

Meet the 
Worldwide Leader
in Veterinary Ultrasound and MRI

Premium performance and innovation

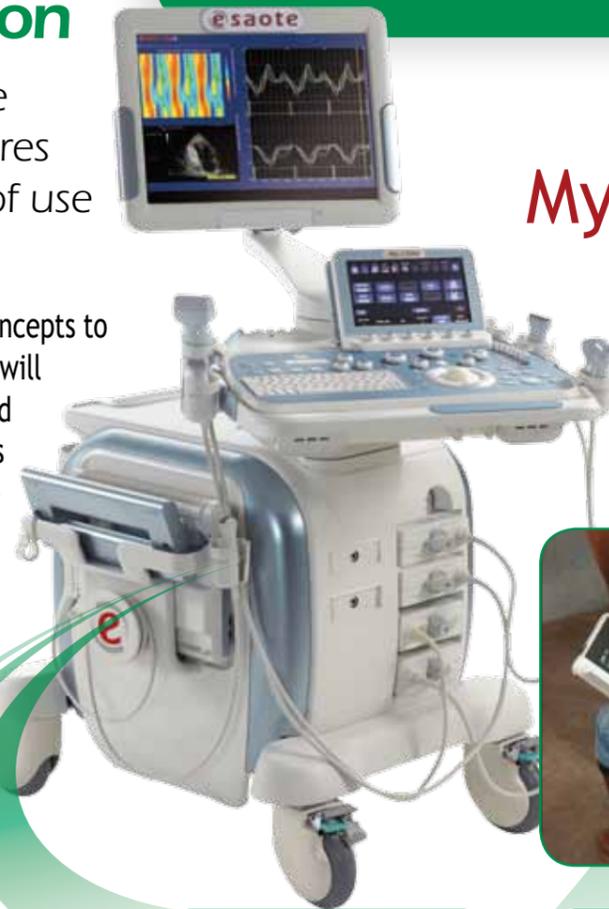
In today's veterinary clinic efficiency and productivity are of great importance. The change of clinical needs requires medical equipment to deliver high performance, ease of use and innovative solutions.

The **MyLabClassCVET** is a high-level ultrasound system which is based on these key concepts to deliver a reliable diagnosis and to ensure daily productivity. With just one glance you will understand that simplicity has never been seen before on such a high level ultrasound scanner. This compact system is easy to move and has a height-adjustable keyboard as well as a multi-plane articulated monitor arm for optimal positioning at all times. The large high quality touch screen is well positioned near the most important working area of the control panel.



MyLabClassTMVET

The unique **MyLabTwiceVET** is based on the same idea, but offers Premium Performance together with Point-of-Care-Ultrasound, meaning that besides the office-based system the **MyLabSat-VET** unit can be used where it is needed, from clinic to barn and the field. The possibility to seamlessly integrate the results from both systems will provide an improved workflow leading to fast and accurate diagnoses.



MyLabTwiceTMVET

MyLabSatTMVET



Esaote advanced technologies

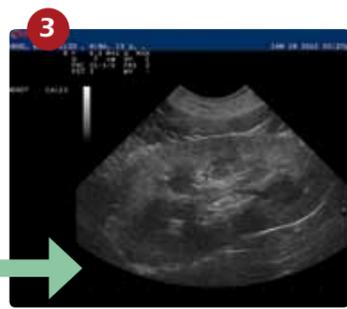
Create diagnostic confidence by optimizing your image with a range of Esaote technologies



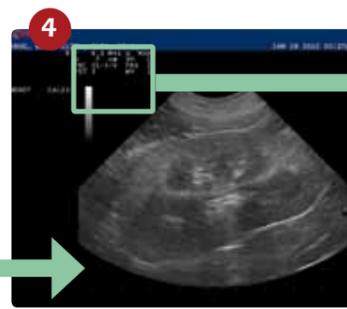
1 START
Clinical image of a dog kidney. The following chosen settings are case specific.



