

The passport to improved diagnostics:
ORTHOPHOS 3 panoramic X-ray system.



ORTHOPHOS 3

ORTHOPHOS 3

ORTHOPHOS 3 Ceph

ORTHOPHOS 3 DS

The Dental Company

sirona.

Better in every sense: ORTHOPHOS panoramic radiographs.

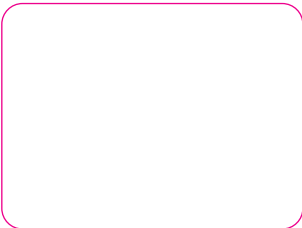


ORTHOPHOS is the name of a successful family of panoramic X-ray systems made by Sirona. This brochure tells you more about the “smallest” members of the ORTHOPHOS family: the ORTHOPHOS 3, ORTHOPHOS 3 Ceph and the ORTHOPHOS 3 DS.

One thing is beyond all doubt: a detailed X-ray examination is a prerequisite for planning an effective course of treatment. Intraoral X-rays, however, cover only a small region consisting of a maximum of three molars. Even a full-scale intraoral X-ray status is incapable of detecting anomalies and pathological changes beyond the immediate jaw segment concerned. The following pages give you an idea of some of the essential details you may otherwise miss.

**Dependable:
the ORTHOPHOS 3 family**

Only a panoramic radiograph provides a truly dependable and meaningful basis for diagnostics and therapy. The ORTHOPHOS 3 systems offer you three

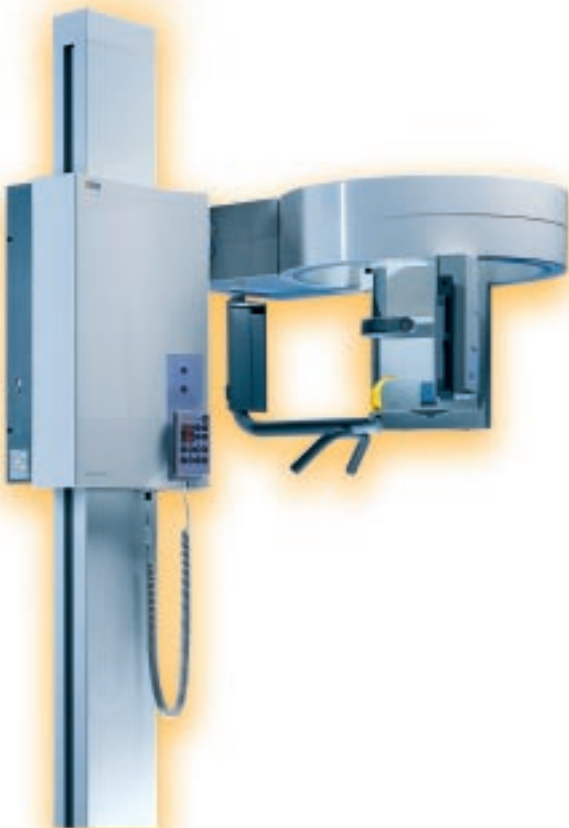


panoramic programs as standard. The tried-and-tested multipulse X-ray generator delivers razor-sharp images every time. What’s more, the ORTHOPHOS 3 units are easy to operate and offer outstanding value for investment.

If you decide in favour of a conventional film-based ORTHOPHOS 3 model you can upgrade – quickly and easily – to digital technology at a later date. The service engineer can perform all the necessary conversion work on-site in your dental practice.

Digital technology: either choose the ORTHOPHOS 3 DS or upgrade your system at a later date

Digital radiography is the technology of the future. In combination with the Sirona SIDEXIS software package you can experience all the benefits that digital technology has to offer: panoramic X-rays which are viewable in real time on your computer monitor, practical image processing functions, and automatic archiving.



