INTECH NDE
Inspection Solutions

WeldCheck2 Single Channel
WeldCheck+ dual Channel

WeldCheck2 - Single Channel

WeldCheck+ - Dual channel

WELD INSPECTION EDDY CURRENT FLAW DETECTOR

- Designed to meet & exceed the requirements of EN 1711 & ISO 17643 "Eddy Current Examination of Welds by Complex Phase Analysis"

- Advanced features including Loop, Guides & Automatic Lift-Off Gain Correction

- Large, crisp, daylight readable display

- User-friendly interface and ergonomic lightweight design

- Over 7 hours battery life

- Rapid 2.5 Hour charging time

- Three year warranty

Both the WeldCheck+ and WeldCheck2 can perform a great many eddy current inspection tasks due to their superior performance including weld inspection, surface defect detection and low frequency inspection of non-ferrous material.

The WeldCheck2 is a single channel instrument that offers a simplified specification but none the less boasts a 10Hz-20MHz frequency range.

The WeldCheck+ instrument is a dual-frequency eddy current inspection instrument with conductivity. The dual channel/frequency capability means that the instrument can perform, in addition to single frequency, applications that require dual frequency.

INDUSTRY STANDARD PROBE CONNECTORS

The WeldCheck series uses a wide range of eddy current probes meeting all the needs of the Aerospace Eddy Current Inspector. Absolute, bridge and reflection connected probes can use the industry standard 12 Way LEMO Connector. A LEMO 00 Connector is also provided for simpler connection of absolute probes.

WIDE FREQUENCY RANGE

The single frequency WeldCheck2 has a frequency range of 10Hz to 20MHz, whereas the dual channel WeldCheck+ offers 10Hz -12.8MHz, ensuring a diverse range of real world applications can be met.
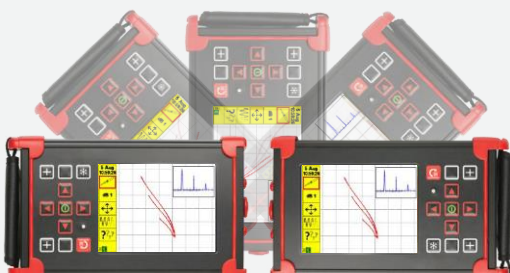
WORKS THE WAY YOU DO!

The WeldCheck series has been created with user convenience and efficiency in mind at all stages of the design and manufacturing process. One Key Benefit of the WeldCheck series is the "flip" function providing the ability to work identically in left-handed and right-handed mode.

LIGHTWEIGHT, COMPACT & RUGGED

The WeldCheck series weighs just 1.2kg (2.7lbs) and has a robust tough aluminium alloy Mg Si 0.5 powder-coated outer case and fitted with rubber feet to aid grip, with the internal design optimised to resist moist, tropical or salt-laden atmospheres.

Both instruments have two integrated moulded "Sure Grip" handles on the rear of the case making it equally at home whether on the workshop bench or in the field with an integral hand-strap for even greater ruggedness and easier grip in use.

The WeldCheck series also has enhanced durability through a fully-fitted, custom-designed outer "protective boot".

DAYLIGHT VISIBLE LARGE COLOUR SCREEN

We understand that the operator will use the WeldCheck in all types of weather and light conditions and being able to see the screen clearly is a top priority.

The WeldCheck has a fully daylight readable 14.5cm LCD Colour Screen of 640 x 480 pixels ensuring the Operator has excellent signal resolution and presentation no matter what the working conditions are.

The operator has the choice of configuring their own colour schemes and display types. This will optimise their viewing ability of the screen in any light conditions. It is possible to view the readings in a choice of spot, time-base, waterfall or meter display types.

EXTRAORDINARY BATTERY LIFE

With more than 8.5 hours battery life with a 100kHz Weld Probe and maximum backlighting, the WeldCheck is an obvious choice when faced with a long day of Eddy Current NDT. With the internal memory able to store over 500 saved readings, the WeldCheck can easily be in the field for an entire shift without needing to be returned to base for charging.

In addition, an external AA battery power pack can extend the battery running time for a further 4 hours.

EQUIPPED FOR ALL ENVIRONMENTS

We know that in an oilfield environment the WeldCheck is going to come up against some of the harshest working conditions in the NDT industry, not to mention being lifted and lowered on ropes, dropped and bumped.

