



DBD-001



DBD-002

DBD-001/002, Dry Bath Incubators

Useful for variety of applications in molecular biology and histology as well as clinical, environmental and industrial settings, including restriction digests, denaturing DNA, BUN, melting agar, coagulation studies, hybridization and Hot Start thermo-cycled reaction. The dry baths feature a broad temperature range, up to 150°C, and excellent uniformity. A microprocessor regulates the high wattage heater to provide precise, accurate control and rapid heating. The Aluminium block chamber ensures an even transfer of heat from the heating element to the block. Temperature is easily set using arrow keys while the value is shown on the large display. The user calibration function allows for easy calibration to in-house standards when required. Interchangeable blocks are available to accommodate a wide variety of tubes, plates and slides. Solid blocks are also available for custom machining. Each dry bath is supplied with a block lifter that enables the user to exchange blocks easily, even when the block is hot.

Features:

- Precise microprocessor control.
- Broad temperature range, to 150°C.
- Large digital display.
- User friendly calibration.
- Single and dual block models.
- Rapid temperature increasing rate.
- Large Digital LED display & timer.
- Used as a water bath.
- Molded aluminum alloy chamber.
- Function Control software available.



Ordering Information:

- **DBD-P01** - Thermocouple, optional tmp. probe for DBD-001/002
- **DBD-RS232** - RS232 cable
- **DBD-PCSW** - Function control & data logging software package
- **DBD-PCSW-R** - Function control & data logging software package, includes a RS232 cable.

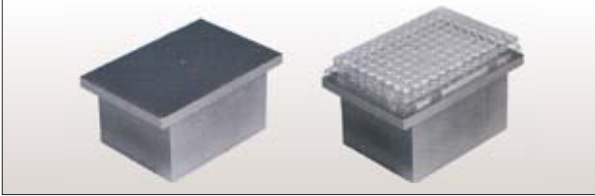
Model	DBD-001	DBD-002
Display	LED Display	
Heating power	125W	200W
Unit dimension (WxLxH)	200x290x80 mm	
Controller	Digital microprocessor controller	
Heating chamber	Molded aluminum alloy chamber	
Temperature control range	5°C Above ambient to 150°C	
Temperature increment	0.1°C	
Temperature uniformity in working area at 37°C	±0.2°C	
Temperature accuracy in working area at 37°C	±0.2°C	
Temperature calibration	Yes	
Timer	1~999 mins, continuous	
Safety device	Leakage proof for heating chamber, Over temperature protection, SSR failure detection	
Operating temperature	Ambient to 40°C	
Special feature	Used as water bath incubator	
Block material	Aluminum alloy	
Block type	Standard and customized type are available	
Data log	RS232	
Weight	approx. 2.6kg	approx. 2.8kg
Rated voltage	110V or 220V selectable	

DRY BATHS

Blocks for DBD-001/002

Dry Bath Blocks are designed for Dry Bath Incubator. The precision machined aluminum alloy blocks, which are suitable for microplate and different test tubes, range from 0.2ml tube to 50ml centrifuge tube, deliver efficient heat transfer. In addition to the standard blocks, customized blocks are also available for specified user requirement.

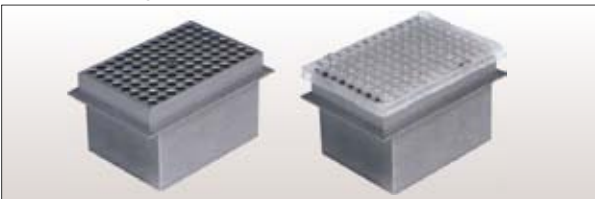
300-1-111101: For Microplate; Titerplate (Plain Block for Single Block unit only)



300-1-111102: For Microplate; Titerplate (Dual Block unit only)



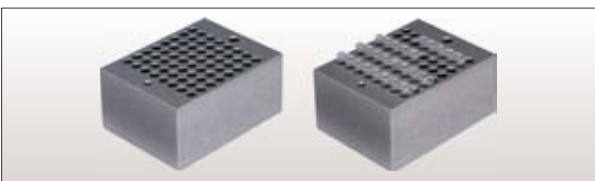
300-1-111103: For 96 wells Deep Microplate or PCR plate (for Single Block unit only)



300-1-111104: For 96 wells Deep Microplate or PCR plate (for Dual Block unit only)



300-1-111105: For 0.2ml tube, 64 wells (or 0.2ml PCR Strip tube for 8 wells x 8)



300-1-111106: For 0.5ml tube, 20 wells



300-1-111107: For 1.5ml tube, 20 wells



Specifications:

Block material	Aluminum alloy
Dimensions (mm)	W79xL104xH50
Block lifter well	Yes
Thermometer well	Yes (except microplate blocks)

300-1-111108: Well size 13mm, 20 wells



300-1-111109: For 15ml centrifuge tube, 12 wells



300-1-111110: Well size 20mm, 12 wells



300-1-111111: Well size 25mm, 6 wells



300-1-111112: For 50ml centrifuge tube, 4 wells



300-1-111113: One side For 1.5/2.0ml tube, 20 wells & another side For 0.5ml tube, 30 wells (on the opposite side)



300-1-111114: Combination: For 0.5ml tube, 12 wells & For 1.5ml tube, 12 wells (on the same side)



DBC-001, Cool-Heater Dry Bath Incubator

Cool-Hotter Dry Bath Incubator is available with different temperature performance, along with a competitive range of interchangeable block. It is designed for a variety of applications including ligation, storage, restriction digests, denaturing DNA, BUN, melting agar, coagulation studies, hybridization and Hot Start thermo-cycled reaction. The fully programmability contains Constant Operation, Programmable Mode, and Annealing Mode. A 2.6" LCD screen, showing all the running / setting conditions. Microprocessor controller offers easy temperature selection, rapid heat up and cooling down with an excellent stability. The temperature can be set in 0.1°C increments from -10°C to 100°C. Optional Function Control software is available for the control & real time data recording through a PC for specified user requirement.



DBC-001

Features:

- Microprocessor control with digital performance for precise, accurate control.
- Wide temperature control range & great temperature controlled performance.
- Rapid temperature increasing rate.
- LCD screen shows all the parameters during run.
- User temp. calibration.
- Can be used as a water bath.
- Function Control software available.

