ODYSSEY HF SERIES
High Frequency X-Ray Technology

Precision • Performance • Power

Quantum MEDICAL IMAGING
Division of Carestream
The ODYSSEY HF Series™

The ODYSSEY HF Series™ integrates revolutionary design with superb functionality, resulting in the most advanced radiographic generator ever developed.

Designed for both digital and conventional imaging and operating at a near-constant potential of up to 120 kHz, the ODYSSEY HF provides ULTRA High Frequency imaging for highly efficient X-ray production. Radiographic imaging is optimized through the ODYSSEY HF’s simple programmability, which permits a wide variety of routine, specialized and custom procedures.

ULTRA HIGH FREQUENCY TECHNOLOGY ...120 kHz

Through the integration of the ODYSSEY HF’s sophisticated proprietary technology, hospitals and high-volume radiology facilities can meet the traditional objectives of imaging. The ODYSSEY HF maximizes operating efficiency and enhances patient throughput.

Utilization of advanced transformer design technology has enabled the emergence of ULTRA-High Frequency power. Precise voltage control and extremely efficient high voltage switching come together to provide superb accuracy, repeatability, and system reliability. With a near-constant potential output of up to 120 kHz of power, the ODYSSEY HF delivers highly refined images and provides the shortest exposure times, while minimizing patient dose.

The ODYSSEY HF Series of generators provide power levels of 80 kW through 32 kW and outputs of up to 150 kVp, meeting the needs of any imaging environment.
Operating Modes

The ODYSSEY HF Series provides a wide selection of operating modes (3 point, 2 point or 1 point) providing different levels of user intervention. Technologists may assign their own custom selected techniques or may choose varying levels of automated control (APR) for precise imaging parameters.

In all operating modes, the user always has the capability to override any technique parameter individually, providing uncompromised flexibility and control.

Anatomical Programmed Radiography (APR)

The APR mode allows the operator to simply select the desired examination from any of the 100 exam views, covering the 10 anatomical regions. APR mode will automatically select and set the typical technique factors including: kVp, mA, time (mAs), focal spot, film speed, SID and imaging receptor, while allowing the operator complete control to modify any parameter prior to exam. The operator may also input the actual patient thickness (in individual cm’s), thus providing the optimal selection of technique parameters for that exam. Each individual exam provides up to 50 different technique selections, for up to 5000 unique anatomical program settings.

APR/AEC Mode

When used in conjunction with AEC (Automatic Exposure Control), the APR mode enhances uniformity of images, virtually eliminating the need for retakes. It automatically selects the required AEC chamber field format, sets a back-up time and terminates the exposure at the precise interval required for a perfect image.

APR/Patient Type Mode

When APR is used without AEC, the system allows the operator to quickly modify the mAs (time) to accommodate for various patient densities. This mode provides quick automatic adjustment of mAs in increments of +/-25% and +/-50%, from the average patient type.

Automatic Exposure Control (AEC) Mode

The AEC mode provides exceptional uniformity and image consistency. AEC automatically terminates the exposure at the precise mAs required. To allow the operator full control, there is an 11-step selection of AEC density (in 15% increments). The system also provides a selection of up to seven different film speed settings.

Manual Mode

Manual mode allows the operator to easily select all technique parameters (mA, kVp, mAs/time).
Quantum's advanced software technology allows for custom modification of your APR menu either from the control panel or using a laptop computer (Q-WARE™). In addition, the display screen can be viewed in various international languages, as required.

**TECHNOLOGICALLY SUPERIOR BY DESIGN...**

The ODYSSEY HF series of generators incorporate the latest in advanced electronic design and software architecture, including:

- Self-Testing/Self-Diagnostic
- X-Ray Tube Protection Circuit
- Exposure Counter/X-Ray Tube Counter
- Anode Heat Unit Calculator/Monitor
- Error Messaging
- Multiple Security Code Feature
- Automatic Line Voltage Compensation
- APR Technique and Text Editing
- International Language Ability
- Auto Calibrate Function
- Extensive Memory for History Details
- RS-232 Connection Port
- Automatic shut-off timer (variable time settings)
- Connect to Techvision remote control

**Q-WARE™ UTILITY SOFTWARE**

Q-WARE™ is a laptop-based service support tool that provides an advanced level of APR text and technique editing, simplified calibration as well as other set-up functions.

**SELF-DIAGNOSTICS**

The ODYSSEY HF’s integrated self-diagnostics and calibration program surveys system performance at the rate of 500 times per second. This specialized quality control program is designed to detect operator and system errors for enhanced operation.

