

# Ronin®



# MOISTURE

## Control Solutions

### THE UNIVERSAL IMPORTANCE OF WATER

*Organic life is not possible without water. When searching for life within our universe H2O is the first element scientists and astronomers look for. Naturally it is just as crucial an element here on our own planet. Water is undeniably the foundation for biodiversity and food security on our planet and is the prime requisite for the development and growth of civilisations. It is, however, by no means a wholly benign element. Water can also damage and destroy. Quantifying it in gas, solid or liquid form is the first step towards controlling its inherent risks and benefits*

#### FOOD PRODUCTION

Moisture plays a prominent role in the production of high valued foods and feeds. The final moisture of the product has an inherent influence on other constituents, such as protein, within the product. This is the reason why online analysis of moisture, proteins and other constituents are important to the production manager. Lower final moisture percentages normally yield higher protein results. This has a dramatic price effect in today's protein conscious world.

#### FOOD SECURITY

Water is the single biggest risk factor when it comes to food security. In a production cycle of crops you need it at specific intervals for germination, pollination and ultimately ripening to mature plants and seeds. The end results are harvested and graded to quality of which moisture is a key parameter for safe storage. High moisture in grain gives life to mould, insects and germinates the seeds.

#### TRADE & REGULATIONS

Water offers more challenges since it is normally molecularly bound to cereals, derived products or a bulk commodity which increases the weight of the load. This factor introduced rules and regulations to the trade which firstly created a safe, long term storage environment and secondly an accepted weight standard at a certain moisture

percentage. On this basis trading partners have a means of paying for the commodity at its true value and not at an inflated weight caused by moisture.

#### MOISTURE DAMAGE

Moisture in certain products, such as fertilisers and other chemicals, degrades the product and its physical state. This challenges the final application in the field. Storing and providing a supply chain free of external moisture is therefore crucial.

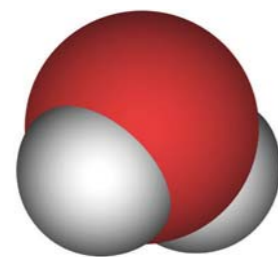
#### MINERALS & ORES

Water weighs and costs less than precious minerals and ores. As is in the case of grain storage it is important from a regulatory and cost point of view to determine moisture levels in these commodities. With the use of instrumentation dry weigh can be determined.

#### CONTROL

Only by controlling moisture throughout the supply chain can quality be guaranteed, losses minimised and the bottom line optimised. Through our proud association with leading international OEM moisture instrumentation manufacturers such as DICKEY-john®, Carl Zeiss, Ohaus and Sinar we are able to empower you with that control. For further information please visit our web site:

[www.roningms.com](http://www.roningms.com)



A water molecule (H<sub>2</sub>O)

**"Water is the single biggest risk factor when it comes to food security."**

ENSURE EFFECTIVE CONTROL WITH RONIN MOISTURE ANALYSIS SOLUTIONS

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# Ronin®



MOISTURE

#### RONIN GRAIN MANAGEMENT SOLUTIONS

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#### RONIN SOLUTIONS

A quick guide



WE PROVIDE THE FOLLOWING SOLUTIONS  
BULK COMMODITY INVENTORY MANAGEMENT / PROCESS & QUALITY CONTROL (NIR/NIR-FT-NIR/CAPACITANCE)  
QUANTITY SURVEYING AND MOMENT-IN-TIME AUDITS / PRECISION FARMING  
YIELD MONITORING, WEIGH LOAD MANAGEMENT & CAMERAS AND ALERTS.



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# BASIC FUNCTIONALITY CHART



## FUNCTIONALITY KEY

- M** MOISTURE
- T** TEMPERATURE
- B** BULK DENSITY
- I** IN LINE
- O** OVER BELT
- C** CONSTITUENTS

### EXAMPLE

**G** ← 1) COMMODITY

**M** ← 2) FUNCTIONALITY

**B**

## UNDERSTANDING THE ICONS

1) **Commodity:** This icon can be found in the top right hand corner of each of the images denoting the commodity types that can be analysed by the instruments in this functionality chart. Commodities range from whole grain to hay. The commodity in the example is Grains.

2) **Functionality:** The key to instrument functionality can be found directly to the left. The functionality icons below each instrument indicates what information it is capable of sourcing. In the example here the instrument is capable of sourcing moisture content and bulk density.

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<b>G S C</b> M MOISTURE T TEMPERATURE B BULK DENSITY*	<b>G S C</b> M MOISTURE T TEMPERATURE B BULK DENSITY	<b>G S C</b> M MOISTURE T TEMPERATURE B BULK DENSITY	<b>G S C</b> M MOISTURE T TEMPERATURE B BULK DENSITY	<b>H</b> M MOISTURE	<b>G S N C</b> <b>T F M Ch P</b> M MOISTURE	<b>G S N C</b> <b>T F M Ch P</b> M MOISTURE	<b>G S N C H T F M Ch P</b> M MOISTURE O OVER BELT C CONSTITUENTS M MOISTURE I IN LINE C CONSTITUENTS	<b>G S N C T</b> M MOISTURE T TEMPERATURE	<b>N</b> M MOISTURE T TEMPERATURE	<b>G S C T</b> M MOISTURE T TEMPERATURE	<b>G S C T</b> M MOISTURE T TEMPERATURE
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\* Only GAC+ offers bulk density. Results can be biased. Not suitable for trade.

Uses 149Mhz frequency signal for improved results. Affordable accuracy for trade.

Highly accurate American industry standard moisture analyser. This is the benchmark.

New generation DJ moisture analyser. Fast and accurate results.

Bulk moisture analyser

Especially suited for powdered products and stores profiles.

Affordable moisture on powdered products but unable to store profiles.

Ideal for conveyor belts and can accommodate irregular surfaces.

Highly accurate and fast on line analyser.

Bulk moisture analyser and temperature geige.

Especially suited for Nuts.

Can take up to 50 calibrations. Can be calibrated remotely with MCAL.

Afordable moisture analysis with up to 9 Calibrations. Can be calibrated remotely with MCAL.