



Refractometers

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Your KERN product specialist will be happy to help:



Daniel Junger
Manager KERN Optics

Tel. +49 [0] 7433 9933 - 155
Fax +49 [0] 7433 9933 - 149
daniel.junger@kern-sohn.com

Analogue refractometer KERN ORA



Box with accessories

Refractive index measurement for laboratories and the industry

Features

- The KERN ORA refractometers are universal, maintenance free analogue handheld 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 ORA models are equipped with an eyepiece for easy and smooth setting for many different diopter strengths.
- The models marked with "ATC" have an automatic temperature compensation which enables accurate measurement at different ambient temperatures (10 °C to 30 °C).
- The following accessory-parts are included:
 - Calibration liquid
 - Calibration block (if required)
 - Storage box
 - Pipette
 - Small screwdriver
 - Cleaning tissue.
- Further accessories are available optionally.

Technical data

- Die-cast housing of copper-aluminium alloy, chrome coated
- Measurement temperature without ATC: 20 °C
- Measurement temperature range with ATC: 10 °C – 30 °C
- Packing dimensions WxDxH 215x94x65 mm (depending on the model)
- Dimensions of the box: 205x75x55 mm (depending on the model)
- Product length: approx. 130 – 200 mm (depending on the model)
- Net weight approx. 135 – 600 g (depending on the model)

8

STANDARD



OPTION



Analogue refractometer KERN ORA

Scope of application: Sugar

The following models are particularly suitable for the measurement of the “BRIX” value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and soft drinks. In the same ideal way these refractometers serve for monitoring processes in the industry (coolant monitoring, oils, lubricants and fats).

The main scope of applications is:

- Industry: Monitoring of lubricants for process and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruits for quality control in harvesting
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 10BB	Brix	0 – 10 %	0,1 %		80,-
ORA 10BA	Brix	0 – 10 %	0,1 %	●	85,-
ORA 18BB	Brix	0 – 18 %	0,1 %		80,-
ORA 20BB	Brix	0 – 20 %	0,1 %		80,-
ORA 20BA	Brix	0 – 20 %	0,1 %	●	85,-
ORA 32BB	Brix	0 – 32 %	0,2 %		80,-
ORA 32BA	Brix	0 – 32 %	0,2 %	●	85,-
ORA 62BB	Brix	28 – 62 %	0,2 %		80,-
ORA 62BA	Brix	28 – 62 %	0,2 %	●	85,-
ORA 82BB	Brix	45 – 82 %	0,5 %		85,-
ORA 80BB	Brix	0 – 80 %	0,5 %		85,-

Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, as well as the water content in honey and “degrees Baumé” to determine the relative density of liquids.

The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 3HB	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %		80,-
ORA 3HA	Brix Baumé Water content	58 – 92 % 38 – 43 °Bé 12 – 27 %	0,5 % 0,5 °Bé 1 %	●	85,-
ORA 6HB	Water content	12 – 30 %	0,1 %		80,-
ORA 6HA	Water content	12 – 30 %	0,1 %	●	85,-



Analogue refractometer KERN ORA

Scope of application: Salt

The following models are particularly suitable for the measurement and concentration control of the mass fraction of sodium chloride in water as well as of the content of NaCl (salt) in water. This is often used in the preparation and the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat.

The main scope of applications is:

- Food industry
- Restaurants and large-scale catering establishment
- Aquaristic: Fishkeepers / Fishfarmers in sea and sweetwater



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1SB	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg		80,-
ORA 1SA	Salinity specific gravity	0 – 100 ‰ 1,000 – 1,070 sg	1 ‰ 0,001 sg	●	85,-
ORA 2SB	Salt (NaCl)	0 – 28 %	0,2 %		80,-
ORA 2SA	Salt (NaCl)	0 – 28 %	0,2 %	●	85,-
ORA 3SB	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %		80,-
ORA 3SA	Salt (NaCl) Brix	0 – 28 % 0 – 32 %	0,2 % 0,2 %	●	85,-

Scope of application: Wine

The following models are particularly suitable for the measurement of the content of sugar in fruits. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing and fruit-growing
- Wine-production
- Must and alcohol production



