

# Ovens

- > Forced Convection Ovens
- > Natural Convection Ovens
- > Vacuum Ovens
- > Clean Ovens, Class 100



## General Applications

### Forced Convection Ovens

General aging and curing, Agricultural genetic, Digestion of proteins and starches, General heating/drying, Stability and QC/Batch testing, Sterilization.

### Natural Convection Ovens

Annealing, Drying of plant tissue, Drug metabolism, Fine chemical precipitation, General heating/drying, Serum protein analysis, Sterilization.

### Vacuum Ovens

Agricultural genetic, Annealing, Desiccating, Out-gassing solids and liquids, Vacuum embedding, Volatile resins and polymers testing.

### Clean Ovens, Class 100

Heat treatment and drying components in clean air requirements of Class 100 cleanliness.

Product Name		Forced Convection Ovens (Programmable Models)	Forced Convection Ovens (General Models)	Forced Convection Ovens (General Models / Programmable Models, Large)	
Model		OF-P	OF-G	OF3-P, OF3-HP	OF3, OF3-H
Chamber volume (L)		60, 102, 151	60, 102, 151	314, 450, 760	314, 450, 760
Temp. control	Temp. range (°C/°F)	Amb. +10 to 250 / Amb. +18 to 482	Amb. +10 to 250 / Amb. +18 to 482	Amb. +10 to 200 / Amb.+18 to 392 (OF3-P / OF3), Amb. +10 to 300 / Amb.+18 to 572 (OF3-HP / OF3-H)	
	Temp. fluctuation at 100°C (±°C/°F)	0.5, 0.6, 0.8 / 0.9, 1.08, 1.44	0.5, 0.6, 0.8 / 0.9, 1.08, 1.44	0.2 / 0.36	0.2 / 0.36
	Temp. variation at 100°C (±°C/°F)	1, 1.3, 1.7 / 1.8, 2.3, 3.1	1, 1.3, 1.7 / 1.8, 2.3, 3.1	2.0, 2.2, 2.5 / 3.6, 3.9, 4.5	2.0, 2.2, 2.5 / 3.6, 3.9, 4.5
Control	Timer	Wait on/off	Wait on/off	Wait on/off	Wait on/off
	Auto-tuning	0	0	0	0
	Program function	0	-	0	-
	Computer interface	RS-232 port	RS-232 port	RS-232 port, USB port	RS-232 port, USB port
	JeioTech network	0	-	0	0
Safety	Over temp. limit	0	0	0	0
	Door open alarm	0	0	0	0
	Over current limit	0	0	0	0
	Auto-run (power failure)	0	0	0	0

## Technical Benefits

### > Performance

- Designed and tested in accordance with the international standard DIN 12880.
  - Increase in reliability of accurate temperature implementation and test results. (27 points measurement data)
- Microprocessor PID control for precise temperature control.
- Temperature calibration and auto-tuning functions for optimizing the unit to the various test environment.
- Intelligent program and scheduler for satisfying any sophisticated control. (for OF-P, OF3-P/PH, OFC-P/PH)
- Reliable clean oven with HEPA filter guarantees class 100 cleanliness. (for OFC)
  - 0.3 µm and larger particulates are removed with 99.97% efficiency, leak-tight HEPA filter which satisfying class 100.

### > Convenience

- Wide selection ovens cover all of your application needs.
  - Air flow type (Forced Convection / Natural Convection)
  - Heating type (General / Vacuum)
  - Filtering type (Clean Oven, Class 100)
  - Temperature (Ambient +5°C to 300°C)
  - Sizes (28 Liters to 760 Liters)
- Easy maintenance design.
  - Rounded corners for easy cleaning.
  - Corrosion resistant stainless steel interior chamber.
  - Dirt-repellent external surface with power coating. (except for OV)
- User-friendly functions for easy operating.
  - Wait ON/OFF dual timer.
  - Three commonly used temperature memories.

### > Safety


- Patented CLS-CS (Custom Logical Safe Control System)
  - Automatic power cut-off system against overheating.
  - Protection system by fuses against overcurrent. (except for OF3, OFC-large type)
  - Automatic run or manual run after power interruption.
- Fully insulated oven chamber maintains the exterior at a safe temperature.
- Safe door open system to minimize heat loss and protect the user.
  - Audible and visible open door alarms. (except for OV)
  - Automatic heater and fan stop (for OF) when door opening.

Forced Convection Ovens (2 / 4-Chamber Models)	Forced Convection Ovens (Economy Models)	Natural Convection Ovens (General Models)	Natural Convection Oven (Economy Models)	Vacuum Ovens	Clean Ovens, Class 100 (General / Programmable Models, Large)	
OF-G-C	OF-E	ON-G	ON-E	OV	OFC-P, OFC-HP	OFC, OFC-H
60 x 2 chambers, 60 x 4 chambers	52, 100, 150	52, 91, 135	52, 100, 150	28, 65	200, 400	200, 400
Amb. +10 to 200 / Amb. +18 to 392	Amb. +10 to 220 / Amb. +18 to 428	Amb. +15 to 250 / Amb. +27 to 482	Amb. +15 to 220 / Amb. +27 to 428	Amb. +5 to 250 / Amb. +9 to 482	Amb. +10 to 200 / Amb.+18 to 392 (OFC-P / OFC), Amb. +10 to 300 / Amb.+18 to 572 (OFC-HP / OFC-H)	
0.5 / 0.9	0.4 / 0.72	0.3 / 0.54	0.3, 0.4, 0.5 / 0.54, 0.72, 0.9	0.1, 0.3 / 0.18, 0.54	0.2 / 0.36	0.2 / 0.36
1.0 / 1.8	3.3, 2.3 / 5.94, 4.14	5.9, 7.5, 6.9 / 10.62, 13.5, 12.42	6.5, 4.1, 7.3 / 11.7, 7.38, 13.14	3.7 / 6.66	2.0, 2.2 / 3.6, 3.9	2.0, 2.2 / 3.6, 3.9
Wait on/off	Wait on/off	Wait on/off	Wait on/off	Wait on/off	Wait on/off	Wait on/off
0	0	0	0	0	0	0
-	-	-	-	-	0	-
-	-	RS-232 port	-	RS-232 port	RS-232 port, USB port	RS-232 port, USB port
-	-	-	-	-	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

# Forced Convection Ovens (Programmable)



Unattended operation is absolutely available with the intelligent programmable controller.