Back Panel
DBC-001**Ordering Information:**

- **DBC-PCSW** - Function control & data logging software package
- **DBC-PCSW-R** - Function control & data logging software package, includes a RS232 cable
- **DBC-LID-N** - LID for DBC-001.

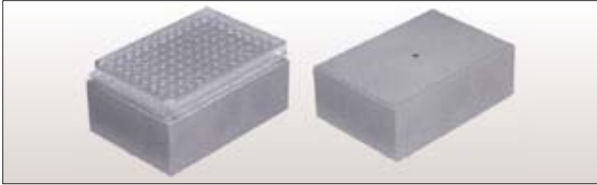
Model	DBC-001
Chamber dimensions (mm)	W129xL90xH46
Display	2.6" LED
Heating power	400W
Unit dimension (mm)	W200xL290xH140
Controller	Digital microprocessor controller
Heating chamber	Water-proof aluminum
Temperature control range	-10°C~100°C In the environment of 25°C
Temperature increment	0.1°C
Temp. uniformity in working area at 37°C	±0.2°C
Temp. accuracy in working area at 37°C	±0.2°C
Temperature calibration	Yes
Operation mode	Constant operation: constant temperature (-10°C~100°C), Timer: 1~9999 mins, Program operation: 1~4 steps and up to 9 cycles, Timer: 1~9999 mins, Annealing program
Safety device	Leakage proof for heating chamber
Operating temperature	Ambient to 40°C
Special feature	Can be used as water bath incubator
Block material	Aluminum alloy
Block type	Standard and customized type are available
Data log	RS232
Weight	approx. 8kg
Rated voltage	110V or 220V selectable

Cool-Heat Dry Bath Blocks

Non-porous aluminium for fast & efficient heat transfer, include a position for a thermometer, specially designed hole for lifting tool.

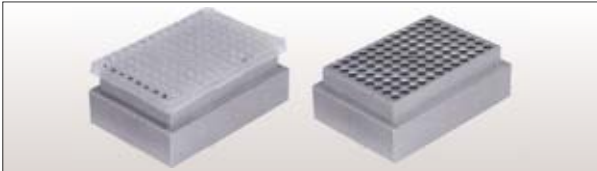
- Corrosion resistant, anodized aluminium.
- Blocks for tubes from 0.2ml to 0.5ml, plates & slides.
- Precision machined for a close fit and efficient heat transfer.
- Solid block available for custom machining.

300-1-111201: For Microplate;Titerplate (Plain Block)

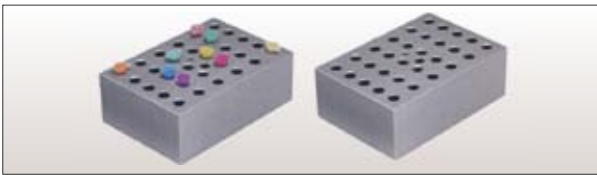


300-1-111202:

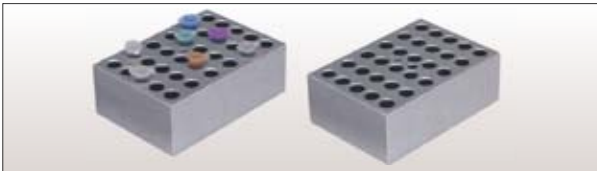
For 96 wells Deep Microplate or PCR plate



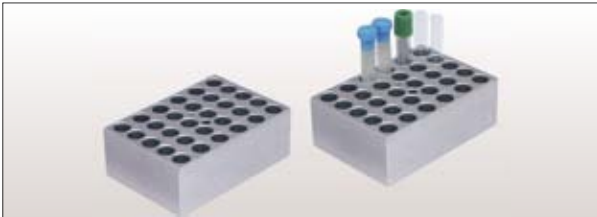
300-1-111203: For 0.5ml, 30 wells



300-1-111204: For 1.5 or 2.0ml, 30 wells



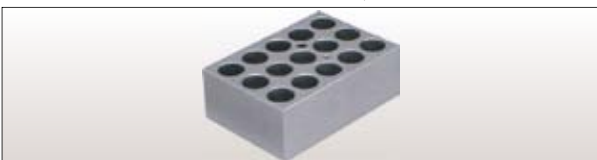
300-1-111205: Well size 13mm,30 wells



300-1-111206: For 15ml centrifuge tube, 15 wells



300-1-111207: Well size 20mm, 15 wells

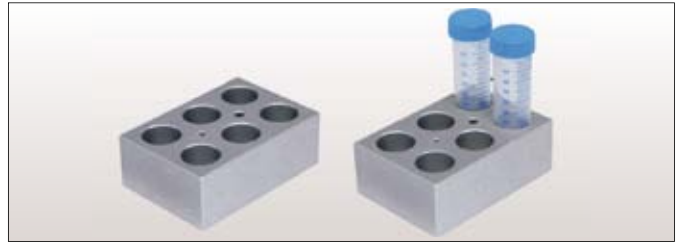


Model	300-1-11120x
Block material	Aluminum alloy
Dimensions (mm)	W90xL127xH50
Block lifter well	Yes
Thermometer well	Yes (except microplate blocks)

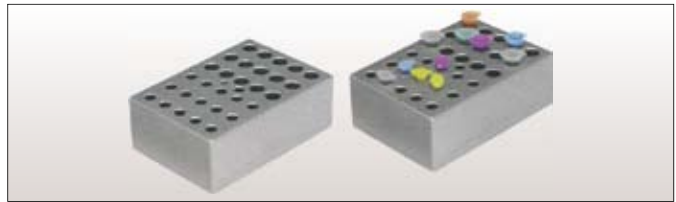
300-1-111208: Well size 25mm,6 wells



300-1-111209: For 50ml centrifuge tube,6 wells



300-1-111210: Combination: 1.5ml or 2.0ml tube, 15 wells and 0.5ml tube, 15 wells (on the same side)



300-1-111211: Combination: 0.2ml tube (or strip tube for 8 wells), 24 wells; 1.5ml or 2.0ml tube, 10 wells



300-1-111212: (1/2) Half block for 0.2ml tube, 40 wells (or 0.2ml PCR Strip tube for 8 wells x 5)



300-1-111213: (1/2) Half block for 0.5ml tube, 15 wells



300-1-111214: (1/2) Half block for 1.5 or 2ml tube, 15 wells





DBC-002

DBC-002, Cool/Heat Dry Bath Incubator - 10°C to +100°C

The DBC-001 Dry Bath Incubator is a microprocessor-controlled product using advanced thermoelectric technique. With this technical, more stable and accurated temperature control is achieved. Replacement is convenient with optional metal block of various specifications configured for different types of test tubes.

