



UNDERSTANDING  
QUALITY.  
**FOR LIFE.**

**HAFFMANS**  
QUALITY CONTROL  
EQUIPMENT

[FOODANDBEVERAGE.PENTAIR.COM](http://FOODANDBEVERAGE.PENTAIR.COM)



# ENHANCE O<sub>2</sub> AND CO<sub>2</sub> MANAGEMENT WITH PENTAIR HAFFMANS' WIDE RANGE OF QUALITY CONTROL EQUIPMENT

## O<sub>2</sub>, CO<sub>2</sub>, AND AIR

### O<sub>2</sub> Gehaltemeter, type o-DGM

Determines the dissolved O<sub>2</sub> (DO) content.

### CO<sub>2</sub>/O<sub>2</sub> Gehaltemeter, type c-DGM

Measures the dissolved CO<sub>2</sub> and DO content.

### CO<sub>2</sub> Gehaltemeter

Determines the dissolved CO<sub>2</sub> content and comes in different executions to meet the requirements of your application:

- Intelligent CO<sub>2</sub> Gehaltemeter, type i-DGM
- Analog CO<sub>2</sub> Gehaltemeter, type GMT

### Inpack TPO Meter, type TPO

Automatically determines the total O<sub>2</sub> content by measuring the DO and the headspace O<sub>2</sub> content of the packaged product in a single measurement.

### Inpack TPO/CO<sub>2</sub> Meter, type c-TPO

Determines the DO, headspace O<sub>2</sub> and total O<sub>2</sub> content of the packaged product. In addition, the c-TPO measures CO<sub>2</sub>.

### Inpack TPO/CO<sub>2</sub> Meter, type c-TPO Selective

The automatic Inpack TPO/CO<sub>2</sub> Meter, type c-TPO Selective, offers Selective CO<sub>2</sub> Measurement using Henry's Law in combination with optical technology.

### Automator

Automatically measures all relevant quality parameters directly in the filled package in a single measurement cycle. In addition to the basic parameters O<sub>2</sub> and CO<sub>2</sub>, the system can be extended for further analysis to meet customer requirements.

### Inpack 2000 CO<sub>2</sub> Device

Manually determines the dissolved CO<sub>2</sub> content in carbonated beverages filled in bottles or cans and comes in different executions:

- Inpack 2000 CO<sub>2</sub> Calculator, type ICC
- Inpack 2000 CO<sub>2</sub> Meter Digital, type ICD

### Inpack 2000 Air Meter, type IAM

Determines the air content in the headspace and the total air content of the package.

### CO<sub>2</sub>-Selector

For non-invasive CO<sub>2</sub> measurement in the filled package. Measures the headspace CO<sub>2</sub> content and internal pressure, and accurately determines the dissolved CO<sub>2</sub> content in the package. Piercing is not required to perform the measurement.

### FOAM MEASUREMENT

#### Nibem Foam Stability Tester

Measures the foam collapsing time.

- Type Nibem-TPH

#### Nibem Cling Meter, type Nibem-CLM

Measures the beer cling (the ability of the beer foam to adhere to the glass wall).

#### Inpack 2000 Sampling Device, type ISD

For sampling from bottles or cans. In combination with a DO device, the DO content can be measured.

#### Sample Bottle Filler, type SBF

For sampling beverages from tanks, pipes or kegs without air intake.

#### Inpack 2000 Flasher Head, type IFH

A flashing device for the creation of reproducible foam for the Nibem foam quality analysis, to be used in combination with the ISD or SBF.

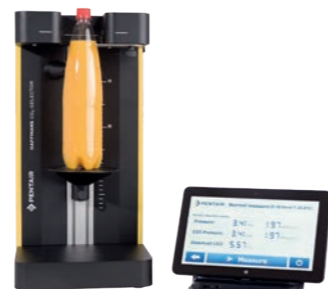
### TURBIDITY MEASUREMENT

#### Turbidity Meter, type Vos Rota 2.0

An easy-to-use and reliable instrument to measure turbidity during production and after filling. It has a measuring range of up to 500 EBC/34,600 ASBC, which makes the instrument suitable for a wide range of beer types, including very turbid beers.



c-DGM



CO<sub>2</sub>-Selector



Automator



Nibem-TPH

## MONITORING OF PROCESSES

### PASTEURIZATION

#### Redpost PU Monitor

Monitors the pasteurization process of beer and beverages as it travels through the pasteurizer tunnel. PU's are automatically calculated and displayed. Available in three executions:

- Type RPU-353
- Type RPU-352
- Type RPU-351

#### Redpost Charger/Interface

Charges PU Monitor and enables data transfer from the Monitor to a PC or printer and comes in two executions:

- Type RPC-80, compatible with all Redpost PU Monitors
- Type RPC-50, compatible with PU Monitors type RPU-120\*, RPU-351/352/353.

