






Solutions for Pharmaceutical & Biotechnology Industries




Process Validation / Mapping		
<p>Kaye RF ValProbe®</p> 	<p>Real-Time Wireless Validation System for Standard Validation Application</p> <ul style="list-style-type: none"> • Temperature Mapping, Validation • Warehouses, Storage Areas • Refrigerators, Freezers, Walk-Ins • Incubators, Chambers • Transportation, Logistics 	<ul style="list-style-type: none"> • Ultra-Reliable, fully redundant RF Mesh Technology • Industry's first Validatable RF Wireless System • Enables compliance to cGMP and 21 CFR • Create complaint reports easily and fast
	<p>Real-Time Wireless Datalogger for Steam in Place Application</p> <ul style="list-style-type: none"> • Pharmaceutical Industry • Dairy Industry • Beverage Industry • Biotechnology Industry 	<ul style="list-style-type: none"> • T/P accuracy meets Pharma sterilization requirements. • RF Mesh Networking provides reliable real-time process validation data • Provides 100% data redundancy in both remote logger and base station • Greater than 1 year battery life in typical use, using Standard AA Lithium batteries. • Easy connection to Kaye Pressure transducer • Can be directly connected to 1.5 in triclover flange via SmartGasket® • Standard auto calibration function
<p>Kaye Validator®</p> 	<p>Wired Thermal Validation</p> <ul style="list-style-type: none"> • Autoclaves • Tunnels, Ovens • Retorts • Incubators, Freezers • Chambers, Walk-Ins, Warehouses 	<ul style="list-style-type: none"> • Industry standard for wired thermal validation • Enables compliance to cGMP and 21 CFR part 11 • Create complaint reports easily and fast • Network capability for passwords and audit trails • USB Data Storage & Communication • Common reporting tool for all validation products
<p>Temperature Calibration</p> 	<ul style="list-style-type: none"> • Thermocouple and logger calibration and verification • Drywells and liquid baths • Temperature Reference Standards 	<ul style="list-style-type: none"> • Automatic control and fast heat up and cool down speeds up sensor calibration • Drywells and Oil baths cover operating range of Validator and ValProbe. • Rugged and lightweight baths and references.
<p>IRTD Temperature Standard</p> 	<p>The intelligent resistant temperature device (IRTD) is a secondary standard The self-contained IRTD allows you to cut system error in half while eliminating the cost and effort of calibrating supporting equipment.</p>	<ul style="list-style-type: none"> • Temperature range -195 to 420°C • Accuracy over range $\pm 0.025^\circ\text{C}$ • Resolution 0.001°C • DKD Certified Calibration, Traceable to NIST
<p>Kaye ValProbe®</p> 	<p>In situ wireless data loggers</p> <ul style="list-style-type: none"> • EtO • Tunnels, Ovens • Retorts • Incubators, Freezers • Chambers, Walk-Ins, Warehouses • Transportation, Logistics 	<ul style="list-style-type: none"> • Delivers unrivaled measurement accuracy over a wide operating range • Easily defined cycle-based data collection, calculation, and reporting from up to 150 sensors • Designed for easy on-site calibration



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<p>Kaye ValProbe®</p> 	<p>Combined Temperature/Pressure Logger</p> <ul style="list-style-type: none"> • Steam Sterilizer Validation • Hospital Validation and Routine Control • Small scale sterilization in dental offices • Parametric release applications 	<ul style="list-style-type: none"> • 10,000 data sample memory • Cost effective field-replaceable battery • Operator programmable sample rates from 1 sec to 12 hours • Configurable start, change and stop events • Enables compliance with ISO-17665, EN554, EN285 and HTM-2010
<p>Kaye ValProbe®</p> 	<p>Cryo Logger</p> <ul style="list-style-type: none"> • Cryogenic Vessels • Freeze Dryer • Freezers • Incubators • Warehouses • Sterilizers 	<ul style="list-style-type: none"> • Temperature Range for complete logger: -85°C to 140°C • Field replaceable 3.6 V lithium thionyl chloride battery • Battery life performance: 1600 h at 1 sec at 20°C 300 h at 10 sec at -85°C
<p>Kaye Validator® ITMS</p> 	<p>Ultra-Fast near- and at-line Cleaning Validation</p> <ul style="list-style-type: none"> • Direct swabbing to determine clean state • No lab required • Simple Sample prep 	<ul style="list-style-type: none"> • Rapid sample analysis time (approximately 10 seconds) • Portable design for at-line use • Rapid method development • Increased capacity utilization and productivity—by minimizing equipment downtime attributed to waiting for traditional analytical lab test results

