Cardiac, Vascular and Transplant Surgery Quality Assessment

VeriQC™ Intraoperative ultrasound imaging and TTFM in a single system – the new paradigm
Our innovative medical devices help improve the quality and outcome of heart and vascular surgery. We combine advanced technologies in flow measurement and advanced imaging to accurately monitor and control proper blood flow intraoperatively – particularly during cardiac bypass surgery. Our devices are developed by working closely together with cardiac surgeons, who in turn have produced a growing amount of clinical data and studies that point to their efficacy and cost-effectiveness when monitoring and documenting patient blood flow. One million beating hearts later, we have set the standard in the field.

Specifications
- Part number VQ4122C
- VeriQ C – Imaging, 4 Flow, 2 Pressure, and 2 Aux channels
- Trolley system with 19” touch screen
- Onboard color printer
- 500 GB Patient archive
- USB output
- No calibration required

Imaging modes:
- 2D – B Mode
- CFM – Color Flow Mapping
- PW – Pulsed Wave Doppler

User Interface and User Manuals are available in the following languages: English, Finnish, French, German, Italian, Norwegian, Spanish and Swedish

Guidelines for flow and imaging
- Transit Time Flow Measurement (TTFM) should be used to verify graft patency, as recommended by guidelines issued jointly in 2010 by the European Society of Cardiology (ESC) and European Association for Cardio-Thoracic Surgery (EACTS).


- Epiaortic imaging guidelines published in 2007 by the American Society of Echocardiography and the Society of Cardiovascular Anesthesiologists have been endorsed by the Society of Thoracic Surgeons.


Please refer to the User Manual for indications, contraindications, warnings, precautions, and further specifications and descriptions. Specifications may be changed without notice.
VeriQ C™ combines ultrasound imaging and proven transit time flow measurement (TTFM) in a single system that is specifically designed for cardiovascular procedures.

TTFM provides accurate and systematic assessments of graft patency. Imaging technology improves the quality assessment obtained from TTFM alone. And both techniques are better at finding plaque than your fingers are. Traditional finger palpation has been demonstrated to be inadequate and even potentially harmful.

Combining high-resolution imaging and blood flow measurement together in a single package is the new paradigm for intraoperative quality assessment and improved outcomes.

CABG
Epiaortic imaging allows a sensitive, direct diagnosis of aortic disease, which can lead to modifications in intraoperative surgical management. Epicardial imaging can be used intraoperatively to assess coronary quality, strategize graft placement and verify graft patency.

Vascular
VeriQ C can assist with vascular reconstruction, from assessment and anastomosis discovery to verification and quality assurance – in procedures such as carotid endarterectomy, femoropopliteal bypass surgery, or flow measurements of AV fistulae.

Transplant
Intraoperative assessment of organ transplants is often determined by verifying anastomosis quality and adequate graft perfusion, which can be easily documented using flow and imaging techniques – improving outcomes and avoiding costly reinterventions.

Probes to fit a wide range of surgical applications

TTFM
- Sizes for vessels 1.5-18 mm in diameter
  - additional sizes on request
- Meet worldwide sterilization standards
- Available with and without handle, for various surgical applications

Imaging
- Approved for direct contact with cardiac tissue
- 128-element, high frequency probe for superior resolution images
- Specifically designed for cardiovascular procedures
- Sterilizable – no need for sterile sheath

Reduce risk of early graft failure, stroke, myocardial infarction or recurrent angina – and provide the highest quality of life for your patients.
The VeriQ C™ system gives surgeons ultimate control, enabling planning, navigation and verification of cardiovascular procedures.

<table>
<thead>
<tr>
<th>Planning</th>
<th>Epiaortic imaging</th>
<th>Identify soft or calcified plaque that precludes clamping and the proximal placement of CABG grafts. Courtesy of Dr. M. Kamler, University Hospital, Essen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation</td>
<td>Epicardial imaging</td>
<td>Strategize graft placement and surgically intervene to provide optimal flow. Before grafting, assess coronary quality, and the extent and locale of stenoses. After grafting, analyze the function of the anastomosis for possible sources of occlusion or compromised blood flow. Courtesy of Prof. R. Haaverstad, Haukeland University Hospital, Bergen</td>
</tr>
<tr>
<td>Verification</td>
<td>Real-time data</td>
<td>Obtain instant insight into the dynamics of graft function, and determine patency for intraoperative quality assurance, using proven transit time flow measurement (TTFM) in real time. Established numeric indices (PI, DF% and Mean Flow) and graphical flow display provide an accurate insight into the dynamics of graft function.</td>
</tr>
<tr>
<td>Documentation</td>
<td>Analysis and reporting</td>
<td>Store data, obtain accurate flow analysis, and produce a single documented report. This can be used as evidence of graft patency, as records for referring physicians, and for preparing publications. These quality assurance measures are simple and not time-consuming, and are likely to improve both the early and the long-term results, avoiding costly reinterventions.</td>
</tr>
</tbody>
</table>