Features:

- LCD display easy to setup and use.
- Simultaneous display of set and actual time/temperature.
- Temperature deflection adjusting meet with different demands.
- As it is equipped with various optional blocks, the instrument can adapt to different tubes & wells to cope with experimental needs. It is easy to replace the metal blocks and is very simple to clean and sterilize
- Customized blocks are available to suit your specific demands.
- Microprocessor controlled incubation time and temp.
- Beep-signal/Stop after program completed.
- Peltier design of DBC-20 provides efficient thermal control.



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Model	DBC-002
Temp. Control Range	-10°C~100°C
Timing Range	1min~99h59min
Temp. Control Accuracy	±0.5°C
Display Accuracy	0.1°C
Heating Time (20°C to 100°C)	≤20min
Cooling Time (20°C to -10°C)	≤30min (*)
Heating Part	Peltier
Cooling Part	Peltier
Dimensions (L×W×H) mm	300×212×180
Certificate	CE
Net Weight	5.0kg

*1) Cooling speed≤25min (20°C to -5°C) if the room temperature is lower than 30°C

*2) Cooling speed≤30min (20°C to -10°C) if the room temperature is lower than 25°C.

Model	Type	Description
301-1-111101	A	96 x 0.2ml
301-1-111102	B	54 x 0.5ml
301-1-111103	C	35 x 1.5ml
301-1-111104	D	35 x 2.0ml
301-1-111105	E	15 x 0.5ml+20 x 1.5ml
301-1-111106	F	24 x Diameter≤12mm tubes
301-1-111107	G	12 x 15ml Falcon tubes
301-1-111108	H	6 x 50ml Falcon tubes
301-1-111109	I	103 x 67 x 30mm Bath Block
301-1-111110	J	96 x 0.2ml Microplate
301-1-111111	K	24 x 5ml tubes
301-1-111112	L	96-Deep well plate

DBD-2000-1/2/Dual, Dry Bath Incubator

DBD-2000 series dry bath incubator are ideal for incubation and activation of cultures, enzyme reactions, blood urea nitrogen determinations, immunoassays, melting/boiling points, and a wide variety of other laboratory procedures. The economical, superb temperature control and compact dry bath incubators are designed for applications that require repeatable results and superior temperature stability.

The DBD-Dual dry bath incubator is an innovative design accommodating two blocks with independent digital temperature control. Each block can be set to different temperatures - ideal for multiple users or for applications where samples have to be transferred between two temperatures very quickly.

One Block



DBD-2000-1

Two Blocks



DBD-2000-2

Dual Independent Channels



DBD-Dual



Blocks

Features:

- Exceptional temperature uniformity and accuracy thanks to advanced temperature control combined with high quality, precision engineered blocks providing excellent thermal contact.
- Wide range of interchangeable aluminium blocks.
- Heat to 105°C, optional external temperature probe.
- Blocks available as accessories for all applications - tubes, vials and microplates.
- Block extraction tool is supplied, allowing blocks to be removed easily.



One Block

DBD-2000-1

Model	DBD-2000-1	DBD-2000-2	DBD-Dual
Temp. Control Range	RT+5°C~105°C	RT+5°C~105°C	RT+5°C~105°C
Timing Range	1min~99h59min	1min~99h59min	1min~99h59min
Temp. Stability @100°C	±0.4°C	±0.4°C	±0.4°C
Uniformity: within the block @ 37°C across similar blocks @ 37°C	±0.2°C -	±0.2°C ±0.3°C	±0.2°C -
Display Accuracy	0.1°C	0.1°C	0.1°C
Heating Time (25°C to 100°C)	≤15min	≤15min	≤15min
Block Quantity	1	2	2
Dimensions (L×W×H)mm	250×190×130	365×210×150	365×210×150
Weight	2.5kg	4.5kg	4.5kg
Optional external temperature probe	Yes	Yes	Yes

Model	Type	Description
301-01181-01	BH01	96 x 0.2ml tubes
301-01181-02	BH02	45 x 0.5ml tubes
301-01181-03	BH03	35 x 1.5ml tubes
301-01181-04	BH04	35 x 2.0ml tubes
301-01181-05	BH05	15 x 0.5ml+20 x 1.5ml
301-01181-06	BH06	20 x 1.5ml+15 x 2.0ml
301-01181-07	BH07	32 x 0.2ml+22 x 0.5ml+ 9 x 1.5ml
301-01181-08	BH08	20 x 5ml tubes
301-01181-09	BH09	20 x 10ml tubes
301-01181-10	BH10	12 x 15ml tubes
301-01181-11	BH11	6 x 50ml tubes
301-01181-12	BH12	96 x 0.2ml Elisa plate or 4 slides
301-01181-13	BH13	Solid block (no holes)
301-01181-14	BH14	384 well PCR Plate
301-01181-15	BH15	40 x Ø6mm tubes
301-01181-16	BH16	28 x Ø10mm tubes
301-01181-17	BH17	24 x Ø12mm tubes
301-01181-18	BH18	24 x Ø13mm tubes
301-01181-19	BH19	14 x Ø15mm tubes
301-01181-20	BH20	14 x Ø16mm tubes
301-01181-21	BH21	12 x Ø19mm tubes
301-01181-22	BH22	11 x Ø20mm tubes
301-01181-23	BH23	6 x Ø26mm tubes
301-01181-24	BH24	6 x Ø28mm tubes
301-01181-25	BH25	2 x Ø40mm tubes
301-01181-26	BH26	2 x 7 - 12.5 x 12.5 (Cuvette)
301-01181-27	PT1000	External temperature probe
301-01181-28	T4	Block extraction tool

DBD2000-2HLP, Dry Bath Incubator Programmer

The dry bath incubator incorporate thermal cycle's heating lid technology, twin blocks and touch screen products with a patent.



