

*The Plato Meter F43 is a highly accurate instrument, specially developed for modern breweries*



**PLATO METER F43**  
**PRODUCT INFORMATION**

## Plato Meter F43 for highly accurate °Plato measurements

### INTRODUCTION

Rhosonics introduces the Plato Meter F43. This new generation instrument can be used in the brewing process for wort extract concentration measurement and is suitable for generally all types of beers. The Plato Meter F43 provides highly accurate measurements up to 0.01 °Plato with a range up to 40 °Plato and above. This instrument is the solution for modern breweries who are searching for a user-friendly, all-in-one, reliable, robust, real-time and in-line device to monitor their brewing processes.



*The Plato Meter F43 is installed in a pipe by means of a VARIVENT™ connection.*

### DESCRIPTION

The Plato Meter F43 measures the °Plato by means of the sound velocity. Unlike other measuring systems, the instrument does not require a bypass installation. The sensor, evaluation unit and control panel are all combined and integrated in the compact design of the instrument. Hence, there are no complex configurations needed. Simplicity has been a key topic in the development. This resulted in very user-friendly software and a simplified calibration procedure. The Plato Meter F43 provides a HART/4-20 mA or RS232 output which can be used for communication with the control room.

### FEATURES AND BENEFITS

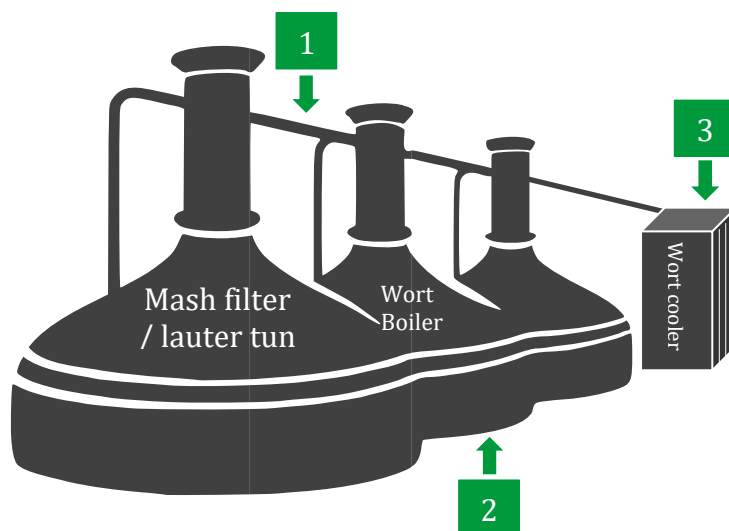
The Plato Meter F43 offers:

- the highest level of accuracy (+/- 0.01 °Plato)
- a simple configuration and operation
- a robust and compact all-in-one system
- durable housing materials for a long lifespan
- no moving parts, virtually no maintenance
- an easy in-line installation into pipelines
- aseptic and bypass-free installation
- intelligent software for °Plato calculations
- temperature compensation by Pt100 sensor
- reproducible measuring results
- continuous data & system logging
- communication via HART/4-20 mA or RS232

### INSTALLATION AND APPLICATION

The Plato Meter F43 can be installed in the pipe via a VARIVENT™ connection where the sensor is clamped into for direct in-line measurements. The instrument can be used in various stages of the brewing process. Some of the typical applications are shown in the figure below.

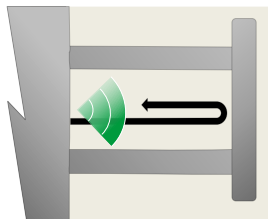
1. mash filter outlet pipe
2. wort boiler circulation pipe
3. wort cooler outlet pipe



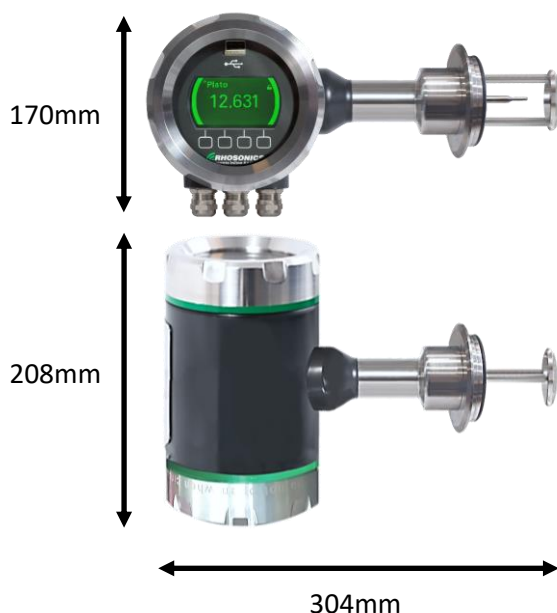
## ULTRASONIC MEASUREMENT

The Plato Meter F43 makes use of an ultrasonic sound velocity measurement. The sensor sends and receives the ultrasonic signal which is traveling through the liquid and returns to the sensor by means of reflection. The total time of flight through the liquid is measured and from the total travel distance and this time of flight the sound velocity is calculated. The sound velocity is translated into the requested measurement parameter °Plato by a unique polynomial which is created in the Rhosonics laboratory. The speed of sound is strongly influenced by the temperature and for this reason also the temperature is measured by an integrated Pt100 temperature sensor.

