Clean Oven

Large capacity, forced convection clean oven

DES830/DTS830

| Operating temp. range | RT+30°~260°C (DES830) RT+30°~360°C (DTS830) | Temp. distribution accuracy | ±2.0°C at 260°C DES830 | ±5.0°C at 360°C DTS830 | Internal capacity | 327L DES830 / DTS830 |

Space saving, large volume class 100 clean oven

327L
DES830

327L
DTS830

- Improved visibility and operability of control panel
- Stable cleanliness through forced circulation with rear exhaust
- Displays power consumption, CO_2 emissions and heater manipulated variables on the control panel
- Incorporates a maximum of 99 steps, 99 patterns program controller with repeat function
- Offers several options such as recorder, manual/auto damper, N_2 gas introducer with flow meter and emergency switch
- DES830 convertible to high performance filter type maintaining Class 100 at stable and fluctuating temperature up to a maximum of 200°C

■Specifications

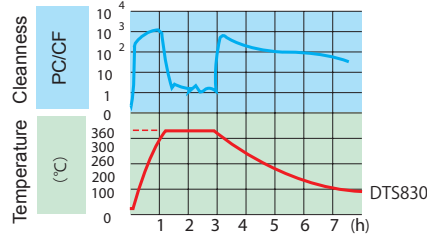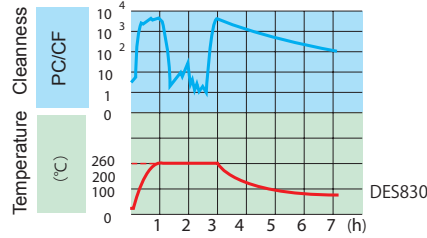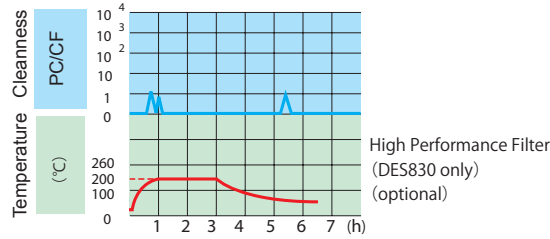| Model	DES830	DTS830
Circulation method	Forced convection	
Operating temperature range	Room temperature +30 to 260°C	Room temperature +30 to 360°C
Temp. control accuracy	±0.5°C at 260°C	±0.5°C at 360°C
Temp. fluctuation	±0.5°C at 260°C	±0.5°C at 360°C
Temp. distribution accuracy	±2.0°C at 260°C	±5.0°C at 360°C
Temp. gradient	±6.0°C at 260°C	±10.0°C at 360°C
Maximum temp. reaching time	~70 min.	~80 min.
Clean level	Class100 (when temperature is stable)	
Interior material	Stainless steel	
Exterior material	Cold rolled steel plate with melamine resin baking finish	
Heat insulating material	Glass wool	
Heater	6.0kW (stainless steel pipe heater)	9.0kW (stainless steel pipe heater)
Fan type	Scirocco fan, condenser type motor 200W x 2	
Differential pressure meter	Analog type (0 ~ 300Pa)	
Cable port	Inner diameter: 33mm×1 (right side)	
Filter	Heat resistant HEPA filter (dust-collection efficiency >99.97% with a 0.3μm particle)	
Caster wheels / adjuster	Free swivel caster wheels without stopper / level adjuster (2 at front)	
Temperature control / setting system	PID V control / Digital setting with ▲/▼ keys	
Temperature display system	Top screen: green 4-digit digital LED (resolution 1°C), Bottom screen: orange 5-digit digital LED (resolution 1°C)	
Other indications	LED indicates temperature patterns for heating/stabilizing/cooling	
Operation functions	Fixed temperature operation, Program operation (maximum 99 steps up to 99 patterns, with repeat operation function), Timer or clock operation function (Fixed temperature operation w/ auto start/auto stop/quick auto stop, program operation auto start)	
Additional functions	Power-on Time and Operation Time Accumulation Monitor (up to 65,535 hours); Calibration Offset; Monitoring Display for Accumulated Power Consumption, Total CO_2 Emissions, and Heater Operation Output; Power Recovery Mode; Setting Data Backup and Recovery, External Communication Terminal (RS485)	
Sensor	K type thermocouple double sensor (for temperature control and independent overheat prevention device)	
Heater control	Triac with zero-cross control	
Safety device	Self-diagnostic functions (Detection for Temp. Sensor Failure, Triac Short Circuit, Automatic overheating prevention, Heater Line Disconnect, Main Relay Contact Damage), Earth leakage breaker, Fan Motor Failure, Key Lock Function, Independent overheating prevention device	
Earth leakage breaker	30A	40A
	Leak Current/Short Circuit/Over-current Protection, Rated Current Sensitivity 30mA	
Door switch	Door open: fan motor and heater circuit off, Door close: fan motor and heater circuit on	
Internal dimensions (W×D×H mm)*²	620×480×1100	
External dimensions (W×D×H mm)*²	850×1080×1955	
Internal capacity	327L	
Weight	~335 kg	
Number of shelf bracket step / pitch	35 steps / 30mm	
Withstand load of shelf	~30 kg / shelf	
Power supply 50/60Hz (V±10%)	AC220V, three phase, 16A *no plug, round terminal*	AC220V, three phase, 24A *no plug, round terminal*
Shelf plate / bracket	3 pcs. / 6 pcs.	

