-Min	PR Vmax
2D/MPA	LA	OB/Hadlock/OFD(HC)	PR Vmean
2D/MV Annulus Diam	LAAs(A2C)	OB/Hadlock/Ratio FL/ AC	PR VTI
2D/MV Area	LAAs(A4C)	OB/Hadlock/Ratio FL/ HC	PRend maxPG
2D/MVA Planimetry	LAESV(A-L A2C)	OB/Hansmann/AC	PRend Vmax
2D/PV Annulus Diam	LAESV(A-L A4C)	OB/Hansmann/AC-GA	presence undetermined
2D/PV Area	LAESV(MOD A2C)	OB/Hansmann/AC-Max	present
2D/RPA	LAESV(MOD A4C)	OB/Hansmann/AC-Min	Procedural Scope of Findings
2D/RVAWd	LALd(A4C)	OB/Hansmann/BPD	procedure reported
2D/RVAWs	LALs(A4C)	OB/Hansmann/BPD-GA	Profunda Femoris Artery
2D/RVIDd	Lateral	OB/Hansmann/BPD- Max	Profunda Femoris Vein
2D/RVIDs	Lateral calf perforator	OB/Hansmann/BPD-Min	Proper Hepatic Artery
2D/RVOT Area	Lateral mitral annulus	OB/Hansmann/CRL	Proximal
2D/RVOT Diam	Laterality	OB/Hansmann/CRL-GA	Psax
2D/SAX/LVA diastole	Left	OB/Hansmann/CRL- Max	Psaxao
2D/SAX/LVA systole	Left Hepatic Vein	OB/Hansmann/CRL-Min	Psaxchord
2D/SAX/MVA	left lower	OB/Hansmann/FL	Psaxmv
2D/SAX/Trans AoD diastole	Left Main Branch of Portal Vein	OB/Hansmann/FL-GA	Psaxpap
2D/SAX/Trans AoD systole	left upper	OB/Hansmann/FL-Max	Pulsatility Index
2D/SAX/Trans AVA diastole	Lesser Saphenous Vein	OB/Hansmann/FL-Min	PV
2D/SAX/Trans AVA systole	LIMP	OB/Hansmann/GS	PV Acc Time
2D/SI(A-L)	Lobar Artery	OB/Hansmann/GS-GA	PV Acc Time/ET Ratio
2D/SI(Cube)	Lumbar Artery	OB/Hansmann/HC	PV HR
2D/SI(MOD)	LV	OB/Hansmann/HC-GA	PV maxPG

## Measurement Formulas

2D/SI(Teich)	LV Mass-by-M-mode	OB/Hansmann/HC-Max	PV meanPG
2D/SV(A-L)	LV Mass-by-TE	OB/Hansmann/HC-Min	PV Vmax
2D/SV(Cube)	LVAd(A2C)	OB/Hansmann/OFD	PV Vmax P
2D/SV(MOD)	LVAd(A4C)	OB/Hansmann/OFD-GA	PV Vmean
2D/SV(Teich)	LVAd(LAX)	OB/Hansmann/OFD-Max	PV VTI
2D/SVC Diam Exp	LVAd(sax MV)	OB/Hansmann/OFD-Min	PVA (Vmax)
2D/SVC Diam Ins	LVAd(sax PM)	OB/Hansmann/TAD	PVA (Vmax)P
2D/TV Annulus Diam	LVAd(sax)	OB/Hansmann/TAD-GA	PVA (VTI)
2D/TV Area	LVAs(A2C)	OB/Hansmann/TAD-Max	PVein
2D/VSD Diam	LVAs(A4C)	OB/Hansmann/TAD-Min	PVET
5-point	LVAs(LAX)	OB/Hansmann/ThD	PW
A2C	LVAs(sax MV)	OB/Hansmann/ThD-GA	Qp/Qs
A4C	LVAs(sax PM)	OB/Hansmann/ThD-Max	quart
AA	LVAs(sax)	OB/Hansmann/ThD-Min	RA
Abnormal	LVd Mass(A-L)	OB/Hansmann/TTD	RAAs(A4C)
Abnormally High	LVEDV(A-L A2C)	OB/Hansmann/TTD-GA	rad
Abnormally Low	LVEDV(A-L A4C)	OB/Hellman/GS	Radial artery
absent	LVEDV(A-L LAX)	OB/Hellman/GS-GA	Radial vein
Acceleration Index	LVEDV(MOD A2C)	OB/Hellman/GS-Max	RALd(A4C)
Acceleration Time	LVEDV(MOD A4C)	OB/Hellman/GS-Min	RALs(A4C)
Accessory Renal Artery	LVEDV(MOD BP)	OB/Hill/TCD	RAP
Accessory Renal Artery	LVEDV(MOD BP)_03	OB/Hill/TCD-GA	recent
Adult Echocardiography Procedure Report	LVEDV(MOD LAX)	OB/Hill/TCD-Max	reference authority
age	LVESV(A-L A2C)	OB/Hill/TCD-Min	regurgitant
AI	LVESV(A-L A4C)	OB/Hohler/FL	Renal Artery
AL	LVESV(A-L LAX)	OB/Hohler/FL-GA	Renal Artery/Aorta velocity ratio
anatomical site modifier	LVESV(MOD A2C)	OB/Hohler/Ratio FL/BPD	Renal Vein
antegrade	LVESV(MOD A4C)	OB/Jeanty/AC	Resistivity Index
Anterior Cerebral Artery	LVESV(MOD BP)	OB/Jeanty/AC-GA	respiration state

Anterior Communicating Artery	LVESV(MOD BP)_03	OB/Jeanty/AC-Max	Right
Anterior Tibial Artery	LVESV(MOD LAX)	OB/Jeanty/AC-Min	Right Hepatic Vein
Anterior Tibial Vein	LVET	OB/Jeanty/BPD	right lower
Anterior-Middle Cerebral Artery Bifurcation	LVLd(A2C)	OB/Jeanty/BPD-GA	Right Main Branch of Portal Vein
Anterior-Posterior Cerebral Artery Bifurcation	LVLd(A4C)	OB/Jeanty/BPD-GP	right upper
Aorta	LVLd(apical)	OB/Jeanty/BPD-Max	RIMP
Aorta	LVLs(A2C)	OB/Jeanty/BPD-Min	RV
Aortic Valve Ring	LVLs(A4C)	OB/Jeanty/CRL	RVET
AP/LVOT Diam	LVLs(apical)	OB/Jeanty/CRL-GA	RVIT
AP/LVOT VTI	LVOT	OB/Jeanty/CRL-Max	RVLd(A4C)
Apex	LVOT CI	OB/Jeanty/CRL-Min	RVLs(A4C)
Aplax	LVOT CO	OB/Jeanty/FIB	RVOT
AR Dec Slope	LVOT HR	OB/Jeanty/FIB-GA	RVOT
AR Dec Time	LVOT maxPG	OB/Jeanty/FIB-GP	RVOT CI
AR maxPG	LVOT meanPG	OB/Jeanty/FL	RVOT CO
AR meanPG	LVOT SI	OB/Jeanty/FL-GA	RVOT HR
AR PHT	LVOT SV	OB/Jeanty/FL-GP	RVOT maxPG
AR Vmax	LVOT Vmax	OB/Jeanty/FL-Max	RVOT meanPG
AR Vmean	LVOT Vmax P	OB/Jeanty/FL-Min	RVOT SI
AR VTI	LVOT Vmean	OB/Jeanty/HC	RVOT SV
Arcuate Artery of the Kidney	LVOT VTI	OB/Jeanty/HC-GA	RVOT Vmax
Area-Length Biplane	LVPEP	OB/Jeanty/HC-GP	RVOT Vmax P
Area-length single plane	LVs Mass(A-L)	OB/Jeanty/HC-Max	RVOT Vmean
ARend maxPG	MA	OB/Jeanty/HC-Min	RVOT VTI
ARend Vmax	Main	OB/Jeanty/HL	RVPEP
Artery of Abdomen	manual	OB/Jeanty/HL-GA	s (Scarred Myocardium)
Artery of Abdomen-Unilateral	MAS	OB/Jeanty/HL-Max	Saphenofemoral Junction
Artery of Lower Extremity	MCO	OB/Jeanty/HL-Min	scope of findings

## Measurement Formulas

Artery of neck	mean	OB/Jeanty/Radius	scoring scheme
Artery of Upper Extremity	measurement group	OB/Jeanty/Radius-GA	SD/Q-to-PV close
AS	Medial	OB/Jeanty/Radius-GP	SD/Q-to-TV open
ASD	Medial mitral annulus	OB/Jeanty/TIB	Second Lumbar Artery
ASD maxPG	Median Cubital vein	OB/Jeanty/TIB-GA	Segmental Artery
ASD Vmax	method	OB/Jeanty/TIB-Max	selection
atm	method citation	OB/Jeanty/TIB-Min	sex
AV	MI	OB/Jeanty/ULNA	SI(A-L A2C)
AV Acc Slope	Middle Cerebral Artery	OB/Jeanty/ULNA-GA	SI(A-L A4C)
AV Acc Time	Middle Hepatic Vein	OB/Jeanty/ULNA-Max	SI(A-L LAX)
AV Acc Time/ET Ratio	Mid-longitudinal	OB/Jeanty/ULNA-Min	SI(Biplane)
AV CI	min	OB/JSUM/AC	SI(Biplane)_03
AV CO	Minimum Diastolic Velocity	OB/JSUM/BPD	SI(bp el)
AV Dec Slope	Mitral Annulus	OB/JSUM/CRL	SI(bullet)
AV Dec Time	ML	OB/JSUM/FL	SI(MOD A2C)
AV HR	MM	OB/Kurtz/BPD	SI(MOD A4C)
AV maxPG	MM/%FS	OB/Kurtz/BPD-GA	SI(MOD LAX)
AV meanPG	MM/%IVS Thck	OB/Kurtz/BPD-Max	SI(mod sim)
AV SI	MM/%LVPW Thck	OB/Kurtz/BPD-Min	significance
AV SV	MM/Ao Root Diam	OB/Mayden/IOD	Significance Undetermined
AV Vmax	MM/Ao/LA	OB/Mayden/IOD-GA	Significant
AV Vmax P	MM/AV Cusp	OB/Mayden/OOD	Simplified Bernoulli
AV Vmean	MM/AV Diam	OB/Mayden/OOD-GA	Single Plane Ellipse
AV VTI	MM/CI(Cube)	OB/Mercer/Ft	Sixth Lumbar Artery
AVA (Vmax)	MM/CI(Teich)	OB/Mercer/Ft-GA	Soleal vein
AVA (Vmax)2	MM/CO(Cube)	OB/Mercer/Ft-Max	Splenic artery
AVA (Vmax)P	MM/CO(Teich)	OB/Mercer/Ft-Min	Splenic Vein
AVA (Vmax)P2	MM/EDV(Cube)	OB/Merz/AC	standard deviation
AVA (VTI)	MM/EDV(Teich)	OB/Merz/AC-GA	Subclavian Artery
aver	MM/EF(Cube)	OB/Merz/AC-GP	Subclavian artery



AVET	MM/EF(Teich)	OB/Merz/AC-Max	Subclavian vein
Axillary artery	MM/EPSS	OB/Merz/AC-Min	Subxlax
Axillary vein	MM/ESV(Cube)	OB/Merz/BPD	Subxsax
BA	MM/ESV(Teich)	OB/Merz/BPD-GA	summary
bar	MM/IVSd	OB/Merz/BPD-GP	Superficial Femoral Artery
BAS	MM/IVSd/LVPWd	OB/Merz/BPD-Max	Superficial Femoral Vein
Basilar Artery	MM/IVSs	OB/Merz/BPD-Min	Superficial Palmar Arch
Basilic vein	MM/LA	OB/Merz/FL	Superficial Palmar Venous Arch
BI	MM/LA/Ao	OB/Merz/FL-GA	Superior
biometry group	MM/LAAo/Ao Root Diam	OB/Merz/FL-GP	Superior Mesenteric Artery
biophysical profile	MM/LAAo/Ao/LA	OB/Merz/FL-Max	Superior Mesenteric Vein
Biplane Ellipse	MM/LAAo/LA/Ao	OB/Merz/FL-Min	Superior Vena Cava
BL	MM/LVd Mass	OB/Merz/HC	Supra-renal Aorta
Blood Vessel of Head	MM/LVd Mass/ASE	OB/Merz/HC-GA	SuprastLaA
Blood Vessel of Head-Unilateral	MM/LVET	OB/Merz/HC-GP	SuprastSA
BP	MM/LVIDd	OB/Merz/HC-Max	SV(A-L A2C)
Brachial artery	MM/LVIDs	OB/Merz/HC-Min	SV(A-L A4C)
Brachial vein	MM/LVPEP	OB/Moore/AFI Sum	SV(A-L LAX)
BS	MM/LVPWd	OB/Moore/AFI1	SV(Biplane)
BSA	MM/LVPWs	OB/Moore/AFI2	SV(Biplane)_03
BSA formula	MM/LVs Mass	OB/Moore/AFI3	SV(bp el)
calculated	MM/LVs Mass/ASE	OB/Moore/AFI4	SV(bullet)
Carotid Bifurcation	MM/MV D-E Excursion	OB/Nelson/CRL	SV(MOD A2C)
Carotid Bulb	MM/MV E/A Ratio	OB/Nelson/CRL-GA	SV(MOD A4C)
Carotid Siphon	MM/MV E-F Slope	OB/NT	SV(MOD LAX)
CE	MM/Q-to-PV close	OB/Osaka/BPD	SV(mod sim)
CE-by-MV	MM/Q-to-TV open	OB/Osaka/BPD-GA	systole
CE-by-PV	MM/RVAWd	OB/Osaka/BPD-Max	systolic BP
CE-by-VTI	MM/RVAWs	OB/Osaka/BPD-Min	Systolic to Diastolic Velocity Ratio

## Measurement Formulas

Celiac Axis	MM/RVET	OB/Osaka/CRL	table of values
Central Retinal Artery	MM/RVIDs	OB/Osaka/CRL-GA	table of values citation
Central Retinal Vein	MM/RVOT	OB/Osaka/CRL-Max	TCO
Cephalic vein	MM/RVPEP	OB/Osaka/CRL-Min	Teichholz
CF	MM/SI(Cube)	OB/Osaka/EFW	Testicular Artery
CFM/AR Signal Area	MM/SI(Teich)	OB/Osaka/EFW-EQUATION	Testicular Vein
CFM/MR Signal Area	MM/SV(Cube)	OB/Osaka/FL	Thigh perforator
CFM/PR Signal Area	MM/SV(Teich)	OB/Osaka/FL-GA	Third Lumbar Artery
CFM/TR Signal Area	MOD biplane	OB/Osaka/FL-Max	Time averaged mean velocity
CI(A-L A2C)	MOD single plane	OB/Osaka/FL-Min	Time averaged peak velocity
CI(A-L A2C)/AutoHR	mode	OB/Osaka/FTA	TR maxPG
CI(A-L A4C)	Most significant	OB/Osaka/HL	TR meanPG
CI(A-L A4C)/AutoHR	MP	OB/Osaka/HL-GA	TR Vmax
CI(A-L LAX)	MP/LVOT Diam	OB/Osaka/HL-Max	TR Vmean
CI(A-L LAX)/AutoHR	MP/LVOT VTI	OB/Osaka/HL-Min	TR VTI
CI(Biplane)	MPA Vmax	OB/Paris/BPD	Transjugular Intrahepatic Portosystemic Shunt
CI(Biplane)_03	MR Acc Slope	OB/Paris/CRL	Tricuspid Annulus
CI(bp el)	MR dp/dt	OB/Paris/FL	TV
CI(bullet)	MR maxPG	OB/Paris/Ft	TV A Velocity
CI(MOD A2C)	MR meanPG	OB/Paris/TAD	TV Acc Slope
CI(MOD A2C)/AutoHR	MR Vmax	OB/Rempen/BPD	TV Acc Time
CI(MOD A4C)	MR Vmean	OB/Rempen/BPD-GA	TV Dec Slope
CI(MOD A4C)/AutoHR	MR VTI	OB/Rempen/BPD-GP	TV Dec Time
CI(MOD LAX)	MS	OB/Rempen/CRL	TV E Velocity
CI(MOD LAX)/AutoHR	MV	OB/Rempen/CRL-GA	TV E/A Ratio
CI(mod sim)	MV A Dur	OB/Rempen/CRL-GP	TV HR
CO(A-L A2C)	MV A Velocity	OB/Rempen/CRL-Max	TV maxPG
CO(A-L A2C)/AutoHR	MV Acc Slope	OB/Rempen/CRL-Min	TV meanPG
CO(A-L A4C)	MV Acc Time	OB/Rempen/GS	TV PHT

CO(A-L A4C)/AutoHR	MV Acc Time/MV Dec Time	OB/Rempen/GS-GA	TV Vmax
CO(A-L LAX)	MV CI	OB/Rempen/GS-GP	TV Vmax P
CO(A-L LAX)/AutoHR	MV CO	OB/Rempen/GS-Max	TV Vmean
CO(A-L)	MV Dec Slope	OB/Rempen/GS-Min	TV VTI
CO(Biplane)	MV Dec Time	OB/Robinson/CRL	TVA
CO(Biplane)_03	MV E Velocity	OB/Robinson/CRL-GA	TVA (Vmax)
CO(bp el)	MV E/A Ratio	OB/Robinson/CRL-Max	TVA (Vmax)P
CO(bullet)	MV Eann Velocity	OB/Robinson/CRL-Min	TVA (VTI)
CO(MOD A2C)	MV HR	OB/Shepard/EFW(AC,BPD)	Ulnar artery
CO(MOD A2C)/AutoHR	MV maxPG	OB/Shepard/EFW(AC,BPD)-EQUATION	Ulnar vein
CO(MOD A4C)	MV meanPG	OB/Shinozuka/AC	Umbilical Artery
CO(MOD A4C)/AutoHR	MV PHT	OB/Shinozuka/AC-GA	Umbilical Vein
CO(MOD LAX)	MV SI	OB/Shinozuka/AC-Max	undetermined
CO(MOD LAX)/AutoHR	MV SV	OB/Shinozuka/AC-Min	Unilateral
CO(mod sim)	MV Vmax	OB/Shinozuka/APTD	Uterine Artery
Collateral branch of vessel	MV Vmean	OB/Shinozuka/BPD	Vascular Structure of Kidney
comment	MV VTI	OB/Shinozuka/BPD-GA	Vascular Ultrasound Procedure Report
Common Carotid Artery	MVA (PHT)	OB/Shinozuka/BPD-Max	VC
Common Femoral Artery	MVA (VTI)	OB/Shinozuka/BPD-Min	Vein of Abdomen
Common Femoral Vein	myocardial wall	OB/Shinozuka/CRL	Vein of Abdomen-Unilateral
Common Hepatic Artery	Normal	OB/Shinozuka/CRL-GA	Vein of Lower Extremity
Common Hepatic artery	normal range authority	OB/Shinozuka/CRL-Max	Vein of Upper Extremity
Common Iliac Artery	normal range description	OB/Shinozuka/CRL-Min	Velocity ratio
Common Iliac Artery	Normal Range Lower Limit	OB/Shinozuka/EFW1	Vertebral Artery
Common Iliac Vein	Normal Range Upper Limit	OB/Shinozuka/EFW1-EQUATION	Vessel lumen cross-sectional area
Common iliac vein	normality	OB/Shinozuka/EFW2	Vessel lumen diameter

## Measurement Formulas

Congenital	Normality Undetermined	OB/Shinozuka/EFW2-EQUATION	Vessel outside diameter
CS	Not significant	OB/Shinozuka/EFW3	view
Cube	Ob/2D/OvH	OB/Shinozuka/EFW3-EQUATION	Volume flow
CW	Ob/2D/OvH-left	OB/Shinozuka/FL	VSD
Deceleration Time	Ob/2D/OvH-right	OB/Shinozuka/FL-GA	VSD maxPG
Deep Palmar Arch of Radial Artery	Ob/2D/OvL	OB/Shinozuka/FL-Max	VSD Vmax
Deep Palmar Venous Arch	Ob/2D/OvL-left	OB/Shinozuka/FL-Min	Wall Motion Score -1.0
derivation	Ob/2D/OvL-right	OB/Shinozuka/TTD	Wall Motion Score 0.0
diastole	Ob/2D/OvVolume	OB/Tokyo/APTD	Wall Motion Score 1.0
diastolic BP	Ob/2D/OvVolume-left	OB/Tokyo/BPD	Wall Motion Score 1.5
Distal	Ob/2D/OvVolume-right	OB/Tokyo/BPD-GA	Wall Motion Score 2.0
Doppler Volume Flow	Ob/2D/OvW	OB/Tokyo/BPD-Max	Wall Motion Score 2.5
Dorsalis Pedis Artery	Ob/2D/OvW-left	OB/Tokyo/BPD-Min	Wall Motion Score 3.0
early gestation	Ob/2D/OvW-right	OB/Tokyo/CRL	Wall Motion Score 4.0
EDV(bp el)	OB/AFI Sum	OB/Tokyo/CRL-GA	Wall Motion Score 5.0
EDV(bullet)	OB/AFI1	OB/Tokyo/CRL-Max	Wall Motion Score 6.0
EDV(mod sim)	OB/AFI2	OB/Tokyo/CRL-Min	Wall Motion Score 7.0
EF(A-L A2C)	OB/AFI3	OB/Tokyo/EFW	wall segment
EF(A-L A4C)	OB/AFI4	OB/Tokyo/EFW-EQUATION	wms
EF(A-L LAX)	OB/ASUM/AC	OB/Tokyo/FL	wms finding
EF(Biplane)	OB/ASUM/AC-GA	OB/Tokyo/FL-GA	wms morphology
EF(Biplane)_03	OB/ASUM/AC-Max	OB/Tokyo/FL-Max	wmsi
EF(bp el)	OB/ASUM/AC-Min	OB/Tokyo/FL-Min	X_OB/Hansmann/OFD-GP
EF(bullet)	OB/ASUM/BPD	OB/Tokyo/GS	X_OB/Jeanty/AC-GP
EF(MOD A2C)	OB/ASUM/BPD-GA	OB/Tokyo/GS-GA	X_OB/Jeanty/CRL-GP
EF(MOD A4C)	OB/ASUM/BPD-Max	OB/Tokyo/GS-Max	Z-score
EF(MOD LAX)	OB/ASUM/BPD-Min	OB/Tokyo/GS-Min	birthdate
EF(mod sim)	OB/ASUM/CRL	OB/Tokyo/LV	subjectuid
end diastole	OB/ASUM/CRL-GA	OB/Tokyo/TTD	motheroffetus

End Diastolic Velocity	OB/ASUM2000/AC	OB/Yarkoni/CLA	name
end systole	OB/ASUM2000/AC-GA	OB/Yarkoni/CLA-GA	max
equation	OB/ASUM2000/AC-Max	OB-GYN Ultrasound Procedure Report	s
equation citation	OB/ASUM2000/AC-Min	Ophthalmic Artery	O
Person Observer's Organization Name	Device Observer Name	Device Observer Manufacture	Device Observer Model Name
Device Observer Serial Number	Device Observer Physical Location	Procedure HL7 Placer Number of Evidence	Procedure HL7 Filter Number of Evidende
Procedure Accession Number	Specimen Accession Number	Specimen Identifier	Subject ID
quotation	observer type	Device	Person
Person Observer's Role in the Organization	Person Observer's Role in this Procedure	Procedure Code	Subject class
fetus	specimen	patient	Specimen type
male	female	unknown	male pseudohermaphrodite
female pseudohermaphrodite	hermaphrodite	male changed to female	female changed to male
undetermined sex	Species	Distance	Area outline
volumefrom2d	volumefrom2noncoplanar2d	edd	eddfromImp
eddfromavg	eddfromov	Imp	Impbyedd
ov (Ovulation date)	cd (Conception date)	compositeage	GA
Humerus length	Radius length	Ulna length	Tibia length
Fibula length	Clavicle length	Estimated Weight	numberOfFetuses
Number of follicles in right ovary	Number of follicles in left ovary	gabyov (Gestational Age by ovulation date)	Cervix
Endo	Follicle diameter	Fetus ID	APAD
CM	TC	LLV	NT
Va	Vp	Hem	Yolk Sac
OB/2D/APAD	OB/2D/CM	OB/2D/TC	OB/2D/LLV
OB/NT	OB/2D/Va	OB/2D/Vp	OB/2D/Hem
OB/2D/YolkSac	LeftKidneyThicknes	LeftKidneyWidth	LeftKidneyLength
RightKidneyThicknes	RightKidneyLength	RightKidneyWidth	5 (Ventricular Aneurysm)

## Measurement Formulas

3 (Akinesis)	6 (Akinesis)	4 (Dyskinesis)	7 (Dyskinesis)
1.5 (Mild Hypokinesis)	wms finding	1 (normal wall motion)	2.5 (Severe Hypokinesis)
-1 (Not evaluated)	2 (Hypokinesis)	2 Sigma Lower Value of population	1 Sigma Lower Value of population
5th Percentile Value of population	10th Percentile Value of population	Median Value of population	Mean Value of population
2 Sigma Upper Value of population	1 Sigma Upper Value of population	90th Percentile of population	95th Percentile of population
Vessel Intimal Cross-Sectional Area	Lumen Area Stenosis	Lumen Diameter Stenosis	Ovary
Uterus	Amniotic Sac	Ovarian Follicle	homosapiens
s	ms	min	h
ratio	%	Hz	bpm
BPM	rad	deg	grad
m	dm	cm	mm
inch	feet	m/s	dm/s
cm/s	mm/s	inch/s	m/s <sup>2</sup>
dm/s <sup>2</sup>	cm/s <sup>2</sup>	mm/s <sup>2</sup>	inch/s <sup>2</sup>
m <sup>2</sup>	dm <sup>2</sup>	cm <sup>2</sup>	inch <sup>2</sup>
m <sup>3</sup>	dm <sup>3</sup>	cm <sup>3</sup>	l
dl	cl	ml	gallon
quart	m <sup>3</sup> /s	dm <sup>3</sup> /s	cm <sup>3</sup> /s
l/s	dl/s	cl/s	ml/s
m <sup>3</sup> /min	dm <sup>3</sup> /min	cm <sup>3</sup> /min	l/min
dl/min	cl/min	ml/min	Pascal
mmHg	kPa	bar	atm
psi	kg	g	ounce
pound	Day	Week	Year
Month	Hour	Minute	NoUnit
l/minm <sup>2</sup>	g/m <sup>2</sup>	cm/m <sup>2</sup>	

**NOTE:** Only when the value is displayed as "<#%" or ">#%", that value can't be sent via DICOM SR. This value is normally used for GP calculation and it means out of range. Affected parameters are the followings.

1. <3% or >97%

Hadlock: BPD-GP/AC-GP/HC-GP/FL-GP

2. <5% or >95%

Jeanty: CRL-GP/BPD-GP/AC-GP/HC-GP/FL-GP/FIB-GP/  
Radius-GP

Merz: BPD-GP/AC-GP/HC-GP/FL-GP

Paris: CRL-GP/BPD-GP/TAD-GP/Ft-GP/FL-GP

Kurtz: BPD-GP

Robinson: CRL-GP

Chitty: AC-GP/OFD-GP

CFEF: BPD-GP/AC-GP/FL-GP/HC-GP/TAD-GP

Bertagnoli: KID-GP

3. <10% or >90%

Hansmann: GS-GP/BPD-GP/crl-GP/OFD-GP/HC-GP/TAD-  
GP/ThD-GP/FL-GP/AC-GP

Rempen: GS-GP/CRL-GP/BPD-GP

**NOTE:** If the value is shown as "OOR" (out of range), that value also can't be sent via DICOM SR.





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# Chapter 3

## OB Tables

*Reference for Obstetric Measurement Tables.*

## ASUM

Table 3-1: AC: ASUM, Deler (Fetal Age)  
Unit: AC (mm); Age (Days); 2SD (Days)

AC	Age	2SD	AC	Age	2SD	AC	Age	2SD	AC	Age	2SD
<35	n/a	—	126	126	10	228	189	14	331	252	18
35	70	8	137	133	10	240	196	14	342	259	18
46	77	8	149	140	10	251	203	14	354	266	20
57	84	8	160	147	10	263	210	14	365	273	20
69	91	8	171	154	10	274	217	14	377	280	20
80	98	9	183	161	10	285	224	16	>377	n/a	—
92	105	9	194	168	12	297	231	16			
103	112	9	206	175	12	308	238	18			
114	119	9	217	182	12	320	245	18			

Table 3-2: BPD: ASUM, Aust NZ, Obstet Gynaecol 1989: 29:26 (Fetal Age)  
Unit: BPD (mm); Age (Days); 2SD (Days - \* signifies No Data)

BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD
<20	n/a	—	40	123	8	61	171	13	82	225	18
20	84	4	41	126	9	62	173	13	83	228	18
21	86	4	42	128	9	63	176	14	84	231	19
22	88	4	43	130	9	64	178	14	85	234	0
23	90	4	44	132	9	65	181	14	86	237	0
24	92	5	45	134	9	66	183	14	87	240	0
25	94	5	46	136	10	67	186	15	88	244	0
26	95	5	47	139	10	68	188	15	89	247	0
27	97	5	48	141	10	69	191	15	90	251	0
28	99	5	49	143	10	70	193	15	91	255	0
29	101	6	50	145	11	71	196	16	92	259	0
30	103	6	51	147	11	72	199	16	93	264	0
31	105	6	52	149	11	73	201	16	94	270	0
32	107	6	53	152	11	74	204	16	95	276	0
33	109	7	54	154	12	75	206	17	96	284	0
34	111	7	55	157	12	76	209	17	97	292	0
35	113	7	56	159	12	77	212	17	98	301	0
36	115	7	57	161	12	78	214	17	>98	n/a	—
37	117	8	58	164	13	79	217	17			
38	119	8	59	166	13	80	220	18			
39	121	8	60	169	13	81	222	18			

Table 3-3: CRL: ASUM, Silva et al 1991.6 (Fetal Age)  
Unit: CRL (mm); Age (Days); 2SD (\* No Data available)

CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD
<2	n/a	—	16	56	*	34	71	*	58	86	*
2	42	*	17	57	*	36	72	*	60	87	*
3	43	*	18	58	*	37	73	*	62	88	*
4	44	*	19	59	*	38	74	*	64	89	*
5	45	*	20	60	*	40	75	*	66	90	*
6	46	*	22	61	*	41	76	*	68	91	*
7	47	*	23	62	*	43	77	*	70	92	*
8	48	*	24	63	*	45	78	*	72	93	*
9	49	*	25	64	*	46	79	*	74	94	*
10	50	*	26	65	*	48	80	*	76	95	*
11	51	*	27	66	*	50	81	*	78	96	*
12	52	*	29	67	*	51	82	*	80	97	*
13	53	*	30	68	*	53	83	*	82	98	*
14	54	*	31	69	*	55	84	*	>82	n/a	—
15	55	*	33	70	*	57	85	*			

Table 3-4: ASUM2001/AC Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
52	11	7	176	22	10	294	33	21
63	12	7	186	23	10	305	34	21
74	13	7	201	24	10	315	35	21
84	14	7	212	25	10	325	36	28
96	15	7	223	26	14	333	37	28
106	16	7	230	27	14	342	38	28
120	17	7	242	28	14	356	39	28
131	18	10	259	29	14	362	40	28
140	19	10	262	30	14	367	41	28
151	20	10	272	31	21			
164	21	10	283	32	12			

Table 3-5: ASUM2001/AC Table/Fetal Growth

Unit: AG(week); mean(mm); SD (Day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	52	7	22	176	10	33	294	21
12	63	7	23	186	10	34	305	21
13	74	7	24	201	10	35	315	21
14	84	7	25	212	10	36	325	28
15	96	7	26	223	14	37	333	28
16	106	7	27	230	14	38	342	28
17	120	7	28	242	14	39	356	28
18	131	10	29	259	14	40	362	28
19	140	10	30	262	14	41	367	28
20	151	10	31	272	21			
21	164	10	32	283	21			