### BOTTLE & KEG WASHING

#### Bottle Monitor, type BTM

Evaluates the washing process in each compartment of the bottle washer, based on the time, temperature and conductivity of the cleaning medium.

#### Keg Monitor, type KEG 2.0

Perfect control of your keg washing process. Faster and better process insights due to windows-based PC-program.

### TOTAL LAB SOLUTION (TLS)

Complete, customized laboratories for quality analysis throughout the entire production process. Depending on the requirements, a Total Lab covers everything from concept to commissioning to after sales service.

## IN-LINE EQUIPMENT

### O<sub>2</sub> & CO<sub>2</sub> MEASUREMENT

In-line quality assurance and product monitoring is critical during the production process.

#### In-line CO<sub>2</sub> Meter AuCoMet-i

Determines the dissolved CO<sub>2</sub> content based on Henry's Law. Can easily be extended with an O<sub>2</sub> sensor, due to its modular design.

#### In-line O<sub>2</sub> Gehaltemeter, type OGM

Determines the DO content based on optical O<sub>2</sub> measurement.

#### In-line O<sub>2</sub> Gehaltemeter, type OGM gas application

Determines the O<sub>2</sub> content of CO<sub>2</sub> gas from the fermentation, compressed gases and/or ultra pure gases, which makes it especially suitable for use in CO<sub>2</sub> recovery plants.

### TURBIDITY MEASUREMENT

#### In-line Turbidity Meter, type OptHaze-i

Determines the turbidity of beer and beverages according to the MEBAK standard.

## VARIOUS EQUIPMENT

#### Dew Point Tester, type DPT

Measures the condensation temperature of humidity present in CO<sub>2</sub> or other gases.

#### Gauge Calibration Device, type GCD

Precisely calibrates pressure gauges and digital pressure sensors.

#### CO<sub>2</sub> Purity Tester, type CPT

Measures the purity of the CO<sub>2</sub> gas and is available in the measuring ranges 50 - 100 % v/v and 99 - 100 % v/v.



RPU-353



KEG 2.0



Bottle Monitor



AuCoMet-i

# OPTIMIZING PERFORMANCE. FOR LIFE.

Operating a state-of-the-art brewery, requires just-in-time processes, minimized production losses and compliance with tough quality regulations. This is why it is so important to have precisely planned service intervals, trained service personnel and an outstanding supply of original spare parts.

Our dedication to your system continues after the sale. Through comprehensive lifecycle management, Pentair ensures that your installation operates at optimal performance. Pentair's Service Level Agreements are offered worldwide. They include monitoring of the system via the Internet to help diagnose operational problems, a short engineer response time of 24 hours and faster access to system components. This keeps downtime to a minimum in case of emergency.

Proper planning is key, and maintenance costs can be significantly reduced through accurately planned service intervals. Preventative maintenance helps to minimize maintenance time and unscheduled downtime. All of this contributes to a lower Total Cost of Ownership.

Pentair supports you in creating custom made service plans that perfectly fit your requirements. In addition, Pentair offers plant audits that may relate to processes such as energy savings, increasing operational reliability or the expansion/upgrading of an existing installation. Audits can be carried out externally by means of a simulation or directly on-site.

For operation and service personnel, Pentair offers classroom and hands-on trainings on specific projects. Do not hesitate to contact us for more details on our training program.

## FOR A RELIABLE AND EFFICIENT OPERATION

- Maximum operation uptime
- Reduced maintenance costs
- Variety of service options to choose from



HAFFMANS BV | P.O. Box 3150 | 5902 RD Venlo | Netherlands | +31773232300 | nlvenmarketing@pentair.com | haffmans.nl

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