# ULTRA X

DISCOVER OUR
MOISTURE ANALYSERS

# a&p instruments

A COMPANY OF PCE INSTRUMENTS

# MANUFACTURER OF ULTRA X MOISTURE ANALYSERS

### Made in Germany

A & P Instruments is a recently formed company emerging from ULTRA X laboratory devices, a traditional family-run business. Besides standard moisture analysers, A & P Instruments' main focus is the production and distribution of instruments for special applications.

Here, ULTRA X's years of experience are put to good use.
In December 2002, the move to a new building and thus to modern, well-equipped facilities, enabled the company to take another step forward.

The efficient organisational structure means, A & P Instruments have been providing quick delivery times of less than a week, while maintaining its consistent high quality and prompt service.

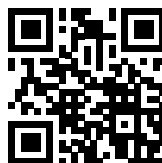A & P Instruments is a member of the PCE Instruments Group.

This alliance allows all to continuously expand comprehensive expertise. Under the PCE Instruments umbrella, A & P Instruments' expertise is united with the proven competencies of companies like List-Magnetik and Drive Test GmbH. For the customers, this means a broader and deeper spectrum of measurement technology, all from a single source.

## MOISTURE ANALYSERS

ULTRA X – instruments you will find in almost all fields!
Raw material exploitation – production – processing – storage –trade – research – recycling – monitoring

In addition to the standard device, the ULTRA X 3011, we also provide special ULTRA X moisture tester models for different requirements tailored to meet specific individual demands. These mainly include the following tried-and-tested devices.

## RAPID INCINERATOR

Our range of ULTRA X laboratory devices includes, in addition to various moisture measuring devices, other devices such as a separate printer, a rapid incinerator and the software ULTRA X DataBridge for all moisture analysers of the series UX3001 and UX2001. The software reads the results of your moisture measurements and transmits the measured values to your PC in various formats.

## QUARTZ RADIATORS

In our range you will find quartz radiators in different versions for moisture analysers of the ULTRA X series – optionally also with other accessories such as a connection cable, a perforated hood or a holder.

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## ULTRA X 3081WQ

### For light and bulky materials / weighing range 400 g

Our Moisture Meter has been specially developed for light and bulky materials. It has an exceptionally large drying pan and is suitable for applications in the fields of raw material extraction, production, processing, research and recycling.
With a maximum weighing capacity of 400 g, a volume of 360 cm³ and a high measuring resolution of 0.001 g, the Moisture Meter enables
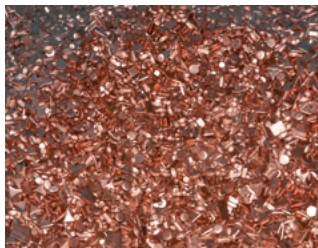
precise and reliable moisture measurements. The balance works according to the principle of drying with simultaneous weighing: the weight loss is continuously recorded and displayed as a percentage of the total mass. With a heater output of 2 x 400 W and an adjustable heating temperature of 105 °C to 360 °C, the Moisture Meter offers quick and flexible drying of samples.

**ISO cal option**

» for all Temperature-insensitive materials up to 360 °C brass chips, steel chips, titanium chips

