

# MK30R - PORTABLE DEEP MOISTURE METER



Designed for pulp, paper and corrugated board plus all fibre materials. Penetrates deep into matter but can measure thin sheets as well. This is a unique instrument

## Advantages

- Measures profiles of reels, rotating and static, running webs, pulp bales and sample stacks
- Static reels can be measured with an integral distance sensor to get a repeatable profile
- Extremely wide moisture range
- Simple to use, accurate readings, excellent repeatability
- Graphic display with trend curve / big numbers
- Wireless data transfer to laptop (Windows 7 - 11 +)
- A compact instrument, contains everything and is easy to travel with its protective carrying case
- Offered with either a small or wide bottom skid for all web and reel measurements plus soft materials for optimum results
- The sensing surface is integral at the bottom of the box. Special models PF and PX have the sensor at the end of a stick with a handle for easy operation in tight places
- Uses safe UHF radio waves at very low power levels

## Benefits

- Quick measurements, readings and reports on site. Profiles are saved into the meter
- Immediate results and rapid reactions to profile issues. Verification of repair success follows
- Routine daily measurements are handy and reliable
- Measurements are saved when needed and documented when reporting
- Excels with difficult materials like black papers and corrugated, pulp bales, felts
- Problems are solved fast and downtime is minimized in serious cases

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## Main Specifications

- applications in pulp, paper and board, textiles, felts, filters, recycled fiber, biofuels with fine particles, packaging papers, animal feed, peat, soil, minerals, wood, sawdust etc.
- suitable also for **corrugated** and **soft materials** and works for **reels** too. Tissue can be measured as well.
- unbeatable for most **black papers**
- moisture of thick and thin samples, moisture content in % (abt. **30 mm penetration in common materials**)
- wide moisture range starting from about 2 %, up to about 99 % depending on BW, **up to 8 000 g/m<sup>2</sup> water**
- fully portable and stand-alone, an easy-to travel companion, no wires
- fast response, selectable digital filtering, 3 or 6 points per sec sampling
- superior stability, based on radio frequency technologies (UHF)
- the price is very competitive and the payback time is usually short
- a universal calibration is included for papers < 400 g/m<sup>2</sup>, giving g/m<sup>2</sup> water content

## Data logging features

- operating distance: **contact required**
- measuring area 40 mm in diameter, depth to 30 mm
- nonvolatile memory for holding up to 820 profiles with time stamp and profile number
- each profile can contain up to 500 points
- profiles can be downloaded to a laptop with the original time stamp and a selectable text label, affecting directly the resulting filename
- profiles remain for years, unless erased
- graphic trend display for recent history
- the current trend display can be saved to a new profile with a button press
- autotimer sampling (adjustable sampling interval from 0.2 s and batch size 1 - 500), start with either the "+"-key or with a separate button in the handle
- statistics of collected values either from one series or of a preset number of series. This allows for averaging of sides of a large pulp bale
- low noise level even at high moistures
- a skid for measuring safely over moving webs and running rolls. It also ensures proper contact while measuring soft materials having a low-friction skid leaving no streaks, no ripping. Two variants are available
- water content in % total, can be calibrated as g/m<sup>2</sup> in some materials
- calibration with multiple points for linearization (2 - 10 points)
- an integral distance meter is used when measuring accurate cross profiles of static reels synchronizing each point accurately
- five quick switching recipes for starting new measurements at regular QC positions. Calibration table and a label can be edited for each recipe
- marker key for marking a part of data series acquired
- **-CARMK** a carrying case, water tight, shock-proof
- **-MKSTD** a polymer plate for verifying the calibration in long-term use (most stable polymers will do)

## Interfaces and physical properties

- an integral display and a diaphragm keyboard
- large numeric display and a graphic display, trend curve and values
- LCD colour hue is associated with crossing preset moisture levels, high / low (alarm feature)
- battery charge indicator LEDs
- battery-backed clock for time stamping
- dimensions 260x178x139 mm, weight 1.9 kg
- IP65 enclosure for harsh environments with sturdy grips
- an operating period of at least 8 hours before recharging the battery.
- battery charger for 110 - 240 VAC mains is included. Several common chargers will do
- wireless communication via 100 meter Bluetooth, the Bluetooth adapter for the laptop included
- the free **ATOM**, **AK30** and **AK30Mini** programs are data acquisition software for trend display, data archiving, manipulation etc. **Advanced** is an optional licensed program with plenty of features.
- meter configuration can be saved, meter starts the next session like that. Temporary changes are not saved.
- calibration tables can be saved after modification, user decides if necessary
- **Note:** Does not operate for materials containing significant amounts of **soothe**, **metal particles**, **metal films** or **Titanium oxide** pigment