Features:

- Exceptional temperature uniformity and accuracy – due to advanced temperature control combined with high quality, precision engineered blocks providing excellent thermal contact.
- Hold a heating lid, 60 user programmable settings.
- Touch screen allows for easy to read & easy programming & easy to use.
- Programmable system and program link functions, it can be run some simple PCR tests.
- Block extraction tool is supplied, allowing blocks to be removed easily.

Model	DBD2000-2HLP
Temp. Control Range	RT+5°C~100°C
Stability @ 100°C	±0.4°C
Uniformity: within the block @ 37°C across similar blocks @ 37°C	±0.2°C ±0.3°C
Display Accuracy/Display	0.1 °C/Touch Screen
Heating Time (25°C to 100°C)	≤15min
Timing Range	1 min-99h59min
Block Quantity	2
Dimensions (LxWxH)mm	380x210x160
Weight	5.5kg

Model	Type	Description
301-01181-01	BH01	96 x 0.2ml PCR tubes
301-01181-02	BH02	45 x 0.5ml tubes
301-01181-03	BH03	35 x 1.5ml tubes
301-01181-04	BH04	35 x 2.0ml tubes
301-01181-05	BH05	15x0.5ml + 20x1.5ml tubes
301-01181-06	BH06	20x1.5ml + 15x2.0ml tubes
301-01181-07	BH07	32x0.2ml + 22x0.5ml + 9x1.5ml
301-01181-08	BH08	20 x 5ml tubes
301-01181-12	BH12	96 x 0.2ml Elisa plate or 4 slides
301-01181-13	BH13	Solid block (no holes)
301-01181-14	BH14	384 well PCR Plate
301-01181-28	T4	Block extraction tool
301-01211-01	L4	Stainless plate

DBR-002, COD Thermoreactor



Features:

- Ideal tube tests for COD, TOC, total nitrogen, total chromium, etc.
- COD digestion and specialized tasks in wastewater treatments & laboratories PPS board fully insulated heater block for protection.
- Program started with auto or manual mode selectable after pre-heating.
- Auto stop when end of running time.
- Easy and friendly to use.
- Large LCD screen with status LED Indicator.
- Light and sound alarm to indicate complete of digestion.
- Six pre-stored and one user defined programs with pre-heating function.
- Automatically back-to-last mode when powering.
- Build-in real-time clock.
- Overheating protection.

The DBR-002 features six pre-set common programs to ease the lab work. It also allows user-tailored program for repeated custom procedures. The digital display provides precise temperature setting.

Safety-first philosophy design:

- Hot warning status light: to indicate heating progress
- PPS board on the top to minimize risk of scald
- Auto stop when end of running time
- Overheating protection safety device: Automatic heat cutoff when the temperature is over 220°C
- Splash resistant design: Avoiding sample permeating from panel.

Model	DBR-002
Reactor type	Dry temperature control device
Number of vial cells	16 cell shafts for reaction cell 16mm ±0.2mm
Temperature Setting	100°C/ 120°C/ 150°C via fixed programs, and 50°C to 199°C user setting
Controlling accuracy	±1°C (±1 digit)
Temperature stability	±1°C
Heating rate (with empty thermoblock) from 25°C to	100°C approx 5min ; 120°C approx 6min 150°C approx 9min ; 199°C approx 15min
Pre-stored programs	150°C/2 hour ; 150°C/20 min. ; 120°C/2 hour 120°C/1 hour ; 120°C/30 min. ; 100°C/1 hour
Programmable temp. range	50°C to 199°C
Programmable time range	0~18hr. Audio signal and heating stoped when the time expired
Temperature correction	±9°C adjust for thermoblock
Ambient temperature	10~50°C
Overheating protector	Auto stop heating when temp. over 220°C
Power supply	220VAC, ±10%, 50/60Hz,
Power consumption	250W
Dimensions	320X210X103mm(LxWxH)
Weight	Approx 3kg

DBD-004, Dry Bath Incubator

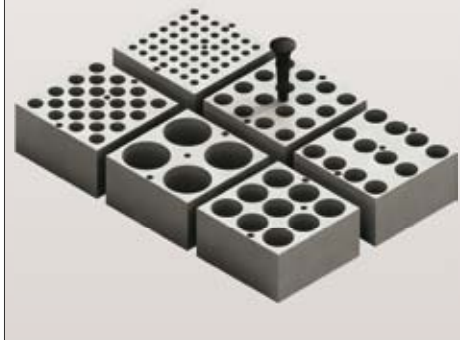
The MRC 4 blocks DBD-004 digital dry baths offer digital control over both temperature and time, eliminating the need for external thermometer or timer. The DBD-004 is extremely space efficient. (The four block model can accommodate up to 100x1.5ml Tubes in less than a square foot of bench space.

The cavities of the high grade aluminum blocks are precision machined to match the conical size and shape of 0.5,1.5,2.0,15 and 50ml tube sizes, providing unsurpassed temperature uniformity.

Assorted blocks are available for compatibility with nearly all common tube sizes. Custom blocks are also available upon request, .

All Bench mark dry baths offer a built-in user recalibration function, to guarantee long term temperature accuracy.

The dry bath includes an easy to use block lifter, with a temperature insulated handle for quick, convenient exchange of blocks, even while they are still hot.

**DBD-004****Features:**

- LED display
- Current temperature and count down time display
- Metal blocks free of sample counter-pollution
- Easy replacement, cleaning and disinfecting of metal blocks
- Built-in over-temperature protection
- Calibrating temperature discrepancy
- Buzzer alarm when temperature control ends
- Only heating design and Custom blocks are available.

