



Calibration News

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1st Quarter 2006

Key Points from Steve Santangelo

President: The C Series measures and generates on two isolated channels...

1. Thermocouples
2. Temperature by resistive probes
3. Resistance
4. Current
5. Voltage
6. Measurement for frequency signals and for dry contacts

Palmer Wahl wants to help ensure your end product meets specifications. Calibrating your sensors and gauges must be done on a routine basis to make that happen. We would like to help you easily achieve this goal. The accuracy of the measurement and emission specifications our products offer over a one year period is a great start.

Here's to an accurate and successful life together!

—Steve Santangelo



Palmer Wahl Introduces New Calibrators

Asheville, NC - Palmer Wahl Instrumentation Group has introduced two new calibrators that are both traceable to NIST (National Institute of Standards and Technology). All manufacturers are concerned that their processes are running at the correct temperature, voltage, current, resistance, and frequency. These new calibrators allow the manufacturer to check each of their sensing devices to ensure that they are accurate.

The Wahl C Series Calibrators were developed with a lot of industry input. They are IP 54 rated, meaning that they are both dust and splashing water protected. They have the ability to read measurements and gen-

erate a simulation simultaneously. Key Specifications for the Wahl C Series can be found on page 3 of this newsletter or visit www.palmerwahl.com and click on Test & Calibration.

The Wahl P 32 is a Process Signal Pocket Calibrator. This device is also IP 54 rated, has user programmable ramps, and can both measure and simulate at a precision rate of 150ppm of reading. It measures low temperature coefficients, voltage and emissions up to 25mA. It is designed to simplify maintenance operations and commissioning of sensors and transmitters using process signals such as 4-20 mA or 0-10V. The P 32 has an accuracy of 0.015% and is price competi-

tive. All units come with NIST Certification.



Wahl P 32



Wahl C Series

Wahl Calibrators Will Save You MONEY!

As technology advances, accuracies get tighter and tighter and customer expectations get higher. The only way to be certain that your products are within specification is to maintain your equipment's calibration certifications. A company must make a choice to outsource calibration certifications or to certify in-house. Traditionally, due to the expense and complexity of equipment and lack of experi-

enced personnel, calibration was outsourced. If you use a lot of sensors in your process monitoring, outsourcing can be a very costly situation, both in time and money. Some calibration facilities provide on location calibration, however it comes at a price. The alternative is to certify the equipment yourself. With advances in technology and an increase in available technical personnel, in house calibration is not only

feasible but also provides a definite cost benefit. If you have electronic technicians on your maintenance staff, Wahl's C Series and P32 calibrators can assist you in performing

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Palmer Wahl is now
ISO 9001:2000 Certified



Palmer Wahl 50,000 sq ft Facility
Asheville, NC

“Palmer Wahl is dedicated to supplying instrumentation that allows our customers to ensure that fluctuation in accuracy of their sensors does not happen to their processes”



**170 Years of
Continued Innovation**

Meeting ISO 9001 Series Calibration Requirements

There are two clauses that apply to meeting ISO 9001 series calibration requirements, they are: Clause 4-11- 1 in ISO 9001 and Clause 4- 11-2.

Clause 4-11-1 states that measuring and test equipment must be controlled, calibrated and maintained to demonstrate the conformance of the product to the specified requirements.

- Calibrate and adjust devices at prescribed intervals, or prior to use, to standards with a valid rela-

tionship to international or national standards.

- Protect the devices from being adjusted in a way that would cause the settings to be incorrect.
- Provide identification to determine calibration status
- Protect such devices from damage, providing suitable methods of handling, maintenance, preservation and storage.

- Review the validity of previous measuring and monitoring results when equipment is found out of calibration and take necessary actions.
- Maintain calibration and verification records.

...in the next newsletter we will talk about Clause 4-11-2 in detail.

Who Benefits from Calibration? Your Customer

Asheville, NC

The continual monitoring of sensing devices for accuracy is key for maintaining a consistent product to your customer. Without the testing and tracking afforded by Palmer Wahl Calibrators this goal is very hard to achieve.

Steve Santangelo, President of Palmer Wahl said, “Without the repetitive monitoring of all sensors in a manufacturing

process, the process will vary and go out of specification. We are dedicated to supplying instrumentation that allows our customers to ensure that fluctuation in accuracy of your sensors is minimized by use of our calibration equipment”.

“We pride ourselves on producing sensors of all types using the highest quality standards, realizing that these will fluctuate with use over time. Hence,

we have developed these NIST certified calibration devices to ensure that you are able to easily and accurately keep our calibrators and any other sensing devices you may utilize, continually accurate to ensure a quality product every time.”

Calibration Alternative.....

your own in-house, NIST traceable calibrations. These devices can pay for themselves several times over in just one calibration cycle. The C Series and P 32 come standard with NIST certification and can be returned to Wahl annually for re-certification. These may then be used to certify your process monitoring sensors and equipment resulting in a substantial

savings to you. Please check out www.palmerwahl.com and click on Test & Calibration for details and complete specifications.