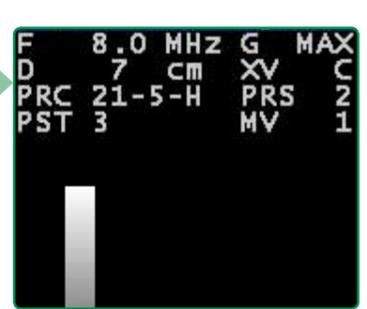
2 Dynamic Range: In case of the increase of the dynamic range, the operator gets a softer image that helps to better differentiate between different tissue structures. When using high dynamic range the user needs to increase the gain to improve the image. If the operator uses a high dynamic range and maximum gain setting it could decrease the penetration capacity. To get a deeper penetration, it could be helpful to decrease dynamic range as well as the frequency.



3 XView elaborates the pattern of every single frame at the pixel level, eliminating speckle and noise artifacts, dynamically enhancing tissue margins, improving tissue conspicuity and increasing diagnostic confidence through real-time adaptive algorithm.



4 MView is Esaote's revolutionary technology which improves quality of ultrasound images by reducing the presence of artefacts, shadowing and speckle. MView enables the user to define shapes and structures more clearly also in applications such as equine tendon and MSK companion animals.



F Frequency **8.0 MHz**
D Depth **7 cm**
PRC Dynamic Range - Sharpness - Density
PST Post-Processing - Grey Map **3**
G Gain **MAX**
XV XView **Custom**
PRS Persistence **2**
MV MView **1**



Measurement of Pulmonary Transit Time in Cats using Echocardiography and the blood pool contrast media SonoVue®. – A new tool in feline cardiology?



Dr. Peter Modler,
FTA f. Kleintiere Certified
Member Collegium
Cardiologicum, Head of
Cardiology Unit, Traunkreis
Vet Clinic Sattledt, Austria,
www.vetclinic.at

Why it is so interesting and how far we are now?

Pulmonary Transit Time (PTT) is the time a sample of blood needs to pass the pulmonary circuit and is dependent on cardiac output and pulmonary blood volume. It is usually normalized by the mean R-R interval (nPTT). Thus, nPTT represents the number of stroke volumes necessary to drive one erythrocyte from the pulmonary valve to the left atrium.

Based on first pass radionuclide angiography it has been found out that nPTT is independent on body size and loading conditions. In dogs, significantly different nPTT values were calculated in patients suffering from DMVD with and without CHF¹.

It has recently been shown that PTT and nPTT can be measured using ultrasound and the blood pool contrast media SonoVue® with low interobserver variability and high repeatability^{2,3}.

Congestive heart failure (CHF) is a common sequelae of feline cardiomyopathy and usually causes severe clinical signs of acute onset. Moreover, a clear differentiation between CHF and respiratory disease can sometimes be difficult. For this reason, an accurate hemodynamic assessment and risk analysis would be desirable for patients suffering from cardiomyopathy.

Systolic and diastolic function is evaluated mainly on the basis of 2D measurements and indirect (Doppler) estimation of flows and pressures. A functional parameter like PTT/nPTT, directly measured by echocardiography could possibly provide more valuable if not essential information.

During the last year we tried to find out if nPTT measurement using echocardiography and SonoVue® is feasible in

cats and if normal values are comparable to those obtained in dogs. The study population consisted of 40 healthy cats⁴.

Contrast studies were done with the MyLab70VetXV with the cat positioned in right lateral recumbency. A right parasternal short axis view was displayed using a 7.5-10 MHz phased array probe with the ECG recorded simultaneously. Time was recorded (two decimals of seconds) while a bolus of 0.05-0.07 ml/kg of SonoVue® was injected into the cephalic vein through a venous catheter. PTT measurements were then performed offline and independently by three different observers. The frame where the contrast media was first seen to pass the pulmonic valve was defined as the beginning time point of PTT. The end point was specified as the frame when the contrast media was first noticed within the left atrium.

The method and the results were presented at the 21st ECVIM-CA congress in Sevilla (8th-10th Sept. 2011)⁴. A written publication is currently in submission.

The median inter observer variation was 7.7%, the within-day variability was 13.2%, 12.9% and 12.9% for the low, medium and high experienced observer, respectively.

Normal values for nPTT were 4.1 +/-1.02 (mean +/-SD).

We did not notice any adverse reactions attributable to the injection of SonoVue®.

Further studies are underway to estimate the effect of left atrial size and pulmonary congestion on nPTT values in cats. What we can already say is that differences in nPTT between healthy cats and cats with left atrial enlargement are huge.