» large drying tray 110 x 240 x 20 mm

» weight up to 400 g

» fast and accurate results

» robust industry standard

» sample weight: min. 20 g

» sample volume: max. 360 cm³

» data output via USB and RS 232

## APPLICATION

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Absolute moisture | |
| Measurement range up to | 0 … 100 % |
| Resolution | 0,01 % |
| Accuracy | 0.01 % |
| | |
| Weighing range | |
| Measurement range up to [Max] | 400 g |
| Resolution [d] | 0,001 g |
| Accuracy | 0.001 g |
| | |
| General technical data | |
| Heating temperature | 105 … 360 °C |
| Outputs | V24 |
| Measurable materials | brass chips |
| | steel chips |
| | titanium chips |
| Measuring functions | % moisture, % dry matter, % moisture bd, g residual weight / kg, Residual weight |
| Display type | LCD with backlight |
| Display size | 4 Inch |
| Interface | USB, RS232 |
| Minimum load [min] | 20 g |
| Menu language | German, English, English (GB) |
| Protection class (device) | IP20 |
| Power supply | 230V AC | 48/63 Hz |
| Connector type | Schuko plug |
| Operating conditions | 10 … 40 °C , 0 … 90 % RH |
| Storage conditions | 10 … 40 °C , 0 … 90 % RH |
| Dimensions ( L x W x H x D ) | 440 x 440 x 240 x 330 mm |
| Other dimensions | Inner pan size: 230 x 97 mm / 243 x 111 mm |
| Inner pan height: | 17 mm |
| Weight | 13200 g |

**Further model:**

| | |
|---|---|
| ULTRA X 3081WQD | with printer |
| ULTRA X 3081D | with printer |
| ULTRA X 3081 | |
| | |
| Heating temperature | 40 … 200 °C |
| Measurable materials | all light, voluminous materials wood chips wood fibers, pellets grasses, straw, hay animal feed silage, tacco leaves tea leaves granules powder |

ULTRA X 3081

Subject to change without notice

## ULTRA X 3031

### For plaster and gypsum analysis / weighing range 220 g

Our Moisture Analyser is a high-precision device that has been specially developed for plaster / gysum analysis. With a maximum weighing capacity of 220 g and a measuring resolution of 0.001 g, it enables exact and reliable moisture measurements. The balance works on the principle of drying with simultaneous weighing. During drying, the weight loss is continuou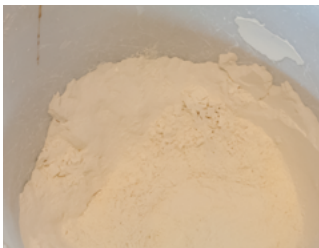sly recorded and displayed as a percentage of the total mass. The Moisture Meter has two adjustable heating temperature ranges: 40 °C ... 180 °C and 105 °C ... 360 °C - which are made possible by two powerful radiant heaters: a 250 W infrared heater and a 375 W quartz heater. These heating elements ensure precise and efficient drying results and can be operated independently of each other in timer or automatic mode.

**ISO** cal option

» weighing range: 220 g

» adjustable heating temperature up to 360 °C

» sample weight: Min. 4 g

» sample volume: Max. 95 cm³

» weighing pan inside: Ø 105 / 115 mm

» radiator power: 250 W / 375 W

» time setting: 1 ... 180 min

» menu lock

## APPLICATION

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Absolute moisture | |
| Measurement range up to | 0 ... 100 % |
| Resolution | 0,01 % |
| Accuracy | 0.01 |
| | |
| Weighing range | |
| Measurement range up to [Max] | 220 g |
| Resolution [d] | 0,001 g |
| Accuracy | 0.001 g |
| | |
| General technical data | |
| Outputs | V24 |
| Measuring functions | % moisture, % dry matter, % moisture bd, g residual weight / kg, Residual weight |
| Display type | LCD with backlight |
| Display size | 4 Inch |
| Interface | USB, RS232 |
| Heating temperature | 40 ... 180 °C |
| Heating temperature 2 | 105 ... 360 °C |
| Minimum load [min] | 4 g |
| Menu language | German, English, English (GB) |
| Protection class (device) | IP20 |
| Power supply | 230 V AC | 48/63 Hz |
| Connector type | Schuko plug |
| Operating conditions | 10 ... 40 °C , 0 ... 90 % RH |
| Storage conditions | 10 ... 40 °C , 0 ... 90 % RH |
| Dimensions ( L x W x H x D ) | 380 x 380 x 440 x 280 mm |
| Other dimensions | Inner pan size: Ø 105 / 115 mm |
| Inner pan height: 9 mm | |
| Weight | 8300 g |

