

Customized Industrial Products

Large Autoclave

Large Walk-in Forced Convection Oven

Combination Forced Convection Oven

Large Vacuum Drying Oven

Targeting Productivity Improvement

Yamato offers customization of products based on customer requirements

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Forced Convection Oven

Combination type

C1-006



Usage: thermal treatment of products.

- Use platform stands to combine one machine with several units to save space
- Equipped with set recorder (to record product temperature), timer and product running status indicator lamp
- Repositioned air exhaust ports (facing backwards) to accommodate overlapping set of product
- Each door is equipped with an electromagnetic lock
- Customized chamber dimensions
- Easy operation, available for fixed temperature, program, quick auto stop, auto stop and auto start operations
- Self-diagnostic circuit (abnormal temperature sensor, heater disconnection, auto overheat prevention, SSR short circuit), overheat protector, ELB to prevent overcurrent, key lock, etc.

Model	C1-006
Method	Forced convection
Operating temp. range	Room temp. +10°C ~260°C
Temp. adjustment accuracy	±1.0°C (at 210°C)
Temp. distribution accuracy	±2.5°C (at 210°C)
Operation function	Fixed temp., program, auto stop and auto start operations
Additional function	Deviation correction, key lock, power outage compensation
Internal dimension	W700xD500xH500mm (single)
Power source	Single phase AC220V

Forced Convection Oven

Large walk-in type

C4-008



Usage: drying treatment of special materials.

- Large walk-in type
- Double door structure, anti lock mechanism
- Easy operation, available for fixed temperature, program, quick auto stop, auto stop and auto start operations
- Self-diagnostic circuit (abnormal temperature sensor, heater disconnection, auto overheat prevention, SSR short circuit), overheat protector, ELB to prevent overcurrent, key lock, etc.

Model	C4-008
Method	Forced convection circulation
Operating temp. range	Room temp. +10~100°C
Temp. adjustment accuracy	±1°C (at 100°C)
Temp. distribution accuracy	±5°C (at 100°C)
Operation function	Fixed temp., program, auto stop and auto start operations
Additional function	Deviation correction, key lock, power outage compensation
Internal dimension	W3500xD3500xH3000mm
Power source	3 phase AC380V

Vacuum Drying Oven

Large capacity

DP83C/103C

Operating temp. range 40~200°C

Operating pressure range 101~0.1kPa

Internal capacity DP83C 512L DP103C 1000L

Large scale vacuum drying oven designed for treatment of large-sized parts.



Operation and features

- Vacuum pump can be installed inside the oven
- Quick connect / disconnect of vacuum pipes for easy vacuum pump maintenance
- Because the exhaust system is improved to significantly shorten the time to reach vacuum, working efficiency is improved
- Use specialized function menu key and ▲/▼ key to set. With program operation function, use submenu key to operate overheat protector, deviation correction, etc.

Safety features

- Self-diagnostic circuit (abnormal temperature sensor, heater disconnection, auto overheat prevention, SSR short circuit), overheat protector, ELB to prevent overcurrent, key lock, etc.
- For safety, resin protection panel is installed at the observation window

Specifications

Model	DP83C	DP103C
Method	Decompressed chamber direct heating	
Operating temp. range	40~200°C	
Operating vacuum range	101~0.1kPa (760~1Torr)	
Temp. adjustment accuracy	±1.0°C (at 200°C)	
Interior material	Stainless steel plate	
Exterior material	Cold rolled steel plate with chemical proofing coating	
Insulating material	Glass fiber	
Heater power	6.5kW	14.4kW
Observation window	Toughened glass + resin protection panel	
Vacuum gauge	Pointer type, -100~0kPa	
Vacuum pump installation room	Yes	
Temp. control	3 segments PID	
Temp. setting	Use specialized function menu key and ▲/▼ key to set	
Temp. display	Measured temp. display: green 4-digit LED digital display Setting temp. display: red 4-digit LED digital display	
Timer	1min-99 hr 59 min and 100 hr-999 hr 50 min (with time wait function)	
Operation function	Fixed temp. auto start, auto stop, program operation	
Program mode	Program operation 3 segments 30 steps (30 steps×1, 15 steps×2, 10 steps×3)	
Additional function	Deviation correction, key lock, power outage compensation	
Heater circuit control	SSR driving	
Sensor	K thermocouple (temp. controller and overheat protector)	
Safety device	Self-diagnostic circuit (abnormal temp. sensing, heater disconnection, auto overheat prevention, SSR short circuit), overheat protector, EBL to prevent overcurrent, key lock, etc.	
Internal dimensions (WxDxHmm)	800×800×800	1000×1000×1000
External dimensions (WxDxHmm)	1020×1020×1850	1300×1280×2110
Internal capacity	512L	1000L
Air exhaust port	NW40 flange	
Air suction port	Rc 3/8	
Power source (50/60Hz) rated current	AC220V 31.5A	3 phase AC380V 27A
Weight	~450kg	~1000kg
Included accessories	Stainless steel punching plates, 2 pcs.	Stainless steel punching plates, 4 pcs.
Optional accessories	Shelf plate, vacuum pump, N ₂ introduction device, recorder, alarm indicator lamp (stand-by/running/malfunction), external communication (RS485), temp. output terminal (4~20mA), Output terminal for external alarm, time up output terminal	

Conveyor Drying Oven

Fully automatic

C1-007

Operating temp. range RT +20~80°C



■ **Usage:** thermal treatment during electronic component production process.