Table 3-6: ASUM2001/BPD Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
16	11	4	52	22	10	84	33	21
20	12	7	57	23	10	86	34	21
24	13	7	60	24	10	88	35	21
28	14	7	64	25	10	90	36	21
31	15	7	67	26	12	92	37	24
36	16	7	68	27	12	93	38	24
39	17	10	72	28	12	95	39	28
42	18	10	75	29	12	96	40	28
45	19	10	76	30	14	98	41	28
47	20	10	80	31	16			
49	21	10	81	32	16			

Table 3-7: ASUM2001/BPD Table/Fetal Growth

Unit: AGE (week); mean(mm); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	16	4	22	52	10	33	84	21
12	20	7	23	57	10	34	86	21
13	24	7	24	60	10	35	88	21
14	28	7	25	64	10	36	90	21
15	31	7	26	67	12	37	92	24
16	36	7	27	68	12	38	93	24
17	39	10	28	72	12	39	95	28
18	42	10	29	75	12	40	96	28
19	45	10	30	76	14	41	98	28
20	47	10	31	80	16			
21	49	10	32	81	16			

Table 3-8: ASUM2001/FL Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
8	11	7	37	22	14	65	33	21
10	12	7	43	23	14	66	34	21
11	13	7	45	24	14	67	35	21
15	14	7	48	25	14	69	36	21
17	15	7	49	26	14	72	37	21
22	16	7	50	27	14	73	38	21
25	17	7	54	28	14	75	39	21
28	18	10	55	29	18	76	40	21
30	19	10	58	30	18	77	41	21
32	20	10	59	31	18			
34	21	14	62	32	21			

Table 3-9: ASUM2001/FL Table/Fetal Growth

Unit: AGE (week); mean(mm); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	8	7	22	37	14	33	65	21
12	10	7	23	43	14	34	66	21
13	11	7	24	45	14	35	67	21
14	15	7	25	48	14	36	69	21
15	17	7	26	49	14	37	72	21
16	22	7	27	50	14	38	73	21
17	25	7	28	54	14	39	75	21
18	28	10	29	55	18	40	76	21
19	30	10	30	58	18	41	77	21
20	32	10	31	59	18			
21	34	14	32	62	21			

Table 3-10: ASUM2001/HC Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
59	11	7	188	22	14	300	33	24
70	12	7	210	23	14	305	34	28
84	13	7	220	24	14	310	35	28
96	14	10	231	25	14	317	36	28
108	15	10	238	26	14	321	37	28
128	16	10	250	27	18	328	38	28
141	17	10	263	28	18	336	39	28
151	18	14	269	29	21	340	40	28
160	19	14	274	30	21	344	41	28
170	20	14	284	31	21			
176	21	14	288	32	24			

Table 3-11: ASUM2001/HC Table/Fetal Growth

Unit: AGE(week); mean(mm); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	59	7	22	188	14	33	300	24
12	70	7	23	210	14	34	305	28
13	84	7	24	220	14	35	310	28
14	96	10	25	231	14	36	317	28
15	108	10	26	238	14	37	321	28
16	128	10	27	250	18	38	328	28
17	141	10	28	263	18	39	336	28
18	151	14	29	269	21	40	340	28
19	160	14	30	274	21	41	344	28
20	170	14	31	284	21			
21	176	14	32	288	24			

Table 3-12: ASUM2001/HL Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
8	11	7	35	22	14	57	33	21
9	12	7	38	23	14	59	34	21
11	13	7	40	24	14	60	35	21
14	14	7	43	25	14	62	36	21
17	15	7	44	26	14	63	37	28
21	16	7	47	27	14	64	38	28
25	17	10	50	28	18	65	39	28
27	18	10	51	29	18	66	40	28
29	19	14	52	30	21	68	41	28
31	20	14	54	31	21			
32	21	14	56	32	21			

Table 3-13: ASUM2001/HL Table/Fetal Growth

Unit: AGE (week); mean(mm); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	8	7	22	35	14	33	57	21
12	9	7	23	38	14	34	59	21
13	11	7	24	40	14	35	60	21
14	14	7	25	43	14	36	62	21
15	17	7	26	44	14	37	63	28
16	21	7	27	47	14	38	64	28
17	25	10	28	50	18	39	65	28
18	27	10	29	51	18	40	66	28
19	29	14	30	52	21	41	68	28
20	31	14	31	54	21			
21	32	14	32	56	21			

Table 3-14: ASUM2001/OFD Table/Fetal Age

Unit: meas (mm); mean(week); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
21	11	5	68	22	7	107	33	14
24	12	5	76	23	7	108	34	18
29	13	5	79	24	10	109	35	18
34	14	5	82	25	10	112	36	21
38	15	5	84	26	10	113	37	21
46	16	5	86	27	10	116	38	21
50	17	5	95	28	10	119	39	21
54	18	7	97	29	10	120	40	21
57	19	7	98	30	14	122	41	21
61	20	7	101	31	14			
63	21	7	102	32	14			

Table 3-15: ASUM2001/OFD Table/Fetal Growth

Unit: AGE (week); mean(mm); SD (day)

Table Type=SD, Table Range=2SD, Graph Range=2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
11	21	5	22	68	7	33	107	14
12	24	5	23	76	7	34	108	18
13	29	5	24	79	10	35	109	18
14	34	5	25	82	10	36	112	21
15	38	5	26	84	10	37	113	21
16	46	5	27	86	10	38	116	21
17	50	5	28	95	10	39	119	21
18	54	7	29	97	10	40	120	21
19	57	7	30	98	14	41	122	21
20	61	7	31	101	14			
21	63	7	32	102	14			

Table 3-16: ASUM2001/CRL Table/Fetal Age

Unit: meas (mm); mean(week/day)

Meas	Mean	Meas	Mean	Meas	Mean	Meas	Mean
1	5+2	15	7+6	38	10+3	68	13+0
2	5+3	17	8+0	39	10+4	70	13+1
3	5+4	18	8+1	39	10+5	72	13+2
3	5+5	19	8+2	40	10+6	74	13+3
4	5+6	20	8+3	44	11+0	76	13+4
4	6+0	21	8+4	45	11+1	77	13+5
5	6+1	22	8+5	47	11+2	80	13+6
6	6+2	22	8+6	48	11+3	81	14+0
7	6+3	23	9+9	52	11+4	84	14+1
8	6+4	24	9+1	55	11+5	85	14+2
9	6+5	26	9+2	56	11+6	86	14+3
10	6+6	27	9+3	57	12+0	87	14+4
11	7+0	28	9+4	58	12+1		
11	7+1	29	9+5	60	12+2		
12	7+2	31	9+6	61	12+3		
12	7+3	34	10+0	63	12+4		
13	7+4	36	10+1	64	12+5		
14	7+5	37	10+2	65	12+6		

Table 3-17: ASUM2001/CRL Table/Fetal Growth  
Unit: meas (week/day); mean(mm)

Meas	Mean	Meas	Mean	Meas	Mean	Meas	Mean
5+2	1	7+6	15	10+3	38	13+0	68
5+3	2	8+0	17	10+4	39	13+1	70
5+4	3	8+1	18	10+5	39	13+2	72
5+5	3	8+2	19	10+6	40	13+3	74
5+6	4	8+3	20	11+0	44	13+4	76
6+0	4	8+4	21	11+1	45	13+5	77
6+1	5	8+5	22	11+2	47	13+6	80
6+2	6	8+6	22	11+3	48	14+0	81
6+3	7	9+9	23	11+4	52	14+1	84
6+4	8	9+1	24	11+5	55	14+2	85
6+5	9	9+2	26	11+6	56	14+3	86
6+6	10	9+3	27	12+0	57	14+4	87
7+0	11	9+4	28	12+1	58		
7+1	11	9+5	29	12+2	60		
7+2	12	9+6	31	12+3	61		
7+3	12	10+0	34	12+4	63		
7+4	13	10+1	36	12+5	64		
7+5	14	10+2	37	12+6	65		

NOTE: 2000 table represents as "2001" on the system.

**Berkowitz**

Table 3-18: BD: Berkowitz (Fetal Age)  
Unit: BD (mm); Age (Day); SD (mm)

BD	Age	SD	BD	Age	SD	BD	Age	SD	BD	Age	SD
<13	n/a	—	25	112	0	38	155	0	51	217	0
13	81	0	26	116	0	39	159	0	52	223	0
14	82	0	27	120	0	40	162	0	53	230	0
15	84	0	28	124	0	41	166	0	54	237	0
16	86	0	29	128	0	42	169	0	55	244	0
17	88	0	30	130	0	43	173	0	56	251	0
18	91	0	31	132	0	44	179	0	57	258	0
19	95	0	32	135	0	45	185	0	58	266	0
20	98	0	33	138	0	46	191	0	59	275	0
21	102	0	34	142	0	47	197	0	>59	n/a	—
22	105	0	35	145	0	48	202	0			
23	109	0	36	149	0	49	207	0			
24	110	0	37	152	0	50	212	0			



**Bertagnoli**

Table 3-19: Bertagnoli (Fetal Growth)/Kid-table  
 Unit: AGE (WeekDay); min(mm); mean(mm); max(mm)  
 Table Type=GP, Table Range=2SD

Age	Min	Mean	Max	Age	Min	Mean	Max
24	22.0	24.5	27.0	34	29.6	32.2	34.7
25	22.6	25.1	27.7	35	30.5	33.1	35.6
26	23.3	25.8	28.3	36	31.5	34.0	36.5
27	24.0	26.5	29.0	37	32.4	35.0	37.5
28	24.7	27.2	29.8	38	33.4	36.0	38.5
29	25.5	28.0	30.5	39	34.5	37.0	39.5
30	26.3	28.8	31.3	40	35.5	38.0	40.5
31	27.1	29.6	32.1	41	36.6	39.1	41.6
32	27.9	30.4	32.9	42	37.7	40.2	42.7
33	28.8	31.3	33.8				

**Brenner**

Table 3-20: EFW: Brenner (Fetal Growth)  
 GP, Table/Graph Range = 10%: 90%  
 Age (Weeks); Mini/Mean/Max (grams)

Age	Min	Mean	Max	Age	Min	Mean	Max
21.0	280	410	860	33.0	1480	2010	2690
22.0	320	480	920	34.0	1670	2220	2880
23.0	370	550	990	35.0	1870	2430	3090
24.0	420	640	1080	36.0	2190	2650	3290
25.0	490	740	1180	37.0	2310	2870	3470
26.0	570	860	1320	38.0	2510	3030	3610
27.0	660	990	1470	39.0	2680	3170	3750
28.0	770	1150	1660	40.0	2750	3280	3870
29.0	890	1310	1890	41.0	2800	3360	3980
30.0	1030	1460	2100	42.0	2830	3410	4060
31.0	1180	1630	2290	43.0	2840	3420	4100
32.0	1310	1810	2500	44.0	2790	3390	4110

**Campbell**

Table 3-21: HC/AC Ratio: Campbell, Br J Obstet Gynaecol 1977, 84:165-174  
(Fetal Growth)

Unit: GA (Weeks); Min/Max (Index)

GA	Min	Max	GA	Min	Max	GA	Min	Max
<13	n/a	—	23	1.05	1.21	35	0.93	1.11
13	1.14	1.31	25	1.04	1.22	37	0.92	1.05
15	1.05	1.39	27	1.05	1.22	39	0.87	1.06
17	1.07	1.29	29	0.99	1.21	41	0.93	1.00
19	1.09	1.26	31	0.96	1.17	>42	n/a	n/a
21	1.06	1.25	33	0.96	1.11			

## CFEF

Table 3-22: Abdominal Circumference (AC) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155  
 Unit: GA (week); Output unit : Percentile[mm]; Min Range:15weeks; Max Range: 40Weeks

GA (week)	AC (mm)				
	3%	10%	50%	90%	97%
15	80.70	85.30	95.00	104.40	108.80
16	91.30	96.10	106.40	116.80	121.60
17	101.70	106.80	118.00	129.00	134.00
18	111.80	117.40	129.20	141.00	146.60
18	122.00	128.00	140.40	153.00	158.80
20	132.00	138.00	151.40	164.70	171.00
21	141.60	148.20	162.30	176.30	183.00
22	151.40	158.20	173.00	187.80	194.70
23	160.90	168.20	183.60	199.00	206.30
24	170.20	177.80	194.00	210.30	218.00
25	179.30	187.30	204.40	221.30	229.30
26	188.40	196.70	214.50	232.30	240.60
27	197.30	206.00	224.50	243.00	251.60
28	206.20	215.10	234.40	253.60	262.60
29	214.70	224.00	244.00	264.00	273.30
30	223.20	232.80	253.60	274.20	283.70
31	231.60	241.60	263.00	284.20	294.40
32	239.70	250.00	272.20	294.30	304.60
33	247.80	258.40	281.20	304.00	314.80
34	255.60	266.70	290.20	313.80	324.80
35	263.20	274.70	298.80	323.30	334.50
36	271.00	282.60	307.40	332.50	344.30
37	278.30	290.30	316.00	341.70	353.80
38	285.60	298.00	324.70	350.70	363.00
39	292.70	305.30	332.40	359.60	372.20
40	298.00	311.00	339.00	367.00	380.00

Table 3-23: Abdominal Circumference (AC) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

**NOTE: AC and GA Values are taken from Fetal Growth Table; AC (50% values) are used as Input and GA as Output!**

AC(mm)	GA(week)	AC	GA	AC	GA	AC	GA
95.00	15	173.00	22	234.40	29	298.80	36
106.40	16	183.60	23	244.00	30	307.40	37
118.00	17	183.60	24	253.60	31	316.00	38
129.20	18	194.00	25	263.00	32	327.40	39
140.40	19	204.40	26	272.20	33	339.00	40
151.40	20	214.50	27	281.20	34		
162.30	21	224.50	27	290.20	35		

Table 3-24: Biparietal Diameter (BPD) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155  
 Unit: GA (week); Output unit : Percentile[mm]; Min Range:11weeks; Max Range: 41Weeks

GA	BPD (mm)				
GA	3%	10%	50%	90%	97%
11	12.08	13.12	15.36	17.60	18.63
12	15.81	16.96	19.40	21.81	22.92
13	19.47	20.71	23.30	25.92	27.12
14	23.05	24.36	27.14	29.92	31.23
15	26.56	27.93	30.89	33.82	35.23
16	29.97	31.41	34.53	37.62	39.08
17	33.32	34.85	38.12	41.35	42.87
18	36.55	38.15	41.58	44.97	46.56
19	39.76	41.46	45.00	48.52	50.18
20	42.85	44.56	48.22	51.90	53.64
21	45.86	47.66	51.43	55.23	57.00
22	48.79	50.61	54.53	58.44	60.30
23	51.63	53.48	57.51	61.54	63.45
24	54.38	56.31	60.42	64.57	66.50
25	57.04	59.00	63.25	67.48	69.42
26	59.62	61.64	65.94	70.24	72.27
27	62.12	64.15	68.55	72.92	75.00
28	64.50	66.61	71.03	75.52	77.60
29	66.84	68.98	73.50	77.97	80.09
30	69.07	71.21	75.80	80.37	82.52
31	71.22	73.39	78.00	82.63	84.80
32	73.30	75.49	80.16	84.80	87.00
33	75.24	77.46	82.14	86.84	89.04
34	77.14	79.36	84.07	88.80	91.00
35	78.94	81.14	85.90	90.61	92.83
36	80.64	82.88	87.61	92.35	94.56
37	82.27	84.50	89.24	93.37	96.19
38	83.78	86.00	90.70	95.42	97.66
39	85.22	87.43	92.10	96.86	99.05
40	86.57	88.78	93.45	98.13	100.31
41	87.00	89.00	94.00	99.00	101.00

Table 3-25: Biparietal Diameter (BPD) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

**NOTE: BPD and GA Values are taken from Fetal Growth Table; BPD values are used as Input and GA as Output!**

BPD(mm)	GA(week)	BPD	GA	BPD	GA	BPD	GA
15.36	11	45.00	19	68.55	27	85.90	35
19.40	12	48.22	20	71.03	28	87.61	36
23.30	13	51.43	21	73.50	29	89.24	37
27.14	14	54.53	22	75.80	30	90.70	38
30.89	15	57.51	23	78.00	31	92.10	39
34.53	16	60.42	24	80.16	32	93.45	40
38.12	17	63.25	25	82.14	33	94.00	41
41.58	18	65.94	26	84.07	34		

Table 3-26: Femur Length (FL) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

Unit: GA (week); Output unit : Percentile[mm]; Min Range:12weeks; Max Range: 41Weeks

GA	FL (mm)				
GA	3%	10%	50%	90%	97%
12	2.76	3.89	6.33	8.79	10.00
13	6.09	7.29	9.88	12.42	13.65
14	9.40	10.65	13.33	16.00	17.27
15	12.56	13.87	16.66	19.44	20.77
16	15.70	17.00	19.95	22.80	24.18
17	18.74	20.12	23.12	26.13	27.53
18	21.69	23.14	26.23	29.30	30.80
19	24.59	26.06	29.25	32.44	33.91
20	27.42	28.94	32.23	35.48	37.03
21	30.12	31.72	35.05	38.41	40.00
22	32.83	34.49	37.87	41.30	42.91
23	35.34	37.00	40.50	44.03	45.71
24	37.89	39.58	43.16	46.75	48.42
25	40.33	42.04	45.69	49.36	51.08
26	42.66	44.40	48.17	51.88	53.62
27	44.95	46.72	50.53	54.32	56.09
28	47.13	48.94	52.80	56.64	58.45
29	49.22	51.06	54.94	58.91	60.72
30	51.30	53.14	57.13	61.08	62.92
31	53.26	55.13	59.15	63.14	65.04
32	55.12	57.04	61.11	65.19	67.07
33	56.96	58.87	63.00	67.10	69.03
34	58.69	60.82	64.76	68.88	70.84
35	60.33	62.29	66.47	70.65	72.63
36	61.90	63.89	68.13	72.34	74.30
37	63.40	65.38	69.63	73.91	75.89
38	64.81	66.79	71.11	75.38	77.41
39	66.16	68.19	72.48	76.81	78.84
40	67.42	69.47	73.79	78.14	80.17
41	68.00	70.00	74.00	79.00	81.00

Table 3-27: Femur Length (FL) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

**NOTE: FL and GA Values are taken from Fetal Growth Table; FL (50% values) are used as Input and GA as Output!**

FL(mm)	GA(week)	FL	GA	FL	GA	FL	GA
	11	29.25	19	50.53	27	66.47	35
6.33	12	32.23	20	52.80	28	68.13	36
9.88	13	35.05	21	54.94	29	69.63	37
13.33	14	37.87	22	57.13	30	71.11	38
16.66	15	40.50	23	59.15	31	72.48	39
19.95	16	43.16	24	61.11	32	73.79	40
23.12	17	45.69	25	63.00	33	74.00	41
26.23	18	48.17	26	64.76	34		

Table 3-28: Head Circumference (HC) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155  
 Unit: GA (week); Output unit : Percentile[mm]; Min Range:16weeks; Max Range: 40Weeks

GA	HC (mm)				
GA	3%	10%	50%	90%	97%
16	105.80	110.58	120.86	131.25	136.11
17	118.87	123.78	139.49	145.38	150.39
18	131.08	136.36	147.55	158.92	164.11
19	143.00	148.53	160.29	172.14	177.48
20	154.53	160.21	172.47	184.86	190.54
21	165.41	171.49	184.21	197.12	203.09
22	176.12	182.35	195.74	208.91	215.15
23	186.32	192.31	206.64	220.26	226.76
24	196.19	203.00	217.18	231.39	238.00
25	205.50	212.40	227.32	241.91	248.81
26	214.44	221.57	236.72	252.00	259.23
27	222.87	230.33	246.00	261.75	269.13
28	231.00	238.58	254.77	271.00	278.57
29	238.40	246.35	263.00	279.71	287.56
30	245.86	253.74	270.84	288.13	296.00
31	252.54	260.81	278.33	296.00	304.27
32	258.86	267.22	285.29	303.54	312.00
33	264.62	273.38	292.00	310.40	319.10
34	270.14	279.00	298.10	317.00	325.91
35	275.33	284.23	303.62	323.00	332.16
36	279.79	289.00	308.81	328.75	338.00
37	283.90	293.32	313.52	334.00	343.34
38	287.83	297.29	317.88	338.64	348.29
39	290.88	300.76	321.86	343.00	352.67
40	293.00	303.00	324.00	346.00	356.00

Table 3-29: Head Circumference (HC) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

**NOTE: HC and GA Values are taken from Fetal Growth Table; HC (50% values) are used as Input and GA as Output!**

HC(mm)	GA(week)	HC	GA	HC	GA	HC	GA
120.86	16	206.64	23	270.84	30	313.52	37
134.49	17	217.18	24	278.33	31	317.88	38
147.55	18	227.32	25	285.29	32	321.86	39
160.29	19	236.72	26	292.00	33	324.00	40
172.47	20	246.00	27	298.10	34		
184.21	21	254.77	28	303.62	35		
195.74	22	263.00	29	308.81	36		

Table 3-30: Transverse Abdominal Diameter (TAD) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

Unit: GA (week); Output unit : Percentile[mm]; Min Range:11weeks; Max Range: 42Weeks

GA	TAD (mm)				
GA	3%	10%	50%	90%	97%
11	9.68	11.00	13.50	16.00	17.25
12	12.68	14.00	17.00	20.00	21.46
13	15.60	17.25	20.56	24.00	25.51
14	18.69	20.41	24.00	27.84	29.56
15	21.76	23.64	27.69	31.74	33.61
16	25.00	27.00	31.21	35.53	37.48
17	28.23	30.34	34.70	39.21	41.39
18	31.54	33.64	38.31	42.89	45.14
19	34.78	37.00	41.69	46.42	48.59
20	38.16	40.26	45.21	50.00	52.20
21	41.14	43.46	48.34	53.22	55.63
22	44.21	46.61	51.57	56.75	59.08
23	47.00	49.47	54.72	60.00	62.46
24	49.77	52.39	57.88	63.43	66.00
25	52.54	55.18	61.00	66.74	69.44
26	55.17	58.00	64.00	70.12	72.89
27	57.72	60.73	67.11	73.42	76.42
28	60.43	63.58	70.27	76.80	79.87
29	63.13	66.36	73.27	80.17	83.33
30	65.80	69.17	76.17	83.45	86.75
31	68.35	71.88	79.25	86.68	90.13
32	70.90	74.43	82.10	89.76	93.36
33	73.08	76.75	84.78	92.89	96.64
34	75.25	79.08	87.55	95.89	99.86
35	77.00	81.10	90.00	99.00	103.00
36	78.48	82.90	92.36	102.00	106.31
37	79.79	84.60	94.81	105.00	109.67
38	80.92	86.10	97.00	108.19	113.29
39	81.85	87.41	99.33	111.34	117.00
40	82.58	88.59	101.64	114.52	120.70
41	82.80	89.20	103.00	117.00	123.00

Table 3-31: Transverse Abdominal Diameter (TAD) CFEF, Collège Français d'Echographie, Foetale INSERM Unité155

NOTE: TAD and GA Values are taken from Fetal Growth Table; TAD (50% values) are used as Input and GA as Output!

TAD(mm)	GA(week)	TAD	GA	TAD	GA	TAD	GA
13.50	11	41.69	19	67.11	27	90.00	35
17.00	12	45.21	20	70.27	28	92.36	36
20.56	13	48.34	21	73.27	29	94.81	37
24.00	14	51.57	22	76.17	30	97.00	38
27.69	15	54.72	23	79.25	31	99.33	39
31.21	16	57.88	24	82.10	32	101.64	40
34.70	17	61.00	25	84.78	33	103.00	41
38.31	18	64.00	26	87.55	34		

## Chitty

Table 3-32: Abdominal Circumference :  
 Chitty et al Br J Obstetric Gynaecology 1994, Vol1  
 Unit: AC (cm); GA (Weeks)

*NOTE: AC and GA values are taken from Fetal Growth table; AC (50% values) are used as Input and GA as output.*

AC Median	GA	AC Median	GA	AC Median	GA	AC Median	GA
5.89	12	15.21	20	23.91	28	31.74	36
7.09	13	16.34	21	24.94	29	32.64	37
8.27	14	17.46	22	25.96	30	33.53	38
9.45	15	18.56	23	26.96	31	34.40	39
10.62	16	19.66	24	27.95	32	35.25	40
11.78	17	20.74	25	28.92	33	36.08	42
12.93	18	21.81	26	29.88	34	36.89	42
14.08	19	22.87	27	30.82	35		



Table 3-33: BPD: Altmann D.G; Chitty L.S.; "New charts for ultrasound dating of pregnancy", Ultrasound in Obstetrics and Gynecology Vol.10:174-191, 1997

Unit: BPD (cm); GA (Weeks + days)

BPD	GA			BPD	GA		
	5%	50%	95%		5%	50%	95%
2.20	11w5d	12w4d	13w4d	5.70	20w5d	22w5d	24w5d
2.30	12w0d	12w6d	13w6d	5.80	21w0d	23w0d	25w1d
2.40	12w1d	13w1d	14w1d	5.90	21w2d	23w2d	25w4d
2.50	12w3d	13w3d	14w3d	6.00	21w4d	23w5d	25w6d
2.60	12w5d	13w4d	14w5d	6.10	21w6d	24w0d	26w2d
2.70	12w6d	13w6d	15w0d	6.20	22w1d	24w2d	26w5d
2.80	13w1d	14w1d	15w2d	6.30	22w4d	24w5d	27w0d
2.90	13w3d	14w3d	15w4d	6.40	22w6d	25w0d	27w3d
3.00	13w4d	14w5d	15w5d	6.50	23w1d	25w2d	27w6d
3.10	13w6d	15w0d	16w1d	6.60	23w3d	25w5d	28w2d
3.20	14w1d	15w2d	16w3d	6.70	23w5d	26w0d	28w4d
3.30	14w3d	15w4d	16w5d	6.80	24w0d	26w3d	29w0d
3.40	14w4d	15w5d	17w0d	6.90	24w2d	26w5d	29w3d
3.50	14w6d	16w0d	17w2d	7.00	24w4d	27w1d	29w6d
3.60	15w1d	16w2d	17w5d	7.10	25w0d	27w3d	30w3d
3.70	15w3d	16w4d	18w0d	7.20	25w2d	27w6d	30w4d
3.80	15w4d	16w6d	18w2d	7.30	25w4d	28w1d	31w0d
3.90	15w6d	17w1d	18w4d	7.40	25w6d	28w4d	31w3d
4.00	16w1d	17w3d	19w0d	7.50	26w2d	28w6d	31w6d
4.10	16w3d	17w5d	19w2d	7.60	26w4d	29w2d	32w2d
4.20	16w4d	18w0d	19w4d	7.70	26w6d	29w5d	32w5d
4.30	16w6d	18w2d	19w6d	7.80	27w1d	30w0d	33w1d
4.40	17w1d	18w4d	20w2d	7.90	27w4d	30w3d	33w4d
4.50	17w3d	19w0d	20w4d	8.00	27w6d	30w5d	34w0d
4.60	17w5d	19w2d	20w6d	8.10	28w1d	31w1d	34w3d
4.70	18w0d	19w4d	21w2d	8.20	28w3d	31w4d	34w6d
4.80	18w2d	19w6d	21w4d	8.30	28w6d	31w6d	35w2d
4.90	18w4d	20w1d	22w0d	8.40	29w1d	32w2d	35w6d
5.00	18w5d	20w3d	22w2d	8.50	29w4d	32w5d	36w2d
5.10	19w0d	20w5d	22w4d	8.60	29w6d	33w1d	36w5d
5.20	19w2d	21w1d	23w0d	8.70	30w1d	33w3d	37w1d
5.30	19w4d	21w3d	23w2d	8.80	30w4d	33w6d	37w4d
5.40	19w6d	21w5d	23w5d	8.90	30w6d	34w2d	38w1d
5.50	20w1d	22w0d	24w0d	9.00	31w1d	34w5d	38w4d
5.60	20w3d	22w2d	24w3d	9.10	31w4d	35w1d	39w0d

Table 3-34: FL:Altmann D.G.;Chitty L.S. "New charts for ultrasound dating of pregnancy" *Ultrasound in Obstetrics and Gynecology* Vol. 10:174-191. 1997  
 Unit: FL(cm); GA(weeks+days)

FL	GA			FL	GA		
	5%	50%	95%		5%	50%	95%
1.00	12w1d	13w0d	13w6d	3.90	20w5d	22w4d	24w3d
1.10	12w3d	13w2d	14w1d	4.00	21w1d	22w6d	24w6d
1.20	12w5d	13w4d	14w4d	4.10	21w3d	23w2d	25w2d
1.30	13w0d	13w6d	14w6d	4.20	21w6d	23w5d	25w5d
1.40	13w1d	14w1d	15w1d	4.30	22w1d	24w1d	26w1d
1.50	13w3d	14w3d	15w3d	4.40	22w4d	24w3d	26w4d
1.60	13w5d	14w5d	15w6d	4.50	22w6d	24w6d	27w1d
1.70	14w0d	15w0d	16w1d	4.60	23w2d	25w2d	27w4d
1.80	14w2d	15w2d	16w3d	4.70	23w4d	25w5d	28w0d
1.90	14w4d	15w4d	16w6d	4.80	24w0d	26w1d	28w3d
2.00	14w6d	15w5d	17w1d	4.90	24w3d	26w4d	29w0d
2.10	15w1d	16w0d	17w3d	5.00	24w5d	27w0d	29w3d
2.20	15w3d	16w2d	17w6d	5.10	25w1d	27w3d	30w0d
2.30	15w5d	16w4d	18w1d	5.20	25w4d	27w6d	30w3d
2.40	16w0d	16w6d	18w4d	5.30	26w0d	28w2d	31w0d
2.50	16w2d	17w2d	18w6d	5.40	26w2d	28w5d	31w3d
2.60	16w4d	17w4d	19w2d	5.50	26w5d	29w2d	32w0d
2.70	16w6d	17w6d	19w5d	5.60	27w1d	29w5d	32w3d
2.80	17w1d	18w2d	20w0d	5.70	27w4d	30w1d	33w0d
2.90	17w4d	18w4d	20w3d	5.80	28w0d	30w4d	33w4d
3.00	17w6d	18w6d	20w5d	5.90	28w3d	31w1d	34w1d
3.10	18w1d	19w2d	21w1d	6.00	28w6d	31w4d	34w4d
3.20	18w3d	19w4d	21w4d	6.10	29w2d	32w1d	35w1d
3.30	18w5d	19w6d	22w0d	6.20	29w5d	32w4d	35w5d
3.40	19w1d	20w0d	22w2d	6.30	30w1d	33w1d	36w2d
3.50	19w3d	20w2d	22w5d	6.40	30w4d	33w4d	36w6d
3.60	19w5d	20w5d	23w1d	6.50	31w0d	34w1d	37w3d
3.70	20w1d	21w0d	23w4d	6.60	31w3d	34w4d	38w0d
3.80	20w3d	21w3d	24w0d	6.70	32w0d	35w1d	38w5d

Table 3-35: HC : Altmann D.G.; Chitty L.S. "New charts for ultrasound dating of pregnancy" *Ultrasound in Obstetrics and Gynecology* Vol.10:174-191, 1997

**Unit: HC (cm); GA (Weeks + days)**

**NOTE:** Note : HC measured (Not derived from diameters)

HC	GA			HC	GA		
	5%	50%	95%		5%	50%	95%
8.50	12w1d	12w6d	13w4d	21.00	21w2d	22w6d	24w4d
9.00	12w4d	13w2d	14w0d	21.50	21w5d	23w2d	25w0d
9.50	12w6d	13w5d	14w3d	22.00	22w0d	23w5d	25w4d
10.00	13w2d	14w0d	14w5d	22.50	22w3d	24w1d	26w0d
10.50	13w4d	14w3d	15w2d	23.00	22w6d	24w4d	26w3d
11.00	14w0d	14w6d	15w6d	23.50	23w1d	25w0d	27w0d
11.50	14w3d	15w2d	16w2d	24.00	23w4d	25w3d	27w3d
12.00	14w5d	15w5d	16w5d	24.50	24w0d	25w6d	28w0d
12.50	15w1d	16w1d	17w1d	25.00	24w3d	26w3d	28w3d
13.00	15w3d	16w3d	17w4d	25.50	24w6d	26w6d	29w0d
13.50	15w6d	16w6d	18w0d	26.00	25w2d	27w3d	29w4d
14.00	16w1d	17w2d	18w3d	26.50	25w5d	27w6d	30w1d
14.50	16w4d	17w5d	18w6d	27.00	26w2d	28w3d	30w5d
15.00	17w0d	18w1d	19w2d	27.50	26w5d	29w0d	31w2d
15.50	17w2d	18w3d	19w5d	28.00	27w2d	29w4d	32w0d
16.00	17w5d	18w6d	20w1d	28.50	27w5d	30w1d	32w4d
16.50	18w0d	19w2d	20w4d	29.00	28w2d	30w5d	33w2d
17.00	18w3d	19w5d	21w0d	29.50	28w6d	31w2d	34w0d
17.50	18w5d	20w0d	21w3d	30.00	29w3d	32w0d	34w5d
18.00	19w1d	20w3d	21w6d	30.50	30w0d	32w5d	35w3d
18.50	19w3d	20w6d	22w2d	31.00	30w5d	33w3d	36w2d
19.00	19w6d	21w2d	22w6d	31.50	31w2d	34w1d	37w1d
19.50	20w1d	21w5d	23w2d	32.00	32w0d	34w6d	38w0d
20.00	20w4d	22w0d	23w5d	32.50	32w5d	35w5d	38w6d
20.50	20w6d	22w3d	24w1d				