**Further model:**

| | |
|---|---|
| PCE-ULTRA X 3031D | with built-in printer |

Subject to change without notice

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# ULTRA X 3011HQ

**Up to max. 95 cm³ sample volume / weighing range 200 g / high temperature, 105 ℃ - 600 ℃**

Our Moisture Analyser is a precise device for determining moisture in liquid and solid materials. It is suitable for various applications in raw material extraction, production, processing, research and recycling. With a maximum sample weight of 220 g and a high measuring resolution of 0.001 g, the Moisture Balances enables precise moisture measurement.
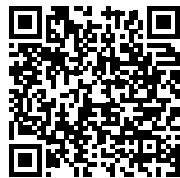
The balance works on the principle of drying with simultaneous weighing. During drying, the weight loss is continuously recorded and displayed as a percentage of the total mass. With a heater output of 250 W and an adjustable heating temperature of 40 ℃ to 180 ℃, the Moisture Balances ensures quick and flexible drying of the samples.

**ISO cal option**

» weighing range: 200 g

» sample weight: min. 10 g

» sample volume: max. 95 cm³

» weighing pan inside: Ø 105 / 115 mm

» adjustable heating temperature: 105 ... 600 ℃

» radiator power: 375 W

» time setting: 1 ... 180 min

» PreFlash adjustable up to 180℃

» menu lockwith built in printer

» with timer and automatic switch-off

# TECHNICAL SPECIFICATIONS

**Weighing range**

| | |
|---|---|
| Measurement range up to [Max] | 200 g |
| Resolution [d] | 0,001 g |
| Accuracy | 0.001 g |

**General technical data**

| | |
|---|---|
| Measuring functions | % moisture, % dry matter, % moisture bd, % annealing loss, g residual weight / kg Residual weight, % annealing residue |
| Display type | LCD with backlight |
| Display size | 4 Inch |
| Interface | USB, RS232 |
| Heating temperature | 105 ... 600 ℃ |
| Minimum load [min] | 10 g |
| Menu language | English, German, English (GB) |
| Protection class (device) | IP20 |
| Power supply | 230V AC | 50 Hz |
| Connector type | Schuko plug |
| Operating conditions | 10 ... 40 ℃ , 0 ... 90 % RH |
| Storage conditions | 10 ... 40 ℃ , 0 ... 90 % RH |
| Dimensions ( L x W x H x D ) | 380 x 380 x 330 x 280 mm |
| Other dimensions | Inner pan size: Ø 105 / 115 mm |
| Inner pan height: 9 mm | |
| Weight | 8500 g |

**Further Models:**

| | |
|---|---|
| ULTRA X 3011 | standard, 40 - 180 ℃, 220 g sample weight, |
| ULTRA X 3011G | for wastewater treatment plants, 40-180 ℃, 220 g, sample weight, determination of residue on ignition, PreFlash |
| ULTRA X 3011Q | High temperature, 105 ℃ - 360 ℃, initial sample weight 220 g |
| ULTRA X 3011GQD | High temperature, 105 ℃ - 600 ℃, initial sample weight 220 g,,, Biogas Plans, with build in printer |
| ULTRA X 3011HQD | with printer |
| ULTRA X 3011QD | with prnter |
| ULTRA X 3011D | with printer |

# APPLICATION

## ULTRA X 052

**Rapid incinerator for individual samples up to 610 ºC / typical ashing between 8 and 15 minutes.**

This infrared rapid incinerator is used particularly in conjunction with ULTRA X laboratory devices to determine the incineration residue in sewage sludge after the determination of dry matter. The UX 052 is useful in every laboratory where a fast incineration of single samples of organic materials is eeded.
Rapid incinerator for individual samples up to 610 ºC, an inexpensive alternative to the high-temperature furnace, for incinerating all materials and determining the ash content, organic substances and the residue on ignition. Depending on the type of material to be burned, the typical ashing time of a 5 g sample is generally between 8 and 15 minutes.