**ORTHOPHOS 3
The benefits in brief**

- **Reliable diagnosis**
3 panorama programs
- **Brilliant image quality**
Multipulse generator
- **Cost-effective**
Attractive price, sturdy construction, tried-and-tested technology
- **Future-compatible**
Digitally upgradable, as of serial number 6000 up

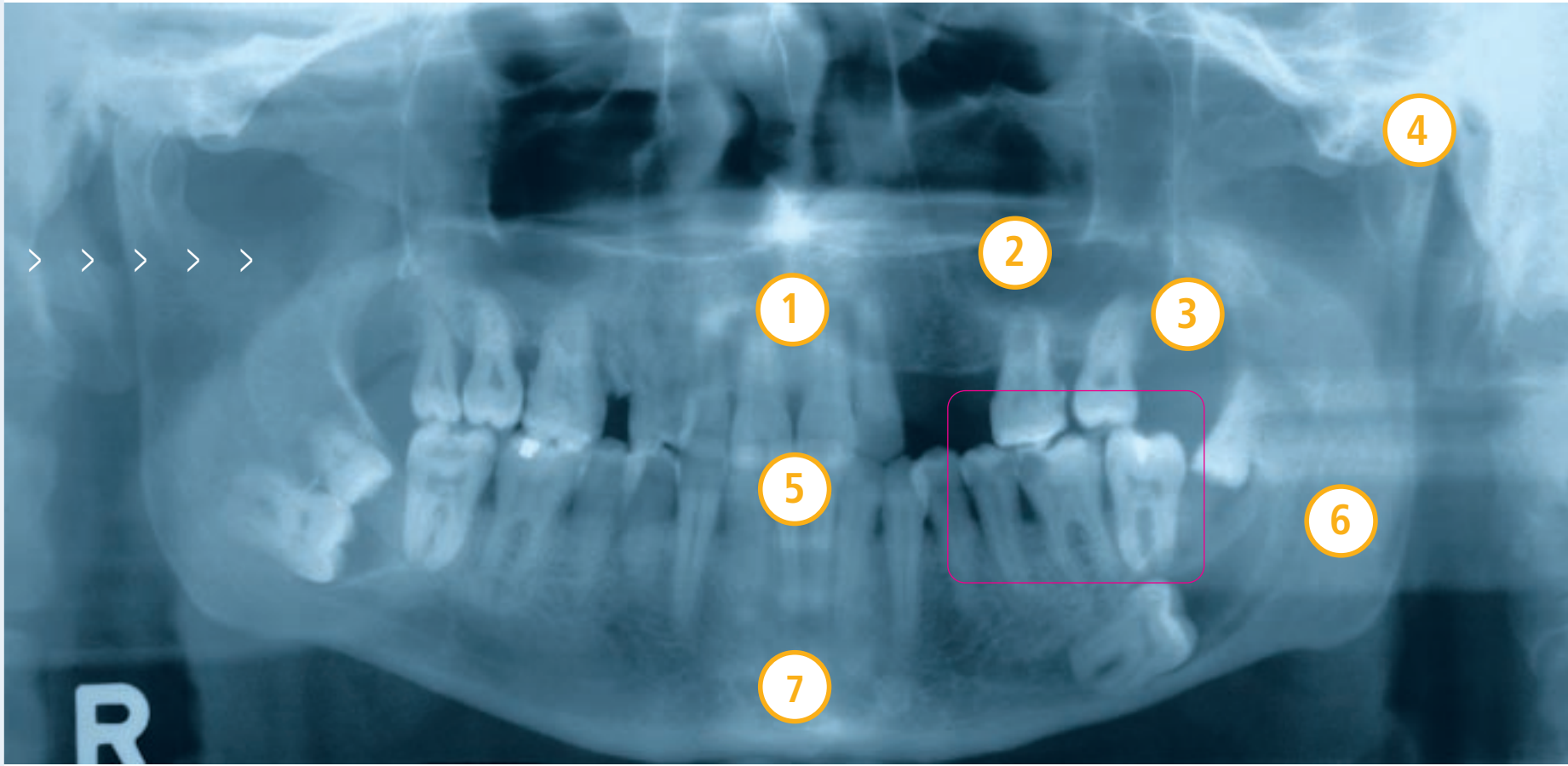


At a single glance: Indications and diagnoses in the maxillo-mandibular region.

See it with your own eyes:
panoramic radiographs are the ba-
sis for even more accurate diagno-
sis and even more effective therapy.