With a rear foot stand and four harness attachment points, the WeldCheck is designed to be used in all environments from the desktop in the office to the rigours of the job site.
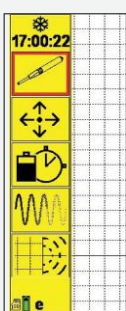
EASY TO USE MENUS & ICON SYSTEM

The WeldCheck series menu system is simple and fast to navigate with the ability to add individually selectable soft key menu items to the sidebar as recognisable icons for rapid function access and a quick setting menu for easy set-up, review and adjustment.

With four operator-selectable soft keys and a fifth slot for the last menu function used, Technicians can quickly customise the system with their preferences. Each saved instrument setting can be associated with a unique, single press set of quick access soft keys. There are also two front panel hard keys that can be readily programmed for rapid single press access to frequently used functions.

RECORD AND REPLAY

Up to 164 seconds of live data may be recorded in real-time and then played back either on the instrument or on a PC, using the desktop application ETherAnalyser for subsequent analysis and review. The recorded data may be further optimised by adjusting many settings including Phase, Gain, Filters, Display and Spot Position.
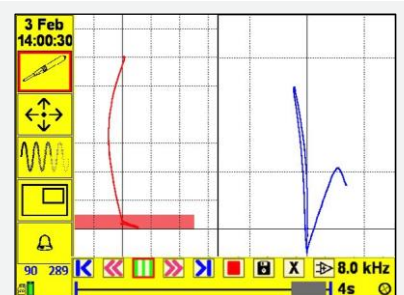
All Possible Applications Covered!

The WeldCheck2 and WeldCheck+ offer maximum flexibility when deciding which features are needed for your application. As well as the hand-held WeldCheck, AeroCheck2 and AeroCheck+ instruments, the range also includes the Victor 2.2D for inline component testing solutions.
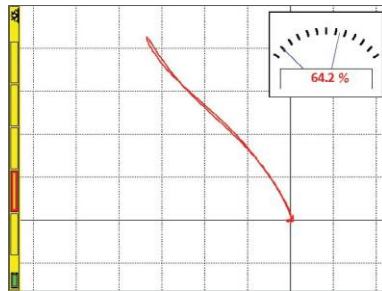
Key Differences

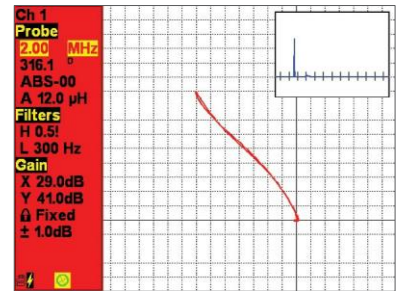|	D●●● ●●●●●●●●●	L●●● O●● ●●● ●●●●●●●●●●●●●	●●●●●●●●●●●●	G●●●● L●●●	T●●●●	E●●●●●●●● ●	●●●●●●●	F●●●●●●●
W●●●●●●●●2	●			●	●	●	●	S●●●●● 10Hz-20MHz
W●●●●●●●●+	●	●	●	●	●	●	●	D●●● 10Hz-12.8MHz

● = As Standard

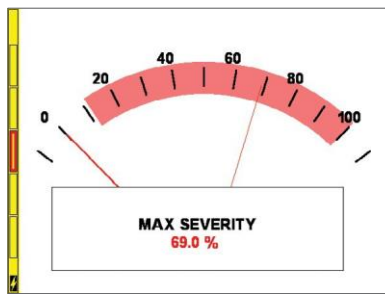## Exceptional Screen Clarity For Any Application
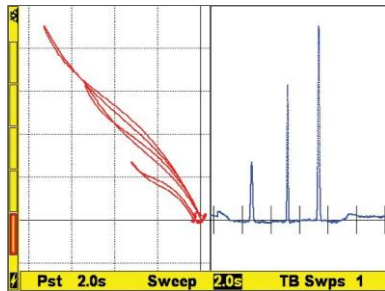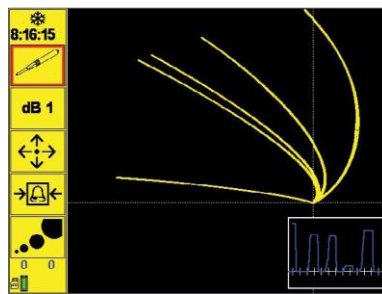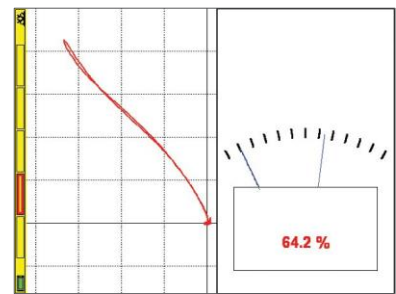
50/50 XY & Timebase