References: 1. Lord P, Eriksson A, Haggström J, et al. Increased pulmonary transit times in asymptomatic dogs with mitral regurgitation. *J Vet Int Med* 2003; 17:824-829 2. Kresken JG, Wendt RT, Haggström J. Proceedings of the 19th ECVIM Congress, Sept. 8th-10th, Porto 3. Wendt RT, Kresken JG, Haggström J. Proceedings of the 20th ECVIM Congress, Sept 9th-11th, Toulouse 4. Streitberger A, Hocke V, Modler P. Measurement of Pulmonary Transit Time in Cats by Use of the Ultrasound Contrast Media "SonoVue®". Feasibility, Reproducibility, and Normal Values. 21th ECVIM-CA Congress, Sevilla, Spain, Sept. 8th to 10th, 2011

The aim of our work is to find out if nPTT measurements could be a tool for assessing the risk of congestive heart failure in cats.

Furthermore, the effect of different medications on cardiac performance and pulmonary blood volume could possibly be evaluated. Still, this needs to be further investigated.

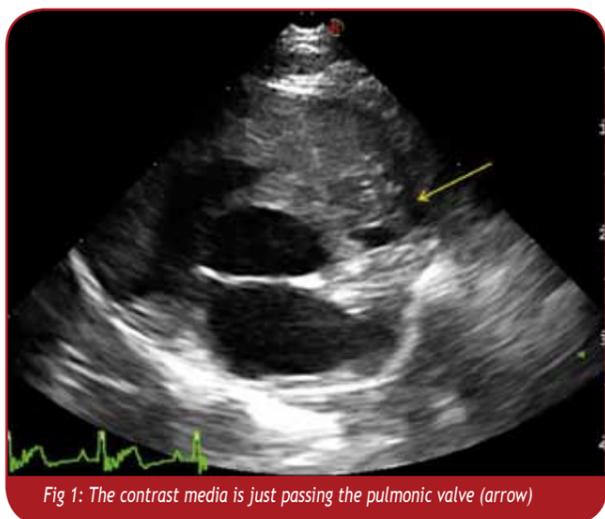


Fig 1: The contrast media is just passing the pulmonic valve (arrow)

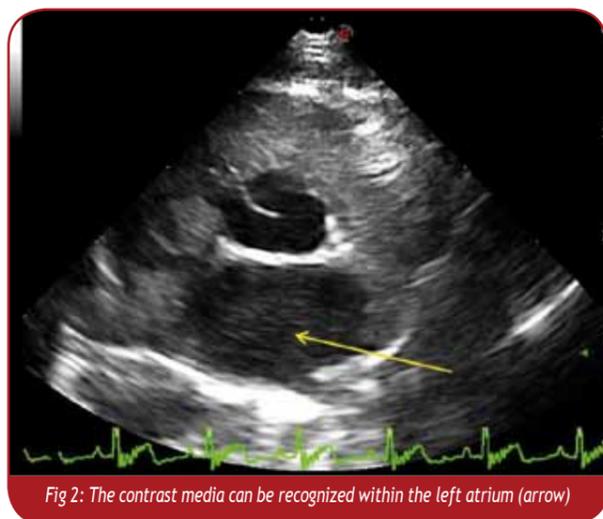


Fig 2: The contrast media can be recognized within the left atrium (arrow)



In The Spotlight Tierklinik Kirschenwäldchen



Dr. Wendt, born in Johannesburg, South Africa and grown up in Germany has concluded his veterinary studies in 1995 in Budapest, Hungary and got his approbation in 1996 in Munich, Germany.

Since 1998 he has his own veterinary ultrasound and endoscopy diagnostic referral practice in Wetzlar, Germany. He is specialised in cardiology for which he received a Certificate of Added Qualification.

Together with his wife, Dr. Katrin Wendt DVM, he works on a daily basis in the practice, where his wife offers specialised eye care for horses and small animals. In addition Dr. Wendt organises basic to advanced ultrasound courses for other veterinarians on a regular basis.

Besides the practice, Ralph Wendt is a member of the European Society of Veterinary Cardiology and the DGK-DVG cardiology committee and founder of the Collegium Cardiologicum e. V. in Germany.