Model	DBD-004
Temp. Control Range	RT+5°C~120°C
Timing Range	1min~99h59min
Temp. Control Accuracy @40°C	±0.3°C
Temp. Control Accuracy at 40°C~100°C	±0.5°C
Temp. Control Accuracy @120°C	±1°C
Display Accuracy	0.1°C
Heating Time (to Max. Temperature)	≤30min
Dimensions (L×W×H)mm	380×240×110
Quantity of Blocks	4
Display	LED

Model	Type	Description	Dimension (mm)
301-01081-01	BK01	49 x Ø6mm	96 x 96 x 49
301-01081-02	BK02	49 x Ø7mm	96 x 96 x 49
301-01081-03	BK03	25 x Ø10mm	96 x 96 x 49
301-01081-04	BK04	25 x Ø12mm	96 x 96 x 49
301-01081-05	BK05	25 x Ø13mm	96 x 96 x 49
301-01081-06	BK06	12 x Ø15mm	96 x 96 x 49
301-01081-07	BK07	16 x Ø15mm	96 x 96 x 49
301-01081-08	BK08	12 x Ø16mm	96 x 96 x 49
301-01081-09	BK09	16 x Ø16mm	96 x 96 x 49
301-01081-10	BK10	12 x Ø19mm	96 x 96 x 49
301-01081-11	BK11	16 x Ø19mm	96 x 96 x 49
301-01081-12	BK12	9 x Ø20mm	96 x 96 x 49
301-01081-13	BK13	9 x Ø26mm	96 x 96 x 49
301-01081-14	BK14	4 x Ø28mm	96 x 96 x 49
301-01081-15	BK15	4 x Ø40mm	96 x 96 x 49
301-01081-16	BK16	49 x 0.5ml tubes	96 x 96 x 49
301-01081-17	BK17	25 x 1.5ml tubes	96 x 96 x 49
301-01081-18	BK18	25 x 2.0ml tubes	96 x 96 x 49



DBS-001

DBSC-001

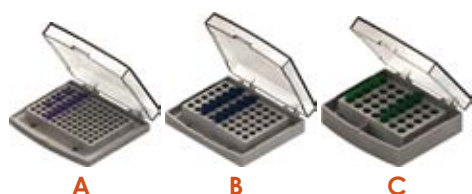
DBS-001/DBSC-001-100, Thermo Shaker Incubator

Designed for simultaneous heating, cooling and mixing of small samples. Both DBS-001 and DBSC-001 can be supplied with interchangeable blocks to match various tubes. Mixing, heating and cooling modes can be used either simultaneously or independently. The main Mixing body can be used with different kinds of blocks.

Features:

- LCD display, easy to setup and use.
- Accurate control and display time, temperature and speed.
- Over-heating protection device ensures safety & reliability.
- Low working noise even when working below 1,500rpm.
- Customized blocks are available to suit your specific demands.
- Audible signal to indicate end of run after program completion.
- Gentle, reliable mixing with long-life direct current motor.
- Conforms to CE safety standard.
- Peltier design of DBS-001 provides thermal control in a compact unit.

Model	DBS-001	DBSC-001
Temp. Control Range	RT+5°C~100°C	0°C~100°C if Ambient Temp. ≤20°C 4°C~100°C if Ambient Temp. ≤25°C 10°C~100°C if Ambient Temp. ≤30°C
Temperature Setting Range	5°C~100°C	0°C~100°C
Timing Range	1min~99h59min	
Temp. Control Accuracy	±0.5°C	
Display Accuracy	0.1°C	
Heating Time (20°C to 100°C)	≤15min	
Cooling Time	—	≤30min (from RT. to RT.-20°C) ≤15min (from 100°C to 20°C)
Mixing Speed	200~1500rpm	
Mixing Orbit	2mm	
Dimensions (L×W×H) mm	300×220×170	
Net Weight	7kg	8.5kg



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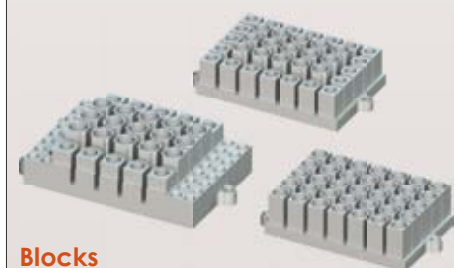


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Model	Type	Description	Max. Speed
301-01051-01	A	49 x Ø6mm	96 x 96 x 49
301-01051-02	B	49 x Ø7mm	96 x 96 x 49
301-01051-03	C	25 x Ø10mm	96 x 96 x 49
301-01051-04	D	25 x Ø12mm	96 x 96 x 49
301-01051-05	E	25 x Ø13mm	96 x 96 x 49
301-01051-06	F	12 x Ø15mm	96 x 96 x 49
301-01051-07	G	16 x Ø15mm	96 x 96 x 49
301-01051-08	H	12 x Ø16mm	96 x 96 x 49
301-01051-09	I	16 x Ø16mm	96 x 96 x 49
301-01051-10	J	12 x Ø19mm	96 x 96 x 49
301-01051-11	K	16 x Ø19mm	96 x 96 x 49
301-01051-12	L	9 x Ø20mm	96 x 96 x 49



Blocks



Tube Holders

DBS-002/DBS-003, Turbo Thermo Shaker Incubator

The fastest functions-rich, thermo-shaker for multiple applications in the world.

Highlights:

- Thermo shaker for microplates, tubes, and glass vials.
- Fast shaking and mixing up to 3,000rpm.
- 3D-Shake-Control: efficient and fast controlled orbital mixing movements, eliminating any need for centrifugation after mixing.
- Perfectly controlled 3-dimensional mixing prevents spilling and lid wetting.
- Highly accurate processing and Anti-Vibration Technology eliminate vibrations for a relaxed working environment.
- 2 programmable soft keys, integrated vortex and short mix functions.
- Very small, light, efficient and quiet.
- Adapter plates:

Microplates: 96, 384, & 1536-well microplates/deepwell plates/PCR plates.

Holder: 0.2ml PCR tubes holder, 0.5ml tubes holder, 1.5/2.0ml tubes holder.
15ml Micro tubes holder, -50ml Micro tubes holder

Block: 10 types Aluminum blocks for user choosing.

