

YEAST MONITOR MODELS 720 AND 710

General	Measures the concentration of live yeast biomass. Applications include yeast pitching, cropping and monitoring krausening. The Model 720 can be used with up to 4 probes: the Model 710 is one channel only.
Operating Range	2 operating ranges with options using a dedicated head amplifier for: Low Range- 0 - 400 million viable cells/ml. High Range- 5-70% viable spun solids or 4×10^8 to 10^{10} viable cells/ml
Front Panel Display	Viable yeast concentration, conductivity and temperature.
Communications	4-20mA loops for yeast concentration and conductivity. PLC logic I/O - input lines and output lines for channel /strain selection /alarms RS232 with optional modules for RS484 with or without Profibus protocol and Ethernet. These allow full remote operation of the instrument from a PLC.
Power Supply	100-230V AC 50/60Hz, 150 VA
Enclosure	IP65 Stainless steel wall mounting. Size: 400H x 400W x 200D (mm).
Head Amplifier	Waterproof: IP 65 when connected to probe.
Probe	Contains 4 platinum electrodes. High performance polymer matrix body. Suitable for standard CIP and SIP brewery conditions
Probe Housing	Range of hygienic stainless steel fittings (based on the Tuchenhausen Varivent) for welding into the Yeast lines. Options for weld in ports for vessels.

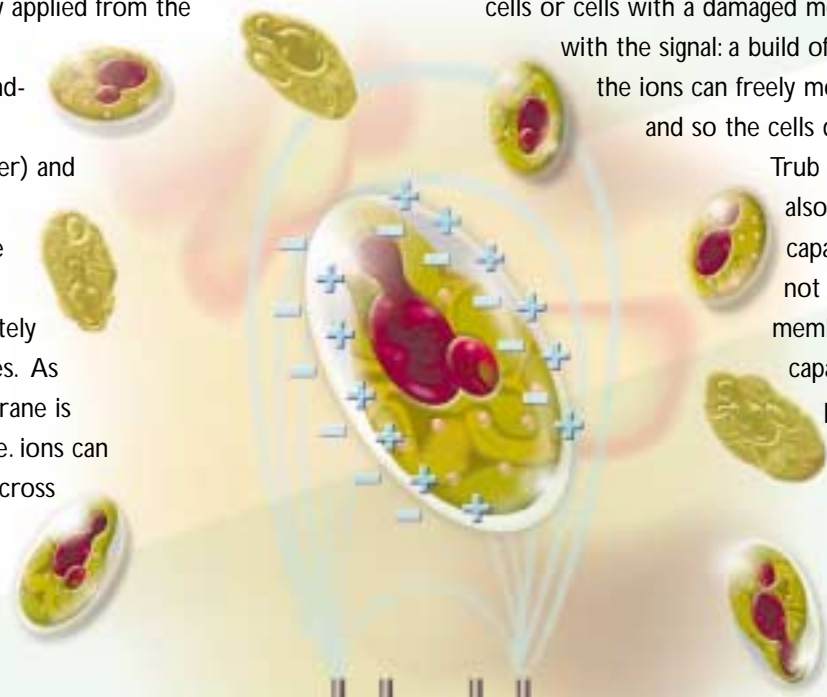
Hands free yeast pitching

How the Aber Yeast Monitoring Systems work

The Yeast Monitor measures the concentration of LIVE yeast with an on-line capacitance probe with 4 electrodes. A radio-frequency applied from the electrodes causes ions in the suspending medium (e.g. wort or green beer) and the cytoplasm of the yeast to move towards the two respective oppositely charged electrodes. As the plasma membrane is non-conducting i.e. ions can not freely move across it, a build up of charge will result

and these cells are said to be polarised with the yeast cells acting as tiny capacitors within the medium. Non-viable cells or cells with a damaged membrane do not interfere with the signal: a build of charge can not occur as the ions can freely move across the membrane and so the cells do not become polarised.

Trub and other non-yeast solids also have no effect on the capacitance signal as they do not possess a polarisable membrane. The measured capacitance is directly proportional to the amount of viable yeast within a sample over a wide concentration range.



...now lower price higher specification



Queens Award for Export Achievement



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IMPROVE YOUR FERMENTATION CONSISTENCY WITH THE Aber™ YEAST MONITORS.

The Aber™ Yeast Monitors are recognized today as the most accurate and reliable instruments for measuring the LIVE yeast cell concentration on-line. Many of the world's major brewing groups have benefited by having more consistent fermentations by having the "Aber" as a standard at the heart of their automatic yeast pitching systems.

Other breweries have benefited from improve-

ments in the quality of their pitching yeast or from reducing overall fermentation times.

At Drinktec Interbrau 2005, Aber Instruments introduced a new, unique range of Yeast Monitors incorporating the latest manufacturing techniques in radio-frequency impedance. The Aber™ Models 720 and 710 have a higher specification but are available at a lower cost!