Accessories

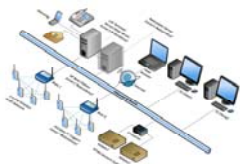
<p>Kaye Feedthru</p> 	<p>Validation accessories:</p> <ul style="list-style-type: none"> • Feedthru's for autoclaves and freeze dryers • Feedthru triclover kits inc. Clamps, gaskets 	<ul style="list-style-type: none"> • Feedthru accommodates from 1 to 18 thermocouples of any diameter • TUV certified for pressure vessels from -1 bar /+5 bar, and -60°C / + 160°C • Standard 1.5" tri-clamp connections • Easily installed with no tools required
<p>Kaye Validator® Pressure Transducer</p> 	<p>Validation accessories:</p> <ul style="list-style-type: none"> • Designed for the harsh environment applications such as steam sterilizers and SIP systems • High performance pressure transducer, specified full temperature range of autoclaves 	<ul style="list-style-type: none"> • Directly connectable to 1.5 triclover flange • Full ISO-17025 traceable calibration over pressure and temperature range 0 bar to 4 bar (59psia) absolute 110°C – 140°C
<p>Highest Quality Thermocouple Wire</p> 	<p>Validation accessories:</p> <ul style="list-style-type: none"> • thermocouple wire is manufactured with the highest purity and uniformity available to the industry 	<ul style="list-style-type: none"> • Available in 3 or 7 strand constructions • Available uncut in spools or cut to length with teflon tips



Solutions for Pharmaceutical & Biotechnology Industries

Facilities and Stability Monitoring

Labwatch™



Centralized monitoring, alarming and reporting system

- Stability Chambers
- Freezers
- Refrigerators
- Incubators
- Cryogenic Freezers
- LN2 tanks
- Ovens

- Wireless Sensor Capability utilizing RF ValProbe
- Interface to Pre-Existing/3rd party Sensors
- Enables compliance with FDA regulation 21 CFR Part 11
- Robust and Scalable System Architecture
- Provides a complete history of alarms, notification and data in one central location, automatically
- Regulatory compliant data reporting

Differential Pressure



- Interfaces to Labwatch Monitoring System
- Clean rooms
- Glove boxes
- Cost Effective Magnahelix replacement

- Exceptional accuracy & stability
- Ranges ± 0.1 to ± 6 in H₂O
- Optional front mount pressure ports simplify sensor calibration
- Designed for use in condensing environments

Services

Rental



We offer a comprehensive range of products suitable for your short term Temperature / Validation needs.

- Validator2000
- Calibration Bath/ Dry Wells
- DKD Temperature Standard
- ValProbe Loggers
- RF ValProbe – wireless system
- Accessories like Feedthru or Pressure Transducer

Beside this the rental fleet also contains non-Kaye products to measure RH, P, and Flow:

- Portable Hygrometer
- Chilled mirror hygrometers
- Precision Barometric Indicator
- High Precision Pressure Controller/Calibrator
- Precision Portable Pressure Calibrators
- Portable Documenting Calibrator
- Portable Ultrasonic Clamp-on Flow meter for Gases
- Portable Ultrasonic Clamp-on Flow meter for Liquids

Short-term temporary solutions

To assist customers in meeting peak demands, unexpected situations, evaluations and also to minimize downtime of important processes we offer a wide range of measurement, test and calibration equipment available on a short term rental basis...from a simple hand-held tester to portable calibrators and sophisticated air data test systems.

Services



- IQ/OQ Execution
- Rental & Leasing
- Calibration
- EMA's (Gold / Silver Contracts)
- Validation Training

- World Class Calibration Labs
- Include NIST or DKD & UKAS certified for Temperature, Humidity and Pressure
- Onsite calibration and IQ/OQ execution
- Piece of mind through Extended Maintenance Agreements
- Worldwide rental fleet fulfills short term equipment needs