

SINCE 1889



Yamato Scientific America

NEW

Programmable Forced Convection Oven DKV SERIES 400/410/600/610/810/910



Equipped with 3.5 in.
color LCD controller



* Stand sold separately

SIX (6) MODELS TO CHOOSE FROM



DKV400/410
90L



DKV600/610
150L



DKV810
300L



DKV910
535L

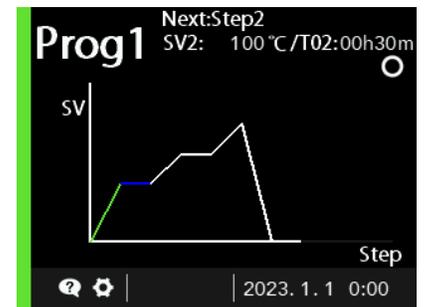
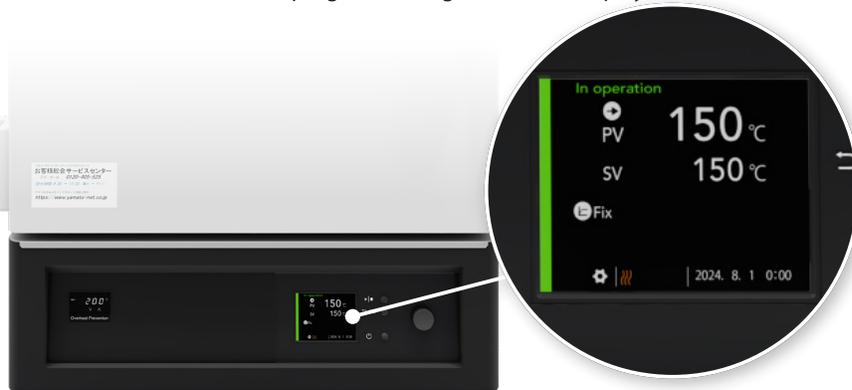
Yamato ovens continue to earn the trust of customers worldwide. Designed to meet a wide range of needs—from testing to production—our ovens have advanced even further. This latest model now features two new functions that enhance versatility and performance.



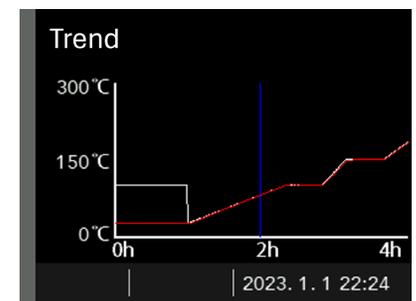
NEW

Feature 1 Easy to use, highly visible color LCD controller VSD-1 type (3.5 inches)

Experience the ease of use with program settings and trend display



Program operation display



Temperature trend display

Functions

- 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)

Feature 2 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 safely inserted and removed without worrying about burns or contact.



Prevents the door from closing when unit is tilted

Specially designed door handle

The door can be opened effortlessly with one hand. A generously sized push button ensures smooth, stress-free operation. This durable, highly reliable handle has been proven over many years in demanding production environments where frequent access is essential.