Sound velocity measurement



## HOUSING DIMENSIONS



## TECHNICAL DATA

### PERFORMANCE SPECIFICATIONS

Method:	Ultrasonic sound velocity & Pt100 temperature measurement
Measuring range:	0 - 40 °Plato
Readings:	Original Gravity, °Plato
Accuracy:	Up to 0.01 °Plato or 0.5% of reading
Decay time:	1 to 99 s (adjustable)
Display:	Monochrome display with RGB backlight, behind glass cover
Operation:	Push-buttons, HART, Computer

### GENERAL SPECIFICATIONS

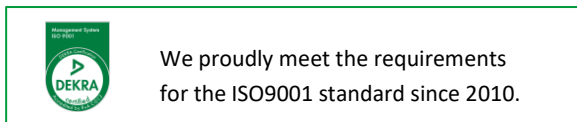
Process conditions	
Pressure:	max 16 bar
Temperature range:	0 °C to 110 °C (32 °F to 230 °F)
Wetted materials:	Ceramics Duplex 1.4462 Food Grade Sensor Parts
Electrical specifications	
Power supply:	18 ... 32 VDC, 8 Watt
Communication & Output:	HART/4...20mA or Modbus RTU/RS232
Data logging & fault reporting:	Internal memory, via USB memory stick
Cable entries:	3x M16X1.5, cable OD Ø 3-10 mm
Ambient conditions	
Ambient temperature:	-20 °C to +65 °C (-4 °F to 149 °F)
Humidity:	< 95% at 40 °C (noncondensing)
Protection:	IP68, NEMA 6P
Vibration:	Resistant to moderate / high vibration of pumps
Housing dimensions and weight	
Weight:	Approx. 6.4 – 6.8 kg
Housing materials:	Coated stainless steel
Dimensions:	304 x 208 x 170 (L x W x H in mm)
Process connection:	VARIVENT™ pipe connection

## About us



### MEASURING BEYOND LIMITS

Rhosonics is based in the Netherlands near Amsterdam. We design, produce and supply state-of-the-art measuring instruments for virtually any industry. The company cooperates with partners worldwide to offer the best technology solutions. We use craftsmanship, capability and creativity to create measurement beyond limits.

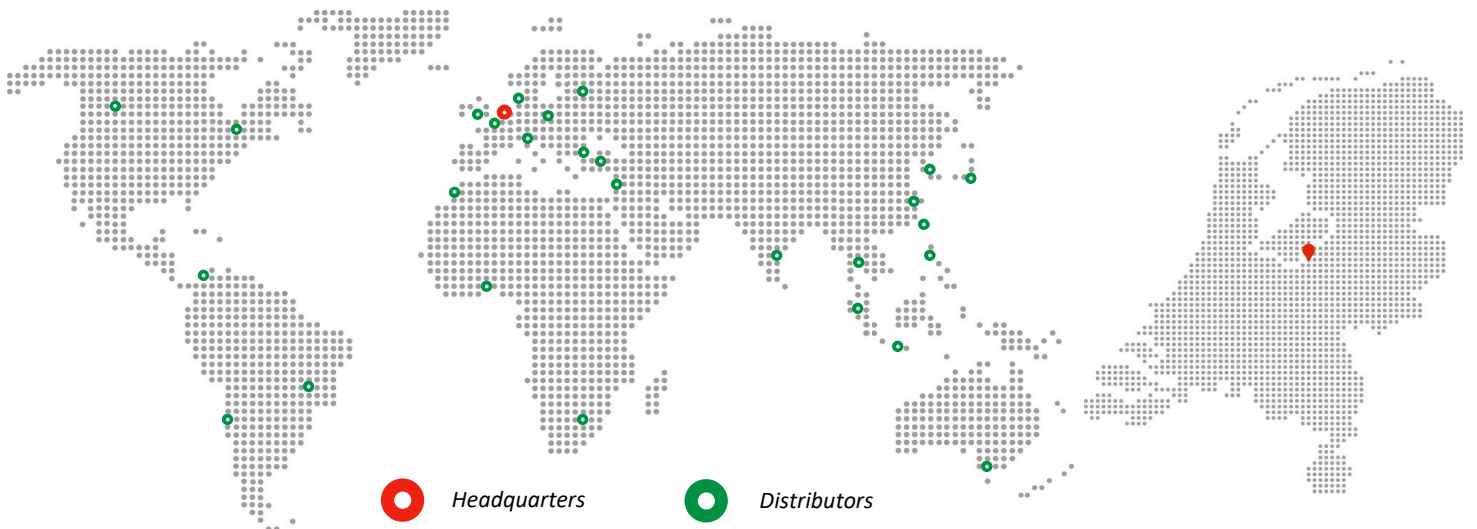


### CONTACT US

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#### Distributor



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