 **REMOTE CONTROL**  
with your **MOBILE DEVICE**  
see page 8-9



## Intelligent program control

- 10 programs available for temperature ramp up and dwell control.
- 10 steps per a program and 99 hours 59 minutes per a step.
- Stored programs are easily linkable.
- Programs can be repeated up to 99 cycles.
- Pre-heating and heating time are settable before program starts.

## Performance

- Temperature range from ambient +10°C to 250°C.
- Microprocessor PID control.
- Three point temperature calibration / Automatic tuning.
- Forced air convection ensures optimal air circulation, temperature uniformity, and short heat-up time.
- Adjustable dual slide vents for inner vapor circulation.

## Convenience

- Intuitive touch screen LCD controller with easy icons and logical menus.
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Digital input and output control function for interlocking external devices.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- RS-232 interface for external control and data collection.

## Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

## OF-12P

with optional viewing window

**Standard accessories** • Wire shelves (2ea)

**Optional accessories** • Tempered viewing window  
see page 112 • Perforated shelves  
• Gateway

Model		OF-02P	OF-12P	OF-22P
Chamber volume (L / cu ft)		60 / 2.1	102 / 3.6	151 / 5.3
Temperature	Range (°C / °F)	Amb. +10 to 250 / Amb. +18 to 482		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.5 / 0.9	0.6 / 1.08	0.8 / 1.44
	Variation <sup>1)</sup> at 100°C (±°C / °F)	1 / 1.8	1.3 / 2.3	1.7 / 3.1
Dimension (WxDxH)	Interior (mm / inch)	400×360×420 / 15.7×14.2×16.5	480×410×520 / 18.9×16.1×20.5	550×460×600 / 22×18×23.6
	Exterior (mm / inch)	577×642×760 / 22.7×25.3×30	657×692×870 / 25.9×27.2×34.3	727×742×974 / 28.7×29.2×38.3
	No. of wire shelf (standard / max.)	2 / 7	2 / 11	2 / 13
	Net weight (Kg / lbs)	53 / 117	63 / 139	72.5 / 160
Electrical requirements (230V, 50 / 60Hz)		4.4A	6.1A	7.4A
<b>Cat. No.</b>		<b>AAH12555K</b>	<b>AAH12565K</b>	<b>AAH12575K</b>
Electrical requirements (120V, 60Hz)		6.8A	8.4A	10.1A
<b>Cat. No.</b>		<b>AAH12553U</b>	<b>AAH12563U</b>	<b>AAH12573U</b>

1) Technical data according to DIN 12880.

\* FDA establishment registered company. FDA listed products.



## Performance

- Temperature range from ambient +10°C to 250°C.
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Forced air convection ensures optimal air circulation, temperature uniformity, and short heat-up time.
- Fan speed control by an analog dial prevents powdered samples from blowing away. (optional)
- Adjustable dual slide vents for inner vapor circulation.

## Convenience

- Intuitive control panel with bright LED displays. (0.1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Rounded inner chamber corners for easy cleaning and optimal airflow.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Threefold tempered-glass window provides clear inside view of the chambers. (optional)
- RS-232 interface for external control and data collection.

## Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

Superb air dispersion and uniform temperature distribution.

Provide superb drying performance especially suitable for samples with high moisture content.



## OF-22G

with optional viewing window

- |   |   |
|---|---|
| <b>Standard accessories</b>                 | • Wire shelves (2ea)  |
| <b>Optional accessories</b><br>see page 112 | • Tempered viewing window<br>• Fan speed adjuster<br>• Perforated shelves |

Model	OF-02G	OF-12G	OF-22G	
Chamber volume (L / cu ft)	60 / 2.1	102 / 3.6	151 / 5.3	
Temperature	Range (°C / °F)	Amb. +10 to 250 / Amb. +18 to 482		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.5 / 0.9	0.6 / 1.08	0.8 / 1.44
	Variation <sup>1)</sup> at 100°C (±°C / °F)	1 / 1.8	1.3 / 2.3	1.7 / 3.1
Dimension (WxDxH)	Interior (mm / inch)	400×360×420 / 15.7×14.2×16.5	480×410×520 / 18.9×16.1×20.5	550×460×600 / 22×18×23.6
	Exterior (mm / inch)	577×642×760 / 22.7×25.3×30	657×692×870 / 25.9×27.2×34.3	727×742×974 / 28.7×29.2×38.3
	No. of wire shelf (standard / max.)	2 / 7	2 / 11	2 / 13
	Net weight (Kg / lbs)	53 / 117	63 / 139	72.5 / 160
Electrical requirements (230V, 50 / 60Hz)	4.4A	6.1A	7.4A	
Cat. No.	<b>AAH12155K</b>	<b>AAH12165K</b>	<b>AAH12175K</b>	
Electrical requirements (120V, 60Hz)	6.8A	8.4A	10.1A	
Cat. No.	<b>AAH12156U</b>	<b>AAH12166U</b>	<b>AAH12176U</b>	

1) Technical data according to DIN 12880.

※ FDA establishment registered company. FDA listed products.

