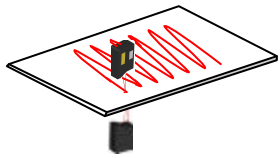


# Sheet Thickness Measurement

## Non-Contact Laser & LED Technology

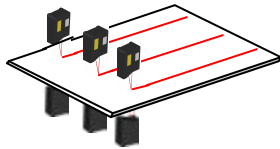
### Thickness Gauging Systems

Noble Tool Corp



#### Automated Traversing Sensor Heads

- Measure full product width
- Programmable width travel & speed
- Multiple product libraries allow for automatic setup from part-to-part.



#### Multiple Static Sensor Heads

- 1 – 4 positions available (2 – 8 sensors)
- Easily adjust positions with our unique rail system

#### Continuously monitor and control sheet thickness in-process

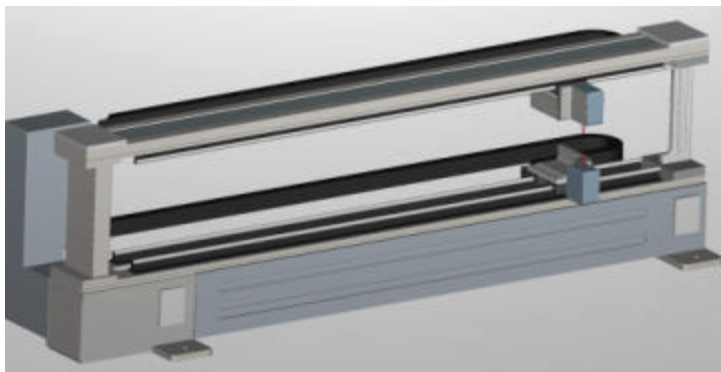
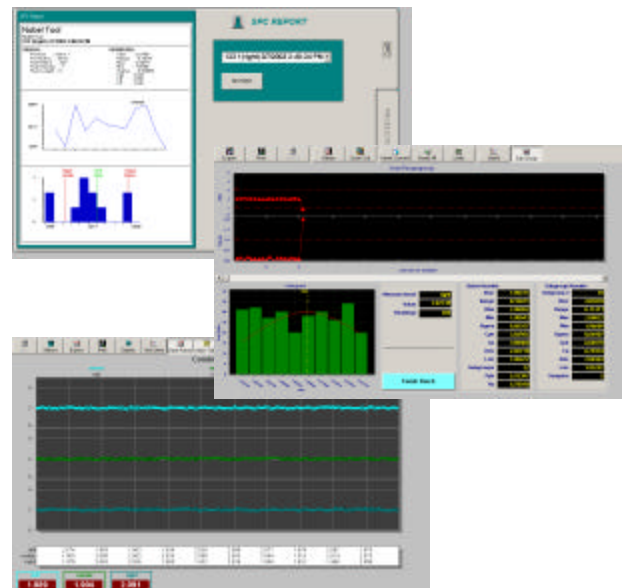
- Reduce Material Waste During Start-up
- Material Savings by Maintaining Narrow Tolerance Band
- Reduce Scrap
- Improved Product Quality

#### Standard Features-

- Easy To Use Graphical Interface
- RS-232 Data Output
- User Defined Tolerance Thresholds
- Tolerance Alarm Outputs
- Calibration Fixture

#### Optional Features-

- SPC Data Collection & Reporting
- Closed-Loop Control
- Air Purge System
- Alarm Stack & Marking Device
- Roller Guide Fixture
- Adjustable Height Stand

