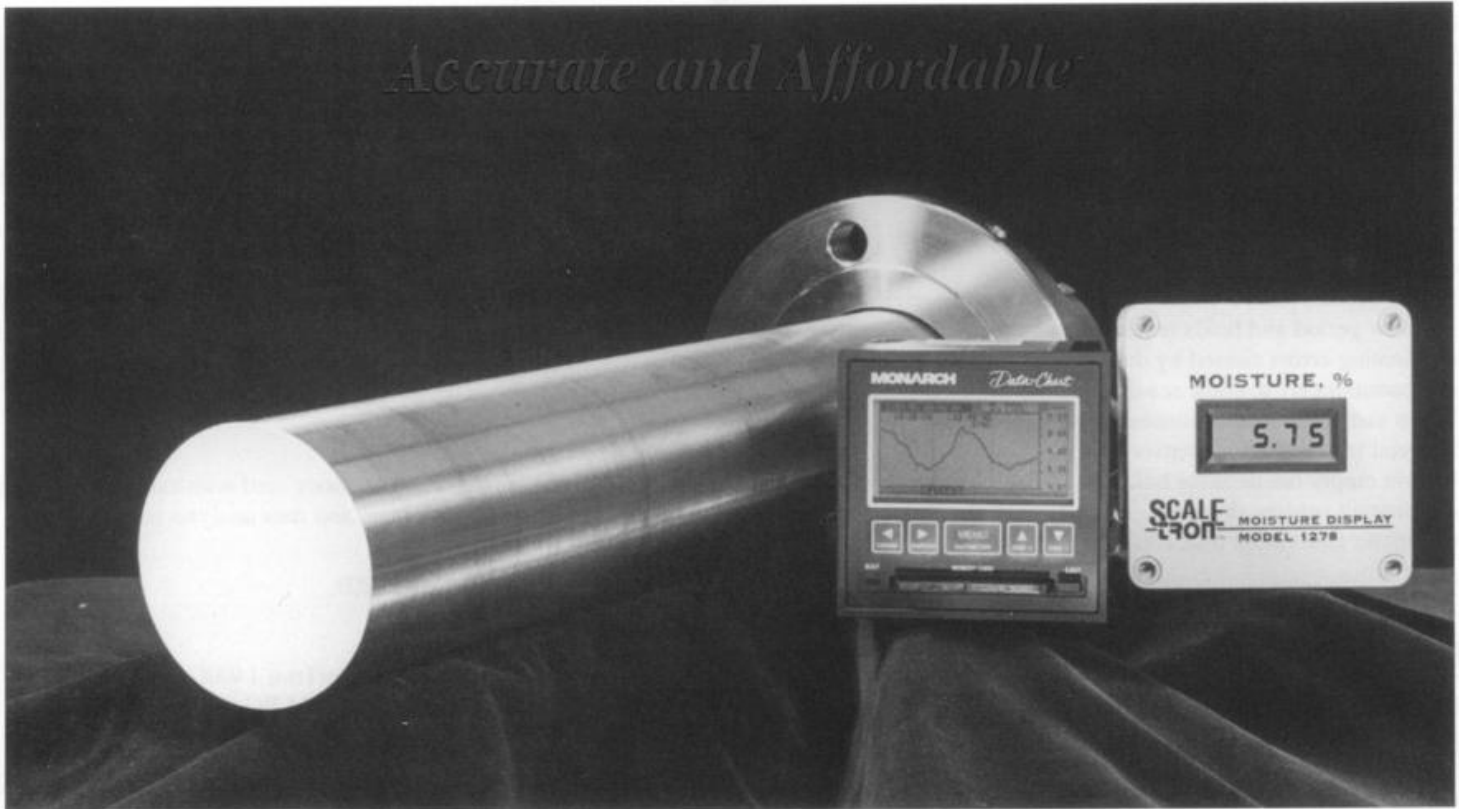


RadarTron 1400C

MICROWAVE MOISTURE SENSOR

Accurate and Affordable



The RadarTron 1400C accurately measures the moisture of fine aggregates such as sand and crushed stone. Its microwave technology eliminates all errors associated with resistance and capacitance methods, guaranteeing an accurate reading every time. RadarTron 1400C is easily installed in any bin wall and is suitable for numeric or graphic display as well as direct connection to a computerized batching system.

THE IMPORTANCE OF ACCURATE MOISTURE MEASUREMENT

In concrete production, the mix design assumes that aggregates, cement and water are present in the correct proportions. If the sand moisture decreases by 2% without being noticed, (which can often happen in practice) the batching system will batch 2% more sand than required and will add noticeably less water than needed, resulting in a dry batch. If the operator corrects this by adding more water, the water/cement ratio will increase, reducing the strength of the product. If the moisture had been measured accurately, the proportions would all have been correct and there would be no need to add more water.

PRODUCTION QUALITY IMPROVEMENT

RadarTron 1400C guarantees: consistent yield; consistent color/texture; consistent workability; consistent strength and durability.

There is no mystery in obtaining accurate moisture measurements. The RadarTron sensor is scientifically designed to ensure control of the following factors:

MATERIAL COMPACTION

No moisture sensor can give accurate readings unless the material is compacted uniformly when the reading is taken. RadarTron's sensing head packs the material precisely during the flow period.

