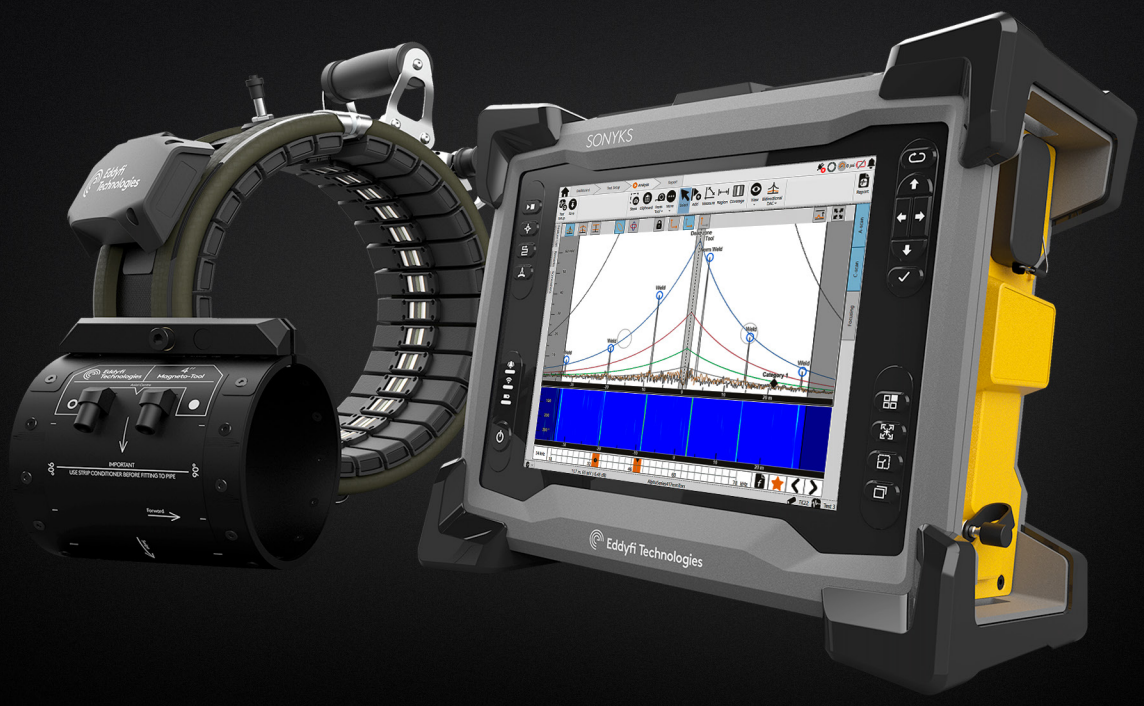
Technical
Specifications

SONYKS™

Take Control. Be Your Own Guide.



Eddyfi Technologies

SONYKS™ IS A MAJOR LEAP IN GUIDED WAVE EQUIPMENT

Eddyfi Technologies has redefined guided wave ultrasonic testing with the Sonyks setting new benchmarks for data quality, versatility, ease of use, and deployment.

From those who pioneered Guided Wave Testing (GWT) commercially, the state-of-the-art system comes with a large high-quality touchscreen, ultra-fast electronics for rapid data acquisition, and on-the-spot data analysis capabilities for accurate reporting. Sonyks has reinvented guided waves, making the technology simpler and more accessible for the industry.

The system offers an unprecedented ability to inspect more piping applications, including flange-to-flange piping, in the most cost and time-efficient manner.

The instrument is also compatible with typical transducer rings found on the market. Reuse your own rings and make the most of your past investment in guided waves. Couple your existing collars to a new-generation instrument with best-in-class electronics and give a second life to your inspection programs.

Benefits

- Unmatched SNR for longer inspection runs
- Easy to interpret data making the technology more accessible
- Compatible with other manufacturer transducer rings
- Collect all RAW data in one scan for accurate and auditable results
- Streamlined workflow, increasing efficiency and inspection capabilities
- Transducer rings suitable for pipes ranging 1.5 in to 72 in
- Internal compressor for inflation of collars

INCREASING PRODUCTIVITY AND UTILIZATION

Thanks to project-based inspection setup and increased portability, the number of locations inspected per day is increased by 50%.

Simplified & streamlined workflow for top efficiency

Thanks to a project-based inspection setup, time spent at a location can be reduced by 33%. This combined with a new multi-location reporting feature generates significant time savings.

Comprehensive data at your fingertips

Sonyks™ is the first instrument with an onboard screen for GWT interpretation. It uses a combination of broadband and Full Matrix Capture (FMC) data collection, meaning that all data ever needed is collected once to make analysis possible anywhere. Move on to the next location knowing you have all the necessary data with increased speed and peace of mind.

