

# Forced Convection Oven (High Temp.)

Industrial & Laboratory Forced Convection

## DN411H/611H

Operating temp. range Room temp. +15°C~360°C

Temp. distribution accuracy ±3.0°C (at 360°C)

Internal capacity 95L DN411H 223L DN611H

High precision constant temperature oven suitable for heat treatment and heat insulation tests. High performance control is possible due to its high precision control system. CO<sub>2</sub> and power discharge can be displayed on the monitor.

- Suitable for heat insulation test and curing process up to 360°C.
- Simple operation by interactive key input.
- Standard equipped with calibration offset function, power failure recovery mode, user configuration information and other functions.
- Maximum 99 steps, 99 patterns program controller with repeat function.
- Loaded with total operation hours timer.
- Designed with cable holes which allows data acquisition from internal test device.



95L  
DN411H

223L  
DN611H

### Specifications

Product code	212901	212902
<b>Model</b>	<b>DN411H</b>	<b>DN611H</b>
System	Forced air circulation	
Operating temp. range	Room Temp. +15 to 360°C	
Temp. adjustment accuracy*1	±0.2°C (at 360°C) JTM K05	
Temp. fluctuation*1	1.2°C (at 360°C) JIS	
Temp. distribution accuracy*1	±3°C(at 360°C) JTM K05	
Temp. gradient*1	12°C(at 360°C) JIS	20°C(at 360°C) JIS
Max. temp. reaching time*1	Approx. 60 min.	
Interior	Stainless steel plate	
Insulation material	Glass wool + Ceramic fiber	
Heater	Stainless pipe heater 3.0kW	Stainless pipe heater 4.0kW
Fan type / Motor	Sirocco fan / Condenser type motor	
Cable holes	33mm I.D. (right side)	
Exhaust port	33mm I.D.×2 ( back side)	
Temp. controller	PID control by microcomputer	
Temp. setting Type	Digital setting by UP/DOWN key	
Temp. display	Digital indication by green LED	
Other display	Temp. pattern display for operating display by LED	
Sensor	K thermocouple for temperature control and independent overload prevention device	
Timer / Timer resolution	1min. to 99hrs. 59min / 1min.	
Operation functions	Fixed temp. program operation, Auto start, Auto stop, Quick Auto stop	
Additional functions	Calendar time(24 hours), Calibration off set function, Electricity consumption, CO <sub>2</sub> discharge, Heater output operation display monitor, Power failure return mode, User configuration information saving / accessing	
Heater Circuit Control / Sensor	Triac zero-cross type / K-thermocouple (for temp. adjustment, Individual overheating prevention)	
Safety device	Self diagnosis function (Sensor, Heater, Triac, Main relay, Automatic overheat prevention), Key lock function, Independent overheating prevention, Door switch, Electric leakage breaker	
Internal dimensions	W470×D450×H450mm	W620×D600×H600mm
External dimensions	W640×D695×H915mm	W790×D845×H1065mm
Internal capacity	95L	223L
Withstand load of shelf board	Approx. 30kg / shelf	
No. of shelf stages/peg pitch	12pcs. / 30mm	17pcs. / 30mm
Power source (50/60Hz)	AC220V Single phase	
Weight	Approx. 90kg	Approx. 130kg
Shelf plate / bracket	Stainless wire, 2 pcs. / 4 pcs.	

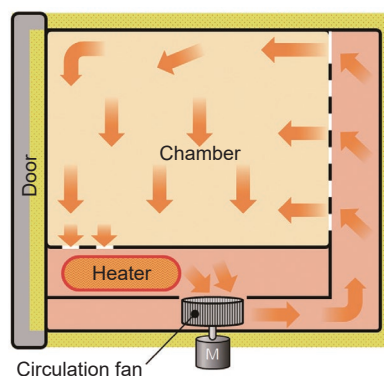
The length of the power cord is about 2 meters outside the unit

\*1 Conditions: temperature and humidity : 23°C±5°C, 65%RH±20%, damper fully closed, no load.  
The environmental temp. range is 5 to 35°C.

