Rollscan 350

2019-04-17

stresstech

Measure for success

Rollscan 350

Rollscan 350

Manufacturing processes like **heat treatment** and **grinding** generate residual stresses and change microstructure in manufactured components.

Barkhausen noise analysis is a powerful method for measuring these changes on component surface.

Barkhausen noise signal analyzer **Rollscan 350** is designed for surface quality control and testing of near-surface defects such as grinding burns, heat treatment defects, as well as changes in stress and microstructure in a wide variety of ferritic steel and other ferromagnetic materials.

Rollscan 350

Rollscan 350 is a full-featured, self-contained unit which is portable for on-site measurements while also providing advanced capabilities for in-line and laboratory use.

✔ Measurement parameters adjustable via graphic user interface and front panel controls – No PC necessary

✔ Oscilloscope display with sensor feedback for real-time measurement diagnostics

✔ User interface in several languages

Rollscan 350

Standard system	Lean item
Rollscan 350 Barkhausen noise analyzer	100036
Rollscan 350 accessory cable set	280065110
Power cable: ✓ Power cable 2.5 m, Europe (Type F) ✓ Power cable 2.0 m, North America (Type B) ✓ Power cable 2.0 m, UK (Type G) ✓ Power cable 2.5 m, China (Type I)	270110250 270110260 270110280 270110284

Mandatory accessories	Lean item
Barkhausen noise sensor	

Options	Lean item
Battery option	288235100
Foot trigger BNFTD15	288290301
Hand trigger BNHTD15	288290302
Transport case for Rollscan 350 Pelicase 1610	290404440
ViewScan data acquisition software in English	100050
2D code reader ViewScan option: 2D code reader module	100181 6010005407
ViewScan option: Other language module	6010005402
MicroScan software	100072
Documentation in local language	000002

Rollscan 350

Standard system features

Control panel with six function keys for selecting windows and functions

Control wheel with a push button for adjusting different parameter values

Setup pages for:
- ✔ Magnetization settings
- ✔ Measurement settings
- ✔ Communication settings
- ✔ Miscellaneous functions
- ✔ Diagnostics

Automatic magnetizing voltage and frequency sweeps to find optimal measurement parameters

Single measurement channel

Magnetizing frequencies ranges:
- ✔ Sine wave 1–1000 Hz
- ✔ Triangle wave 1–150 Hz

Analyzing filter ranges:
- ✔ 10–70 kHz
- ✔ 70–200 kHz
- ✔ 200–450 kHz

Rollscan 350

Standard system features

Connector for auxiliary devices

Rollscan 350 accessory cable set
- ✔ CAT.6 UTP LAN Ethernet cable, 5 m
- ✔ USB cable USB2 A/B cable, 3-5 m
- ✔ Rollscan IE-Grounding cable, 2 m
- ✔ Rollscan IE-Grounding jaw set
- ✔ Fan filter pad 10 pcs

1. DVI-D Video connector for external display
2. Ethernet port (RJ45) (LAN)
3. USB-1 and 2 ports for external devices
4. USB-B port for PC connection
5. Scope: BN signal output
6. PLC connector
7. Current in
8. Magn out
9. Connector for auxiliary devices (15 pin) (AUX).
10. Fan with filter
11. IE-grounding
12. Main power switch
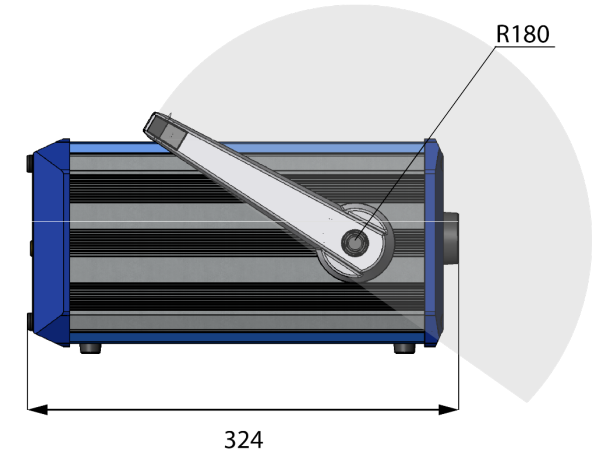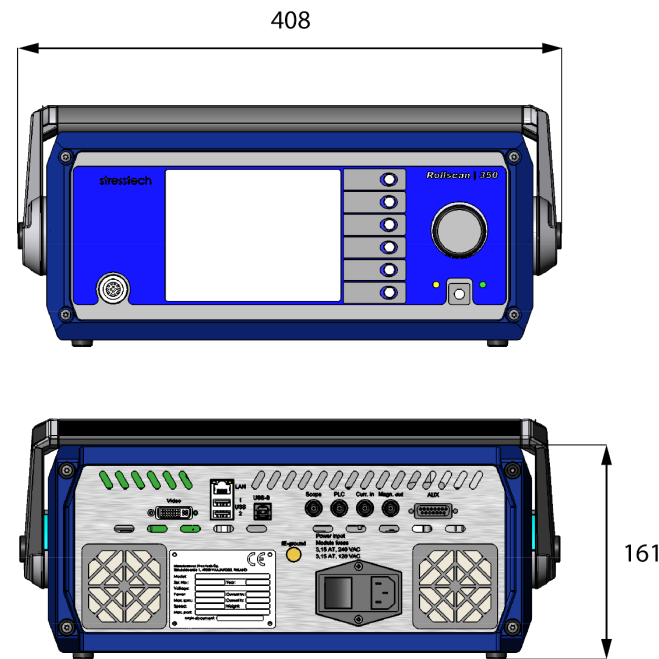13. Mains fuses
14. Power connector

