

ESTABLISHED IN 1991

Pro-Project

Equipment for Quality Control

RADIATION
under control



...because you care about your patient



About us

The Center of Computer Projects and Analysis 'Pro-Project' was established in 1991. We occupy ourselves with the whole range of issues connected with the work of X-ray laboratories. Many years of practice places us on the top of companies specializing in this issue. We have, among other things, some of the best specialists engaged in designing of X-ray laboratories and calculation of fixed screens.

The knowledge and experience we gained, allowed us to develop and begin the production of the only Polish phantoms for

testing of X-ray machines used in stomatology, radiography, fluoroscopy and mammography. Our products are in accordance with Polish and international norms, and possess CE certificates. Many of the solutions applied in them is unique in the world and has been patented.

Our products are noted for their high quality (our company has a certified management system ISO 9001:2008), user-friendliness and affordable price. It has a considerable impact on their availability and the popularization of conducting constancy testing of X-Ray machines. In turn, it directly translates into quality of performed examinations with the use of these machines and the safety of the patients.

Tailored Products

To our partners, apart from standard products, we also offer models made specifically for them. Individual designs include not only descriptions on phantoms in the partner's native language but also adjustment of the phantom's construction to the current regulations of said country.

Some of Our Awards and Commendations

Commendation in the All-Poland Contest 'Pearls of Medicine 2009' in the category 'The Producer and distributor of medical and pharmaceutical articles'



We were twice chosen by the European Commission to represent European Union in the business mission to Japan as a part of EU Gateway 2009 and 2010 programme.



The Patent of the Year 2009 – the award for the set of dental phantoms Pro-Dent.





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The Pro-Dent set is a **universal set of phantoms** for carrying out constancy and acceptance tests of **conventional and digital** dental X-ray units (intra-oral, panoramic and cephalometric). This is not an all-in-one device where results of tests blur each other out. This is the only solution on the market that allows measuring of the x-ray beam radius at the end of the beam applicator.



The **Pro-Dent** set consists of:



Pro-Dent α phantom

Technical data:

- 3 step wedge (first step made of cooper foil 0.3 mm thick, next are made of polytetrafluoroethylene 8 and 16 mm thick)
- cover made of PMMA



Pro-Dent β phantom

Technical data:

- cone for perpendicular X-Ray beam control in range of $0^\circ \div 1,5^\circ$
- pattern for beam radius estimation
- cover made of PMMA

Pro-Dent γ phantom

Technical data:

- pattern for the line pair resolution evaluation (from 4 to 8 LP/mm)
- optional second pattern for the line pair resolution evaluation (from 1,6 to 3 LP/mm) – panoramic and cephalometric units
- four holes in 0,5mm Al foil for low contrast resolution tests
- additional 6mm aluminum filter
- cover made of PMMA

With the Pro-Dent set you can make following tests:

- dose reproducibility
- development process stability
- X-ray beam perpendicularity (in range $0^\circ \div 1,5^\circ$)
- limitation and alignment of the X-Ray beam (including beam radius measurement)
- spatial / line pair resolution (perpendicular, parallel and rotated 45° to anode-cathode line)
- low contrast resolution



Product features:

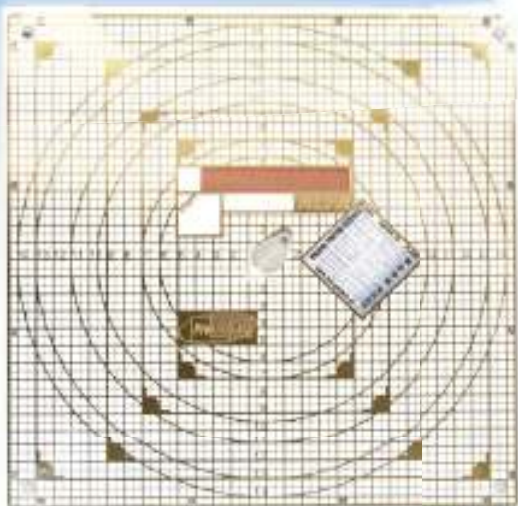
- Complies with:
 - PN-EN 61223-3-4
 - IEC 61223-2-7 and IEC 61223-3-4
- CE certified
- manual provides detailed guidelines for carrying out each test, results assessment and registration

Accessories

- 0,8mm copper filter – patients head equivalent
- positioning stand with place for a analogue film or a digital detector
- band for firm and perpendicular attachment of the phantom to the X-Ray unit's beam applicator
- reduction rings for centering phantoms on the X-Ray unit's beam applicator
- CD with documentation
- elegant and convenient aluminum box for storing phantoms



Pro-Alpha phantom



The Pro-Alpha phantom may be used for carrying out acceptance and constancy tests of conventional and digital radiography X-Ray units. With the Pro-Alpha phantom you can make following tests:

- collimation/beam alignment
- position and size of the effective radiation field
- dynamic range
- spatial resolution
- contrast resolution
- image quality (distortion in fluoroscopy)

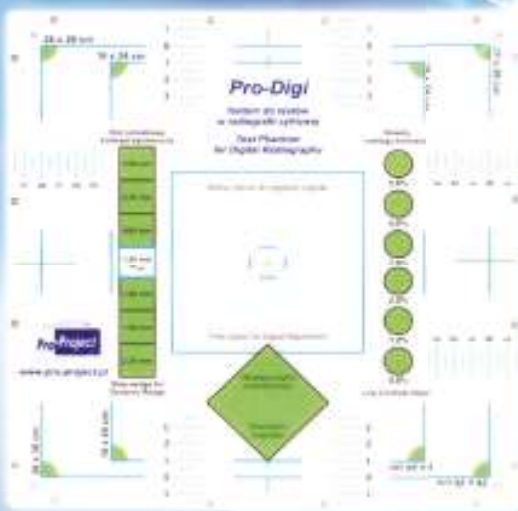
Phantom contains:

