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# FLOWD 8020
# X-ray Flaw Detector

**REGULAR X-RAY PROTECTIVE CLOTHING TESTING IN COMPLIANCE WITH DIN 6857-2 AND ÖNORM S 5213**


Remote workstation
(OPTIONAL)

## KEY FEATURES

- Automatic defects detection
- Smart software algorithms
- Full size image
- Compact and easy to relocate

CONFORMITY CERTIFICATES: CE № 201299122EN ISO 13485:2016,
ISO 9001:2015, ISO/IEC 27001:2013, ISO 45001:2018, ISO 14001:2015

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# THE X-RAY FLAW DETECTOR

**The detector is designed for** non-destructive radiographic testing of the X-ray personal protective equipment (hereinafter referred to as the PPE) to approve its further using. The detector allows manufacturers to carry out quality control of X-ray protective materials.

**Types of PPE:** protective aprons, mittens, skirts, gonad aprons, vests, shadow shields and any protective materials in sheet form.

# MAIN FEATURES

- Automatic defects detection
- Smart software algorithm
- Full size image of most items
- Reporting mode
- Plug and play
- Great portability and compactness

# OPERATOR'S WORKSTATION

- Software complex "DefVision" with Windows 10
- The device operates by 24" touchscreen
- Self-diagnostic during every start
- Auto calculating of material relative heterogeneity
- Auto definition of areas where the lead equivalent thickness less than its permitted
- Coloring of images in different colors depending on actual lead equivalent thickness
- Data fill in editor and printing the testing report
- X-ray images and test report archiving
- User-friendly and self-intuitive interface

# SPECIFICATIONS

| TOTAL SPECIFICATIONS | | | |
|---|---|---|---|
| Weight | | 400 kg | |
| Size of the inspection window | height | 240 ± 5 mm | |
| | width | 870 ± 3 mm | |
| Dimensions of the inspection object | height | 200 mm | |
| | width | 750 mm | |
| | length | 1300 mm | |
| Power Supply | number of phases | single-phase network of general purpose | |
| | voltage range | 220/110 V | |
| | current frequency | 50/60 Hz | |
| | maximum power consumption | 0,5 kV · A | |
| Maximum distributed load per conveyor | | 25 kg | |
| Conveyor speed | | 0,22 ± 0,03 m / s | 0,125 ± 0,03 m / s * |
| Detectability of the System (AWG), not worse (the minimum diameter of the copper wire detected by the X-ray unit, mm, not more) | | 0,08 (40 AWG) | |
| Spatial resolution | Along the detector line | 1,0 mm | 1,1 lp/mm* |
| | In the direction of scanning | 1,5 mm | 0,9 lp/mm* |

* - FlowD 8020 version with enhanced spatial resolution

| INTEGRATED X-RAY SOURCE | |
|---|---|
| Anode voltage | 80/100 kV |
| Anode current | 1,2/1,0 mA |
| The maximum radiation angle at the output of the collimator | 82° |
| Generator Cooling System | oil |
| Anode type | fixed |
| Focal spot | 0,8 / 0,8 mm |
| Output slit of the collimator (width), not more than | 1,0 mm |
| X-ray protection | Fully protected |
| X-ray emission | Not more than 1 μSv/h at any point at 10 cm from the device |

# AUTOMATIC SOFTWARE ALGORITHMS

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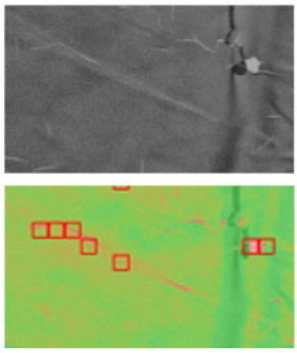
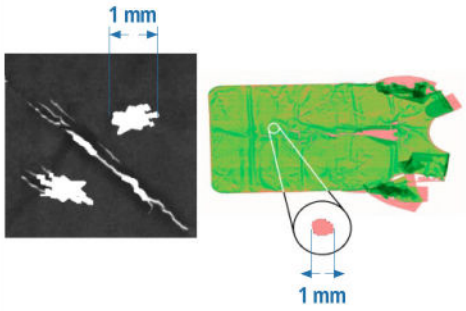
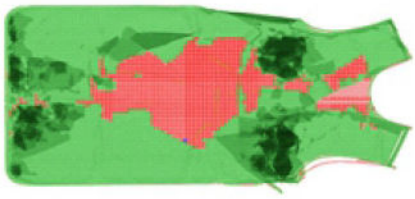
**1.** DEFECTS (CRACKS, BREAKS, LACERATIONS, TEARS, ETC.)



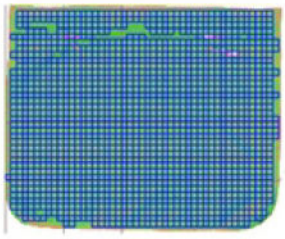
**2.** IDENTIFICATION OF ANY DEFECTS LESS THAN 1 MM IN SIZE



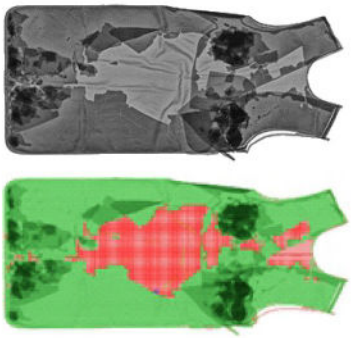

**3.** DETECTION OF SMALLEST THICKNESS ZONE LEAD EQUIVALENT



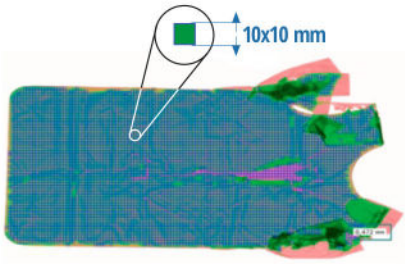
**4.** CALCULATION OF THE NONHOMOGENEITY OF THE X-RAY PROTECTIVE MATERIAL



**5.** HIGHLIGHTING OF SEVERELY DAMAGED ZONES WITH COLOR



**6.** DRAWING A DIMENSIONAL GRID (10X10 MM), ALLOWING TO DETERMINE THE DEFECT SIZE VISUALLY



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