

1-CUBE

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MASH BATH - R4, R8, R12

Mashing Equipment is designed for laboratory use in breweries and malthouses. It aids in the determination of malt extract. The equipment allows one to utilize the CONGRESS, HARTONG 20, HARTONG 45, HARTONG 65, HARTONG 80, ASBC, PROFILE or THERMOSTAT methodology of testing. The "Thermostat" method maintains a constant temperature for a specific time. The "Profile" method allows the user to program the variables according to their needs.

Congress-Method:

- Mashing, by passing through a temperature programm
- Use of malt-fine grind and –coarse grind
- Detection of the absolute number of the extract content, by use of the Plato-Table. In addition to the identification of the saccharification time (Iodine- normality), protein content, viscosity, pH-value a.o.. Difference between fine- and coarse grind extract, permits a conclusion to the cytolytical solution of the malt

Hartong-Method:

- Mashing at constant temperature (20°, 45°, 65° or 80° C)
- Use of malt-fine grind
- Detection of a ratio (VZ) = percentage share of the highest possible extract yield at the chosen temperature. Conclusions about the enzyme activity, protein modification of the malt and malting work by itself, are possible.

Two versions are available:

Standard version: all the above mentioned methods run fully automatically as an alarm lets the operator know the necessity for example to sample for saccharification, to refill the distilled water (which is preheated in test tubes directly in the Mash Bath) into the beakers with the mash at predetermined intervals.

Automatic version with automatic distilled water refilling: all the above mentined methods run fully automatically including automatic preheated distilled water refilling.

The mashing equipment is equipped with a microcomputer, a thermometer Pt 100, an electromagnetic valve for the automatic cooling-down of mash bath, an LCD 20x4 display, a membrane keyboard and controlling software. The Mash Bath can be equipped with an interface RS232-USB making PC communication possible. The Mash Bath with the interface RS232-USB is indicated as **monitoring**. This is an advantage for customers that are on an ISO 9001 compliant system.

Models:

Standard R4- four beakers

Standard R4 monitoring- four beakers, equipped with a interface RS232-USB

Standard R8 - eight beakers

Standard R8 monitoring - eight beakers, equipped with interface RS232-USB

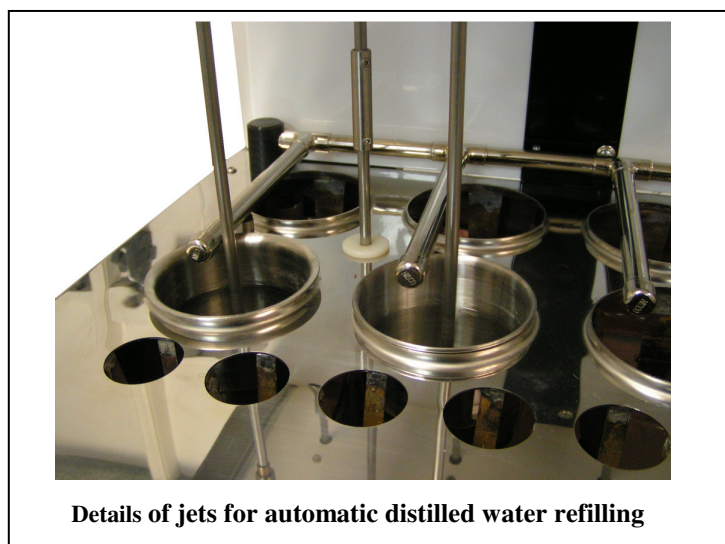
Automatic R8 monitoring - eight beakers, with automatic distilled water refilling, equipped with interface RS232-USB

Standard R12- twelve beakers

Standard R12 monitoring - twelve beakers, equipped with a interface RS232-USB

Automatic R12 monitoring- twelve beakers, with automatic distilled water refilling, equipped with interface RS232-USB

Note: All types can be equipped with the color touch screen for an extra charge. Please specify this requirement in your order.