SPECIFICATIONS

| MODEL | | DKV-400 DKV-410 | DKV-600 DKV-610 | DKV810 | DKV910 |
|---------------------------------|---|--|---|---|---|
| Images displayed with open door | |  |  |  |  |
| System | | Forced convection | | | |
| Ambient temp. range | | 5~35°C | | | |
| Setting temp. range | | 0~270°C | | | 0~220°C |
| Performance ^{*1} | Temp. range | Room temp. +10°C~270°C | | | Room temp. +10°C~220°C |
| | Temp. fluctuation ^{*2} | ±0.6°C (at270°C) | ±0.5°C (at270°C) | ±0.6°C (at270°C) | ±0.5°C (at220°C) |
| | Temp. gradient ^{*2} | 9°C (at270°C) | | 11°C (at270°C) | 11°C (at220°C) |
| | Temp. rise rate ^{*2} | 3.3°C/min | 2.1°C/min | 3.4°C/min | 2.5°C/min |
| | Temp. rise time ^{*2} | ~75 min | ~115 min | ~75 min | ~80 min |
| Composition | Exterior | 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 | 2 pcs (33 mm I.D.) (top) | | 2 pcs (33 mm I.D.) (back) | |
| Safety devices ^{*3} | | 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 | Controller type | VSD-1 Controller | | | |
| | Temp. control system | PID control by microcomputer | | | |
| | Temp display system | 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 | | | |
| Standard | Internal dimension (W x D x H mm) | 450×450×450 | 600×500×500 | 600×500×1000 | 1090×500×1000 |
| | External dimension ^{*4} (W x D x H mm) | 580×635×830mm | 730×685×880 | 730×685×1610 | 1220×685×1610 |
| | Internal volume | 90L | 150L | 300L | 545L |
| | Number of shelves / pitch | 11 steps / 30mm | 13 steps / 30mm | 29 steps / 30mm | 29 / 30mm × 2 columns |
| | Chamber shelf load | 15kg / shelf | | | |
| | Chamber load capacity | 30kg | | 60kg | 120kg |
| | Power supply (50/60Hz) Rated current | DKV400: AC115V 13.5A DKV410: AC220V 7.5A | DKV600: AC115V 13.5A DKV610: AC220V 7.5A | Single phase AC220V 12A | Single phase AC220V 14.5A |
| | Breaker capacity | DKV400: 15A DKV410:10A | DKV600:15A DKV610:10A | 15A | 16A |
| | Weight (kg) | ~60kg | ~75kg | ~ 120kg | ~195kg |
| Accessories | Shelf plate / brackets | 1pc. / 2 pcs. | | 3 pc. / 6pcs. | 6 pc. / 12 pcs. |
| | Fall prevention fittings | - | - | 4 pcs (fixing hole diameter Φ 14 M12 recommended) | |

*1 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.

*2 The 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. *3 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. *4 Protrusions are not included.

OPTIONAL ITEMS

| DESCRIPTION | FACTORY CODE | PRODUCT NUMBER | DKV Models | | | | Additional Information |
|--|--------------|----------------|------------|------------|-----|-----|---|
| | | | 400 410 | 600 610 | 810 | 910 | |
| Stand | OA194 | 281596 | ● | ● | – | – | Unit can be secured on this stand with screws (Caster less) |
| | OA117 | 281355 | ● | – | – | – | |
| | OA118 | 281356 | – | ● | – | – | |
| Stacking kit | OA196 | 281598 | ● | – | – | – | Fixing bracket for stacking two units |
| | OA197 | 281599 | – | ● | – | – | |
| Shelf and brackets | – | 212246 | ● | – | – | – | Stainless steel perforated metal shelf Includes two brackets Same shelf as standard accessories |
| | – | 212266 | – | ● | ● | – | |
| | – | 212490 | – | – | – | ● | |
| Seismic isolation mat | – | 296902 | ● | ● | – | – | Secures devices in place by fastening them to the base, preventing tipping |
| Sheath sensor (K thermocouple) | ODT48 | 212946 | ● | ● | ● | ● | Temperature sensor for checking chamber temperature, sample temperature, etc. |
| Silicone stopper (1 piece with hole, φ2mm) | ODT52 | 212947 | ● | ● | ● | ● | Silicone rubber plug for cable hole φ2mm hole for sensor |
| * Cable port (inner diameter 25 mm) | ODM36 | 281454 | ● | ● | ● | ● | Contact Customer Service for installation position and quantity. Not available for installation after delivery |
| * Cable port (inner diameter 50 mm) | ODM38 | 281455 | ● | ● | ● | ● | |
| * Rubber feet | OA198 | 281634 | ● | ● | – | – | Rubber feet attachable to the main unit legs |

* Please specify when ordering main unit. Not available for installation after delivery.



Stand
281596



Stand
281356



Stacking kit
281599

The 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.



Q&A DKV SERIES

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

A This can be arranged as a custom order; however, insulation performance may be slightly reduced, and the specified performance might not be achieved depending on the operating temperature. Please consider this when placing your order.

Attention: The product specifications and performance data provided in this catalog are intended as a general user guide. Please carefully review the instruction manual before use and ensure the product is operated correctly. Note that we are not responsible for any personal injury or property damage resulting from use of the product outside the conditions outlined in the instruction manual.

Specifications and appearance may change without notice for improvement purposes. Product colors may appear different from the actual colors due to photography and printing ink. Company names, product names, and logos listed are trademarks of our company or the respective companies.



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