Table 3-36: OFD : chitty et al. *Br J Obstetric Gynecology* 1994 Vol. 101

**Unit: OFD(cm); GA (Weeks)**

**NOTE:** OFD and GA values are taken from Fetal Growth Table; OFD (50% value) are used as Input and GA as Output!

OFD Median	GA	OFD Median	GA	OFD Median	GA	OFD Median	GA
2.62	12	6.10	20	9.48	28	11.72	36
2.97	13	6.66	21	9.96	29	11.67	37
3.58	14	6.88	22	10.16	30	11.74	38
3.86	15	7.32	23	10.55	31	11.80	39
4.39	16	7.90	24	10.86	32	12.07	40
4.72	17	8.22	25	10.98	33	12.41	42
5.29	18	8.68	26	11.09	34	12.06	42
5.81	19	9.08	27	11.24	35		

Table 3-37: TCD : Altmann D.G. ; Chitty L.S. "New charts for ultrasound dating of pregnancy" Ultrasound in Obstetrics and Gynecology Vol.10 : 174-191, 1997  
Unit: Cereb(cm); GA(weeks+days)

TCD	GA			TCD	GA		
	5%	50%	95%		5%	50%	95%
1.30	13w1d	14w3d	16w0d	2.50	22w2d	24w2d	26w3d
1.40	14w0d	15w2d	16w6d	2.60	23w0d	25w0d	27w3d
1.50	14w6d	16w2d	17w5d	2.70	23w4d	25w6d	28w2d
1.60	15w4d	17w0d	18w4d	2.80	24w1d	26w4d	29w2d
1.70	16w3d	17w6d	19w3d	2.90	24w5d	27w2d	30w2d
1.80	17w2d	18w5d	20w2d	3.00	25w1d	28w0d	31w2d
1.90	18w0d	19w4d	21w1d	3.10	25w5d	28w6d	32w2d
2.00	18w6d	20w3d	22w0d	3.20	26w1d	29w4d	33w3d
2.10	19w4d	21w1d	22w6d	3.30	26w4d	30w2d	34w4d
2.20	20w2d	22w0d	23w5d	3.40	26w6d	31w0d	35w5d
2.30	21w0d	22w5d	24w4d	3.50	27w2d	31w5d	36w6d
2.40	21w5d	23w4d	25w4d	3.60	27w4d	32w3d	38w1d

Table 3-38: AC : Chitty et al. Br J Obstetric Gynecology 1994 Vol.101  
Unit: GA(week):AC(cm)

Input Unit :w(weeks); Output Unit:cm; Min Range:12.0weeks; Max Range:42.0weeks

GA	AC			GA	AC		
	3 <sup>th</sup> centile	Median	97 <sup>th</sup> centile		3 <sup>th</sup> centile	Median	97 <sup>th</sup> centile
12	4.77	5.89	7.02	28	21.41	23.91	26.41
13	5.87	7.09	8.30	29	22.36	24.94	27.53
14	6.97	8.27	9.57	30	23.29	25.96	28.63
15	8.06	9.45	10.83	31	24.20	26.96	29.72
16	9.15	10.62	12.09	32	25.10	27.95	30.80
17	10.22	11.78	13.33	33	25.99	28.92	31.85
18	11.29	12.93	14.57	34	26.86	29.88	32.90
19	12.35	14.08	15.81	35	27.71	30.82	33.92
20	13.40	15.21	17.03	36	28.55	31.74	34.93
21	14.44	16.34	18.24	37	29.37	32.64	35.92
22	15.47	17.46	19.44	38	30.17	33.53	36.89
23	16.49	18.56	20.63	39	30.95	34.40	37.85
24	17.50	19.66	21.81	40	31.72	35.52	38.78
25	18.50	20.74	22.98	41	32.46	36.08	39.70
26	19.48	21.81	24.14	42	33.18	36.89	40.60
27	20.45	22.87	25.28				

Table 3-39: OFD : Chitty et al. Br J Obstetric Gynecology 1994 Vol.101

Unit: GA(week):OFD(cm)

Input Unit :w(weeks); Output Unit:cm; Min Range:12.0weeks; Max Range:42.0weeks

GA	AC			GA	AC		
	5 <sup>th</sup> centile	Median	95 <sup>th</sup> centile		5 <sup>th</sup> centile	Median	95 <sup>th</sup> centile
12	2.23	2.62	3.01	28	8.89	9.48	10.07
13	2.51	2.97	3.43	29	9.38	9.96	10.54
14	3.15	3.58	4.01	30	9.57	10.16	10.75
15	3.37	3.86	4.35	31	9.79	10.55	11.31
16	4.01	4.39	4.77	32	9.89	10.68	11.47
17	4.13	4.72	5.31	33	10.19	10.98	11.77
18	4.71	5.29	5.87	34	10.33	11.09	11.85
19	5.30	5.81	6.32	35	10.27	11.24	12.21
20	5.44	6.10	6.76	36	10.72	11.72	12.72
21	6.17	6.66	7.15	37	11.00	11.67	12.34
22	6.29	6.88	7.47	38	10.19	11.74	13.29
23	6.63	7.32	8.01	39	11.04	11.80	12.56
24	7.36	7.90	8.44	40	10.62	12.07	13.52
25	7.68	8.22	8.76	41	11.24	12.41	13.58
26	7.94	8.68	9.42	42	11.02	12.06	13.10
27	8.45	9.08	9.71				

Eriksen

Table 3-40: TAD: Eriksen (Fetal Age)  
Unit: TAD (mm); Age (Day); SD (mm)

TAD	Age	SD	TAD	Age	SD	TAD	Age	SD	TAD	Age	SD
<23	n/a	—	45	134	0	68	182	0	91	232	0
23	91	0	46	136	0	69	184	0	92	234	0
24	93	0	47	138	0	70	186	0	93	236	0
25	95	0	48	140	0	71	188	0	94	239	0
26	97	0	49	142	0	72	190	0	95	241	0
27	99	0	50	144	0	73	192	0	96	243	0
28	101	0	51	146	0	74	195	0	97	245	0
29	103	0	52	148	0	75	197	0	98	247	0
30	105	0	53	150	0	76	199	0	99	250	0
31	107	0	54	152	0	77	201	0	100	252	0
32	109	0	55	154	0	78	203	0	101	254	0
33	111	0	56	156	0	79	206	0	102	256	0
34	113	0	57	158	0	80	208	0	103	259	0
35	115	0	58	161	0	81	210	0	104	261	0
36	117	0	59	163	0	82	212	0	105	263	0
37	119	0	60	165	0	83	214	0	106	266	0
38	120	0	61	167	0	84	217	0	107	268	0
39	122	0	62	169	0	85	219	0	108	270	0
40	124	0	63	171	0	86	221	0	109	273	0
41	126	0	64	173	0	87	223	0	110	275	0
42	128	0	65	175	0	88	225	0	111	277	0
43	130	0	66	177	0	89	228	0	112	280	0
44	132	0	67	179	0	90	230	0	>112	n/a	—

## Erik-Nes

Table 3-41: BPD: Erik-Nes (Fetal Age)  
 Unit: meas (mm); mean(WeekDay); SD (mm)  
 Table type = SD, Table range = 1SD, Graph range = 1SD

meas	mean	SD	meas	mean	SD	meas	mean	SD	meas	mean	SD
29	13+1	0	48	19+2	0	67	24+6	0	86	31+4	0
30	13+3	0	49	19+4	0	68	25+1	0	87	31+7	0
31	13+5	0	50	19+6	0	69	25+3	0	88	32+3	0
32	14+1	0	51	20+1	0	70	25+5	0	89	32+6	0
33	14+3	0	52	20+3	0	71	26+1	0	90	33+3	0
34	14+5	0	53	20+5	0	72	26+3	0	91	33+6	0
35	15+0	0	54	21+0	0	73	26+5	0	92	34+3	0
36	15+3	0	55	21+2	0	74	27+0	0	93	34+7	0
37	15+5	0	56	21+4	0	75	27+3	0	94	35+4	0
38	16+1	0	57	21+6	0	76	27+5	0	95	36+1	0
39	16+3	0	58	22+1	0	77	28+0	0	96	36+5	0
40	16+6	0	59	22+3	0	78	28+3	0	97	37+3	0
41	17+1	0	60	22+5	0	79	28+5	0	98	37+7	0
42	17+3	0	61	23+0	0	80	29+1	0	99	38+5	0
43	17+5	0	62	23+2	0	81	29+4	0	100	39+3	0
44	17+7	0	63	23+4	0	82	29+6	0	101	38+7	0
45	18+2	0	64	23+7	0	83	30+2	0			
46	18+5	0	65	24+2	0	84	30+5	0			
47	19+0	0	66	24+4	0	85	31+1	0			

Table 3-42: BPD: Erik-Nes (Fetal Growth)  
 Unit: AGE (WeekDay); mean(mm);

AGE	meas	AGE	meas	AGE	meas	AGE	meas
13+1	29	19+2	48	24+6	67	31+4	86
13+3	30	19+4	49	25+1	68	31+7	87
13+5	31	19+6	50	25+3	69	32+3	88
14+1	32	20+1	51	25+5	70	32+6	89
14+3	33	20+3	52	26+1	71	33+3	90
14+5	34	20+5	53	26+3	72	33+6	91
15+0	35	21+0	54	26+5	73	34+3	92
15+3	36	21+2	55	27+0	74	34+7	93
15+5	37	21+4	56	27+3	75	35+4	94
16+1	38	21+6	57	27+5	76	36+1	95
16+3	39	22+1	58	28+0	77	36+5	96
16+6	40	22+3	59	28+3	78	37+3	97
17+1	41	22+5	60	28+5	79	37+7	98
17+3	42	23+0	61	29+1	80	38+5	99
17+5	43	23+2	62	29+4	81	39+3	100
17+7	44	23+4	63	29+6	82	38+7	101
18+2	45	23+7	64	30+2	83		
18+5	46	24+2	65	30+5	84		
19+0	47	24+4	66	31+1	85		

Table 3-43: MAD:Erik-Nes (Fetal Age)  
 Unit: meas (mm); mean(WeekDay); SD (mm)  
 Table type = SD, Table range = 1SD, Graph range = 1SD

meas	mean	SD	meas	mean	SD	meas	mean	SD	meas	mean	SD
36	15+6	0	55	22+7	0	74	28+2	0	93	33+5	0
37	16+3	0	56	23+2	0	75	28+4	0	94	34+0	0
38	16+6	0	57	23+4	0	76	28+6	0	95	34+2	0
39	17+2	0	58	23+6	0	77	29+1	0	96	34+5	0
40	17+5	0	59	24+1	0	78	29+3	0	97	34+7	0
41	18+1	0	60	24+3	0	79	29+5	0	98	35+2	0
42	18+4	0	61	24+5	0	80	29+7	0	99	35+5	0
43	18+7	0	62	24+7	0	81	30+2	0	100	36+0	0
44	19+3	0	63	25+2	0	82	30+4	0	101	36+3	0
45	19+5	0	64	25+4	0	83	30+6	0	102	36+6	0
46	20+1	0	65	25+6	0	84	31+1	0	103	37+2	0
47	20+3	0	66	26+1	0	85	31+3	0	104	37+5	0
48	20+6	0	67	26+3	0	86	31+5	0	105	38+1	0
49	21+1	0	68	26+5	0	87	31+7	0	106	38+4	0
50	21+3	0	69	26+7	0	88	32+2	0	107	39+0	0
51	21+5	0	70	27+2	0	89	32+4	0	108	39+4	0
52	22+0	0	71	27+4	0	90	32+6	0	109	40+1	0
53	22+3	0	72	27+5	0	91	33+1	0	110	40+5	0
54	22+5	0	73	28+0	0	92	33+3	0	111	41+2	0

Table 3-44: MAD: Erik-Nes (Fetal Growth)  
 Unit: AGE (WeekDay); mean(mm);

AGE	meas	AGE	meas	AGE	meas	AGE	meas
15+6	36	22+7	55	28+2	74	33+5	93
16+3	37	23+2	56	28+4	75	34+0	94
16+6	38	23+4	57	28+6	76	34+2	95
17+2	39	23+6	58	29+1	77	34+5	96
17+5	40	24+1	59	29+3	78	34+7	97
18+1	41	24+3	60	29+5	79	35+2	98
18+4	42	24+5	61	29+7	80	35+5	99
18+7	43	24+7	62	30+2	81	36+0	100
19+3	44	25+2	63	30+4	82	36+3	101
19+5	45	25+4	64	30+6	83	36+6	102
20+1	46	25+6	65	31+1	84	37+2	103
20+3	47	26+1	66	31+3	85	37+5	104
20+6	48	26+3	67	31+5	86	38+1	105
21+1	49	26+5	68	31+7	87	38+4	106
21+3	50	26+7	69	32+2	88	39+0	107
21+5	51	27+2	70	32+4	89	39+4	108
22+0	52	27+4	71	32+6	90	40+1	109
22+3	53	27+5	72	33+1	91	40+5	110
22+5	54	28+0	73	33+3	92	41+2	111



**Goldstein**

Table 3-45: TCD: Goldstein et a, Am J OB/GYN, May 1987 (Fetal Growth)  
 Unit: TCD (Weeks); Age/Quat1/Mean/Quat3/Max (mm)

Age	Min	Quat1	Mean	Quat3	Max
15	10	12	14	15	16
16	14	16	16	16	17
17	16	17	17	18	18
18	17	18	18	19	19
19	18	18	19	19	22
20	18	19	20	20	22
21	19	20	22	23	24
22	21	23	23	24	24
23	22	23	24	25	26
24	22	24	25	27	28
25	23	21.5	28	28	29
26	25	28	29	30	32
27	26	28.5	30	31	32
28	27	30	31	32	34
29	29	32	34	36	38
30	31	32	35	37	40
31	32	35	38	39	43
32	33	36	38	40	42
33	32	36	40	43	44
34	33	38	40	41	44
35	31	37	40.5	43	47
36	36	29	43	52	55
37	37	37	45	52	55
38	40	40	48.5	52	55
39	52	52	52	55	55

**Hadlock**

Table 3-46: AC: Hadlock, Radiology 1984, V2ol. 152:497 (Fetal Age)

Unit: meas (mm); mean(Week); SD (Week)

Table type = SD, Table range = 2SD, Graph range = 2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
<50	n/a	—	135	19.0	2.06	225	26.9	2.18	315	35.4	2.96
50	12.0	1.66	140	19.4	2.06	230	27.4	2.18	320	35.9	2.96
55	12.4	1.66	145	19.8	2.06	235	27.8	2.18	321	36.0	3.04
60	12.8	1.66	150	20.2	2.06	240	28.3	2.18	325	36.4	3.04
65	13.2	1.66	155	20.7	2.06	245	28.7	2.18	330	36.9	3.04
70	13.6	1.66	160	21.1	2.06	250	29.2	2.18	335	37.4	3.04
75	14.0	1.66	165	21.5	2.06	255	29.7	2.18	340	37.9	3.04
80	14.4	1.66	170	22.0	2.06	258	30.0	2.96	345	38.4	3.04
85	14.8	1.66	175	22.4	2.06	259	30.1	2.96	350	38.9	3.04
90	15.2	1.66	180	22.9	2.06	260	30.2	2.96	355	39.4	3.04
95	15.6	1.66	185	23.3	2.06	265	30.6	2.96	360	39.9	3.04
100	16.0	1.66	190	23.7	2.06	270	31.1	2.96	365	40.4	3.04
105	16.4	1.66	192	23.9	2.06	275	31.6	2.96	370	40.9	3.04
110	16.9	1.66	193	24.0	2.18	280	32.0	2.96	375	41.4	3.04
115	17.3	1.66	195	24.2	2.18	285	32.5	2.96	380	42.0	3.04
120	17.7	1.66	200	24.6	2.18	290	33.0	2.96	385	42.5	3.04
123	17.9	1.66	205	25.1	2.18	295	33.5	2.96	>385	n/a	—
124	18.0	2.06	210	25.5	2.18	300	34.0	2.96			
125	18.1	2.06	215	26.0	2.18	305	34.5	2.96			
130	18.5	2.06	220	26.4	2.18	310	34.9	2.96			

Table 3-47: AC: Hadlock, AJR; 139: 367-370; 1982 (Fetal Age)

Unit: AC (mm); Age (Days); SD (Days)

AC	Age	2SD	AC	Age	2SD	AC	Age	2SD	AC	Age	2SD
<47	n/a	—	138	133	14	230	189	15	305	241	21
47	84	13	144	136	14	235	192	15	310	245	21
53	87	13	151	140	14	241	196	15	314	248	21
60	91	13	157	143	14	246	199	15	319	252	21
67	94	13	163	147	14	251	203	15	323	255	18
74	98	13	174	154	14	256	206	15	328	259	18
80	101	13	180	157	14	261	210	15	332	262	18
87	105	13	186	161	14	266	213	21	337	266	18
93	106	13	192	164	14	271	217	21	341	269	18
100	112	13	197	168	14	276	220	21	344	273	18
106	115	13	203	171	15	281	224	21	349	276	18
113	119	13	208	175	15	286	227	21	353	280	18
119	122	13	214	178	15	291	231	21	>353	n/a	—
126	126	13	219	182	15	296	234	21			
132	129	14	225	185	15	300	238	21			

Table 3-48: BPD: Hadlock, Radiology 1984, Vol. 152:497<sup>a</sup> (Fetal Age)

Unit:meas (mm); mean(Week); SD (Week)

Table Type = SD, Table Range = 2SD, Graph Range = 2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
<14	n/a	—	36	17.0	1.19	59	24.1	2.18	82	33.0	3.08
14	11.9	1.19	37	17.3	1.19	60	24.5	2.18	83	33.4	3.08
15	12.1	1.19	38	17.6	1.19	61	24.8	2.18	84	33.8	3.08
16	12.3	1.19	39	17.9	1.19	62	25.2	2.18	85	34.2	3.08
17	12.5	1.19	40	18.1	1.73	63	25.5	2.18	86	34.7	3.08
18	12.8	1.19	41	18.4	1.73	64	25.9	2.18	87	35.1	3.08
19	13.0	1.19	42	18.7	1.73	65	26.3	2.18	88	35.6	3.08
20	13.2	1.19	43	19.0	1.73	66	26.6	2.18	89	36.0	3.20
21	13.4	1.19	44	19.3	1.73	67	27.0	2.18	90	36.5	3.20
22	13.6	1.19	45	19.6	1.73	68	27.4	2.18	91	36.9	3.20
23	13.8	1.19	46	19.9	1.73	69	27.7	2.18	92	37.4	3.20
24	14.1	1.19	47	20.2	1.73	70	28.1	2.18	93	37.8	3.20
25	14.3	1.19	48	20.5	1.73	71	28.5	2.18	94	38.3	3.20
26	14.5	1.19	49	20.8	1.73	72	28.9	2.18	95	38.7	3.20
27	14.8	1.19	50	21.1	1.73	73	29.3	2.18	96	39.2	3.20
28	15.0	1.19	51	21.5	1.73	74	29.7	2.18	97	39.7	3.20
29	15.2	1.19	52	21.8	1.73	75	30.1	3.08	98	40.2	3.20
30	15.5	1.19	53	22.1	1.73	76	30.5	3.08	99	40.6	3.20
31	15.7	1.19	54	22.4	1.73	77	30.9	3.08	100	41.1	3.20
32	16.0	1.19	55	22.8	1.73	78	31.3	3.08	101	41.6	3.20
33	16.3	1.19	56	23.1	1.73	79	31.7	3.08	102	42.1	3.20
34	16.5	1.19	57	23.4	1.73	80	32.1	3.08	103	42.6	3.20
35	16.8	1.19	58	23.8	1.73	81	32.5	3.08	>103	n/a	—

a.Variability of GA estimate by BPD at term is  $\pm 2$  SD (6 weeks)

Table 3-49: BPD: Hadlock, J Ultrasound Med 1:97-104, April 1982 (Fetal Age)  
Unit: BPD (mm); Age (Days ); SD (Days)

BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD
<20	n/a	—	40	126	10	61	175	9	82	233	14
20	85	6	41	128	10	62	177	9	83	237	14
21	88	6	42	130	10	63	180	9	84	239	14
22	90	6	43	132	10	64	183	9	85	243	14
23	92	6	44	134	10	65	185	9	86	246	14
24	93	6	45	137	10	66	188	9	87	249	14
25	95	6	46	139	10	67	190	9	88	253	25
26	97	6	47	141	10	68	193	9	89	256	25
27	99	6	48	144	10	69	196	9	90	259	25
28	102	6	49	146	10	70	198	9	91	263	25
29	103	6	50	148	10	71	201	9	92	266	25
30	105	6	51	151	10	72	204	9	93	270	25
31	107	6	52	153	10	73	207	9	94	272	25
32	109	6	53	155	10	74	209	9	95	276	25
33	111	6	54	158	10	75	213	14	96	279	25
34	113	6	55	160	10	76	216	14	97	284	25
35	116	6	56	162	10	77	218	14	98	287	25
36	118	6	57	163	10	78	221	14	99	291	25
37	120	6	58	167	10	79	224	14	100	294	25
38	122	6	59	169	9	80	228	14	>100	n/a	—
39	124	6	60	172	9	81	230	14			

Table 3-50: CI: Hadlock, AJR, 137: 83, 1981 (Fetal Growth)

Min (Index)	Max (Index)
70	86

Table 3-51: CRL: Hadlock, Radiology 1992, Vol. 182:501 (Fetal Age)  
Unit: CRL (mm); Age (Week); SD (Week)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<2	n/a	—	32	10.1	± 0.5	63	12.7	± 0.6	94	15.3	± 0.7
2	5.7	± 0.3	33	10.2	± 0.5	64	12.8	± 0.6	95	15.3	± 0.7
3	5.9	± 0.3	34	10.3	± 0.5	65	12.8	± 0.6	96	15.4	± 0.7
4	6.1	± 0.3	35	10.4	± 0.5	66	12.9	± 0.6	97	15.5	± 0.7
5	6.2	± 0.3	36	10.5	± 0.5	67	13.0	± 0.6	98	15.6	± 0.7
6	6.4	± 0.3	37	10.6	± 0.5	68	13.1	± 0.6	99	15.7	± 0.7
7	6.6	± 0.3	38	10.7	± 0.5	69	13.1	± 0.6	100	15.9	± 0.7
8	6.7	± 0.3	39	10.8	± 0.5	70	13.2	± 0.6	101	16.0	± 0.7
9	6.9	± 0.3	40	10.9	± 0.5	71	13.3	± 0.6	102	16.1	± 0.7
10	7.1	± 0.3	41	11.0	± 0.5	72	13.4	± 0.6	103	16.2	± 0.7
11	7.2	± 0.3	42	11.1	± 0.5	73	13.4	± 0.6	104	16.3	± 0.7
12	7.4	± 0.3	43	11.2	± 0.5	74	13.5	± 0.6	105	16.4	± 0.7
13	7.5	± 0.3	44	11.2	± 0.5	75	13.6	± 0.6	106	16.5	± 0.7
14	7.7	± 0.3	45	11.3	± 0.5	76	13.7	± 0.6	107	16.6	± 0.7
15	7.9	± 0.4	46	11.4	± 0.5	77	13.8	± 0.6	108	16.7	± 0.7
16	8.0	± 0.4	47	11.5	± 0.5	78	13.8	± 0.6	109	16.8	± 0.7
17	8.1	± 0.4	48	11.6	± 0.5	79	13.9	± 0.6	110	16.9	± 0.8
18	8.3	± 0.4	49	11.7	± 0.5	80	14.0	± 0.6	111	17.0	± 0.8
19	8.4	± 0.4	50	11.7	± 0.5	81	14.1	± 0.6	112	17.1	± 0.8
20	8.6	± 0.4	51	11.8	± 0.5	82	14.2	± 0.6	113	17.2	± 0.8
21	8.7	± 0.4	52	11.9	± 0.5	83	14.2	± 0.6	114	17.3	± 0.8
22	8.9	± 0.4	53	12.0	± 0.5	84	14.3	± 0.6	115	17.4	± 0.8
23	9.0	± 0.4	54	12.0	± 0.5	85	14.4	± 0.6	116	17.5	± 0.8
24	9.1	± 0.4	55	12.1	± 0.5	86	14.5	± 0.6	117	17.6	± 0.8
25	9.2	± 0.4	56	12.2	± 0.5	87	14.6	± 0.6	118	17.7	± 0.8
26	9.4	± 0.4	57	12.3	± 0.5	88	14.7	± 0.7	119	17.8	± 0.8
27	9.5	± 0.4	58	12.3	± 0.5	89	14.8	± 0.7	120	17.9	± 0.8
28	9.6	± 0.4	59	12.4	± 0.6	90	14.9	± 0.7	121	18.0	± 0.8
29	9.7	± 0.4	60	12.5	± 0.6	91	15.0	± 0.7	>121	n/a	—
30	9.9	± 0.4	61	12.6	± 0.6	92	15.1	± 0.7			
31	10.0	± 0.4	62	12.6	± 0.6	93	15.2	± 0.7			

Table 3-52: EFW: Hadlock (Fetal Age)  
Unit: EFW (grams); Mean (Weeks); SD (grams)

EFW	Mean	2SD	EFW	Mean	2SD	EFW	Mean	2SD
<35	n/a	—	399	21	51	2162	33	275
35	10	4	478	22	61	2377	34	302
45	11	6	568	23	72	2595	35	330
58	12	7	670	24	85	2813	36	357
73	13	9	785	25	101	3028	37	385
93	14	12	913	26	116	3236	38	411
117	15	15	1055	27	134	3435	39	436
146	16	19	1210	28	154	3619	40	460
181	17	23	1379	29	175	3787	41	481
223	18	28	1559	30	198	>3787	n/a	—
273	19	35	1751	31	222			
331	20	42	1953	32	248			

Table 3-53: FL: Hadlock, Radiology 1984, Vol. 152:497 (Fetal Age)  
 Unit: meas (mm); mean(Week); SD (Week)  
 Table Type = SD, Table Range = 2SD, Graph Range = 2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
<6	n/a	—	25	17.6	1.38	45	24.9	2.08	65	33.5	2.96
6	11.9	1.38	26	17.9	1.38	46	25.3	2.08	66	34.0	2.96
7	12.2	1.38	27	18.2	1.80	47	25.7	2.08	67	34.5	2.96
8	12.4	1.38	28	18.6	1.80	48	26.1	2.08	68	34.9	2.96
9	12.7	1.38	29	18.9	1.80	49	26.5	2.08	69	35.4	2.96
10	13.0	1.38	30	19.3	1.80	50	26.9	2.08	70	35.9	2.96
11	13.3	1.38	31	19.6	1.80	51	27.3	2.08	71	36.4	3.12
12	13.5	1.38	32	20.0	1.80	52	27.7	2.08	72	36.9	3.12
13	13.8	1.38	33	20.3	1.80	53	28.2	2.08	73	37.4	3.12
14	14.1	1.38	34	20.7	1.80	54	28.6	2.08	74	37.9	3.12
15	14.4	1.38	35	21.0	1.80	55	29.0	2.08	75	38.4	3.12
16	14.7	1.38	36	21.4	1.80	56	29.5	2.08	76	38.9	3.12
17	15.0	1.38	37	21.8	1.80	57	29.9	2.08	77	39.4	3.12
18	15.3	1.38	38	22.2	1.80	58	30.3	2.96	78	39.9	3.12
19	15.6	1.38	39	22.5	1.80	59	30.8	2.96	79	40.4	3.12
20	16.0	1.38	40	22.9	1.80	60	31.2	2.96	80	40.9	3.12
21	16.3	1.38	41	23.3	1.80	61	31.7	2.96	81	41.4	3.12
22	16.6	1.38	42	23.7	1.80	62	32.1	2.96	82	42.0	3.12
23	16.9	1.38	43	24.1	2.08	63	32.6	2.96	83	42.5	3.12
24	17.2	1.38	44	24.5	2.08	64	33.1	2.96	>83	n/a	—

Table 3-54: FL: Hadlock, AJR 138: 875-878, May 1982 (Fetal Age)  
 Unit: FL (mm); Age (Days); SD (Days)

FL	Age	2SD	FL	Age	2SD	FL	Age	2SD	FL	Age	2SD
<10	n/a	—	27	125	6	45	171	10	63	226	10
10	90	6	28	127	6	46	174	10	64	230	10
11	92	6	29	130	6	47	177	10	65	233	10
12	94	6	30	132	6	48	180	10	66	237	10
13	95	6	31	134	6	49	183	10	67	239	10
14	97	6	32	137	6	50	185	10	68	243	10
15	99	6	33	139	6	51	189	10	69	246	10
16	101	6	34	142	6	52	192	10	70	250	10
17	104	6	35	145	6	53	195	10	71	253	11
18	106	6	36	147	6	54	197	10	72	257	11
19	108	6	37	150	6	55	201	10	73	260	11
20	110	6	38	153	6	56	204	10	74	264	11
21	112	6	39	155	6	57	207	10	75	268	11
22	114	6	40	157	6	58	210	10	76	272	11
23	116	6	41	160	6	59	213	10	77	275	11
24	118	6	42	163	6	60	216	10	78	279	11
25	120	6	43	166	6	61	220	10	79	283	11
26	123	6	44	169	10	62	223	10	>79	n/a	—

Table 3-55: HC: Hadlock, Radiology 1984, Vol. 152:497 (Fetal Age)

Unit: meas(mm); mean(Week); SD (Week)

Table Type = SD, Table Range = 2SD, Graph Range = 2SD

Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD	Meas	Mean	2SD
<55	n/a	—	135	17.0	1.19	215	23.6	1.48	290	31.9	2.98
55	12.0	1.19	140	17.3	1.19	219	23.9	1.48	295	32.6	2.98
60	12.3	1.19	145	17.7	1.19	220	24.0	2.06	300	33.3	2.98
65	12.6	1.19	149	18.0	1.48	225	24.5	2.06	305	33.9	2.98
70	12.8	1.19	150	18.1	1.48	230	25.0	2.06	310	34.6	2.98
75	13.1	1.19	155	18.4	1.48	235	25.5	2.06	315	35.3	2.98
80	13.4	1.19	160	18.8	1.48	240	26.1	2.06	319	35.9	2.98
85	13.7	1.19	165	19.2	1.48	245	26.6	2.06	320	36.1	2.70
90	14.0	1.19	170	19.6	1.48	250	27.1	2.06	325	36.8	2.70
95	14.3	1.19	175	20.0	1.48	255	27.7	2.06	330	37.6	2.70
100	14.7	1.19	180	20.4	1.48	260	28.3	2.06	335	38.3	2.70
105	15.0	1.19	185	20.8	1.48	265	28.9	2.06	340	39.1	2.70
110	15.3	1.19	190	21.3	1.48	270	29.4	2.06	345	39.9	2.70
115	15.6	1.19	195	21.7	1.48	274	29.9	2.06	350	40.7	2.70
120	16.0	1.19	200	22.2	1.48	275	30.0	2.98	355	41.6	2.70
125	16.3	1.19	205	22.6	1.48	280	30.7	2.98	360	42.4	2.70
130	16.6	1.19	210	23.1	1.48	285	31.3	2.98	>360	n/a	—