The Yeast Monitor 720 has an integral multiplexer, allowing the unit to be expanded up to 4 channels and it is completely contained within a stainless steel IP65 enclosure. Communication options include separate 4-20mA outputs for live cell concentration and conductivity and options for Profibus and other fieldbus communications to the PLC.

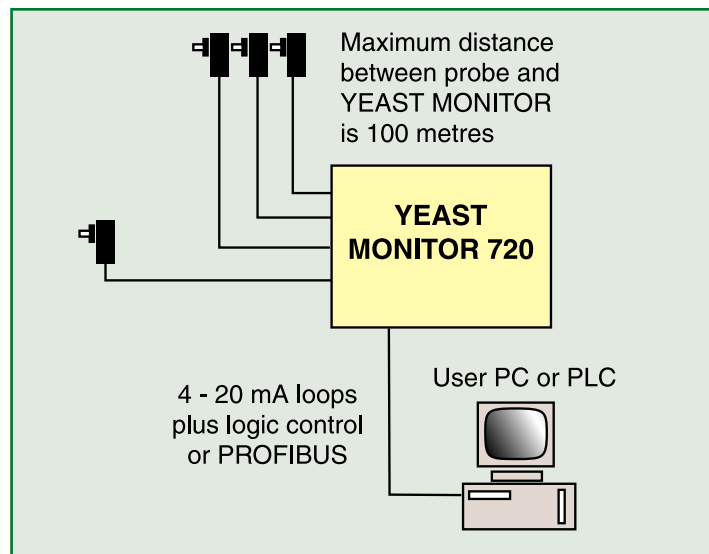
The Model 720 has the flexible option of monitoring from the same instrument both yeast slurries and the relatively low cell concentrations found in propagators or krausening operations. The Model 710 is a budget instrument, ideal for a dedicated yeast pitching application requiring only one probe.



Yeast Monitor probe and Head Amplifier installed in stainless steel housing/sight glass assembly in rising yeast main



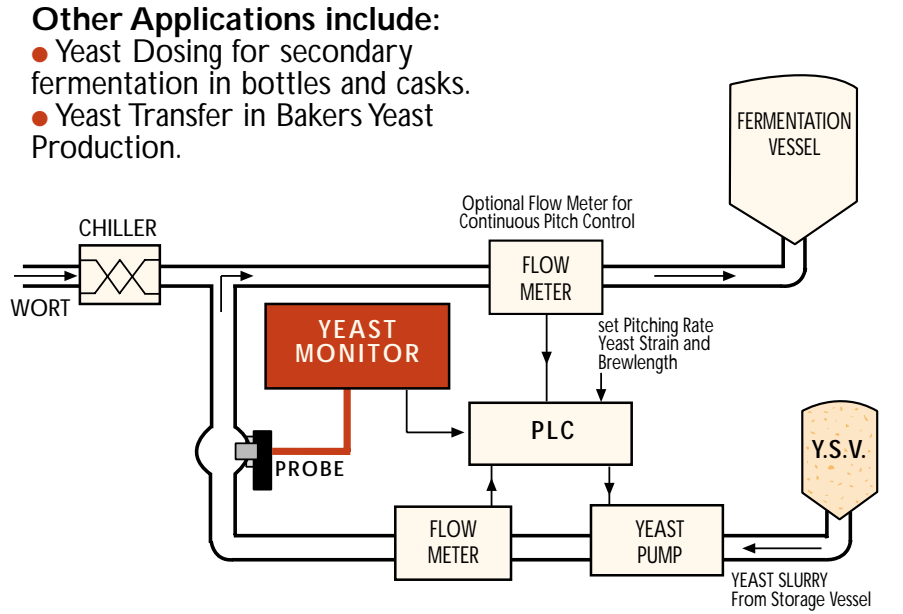
Diagram of a 4 channel Yeast Monitor 720 System



AUTOMATIC PITCHING RATE CONTROL

This automatic pitching rate control system ensures that an accurate amount of viable yeast slurry is delivered from a Yeast Storage Vessel to the Fermentation Vessel within a defined period. The brewer sets the amount of yeast to be pitched and the timing of the pitch within the brew.

The system then monitors the concentrations of yeast passing the probe in the pitching main. The resulting concentration signal is then integrated with the output from the flow meter, giving a measure of the volume of viable yeast pitched into the Fermenting Vessel. When the target is reached the controller will turn off the yeast pump.



- Other Applications include:**
- Yeast Dosing for secondary fermentation in bottles and casks.
 - Yeast Transfer in Bakers Yeast Production.

AUTOMATIC CONTROL OF YEAST CROPPING

The Yeast Monitor is commonly used to control yeast cropping and to automatically dose the correct amount of LIVE yeast into each FV.

The brewery can benefit in the following ways:

- Poor quality yeast can be directed to a waste tank
- The "cream of the yeast" with a high viable cell concentration can be selectively recovered
- The interface between yeast and beer can be clearly detected: ideal for poorly flocculent yeasts.
- The system can detect and alarm when beer is being pulled through the cone.

The final LIVE cell concentration in each YSV can be determined and this value can be used for PITCH RATE CONTROL.

