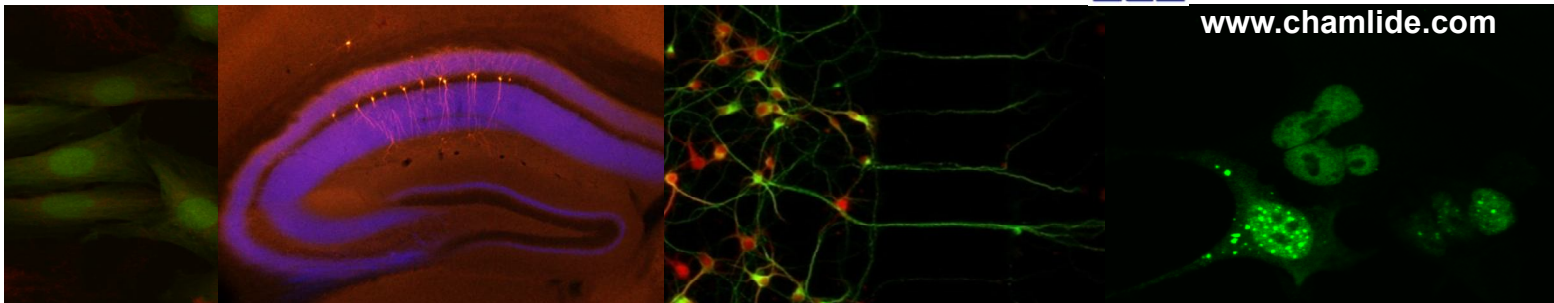


# Catalogue Ver. 7.3.1

Chambers & Top-Stage Incubators for the Microscope



# Contents

| Title   | Page |
|---|------|
| <b>Chamlide Incubators &amp; Heating Systems</b>  |      |
| Overview  | 1    |
| Chamlide Temperature Controller & Chamlide Automatic Gas Mixer                                | 3    |
| Chamlide TC (Incubator Systems for Various Types of Chambers)                                 | 5    |
| Chamlide TC-W   | 7    |
| TC-A (Chamlide TC for ASI or LUDL Piezo Z-stages)   | 9    |
| TC-N (Chamlide TC for Nikon Piezo Z-stages)   | 9    |
| TC-L (Chamlide TC for Piezo Z-stages with Well Plate Size)                                    | 9    |
| TC-G (Chamlide TC for Z-Galvo stages), TC-P (Chamlide TC for Prior Piezo Z-stages)            | 10   |
| Chamlide WP (Incubator system for commercial Well Plates & Chamlide chambers)                 | 11   |
| WP-A (Chamlide WP for ASI or LUDL Piezo Z-stages)   | 14   |
| TC-ST, WP-ST (for the Stereo Microscopes)   | 14   |
| Chamlide IC (Incubator System for Commercial 35mm Dishes & Chamlide Chambers)                 | 15   |
| Chamlide UM (Incubator System for the Upright Microscope)                                     | 17   |
| Incubator Holder (Stage Adaptors for Chamlide Incubator Systems)                              | 18   |
| FC-5N (Automatic CO <sub>2</sub> / Air Mixer)   | 19   |
| FC-9 (Automatic O <sub>2</sub> / CO <sub>2</sub> / N <sub>2</sub> Mixer)                      | 20   |
| Chamlide HX (Acrylic Cage Incubator)  | 21   |
| Heating Plate (Heating Plate for Various Types of Chambers)                                   | 23   |
| Pre-Heating Plate (Pre-Heating Plate for Various Types of Chambers)                           | 24   |
| Heating Glass (Heating Glass for Various Types of Chambers)                                   | 25   |
| Chamlide CH (Cooling/Heating Plate for Various Types of Chambers)                             | 26   |
| IHS-101 (Fluidic Inline Heater)   | 27   |
| IHS-801 (8-channel Fluidic Inline Heater)   | 29   |
| IHC-101 (Fluidic Inline Solution Cooler/Heater)   | 30   |
| CCP ver. 7 (Chamlide Temperature and Gas Composition Controlling Program)                     | 31   |
| Chamlide TR (Temperature Ramping Control System)  | 32   |
| Chamlide CP (Water Circulation Plate with Water Circulation Bath)                             | 33   |
| VC-3 (Valve Controller for 3 Water Circulation Bath)  | 34   |
| In Vivo Imaging Stage System (Mouse and Rat In Vivo Imaging Stage for the Upright Microscope) | 35   |
| DS-1 (In Vitro Fertilization Environmental System)  | 37   |
| FS-1 (IVF Chamber), LS-1 (IVF work station)   | 38   |
| CR Series (Temperature Indicators)  | 39   |

