

Industrial & Laboratory Fine Ovens

(With high accuracy temperature control and exhaust damper)

DF411/611 & DH411/611

DF411/611 & DH411/611 have been discontinued.



Fluorescent display tubes are employed as the sub indicator to support "katakana" indications. Highly reliable accuracy oven with simple settings for various temperature characteristics test that require complicated programming.

Operating temp. range
Room temp. + 10 to 260deg.C(DF) /Room temp. + 10 to 360deg.C(DH)
Temp. distribution accuracy
±1.5deg.C (at 260deg.C) (DF) /±2.5deg.C (at 360deg.C) (DH)
Internal capacity
91L (DF) / 216L (DH)

- Employed main and sub displays and a jog dial with a center switch. The user can operate the unit simply and quickly with only one dial that enables interactive operation with "katakana" display, invoking setting information, and determination of settings.
- Operating status and current operating conditions are clearly indicated as character information on the sub display.
- The temperature display of the unit uses a 7-segment LED and fluorescent display tubes for setting and operation information to assure high visibility.
- Fluorescent display informs the user the operation status of the heater and the fan.
- There is dedicated keys for program input (up to 16 segments) and edit to enable quick access.
- Exhaust damper allows quick exhaust and cooling of inside.
- Accumulated timer function useful for maintenance and management is equipped as standard.
- Cable port useful for a monitor for temperature during testing is equipped as standard.

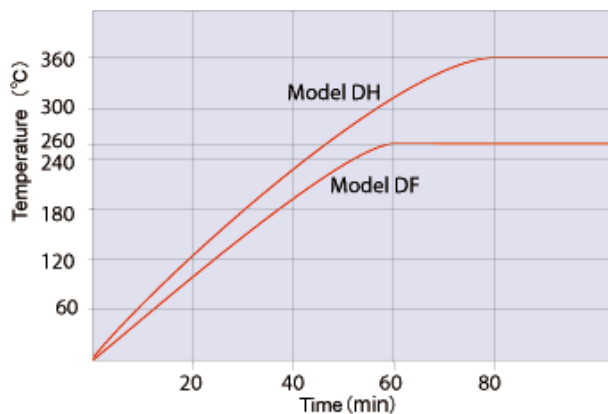
■ Specifications

Product code		211776	211777	211778	211779
Model		DF411	DF611	DH411	DH611
System		Forced convection and ventilation			
Performance	Operating temp. range	Room temp. + 10 to 260deg.C		Room temp. + 10 to 360deg.C	
	Temp. adjustment accuracy	±0.1deg.C (at 260deg.C)		±0.2deg.C (at 360deg.C)	
	Temp. distribution accuracy	±1.5deg.C (at 260deg.C)		±2.5deg.C (at 360deg.C)	
	Time to attain max. temp.	Approx. 60 min. (to 260deg.C)		Approx. 80 min. (to 360deg.C)	
Configuration /Functions	Temp. control system	PID control with a micro computer			
	Temp. and time setting system	Digital setting and display with a jog dial			
	Timer display range	Fixed value operation for 1 min. to 99 hr 59 min. and 100 to 999 hr			
	Operation and manipulation functions	Auto start, auto stop, fixed value operation			
		Programmed operation (up to 16 segments, repeat operation, gradient operation, etc.)			
	Additional functions	Actual 24 hr timer function			
		Accumulation timer function (accumulation up to 49,999 hrs)			
		Calibration offset function			
		Clock display (preset time display)			
	Sensor	Double K-thermocouple			
	Heater	Stainless pipe heater with a fan			
	Nominal heater capacity	2.1kW	3.0kW	2.7kW	3.75kW
	Blower fan (motor)	Axial flow fan (capacitor motor: 20W)			
	Cable port	I.D. 30 mm (rear)			
	Heat insulator	Glass wool		Ceramic fiber	
	Other additional mechanism	Exhaust damper (manual)			
Safety device	Self diagnostic function (temp. sensor error, heater disconnection, SSR short-circuit, automatic overheat prevention function), key lock, door switch, electric leakage breaker, control box switch				
Standards	Internal dimensions (mm) (WxDxH)	450×450×450	600×600×600	450×450×450	600×600×600
	External dimensions (mm) (WxDxH)	1,050×630×850	1,200×780×1000	1,050×630×850	1,200×780×1000
	Internal volume	91L	216L	91L	216L
	Withstand load of shelf board	30 kg/unit			
	No.of shelf stages/peg pitch	9 stages/45 mm	9 stages/60 mm	9 stages/45 mm	9 stages/60 mm
	PS (50/60) Hz rated current	Single phase AC200V 11A (15A)	Single phase AC200V 16A (20A)	Single phase AC200V 14A (20A)	Single phase AC200V 20A (30A)
	Weight	Approx. 78 kg	Approx. 109 kg	Approx. 78 kg	Approx. 109 kg
Accessories	Shelf	Stainless wire			
		2	3	2	3
	Shelf support	4	6	4	6