The few leisure moments he likes to spend with his wife and two children. Among his other qualifications, he is a private pilot. As a hobby he likes to fly in his own bi-plane, enjoying a good cup of home-made Italian coffee afterwards.

www.vetcardio.de

DEDICATED MRI

First VET MR Grande Rotating for Equine in Europe

Esaote has a history in veterinary MRI in Germany which goes back to 2003 when the first two Esaote Vet MR systems for small animals were installed. Both of these systems, and all others installed since are still in use today. From 2003, a dozen Vet MR's have been installed all over Germany and tens thousands of images have been made since then and are still being made. Meanwhile, in 2006 the Vet MR Grande was introduced with its significantly larger field of view and gantry opening. Several Vet MR Grandes have been sold and are on average doing 6 to 8 pets per week.

As an evolution now the first VET MR will be replaced by new Esaote Vet MR Grande in the first quarter of 2012.

The newest development is the Esaote Vet MR Grande Rotating for equine and small animals, a special version of the regular Esaote Vet MR Grande, with a tilting mechanism to rotate the magnet. This feature makes this system the best system to do MRI of the extremities of horses, including the stifle or knee, part of the spine and the head. Although there is one high field system on the market which can also do stifles,

due to the anatomy of many types of horses, in practice this system has a limited application and can only do horses which fit the system. The Vet MR Rotating Grande on the other hand, due to its open architecture is able to scan many more types and sizes of horses.

As of this writing, in January 2012, 4 Vet MR Grande Rotating systems are in use in the United States. And now the first system in Europe has been installed, in the Pferdekllinik Aschheim, a busy equine referral clinic in Aschheim, between Franz Jozef Strauss Airport and the center of Munich, in Southern Germany.

Pferdekllinik Aschheim is owned and managed by Dr. Med. Vet. Hubertus Lutz, and Dr. Med. Vet. Anja Schuette (member of AAEP), both equine surgeons, and a team of highly skilled veterinary doctors and assistants take care of the horses during the MRI procedure, which includes full anesthesia and the related extensive monitoring of the wellbeing of the horse to reduce any risk associated with anesthesia to the absolute minimum. With current fee levels, a system of this kind can be economically operated with 2-3 scans per week and usually

leads to a much more complete and accurate diagnosis and subsequently better choices of treatment as opposed to CT or with other, more limited MRI systems.

The opening of the new facility at Aschheim took place on the 12th October 2011, after an intensive training given by Dr. Alexia McKnight, veterinary radiologist and owner of McKnight Insight LLC from Philadelphia, U.S.A., and by staff from Esaote.

The Open House which was organized for the occasion, in typical Bavarian style, was attended by more than 60 veterinarians from the region. They were treated to lectures on Equine MRI, with explanation on the technology, the different fields of interest of MRI in comparison with CT and the impor-



Head-MRI in VET-MR Grande Rotating in equine clinic in Aschheim

tance of seeing the whole picture and not just the lower limb. Many high quality clinical images were shown and explained to make clear why re-

ferral of specific cases to Aschheim and the Esaote Vet MR Grande Rotating is a wise thing to do.
www.pferdekllinik-aschheim.de

Esaote veterinary MRI, a unique approach

Esaote is the only company with a consistent dedicated line of MRI products for the veterinarian that comprises the Vet-MR and the Vet-MR Grande. Next to these standard products, we can deliver on a project base 2 special build products the Ellegro and the Vet-MR Grande Rotating both tuned to the equine market.

What makes us different from the rest?

Experience

Simply, we can guide the whole project from site design to the delivery of collateral materials to training and education as Esaote has over 10 years' experience in veterinary MRI, equine as well as small animals.

Dedicated to Vet

When we say dedicated we mean dedicated: MRI with a dedicated veterinary user interface; preprogrammed special veterinary scan protocols for pets as well as equine; dedicated vet application support; vet education; dedicated vet-mri brochures; veterinary project knowledge (such as anaesthesia, RF cage and horse table); special vet patient table; etc.

Vet economics

Esaote makes affordable MRI systems with a breakeven of 2-3 patient per week for the Vet-MR and about or 6-7 patients per week for the Vet-MR Grande. This includes the complete project, service, application training and a 5 year finance.

Low risk & low cost start with a clear growth path for the future

Start with a low-cost and low-risk Vet-MR and upgrade to the Vet-MR Grande when the case load is growing. Only Esaote can offer a growth path as the Vet-Grande can be installed in the same space and RF cage as Vet-MR, so without any additional siting cost. Only Esaote can let your MRI grow when your clinic grows.

