

# Industrial Forced Convection Oven (Silicorn/Fluoro-rubber Gasket)

Rapid heating and cooling

## DKG610/610V/650/650V/810/810V/850/850V

Operating temp. range RT +30°C~260°C

Temp. distribution accuracy ±2.0°C (at 200°C)

Internal capacity 150L DKG610/610V/650/650V 300L DKG810/810V/850/850V

### Improved heating and cooling time compared to conventional oven models.

- Temperature increase and decrease time improved by up to 50% (at no load) compared to conventional company models resulting to extensive increase in work efficiency.
- Employment of a total exhaust system in which air supply and discharge are linked by operation of the manual damper at the front realizes extensive reduction in temperature decrease time.
- Horizontal air flow system ideal for batch processing and processing samples in a magazine rack achieves high precision temperature performance even at loaded condition.
- Silicon-free fluoro rubber door packing used for select models. (DKG610V/650V/810V/850V)
- Supports multiple power sources: 200-220V for models 610/610V/810/810V and 230-240V for 650/650V/850/850V.



150L  
DKG610+Stand (option)

300L  
DKG810

### Specifications

Product code	212884	212885	212886	212887	212888	212889	212890	212891
Model	DKG610	DKG610V	DKG650	DKG650V	DKG810	DKG810V	DKG850	DKG850V
System	Forced convection							
Operating temperature range	Room temp. +30°C to 260°C							
Temperature adjustment accuracy*1	± 0.5°C JTM K05							
Temperature distribution accuracy*1	± 2.0°C (at 200°C), ± 2.5°C (at 260°C) JTM K05							
Time to attain max. temp.*1	Within 45min. from 25°C→260°C				Within 50min. from 25°C→260°C			
Temp. decrease time*1	About 30min. from 260°C→50°C				About 40min. from 260°C→50°C			
Air supply and exhaust damper	Front operation, Manual damper, Air supply pipe/Exhaust pipe at the rear NSSC180 with exhaust duct							
Interior/Exterior	Stainless steel plate/Electro galvanized steel plate Chemical proof baking finish							
Heater/Heat insulator	SUS pipe heater/Glass wool							
Heater capacity	200~220V 2.6~3.15kW		230~240V 2.6~2.83kW		200~220V 3.6~4.36kW		230~240V 3.6~3.92kW	
Blower fan	Sirocco fan×1				Sirocco fan×2			
Fan motor	Condenser type moter							
Cable port	I.D.: 30mm One at the right side of the main body							
Door packing	Silicon rubber	Fluororubber	Silicon rubber	Fluororubber	Silicon rubber	Fluororubber	Silicon rubber	Fluororubber
Air supply port	Bottom of heater room (Open/Close with a manual damper)							
Exhaust port	Upper part of rear of the main body: φ80 (Open / Close with a manual damper)							
Damper control	Linked air supply / Exhaust with manual knob on the front of the main body							
Heater control	SSR control							
Sensor	K-thermocouple (for temp. adjustment, Individual overheating prevention)							
Safety device	Self diagnostic function (Temperature sensor error, Heater disconnection, SSR short-circuit, Automatic overheat prevention function), Key lock, Program lock, Overheat preventive device, Electric leakage breaker, Door switch, Temperature fuse, External alarm terminal							
Internal dimension	W600×D500×H500mm				W600×D500×H1000mm			
External dimension*2	W770×D696 (846)×H985 mm * ( ) includes exhaust duct				W770×D696 (846)×H1674 mm * ( ) includes exhaust duct			
Internal capacity	150L				300L			
Withstand load of shelf*3	15 kg/shelf							
No. of internal shelf stages	7 stages				15 stages			
Shelf support pitch	60mm pitch							
Power supply (50/60)Hz Single phase	200~220V 13.5~15A (20A)		230~240V 12~12.5A (15A)		200~220 18.5~20.5A (30A)		230~240V 16.5~17A (20A)	
Weight	Approx.110kg				Approx.155kg			
Accessories	Shelf				Stainless punching metal, 2 pcs.			
	Shelf support				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% (no load) \*2 Do not include protrusions.

\*3 The load capacity when installing shelf on all steps is 5kg/shelf.

