

Shaking water bath

*OLS200 shaking bath combines linear **and** orbital shaking with excellent temperature control.*

Unique shaking mechanism

- Grant's unique shaking mechanism allows both orbital and linear shaking within one product for maximum flexibility of application
- the shaking mechanism is robust and reliable, for long term, steady shaking
- easy transfer from orbital to linear motion simply by changing the orientation of the tray
- adjustable shaking speed and stroke length allow you to set the optimal speed and agitation for your application

Adjustable shaking speed

maximum orbital speed: 20 to 200 rpm

maximum linear speed: 40 to 360 strokes/min

maximum practical speed varies according to operating conditions

- a unique, patented powerful drive mechanism produces smooth, consistent shaking over a wide speed range

Adjustable stroke length, linear motion

- stroke length is altered by a simple adjustment within the tank
- choice of three settings:

Setting	Stroke length mm	Maximum speed* strokes/min
A	18	340
B	28	240
C	36	180

**with a medium load*

- fixed radius for orbital motion: 9mm

0 to 99°C operation

- wide temperature range, with powerful heating for operation to 99°C, and accessory cooling available for operation down to 0°C

Stability ±0.1°C, uniformity ±0.1°C

Digital setting and display of set temperature and shaking speed

Construction

- each bath consists of a stainless steel tank in an outer case, with heater and temperature sensors mounted underneath the tank
- the shaker trolley is operated by a magnetically coupled driver

Design features

- quiet operation maintains a peaceful working environment
- drain for easy emptying
- the working area is completely unobstructed, so the space taken up on the bench is effectively the working area in the bath
- designed to be placed 'end-on' rather than 'sideways' on the bench for convenient access and observation, and for efficient utilisation of bench space

- the bath is designed to allow sufficient depth to contain splashing whilst retaining a minimum overall height for ease of access and observation
- a recessed control panel protects the controls from water spillage and accidental alteration
- all immersed parts are removable for ease of cleaning
- pressed stainless steel tanks with large radiused corners minimise the risks of corrosion and ensure ease of cleaning

Safety

- adjustable overtemperature cut-out



SPECIFICATION – OLS200 shaking water bath

Temperature range	°C	0 to 99*
Stability (DIN 58966)	°C	±0.1
Uniformity	°C	±0.1
Temperature setting/display		digital/LED
Display resolution	°C	0.1
Shaking speed range	rpm	20 to 200
	strokes/min	40 to 360
Linear – stroke length	mm	18, 28, 36
Orbital – radius	mm	9
Shaking speed setting/display		digital/LED
Display resolution	rpm	1
Heater power	kW	1.4
Overall consumption	kW	1.5
Tank dimensions	l/w/d	mm 505/300/200
Shaking tray area	mm	375/235
Flask immersion	min./max.	mm 0/90
Overall dimensions	l/w/d	mm 555/325/300
Safety	overtemperature	adjustable cut-out
Electrical supply	V	220-240 or 110-120
	Hz	50-60

**Accessory cooling is required around or below room temperature*

accessories



Universal flask tray

The UT200 stainless steel tray is designed for ultimate versatility as to the types and sizes of vessel which can be accommodated. The spring configuration is adjustable for maximum flask capacity, and springs can be removed to accommodate awkward shaped vessels – plastic hybridisation boxes, for example. The strong springs ensure fast securing of the glassware, whilst allowing easy insertion and removal – thus avoiding breakages.

The universal tray can accommodate a combination of different flasks, or single size Erlenmeyer flasks as follows:

43 x 25ml, 26 x 50ml, 15 x 100ml, 11 x 250ml, 6 x 500ml, 3 x 1L

Test tube tray

TT200 holds five H1 test tube racks:

Rack	Capacity
H1-10	48 x 10mm tubes
H1-13	44 x 13mm tubes
H1-16	24 x 16mm tubes
H1-19	21 x 19mm tubes
H1-25	12 x 25mm tubes
H1-30	10 x 30mm tubes
H1-LE	48 x 1.5 microtubes

Plain tray

The UTP plain tray will accommodate containers, bags and miscellaneous vessels.

Perforated tray

The PF200 perforated tray replaces the trolley, providing a platform on which vessels or racks can be placed, for use as an unstirred thermostatic bath.

Lid

A lid is recommended for use above 60°C and below room temperature. The stainless steel LS200 sloping lid directs condensate to the edges of the bath to prevent it dripping into open flasks.



Cooling systems

Accessory cooling is required for operation around or below room temperature.

CW200 heat exchange coil

The CW200 is designed to be attached to a supply of cooling tap water or a refrigerated circulator. It can be used down to 2°C above the temperature of the coolant. The coil fits underneath the shaking tray.

CS200G immersion cooler

The CS200G is a refrigerated cooler; the coil fits underneath the shaking tray. Cooling rate will depend on the ambient temperature, the supply voltage and the volume of liquid used.

Specification - CS200G immersion cooler

Liquid temperature range	°C	0 to 35	
Extraction rate	@ 20°C	W	350
	@ 0°C	W	250
Power consumption	VA	500	
Dimensions: case	l/w/h	mm	410/285/225
Flexible pipe	l	mm	925
Electrical supply			220-240V, 50Hz
			or 110-120V, 60Hz

Equipment safety

OLS shaking baths meet the requirements of IEC61010.

CE mark

The OLS bears a CE mark to indicate that it meets the requirements of the Low Voltage and EMC Directives.

After sales service

In the United Kingdom, repairs are normally carried out within two to five working days of arrival at our factory or receipt of authorisation to repair. Alternatively, spare parts and service manuals can normally be despatched within two working days. Most distributors of Grant equipment outside the UK hold stocks of spare parts, have their own service engineers and operate a similarly prompt repair service.

Three year guarantee

Grant OLS shaking baths are robust and reliable, designed and built to provide years of trouble-free service.

They are guaranteed for three years against faulty materials and workmanship. If repairs are carried out under guarantee, no charge is made for labour or materials, and within the UK we make no charge for return carriage.

As Grant Instruments is committed to a continuous programme of improvement, specifications may be changed without notice.

Grant

**Grant Instruments
(Cambridge) Ltd**
Shepreth
Cambridgeshire
SG8 6GB

Tel: +44 (0)1763 260811

www.grant.co.uk

Email: labsales@grant.co.uk

Fax: +44 (0)1763 262410