DB SERIES DIGITAL DRY BATH INCUBATORS

Dry Heating • Precision PID Control • 1-3 Block Expansion

Standard / Split Control / Premium 300°C / Independent Multi-Zone

Utilizing high-purity aluminum conductive heating, this series replaces traditional water/oil baths for cleaner, safer and easier operation.

300°C	±0.5°C	1–3	1s–100d	110/230V	RS485
High-temp option	Stability / Uniformity	Heating blocks 75*95*50mm	Timer range	Power supply	Optional communication

APPLICATION SOLUTIONS

- Molecular Biology
- Clinical Testing
- Pharmaceutical GMP
- Environmental Chemistry
- University Research
- Automation

CORE PLATFORM FEATURES

- 6063 high-purity aluminum heating blocks
- PT100 platinum sensor
- PID closed-loop temperature control
- Water-free operation
- No evaporation / scaling / cross-contamination
- Easy alcohol wipe cleaning

GLTLAB · LABORATORY TEMPERATURE CONTROL

01 - STANDARD & ECONOMICAL SERIES

Preset • Split Control • Standard Digital

PRESET

DB-1A / DB-1A-P

Economical Preset Single Block

- 6 preset temperatures: 35 / 60 / 90 / 120 / 150 / 180°C
- PID temperature control
- Economical, durable and simple
- DB-1A-P high-temperature option up to 300°C
- Optional colorimetric tube customization

SPLIT CONTROL

DB-1H

Split Control Single Block

- Separated controller and heating unit
- LED/LCD display
- Suitable for glove boxes, fume hoods and closed chambers
- Optional extended control cable and RS485

STANDARD DIGITAL

DB-1D / DB-2D / DB-3D

Standard Digital Series

- 1 / 2 / 3 block configurations
- Digital PID control
- Compatible with standard and larger custom blocks
- General laboratory use

QUICK SPECIFICATION COMPARISON

Model	Blocks	Temperature Range	Power	Timer	Overall Dimensions (mm)
DB-1A	1	RT+10–200°C	300W	Preset	220*170*100
DB-1A-P	1	RT+10–200°C	300W	Preset	280*195*115
DB-1H	1	RT+10–200°C	300W	1s–100d	280*195*115
DB-1D	1	RT+10–200°C	300W	1s–100d	255*180*115
DB-2D	2	RT+10–200°C	500W	1s–100d	280*230*115
DB-3D	3	RT+10–200°C	750W	1s–100d	305*280*115

RT: Room Temperature (≈25°C) • Temperature accuracy: ±0.5°C • Power supply: 110/230V, 50/60Hz • RS485 optional

RECOMMENDED APPLICATIONS

- Routine Incubation
- Reagent Warming
- Enzyme Reaction
- Analytical Prep
- Small-Batch Processing
- Teaching Labs

GLTLAB · LABORATORY TEMPERATURE CONTROL

02 - PREMIUM HIGH-TEMPERATURE SERIES

DB-1P • DB-2P • DB-3P

Standard / Split Control / Premium 300°C / Independent Multi-Zone

ROOM TEMPERATURE +10°C ~ 300°C

The premium high-temperature series is designed for demanding dry-heating applications that require stable heating up to 300°C. Reinforced heating structure, high-temperature-resistant insulation and dedicated aluminum blocks make these models a cleaner and safer alternative to oil baths and hot plates.

Reinforced Heating Structure

Stronger internal construction ensures uniform and reliable heat transfer up to 300°C.

Clean Replacement for Oil Bath

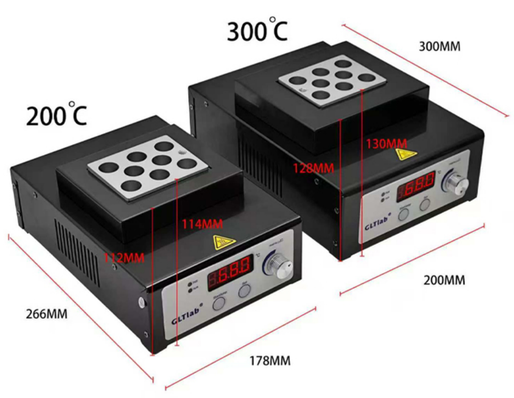
Dry heating eliminates oil risks, leaks and odors for a safer, cleaner laboratory.

