

# PS-710V

## Digital Velocity Caliper System



## Special Features

- Direct digital readout of thickness or ultrasonic velocity
- Lightweight, portable system
- Alarm lights and audible signal for fast sorting of parts - above, below or within preset limits
- Velocity related to degree of nodularity in ductile iron
- Handles parts ½" to 2" thick on typical as-cast iron
- Automatic gain control offers exceptional accuracy, reduces variations resulting from back reflection amplitude

## General

This unique digital-readout system is designed around Centurion NDT's versatile PS-710 Pulse Ultrasonic test instrument. The system can provide digital display of part thickness (mechanically or ultrasonically measured) or of ultrasonic velocity. Since there is a relationship between velocity and degree of nodularity in ductile iron castings, the system is primarily used for sorting of such castings where other variables such as chemistry and heat treat are held constant.

# Equipment

The display consists of four 1/2-inch high digits. A switch permits the operator to select readout of mechanically measured thickness, ultrasonically measured thickness, or velocity. Two sets of four thumbwheels are used to set upper and lower limits. Two red alarm lights and a green "go" light provide instant go/no go and above /below indication. An audio alarm may also be used to indicate acceptable conditions, permitting the operator to work without looking at the instrument. Relay contacts may be used to operate external equipment such as spray markers or mechanical sorters.

The hand caliper is compact and light weight, with a built-in pulse-echo transducer (other transducer types, such as pitch/catch, through transmission or water column are available as options).

The spring-loaded mechanical caliper arm will operate on parts from ½ to 2 inches thick. The system includes automatic gain control (AGC), which maintains back reflection amplitude constant. This eliminates variations due to changes in amplitude of return signals and improves accuracy and consistency of measurements.

Velocity measurements are possible on materials having ultrasonic velocities form less than 150,000 in./sec. to over 250,000 in./sec.

The system may alternatively be used as an ultrasonic flaw detector, electronic micrometer, or ultrasonic thickness gage. Operation is from 115 VAC, 60 Hz.