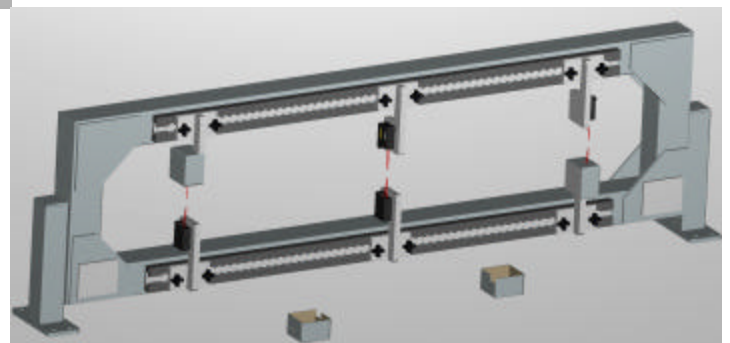


#### Available SPC Analysis Software and Data Reporting

- Multiple Measurement Trend Charts
- Process Monitoring
- User Defined Reporting
- Multiple Part Library

| MEASUREMENT SPECIFICATIONS |   |
|----------------------------|---|
| Accuracy                   | ± 0.1% of range*                            |
| Measurement Rate           | 1000/sec                                    |
| Range (From Nominal)       | ± .005" - ± 4.00" (.13mm - 100mm)           |
| Width Capabilities         | 36", 48" & 60" Standard. Specials Available |
| Thickness Capabilities     | No Limitations                              |

\*Accuracy dependant on product range and surface texture



# Sheet Thickness Measurement

## Non-Contact Laser & LED Technology

### Thickness Gauging Systems

### SYSTEM CONFIGURATION

#### Standard Process/Controller

- RS-232 Serial
- Alarm Output
- Digital Inputs
- Analog Outputs

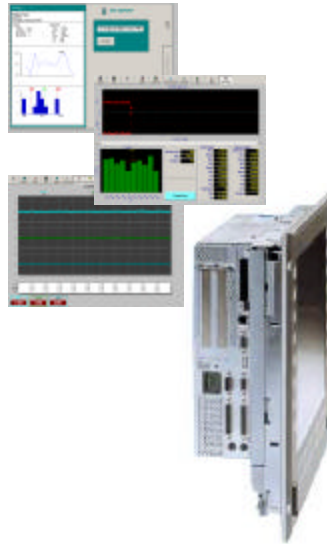
#### Optional Closed-Loop Control

- Dry-contact relay outputs
- DC junction for analog control
- Open collectors for stepper motor control



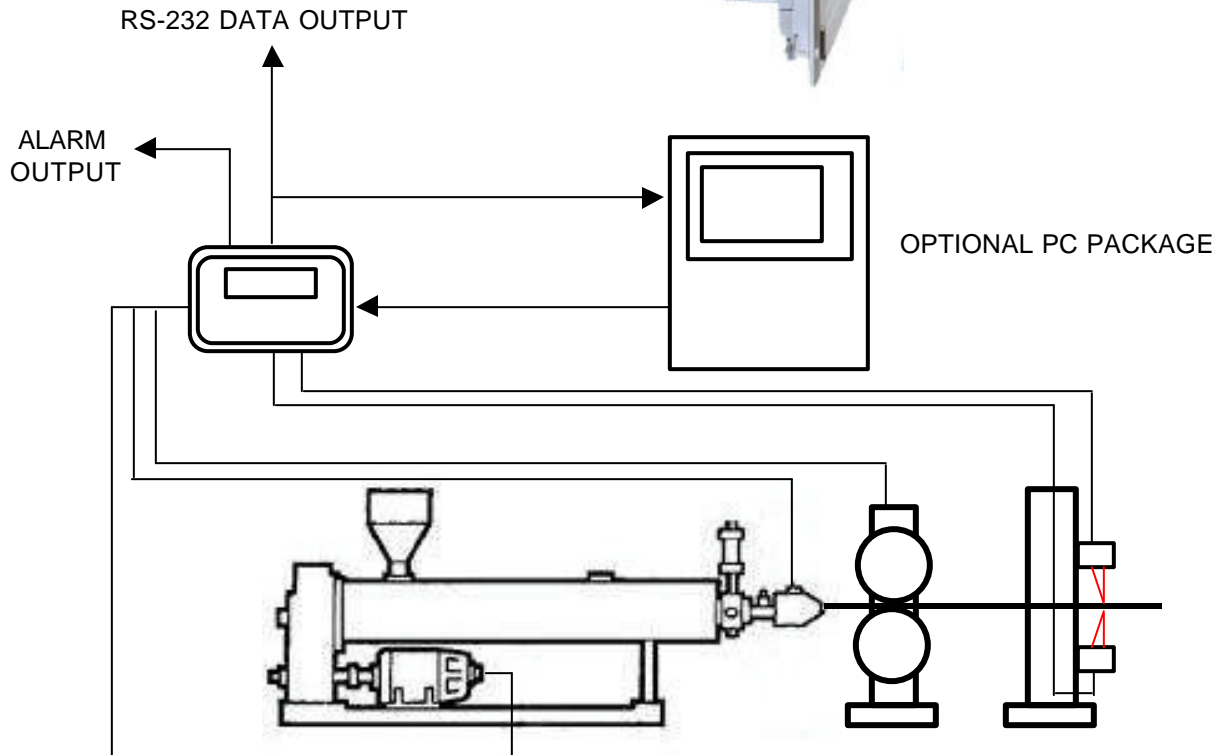
#### Optional Industrial PC & SPC Software Package

