

L LABORATORY

P PROCESS

S SOFTWARE

A AUTOMATION



**SCHMIDT
HAENSCH**
innovators by tradition since 1864

ATR P

High Performance Refractometer

The robust critical angle refractometer, designed for the sugar industry and mixing ratio determination complemented by a VariControl unit



SPECIFICATIONS

ATR-P

Measuring scales	Refractive Index (RI), Sucrose (%Brix) Up to 1000 scales freely definable
Measuring range	1.33200 - 1.54000 RI / 0 - 100% Brix
Resolution	0.00001 RI / 0.01% Brix
Precision	± 0,00002 RI / ± 0.02% Brix
Reproducibility	± 0.00001 RI / ± 0.01% Brix
Ambient temperature	+ 10° to + 40°C
Automatic temperature compensation	+ 5° to + 50°C
Temperature measurement	NTC sensor for measurement of sample temperature placed inside the prism
Temperature control Temperature range	Temperature control prism / sample by external water bath 5°C / 50°C
Measurement mode	Single sample or flow through measurement / horizontal or vertical usage
Prism	Sapphire
Light source / wavelength	LED, interference filter 589 nm
Display	VariControl, 7" Touchscreen, 800 x 480 Pixel, 16 Bit colors
Operation	Touchscreen, keyboard**, mouse**, barcode reader**, remote via PC**
Interfaces	1 x RS232 C serial, 3 x USB (A), 1 x USB (B), 1 x Ethernet, Easy connection of keyboard, mouse, printer, barcode reader, PC and network
Conformity	International Pharmacopoea, ASTM, AOAC, DIN, FDA, ICUMSA and others
Highlights	Robust stainless steel measuring head for rough environments; high performance and accuracy; continuous measurement; ESH ¹ chamber; MBS ² as stand alone with VariControl or polarimeter; easy calibration; GLP/GMP; With the VariControl: Maintenance friendly by remote diagnostic; intuitive user handling guided OP system; installation wizard; full traceability of records; ext. LIMS integration <small>¹ Easy sample handling; ² Modular build-in-system</small>
Weight / dimensions	Measuring Head: 4.5 kg; 200 x 160 x 135 mm (width x depth x height) VariControl: 2.0 kg; 250 x 170 x 180 mm (width x depth x height)

* Standard conditions (589nm, 20°C)
** Optional

Refractometer applications

The applications of Refractometers are highly diverse.

Applications often used

- Determination of refractive index
- Determination of dry substance
- Determination of mass percent
- Brix measurement
- Standard scale (Brix) with automatic temperature compensation
- Qualitative analysis – identification of samples
- Quantitative analysis of dissolved solids in water or other solvents
- Quantitative analysis of sugars, solves, glycol, oechsle...

Typical applications of the model

- Sugar industry (main application)
- Beverages (juices with pulp)
- Samples with suspended particles
- Food (oil from palm, corn, sunflower, soya)