

Endocavity Biplane Transducer

USES

- Prostate brachytherapy
- Transrectal imaging
- Transperineal puncture
- Transvaginal imaging
- Prostate cryotherapy
- Spectral and CFM Doppler examinations
- Contrast imaging[†]

BENEFITS

- Superior image quality and resolution
- Simultaneous biplane visualization
- Long linear array ideal for dynamic endovaginal imaging of the urethra
- Multifrequency imaging
- Built-in control buttons
- Needle guide for perineal puncture
- Compatible with modern sterilization methods



Fig. 1 Endocavity biplane transducer type 8848.

General Description

The 8848 is a simultaneous biplane transducer designed for use with the BK Medical Pro Focus 2202 and *flex Focus* 1202 ultrasound systems. It has a curved array for transverse imaging and a linear array for sagittal imaging. These arrays can be used simultaneously for greater orientation and depth information.

The curved array has a sector angle of 140°. With the Expanded Sector feature, the sector angle is widened to approximately 180° providing an even better view.

Applications

The 8848 is designed for transrectal imaging and is particularly useful for prostate brachytherapy and cryotherapy. The 8848 provides a clear picture enabling precise volume studies and assisting in treatment planning.

When using the simultaneous biplane feature, you are able to view two planes at once with a single transducer, and this helps determine the true position of the needle and its tip during puncture and biopsy.

The 8848 is excellent for pelvic floor examinations. Endovaginal imaging, while the patient performs valsalva or squeeze maneuvers, is very useful for a dynamic assessment of the pelvic floor and urethral function.

Interventional Procedures

The UA1232 metal puncture attachment is designed for transperineal puncture of the prostate. It consists of a needle guide and a mounting ring with a lock screw. The needle guide has nine parallel guide channels, spaced 5 mm apart, each with an internal diameter of 2.1 mm (14 gauge). The guide channels are angled at 0° to the transducer's longitudinal axis and 90° to the transverse imaging plane. The needle guide can be adjusted 90 mm lengthwise with respect to the mounting ring, using the adjustment screw.

Brachytherapy stepping units are an important accessory to the 8848. The stepping unit allows the transducer to be held stable during perineal puncture, radioactive source implantation and cryotherapy.

The CIVCO AccuCare stepper units (UA2000 and UA2001) are compatible with the 8848.

Multifrequency Imaging

Multifrequency imaging (MFI) is standard on BK Medical systems. The 8848 has a broad bandwidth of 12-4 MHz. It can be used for Tissue Harmonic imaging and Contrast imaging[†] (contrast imaging with the Pro Focus 2202 ultrasound system only).

Sterilization and Disinfection

The 8848 transducer can be disinfected by immersion in the solutions listed under Specifications. 8848 can be processed by using STERRAD® 50, 100S, 200, NX™ and 100NX systems. The transducer can also be processed using STERIS SYSTEM 1** and SYSTEM 1E™ (when a watertight plug protection device is fitted).

UA1232 can be autoclaved.

Sterile transducer covers are available.

Safety

8848 is designed and tested in accordance with EN60601-1 (IEC60601-1), "Medical Electrical Equipment, General Requirements for Safety". When used with BK Medical's systems, Type BF requirements are met.

[†] In the USA, contrast-enhanced ultrasound has not been market cleared by the FDA, with the exception of only select cardiac imaging applications.

* STERIS SYSTEM 1 is not market cleared in the USA.

