

# Vacuum Drying Oven

## DP200/300/410/610

Operating temp. range	RT +40°C~240°C	RT +40°C~200°C	Operating pressure range	101~0.1kPa	Internal capacity	10L	27L	91L	216L
	DP200/300	DP410/610				DP200	DP300	DP410	DP610

### Wide variety of compact and large scale ovens.

Designed with high accuracy controller system with advanced functionality and safety, vacuum storage ability and various options for system upgrade. Ideal for curing, annealing, baking, defoaming, hardening and deaeration treatments.



### ■ Operation and functions

- Shorter drying time and heat-up process with the new Z controller system resulting to faster heat up process (by 37% compared to previous models) and improved stability when operating at low temperatures.
- User-friendly control panel and display.
- Standard equipped with various operation modes ( fixed temp., auto-start, auto-stop, quick auto stop, program) and other support functions such as timer, calibration offset, power consumption / CO<sub>2</sub> emission monitor and power recovery mode.
- Option for input/output function (optional) 4-20mA analog output, external communication terminal (RS485), alarm output, operation signal, time-up signal, output port.

### ■ Safety Features

- Self diagnosis functions, independent overheating prevention & electric leakage breaker.

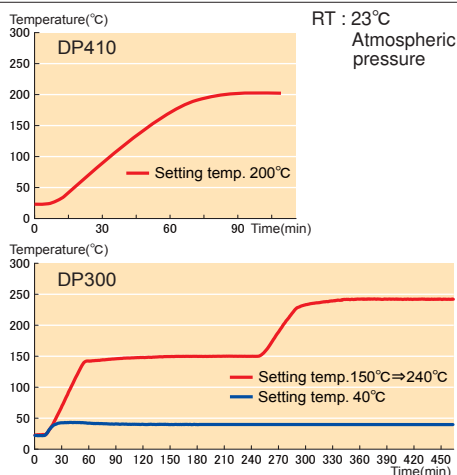
### ■ Specifications

Model	DP200	DP300	DP410	DP610
System	Vacuum drying by decompressed chamber direct heating			
Operating temperature range	Room temp. +40~240°C		Room temp. +40~200°C	
Operating pressure range	101~0.1 kPa (760~1 Torr) at absolute pressure			
Temp. Fluctuation	± 1.0°C (at 240°C)		± 1.5°C (at 200°C)	
Max. temp. reaching time	Approx. 60 min.	Approx. 120 min.	Approx. 80 min.	Approx. 120 min.
Interior material	Stainless steel			
Exterior material	Cold rolled steel plate with baked-on melamine resin finish			
Door	Single swing door			
Heat insulating material	Rock wool			
Heating method	Decompressed chamber direct heating			
Heater	Mica heater, 0.68 kW	Mica heater, 1.05 kW	Mica heater, 2.25 kW	Mica heater, 3.15 kW
Vacuum gauge	Bourdon tube type, 0 to 0.1 MPa (Gauge pressure)			
Observation window	Tempered glass and polycarbonate resin plate			
Pump connection port / Purge port	Exterior ?18(mm) / Rc 1/4		NW25 flange / Rc 1/4	
Temp. control method	PID control by microprocessor			
Temp. setting method	Digital setting with UP/DOWN key			
Temp display method	Digital display by green LED			
Timer	0 min. to 99 Hrs. 59 min. and 100 Hrs. to 999 Hrs.			
Min. division	1 min. or 1 Hrs.			
Operation function	Fixed temperature operation, Auto-start operation, Auto-stop operation, quick auto stop, program			
Additional functions	Calendar timer (max. 24 Hrs.), Integration time (max 65535 Hrs.), Time display, calibration offset, monitor display of total power consumption, total CO <sub>2</sub> emission and heater operating output, power recovery mode, storage and access of operator setting data			
Heater circuit control	Triac zero-cross control			
Temp. sensor	K-thermocouple (Double sensor)			
Safety device	Self diagnosis functions (Sensor, Heater, Triac, Automatic overheating prevention), Independent overheating prevention, Key lock function, Electric leakage breaker			
Leakage breaker	15A		20A	
Independent cut-out circuit	Set temperature range: 0~270°C		Set temperature range: 0~230°C	
Internal dimensions (W×D×Hmm)	200×250×200	300×300×300	450×450×450	0600×600×6000
External dimensions(W×D×Hmm)	400×410×682	510×460×782	670×669×1500	820×819×1650
Internal capacity	10L	27L	91L	216L
Shelf rest step number	3 steps		4 steps	
Shelf rest pitch	63mm		105mm	140mm
Exhaust port / Purge port	18mm O.D. (the right side) 1 pc. each		NW25 flange / Rc 1/4 (18mm O.D.)	
Power source (50/60Hz)	AC115V/AC220V Single phase with step-down transformer	AC115V/AC220V Single phase with step-down transformer	AC220V Single phase	
Weight	Approx. 45 kg	Approx. 72 kg	Approx. 210 kg	Approx. 310 kg
Accessories	Shelf plate Punched stainless steel, 2 pcs			

