

# Clean Oven (Large Capacity)

Class 100

## DES830/DTS830

Operating temp. range RT +30°C~260°C  
DES 830

RT +30°C~360°C  
DTS 830

Temp. distribution accuracy  $\pm 2.0^{\circ}\text{C}$  (at 360°C)  
DES830

$\pm 5.0^{\circ}\text{C}$  (at 360°C)  
DTS830

Internal capacity 327L

### Class 100, large capacity clean oven at constant temperature.

- Maintain a purity degree of class 100 at stable temperature.
- Equipped with various functions, including program operations.
- Operation monitor visualizes controller status, temp and temp. change.
- Program operation: maximum of 99 steps, 99 patterns with repeat function.
- Safety measures are enriched, including self-diagnosis function and independent overheating prevention device.



### Specifications

| Product code                                  | 212668  | 212669                               |
|---|---|--------------------------------------|
| Model   | <b>DES830</b>   | <b>DTS830</b>                        |
| Circulation method                            | Forced convection   |                                      |
| Operating temperature range                   | Room temp. +30~260°C  | Room temp. +30~360°C                 |
| Temp. control accuracy*1 (JTM K05)            | $\pm 0.5^{\circ}\text{C}$ (at 260°C)  | $\pm 0.5^{\circ}\text{C}$ (at 360°C) |
| Temp. fluctuation*1 (JIS)                     | 1.0°C (at 260°C)  | 1.0°C (at 360°C)                     |
| Temperature distribution accuracy*1 (JTM K05) | $\pm 2.0^{\circ}\text{C}$ (at 260°C)  | $\pm 5.0^{\circ}\text{C}$ (at 260°C) |
| Temp. gradient*1 (JIS)                        | 6.0°C (at 260°C)  | 10.0°C (at 260°C)                    |
| Max. temperature reaching time*1              | Approx. 70 min.   | Approx. 80 min.                      |
| Clean level                                   | Class100 (when the temperature is stable)   |                                      |
| Interior Material / Exterior                  | Stainless steel / Cold rolled steel late with melamine resin baking finish  |                                      |
| Heat insulating material                      | Glass wool  |                                      |
| Heater  | Stainless pipe heater   |                                      |
| Fan type / Fan motor                          | Sirocco fan / Condenser type motor  |                                      |
| Differential pressure meter                   | Analog type (0 to 300Pa)  |                                      |
| Cable hole                                    | 33 mm I.D. (right side)   |                                      |
| Filter  | Heat resistance HEPA filter (Dust collect : more than 99.97% at 0.3 $\mu\text{m}$ )   |                                      |
| Temp. controller                              | PID control by microprocessor   |                                      |
| Temp. setting / display method                | Digital setting / display with UP/DOWN key  |                                      |
| Timer   | Fixed value operation for 1 min. to 99 hr. 59 min. and 24hr. setting  |                                      |
| Operation function                            | Fixed temp., Auto-start, Auto-stop, Quick auto stop, Program (max.99 steps, 99 patterns, repeat)  |                                      |
| Additional functions                          | Integration time (max. 65535hrs.), Calibration off-set, Display the amount of power consumption / CO <sub>2</sub> discharge / Heater operation amount, Power failure recovery mode, User setting information save and recall, External communication terminal (RS485) |                                      |
| Heater circuit control / Temp. sensor         | Triac zero-cross control / K-thermocouple (double sensor)   |                                      |
| Temp. sensor                                  | K-thermocouple (Double sensor)  |                                      |
| Safety device                                 | Self diagnosis functions (Sensor, Fan, Heater, Relay, Triac, Automatic overheat prevention), Independent overheat prevention, Key lock function, Electric leakage breaker, Door switch  |                                      |
| Internal dimensions                           | W620×D480×H1,100mm  |                                      |
| External dimensions*2                         | W850×D1,080×H1,955mm  |                                      |
| Internal capacity                             | 327L  |                                      |
| Withstand load of shelf board                 | Approx. 30kg / piece  |                                      |
| Shelf rest step number / pitch                | 35 steps / 30mm   |                                      |
| Power source 50 / 60 Hz                       | AC220V / AC380V Three phase   |                                      |
| Weight  | Approx. 335kg   |                                      |
| Accessories                                   | Shelf plate/Shelf bracket   | Stainless wire steel, 3 pcs / 6 pcs  |

The length of the power cord is about 4 meters outside the unit

\*1 Conditions: Rated power supply voltage: Three-phase 200V, Room temperature 23°C $\pm$ 5°C, Humidity 65%rh $\pm$ 20%, Atmospheric pressure: 86 kPa to 106 kPa, No load.

\*2 Do not include protrusions.

