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# 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

<b>Measuring scales</b>	Refractive Index (RI), Sucrose (%Brix) Up to 1000 scales freely definable
<b>Measuring range</b>	1.32000 - 1.54000 RI / 95% Brix
<b>Resolution</b>	0.00001 RI / 0.01% Brix
<b>Precision</b>	± 0,00002 RI / ± 0.02% Brix
<b>Reproducibility</b>	± 0.00001 RI / ± 0.01% Brix
<b>Ambient temperature</b>	+ 10° to + 40°C
<b>Automatic temperature compensation</b>	+ 5° to + 50°C
<b>Temperature measurement</b>	NTC sensor for measurement of sample temperature placed inside the prism
<b>Temperature control Temperature range</b>	Temperature control prism / sample by external water bath 5°C / 50°C
<b>Measurement mode</b>	Single sample or flow through measurement / horizontal or vertical usage
<b>Prism</b>	Sapphire
<b>Light source / wavelength</b>	LED, interference filter 589 nm
<b>Display</b>	VariControl, 7" Touchscreen, 800 x 480 Pixel, 16 Bit colors
<b>Operation</b>	Touchscreen, keyboard**, mouse**, barcode reader**, remote via PC**
<b>Interfaces</b>	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
<b>Conformity</b>	International Pharmacopoea, ASTM, AOAC, DIN, FDA, ICUMSA and others
<b>Highlights</b>	Robust stainless steel measuring head for rough environments; high performance and accuracy; continuous measurement; ESH <sup>1</sup> chamber; MBS <sup>2</sup> 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 <sup>1</sup> Easy sample handling; <sup>2</sup> Modular build-in-system
<b>Weight / dimensions</b>	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)