- cone for perpendicular X-Ray beam control in range of $0^\circ \div 1,5^\circ$
- 7-step cooper wedge
- 4 low contrast elements
- pattern for the line pair resolution evaluation (from 0,6 to 5,0 LP/mm)
- shape to determine the size and position of the effective radiation field

Product features:

- complies with:
 - PN-EN 61223-3-1
 - IEC 61223-3-1
 - DIN 6868/3 and DIN 6868/4
- CE certified
- manual provides detailed guidelines for carrying out each test, results assessment and registration

Pro-Digi phantom



The Pro-Digi phantom is dedicated for acceptance and constancy tests of digital radiography equipment. It can be used to measure:

- collimation/beam alignment;
- position and size of the effective radiation field
- dynamic range
- spatial resolution
- contrast resolution
- homogeneity

Phantom includes:

- 1mm thick cooper plate
- 7-step cooper wedge
- 4 low contrast elements
- free area for signal calibration
- markings to determine the size and position of the effective radiation field
- pattern for the line pair resolution evaluation (from 0,6 to 5,0 LP/mm)
- optional cone for perpendicular X-Ray beam control in range of $0^\circ \div 1,5^\circ$

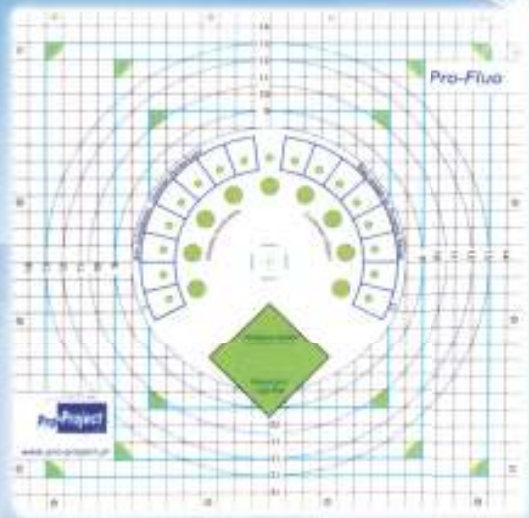
Product features:

- complies with:
 - PN-EN 61223-3-1
 - IEC 61223-3-1
 - DIN 6868/58 and DIN 6868/13
- CE certified
- manual provides detailed guidelines for carrying out each test, results assessment and registration

Pro-Fluo phantom

The Pro-Fluo phantom is dedicated for acceptance and constancy tests of digital and analogue radiography equipment. It can be used to measure:

- collimation/beam alignment
- position and size of the effective radiation field
- dynamic range
- spatial resolution
- contrast resolution
- homogeneity
- beam quality



Phantom includes:

- 1,5mm thick cooper plate
- 17-step cooper wedge (thickness 0,0mm to 3,5mm) with additional low contrast details (4mm diameter)
- 9 low contrast elements (15mm diameter)
- pattern for the line pair resolution evaluation (from 0,6 to 5,0 LP/mm)
- markings to determine the size and position of the effective radiation field
- optional cone for perpendicular X-Ray beam control in range of $0^\circ \div 1,5^\circ$

Product features:

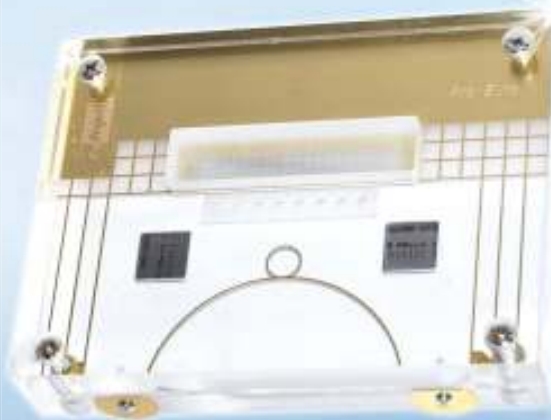
- complies with:
 - PN-EN 61223-3-1
 - IEC 61223-3-1
 - DIN 6868 – 4 (2007)
- CE certified
- manual provides detailed guidelines for carrying out each test, results assessment and registration

Pro-Euro phantom

Pro-Euro phantom is used for monitoring the technical parameters of mammography imaging systems according to the requirements of the „European Guidelines for Quality Assurance in Mammography Screening”.

With Pro-Euro phantom it is possible to carry out following tests:

- optical density in the reference point
- spatial resolution
- dynamic range – image contrast
- threshold contrast visibility
- effective radiation field
- film processing
- automatic Exposure Control



Phantom includes:

- reference point (60mm from thorax side)
- pattern for the line pair resolution evaluation (from 1,5 to 20,0 LP/mm) perpendicular to the anode-cathode line
- 10-step aluminum wedge
- 8 low contrast objects
- pattern for the line pair resolution evaluation (from 5 to 20 LP/mm) parallel and perpendicular to the anode-cathode line
- field covered with brass for sensitometric measurements
- area for measurement of the automatic exposure timer

Product features:

- complies with:
 - PN-EN 61223-3-2
 - IEC 61223-3-2
 - “European Guidelines for Quality Assurance in Mammography Screening”
- CE certified
- manual provides detailed guidelines for carrying out each test, results assessment and registration



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