stresstech
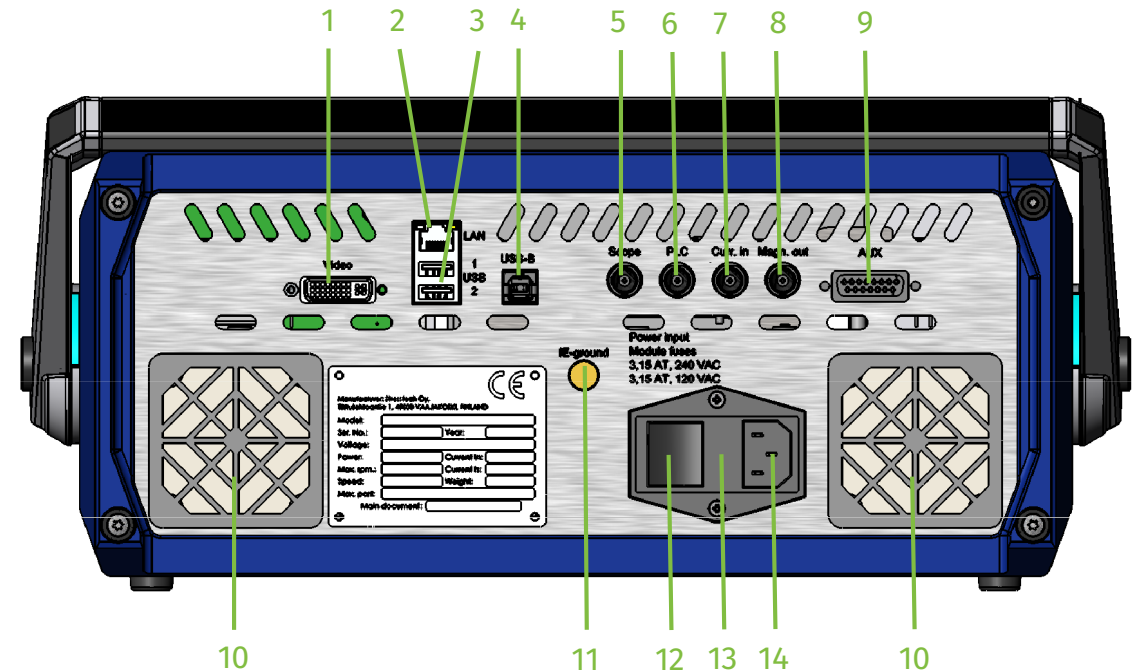
Rollscan 350

Dimensions		
Depth	324–380 mm	12.76–14.96 in
Width	408 mm	16.54 in
Height	161–265 mm	6.34–10.43 in
Weight Battery option	6.8 kg 8.8 kg	14.99 lbs 19.40 lbs

Power demands	
Voltage	100–240 V AC, 50–60 Hz
Power	Normal power consumption: 75 VA Power consumption (maximum when batteries are empty): 100 VA

Rollscan 350

There is a great variety of sensors available to complete Rollscan analyzer for Barkhausen noise analysis. Availabe sensor types are:

- ✓ Camshaft sensor
- ✓ Pick-up sensor
- ✓ Gear sensor
- ✓ OD sensor
- ✓ Flat sensor
- ✓ General purpose sensor
- ✓ ID sensor
- ✓ Crankshaft sensor
- ✓ Special sensor

Rollscan 350

Rollscan can be completed with **ViewScan** software for data analyzing and reporting. Using ViewScan you can:

✔ collect and analyze data from Rollscan.

✔ document your measurement by saving and printing the results.

✔ export data for analysis with other programs.

✔ set rejection limits for real-time rejection checking.

✔ collect data from multiple Rollscan analyzers simultaneously.