°Oe = Degree Oechsle, °KMW = Klosterneuburger Must balance

Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1WB	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %		80,-
ORA 1WA	Oechsle KMW (Babo) Brix	0 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,25 °KMW 0,2 %	●	85,-
ORA 3WB	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %		80,-
ORA 3WA	Oechsle Brix	30 – 140 °Oe 0 – 32 %	1 °Oe 0,2 %	●	85,-
ORA 7WB	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %		80,-
ORA 7WA	Oechsle KMW (Babo) Brix	30 – 140 °Oe 0 – 25 °KMW 0 – 32 %	1 °Oe 0,2 °KMW 0,2 %	●	85,-
ORA 2AB	Vol (weight) Vol (weight)	0 – 50 % Vol 50 – 80 % Vol	1 % Vol 2,5 % Vol		80,-

Analogue refractometer KERN ORA

Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

The main scope of applications is:

- Hospitals
- Doctor's surgeries / Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 2PB	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g / dl 1,000 – 1,050 sgU 1,3330 – 1,3600 nD	0,2 g / dl 0,002 sgU 0,0005 nD		80,-
ORA 2PA	Serum protein Urine (spec. gravity) Refractive index	0 – 12 g / dl 1,000 – 1,050 sgU 1,3330 – 1,3600 nD	0,2 g / dl 0,002 sgU 0,0005 nD	●	85,-

Scope of application: Industry / Automotive

The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene EG, propylene PG), battery fluid (BF), urea, the freezing point of fountain solution (CW) and the refractive index. Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 4FB	EG (G13) PG (G11 / 12) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	1 °C 1 °C 5 °C 0,01 kg / l		80,-
ORA 4FA	EG (G13) PG (G11 / 12) CW BF	-50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	1 °C 1 °C 5 °C 0,01 kg / l	●	85,-
ORA 1UB	Urea	0 – 40 %	0,2 %		80,-
ORA 1UA	Urea	0 – 40 %	0,2 %	●	85,-
ORA 4UB	Urea EG (G13) PG (G11 / 12) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	0,2 % 1 °C 1 °C 5 °C 0,01 kg / l		80,-
ORA 4UA	Urea EG (G13) PG (G11 / 12) CW BF	30 – 35 % -50 – 0 °C -50 – 0 °C -40 – 0 °C 1,10 – 1,40 kg / l	0,2 % 1 °C 1 °C 5 °C 0,01 kg / l	●	85,-

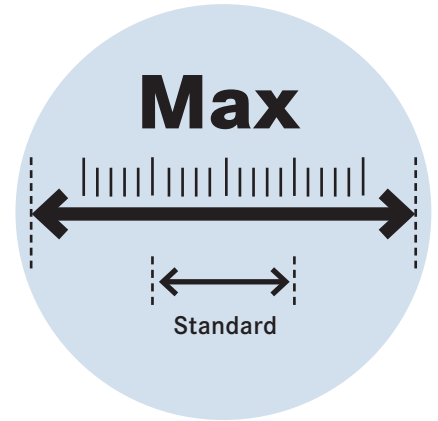
Analogue refractometer KERN ORA

Scope of application: Expert applications

The following models have a special large measuring range for the refractive index and large divided scales for the measurement and clear reading of Brix values.

The main scope of applications is:

- Universal application, especially when extra large measuring ranges are required



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 80BE	Brix	0 – 50 % 50 – 80 %	0,5 % 0,5 %		115,-
ORA 90BE	Brix	0 – 42 % 42 – 71 % 71 – 90 %	0,2 % 0,2 % 0,2 %		275,-
ORA 1RE	Refractive index	1,333 – 1,405 nD 1,405 – 1,468 nD 1,468 – 1,517 nD	0,005 nD 0,005 nD 0,005 nD		275,-
ORA 4RR	Refractive index	1,440 – 1,520 nD	0,001 nD		85,-



ORA 4RR



ORA 90 BE / ORA 1RE



ORA 80BE

Scope of application: Gemmology / Jewellery

The Gem models have a special refracting-index range for jewellery. For this refractometer there is a nice leather bag in the scope of delivery included.

