

# Forced Convection Oven

Programmable Forced Convection Ovens

DKV400/410/600/610/810/910



Operating temp.  
range

RT+10°C~270°C  
DKV400/410/600/610

RT+10°C~220°C  
DKV910

Temp. fluctuation

±.5°C - ±.6°C

Internal  
capacity

90L  
(DKV400/410)

150L  
(DKV600/610)

300L  
(DKV810)

535L  
(DKV910)

## Operation and functions

- Superior temperature accuracy
- Highly visible 3.5 inch color LCD controller (VSD-1 type)
- Door hinges with click function at 30°click and 120°click
- Fixed temperature operation, Quick Auto-Stop Operation / Auto-Stop Operation / Auto-Start Operation / Programmed Auto-Start Operation (Time and Clock Settings), Programmed Operation (Time Settings)
- Increased safety and self-diagnostic function
- Easy to use and maintain
- Built in exhaust ports

**Q:** Is it possible to install an observation window on the door?

**A:** Custom orders can be accommodated; however, insulation and specified performance may vary depending on operating temperature. Standard window size is W250×280 mm. For alternative sizes, please contact Customer Service.



90L

DKV400 + 281355 stand



150L

DKV600 + 281596 stand

(Stands purchased separately)

## Specifications

Model	DKV400	DKV410	DKV600	DKV610	DKV810	DKV910
Circulation method	Forced convection					
Operating temp. range	Room temp. +10°C to 260°C					RT +10°C to 220°C
Temp. fluctuation <sup>*2</sup>	±.6°C (at 270°C)		±.5°C (at 270°C)		±.6°C (at 270°C)	±.6°C (at 220°C)
Temp. gradient <sup>*2</sup>	9°C (at 270°C)				11°C (at 270°C)	11°C (at 220°C)
Temp. rise rate <sup>*2</sup>	3.3°C / min		2.1°C / min		3.4°C / min	2.5°C / min
Temp. rise time <sup>*2</sup>	~75 min.		~115 min.		~75 min.	~80 min.
Exterior material	Chromium-free electrogalvanized steel sheet, baked-on finish					
Chamber	Stainless steel					
SUS tube heater	1.5kW		2.5kW		3.0kW	
Cable port	Inner diameter 33mm (1 piece on right side)					
Exhaust port	33mm I.D. x 2 (top)				33mm I.D. x 2 (back)	
Safety devices	Self-diagnostic functions (automatic overtemperature protection, temperature sensor error, SSR short circuit, heater disconnection, fan error, clock element error, main relay error, memory error, internal communication error) / independent overheat prevention device / door switch (door alarm) / overcurrent leakage breaker / fall prevention fitting (Model 810/910)					
Controller type	VSD-1 Controller					
Temp. control system	PID control by microcomputer					
Temp. display	3.5-inch color LCD panel digital display					
Timer / clock timer	1 minute to 99 hours 59 minutes / Date: hour: minute (up to 31 days later)					
Operation modes	Fixed temperature / Timer: Hourly quick auto stop operation / Timer: Hourly auto stop operation / Timer: Hourly auto start operation / Program operation / Timer: Hourly program auto start operation					
Additional functions	Calibration offset / Power failure return mode selection function / Timer Wait function / Security management function / Temperature upper/lower limit alarm function / Fan OFF delay function / Power failure alarm / External communication terminal (RS-485) / Temperature output terminal (4-20mA) / Time-up output terminal / Error output terminal / Recorder terminal / Program preview function / Operation trend function					
Sensor	Temperature controller / independent overheat prevention device: K thermocouple					
Safety devices <sup>*3</sup>	Self diagnosis functions (temp. sensor abnormal, Heater disconnection, SSR- short, Automatic overheating prevention), Key lock function, Overheat prevention, Electric leakage breaker with over current protection					
Internal dimensions (W×D×H)	450×450×450 mm		600×500×500 mm		600×500×1000 mm	1090×500×1000 mm
External dimensions (W×D×H) <sup>*4</sup>	580×635×830 mm		730×685×880 mm		730×685×1610 mm	1220×685×1610 mm
Internal capacity	90L		150L		300L	545L
Chamber shelf load	~15kg/shelf					
Chamber load capacity	~30kg		~60kg		~120kg	
Number of shelves / pitch	11 steps / 30mm		13 steps / 30mm		29 steps / 30mm	29 / 30mm×2 columns
Power supply 50/60Hz Rated current	115V, 13.5A with plug	220V, 7.5A no plug, round terminal	115V, 13.5A with plug	220V, 7.5A no plug, round terminal	Single phase 220V, 12A no plug, round terminal	Single phase 220V, 14.5A no plug, round terminal
Weight	~60kg		~75kg		~120kg	~195kg
Included shelf plate / brackets	1 pc. / 2 pcs.				3 pc. / 6 pcs.	6 pc. / 12 pcs.
Fall prevention fittings	-		-		4 pcs (fixing hole diameter Φ14 M12 recommended)	