# Contents

| Title  | Page |
|--|------|
| <b>Chamlide magnetic chambers</b>  |      |
| Overview   | 40   |
| Chamlide CMB (35mm Dish Type 1-Well Magnetic Chamber for Round Coverslip)      | 41   |
| Chamlide CMM (35mm Dish Type Multi-Well Magnetic Chambers for Round Coverslip) | 43   |
| Chamlide CMS (35mm Dish Type Magnetic Chambers for Square Coverslip)           | 45   |
| Chamlide PT (Well Plate Type Multi-Well Magnetic Chamber)                      | 47   |
| Well-Slip (Coverslip Bottom Magnetic Chamber for Rectangular Coverslip)        | 49   |
| Well-Slide (Slide Glass Bottom Multi-Well Magnetic Chamber)                    | 51   |
| Chamlide WC (Water Circulation Magnetic Chamber)                               | 52   |
| Chamlide AC (Perfusion Type Water Volume Adjustable Magnetic Chamber)          | 53   |
| AC-P (Chamlide AC for Patch Clamp)   | 54   |
| AC-PS (Chamlide AC for Patch Clamp)  | 54   |
| AC-PI (Wide Chamlide AC-P for The Inverted Microscope)                         | 55   |
| AC-PU (Wide Chamlide AC-P for The Up-Right Microscope)                         | 55   |
| Chamlide EC (Perfusion Type Electric Stimulation Magnetic Chamber)             | 56   |
| Chamlide CF (Perfusion Type Closed Magnetic Chamber, Shear Stress Chamber)     | 57   |
| Chamlide CF-EC (Electric Stimulation Chamlide CF)                              | 57   |
| Chamlide CF-T (Chamlide CF with Two Coverslips)                                | 58   |
| Chamlide PM (Perfusion Type Multi-Well Closed Magnetic Chamber)                | 59   |
| Chamlide DF (Dark Field Chamber)   | 60   |
| Chamlide DF-T (0.1mm Internal Height Chamber)                                  | 60   |
| Chamlide MD (6-dish Holder for 35mm Dish Type Magnetic Chambers and Dishes)    | 61   |
| Chamlide MB (Multi-Hole Bottom Plate for 35mm Dish Type Magnetic Chambers)     | 62   |
| Special Glass Cover (Special Glass Cover for Various Commercial Culture Wares) | 63   |
| Stage Insert (Stage Insert for Various Types of Specimen)                      | 64   |
| <b>Chamlide Glasswares</b>   |      |
| Overview   | 65   |
| Chamlide Glassware : Slide glass, Coverslip                                    | 66   |
| <b>Appendix</b>  |      |
| Product Numbers  | 68   |
| Contact Us   | 74   |

## Why Live Cell Imaging ?

To understand the functional integrity of the whole living organism, it is important to have a clear understanding of the interactions between individual cells and a single molecule within these cells. With the latest biomolecular/cellular imaging technology, researchers are focusing on investigating such biological interactions at both molecular and cellular levels. This involves direct imaging of the “presence” of single molecules and individual cells as well as the use of real-time imaging of dynamic, reversible biological signaling “events” such as protein-protein interaction, protein modification and intracellular calcium changes. Moreover, this imaging technology can be combined with the protein manipulation techniques to elucidate the functional contribution of these dynamic interactions and signal transduction events in the whole living organism.

**Live Cell Instrument (LCI)** is an innovative company that designs, develops and manufactures live-Cell microscopy environmental control systems for qualitative and or quantitative microscopy. Our Products are dedicated to the science of live-cell microscopy and include imaging systems, micro-Observation environmental control instruments, and specialized fittings and adapters as well as numerous supplemental items.

## Environment for the Cell on the Microscope

### 1. Temperature

Most mammalian cells grow at 35-37°C. If the temperature is not optimally controlled, the cell growth can be largely compromised. High temperature is more detrimental since it results in an immediate cell death. Therefore, maintaining the temperature within an optimal range is very important for cellular imaging. When the imaging with a high numeric aperture lens, it is necessary to control the temperature of the objective.

