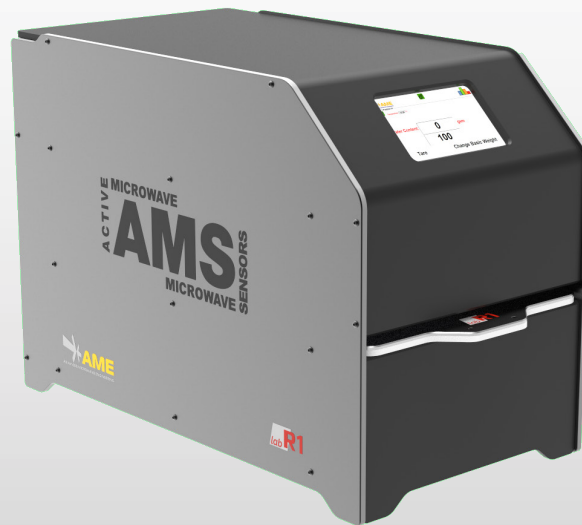


# AMS

Active Microwave Sensors



lab **R1**

## R1 Lab | Precise moisture measurement laboratory equipment

FAST  
RESPONSE

1

HIGH  
ACCURACY

2

EASY OF  
USE

3

### Quality - Accuracy - Easy of use

AMS R1 Lab is a laboratory instrument that measures the amount of water contained in a sheet of paper or cellulose.

The aim of AMS R1 Lab is to give a fast and reliable measure of the consistency of a sample of the material.

AMS R1 Lab comes with a measuring unit that allow maximum accuracy and reproducibility of the measures.

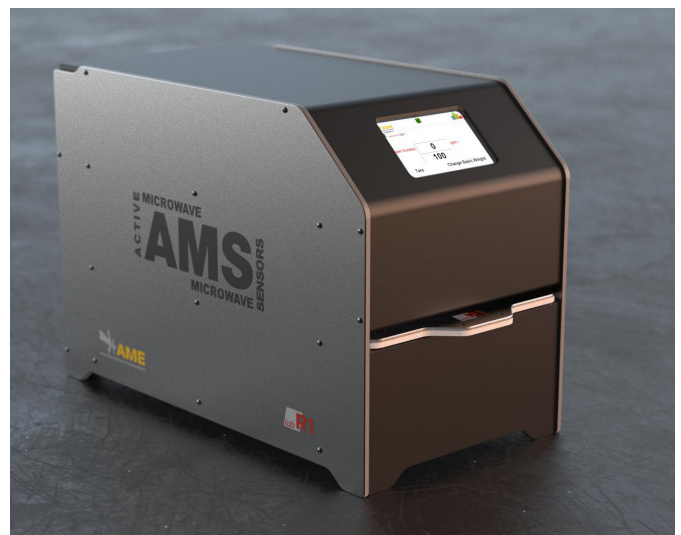
### Unique patented technology

AMS R1 Lab are sensors for measuring the water content in the sheets of pulp or paper.

This sensor works with a proprietary patented technology based on Remote Active Microwave Sensors (RAMS) that allows fast, accurate, and "environment independent" moisture content measurements.

The sensor is based on an advanced measurement concept that uses a very new microwave reflection approach which allows high performances in term of:

- Resolution,
- Accuracy
- Immunity against various environmental interferences like vibration, temperature, vapor and dust.

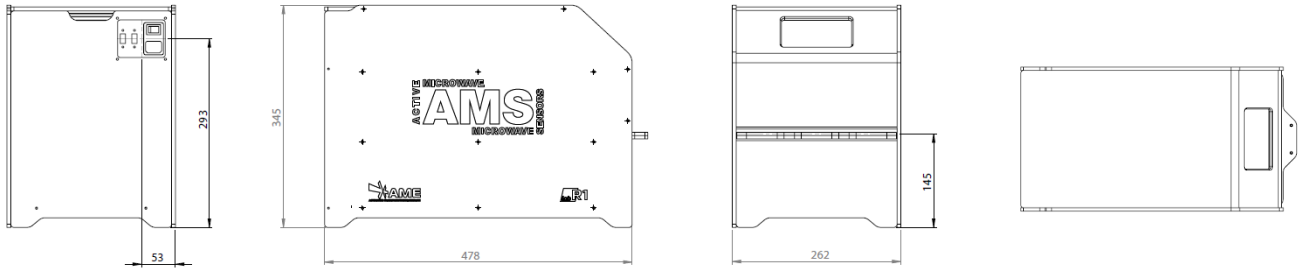


### Main Features

- Non contact measurement
- Wide measurement range from 0 to 800g/m2
- Resolution of 0.1 g/m2
- High repeatability and reliability
- High color and temperature immunity
- Easy of use

## Devices

The R1-Lab instrument is composed of a structure with a moisture sensor inside and a tray where to insert the sheet to be measured.



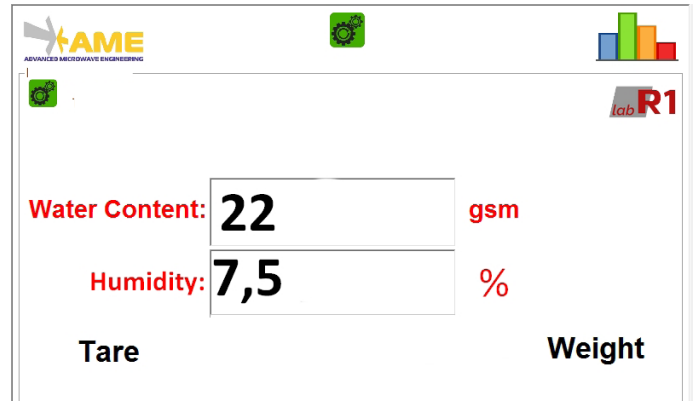
## Easy to use

AMS R1 Lab is very easy to use, the operator only needs take an A4 format sample of the material to be tested, set the zero before starting a new measure, place the sample on the appropriate support, and then insert the support in to the instrument and start the measure.

The moisture value will be displayed on the screen immediately as the measuring system doesn't need for any (time consuming) dryness process.

The touch screen display has an intuitive menus, the allow the operator to perform all the needed functions as an example, zero setting or the consistency calculation.

Thanks to the high measurement rate and the system performance the value of water moisture contained in the sample is measured in real time and shown on the display in term of water density (g/m<sup>2</sup>) and humidity (%).



## Use directly close to the paper machine

The ability to make a quick and frequent checks of the moisture is very important during the production process. So it is possible to install the AMS R1 Lab close to the paper machine in order to be able to perform the measurements as soon as the operator take the sample out from the machine in order to minimize the variation of moisture due to the evaporation or handling.

In this way it is possible to give a quick and reliable feedback to the production process control.

The wide measurement range (0-800 gr/mq) of the AMS R1 Lab allow to use the instrument all along the paper machine to measure the moisture content of the sheet of paper in all the relevant sections along the machine starting from the end of the press section.

This allow the operator to verify and control many parameters of the machine setting thus allowing:

- better product quality
- better machine runnability
- lower energy consumptions

## Technical specifications

### Measurement specifications

Water content measurement range	g/m <sup>2</sup> 0 to 800
Resolution	g/m <sup>2</sup> 0,1
Sample rate	Sample/sec 40 max

### Enviromental

Operating temperature	°C 10 - 60
Protection grade	IP 67

### Mechanical Specificatio /R1 Reflector

Weight	Kg 2,50
Dimension	mm 222 x 85 x 150