<sup>\*1</sup> Performance (excluding temperature rise time) is measured at rated voltage, 50Hz or 60Hz frequency, room temperature 23° C ±5° C, humidity 65%RH ±20%, and no load. Note that the maximum temperature in the temperature control range may not be reached if the power supply voltage is below the rating or if the outside temperature is low. <sup>\*2</sup> Temperature rise time is reference data for rated voltage, 50 Hz or 60 Hz, room temperature 23° C, humidity 65%, and no load. Note that the temperature rise time may be longer when the power supply voltage is below the rating or when the outside temperature is low. <sup>\*3</sup> If the product is used beyond the operating voltage range (±10% of rating), there is a possibility that the safety function will malfunction. Pay attention to the power supply voltage when using the product. <sup>\*4</sup> Protrusions are not included.

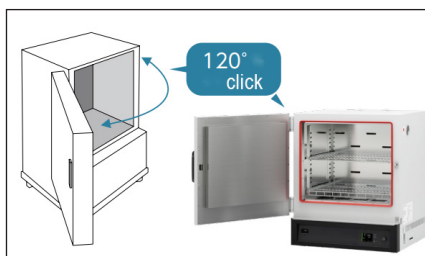
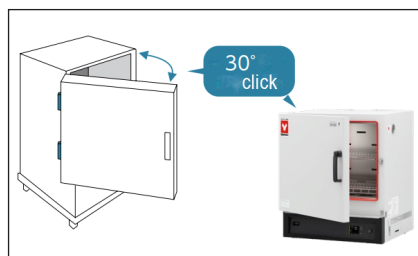


**300L**  
DKV810



**535L**  
DKV910

## Door Hinges with click function



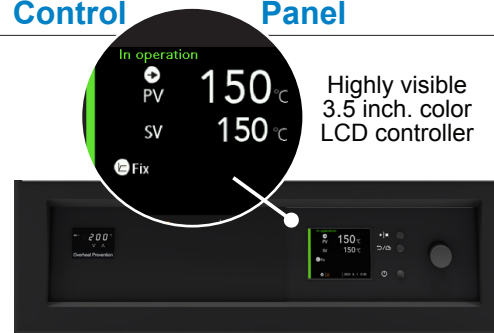
Door hinges have a click function that can hold the door at two angles: 30° and 120° (operating range is 180°). Samples can be inserted and removed safely, without concern for burns or accidental contact.

## Optional Items

Description	Factory Code	YSA Part Number	Compatible Models
Stand (no casters)	OA194	<b>281596</b>	DKV400/410/600/610
	OA117	<b>281355</b>	DKV400/410
	OA118	<b>281356</b>	DKV600/610
Stacking kit	OA196	<b>281598</b>	DKV400/410
	OA197	<b>281599</b>	DKV600/610
Shelf and bracket set <i>Stainless steel perforated metal shelf. Same shelf as standard accessories.</i>	-	<b>212246</b>	DKV400/410
	-	<b>212266</b>	DKV600/610/810
	-	<b>212490</b>	DKV910
Seismic isolation mat <i>Secures devices in place by fastening them to the base, preventing tipping</i>		<b>296902</b>	DKV400/410/600/610
Sheath sensor <i>(K thermocouple)</i>	ODT48	<b>212946</b>	DKV400/410/600/610/810/910
Silicone stopper <i>Silicone rubber plug for cable hole, φ2mm hole for sensor</i>	ODT52	<b>212947</b>	DKV400/410/600/610/810/910
*Rubber feet <i>Rubber feet attachable to the main unit legs</i>	OA198	<b>281634</b>	DKV400/410/600/610
*Cable port <i>Contact Customer Service for installation position and quantity. Not available for installation after delivery.</i>			
*Cable port 25mm inner Ø	ODM36	<b>281454</b>	DKV400/410/600/610/810/910
*Cable port 50mm inner Ø	ODM38	<b>281455</b>	DKV400/410/600/610/810/910

\* Please specify when ordering main unit.

## Control Panel



Highly visible  
3.5 inch. color  
LCD controller

## Interior



**DKV400/410**



**DKV600/610**



**DKV810**



**DKV910**

Standard DKV910 model includes a center column, as shown in the photo. However, we can accommodate special orders for versions without the center column.

\*Please note that the maximum temperature will be limited.



- Never use in flammable or explosive gas atmosphere.
- Never use explosive or flammable material.

- Caution: High temperature components.