

## HR SERIES | MANUAL HAND-HELD REFRACTOMETERS

### Quick on-site measurements!

Manual handheld refractometers are for fast everyday use. They are particularly easy to use and very sturdy. Various scales and additional functions ensure that there is exactly the right handheld refractometer for many application areas. This makes for reliability when reading, as the measured value does not first have to be converted.

Some models have an automatic temperature compensation feature which increases measurement precision for measurements which are performed at 10–40 °C instead of 20 °C. For calibration, distilled water is required, or else a small calibration plate is provided.

### Fields of application

Determination of mixing ratios, quality and quantity inspection in the following industries:

- Beverages
- Food
- Sugar / sweeteners
- Chemicals
- Flavours
- Petrochemicals
- Cosmetics / hygiene
- Metalworking
- Pharmaceuticals
- Water / effluent
- Education / research

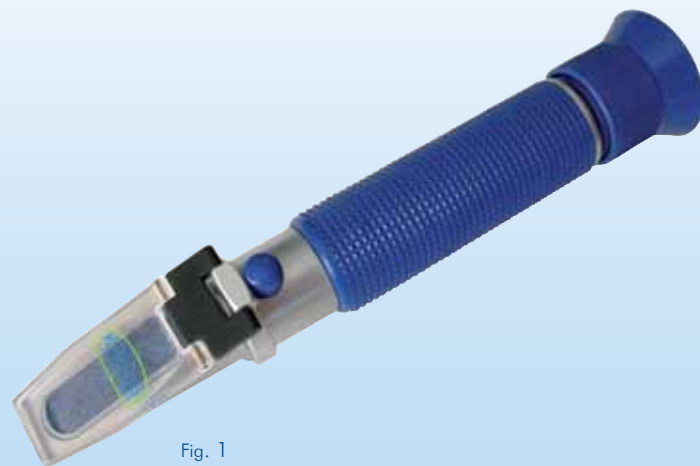


Fig. 1



Fig. 2



Fig. 4

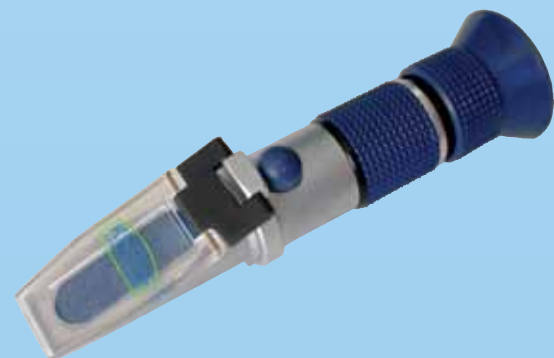


Fig. 3



Fig. 5

Model	Fig. Nr.	Measurement range	Accuracy	scale division	Temperature compensation	Thermometer	Field of application
HR10	Fig. 1	0–10 %Brix	0.1 %Brix	0.1 %Brix	-	-	For sugar concentration in fruit juices, soft drinks, vegetables, foods and cooling lubricants
HR18-01	Fig. 1	0–18 %Brix	0.1 %Brix	0.1 %Brix	-	-	For sugar concentration in fruit juices, soft drinks, vegetables, foods and cooling lubricants
HRKL32	Fig. 2	0–32 %Brix 0–140 °Oechsle 0–27° KMW BaBo	0.2 %Brix 1 °Oechsle 0.2° KMW BaBo	0.2 %Brix 1 °Oechsle 0.2° KMW BaBo	-	-	For the measurement of Brix and alcohol content in must by either oechsle and Klosterneuburg scale
HRN20	Fig. 2	0–20 %Brix	0.2 %Brix	0.2 %Brix	-	-	For sugar concentration in fruit juices, soft drinks, vegetables, foods and cooling lubricants
HRN32	Fig. 2	0–32 %Brix	0.2 %Brix	0.2 %Brix	-	-	For sugar concentration in fruit juices, soft drinks, vegetables, foods and cooling lubricants
HRT32	Fig. 3	0–32 %Brix	0.2 %Brix	0.2 %Brix	automatically	-	For sugar concentration in fruit juices, soft drinks, vegetables, foods and cooling lubricants
HRN62	Fig. 3	28–62 %Brix	0.2 %Brix	0.2 %Brix	-	-	For analysing chemical and technical liquids, such as oils, fats, coolants, lubricants
HRT62	Fig. 3	28–62 %Brix	0.2 %Brix	0.2 %Brix	automatically	-	For analysing chemical and technical liquids, such as oils, fats, coolants, lubricants
HRN82	Fig. 3	45–82 %Brix	0.2 %Brix	0.2 %Brix	-	-	For analysing chemical and technical liquids, such as oils, fats, coolants, lubricants
