NEW from Reichert
Smart Instruments. Modular Connections. Powerful Systems.

Connect the new Reichert *Advantage AR Series* refractometers to Reichert's new density meters, *Density5* and *Density4*, and to Reichert's new polarimeters, *Polar2* and *Polar3*, to create powerful analytical systems that perform all of your requirements.

NEW Refractometers
Advantage Reichert AR Series

Reichert
Established Leadership.
Longstanding Innovation.

Powerful Instruments from Reichert
Measure Everything. Accurately. Quickly. Easily.

Reichert Technologies, a company that has created advanced optical and analytical instruments for more than 150 years, continues to pursue the highest level of accuracy and quality today with its expansion and introduction of three high-end instruments, the Reichert AR Series of Refractometers, Density Meters, and Polarimeters. A modular system, these new instruments deliver connectivity and flexibility. Separately or simultaneously they measure refractive index, density, and optical activity determining the concentration and purity of numerous substances. The new instruments are accurate and robust in obtaining critical measurements sought in quality control analysis or sophisticated R&D investigations.

Density5 and *Density4* Density Meters
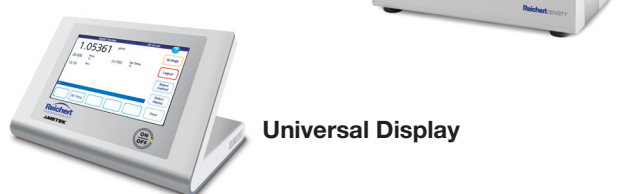### Accurate. Quick. Easy.

With the push-of-a-button the *Density5* and *Density4* meters provide accurate density measurements of liquids for analysis and quality control. Condensed into a compact, robust, stand-alone unit these density meters are reliable workhorses for the laboratory, resisting damage from demanding applications. The robust and precise density meters easily connect to other instruments in the Reichert modular system providing the flexibility for enhanced analysis.

Reichert *Density5*
Exceptional accuracy to 5 decimal places

Reichert *Density4*
Exceptional accuracy to 4 decimal places

Universal Display

Density Meters Advantages
- Easy to exchange measurement module for the most productivity and lowest maintenance
- Robust single-piece system
- Compact size, low weight
- Flexible, modular – easily connect to Reichert *AR Series* refractometers and polarimeters, *Polar2* and *Polar3*
- Built-in Peltier thermostat for accurate temperature control
- Continuous density measurement
- Integrated reference oscillator
- Automatic air bubble detection
- Color 3.5" capacitive touchscreen
- Extremely low noise
- USB and RS232 connectivity
- Powerful software interface, compliant with critically regulated industries, update on site
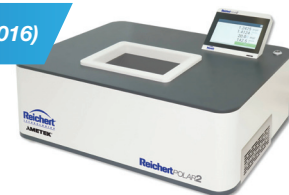- Optional 7" color Universal Display touchscreen

Polar1, *Polar2* (coming in 2016), *Polar3* Polarimeters
High Quality. Modular. User-friendly.

The new modular circular polarimeters from Reichert *Polar1*, *Polar2* and *Polar3*, are designed for analyzing optically active substances. These new robust instruments provide highly precise, accurate results over a particularly wide measurement range. The Reichert polarimeters are easy to use and are suited to perform in many industries including the beverage, cosmetic, chemical, food, pharmaceutical, and fragrance sectors determining concentration and purity analysis.

Reichert *Polar1*

Reichert *Polar2* (coming in 2016)

Reichert *Polar3*

Reichert Polarimeter Advantages
- Maintains accuracy over entire measurement range
- Exceptional high-quality analysis
- Flexible, modular – easily connect to Reichert *AR Series* refractometers and density meters, *Density5* and *Density4*
- Built-in Peltier thermostat
- Ready for all applications
- High-resolution 7" TFT touchscreen
- Energy saving LED light source
- Compliant with international standards, GLP/GMP conformity and 21 CFR Part 11 ready

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Reichert
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Analytical Instruments
AMETEK
ULTRA PRECISION TECHNOLOGIES

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NEW Refractometers for *Advantage Reichert AR Series*

Continuing its record of leadership in refractometry, Reichert introduces two new refractometers to the *Advantage Reichert AR Series* adding to its line of sophisticated benchtop analytical instruments. These new instruments, the *AR9* and the *AR5* are reliable, durable, accurate and tough enough for the most demanding applications.

The *AR9* is precise, having the capability to provide measurements for the most critically regulated industries. The *AR5* offers Peltier temperature control at an attractive price, while providing the connectivity and flexibility inherent in all of Reichert's new products. The *AR9* and *AR5*, part of Reichert's flexible modular system, easily connect with the new Reichert density meters *Density5* and *Density4*, and the new polarimeters, *Polar2* and *Polar3*. Both refractometers have a robust sealed system enabling them to perform in a variety of environments. The *AR9* features a YAG prism, the hardest available. Extremely impressive operational system software meets all electronic records security required in the pharmaceutical industry.

With unmatched performance, the *Advantage Reichert AR Series Refractometers* is the *advantage for you*.

NEW! *AR9* Refractometer

This top of the line refractometer is exceptionally precise with measurement accuracies of 0.00002 refractive index (RI) and 0.02% Brix. With a built-in Peltier thermostat, the *AR9* controls the temperature at the sample interface to an accuracy of 0.03°C. The *AR9* has a YAG (Yttrium Aluminum Garnet) prism, the hardest prism available, guaranteeing accuracy and resilience for years. Backed by Reichert's longstanding knowledge in the analytical instruments industry, the *AR9* is the perfect match for research and development applications. It is robust and durable, making it the right choice for all laboratory requirements.