## Ambient conditions

- operating +5 ... +45 C (+65 C shortly)
- fully temperature compensated
- IP65 case tolerating some water splashes but is not water-tight. Tailored water-proof IP67 units available
- sensing surface can be cleaned if dirt accumulated
- power and clock batteries are replaced every 5 to 7 years

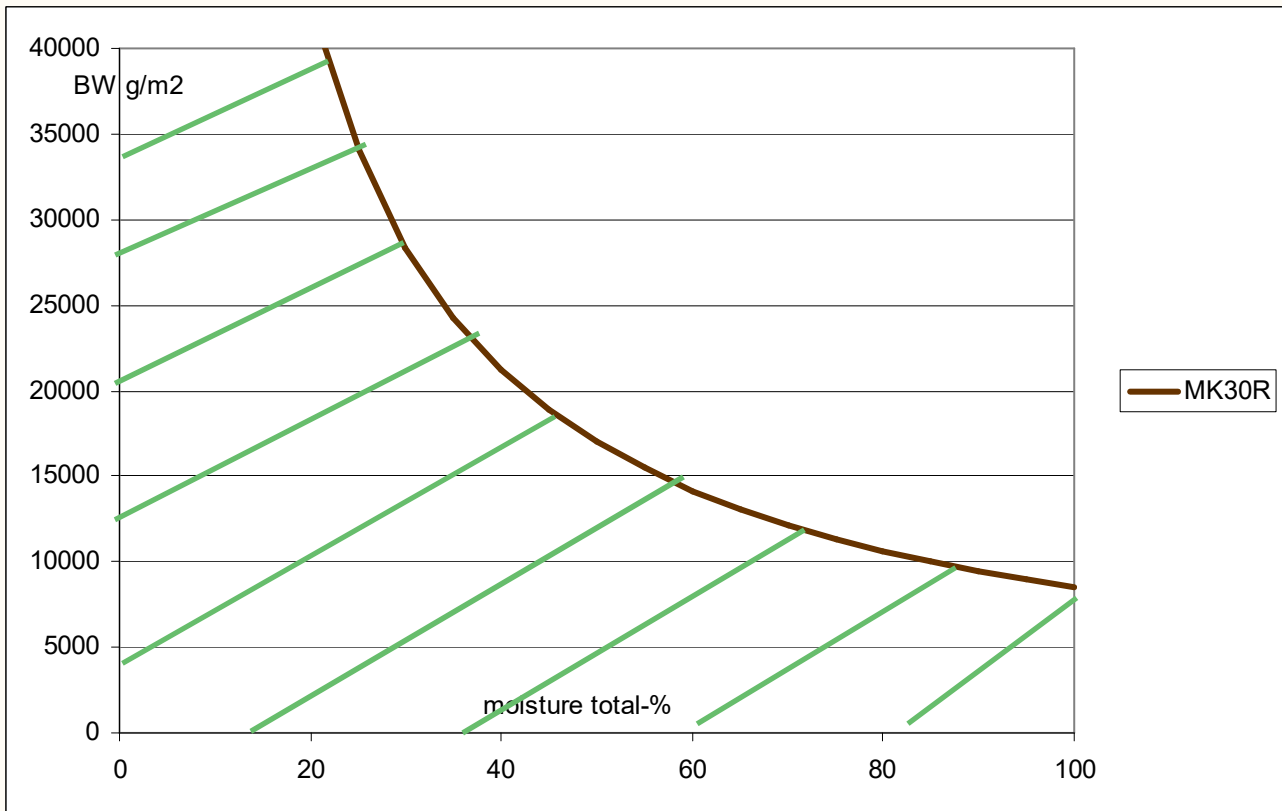
## Options

- Special versions, like **MK30R-PF** for paper forms and **MK30R-PX** for felts and pulp with very high moisture levels

## Your nearest contact:

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## Approximate safe operating region for MK30R



**Moisture accuracy for MK30R** - The moisture reading accuracy is dependent on the moisture level. The calibration performed will strongly affect and so do the measuring conditions.

In order to get the best results, measure with a thick layer of material **with air compressed out between the layers**. Strong layering of water is not supposed to exist. Moisture level 2 - 40 % accuracy is  $\pm 0.3\%$  or better. 40 - 70 accuracy is  $\pm 0.4\%$  or better, above that  $\pm 2\%$  or better. Repeatability numbers are usually much better than these. **MK30R** will average out the moisture of the material which it is able to "see".



Special versions **MK30R-PF** and **MK30R-PX** have a handle and a probe in it for sensing the targets

