

SINCE 1889



**Yamato**

Equipped with a new controller Compact size benchtop vacuum dryer

# Vacuum Drying Oven

## ADP201/301

Temperature control accuracy has been improved.  
Recommended for use laboratory.



10L

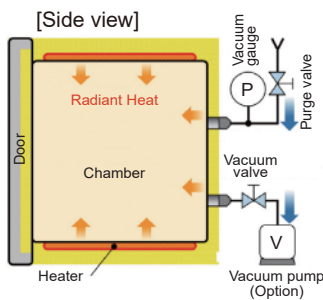
ADP201



27L

ADP301

Adopts an external heat furnace system that minimizes heater deterioration. Realizes excellent temperature distribution.



Uses an external heating furnace with a heater located outside the chamber. The structure heats the inside of the tank with radiant heat from the inner tank wall surface, and has features such as excellent temp. distribution and less deterioration of the heater compared with the inner heat furnace system where the heater is arranged inside.

Structural drawing | Heaters are located at the top, bottom, left and right. The purge valve can be used for introducing inert gas in addition to air. Vacuum pump is sold separately.

Adoption of a new type of controller with good visibility for improved temperature control accuracy

The VS6-type controller is more visible and easier to use, and has a full range of timer functions.(auto start, auto stop, quick auto stop). The new controller improves the temp. control accuracy from  $\pm 1.5^{\circ}\text{C}$  (previous model) to  $\pm 1.0^{\circ}\text{C}$ . (at  $240^{\circ}\text{C}$  JTMK05)



VS6 type new controller

### Enhanced safety functions

It is equipped with safety functions such as self-diagnostic function and overheat prevention. The operation after power failure recovery (standby or return to the status before power failure) can be selected.

### Aluminum shelf plates increase thermal conductivity

By changing the shelf installation structure from a stacking type to a shelf support type (interior integrated structure), smoother loading and unloading is now possible.

The material of the shelf plate is made of aluminum for thermal conductivity in vacuum.

### Can be used with a 15A outlet

The ADP201/301 have a breaker capacity of 100VAC 10A/15A, so they can be used with a 100VAC 15A outlet (3-pin grounded).

Read more about the ADP series here. ▶



**Yamato Scientific Co., Ltd.**

## Specifications

Model		ADP201	ADP301
Product code		212144	212145
System		Vacuum drying by decompressed chamber direct heating	
Performance	Operating temperature range	40 to 240°C	
	Operating pressure range	101 to 0.1kPa(760 to 1Torr)	
	Temp. control accuracy	±1.5°C (at 240°C) JTM K05	
	Temperature fluctuation	2.0°C (at 240°C JIS)	
Max. temp. reaching time	Approx. 70min.	Approx. 100min.	
Structure	Interior material	Stainless steel	
	Observation window	Tempered glass 12mm thick and polycarbonate resin protection plate	
	Vacuum gauge	Bourdon tube type, scale range: 0 to 0.1MPa	
Controller	temperature controller	PID control by microprocessor	
	Sensor	K-thermocouple	
	Timer	1min. to 99hrs. 59min. to 999.5hrs., Digital display (with timer weighting function)	
	Operation functions	Constant temperature operation / Quick auto stop operation/Auto stop operation/Auto start operation	
	Additional Functions	Calibration offset function / Setting value lock function / Power failure recovery mode selection function	
Safety device		Self-diagnostic function (heater disconnection, sensor disconnection, SSR short circuit, automatic overheat protection), overcurrent leakage breaker, overheat protection	
Standards	Shelf loading	Approx. 15kg / pc	
	Shelf rest pitch	63mm	71mm
	Shelf rest step number	2 steps	3 steps
	Purge port/Vacuum port	Outer diameter 18mm	
	Internal capacity	10L	27L
	Internal dimensions	W200×D250×H200mm	W300×D300×H300mm
	External dimensions	W400×D411×H565mm	W500×D463×H669mm
	Power source	AC 220V Single-phase with step down transformer	
	Weight	Approx. 30kg	Approx. 55kg
Accessories		Shelf plate (Aluminum punting metal) 2 pcs.	Shelf plate (Aluminum punting metal) 3 pcs.

## Optional Items

	Product name	Model	Product Code	Applicable model	
				ADP 201	ADP 301
Normal options	Shelf plate (standard accessory) (Aluminum punching metal)	OA090	281326	●	-
		OA091	281327	-	●
	Shelf plate (Stainless steel punching metal)	-	212134	●	-
		-	212162	-	●
Factory-installed options <sup>*1</sup>	External communication adapter set USB/RS485 converter + connection cable included	OA017	281146	●	●
		OA082	281318	●	-
	External communication terminal (RS485)	OA086	281322	-	●
		OA083	281319	●	-
	External alarm terminal Non-voltage A contact output	OA087	281323	-	●
		OA084	281320	●	-
	Time-up output terminal No-voltage A contact output	OA088	281324	-	●
		OA085	281321	●	-
Temperature output terminal 4 to 20mA	OA089	281325	-	●	

\*1 Please contact us regarding the delivery date.

## Q & A ADP Series

**Q** Please tell me the compatible vacuum pump and connection method.

The pump connection port is a hose nipple with an outer diameter of 18 mm, so a vacuum hose with an inner diameter of 15 mm is suitable. Select a vacuum pump with a capacity of about 50 L/min. Our models such as PD53 and PX52 (corrosion-resistant) are suitable for this purpose.

**Q** There is moisture in the sample, is there any problem?

The inner tank of the main unit is made of stainless steel, so there is no problem, but vacuum pump may fail due to moisture.

If there is a small amount of moisture, the gas ballast mechanism of the vacuum pump can be used to release the moisture, but if there is a large amount, a cooling trap will be necessary.



### Caution

The specifications and performance figures of the products listed in this catalog are presented as a user guide under general operating conditions. When using the product, please understand the contents of the instruction manual and use the product correctly. Please note that we cannot be held responsible for any damage to persons or property caused by using the product outside the conditions of use described in the instruction manual.

- Specifications and appearance are subject to change for improvement without prior notice. • The product colors may appear different from the actual colors due to the shooting and printing inks.
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