*¹ Conditions: temperature and humidity: 23℃+, 65% RH ±20%, atmospheric pressure 86kPa ~106kPa (no load)
*² Protrusions excluded

Interior

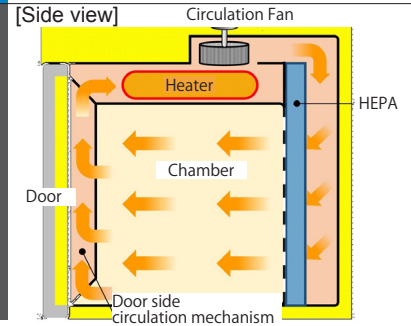## Performance Curve

High Performance Filter
（DES830 only）
（optional）

DES830

DTS830

Method

[Side view]

Circulation Fan
Heater
HEPA
Chamber
Door
Door side circulation mechanism

Cable Port
(φ33mm×1 right side)

Paperless Recorder

YHR150

■ Optional Items

Product Code	Model	Description	Suitable models
212678	---	Stainless steel wire shelf and bracket set. Withstand load up to 30 kg/shelf	DES830/DTS830
212679	ODE50	Stainless steel punching shelf and bracket set. Withstand load up to 15 kg/shelf	DES830/DTS830
212919	ODE12	Basket-type shelf placed on top of standard shelves. Withstand load up to 15kg/shelf）	DES830/DTS830
212946	ODT48	Sheath sensor (K thermocouple)	DES830/DTS830
212947	ODT52	Silicon plug (One hole φ 2mm)	DES830
211880	OIN90	External communication adapter set	DES830/DTS830
*212956	ODT72	Temperature output terminal (4-20 mA)	DES830/DTS830
*212957	ODT74	External alarm output terminal	DES830/DTS830
*212958	ODT76	Time-up output terminal	DES830/DTS830
*212959	ODT78	Operation signal output terminal	DES830/DTS830
*212960	ODT80	Event output terminal	DES830/DTS830
*212941	ODT82	Emergency stop switch	DES830
*212942	ODT84	Emergency stop switch	DTS830
*212943	ODT86	Recorder 6 pts. (sensors not included)	DES830/DTS830
*212945	ODT88	Power cord 10m.	DES830
*212999	ODT90	Power cord 10m.	DTS830
*212921	ODT92	Manual damper	DES830/DTS830
*212923	ODT94	Automatic damper: 5 steps: 5%-25%-50%-75%-100%	DES830/DTS830
*212932	ODT96	N_2 gas introduction device (with flowmeter)	DES830/DTS830
*212934	ODT98	Exhaust port for clean room O.D. φ 80mm (duct sold seprately)	DES830/DTS830
*212920	ODE14	High efficiency filter (Class 100) maximum temperature 200°C	DES830

* Customized at factory. Please specify when ordering main unit.

Dimensions (Unit:mm)

655
1235
1955
850
1080
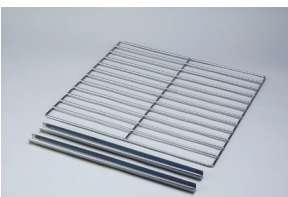
Stainless steel wire shelf
212678
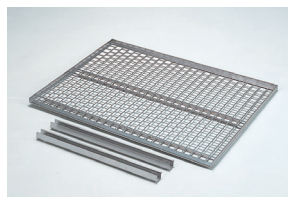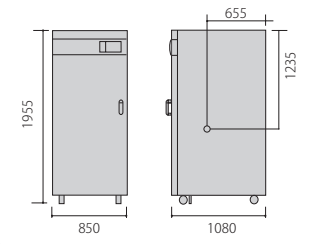

Stainless steel punching shelf
212679

Basket-type shelf
(Placed on top of standard shelves)
212919

⚠ Attention
- Never use in flammable or explosive gas atmosphere.
- Never use explosive or flammable material.
- Caution: High temperature components.