



FEATURE	ABBE MARK III	DIFFERENTIATION BETWEEN MARK III AND MARK II
	BENEFITS / ADVANTAGES	
Direct Reading	Direct Reading of Refractive Index, % Solids, Refractive Index Temperature Compensated and % Solids Temperature Compensated. All readings displayed on bright LCD display screen. Reading errors eliminated. Measurement, Temperature, Date and Time displayed until next reading is undertaken.	No Direct Reading of RI-TC on MARK II. MARK II LED displays only the measurement for several seconds.
Automatic Temperature Compensation	Automatically corrects all readings to 20 degrees C, the industry standard, or to other temperatures, based on application requirement. Both Refractive Index and % Solids measurements are corrected. Eliminates the need for temperature correction charts. Eliminates the need for water bath temperature control.	No Temperature Compensation of RI on MARK II. MARK II only compensates to 20 degrees C. No flexibility to compensate at other temperatures.
Automatic Temperature Equilibration	Automatically senses when the sample and prism have reached thermal equilibrium, which is critical for accurate measurements. Reading is then automatically initiated. Effortless analysis. Apply sample, align shadowline, press read key.	NOT AVAILABLE ON MARK II.
Internal Illumination by 6 high intensity LEDs	Bright, even illumination. Eliminates the need to align an external light arm. Lighting will transmit through tough semi-translucent samples. Eliminates the need to replace halogen lamps. Long life LEDs rated > 100,000 hours.	NOT AVAILABLE ON MARK II -- MARK II uses a halogen lamp for its illumination
1.3000 - 1.7000 Refractive Index Range	Wide measurement range allows for use in a variety of industries, including food, beverage, dairy, chemical, petroleum, cosmetic, and pharmaceutical.	MARK II has identical range.
Precision to 0.0001 RI and 0.1 %	Provides better precision than can be achieved	MARK II does not use LSA technology. Mark II

Solids	with traditional transmitted light refractometers. Mark III detects measurement with electronic Linear Scanned Array (LSA). The LSA resolves shadowline location at a magnitude that the human eye is not capable of performing.	uses a mirror and mechanical elevator apparatus which is common with many manual transmission abbes. Old technology.
14 Custom Channel Programmability	Channel # 1 is BRIX per ICUMSA tables. Channel # 2 - 15 are easily customizable for product- specific analysis. A multi-measurement instrument based on Refractive Index correlation.	NOT AVAILABLE ON MARK II.
Graphical LCD Display	Large, Easy to Read Backlight screen shows complete sample information. On-Screen instructions for all functions. Pull-Down style menus and options.	NOT AVAILABLE ON MARK II. MARK II has no pull down menu or on screen directions.
2 RS232 Serial Communication Ports	Allows for connectivity to either PC or printer. Enables custom channel programming, data downloading, sample analysis printouts.	MARK II offers 1 RS232 Port only. Serial Data output is very limited.

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Water Bath Circulator Ports	For applications that require specific temperature control, ports on Upper and Lower prism assembly provide superior sample temperature control.	Same.
Electronic Prism Temperature Measurement	Electronic thermister located directly at the sample/prism interface provides the most accurate temperature readings possible. Results in the most accurate refractive index and % solids measurements. Location of temperature measurement is critical because refractive index is dependent upon temperature. Temperature can vary by a few degrees at other locations such as in water bath lines.	Same.
Calibration History Record	Records and stores 500 of the most recent calibrations. Can be retrieved to a PC from Serial Ports. Compliance with ISO and other standards/regulations.	NOT AVAILABLE ON MARK II.
Custom Password Protection	Instrument operating parameters are secure. Each feature can be selectively password protected.	NOT AVAILABLE ON MARK II.
Four Languages	On-Screen instructions and operating system available in English, German, French, and Spanish. Allows for easy use throughout the world.	NOT AVAILABLE ON MARK II.
Rugged, Durable Body, Gasket Sealed Housing	Well suited for factory settings where harsh conditions and sample spills are common. Ideal for use directly in a production environment.	MARK III offers additional rubber gaskets that seal the instrument housing.
Solid State Design	Instrument has few moving, mechanical parts which over time would need adjustment and added maintenance. Electronic Linear Scanned Array is fixed and requires no adjustments.	MARK II more mechanical than electronic. MARK III has no moving parts other than the handwheel and the prism hinge.
Magnetic Locking Prism Assemblies	Prism assemblies are aligned properly and locked together to insure optimum shadowline formation. No mechanical fastening latches that wear out over time.	MARK II has mechanical latch assembly.

Universal Power Supply

Instrument has voltage line sensing that allows for operation between 110V to 220V. Detachable power cords (US, EU, UK) are provided with instrument allowing it to be operated anywhere in the world

NOT AVAILABLE ON MARK II. MARK II is available as a 110V model or a 220V model. Unit has a fixed power transformer.

Factory Application Support

Instrument supported by Reichert Technical/Application Support Team that offers custom channel programming, and special factory calibrations that are required for customer's applications.

Same.

Factory Warranty

Instrument is warranted for 2 full years from date of purchase. Quality design and manufacture ensure an instrument of lasting value.

Same.

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