



Inert Gas Oven

Suitable for No Oxidation Environment

Yamato Inert Gas Ovens Models: DN411IE DN611IE

For Information and to Order
Contact Us At:
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Email: sales@LRE.com Web
Site: www.LRE.com



Operating temp. range	Room temp. +15°C~360°C	Temp. gradient	12°C(at 360°C)(411IE)/20°C(at 360°C)(611IE)	Internal capacity	3.3 Cuft. (DN411IE) 7.8 Cuft. (DN611IE)
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Suitable for Curing Process in No Oxidation Environment



3.3 CuFt.
DN411IE

7.8 CuFt.
DN611IE

Yamato Inert Oven Specs: **Contact Us For Discounted Prices**

Model	DN411IE	DN611IE
System	Forced Convection	
Operating temp. range	Room Temp. +15 to 360°C	
Temp. adjustment accuracy	±0.2°C (at 360°C)	
Temp. fluctuation	±0.6°C (at 360°C)	
Temp. uniformity	±3°C(at 360°C)	
Temp. gradient	12°C(at 360°C)	20°C(at 360°C)
Max. temp. reaching time	~60 min.	
Nitrogen substitution time required	~30 min. (ordinary temp with oxygen concentration of 2%)	~70 min. (ordinary temp with oxygen concentration of 2%)
Interior	Stainless steel plate	
Exterior	Cold rolled steel plate with baked melamine resin coating	
Heat insulator	Glass wool + Ceramic fiber	
Heater	SUS Pipe Heater 3.0kW	SUS 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 4 digit green LED (resolution:1°C) Setting temp. display: Digital display by 5 digit orange LED (resolution:1°C)	
Timer / Timer resolution	1min. ~ 99hrs. 59mins. or 100hrs. ~ 999hrs. / 1min. or 1hr.	
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	18.5"W X 17.7"D X 17.7"H	24.4"W X 23.6"D X 23.6"H
External Dimensions	25.2"W X 27.4"D X 36"H	31.1"W X 33.3"D x 41.9"h
Internal Capacity	3.3 Cubic Ft.	7.8 Cubic Ft.
Shelf max. load	66.1 Lbs / shelf	
Shelf support qty. / Pitch	12pcs. / 1.2"	17pcs. / 1.2"
Power source	Single phase 220V 13.5A no plug, round terminal	Single phase 220V 18A no plug, round terminal
Weight	198 Lbs.	287 Lbs
Shelf plate / bracket	Stainless wire, 2 pcs. / 4 pcs.	

* N₂ introduction rate 20L/min.

Inert oven suitable for temperature test and heat treatment in a non-oxidizing environment, by introducing N₂ gas into chamber.

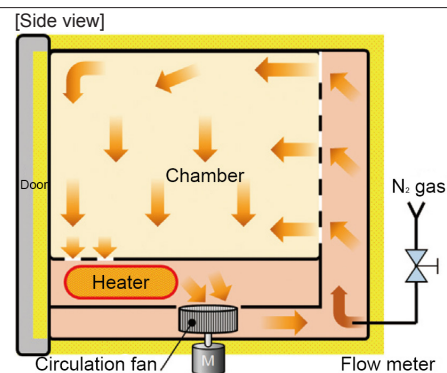
■ Operation and functions

- Heat resistance test and heat treatment of up to 360°C
- Simple operation by interactive key input
- Standard equipped with various operation modes such as program operation and calibration offset function, power failure recovery mode selection, and user configuration information saving
- Repeatable operation function up to maximum 99 steps, 99 patterns controller with repeat function
- N₂ gas flow amount controllable

■ Safety features

- Enhanced safety countermeasure, including self-diagnostic functions, digital setting independent overheat prevention device and electric leakage breaker
- In case of door opening during operation, fan and heater turn off by door switch

Method



Control Panel



Overheat Prevention Device

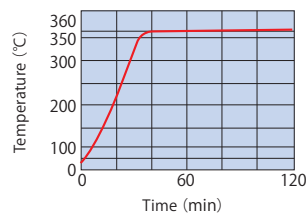


N₂ Gas Entrance Port (ø9mm)

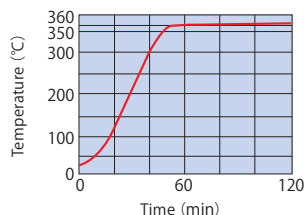


Temp. Rising Curve (AC220V 50Hz Room temp.23°C)

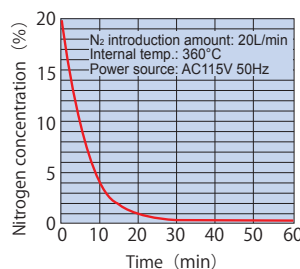
DN411IE



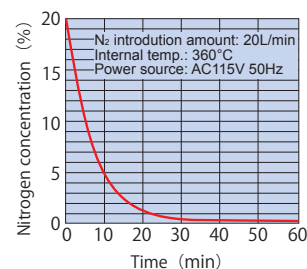
DN611IE

**N₂ Gas Substitution Performance Curve**

DN411IE



DN611IE

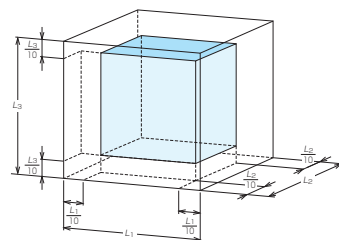
**9 Points Distribution Reference Data**

	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
DN411IE	359	358	363	361	359	359	359	356	359
DN611IE	361	357	362	357	359	355	350	350	357

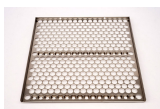
(°C)

Conditions:

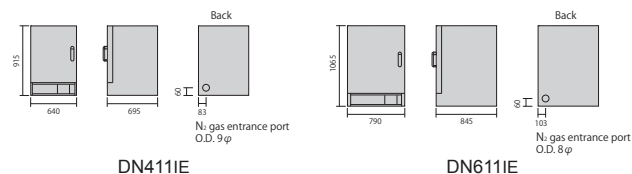
1. Measured by 9 points including 1/10 distance to the the opposite wall and center measuring point according to internal dimensions.
2. Room temperature 23°C, AC220V, 50Hz, Setting at 360°C, Average temp. during stable state.
3. No load, 2 shelf plates installed.

**Options We Can Provide:**

Additional Shelves / Racks
Custom Stands
Ports
Recording Devices
Please Inquire...

**Interior****Stand (Optional Item)**

DN611IE+ Stand (Optional Item)

Dimensions (Unit:mm)**⚠ Attention**

- Never use in flammable or explosive gas atmosphere
- Never use explosive or flammable materials
- Caution: High temperature components