### 2. pH

Correct pH is crucial for the cultured cells to maintain the normal physiological states and thus remains viable for a long time. The pH of the medium should be maintained around pH 7.4. The bicarbonate buffer system is the most widely used in the cell culture. The pH depends on the level of CO<sub>2</sub>. Thus, the CO<sub>2</sub> level should be maintained during the cell imaging.

### 3. Humidity

All incubator systems should maintain the internal humidity to prevent the medium evaporation. The evaporation causes the accumulation of the cell metabolites and medium constituents that will eventually impair the cell growth.



## Stable Environment for the Live Cell Imaging

Chamlide incubator systems create a stable cell environment by maintaining the proper temperature, humidity and pH for a long term.

- Controller**
  - PID for the precise temperature control of all electrical parts (incubator cover, incubator main body, humidifier, and lens warmer)
  - Adjusting the flow rate of CO<sub>2</sub> gas
  - User-friendly to operate
- Incubator**
  - Optimal cell growth conditions by controlling the temperature, humidity and pH.
  - Main body is the heating plate to maintain the temperature of cells.
  - Incubator cover contains a built-in reflecting glass heater to achieve perfect transmission for imaging and to control the temperature inside, preventing the formation of condensation.
- Humidifier**
  - Maintains humidity of the incubator inside to prevent evaporation, which can cause cell damage.
  - Generate warm moisture which does not affect temperature within the incubator.
  - CO<sub>2</sub> gas passes through the humidifier and enters the incubator mixed with warm vapor.
  - The rate of air-bubbling in the humidifier can be used to check the flow of CO<sub>2</sub> gas.
- Lens warmer**
  - For high-resolution imaging is to control the temperature of the objectives
  - Optical coupling medium (oil, glycerin, or water) acts as a thermal coupling medium to draw heat away from the specimen.
  - Lens warmer maintains proper temperature of the lens
  - Heating band fits all types of objectives.

## Use with Chamlide Magnetic Chambers and Commercial Culture Wares

Chamlide incubator systems accept various Chamlide magnetic chambers as well as consumable 35mm culture dishes and all well plates.

## Compact Design

- Designed for easy handling, portable from the microscope
- Very compatible to all microscopes

## Convenient Computer-Controlled Operation

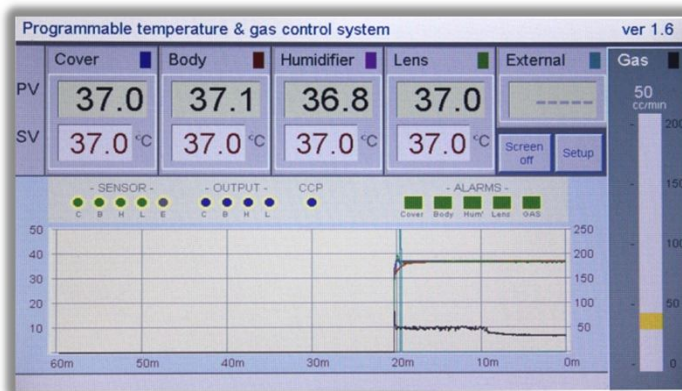
- CCP software regulates the temperatures of the incubator main body, incubator cover, humidifier and lens warmer and gas concentration.
- CCP is to program temperature and gas gradients and to record temperatures and gas concentration over time.

## Temperature Controllers



CU-501: 5-channel controller/ CU-302: 2-channel controller/ CU-301: 1 channel controller

## Touch Panel for CU-501

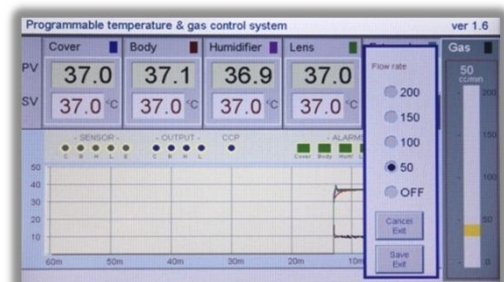


### Main Window

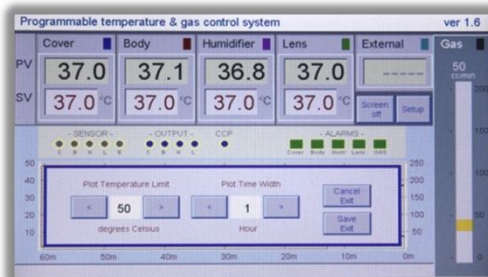
- 4-channel temperature windows and an external temperature sensor window.
- Digital flow meter for mixed gas
- Real-time graph for all parameters
- Alarm function
- Automatic screen off function
- Changeable internal parameter (e.g. PID values in the setup mode)