Model	DBS-002	DBS-003
Mixing frequency	300~3000rpm	300~1700rpm
Mixing orbit	2mm	3mm
Speed setting resolution	10rpm increment	
Mixing accuracy	±25rpm	
Short-Mix function	Yes	
Temp. Control Range	RT+5°C~100°C	
Temperature Setting	0.1°C increment	
Timing Range	±0.1°C	
Temperature Accuracy	±0.25°C at 37°C	±0.5°C at 95°C
Heating Time	≤12min	
Time setting	1min~100h	
Time setting resolution	1min	
Continuous working	Yes	
Programs stored	2	
Individual program capacity	3 steps	
Internal memory	Yes	
Operation voltage	24V DC 150W	
Power supply	AC100~240V	
Dimensions (L×W×H) mm	230×170×130	
Weight	4.5kg	

Model	Type	Description
301-02051-01	A-200	96 x 0.2ml
301-02051-02	B-200	54 x 0.5ml
301-02051-03	C-200	35 x 1.5ml
301-02051-04	D-200	35 x 2.0ml
301-02051-05	E-200	15 x 0.5ml + 20 x 1.5ml
301-02051-06	F-200	24 x Dia Φ.1 ≤2mm tubes
301-02051-07	G-200	32 x 0.2ml + 25 x 1.5ml
301-02051-08	H-200	32x0.2ml + 10x0.5ml + 15x1.5ml
301-02051-09	I-200	103 x 67 x 30mm Bath Block
301-02051-10	J-200	96 x 0.2ml Microplate
301-02031-01	MIX-A	0.2ml PCR Tube Holder
301-02031-02	MIX-B	0.5ml Tube Holder
301-02031-03	MIX-C	1.5/2.0ml Tube Holder
301-02031-04	MIX-D	8 x 15ml Tube Holder
301-02031-05	MIX-E	3 x 50ml Tube Holder

DRY BATHS

Digital Max. 150°C, Large Capacity Blocks



DBD-64

DBD-128

DBD-64/DBD-128, Larger Blocks, Larger Capacities

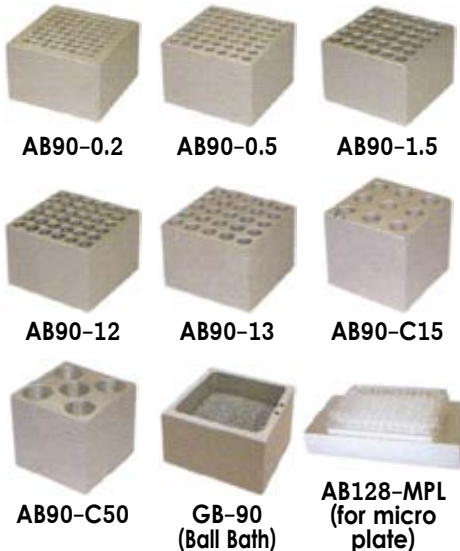
- Digital microprocessor control (PID) for highest accuracy.
- A variety of changeable blocks.
- Special thick blocks guarantee excellent temperature stability.
- Standard flat covers for protecting the user from accidentally touching a hot block and spitting tubes.
- Safety features:
 - Flashing alarm lamp to warn over-temp.
 - Over-temperature cut-out.
 - Over temperature safety thermostat.



Model	DBD-64	DBD-128
Temp. Range	Ambient +5°C ~ 150°C	
Temp. Accuracy	±0.5°C	
Timer	1min~99h59min	
Heating Method	Cartridge Heater	
Capacity	1Block	2Blocks
Material	Energy plate and sample block: Aluminum Inside and insulating side: Stainless steel	
Weight	4kg (without block)	7kg (without block)
Dimensions (mm)	148W×230D×155H	238W×230D×155H
Wattage	250W	600W
Power	AC 110V/220V/230V, 50/60Hz	

Other types of blocks are available upon special request

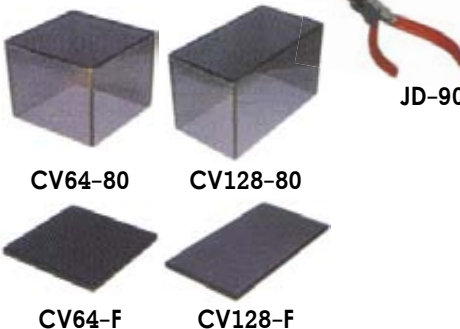
Accessories:



Blocks:

AB90-0.2	Block / 0.2ml centrifuge tube (90x90xH60) capacity: 64ea
AB90-0.5	Block / 0.5ml centrifuge tube (90x90xH60) capacity: 49ea
AB90-1.5	Block / 1.5ml centrifuge tube (90x90xH60) capacity: 36ea
AB90-12	Block / 12 Ø test tube (90x90xH60) capacity: 36ea
AB90-13	Block / 13 Ø test tube (90x90xH60) capacity: 25ea
AB90-15	Block / 15 Ø test tube (90x90xH60) capacity: 25ea
AB90-16.5	Block / 16.5 Ø test tube (90x90xH60) capacity: 20ea
AB90-18	Block / 18 Ø test tube (90x90xH60) capacity: 20ea
AB90-C15	Block / 15ml conical tube (90x90xH80) capacity: 9ea
AB90-C50	Block / 50ml conical tube (90x90xH80) capacity: 5ea
GB90	Ball bath (zinc ball)
AB128-MPL	Block plate / micro plate- capacity: 1ea (for DBD-128)

Cover:



JD-90

Other Accessories:

Model Number	Description
JD90	Block extraction tool
CV64-80	High cover for Test tube (W115xD115xH80mm)
CV128-80	High cover for Test tube (W230xD115xH80mm)



DBC-6400

DBC-6400, Cooling and heating in one unit

- Digital microprocessor control (PID); Digital display.
- Independent cooling and heating systems for years of trouble-free operation.
- A variety of interchangeable insert blocks.
- Block combined with the close fit of the tubes for fast efficient heat transfer.
- Special thicker blocks guarantee excellent temperature stability.
- Safety features:
 - Flashing alarm lamp to warn over-temperature.
 - Over-temperature cut-out.
 - Over temperature safety thermostat.