MATERIAL FLOW

Unless the whole sensing element is in the material flow region, which extends vertically above the discharge gate, readings will be affected by the static material in the bin sides. RadarTron adjusts to accommodate all bin shapes.

AVERAGING OVER THE FEED PERIOD

Sensors measure only a few cubic inches of material. As the material flows, the sensor will detect wetter and dryer regions. RadarTron averages readings to obtain the best results every time.

MATERIAL TEMPERATURE

Some sensing methods are sensitive to the material temperature; this must be compensated if accurate results are expected. RadarTron is not temperature sensitive.

FEATURES

- 1/10 to 1/4% accuracy, depending on type of material.
- 0-10 volt, 0-5 volt and 4-20mA outputs for use with computers and PLCs.
- Stainless steel body contains both the sensor and electronics, eliminating the need for a separate processor package.
- Super Hard Ceramic faceplate eliminates the need for recalibration or replacement.
- Optional digital and graphic chart displays.
- Pre-wired and pre-calibrated for quick installation.
- Adjustable probe length allow insertion into material flow region of bin.
- Simple one-hole mount for quick installation without emptying bin.
- Safe - Meets all application regulations.
- Special circuitry ignores erratic readings from loose material during flow.
- FLOW AVERAGING ELECTRONICS averages readings during flow period and holds result for immediate or later use, eliminating errors caused by dry or wet spots. Alternatively, can continuously average readings.
- When sampling is discontinued, reading gradually adapts to material in contact with sensor.
- Built-in empty bin detector holds last value until bin is refilled, eliminating reading dropouts.
- Computer calibration disk allows one-step calibration.

SPECIFICATIONS

SENSOR

- Model:** RadarTron 1400C
- Size:** 3-1/2" diameter, 25" long with 7-1/2" adjustable flange for correct positioning. 8ft. pre-wired captive 7 conductor cable.
- Material:** Body and flange — 304 stainless steel with super hard ceramic faceplate.
- Sensing Volume:** 2" x 2" x 4" at 4% moisture.
- Moisture Range:** 0 - 20% for zero to full scale output. (Actual upper limit is dependent on moisture retaining ability of material, typically 10-12% for medium sand.) Can be adjusted for surface or total moisture and will accommodate negative moistures.
- Output:** 4-20-mA, 0-5V or 0-10V for 0-20% moisture range.
- Power:** 120V/240V 50/60Hz, 5 Watt.
- Sampling Signal:** 120V/240V 50/60Hz, 3mA max.
- Cable Length:** 2,000 ft max.
- Temperature:** 32 - 140° F.

DIGITAL DISPLAY FOR PANEL MOUNTING

- Model:** 1279
- 3-1/2" digit (.00 - 19.99%) display, 0.35" LCD, readable in all light levels. Powered by 4-20mA RadarTron signal. Requires no external power.
- Size:** 1.2"H x 2.4"W x 1.4"D

SPECIFICATIONS

DIGITAL DISPLAY (Waterproof)

- Model:** 1278
- Waterproof plastic case
- Size:** 4.5"H x 4.5"W x 2.5"D

DATA CHART DISPLAY

- Model:** Single channel - DC-1100-NP1
Double channel, for two sensors - DC-1200-NP1-NP1
- Displays moisture trend over a full day's run and can store results in a memory card for later transfer to a computer.
- Power:** 110V 50/60Hz. Optional 240V 50/60Hz or 24V DC.
- Size:** 1/4 DIN panel mount. 3.78"H x 3.78"W x 5.5"D

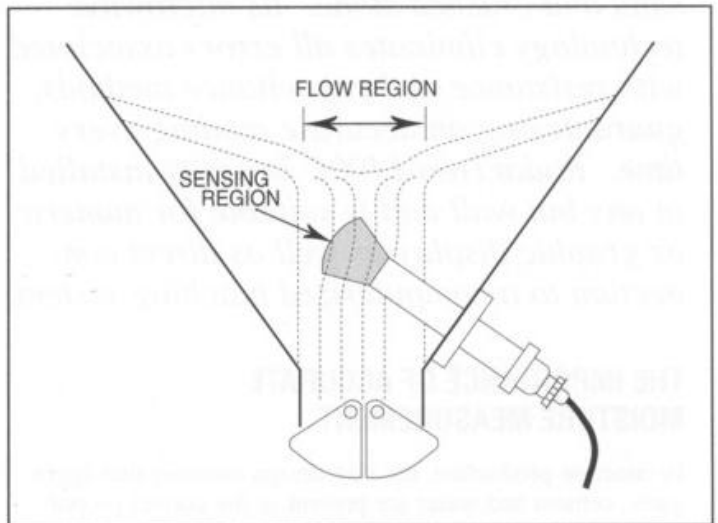
COMPUTER MEMORY CARD READER KIT.

- Model:** MC512/CR-1
- 512K PCMCIA memory card with card reader (plugs into PC computer) and data analysis software.

COMPUTER INPUT BOARD

- Model:** PCL-711S
- Accepts up to 8 RadarTron 1400C Sensor inputs. Compatible with all IBM-PC computers. Fits into any 8 or 16 bit half or full size slot.
- Size:** 6.3"W x 4.25"H, with termination board for external mounting, 4"W x 2.6"H.

TYPICAL BIN INSTALLATION



SCALE-TRON
Perfecting the Art of Concrete Production

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