\*2 Do not include protrusions.

### Method

[Side view]



### Control Panel



### Overheat Prevention Device



Forced convection circulation

Auto overheat prevention

Independent overheat protector

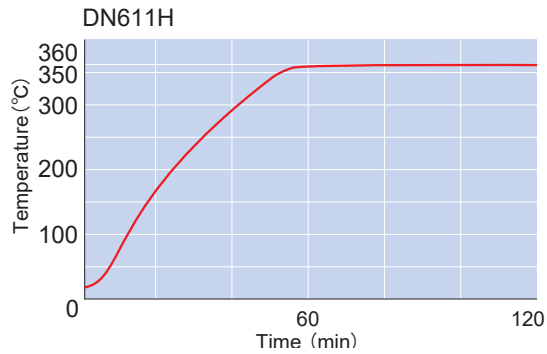
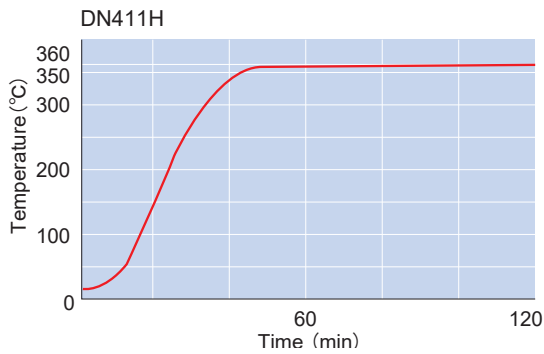
Self-diagnosis

Key lock

Power outage compensation

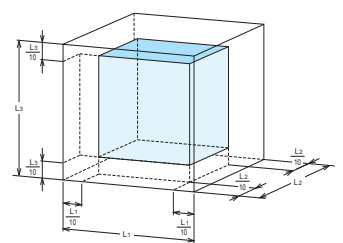
Overcurrent ELB

## Temp. Rising Curve (AC200V 50Hz Room temp.23°C)



## 9 Points Distribution Reference Data (no load)

	Top right back	Top left back	Top right front	Top left front	Bottom right back	Bottom left back	Bottom right front	Bottom left front	Center
DN411H	361	357	362	359	358	356	360	354	359
DN611H	358	358	367	357	360	360	356	354	358



### Conditions

1. Measured by 9 points including 1/10 distance to the the opposite wall and center measuring point according to internal dimensions.
2. Room temperature 23°C, AC200V, 50Hz, Setting at 360°C, Average temp. during stable state.
3. No load, 2 shelf plates installed.

### Optional Items

No.	Product name		Product code
①	Stand	OH41 for DN411H	212477
②		OH61 for DN611H	212478
③	Shelf (with support 2 pcs.)	ODQ 10 for DN411H	211063
④	Stainless wire (loading up to 30 kg/shelf)	ODQ 20 for DN611H	211064
⑤	Shelf (with support 2 pcs.)	ODQ 30 for DN411H	211098
⑥	Stainless punching metal (loading up to 15kg/shelf)	ODQ 40 for DN611H	211099
⑦	*External Communication Adapter set	OIN90	211880
⑧	*Additional cable port, 25mm dia.	ODH12	281056
⑨	*Additional cable port, 50mm dia.	ODH14	281057
⑩	*External Communication terminal	ODH16 (RS485)	212975
⑪	*Temperature output terminal	ODH18 (4-20mA)	212976
⑫	*External alarm output terminal	ODH22	212977
⑬	*Time up output terminal	ODH24	212978
⑭	*Operation signal output terminal	ODH26	212979
⑮	*Event output terminal	ODH28	212980

\* Please specify when ordering main unit.

## Interior



## Stand (Optional Item)



DN611H+ Stand (Optional Item)

## Dimensions (Unit:mm)