Table 3-56: HC: Hadlock, AJR 138: 649-653, 1982 (Fetal Age)

Unit: HC (mm); Age (Days); SD (Days)

HC	Age	2SD	HC	Age	2SD	HC	Age	2SD	HC	Age	2SD
<69	n/a	—	169	136	11	260	196	16	322	252	19
69	84	9	175	140	11	264	199	16	325	255	24
75	87	9	181	143	11	269	203	16	328	259	24
81	91	9	187	147	11	273	206	16	331	262	24
88	94	9	193	150	11	278	210	16	334	266	24
96	98	9	198	154	11	282	213	19	337	269	24
103	101	9	204	157	11	286	217	19	340	273	24
110	105	9	209	161	11	291	220	19	343	276	24
117	108	9	215	164	11	294	224	19	345	280	24
124	112	9	220	168	11	298	227	19	348	286	24
131	115	9	225	171	16	302	231	19	351	287	24
137	119	9	230	175	16	306	234	19	353	290	24
144	122	9	240	182	16	309	238	19	354	294	24
150	126	9	245	185	16	312	241	19	>354	n/a	—
157	129	11	250	189	16	316	245	19			
163	133	11	255	192	16	319	248	19			

Table 3-57: FL/HC Ratio: Hadlock, J Ultrasound Med 1984, 3: 439-442 (Fetal Growth)  
Unit: GA (Weeks)

GA	Min	Max	GA	Min	Max	GA	Min	Max
<15	n/a	—	24	18.7	20.9	34	19.4	21.8
15	15.3	17.1	25	18.7	20.3	35	20.1	22.3
16	13.3	16.5	26	18.6	20.4	36	20.1	22.1
17	14.6	17.6	27	18.6	20.4	37	20.8	22.6
18	15.8	18.0	28	18.8	20.6	38	20.9	22.7
19	16.1	18.3	29	19.6	20.8	39	20.6	23.4
20	16.8	19.8	30	19.2	21.4	40	20.7	22.5
21	15.9	20.3	31	19.3	21.3	41	21.6	23.2
22	18.4	20.2	32	19.1	21.3	42	20.1	23.9
23	19.2	20.8	33	19.9	21.5	>42	n/a	n/a

Table 3-58: FL/AC Ratio: Hadlock (Fetal Growth)  
Unit: Age (Weeks)

Age	Min (Index)	Max (Index)
21	20	24
42	20	24



## Hansmann

Table 3-59: AC: Hansmann (Fetal Age)  
 (Hansmann:M & Al:Geburtsh, u, Frauenheilk 39:656, 1979)  
 Unit: AC (mm); Age (Weeks/Days); SD (mm)

AC	Age	SD	AC	Age	SD	AC	Age	SD	AC	Age	SD
<53	n/a	—	100	15w3d	0	148	20w3d	0	196	25w4d	0
53	11w1d	0	101	15w4d	0	149	20w3d	0	197	25w5d	0
54	11w2d	0	102	15w5d	0	150	20w4d	0	198	25w5d	0
55	11w2d	0	103	15w5d	0	151	20w4d	0	199	25w6d	0
56	11w3d	0	104	15w6d	0	152	20w5d	0	200	26w0d	0
57	11w3d	0	105	16w0d	0	153	20w6d	0	201	26w0d	0
58	11w4d	0	106	16w0d	0	154	21w0d	0	202	26w1d	0
59	11w4d	0	107	16w1d	0	155	21w1d	0	203	26w2d	0
60	11w5d	0	108	16w2d	0	156	21w2d	0	204	26w3d	0
61	11w6d	0	109	16w3d	0	157	21w2d	0	205	26w3d	0
62	12w0d	0	110	16w3d	0	158	21w3d	0	206	26w4d	0
63	12w1d	0	111	16w4d	0	159	21w3d	0	207	26w5d	0
64	12w2d	0	112	16w5d	0	160	21w4d	0	208	26w6d	0
65	12w2d	0	113	16w6d	0	161	21w4d	0	209	26w6d	0
66	12w3d	0	114	16w6d	0	162	21w5d	0	210	27w0d	0
67	12w3d	0	115	17w0d	0	163	21w6d	0	211	27w1d	0
68	12w4d	0	116	17w1d	0	164	22w0d	0	212	27w2d	0
69	12w5d	0	117	17w2d	0	165	22w1d	0	213	27w2d	0
70	12w5d	0	118	17w2d	0	166	22w2d	0	214	27w3d	0
71	12w6d	0	119	17w3d	0	167	22w3d	0	215	27w4d	0
72	12w6d	0	120	17w3d	0	168	22w4d	0	216	27w4d	0
73	13w0d	0	121	17w4d	0	169	22w5d	0	217	27w5d	0
74	13w0d	0	122	17w4d	0	170	22w5d	0	218	27w5d	0
75	13w1d	0	123	17w5d	0	171	22w6d	0	219	27w6d	0
76	13w2d	0	124	17w6d	0	172	23w0d	0	220	28w0d	0
77	13w2d	0	125	18w0d	0	173	23w1d	0	221	28w0d	0
78	13w3d	0	126	18w1d	0	174	23w2d	0	222	28w1d	0
79	13w3d	0	127	18w2d	0	175	23w2d	0	223	28w2d	0
80	13w4d	0	128	18w3d	0	176	23w3d	0	224	28w3d	0
81	13w4d	0	129	18w3d	0	177	23w3d	0	225	28w4d	0
82	13w5d	0	130	18w4d	0	178	23w4d	0	226	28w5d	0
83	13w6d	0	131	18w5d	0	179	23w4d	0	227	28w5d	0
84	14w0d	0	132	18w6d	0	180	23w5d	0	228	28w6d	0
85	14w1d	0	133	18w6d	0	181	23w6d	0	229	29w0d	0
86	14w2d	0	134	19w0d	0	182	24w0d	0	230	29w1d	0
87	14w2d	0	135	19w1d	0	183	24w1d	0	231	29w2d	0
88	14w3d	0	136	19w2d	0	184	24w2d	0	232	29w2d	0
89	14w3d	0	137	19w2d	0	185	24w3d	0	233	29w3d	0
90	14w4d	0	138	19w3d	0	186	24w4d	0	234	29w3d	0
91	14w5d	0	139	19w3d	0	187	24w5d	0	235	29w4d	0
92	14w5d	0	140	19w4d	0	188	24w5d	0	236	29w4d	0
93	14w6d	0	141	19w4d	0	189	24w6d	0	237	29w5d	0
94	14w6d	0	142	19w5d	0	190	25w0d	0	238	29w6d	0
95	15w0d	0	143	19w6d	0	191	25w1d	0	239	30w0d	0
96	15w0d	0	144	20w0d	0	192	25w2d	0	240	30w1d	0
97	15w1d	0	145	20w1d	0	193	25w2d	0	241	30w2d	0
98	15w2d	0	146	20w2d	0	194	25w3d	0	242	30w3d	0
99	15w2d	0	147	20w2d	0	195	25w4d	0	243	30w3d	0

Table 3-59: AC: Hansmann (Fetal Age)  
 (Hansmann:M & AI:Geburtsh, u, Frauenheilk 39:656, 1979) (Continued)  
 Unit: AC (mm); Age (Weeks/Days); SD (mm)

AC	Age	SD	AC	Age	SD	AC	Age	SD	AC	Age	SD
244	30w4d	0	264	32w4d	0	284	34w5d	0	304	36w6d	0
245	30w5d	0	265	32w5d	0	285	34w6d	0	305	37w0d	0
246	30w6d	0	266	32w6d	0	286	35w0d	0	306	37w1d	0
247	30w6d	0	267	33w0d	0	287	35w1d	0	307	37w2d	0
248	31w0d	0	268	33w1d	0	288	35w2d	0	308	37w3d	0
249	31w1d	0	269	33w2d	0	289	35w3d	0	309	37w3d	0
250	31w2d	0	270	33w3d	0	290	35w3d	0	310	37w4d	0
251	31w3d	0	271	33w3d	0	291	35w4d	0	311	37w5d	0
252	31w3d	0	272	33w4d	0	292	35w5d	0	312	37w6d	0
253	31w4d	0	273	33w5d	0	293	35w6d	0	313	37w6d	0
254	31w5d	0	274	33w6d	0	294	35w6d	0	314	38w0d	0
255	31w6d	0	275	33w6d	0	295	36w0d	0	315	38w1d	0
256	31w6d	0	276	34w0d	0	296	36w1d	0	316	38w2d	0
257	32w0d	0	277	34w1d	0	297	36w2d	0	317	38w4d	0
258	32w1d	0	278	34w2d	0	298	36w2d	0	318	38w5d	0
259	32w2d	0	279	34w2d	0	299	36w3d	0	319	39w0d	0
260	32w2d	0	280	34w3d	0	300	36w3d	0	320	39w1d	0
261	32w3d	0	281	34w3d	0	301	36w4d	0	>320	n/a	—
262	32w3d	0	282	34w4d	0	302	36w4d	0			
263	32w4d	0	283	34w4d	0	303	36w5d	0			

Table 3-60: BPD: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics & Gynecology, 438-439, 1985

Known LMP (left)—Unknown LMP (right)

Unit: BPD (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD
<14	n/a	—	60	22w6d	5	<14	n/a	—	60	23w2d	10
14	10w0d	0	61	23w1d	5	14	9w1d	7	61	23w4d	10
15	10w1d	0	62	23w4d	5	15	9w3d	7	62	24w0d	10
16	10w2d	0	63	23w6d	5	16	9w5d	7	63	24w2d	10
17	10w5d	0	64	24w1d	6	17	10w0d	7	64	24w4d	10
18	10w6d	0	65	24w4d	6	18	10w2d	7	65	24w6d	10
19	11w1d	0	66	24w6d	6	19	10w4d	7	66	25w1d	11
20	11w3d	0	67	25w1d	6	20	10w6d	7	67	25w3d	12
21	11w5d	0	68	25w3d	6	21	11w1d	7	68	25w6d	10
22	12w0d	0	69	25w5d	6	22	11w3d	7	69	26w1d	10
23	12w2d	0	70	26w1d	6	23	11w5d	7	70	26w3d	10
24	12w4d	5	71	26w3d	6	24	12w0d	7	71	26w5d	12
25	12w6d	5	72	26w6d	6	25	12w2d	7	72	27w1d	11
26	13w1d	5	73	27w1d	6	26	12w4d	7	73	27w3d	13
27	13w2d	5	74	27w3d	6	27	12w6d	7	74	27w6d	12
28	13w4d	4	75	27w6d	6	28	13w1d	7	75	28w1d	12
29	13w6d	4	76	28w1d	6	29	13w3d	8	76	28w4d	13
30	14w1d	4	77	28w4d	6	30	13w5d	7	77	28w6d	13
31	14w3d	4	78	28w6d	6	31	14w0d	8	78	29w2d	15
32	14w4d	4	79	29w2d	6	32	14w2d	8	79	29w5d	16
33	14w6d	4	80	29w5d	6	33	14w4d	9	80	30w0d	15
34	15w2d	4	81	30w0d	6	34	15w0d	9	81	30w3d	15
35	15w4d	4	82	30w3d	6	35	15w2d	8	82	31w0d	15
36	15w6d	4	83	30w5d	6	36	15w4d	9	83	31w2d	16
37	16w1d	4	84	31w2d	6	37	16w0d	8	84	31w6d	17
38	16w3d	4	85	31w5d	6	38	16w2d	9	85	32w2d	17
39	16w5d	4	86	32w1d	6	39	16w4d	9	86	32w5d	18
40	17w0d	4	87	32w4d	6	40	17w0d	9	87	33w2d	20
41	17w2d	4	88	33w0d	7	41	17w2d	9	88	33w5d	19
42	17w4d	4	89	33w3d	7	42	17w4d	9	89	34w2d	19
43	17w6d	4	90	33w6d	7	43	17w6d	9	90	34w5d	19
44	18w1d	4	91	34w3d	7	44	18w1d	9	91	35w1d	25
45	18w3d	4	92	34w6d	7	45	18w4d	9	92	35w6d	24
46	18w5d	4	93	35w3d	7	46	18w6d	9	93	36w5d	21
47	19w0d	4	94	36w0d	7	47	19w1d	10	94	37w3d	19
48	19w2d	5	95	36w3d	7	48	19w3d	10	95	38w3d	22
49	19w4d	5	96	37w1d	7	49	19w5d	10	96	38w6d	25
50	19w6d	5	97	37w6d	7	50	20w0d	10	97	39w0d	22
51	20w1d	5	98	38w4d	7	51	20w3d	10	98	39w2d	20
52	20w3d	5	99	39w3d	7	52	20w5d	10	99	39w3d	22
53	20w6d	5	100	40w3d	7	53	21w0d	11	100	39w4d	20
54	21w1d	5	101	41w3d	7	54	21w3d	10	101	39w5d	20
55	21w2d	5	>101	n/a	—	55	21w5d	10	102	39w6d	19
56	21w4d	5				56	22w0d	9	103	40w0d	19
57	21w6d	5				57	22w2d	9	104	40w1d	19
58	22w2d	5				58	22w5d	9	105	40w2d	17
59	22w4d	5				59	23w0d	10	>105	n/a	—

Table 3-61: CRL: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics & Gynecology, 438-439, 1985

Unit: CRL (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD
<b>Known LMP</b>											
<13	n/a	—	54	12w0d	15	96	15w3d	11	138	19w2d	15
13	7w4d	0	55	12w1d	16	97	15w3d	11	139	19w3d	15
14	7w5d	0	56	12w1d	16	98	15w4d	11	140	19w4d	15
15	8w0d	0	57	12w2d	16	99	15w4d	11	141	19w4d	16
16	8w1d	0	58	12w2d	16	100	15w5d	11	142	19w5d	16
17	8w2d	0	59	12w3d	16	101	15w5d	10	143	19w5d	16
18	8w3d	0	60	12w3d	16	102	15w6d	10	144	19w6d	16
19	8w4d	7	61	12w4d	15	103	15w6d	10	145	20w0d	16
20	8w5d	7	62	12w4d	15	104	16w0d	10	146	20w1d	17
21	8w6d	8	63	12w5d	15	105	16w1d	10	147	20w2d	17
22	9w0d	8	64	12w5d	15	106	16w2d	10	148	20w2d	17
23	9w1d	10	65	12w6d	15	107	16w2d	10	149	20w3d	17
24	9w2d	10	66	12w6d	15	108	16w3d	10	150	20w4d	17
25	9w3d	11	67	13w0d	15	109	16w3d	10	151	20w4d	0
26	9w4d	11	68	13w1d	15	110	16w4d	10	152	20w5d	0
27	9w4d	11	69	13w1d	15	111	16w4d	11	153	20w5d	0
28	9w5d	11	70	13w2d	15	112	16w5d	11	154	20w6d	0
29	9w6d	11	71	13w3d	15	113	16w5d	11	155	21w0d	0
30	10w0d	12	72	13w3d	15	114	16w6d	11	156	21w0d	0
31	10w0d	12	73	13w4d	15	115	17w0d	11	157	21w1d	0
32	10w1d	12	74	13w4d	15	116	17w1d	12	158	21w1d	0
33	10w2d	12	75	13w5d	15	117	17w2d	12	159	21w2d	0
34	10w3d	12	76	13w5d	15	118	17w2d	12	160	21w3d	0
35	10w3d	13	77	13w6d	15	119	17w3d	12	161	21w3d	0
36	10w4d	13	78	13w6d	15	120	17w3d	12	162	21w4d	0
37	10w5d	13	79	14w0d	15	121	17w4d	13	163	21w4d	0
38	10w5d	13	80	14w0d	15	122	17w5d	13	164	21w5d	0
39	10w6d	13	81	14w1d	13	123	17w5d	13	165	21w6d	0
40	10w6d	13	82	14w1d	13	124	17w6d	13	166	21w6d	0
41	11w0d	14	83	14w2d	13	125	18w0d	13	167	22w0d	0
42	11w1d	14	84	14w2d	13	126	18w1d	14	168	22w0d	0
43	11w1d	14	85	14w3d	13	127	18w1d	14	169	22w1d	0
44	11w2d	14	86	14w3d	13	128	18w2d	14	170	22w1d	0
45	11w2d	14	87	14w4d	13	129	18w2d	14	171	22w2d	0
46	11w3d	14	88	14w4d	13	130	18w3d	15	172	22w2d	0
47	11w3d	15	89	14w5d	13	131	18w4d	15	173	22w3d	0
48	11w4d	15	90	14w6d	13	132	18w4d	15	174	22w3d	0
49	11w4d	15	91	14w6d	12	133	18w5d	15	175	22w4d	0
50	11w5d	15	92	15w0d	12	134	18w6d	15	>175	n/a	—
51	11w5d	15	93	15w0d	12	135	19w0d	15			
52	11w6d	15	94	15w1d	12	136	19w1d	15			
53	11w6d	15	95	15w2d	12	137	19w1d	15			

Table 3-61: CRL: Hansmann (Fetal Age) (Continued)  
 Ultrasound Diagnosis in Obstetrics & Gynecology, 438-439, 1985

Unit: CRL (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD
<b>Unknown LMP</b>											
<6	n/a	—	22	9w1d	7	54	12w3d	9	106	16w2d	13
6	6w1d	7	23	9w2d	7	56	12w4d	9	110	16w4d	14
7	6w2d	7	24	9w3d	7	58	12w5d	9	113	17w0d	14
8	6w4d	7	26	9w5d	7	60	12w6d	9	116	17w2d	14
9	6w6d	7	28	10w0d	8	63	13w0d	10	120	17w4d	14
10	7w0d	7	30	10w2d	8	66	13w2d	10	123	18w0d	14
11	7w2d	7	32	10w3d	8	70	13w3d	10	126	18w2d	14
12	7w3d	7	34	10w5d	8	73	13w5d	11	130	18w6d	14
13	7w4d	7	36	10w6d	8	76	13w6d	11	133	19w1d	15
14	7w6d	7	38	11w1d	8	80	14w1d	11	136	19w4d	16
15	8w0d	7	40	11w2d	8	83	14w2d	12	140	20w0d	16
16	8w2d	7	42	11w3d	8	86	14w4d	12	143	20w3d	16
17	8w3d	7	44	11w4d	9	90	14w6d	12	146	20w6d	16
18	8w4d	7	46	11w6d	9	93	15w1d	12	150	21w3d	16
19	8w5d	7	48	12w0d	9	96	15w3d	12	>150	n/a	—
20	8w6d	7	50	12w1d	9	100	15w5d	12			
21	9w0d	7	52	12w2d	9	103	16w0d	13			

Table 3-62: FL: Hansmann (Fetal Age)

Ultrasound Diagnosis in Obstetrics and Gynecology, 438-439, 1985

Known/Unknown LMP; Unit: FL (mm); Age (Weeks/Days); 2SD (Week)

FL	Age	2SD	FL	Age	2SD	FL	Age	2SD	FL	Age	2SD
<12	n/a	—	28	18w4d	4	45	24w6d	5	62	32w1d	5
12	13w4d	0	29	18w6d	4	46	25w2d	5	63	32w5d	5
13	13w6d	0	30	19w2d	4	47	25w4d	5	64	33w1d	6
14	14w1d	0	31	19w4d	4	48	26w0d	5	65	33w5d	6
15	14w3d	0	32	20w0d	4	49	26w3d	5	66	34w1d	6
16	14w5d	5	33	20w3d	4	50	26w6d	5	67	34w5d	6
17	15w1d	5	34	20w5d	4	51	27w3d	5	68	35w1d	6
18	15w2d	4	35	21w1d	5	52	27w5d	5	69	35w5d	6
19	15w5d	4	36	21w3d	5	53	28w1d	5	70	36w1d	6
20	16w0d	4	37	21w6d	5	54	28w4d	5	71	36w5d	6
21	16w2d	4	38	22w1d	5	55	29w0d	5	72	37w2d	6
22	16w4d	4	39	22w4d	5	56	29w3d	6	73	37w6d	6
23	16w6d	4	40	22w6d	5	57	29w6d	6	74	38w3d	7
24	17w2d	4	41	23w2d	5	58	30w2d	6	75	39w0d	7
25	17w4d	4	42	23w5d	5	59	30w5d	5	>75	n/a	—
26	17w6d	4	43	24w0d	5	60	31w2d	5			
27	18w2d	4	44	24w3d	5	61	31w5d	5			

Table 3-63: GS: Hansmann (Fetal Age)  
 Hansmann: M and Al: Geburtsh, u, Frauenheilk 39: 656, 1979  
 Unit: GS (mm); Age (Days); SD (mm)

GS	Age	SD	GS	Age	SD	GS	Age	SD	GS	Age	SD
<10	n/a	—	24	47	5	39	61	5	54	76	5
10	33	5	25	48	5	40	62	5	55	77	5
11	34	5	26	49	5	41	63	5	56	78	5
12	35	5	27	50	5	42	64	5	57	79	5
13	36	5	28	51	5	43	65	5	58	80	5
14	37	5	29	52	5	44	66	5	59	81	5
15	38	5	30	53	5	45	67	5	60	82	5
16	39	5	31	54	5	46	68	5	61	83	5
17	40	5	32	55	5	47	69	5	62	84	5
18	41	5	33	56	5	48	70	5	63	85	5
19	42	5	34	57	5	49	71	5	64	86	5
20	43	5	35	58	5	50	72	5	65	87	5
21	44	5	36	58	5	51	73	5	>65	n/a	—
22	45	5	37	59	5	52	74	5			
23	46	5	38	60	5	53	75	5			

Table 3-64: HC: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics and Gynecology, 438-439, 1985  
 Known/Unknown LMP; Unit: HC (mm); Age (Weeks/Days); 2SD (mm)

HC	Age	2SD	HC	Age	2SD	HC	Age	2SD	HC	Age	2SD
<105	n/a	—	165	18w4d	16	230	23w5d	18	295	29w5d	19
105	13w3d	0	170	19w0d	16	235	24w1d	18	300	30w2d	19
110	14w0d	0	175	19w3d	16	240	24w4d	18	305	30w5d	19
115	14w3d	14	180	19w5d	16	245	25w0d	18	310	31w2d	19
120	14w6d	14	185	20w1d	17	250	25w3d	18	315	32w1d	20
125	15w3d	14	190	20w4d	17	255	25w6d	18	320	32w5d	20
130	15w5d	14	195	21w0d	17	260	26w2d	18	325	33w3d	20
135	16w1d	14	200	21w2d	17	265	26w5d	18	330	34w2d	20
140	16w4d	14	205	21w5d	17	270	27w1d	18	335	35w1d	20
145	17w0d	15	210	22w1d	17	275	27w4d	19	340	36w2d	20
150	17w3d	15	215	22w4d	17	280	28w1d	19	345	37w6d	20
155	17w6d	16	220	23w0d	17	285	28w5d	19	>345	n/a	—
160	18w1d	16	225	23w3d	17	290	29w1d	19			

Table 3-65: OFD: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics and Gynecology, 438-439, 1985  
 Known/Unknown LMP; Unit: OFD (mm); Age (Weeks/Days); 2SD (mm)

OFD	Age	2SD	OFD	Age	2SD	OFD	Age	2SD	OFD	Age	2SD
<34	n/a	—	54	18w4d	5	75	23w2d	7	96	29w0d	8
34	13w3d	0	55	18w6d	5	76	23w4d	7	97	29w3d	8
35	13w5d	0	56	19w0d	6	77	23w6d	7	98	29w5d	8
36	14w0d	0	57	19w2d	6	78	24w1d	7	99	30w0d	8
37	14w2d	5	58	19w3d	6	79	24w2d	7	100	30w3d	8
38	14w4d	5	59	19w5d	6	80	24w4d	7	101	30w5d	8
39	14w6d	5	60	20w0d	6	81	24w6d	7	102	31w1d	8
40	15w1d	5	61	20w1d	6	82	25w1d	7	103	31w4d	8
41	15w3d	5	62	20w2d	6	83	25w2d	7	104	32w0d	8
42	15w5d	5	63	20w4d	6	84	25w4d	7	105	32w3d	8
43	16w0d	5	64	20w6d	6	85	25w6d	7	106	32w6d	8
44	16w1d	5	65	21w0d	6	86	26w1d	7	107	33w3d	8
45	16w3d	5	66	21w2d	6	87	26w3d	7	108	33w6d	8
46	16w4d	5	67	21w4d	6	88	26w5d	7	109	34w3d	8
47	16w6d	5	68	21w5d	6	89	27w0d	7	110	35w0d	8
48	17w1d	5	69	22w0d	6	90	27w2d	7	111	35w4d	8
49	17w3d	5	70	22w1d	7	91	27w4d	8	112	36w2d	8
50	17w4d	5	71	22w3d	7	92	27w6d	8	113	37w0d	8
51	17w6d	5	72	22w4d	7	93	28w1d	8	114	38w0d	8
52	18w1d	5	73	22w6d	7	94	28w3d	8	115	39w0d	8
53	18w2d	5	74	23w1d	7	95	28w5d	8	>115	n/a	—

Table 3-66: TAD: Hansmann (Fetal Age)  
 Hansmann: M and AI: Geburtsh, u, Frauenheilk 39: 656, 1979  
 Unit: TAD (mm); Age (Days); SD (mm)

TAD	Age	SD	TAD	Age	SD	TAD	Age	SD	TAD	Age	SD
<20	n/a	—	41	130	4	63	179	4	85	232	5
20	87	4	42	132	4	64	182	4	86	235	5
21	89	4	43	135	4	65	184	4	87	237	5
22	91	4	44	137	4	66	186	4	88	240	5
23	93	4	45	139	4	67	188	4	89	242	5
24	95	4	46	141	4	68	191	5	90	245	5
25	97	4	47	143	4	69	193	5	91	247	5
26	99	4	48	146	4	70	195	5	92	250	5
27	101	4	49	148	4	71	198	5	93	252	5
28	103	4	50	150	4	72	200	5	94	255	5
29	105	4	51	152	4	73	203	5	95	258	5
30	107	4	52	155	4	74	205	5	96	261	5
31	109	4	53	157	4	75	208	5	97	264	5
32	111	4	54	159	4	76	210	5	98	267	5
33	113	4	55	161	4	77	212	5	99	270	5
34	115	4	56	164	4	78	215	5	100	273	5
35	117	4	57	166	4	79	217	5	101	276	5
36	119	4	58	168	4	80	220	5	102	279	5
37	122	4	59	170	4	81	222	5	103	282	5
38	124	4	60	173	4	82	225	5	>103	n/a	—
39	126	4	61	175	4	83	227	5			
40	128	4	62	177	4	84	230	5			

Table 3-67: ThD: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics and Gynecology, 438-439, 1985  
 Known/Unknown LMP; Unit: ThD (mm); Age (Weeks/Days); 2SD (mm)

ThD	Age	2SD	ThD	Age	2SD	ThD	Age	2SD	ThD	Age	2SD
<20	n/a	—	41	18w5d	5	63	25w5d	7	85	33w1d	9
20	12w4d	0	42	19w0d	5	64	26w1d	7	86	33w4d	9
21	12w6d	0	43	19w3d	5	65	26w3d	7	87	33w6d	9
22	13w1d	0	44	19w5d	5	66	26w5d	7	88	34w2d	9
23	13w3d	0	45	19w6d	5	67	27w0d	7	89	34w4d	9
24	13w4d	4	46	20w2d	5	68	27w3d	8	90	35w0d	9
25	13w6d	4	47	20w4d	6	69	27w5d	8	91	35w3d	10
26	14w1d	4	48	20w6d	6	70	28w0d	8	92	35w5d	10
27	14w3d	4	49	21w2d	6	71	28w3d	8	93	36w1d	10
28	14w6d	4	50	21w4d	6	72	28w5d	8	94	36w3d	10
29	15w1d	4	51	21w6d	6	73	29w1d	8	95	36w6d	10
30	15w2d	4	52	22w1d	6	74	29w3d	8	96	37w1d	10
31	15w4d	4	53	22w4d	6	75	29w5d	8	97	37w4d	10
32	15w6d	4	54	22w6d	6	76	30w1d	8	98	38w1d	11
33	16w2d	4	55	23w1d	6	77	30w3d	8	99	38w4d	11
34	16w4d	4	56	23w3d	6	78	30w5d	8	100	38w6d	11
35	16w6d	4	57	23w6d	7	79	31w1d	8	101	39w3d	12
36	17w1d	5	58	24w1d	7	80	31w3d	8	102	39w6d	14
37	17w3d	5	59	24w3d	7	81	31w5d	8	103	40w2d	14
38	17w5d	5	60	24w6d	7	82	32w1d	9	104	40w5d	14
39	18w1d	5	61	25w1d	7	83	32w4d	9	105	41w2d	14
40	18w3d	5	62	25w3d	7	84	32w6d	9	>105	n/a	—

Table 3-68: TTD: Hansmann (Fetal Age)  
 Ultrasound Diagnosis in Obstetrics and Gynecology, 438-439, 1985  
 Unit: meas (mm); mean(Weeks/Days), Table Type = SD

Meas	Mean	Meas	Mean	Meas	Mean	Meas	Mean
17	12+0	44	20+0	69	28+0	92	36+0
20	13+0	47	21+0	72	29+0	94	37+0
24	14+0	50	22+0	74	30+0	97	38+0
27	15+0	53	23+0	78	31+0	99	39+0
31	16+0	56	24+0	81	32+0	101	40+0
34	17+0	59	25+0	83	33+0		
37	18+0	62	26+0	86	34+0		
40	19+0	65	27+0	89	35+0		



## Hellman

Table 3-69: GS: Hellman (Fetal Age)

A/OG 103: 789, 1969

Unit: GS (mm); Age (Week); SD (Week)

GS	Age	SD	GS	Age	SD	GS	Age	SD	GS	Age	SD
<10	n/a	—	23	6.9	± 1.0	37	8.9	± 1.0	51	10.9	± 1.0
10	5.0	± 1.0	24	7.0	± 1.0	38	9.0	± 1.0	52	11.0	± 1.0
11	5.2	± 1.0	25	7.2	± 1.0	39	9.2	± 1.0	53	11.2	± 1.0
12	5.3	± 1.0	26	7.3	± 1.0	40	9.3	± 1.0	54	11.3	± 1.0
13	5.5	± 1.0	27	7.5	± 1.0	41	9.5	± 1.0	55	11.5	± 1.0
14	5.6	± 1.0	28	7.6	± 1.0	42	9.6	± 1.0	56	11.6	± 1.0
15	5.8	± 1.0	29	7.8	± 1.0	43	9.7	± 1.0	57	11.7	± 1.0
16	5.9	± 1.0	30	7.9	± 1.0	44	9.9	± 1.0	58	11.9	± 1.0
17	6.0	± 1.0	31	8.0	± 1.0	45	10.0	± 1.0	59	12.0	± 1.0
18	6.2	± 1.0	32	8.2	± 1.0	46	10.2	± 1.0	60	12.2	± 1.0
19	6.3	± 1.0	33	8.3	± 1.0	47	10.3	± 1.0	>60	n/a	—
20	6.5	± 1.0	34	8.5	± 1.0	48	10.5	± 1.0			
21	6.6	± 1.0	35	8.6	± 1.0	49	10.6	± 1.0			
22	6.8	± 1.0	36	8.8	± 1.0	50	10.7	± 1.0			

## Hill

Table 3-70: TCD: Hill (Fetal Age)

Obstet Gyn, 75: 981-984, 1990

Unit: TCD (mm); Age (Weeks); SD (Week)

TCD	Age	SD	TCD	Age	SD	TCD	Age	SD
<14	n/a	—	28	24.9	± 1.01	43	33.9	± 1.2
14	15.2	± 0.5	29	25.5	± 1.01	44	34.4	± 1.2
15	15.8	± 0.5	30	26.2	± 1.01	45	34.8	± 1.2
16	16.5	± 0.5	31	26.9	± 1.01	46	35.3	± 1.2
17	17.2	± 0.5	32	27.5	± 1.01	47	35.7	± 1.2
18	17.9	± 0.5	33	28.1	± 1.01	48	36.1	± 1.6
19	18.6	± 0.9	34	28.8	± 1.01	49	36.5	± 1.6
20	19.3	± 0.9	35	29.4	± 1.01	50	36.8	± 1.6
21	20.0	± 0.9	36	30.0	± 1.2	51	37.2	± 1.6
22	20.7	± 0.9	37	30.6	± 1.2	52	37.5	± 1.6
23	21.4	± 0.9	38	31.2	± 1.2	54	38.0	± 1.6
24	22.1	± 0.9	39	31.8	± 1.2	55	38.3	± 1.6
25	22.8	± 0.9	40	32.3	± 1.2	56	38.5	± 1.6
26	23.5	± 0.9	41	32.8	± 1.2	>56	n/a	—
27	24.2	± 1.01	42	33.4	± 1.2			