XY with Small Meter

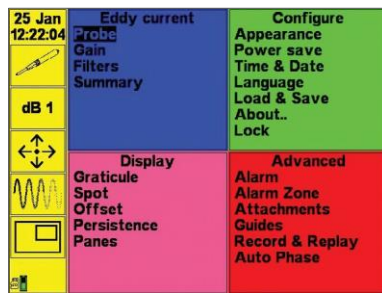XY with small timebase and Quick Menu

Meter Full Screen

Dark background polar graticule and soft-keys

XY and Meter 50/50

XY Full screen with Box Alarm

Simple single screen menu showing four user assignable soft keys and one "last item used" soft key

Timebase Full Sceen with level arm

Features Available On The WeldCheck2 & WeldCheck+

Guides Feature: "Guides" allows the user to display a slide show that can be created easily with commonly used desktop software. The benefit of this feature is that instructions, tutorials and procedures for an inspection can be added to the WeldCheck+ very quickly and the NDT inspector can easily switch between the inspection itself and the "Guides" while performing a live test.
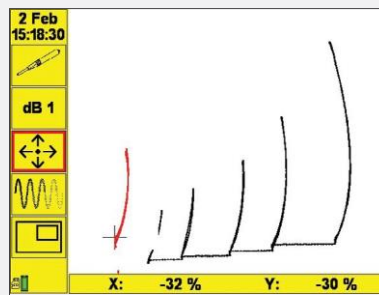
**Trace Feature:** The trace function allows a reference trace to be stored on the screen and appears along with the graticule behind the live spot, allowing the operator to readily compare the live data with the reference calibration.

"Loop" Feature: Loop is a convenient way of capturing a short live repetitive signal and then optimizing the instrument settings through real time adjustments of the Phase, Gain, Balance, Filters and Display Configuration in order to simplify the task of optimising the parameters.

The Loop function is excellent for calibration set up especially for setting a Dual Frequency mix.

Exclusive Features Only Available On The WeldCheck+

Dual Frequency / Channel Feature: At different frequencies, different signal indications (e.g. lift off and defect) have a different relative phase and amplitude response. By means of Phase rotation and Gain change of the X Y signal components one of these indications can be manipulated to be almost identical in phase and amplitude as the other and then by subtraction (mixing), the unwanted component is minimised, giving an improved detection of the required signal.
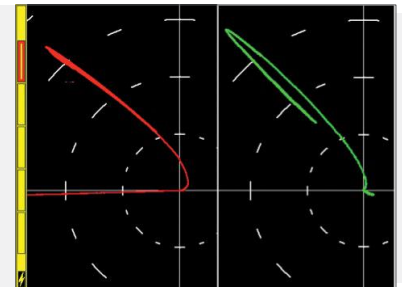
Auto-Mix Feature: A dual frequency mix exploits the phase and sensitivity change between two different types of indication to suppress one and enhance the other.

Auto-mix simplifies the sometimes complex procedure of mixing two different frequency signals and can be achieved on the WeldCheck+ through a series of easy steps. Once set up, the Auto-mix itself is as simple as pressing one key.
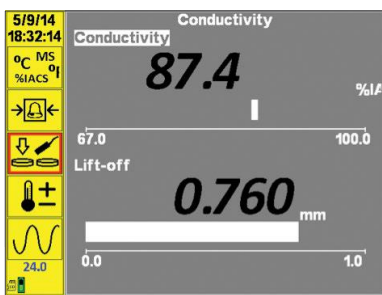
Conductivity Measurement: When connecting the Conductivity Probe, the WeldCheck+ auto-detects the probe and seamlessly switches into conductivity mode. Removal of the probe switches the instrument back to flaw detection mode.

NB: The Conductivity Measurement Option is available through the purchase of the KACON001 KIT.