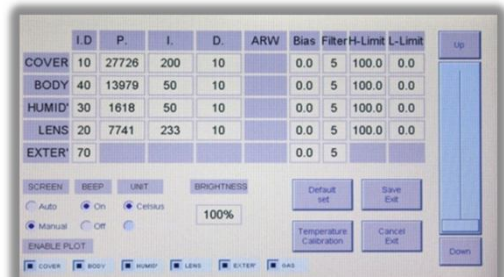
- Changeable temperatures



- Changeable flow rate of mixed gas



- Changeable total duration & parameter range of the graph.



- Changeable PID values, calibration value, automatic screen off function or etc.

## Automatic Gas Mixer

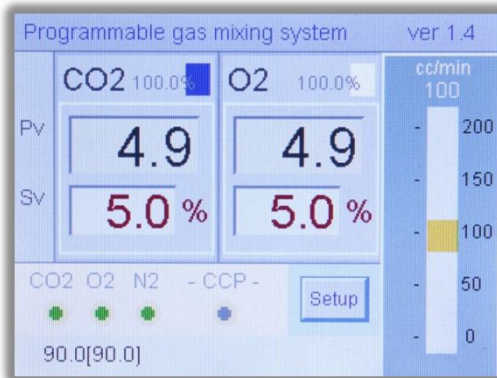


**FC-5N:** automatic CO<sub>2</sub> / air mixer



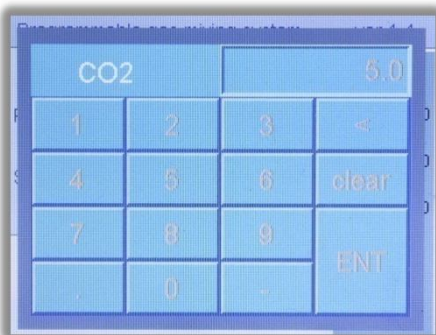
**FC-9:** automatic CO<sub>2</sub> / O<sub>2</sub> / N<sub>2</sub> mixer

## Touch Panel for FC-9

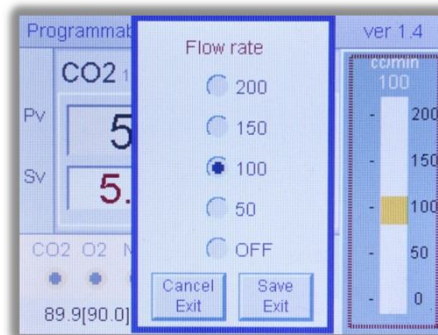


### Main Window

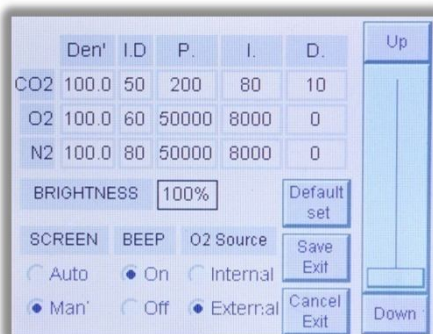
- 2-channel gas control windows .
- Digital flow meter for mixed gas
- Automatic screen off function
- Changeable internal parameter (e.g. PID values in the setup mode)



- Changeable gas percentage



- Changeable flow rate of mixed gas



- Changeable PID values, calibration value, automatic screen off function, & etc.