**GENERATOR OPTIONS:**

- Automatic Exposure Control (AEC) Electronics: (QG-AEC)
- High (Dual) Speed Starter: (Q-HSS); internal design
- Universal AEC/Tomo interface; (QG-AEC-U/QG-Tomo)
- TechVision synchronized operator control on handgrip (QS-TVC)
- Pedestal Mount for Operator Control Console: (QG-PDL)
- Wall Mount for Operator Control Console: (QG-WM)
- Remote Exposure Hand Switch: (R80-HS)
- Digital Imaging Interface: (QG-DIG); consult factory

*All generators standard with Q-WARE™ Utility Software

**STORED ENERGY (SE) GENERATORS**

Quantum’s advanced STORED ENERGY (SE) technology permits powerful operation using only a standard “low amperage” wall outlet or alternate power source. The SE’s power cells are virtually maintenance-free and provide years of usage. These units are ideal in facilities where incoming power is unavailable and for mobile imaging applications.

The ODYSSEY HF’s control panel can be positioned on a custom pedestal, fastened to a wall for space saving, desktop mounted, or positioned on top of the generator cabinet.
TECHVISION™: A QUANTUM EXCLUSIVE

Quantum’s TechVision is truly an innovation for the Technologist. Technologists can use the color touch display to easily view and set up all technique parameters, as well as access set-up functions right at tube-side.

TechVision eliminates going back-and-forth from the generator’s Operator Control Panel to the patient, in order to prepare for patient exams. The operator has complete control to adjust exposure parameters right at the tube-side, just as if they were at the generator’s Operator Control Panel. This synchronized generator solution greatly streamlines the imaging process and decreases overall examination time, while allowing the technologist to remain close to the patient, for increased patient care.

TECHVISION™ FEATURES:
- Multi-Color (16 Bit; 800 x 600 Pixel; 8.4” display) Touch Screen
- Technologist controls generator technique selection at tube-side
- Full APR, AEC and Manual technique control
- Improved patient care, as technologist remains close to the patient during exam set-up procedure
- Improved patient through-put, by reducing steps taken by the technologist
## ODYSSEY HF SERIES Generator Specifications

### CORPORATE OVERVIEW

Quantum Medical Imaging is a highly innovative designer and manufacturer of high quality Medical Radiographic systems for hospitals and imaging centers around the world. Utilizing the most advanced ULTRA High Frequency X-ray technology, Quantum systems are designed for both conventional and direct Digital imaging, providing a secure investment far into the future.

### QUANTUM’S GOLD STAR NETWORK

Our worldwide dealer network provides factory-authorized sales and service for all Quantum Medical Imaging systems. As members of Quantum's GOLD STAR NETWORK, these dealers are recognized for their excellence in technical support and customer service.

### STORED ENERGY (SE) GENERATORS

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>QG-8000</th>
<th>QG-6500</th>
<th>QG-5000</th>
<th>QG-4000</th>
<th>QG-3200</th>
<th>QG-5000-SE</th>
<th>QG-4000-SE</th>
<th>QG-3200-SE</th>
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<tbody>
<tr>
<td>Power Rating (kW): DIN</td>
<td>80 kW</td>
<td>65 kW</td>
<td>50kW</td>
<td>40kW</td>
<td>32kW</td>
<td>50kW</td>
<td>50kW</td>
<td>32kW</td>
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<tr>
<td>ULTRA High Frequency</td>
<td>120 kHz PLUS</td>
<td>120 kHz PLUS</td>
<td>120 kHz PLUS</td>
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<tr>
<td>kVp Range (1 kVp steps)</td>
<td>40-150 kVp</td>
<td>40-150 kVp</td>
<td>40-125 kVp</td>
<td>40-125 kVp</td>
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<td>150 kVp output</td>
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<td>option</td>
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<tr>
<td>mA Range</td>
<td>25 - 800 mA</td>
<td>25 - 800 mA</td>
<td>25 - 500 mA</td>
<td>25 - 500 mA</td>
<td>25 - 500 mA</td>
<td>25 - 500 mA</td>
<td>25 - 400 mA</td>
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<tr>
<td>Timer Range (seconds)</td>
<td>.001-6.3 sec.</td>
<td>.001-6.3 sec.</td>
<td>.001-6.3 sec.</td>
<td>.001-6.3 sec.</td>
<td>.001-6.3 sec.</td>
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<td>mAs Range</td>
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<td>0.025-600 mAs</td>
<td>0.025-600 mAs</td>
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<tr>
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<tr>
<td>APR Programs (Pre-programmed and Custom)</td>
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<td>100 APR 5000 Techniques</td>
<td>100 APR 5000 Techniques</td>
<td>100 APR 5000 Techniques</td>
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<td>Operational Modes</td>
<td>1. kVp/mA/mAs</td>
<td>1. kVp/mA/mAs</td>
<td>1. kVp/mA/mAs</td>
<td>1. kVp/mA/mAs</td>
<td>1. kVp/mA/mAs</td>
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<td>n/a</td>
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<td>Single Phase Line: -5</td>
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<td>Three Phase Line: -3</td>
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<td>Standard</td>
<td>Option</td>
<td>Option</td>
<td>Option</td>
<td>Option</td>
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Above ranges may be limited by tube selection/AEC limits/incoming power line. Specifications subject to change without prior notice.