Automatic Lift Off Gain Compensation: The Lift Off Gain (LOGC) is a feature that automatically compensates the gain of the defect channel according to the paint thickness thus ensuring that a defect signal will appear the same height irrespective of the paint thickness.
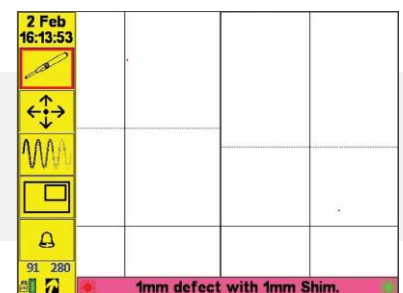
Both the WeldCheck2 and WeldCheck+ are supplied with a standard "Three Year Manufacturer Warranty".
This covers all components of the Instruments and only excludes customer damage or misuse.
The "Three Year Warranty" can be extended to "Six Years" through purchase of "ETherCover" Extended Warranty Protection.

Specifications

		WeldCheck2	WeldCheck+
Probe	Connectors	12 Way Lemo 2b (Absolute, Bridge and Reflection) and Connection Lemo 00 (for single element absolute probes)	Simultaneous probe operation possible using Lemo 12 way and Lemo 00
Frequency		Single Freq. = 10Hz – 20MHz with range variable resolution.	Dual Freq. = 10Hz - 12.8MHz
Gain	Overall	-18 to + 104 dB, 0.1, 1 and 6dB steps (104dB maximum) + Mix Gain (-18 to +18dB on Output)	
	Input	0dB or 12dB	
	Drive	0dB, 6dB and 10dB (0dB reference 1mW into 50 ohm)	
	Max X/Y Ratio	+/-100.0 dB	
Phase	Range	0.0-359.9°, 0.1° steps	
	Auto Phase	Allows phase angle to be automatically set to a pre set angle	
Filters	Normal High Pass	DC to 2kHz or Low Pass Filter, which ever is the lower in 1 Hz steps. Plus variable adaptive balance drift compensation 0.01 - 0.5 Hz (6 steps)	
	Normal Low Pass	1Hz to 2kHz or a quarter of the lowest test frequency, which ever is lower in 1 Hz steps	
Balance	Manual	14 internal balance loads; 2.2µH, 5.0µH, 6.0µH, 6.5µH, 7.0µH, 7.5µH, 8.2µH, 12µH, 15µH, 18µH, 22µH, 30µH, 47µH, 82µH	
	Automatic	Optimised balance load selection	
Alarms	Box	Fully configurable, Freeze, Tone or Visual	
	Sector	Fully configurable, Freeze, Tone or Visual	
	Output	Open collector transistor (50v dc at 10mA max) available on 12 way Lemo	
Display	Type	5.7" (145mm), 18 bit Colour, daylight readable	
	Viewable Area	115.2mm (Horizontal) x 86.4mm (Vertical)	
	Resolutiion	640 x 480 pixels	
	Flip	Manual or automatic screen orientation change to enable left or right handed use	
	Colour Schemes	User configurable Dark, Bright and Black & White	
	Configurable Screen	Full Screen, Single, Dual Spot or Dual Pane with variable size and location and function e.g. XY, Timebase, Waterfall and Meter.	
	Display Modes	Spot, Time base (0.1-20 seconds x 1-200 sweeps and up to 55 seconds), Waterfall and Meter with peak hold and % readout	
	Graticules	None, Grid (4 sizes 5, 10, 15 and 20% FSH), Polar (4 sizes 5, 10, 15 and 20% FSH)	
	Offset	Spot Position: Y =-50 to +50, X =-65 to +65%	
	Digital Spot	Display in X,Y or R,θ	
	Position Readout	Display of all settings in Legacy Format	
	Summary		
Removable Data Storage	Setup Storage	micro SD up to 32GB, holding over 10,000 settings	
	Stored Screen Shots	micro SD up to 32GB, holding over 10,000 screen shots	
	Record Replay	Comprehensive Record Replay and Storage	
		Real-time recording of trace data and Replay on instruments and desktop PC up to 164 seconds	
Outputs	PC Connectivity	USB (Full PC remote control plus Real Time data)	
	Digital Volt Free Alarm	On Lemo 12 way Open collector transistor (36v dc at 10mA max)	
	VGA	Full 15 way VGA output	
Languages		English, French, Spanish, Italian, Portuguese, Russian, Japanese, Chinese, Turkish, Czech, Norwegian	
Verification Level		The system includes on delivery a 2 year validity Verification Level 2 detailed functional check and calibration as per ISO 15548-1:2013	
Power On Self Test		The system performs a self test on start up of external ram, sd ram, accelerometer, Micro SD card, LCD screen buffer	
Power	External	100-240 v 50-60Hz 30 Watts	
	Battery	Internal 7.2V nominal @ 3100mAh = 22.32 watt.hr	
	Running Time	Over 7 hours with a Weld Probe at 100kHz and 50% backlight	
	Charging Time	2.5 hrs. charge time, Simultaneous charge and operation	
Physical	Weight	1.2 kg, 2.7 lbs	
	Size (w x h x d)	237.5mm x 144mm x 52mm / 9.4" x 5.7" x 2.1"	
	Material	Aluminium alloy Mg Si 0.5 powder-coated	
	Operating Temp	-20 to +60 °C	
	Storage Temp	Storage for up to 12 months -20 to +35 °C Nominal +20 °C	
	IP Rating	54	