- CU-501 temperature controller stacked



# Chamlide TC

## Incubator System for Various Types of Chambers

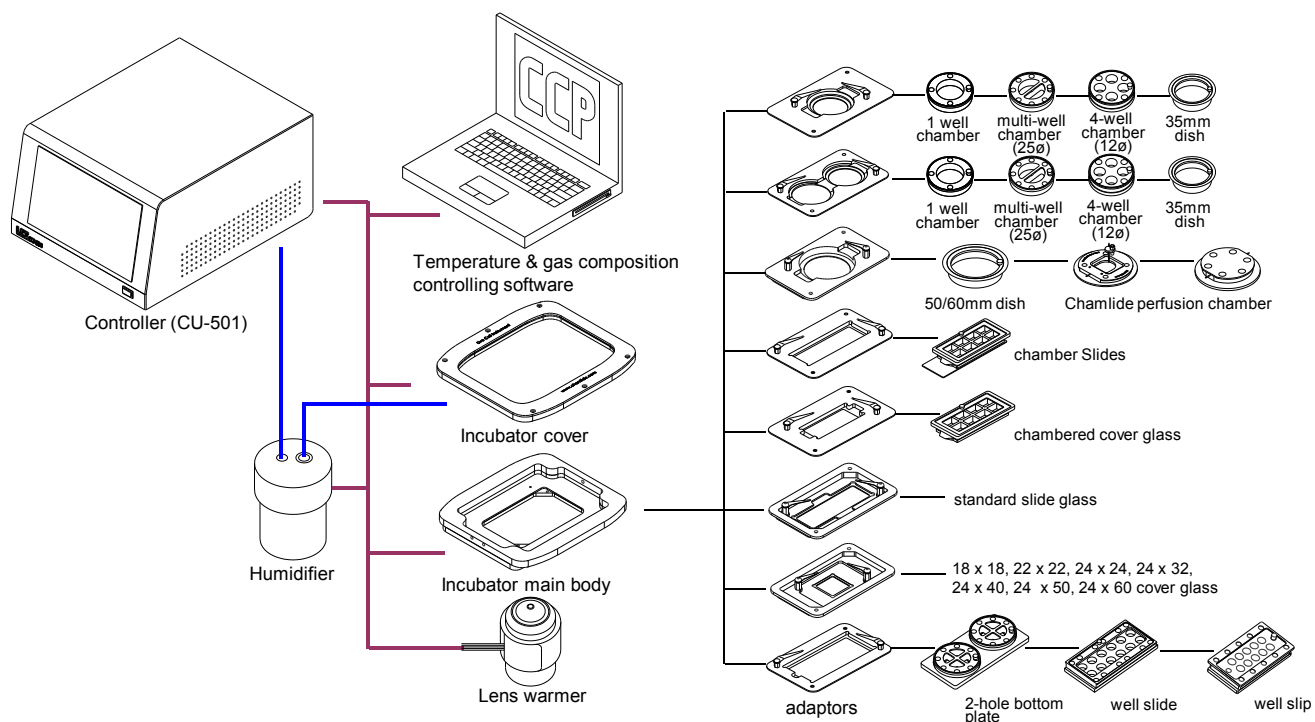



- Able to use with the most microscope stages.
- Able to use with a variety of Chamlide magnetic chambers, commercial culture dishes, and commercial culture dishes using 8 types of adaptors (5 adaptors provided as standard).
- Special glass covers for disposable culture wares to maintain humidity and provide excellent transmission for imaging (For Lab-Tek chambered cover glass, Lab-Tek chamber slide, and 35mm plastic culture dish).
- CU-501 controls temperatures of the incubator main body, incubator cover, humidifier, and lens warmer.
- CU-501 adjusts flow rate of the mixed CO<sub>2</sub> gas by the flow meter.
- Glass incubator cover is coated by the heating element.
- Optimum mixed gas is provided to all incubator systems with FC-5N or FC-9. (e.g. Chamlide TC, WP, and IC instead of pre-mixed 5% CO<sub>2</sub>/ 95% air gas)
- In/out ports without opening the incubator cover using CM-B-PA, CM-B-PB.
- Able to control the temperature and gas concentration, and to program the temperature and the gas concentration gradients.
- Able to record temperature and gas concentration over time using CCP ver.7 software or MetaMorph software.