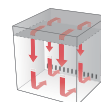
## Forced Convection Ovens (Programmable / General)

Specially designed for large volume and fast drying application. (max. 760L and 300°C)

Offering rapid heating performance as well as uniform temperature distribution, these heavy-duty ovens are ideal for obtaining quick test results.



**REMOTE CONTROL**  
with your **MOBILE DEVICE**  
see page 8-9



### OF3-75P(HP), OF3-75(H)

with optional viewing window

#### Standard accessories

- Wire shelves (2ea for 314L chambers, 3ea for 450/760L chambers)

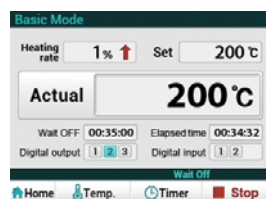
#### Optional accessories

see page 112

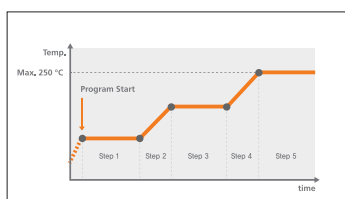
- Perforated shelves
- Digital recorders
- Gateway

Programmable model (OF3-P/PH)

#### for intelligent program control



Color touch LCD display



- 10 programs available for temperature ramp up and dwell control.
- 10 steps per a program and 99 hours 59 minutes per a step.
- Stored programs are easily linkable.
- Programs can be repeated up to 99 cycles.
- Pre-heating and heating time are settable before program starts.

General model (OF3/H)

#### for simple and quick control



Bright VFD display and quick adjustable dial knob

- Designed for offering the simplest control by user-friendly control panel.
- Set value and present value are shown on display at once.
- Easy adjustable knob for convenient set values and select functions.
- Intuitive heating level indication bar.



## Performance

- Rapid heating performance up to maximum 300°C
- Microprocessor PID control.
- Three point temperature calibration / Automatic tuning.
- Forced air convection generated by two noiseless and powerful sirocco fans ensures optimal air circulation, temperature uniformity, and short heat-up time.
- Adjustable dual slide vents for inner vapor circulation.
- Energy efficiency is achieved thanks to optimization of the insulation system.
  - Even if the unit is operating at max. temperature, the surface of the unit doesn't allow high temperatures.

## Convenience

- Optimum model selection is available according to two different types of control panel.
  - Intuitive touch screen LCD controller with easy icons and logical menus. (for OF3-P/HP)
  - Bright VFD display with quick adjustable dial knob. (for OF3/H)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)

- Convenient presetting function for 3 most commonly used temperature settings.
- Rounded inner chamber corners for easy cleaning and optimal airflow.
- Threefold tempered-glass window provides clear inside view of the chamber. (optional)
- USB port and RS-232 port for external control and data collection.
- Casters for easy mobility during installation or relocation.

## Safety

- Automatic run after power interruption.
- Over-current protection.
- Triple independent temperature monitor system.
  - Temperature deviation alarm (High/Low)
  - Electronic temperature limiter (High/Low)
  - Mechanical over-temperature limiter (High)
- Alarms for open door status, temperature sensor error and temperature deviation.
- Keypad lock function prevents accidental changes during operation.

Programmable Model		OF3-30P	OF3-45P	OF3-75P	OF3-30HP	OF3-45HP	OF3-75HP
Chamber volume (L / cu ft)		314 / 11.1	450 / 15.9	760 / 26.8	314 / 11.1	450 / 15.9	760 / 26.8
Temperaure	Range (°C / °F)	Amb. +10 to 200 / Amb.+18 to 392			Amb. +10 to 300 / Amb.+18 to 572		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.2 / 0.36			0.2 / 0.36		
	Variation <sup>1)</sup> at 100°C (±°C / °F)	2.0 / 3.60	2.2 / 3.96	2.5 / 4.50	2.0 / 3.60	2.2 / 3.96	2.5 / 4.50
Dimension (WxDxH)	Interior (mm / inch)	645x750x650 / 25.4x29.5x25.6	645x750x930 / 25.4x29.5x36.6	745x850x1200 / 29.3x33.5x47.2	645x750x650 / 25.4x29.5x25.6	645x750x930 / 25.4x29.5x36.6	745x850x1200 / 29.3x33.5x47.2
	Exterior (mm / inch)	850x1100x1235 / 33.5x43.3x48.6	850x1100x1525 / 33.5x43.3x60	950x1200x1785 / 37.4x47.2x70.3	850x1100x1235 / 33.5x43.3x48.6	850x1100x1525 / 33.5x43.3x60	950x1200x1785 / 37.4x47.2x70.3
	Net weight (Kg / lbs)	200 / 440.9	240 / 529.1	300 / 661.4	200 / 440.9	240 / 529.1	300 / 661.4
Shelves	No. of wire shelf (standard / max.)	2 / 5	3 / 8	3 / 11	2 / 5	3 / 8	3 / 11
	Max. load per shelf (kg / lbs)	25 / 55.1			25 / 55.1		
Electrical requirements (230V, 50/60Hz, A)		1P, 13.2 A			3P, 6.7 A		
Cat No.	Solid door	<b>AAH18615K</b>	-	-	-	-	-
	Window door	<b>AAH18715K</b>	-	-	-	-	-
Electrical requirements (380V, 50Hz)			3P, 6.7 A	3P, 9.0 A	3P, 6.7 A	3P, 9.0 A	3P, 10.8 A
Cat No.	Solid door	-	<b>AAH186214K</b>	<b>AAH186314K</b>	<b>AAH196114K</b>	<b>AAH196214K</b>	<b>AAH196314K</b>
	Window door	-	<b>AAH187214K</b>	<b>AAH187314K</b>	<b>AAH197114K</b>	<b>AAH197214K</b>	<b>AAH197314K</b>
General Model		OF3-30	OF3-45	OF3-75	OF3-30H	OF3-45H	OF3-75H
Chamber volume (L / cu ft)		314 / 11.1	450 / 15.9	760 / 26.8	314 / 11.1	450 / 15.9	760 / 26.8
Temperaure	Range (°C / °F)	Amb. +10 to 200 / Amb.+18 to 392			Amb. +10 to 300 / Amb.+18 to 572		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.2 / 0.36			0.2 / 0.36		
	Variation <sup>1)</sup> at 100°C (±°C / °F)	2.0 / 3.60	2.2 / 3.96	2.5 / 4.50	2.0 / 3.60	2.2 / 3.96	2.5 / 4.50
Dimension (WxDxH)	Interior (mm / inch)	645x750x650 / 25.4x29.5x25.6	645x750x930 / 25.4x29.5x36.6	745x850x1200 / 29.3x33.5x47.2	645x750x650 / 25.4x29.5x25.6	645x750x930 / 25.4x29.5x36.6	745x850x1200 / 29.3x33.5x47.2
	Exterior (mm / inch)	850x1100x1235 / 33.5x43.3x48.6	850x1100x1525 / 33.5x43.3x60	950x1200x1785 / 37.4x47.2x70.3	850x1100x1235 / 33.5x43.3x48.6	850x1100x1525 / 33.5x43.3x60	950x1200x1785 / 37.4x47.2x70.3
	Net weight (Kg / lbs)	200 / 440.9	240 / 529.1	300 / 661.4	200 / 440.9	240 / 529.1	300 / 661.4
Shelves	No. of wire shelf (standard / max.)	2 / 5	3 / 8	3 / 11	2 / 5	3 / 8	3 / 11
	Max. load per shelf (kg / lbs)	25 / 55.1			25 / 55.1		
Electrical requirements (230V, 50/60Hz, A)		1P, 13.2 A			3P, 6.7 A		
Cat No.	Solid door	<b>AAH18215K</b>	-	-	-	-	-
	Window door	<b>AAH18315K</b>	-	-	-	-	-
Electrical requirements (380V, 50Hz)			3P, 6.7 A	3P, 9.0 A	3P, 6.7 A	3P, 9.0 A	3P, 10.8 A
Cat No.	Solid door	-	<b>AAH182214K</b>	<b>AAH182314K</b>	<b>AAH192114K</b>	<b>AAH192214K</b>	<b>AAH192314K</b>
	Window door	-	<b>AAH183214K</b>	<b>AAH183314K</b>	<b>AAH193114K</b>	<b>AAH193214K</b>	<b>AAH193314K</b>

