

Inert Oven

Suitable for Low Oxidation Environment

DN411I/611I

Operating temp. range

Room temp. +15°C~360°C

Temp. gradient

12°C (at 360°C)
DN411I

20°C (at 360°C)
DN611I

Internal capacity

95L
DN411I

223L
DN611I

Suitable for Curing Process in a low oxygen atmosphere

- Suitable for heat insulation test and curing process up to 360°C.
- Simple operation by interactive key input.
- Operation monitor visualizes controller status, temp and temp. changing.
- Incorporates with maximum 99 steps, 99 patterns program controller with repeat function.
- Loaded with total operation hours timer.
- N₂ gas flow amount controllable.

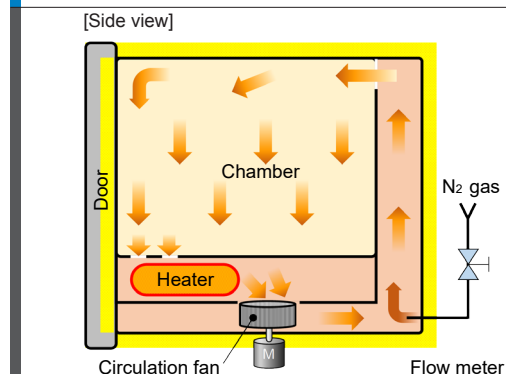


Specifications

Model	DN411I	DN611I
System	Forced Convection	
Operating temp. range	Room Temp. +15 to 360°C	
Temp. adjustment accuracy	±0.2°C (at 360°C) JTM K05	
Temp. fluctuation	1.2°C (at 360°C) JIS	
Temp. uniformity	±3°C (at 360°C) JTM K05	
Temp. gradient	12°C (at 360°C) JIS	20°C (at 360°C) JIS
Max. temp. reaching time	Approx. 60 min.	
Nitrogen substitution time required*1	Approx. 30 min. (ordinary temp with nitrogen concentration of 2%)	Approx. 70 min. (ordinary temp with nitrogen concentration of 2%)
Interior	Stainless steel plate	
Exterior	Cold rolled steel plate with baked melamine resin coating	
Heat insulator	Glass wool + Ceramic fiber	
Heater	Stainless pipe heater 3.0kW	Stainless pipe heater 4.0kW
Sensor	K thermocouple for temperature control and independent overload prevention device	
Fan type / Motor	Sirocco Fan / Condenser type	
Flow meter, Gas carrier	Max. flow 30L/min, O.D. 9mm hose nipple	
Temp. controller	PID control by microcomputer	
Temp. display type	Temp. display: Digital display by green LED (resolution:1°C) Setting temp. display: Digital display by orange LED (resolution:1°C)	
Timer / Timer resolution	1min. ~ 99hrs. 59mins. / 1min.	
Operation function	Fixed temp. operation, Auto-start, Auto-stop, Quick auto-stop, Program operation	
Program mode	Repeatable operation function up to max 99 steps or 99 patterns.	
Additional functions	Power on and operation time integrating function (up to 65535 hours), Calendar time (24 hours), Calibration offset, Monitor display of integrated power consumption, Total CO ₂ emissions and heater operating output, Power failure recovery mode, Save and read out of user settings	
Heater circuit control	Triac with Zero-cross	
Safety device	Self diagnostic functions (Sensor failure, SSR short circuit, Heater line disconnection, Main relay contact damaged, Automatic overheat prevention), Key lock function, Independent overheating prevention, Electric leakage breaker, Door switch	
Internal dimensions	W470×D450×H450mm	W620×D600×H600mm
External dimensions	W640×D695×H915mm	W790×D845×H1065mm
Internal capacity	95L	223L
Shelf max. load	Approx. 30kg / shelf	
Shelf support qty. / Pitch	12pcs. / 30mm	17pcs. / 30mm
Power source	Single phase 220V 15A	Single phase 220V 20A
Weight	Approx. 90kg	Approx. 130kg
Shelf plate / bracket	Stainless wire, 2 pcs. / 4 pcs.	

*1 N₂ introduction rate 20L/min.

Method



Control Panel



Overheat Prevention Device



N₂ Gas Entrance Port (9mm O.D.)