Forced convection circulation

Auto overheat prevention

Independent overheat protector

Self-diagnosis

Key lock

Power outage compensation

Overcurrent ELB

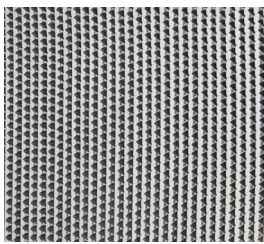
## Control Panel



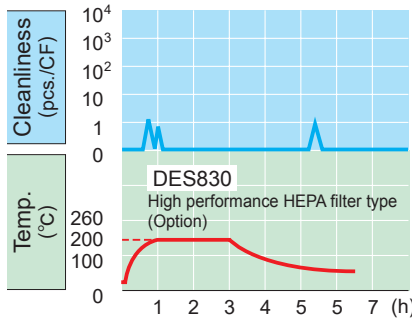
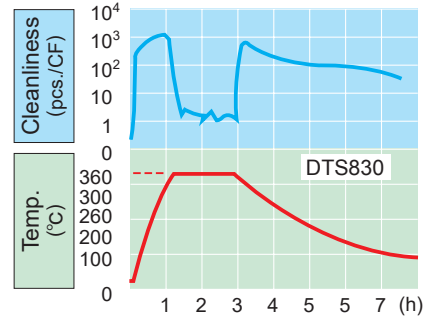
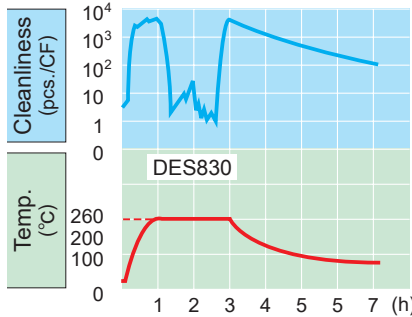
## Cable Port



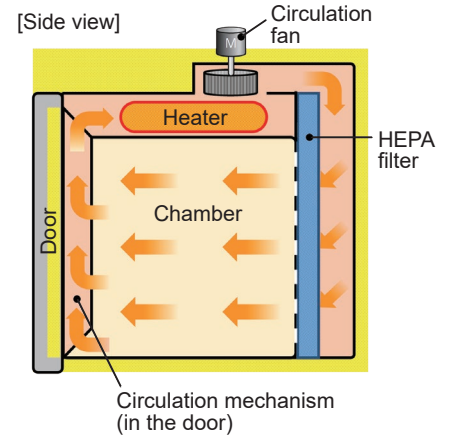
## HEPA Filter



## Performance Curve



## Method



## Interior

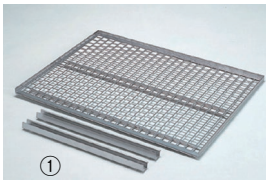


## Optional Items

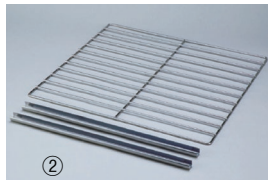
| No. | Description  | Option model No. | Main unit model No. | Product code |
|-----|--|------------------|---------------------|--------------|
| ①   | Stainless wire shelf (loading up to 30 kg/shelf)   |                  | DES830/DTS830       | 212678       |
| ②   | Stainless punching metal shelf (loading up to 15kg/shelf)  | ODE50            | DES830/DTS830       | 212679       |
| ③   | Stainless mesh basket shelf (loading up to 15 kg/shelf)  | ODE12            | DES830/DTS830       | 212919       |
| ④   | Additional sensor (K thermocouple)   | ODT48            | DES830/DTS830       | 212946       |
| ⑤   | Silicon plug (with one hole, φ2mm)   | ODT52            | DES830              | 212947       |
| ⑥   | *External communication adapter set  | OIN90            | DES830/DTS830       | 211880       |
| ⑦   | *Temperature output terminal (4-20mA)  | ODT72            | DES830/DTS830       | 212956       |
| ⑧   | *External alarm output terminal  | ODT74            | DES830/DTS830       | 212957       |
| ⑨   | *Time up output terminal   | ODT76            | DES830/DTS830       | 212958       |
| ⑩   | *Operation signal output terminal  | ODT78            | DES830/DTS830       | 212959       |
| ⑪   | *Event Output Terminal   | ODT80            | DES830/DTS830       | 212960       |
| ⑫   | *Emergency stop switch   | ODT82            | DES830              | 212941       |
| ⑬   | *Emergency stop switch   | ODT84            | DTS830              | 212942       |
| ⑭   | *Digital recorder, 6 points, sensors are not included  | ODT86            | DES830/DTS830       | 212943       |
| ⑮   | *Power cord, 10m   | ODT88            | DES830              | 212945       |
| ⑯   | *Power cord, 10m   | ODT90            | DTS830              | 212999       |
| ⑰   | *Exhaust ducting unit (manual damper)  | ODT92            | DES830/DTS830       | 212921       |
| ⑱   | *Automatic damper  | ODT94            | DES830/DTS830       | 212923       |
| ⑲   | *N <sub>2</sub> gas injection unit (Flow meter included)   | ODT96            | DES830/DTS830       | 212932       |
| ⑳   | *Exhaust port for clean room (O.D. 80mm, duct and exhaust fan are not included)                                  | ODT98            | DES830/DTS830       | 212934       |
| ㉑   | *High performance HEPA filter, class 100 in all heating conditions (stable, increase, decrease), max temp: 200°C | ODE14            | DES830              | 212920       |

\* Please specify when ordering main unit.

## Shelf / Bracket



① Stainless punching metal (Loading up to 15kg/pc)



② Stainless wire (Loading up to 30kg/pc)



③ Stainless mesh basket shelf (loading up to 15kg/shelf) (Placed on top of the standard shelves)

## Dimensions (Unit:mm)