Best instrument and tooling provide the best data

With an unmatched Signal-to-Noise Ratio (SNR), Sonyks inspects longer distances and locates even smaller defects. This improved SNR can dramatically simplify analysis and increase the overall efficiency of the inspection by 50%.

Sound evolution for GWT experts

Reuse transducer rings you already own and make the most of your past investment in GWT. Couple your existing collars to a new-generation instrument with best-in-class electronics and give a second life to your inspection programs.

Ramp up your utilization rate

Sonyks is an incredibly versatile system that allows operators to address more applications thanks to short-range and medium-range capabilities in addition to long-range ultrasonic testing. For example, use the new 128 kHz magnetostrictive collar to inspect flanged pipes efficiently.

PIEZO TOOLING
6 - 72 inch

MAGNETO TOOLING
1.5 - 4 inch

SPECIFICATIONS

INSTRUMENT

Dimensions (W × H × D)		355 × 288 × 127 mm (14.0 × 11.3 × 5.0 in)
Weight (with 1 × battery)		7.2 kg (15.9 lb)
Power Requirements		100–240 VAC, 50–60 Hz
Power Supply		Direct VAC or onboard batteries
Batteries	Type	10.8 V Li-ion, rechargeable, DOT compliant
	Typical Life	6–8 hours
Video Output		HDMI
Number of Channels Transmit		40
Transmitter Frequency Range		5–260 kHz
Standard Output Voltage		200V, peak to peak
Number of Channels Receive		40
Receiving Gain Range		Up to 100 dB
Maximum Sample Range		365 m: longitudinal in pulse-echo or 200 m: torsional in pulse-echo
Maximum Number of Averages		128
Focusing Options		C-scan imaging, Time delay focussing
Display		• 26.4 cm (10.4 in) • Non reflective (AR coating) • Anti-fingerprint (oleophobic coating) • 3 mm (1/8 in), chemically strengthened glass cover • Optically bonded LCD and touchscreen • Passive backlight enhancement
Software Options		Sonyks GO (Instrument) Sonyks PRO (Optional Laptop Control)
Laptop Connectivity		Optional connection through Wi-Fi or Gigabit Ethernet
Storage		200 GB, SSD
Cooling		Sealed and internal fan
Onboard Pump		60 PSI maximum pressure
Onboard Collar Pressure Monitoring		Yes
GPS		Accurate positioning to 2.5 m (8.2 ft)
Instrument Transduction Compatibility		Magnetostrictive and Piezo transducer compatibility
Supported Rings		Sonyks Piezo and Magneto tools, Teletest and other commercial PZT rings

INSTRUMENT (SUITE)

Probe Recognition and Setup	Automatic with Sonyks tooling including ring type, size, serial number, pipe and angular orientation
Maximum Sample Range	125 ms
Automated Self-check	Onboard capacitance testing

ENVIRONMENTAL

IP Rating	Designed for IP65
Operating Temperature	0–40°C (32–104°F)
Operating Humidity	95%, non-condensing
Compliance	ASME, EN 61010-1, CE, WEEE, FCC Part 15B, ICES-003, AS/NZS CISPR 22, RoHS

TOOL AND MODULE TYPES COMPATIBILITY

Piezo Tooling – Transduction Method	Piezoelectric transducers (PZT)
Piezo Tooling – Frequency Range	20–80 kHz broadband collection
Piezo Tooling – Pipe Size Range	15.2–91.4 cm (6–36 in) single collar 66–182.9 cm (26-72 in) dual collar setup
Piezo Tooling – Sensors	Automatic collar recognition, pipe size, orientation and angular position
Piezo Tooling – Max. Surface Temp.	120°C (248°F)
Magneto Tooling – Transduction Method	Segmented Magnetostrictive Sensors (SMS)
Magneto Tooling – Frequency Range	32 kHz – Test range 22–42 kHz 64 kHz – Test range 54–74 kHz 128 kHz – Test range 118–138 kHz
Magneto Tooling – Pipe Size Range	3.8, 5.1, 7.6 and 10.2 cm (1.5, 2, 3 and 4 in)
Magneto Tooling – Maximum Surface Temperature	80°C (176°F) 120°C (248°F) short term
Teletest Tooling – Transduction Method	Piezoelectric transducer
Teletest Tooling – Pipe-size	15.2–61 cm (6–24 in) single collar 66–132.1 cm (26–52 in) dual collar setup 137.2–198.1 cm (54–78 in) treble collar setup
Teletest Tooling – Frequency Range	20–80 kHz depending on spacing and wave mode
Teletest Tooling – Maximum Surface Temperature	Standard 120°C (248°F) High Temperature (HT) 240°C (464°F)
Teletest Module – Wavemode Compatibility	Multimode 3 ring torsional – 30 mm (1.2 in) 3 ring torsional – 45 mm (1.8 in)

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