High-Temperature Dedicated Aluminum Blocks

Anodized aluminum blocks deliver excellent thermal conductivity and outstanding corrosion resistance.

DB-1P

Single Block



Blocks	1 block
Power	300W
Temp. Range	RT+10–300°C
Dimensions	280*195*130mm
Weight	2.8 kg

DB-2P

Dual Block

Blocks	2 blocks
Power	600W
Temp. Range	RT+10–300°C
Dimensions	360*195*130mm
Weight	4.0 kg

DB-3P

Triple Block

Blocks	3 blocks
Power	900W
Temp. Range	RT+10–300°C
Dimensions	440*195*130mm
Weight	4.0 kg

TYPICAL HIGH-TEMPERATURE APPLICATIONS

- Environmental Monitoring
- Chemical Synthesis
- Materials R&D
- Pharmaceutical Testing
- Geological Mineral Testing
- University Research

PT100 Sensor	±0.5°C Stability	IP21	50°C Heat Warning	110/230V Power Supply	RS485 Optional

03 - INDEPENDENT MULTI-ZONE SERIES & FULL MODEL MATRIX

DB-2T • DB-3T

DB-2T
Dual Independent PID

- 2 independent channels
- Different temperatures simultaneously
- Independent timer 1 sec–100 days
- RT+10–200°C
- 600W
- 340×280×110 mm
- 3.0 kg

DB-3T
Triple Independent PID

- 3 fully independent zones A / B / C
- Independent heating, sensing and control
- Independent start / stop / timer
- RT+10–200°C
- 900W
- 500×280×110 mm
- 3.0 kg

37°C Incubation — Gentle & stable culture

65°C Digestion — Enzyme & digestion processing

95°C Denaturation — Nucleic acid denaturation

FULL MODEL SELECTION MATRIX

Model	Blocks	Temperature Range	Power	Key Feature	Size (mm)
DB-1A	1	RT+10–200°C	300W	6 preset temperatures	220*170*100
DB-1A-P	1	RT+10–300°C	300W	preset high-temp	280*195*115
DB-1H	1	RT+10–200°C	300W	split controller	280*195*115
DB-1D	1	RT+10–200°C	300W	standard digital PID	255*180*115
DB-2D	2	RT+10–200°C	500W	dual-block digital PID	280*230*115
DB-3D	3	RT+10–200°C	750W	triple-block digital PID	305*280*115
DB-1P	1	RT+10–300°C	300W	premium high-temp	280*195*130
DB-2P	2	RT+10–300°C	600W	premium high-temp	360*195*130
DB-3P	3	RT+10–300°C	600W	premium high-temp	440*195*130
DB-2T	**2**	**RT+10–200°C**	**600W**	**dual independent PID**	335*280*115
DB-3T	**3**	**RT+10–200°C**	**900W**	**triple independent PID**	490*280*115

PT100 — High-accuracy sensor

IP21 — Protective design

Stainless Steel — Corrosion-resistant

50°C — Heat Warning

110/230V — Wide voltage

RS485 — Optional

GLTLab Aluminum Heating Blocks / Low-Temperature Reagent Cooling Blocks

Quick-Change Modules I Multiple Size Options | Laboratory Sample Heating / Cooling Solutions

Designed for GLTLab digital dry bath systems, these removable and replaceable aluminumheating and cooling block modules fit insulated base units. All modules are made ofhigh-thermal-conductivity 6061-T6 aerospace aluminum alloy with anodized surface treatment, supporting quick plug-in replacement to meet different laboratory container requirements.

