

Dry Thermo Unit DTU-1BN/2BN/1CN/2CN

The aluminum block Bath that heats and cools Microtubes, Centrifuge tubes, and Test tubes. The block enables vessels to be inserted deeply, which allows for the temp. control accuracy like a Constant temperature water bath. Compatible with the nitrogen gas spraying unit.

•"Guide to custom-made aluminum block" --> P.119



DTU-1CN

DTU-2BN

Using with Aluminum blocks (Sold separately)

Model	DTU-1BN	DTU-2BN	DTU-1CN	DTU-2CN
Temperature range	+ 5°C above Room temperature to +110°C		+ 5°C above Room temperature to + 200°C	
Temp. control accuracy	Below ±0.1°C (Set per 0.1°C)			
Capacity	1BN/1CN: Deep block × 1 pc 2BN/2CN: Deep block × 2 pcs			
Other functions	Automatic tuning, ON/OFF timer (1 min to 99 h 59 min), Setting time notification timer, Setting temp. reaching notification buzzer, Temp. memory × 3, temp. Output (DC 0 V to 1 V: 1CN/2CN) (*)			
Temp. Display	Digital (Preset/Current value)			
Heater	100 W	150 W	180 W	250 W
Safe devices/ protections	Fuse, Sensor open/short circuit alarm, High/Low temp absolute value alarm, Memory error, Automatic tuning error			
Dimensions (WxDxH)/ Weight	1BN/1CN: 210 × 318 × 130 mm, Approx. 4 kg 2BN/2CN: 318 × 318 × 130 mm, Approx. 6 kg			
Power supply	AC100V / 1.3A (Need a step-down transformer)	AC100V / 1.8A (Need a step-down transformer)	AC100V / 2A (Need a step-down transformer)	AC100V / 2.8A (Need a step-down transformer)
Standard accessories	Block extraction hook handle × 1 pc (Blocks are sold separately)			

(*)The current temperature can be outputted (*Alarm Out Cable AOC-2* is required for use).

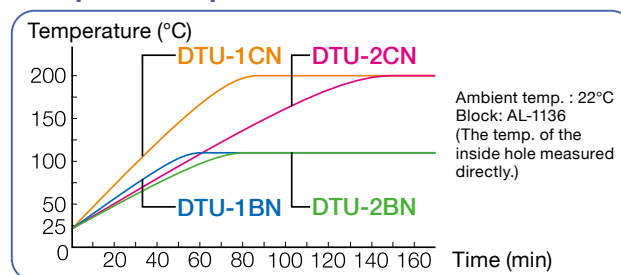
Features

- For "Deep block". Changeable block (Optional)
- "BN" with Up to 110°C, "CN" with Temp. output and Up to 200°C
- Equipped Temp. memory and Compatible with the Nitrogen gas spraying unit

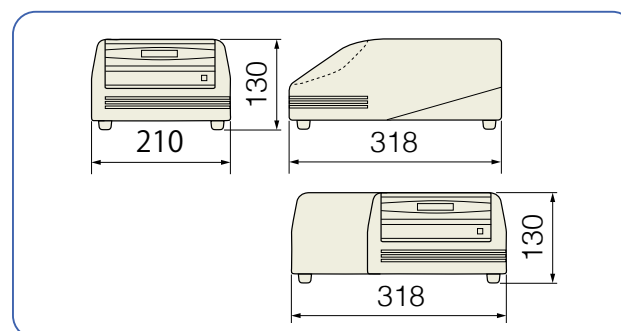
Applications

- Enzymatic reactions, Heat denaturation of DNA and RNA
- Hydrolytic reaction of Sugar, Protein, Fatty acid, etc.
- Concentration of Solvent with Nitrogen gas spraying (Optional)