Indications for panoramic tomography:

- First-time examination of patients in all age groups.
- Clarifying the cause of missing teeth.
- Investigation of syndromes and sys-temic diseases.
- Investigation of apical and peri-odontal lesions.
- Investigation of dentogenic diseases of the maxillary sinuses.
- Investigation of temporomandibular complaints in habitual occlusion (e.g. in the case of malocclusion) and at maximum mouth aperture (e.g. in the case of dysfunctions).
- Investigation of facial asymmetries and swellings.
- Suspected benign or malignant tu-mours.
- Suspected fractures and maxillofa-cial traumas.
- Pre- and postoperative status in the area of maxillo-facial surgery and implantology.
- Slow-healing extraction wounds and suspected osteomyelitis (fol-low-up examinations).



Sites of some of the most important dental and maxillo-mandibular
conditions revealed in panoramic radiographs:

- | | |
|---|---|
| <p>1 Incisive bone region
Radicular and follicular cysts, non-dentogenic cysts, osteochondroma, invasive carcinoma</p> <p>2 Maxillary sinus
Dentogenic inflammations, reactions to foreign bodies, dentogenic cysts, tumours and tumour-like lesions</p> <p>3 Maxilla and maxillary tubercle
Dentogenic cysts and tumours, fibrous dysplasia and fibromas, osteomyelitis, impacted teeth, abnormally positioned wisdom teeth</p> <p>4 Temporomandibular joint
Malpositioning of the condyles, degenerative processes, inflammation, osteochondroma, traumas and post-traumatic conditions</p> | <p>5 Teeth and alveolar crest
Deep-seated caries, apical and peridental lesions, malocclusions, dentogenic cysts, granulomatosis, invasive carcinoma</p> <p>6 Maxillary angle and ascending branches
Dentogenic cysts and tumours, fibromas, parotic tumours, salivary calculi, osteomyelitis, abnormally positioned wisdom teeth, fractures</p> <p>7 Body of the mandible
Dentogenic cysts, pseudo cysts, dentogenic and non-dentogenic tumours and tumour-like lesions, osteomyelitis, salivary calculi, invasive carcinoma, osteogenic sarcoma, impacted teeth, fractures</p> |
|---|---|

Visible quality: The economical ORTHOPHOS 3 family.

Razor-sharp X-ray images and easy operation – these are the outstanding features of the ORTHOPHOS 3 family. The patient fixing system has proved its worth in thousands of installed systems. Repeat exposures are now a thing of the past. You save time and money. And your patients are not exposed to unnecessary radiation.

The ORTHOPHOS 3 has a multipulse generator, which produces consistently “hard” radiation. The result? Razor-sharp X-ray images at a low radiation dose. By comparison with systems with conventional half-wave generators, the skin surface dose is reduced by approx. 20%.

Convenient patient positioning

At the touch of a button the motor drive adjusts the ORTHOPHOS 3 to the individual height of the patient. To make it easier for the patient to keep still the ORTHOPHOS 3 uses a 3-point patient fixing system when operating in the panorama X-ray mode. The bite segment and

the temple and forehead supports ensure perfect positioning and prevent kinetic blurring and “technical” asymmetries. All parts that come into contact with the patient’s skin can be sterilized. Alternatively, you can use our tailor-made disposable protective sleeves.

A quick glance in the mirror and you can tell whether the patient is properly positioned. With the help of the vertical light beam you can check the symmetrical alignment of the patient’s head in the frontal plane. The lateral light beam allows you to instantly verify the Frankfort horizontal (FH) alignment.



Logical control elements

The exposure procedure is triggered using the multimer control unit. Thanks to its easy-to-understand icons the multimer is child’s play to operate. The exposure parameters are shown in the digital display. The multimer is available as a hand-held unit attached to a spiral cable or as a permanently installed remote control unit.

Ideal for special cases

Advanced rotational path motion and movements of Program 11 permit services to be performed for patients with broad shoulders, short necks or compressed spines.

Ideal for patients in wheelchairs

The ORTHOPHOS 3 family is easily accessible for people in wheelchairs. Both the panoramic unit and the cephalometric unit are mounted on a central column. This ensures that there is plenty of legroom. And at the touch of a button the motor drive adjusts the ORTHOPHOS 3 to the individual height of the patient.



