

## PRODUCT BROCHURE

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# OPTICS ORA 3HA

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ENGLISH



Refractive index measurement for laboratories and the industry

### CONTACT

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## PRODUCT SHOWCASE



## DESCRIPTION

- The models in the KERN ORA-H range are universal, maintenance-free analogue manual refractometers
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- Manually calculated conversions and errors of the user are avoided by multiple selectable scales.
- These scales are especially developed, exactly calculated and checked. They are also characterized by their thin and clear lines.
- The optical system and the prism cover are made of special material which allows a low-tolerance measuring.
- All models are fitted with an eyepiece which can be adjusted easily and smoothly to different visual capacities
- The temperature compensation ("ATC") enables accurate measurement at different ambient temperatures (10 °C to 30 °C)
- Included with the delivery:
  - Storage box
  - Calibration block
  - Contact liquid
  - Pipette
  - Screwdriver
  - Cleaning cloth
- Further accessories are available optionally.
- The following model is particularly suitable for measuring the Brix value, the water content in honey and the Baumé degree (°Bé) to determine the relative density of liquids
- The main scope of applications is:
  - Beekeeping
  - Honey production

## SPECIFICATIONS

### Article codes, product groups & Status information

Model article-code	ORA 3HA
Model-Serie	ORA-H
Assortment	Optics
Product Type	Refractometers
Product group	Analogue refractometers
Product usage type	Main article
EAN code (Model)	4045761159969
Predecessor Model	ORA 3HB
Successor Model	ORA 3HA-2025e
Customs tariff number	90275000

### Technical data - Primary

Scales	Brix Baumé Water content
Scale Range	58 % - 92 % 38 °Bé - 43 °Bé 12 % - 27 %
ATC	yes

### Technical data - Construction

Type	Handheld refractometer
Display scale	Analogue
Dimensions (W×D×H)	160×40×40 mm

### Technical data - Measuring system

Measuring method	Light refraction
Measuring Temp min	10 °C
Measuring Temp max	30 °C

Readout 0.5 % 0.5 °Bé 1 %

### Technical data - Environmental conditions

Storage Temp Min	-5 °C
Storage Temp Max	40 °C

### Technical data - Packing & Shipping

Dimensions packaging (W×D×H)	215×94×65 mm
Gross weight	0.35 kg
Net weight	0.30 kg
Shipping method	Parcel service
Packaging component - by weight - paper	888.76 mg
Packaging component - by weight - cardboard	49.9797 g
Packaging component - by weight - plastics	1.41156 g
Packaging component - by weight - styrofoam	0 g
Packaging component - by weight - foam	0 g
Delivery time	1 d

### Optional Services

ISO Calibration	961-290
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## FUNCTIONS

Standard
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## ACCESSORIES

Model	Description
ORA-A1005	Calibration block ORA-A1005
ORA-A1101	Prism cover ORA-A1101
OCS-A1101	Cleaning liquid KERN OCS-A1101
ORA-A1004	Liquid KERN ORA-A1004
OCS 901	Cleaning Sets for Microscopes KERN OCS 901
ORA-A2103	Leather bag ORA-A2103

## SERVICES

Model	Description
961-290	Factory calibration KERN 961-290
961-290R	Factory calibration KERN 961-290R
970-012	Warranty extension KERN (+2 years) 970-012

## SPARE PARTS

Model	Description
ORA-A2001	Prismatic flap ORA-A2001
ORA-A2002	Cover ORA-A2002
ORA-A2003	Eyepiece - rubber ORA-A2003
ORA-A2004	Rubber grip (40 mm) ORA-A2004
ORA-A2101	Refractometer box ORA-A2101
ORA-A2105	Single shipping box ORA-A2105
ORA-A2010	Pipette ORA-A2010

## RELATED ARTICLES DATA

Model name	Scales	Scale Range	ATC
ORA 6HA	Water content	12 % - 30 %	yes
ORA 3HB	Brix Baumé Water content	58 % - 92 % 38 °Bé - 43 °Bé 12 % - 27 %	-
ORA 3HA	Brix Baumé Water content	58 % - 92 % 38 °Bé - 43 °Bé 12 % - 27 %	yes