1) Technical data according to DIN 12880.

※ CE for 380V, 50hz. ※ FDA establishment registered company. FDA listed products.

## Forced Convection Oven (2 / 4-Chamber)

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Two or four 60L forced convection chambers in a single unit.

Designed to offer an ideal and cost-effective solution for laboratories with limited space and budget.



### OF-02G-2C/4C

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**Standard accessories** • Wire shelves (2ea per chamber)

**Optional accessories** • Perforated shelves  
see page 112



## Performance

- Temperature range from ambient +10°C to 200°C.
- Microprocessor PID control.
- Temperature calibration.
- Automatic tuning.
- Forced air convection generated by a noiseless and powerful sirocco fan ensures optimal air circulation, temperature uniformity, and short heat-up time.
- Adjustable slide vents for inner vapor circulation.

## Convenience

- Intuitive control panel with bright LED displays. (0.1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Rounded inner chamber corners for easy cleaning and optimal airflow.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Built-in casters for easy transport and installation.

## Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

## Efficient lab space use with multi-chamber oven

- Designed to offer an ideal and cost-effective solution for laboratories with limited space and budget.
  - Two or four 60L ovens merged into a single unit.
- Optimum model selection between two and four chamber unit according to application demand.
- Suitable for conducting each different experiment at once.
  - Independent temperature and timer control of each chamber using microprocessor PID.



Model		OF-02G-2C	OF-02G-4C
Chamber volume (L / cu ft)		60 / 2.1 x 2 chambers	60 / 2.1 x 4 chambers
Temperature	Range (°C / °F)	Amb. +10 to 200 / Amb. +18 to 392	
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.5 / 0.9	
	Variation <sup>1)</sup> at 100°C (±°C / °F)	1 / 1.8	
Dimension (WxDxH)	Interior (mm / inch)	400×360×420 / 15.7×14.2×16.5 x 2 Chambers	400×360×420 / 15.7×14.2×16.5 x 4 Chambers
	Exterior (mm / inch)	570×640×1340 / 22.4×25.2×52.8	1170×640×1340 / 46.1×25.2×52.8
	No. of wire shelf (standard / max.)	2 / 7 per chamber	2 / 7 per chamber
	Net weight (Kg / lbs)	110 / 242.5	170 / 374.8
Electrical requirements (230V, 50 / 60Hz)		8.4A	8.4A x 2EA
Cat. No.		<b>AAH1A115K</b>	<b>AAH1A015K</b>
Electrical requirements (120V, 60Hz)		16.7A	16.7A x 2EA
Cat. No.		<b>AAH1A116U</b>	<b>AAH1A016U</b>

1) Technical data according to DIN 12880.

\* FDA establishment registered company. FDA listed products.



## Forced Convection Ovens (Economy)



Affordable multi-functional fast drying ovens with vertical airflow.



### Performance

- Temperature range from ambient +10°C to 220°C.
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Forced air convection generated by a circular fan provides high and uniform drying performance.
- Adjustable dual slide vents for inner vapor circulation.

### Convenience

- Intuitive control panel with bright LED displays. (0.1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Easy-to-grip circular door handle.

### Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

## OF-11E

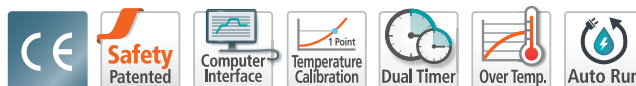
**Standard accessories** • Wire shelves (2ea)

**Optional accessories** • Perforated shelves  
see page 112

Model		OF-01E	OF-11E	OF-21E
Chamber volume (L / cu ft)		52 / 1.8	100 / 3.5	150 / 5.3
Temperature	Range (°C / °F)	Amb. +10 to 220 / Amb. +18 to 428		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.4 / 0.72		
	Variation <sup>1)</sup> at 100°C (±°C / °F)	3.3 / 5.94	3.3 / 5.94	2.3 / 4.14
Dimension (WxDxH)	Interior (mm / inch)	375×370×370 / 14.8×14.6×14.6	455×430×510 / 18×17×20	585×460×555 / 23×18.1×21.9
	Exterior (mm / inch)	530×535×737 / 20.9×21.1×29	610×595×877 / 24×23.4×34.5	740×625×922 / 29.1×24.6×36.3
	No. of wire shelf (standard / max.)	2 / 9	2 / 13	2 / 14
	Net weight (Kg / lbs)	36 / 79.4	47 / 103.6	59 / 130
Electrical requirements (230V, 50 / 60 Hz)		4.3A	6 A	7.4A
<b>Cat. No.</b>		<b>AAH14012K</b>	<b>AAH14022K</b>	<b>AAH14032K</b>
Electrical requirements (120V, 60 Hz)		6.8A	8.4A	10.1A
<b>Cat. No.</b>		<b>AAH14016U</b>	<b>AAH14026U</b>	<b>AAH14036U</b>

<sup>1)</sup> Technical data according to DIN 12880.

\* FDA establishment registered company. FDA listed products.



## Performance

- Temperature range from ambient +15°C to 250°C
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Gravity flow convection for uniform sample heating.
  - Ideal for all sterilization, drying, and high-temperature storage tasks that do not require high drying performance or airflow.
- Adjustable dual slide vents for inner vapor circulation.

## Convenience

- Intuitive control panel with bright LED displays. (1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Rounded inner chamber corners for easy cleaning and optimal airflow.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Fully insulated dual-wall door with 180 degree hinges and a pull-down handle.
- Threefold tempered-glass window provides clear inside view of the chambers. (optional)
- RS-232 interface for external control and data collection.

## Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

Specially designed for applications requiring gentle airflow.



## ON-22G

with optional viewing window

- Standard accessories**
- Wire shelves (2ea)
- Optional accessories**
- Tempered viewing windows
  - Perforated shelves
- see page 112

Model		ON-02G	ON-12G	ON-22G
Chamber volume (L / cu ft)		52 / 1.8	91 / 3.2	135 / 4.8
Temperature	Range (°C / °F)	Amb. +15 to 250 / Amb. +27 to 482		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.3 / 0.54		
	Variation <sup>1)</sup> at 100°C (±°C / °F)	5.9 / 10.62	7.5 / 13.5	6.9 / 12.42
Dimension (WxDxH)	Interior (mm / inch)	400×360×365 / 15.7×14.2×14.4	480×410×465 / 18.9×16.1×18.3	610×460×485 / 24×18×19
	Exterior (mm / inch)	577×542×760 / 22.7×21.3×30	657×592×870 / 25.9×23.3×34.3	785×642×897 / 30.9×25.3×35.3
	No. of wire shelf (standard / max.)	2 / 7	2 / 11	2 / 13
	Net weight (Kg / lbs)	49 / 108	59 / 130	68 / 150
Electrical requirements (230V, 50 / 60 Hz)		4.3A	6A	7.4A
<b>Cat. No.</b>		<b>AAH11135K</b>	<b>AAH11145K</b>	<b>AAH11155K</b>
Electrical requirements (120V, 60 Hz)		6.7A	8.3A	10A
<b>Cat. No.</b>		<b>AAH11136U</b>	<b>AAH11146U</b>	<b>AAH11156U</b>

1) Technical data according to DIN 12880.

\* FDA establishment registered company. FDA listed products.

## Natural Convection Ovens (Economy)



Economical multi-function ovens with gentle airflow.



### Performance

- Temperature range from ambient +15°C to 220°C.
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Gravity flow convection for uniform sample heating.
- Adjustable dual slide vents for inner vapor circulation.

### Convenience

- Intuitive control panel with bright LED displays. (1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Moderately sized, an easy to clean spacious chamber, and an easy to grip circular door handle.

### Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.
- Audible and visible open door alarms.

## ON-11E

**Standard accessories** • Wire shelves (2ea)

**Optional accessories** • Perforated shelves  
see page 112

Model		ON-01E	ON-11E	ON-21E
Chamber volume (L / cu ft)		52 / 1.8	100 / 3.5	150 / 5.3
Temperature	Range (°C / °F)	Amb. +15 to 220 / Amb. +27 to 428		
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.3 / 0.54	0.4 / 0.72	0.5 / 0.9
	Variation <sup>1)</sup> at 100°C (±°C / °F)	6.5 / 11.7	4.1 / 7.38	7.3 / 13.14
Dimension (WxDxH)	Interior (mm / inch)	375×370×370 / 14.8×14.6×14.6	455×430×510 / 18×17×20	585×460×555 / 23×18.1×21.9
	Exterior (mm / inch)	530×535×737 / 20.9×21.1×29	610×595×877 / 24×23.4×34.5	740×625×922 / 29.1×24.6×36.3
	No. of wire shelf (standard / max.)	2 / 9	2 / 13	2 / 13
	Net weight (Kg / lbs)	34 / 75	46 / 101.4	59 / 130
Electrical requirements (230V, 50 / 60 Hz)		4.3A	6A	7.4A
<b>Cat. No.</b>		<b>AAH15015K</b>	<b>AAH15025K</b>	<b>AAH15035K</b>
Electrical requirements (120V, 60 Hz)		6.7A	8.3A	10A
<b>Cat. No.</b>		<b>AAH15016U</b>	<b>AAH15026U</b>	<b>AAH15036U</b>

<sup>1)</sup> Technical data according to DIN 12880.