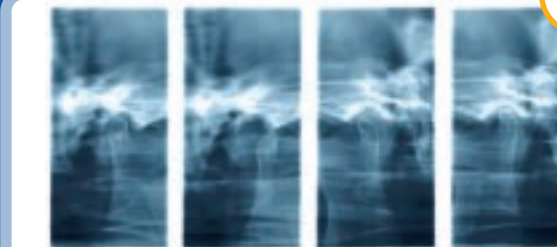
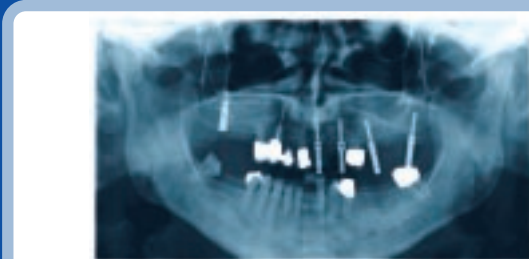
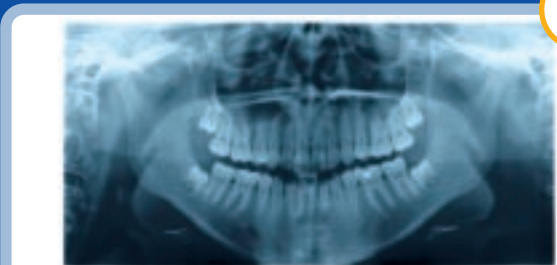
ORTHOPHOS 3 The benefits in brief

- **Easy positioning**
Light localizers for mid-sagittal and FH
- **Reliable 3-point fixing**
Bite segment, forehead support and temple support
- **Simple operation**
Multimer control unit
- **Outstanding hygiene**
Sterilization and/or protective sleeves



Panoramic programs supported by the ORTHOPHOS 3, 3 Ceph and 3 DS

- A** Standard panoramic radiograph for basic examinations and treatment planning.
- B** Panoramic radiograph with uniform 1.25-fold vertical magnification. Very suitable for implantology applications and determining vertical bone thickness.
- C** Temporomandibular joint in habitual occlusion or maximum jaw aperture. Ideal for investigating changes in position and degenerative/pathological changes in the condyle.



Clear perspectives: Digital radiography with the ORTHOPHOS 3 DS.

Digital radiography opens up a whole range of new perspectives. The ORTHOPHOS 3 DS supports the same three panoramic programs as its film-based counterparts, yet provides all the benefits of digital radiography. In concrete terms this means no darkroom, no film processing and no harmful chemicals. Any exposure errors are automatically corrected. The images are displayed in real time on your computer monitor and can be stored in a patient-related archive for future reference.

SIDEXIS – Sirona's image acquisition and processing software – is your passport to state-of-the-art practice organization. You can view the X-ray images on your computer monitor wherever and whenever you want. The images can be processed in a variety of different ways – e.g. if you want to convince a patient of the necessity of a certain

course of treatment, or if you need to clarify individual points of a diagnosis. What's more, SIDEXIS interfaces with the commonly available practice management programs.

The image capture card is integrated directly into the ORTHOPHOS 3 DS. In other words, you're not dependant on any particular PC in your practice network. And this results in greater flexibility.

Additional user-friendly benefits

You haven't had much experience with computers? No problem. SIDEXIS features an easy-to-understand user interface. In no time at all you'll wonder how you ever did without the practical image processing and imaging functions. Digital radiography saves time, money and effort – and protects the environment as it obviates the need for photographic chemicals.

Compared with X-ray systems using a conventional film-screen combination ($S = 250$), the ORTHOPHOS 3 DS reduces the radiation dose by up to 50%.

A complete digital radiography package

To expand the capabilities of the ORTHOPHOS 3 DS even further all you need is an intraoral X-ray unit (e.g. the HELIODENT DS), an intraoral sensor and an image acquisition unit. The SIDEXIS software comes with intraoral X-ray functions already "built-in". All the digital radiography options (intraoral, panoramic) run under the same convenient user interface. Your local dealer will tell you more about our intraoral radiography systems and which options are best suited to your practice.