HR92	Fig. 3	58–92 %Brix 38–43 °Baume 12–27 % Water	1 %Brix 0.5 °Baume 1 % Water	1 %Brix 0.5 °Baume 1 % Water	-	-	For examination of highly concentrated sugars, de termination of water content in honey and analysing fats, lubricants and cooking oil
HRH30	Fig. 2	12–30 % Water content in honey	0.1 % Water content in honey	0.1 % Water content in honey	-	-	For examination of highly concentrated sugars, de termination of water content in honey and analysing fats, lubricants and cooking oil
HR900	Fig. 5	0–90 %Brix	0.2 %Brix	0.2 %Brix	-	6–36 °C	Universal hand refractometer with stage switch for all ranges. Adjustable prisms for sharp contours, direct and indirect light guidance for measurement of clear and opaque substances. With thermometer
HR901	Fig. 5	1.333–1.517 nD	0.0005 nD	0.0005 nD	-	6–36 °C	Universal hand refractometer with stage switch for all ranges. Adjustable prisms for sharp contours, direct and indirect light guidance for measurement of clear and opaque substances. With thermometer
HR27-100	Fig. 2	1.000–1.070 d <sub>20</sub> <sup>20</sup> 0–100 ‰ Salinity	0.001 d <sub>20</sub> <sup>20</sup> 1 ‰ Salinity	0.001 d <sub>20</sub> <sup>20</sup> 1 ‰ Salinity	-	-	For salinity analysis
HRS16	Fig. 1	1,333–1,373 nD 0–160 ‰ Salinity	0.001 nD 2 ‰ Salinity	0.001 nD 2 ‰ Salinity	-	-	For salinity analysis
HR146	Fig. 2	1,3330–1,3834 nD 0-28 % Salinity	0.001 nD 0.2 % Salinity	0.001 nD 0.1 % Salinity	-	-	For salinity analysis
HRM18	Fig. 2	0–12 g/dl 1.333–1.360 nD 1.000–1.050 UG	0.2 g/dl 0.0005 nD 0.002 UG	0.2 g/dl 0.0005 nD 0.002 UG	-	-	For the measurement of serum protein and specific urine weight
HRMT18	Fig. 2	0–12 g/dl 1.333–1.360 nD 1.000–1.050 UG	0.2 g/dl 0.0005 nD 0.002 UG	0.2 g/dl 0.0005 nD 0.002 UG	automatically	-	For the measurement of serum protein and specific urine weight
HRO32	Fig. 2	0–32 %Brix 30–130 °Oe 4.4–19 % Alcohol	0.2 %Brix 1 °Oe 0.1 % Alcohol	0.2 %Brix 1 °Oe 0.1 % Alcohol	-	-	For the measurement of Oechsle, Brix and alcohol content in must
HROT32	Fig. 3	0–32 %Brix 30–130 °Oe 4.4–19 % Alcohol	0,2 %Brix 1 °Oe 0.1 % Alcohol	0.2 %Brix 1 °Oe 0.1 % Alcohol	automatically	-	For the measurement of Oechsle, Brix and alcohol content in must
HRKFZ1	Fig. 3	Anti freeze: 50–0 °C Battery acid: 1.10–1.30 g/cm <sup>3</sup>	Ethylene-Propylen: 5 °C Battery acid: 0.01 g/cm <sup>3</sup>	Ethylene-Propylen: 5 °C Battery acid: 0.01 g/cm <sup>3</sup>	-	-	Anti freeze and battery fluid tester
HR25-800	Fig. 4	0–80 %Brix	0.5 %Brix	0.5 %Brix	-	-	Universal hand refractometer with stage switch for all ranges. Adjustable prisms for sharp contours, direct and indirect light guidance for measurement of clear and opaque substances