The main scope of applications is:

- Jewellers
- Training / Education
- Jewellery industry



Model	Scales	Measuring range	Division	ATC	Price excl. of VAT ex works €
KERN					
ORA 1GG	Refractive index	1,30 – 1,81 nD	0,01 nD		190,-



ORA 1GG

Analogue refractometer KERN ORA

Accessory parts: Analogue refractometer – ORA

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1101	Prism coverplate with integrated LED-Diode	30,-
ORA-A2103	Leather bag for analog refractometers	30,-
ORA-A1001	Calibration liquid 0% (Distilled Water) Volume: 2,5 ml	30,-
ORA-A1002	Contact liquid 19,6 % for models ORA 6HB, ORA 6HA Volume: 2,5 ml	30,-
ORA-A1003	Calibration liquid 29,6 % for models ORA 62BB Volume: 2,5 ml	30,-
ORA-A1004	Contact liquid 78,8 % for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 4RR; Volume: 2,5 ml	30,-
ORA-A1005	Calibration block for models ORA 82BB, ORA 3HA, ORA 3HB, ORA 6HA, ORA 6HB, ORA 4RR	30,-
ORA-A1007	Contact liquid 2-Iodmethan for model ORA 1GG Volume: 2,5 ml	30,-
ORA-A1008	Calibration block for model ORA 1GG	40,-
ORA-2001	Prism coverplate (spare part)	30,-



Prism coverplate with LED
ORA-A1101



Leather bag
ORA-A2103



Calibration liquid

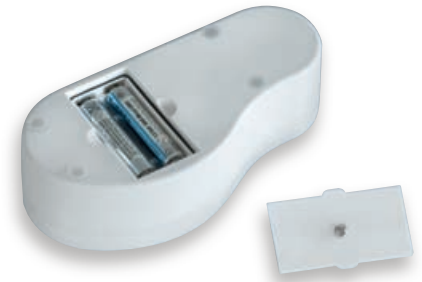


Calibration block

Digital refractometer KERN ORD



Transport and storage case



Battery compartment

Digital refractive index measurement for laboratories and the industry for multi-application

Features

- The KERN ORD refractometers are accurate and universal maintenance free digital handheld refractometers.
- The typical and practical design is suitable for a quick and convenient everyday use and is characterized by its easy-using and robustness.
- The large display is easy to read. Mistakes in reading are avoided.
- A large selection of models is available with single or multiple scales. This allows the use in various applications.
- The instrument comes with an optimized software that can show a result in different scales.
- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument.
- The required calibration liquid is already included in scope of in the delivery, as well as a storage box, a leather case, a pipette, a small screwdriver and a cleaning cloth.

Technical data

- Measurement temperature: 10°C – 30°C
- Packing dimensions WxDxH 235x200x65 mm
- Overall dimensions WxDxH 133x65x38 mm
- Net weight approx. 200 g
- Power supply: 2 x AAA (1,5V)
- Lifetime of the battery: 10000 measurements
- ATC (Automatic Temperature Compensation)
- Minimum sample volume: 2 drops
- Automatic energy management (turns off after 5 minutes)

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STANDARD



Digital refractometer KERN ORD

Scope of application: Sugar

The following models are particularly suitable for the measurement of the “BRIX” value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and sweet or soft drinks. In the same ideal way, these refractometers serve in monitoring processes in the industry (coolant monitoring, oils, lubricants and fats). Alternatively, the display can be switched to show the refractive index.

The main scope of applications is:

- Industry: Monitoring of lubricants in machines and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruit for quality control in harvesting
- Restaurants and large-scale catering establishment



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 45BM	Brix Refractive index	0 - 45 % 1,3330 - 1,4098 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	305,-
ORD 92BM	Brix Refractive index	58 - 92 % 1,4370 - 1,5233 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	335,-
ORD 85BM	Brix Refractive index	0 - 85 % 1,3330 - 1,5100 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	365,-

Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, the water content in honey according to the International Honey Commission (IHC2002) and “degrees Baumé” to determine the relative density of liquids. Alternatively the display can be switched to show the refractive index.

The main scope of applications is:

- Beekeeping
- Honey production



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 92HM	Brix Baumé Water content Refractive index	58 - 92 % 38 - 43 °Bé 13 - 25 % 1,4370 - 1,5233 nD	± 0,2 % ± 0,1 °Bé ± 0,1 % ± 0,0003 nD	0,1 % 0,1 °Bé 0,1 % 0,0001 nD	335,-

Digital refractometer KERN ORD

Scope of application: Salt

The following models are particularly suitable to determine the concentration of NaCl (salt) in water. This is often used for the preparation and for the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat. Alternatively the display can be switched to show the refractive index.