Please contact us or your Palmer Wahl representative at any time to discuss your specific calibration needs and how we can help.

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*Jim Eldridge - Product
Development Manager*

Specifications C Series

Note: Complete specifications can be found at www.palmerwahl.com and click on New Products.



Price:
C 50 On Site or Bench Top Use - \$2299.00
C 75 Plus Data Recording - \$3199.00
C 100 Plus High Accuracy- \$3699.00

Temperature Resistive Probes	Pt 50 to 1,000; Ni 100 to 1,000; Cu 10 to 50 Example: Pt 100: <i>Accuracy/one year Measurement</i> = 0.012%R+0.05°C, 0.01°C Resolution <i>Accuracy/one year Emission</i> = 0.014%R+0.12°C, 0.02°C Resolution
Thermocouples	13 different types, K, T, J, E, R, S, B, U, L, C, N, Platine, Mo Example: Type K: <i>Accuracy/one year Measurement & Emission</i> = 0/1372°C = 0.013%R+0.08°C, 0.05°C Resolution
DC Current	Example: up to 50mA with 1µA Resolution <i>Accuracy/one year measurement & emission</i> = 0.0175%R+2µA
DC Voltage	Four ranges, +/-100mV, 1V, 10V, 50V Example: +/-100mV with 1µV Resolution <i>Accuracy/one year measurement & emission</i> = 0.013%R+3µV (+2µV)
Resistance	Two ranges, 400Ω , 4000Ω Example: 400Ω with 1mΩ resolution <i>Accuracy/one year</i> 0.012%R+10mΩ Measurement
Frequency and Counting	Example: 20KHz with 0.01Hz <i>Accuracy/one year</i> = 0.005%R
NIST Certification	NIST Certification of the variables above are included at no additional cost.

Specifications Wahl P 32

Note: Complete specifications can be found at www.palmerwahl.com and click on New Products.

DC Voltage:	Three ranges for measurement, two ranges transmission function Example: -2/+25V with 1mV resolution <i>Precision/one year</i> = 0.015%R +2mV
Direct Current:	Three ranges for measurement and transmission Example: -2mA/+24mA with 1µA resolution <i>Precision/one year for measurement & transmission</i> 0.015%R+2µA
NIST Certification:	NIST Certification of the variables above are included at no additional cost.



Price: \$ 599.00

IF YOU DON'T CALIBRATE YOUR EQUIPMENT—WATCH OUT FOR...

Calibration of critical gauges and sensors in the manufacturing process is necessary to produce a consistent product or service. Without this control element one or more of the following will occur.

- Poor Manufacturing practices
- Customer Dissatisfaction
- Non compliance of quality system
- Diminished Production Management
- Low Level of Traceability - the inability to know what is happening or has happened in your manufacturing process
- Poor Quality- this will only spell trouble in the long run for your company. Without an accurate ability to measure your process, the control of the process is greatly diminished, causing customer dissatisfaction and ultimately low employee moral



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 Continued Innovation**

*The World's Finest Manufacturers
of Industrial Temperature,
Pressure, Humidity, Test and
Calibration Instruments.*

How to contact us:

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Fax: 828-658-0728

Email: info@palmerwahl.com

**We're on the Web at:
www.palmerwahl.com**

Why Calibrate Your Equipment?

Measure System Analysis by Edward A. Peterson

History: In the 1980's Six Sigma quality led to significant strides in identifying and controlling key process parameters while testing the capabilities of the measurement system. As these process improvements became more prevalent customers began to expect the new level of quality from producers, further fueling the improvement cycle. Extensive analysis and controls were put in place to improve manufacturing performance. As this drive to improve quality moved into the 1990's, the measurement systems began to come under fire. Suddenly, one of the primary sources of special-cause variation in the data was the measurement gauge— unbeknownst to the manufacturers.....

If you are examining process capability, tracking process quality, analyzing attributes before and after changes, and especially if you are designing experiments, you must know if your gauges have the ability to measure the characteristics of interest and their associated variations. The variations found in each of these analyses may be principally due to variations from the gauge itself!.....

Yet while manufacturers had extensive calibration methodologies integrated into functional activities, minimal systematic processes or procedures existed to validate measurement system capability. Many manufacturers now made a critical mistake, assuming that buying better gauges with higher resolution, at considerable expense, would resolve this problem. These gauges would be calibrated and have their resolution verified, only to still have the same problems of variation that existed before. It was only after extensive analysis with gauge studies

that it became apparent that the total measurement system needed to be considered and that the gauges were just a part of the measurement system. How you apply a gauge and the processes with which you use it are just as important in determining gauge capability. The manufacturers of tomorrow will have measurement system analysis and capability as primary tools in their push to compete with better products.

An Innovation, Productivity and Quality Focus edited by: Dr. Jack B. Revelle PhD 2001

Source: Manufacturing Handbook of Best Practices: Drs. W.E. Deming and Mikel Harry both professed that data should drive the decisions of an organization in improving quality and competitiveness. Such data-driven approaches are dependent on the quality of the data and, therefore, the quality of the measurement system that supplies the data.