Specifications 8848

<p>OPERATIONAL FACILITIES Two built-in control buttons</p> <p>SAFETY When used with BK Medical's ultrasound systems, this transducer complies with Safety Standard EN60601-1 (IEC60601-1) Type BF.</p> <p>FREQUENCY RANGE 12–4 MHz (Depending on system)</p> <p>ENVIRONMENTAL Operating Pressure: 700–1060 hPa (normal atmospheric pressure) Operating Temperature: +10 to +40 °C (+50 to +104 °F) Storage Temperature: -25 to +70 °C (-13 to +158 °F) Watertight Immersion Temperature: Max. +40 °C (+104 °F)</p> <p>STERILIZATION AND DISINFECTION (RECOMMENDED) Complete details and procedures can be found in <i>Care, Cleaning & Safety</i>.</p>	<p>RESISTANCE TO CHEMICALS AND PROCESSES Sterilization processing* 8848 can be processed using:</p> <ul style="list-style-type: none"> • STERRAD NX™ and 100NX systems# • STERRAD® 50, 100S and 200 systems • STERIS SYSTEM 1*** and SYSTEM 1E™ <p>Immersion (with covered plug) For less than 10 minutes in each hour in:</p> <ul style="list-style-type: none"> • Chlorhexidine gluconate (5–20%) • Ethanol (70% in water) • Isopropanol (70% in water) • Tristel® Fuse for Instruments • PeraSafe® <p>In the following solutions, following manufacturer's instructions:</p> <ul style="list-style-type: none"> • Glutaraldehyde (2–3.4% in water) • Korsolex® Basic • Korsolex® Extra • Cidex® OPA <p>Follow manufacturer's instructions for use.</p> <p>POWER SUPPLY Internally from system</p>	<p>CABLE LENGTH 2.3 m (7.5 ft)</p> <p>TRADEMARKS</p> <ul style="list-style-type: none"> • Tristel is a registered trademark of Tristel Pharmaceutical Ltd. • Korsolex is a registered trademark of Bode Chemie GmbH. • PeraSafe is a registered trademark of Antec International. • STERIS and SYSTEM 1 are registered trademarks, and SYSTEM 1E is a trademark of the STERIS Corporation. • NX and 100NX are trademarks, and STERRAD and Cidex OPA are registered trademarks of Advanced Sterilization Products. <p># Transducers with serial numbers higher than 3900001 are 100NX and NX compatible. * Sterilization processes are harsh and can shorten the life of the product. ** STERIS SYSTEM 1 is not market cleared in the USA.</p>
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	Units	Endocavity Biplane Transducer Type 8848											
		Pro Focus UltraView 2202						flex Focus 1202#					
Imaging Plane		Transverse			Sagittal			Transverse			Sagittal		
B-Mode Frequency	MHz	12	9	6	12	9	6	12	9	6	12	9	6
Doppler Frequency	MHz	7.5	6	5	7.5	6	5	7.5	6	5	7.5	6	5
Tissue Harmonic Frequency	MHz	12 - 10											
Contrast Frequency	MHz	4.3 - 4 - 3.8						-					
Number of Elements		128			192			128			192		
Radius of Curvature	mm	9.3			-			9.3			-		
Transverse Plane Aperture	mm	5.5											
Transverse Focal Length (Typical)	mm	40											
Image Plane Aperture	mm	11.5			21.8			11.5			21.8		
Image Plane Focal Length	mm	Variable											
Axial Resolution‡	mm	0.5	0.4	0.5	0.3	0.3	0.4	0.5	0.4	0.5	0.5	0.5	0.5
Lateral Resolution‡	mm	1.5	1.5	1.6	0.8	0.9	0.9	1.2	1.3	1.7	1	1	1.1
Image Field		140 °			65 mm			140 °			65 mm		
B-mode Image Field incl. Expanded Sector		180 °			65 mm + 15 ° each side			180 °			65 mm + 15 ° each side		
Basic Imaging Modes		B, M, Doppler, CFM, Tissue Harmonic Imaging, Contrast Imaging**						B, M, Doppler, CFM, Tissue Harmonic Imaging					
Penetration Depth‡	mm	58	74	83	74	82	103	63	73	90	82	86	100
Focal Range	mm	3 – 60											
Frame Rate (Max)	Hz	>150											
Contact Surface (Acoustic)	mm	23 x 5.5			65 x 5.5			23 x 5.5			65 x 5.5		
Contact Surface (Overall)	mm ²	127			357			127			357		
Total Dimensions	mm	352.5 x 32.4											
Size of Handle	mm	150 x 32.4											
Weight (Approximate)	g	250											
Applications (Typical)		Transrectal, Transvaginal											

Not available with flex Focus 200 and 400 exp.
‡ Measurements according to IEC/TS 61390 and JIS T 1501. Penetration depth is measured in an ultrasound phantom and recalculated corresponding to a realistic tissue attenuation of 0.5 dB/cm/MHz.
** Contrast-enhanced ultrasound has not been market cleared by the FDA for use in the USA, except for use in select cardiac applications. For definition of terms, refer to Acoustic Output Measurement for Diagnostic Ultrasound Equipment, AIUM/NEMA 2004.

Ordering Information 8848

ACCESSORIES AVAILABLE

UA1232:	Puncture Attachment (bore diameter 2.2 mm; angle of insertion 0° to the long axis of the transducer)
UA0059:	Endocavity Standoff Kit
UA2000:	CIVCO Classic Stepper and Stand (18G)
UA2001:	CIVCO Classic Stepper and Stand (17G)
UA4010:	EX3 Tracked Stepper and Stand (18G)
UA4011:	EX3 Tracked Stepper and Stand (17G)
UA0513:	Magnetic Wheel Mover
UA0510:	Adapter Ring for use with UA0513
KE4326:	Carrying Case

TRANSDUCER COVERS

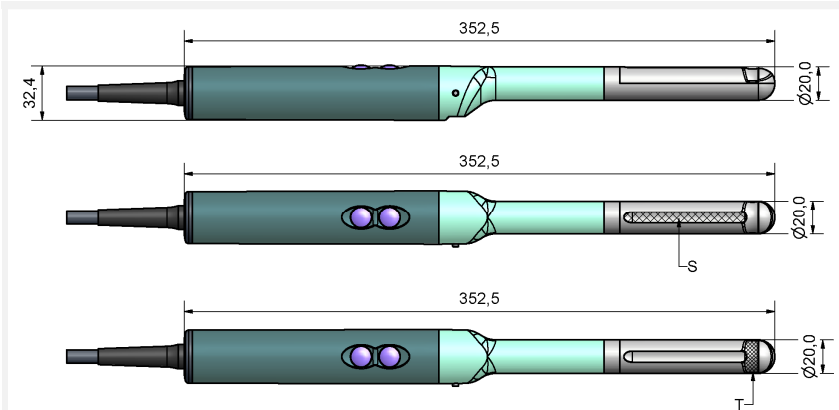
UA0005:	Sterile Latex (pack of 24)
UA0008:	CIV-Flex™ Sterile, latex-free (pack of 24)

TRADEMARKS

CIV-Flex is a trademark of CIVCO Medical Solutions.

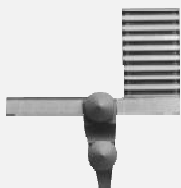
8848 Technical Drawings

All measurements are in mm.



Puncture Attachment UA1232

- Weight: 107 g
- Dimensions: 90 x 90 x 45 mm
- Material: Stainless steel AISI303



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Innovative Solutions for Life

Analogic Corporation creates innovative technology to improve the health and enhance the safety of people around the world. We are committed to providing ultrasound solutions under the BK Medical brand name that advance medicine and save lives.



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