### TC Adaptors


- **For 35mm dish type chamber or dish**  
Commercial 35mm culture dishes or 35mm dish type Chamlide magnetic chambers
- **For Chamber slide**  
Nunc Lab-Tek™ II Chamber Slide
- **For chamber cover glass**  
Nunc Lab-Tek™ II chamber- cover glass
- **For 2-hole type Chamlide MB or Well slide/ Well slip**  
Chamlide MB, Well slide, Well slip or customized chambers
- **For two 35mm dish type chambers or dish**  
Two commercial 35mm culture dishes or 35mm dish type Chamlide magnetic chambers
- **For standard slide glass**  
75 x 25 standard slide glass
- **For cover glass**  
18 x 18, 22 x 22, 24 x 24, 24 x 32, 24 x 40, 24 x 50, 24 x 60 cover glass
- **For 50/60mm dish**  
Commercial 50/60 mm culture dishes







- Hole(s) to inject reagent solution during time-lapse imaging
- Sizes and shapes are customizable.
- Silicon lids to cover the hole (option)



- Water reservoir inside of the main body to raise the humidity of the incubator without a glass cover or a special cover (option)

## Specifications

|  |  |
|--|--|
| Temperature range                                  | Ambient +3°C ~ +45°C   |
| Recommended 5% CO <sub>2</sub> / 95% Air flow rate | 100 ml/ min  |
| Incubator physical dimension (mm)                  | Cover 164.9 (W) x 134 (D) x 11 (H)<br>Main body 160.0 (W) x 130 (D) x 14 (H)<br>(insert part) (160 x 110, universal K insert size)<br>Adaptor 110 (W) x 62 (D) x 7 (H) |
| Heating method                                     | Cover invisible coating heater<br>Main body thin layer heater<br>Humidifier cartridge heater<br>Lens warmer thin layer heater  |
| Sensor   | PT 100 ohm   |
| Incubator material                                 | Black anodized aluminum alloy  |

|                  |                |
|------------------|----------------|
| <b>Model No.</b> | <b>Product</b> |
| TC-L-10          | Chamlide TC    |

# Chamlide TC-W

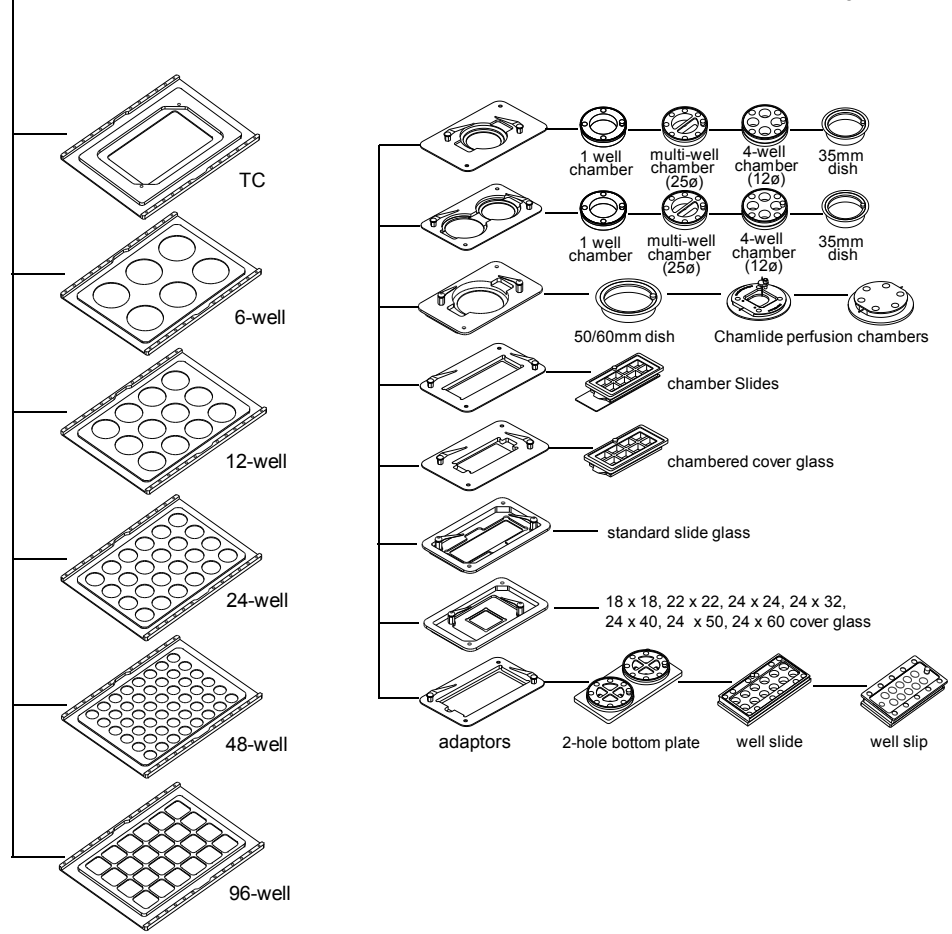
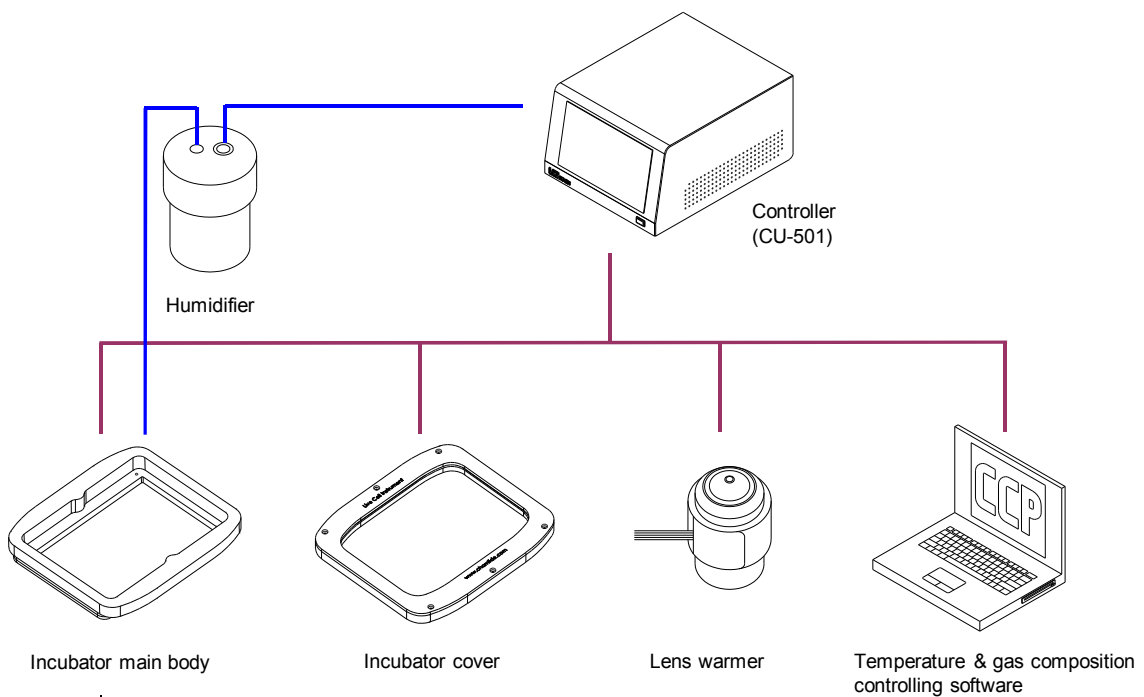
## Incubator System for Various Types of Chambers and Well Plates