Advanced Features

Guides Attachments	Create and display a slide show containing instructions, tutorials and procedures using Microsoft PowerPoint. Screenshots and Data Recordings are saved in a folder with the name of the Settings.
Loop	Capture a live repetitive signal and then optimise the instrument settings (Phase, Gain, Filters) to simplify optimising the parameters
Trace	Allows a calibration reference signal to be stored on the screen and then compared with the live signal
Data Output	Real-time post processed over USB at 8kHz overall for all 3 data pairs (X, Y and Mix) with DLL for embedding functionality into software.

WeldCheck+ Only Advanced Features

Lift Off Gain	Automatically compensates the gain of the defect channel according to the paint thickness

Conductivity Specification (WeldCheck+ Only)

Frequency	One frequency only 60kHz standard (choice of 120, 240 and 480kHz)
Acccuracy	0.5%-10% IACS better than +/-0.05% IACS 10%-25% IACS better than +/-0.25% IACS 25%-60% IACS better than +/-0.5% IACS 60%-110% IACS better than +/-1% IACS Lift Off corrected to 1.0mm No temperature compensation All Errors at 90% Confidence Level
Resolution	3 decimal points max Auto Resolution Mode AutoS = Legacy Instrument, Auto = SigmaCheck

Equipment Kits

STANDARD WeldCheck Series Kits
KIWEL003 Kit, WeldCheck2, Eddy Current Portable Flaw Detector, Including:
IWEL003 Instrument, WeldCheck2, Single Frequency, (10Hz-12.8MHz) Hand Held, Portable Flaw Detector. Software + Manual on USB Stick
AWEL002 AeroCheck, Power Adapter + Input Plugs (UK, EU, US & Australia)
AWEL003 Adjustable Shoulder Strap, Padded with Quick-Release
AC006 Instrument Soft Carry Case
A090 USB Cable, A to MIN B
40463 Quick Reference Card

KIWEL002 Kit, WeldCheck+, Eddy Current Portable Flaw Detector, Including:
IWEL002 Instrument, WeldCheck+, Dual Frequency, (10Hz-12.8MHz) Hand Held, Portable Flaw Detector. Software + Manual on USB Stick
AWEL002 AeroCheck, Power Adapter + Input Plugs (UK, EU, US & Australia)
AWEL003 Adjustable Shoulder Strap, Padded with Quick-Release
AC006 Instrument Soft Carry Case
A090 USB Cable, A to MIN B
40463 Quick Reference Card
ALLCX-M02-015A Lead, Lemo 00 to Microdot, 1.5m (Absolute)
ALL12-L04-015B Lead, Lemo 12-Way - Lemo 4-Way (Bridge)

OPTIONAL ACCESSORIES
AWER002 Hard Transit Case
AAER004 Protective Splash Proof Cover (WeldCheck2, WeldCheck+, AeroCheck2, AeroCheck+)
AWEL006 External, 8 x AA Battery Holder with On/Off Switch
AWEL008 In car Power Adapter
ALL12-L04-015R Lead, Lemo 12-Way - Lemo 4-Way, 1.5m (Reflection)
ALL12-L04-015B Lead, Lemo 12-Way - Lemo 4-Way, 1.5m (Bridge)
ALLCX-M02-015A Lead, Lemo 00 to Microdot, 1.5m (Absolute)
ALLCX-B02-015A Lead. Lemo 00 to BNC, 1.5m (Absolute)

For more information on any of these products please visit
www.intechnde.com
Email: Sales@intechnde.com

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Tel: 604 276 8006	Tel: 780 448 9575	Tel: 289 430 0286
Fax: 604 276 8725	Fax: 780 466 1280	Fax: 780 466 1280
Toll Free: 1 800 677 8884	Toll Free: 1 888 576 7756	