Details of jets for automatic distilled water refilling

Technical data:

Data represented on LCD display:

- type of method: Hartong 20, Hartong 45, Hartong 65, Hartong 80, Congress, ASBC, Thermostat, Profile
- instantaneous temperature of bath
- time since the beginning of test

Adjustable data:

- choice of methods: Hartong 20, Hartong 45, Hartong 65, Hartong 80, Congress, ASBC, Thermostat, Profile
- temperature range: from 20⁰C to 95⁰C
- mixer speed: 0, 100, 200 R.P.M.
- time
- accuracy of temperature adjustment: +-0,01⁰C
- accuracy of regulation: to 0,2⁰C
- accuracy of time adjustment: 1 sec
- Temperature range: up to 95⁰C

Signalization:

- acoustic and optical alarm

PowerCut:

After a voltage breakdown, the device activates itself again and continues the step in place, it was interrupted before, resp. breaks off the test.

Electric data:

- voltage 230V/50 Hz
- Note: by request 110V/60Hz
- Max. heat output: 3 kW

The mash bath is designed ergonomically and completely made of stainless steel, copper and aluminum.

Stainless steel beakers- 550 ml

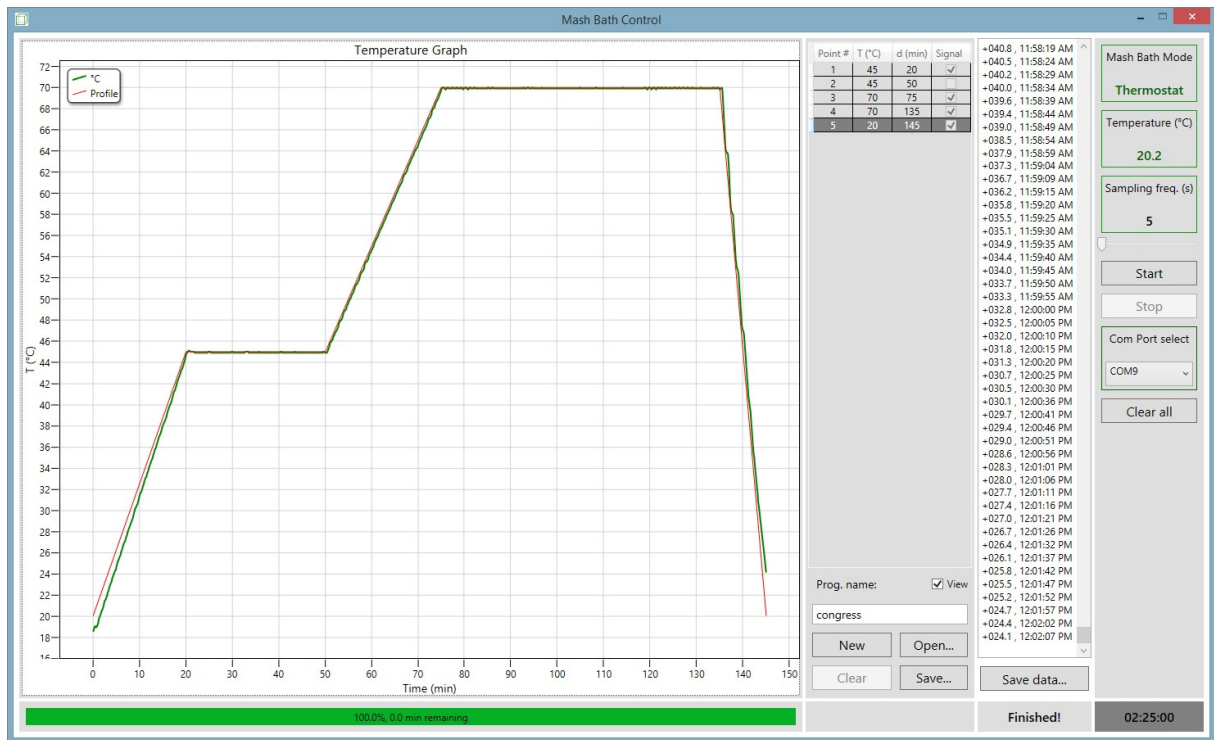
Glass cuvette- 50/100 ml

Weight :

Type R4-21 kg, Type R8-36 kg,
Type R12-45 kg

Interface and connection:

- Water inlet: ¾" (DN20)
- Water outlet: ¾" (DN20)
- Computer interface: RS 232-USB
- Adapter: USB-RS 232 – part of the supply



Monitoring software for Mash Bath equipped with a interface RS232-USB which allows the user to program temperature curve according to their needs in PC.