✔ view the results as a 3-dimensional polysurface.
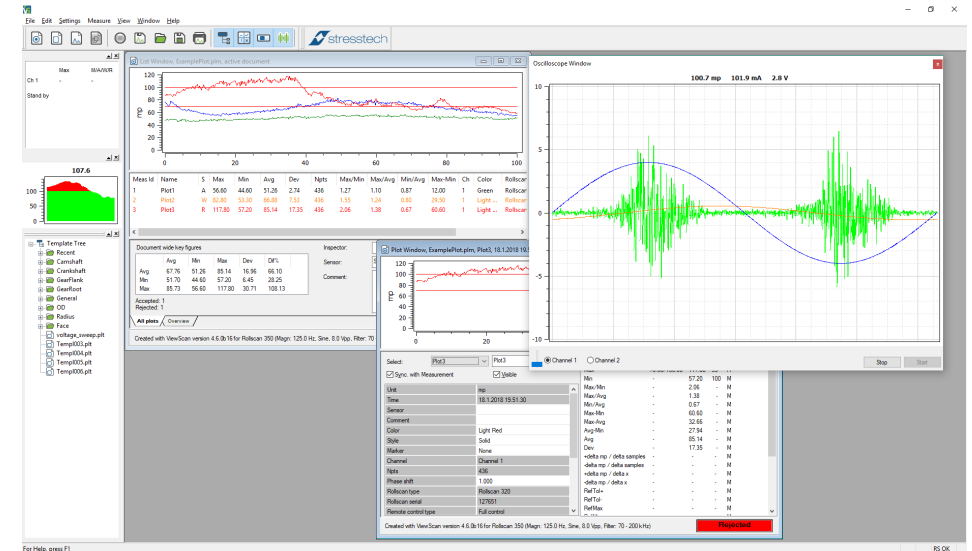
Rollscan 350

Rollscan 350 can be completed with **MicroScan** software for material analysis. The system provides analysis of data with freely adjustable analyzing frequency filter (RMS, peak value, peak position, FWHM, amplitude spectrum, integral of the bursts, pulse height distribution). Using MicroScan you can:

✓ study magnetic properties of the material.

✓ develop new NDT applications.

✓ evaluate stress and microstructure changes using several functions and parameters.

✓ optimize measurement conditions for the analysis.
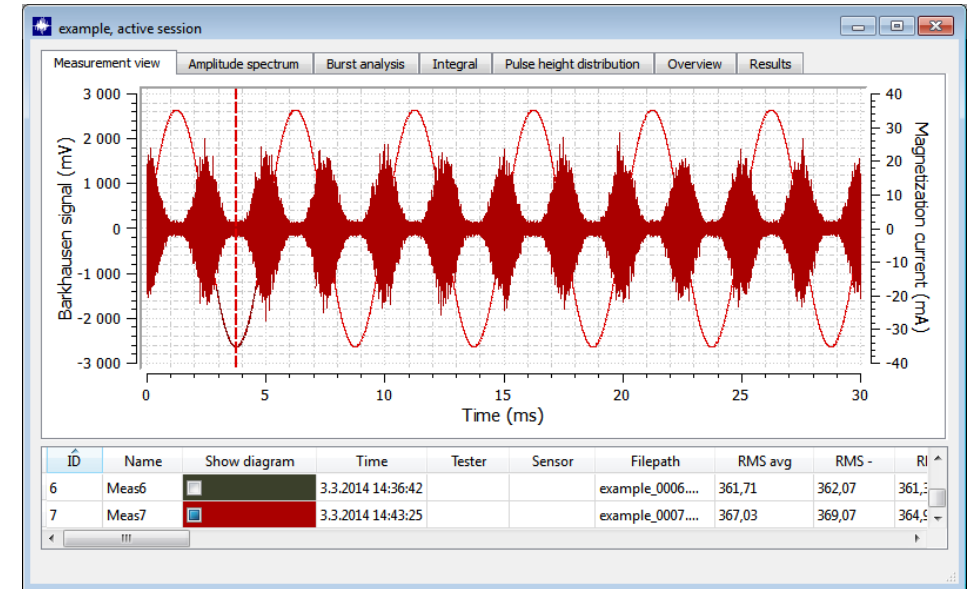
Feature	Rollscan 250	Rollscan 350	Rollscan 320
Measurement channels	2	1	2 (with 8 parallel analyzers up to 16 channels)
Magnetizing voltage range (*)	0–16 Volts	0–16 Volts	0–16 Volts
Magnetizing waveform: Sine/Triangle (**)	✓/✓	✓/✓	✓/✓
Magnetizing frequency range: Sine/Triangle (***)	1–1000 Hz/1-150 Hz	1-1000 Hz/1-150 Hz	1–1000 Hz/1-150 Hz
Analyzing filter range (****)	70–200 kHz	10–70 kHz, 70–200 kHz, 200–450 kHz	70–200 kHz
Magnetizing & frequencies	-	Automatic/Visible	-
Communications	Ethernet/USB/RS232	Ethernet/USB	Ethernet
Measurement parameter control	Manual/Remote	Manual/Remote	Manual/Remote
Oscilloscope display/software (*****)	-/-	✓/✓	-/✓
Battery option	✓	✓	-
MicroScan option	-	✓	-
Sensor connector	ODU14 or 2 x D9	ODU14	2 x D26

*Adjustment range for power output for sensor.
**Sine for standard measurement and triangle for special purposes
***Sensor performance optimization
****Penetration depth of signal depends on analyzing frequency range. Lower frequency range means deeper penetration depth
*****For visualizing signal quality

stresstech   12