The camera for Heart- and Brain Diagnosis.

The benchmark for diagnostic and technical quality.
The Inter Medical P3000 NewTec camera concept.

Inter Medical offers the most effective solution for the area of Heart- and Brain Diagnosis – the specialized triple head gamma camera. Of course, the camera shows its strength in the area of the Thyroid-SPECT, as well as for special issues, for which quality is important. Planar studies are feasible, too.

The 3-Detector concept with Open Gantry Architecture

Claustrophobic patients can always become a problem in the heart diagnosis. Special consideration will be shown for this circle by bedding the patient with the feet ahead in the gantry. The head of the patient is not in the gantry at any time. This circumstance leads to a conspicuous improvement of the acceptance of this examination and therefore to a calmer pulse, less movement artefacts and to a higher diagnostic quality. Additionally, the eye contact to the patient is maintaining during the whole study course.

The system with the shortest acquisition time, a stable COR

You can reduce the acquisition time to an absolute minimum because of the use of a triple head camera. The detectors, which are solidly embedded in the ring and which are mounted in an exact 120° geometry, ensure an intransigent stable »Center Of Rotation« in the long-term because of the rigid fixation and therefore they offer the best requirements for a perfect artifact-free reconstruction. Time-consuming setup time, like for angle-variable systems, are not necessary. Mechanical problems, which are almost preprogrammed with Large-Field-Detectors in the long-term, are nearly impossible with this camera.
Purchase- and running costs – the commercial question in the everyday life:

The modular InterMedical »NewTec« concept for the new and re-worked gamma cameras ensures inexpensive production costs, operating costs and service costs and the long-term spare part availability for every component in the long-run. That is why, our ultra-modern LQN-detector electronic – the »heart and brain« of every camera – will be deployed for all of our camera systems. It is handled exactly like it is with our UniCam computer systems which are providing modular tools for every diagnostic application. The availability of spare-parts and the stock-keeping, which is connected with that, will be simplified. We would love to pass these advantages on to you.

Let yourself be convinced commercially and technologically.
The latest technology at the state of 2009:

Profit from a reliable, diagnostic concept and use the advantages of the P 3000 NewTec technology in addition to that. Only the positive function attributes of the original system will be kept conceptually. The detectors have been shortened because of the small space requirement of the new LQN-detector electronic. The latest electronic, like in our new systems, will be used for the signal processing and the system handling. In addition to that, a new control monitor is mounted at the system. Besides from the gantry-specific information, the patient monitor and essential acquisition-specific parameter are shown on this monitor.

The technique in detail

No electronic construction element in the area of the system control or the signal processing are identical to the old original. All of the electronic components are new – technologically on the state of 2009. Of course this camera is equipped with new crystals, for which you get a warranty of several years. The LQN detector electronic with a high-resolution PMT-single digitalization accomplishes a vital quality-improved contribution in addition to that. Only the mechanical basic components will be used further, after a complete dismantling and check. For the PMTs you have the choice brand-new or selected. In the end, this is a price question – but not a quality attribute.

The whole system cabling is new, too and embedded in a modern energy chain. Every component communicates with each other via a high speed network and the UniCam computer system.

May other double head cameras be ever so modern – they will never reach the diagnostic quality of this system when it comes to Heart- and Brain-Diagnosis because of our latest technique and the constructive, mechanical attributes.

You will be surprised in a positive way about the purchase- and service costs, too.
The system with the highest clinical acceptance

Many university hospitals and institutes, too, this camera – in the configuration of the predecessor-systems – is used for many years. **InterMedical** gives them the opportunity with the upgrade to use the multiple diagnostic and acquisition-technical advantages of this camera and working with the latest technology.

The quality will be improved because of that. The operating costs will be lowered to a fraction. The heat emission will be reduced to a negligible, ecological extent.

The camera works almost noiseless because of the waiver of unnecessary ventilators.

The full HIS/RIS/PACS compatibility via DICOM is ensured by the modern **UniCam**-Computer System. Technologically, the **P 3000 NewTec** concept is only related to the mechanical base-configuration of the predecessor-version.
**Small flange range**

Everyone knows the problem – where do you put the arms – and hopefully the patient can keep them in this position during the examination time. The advantages of this camera system affect here in multiple ways. The collimators, which are especially made for the heart diagnostics, are splayed towards the patient. In addition to that they show an extremely small flange range of only 6 cm. In this manner it is not necessary that the patient stretches his arm backwards along his body. When using this camera system, a right-angled position to the body is enough. The triple-head technology supports this effect by a shorter examination time.

**Optimal patient layering**

Special tools for the patient layering provide a comfortable lying of the patient. The light higher-storing of the legs has the effect that the upper body lies flatly on the table. First of all this layering is comfortable, secondly the distance between the heart to the table will be reduced again and the posterior view will be clearly improved. The comfortable position of the arms, which will be achieved because of the small flange range of the detectors, supports the patient’s acceptance and the diagnostic quality.