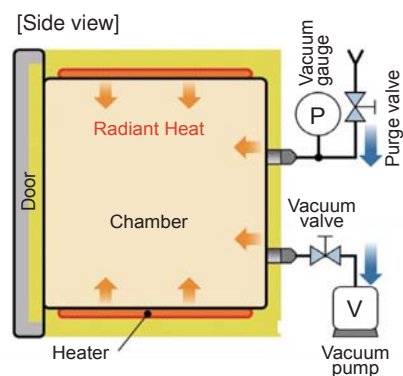
## Control Panel



## Temperature Characteristics



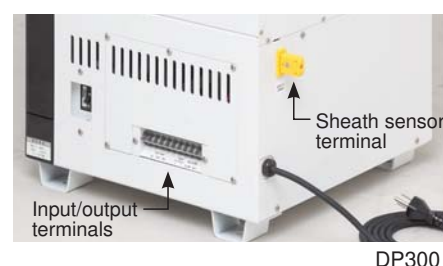
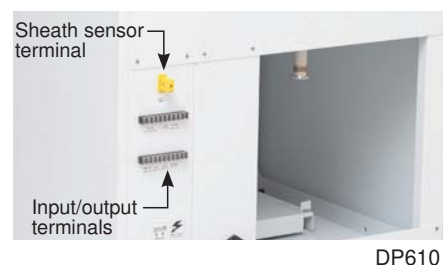
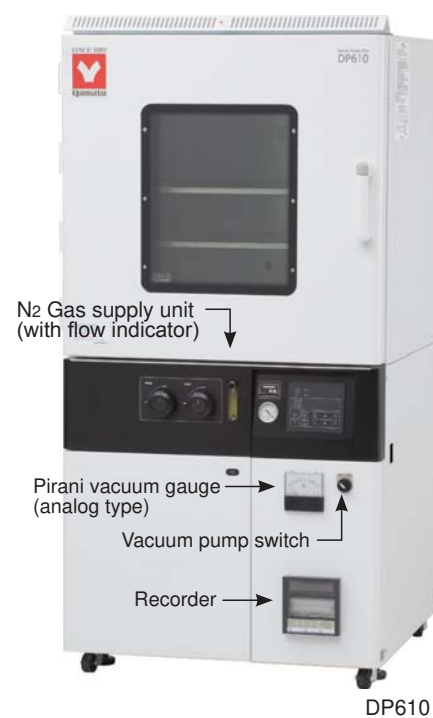
## Method



## Optional Items

Description		Model No.	Product code
Stainless punching metal shelf	for DP200	-	212134
Stainless punching metal shelf	for DP300	-	212162
Stand	for DP200/DP300	ONS10	212079
External communication adapter set	for DP200/DP300	OIN90	211880
*Sheath sensor(500mm)	for DP200/DP300	ODP36	281601
*Sheath sensor(1500mm)	for DP200/DP300	ODP38	281602
*External communication terminal (RS485)	for DP200/DP300	ODP24	281603
*Analog output terminal (4-20 mA)	for DP200/DP300	ODP26	281604
*External alarm output terminal	for DP200/DP300	ODP28	281605
*Time-up output terminal	for DP200/DP300	ODP32	281606
*Digital vacuum indicator	for DP200/DP300	ODP34	281607
Stainless punching metal shelf	for DP410	-	212192
Stainless punching metal shelf	for DP610	-	212193
External communication adapter set	for DP410/DP610	OIN90	211880
*Sheath sensor (500mm)	for DP410/DP610	ODP36	281601
*Sheath sensor (1500mm)	for DP410/DP610	ODP38	281602
*External communication terminal (RS485)	for DP410/DP610	ODP42	281608
*Analog output terminal (4-20 mA)	for DP410/DP610	ODP44	281609
*External alarm output terminal	for DP410/DP610	ODP46	281610
*Time-up output terminal	for DP410/DP610	ODP48	281611
*Operating signal output terminal	for DP410/DP610	ODP52	281612
*Event output terminal	for DP410/DP610	ODP54	281613
*Vacuum pump switch (AC100V)	for DP410/DP610	ODP84	281625
*Vacuum pump switch (AC200V)	for DP410/DP610	ODP56	281614
*Pirani vacuum gauge with 0-10mV voltage output (analog type)	for DP410/DP610	ODP58	281615
*Pirani vacuum gauge with 0-10mV voltage output	for DP410/DP610	ODP62	281616
*Digital recorder	for DP410/DP610	ODP64	281617
*Digital vacuum indicator	for DP410/DP610	ODP82	281618
*N <sub>2</sub> gas supply unit (with flow Indicator)	for DP410	ODP66	281619
*Slide type vacuum pump Stand A	for DP410	ODP72	281620
*Slide type vacuum pump Stand B	for DP410	ODP76	281621
*N <sub>2</sub> Gas supply unit (with flow Indicator)	for DP610	ODP68	281622
*Slide type vacuum pump Stand C	for DP610	ODP74	281623
*Slide type vacuum pump Stand D	for DP610	ODP78	281624

\* Please specify when ordering main unit.



## Dimensions (Unit:mm)

