

Data Sheet



Description

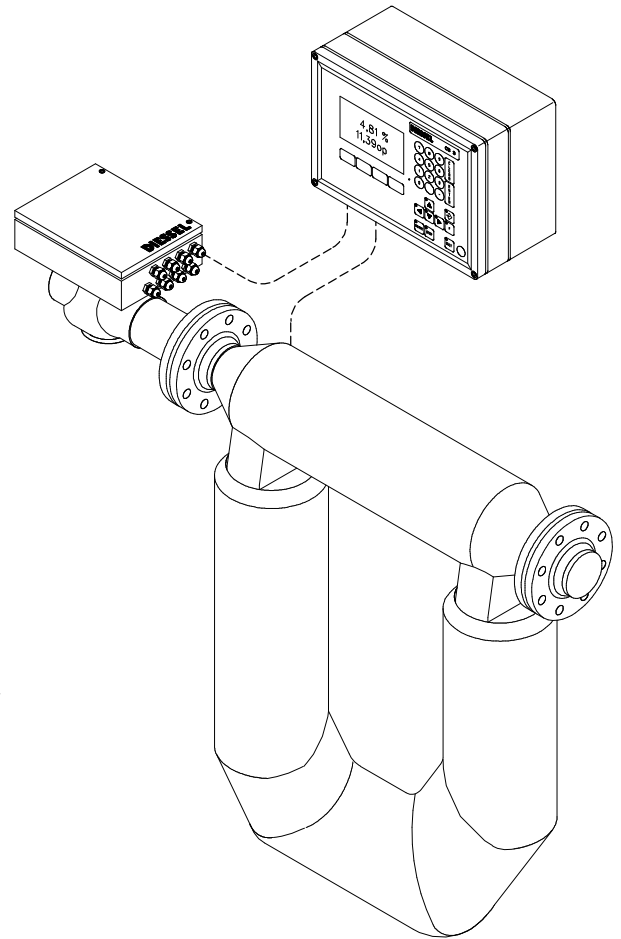
The GEA Diessel beer analysing system type **DI-WAVE** is a real IN-LINE process metering system. The concentrations that are of importance for the brewery are measured simultaneously with the quantity passed through.

The use of IN-LINE measuring instruments excludes the risk that the finished beer quality could be affected by bacteriological contamination.

Original gravity or alcohol can be balanced direct with the quantity or the quantity can be allocated to different classifications of alcohol or original gravity. The basic version of the system consists of a mass flow meter type MDM-C (see data sheet D15.16E) and an original gravity meter type LIQUI (see data sheet D23.11E) with the evaluating unit CONTROLLER 4D (see data sheet D31.14E).

The beer data that can be compared to the laboratory values (such as density ratio, real and apparent extract, degree of fermentation, original gravity and alcoholic content) is continuously indicated on a 16 x 40 digits display. By use of a BUS printer BP110 (see data sheet D52.49E) the data can be printed out in freely selectable intervals (depending on time or quantity).

A total voucher is printed out at the end of the batch. Alarms or other control functions can be released through a variety of limit values.



Applications

The GEA Diessel IN-LINE metering system type **DI-WAVE** can be used wherever the quality of saleable beer has to be controlled and logged. Possible applications are ranging from alcoholfree beer up to "Doppelbock" (high-gravity beer).

Wine and champagne can also be measured by **DI-WAVE**.

In addition, some product-specific adjustments render it possible to measure even alcoholfree beverages (soft drinks).

While the quantity of the product passed though is measured at a high precision, an updated batch accounting can be realized at the same time.

Special features

- direct "IN-LINE" measuring method without any by-pass lines, thus **bacteriologically recognized as safe**
- suitable for SIP/CIP without any problem
- quantitative acquisition and accounting of the ingredients such as original gravity and alcohol
- continuous availability of analytical data and thus a **complete product control**
- freely programmable limit values for alarms and control purposes
- connection to a factory data capture via serial interface (option)
- direct printer control for batch-accounting purposes

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DI-WAVE
IN-LINE Analysing System

D 23.40 E

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Technical Data

Mounting part

Assembly:	into the existing pipe system:
optional:	mounted on a frame
Nominal width:	DN80 (DN50, DN65 on demand)
Flow range:	1,200 hl/h max.
Connections:	standard: flange according to DIN 2501
Dimensions:	1200 mm x 500 mm x 1100 mm (L x W x H) (DN80)
Weight:	100 kg (DN 80)
Materials:	all product-contact parts: stainless steel, material no. 1.4571 (AISI 316)
Admissible pressure:	10 bar
Ambient temperature:	50 °C max.
Cleaning temperature:	120 °C max.
Protection:	IP 65

Evaluating unit

Mechanical construction:	field housing (standard) / optional 19" rack
Dimensions:	330 mm x 230 mm x 151 mm (L x W x H)
Weight:	10 kg
Protection:	IP 65
Auxiliary energy:	115/230 V
Power consumption:	20 VA
Ambient temperature:	0 ... 40 °C
Display:	16 x 40 digits / illuminated / with large-screen representation
Keypad:	numerical plus special keys (27 keys)
Outputs:	analog: 3 x 0/4 20 mA digital: 4 limit values per product sort 2 x pulse output
Contact load:	50 V / 500 mA
Inputs:	4 x product sort 1 x start function 1 x stop function 1 x SIP/CIP
Activation:	24 V / 30 mA
Interface:	standard: RS232
Printer (optional):	CS3-BUS printer type BP110 (see data sheet D52.49E)

Technical data Measuring technique

Measuring ranges

Flow rate:	90 900 hl/h (typical)
Original gravity:	0 20 °Plato
Alcohol:	0 10 % by volume
Residual extract:	0 10 %
Degree of fermentation:	0 100%
Ratio of the weight:	0.98 1.02
Other ingredients:	on demand
Temperature:	-5 +25 °C (other temperatures on demand)

Measuring accuracies

Flow rate:	± 0.3 % of the measured value
Original gravity:	± 0.05 °Plato
Alcohol:	± 0.08 % by volume
Residual exact:	± 0.15 %
Degree of fermentation:	± 0.5 %
Temperature:	± 0.05 °C
Other ingredients:	on demand

GEA Diessel reserves itself the right to make changes serving the technical progress without previous announcement.