Reichert *AR9* Advantages
- Exceptional accuracy and reproducibility
- Flexible, modular – easily connects to Reichert's new *Density5* and *Density4* meters and Reichert's new polarimeters, *Polar2* and *Polar3*, for additional complimentary measurements
- Continuous reading mode / real time measurement
- Powerful software interface, compliant with critically regulated industries
- YAG (Yttrium Aluminum Garnet) prism in stainless steel well, provides durable maintenance-free optics
- Built-in solid state Peltier thermostat for accurate temperature control
- Modern, robust design is easy to clean and simplifies service
- Sample temperatures up to 100°C
- Easy to calibrate
- Remote diagnostics and maintenance of data

NEW! *AR5* Refractometer

The economical *AR5* digital refractometer with Peltier temperature control included makes sophisticated measuring technology available to users on a tight budget. High-end accuracy and a good price point give customers an exceptional advantage in the laboratory. The *AR5* is precise, measuring refractive index and % Brix with results accurate to 0.0001 RI and 0.05% Brix. The *AR5* is the ideal instrument to perform routine measurements with standard scales and has the ability to be configured for custom measurements. The robust design, sapphire prism and reliable operation make it a workhorse for the laboratory, resisting surface damage from demanding applications.

Reichert *AR5* Advantages
- Accurate, fast and reproducible measurements
- Flexible, modular – easily connects to Reichert density meters, *Density5* and *Density4* and polarimeters, *Polar2* and *Polar3*, for additional measurements
- Robust design for rough environments
- Sapphire prism
- Built-in solid state Peltier thermostat for accurate temperature control
- Easy to clean and maintain with flat sample chamber
- Easy to calibrate
- Energy saving LED light source
- Remote diagnostics and maintenance of data available

Technical Specifications

	AR9	AR5
Measuring Scales	Refractive index (RI), %Brix and other standard scales included. User defined scales available	
Measuring range	1.32000 – 1.70000 RI / 0 to 100% Brix	1.3200 – 1.5800 RI / 0 to 100 % Brix
Accuracy	± 0.00002 RI / ± 0.02% Brix	± 0.0001 RI / ± 0.05% Brix
Reproducibility	± 0.00001 RI / ± 0.01% Brix	± 0.0001 RI / ± 0.05% Brix
Measurement method	Single sample or flow through	Single sample
Measurement mode	Continuous	

Temperature Specifications

	AR9	AR5
Ambient operating temperature	+10 to +40°C	
Automatic temperature compensation	+5° to +100°C	+5° to +50°C Brix
Temperature measurement	Optimized accuracy – sensor integral to sample surface	
Temperature control method	Peltier control range from 5°C to +100°C	Peltier control range 20° or 25°C
Temperature accuracy	0.03°C	
Temperature reproducibility	± 0.02°C	

Additional Information

	AR9	AR5
Prism	YAG (Yttrium Aluminum Garnet) in stainless steel well provides durable maintenance-free optics	Sapphire
Light source	Lifetime LED, interference filter 589nm	
Display	Universal Display 7" color touchscreen	Two line visual display or Optional Universal Display 7" color touchscreen
Interfaces	4 USB, mini USB, Ethernet, RS232	RS232, USB optional
Weight and dimensions	Refractometer, 10.8 lbs. (4.9 kg)	
	8.2 x 8.2 x 6.3 inches (210 x 210 x 160mm)	
	Universal Display, 6.6 lbs. (3.0 kg)	
	9.4 x 7.5 x 6 inches (240 x 190 x 150mm)	

Advantage Reichert AR Series Refractometers Measure All Industries

- Pharmaceutical
- Agriculture
- Beverage
- Chemical
- Confections
- Cosmetics
- Essential Oils
- Food Ingredients and Additives
- Fragrance
- Manufacturing and Industrial

Advantage Reichert AR Series Refractometers are 100% Compliant

The Reichert *AR Series* Refractometers are compliant with international standards ASTM, AOAC, DIN, FDA, ICUMSA. The instruments also provide documentation according to GLP/GMP and with the addition of the optional GxP software package, the instruments are compliant with 21 CFR Part 11 for electronic record security in the pharmaceutical industry.

Reichert *AR Series* Operating System Software

The operating system (OS) software has been designed with the user in mind. The intuitive touchscreen navigation saves time when defining settings or changing methods. The OS can easily connect the Reichert *AR9* and *AR5* to the Reichert density meters, *Density5* and the *Density4*, and polarimeters, *Polar2* and *Polar3*, making your lab ready for all applications. This powerful software makes the instrument part of your workflow communicating with LIMS systems and other laboratory instruments via USB or RS232. Programmed in the Universal Display, the software operates up to 5 measurement modules. Combine the OS with the optional, GxP software package to provide full compliance with 21 CFR Part 11 meeting all security electronic records requirements for the pharmaceutical industry.

Advantages of Reichert Operating System Software
- Customize easily to fit your workflow and maximize efficiency
- Intuitive interface to guide the user
- Quick setup of specific measurement scales
- Storage for more than 1,000 products including up to 1,000 methods
- Context sensitive help
- Password protected administration and user profiles
- Evaluate and calculate displayed values and data
- Easy to calibrate
- Traceability of all calibration procedures
- Export interface to MS Excel, text file or PDF
- Self-diagnostics
- Easy access service and support references
- USB interface allows upgrades at user site
- Compliant with international standards

Universal Display
- Operation system displayed on 7" color touchscreen
- Drives up to 5 measurement modules
- Program and save testing methods

GxP Software Package
- Provides compliance for 21 CFR part 11 meeting all security requirements for critically regulated industries