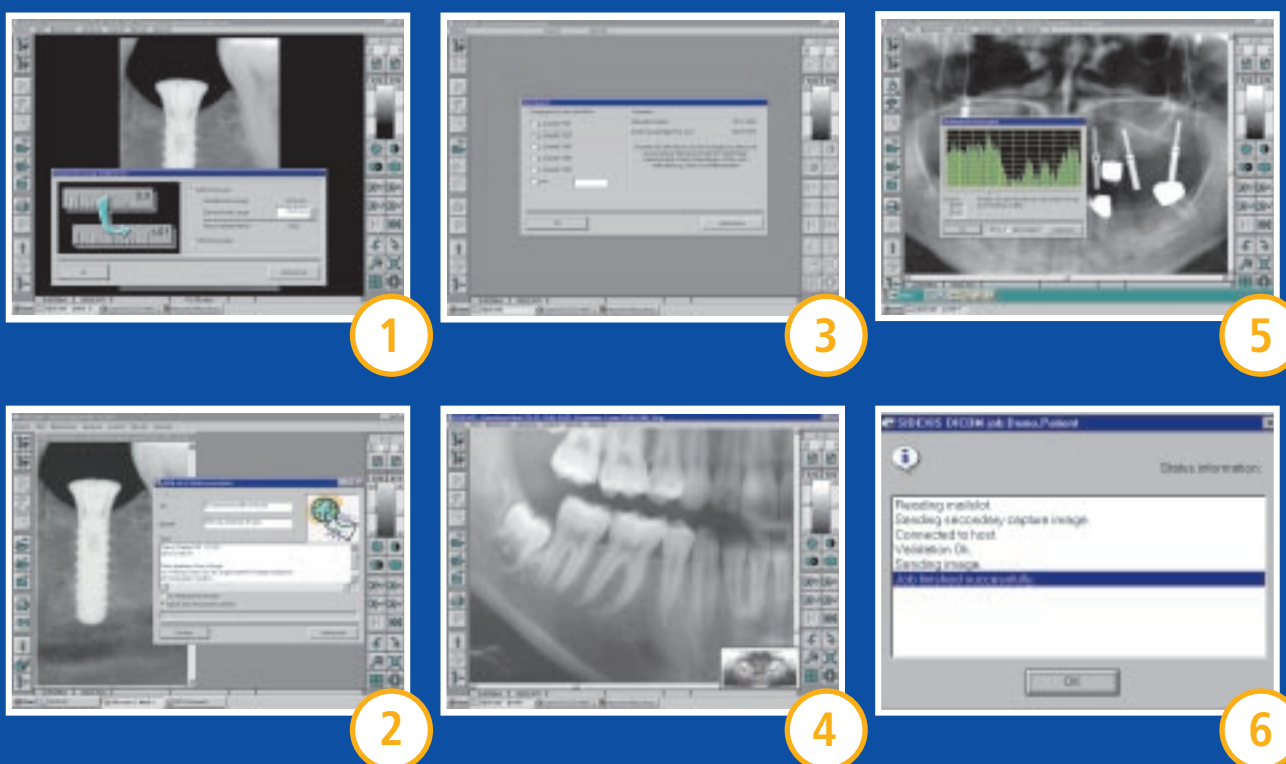


Special digital radiography functions supported by SIDEXIS:

- 1 **Calibration of longitudinal measurements:**
Additional diagnostic accuracy in the area of endodontics and implantology.
- 2 **E-mail transmission of X-ray images:**
Easy communication with colleagues and referring parties.
- 3 **Sophisticated long-term archiving:**
If your hard disk is full and you transfer your image data to external media, SIDEXIS "remembers" exactly where each individual file is stored.
- 4 **Viewport function indicates the location of a magnified segment of the overall X-ray image:** You always know exactly where you are.
- 5 **Histogram display for bone density measurements:** A helpful indicator for implantology.
- 6 **DICOM Send function:**
As an optional extra, SIDEXIS allows you to transfer X-ray images to a DICOM archive at the touch of a button. Ask your dealer about this versatile software package.

ORTHOPHOS 3 DS The benefits in brief

- **Razor-sharp real-time images**
No film processing, no scanning, no readouts
- **Environmental protection**
No darkroom, no chemicals
- **Reduced radiation doses**
Up to 50%
- **SIDEXIS software**
Simple and effective image processing; automatic patient-related archiving; interfaces with practice management programs



The ideal solution for orthodontics and oral surgery: The ORTHOPHOS 3 Ceph.