※ FDA establishment registered company. FDA listed products.



## Performance

- Temperature range from ambient +5°C to 250°C
- Vacuum range: 0 to 0.1 MPa. (analog vacuum gauge)
  - Drying a solvent in vacuum lowers its boiling point, thereby making the separation process easier and eliminating the need to use high temperatures.
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- Uniform heat distribution from block type heater attached to the chamber exterior to the anodized aluminum shelves.

## Convenience

- Intuitive control panel with bright LED displays. (1°C resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.
- Viton (fluorine rubber) door gasket also available for acidic applications. (optional)
- Heat tempered glass window provides clear inside view of the chambers
- Tight vacuum seal thanks to spring-loaded glass door, silicone gasket, and a push-button latch handle.
- Separate vacuum and vent ports.
- RS-232 interface for external control and data collection.

## Safety

- Keypad lock function prevents accidental changes during operation.
- Automatic run after power interruption.
- Over-temperature and over-current protection.

Optimally constructed for separating solvents from solutions or drying solvents with high boiling points.



## OV-11

### Standard accessories

- Plate shelves (2ea for OV-11, 3ea for OV-12)

### Optional accessories

see page 113

- Safety cover, Viton gasket
- Vacuum pumps and oil mist trap
- Cold trap baths and U-type class trap

Model		OV-11	OV-12
Chamber volume (L / cu ft)		28 / 1	65 / 2.3
Vacuum range		0~0.1MPa, Analog	
Nozzle size (mm / inch)		Vacuum $\varnothing$ 10 / 0.4, Vent $\varnothing$ 10 / 0.4	
Temperature	Range (°C / °F)	Amb. +5 to 250 / Amb. +9 to 482	
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.1 / 0.18	0.3 / 0.54
	Variation <sup>1)</sup> at 100°C (±°C / °F)	3.7 / 6.66	
Dimension (WxDxH)	Interior (mm / inch)	302x305x302 / 11.9x12x11.9	402x405x402 / 15.8x15.9x15.8
	Exterior (mm / inch)	680x453x495 / 26.8x17.8x19.5	780x557x595 / 30.7x21.9x23.4
	No. of shelf (standard / max.)	2	3
	Net weight (Kg / lbs)	63 / 139	103 / 227
Electrical requirements (230V, 50 / 60 Hz)		5.3A	6.1A
Cat. No.		AAH13115K	AAH13125K
Electrical requirements (120V, 60 Hz)		10A	11.7A
Cat. No.		AAH13116U	AAH13126U

1) Technical data according to DIN 12880.

※ FDA establishment registered company. FDA listed products.

## Clean Ovens, Class 100 (Programmable / General)

Reliable HEPA filter guarantees class 100 cleanliness inside of our clean oven. Ideal for specific use such as heat treatment and drying process.



**REMOTE CONTROL**  
with your **MOBILE DEVICE**  
see page 8-9



### OFC-40P(HP), OFC-20(H)

with optional viewing window, digital differential pressure gauge

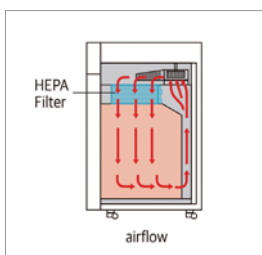
#### Standard accessories

- Wire shelves (2ea for 200L chambers, 3ea for 400L chambers)
- HEPA filter, Analog differential pressure gauge

#### Optional accessories

see page 113

- Gateway, Digital recorders
- Digital differential pressure gauge
- Tempered viewing window



#### Programmable model (OFC-P, OFC-PH) for intelligent program control

- 10 programs available for temperature ramp up and dwell control.
- 10 steps per a program and 99 hours 59 minutes per a step.
- Stored programs are easily linkable.
- Programs can be repeated up to 99 cycles.
- Pre-heating and heating time are settable before program starts.

#### Class 100 cleanliness is achieved by HEPA filter.

- 0.3  $\mu\text{m}$  and larger particulates are removed with 99.97% efficiency, leak-tight HEPA filter which satisfying class 100.
- Easy HEPA filter condition check by a built-in front differential pressure.
- Real time monitor of HEPA filter is available.
  - Optional digital differential pressure gauge let users know when filter needs replacement.

#### General model (OFC, OFC-H) for simple and quick control

- Designed for offering the simplest control by user-friendly control panel.
- Set value and present value are shown on display at once.
- Easy adjustable knob for convenient set values and select functions.
- Intuitive heating level indication bar.



## Performance

- Rapid heating performance up to maximum 300°C
- Microprocessor PID control.
- Three point temperature calibration / Automatic tuning
- Forced air convection generated by two noiseless and powerful sirocco fans ensures optimal air circulation, temperature uniformity, and short heat-up time.
- Adjustable dual slide vents for inner vapor circulation.
- Energy efficiency is achieved thanks to optimization of the insulation system.
  - Even if the unit is operating at max. temperature, the surface of the unit doesn't allow high temperatures.

- Rounded inner chamber corners for easy cleaning and optimal airflow.
- Corrosion-resistant incoloy sheath heating element and stainless steel interior.
- Threefold tempered-glass window provides clear inside view of the chamber. (optional)
- USB port and RS-232 port for external control and data collection.
- Casters for easy mobility during installation or relocation.

## Convenience

- Optimum model selection is available according to two different types of control panel.
  - Intuitive touch screen LCD controller with easy icons and logical menus. (for OFC-P/HP)
  - Bright VFD display with quick adjustable dial knob. (for OFC/H)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient presetting function for 3 most commonly used temperature settings.

