



Over temperature protection function.



2 year warranty Free A/S.



Control of temperature / humidity / rpm / time, etc. through dedicated program.

#### **General Application**

Sterilization of experimental equipment/ materials, growth media, and glassware using saturated steam

# Easy to use with optimized program function for each application. Sterilization process monitoring ensures reliable sterilization.

#### > Optimized usage mode provided

Three (General, Standard, Program) modes are provided to allow a choice of sterilization processes optimized for the application.

**General mode:** Operate by setting sterilization conditions manually.

**Standard mode:** Select and operate four representative actions.

**Program mode:** The mainly used conditions are saved and used.

| Operational mode |                      | Temp. (°C) | Time (min) |
|------------------|----------------------|------------|------------|
| General mode     |                      | 110 ~ 123  | 1 ~ 999    |
| Standard<br>mode | Decontamination      | 121        | 35         |
|                  | Solid sterilization  | 121        | 20         |
|                  | Liquid sterilization | 121        | 15         |
|                  | Melting              | 100        | 30         |
| Program<br>mode  | Sterilization 1      | 110 ~ 123  | 1 ~ 999    |
|                  | Sterilization 2      | 110 ~ 123  | 1 ~ 999    |
|                  | Liquid sterilization | 110 ~ 123  | 1 ~ 999    |
|                  | Melting              | 60 ~ 100   | 1 ~ 999    |

#### Reliable sterilization performance monitoring

The device itself monitors the sterilization process to perform more reliable sterilization.

**Low Heat:** When the set temperature is not reached within the designated time.

**Over/Low Temp.:** When the set temperature is deviated from set value during the time set.

**Sterilization Fail:** When sterilization is incomplete due to power failure, and etc.

|  | Sterilization    |
|--|------------------|
| Heating  | Over Temperature |
|  | Setting temp.    |
| If the set temperature<br>within a specified time<br>period is not reached |                  |
| Low Heat   | Low Temperature  |



High-capacity, top loading method.



Displays information on the progress of the sterilization process and operation of the equipment.



Pressure gauge to check pressure inside of chamber.

## **Autoclave**

Suitable for temperature characteristic tests such as heat treatment and drying

#### Proven Control Capability

- Verified according to KS P 6102, providing a more reliable sterilization environment.
- Verified stable temperature control performance by measuring the inside with 10 of temperature sensor.

#### Structural Functional Features

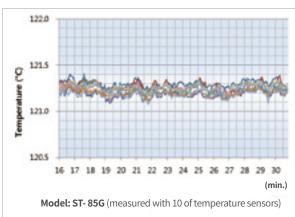
- Easy to open and close with circular handle.
- Including pressure gauge for internal pressure verification.
- Exhaust tank provided as standard.
- Including drain bucket for use cleanly.
- Upper part is made of stainless steel and is easy to maintain
- Vertical, top loading system makes it easy to sterilize large volume samples.
- Casters for easy mobility during installation or relocation.

#### Use Convenience Features

- Easy operation environment allowing the whole sterilization process to be started with just one operation.
- Three operation modes provided according to usage.
- Precise temperature control with PID Feedback control and Auto Tuning.
- Automatic exhaust after the sterilization process.
- LED display lamp, clear VFD and sterilization step to check operation status and sterilization progress conveniently.
- Including sterilization elapsed time display.
- Additional temperature sensor and recorder for recording sterilization procedure. (option)
- Pressure for each step can be checked with pressure sensor. (option)
- Including manual valve for releasing internal pressure.