### ISO cal option

» for individual samples up to 610 ºC

» for sewage sludge analysis

» two heating stages

» sample volume max. 130 cm³

» radiator power: 375 Watt
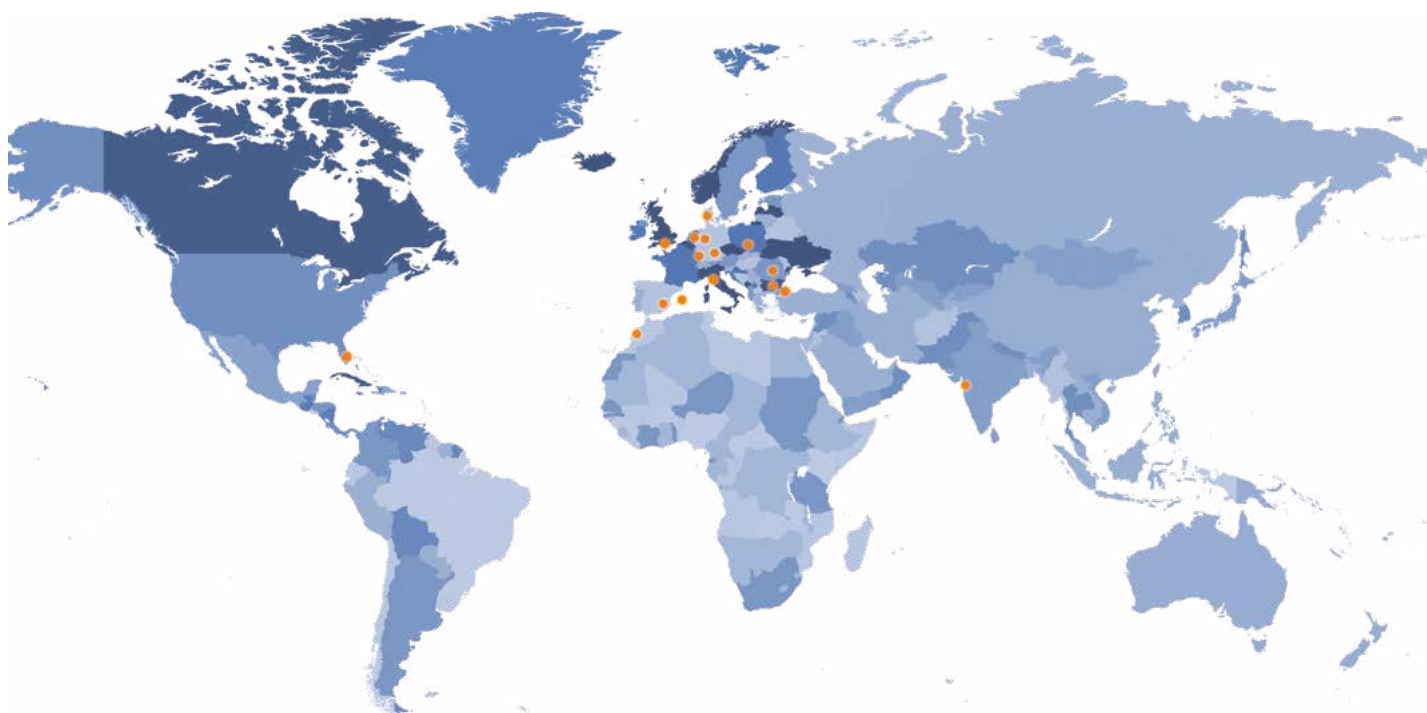
» electronic with LCD display

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Power supply | 230 Volt, 50-60 Hz |

**Other voltages with separate transformer**

| | |
|---|---|
| Radiator power: | 375 Watt |
| Temperature range | up to approx. 610 ºC |
| Temperature setting | electronically, 2 staps possible |
| Time setting | electronically, 2 staps possible |
| | up to 99 min. per stage |
| Sample volume | max. 130 cm3 |
| | (aluminium pan) |
| Max. bowl size | 75 mm diameter x 30 mm height |
| Dimensions | Height     180 mm |
| | Width      190 mm |
| | Depth      350 mm |
| Weight | approx. 4.0 kg |

## APPLICATION

Subject to change without notice

# PCE Instruments SE



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| Germany | DriveTest GmbH | www.drivetest.de |
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