**Hohler**

Table 3-71: FL/BPD ratio: Hohler (Fetal Growth)  
 Communications in Brief, 143: 479-481, 1982

Age (Weeks)	Min (Index)	Max (Index)
23	71	87
40	71	87

**Jeanty**

Table 3-72: AC: Jeanty (Fetal Age)  
 Jeanty, Radiology 143: 513, 1982  
 Unit: AC (mm); Age (Day); SD (mm)

AC	Age	SD	AC	Age	SD	AC	Age	SD	AC	Age	SD
<50	n/a	—	115	122	22	185	169	22	255	218	22
50	79	22	120	125	22	190	172	22	260	222	22
55	82	22	125	129	22	195	176	22	265	226	22
60	85	22	130	132	22	200	179	22	270	230	22
65	89	22	135	135	22	205	182	22	275	234	22
70	92	22	140	139	22	210	186	22	280	239	22
75	95	22	145	142	22	215	189	22	285	244	22
80	99	22	150	146	22	220	192	22	290	249	22
85	102	22	155	149	22	225	196	22	295	254	22
90	105	22	160	152	22	230	199	22	300	259	22
95	109	22	165	156	22	235	203	22	305	265	22
100	112	22	170	159	22	240	206	22	310	272	22
105	115	22	175	162	22	245	210	22	315	279	22
110	119	22	180	166	22	250	214	22	>315	n/a	—

Table 3-73: BD: Jeanty (Fetal Age)  
 Jeanty: Radiology 143: 513, 1982  
 Unit: BD (mm); Age (Days); SD (mm)

BD	Age	SD	BD	Age	SD	BD	Age	SD	BD	Age	SD
<15	n/a	—	28	127	0	42	185	0	56	243	0
15	73	0	29	131	0	43	189	0	57	247	0
16	77	0	30	135	0	44	193	0	58	251	0
17	81	0	31	139	0	45	197	0	59	256	0
18	85	0	32	143	0	46	201	0	60	260	0
19	89	0	33	147	0	47	206	0	61	264	0
20	93	0	34	152	0	48	210	0	62	268	0
21	97	0	35	156	0	49	214	0	63	272	0
22	102	0	36	160	0	50	218	0	64	276	0
23	106	0	37	164	0	51	222	0	65	281	0
24	110	0	38	168	0	52	226	0	>65	n/a	—
25	114	0	39	172	0	53	231	0			
26	118	0	40	177	0	54	235	0			
27	122	0	41	181	0	55	239	0			

Table 3-74: BPD: Jeanty (Fetal Age)

Jeanty: Radiology 143: 513, 1982

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	53	18w4d	21w1d	23w6d
10	6w4d	9w1d	11w6d	54	18w6d	21w4d	24w1d
11	6w6d	9w4d	12w1d	55	19w1d	21w6d	24w4d
12	7w0d	9w5d	12w3d	56	19w4d	22w1d	24w6d
13	7w2d	10w0d	12w5d	57	19w6d	22w4d	25w1d
14	7w4d	10w2d	12w6d	58	20w1d	22w6d	25w4d
15	7w6d	10w4d	13w1d	59	20w4d	23w1d	25w6d
16	8w1d	10w6d	13w3d	60	20w6d	23w4d	26w1d
17	8w3d	11w1d	13w5d	61	21w1d	23w6d	26w4d
18	8w4d	11w2d	14w0d	62	21w4d	24w1d	26w6d
19	8w6d	11w4d	14w1d	63	21w6d	24w4d	27w1d
20	9w1d	11w6d	14w4d	64	22w1d	24w6d	27w4d
21	9w3d	12w1d	14w6d	65	22w4d	25w2d	27w6d
22	9w5d	12w3d	15w0d	66	22w6d	25w4d	28w2d
23	9w6d	12w4d	15w2d	67	23w2d	26w0d	28w4d
24	10w1d	12w6d	15w4d	68	23w5d	26w3d	29w0d
25	10w4d	13w1d	15w6d	69	24w0d	26w5d	29w3d
26	10w5d	13w3d	16w1d	70	24w3d	27w1d	29w6d
27	11w0d	13w5d	16w3d	71	24w6d	27w4d	30w1d
28	11w2d	14w0d	16w4d	72	25w1d	27w6d	30w4d
29	11w4d	14w1d	16w6d	73	25w4d	28w2d	30w6d
30	11w6d	14w4d	17w1d	74	26w0d	28w5d	31w2d
31	12w1d	14w6d	17w3d	75	26w3d	29w1d	31w5d
32	12w2d	15w1d	17w5d	76	26w6d	29w4d	32w1d
33	12w4d	15w2d	18w0d	77	27w1d	29w6d	32w4d
34	12w6d	15w4d	18w2d	78	27w4d	30w2d	33w0d
35	13w1d	15w6d	18w4d	79	28w0d	30w5d	33w3d
36	13w4d	16w1d	18w6d	80	28w4d	31w1d	33w6d
37	13w5d	16w3d	19w1d	81	28w6d	31w4d	34w2d
38	14w0d	16w5d	19w3d	82	29w2d	32w0d	34w5d
39	14w2d	17w0d	19w5d	83	29w6d	32w4d	35w1d
40	14w4d	17w2d	19w6d	84	30w1d	32w6d	35w4d
41	14w6d	17w4d	20w1d	85	30w5d	33w3d	36w0d
42	15w1d	17w6d	20w4d	86	31w1d	33w6d	36w4d
43	15w3d	18w1d	20w6d	87	31w4d	34w2d	37w0d
44	15w5d	18w3d	21w1d	88	32w1d	34w6d	37w3d
45	16w0d	18w5d	21w3d	89	32w4d	35w2d	37w6d
46	16w2d	19w0d	21w5d	90	33w0d	35w5d	38w3d
47	16w4d	19w2d	22w0d	91	33w4d	36w1d	38w6d
48	16w6d	19w4d	22w2d	92	34w0d	36w5d	39w3d
49	17w1d	19w6d	22w4d	93	34w4d	37w1d	39w6d
50	17w4d	20w2d	22w6d	94	35w0d	37w5d	40w3d
51	17w6d	20w4d	23w1d	95	35w4d	38w2d	40w6d
52	18w1d	20w6d	23w4d	>95	n/a	n/a	n/a

Table 3-75: BPD: Jeanty (Fetal Growth)

Jeanty: Radiology 143: 513, 1982

Unit: Age (Weeks/Days); Min/Mean/Max (mm); Table/Graph Range: 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
10.0+0	9	14	18	26.0+0	62	67	71
11.0+0	13	17	22	27.0+0	65	70	74
12.0+0	16	21	25	28.0+0	68	72	77
13.0+0	20	24	29	29.0+0	70	75	79
14.0+0	23	28	32	30.0+0	73	77	82
15.0+0	27	31	36	31.0+0	75	79	84
16.0+0	30	35	39	32.0+0	77	82	86
17.0+0	34	38	43	33.0+0	79	84	88
18.0+0	37	42	46	34.0+0	81	86	90
19.0+0	40	45	49	35.0+0	83	87	92
20.0+0	44	48	53	36.0+0	84	89	93
21.0+0	47	51	56	37.0+0	86	90	95
22.0+0	50	55	59	38.0+0	87	91	96
23.0+0	53	58	62	39.0+0	88	93	97
24.0+0	56	61	65	40.0+0	89	93	98
25.0+0	59	64	68				

Table 3-76: CRL: Jeanty (Fetal Age)

Jeanty: Radiology 143: 513, 1982

Unit: CRL (mm); Age (Days); SD (mm)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<5	n/a	—	17	58	5	30	69	7	43	77	7
5	44	4	18	59	5	31	70	7	44	78	7
6	45	4	19	60	5	32	70	7	45	79	7
7	46	4	20	61	5	33	71	7	46	79	7
8	48	4	21	62	6	34	72	7	47	80	7
9	50	4	22	63	6	35	73	7	48	81	7
10	51	4	23	64	6	36	73	7	49	81	7
11	52	4	24	65	6	37	74	7	50	82	7
12	53	4	25	66	6	38	75	7	51	83	7
13	54	4	26	67	7	39	76	7	52	83	7
14	55	4	27	67	7	40	76	7	53	84	7
15	56	5	28	67	7	41	76	7	54	85	7
16	57	5	29	68	7	42	77	7	>54	n/a	—

Table 3-77: FIB: Jeanty (Fetal Growth)  
 Fetal Limb Biometry (Letter), Radiology 147:602, 1983  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range: 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
11	2	2	2	26	32	39	43
12	5	5	5	27	35	41	47
13	8	8	8	28	36	43	47
14	6	11	10	29	40	45	50
15	10	14	18	30	38	47	52
16	6	17	22	31	40	48	57
17	7	19	31	32	40	50	56
18	10	22	28	33	43	51	59
19	18	24	30	34	46	52	56
20	18	27	30	35	51	54	57
21	24	29	34	36	51	55	56
22	21	31	37	37	55	56	58
23	23	33	44	38	54	57	59
24	26	35	41	39	55	58	62
25	33	37	42	40	54	59	62

Table 3-78: FL: Jeanty (Fetal Age)

Jeanty: Radiology 143: 513, 1982

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<14	n/a	n/a	n/a	48	24w0d	26w1d	28w3d
14	11w5d	13w6d	16w1d	49	24w3d	26w4d	28w6d
15	12w0d	14w1d	16w3d	50	24w6d	27w0d	29w1d
16	12w3d	14w4d	16w6d	51	25w1d	27w3d	29w4d
17	12w5d	14w6d	17w1d	52	25w4d	27w6d	30w0d
18	13w0d	15w1d	17w3d	53	26w0d	28w1d	30w3d
19	13w3d	15w4d	17w6d	54	26w3d	28w4d	30w6d
20	13w5d	15w6d	18w1d	55	26w6d	29w1d	31w2d
21	14w1d	16w2d	18w4d	56	27w2d	29w4d	31w5d
22	14w3d	16w4d	18w6d	57	27w5d	29w6d	32w1d
23	14w5d	16w6d	19w1d	58	28w1d	30w2d	32w4d
24	15w1d	17w2d	19w4d	59	28w4d	30w5d	32w6d
25	15w3d	17w4d	19w6d	60	28w6d	31w1d	33w2d
26	15w6d	18w0d	20w1d	61	29w3d	31w4d	33w6d
27	16w1d	18w2d	20w4d	62	29w6d	32w0d	34w1d
28	16w4d	18w5d	20w6d	63	30w1d	32w3d	34w4d
29	16w6d	19w0d	21w1d	64	30w5d	32w6d	35w1d
30	17w1d	19w3d	21w4d	65	31w1d	33w2d	35w4d
31	17w4d	19w6d	22w0d	66	31w4d	33w5d	35w6d
32	17w6d	20w1d	22w2d	67	32w0d	34w1d	36w3d
33	18w2d	20w4d	22w5d	68	32w3d	34w4d	36w6d
34	18w5d	20w6d	23w1d	69	32w6d	35w0d	37w1d
35	19w0d	21w1d	23w3d	70	33w2d	35w4d	37w5d
36	19w3d	21w4d	23w6d	71	33w5d	35w6d	38w1d
37	19w6d	22w0d	24w1d	72	34w1d	36w3d	38w4d
38	20w1d	22w3d	24w4d	73	34w4d	36w6d	39w0d
39	20w4d	22w5d	24w6d	74	35w1d	37w2d	39w4d
40	20w6d	23w1d	25w2d	75	35w4d	37w5d	39w6d
41	21w2d	23w4d	25w5d	76	36w0d	38w1d	40w3d
42	21w5d	23w6d	26w1d	77	36w3d	38w4d	40w6d
43	22w1d	24w2d	26w4d	78	36w6d	39w1d	41w2d
44	22w4d	24w5d	26w6d	79	37w2d	39w4d	41w5d
45	22w6d	25w0d	27w1d	80	37w6d	40w0d	42w1d
46	23w1d	25w3d	27w4d	>80	n/a	n/a	n/a
47	23w4d	25w6d	28w0d				

Table 3-79: FL: Jeanty (Fetal Growth)

Jeanty: Radiology 143: 513, 1982

Unit: Age (Weeks/Days); Min/Mean/Max (mm); Table/Graph Range: 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.0+0	4	8	13	27.0+0	45	49	54
13.0+0	6	11	16	28.0+0	47	52	56
14.0+0	9	14	18	29.0+0	50	54	59
15.0+0	12	17	21	30.0+0	52	56	61
16.0+0	15	20	24	31.0+0	54	59	63
17.0+0	18	23	27	32.0+0	56	61	65
18.0+0	21	25	30	33.0+0	58	63	67
19.0+0	24	28	33	34.0+0	60	65	69
20.0+0	26	31	36	35.0+0	62	67	71
21.0+0	29	34	38	36.0+0	64	68	73
22.0+0	32	36	41	37.0+0	65	70	74
23.0+0	35	39	44	38.0+0	67	71	76
24.0+0	37	42	46	39.0+0	68	73	77
25.0+0	40	44	49	40.0+0	70	74	79
26.0+0	42	47	51				

Table 3-80: HC: Jeanty (Fetal Age)

Jeanty: Radiology 143: 513, 1982

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<80	n/a	n/a	n/a	225	22w3d	24w3d	26w2d
80	11w3d	13w2d	15w2d	230	22w6d	24w6d	26w6d
85	11w5d	13w5d	15w4d	235	23w3d	25w3d	27w2d
90	11w7d	13w7d	15w6d	240	23w6d	25w6d	27w6d
95	12w2d	14w2d	16w2d	245	24w3d	26w3d	28w2d
100	12w4d	14w4d	16w4d	250	24w7d	26w6d	28w6d
105	12w7d	14w6d	16w6d	255	25w4d	27w3d	29w3d
110	13w2d	15w2d	17w1d	260	26w0d	28w0d	29w7d
115	13w4d	15w4d	17w4d	265	26w4d	28w4d	30w4d
120	13w6d	15w6d	17w6d	270	27w1d	29w1d	31w1d
125	14w2d	16w2d	18w1d	275	27w6d	29w5d	31w5d
130	14w4d	16w4d	18w4d	280	28w3d	30w2d	32w2d
135	14w7d	16w6d	18w6d	285	28w7d	30w7d	32w6d
140	15w2d	17w2d	19w2d	290	29w4d	31w4d	33w4d
145	15w5d	17w4d	19w4d	295	30w2d	32w1d	34w1d
150	16w0d	17w7d	19w7d	300	30w6d	32w6d	34w6d
155	16w3d	18w3d	20w2d	305	31w4d	33w4d	35w3d
160	16w6d	18w5d	20w5d	310	32w2d	34w1d	36w1d
165	17w1d	19w1d	21w1d	315	32w6d	34w6d	36w6d
170	17w4d	19w4d	21w3d	320	33w4d	35w4d	37w4d
175	17w7d	19w6d	21w6d	325	34w2d	36w2d	38w2d
180	18w3d	20w2d	22w2d	330	35w0d	37w0d	38w7d
185	18w6d	20w5d	22w5d	335	35w6d	37w5d	39w5d
190	19w1d	21w1d	23w1d	340	36w4d	38w4d	40w3d
195	19w4d	21w4d	23w4d	345	37w2d	39w2d	41w2d
200	20w1d	22w0d	23w7d	350	38w1d	40w0d	42w0d
205	20w4d	22w3d	24w3d	355	38w6d	40w6d	42w6d
210	20w7d	22w7d	24w6d	360	39w5d	41w5d	43w4d
215	21w3d	23w3d	25w3d	>360	n/a	n/a	n/a
220	21w6d	23w6d	25w6d				



Table 3-81: HC: Jeanty (Fetal Growth)

Jeanty: Radiology 143: 513, 1982

Unit: Age (Weeks/Days); Min/Mean/Max (mm); Table/Graph Range: 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.0+0	51	75	100	27.0+0	228	252	277
13.0+0	64	88	112	28.0+0	238	262	286
14.0+0	76	101	125	29.0+0	247	271	296
15.0+0	89	113	138	30.0+0	256	281	305
16.0+0	101	126	150	31.0+0	265	289	313
17.0+0	114	138	163	32.0+0	273	297	322
18.0+0	126	151	175	33.0+0	281	305	329
19.0+0	138	163	187	34.0+0	288	312	336
20.0+0	150	175	199	35.0+0	294	319	343
21.0+0	162	187	211	36.0+0	300	325	349
22.0+0	174	198	223	37.0+0	306	330	355
23.0+0	185	210	234	38.0+0	311	335	359
24.0+0	196	221	245	39.0+0	315	339	364
25.0+0	207	232	256	40.0+0	319	343	367
26.0+0	218	242	266				

Table 3-82: HL: Jeanty (Fetal Age)  
Obstetrical Ultrasound, Table 13.9, 1984

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	40	21w4d	24w2d	27w1d
10	9w6d	12w4d	15w2d	41	22w0d	24w6d	27w4d
11	10w1d	12w6d	15w4d	42	22w4d	25w2d	28w0d
12	10w3d	13w1d	15w6d	43	23w0d	25w5d	28w4d
13	10w6d	13w4d	16w1d	44	23w4d	26w1d	29w0d
14	11w1d	13w6d	16w4d	45	24w0d	26w5d	29w4d
15	11w3d	14w1d	16w6d	46	24w4d	27w1d	30w0d
16	11w6d	14w4d	17w2d	47	25w0d	27w5d	30w4d
17	12w1d	14w6d	17w4d	48	25w4d	28w1d	31w0d
18	12w4d	15w1d	18w0d	49	26w0d	28w6d	31w4d
19	12w6d	15w4d	18w2d	50	26w4d	29w2d	32w0d
20	13w1d	15w6d	18w5d	51	27w1d	29w6d	32w4d
21	13w4d	16w2d	19w1d	52	27w4d	30w2d	33w1d
22	13w6d	16w5d	19w3d	53	28w1d	30w6d	33w4d
23	14w2d	17w1d	19w6d	54	28w5d	31w3d	34w1d
24	14w5d	17w3d	20w1d	55	29w1d	32w0d	34w5d
25	15w1d	17w6d	20w4d	56	29w6d	32w4d	35w2d
26	15w4d	18w1d	21w0d	57	30w2d	33w1d	35w6d
27	15w6d	18w4d	21w3d	58	30w6d	33w4d	36w3d
28	16w2d	19w0d	21w6d	59	31w3d	34w1d	36w6d
29	16w5d	19w3d	22w1d	60	32w0d	34w6d	37w4d
30	17w1d	19w6d	22w4d	61	32w4d	35w2d	38w1d
31	17w4d	20w2d	23w0d	62	33w1d	35w6d	38w5d
32	18w0d	20w5d	23w4d	63	33w6d	36w4d	39w2d
33	18w3d	21w1d	23w6d	64	34w3d	37w1d	39w6d
34	18w6d	21w4d	24w2d	65	35w0d	37w5d	40w4d
35	19w2d	22w0d	24w6d	66	35w4d	38w2d	41w1d
36	19w5d	22w4d	25w1d	67	36w1d	38w6d	41w5d
37	20w1d	22w6d	25w5d	68	36w6d	39w4d	42w2d
38	20w4d	23w3d	26w1d	69	37w3d	40w1d	42w6d
39	21w1d	23w6d	26w4d	>69	n/a	n/a	n/a

Table 3-83: Radius: Jeanty (Fetal Growth)  
 Fetal Limb Biometry (Letter), Radiology 147:602, 1983  
 Unit: Age (weeks); Min/Mean/Max (mm); Table/Graph Range: 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
<11	n/a	n/a	n/a	26	30	37	41
11	5	5	5	27	33	39	45
12	7	7	7	28	33	40	45
13	10	10	10	29	36	42	47
14	8	13	12	30	34	43	49
15	12	15	19	31	34	44	53
16	9	18	21	32	37	45	51
17	11	20	29	33	41	46	51
18	14	22	26	34	39	47	53
19	20	24	29	35	38	48	57
20	21	27	28	36	41	48	54
21	25	29	32	37	45	49	53
22	24	31	34	38	45	49	53
23	26	32	39	39	46	50	54
24	27	34	38	40	46	50	54
25	31	36	40	>40	n/a	n/a	n/a

Table 3-84: TIB: Jeanty (Fetal Age)  
Obstetrical Ultrasound, Table 13.9, 1984

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	40	22w3d	25w2d	28w1d
10	10w4d	13w3d	16w2d	41	22w6d	25w5d	28w4d
11	10w6d	13w5d	16w4d	42	23w2d	26w1d	29w1d
12	11w1d	14w1d	17w0d	43	23w5d	26w4d	29w4d
13	11w4d	14w3d	17w2d	44	24w1d	27w1d	30w0d
14	11w6d	14w6d	17w5d	45	24w4d	27w4d	30w4d
15	12w1d	15w1d	18w0d	46	25w1d	28w0d	30w6d
16	12w4d	15w4d	18w3d	47	25w4d	28w4d	31w3d
17	13w0d	15w6d	18w6d	48	26w1d	29w0d	31w6d
18	13w2d	16w1d	19w1d	49	26w4d	29w3d	32w2d
19	13w5d	16w4d	19w4d	50	27w0d	29w6d	32w6d
20	14w1d	17w0d	19w6d	51	27w4d	30w3d	33w2d
21	14w4d	17w3d	20w2d	52	28w0d	30w6d	33w6d
22	14w6d	17w6d	20w5d	53	28w4d	31w3d	34w2d
23	15w1d	18w1d	21w1d	54	29w0d	31w6d	34w6d
24	15w4d	18w4d	21w3d	55	29w4d	32w3d	35w2d
25	16w0d	18w6d	21w6d	56	30w0d	32w6d	35w6d
26	16w3d	19w2d	22w1d	57	30w4d	33w3d	36w2d
27	16w6d	19w5d	22w4d	58	31w0d	33w6d	36w6d
28	17w1d	20w1d	23w0d	59	31w4d	34w3d	37w2d
29	17w4d	20w4d	23w4d	60	32w0d	34w6d	37w6d
30	18w1d	21w0d	23w6d	61	32w4d	35w3d	38w2d
31	18w4d	21w3d	24w2d	62	33w0d	35w6d	38w6d
32	18w6d	21w6d	24w5d	63	33w4d	36w4d	39w3d
33	19w2d	22w1d	25w1d	64	34w1d	37w0d	39w6d
34	19w5d	22w4d	25w4d	65	34w4d	37w4d	40w3d
35	20w1d	23w1d	26w0d	66	35w1d	38w0d	41w0d
36	20w4d	23w4d	26w3d	67	35w5d	38w4d	41w4d
37	21w0d	23w6d	26w6d	68	36w1d	39w1d	42w0d
38	21w4d	24w3d	27w2d	69	36w6d	39w5d	42w4d
39	21w6d	24w6d	27w5d	>69	n/a	n/a	n/a

Table 3-85: ULNA: Jeanty (Fetal Age)  
Obstetrical Ultrasound, Table 13.9, 1984

Unit: Meas (mm); Min/Mean/Max (Weeks/Days); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	38	22w1d	25w1d	28w1d
10	10w1d	13w1d	16w1d	39	22w4d	25w4d	28w5d
11	10w4d	13w4d	16w4d	40	23w1d	26w1d	29w1d
12	10w6d	13w6d	16w6d	41	23w4d	26w5d	29w5d
13	11w1d	14w1d	17w2d	42	24w1d	27w1d	30w2d
14	11w4d	14w4d	17w5d	43	24w5d	27w5d	30w6d
15	11w6d	15w0d	18w0d	44	25w1d	28w2d	31w2d
16	12w2d	15w3d	18w3d	45	25w6d	28w6d	31w6d
17	12w5d	15w5d	18w6d	46	26w2d	29w3d	32w3d
18	13w1d	16w1d	19w1d	47	26w6d	29w6d	33w0d
19	13w4d	16w4d	19w4d	48	27w3d	30w4d	33w4d
20	13w6d	16w6d	20w0d	49	28w0d	31w1d	34w1d
21	14w2d	17w2d	20w3d	50	28w4d	31w4d	34w5d
22	14w5d	17w5d	20w6d	51	29w1d	32w1d	35w2d
23	15w1d	18w1d	21w1d	52	29w5d	32w6d	35w6d
24	15w4d	18w4d	21w4d	53	30w2d	33w3d	36w3d
25	16w0d	19w0d	22w1d	54	30w6d	34w0d	37w0d
26	16w3d	19w3d	22w4d	55	31w4d	34w4d	37w5d
27	16w6d	19w6d	22w6d	56	32w1d	35w1d	38w2d
28	17w2d	20w2d	23w3d	57	32w6d	35w6d	38w6d
29	17w5d	20w6d	23w6d	58	33w3d	36w3d	39w4d
30	18w1d	21w1d	24w2d	59	34w0d	37w1d	40w1d
31	18w4d	21w5d	24w6d	60	34w4d	37w5d	40w6d
32	19w1d	22w1d	25w1d	61	35w2d	38w2d	41w3d
33	19w4d	22w5d	25w5d	62	35w6d	39w0d	42w0d
34	20w1d	23w1d	26w1d	63	36w4d	39w4d	42w5d
35	20w4d	23w4d	26w5d	64	37w1d	40w2d	43w2d
36	21w1d	24w1d	27w1d	>64	n/a	n/a	n/a
37	21w4d	24w4d	27w5d				

**JSUM**

Table 3-86: AC, JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
 Unit: AC (cm); Age (w+d); SD (cm)

Age	AC	Age	1SD	Age	AC	Age	1SD
16	10.4	16+0	0.57	30	24.2	30+0	1.24
17	11.4	17+0	0.62	31	25.1	31+0	1.29
18	12.5	18+0	0.67	32	25.9	32+0	1.33
19	13.5	19+0	0.71	33	26.8	33+0	1.38
20	14.5	20+0	0.76	34	27.6	34+0	1.43
21	15.5	21+0	0.81	35	28.4	35+0	1.48
22	16.5	22+0	0.86	36	29.2	36+0	1.52
23	17.5	23+0	0.90	37	29.9	37+0	1.57
24	18.5	24+0	0.95	38	30.6	38+0	1.62
25	19.5	25+0	1.00	39	31.3	39+0	1.67
26	20.5	26+0	1.05	40	31.9	40+0	1.71
27	21.4	27+0	1.10	41	32.5	41+0	1.76
28	22.4	28+0	1.14	42	33.1	42+0	1.81
29	23.3	29+0	1.19				

Table 3-87: BPD, JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
 Unit: BPD (mm); Age (w+d); SD (mm)

Age	BPD	Age	1SD	Age	BPD	Age	1SD
10	12.6	10+0	2.29	27	67.4	27+0	3.23
11	15.9	11+0	2.34	28	70.1	28+0	3.29
12	19.3	12+0	2.40	29	72.6	29+0	3.35
13	22.7	13+0	2.45	30	75.1	30+0	3.40
14	26.1	14+0	2.51	31	77.4	31+0	3.46
15	29.5	15+0	2.57	32	79.6	32+0	3.51
16	32.9	16+0	2.62	33	81.7	33+0	3.57
17	36.3	17+0	2.68	34	83.6	34+0	3.62
18	39.6	18+0	2.73	35	85.3	35+0	3.68
19	43.0	19+0	2.79	36	86.9	36+0	3.74
20	46.2	20+0	2.84	37	88.3	37+0	3.79
21	49.5	21+0	2.90	38	89.6	38+0	3.85
22	52.6	22+0	2.96	39	90.6	39+0	3.90
23	55.7	23+0	3.01	40	91.5	40+0	3.96
24	58.8	24+0	3.07	41	92.2	41+0	4.01
25	61.7	25+0	3.12	42	92.6	42+0	4.07
26	64.6	26+0	3.18				

Table 3-88: CRL, JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
Unit: GA (week+day); CRL (mm)

GA	CRL				
	5%	10%	50%	90%	95%
7W+0	5.7	6.8	10.1	16.0	17.2
7W+2	6.0	7.3	10.5	15.7	16.4
7W+4	6.5	8.1	11.3	16.0	16.6
7W+6	7.2	9.0	12.5	17.0	17.5
8W+1	8.1	10.2	14.0	18.4	19.1
8W+3	9.1	11.6	15.8	20.4	21.3
8W+5	10.3	13.1	17.8	22.7	24.0
9W+0	11.7	14.9	20.0	25.4	27.0
9W+2	13.3	16.7	22.5	28.3	30.3
9W+4	15.1	18.7	25.0	31.4	33.7
9W+6	17.1	20.9	27.6	34.6	37.3
10W+1	19.2	23.1	30.3	37.8	40.7
10W+3	21.5	25.4	33.1	41.0	44.1
10W+5	24.1	27.9	35.8	44.1	47.1
11W+0	26.7	30.4	38.4	47.0	49.8
11W+2	29.6	32.9	40.9	49.6	52.1
11W+4	32.7	35.5	43.3	51.9	53.8

Table 3-89: EFW, JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
Unit: EFW (g); Age (w+d); 1SD (g)

Age	EFW	Age	1SD	Age	EFW	Age	1SD
18	187	18+0	30.13	30	1,470	30+0	185.98
19	247	19+0	40.47	31	1,635	31+0	202.09
20	313	20+0	51.30	32	1,805	32+0	218.68
21	387	21+0	62.61	33	1,980	33+0	235.75
22	469	22+0	74.39	34	2,156	34+0	253.30
23	560	23+0	86.66	35	2,333	35+0	271.33
24	660	24+0	99.41	36	2,507	36+0	289.84
25	771	25+0	112.64	37	2,676	37+0	308.83
26	892	26+0	126.35	38	2,838	38+0	328.30
27	1,023	27+0	140.53	39	2,989	39+0	348.25
28	1,163	28+0	155.20	40	3,125	40+0	368.68
29	1,313	29+0	170.35	41	3,244	41+0	389.59

Table 3-90: FL, JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
Unit: FL (mm); Age (w+d); SD (mm)

Age	FL	Age	1SD	Age	FL	Age	1SD
16	20.1	16+0	2.64	30	53.8	30+0	3.11
17	22.7	17+0	2.67	31	55.8	31+0	3.15
18	25.3	18+0	2.71	32	57.8	32+0	3.18
19	27.8	19+0	2.74	33	59.6	33+0	3.21
20	30.4	20+0	2.77	34	61.4	34+0	3.25
21	32.9	21+0	2.81	35	63.0	35+0	3.28
22	35.4	22+0	2.84	36	64.6	36+0	3.31
23	37.9	23+0	2.88	37	66.0	37+0	3.35
24	40.3	24+0	2.91	38	67.4	38+0	3.38
25	42.7	25+0	2.94	39	68.6	39+0	3.42
26	45.0	26+0	2.98	40	69.6	40+0	3.45
27	47.3	27+0	3.01	41	70.6	41+0	3.48
28	49.6	28+0	3.04	42	71.4	42+0	3.52
29	51.7	29+0	3.08				

Table 3-91: MCA PI values with advance in gestation  
JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
Unit: Age (Weeks)

Age	5%	10%	50%	90%	95%	Age	5%	10%	50%	90%	95%
20	1.271	1.270	1.440	1.880	1.990	31	1.446	1.515	1.933	2.436	2.489
21	1.318	1.329	1.537	1.986	2.091	32	1.425	1.493	1.915	2.420	2.468
22	1.359	1.381	1.623	2.080	2.182	33	1.397	1.464	1.887	2.394	2.435
23	1.393	1.426	1.699	2.164	2.261	34	1.363	1.427	1.849	2.356	2.390
24	1.421	1.463	1.765	2.236	2.328	35	1.324	1.383	1.800	2.308	2.335
25	1.444	1.493	1.820	2.298	2.385	36	1.277	1.331	1.741	2.248	2.268
26	1.459	1.515	1.865	2.348	2.430	37	1.225	1.272	1.671	2.178	2.191
27	1.469	1.530	1.899	2.388	2.465	38	1.167	1.205	1.591	2.096	2.102
28	1.473	1.537	1.923	2.416	2.488	39	1.102	1.131	1.501	2.004	2.001
29	1.470	1.537	1.937	2.434	2.499	40	1.031	1.050	1.400	1.900	1.890
30	1.461	1.530	1.940	2.440	2.500	41	0.954	0.961	1.289	1.786	1.767