#### Outstanding Safety

- Preventing users from get burnt by using safety door cover made of plastic with low thermal conductivity.
- Automatic operation of safety valve when overpressure occurs.
- Over temperature protection. (over temperature limiter)
- Low level of solution alarm. (low level limiter)
- Overcurrent and short circuit protection.



| Max. Loading Capacity of Media Bottle |                        |                        |                        |                         |  |
|---------------------------------------|------------------------|------------------------|------------------------|-------------------------|--|
| Bottle<br>Capacity (ml)               | ST-50G<br>(ea x floor) | ST-65G<br>(ea x floor) | ST-85G<br>(ea x floor) | ST-105G<br>(ea x floor) |  |
| 250                                   | 20 x 3                 | 20 x 3                 | 20 x 5                 | 20 x 6                  |  |
| 500                                   | 14 x 2                 | 14 x 3                 | 14 x 4                 | 14 x 4                  |  |
| 1000                                  | 8 x 1                  | 8 x 2                  | 8 x 3                  | 8 x 3                   |  |
| 2000                                  | 5 x 1                  | 5 x 1                  | 5 x 2                  | 5 x 3                   |  |

| Max. Loading Capacity of Erlenmeyer Flask |                        |                        |                        |                         |  |
|---|------------------------|------------------------|------------------------|-------------------------|--|
| Bottle<br>Capacity (ml)                   | ST-50G<br>(ea x floor) | ST-65G<br>(ea x floor) | ST-85G<br>(ea x floor) | ST-105G<br>(ea x floor) |  |
| 250                                       | 14 x 3                 | 14 x 4                 | 14 x 5                 | 14 x 6                  |  |
| 500                                       | 8 x 2                  | 8 x 3                  | 8 x 4                  | 8 x 4                   |  |
| 1000                                      | 5 x 2                  | 5 x 2                  | 5 x 3                  | 5 x 3                   |  |
| 2000                                      | 3 x 1                  | 3 x 2                  | 3 x 2                  | 3 x 3                   |  |

















Drain Bucket







Basket



Recorder (Thermal Line)

Pressure Sensor

Step Stool

#### **Standard Accessories**

| Cat. No.     | Description   | Standard | Max.<br>mounted No. | Model               |
|--------------|---|----------|---------------------|---------------------|
| 00ATC0000002 | Basket,<br>Stainless steel<br>(Ø380 x 180 mm)               | 2        | 2                   | ST-50G              |
|              |   | -        | 2                   | ST-65G              |
|              |   | -        | 3                   | ST-85G              |
|              |   | -        | 4                   | ST-105G             |
|              | Basket,<br>Stainless steel<br>(Ø380 x 230 mm)               | -        | 1                   | ST-50G              |
| 00ATC0000003 |   | 2        | 2                   | ST-65G              |
| 00A1C0000003 |   | -        | 2                   | ST-85G              |
|              |   | -        | 3                   | ST-105G             |
|              | Basket,<br>Stainless steel<br>(Ø380 x 330 mm)               | -        | 1                   | ST-50G              |
| 00ATC0000004 |   | -        | 1                   | ST-65G              |
| 00A1C000004  |   | 2        | 2                   | ST-85G              |
|              |   | -        | 2                   | ST-105G             |
|              | Basket,<br>Stainless steel<br>(Ø380 x 405 mm)               | -        | -                   | ST-50G              |
| 00ATC0000126 |   | -        | 1                   | ST-65G              |
| 00A1C0000126 |   | -        | 1                   | ST-85G              |
|              |   | 2        | 2                   | ST-105G             |
| AAAL1521     | Exhaust Tank  | 1        | 1                   | ST-50G/65G/85G/105G |
| 00ATC0000091 | Drain Bucket<br>(490 x 291 x 107, mm)                       | 1        | 1                   | ST-50G/65G/85G/105G |
| AAAL1531     | Step Stool,<br>Powder Coated Steel<br>(500 x 400 x 250, mm) | -        | -                   | ST-105G             |

## **Optional Accessories**

| Cat. No.     | Description   |  |  |
|--------------|---|--|--|
| AAAL1501     | Recorder set:<br>Recorder (Dot, 6 Point) &<br>Temp. sensor (Double) |  |  |
| AAAL1502     | Recorder set:<br>Recorder (Thermal Line) &<br>Temp. sensor (Double) |  |  |
| 00ATC0000108 | Temperature sensor for Recorder                                     |  |  |
| AAAL1511     | Pressure sensor   |  |  |

 $<sup>\</sup>ensuremath{\ensuremath{\%}}$  The above option is only installed when initial order.