The main scope of applications is:

- Food industry
- Restaurants, and large-scale catering establishment, canteens



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 1SM	Salt (NaCl) Refractive index	0 - 28 % 1,3330 - 1,3900 nD	± 0,2 % ± 0,0003 nD	0,1 % 0,0001 nD	305,-
ORD 3SM	Brix Salt (NaCl) Refractive index	0 - 35 % 0 - 28 % 1,3330 - 1,3900 nD	± 0,2 % ± 0,2 % ± 0,0003 nD	0,1 % 0,1 % 0,0001 nD	305,-

Scope of application: Wine

The following models are particularly suitable for the measurement of the sugar content in fruit. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing (viticulture) and fruit-growing
- Wine-production
- Must and alcohol production



°Oe = Degree Oechsle, °KMW = Klosterneuburger Most Waage

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 2WM	Mass SW Vol. AP Oechsle KMW (Babo)	0 - 35 % 0 - 22 % 30 - 150 °Oe 0 - 25 °KMW	± 0,2 % ± 0,1 % ± 1 °Oe ± 0,1 °KMW	0,1 % 0,1 % 1 °Oe 0,1 °KMW	305,-

Digital refractometer KERN ORD

Scope of application: Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

The main scope of applications is:

- Hospitals
- Doctor's surgeries / Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 1PM	Serum protein Urine (spec. gravity) Refractive index	0 - 12 g / dl 1,000 - 1,050 sgU 1,3330 - 1,3990 nD	± 0,1 g / dl ± 0,001 sgU ± 0,0003 nD	0,1 g / dl 0,001 sgU 0,001 nD	305,-

Scope of application: Industry / Automotive

The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene EG, propylene PG), battery fluid (BF), urea, the freezing point of fountain solution (CW) and the refractive index. Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry / Lumbermen



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 2UM	EG PG BF CW	-50 - 0 °C -50 - 0 °C 1.00 - 1.50 kg / l -40 - 0 °C	± 0,5 °C ± 0,5 °C ± 0,01 kg / l ± 0,5 °C	0,1 °C 0,1 °C 0,01 kg / l 0,1 °C	305,-
ORD 5UM	EG PG Urea CW	-50 - 0 °C -50 - 0 °C 0 - 40 % -40 - 0 °C	± 0,5 °C ± 0,5 °C ± 0,2 % ± 0,5 °C	0,1 °C 0,1 °C 0,1 % 0,1 °C	305,-
ORD 6US	Urea	0 - 40 %	± 0,2 %	0,1 %	305,-

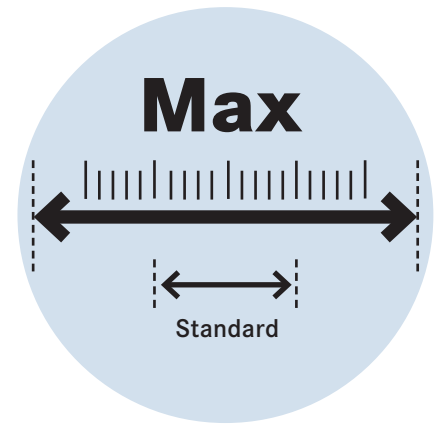
Digital refractometer KERN ORD

Scope of application: Expert applications

The following model has a special large measuring range for the refractive index.

The main scope of applications is:

- Universal measuring instrument, especially for applications with extra large measuring ranges



Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORD 1RS	Refractive index	1,3330 - 1,5400 nD	± 0,0003 nD	0,0001 nD	395,-

Accessory parts: Digital refractometer – ORD

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1006	Calibration liquid 60,0 % for ORD 92BM and ORD 92HM Content: 2,5 ml	30,-
ORA-A2103	Leather bag for digital refractometer	30,-
ORA-A1001	Calibration liquid 0 % (Distilled Water) Volume: 2,5 ml	30,-



Calibration liquid

Abbe refractometer KERN ORT-1



Thermometer

Refractive index measurement for pharmacy, laboratories and industry

Features

- The KERN ORT refractometers are universal analog Abbe refractometers.
- The handy and robust design allows the easy, efficient and sustainable use in everyday life
- The integrated scale allows the use in different applications and provides the best possible security to read the measurement results accurately.
- The scope of delivery includes:
 - calibration solution
 - calibration block
 - pipette
 - small screwdriver
 - cleaning tissue
- Accessories are available as options

Technical data

- Measurement temperature: 20 °C
- Overall dimensions
WxDxH 180x90x240 mm
- Dimensions aluminium box
WxDxH 310x120x240 mm
- Packing dimensions
WxDxH 350x130x270 mm
- Net weight approx. 1950 g