Esaote, your veterinary MRI company.

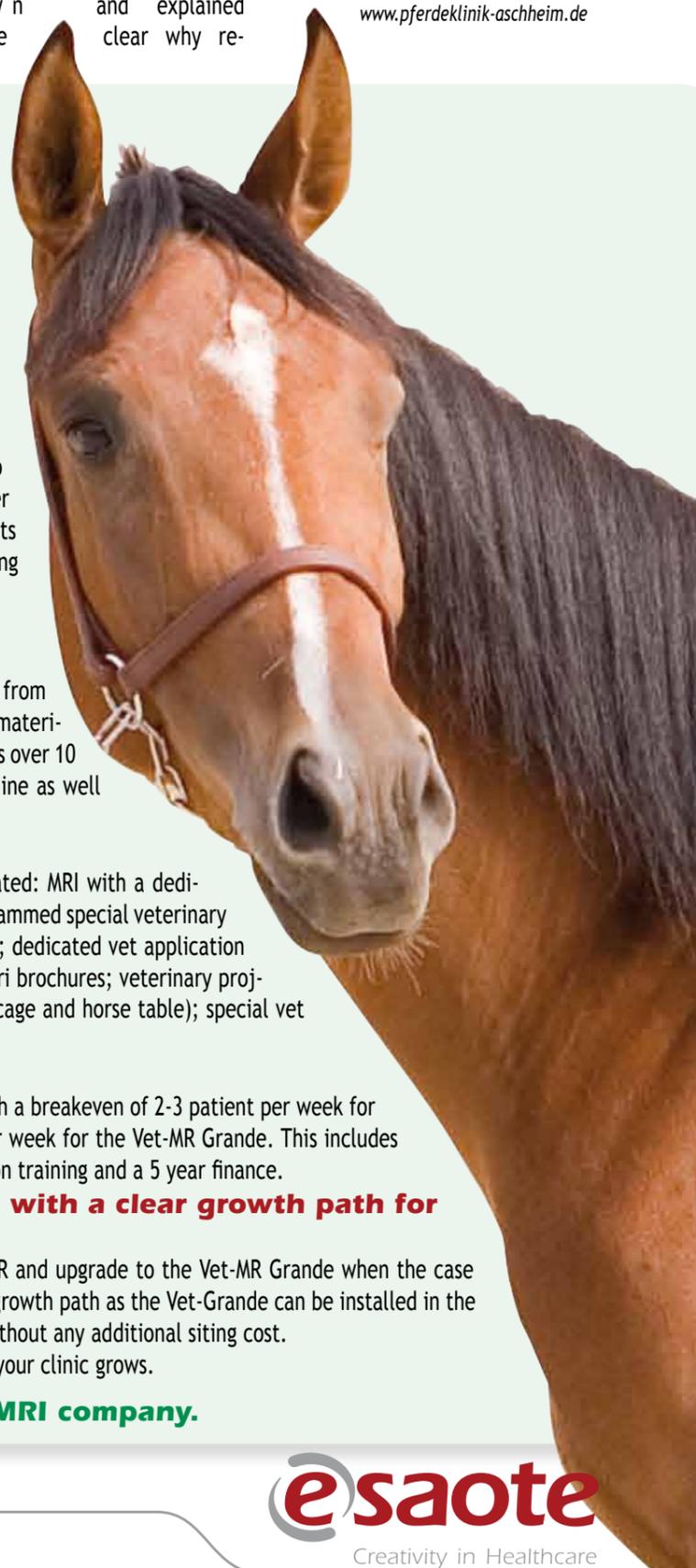


VET-MR Grande Rotating in action in equine clinic in Aschheim



Another special project: Ellegro for lower limbs in Horsholm, Denmark

Meet the
Worldwide Leader
in Veterinary Ultrasound and MRI



esaote
Creativity in Healthcare

Meet the Worldwide Leader in Veterinary Ultrasound and MRI



Annually dozens
of veterinary courses
are organised locally
Please contact us
for more information



The 6th Edition of MRI in Veterinary Medicine 9-10 September 2011 Miami, USA

This year's edition was successful with participants from all over the world. Most of the veterinarians were from the Canada & USA, others were from Latin America, Korea and Europe.