- Installed with a conveyor to improve efficiency of thermal treatment
- Adjustable conveyor speed with the ability to set multiple treatment processes
- Program operation function
- Equipped with a frequency converter, beacon, infrared switch, etc.
- Equipped with safety devices such as auto overheat protector, overheat protector, emergency stop switch, conveyor overload protection, over-current earth leakage circuit breaker, etc.

Model	C1-007
Temp. range	Room temp. +20~80°C
Temp. distribution accuracy	±10°C (at 80°C)
Temp. rising time	15min (Room temp.→80°C)
Operation function	Fixed temp., program operation
Conveyor speed	0.035-0.35m/min
Conveyor length	1100mm
Inlet and outlet dimension	W400xH65mm
Power source	3 phase AC380V

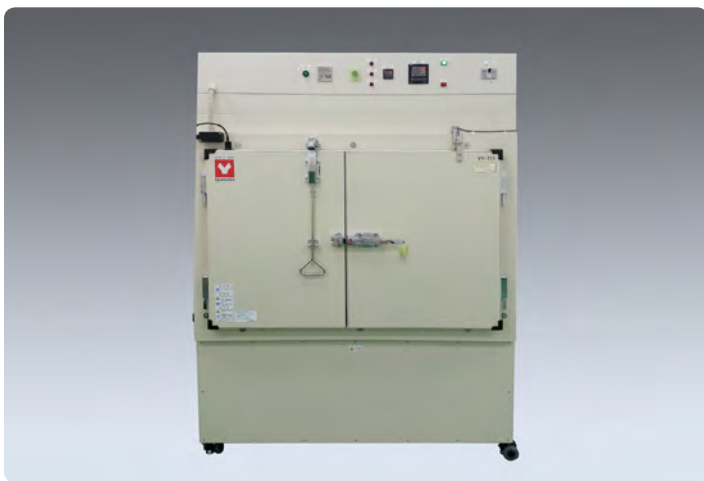
Low Temperature Chamber

Large Capacity

YY-711

Operating temp. range -20~50°C

Internal capacity 800L



Industry: Material and parts manufacturers

Application: Environmental test of various materials, parts

■ **Features**

- Low temperature: -20°C
- Large capacity of 800L compared to standard models IN and INE which are up to 286L
- High airtight panel structure (thermal insulation panel)
- Door switch and other safety devices can be added
- Size can be specified according to customer's needs
- Other optional specs can also be added



Interior

■ **Specifications**

Model	YY-711
Operating temp. range	-20~50°C
External dimensions (mm)	W1600 x D1200 x H2100
Internal dimensions (mm)	W1300 x D800 x H800
Power source	AC220

Large Autoclave

Standard type

YYK500/750/800/900

Operating temp. range

Room temp. +10~70°C

Max. operating pressure

0.9MPa

Internal dimension

YYK500
ø500x850mm

YYK750
ø750x1100mm

YYK800
ø800x1100mm

YYK900
ø900x1300mm

Used to remove residual air bubbles after affixing polarizer in LED production.



Operation and features

- No temperature overshoot, precision temperature uniformity available
- 4 step working procedures:
 - (1) Preheat: temperature rising, no pressurizing
 - (2) Pressurizing: holding temperature, pressurizing
 - (3) Deaeration: holding temperature, deaerating
 - (4) End: temperature cooling, pressure dropping
- Adjustable air suction and exhaust speed
- Customized chamber dimensions

Safety features

- Door open / close detection, door lock / unlock detection, higher pressure alarm, air inlet pressure detection, safety valve, independent overheat protector, ELB to prevent over-current

Specifications

Model	YYK500	YYK750	YYK800	YYK900
Method	Heating + pressurizing			
Specifications	Class-1 pressure container (AQSIQ pressure container verification)			
Operating temp. range	Room temp. 10~70°C			
Operating pressure range	0.101~0.9MPa			
Temp. distribution accuracy	±3°C (at 50°C)			
Max. temp. reaching time	Within 15min (adjustable)			
Max. pressure reaching time	Within 20min (adjustable)			
Internal dimension (effective)	ø500mmx850Lmm	ø750mmx1100Lmm	ø 800mmx1100Lmm	ø900mmx1300Lmm
Material	SUS304 stainless steel, internal polishing			
Max. operating pressure	0.9MPa			
Hydraulic test pressure	1.35MPa			
Medium	Dry air (pressure: working pressure +0.05MPa or higher)			
Opening / closing system	Manual clutch easy to operate			
Pressurizing system	Controlled by pressure controller			
Heating system	PID control			
Stirring system	Stirred by centrifugal fan (Water-Cooling is not required for shaft seal, free-maintenance)			
Control system	PLC control			
Pressure gauge	Pressure range: 0 to 1.0MPa, accuracy: ±1% (with upper limit alarm contact)			
Temp. controller	Digital setting and display, PID control			
Pressure controller	Digital setting and display, ON/OFF control			
Working timer	Time range: 99 hr 59min, Digital setting and display,			
Temp. sensor output	5 groups of K thermocouple output terminals			
Safety features	Door open / close detection, door lock / unlock detection, higher pressure alarm, air inlet pressure detection, safety valve, motor overheating protection, independent overheat protector, ELB to prevent over-current			
External dimensions (WxDxHmm)	1000x1656x1546	1200x1957x1781	1250x2057x1806	1400x1950x2232
Air suction port	15A (internally equipped with air filter and oil mist separator)			
Air exhaust port	20A (manual and auto exhaust, equipped with silencer)			
Power source (50/60Hz) rated current	3 phase AC380V 7A	3 phase AC380V 8A	3 phase AC380V 9A	3 phase AC380V 12A
Weight	~700kg	~900kg	~1000kg	~1300kg