

NovaScope 5000 Precision Thickness Gauge



NovaScope 5000



Previous generation
NovaScope designs

- **Advanced Design Increases Application Range....** The 5000's specially designed pulser-receiver section covers applications ranging from those requiring delicate high resolution to those demanding hefty penetrating power and high sensitivity. The broadband dual-trace scope displays the ultrasonic A-trace and the various selectable gates needed to optimize the setup and assure the digital thickness response for a given application.
- In addition to its adjustable noise-blocking IP and IF gates, a **TAC-Gate** (Thickness Amplitude Compensation) allows increases in signal-to-noise ratios for ultrasonically "difficult" materials.
- A host of other controls round out the features necessary to produce exceptional performance and versatility. And to extend its standard digital output interfacing ability, there's even a microprocessor based high speed binary (rep rate) and RS-232 output.
- **More than Just a Thickness Gage....** The NovaScope 5000 is a sophisticated thickness gaging and monitoring system integrated into a single tabletop instrument. its advanced design is specifically intended for those complex, difficult or ultra-critical applications that require special ultrasonic

TemaFlux Srl

C.F., P.IVA e N. iscrizione registro imprese di Brescia: 02397750981

Via Tartaglia, 11 – 25064 Gussago (BS)

Tel. +39 030 322.079 - Fax +39 030.311.872

e-mail: temaflux@temaflux.com

c.s.. € 50.000,00 i.v.

www.temaflux.com

capabilities. It can reliably handle contact spot gaging on difficult, complex shapes, and with the flip of a switch, the 5000 becomes a sophisticated process line instrument for non-contact automated thickness monitoring.

Stationary or In-Motor Inspection...

Many products with simple to complex shapes can be gaged with small hand held transducers (contact or delay line types). For gaging on particularly sharp contours or in very small spots, effective results can be obtained using a bubbler and immersion transducer with a sharp-focused ultrasonic beam. The product can be presented in a continuous manner (e.g. a web); discrete lengths (e.g. pipe); or as rapidly indexed small parts (e.g., bottles and forgings).

Various Digital and analog outputs of thickness data and alarms are available on the side panel to interface with the controllers, loggers or computers. Such system setups permit automatic thickness monitoring and, in certain situations, process feedback control.

Features:

- Color Scan imaging capability when used with NDT Systems' PortaScan.
- 0.0001 " (0.0025mm) digital resolution; as low as 0.005"(0.127 mm) thickness resolution.
- Compatible with contact, delay line or immersion transducers.
- Dual-trace display; A-Trace and gates.
- Displays English or Metric units.
- Velocity display (quartz-stabilized, digital).
- Full RF or rectified RF display.
- Selectable multiple echo interval.
- Receiver attenuation control plus manual gain and automatic gain control (AGC).
- TAC (Thickness Amplitude Compensation), for noise suppression.
- Outputs: Alarms, Analog Thickness, Digital
- High Speed Binary, Serial RS-232C, IP Sync, and PortaScan.
- Input: External Sync.

Technical Specifications:

Digital Display

Four Digit (LED), with 0.2 Second Update

Dimensional Readout

English and Metric (Selector Switch)

Gaging Range English: 0.005-10 inches Metric 0. 13-100 mm
(Depending Upon Material)

Digital Resolution

English Units

±0.0001 " on 1 " Range

±0.001 " on 10" Range

A-Trace Display

Sweep Width Switchable down to 50 ns/Div Continuously Adjustable

Sweep Delay - 1 ms to 80 ms

Display - Dual Trace; A-Trace plus Selectable

Gate Traces (IP, IF, T or TAC)

Display Modes - Full Wave RF, Positive or Negative
Rectified

T-Gate

Thickness Gate with Adjustable Sync

T-Gate Start/Stop

Metric Units

±0.0001mm on 10 mm Range

±0.001mm on 100 mm Range

Measuring Mode

Sets Mode for Contact, Delay Line or Immersion Transducers

Readout Mode

Selects Digital Display for Thickness or Velocity

Pulser**Risetime**

5 to 10 ns into 50 Ohms (Depending on Pulser Voltage)

Amplitude

Selectable for 90, 150, or 300 Volts

Peak into 50 Ohms

Repetition Rate

Selectable for 625, 1200, 2500 or 5000 Hz

Damping

15 to 350 Ohms

Receiver**Adjustable Gain**

66dB

Automatic Gain Control

40 dB Dynamic Range

Reject

Variable Threshold to Full Scale

Bandwidth

30 MHz (6 dB down),

20 MHz (3dB down)

Attenuator

0, 10, and 20 dB Selectable

Selectable on Positive or Negative Half Cycles

IP-Gate

0.25 to 20 ms (Contact), 1.0 to 0 ms (Delay or Immersion)

IF Gate

0.1 to 8.0 ms

TAC-Gate

Adjustable thickness Amplitude Compensation of **Gain:**

Start Control 0.02 to 6 ms

Amplitude Control 0 to 17 dB

Slope Control 0.1 to 50 ms

Alarms

Three functions: LO, HI, LO/HI

Outputs

Alarms, Analog Thickness, Digital High Speed Binary, Serial RS-232C, IP Sync and PortaScan

Inputs

External Sync

Power Source

Switchable Between Nominal 115VAC (95-128) and Nominal 230VAC (185-250) 48 to 440 Hz

Power Consumption

70 Watts

Size

5.4"H x 12.9" W x 17.2 D

(137 x 328 x 437mm)

Weight

18.2 lbs. (8.3 kg)

Warranty One Year