

MK30 - PORTABLE MOISTURE METER FOR THICK MATERIALS



Model MK30 Compact



Model MK30 Regular

- Designed for thick materials like pulp, paper and corrugated board - penetrates deep into matter but can measure sheets
- Excels with difficult materials like black papers and corrugated
- Suitable for static samples, stacks and running production lines
- Other materials like wood, sawdust, minerals, soil, textiles
- Wide bottom skid for all web and roll measurements plus other soft materials
- Laboratory and field, QC, research and troubleshooting
- Simple to use, accurate readings, excellent repeatability
- Extremely wide moisture range
- Graphic display with trend curve / big numbers
- Wireless data transfer
- Operates with safe UHF radio waves
- A version for extremely high water contents is available

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Main Features and Applications

- 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
- unbeatable for **black papers**, capable of measuring plastic plate thickness
- moisture of thick and thin samples, moisture content in % (abt. **30 mm penetration in common materials**)
- wide moisture range starting from about 0.5 %, up to about 99 % depending on BW
- fully portable and stand-alone, an easy-to travel companion, no wire tangles
- 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

Data logging features

- operating distance: **contact required**
- measuring area 40 mm in diameter, depth to 30 mm
- nonvolatile memory banks for holding up to 820 data series with time stamp and bank number
- each bank can contain up to 500 samples
- banks can be downloaded to a PC with the original time stamp and a selectable text label, affecting directly the resulting filename too
- banks remain for years, unless erased
- graphic trend display for recent history
- the current trend display can be saved to a new bank 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
- statistics can be calculated 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
- measurement modes: SLOW / FAST for speed selection, DRY / WET for water content range for optimum results
- water content in % total
- calibration with multiple points for linearization (2 - 10 points)
- five quick switching recipes for starting new measurements at regular QC positions. Calibration table and a label can be selected for each recipe
- marker key for marking a part of data series acquired
- **Note:** Does not operate for materials containing significant amounts of **soothe, metal particles, metal films** or **Titanium oxide** pigment

Interfaces and physical properties

- an integral display and a diaphragm keyboard
- large numeric display and a graphic display, trend curve and values
- colour hue is associated with crossing preset moisture levels, high or low (alarm feature)
- charge indicator LEDs
- battery-backed clock for time stamping
- dimensions 410x140x110 mm, weight 1.2 kg Compact and 1.9 kg Regular models
- IP67 enclosure for harsh environments
- an operating period of at least 9 hours before recharging the battery.
- battery charger for 110 - 240 VAC mains is included
- wireless communication via 100 meter Bluetooth, the Bluetooth adapter for the PC included
- the free **AK30** and **AK30Mini** programs are data acquisition software for trend display, data archiving, manipulation etc. **IRMA7Basic** has more features. **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

Ambient conditions

- operating +5 ... +50 C (+70 C shortly)
- fully temperature compensated
- IP65 case
- sensing surface can be cleaned if dirt accumulated
- service interval of 200 000 hours
- power and clock batteries are replaced every 5 to 7 years