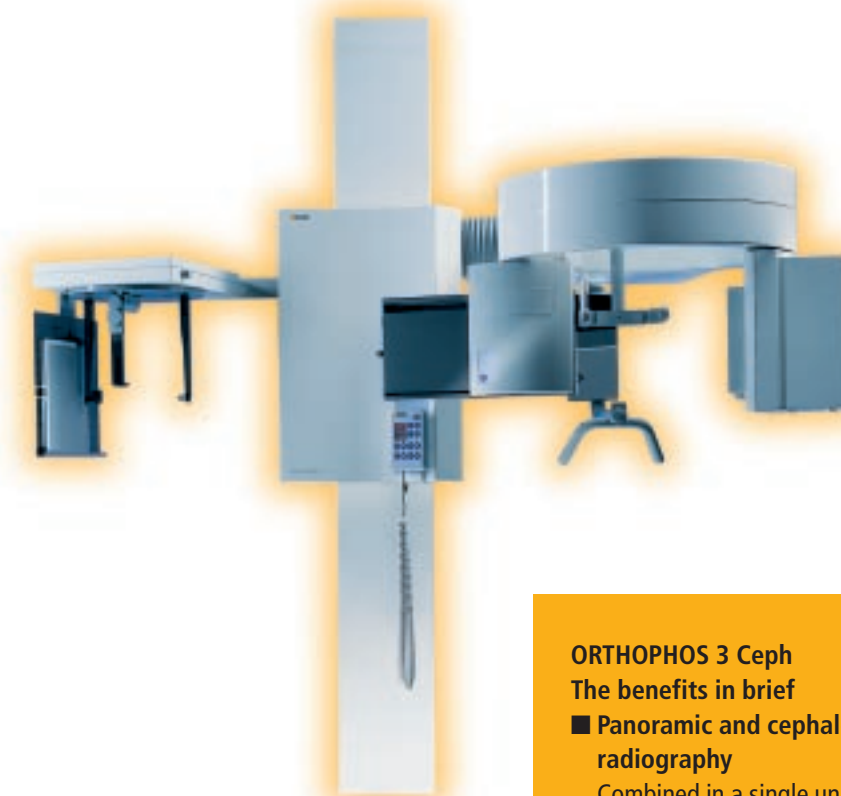
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Compact and cost-effective: the ORTHOPHOS 3 Ceph combines film-based panoramic and cephalometric radiography in a single unit. The four projections (lateral, posterior-anterior, anterior-posterior, carpus (hand)) put you in a position to fulfil a full spectrum of orthodontic and oral surgery requirements.

Changing over the panoramic to the cephalometric mode and vice versa is quick and easy. As soon as you choose the appropriate aperture setting the multimer automatically switches to the cephalometry mode. All you have to do is select the relevant patient icon and the preprogrammed exposure parameters are shown in the digital display.



- 1 Lateral view of skull
- 2 Carpus (hand)
- 3 Posterior-anterior view of skull



ORTHOPHOS 3 Ceph
The benefits in brief

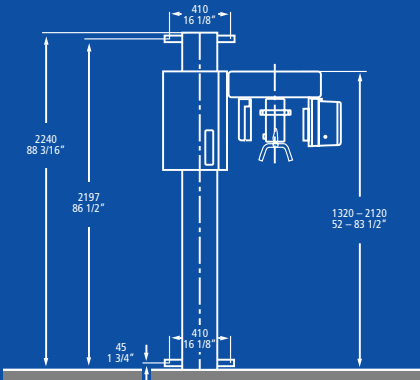
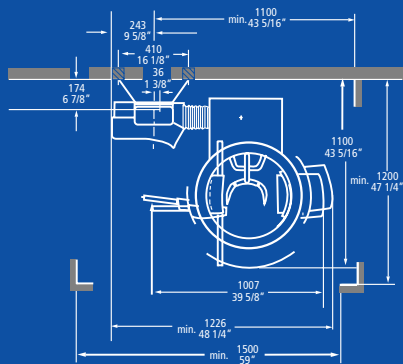
- Panoramic and cephalometric radiography
Combined in a single unit
- Panoramic or cephalometric radiography
Quick and easy changeover