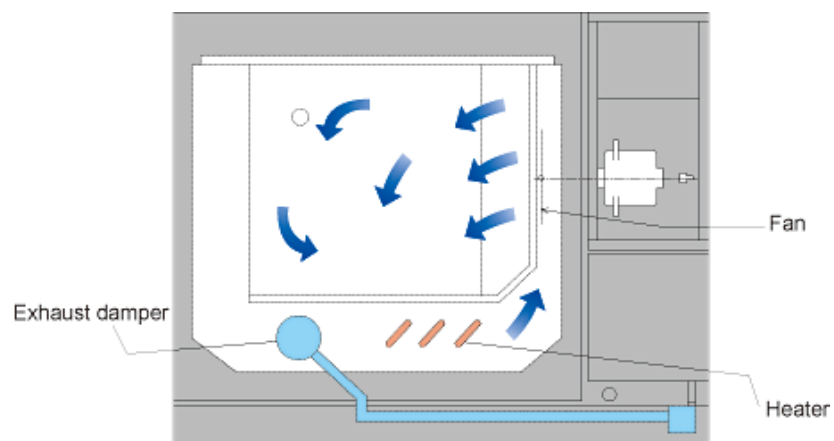
■ Control Panel



■ Temperature rising curve



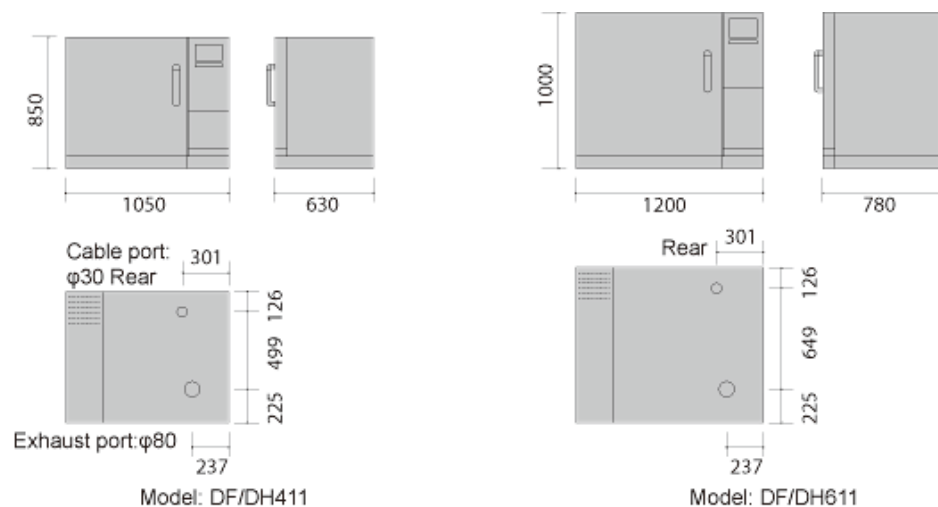
■ Mechanism diagram



■ Internal chamber



■ Dimensional drawing (unit: mm)



■ Optional items

Remark	Description	Model No.	Product Code
○	Stand OP42, for DF/DH411(without caster)	DF/DH Series	415460
○	Stand OP62, for DF/DH611(without caster)	DF/DH Series	415462
○	Stand OP45, for DF/DH411(with front side caster with stopper)	DF/DH Series	415461
○	Stand OP65, for DF/DH611(with front side caster with stopper)	DF/DH Series	415463
	Stacking support	DF/DH Series	211065
	Stainless wire shelf (with support 2 pcs., loading up to 30 kg/shelf) for DF/DH411	DF/DH Series	211063
	Stainless wire shelf (with support 2 pcs., loading up to 30 kg/shelf) for DF/DH611	DF/DH Series	211064
	Stainless punching metal shelf (loading up to 15kg/shelf) for DF/DH411	DF/DH Series	211098
	Stainless punching metal shelf (loading up to 15kg/shelf) for DF/DH611	DF/DH Series	211099
●	Wind velocity changeable function	DF/DH Series	281060
	Fan Revolution Changeable Range;		
	50Hz: approx. 450-1,350rpm		
	60HZ: approx. 450-1,550rpm		
●	External communication adapter	DF/DH Series	281061
●	Abnormal alarm display	DF/DH Series	281062
●	Emergency stop switch	DF/DH Series	281063
●	Recorder (6 points type)	DF/DH Series	281064
●	Additional sensor (sheath sensor)	DF/DH Series	281065
●	Manual recovery function from blackout	DF/DH Series	281066
●	Automatic damper : 5 steps : 5%-25%-50%-75%-100%	DF/DH Series	281067
●	Exhaust duct (80mm dia)	DF/DH Series	281068
●	Flange for exhaust port	DF/DH Series	281069
●	Observation window (for DF Type only)	DF/DH Series	281070
●	Wind velocity changeable function	DF/DH Series	281071
●	Power cord, 5m.	DF/DH Series	281072
●	Power plug	DF/DH Series	281074
●	Cable port, 25mm dia	DF/DH Series	281075
●	Cable port, 50mm dia	DF/DH Series	281076

Note:

1. The item marked " ● " in the column of "Remark" shall be ordered together with the main unit.
 2. The transportation cost will not be required if the order is together with main unit except the item marked "○".
- In case you order the item marked "○" together with the main unit, please ask Yamato to obtain the correct transportation cost.