

# Under Pressure

CONDEC Pressure Calibrators remain a unique portion of Rice Lake Weighing Systems' business. In 1999, Rice Lake Weighing Systems acquired the Measurement and Control Group from EATON Corporation. This group was most widely known for the UMC Series of Digital Weight Indicators under the CONDEC brand. The weighing business was relocated in its entirety to Rice Lake, Wis., and the Pressure Calibrator remained in Connecticut.

The Pressure Calibrator's humble beginnings began as an offshoot of the UMC Electronics. Instead of using a load cell as in the weighing business, an extremely repeatable pressure transducer was used.

The CONDEC Pressure Calibrators also had the benefits of a U.S. Military background. After a development contract with the U.S.

Government, initial units were deployed for the U.S. Navy on FFG-7 Frigates for on-board pressure calibration. No one knew then that the benefits of a military pedigree would lead to a 20-plus year life with thousands of units in service in a myriad of industries. EMI (Electro Magnetic Interference) testing, RFI (Radio Frequency Interference) testing, Salt Spray Testing, and drop tests from a 42 inch height were just a few of the tests that separated the CONDEC Pressure Calibrator from the rest of the industrial field.

The self-contained internal pressure cylinder proves to be a key feature. In the weighing industry, a known weight is placed on a surface for calibration. When calibrating a pressure device, a known pressure must be provided to the pressure device. This is usually done via a test hose to the pressure transmitter or pressure gauge under test. The CONDEC pressure calibrator was the first instrument to have the pressure source totally self-contained. Think of it as a smaller size scuba tank inside a box. Other devices had to use a hydraulic ram to generate pressure or drag a large nitrogen cylinder with them. The CONDEC has the



cylinder built in, and uses nitrogen to eliminate the mess and leaking of hydraulics. As the tests required are dead-ended and usually performed on a small diaphragm device, the CONDEC performed many tests from the easily rechargeable cylinder – even at pressures to 2000 psi.



In weighing calibration, a load cell simulator may be used to calibrate an indicator. The CONDEC pressure calibrator uses a patented precision pressure vernier to dial in the pressure required to calibrate the unit under test. This eliminates any overshoot or searching for a target pressure.

The unit is traceable to NIST (National Institute of Standards and Technology) and this has proved invaluable to the many

industries that count on the pressure calibrator as its master standard. One such industry is the Pharmaceutical and Chemical vertical markets where various batches have to be documented and recorded. The CONDEC pressure calibrator ensures that the pressure sensitive devices used in the manufacture of a chemical or pharmaceutical were accurately calibrated. An entire lot could be ruined if the pressure gauges and transmitters used in its manufacture are not accurate.

Thousands of CONDEC Pressure Calibrators remain in service for many years. Mike Murray, President of Shelby Jones Company (a Philadelphia area instrumentation supplier) comments, "On a recent visit to Baltimore Gas and Electric's Wagner Generating Station, I found that the UPC5200 and UPC5000 CONDEC Pressure Calibrators we sold to them in 1986 were still in service. The current instrument shop supervisor was surprised to hear how long ago the instruments were acquired."

For more than 20 years and with thousands of units still at work in a variety of vertical markets, the CONDEC pressure calibrator continues as a stalwart in the pressure calibration field. ■



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