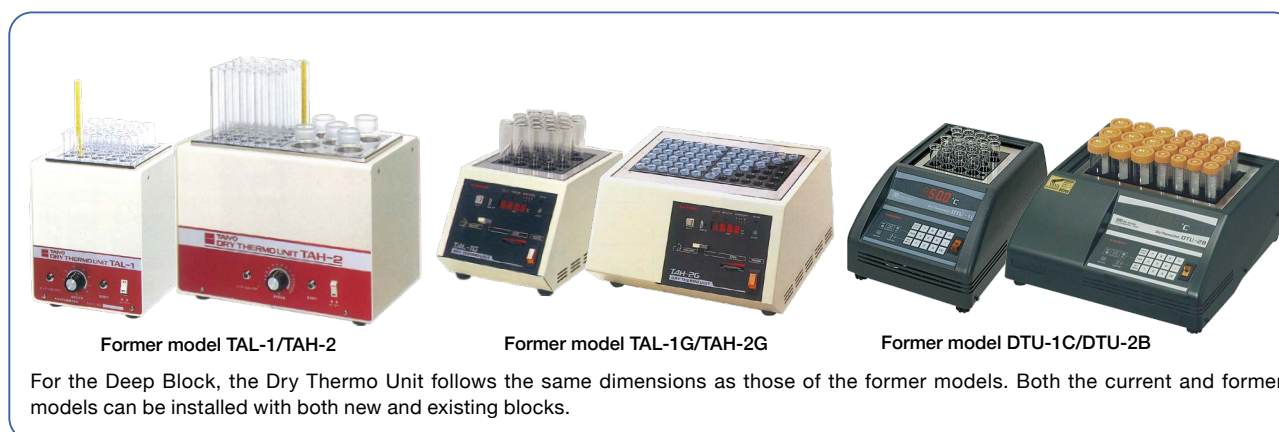
Examples of Temperature transition time



Dimensions



Compatibility with former models



Former model TAL-1/TAH-2

Former model TAL-1G/TAH-2G

Former model DTU-1C/DTU-2B

For the Deep Block, the Dry Thermo Unit follows the same dimensions as those of the former models. Both the current and former models can be installed with both new and existing blocks.

NEW

Constant temperature incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Consistent temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant temperature water circulating system (Chiller)

Appendix

Optional parts

Optional parts: Deep block for Disposable centrifuge tubes

Model	Capacity	Hole depth	Dimensions
0AL-1616F	15 mL × 16 pcs	70 mm	108 × 108 × 80H mm
2AL-2909F	50 mL × 9 pcs		
3AL-5011F	15 mL × 8 pcs +50 mL × 3 pcs		

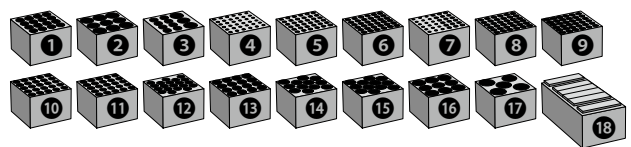
Optional parts: Deep block for Microtubes

Model	Capacity	Hole depth	Dimensions/Remarks
3AL-0836	0.5 mL × 36 pcs	25 mm	108 × 108 × 80H mm Some tubes may not be closely contacted to the holes depending on their sizes. Self-stand tubes cannot be used.
5AL-1136	1.5 mL × 36 pcs	35 mm	
5AL-1136B	2.0 mL × 36 pcs	39 mm	
7AL-8136	0.5 mL × 18 pcs + 1.5 mL × 18 pcs	25 mm	
		35 mm	

Optional parts: Deep block for Microplate/Microscope slide (for 2BN/2CN)

Model	Capacity	Dimensions
18AL-96MP	Flat bottom × 1 pc (*) or Microscope slide × 6 pcs	108 × 216 × 80H mm

(*)The temperature transfer is inferior in Round bottom Microplates. Use the Flat bottom Microplates.



Optional parts: Deep block for Vials (for Concentrating Drying)

It has a slit on the side for easily checking the degree of evaporation when Nitrogen gas is sprayed with EN1. Further, it can easily be checked with the Raising block.

Model	Capacity/Remarks
19AL-1336V	1.5/2 mL × 36 pcs (φ12 × 32H mm), Dimensions 108 × 108 × 80H mm
20AL-1525V	4 mL × 25 pcs (φ15 × 45H mm), Dimensions 108 × 108 × 80H mm
21AL-2412V	10 mL × 12 pcs (φ22.5 × 46H mm), 18 mL can also be used (*), Dimensions 108 × 108 × 80H mm
22AL-0030V	"Raising block" enables easily checking inside vials, Dimensions 108 × 108 × 80H mm

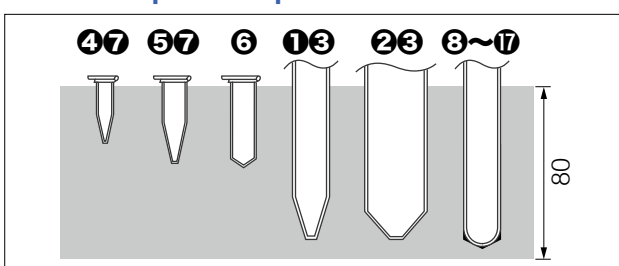
(*)The vials fit about half the height of those in the hole. •In consideration of the dimensional errors, the hole dia. is slightly larger.

