

# BOLTMIKE III SPECIFICATIONS

The **StressTel BoltMike III** ultrasonically measures tension and clamp load of threaded fasteners. A large, bright, easy-to-read display; rapid calibration and set-up; and automatic temperature compensation ensure fast, repeatable, and accurate fastener tension measurements.

**Key BoltMike III** features include:

- **Simultaneous display** of fastener load, stress, and elongation.
- **Long 40 hour life** with five standard "AA" alkaline batteries.
- **High resolution** 1/4 VGA LCD display to verify signal and optimize probe placement.
- **LARGE DIGIT** and bargraph display with limits for fast testing.
- Automatic temperature **compensation**.
- Built-in probe zero block allows **easy exchange of transducers**.
- Regression analysis for **custom material calibration**.
- **WINDOWS™ software** to download measurements, create reports, and upload test parameters.
- Direct to printer reports.

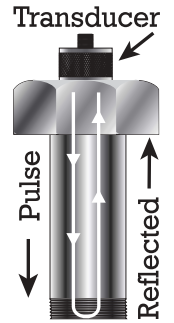
## ULTRASONIC MEASUREMENT OF FASTENER LOAD

An ultrasonic pulse, generated in the transducer, is transmitted into the fastener. The pulse travels down the length of the fastener and is reflected back from the end. The **BoltMike III** measures the total pulse transit time.

Fastener Length = (total pulse transit time / 2) X (material constants)

Fastener Elongation = (fastener length AFTER tensioning) - (fastener length BEFORE tensioning)

Fastener Load = (fastener elongation) X (geometric and material constants)



## PHYSICAL DESCRIPTION

**Width:** 7.5 in (191 mm)  
**Height:** 5.5 in (140 mm)  
**Depth:** 2.2 in (56 mm)  
**Weight:** 2.5 lbs (1.14 kg) with batteries  
 Shock resistant plastic case  
 Weather resistant key pad

## DISPLAY

**Graphic Waveform LCD:** 1/4 VGA  
**Viewing Area (w x h):** 3.8 x 2.8 in/ 96 x 71 mm  
**Pixel Density (w x h):** 320 x 240  
**Update Rate:** 4 Hz  
 Adjustable contrast and backlight  
 Four level **ZOOM** for signal enlargement

## TEST SPECIFICATIONS

**Measurable Fastener Length:**  
 0.75 to 250 in/19 to 6350 mm  
**Fastener and Test Memory:**  
 10,000 fasteners in 512 groups  
**Measurement Modes:** Initial to first pulse; multiple echo for short fasteners  
**Units:** Load, stress, and elongation in English and Metric units  
**Stored material constants:**  
 12 common fastener materials

## POWER SUPPLY

5 "AA" Alkaline or NiCad batteries  
 Interchangeable and easy-to-access  
 Operating time: 40 hours w/o backlight  
 A.C. Power (85 to 260 volt)

**StressTel offers a complete range of transducers for fastener tension measurement.**

## SOFTWARE

STRESSWARE (WINDOWS™ 95/98/ME/NT/2000) to download measurements, create reports, and upload test parameters.

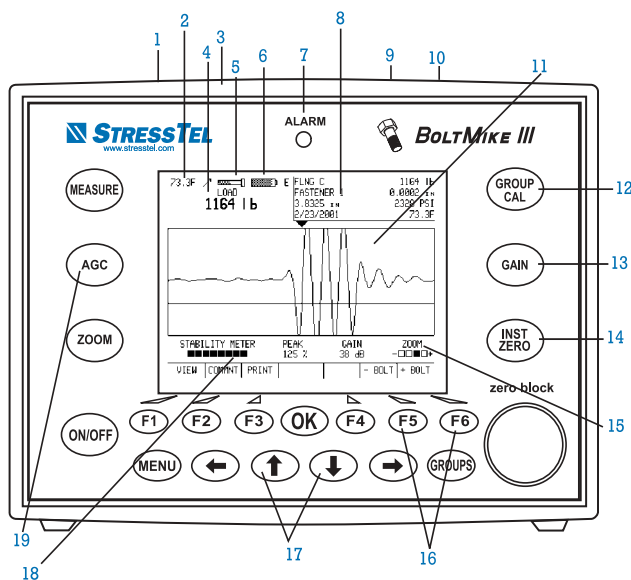
## OPERATING TEMPERATURE

+ 10 to + 120 F/-10 to + 50 C

## WARRANTY

The **BoltMike III** and StressTel fastener transducers are manufactured in a facility with processes conforming to ISO 9001. All **BoltMike III's** have a full two-year warranty on parts and labor excluding batteries, transducers, and cables.

Specifications subject to change without notice



1. Temp Sensor Connector
2. Test Temperature
3. Transducer Connector
4. Measurement Value (load, stress, or elong)
5. Coupling Indicator
6. Battery Life Indicator
7. Alarm LED
8. Measurement Window
9. RS-232 Connector
10. A.C. Power Connector
11. Measurement Signal
12. **GROUP CAL** for Custom Material Calibration
13. **GAIN** Adjustment
14. Zero for Probe Exchange
15. **ZOOM** Indicator
16. **BOLT** Increment Keys
17. Navigation Keys
18. Stability Indicator
19. Auto Gain Adjustment

Visit our website at  
<http://www.stresstel.com>



**The StressTel BoltMike III** ultrasonically measures tension and clamp load of threaded fasteners. A large, bright, easy-to-read display; rapid calibration and set-up; and automatic temperature compensation ensure fast, repeatable, and accurate fastener tension measurements in many diverse applications.

**Aerospace** - Control tightening of bolted engine joints and aircraft wheel assemblies.

**Automotive** - Confirm tension of installed engine headbolts, connecting rod bolts, and main bearing bolts PLUS monitor torque and tensioning tools.

**Injection Molding Machines** - Measure elongation on tiebars and tierods.

**Power Generation** - Verify tension on manway studs and confirm uniform loading of gasketed flange bolts.

**Oil/Petrochemical** - Measure tension in leg fasteners of offshore platforms, confirm uniform loading of gasketed flange bolts in pipelines, and verify tension of vessel, reactor, and heat exchanger bolts.

Critical fastener and bolting applications require easy, repeatable, and accurate tension measurements. Verify your loads with the **BoltMike III**.

View our products and specifications at <http://www.stresstel.com>