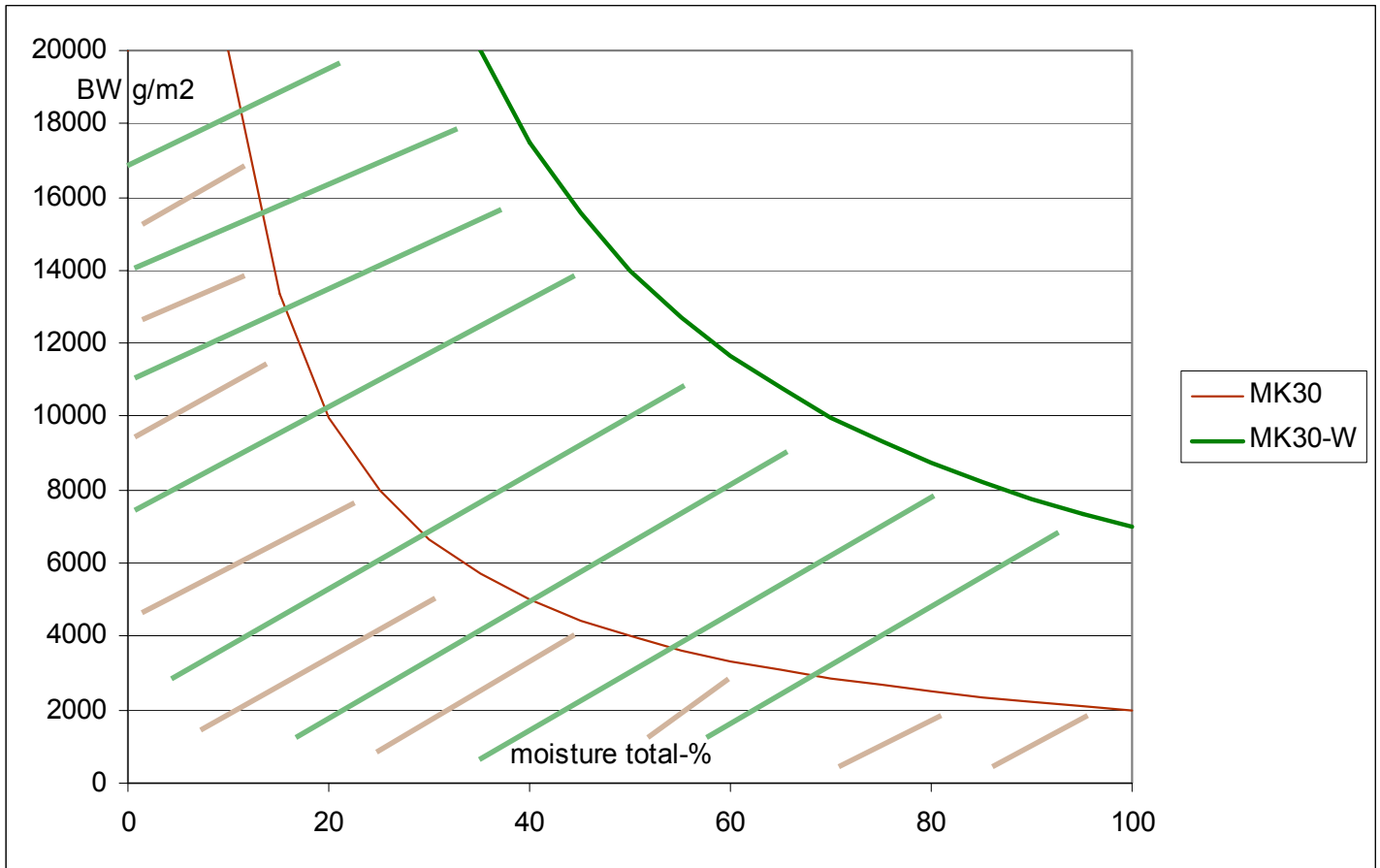
Options

- **MK30 Compact** a smaller-sized version with is best in the dry end. The **Regular model** has a wider range
- **MK30-W** a special version for extremely high water contents (see picture on next page)
- **-CARMK** a special carrying case, water tight, shock-proof
- **-MKSTD** a polymer plate for verifying the calibration in long-term use (any stable plastic will do)

Your nearest contact:

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Approximate safe operating regions for MK30 and MK30-W



MK30 Regular can be tailored for specific targets by optimizing some of its internal parameters. The version **Compact** has somewhat narrower moisture range

Moisture accuracy for MK30 models - The moisture reading accuracy is dependent on the moisture level and on the low level filtering used (FAST/SLOW). 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. With SLOW: Moisture 2 - 40 % accuracy is +/-0.3% or better. 40 - 70 accuracy is +/-0.4 % or better, above that +/-2% or better. Repeatability numbers are usually much better than these. MK30 will average out the moisture of the material which it is able to "see".

MK30 Sample Holder for regular QC of cylindrical products, filled or hollow. The system is flexing and adapts to varying diameters. The reading is seen immediately and can also be acquired at a PC through the wireless link.