STANDARD



Abbe refractometer KERN ORT-1

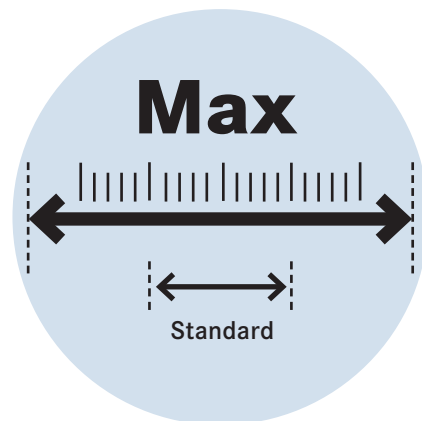
Scope of application: Industry / Pharmacy / Laboratory

The following model is a simple yet highly reliable Abbe refractometer with a digital thermometer. Liquid, solid and pasty samples can be evaluated. This refractometer is robust, accurate and easy to use. Optionally a solide aluminium case for transport and storage is available. It measures the refractive index (nD).

The main scope of applications is:

- Sugar industry: for example cane sugar
- Pharmacy
- Beverage industry
- Food industry
- Chemical industry
- Oil industry / Refinery
- Laboratories
- Training

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORT 1RS	Brix Refractive index	0 - 95 % 1,3000 - 1,7000 nD	± 0,1 % ± 0,0002 nD	0,25 % 0,0005 nD	675,-



Accessory parts: Abbe refractometer – ORT

Model	Description	Price excl. of VAT ex works €
KERN		
ORA-A1102	Aluminium suitcase Dimension: 310x120x240 mm, weight: 1300 g	90,-
ORA-A2266	Digital thermometer	40,-
ORA-A2267	Calibration block for ORT 1RS	35,-
ORA-A1107	Contact liquid: Alpha-Bromonaphthalene for ORT 1RS Volume: 2,5 ml	40,-















Calibration block
ORA-A2267



Transport and storage case
ORA-A1102

KERN Pictograms

 360° rotatable microscope head	 Infinity system Infinity corrected optical system
 Monocular Microscope For the inspection with one eye	 Zoom magnification For stereomicroscopes
 Binocular Microscope For the inspection with both eyes	 Parallel optical system For stereomicroscopes, enables fatigue-proof working
 Trinocular Microscope For the inspection with both eyes and the additional option for the connection of a camera	 Integrated scale In the eyepiece
 Abbe Condenser With high numerical aperture for the concentration and the focusing of light	 Integrated USB 2.0 digital camera For direct transmitting of the picture to a PC
 Halogen illumination For pictures bright and rich in contrast	 Integrated USB 3.0 digital camera For direct transmitting of the picture to a PC
 LED illumination Cold, energy saving and especially long-life illumination	 Automatic temperature compensation For measurements between 10 °C and 30 °C
 Incident illumination For non-transparent objects	 Protection against dust and water splashes IPxx The type of protection is shown by the pictogram.
 Transmitting illumination For transparent objects	 Battery operation Ready for battery operation. The battery type is specified for each device.
 Fluorescence illumination For stereomicroscopes	 Rechargeable battery pack Rechargeable set.
 Fluorescence illumination for compound microscopes With 100W mercury lamp and filter	 Mains adapter 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 Fluorescence illumination for compound microscopes With 3W LED illumination and filter	 Power supply Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 Phase contrast unit For a higher contrast	 Package shipment The time required to manufacture the product internally is shown in days in the pictogram.
 Polarising unit To polarise the light	 Warranty The warranty period is shown in the pictogram.

Abbreviations

C-Mount	Adapter for the connection of a camera to a trinocular microscope	N.A.	Numerical Aperture
FPS	Frames per second	SLR camera	Single-Lens Reflex camera
H(S)WF	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	SWF	Super Wide Field (Field number at least Ø 23 mm for 10x eyepiece)
LWD	Long Working Distance	W.D.	Working Distance
		WF	Wide Field (Field number up to Ø 22 mm for 10x eyepiece)

Microscopy, measuring technology and testing services from a single source



Optical instruments catalogue



Balances & test service catalogue



Medical scales catalogue



SAUTER measuring equipment catalogue



DAkkS calibration service brochure

KERN – your partner for optical instruments

Dear Customer,

Precision is our business and it has been for more than 170 years.

We are constantly using these years of experience and the very latest know-how to create new products, to help you and your customers carry out your daily work as efficiently as possible.

So we already have a large selection of products on offer - precision balances and industrial scales, medical scales, measuring instruments, test weights and a comprehensive range of calibration services.