Optional parts: Deep blocks for Test tubes

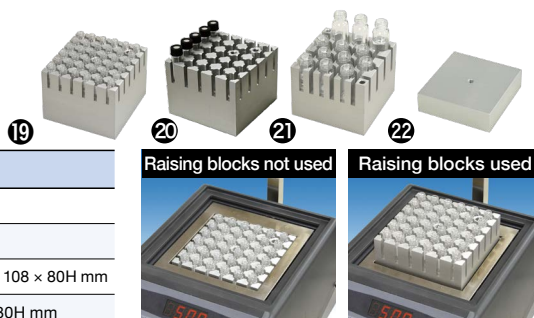
Model	Capacity	Hole depth	Dimensions/Remarks
3AL-1236	φ12 mm × 36 pcs	75 mm	108 × 108 × 80H mm The hole bottom is not Round shaped, but Mortar shaped. See the below figure for details.
3AL-1336	φ13 mm × 36 pcs		
3AL-1525	φ15 mm × 25 pcs		
3AL-1625	φ16.5 mm × 25 pcs		
3AL-1820	φ18 mm × 20 pcs		
3AL-2116	φ21 mm × 16 pcs		
3AL-2412	φ12 mm × 24 pcs		
3AL-2512	φ25 mm × 12 pcs		
3AL-3009	φ30 mm × 9 pcs		
3AL-3505	φ35 mm × 5 pcs		

•We can also manufacture custom-shaped blocks according to the vessels. Please see P.119 for details.

The hole shapes of Deep blocks

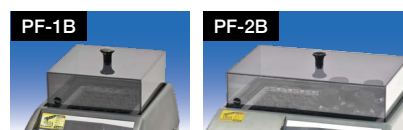


The hole shapes and fit conditions are as the above figure. Each hole shape of a vessel almost fits to that of a Deep block except for 3 to 17. In 1 and 3, 15 mL Centrifuge tubes fits in around 8 to 9 mL the scale marked, 2 and 3 fit in around 30 to 35 mL the scale marked.



Optional parts: Heat-proof Hood for DTU

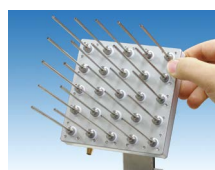
Model	Applicable to	Usable temp.	Applicable vessels	Remarks
PF-1B	DTU-1BN	Max. 110°C at the setting of DTU	Test tubes (Below 120 mm) 15/50 mL Disposable centrifuge tubes, etc.	Dimensions 170 × 160 × 85H mm, Max height inside Chamber 60 mm
PF-2B	DTU-2BN			



Optional parts: Evaporation Head EN1 series

Nitrogen gas spraying unit used in combination with DTU-1 and 2, 1 set of EN1 for DTU-1, and 2 sets of EN1 for DTU-2. It is used for concentration of Solvent with setting Test tubes, Vials, and Block for Vials (Optional).

Combination e.g.: DTU-2CN
+ Evaporation head EN1-25 × 2 pcs *
+ Deep block for Vials AL-1525V × 2 pcs *
+ Raising block AL-0030V × 2 pcs
* Possible to combine different types



Correspondence table

Model	Nozzle	Applicable to	Applicable vessels outer dia.
EN1-36	36	DTU-1BN DTU-2BN (*) DTU-1CN DTU-2CN (*)	φ8, 11, 12, 13 mm
EN1-25	25		φ15, 16.5 mm
EN1-20	20		φ18 mm
EN1-16 (*)	16		φ21 mm
EN1-12 (*)	12		φ24, 25 mm
EN1-9 (*)	9		φ30 mm
EN1-5 (*)	5		φ35 mm

(*)2 sets (Different models mixed) can be attached. (**)Each gas can be stopped by attaching the accessory stopper instead of the nozzle. (*)Custom made •Nozzles are individually available [SUS Needle set for EN (10 pcs)]

•Disposable nozzles are also available [PP Needle set for EN (20pcs)]

Model	EN1 series
Applicable to	DTU-1BN/2BN/1CN/2CN (*)
Spray nozzle length	Effective length 88 mm (Nozzles are made of stainless steel)
Number of Spray nozzle	5 pcs to 36 pcs (depends on the model) (**)
Gas supply connection Dia.	Inner dia. φ6 mm Hose or Outer dia. φ6 mm Pisco tube
Head Dimensions (W×D×H)	105 × 105 × 15 mm

•Nitrogen gas Generator "N₂ GENESIS 200" where Nitrogen gas cylinder is unnecessary. --> P.051

NEW
Constant-temperature incubator/shaker
OD Monitor
For cell culture related products
Shaker
Mixer
Rotator
Stirrer
Bead beater
homogenizer
Ultrasonic homogenizer
Aluminum block Bath
Mini-size Bath
Water bath
Sparking Water bath
Immersion cooler
Hybridization
Incubator
Constant-temperature Chambers
Centrifugal
Concentrators
Cold Trap
Freeze dryers
Substrate
Electrophoresis apparatus
Blotting device for hybridization
Constant-temperature
water-circulating
system [Chilled]
Appendix