

**L** LABORATORY

**P** PROCESS

**S** SOFTWARE

**A** AUTOMATION



**SCHMIDT  
HAENSCH**  
innovators by tradition since 1864

# VariRef Series

Refractometer – The next generation



SPECIFICATIONS	VariRef C	VariRef B	VariRef A
Measuring scales	Refractive Index (RI), Sucrose (% Brix) Standard scales included, freely definable scales		Refractive Index (RI), Sucrose (% Brix), USG
Measuring range	1.2900 - 1.5800 RI / 100% Brix	1.29000 - 1.58000 RI / 100% Brix 1.32000 - 1.70000 RI / 100% Brix	1.320000 - 1.580000 RI / 100% Brix
Specifications			
Precision	± 0,0001 RI* / ± 0.05% Brix*	± 0,00002 RI* / ± 0.02% Brix*	0.000001 RI / 0.001% Brix
Repeatability	± 0.0001 RI / ± 0.05% Brix	± 0.00002 RI / ± 0.02% Brix	
Resolution	0.0001 RI / 0.05% Brix	0.00001 RI / 0.01% Brix	
Ambient temperature	+ 10 °C to + 40 °C		
Temperature measurement	NTC sensor		
Temperature range	5 °C to 80 °C	5°C to 100 °C	20 °C (others upon request)
Temperature precision / resolution	± 0.03 °C* / 0.01 °C		
Minimum sample volume	0,6 ml		
Temperature stabilization time	25 °C to 20 °C, ± 0.1 °C, in 1 minute (valid for ambient temp. = 20 °C)		
Measurement mode	Single sample or flow through measurement (with optional compartment door)		
Prism	Sapphire	Sapphire/YAG	Sapphire
Light source/wavelength	LED, interference filter 589 nm		
Display	7" Touchscreen**, 800 x 480 Pixel		
Operation	Touchscreen**, Keyboard***, Mouse***, Barcode Reader***, Remote via PC / Tablet / Smartphone***		
Interfaces	Ethernet 10/100/1000, RS232, SH connector, USB, WLAN**, Modbus**, Canbus**, Profibus**		
Conformity	International Pharmacopoeia, ASTM, AOAC, DIN, FDA, ICUMSA and others		
Power	VAC 90-265; 50/60 Hz; 150 W max		
Dimensions	With display: 310 x 220 x 250 mm (w x d x h); without display: 310 x 220 x 150 mm (w x d x h)		
Highlights	Modularity; user friendliness; fast temperature control; easy cleaning; variety of complete special sample room doors, e.g. for single or flow through measurements or for solid samples; the self-checking capabilities for cleanliness; environment temperature effects; calibration and more result in a virtually maintenance free product; 21 CFR Part 11 conform; ELN; LIMS ready		

\* Standard conditions (589 nm,  $t_s=20^\circ\text{C}$ ,  $t_A=23^\circ\text{C}$ )

\*\* Optional

\*\*\* not included in delivery

### Combining over 150 years of experience with the endless strive for innovation

The VariRef possesses the well-established flat and easy to clean SCHMIDT + HAENSCH sample room. When dealing with sticky, hard to clean or hazardous materials we offer you a variety of sample room doors to ensure proper sampling.

The new double isolated peltier systems allows fastest and precise temperature control. The newly developed ATC (Ambient T-Control) takes temperature variations of the ambience of the instrument into account as well.