The goal of these annual meetings was to provide a forum for those who work with MRI and are interested in enhancing their knowledge of this modality.

By hosting the meeting in Miami it gave the veterinarians from North America and the Esaote Team an opportunity to build their relationship.

The two-day scientific programme provided participants with an opportunity to learn about new developments, obtain expert insights into techniques, exchange ideas and forge new friendships.



Equine ultrasound workshop - advanced orthopaedics 22-23 September 2011 Tirol, Austria

In September 2011 an equine workshop was organised by our Austrian dealer Haslauer Medizintechnik at the veterinary clinic Gnadenswald in Tirol.

Our dealer invited ten MyLab30 VET users to attend to this workshop. The course which focused on advanced orthopaedics (from tendons till knee) was given by Dr. Philippe Benoit, one of the top international horse show veterinarians in the world connected to the equine clinic Les Brevaires in France. The first day covered the theoretic part, supported by Power Point presentations, whereas the second day consisted of hands-on activities at the clinic.



Esaote S.p.A.

International Activities: Via di Caciolle, 15 50127 Florence, Italy, Tel. +39 055 4229 1, Fax +39 055 4229 208, international.sales@esaote.com
Domestic Activities: Via A. Siffredi, 58 16153 Genoa, Italy, Tel. +39 010 6547 1, Fax +39 010 6547 275, info@esaote.com

FRANCE
Esaote France S.A.R.L.
ZA du Bel Air
10, rue de Témar, 78105 Saint Germain en Laye
Tel. +33 1 8204 8900, Fax +33 1 3061 7210
info@esaote.fr

GERMANY
Esaote Biomedica Deutschland GmbH
Max-Planck-Straße 27a
50858 Köln
Tel. +49 2234 688 5632, Fax +49 2234 967 9628
info@esaote-piemedical.de

SPAIN
Esaote España S.A.
Avda San Sebastian, s/n
08960 Sant Just Desvern, Barcelona
Tel. +34 93 473 2090, Fax +34 93 473 2042
info@esaote.es

THE NETHERLANDS AND BELGIUM
Esaote Benelux B.V.
Philipsweg 1
6227 AJ Maastricht
Tel. +31 43 3824650, Fax +31 43 3824651
benelux@esaote.nl

UK
Esaote UK
400 Thames Valley Park Drive,
Reading, Berkshire. RG6 1PT
Tel. +44 118 965 3500, Fax +44 709 288 0231
infoUK@esaote.com

NORTH AMERICA
Esaote North America
8000 Castleway Drive,
P.O. Box 50858, Indianapolis, IN 46250
Tel. +1 317 813 6000, Fax +1 317 813 6600
info@biosound.com

BRASIL
Brasilian Direct Office
Rua Tomas Carvalhal, 711
04006-001 São Paulo SP
Tel. +55 11 2589 0533 Fax +55 11 2589 0527
edson.lopes@esaote.com

ARGENTINA
Esaote Latinoamérica S.A.
San Martín 551, Cuerpo 'C', Piso 8, (C1004AAK)
Buenos Aires
Tel. +54 11 4326 1832, Fax: +54 11 4328 1245
info@esaote.com.ar

INDIA
Esaote Asia Pacific Diagnostic Pvt. Ltd.
DLF IT Park, A - 44 & 45,
Tower- C, Ground Floor, Sector- 62, Noida,
Uttar Pradesh, India - Pin Code: 201 301
Tel : +91 120 4732444, Fax : +91 120 4750148
info@esaote.in

HONG KONG AND FAR EAST
Esaote China Ltd
18/F, 135 Bonham Strand Trade Centre,
135 Bonham Strand, Sheung Wan, Hong Kong
Tel. +852 2545 8386, Fax +852 2543 3068
esaote@esaotechina.co

CHINA
Esaote Shenzhen Medical Equipment
Room 2608, Tower B
Beijing Global Trade Center
36 North Third Ring Road East,
Dongcheng District, 100013, Beijing
Tel. +86 010 58257766, Fax +86 010 52257760

RUSSIAN FEDERATION AND CIS
Esaote S.p.A.
18 Leningradsky prospekt
Off. 5 and 6, Moscow 125040
Tel. +7 495 232 0205, Fax +7 495 232 1833
esaotemoscov@yandex.ru