In this catalogue we are now expanding our product range to include high-quality microscopes and refractometers.

Over recent years, a specially created department has been working with your requests, market requirements and the latest developments, so that we can offer you a complete, carefully-designed range of devices, which are high-quality and highly-competitive in terms of price.







Comprehensive product details, high-quality materials, durability and ergonomic operation are all in line with the typical KERN “virtues” - quick delivery, large stocks, competent advice, comprehensive pre and after sales service.

Do you have any questions about our range of microscopes and refractometers? Your KERN customer advisers are available at any time to help you further.

I hope that you enjoy working efficiently with our KERN Optics products.

Albert Sauter, Managing Director

Your advantages

 Quick Delivery Items in stock are sent the same day if orders are placed before 1:00 pm (valid for parcel service delivery within the EC).	 Price performance ratio KERN microscopes and refractometers are always an inexpensive alternative. They are durable, uncomplicated and easy to place into operation.	 Direct dispatch of ordered goods to your customer is available, invoice will be issued to you (third party business).
 3 years warranty Items under € 400,-: 2 years	 No stock-keeping necessary. KERN does the warehousing for you.	 Sale or return within 14 days of purchase.


Retailer information


Sales conditions

All prices are valid as of January 1st 2016 until a new version of the KERN catalogue is released. In Europe, all prices do not include the applicable V.A.T..

At KERN there is no minimum order value. For orders less than € 15.00 there is no re-sale discount available. A minimum fee of € 15.00 (net) will be charged for orders less than € 15.00 (net).

Delivery Conditions: we supply ex works Balingen, i.e. the transport costs are invoiced. With our contract logistics partners we always offer you shipping at a good rate. When shipping to islands or other more distant areas, or areas which are difficult to access, the transport costs may possibly be higher, please ask for details. Any goods supplied remain KERN's property until complete payment for the goods sold has been received.

 Delivery is usually via courier service.

 When you see this symbol by truck, please ask for prices.

Extract from general terms and conditions:

Court of jurisdiction/Legal domicile: 72336 Balingen, Germany; Commercial register N°: HRB 400865, AG Stuttgart; Managing director: Albert Sauter, Martin Sauter. For the full Terms and Conditions, please refer to the website. www.kern-sohn.com/en/kern/agbs.html

Price changes and product changes are likely in individual cases due to product modifications as well as error.

Sale or return: within 14 days of purchase. Not valid for custom processes, such as, for example, special orders.

Warranty: 3 years.
2 years for products with list price ≤ € 400.00
Does not apply to consumables such as batteries, rechargeable battery packs, etc.

Services

Free delivery: all orders from dealers through the KERN Online shop with an order value over € 150.00 (list price) and parcel shipment, within the EU (except of MT, CY) with our parcel service (no pallet shipment) are delivered free of charge.

3 % web discount: Additional discount for dealer orders from the KERN Online shop (only in combination with KERN e-invoice, please ask for details).

KERN DirectCash: The quick, secure COD procedure for protection against non-payment. With the KERN DirectCash COD system, you can safely deliver orders to end customers with unknown credit rating, with no risk of non-payment. Please request further details on this procedure.

After-Sales-Service

Repair services within 1 week at our plant in Balingen, transportation costs are additional. In urgent cases, if requested by customer, a replacement device will be provided until all repairs are completed; please ask.

Price reduction on a new device: if repair costs exceed the current value of the defective device, a new device will be offered at a discount price. This offer is valid only up to 2 years after warranty expiration.

Spare parts service within 48 hours, transportation costs are additional.

Marketing support

KERN catalogues, brochures, branch prospectuses – your own personalised marketing tools

This catalogue and branch prospectuses are available free of charge. A neutral version of the catalogue, without the KERN address imprint, is also available for your marketing activities free of charge (200 pcs., larger quantities on request).

On demand, your company logo and address can be printed on the back of the KERN catalogue free of charge (200 pcs., larger quantities on request). In this way you have your own individual marketing tool. The KERN catalogue branch prospectuses are available in the following languages: DE, GB, FR, IT, ES.

Important notice

Humidity

Our models are not suitable for rooms with a high level of air humidity (condensing). Please observe the applicable electrical regulations.

Miscellaneous

Product pictures printed in catalogue

All product pictures contained in our catalogue show devices similar to our products. Please note that possible technical innovations might be the cause of such deviations.

Accessory for optical instruments

Further extensive accessories for our optical instruments you can also find in the KERN Online shop on www.kern-sohn.com