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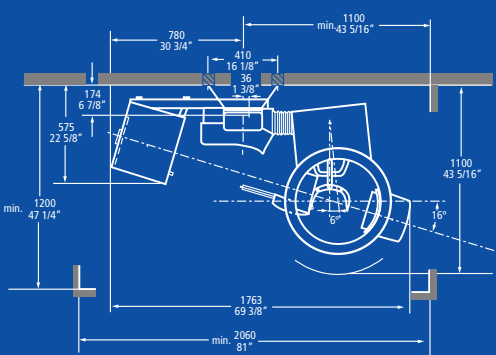
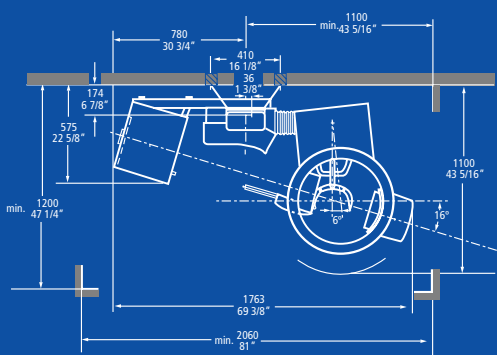
The ORTHOPHOS 3 series at a single glance			
Equipment features	ORTHOPHOS 3	ORTHOPHOS 3 DS	ORTHOPHOS 3 Ceph
Program 1: Standard panoramic image	■	■	■
Program 6: Temporomandibular joints, lateral view, closed/open mouth	■	■	■
Program 11: Unique panoramic image with constant 1.25 fold vertical magnification	■	■	■
Cephalometric radiography			
Cassette format 18 x 24 cm			■
Cassette format 24 x 30 cm			▲
Digital radiography			
Digital		■	
Digitally upgradable (from serial number 6000 up)	■		
Operation, service			
Multitimer	■	■	■
Remote control	▲	▲	▲
■ <i>standard</i> ▲ <i>optional</i>			

Technical data for ORTHOPHOS 3	
Focal spot size according to IEC 336/82	0.5 mm x 0.5 mm
Total filter	2.5 mm AL
Tube voltage	60 – 80 kV
Tube current	10 mA, fixed
Nominal voltage	208/230 V, 50 – 60 Hz
Nominal current	max. 9.7 A
Line resistance	max. 0.8 Ohm
Fuse	20 A (slow blowing)
Power consumption	max. 2.1 kW
Permissible line voltage fluctuations	+6%, –10% (230 V), +10%, –10% (208 V)
Rotation time: panoramic X-ray P1	11.3 s
Rotation time: panoramic X-ray P6.1 and P6.2	7.8 s
Rotation time: panoramic X-ray P11	11.3 s
Ceph film switching times	0.1 s – 4.0 s (17 steps)
Dimensions:	
ORTHOPHOS 3	1226 x 2240 x 1100 mm*
ORTHOPHOS 3 DS	1226 x 2240 x 1100 mm*
ORTHOPHOS 3 Ceph	1763 x 2240 x 1100 mm*
* (width x height x depth)	

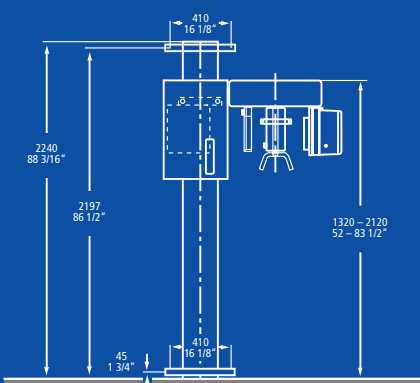
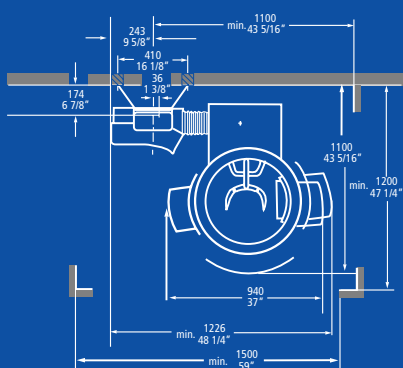
ORTHOPHOS 3




ORTHOPHOS 3 Ceph



ORTHOPHOS 3 DS





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