

The new standard for production and laboratory:

# eddyvisor<sup>®</sup> DC / C



## Crack and pore detection with **eddyvisor<sup>®</sup> C**: New technology revolutionises crack detection

- Calibration with good parts only, highest test reliability for unknown defects, (traditional calibration with master parts is also possible)
- Automatic generation of tolerance fields in all filter frequencies at the same time Preventive-Multi-Filter-Test
- 2 crack test channels in basic version (up to 16 channels as option)
- Lift-off compensation integrated in basic instrument
- Three dimensional graphic of crack-tested surface (C-scan)
- Maximum test stability due to digital signal processing (DSP)
- 15" colour touch screen for easy operation with several graphic display options for interpretation
- USB 2.0 and Ethernet interfaces for easy data transfer to PC and printer; remote control, data storage to USB-stick
- Desktop version (DC) and the new two-part switch panel version (C)
- Structure test and crack detection as combined instrument available: **eddyvisor<sup>®</sup> SC**

The eddy current test instrument **eddyvisor®C** is designed to detect surface-open and close to surface subsurface defects like cracks and pores on conductive test parts.

**eddyvisor®C** operates according to the fast and clean eddy current method and is specially designed for testing of components in a production environment. The instrument is capable of detecting surface cracks with a depth of only 0.05 mm on plane or rotation-symmetrical parts with surface speeds up to 50m/sec.

The path from calibration of **eddyvisor®C** to test mode is short and simple. It is operated via a bright 15" colour touch screen with ergonomically designed user interface. Advanced electronics enable a hitherto unachievable level of function.

The **eddyvisor®C** is available in different versions. The basic version has two crack test channels (resp. one crack test channel with lift-off compensation). Up to 16 channels may be provided.

#### **Preventive Multi-Filter Technology of crack detection:**

One or several good parts are used for calibration of the **eddyvisor®C**. In calibration mode, the crack detection probe is moved over the area to be tested on the good part. Signals generated by the surface finish are recorded and displayed as tolerance fields. Signals are recorded simultaneously from a large number of band pass filter settings and tolerance fields are uniquely generated for each filter setting.

In test mode, all test parts which do not match the signals of the tolerance fields are assigned 'not good'. This guarantees detection of unexpected faults as well as expected faults, and makes manual and time-consuming setting to detect a 'complex defect' unnecessary.

Setting is also possible by semi-skilled personnel. Traditional set up using a master crack can also be used.

Each crack test channel is independent. The test results of each channel are processed and displayed by the integrated PC. A variety of graphic display options of the test results is available, e.g.: bargraph, tolerance field, xy- x(t)- and y(t)-view or C-scan.

The test result per channel is "good" or "bad". Historical test results can also be displayed as a histogram.

#### **Lift-off compensation:**

The crack test instrument **eddyvisor®C** has lift-off compensation. Special probes are needed. One lift-off probe requires two crack test channels. Lift-off compensation electronically balances changes of crack sensitivity which occur due to eccentricity or mechanical tolerances.

#### **Data security:**

The **eddyvisor®C** can internally store up to 50 part types with the relating settings, which can be recalled manually or by means of PLC signals. All internally stored data may be transferred to a PC or stored on a USB-stick.

#### **Documentation and data transfer:**

The **eddyvisor®C** is equipped with three USB 2.0 interfaces (two of them on front) as well as one Ethernet interface. A standard printer (USB) can be used for printing the test result.

#### **Opto-isolated interface:**

An opto-isolated PLC interface with 64 (option 128) in- and outputs is available to control automatic test systems.

#### **Probes:**

Proven ibg standard and customised probes are available for all applications.

#### **Case options:**

The **eddyvisor®C** is available as desktop version as **eddyvisor®DC** (Desktop, Crack test) or as divided version as **eddyvisor®C** (Crack test) consisting of the operating unit **eddyvisor®HMI** (Human Machine Interface) and the measuring unit **eddyvisor®MC**.

Combination with structure test instrument **eddyvisor®S**. The **eddyvisor®C** (Crack test) may be combined with the structure test instrument **eddyvisor®S** to **eddyvisor®SC**. Thus crack detection and structure test are realised in one instrument simplifying integration in automatic test systems.

#### **Technical data:**

Test method:	Crack detection with eddy current (PMFT)
Crack test channels:	2, option up to 16 channels (realtime parallel processing)
Lift-off compensation:	special probes with lift-off compensation required, lift-off channel needs two channels
Carrier frequency range:	from 10 kHz up to 10 MHz in 20 steps
Gain:	40 up to 100 dB
Filter:	up to 30 band pass filters at the same time per channel
Filter frequency range:	from 6 Hz up to 20 kHz (test speed up to 50m/sec)
Processor:	several high performance processors (DSP)
Mains voltage:	90...264 V AC, 47...63 Hz
Power requirement:	120...200 VA (depends on version)
Dimensions:	[mm] w x h x d
	eddyvisor®DC 410 x 308 x 271
	eddyvisor®HMI 410 x 308 x 96
	eddyvisor®MC 410 x 308 x 175
Weight:	13 kg

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