## Safety

- Automatic run after power interruption.
- Over-current protection.
- Triple independent temperature monitor system.
  - Temperature deviation alarm (High/Low)
  - Electronic temperature limiter (High/Low)
  - Mechanical over-temperature limiter (High)
- Alarms for open door status, temperature sensor error and temperature deviation.
- Keypad lock function prevents accidental changes during operation.

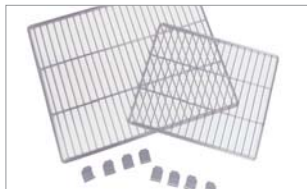
Programmable Model		OFC-20P	OF3-40P	OFC-20HP	OFC-40HP
Chamber volume (L / cu ft)		200 / 7.1	400 / 14.1	200 / 7.1	400 / 14.1
Temperature	Range (°C / °F)	Amb. +15 to 200 / Amb.+27 to 392		Amb. +15 to 300 / Amb.+27 to 572	
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.2 / 0.36		0.2 / 0.36	
	Variation <sup>1)</sup> at 100°C (±°C / °F)	2.0 / 3.60		2.0 / 3.60	
Dimension (WxDxH)	Interior (mm / inch)	645x750x412 / 25.4x29.5x16.2	645x750x866 / 25.4x29.5x34.1	645x750x412 / 25.4x29.5x16.2	645x750x866 / 25.4x29.5x34.1
	Exterior (mm / inch)	850x1100x1170 / 33.5x43.3x46.1	850x1100x1625 / 33.5x43.3x64	850x1100x1170 / 33.5x43.3x46.1	850x1100x1625 / 33.5x43.3x64
	Net weight (Kg / lbs)	190 / 418.9	250 / 551.2	190 / 418.9	250 / 551.2
Shelves	No. of wire shelf (standard / max.)	2 / 4	3 / 7	2 / 4	3 / 7
	Max. load per shelf (kg / lbs)	25 / 55.1		25 / 55.1	
Electrical requirements (230V, 50/60Hz)		1P, 12.0 A			
Cat No.	Solid door	AAH173115K	-	-	-
	Window door	AAH173125K	-	-	-
Electrical requirements (380V, 50Hz)		3P, 6.7 A		3P, 6.2 A	3P, 9.0 A
Cat No.	Solid door	-	AAH173214K	AAH174114K	AAH174214K
	Window door	-	AAH173224K	AAH174124K	AAH174224K
General Model		OFC-20	OFC-40	OFC-20H	OFC-40H
Chamber volume (L / cu ft)		200 / 7.1	400 / 14.1	200 / 7.1	400 / 14.1
Temperature	Range (°C / °F)	Amb. +15 to 200 / Amb.+27 to 392		Amb. +15 to 300 / Amb.+27 to 572	
	Fluctuation <sup>1)</sup> at 100°C (±°C / °F)	0.2 / 0.36		0.2 / 0.36	
	Variation <sup>1)</sup> at 100°C (±°C / °F)	2.0 / 3.60		2.0 / 3.60	
Dimension (WxDxH)	Interior (mm / inch)	645x750x412 / 25.4x29.5x16.2	645x750x866 / 25.4x29.5x34.1	645x750x412 / 25.4x29.5x16.2	645x750x866 / 25.4x29.5x34.1
	Exterior (mm / inch)	850x1100x1170 / 33.5x43.3x46.1	850x1100x1625 / 33.5x43.3x64	850x1100x1170 / 33.5x43.3x46.1	850x1100x1625 / 33.5x43.3x64
	Net weight (Kg / lbs)	190 / 418.9	250 / 551.2	190 / 418.9	250 / 551.2
Shelves	No. of wire shelf (standard / max.)	2 / 4	3 / 7	2 / 4	3 / 7
	Max. load per shelf (kg / lbs)	25 / 55.1		25 / 55.1	
Electrical requirements (230V, 50/60Hz)		1P, 12.0 A			
Cat No.	Solid door	AAH171115K	-	-	-
	Window door	AAH171125K	-	-	-
Electrical requirements (380V, 50Hz)		3P, 6.7 A		3P, 6.2 A	3P, 9.0 A
Cat No.	Solid door	-	AAH17214K	AAH17214K	AAH172214K
	Window door	-	AAH17224K	AAH172124K	AAH172224K

1) Technical data according to DIN 12880.

\* FDA establishment registered company. FDA listed products.

# Accessories & Options

## for Forced / Natural convection ovens



Wire shelves



Perforated shelves



Fan speed adjuster



Gateway

## Wire shelves & Perforated shelves

Stainless steel and electro-polished shelf system is removed easily without using tools for easy cleaning.

Description WxL (mm / inch)	Wire shelves		Perforated shelves		Suitable for
	Standard/Maximum	Cat. No.	Maximum	Cat. No.	
366x316 / 14.4x12.4	2 / 7	EDA8136	7	AAA12531	OF-02G/P
	4 / 14		14		OF-02G-2C
	8 / 28		28		OF-02G-4C
446x366 / 17.6x14.4	2 / 11	EDA8135	11	AAA12532	OF-12G/P
516x416 / 20.3x16.4	2 / 13	EDA8134	13	AAA12533	OF-22G/P
366x316 / 14.4x12.4	2 / 9	EDA8136	9	AAA12531	OF-01E, ON-01E
446x366 / 17.6x14.4	2 / 13	EDA8135	13	AAA12532	OF-11E, ON-11E
576x419 / 22.7x16.5	2 / 14	EDA8137	14	AAA12535	OF-21E, ON-21E
708x608 / 27.9x23.9	2 / 5	RTD1196	5	AAA18501	OF3-30 models
	3 / 8		8		OF3-45 models
	3 / 11	RTD1197	11	AAA18502	OF3-75 models
366x316 / 14.4x12.4	2 / 7	EDA8136	7	AAA12531	ON-02G
446x366 / 17.6x14.4	2 / 11	EDA8135	11	AAA12532	ON-12G
576x419 / 22.7x16.5	2 / 13	EDA8137	13	AAA12535	ON-22G
366x316 / 14.4x12.4	2 / 9	EDA8136	9	AAA12531	ON-01E
446x366 / 17.6x14.4	2 / 13	EDA8135	13	AAA12532	ON-11E
576x419 / 22.7x16.5	2 / 13	EDA8137	13	AAA12535	ON-21E

## Tempered viewing windows

Optimized sample monitoring with threefold, tempered safety glass window.