Forced convection circulation

Auto overheat prevention

Overheat protector

Self-diagnosis

Key lock

Power outage compensation

Overcurrent ELB

## Interior



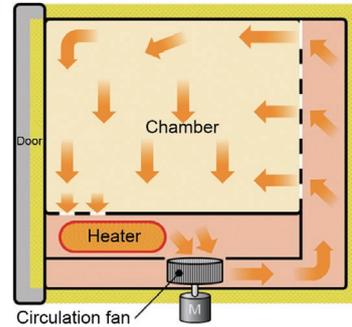
DKG610



DKG810

## Method

[Side view]

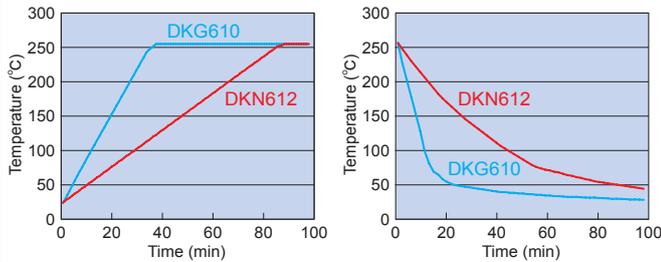


## Cable Hole

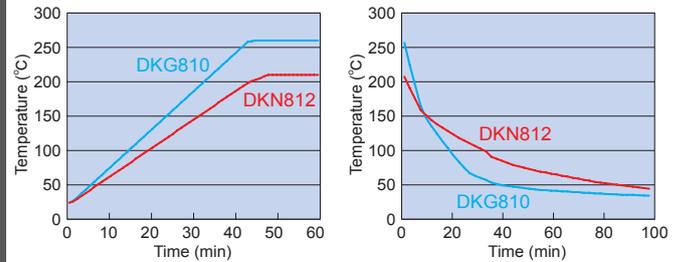
(right side)



## DKG610 Comparison of temperature increase/decrease time with conventional products

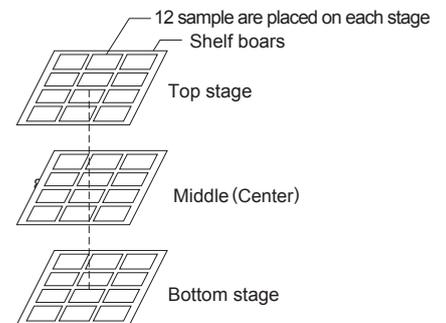


## DKG810 Comparison of temperature increase/decrease time with conventional products



## Reference Data of Loaded Conditions

Model	Temp.	Avg. temp. increase time	Distribution width	Avg. temp. decrease time
DKG610/650	100°C	23 min.	0.8 (±0.4)°C	21 min.
	150°C	38 min.	1.7 (±0.85)°C	30 min.
DKG810/850	100°C	28 min.	2.6 (±1.3)°C	40 min.
	150°C	51 min.	5.2 (±2.6)°C	55 min.



- DKG610/650: Install shelves on all stages (7 stages) and place 12 samples on each stage.  
DKG810/850: Install shelves on all stages (15 stages) and place 12 samples on each stage. A sample is a 370g box of folded stainless steel plate (size 145×105×20 mm×thickness 2.0 mm).
- Measuring points shall be the center and points 15 mm above the centers of the samples at four corners of the middle, top and bottom stages.
- Increase time shall be the average of the shortest and longest times for the measured time to reach the target temperature +10°C for nine points.
- Decrease time shall be the average time to cool down from 260°C to 50°C with the damper fully opened for all of nine measured points.
- Temperature distribution width shall be a value for a stable range after the set temperature is reached and shall be the difference between the highest and the lowest temperatures (highest temperature - lowest temperature / 2) of measured temperatures at nine points.

Measuring sensors shall be positioned at 15mm above the centers of the samples at four corners of the middle, top and bottom stages.

## Optional Items

No.	Description	Product code
①	Shelf (with support 2pcs)	212266
②	Stand: ON62 stand for DKG610/610V/650/650V	281540
③	*I.D.25mm cable port	281558
④	*I.D.50mm cable port	281559
⑤	*Temperature output terminal (4-20 mA)	281560
⑥	*External communication function (RS485)	281562
⑦	*External communication adapter (RS232C conversion)	281563
⑧	*Independent overheat preventive device	281564
⑨	*Automatic damper*1	281565

\* Please specify when ordering main unit.

\*1 When an automatic damper is installed, the external alarm terminal becomes the time-up output terminal.

## Dimensions (Unit:mm)