Other types of blocks are available upon special request

Accessories: Blocks for ALB-6400

AB90-0.2

AB90-0.5

AB90-1.5



AB90-12

AB90-13

AB90-C15



AB90-C50

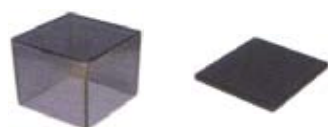
GB-90
(Ball Bath)

JD-90

Model	DBC-6400
Temp. Range	Ambient 0°C ~ 95°C
Temp. Accuracy	±0.5°C
Timer	99hour 59min
Cooling Method	Peltier
Heating Method	Cartridge heater
Capacity	1Block
Material	Energy plate and sample block: Aluminum Inside and insulating side: Stainless steel
Weight	8kg (without block)
Dimensions (mm)	190W×278D×230H
Wattage	300W
Power	AC 110V/220V/230V, 50/60Hz

Blocks:

AB90-0.2	Block / 0.2ml centrifuge tube (90x90xH60) capacity: 64ea
AB90-0.5	Block / 0.5ml centrifuge tube (90x90xH60) capacity: 49ea
AB90-1.5	Block / 1.5ml centrifuge tube (90x90xH60) capacity: 36ea
AB90-12	Block / 12 Ø test tube (90x90xH60) capacity: 36ea
AB90-13	Block / 13 Ø test tube (90x90xH60) capacity: 25ea
AB90-15	Block / 15 Ø test tube (90x90xH60) capacity: 25ea
AB90-16.5	Block / 16.5 Ø test tube (90x90xH60) capacity: 20ea
AB90-18	Block / 18 Ø test tube (90x90xH60) capacity: 20ea
AB90-C15	Block / 15ml conical tube (90x90xH80) capacity: 9ea
AB90-C50	Block / 50ml conical tube (90x90xH80) capacity: 5ea

Cover:

CV6400-80

CV6400-F

Other Accessories:

Model Number	Description
JD90	Block extraction tool
GB-90	Ball bath (zinc ball)
CV6400-80	High cover for Test tube (W115xD115xH80mm)

Heating only, Temp. range: ambient to 100°C



DBM-H

Heating/Cooling+Programmer



DBM-CP

DBM-H/DBM-HB:

- Ambient~100°C.
- Heating only, temperature adjustable.
- Only for DBM-HB: Battery operated.

DBM-C/DBM-CB:

- 0-100°C.
- Cooling/heating.
- Adjustable temperature.
- Only for DBM-CB: Battery operated.

DBM-CP/DBM-CPB:

- 0-100°C.
- Cooling/heating.
- Time & temp. control.
- Programmable.
- Run up to 3 segments of time and temp. continuously.
- Only for DBM-CPB: Battery operated.

Accessories:



1 Lid, 4 Blocks

DBM Series, Cooling/Heating Dry Baths

DBM series cooling/heating dry baths meet all temperature requirements from 0-100°C in a Molecular Biology Lab, It plays the role of all-in-one small box combining the functions of ice box, refrigerator, incubator, water bath, circulator, heater etc.

Heater: Model DBM-H/HB can only heat and its temperature ranges from ambient-100°C.

Cooling/Heating Dry Bath: Model DBM-C/CB ranges from 0-100°C.

Programmable Dry Bath: Model DBM-CP/CPB let you do your experiments at specific temperature for certain time and after the program completes, it automatically stops your reaction by going down to 4°C. DBM-CP/CPB can run up to 3 segments. time and temperature continuously.

Features:

- Modular designed blocks, mix and match tubes from 0.2mL to 50mL and accommodates 96 well plates, flat bottom plates and slides.
- Small footprint, can work in a hood, or lab automation systems.
- 12V 5A DC input, energy efficient, a car charger & rechargeable battery pack can be ordered.
- Fast chilling/heating rate, precise temp. control.
- Clean and maintenance free.

Heating/Cooling
0°C to 100°C



DBM-C

Specifications for DBM-CP/CPB:

- Power supply: 12V DC, 5A.
- Temperature range: 0°C to 100°C.
- Time Range: 1 min to 23 hr 59 min.
- Temperature precision: $\pm 0.2^\circ\text{C}$.
- Display resolution: 0.1°C.
- Sample block temperature evenness: $\pm 0.5^\circ\text{C}$.
- Average heating rate from 16°C to 60°C: 8°C / min.*
- Average chilling rate from 60°C to 16°C: 3°C / min.*
- Average chilling rate from 25°C to 4°C: 3°C / min.*
- Electrical input: 12 V DC, 5A.
- Dimensions: 185x185x90 mm (7.25x7.25x3.5 in).
- Working area dimensions: 110 x 72.5 mm (fits a standard 96 well plate).
- Net Weight: 1.4 kg.
- Gross Weight: 2.5 kg.

* Room temperature at 25°C, with 4 0.2mL blocks.

Each dry bath is tested over 100 hours for aging. Each unit is tested and calibrated by both computer data acquisition system & manually inspection. DBM Dry Baths use standard temperature probe for calibration to ensure world-wide uniformity of measurements and their traceability to the International System of Units (SI). Our Patented technology insures precise temperature control within $\pm 0.2^\circ\text{C}$.

Blocks:



DBM-B0.2x24

DBM-B0.5x12

DBM-B1.5x6

DBM-B2x6

DBM-B15x6

DBM-B50x3

DBM-B96

DBG-001



DBG-002



Blocks

DBG-001/DBG-002, Sample Concentration

The instrument consists of a base and stand assembly, sample holder and gas distribution system. Test tubes are held in a block. The gas at 5 to 10 psig passes through the distribution manifold. Depending on the test-tube size and solvent volume they can be individually raised or lowered to the correct height. Needles or glass pipets blow gas onto the surface of the solution resulting in rapid evaporation of the solvent.

Features:

- High precision and wide range of temperature control.
- Blowing a large number of samples at 1 time.
- Blowing each sample independently.
- Amount of airflow can be adjusted.
- Easy operation; safe and reliable to use.