B01

0.2 mL PCR Tubes /8-Strip Tubes

B10

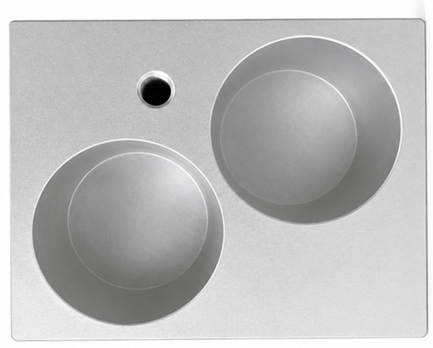
Φ11 mm Glass Test Tubes

B14

20 mL Glass Test Tubes

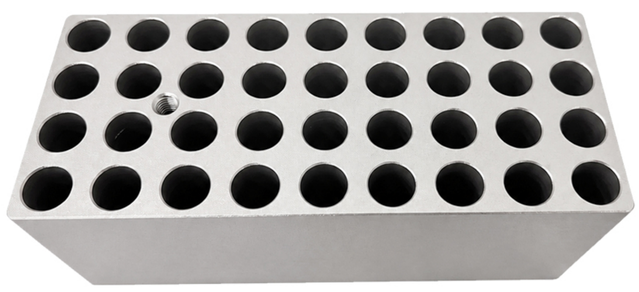
B17

40/50 mL Glass Test Tubes



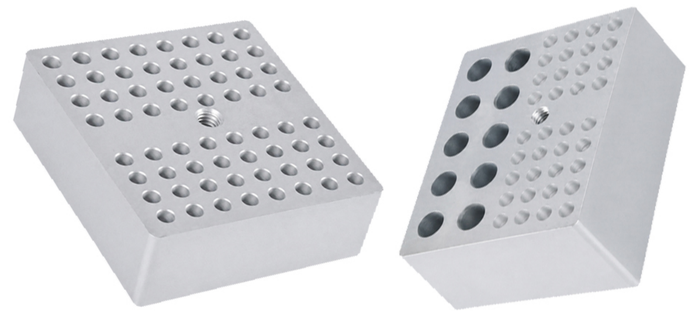
B28

Φ43 Flat-Bottom Tubes



B33

Φ17 Flat-Bottom Test Tubes



Custom Available

Special hole diameters/
hole counts customizable

Key Advantages

Precision Alloy Body
Improved performance consistency
Premium-grade raw material

Reliable Manufacturing
Standardized and refined
More reliable

High Strength, Low Deformation
Higher compressive strength
Suitable for machinery and precision structures

Uniform & Stable Temperature
±0.02°C
Excellent uniformity / low fluctuation
Below ±0.02°C

Customizable Hole Design
Special hole diameters / hole counts
Customizable to match application needs

Broad Compatibility
Multiple specifications and sizes
Suitable for various devices and scenarios

General Technical Parameters

Thermal conductivity:
≥ 180 W/(m·K)

Surface treatment:
Hard anodizing

Replacement method:
Handle-type plug-in removal
Quick replacement

Compatible equipment:
GLTLab DB Series
Single-module / triple-module
Digital dry bath /
custom cuvette models

Customization support:
Custom heating blocks for
cuvette-type containers
and matching device-body
customization

Typical Applications

PCR reactions / nucleic acid incubation / primer annealing

Protein denaturation / sample incubation / nucleic acid extraction

Chemical synthesis / digestion reactions / sample heating

Cuvette reactions / strain activation

Large-volume sample incubation / reagent melting

A wide range of module specifications provides flexible compatibility with different laboratory containers; standard models and custom non-standard designs are available.

GLTLab Aluminum Metal Blocks Specifications & Models Overview

Standard Modules/ Colorimetric Tube Modules/ Microplate Modules |Support Non-standard Customization