Table 3-92: MCA RI values with advance in gestation  
JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
Unit: Age (Weeks)

Age	5%	10%	50%	90%	95%	Age	5%	10%	50%	90%	95%
20	0.717	0.718	0.775	0.842	0.871	31	0.769	0.789	0.865	0.922	0.928
21	0.731	0.735	0.793	0.857	0.883	32	0.762	0.783	0.862	0.920	0.925
22	0.742	0.749	0.808	0.871	0.894	33	0.755	0.775	0.857	0.916	0.920
23	0.753	0.761	0.821	0.883	0.903	34	0.745	0.766	0.851	0.911	0.914
24	0.761	0.772	0.833	0.894	0.911	35	0.733	0.754	0.843	0.904	0.907
25	0.767	0.780	0.743	0.903	0.918	36	0.720	0.740	0.833	0.895	0.898
26	0.772	0.787	0.851	0.910	0.923	37	0.705	0.725	0.821	0.885	0.888
27	0.775	0.791	0.857	0.916	0.927	38	0.688	0.707	0.808	0.873	0.876
28	0.776	0.793	0.862	0.920	0.929	39	0.669	0.688	0.793	0.859	0.863
29	0.775	0.794	0.865	0.922	0.930	40	0.649	0.666	0.775	0.844	0.849
30	0.773	0.792	0.865	0.923	0.930	41	0.627	0.643	0.757	0.827	0.833



Table 3-93: UMA PI values with advance in gestation  
 JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
 Unit: Age (Weeks)

Age	5%	10%	50%	90%	95%	Age	5%	10%	50%	90%	95%
20	1.118	1.144	1.390	1.620	1.688	31	0.766	0.821	0.986	1.161	1.285
21	1.075	1.106	1.340	1.565	1.641	32	0.747	0.802	0.965	1.135	1.261
22	1.034	1.069	1.293	1.513	1.597	33	0.731	0.785	0.947	1.112	1.238
23	0.996	1.034	1.249	1.464	1.554	34	0.716	0.770	0.931	1.091	1.218
24	0.959	1.001	1.207	1.417	1.514	35	0.704	0.757	0.918	1.073	1.199
25	0.925	0.970	1.168	1.373	1.475	36	0.694	0.746	0.907	1.057	1.182
26	0.893	0.941	1.131	1.331	1.438	37	0.686	0.736	0.899	1.044	1.168
27	0.863	0.913	1.097	1.292	1.404	38	0.681	0.728	0.893	1.033	1.155
28	0.836	0.887	1.065	1.255	1.371	39	0.677	0.722	0.890	1.025	1.145
29	0.810	0.863	1.036	1.221	1.341	40	0.676	0.718	0.890	1.020	1.136
30	0.787	0.841	1.010	1.190	1.312	41	0.677	0.716	0.892	1.017	1.129

Table 3-94: UMA RI values with advance in gestation  
 JSUM, J Med Ultrasound Vol.28 No.5 (2001)  
 Unit: Age (Weeks)

Age	5%	10%	50%	90%	95%	Age	5%	10%	50%	90%	95%
20	0.698	0.722	0.778	0.820	0.846	31	0.535	0.589	0.648	0.700	0.746
21	0.680	0.707	0.763	0.808	0.836	32	0.524	0.580	0.640	0.690	0.738
22	0.663	0.692	0.749	0.796	0.826	33	0.513	0.573	0.632	0.681	0.730
23	0.646	0.679	0.735	0.785	0.816	34	0.503	0.565	0.625	0.672	0.723
24	0.630	0.665	0.722	0.774	0.807	35	0.494	0.559	0.619	0.663	0.716
25	0.615	0.653	0.710	0.763	0.798	36	0.485	0.552	0.613	0.654	0.708
26	0.600	0.640	0.698	0.752	0.788	37	0.477	0.547	0.608	0.645	0.702
27	0.586	0.629	0.687	0.741	0.780	38	0.469	0.542	0.603	0.636	0.695
28	0.572	0.618	0.676	0.730	0.771	39	0.462	0.538	0.599	0.628	0.688
29	0.559	0.608	0.666	0.720	0.762	40	0.456	0.534	0.596	0.620	0.682
30	0.547	0.598	0.657	0.710	0.754	41	0.450	0.531	0.593	0.612	0.676

**Kurtz**

Table 3-95: BPD: Kurtz (Fetal Age)  
 Journal of Clinical Ultrasound, 8: 319-326, 1980  
 Unit: BPD (mm); Age (Days); SD (mm)

BPD	Age	SD	BPD	Age	SD	BPD	Age	SD	BPD	Age	SD
<21	n/a	—	40	125	4	60	168	5	80	222	5
21	84	4	41	127	4	61	170	5	81	225	5
22	87	4	42	129	4	62	173	5	82	229	5
23	91	4	43	131	4	63	175	5	83	232	5
24	93	4	44	133	4	64	178	5	84	235	5
25	95	4	45	135	4	65	181	5	85	238	5
26	97	4	46	137	4	66	183	5	86	241	5
27	99	4	47	139	4	67	186	5	87	244	5
28	101	4	48	141	4	68	188	5	88	248	5
29	103	4	49	143	4	69	191	5	89	252	5
30	105	4	50	145	4	70	194	5	90	257	5
31	107	4	51	147	4	71	196	5	91	262	5
32	109	4	52	149	4	72	199	5	92	267	5
33	111	4	53	151	4	73	201	5	93	272	5
34	113	4	54	153	4	74	204	5	94	276	5
35	115	4	55	155	5	75	207	5	95	280	5
36	117	4	56	157	5	76	210	5	96	284	5
37	119	4	57	160	5	77	213	5	97	288	5
38	121	4	58	162	5	78	216	5	98	293	5
39	123	4	59	165	5	79	219	5	>98	n/a	—

## Mayden

Table 3-96: IOD: Mayden (Fetal Age)

Am J Obstet Gynecol 144:289, 1982

Unit: Meas (mm); Mean (Weeks)

Meas	Mean	Meas	Mean	Meas	Mean	Meas	Mean
5	11.6	11	17.9	16	24.3	19	32.5
5	11.6	12	18.4	16	24.7	19	33.0
6	12.1	12	18.9	16	25.2	19	33.5
6	12.6	12	19.4	16	25.2	19	34.0
6	12.6	13	19.4	17	25.7	19	34.4
7	13.1	13	19.9	17	26.2	19	35.0
7	13.6	13	20.4	17	26.2	19	35.4
7	13.6	13	20.4	17	26.7	19	35.9
8	14.1	14	20.9	17	27.2	19	36.4
8	14.6	14	21.3	17	27.6	19	36.9
8	14.6	14	21.3	17	28.1	19	37.3
9	15.0	14	21.8	18	28.6	19	37.8
9	15.5	14	22.3	18	29.1	19	38.3
9	15.5	15	22.3	18	29.6	19	38.3
10	16.0	15	22.8	18	30.0	19	39.3
10	16.5	15	23.3	18	30.6	19	39.8
10	16.5	15	23.3	18	31.0		
10	17.0	15	23.8	18	31.5		
11	17.5	16	24.3	18	32.0		

Table 3-97: OOD: Mayden (Fetal Age)

Am J Obstet Gynecol 144:289, 1982

Unit: Meas (mm); Mean (Weeks)

Meas	Mean	Meas	Mean	Meas	Mean	Meas	Mean
13	11.6	28	17.9	42	24.3	52	32.5
14	11.6	30	18.4	43	24.7	53	33.0
15	12.1	31	18.9	43	25.2	54	33.5
16	12.6	32	19.4	44	25.2	54	34.0
17	12.6	32	19.4	44	25.7	54	34.4
17	13.1	33	19.9	45	26.2	55	35.0
18	13.6	34	20.4	45	26.2	55	35.4
19	13.6	34	20.4	46	26.7	56	35.9
20	14.1	35	20.9	46	27.2	56	36.4
21	14.6	36	21.3	47	27.6	57	36.9
21	14.6	36	21.3	47	28.1	57	37.3
22	15.0	37	21.8	48	28.6	58	37.8
23	15.5	38	22.3	48	29.1	58	38.3
24	15.5	38	22.3	49	29.6	58	38.3
25	16.0	39	22.8	50	30.0	59	39.3
25	16.5	40	23.3	50	30.6	59	39.8
26	16.5	40	23.3	51	31.0		
27	17.0	41	23.8	51	31.5		
27	17.5	41	24.3	52	32.0		

**Mercer**

Table 3-98: Ft: Mercer (Fetal Age)  
Am J Obstet Gynecol, 156: 350-355, 1987

Unit: Meas (mm); Min/Mean/Max (Weeks); Table/Graph Range: 2SD

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	50	24.3	26.4	28.4
10	11.5	12.5	13.5	52	24.9	27.1	29.3
12	12.1	13.1	14.2	54	25.7	27.9	30.1
14	12.7	13.8	14.9	56	26.4	28.4	30.9
16	13.3	14.4	15.5	58	27.1	29.4	31.8
18	13.9	15.1	16.3	60	27.8	30.2	32.6
20	14.5	15.7	17.0	62	28.5	31.0	33.5
22	15.1	16.4	17.7	64	29.3	31.8	34.3
24	15.7	17.1	18.4	66	30.0	32.6	35.2
26	16.3	17.7	19.1	68	30.7	33.4	36.1
28	16.9	18.4	19.9	70	31.5	34.2	36.9
30	17.6	19.1	20.6	72	32.2	35.0	37.8
32	18.2	19.8	21.4	74	33.0	35.9	38.7
34	18.9	20.5	22.1	76	33.8	36.8	39.6
36	19.5	21.2	22.9	78	34.5	37.5	40.5
38	20.2	21.9	23.7	80	35.3	38.4	41.4
40	20.8	22.7	24.5	82	36.1	39.2	42.4
42	21.5	23.4	25.2	84	36.9	40.1	43.3
44	22.2	24.1	26.0	86	37.7	41.0	44.2
46	22.9	24.9	26.8	>86	n/a	n/a	n/a
48	23.6	25.6	27.6				

## Merz

Table 3-99: AC: Merz (Fetal Age)

Habilitationsschrift, Mainz University Women's Hospital, 1988

Unit: Meas (mm); Min/Mean/Max (Weeks); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<56	n/a	n/a	n/a	152	19w5d	21w1d	22w6d
56	10w6d	12w1d	13w2d	154	19w6d	21w3d	23w0d
58	11w1d	12w2d	13w4d	156	20w1d	21w4d	23w1d
60	11w2d	12w4d	13w5d	158	20w1d	21w6d	23w3d
62	11w4d	12w5d	13w6d	160	20w3d	22w0d	23w4d
64	11w5d	12w6d	14w1d	162	20w4d	22w1d	23w6d
66	11w6d	13w1d	14w2d	164	20w6d	22w3d	24w0d
68	12w0d	13w2d	14w4d	166	21w0d	22w4d	24w1d
70	12w1d	13w4d	14w5d	168	21w1d	22w6d	24w3d
72	12w3d	13w4d	14w6d	170	21w2d	23w0d	24w4d
74	12w4d	13w6d	15w1d	172	21w4d	23w1d	24w6d
76	12w6d	14w0d	15w2d	174	21w5d	23w2d	25w0d
78	12w6d	14w1d	15w4d	176	21w6d	23w4d	25w1d
80	13w1d	14w3d	15w5d	178	22w1d	23w5d	25w3d
82	13w2d	14w4d	15w6d	180	22w1d	23w6d	25w4d
84	13w4d	14w6d	16w1d	182	22w3d	24w1d	25w6d
86	13w5d	15w0d	16w2d	184	22w4d	24w2d	26w0d
88	13w6d	15w1d	16w4d	186	22w6d	24w4d	26w1d
90	14w0d	15w3d	16w5d	188	23w0d	24w5d	26w3d
92	14w1d	15w4d	16w6d	190	23w1d	24w6d	26w4d
94	14w3d	15w5d	17w1d	192	23w2d	25w0d	26w6d
96	14w4d	15w6d	17w2d	194	23w4d	25w1d	27w0d
98	14w6d	16w1d	17w4d	196	23w5d	25w3d	27w1d
100	14w6d	16w2d	17w5d	198	23w6d	25w4d	27w3d
102	15w1d	16w4d	17w6d	200	24w1d	25w6d	27w4d
104	15w2d	16w5d	18w1d	202	24w2d	26w0d	27w6d
106	15w4d	16w6d	18w2d	204	24w3d	26w1d	27w6d
108	15w5d	17w1d	18w3d	206	24w4d	26w3d	28w1d
110	15w6d	17w2d	18w4d	208	24w6d	26w4d	28w2d
112	16w0d	17w3d	18w6d	210	25w0d	26w6d	28w4d
114	16w1d	17w4d	19w0d	212	25w1d	27w0d	28w5d
116	16w3d	17w6d	19w1d	214	25w2d	27w1d	28w6d
118	16w4d	18w0d	19w3d	216	25w4d	27w2d	29w1d
120	16w6d	18w1d	19w4d	218	25w5d	27w4d	29w2d
122	17w0d	18w3d	19w6d	220	25w6d	27w5d	29w4d
124	17w1d	18w4d	20w0d	222	26w1d	27w6d	29w5d
126	17w2d	18w6d	20w1d	224	26w2d	28w1d	29w6d
128	17w4d	19w0d	20w3d	226	26w3d	28w2d	30w1d
130	17w5d	19w1d	20w4d	228	26w4d	28w4d	30w2d
132	17w6d	19w2d	20w6d	230	26w6d	28w5d	30w4d
134	18w0d	19w4d	21w0d	232	27w0d	28w6d	30w5d
136	18w1d	19w5d	21w1d	234	27w1d	29w0d	30w6d
138	18w3d	19w6d	21w3d	236	27w3d	29w1d	31w1d
140	18w4d	20w1d	21w4d	238	27w4d	29w3d	31w2d
142	18w6d	20w2d	21w6d	240	27w5d	29w4d	31w4d
144	19w0d	20w4d	22w0d	242	27w6d	29w6d	31w5d
146	19w1d	20w5d	22w1d	244	28w1d	30w0d	31w6d
148	19w2d	20w6d	22w3d	246	28w2d	30w1d	32w1d
150	19w4d	21w1d	22w4d	248	28w3d	30w3d	32w2d

Table 3-99: AC: Merz (Fetal Age) (Continued)

Habilitationsschrift, Mainz University Women's Hospital, 1988

Unit: Meas (mm); Min/Mean/Max (Weeks); Table/Graph Range: 5%:95%

Meas	Min	Mean	Max	Meas	Min	Mean	Max
250	28w4d	30w4d	32w4d	302	33w3d	35w4d	37w4d
252	28w6d	30w6d	32w5d	304	33w4d	35w5d	37w6d
254	29w0d	30w6d	32w6d	306	33w5d	35w6d	38w0d
256	29w1d	31w1d	33w1d	308	33w6d	36w1d	38w1d
258	29w3d	31w2d	33w2d	310	34w1d	36w2d	38w3d
260	29w4d	31w4d	33w4d	312	34w2d	36w4d	38w4d
262	29w5d	31w5d	33w5d	314	34w4d	36w4d	38w6d
264	29w6d	31w6d	33w6d	316	34w4d	36w6d	39w0d
266	30w1d	32w1d	34w1d	318	34w6d	37w0d	39w1d
268	30w2d	32w2d	34w2d	320	35w0d	37w1d	39w3d
270	30w4d	32w4d	34w4d	322	35w1d	37w3d	39w4d
272	30w4d	32w5d	34w5d	324	35w3d	37w4d	39w6d
274	30w6d	32w6d	34w6d	326	35w4d	37w6d	40w0d
276	31w0d	33w0d	35w1d	328	35w5d	38w0d	40w1d
278	31w1d	33w1d	35w2d	330	35w6d	38w1d	40w3d
280	31w3d	33w3d	35w4d	332	36w1d	38w3d	40w4d
282	31w4d	33w4d	35w5d	334	36w2d	38w4d	40w6d
284	31w5d	33w6d	35w6d	336	36w4d	38w5d	41w0d
286	31w6d	34w0d	36w1d	338	36w5d	38w6d	41w1d
288	32w1d	34w1d	36w2d	340	36w6d	39w1d	41w3d
290	32w2d	34w3d	36w4d	342	37w0d	39w2d	41w4d
292	32w4d	34w4d	36w5d	344	37w1d	39w4d	41w6d
294	32w4d	34w5d	36w6d	346	37w3d	39w5d	42w0d
296	32w6d	34w6d	37w1d	348	37w4d	39w6d	42w1d
298	33w0d	35w1d	37w1d	>348	n/a	n/a	n/a
300	33w1d	35w2d	37w3d				

Table 3-100: AC: Merz (Fetal Growth)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.5	50	62	74	27.5	202	222	242
13.0	55	67	80	28.0	207	227	247
13.5	60	73	85	28.5	212	232	252
14.0	65	78	91	29.0	217	237	257
14.5	71	83	96	29.5	221	242	263
15.0	76	89	102	30.0	226	247	268
15.5	81	94	108	30.5	231	252	273
16.0	86	100	114	31.0	235	257	278
16.5	91	105	119	31.5	240	262	283
17.0	96	111	125	32.0	244	266	288
17.5	102	116	131	32.5	249	271	293
18.0	107	122	136	33.0	253	276	298
18.5	112	127	142	33.5	258	280	303
19.0	117	132	148	34.0	262	285	308
19.5	122	138	153	34.5	266	289	313
20.0	127	143	159	35.0	270	294	317
20.5	133	149	165	35.5	275	298	322
21.0	138	154	170	36.0	279	303	327
21.5	143	159	176	36.5	283	307	331
22.0	148	165	181	37.0	287	311	336
22.5	153	170	187	37.5	290	315	340
23.0	158	175	193	38.0	294	319	344
23.5	163	181	198	38.5	298	323	348
24.0	168	186	204	39.0	301	327	352
24.5	173	191	209	39.5	305	331	356
25.0	178	196	215	40.0	308	334	360
25.5	183	202	220	40.5	311	338	364
26.0	188	207	226	41.0	314	341	367
26.5	193	212	231	41.5	317	343	370
27.0	198	217	236				

Table 3-101: BPD: Merz (Fetal Age)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: BPD (mm); % Age (Weeks/Days)

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<21	n/a	n/a	n/a	62	22w1d	24w1d	26w1d
21	10w5d	12w1d	13w5d	63	22w4d	24w4d	26w4d
22	10w6d	12w3d	13w6d	64	22w6d	24w6d	26w6d
23	11w1d	12w5d	14w1d	65	23w1d	25w1d	27w1d
24	11w4d	13w0d	14w4d	66	23w4d	25w4d	27w4d
25	11w5d	13w1d	14w5d	67	23w6d	25w6d	27w6d
26	12w0d	13w4d	15w0d	68	24w1d	26w1d	28w2d
27	12w1d	13w6d	15w3d	69	24w3d	26w4d	28w4d
28	12w4d	14w1d	15w5d	70	24w5d	26w6d	28w6d
29	12w5d	14w2d	15w6d	71	25w1d	27w1d	29w2d
30	13w0d	14w4d	16w1d	72	25w4d	27w4d	29w5d
31	13w2d	14w6d	16w4d	73	25w6d	27w6d	30w0d
32	13w4d	15w1d	16w6d	74	26w1d	28w2d	30w3d
33	13w6d	15w3d	17w0d	75	26w4d	28w4d	30w5d
34	14w0d	15w5d	17w3d	76	26w6d	29w0d	31w1d
35	14w2d	16w0d	17w5d	77	27w1d	29w3d	31w4d
36	14w4d	16w2d	18w0d	78	27w4d	29w6d	32w0d
37	14w6d	16w4d	18w1d	79	27w6d	30w1d	32w2d
38	15w1d	16w6d	18w4d	80	28w2d	30w4d	32w5d
39	15w3d	17w1d	18w6d	81	28w5d	30w6d	33w1d
40	15w5d	17w3d	19w1d	82	29w1d	31w2d	33w4d
41	15w6d	17w5d	19w4d	83	29w4d	31w5d	33w6d
42	16w1d	18w0d	19w6d	84	29w6d	32w1d	34w2d
43	16w4d	18w2d	20w1d	85	30w2d	32w4d	34w6d
44	16w6d	18w4d	20w3d	86	30w5d	32w6d	35w1d
45	17w1d	18w6d	20w5d	87	31w0d	33w2d	35w4d
46	17w3d	19w1d	21w0d	88	31w4d	33w6d	36w1d
47	17w4d	19w3d	21w1d	89	31w6d	34w1d	36w4d
48	17w6d	19w5d	21w4d	90	32w2d	34w4d	36w6d
49	18w1d	20w0d	21w6d	91	32w6d	35w1d	37w3d
50	18w4d	20w3d	22w1d	92	33w1d	35w4d	37w6d
51	18w6d	20w5d	22w4d	93	33w4d	35w6d	38w1d
52	19w1d	21w0d	22w6d	94	34w0d	36w3d	38w6d
53	19w3d	21w2d	23w1d	95	34w4d	36w6d	39w2d
54	19w5d	21w4d	23w4d	96	34w6d	37w2d	39w5d
55	20w0d	21w6d	23w6d	97	35w3d	37w6d	40w1d
56	20w2d	22w1d	24w1d	98	35w6d	38w2d	40w5d
57	20w4d	22w4d	24w3d	99	36w3d	38w6d	41w1d
58	20w6d	22w6d	24w5d	100	36w6d	39w2d	41w6d
59	21w1d	23w1d	25w1d	101	37w2d	39w6d	42w2d
60	21w4d	23w4d	25w4d	102	37w6d	40w2d	42w6d
61	21w6d	23w6d	25w6d	>102	n/a	n/a	n/a



Table 3-102: BPD: Merz (Fetal Growth)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.5	21	25	29	27.5	68	73	78
13.0	23	26	30	28.0	69	74	79
13.5	24	28	31	28.5	71	76	81
14.0	25	29	33	29.0	72	77	82
14.5	27	31	35	29.5	73	78	84
15.0	28	32	36	30.0	74	80	85
15.5	30	34	38	30.5	76	81	86
16.0	31	35	39	31.0	77	82	88
16.5	33	37	41	31.5	78	83	89
17.0	35	39	43	32.0	79	85	90
17.5	36	40	45	32.5	80	86	91
18.0	38	42	46	33.0	81	87	92
18.5	40	44	48	33.5	82	88	93
19.0	41	46	50	34.0	83	89	95
19.5	43	47	52	34.5	84	90	96
20.0	45	49	53	35.0	85	91	97
20.5	46	51	55	35.5	86	92	97
21.0	48	52	57	36.0	87	92	98
21.5	49	54	59	36.5	87	93	99
22.0	51	56	60	37.0	88	94	100
22.5	53	57	62	37.5	89	95	101
23.0	54	59	64	38.0	89	95	101
23.5	56	61	65	38.5	90	96	102
24.0	57	62	67	39.0	90	96	103
24.5	59	64	69	39.5	91	97	103
25.0	61	65	70	40.0	91	97	103
25.5	62	67	72	40.5	91	97	104
26.0	64	68	73	41.0	91	98	104
26.5	65	70	75	41.5	92	98	104
27.0	66	71	77				

Table 3-103: FL: Merz (Fetal Age)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: FL (mm); % Age (Weeks/Days)

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<10	n/a	n/a	n/a	46	23w4d	25w3d	27w1d
10	11w1d	12w2d	13w4d	47	24w0d	25w6d	27w4d
11	11w4d	12w5d	13w6d	48	24w3d	26w1d	28w0d
12	11w6d	13w0d	14w1d	49	24w5d	26w4d	28w2d
13	12w1d	13w2d	14w4d	50	25w1d	26w6d	28w5d
14	12w3d	13w5d	15w0d	51	25w4d	27w2d	29w1d
15	12w5d	14w0d	15w2d	52	25w6d	27w5d	29w4d
16	13w1d	14w3d	15w5d	53	26w1d	28w1d	30w0d
17	13w3d	14w5d	16w0d	54	26w4d	28w4d	30w4d
18	13w6d	15w1d	16w3d	55	27w0d	29w0d	31w0d
19	14w1d	15w3d	16w5d	56	27w3d	29w3d	31w3d
20	14w4d	15w6d	17w1d	57	27w6d	29w6d	31w6d
21	14w6d	16w1d	17w3d	58	28w1d	30w1d	32w1d
22	15w1d	16w4d	17w6d	59	28w4d	30w4d	32w4d
23	15w3d	16w6d	18w1d	60	29w0d	31w0d	33w0d
24	15w6d	17w1d	18w4d	61	29w4d	31w4d	33w4d
25	16w1d	17w4d	19w1d	62	29w6d	31w6d	33w6d
26	16w3d	17w6d	19w3d	63	30w2d	32w2d	34w2d
27	16w6d	18w2d	19w6d	64	30w6d	32w6d	34w6d
28	17w1d	18w4d	20w1d	65	31w1d	33w1d	35w1d
29	17w4d	19w0d	20w4d	66	31w4d	33w4d	35w4d
30	17w6d	19w3d	20w6d	67	32w0d	34w1d	36w1d
31	18w1d	19w5d	21w1d	68	32w3d	34w4d	36w4d
32	18w4d	20w1d	21w4d	69	32w6d	35w0d	37w1d
33	18w6d	20w4d	22w1d	70	33w2d	35w3d	37w4d
34	19w1d	20w6d	22w3d	71	33w6d	35w6d	38w0d
35	19w4d	21w1d	22w6d	72	34w1d	36w2d	38w3d
36	20w0d	21w4d	23w1d	73	34w4d	36w6d	39w0d
37	20w2d	21w6d	23w4d	74	35w1d	37w2d	39w4d
38	20w5d	22w2d	23w6d	75	35w4d	37w5d	39w6d
39	21w0d	22w5d	24w3d	76	36w0d	38w1d	40w3d
40	21w3d	23w1d	24w6d	77	36w4d	38w5d	40w6d
41	21w5d	23w3d	25w1d	78	37w0d	39w1d	41w3d
42	22w1d	23w6d	25w4d	79	37w3d	39w4d	41w6d
43	22w4d	24w1d	25w6d	80	37w6d	40w1d	42w2d
44	22w6d	24w4d	26w3d	>80	n/a	n/a	n/a
45	23w1d	25w0d	26w6d				

Table 3-104: FL: Merz (Fetal Growth)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.5	6	9	12	27.5	48	52	57
13.0	8	11	14	28.0	49	53	58
13.5	10	13	16	28.5	50	55	59
14.0	11	15	18	29.0	51	56	60
14.5	13	16	20	29.5	52	57	61
15.0	15	18	21	30.0	53	58	62
15.5	16	20	23	30.5	54	59	63
16.0	18	21	25	31.0	55	60	64
16.5	19	23	26	31.5	56	61	66
17.0	21	24	28	32.0	57	62	67
17.5	22	26	29	32.5	58	63	68
18.0	24	27	31	33.0	59	64	69
18.5	25	29	32	33.5	60	65	70
19.0	27	30	34	34.0	61	66	71
19.5	28	32	35	34.5	62	67	72
20.0	29	33	37	35.0	63	68	73
20.5	31	35	38	35.5	64	69	74
21.0	32	36	40	36.0	65	70	74
21.5	33	37	41	36.5	66	70	75
22.0	35	39	42	37.0	66	71	76
22.5	36	40	44	37.5	67	72	77
23.0	37	41	45	38.0	68	73	78
23.5	39	43	46	38.5	69	74	79
24.0	40	44	48	39.0	69	74	79
24.5	41	45	49	39.5	70	75	80
25.0	42	46	50	40.0	71	76	81
25.5	43	48	52	40.5	71	76	81
26.0	45	49	53	41.0	72	77	82
26.5	46	50	54	41.5	72	77	83
27.0	47	51	55				

Table 3-105: HC: Merz (Fetal Age)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: HC (mm); % Age (Weeks/Days)

Meas	Min	Mean	Max	Meas	Min	Mean	Max
<72	n/a	n/a	n/a	172	17w6d	19w2d	20w6d
72	11w0d	12w1d	13w1d	174	17w6d	19w3d	20w6d
74	11w1d	12w2d	13w4d	176	18w0d	19w4d	21w1d
76	11w1d	12w3d	13w4d	178	18w1d	19w6d	21w3d
78	11w2d	12w4d	13w5d	180	18w2d	19w6d	21w4d
80	11w4d	12w5d	13w6d	182	18w4d	20w1d	21w5d
82	11w4d	12w6d	14w0d	184	18w4d	20w1d	21w6d
84	11w5d	12w6d	14w1d	186	18w6d	20w3d	22w0d
86	11w6d	13w1d	14w2d	188	19w0d	20w4d	22w1d
88	12w0d	13w1d	14w3d	190	19w1d	20w5d	22w2d
90	12w1d	13w2d	14w4d	192	19w2d	20w6d	22w4d
92	12w2d	13w4d	14w5d	194	19w4d	21w1d	22w5d
94	12w3d	13w4d	14w6d	196	19w4d	21w1d	22w6d
96	12w4d	13w5d	14w6d	198	19w5d	21w3d	23w0d
98	12w5d	13w6d	15w1d	200	19w6d	21w4d	23w2d
100	12w6d	14w0d	15w1d	202	20w0d	21w5d	23w3d
102	12w6d	14w1d	15w4d	204	20w1d	21w6d	23w4d
104	13w0d	14w2d	15w4d	206	20w3d	22w1d	23w6d
106	13w1d	14w3d	15w5d	208	20w4d	22w1d	23w6d
108	13w2d	14w4d	15w6d	210	20w5d	22w3d	24w1d
110	13w3d	14w5d	16w0d	212	20w6d	22w4d	24w2d
112	13w4d	14w6d	16w1d	214	21w0d	22w5d	24w3d
114	13w5d	15w0d	16w2d	216	21w1d	22w6d	24w4d
116	13w6d	15w1d	16w3d	218	21w3d	23w1d	24w6d
118	14w0d	15w2d	16w4d	220	21w4d	23w2d	25w0d
120	14w1d	15w3d	16w5d	222	21w6d	23w4d	25w1d
122	14w1d	15w4d	17w0d	224	21w6d	23w4d	25w2d
124	14w2d	15w5d	17w1d	226	22w1d	23w6d	25w4d
126	14w3d	15w6d	17w1d	228	22w1d	24w0d	25w6d
128	14w4d	16w0d	17w3d	230	22w3d	24w1d	26w0d
130	14w5d	16w1d	17w4d	232	22w4d	24w3d	26w1d
132	14w6d	16w2d	17w5d	234	22w5d	24w4d	26w2d
134	15w0d	16w3d	17w6d	236	22w6d	24w5d	26w4d
136	15w1d	16w4d	18w0d	238	23w1d	24w6d	26w5d
138	15w2d	16w5d	18w1d	240	23w2d	25w1d	26w6d
140	15w4d	16w6d	18w2d	242	23w4d	25w2d	27w1d
142	15w4d	17w0d	18w3d	244	23w5d	25w4d	27w2d
144	15w6d	17w1d	18w4d	246	23w6d	25w5d	27w4d
146	15w6d	17w2d	18w5d	248	24w1d	25w6d	27w5d
148	16w0d	17w4d	19w0d	250	24w1d	26w0d	27w6d
150	16w1d	17w4d	19w1d	252	24w3d	26w1d	28w0d
152	16w2d	17w6d	19w2d	254	24w4d	26w3d	28w1d
154	16w3d	17w6d	19w3d	256	24w6d	26w4d	28w3d
156	16w4d	18w1d	19w4d	258	25w0d	26w6d	28w4d
158	16w5d	18w1d	19w5d	260	25w1d	27w0d	28w6d
160	16w6d	18w3d	19w6d	262	25w3d	27w1d	29w0d
162	17w0d	18w4d	20w0d	264	25w4d	27w3d	29w1d
164	17w1d	18w5d	20w1d	266	25w6d	27w4d	29w3d
166	17w2d	18w6d	20w2d	268	26w0d	27w6d	29w4d
168	17w4d	19w0d	20w4d	270	26w1d	28w1d	30w0d
170	17w4d	19w1d	20w4d	272	26w3d	28w2d	30w1d