- 12" or 15" panel mount touch screen
- Powerful SPC analysis & reporting
- Custom U/I features available



#### Measurement Sensors

- Selected and configured specifically for your products
  - Laser/LED
  - Diffuse/Specular
  - Spot Size
  - Measurement Range
  - Air Purge



## Operating Specifications

### **Power Requirements**

90-260 VAC, 47-63 Hz

### **Operating Temperature**

5-55°C (41-131°F)

### **Laser**

Class II (3mW max) visible red

### **Environmental**

90% RH, noncondensing

## Input/Output Specifications

### **RS-232 Serial Port**

(1) female DB-9

### **Parallel Printer Port**

(1) female DB-25

Compatible with all common printers.

### **Alarm Outputs**

(6) dry-contact relay alarm outputs

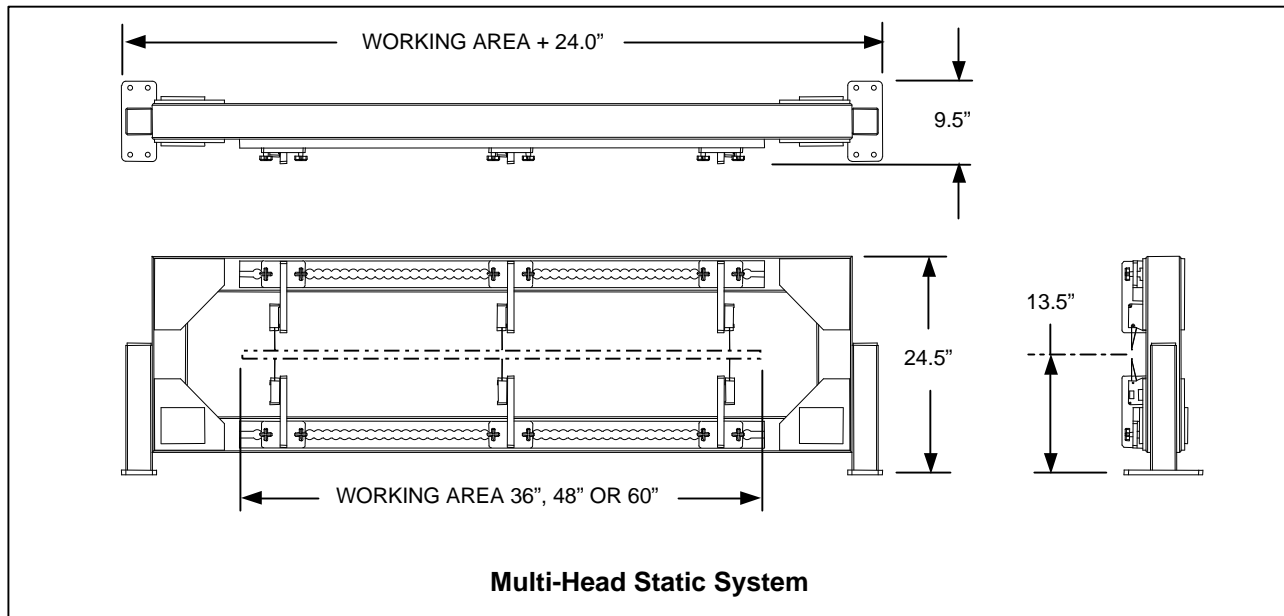
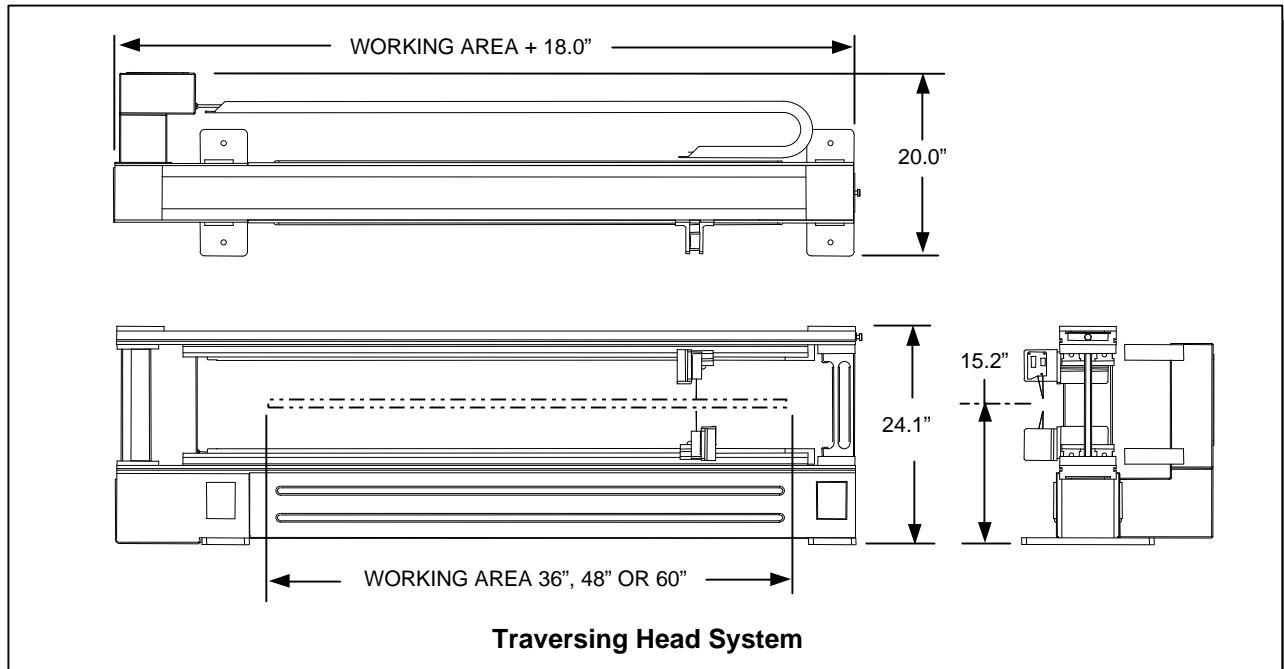
### **Digital Inputs**

(7) digital inputs with voltage input options from 5 –24 VDC to ground

### **Analog Output**

(3) 12-bit analog output channels with BNC connector. Voltage output options: 0-5V, 0-10V,  $\pm 5V$  &  $\pm 10V$ . Current output option: 4-20mA.

## OUTLINE DRAWINGS



**Noble Tool Corp.**

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