Cat. No.	Description (Thickness, WxL)	Suitable for
AAA12611	5, 150x280mm / 0.2, 5.9x11"	OF-02G/P, ON-02G
AAA12612	5, 150x380mm / 0.2, 5.9x15"	OF-12G/P, OF-22G/P, ON-12G, 22G

## Fan speed adjuster

Adjustable inner circulation speed, which protects spreading out powder sample.

Cat. No.	Description	Suitable for
AAA12701	Analog dial control	OF-02G, 12G, 22G

## Gateway

Establish Jeio Tech Network by Gateway. No computer use is required at all. Remote monitoring of operating status through a mobile device (Android only) is simply available when you place a Gateway in your lab. Maximum 4 units can be connected to Gateway by RS-232 cable.

Cat. No.	Description	Suitable for
AAAQ1011	Gateway (2.4GHz, 100-240V, 50/60Hz)	OF-P, OF3 models

## Recorders

Easy recognizable digital recorders for efficient temperature indicating.

Cat. No.	Description	Suitable for
AAA8T500	Recorder (6 point)	OF3 models
AAA1E1503	Recorder (thermal line type)	

## for Vacuum ovens



Safety covers



Viton gaskets



Vacuum pumps



Cold trap baths

### Safety covers

In case of the glass is destroyed, the netted steel frame and polycarbonate sheet cover prevent user from glass splinters.

Cat. No.	Description	Suitable for
AAA13603	Safety cover	OV-11
AAA13604	Safety cover	OV-12

### Gaskets

Viton (fluorine rubber) door gaskets can be provided upon request.

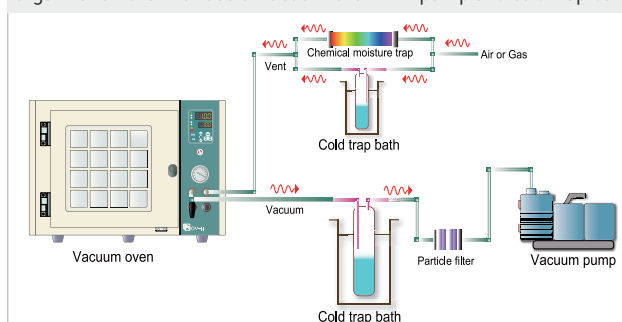
Cat. No.	Description	Suitable for
FAA5146	Silicone gasket	OV-11
FAA5187	Viton (fluorine rubber) gasket	
FAA5147	Silicone gasket	OV-12
FAA5188	Viton (fluorine rubber) gasket	

### Related products for vacuum ovens

Cat. No.	Vacuum pumps
BEH73205K	W2V10 (230V, 50/60Hz)
BEH73206U	W2V10 (120V, 60Hz)
BEA700351	Oil mist trap (PC)
BEA700355	Oil mist trap (metal)
BEA700353	Vacuum pump oil (1L)
BEA700354	Vacuum pump oil (20L)
Cat. No.	Cold trap baths
AAH62011K	CTB-10 (230V, 60Hz)
AAH62012K	CTB-10 (230V, 50Hz)
FCA1110	U-type glass trap (1ea)

※ In order to get rid of evaporated oil or to block oil in-flow, an optional oil mist trap is recommended. (refer to page 115 for additional information.)

### Organization chart for use of vacuum oven with pump and cold trap bath



※ In addition to standard accessories, we can also provide customized accessories to meet your specific requirements. Please contact your local dealer for more details.

## for Clean ovens

### Wire shelves & Perforated shelves

Stainless steel and electro-polished shelf system is removed easily without using tools for easy cleaning.

Description	Wire shelves		Perforated shelves		Suitable for
	WxL (mm / inch)	Standard/Maximum	Cat. No.	Maximum	
708×608 / 27.9×23.9	2 / 4 3 / 7	RTD1196	4 7	AAA18501	OFC-20 models OFC-40 models

### HEPA filter

Biohazardous aerosols and other visible and non-visible particles. (filtration efficiency: 99.99% at 0.3 microns)

Cat. No.	Description	Suitable for
STT2791	HEPA filter (200°C, 549x447x150mm / 21.6x17.6x5.9")	OFC models, OFC-P models
STT2792	HEPA filter (300°C, 549x447x150mm / 21.6x17.6x5.9")	OFC-H models, OFC-HP models

### Digital differential pressure gauge

Digital differential pressure sensor allows for easy verification of HEPA filter condition great for knowing when to change HEPA filter.

Cat. No.	Description
AAA17508	Digital differential pressure gauge

### Gateway

Establish Jeio Tech Network by Gateway. No computer use is required at all. Remote monitoring of operating status through a mobile device (Android only) is simply available when you place a Gateway in your lab. Maximum 4 units can be connected to Gateway by RS-232 cable.

Cat. No.	Description
AAAQ1011	Gateway (2.4GHz, 100~240V, 50/60Hz)

### Recorders

Easy recognizable digital recorders for efficient temperature indicating.

Cat. No.	Description
AAA8T500	Recorder (6 point)
AAA1503	Recorder (thermal line type)