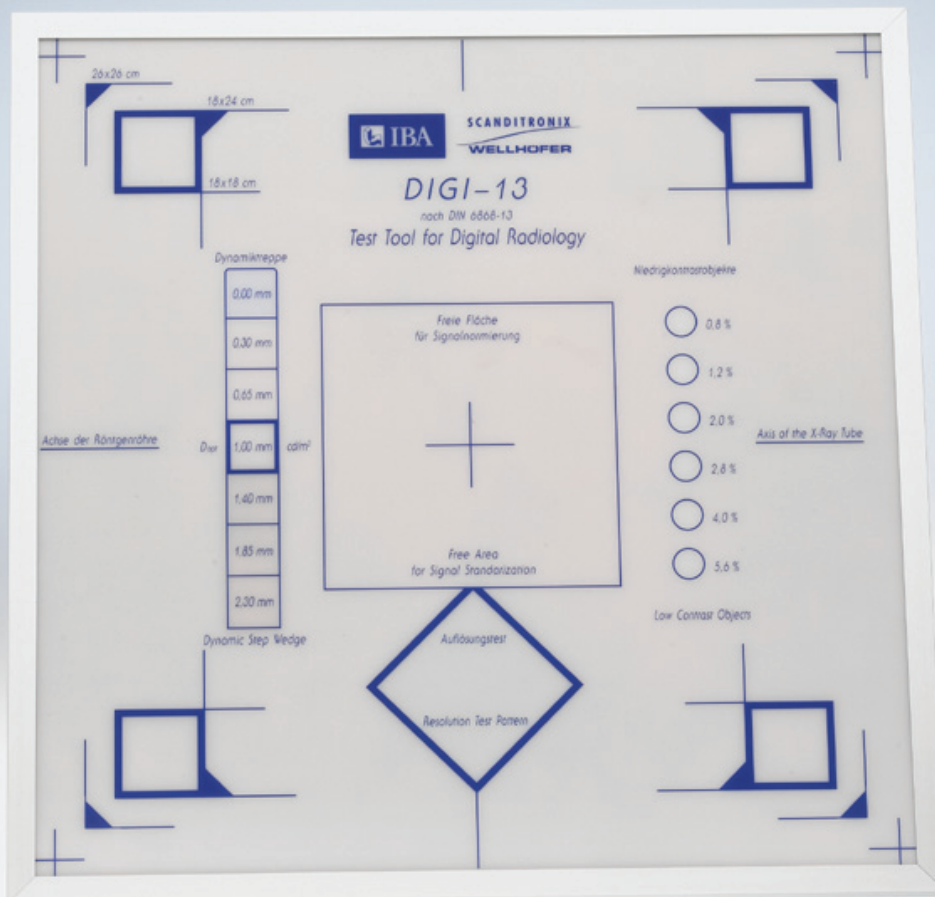


Quality Assurance in Digital Radiology

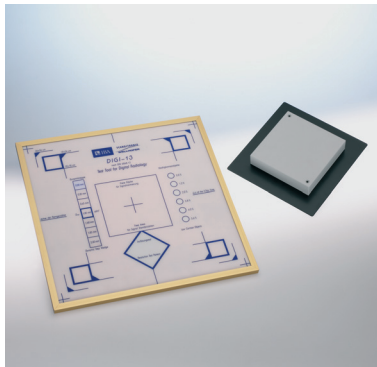
Test Device DIGI-13 |

*Test device for quality tests at CR and DR systems
(e.g. for acceptance tests according to DIN V 6868-58 and
constancy tests according to DIN 6868-13)*



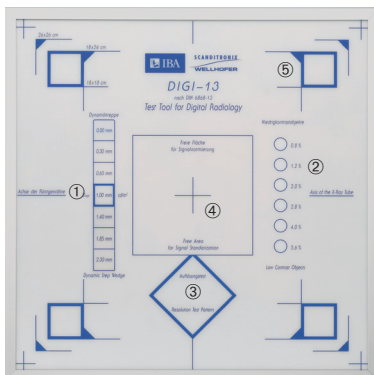
DIGI-13 |

Test device for quality tests (e.g. for acceptance tests according to DIN V 6868-58 and constancy tests according to DIN 6868-13) of projection radiography systems with digital image receptors like semiconductor detectors or storage screens



By using the test device you can determine simultaneously:

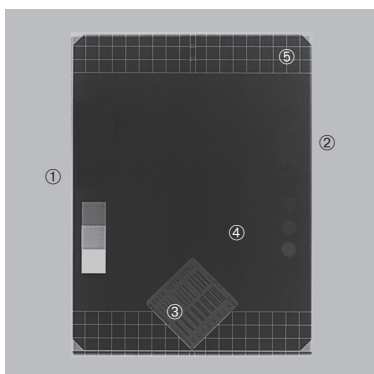
- Signal standardization and dose indicator (Image receptor dose KB, S-value or LgM-value (log. median) on film or monitor)
- Homogeneity (optical density resp. luminance)¹⁾
- Spatial resolution
- Contrast resolution
- Alignment of light field and the field of useful beam
- Image scale
- Artifacts



Construction of the test device DIGI-13

Basic copper plate (300 x 300 x 1.0 mm) with

- **Dynamic step wedge**, made of copper ①, with different radiation absorption, 7 steps ascending: 0.00, 0.30, 0.65, 1.00, 1.40, 1.85 and 2.3 mm Cu, for controlling the dynamic range
- **Low contrast objects**, made of aluminium disks ②, with a diameter of 10 mm, producing a contrast of 0.8 %, 1.2 %, 2.0 %, 2.8 %, 4.0 % and 5.6 % at 70 kV, for determination of contrast resolution
- **Resolution test** (lead foil) ③, 0.6 – 5.0 lp/mm, 45° rotated, for checking spatial resolution
- **Marked areas** for signal standardization and homogeneity check ④
- **Alignment marks** for different cassette sizes ⑤



1) For diagnosis by using an X-ray film a suitable densitometer, (e.g. **Unilight D / TR**), for diagnosis at image display devices a luminance meter, class B according to DIN 5032-7, e.g. **LXplus**) is necessary.