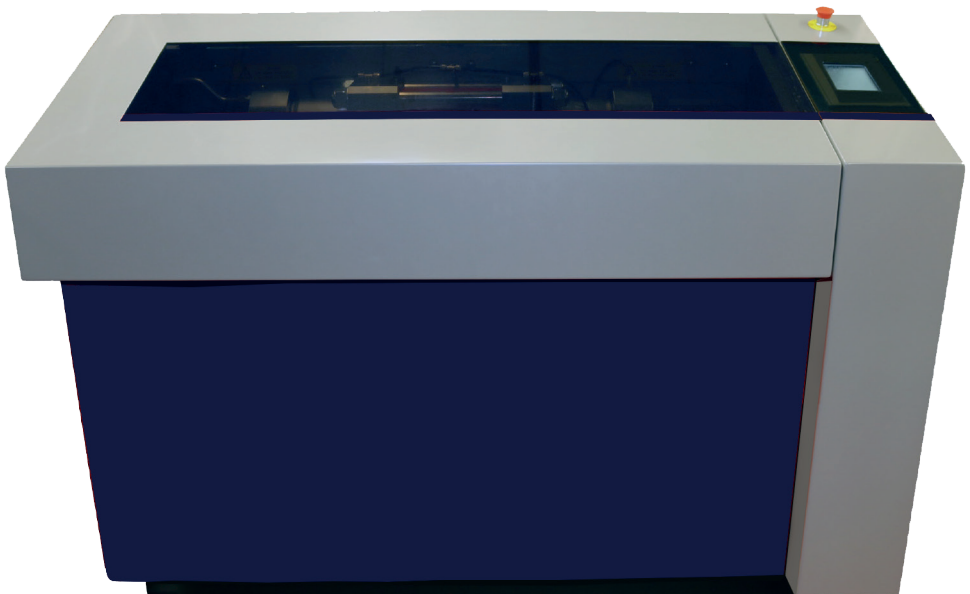




**CONSTANT
SYSTEMS**
CELL DISRUPTION MADE EASY



HFR Cell Disruptor

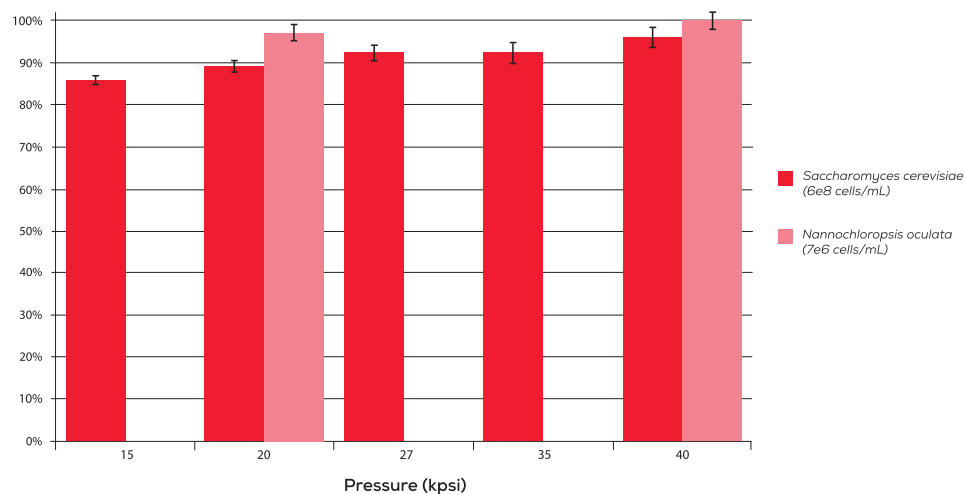


The HFR is the ideal production model and offers the same lysis efficiency as the standard cell disruption systems across the full range of processing pressures yet can provide a vastly superior flow rate.

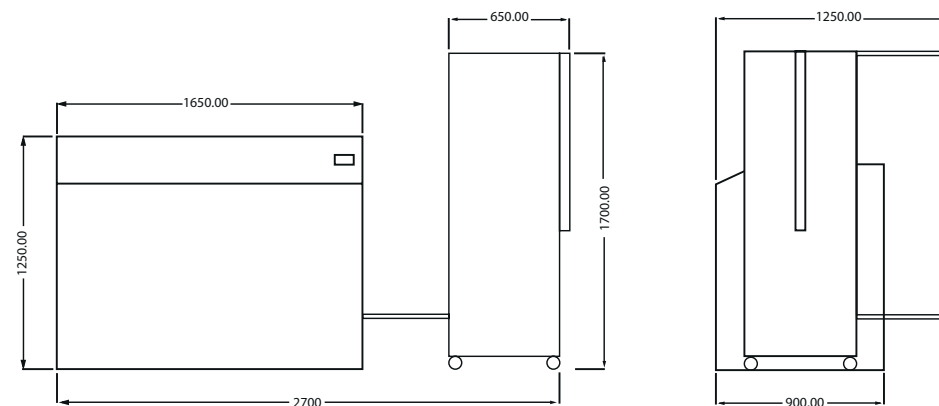
With lysis efficiencies of up to 95% or more and flow rates of up to 150L per hour, this system can make short work of processing the entire contents of a production scale fermenter or bioreactor, even without prior pelleting and re-suspending.

The intuitive user interface offers complete control of the flow rate while the flow path accumulator ensures that the entire sample is processed smoothly and efficiently. The HFR machine has been shown to give the same lysis results as the CF Range when processing tough to break cells types such as *S. cerevisiae* and *N. oculata* and the innovative heat exchange system ensures that the processed sample is completely chilled upon recovery when fitted with a circulating chiller.

Lysis Efficiency of Yeast and Algae by Constant Systems HFR Cell Disruptor in Standard Configuration



- Incorporates our unique disruption mechanism and precise hydraulic operating control system
- Disruption pressure easily and accurately set and displayed digitally with a range of up to 40Kpsi as standard
- Flow rate up to 150 L/hr at maximum pressure
- Automatic shut down when process is complete
- Various flow rates are available depending on desired maximum pressure
- Pressure consistent and stable during the disruption cycle
- Various configurations available for inlet and outlet, allowing direct connections to upstream and downstream equipment
- Performance comparable to existing range of Constant Systems Ltd cell disruptors
- Materials in contact with sample—316L and F51 duplex stainless steel or equivalent, EPDM
- IQ/OQ available on request
- Machine Dimensions - 1650 x 900 x 1250 (LxWxH)
- Machine weight - 875 kg
- Accumulator Dimension - 650 x 1700
- Accumulator weight - 210 kg



The dimensions, weight power and materials are for reference only. Constant Systems Ltd have the right to change these at any time.



CONSTANT SYSTEMS

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