Table 3-105: HC: Merz (Fetal Age) (Continued)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: HC (mm); % Age (Weeks/Days)

Meas	Min	Mean	Max	Meas	Min	Mean	Max
274	26w4d	28w4d	30w3d	322	32w0d	34w1d	36w1d
276	26w6d	28w5d	30w4d	324	32w2d	34w3d	36w4d
278	27w0d	28w6d	30w6d	326	32w4d	34w5d	36w6d
280	27w1d	29w1d	31w0d	328	32w6d	34w6d	37w0d
282	27w3d	29w2d	31w1d	330	33w1d	35w1d	37w2d
284	27w5d	29w4d	31w4d	332	33w2d	35w4d	37w5d
286	27w6d	29w6d	31w5d	334	33w4d	35w6d	38w0d
288	28w1d	30w0d	31w6d	336	33w6d	36w1d	38w2d
290	28w2d	30w1d	32w1d	338	34w1d	36w3d	38w4d
292	28w4d	30w4d	32w3d	340	34w3d	36w4d	38w6d
294	28w6d	30w5d	32w4d	342	34w5d	36w6d	39w1d
296	29w0d	30w6d	32w6d	344	35w0d	37w1d	39w3d
298	29w1d	31w1d	33w0d	346	35w2d	37w4d	39w5d
300	29w3d	31w3d	33w3d	348	35w4d	37w6d	40w1d
302	29w4d	31w4d	33w4d	350	35w6d	38w1d	40w4d
304	29w6d	31w6d	33w6d	352	36w1d	38w4d	40w6d
306	30w1d	32w1d	34w1d	354	36w4d	38w6d	41w1d
308	30w2d	32w2d	34w2d	356	36w6d	39w1d	41w3d
310	30w4d	32w4d	34w4d	358	37w1d	39w4d	41w6d
312	30w6d	32w6d	34w6d	360	37w4d	39w6d	42w1d
314	31w1d	33w1d	35w1d	362	37w6d	40w1d	42w3d
316	31w3d	33w3d	35w3d	364	38w1d	40w4d	42w6d
318	31w4d	33w4d	35w4d	>364	n/a	n/a	n/a
320	31w6d	33w6d	36w0d				

Table 3-106: HC: Merz (Fetal Growth)  
 Habilitationsschrift, Mainz University Women's Hospital, 1988  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range 5%:95%

Age	Min	Mean	Max	Age	Min	Mean	Max
12.5	80	92	104	27.5	253	268	284
13.0	84	96	108	28.0	258	273	289
13.5	89	101	113	28.5	263	278	294
14.0	94	106	119	29.0	268	283	299
14.5	100	112	124	29.5	272	288	303
15.0	105	118	130	30.0	277	292	308
15.5	111	124	137	30.5	281	297	313
16.0	117	130	143	31.0	285	301	317
16.5	123	136	149	31.5	289	305	321
17.0	130	143	156	32.0	293	309	325
17.5	136	149	162	32.5	297	313	329
18.0	142	155	168	33.0	300	316	333
18.5	148	162	175	33.5	303	320	336
19.0	155	168	181	34.0	307	323	340
19.5	161	174	188	34.5	310	326	343
20.0	167	181	194	35.0	313	329	346
20.5	173	187	201	35.5	315	332	349
21.0	180	193	207	36.0	318	335	352
21.5	186	200	214	36.5	320	337	354
22.0	192	206	220	37.0	322	339	356
22.5	198	212	226	37.5	324	341	359
23.0	204	218	232	38.0	326	343	361
23.5	210	224	238	38.5	327	345	362
24.0	216	230	244	39.0	329	346	364
24.5	221	236	250	39.5	330	348	365
25.0	227	241	256	40.0	331	349	366
25.5	232	247	262	40.5	332	349	367
26.0	238	253	267	41.0	332	350	368
26.5	243	258	273	41.5	332	350	369
27.0	248	263	278				

**Moore**

Table 3-107: AFI: Moore (Fetal Age)  
 Unit: Age (Week); Min(cm); Mean(cm); Max (cm);  
 Table type = GP, Table/Graph Range (2.5%: 97.5%)

Age	Min	Mean	Max	Age	Min	Mean	Max	Age	Min	Mean	Max
16	7.3	12.1	20.1	25	9.0	14.7	24.0	34	7.2	14.2	27.8
17	7.7	12.7	21.1	26	8.9	14.7	24.2	35	7.0	14.0	27.9
18	8.0	13.3	22.0	27	8.5	14.6	24.5	36	6.8	13.8	27.9
19	8.3	13.7	22.5	28	8.6	14.6	24.9	37	6.6	13.5	27.5
20	8.6	14.1	23.0	29	8.4	14.5	25.4	38	6.5	13.2	26.9
21	8.8	14.3	23.3	30	8.2	14.5	25.8	39	6.4	12.7	25.5
22	8.9	14.5	23.5	31	7.9	14.4	26.3	40	6.3	12.3	24.0
23	9.0	14.6	23.7	32	7.7	14.4	26.9	41	6.3	11.6	21.6
24	9.0	14.7	23.8	33	7.4	14.3	27.4	42	6.3	11.0	19.2

**Nelson**

Table 3-108: CRL: Nelson (Fetal Age)  
 Journal of Clinical Ultrasound, 9: 67-70, 1981  
 Unit: CRL (mm); GA (Days)

CRL	GA	CRL	GA	CRL	GA	CRL	GA	CRL	GA
14	59	34	71	54	83	74	95	94	107
15	60	35	72	55	84	75	96	95	108
16	61	36	73	56	85	76	97	96	109
17	61	37	73	57	85	77	97	97	109
18	62	38	74	58	86	78	98	98	110
19	62	39	74	59	86	79	98	99	110
20	63	40	75	60	87	80	99	100	111
21	64	41	76	61	88	81	100	101	112
22	64	42	76	62	88	82	100	102	112
23	65	43	77	63	89	83	101	103	113
24	65	44	77	64	89	84	101	104	113
25	66	45	78	65	90	85	102	105	114
26	67	46	79	66	91	86	103	106	115
27	67	47	79	67	91	87	103	107	115
28	68	48	80	68	92	88	104	108	116
29	68	49	80	69	92	89	104	109	116
30	69	50	81	70	93	90	105	110	117
31	70	51	82	71	94	91	106	111	118
32	70	52	82	72	94	92	106		
33	71	53	83	73	95	93	107		

Osaka

Table 3-109: BPD: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: BPD (mm); Age (Days); SD (mm)

BPD	Age	SD	BPD	Age	SD	BPD	Age	SD	BPD	Age	SD
<13	n/a	—	33	107	2.4	54	152	3.0	75	203	3.5
13	70	1.9	34	109	2.5	55	154	3.0	76	206	3.5
14	71	1.9	35	112	2.5	56	157	3.0	77	209	3.5
15	73	1.9	36	114	2.5	57	159	3.1	78	212	3.5
16	75	1.9	37	116	2.5	58	161	3.1	79	214	3.6
17	77	2.0	38	118	2.6	59	164	3.1	80	217	3.6
18	78	2.0	39	120	2.6	60	166	3.1	81	220	3.6
19	80	2.0	40	122	2.6	61	168	3.2	82	224	3.6
20	82	2.1	41	124	2.7	62	171	3.2	83	227	3.6
21	84	2.1	42	126	2.7	63	173	3.2	84	230	3.7
22	86	2.1	43	128	2.7	64	175	3.2	85	234	3.7
23	88	2.1	44	130	2.7	65	178	3.3	86	237	3.7
24	90	2.2	45	132	2.8	66	180	3.3	87	238	3.7
25	92	2.2	46	135	2.8	67	182	3.3	88	245	3.7
26	94	2.2	47	137	2.8	68	185	3.3	89	249	3.8
27	96	2.3	48	139	2.8	69	187	3.3	90	254	3.8
28	98	2.3	49	141	2.9	70	190	3.4	91	259	3.8
29	99	2.3	50	143	2.9	71	193	3.4	92	265	3.8
30	101	2.3	51	145	2.9	72	195	3.4	93	273	3.9
31	103	2.4	52	148	2.9	73	198	3.4	94	280	3.9
32	105	2.4	53	150	3.0	74	200	3.5	>94	n/a	—

Table 3-110: CRL: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: CRL (mm); Age (Days); SD (mm)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<9	n/a	—	23	65	4.0	38	75	5.5	53	84	6.9
9	50	1.7	24	66	4.1	39	76	5.7	54	85	7.0
10	52	2.0	25	66	4.1	40	76	5.7	55	85	7.0
11	53	2.2	26	67	4.3	41	77	5.8	56	86	7.2
12	55	2.5	27	68	4.5	42	77	5.8	57	86	7.2
13	56	2.6	28	69	4.6	43	78	6.0	58	87	7.3
14	57	2.8	29	69	4.6	44	79	6.1	59	87	7.3
15	58	2.9	30	70	4.8	45	79	6.1	60	88	7.5
16	59	3.1	31	71	4.9	46	80	6.3	61	89	7.6
17	60	3.2	32	71	4.9	47	80	6.3	62	89	7.6
18	61	3.4	33	72	5.1	48	81	6.4	63	90	7.8
19	62	3.5	34	73	5.2	49	82	6.6	>63	n/a	—
20	63	3.7	35	73	5.2	50	83	6.7			
21	63	3.7	36	74	5.4	51	83	6.7			
22	64	3.8	37	74	5.4	52	83	6.7			



Table 3-111: EFW: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: EFW (grams); Age (Days); SD (grams)

EFW	Age	SD	EFW	Age	SD	EFW	Age	SD	EFW	Age	SD
<137	n/a	—	590	160	81	1420	203	171	2360	242	268
137	112	29	600	160	81	1440	204	174	2380	243	271
140	113	29	610	161	83	1460	205	176	2400	244	274
150	115	29	620	162	85	1480	206	178	2420	245	276
160	116	30	630	162	85	1500	207	181	2440	245	276
170	118	30	640	163	87	1520	208	183	2460	246	279
180	120	31	650	164	89	1540	209	185	2480	247	282
190	121	32	660	164	89	1560	210	188	2500	248	285
200	123	33	670	165	91	1580	210	188	2520	249	288
210	124	34	680	165	91	1600	211	190	2540	249	288
220	126	35	690	166	92	1620	212	192	2560	250	290
230	127	36	700	167	94	1640	213	195	2580	251	293
240	128	37	720	168	96	1660	214	197	2600	252	296
250	130	39	740	169	98	1680	215	200	2620	253	299
260	131	40	760	170	100	1700	216	202	2640	254	302
270	132	41	780	171	102	1720	216	202	2660	254	302
280	133	42	800	173	106	1740	217	204	2680	255	305
290	134	43	820	174	108	1760	218	207	2700	256	308
300	135	44	840	175	110	1780	219	209	2720	257	311
310	136	45	860	176	112	1800	220	212	2740	258	314
320	137	46	880	177	114	1820	220	212	2760	259	317
330	138	48	900	178	116	1840	221	214	2780	259	317
340	139	49	920	179	118	1860	222	217	2800	260	320
350	140	50	940	180	120	1880	223	219	2820	261	323
360	141	51	960	181	123	1900	224	222	2840	262	326
370	142	53	980	182	125	1920	224	222	2860	263	329
380	143	54	1000	183	127	1940	225	224	2880	264	332
390	144	56	1020	185	131	1960	226	227	2900	265	335
400	145	57	1040	186	133	1980	227	229	2920	266	339
410	146	58	1060	187	135	2000	228	232	2940	266	339
420	147	60	1080	188	138	2020	229	234	2960	267	342
430	148	61	1100	189	140	2040	229	234	2980	268	345
440	149	63	1120	190	142	2060	230	237	3000	269	348
450	149	63	1140	191	144	2080	231	239	3020	270	352
460	150	65	1160	192	146	2100	232	242	3040	271	355
470	151	66	1180	193	149	2120	233	244	3060	272	358
480	152	68	1200	194	151	2140	233	244	3080	273	362
490	153	69	1220	195	153	2160	234	247	3100	274	365
500	153	69	1240	195	153	2180	235	250	3120	275	369
510	154	71	1260	196	155	2200	236	252	3140	276	372
520	155	73	1280	197	158	2220	236	252	3160	277	376
530	155	73	1300	198	160	2240	237	255	3180	278	379
540	156	74	1320	199	162	2260	238	257	3200	279	383
550	157	76	1340	200	164	2280	239	260	3220	280	387
560	157	76	1360	201	167	2300	240	263	>3220	n/a	—
570	158	78	1380	202	169	2320	241	265			
580	159	80	1400	203	171	2340	241	265			

Table 3-112: FL: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: FL (mm); Age (Days); SD (mm)

FL	Age	SD	FL	Age	SD	FL	Age	SD	FL	Age	SD
<9	n/a	—	25	127	2.3	42	172	2.6	59	227	2.9
9	91	2.1	26	130	2.3	43	175	2.6	60	230	2.9
10	93	2.1	27	132	2.3	44	178	2.6	61	235	2.9
11	95	2.1	28	135	2.4	45	181	2.6	62	239	2.9
12	97	2.2	29	137	2.4	46	184	2.6	63	242	3.0
13	99	2.2	30	140	2.4	47	186	2.6	64	247	3.0
14	102	2.2	31	142	2.4	48	190	2.7	65	250	3.0
15	104	2.2	32	145	2.4	49	193	2.7	66	255	3.0
16	106	2.2	33	147	2.4	50	196	2.7	67	258	3.0
17	108	2.2	34	150	2.4	51	199	2.7	68	260	3.1
18	110	2.2	35	152	2.5	52	202	2.6	69	269	3.1
19	113	2.2	36	155	2.5	53	205	2.8	70	274	3.1
20	115	2.3	37	158	2.5	54	209	2.8	71	279	3.2
21	118	2.3	38	162	2.5	55	212	2.8	>71	n/a	—
22	120	2.3	39	163	2.5	56	216	2.8			
23	122	2.3	40	166	2.5	57	220	2.8			
24	125	2.3	41	169	2.6	58	223	2.9			

Table 3-113: FTA: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: FTA (mm<sup>2</sup>); Age (Days); SD (mm<sup>2</sup>)

FTA	Age	SD	FTA	Age	SD	FTA	Age	SD	FTA	Age	SD
<560	n/a	—	2600	159	330	4800	205	560	7000	246	800
560	98	120	2700	162	340	4900	207	570	7100	248	820
600	100	120	2800	164	350	5000	209	580	7200	250	830
700	103	130	2900	166	360	5100	211	590	7300	252	840
800	108	150	3000	168	370	5200	213	600	7400	254	860
900	113	160	3100	170	380	5300	215	610	7500	256	870
1000	115	170	3200	173	390	5400	216	620	7600	258	880
1100	117	170	3300	175	400	5500	218	630	7700	260	900
1200	122	190	3400	177	410	5600	220	640	7800	262	910
1300	125	200	3500	179	420	5700	222	650	7900	264	930
1400	128	210	3600	181	430	5800	224	670	8000	265	930
1500	130	220	3700	183	440	5900	226	680	8100	268	960
1600	134	230	3800	185	450	6000	227	680	8200	270	970
1700	137	240	3900	187	460	6100	229	700	8300	273	990
1800	139	250	4000	189	470	6200	231	710	8400	274	1000
1900	142	260	4100	191	480	6300	233	720	8500	276	1010
2000	145	270	4200	193	490	6400	235	730	8600	279	1040
2100	147	280	4300	195	500	6500	237	750	8660	280	1040
2200	150	290	4400	197	510	6600	238	750	>8660	n/a	—
2300	152	300	4500	199	520	6700	240	760			
2400	155	310	4600	201	530	6800	242	780			
2500	157	330	4700	203	540	6900	244	790			

Table 3-114: HL: Osaka (Fetal Age)  
Osaka University Method 1989, 3 by Univ. Osaka  
Unit: HL (mm); Age (Days); SD (mm)

HL	Age	SD	HL	Age	SD	HL	Age	SD	HL	Age	SD
<10	n/a	—	23	123	2.2	37	164	2.4	51	217	2.6
10	91	2.0	24	126	2.2	38	167	2.4	52	222	2.6
11	93	2.0	25	129	2.2	39	170	2.4	53	227	2.7
12	96	2.0	26	132	2.2	40	174	2.4	54	232	2.7
13	98	2.1	27	134	2.2	41	178	2.4	55	237	2.7
14	100	2.1	28	137	2.2	42	182	2.5	56	242	2.7
15	103	2.1	29	140	2.3	43	185	2.5	57	248	2.8
16	105	2.1	30	143	2.3	44	188	2.5	58	254	2.8
17	108	2.1	31	145	2.3	45	192	2.5	59	260	2.8
18	110	2.1	32	149	2.3	46	196	2.5	60	267	2.9
19	113	2.1	33	151	2.3	47	200	2.5	61	275	2.9
20	115	2.1	34	155	2.3	48	204	2.6	62	280	2.9
21	117	2.1	35	158	2.3	49	208	2.6	>62	n/a	—
22	121	2.2	36	161	2.4	50	213	2.6			

Paris

Table 3-115: BPD: Paris (Fetal Age)  
Unit: BPD (mm); Age (Days); SD (mm)

BPD	Age	SD	BPD	Age	SD	BPD	Age	SD	BPD	Age	SD
<13	n/a	—	33	110	3	54	158	4	75	210	5
13	77	3	34	113	3	55	161	4	76	213	5
14	78	3	35	115	3	56	163	4	77	217	5
15	79	3	36	117	3	57	165	4	78	220	5
16	80	3	37	119	3	58	168	4	79	224	5
17	81	3	38	121	3	59	170	4	80	227	5
18	82	3	39	123	3	60	172	4	81	231	5
19	83	3	40	126	4	61	175	4	82	234	5
20	84	3	41	128	4	62	177	4	83	238	5
21	85	3	42	130	4	63	179	4	84	242	5
22	87	3	43	133	4	64	182	4	85	247	5
23	89	3	44	135	4	65	184	4	86	252	5
24	91	3	45	137	4	66	187	4	87	256	5
25	93	3	46	140	4	67	189	4	88	261	5
26	95	3	47	142	4	68	192	4	89	266	5
27	97	3	48	144	4	69	194	4	90	287	5
28	100	3	49	147	4	70	197	4	>90	n/a	—
29	102	3	50	149	4	71	199	4			
30	104	3	51	151	4	72	202	4			
31	106	3	52	154	4	73	204	4			
32	108	3	53	156	4	74	207	4			

Table 3-116: CRL: Paris (Fetal Age)  
Unit: CRL (mm); Age (Days); SD (mm)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<5	n/a	—	25	64	7	46	78	7	67	90	7
5	42	4	26	65	7	47	79	7	68	90	7
6	43	4	27	66	7	48	79	7	69	91	7
7	44	4	28	66	7	49	80	7	70	91	7
8	46	4	29	67	7	50	80	7	71	91	7
9	47	4	30	68	7	51	81	7	72	92	7
10	49	4	31	69	7	52	82	7	73	92	7
11	50	4	32	70	7	53	82	7	74	93	7
12	51	4	33	70	7	54	83	7	75	93	7
13	52	4	34	71	7	55	84	7	76	94	7
14	53	4	35	71	7	56	84	7	77	94	7
15	54	4	36	72	7	57	85	7	78	94	7
16	55	5	37	73	7	58	85	7	79	95	7
17	56	5	38	73	7	59	86	7	80	95	7
18	57	5	39	74	7	60	86	7	81	96	7
19	58	6	40	74	7	61	87	7	82	96	7
20	59	6	41	75	7	62	87	7	83	97	7
21	60	6	42	76	7	63	88	7	84	97	7
22	61	6	43	76	7	64	88	7	85	98	7
23	63	6	44	77	7	65	89	7	>85	n/a	—
24	63	7	45	77	7	66	89	7			

Table 3-117: FL: Paris (Fetal Age)  
Unit: FL (mm); Age (Days); SD (mm)

FL	Age	SD	FL	Age	SD	FL	Age	SD	FL	Age	SD
<15	n/a	—	31	137	5	48	183	5	65	238	5
15	98	4	32	139	5	49	186	5	66	241	5
16	100	4	33	142	5	50	189	5	67	245	5
17	102	4	34	145	5	51	192	5	68	248	5
18	105	4	35	148	5	52	194	5	69	252	5
19	107	4	36	150	5	53	197	5	70	255	5
20	109	4	37	153	5	54	200	5	71	259	5
21	112	4	38	156	5	55	203	5	72	262	5
22	114	4	39	159	5	56	206	5	73	266	5
23	116	4	40	161	5	57	210	5	74	271	5
24	119	4	41	164	5	58	213	5	75	276	5
25	121	4	42	167	5	59	217	5	76	281	5
26	123	4	43	170	5	60	219	5	77	287	5
27	126	5	44	172	5	61	221	5	>77	n/a	—
28	128	5	45	175	5	62	224	5			
29	131	5	46	178	5	63	231	5			
30	134	5	47	181	5	64	234	5			

Table 3-118: Ft: Paris (Fetal Age)  
Unit: Ft (mm); Age (Days); SD (mm)

Ft	Age	SD	Ft	Age	SD	Ft	Age	SD	Ft	Age	SD
<13	n/a	—	29	133	4	46	173	4	63	221	4
13	91	2	30	135	4	47	175	4	64	224	4
14	94	2	31	137	4	48	178	4	65	227	4
15	97	2	32	140	4	49	180	4	66	231	5
16	100	2	33	142	4	50	183	4	67	234	5
17	103	3	34	144	4	51	185	4	68	238	5
18	106	3	35	147	4	52	188	4	69	242	5
19	109	3	36	149	4	53	190	4	70	246	5
20	112	4	37	151	4	54	193	4	71	250	5
21	114	4	38	154	4	55	196	4	72	254	5
22	116	4	39	156	4	56	199	4	73	258	5
23	119	4	40	158	4	57	202	4	74	262	5
24	121	4	41	161	4	58	205	4	75	266	6
25	123	4	42	163	4	59	208	4	>75	n/a	—
26	126	4	43	165	4	60	211	4			
27	128	4	44	168	4	61	215	4			
28	130	4	45	170	4	62	218	4			

Table 3-119: TAD: Paris (Fetal Age)  
 Unit: TAD (mm); Age (Days); SD (mm)

TAD	Age	SD	TAD	Age	SD	TAD	Age	SD	TAD	Age	SD
<10	n/a	—	32	116	0	55	171	0	78	229	0
10	84	0	33	118	0	56	174	0	79	232	0
11	84	0	34	120	0	57	176	0	80	234	0
12	85	0	35	122	0	58	179	0	81	237	0
13	86	0	36	124	0	59	181	0	82	239	0
14	87	0	37	126	0	60	184	0	83	242	0
15	87	0	38	128	0	61	186	0	84	245	0
16	88	0	39	131	0	62	189	0	85	248	0
17	89	0	40	133	0	63	191	0	86	252	0
18	90	0	41	136	0	64	194	0	87	255	0
19	91	0	42	138	0	65	196	0	88	259	0
20	92	0	43	141	0	66	199	0	89	262	0
21	94	0	44	143	0	67	201	0	90	266	0
22	96	0	45	146	0	68	204	0	91	269	0
23	98	0	46	148	0	69	207	0	92	273	0
24	100	0	47	151	0	70	209	0	93	276	0
25	102	0	48	153	0	71	212	0	94	280	0
26	104	0	49	156	0	72	214	0	95	283	0
27	106	0	50	158	0	73	217	0	96	287	0
28	108	0	51	161	0	74	219	0	>96	n/a	—
29	110	0	52	163	0	75	222	0			
30	112	0	53	166	0	76	224	0			
31	114	0	54	169	0	77	227	0			

## Rempen

Table 3-120: BPD: Rempen (Fetal Age)

Der Frauenarzt 32, 4 (1991) 425-30

Known LMP (left)—Unknown LMP (right)

Unit: BPD (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD	BPD	Age	2SD
<2	n/a	—	15	10w2d	4	<3	n/a	—	16	10w4d	8
2	6w2d	4	16	10w5d	4	3	6w6d	8	17	10w6d	8
3	6w4d	4	17	11w0d	4	4	7w1d	8	18	11w1d	8
4	6w6d	4	18	11w2d	4	5	7w3d	8	19	11w3d	8
5	7w1d	4	19	11w5d	4	6	7w5d	8	20	11w5d	8
6	7w4d	4	20	12w0d	4	7	8w0d	8	21	12w0d	8
7	7w6d	4	21	12w2d	4	8	8w2d	8	22	12w2d	8
8	8w1d	4	22	12w4d	4	9	8w4d	8	23	12w4d	8
9	8w3d	4	23	13w0d	4	10	8w6d	8	24	12w6d	8
10	8w5d	4	24	13w2d	4	11	9w1d	8	25	13w1d	8
11	9w1d	4	>24	n/a	—	12	9w3d	8	26	13w3d	8
12	9w3d	4				13	9w5d	8	27	13w5d	8
13	9w5d	4				14	10w0d	8	>27	n/a	—
14	10w0d	4				15	10w2d	8			

Table 3-121: BPD: Rempen (Fetal Growth)

Der Frauenarzt 32, 4 (1991) 425-30

Unit: Age (Weeks/Days); Mean (mm); Range(mm); Table/Graph Range (5%:95%)

Age	Mean	Range	Age	Mean	Range	Age	Mean	Range
6w2d	2.0	3.7	8w5d	9.8	3.7	11w1d	17.4	3.7
6w3d	2.5	3.7	8w6d	10.3	3.7	11w2d	17.9	3.7
6w4d	3.0	3.7	9w0d	10.7	3.7	11w3d	18.3	3.7
6w5d	3.4	3.7	9w1d	11.2	3.7	11w4d	18.7	3.7
6w6d	3.9	3.7	9w2d	11.6	3.7	11w5d	19.2	3.7
7w0d	4.3	3.7	9w3d	12.1	3.7	11w6d	19.6	3.7
7w1d	4.8	3.7	9w4d	12.5	3.7	12w0d	20.0	3.7
7w2d	5.3	3.7	9w5d	13.0	3.7	12w1d	20.5	3.7
7w3d	5.7	3.7	9w6d	13.4	3.7	12w2d	20.9	3.7
7w4d	6.2	3.7	10w0d	13.9	3.7	12w3d	21.3	3.7
7w5d	6.7	3.7	10w1d	14.3	3.7	12w4d	21.8	3.7
7w6d	7.1	3.7	10w2d	14.8	3.7	12w5d	22.2	3.7
8w0d	7.6	3.7	10w3d	15.2	3.7	12w6d	22.6	3.7
8w1d	8.0	3.7	10w4d	15.7	3.7	13w0d	23.1	3.7
8w2d	8.5	3.7	10w5d	16.1	3.7	13w1d	23.5	3.7
8w3d	8.9	3.7	10w6d	16.5	3.7	13w2d	23.9	3.7
8w4d	9.4	3.7	11w0d	17.0	3.7			

Table 3-122: CRL: Rempen (Fetal Age)

Der Frauenarzt 32, 4 (1991) 425-30

Known LMP (left)—Unknown LMP (right)

Unit: CRL (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD	CRL	Age	2SD
<1	n/a	—	40	10w5d	8	<2	n/a	—	41	10w5d	7
1	5w5d	8	41	10w6d	8	2	6w0d	6	42	10w6d	6
2	5w6d	8	42	11w0d	8	3	6w1d	6	43	11w0d	7
3	6w0d	8	43	11w0d	8	4	6w2d	6	44	11w0d	7
4	6w1d	8	44	11w1d	8	5	6w3d	6	45	11w1d	6
5	6w2d	8	45	11w2d	8	6	6w4d	6	46	11w2d	7
6	6w3d	8	46	11w2d	8	7	6w5d	6	47	11w2d	7
7	6w4d	8	47	11w3d	8	8	6w6d	6	48	11w3d	6
8	6w6d	8	48	11w4d	8	9	7w0d	6	49	11w4d	7
9	6w6d	8	49	11w4d	8	10	7w1d	6	50	11w4d	6
10	7w0d	8	50	11w5d	8	11	7w2d	6	51	11w5d	6
11	7w2d	8	51	11w6d	8	12	7w3d	6	52	11w5d	7
12	7w2d	8	52	12w0d	8	13	7w4d	7	53	11w6d	6
13	7w4d	8	53	12w0d	8	14	7w5d	7	54	12w0d	7
14	7w4d	8	54	12w1d	8	15	7w6d	7	55	12w0d	7
15	7w5d	8	55	12w2d	8	16	7w6d	7	56	12w1d	6
16	7w6d	8	56	12w2d	8	17	8w0d	7	57	12w1d	7
17	8w0d	8	57	12w3d	8	18	8w1d	6	58	12w2d	6
18	8w1d	8	58	12w3d	8	19	8w2d	6	59	12w3d	7
19	8w2d	8	59	12w4d	8	20	8w3d	6	60	12w3d	6
20	8w3d	8	60	12w5d	8	21	8w4d	7	61	12w4d	7
21	8w4d	8	61	12w5d	8	22	8w5d	7	62	12w4d	6
22	8w5d	8	62	12w6d	8	23	8w5d	7	63	12w5d	7
23	8w6d	8	63	13w0d	8	24	8w6d	7	64	12w5d	7
24	8w6d	8	64	13w0d	8	25	9w0d	6	65	12w6d	6
25	9w0d	8	65	13w1d	8	26	9w1d	6	66	12w6d	7
26	9w1d	8	66	13w2d	8	27	9w2d	7	67	13w0d	6
27	9w2d	8	>66	n/a	—	28	9w3d	7	68	13w0d	7
28	9w3d	8				29	9w3d	7	69	13w1d	6
29	9w4d	8				30	9w4d	7	70	13w1d	7
30	9w4d	8				31	9w5d	7	71	13w2d	7
31	9w5d	8				32	9w6d	7	72	13w2d	6
32	9w6d	8				33	9w6d	7	73	13w3d	7
33	10w0d	8				34	10w0d	6	74	13w3d	6
34	10w1d	8				35	10w1d	6	75	13w4d	7
35	10w1d	8				36	10w2d	7	76	13w4d	6
36	10w2d	8				37	10w2d	7	77	13w4d	7
37	10w3d	8				38	10w3d	6	78	13w5d	6
38	10w4d	8				39	10w4d	6	>78	n/a	—
39	10w4d	8				40	10w5d	7			



Table 3-123: CRL: Rempen (Fetal Growth)

Der Frauenarzt 32, 4 (1991) 425-30

Unit: Age (Weeks/Days); Mean (mm); Range (mm); Table/Graph Range (5%:95%)

Age	Mean	Range	Age	Mean	Range	Age	Mean	Range
5w5d	1.2	7.8	8w2d	18.9	7.8	10w6d	41.3	7.8
5w6d	2.1	7.8	8w3d	20.0	7.8	11w0d	42.6	7.8
6w0d	3.0	7.8	8w4d	21.1	7.8	11w1d	44.0	7.8
6w1d	3.8	7.8	8w5d	22.3	7.8	11w2d	45.4	7.8
6w2d	4.7	7.8	8w6d	23.5	7.8	11w3d	46.9	7.8
6w3d	5.7	7.8	9w0d	24.6	7.8	11w4d	48.3	7.8
6w4d	6.6	7.8	9w1d	25.8	7.8	11w5d	49.8	7.8
6w5d	7.5	7.8	9w2d	27.0	7.8	11w6d	51.2	7.8
6w6d	8.5	7.8	9w3d	28.3	7.8	12w0d	52.7	7.8
7w0d	9.5	7.8	9w4d	29.5	7.8	12w1d	54.2	7.8
7w1d	10.5	7.8	9w5d	30.7	7.8	12w2d	55.7	7.8
7w2d	11.5	7.8	9w6d	32.0	7.8	12w3d	57.3	7.8
7w3d	12.5	7.8	10w0d	33.3	7.8	12w4d	58.8	7.8
7w4d	13.5	7.8	10w1d	34.6	7.8	12w5d	60.3	7.8
7w5d	14.6	7.8	10w2d	35.9	7.8	12w6d	61.9	7.8
7w6d	15.6	7.8	10w3d	37.2	7.8	13w0d	63.5	7.8
8w0d	16.7	7.8	10w4d	38.5	7.8	13w1d	65.1	7.8
8w1d	17.8	7.8	10w5d	39.9	7.8	13w2d	66.7	7.8

Table 3-124: GS: Rempen (Fetal Age)

Der Frauenarzt 32, 4 (1991) 425-30

Known LMP (left)—Unknown LMP (right)