Forced convection circulation

Auto overheat prevention

Independant overheat protector

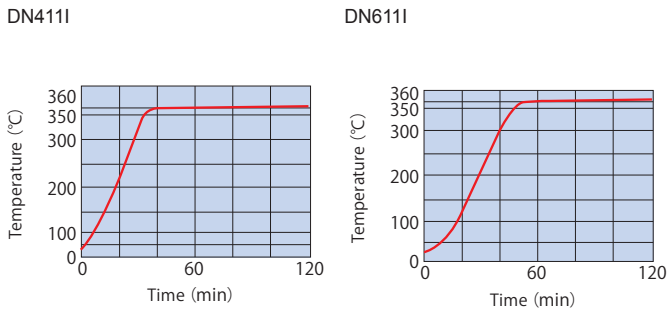
Self-diagnosis

Key lock

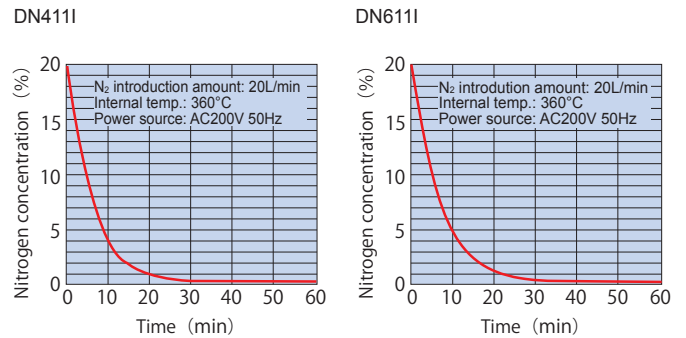
Power outage compensation

Overcurrent ELB

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

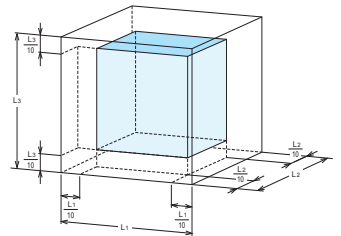


N₂ Gas Substitution Performance Curve



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	(°C)
DN4111	359	358	363	361	359	359	359	356	359	
DN6111	361	357	362	357	359	355	350	350	357	



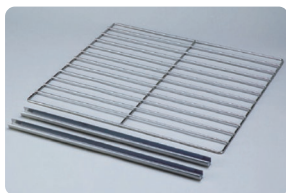
Conditions

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.

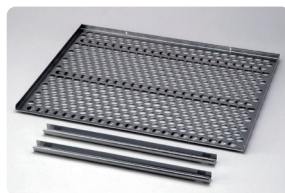
Optional Items

Product name	Product code
Stand OH41(for DN4111)	212477
OH61(for DN6111)	212478
Shelf (with support 2 pcs.)	
Stainless wire (loading up to 30 kg/shelf)	ODQ 10 for DN4111 211063
	ODQ 20 for DN6111 211064
Stainless punching metal (loading up to 15kg/shelf)	ODQ 30 for DN4111 211098
	ODQ 40 for DN6111 211099
External communication adapter set OIN90	211880
External communication terminal ODH16	212975
Temperature output terminal ODH18	212976
External alarm output terminal ODH22	212977
Time up output terminal ODH24	212978
Operation signal output terminal ODH26	212979
Event output terminal ODH28	212980

* Please specify when ordering main unit.

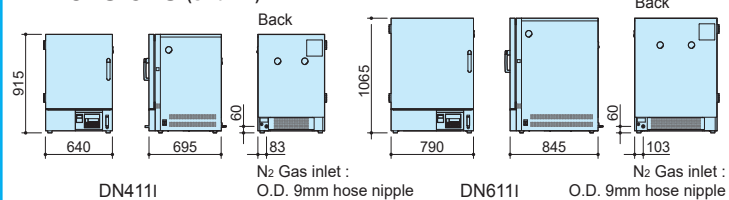


Stainless wire
(Weight tolerance 30kg/pc)



Stainless punching metal
(Weight tolerance 15kg/pc)

Dimensions (Unit:mm)



Interior



Stand (Optional Item)



DN6111+ Stand (Optional Item)