B01
0.2 mL PCR Tubes /8-Strip Tubes

B10
Φ11 mm Glass Test Tubes

B14
20 mL Glass Test Tubes

B17
40/50 mL Glass Test Tubes

OEM Customization
Special Hole / WellCount/Size/ External Dimensions

A. PCR / Centrifuge Tube Modules

Model	Compatible Tube	Number of Wells	Well Diameter (mm)	Well Depth (mm)	Module Dimensions (mm)
GLT-B01	0.2mL PCR Tube / 8-Well Strip	72	Φ6.5 (9° taper)	18	75 × 95 × 25
GLT-B02	0.5mL PCR Tube	48	Φ7.8 (9° taper)	27	75 × 95 × 30
GLT-B03	1.5mL / 2mL Centrifuge Tube	30	Φ10.7 (9° taper)	40	75 × 95 × 50
GLT-B04	3mL Centrifuge Tube	20	Φ12.5	33	75 × 95 × 35
GLT-B05	5mL Centrifuge Tube	20	Φ13.5	47	75 × 95 × 50
GLT-B06	15mL Centrifuge Tube	12	Φ17.5	47	75 × 95 × 50
GLT-B07	50mL Centrifuge Tube (Conical Bottom)	4	Φ30.0	47	75 × 95 × 50

B. Glass Tube / Flat-bottom Tube Modules

	Compatible Tube	Number of Wells	Well Diameter (mm)	Well Depth (mm)	Module Dimensions (mm)
GLT-B08	Φ8mm Test Tube	30	Φ8.5	47	75 × 95 × 50
GLT-B09	4 / 5 / 6mL Glass Tube	30	Φ10.6	47	75 × 95 × 50
GLT-B10	Φ11mm Glass Tube	20	Φ11.6	47	75 × 95 × 50
GLT-B11	10mL Glass Tube	20	Φ12.6	47	75 × 95 × 50
GLT-B12	10mL Glass Tube	20	Φ13.5	47	75 × 95 × 50
GLT-B13	15 / 20 / 22mL Glass Tube	20	Φ15.5	47	75 × 95 × 50
GLT-B14	20mL Glass Tube	12	Φ16.6	47	75 × 95 × 50
GLT-B15	30 / 38mL Glass Tube	12	Φ18.5	48	75 × 95 × 50
GLT-B16	20mL Glass Tube	8	Φ20.5	48	75 × 95 × 50
GLT-B17	40 / 20mL Glass Tube	6	Φ25.5	48	75 × 95 × 50

B. Flat-bottom Tube / Beaker Modules

	Compatible Tube	Number of Wells	Well Diameter (mm)	Well Depth (mm)	Module Dimensions (mm)
GLT-B23	Φ28mm Glass Tube	6	Φ28.6	48	75 × 95 × 50
GLT-B24	55 / 85mL Glass Tube	4	Φ31	47	75 × 95 × 50
GLT-B25	Φ33 Glass Tube	4	Φ33.6	47	75 × 95 × 50
GLT-B26	Φ40 Flat-bottom Tube	2	Φ40.5	47	75 × 95 × 50
GLT-B28	Φ43 Flat-bottom Tube	2	Φ43.8	47	75 × 95 × 50
GLT-B29	Φ45 Flat-bottom Tube	2	Φ45.5	47	75 × 95 × 50
GLT-B30	Φ45 Flat-bottom Tube	2	Φ46.5	47	75 × 95 × 50
GLT-B31	Φ56 Flat-bottom Beaker	1	Φ57	47	75 × 95 × 50
GLT-B32	Φ60mm Flat-bottom Beaker	1	Φ61	47.8	75 × 95 × 50
GLT-B33	Φ17 Test Tube Rack	36	Φ17.6	80	225 × 95 × 85

C. Colorimetric Tube / Microplate Modules

Model	Compatible Tube / Plate	Number of Wells	Well Diameter (mm)	Well Depth (mm)	Module Dimensions (mm)
GLT-MP	Standard 96-Well Microplate	1 module	6.3	20	128 × 86 × 30
GLT-NT01	10mL Glass Colorimetric Tube	12	Φ 15.2	80	75 × 95 × 85
GLT-NT02	25mL Glass Colorimetric Tube	4	Φ 20.5	80	75 × 95 × 85
GLT-NT03	50mL Glass Colorimetric Tube	6	Φ 25.5	80	75 × 95 × 85
100mL Colorimetric Tube Module	100mL Glass Colorimetric Tube	4	Φ 31	80	75 × 95 × 85

The above are common standard models. Support customization for special hole diameters, well counts, module heights, and non-standard vessels.