Unit: GS (mm); Age (Weeks/Days); 2SD (mm [Known LMP] or day [Unknown LMP])

GS	Age	2SD	GS	Age	2SD	GS	Age	2SD	GS	Age	2SD
<1	n/a	—	38	9w1d	11	<1	n/a	—	38	9w1d	10
1	4w4d	11	39	9w2d	11	1	4w5d	10	39	9w2d	10
2	4w5d	11	40	9w4d	11	2	4w6d	10	40	9w3d	10
3	4w6d	11	41	9w5d	11	3	5w0d	10	41	9w4d	10
4	5w0d	11	42	9w6d	11	4	5w1d	10	42	9w5d	10
5	5w0d	11	43	10w0d	11	5	5w2d	10	43	9w6d	10
6	5w1d	11	44	10w1d	11	6	5w2d	10	44	9w6d	10
7	5w2d	11	45	10w2d	11	7	5w3d	10	45	10w0d	10
8	5w3d	11	46	10w3d	11	8	5w4d	10	46	10w1d	10
9	5w3d	11	47	10w4d	11	9	5w5d	10	47	10w2d	10
10	5w4d	11	48	10w6d	11	10	5w5d	10	48	10w3d	10
11	5w5d	11	49	11w0d	11	11	5w6d	10	49	10w4d	10
12	5w6d	11	50	11w1d	11	12	6w0d	10	50	10w5d	10
13	6w0d	11	51	11w2d	11	13	6w1d	10	51	10w6d	10
14	6w0d	11	52	11w4d	11	14	6w2d	10	52	11w0d	10
15	6w1d	11	53	11w5d	11	15	6w2d	10	53	11w1d	10
16	6w2d	11	54	12w0d	11	16	6w3d	10	54	11w2d	10
17	6w3d	11	55	12w1d	11	17	6w4d	10	55	11w3d	10
18	6w4d	11	56	12w2d	11	18	6w5d	10	56	11w4d	10
19	6w5d	11	57	12w4d	11	19	6w6d	10	57	11w5d	10
20	6w6d	11	58	12w5d	11	20	6w6d	10	58	11w6d	10
21	6w6d	11	59	13w0d	11	21	7w0d	10	59	12w0d	10
22	7w0d	11	60	13w1d	11	22	7w1d	10	60	12w1d	10
23	7w1d	11	>60	n/a	—	23	7w2d	10	61	12w2d	10
24	7w2d	11				24	7w3d	10	62	12w3d	10
25	7w3d	11				25	7w4d	10	63	12w4d	10
26	7w4d	11				26	7w4d	10	64	12w5d	10
27	7w5d	11				27	7w5d	10	65	12w6d	10
28	7w6d	11				28	7w6d	10	66	13w0d	10
29	8w0d	11				29	8w0d	10	67	13w1d	10
30	8w0d	11				30	8w1d	10	68	13w2d	10
31	8w1d	11				31	8w2d	10	69	13w3d	10
32	8w2d	11				32	8w3d	10	70	13w4d	10
33	8w3d	11				33	8w3d	10	71	13w5d	10
34	8w4d	11				34	8w4d	10	72	14w0d	10
35	8w5d	11				35	8w5d	10	73	14w1d	10
36	8w6d	11				36	8w6d	10	>73	n/a	—
37	9w0d	11				37	9w0d	10			

Table 3-125: GS: Rempen (Fetal Growth)

Der Frauenarzt 32, 4 (1991) 425-30

Unit: Age (Weeks/Days); Mean (mm); Range (mm); Table/Graph Range (5%:95%)

Age	Mean	Range	Age	Mean	Range	Age	Mean	Range
4w4d	0.5	10.5	7w4d	26.2	10.5	10w4d	46.6	10.5
4w5d	1.8	10.5	7w5d	27.3	10.5	10w5d	47.4	10.5
4w6d	3.2	10.5	7w6d	28.4	10.5	10w6d	48.2	10.5
5w0d	4.5	10.5	8w0d	29.5	10.5	11w0d	49.0	10.5
5w1d	5.8	10.5	8w1d	30.5	10.5	11w1d	49.8	10.5
5w2d	7.1	10.5	8w2d	31.6	10.5	11w2d	50.6	10.5
5w3d	8.4	10.5	8w3d	32.6	10.5	11w3d	51.4	10.5
5w4d	9.7	10.5	8w4d	33.6	10.5	11w4d	52.1	10.5
5w5d	10.9	10.5	8w5d	34.6	10.5	11w5d	52.9	10.5
5w6d	12.2	10.5	8w6d	35.6	10.5	11w6d	53.6	10.5
6w0d	13.4	10.5	9w0d	36.6	10.5	12w0d	54.3	10.5
6w1d	14.6	10.5	9w1d	37.6	10.5	12w1d	55.1	10.5
6w2d	15.9	10.5	9w2d	38.5	10.5	12w2d	55.8	10.5
6w3d	17.1	10.5	9w3d	39.5	10.5	12w3d	56.4	10.5
6w4d	18.3	10.5	9w4d	40.4	10.5	12w4d	57.1	10.5
6w5d	19.4	10.5	9w5d	41.3	10.5	12w5d	57.8	10.5
6w6d	20.6	10.5	9w6d	42.2	10.5	12w6d	58.4	10.5
7w0d	21.7	10.5	10w0d	43.1	10.5	13w0d	59.1	10.5
7w1d	22.9	10.5	10w1d	44.0	10.5	13w1d	59.7	10.5
7w2d	24.0	10.5	10w2d	44.9	10.5	13w2d	60.3	10.5
7w3d	25.1	10.5	10w3d	45.7	10.5			

**Robinson**

Table 3-126: CRL: Robinson (Fetal Age)

Br J Gynecol, 82: 702, 1975

Unit: CRL (mm); Age (Days); SD (mm)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<7	n/a	—	26	64	5	46	78	7	66	90	7
7	45	4	27	65	5	47	79	7	67	90	7
8	46	4	28	66	6	48	79	7	68	91	7
9	47	4	29	67	6	49	80	7	69	91	7
10	48	4	30	68	6	50	81	7	70	91	7
11	50	4	31	69	7	51	82	7	71	92	7
12	52	4	32	69	7	52	83	7	72	92	7
13	53	4	33	70	7	53	83	7	73	93	7
14	54	4	34	70	7	54	83	7	74	93	7
15	55	4	35	71	7	55	84	7	75	93	7
16	56	4	36	72	7	56	84	7	76	94	7
17	57	4	37	72	7	57	84	7	77	94	7
18	58	4	38	73	7	58	85	7	78	95	7
19	59	4	39	74	7	59	85	7	79	95	7
20	60	4	40	74	7	60	86	7	80	96	7
21	60	4	41	75	7	61	86	7	81	97	7
22	61	4	42	75	7	62	87	7	82	98	7
23	62	4	43	76	7	63	88	7	>82	n/a	—
24	63	5	44	77	7	64	89	7			
25	64	5	45	77	7	65	90	7			

## Tokyo

Table 3-127: BPD: Tokyo (Fetal Age)  
Tokyo University Method 1986, 6 by University Tokyo  
Unit: BPD (mm); Age (Days); SD (Days)

BPD	Age	SD	BPD	Age	SD	BPD	Age	SD	BPD	Age	SD
<20	n/a	—	38	123	± 5	57	164	± 6	76	213	± 8
20	85	± 6	39	125	± 5	58	167	± 6	77	216	± 8
21	87	± 6	40	127	± 5	59	169	± 6	78	218	± 8
22	89	± 6	41	129	± 5	60	171	± 6	79	221	± 8
23	92	± 6	42	131	± 5	61	174	± 7	80	225	± 8
24	94	± 6	43	133	± 5	62	176	± 7	81	228	± 8
25	96	± 6	44	135	± 5	63	179	± 7	82	231	± 8
26	98	± 6	45	138	± 6	64	181	± 7	83	234	± 9
27	100	± 6	46	140	± 6	65	183	± 7	84	238	± 9
28	102	± 6	47	142	± 6	66	186	± 7	85	241	± 9
29	102	± 6	48	144	± 6	67	188	± 7	86	245	± 9
30	106	± 5	49	146	± 6	68	191	± 7	87	249	± 9
31	108	± 5	50	148	± 6	69	194	± 7	88	253	± 9
32	110	± 5	51	151	± 6	70	196	± 7	89	258	± 9
33	112	± 5	52	153	± 6	71	199	± 8	90	262	± 9
34	114	± 5	53	154	± 6	72	201	± 8	>90	n/a	—
35	116	± 5	54	157	± 6	73	204	± 8			
36	118	± 5	55	160	± 6	74	207	± 8			
37	120	± 5	56	162	± 6	75	210	± 8			

Table 3-128: CRL: Tokyo (Fetal Age)  
Tokyo University Method 1986, 6 by University Tokyo  
Unit: CRL (mm); Age (Days); SD (Days)

CRL	Age	SD	CRL	Age	SD	CRL	Age	SD	CRL	Age	SD
<13	n/a	—	22	64	± 7	32	73	± 7	42	81	± 7
13	55	± 8	23	65	± 7	33	74	± 7	43	81	± 7
14	56	± 9	24	66	± 7	34	74	± 7	44	82	± 7
15	57	± 10	25	67	± 7	35	75	± 7	45	83	± 7
16	58	± 8	26	68	± 7	36	76	± 7	46	84	± 7
17	59	± 9	27	68	± 7	37	77	± 7	47	84	± 7
18	60	± 10	28	69	± 7	38	78	± 7	48	85	± 7
19	61	± 8	29	70	± 7	39	78	± 7	49	86	± 7
20	62	± 9	30	71	± 7	40	79	± 7	50	86	± 7
21	63	± 7	31	72	± 7	41	80	± 7	>50	n/a	—

Table 3-129: FL: Tokyo (Fetal Age)  
Tokyo University Method 1986, 6 by University Tokyo  
Unit: FL (mm); Age (Days); SD (mm)

FL	Age	SD	FL	Age	SD	FL	Age	SD	FL	Age	SD
<33	n/a	—	43	175	± 6	54	210	± 7	65	251	± 8
33	143	± 6	44	178	± 6	55	214	± 7	66	256	± 8
34	146	± 6	45	181	± 6	56	217	± 7	67	260	± 8
35	149	± 6	46	185	± 7	57	220	± 7	68	266	± 7
36	153	± 6	47	188	± 7	58	224	± 7	69	271	± 7
37	156	± 6	48	191	± 7	59	228	± 8	70	278	± 7
38	159	± 6	49	194	± 7	60	231	± 8	71	286	± 6
39	162	± 6	50	197	± 7	61	235	± 8	>71	n/a	—
40	166	± 6	51	200	± 7	62	239	± 8			
41	169	± 6	52	204	± 7	63	243	± 8			
42	172	± 6	53	207	± 7	64	247	± 8			

Table 3-130: GS: Tokyo (Fetal Age)  
Tokyo University Method 1986, 6 by University Tokyo  
Unit: GS (mm); Age (Days); SD (Days)

GS	Age	SD	GS	Age	SD	GS	Age	SD	GS	Age	SD
<12	n/a	—	22	43	± 7	33	56	± 0	44	66	± 0
12	31	± 7	23	44	± 7	34	57	± 0	45	67	± 0
13	32	± 7	24	46	± 7	35	58	± 0	46	68	± 0
14	33	± 7	25	47	± 7	36	59	± 0	47	69	± 0
15	34	± 7	26	48	± 8	37	60	± 0	48	70	± 0
16	36	± 7	27	49	± 9	38	61	± 0	49	71	± 0
17	37	± 7	28	50	± 10	39	62	± 0	50	72	± 0
18	38	± 7	29	51	± 0	40	63	± 0	>50	n/a	—
19	40	± 7	30	52	± 0	41	64	± 0			
20	41	± 7	31	53	± 0	42	65	± 0			
21	42	± 7	32	55	± 0	43	65	± 0			

Table 3-131: SL: Tokyo (Fetal Age)  
Tokyo University Method 1986, 6 by University Tokyo  
Unit: SL (mm); Age (Days); SD (Days)

SL	Age	SD	SL	Age	SD	SL	Age	SD	SL	Age	SD
<44	n/a	—	55	181	± 7	67	217	± 10	79	260	± 10
44	154	± 5	56	183	± 8	68	220	± 10	80	264	± 10
45	157	± 5	57	186	± 8	69	224	± 10	81	267	± 10
46	159	± 5	58	189	± 8	70	227	± 11	82	271	± 10
47	161	± 5	59	192	± 8	71	231	± 11	83	275	± 10
48	163	± 5	60	195	± 9	72	234	± 11	84	278	± 10
49	166	± 6	61	198	± 9	73	238	± 11	85	282	± 10
50	168	± 6	62	201	± 9	74	241	± 11	86	285	± 10
51	171	± 6	63	204	± 9	75	245	± 11	>86	n/a	—
52	173	± 6	64	207	± 10	76	249	± 11			
53	176	± 7	65	210	± 10	77	252	± 11			
54	178	± 7	66	213	± 10	78	256	± 11			

NOTE: OB/Tokyo/LV represents as “SL” on the system.

## Tokyo Shinozuka

Table 3-132: AC: Tokyo Shinozuka (Fetal Age)

Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996

Unit: AC (cm); Age (Weeks/Days); SD (cm)

AC	Age	1SD	AC	Age	1SD	AC	Age	1SD
<10	n/a	—	18	23w3d	0.9	27	33w1d	1.4
10	15w3d	0.5	19	24w3d	1.0	28	34w2d	1.4
11	16w4d	0.6	20	25w3d	1.0	29	35w4d	1.5
12	17w4d	0.6	21	26w3d	1.1	30	37w0d	1.6
13	18w4d	0.7	22	27w3d	1.1	31	38w2d	1.6
14	19w4d	0.7	23	28w4d	1.2	32	39w6d	1.7
15	20w3d	0.8	24	29w4d	1.2	33	41w2d	1.8
16	21w3d	0.8	25	30w5d	1.3	>33	n/a	—
17	22w3d	0.9	26	31w6d	1.3			

Table 3-133: AC: Tokyo Shinozuka (Fetal Growth)

Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996

Unit: Age (Weeks/Days); Min/Mean/Max (cm); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
16	9.3	10.9	12.5	30	22.0	24.7	27.3
17	10.3	12.0	13.6	31	22.8	25.6	28.3
18	11.2	13.0	14.7	32	23.5	26.5	29.2
19	12.2	14.0	15.8	33	24.3	27.3	30.1
20	13.1	15.1	16.9	34	25.0	28.1	31.0
21	14.0	16.1	18.0	35	25.7	28.9	31.9
22	15.0	17.1	19.1	36	26.4	29.7	32.7
23	15.9	18.1	20.2	37	27.0	30.4	33.5
24	16.8	19.1	21.2	38	27.6	31.1	34.3
25	17.7	20.1	22.3	39	28.2	31.8	35.0
26	18.6	21.0	23.3	40	28.8	32.4	35.7
27	19.5	22.0	24.4	41	29.3	33.0	36.4
28	20.3	22.9	25.4	42	29.7	33.6	37.0
29	21.1	23.8	26.4				

Table 3-134: AxT (APTDxTTD): Tokyo Shinozuka (Fetal Age)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: AxT (cm<sup>2</sup>); Age (Weeks/Days); SD (cm<sup>2</sup>)

AxT	Age	1SD	AxT	Age	1SD	AxT	Age	1SD
<10	n/a	—	38	25w6d	5.5	68	33w3d	8.8
10	16w1d	2.5	40	26w3d	5.7	70	33w6d	9.1
12	17w0d	2.7	42	27w0d	6.0	72	34w2d	9.3
14	17w6d	2.9	44	27w3d	6.1	74	34w6d	9.6
16	18w4d	3.1	46	28w0d	6.4	76	35w3d	9.9
18	19w3d	3.4	48	28w4d	6.6	78	35w6d	10.1
20	20w1d	3.6	50	29w0d	6.8	80	36w3d	10.2
22	20w6d	3.8	52	29w3d	7.0	82	37w0d	10.7
24	21w4d	4.0	54	30w0d	7.2	84	37w4d	11.0
26	22w2d	4.3	56	30w3d	7.4	86	38w1d	11.3
28	22w6d	4.4	58	31w0d	7.7	88	38w5d	11.7
30	23w4d	4.7	60	31w3d	7.9	90	39w2d	12.0
32	24w1d	4.9	62	31w6d	8.1	>90	n/a	—
34	24w5d	5.1	64	32w3d	8.4			
36	25w2d	5.3	66	32w6d	8.6			

Table 3-135: AxT (APTDxTTD): Tokyo Shinozuka (Fetal Growth)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: Age (Weeks); Min/Mean/Max (cm<sup>2</sup>); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
16	7.0	11.2	15.5	30	43.5	55.7	68.0
17	8.7	13.3	18.0	31	46.8	59.7	72.7
18	10.5	15.6	20.7	32	50.0	63.8	77.6
19	12.5	18.1	23.6	33	53.3	67.8	82.4
20	14.7	20.8	26.8	34	56.5	71.9	87.3
21	17.1	23.6	30.2	35	59.7	75.9	92.2
22	19.6	26.7	33.8	36	62.8	79.9	97.0
23	22.2	29.9	37.5	37	65.9	83.9	101.9
24	25.0	33.2	41.5	38	68.8	87.7	106.7
25	27.9	36.7	45.6	39	71.6	91.5	111.4
26	30.9	40.3	49.8	40	74.3	95.1	116.0
27	33.9	44.1	54.2	41	76.8	98.6	120.5
28	37.1	47.9	58.7	42	79.1	102.0	124.8
29	40.3	51.8	63.3				



Table 3-136: BPD: Tokyo Shinozuka (Fetal Age)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: BPD (mm); Age (Weeks/Days); SD (mm)

BPD	Age	1SD	BPD	Age	1SD	BPD	Age	1SD
<13	n/a	—	39	17w6d	2.7	66	26w3d	3.2
13	10w1d	2.3	40	18w1d	2.7	67	26w6d	3.2
14	10w3d	2.3	41	18w3d	2.8	68	27w2d	3.3
15	10w5d	2.3	42	18w5d	2.8	69	27w4d	3.3
16	11w0d	2.3	43	19w0d	2.8	70	28w0d	3.3
17	11w2d	2.4	44	19w2d	2.8	71	28w3d	3.3
18	11w4d	2.4	45	19w4d	2.8	72	28w5d	3.3
19	11w6d	2.4	46	20w0d	2.8	73	29w1d	3.4
20	12w1d	2.4	47	20w2d	2.9	74	29w4d	3.4
21	12w3d	2.4	48	20w4d	2.9	75	30w0d	3.4
22	12w6d	2.4	49	20w6d	2.9	76	30w3d	3.4
23	13w1d	2.5	50	21w1d	2.9	77	30w6d	3.4
24	13w3d	2.5	51	21w3d	2.9	78	31w2d	3.5
25	13w5d	2.5	52	21w6d	2.9	79	31w5d	3.5
26	14w0d	2.5	53	22w1d	3.0	80	32w1d	3.5
27	14w2d	2.5	54	22w3d	3.0	81	32w5d	3.6
28	14w4d	2.5	55	22w5d	3.0	82	33w1d	3.6
29	14w6d	2.6	56	23w1d	3.0	83	33w5d	3.6
30	15w1d	2.6	57	23w3d	3.0	84	34w2d	3.6
31	15w3d	2.6	58	23w5d	3.1	85	34w6d	3.7
32	15w5d	2.6	59	24w1d	3.1	86	35w3d	3.7
33	16w0d	2.6	60	24w3d	3.1	87	36w0d	3.7
34	16w2d	2.6	61	24w5d	3.1	88	36w5d	3.8
35	16w4d	2.7	62	25w1d	3.1	89	37w4d	3.8
36	16w6d	2.7	63	25w3d	3.1	90	38w3d	3.9
37	17w1d	2.7	64	25w5d	3.2	>90	n/a	—
38	17w4d	2.7	65	26w1d	3.2			

Table 3-137: BPD: Tokyo Shinozuka (Fetal Growth)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
10	10.5	14.3	18.1	27	63.4	68.7	74.1
11	13.7	17.6	21.5	28	65.9	71.4	76.8
12	17.0	21.0	25.0	29	68.3	73.9	79.4
13	20.4	24.4	28.5	30	70.6	76.3	81.9
14	23.7	27.8	32.0	31	72.8	78.5	84.2
15	27.0	31.2	35.5	32	74.8	80.6	86.5
16	30.3	34.6	39.0	33	76.7	82.6	88.5
17	33.5	38.0	42.4	34	78.5	84.5	90.4
18	36.8	41.3	45.8	35	80.1	86.1	92.2
19	40.0	44.6	49.2	36	81.5	87.6	93.8
20	43.2	47.9	52.6	37	82.7	89.0	95.2
21	46.3	51.1	55.9	38	83.8	90.1	96.5
22	49.3	54.2	59.1	39	84.6	91.1	97.5
23	52.3	57.3	62.3	40	85.3	91.8	98.4
24	55.2	60.3	65.3	41	85.8	92.4	99.0
25	58.0	63.2	68.4	42	86.0	92.8	99.5
26	60.8	66.0	71.3				

Table 3-138: CRL: Tokyo Shinozuka (Fetal Age)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: CRL (mm); Age (Weeks/Days); SD (mm)

CRL	Age	1SD	CRL	Age	1SD	CRL	Age	1SD
<5	n/a	—	20	8w6d	3.7	36	10w6d	5.9
5	6w3d	1.1	21	9w0d	3.9	37	11w0d	6.0
6	6w4d	1.3	22	9w1d	4.0	38	11w0d	6.0
7	6w6d	1.6	23	9w2d	4.2	39	11w1d	6.2
8	7w0d	1.7	24	9w3d	4.3	40	11w2d	6.3
9	7w1d	1.9	25	9w4d	4.5	41	11w3d	6.5
10	7w2d	2.0	26	9w4d	4.5	42	11w3d	6.5
11	7w3d	2.2	27	9w5d	4.6	43	11w4d	6.6
12	7w4d	2.3	28	9w6d	4.8	44	11w5d	6.8
13	7w5d	2.5	29	10w0d	4.9	45	11w6d	6.9
14	7w6d	2.6	30	10w1d	5.1	46	11w6d	6.9
15	8w1d	2.9	31	10w2d	5.2	47	12w0d	7.1
16	8w2d	3.1	32	10w3d	5.4	48	12w1d	7.2
17	8w3d	3.3	33	10w4d	5.5	49	12w1d	7.2
18	8w4d	3.4	34	10w5d	5.7	50	12w2d	7.4
19	8w5d	3.6	35	10w6d	5.9	>50	n/a	—

Table 3-139: CRL: Tokyo Shinozuka (Fetal Growth)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996

Unit: Age (Weeks/Days); Min/Mean/Max (mm); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
7w0d	5.1	7.9	10.7	10w2d	21.9	30.5	39.1
7w1d	5.5	8.6	11.7	10w3d	22.9	31.8	40.6
7w2d	6.0	9.3	12.7	10w4d	24.0	33.1	42.2
7w3d	6.5	10.1	13.7	10w5d	25.1	34.4	43.8
7w4d	7.1	10.9	14.7	10w6d	26.2	35.8	45.4
7w5d	7.6	11.7	15.8	11w0d	27.3	37.1	47.0
7w6d	8.2	12.5	16.9	11w1d	28.4	38.5	48.6
8w0d	8.8	13.4	18.0	11w2d	29.6	40.0	50.3
8w1d	9.5	14.3	19.1	11w3d	30.8	41.4	52.0
8w2d	10.1	15.2	20.3	11w4d	32.0	42.9	53.7
8w3d	10.8	16.1	21.5	11w5d	33.3	44.4	55.5
8w4d	11.5	17.1	22.7	11w6d	34.5	45.9	57.3
8w5d	12.2	18.1	23.9	12w0d	35.8	47.4	59.1
8w6d	13.0	19.1	25.2	12w1d	37.2	49.0	60.9
9w0d	13.8	20.1	26.5	12w2d	38.5	50.6	62.7
9w1d	14.6	21.2	27.8	12w3d	39.9	52.2	64.6
9w2d	15.4	22.3	29.1	12w4d	41.3	53.9	66.5
9w3d	16.3	23.4	30.5	12w5d	42.7	55.5	68.4
9w4d	17.2	24.5	31.8	12w6d	44.1	57.2	70.3
9w5d	18.1	25.7	33.2	13w0d	45.6	58.9	72.3
9w6d	19.0	26.8	34.7				
10w0d	19.9	28.0	36.1				
10w1d	20.9	29.3	37.6				

Table 3-140: EFW: Tokyo Shinozuka (Fetal Age)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: EFW (grams); Age (Weeks/Days); SD (grams)

EFW	Age	1SD	EFW	Age	1SD	EFW	Age	1SD
<250	n/a	—	1200	28w3d	162	2200	34w2d	258
250	19w3d	45	1250	28w5d	166	2250	34w4d	264
300	20w0d	51	1300	29w1d	173	2300	34w6d	269
350	20w4d	58	1350	29w3d	177	2350	35w1d	274
400	21w2d	66	1400	29w5d	181	2400	35w3d	279
450	21w5d	71	1450	30w0d	186	2450	35w5d	284
500	22w2d	78	1500	30w2d	191	2500	35w7d	290
550	22w6d	85	1550	30w5d	197	2550	36w2d	295
600	23w2d	90	1600	30w7d	202	2600	36w4d	301
650	23w6d	98	1650	31w2d	207	2650	36w6d	306
700	24w2d	103	1700	31w4d	211	2700	37w2d	314
750	24w5d	109	1750	31w6d	216	2750	37w4d	320
800	25w2d	116	1800	32w1d	221	2800	37w6d	325
850	25w5d	122	1850	32w3d	226	2850	38w1d	331
900	26w1d	128	1900	32w5d	231	2900	38w4d	340
950	26w4d	134	1950	32w7d	236	2950	38w6d	345
1000	26w6d	138	2000	33w1d	238	3000	39w2d	354
1050	27w2d	145	2050	33w3d	243	>3000	n/a	—
1100	27w5d	151	2100	33w5d	248			
1150	28w0d	155	2150	34w0d	253			

Table 3-141: EFW: Tokyo Shinozuka (Fetal Growth)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996

Unit: Age (Weeks); Min/Mean/Max (grams); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
18	158	216	274	30	1234	1552	1870
19	204	279	355	31	1375	1720	2064
20	256	349	442	32	1520	1892	2265
21	314	427	539	33	1667	2068	2469
22	381	513	645	34	1814	2244	2675
23	456	609	761	35	1960	2420	2880
24	541	714	888	36	2102	2592	3083
25	634	830	1026	37	2236	2758	3280
26	737	956	1175	38	2360	2915	3469
27	849	1092	1334	39	2471	3059	3647
28	970	1237	1504	40	2565	3187	3809
29	1099	1391	1683	41	2639	3296	3952

Table 3-142: FL: Tokyo Shinozuka (Fetal Age)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: FL (mm); Age (Weeks/Days); SD (mm)

FL	Age	1SD	FL	Age	1SD	FL	Age	1SD
<20	n/a	—	37	22w2d	2.9	55	30w5d	3.1
20	16w1d	2.6	38	22w5d	2.9	56	31w2d	3.2
21	16w3d	2.7	39	23w1d	2.9	57	31w6d	3.2
22	16w6d	2.7	40	23w4d	2.9	58	32w3d	3.2
23	17w1d	2.7	41	24w0d	2.9	59	33w0d	3.2
24	17w3d	2.7	42	24w3d	2.9	60	33w3d	3.2
25	17w6d	2.7	43	24w6d	2.9	61	34w0d	3.2
26	18w1d	2.7	44	25w3d	3.0	62	34w4d	3.3
27	18w3d	2.7	45	25w6d	3.0	63	35w1d	3.3
28	18w6d	2.7	46	26w2d	3.0	64	35w5d	3.3
29	19w1d	2.7	47	26w5d	3.0	65	36w2d	3.3
30	19w4d	2.8	48	27w2d	3.0	66	37w0d	3.3
31	20w0d	2.8	49	27w5d	3.0	67	37w4d	3.4
32	20w2d	2.8	50	28w2d	3.1	68	38w1d	3.4
33	20w5d	2.8	51	28w5d	3.1	69	38w5d	3.4
34	21w1d	2.8	52	29w2d	3.1	70	39w3d	3.4
35	21w3d	2.8	53	29w5d	3.1	>70	n/a	—
36	21w6d	2.8	54	30w2d	3.1			

Table 3-143: FL: Tokyo Shinozuka (Fetal Growth)  
 Shinozuka Jpn J Med Ultrasonics vol 23: 12 1996  
 Unit: Age (Weeks); Min/Mean/Max (mm); Table/Graph Range: 1.64SD

Age	Min	Mean	Max	Age	Min	Mean	Max
16	17.1	21.4	25.8	30	49.7	54.8	60.0
17	19.6	24.0	28.4	31	51.6	56.8	62.0
18	22.1	26.5	31.0	32	53.5	58.7	64.0
19	24.6	29.1	33.6	33	55.2	60.5	65.8
20	27.1	31.6	36.2	34	56.9	62.2	67.6
21	29.5	34.1	38.8	35	58.4	63.8	69.2
22	31.9	36.6	41.3	36	59.9	65.3	70.8
23	34.3	39.1	43.8	37	61.2	66.7	72.2
24	36.7	41.5	46.3	38	62.4	68.0	73.6
25	39.0	43.9	48.7	39	63.5	69.1	74.7
26	41.3	46.2	51.1	40	64.4	70.1	75.8
27	43.5	48.4	53.4	41	65.3	71.0	76.7
28	45.6	50.6	55.7	42	65.9	71.7	77.5
29	47.7	52.8	57.9				

**Williams**

Table 3-144: EFW: Williams (Fetal Growth)  
Unit: Age (Weeks); Min/Mean/Max (grams)

Age	Min	Mean	Max	Age	Min	Mean	Max
22.0	320	513	746	34.0	1728	2394	3132
23.0	365	589	861	35.0	1974	2628	3333
24.0	417	675	989	36.0	2224	2849	3521
25.0	477	773	1132	37.0	2455	3052	3706
26.0	546	882	1289	38.0	2642	3227	3867
27.0	627	1005	1463	39.0	2790	3364	3994
28.0	720	1143	1653	40.0	2881	3462	4080
29.0	829	1298	1859	41.0	2946	3524	4127
30.0	955	1484	2136	42.0	3011	3589	4185
31.0	1100	1695	2402	43.0	3044	3626	4221
32.0	1284	1920	2673	44.0	3043	3633	4233
33.0	1499	2155	2910				

**Yarkoni**

Table 3-145: CLA:Yarkoni S, Journal of Ultrasound in Medicine, 4:467-470, 1985  
(Fetal Age)

Unit: Meas (mm); Min/Mean/Max (Weeks/Days)

Meas	Min	Mean	Max	Meas	Min	Mean	Max
11	8w3d	13w6d	17w2d	29	23w2d	28w5d	32w1d
12	9w1d	14w4d	18w1d	30	24w0d	29w4d	34w0d
13	10w0d	14w3d	19w6d	31	25w6d	29w2d	34w6d
14	11w6d	15w2d	20w5d	32	26w5d	30w1d	35w4d
15	12w5d	16w1d	21w4d	33	27w4d	31w0d	35w3d
16	12w3d	18w0d	21w3d	34	27w3d	32w6d	36w2d
17	13w2d	18w5d	22w2d	35	28w1d	33w5d	37w1d
18	14w1d	19w4d	23w0d	36	29w0d	33w3d	39w0d
19	16w0d	19w3d	24w6d	37	30w6d	34w2d	39w5d
20	16w6d	20w2d	25w5d	38	31w5d	35w1d	40w4d
21	17w4d	21w1d	26w4d	39	32w4d	37w0d	40w3d
22	17w3d	22w6d	26w2d	40	32w2d	37w6d	41w2d
23	18w2d	23w5d	27w1d	41	33w1d	38w4d	42w0d
24	19w1d	24w4d	28w0d	42	35w0d	38w3d	43w6d
25	21w0d	24w3d	29w6d	43	35w6d	39w2d	44w5d
26	21w5d	25w1d	30w5d	44	36w5d	40w1d	45w4d
27	22w4d	26w0d	30w3d	45	36w3d	41w6d	45w3d
28	22w3d	27w6d	31w2d				

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