Valve

Model	DBG-001	DBG-002
Temp. Control Range	RT+5°C~150°C	
Timer	1min~99h59min	
Display	LED	
Temp. Control Accuracy @40~100°C	±0.5°C	
Temp. Control Accuracy @100~150°C	1°C	
Display Accuracy	0.1°C	
Heating Time(40°C~150°C)	≤30min	
Standard Blocks	1	2
Nitrogen Consumption	0~10L/min	
Dimensions (L×W×H) mm	280×240×110	
Needle Length	150mm	

Model	Type	Description	Dimensions (mm)
301-01081-01	BK01	49×Φ6mm	96×96×49
301-01081-02	BK02	49×Φ7mm	96×96×49
301-01081-03	BK03	25×Φ10mm	96×96×49
301-01081-04	BK04	25×Φ12mm	96×96×49
301-01081-05	BK05	25×Φ13mm	96×96×49
301-01081-06	BK06	12×Φ15mm	96×96×49
301-01081-07	BK07	16×Φ15mm	96×96×49
301-01081-08	BK08	12×Φ16mm	96×96×49
301-01081-09	BK09	16×Φ16mm	96×96×49
301-01081-10	BK10	12×Φ19mm	96×96×49
301-01081-11	BK11	16×Φ19mm	96×96×49
301-01081-12	BK12	9×Φ20mm	96×96×49
301-01081-13	BK13	9×Φ26mm	96×96×49
301-01081-14	BK14	4×Φ28mm	96×96×49
301-01081-15	BK15	4×Φ40mm	96×96×49
301-01081-16	BK16	49×0.5ml tubes	96×96×49
301-01081-17	BK17	25×1.5ml tubes	96×96×49
301-01081-18	BK18	25×2.0ml tubes	96×96×49
301-01081-19	BK19	96×0.2ml tubes	78×114×26
301-01081-20	BK20	96×0.2ml microplate	81×123×19



DBG-003, Sample Concentration, Each Sample Independently

Features:

- High precision and wide range of temperature control.
- Blowing at a large number of samples at one time.
- Blowing each sample independently.
- Amount of airflow can be adjusted.
- Easy operation; safe and reliable to use.
- Low Nitrogen consumption of 330ml/min/sample.

Model	DBG-003
Temperature Control Range	RT+5°C-150°C
Temperature control discrepancy	≤±1°C (RT+5°C~100°C) ≤±1.5°C (100°C~150°C)
Heating time (from 40°C to 150°C)	≤30min
Processing timer	1min~99h59min
Maximum input power	400W
Temp. control discrepancy	0.1°C
Deedles length	150mm
Capacity	12 pcs
Dimensions (L×W×H)mm	280×240×500

Model	Type	Description	Dimensions (mm)
301-06091-01	BD01	12×Φ10mm	192×96×49
301-06091-02	BD02	12×Φ12mm	192×96×49
301-06091-03	BD03	12×Φ13mm	192×96×49
301-06091-04	BD04	12×Φ15mm	192×96×49
301-06091-05	BD05	12×Φ16mm	192×96×49
301-06091-06	BD06	12×Φ19mm	192×96×49
301-06091-07	BD07	12×Φ20mm	192×96×49



DBD-SAMPLER, Manual Head Space Sampler

Headspace analysis has generally been limited to costly automated systems – until now! This manual sampler enables to utilise the headspace technique in a quantitative, economical and precise manner. Analyse up to six samples at a time using all popular vial sizes, from 2 to 27ml.

Features:

- Volatiles in pharmaceuticals.
- Flavours analysis.
- Alcohol and other toxic compounds in blood.
- Screening of volatiles in all type of environmental samples e. g. soils, waters, plastics, polymers, etc.

Model	DBD-SAMPLER
Heating temperature range	RT+5°C-100°C
Variable injection	up to 2.5ml
Temperature accuracy	±0.5°C
Holds up to 6 vials of	2, 10, 20ml
Stabilization time from 20ml vials: 8minutes	25°C to 70°C with 1ml syringe and 6 empty



STEP-1



STEP-2



STEP-3



STEP-4



STEP-5



Chemical digestion of the samples is a prerequisite such as: tests, determination of COD, TOC, total phosphate, nitrogen etc. The required temperature & reaction time are programmed using the membrane keypad on the front of the reactor. When digestion is complete, the reactor automatically switches off & sounds an alarm. DBR-001 COD reactor is designed to meet USEPA 410.4 method. It can be used to digest closed 1 micro reflux COD vial and other samples which diameter is 16mm. Further, it is safer and easier than traditional open macro reflux method. Unique COD program let DBR-001 to be a truly automatic reactor. When the reactor is powered on, just click the start/stop button, then it starts to heat to 150°C and keep for 2 hours then stop heating with an audio alarm. Samples are ready to be measured by colorimeter when they cool down. DBR-001 COD reactor is compatible with any COD detectors which use 16mm COD vials. In addition to COD program, DBR-001 is a microprocessor controlled block heater, with temperature range from 60°C to 200°C and timer from 0 to 999 minutes or continuous operation, and 3 extra self-made heating programs can be stored.

For The Digestion Of:

- COD (150°C)
- TOC (120°C)
- Total chromium (100°C)
- Total nitrogen (100°C)
- Total phosphate (100°C)

Features:

- Approved by ERA (method 410.4) of USA and most of the countries in the world.
- Safer and easier than traditional open reflux method.
- Save lab top space, power and water consumption.
- Reduce waste & maximize safety.
- Unique COD program makes it truly automatic.

Model	DBR-001 COD REACTOR
Read out	4 Digital LED of set temperature, set time, process temperature, residual time display
Timer	1~999 minutes with audible alarm and automatic shut off or continuous operation
Accuracy	±2°C (at 150°C)
Temperature	Fixed 150°C (COD program) 60°C~200°C, adjustable
Safety	Hot top indicator (flashing when block temperature is over 70°C (Automatic shut off when block temperature is over 210°C)
Block capacity	25 of 16mm Ø sample vials, Option block(with 8x20mm Ø and 6x25mm Ø vial holes) is available
Structure	Housing: stainless steel with power paint coating, Block: Anodized aluminum
Power	AC110 or AC220V, 50/60Hz, 220Watt
Dimensions	W18.9xH11.6xD31.5mm
Weight	Net 4.5kg Gross 6.1kg