# Specification









| Specification  | <b>v</b> v                                  | <b>**</b>                                  | <b>v</b>                                     | 'The The                                     |  |
|--|---|--|--|--|--|
| Model  | ST-50G                                      | ST-65G                                     | ST-85G                                       | ST-105G                                      |  |
| Temperature  |   |  |  |  |  |
| Sterilization (°C / °F)                              | 110 to 123 / 230 to 253.4                   | 110 to 123 / 230 to 253.4                  | 110 to 123 / 230 to 253.4                    | 110 to 123 / 230 to 253.4                    |  |
| Melting (°C / °F)                                    | 60 to 100 / 140 to 212                      | 60 to 100 / 140 to 212                     | 60 to 100 / 140 to 212                       | 60 to 100 / 140 to 212                       |  |
| Pressure   |   |  |  |  |  |
| Sterilization at 121°C (kg/cm²)                      | 1.1 to 1.2                                  | 1.1 to 1.2                                 | 1.1 to 1.2                                   | 1.1 to 1.2                                   |  |
| Gauge range in analog (Mpa)                          | -0.1 to 0.6                                 | -0.1 to 0.6                                | -0.1 to 0.6                                  | -0.1 to 0.6                                  |  |
| Dimension  |   |  |  |  |  |
| Volume (L / cu ft)                                   | 50 / 1.76                                   | 65 / 2.29                                  | 85 / 3                                       | 105 / 3.7                                    |  |
| Internal (Ø x H, mm / inch)                          | 400 x 458 / 15.75 x 18.03                   | 400 x 558 / 15.75 x 21.97                  | 400 x 758 / 15.75 x 29.84                    | 400 x 908 / 15.75 x 35.75                    |  |
| External (W x D x H, mm / inch)                      | 624 x 672 x 870<br>/ 24.57 x 26.46 x 34.25  | 624 x 672 x 971<br>/ 24.57 x 26.46 x 38.23 | 624 x 672 x 1083<br>/ 24.57 x 26.46 x 42.64  | 624 x 672 x 1233<br>/ 24.57 x 26.46 x 48.54  |  |
| External with Exhaust Tank<br>(W x D x H, mm / inch) | 722 x 672 x 870<br>/ 28.42 x 26.46 x 34.25  | 722 x 672 x 971<br>/ 28.42 x 26.46 x 38.23 | 722 x 672 x 1083<br>/ 28.42 x 26.46 x 42.64  | 722 x 672 x 1233<br>/ 28.42 x 26.46 x 48.54  |  |
| Door Max. Opening<br>(W x D x H, mm / inch)          | 1012 x 672 x 882<br>/ 39.84 x 26.46 x 32.72 | 1012 x 672 x 983<br>/ 39.84 x 26.46 x 38.7 | 1012 x 672 x 1095<br>/ 39.84 x 26.46 x 43.11 | 1012 x 672 x 1245<br>/ 39.84 x 26.46 x 49.01 |  |
| Basket (Ø x H, mm / inch)                            | 380 x 180                                   | 380 x 230 / 14.96 x 9.05                   | 380 x 330 / 14.96 x 12.99                    | 380 x 405 / 14.96 x 15.94                    |  |
| Weight (kg / lbs)                                    | 94.5 / 208.34                               | 99.5 / 219.36                              | 104 / 229.28                                 | 110 / 242.51                                 |  |
| Electrical data & Ordering informa                   | tion  |  |  |  |  |
| 230V, 50/60Hz, A                                     | 14.3  | 14.3                                       | 14.3   | 21.3   |  |
| Cat. No.   | AAHL1015K                                   | AAHL1025K                                  | AAHL1035K                                    | AAHL1045K                                    |  |

<sup>\*</sup> Above product must be installed in a location below an altitude of 800 meters.