**High-resolution detectors**

The high-resolution collimators have a visual field of 400x240 mm and are equipped with 49 PMTs. This extremely high PMT density provides the optimal requirements for an excellent resolution. A wide range of collimators for every energy sector and application, also like special Cardiofan collimators are system-specifically optimized. After the detection, every PMT signal will be digitized separately and individually and will be transmitted to the computer via the network. All of these construction attributes provide an optimal diagnostic result.
Optimal geometry for heart and brain

The high-resolution small-field detectors allow an absolute patient outline at smallest radii. Even for brain images it is ensured that the patient is positionable in the centre of the detectors at optimal acquisition quality and minimal distances.

The real 360° data record for heart diagnostics

A 360° data record will always be recorded with this P 3000 NewTec camera system. Angle-variable camera systems, which are often used in the heart diagnostics field, only acquire in the 180° area. Even if this acquisition is theoretically enough for a reconstruction, the influences of the weakening of the organic tissue will be waived there. Therewith important information will be lost. These additional information could be diagnostically vital and could have serious therapeutic effects on the patient.
World-wide real close
**World-wide real close**

We are always directly on-site world-wide, via our perfected remote maintenance system. After your personal release via a safe connection, we will support you with the acquiring and analyzing. In the case of a technical study, our service will work with the same speed and competence. We are in the position to give you a live online support – the distance does not matter. Your software will be updated and we check every function and technical detail of the system. In this manner we can – if it is needed – select correction values, retrieve voltage and temperature profiles, test photomultiplier and every drive component on their function, etc.

If a maintenance employment is necessary, it will be prepared optimally via remote maintenance. With only one service visit the problem will be removed qualifledly and cheaply. A maximal system availability will be ensured through this.

**Small space requirement**

Only 4,8 m x 3,0 m (189 in x 118 in) are required for the safe and functional camera work. For an optimal access to the system in the scope of the quality control or the change of the collimators, as well as for special acquisition, the system can be delivered optionally with a patient table that is ridable to the right or the left.
Imagine, you activate your new UniCam computer system with your gamma camera for the first time and you feel like »home« right from the start. The hard- and software works with the professional windows-operating system, which is especially configured from us for the medical use and which is certainly known by you. Storage media, software and hardware are always state of the art and are available for every conceivable area and option, are known for their reliability and inexpensive price. The system can be operated intuitively, extended easily and it is extremely fast because of the efficient processors. The multitasking ability allows the usage of multiple processes at the same time.

During the acquiring you can evaluate, document and transmit data to your PACS, HIS, and RIS via DICOM at the same time.

Every process is under your control because of the use of double monitor systems. A Raid-System can provide data safety in addition. Other exemplary features are application-support via remote access, online software updates and remote diagnosis in the camera system, etc.

A new beginning with your InterMedical Uni Cam computer system is that easy – effective right from the start.

You can find further detailed information in the separate UniCam Brochure.
Low current consumption-optimal use of energy

The whole system with every PC component has a energy demand of 700 watt only. Conventional systems, which are put on the market still today, partially need the 5- up to the 8- fold of energy. This energy has to be discharged costly as thermic energy from the room. This is not happening with our P3000 NewTec system.

Air-conditioning of the room is minimized as a general rule. You can save energy for the camera and running costs and energy costs for the air-conditioning with that.

In addition to that you lower the noise level, because there are no noisy fans.

With the amount of the saved operating cost you can finance an extremely inexpensive service contract, which lets you look economically protected into the future.

Fit for network

DICOM HIS RIS PACS

On the base of internationally accepted standards, our system ensures the full DICOM conformity in the network – without any compromises.

Of course you can use the analysis from every workstation in your institute. A special workstation is not needed for that. You just switch with your normal office-PC to the analysis computer and have the full functionality to your disposition.

Gated, 3D representation, Volume Rendering, 4D CardialSpect, Bullseye, Receptor Szintigrafy, Image-fusion with MR; CT or PET, etc.

Regarding to this, our UniCam computer system does not leave any wish unfulfilled.
Modern, up-to-date design

The colored design of your camera is mainly at your disposition. It is your choice. Herewith the system fits harmonically in your room interior. The modern appearance gives the safe feeling to the patient, that he will be evaluated with a modern camera.

Calmness and composure during the evaluation process support the diagnostic course. In addition you increase the acceptance of your institute by these opportunities.

Technical Data

<table>
<thead>
<tr>
<th><strong>P3000</strong></th>
<th>Width (cm/in)</th>
<th>Length (cm/in)</th>
<th>Height (cm/in)</th>
<th>Weight (kg/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gantry with table</td>
<td>175/69</td>
<td>320/126</td>
<td>179/70</td>
<td>2330/5137</td>
</tr>
<tr>
<td>Power consumption of the gantry</td>
<td></td>
<td></td>
<td></td>
<td>370 Watt</td>
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<tr>
<td>Power consumption complete with computer</td>
<td></td>
<td></td>
<td></td>
<td>700 Watt</td>
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<tr>
<td>Acceptable operating conditions</td>
<td></td>
<td></td>
<td></td>
<td>20-28 ° C / 68-82° F</td>
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