- Easy and fast exchange of the plate by magnetic force.
- Any types of commercial well plates are usable.
- All adaptors for a standard TC are usable.
- 8 types of adaptors are usable.
- Able to use with most microscope stages.
- Able to use with various Chamlide magnetic chambers, commercial culture dishes, and commercial well plates.
- CU-501 regulates the temperature of the incubator main body, incubator cover, humidifier, and lens warmer.
- CU-501 adjusts the flow rate of the mixed CO<sub>2</sub> gas by flow meter.
- Glass incubator cover is coated by heating element.
- Optimum mixed gas provided to all incubator systems with FC-5N or FC-9.  
(e.g. Chamlide TC, WP, and IC instead of pre-mixed 5% CO<sub>2</sub>/ 95% air gas)
- In/out ports without opening the incubator cover using CM-B-PA, CM-B-PB.  
(e.g. perfusion, injection of liquids, drugs: see page 42)
- Able to control the temperature, gas concentration, and to program the temperature and the gas concentration gradients.
- Able to record the temperature and gas concentration over time using CCP ver.7 software or MetaMorph software.

### Specification

|  |                               |                                      |
|--|-------------------------------|--------------------------------------|
| Temperature range                                  | Ambient +3°C ~ +45°C          |                                      |
| Recommended 5% CO <sub>2</sub> / 95% Air flow rate | 100 ml/ min                   |                                      |
| Incubator physical dimension (mm)                  | Cover                         | 164.9 (W) x 134 (D) x 11 (H)         |
|  | Main body                     | 160.0 (W) x 130 (D) x 14 (H)         |
|  | (insert part)                 | (160 x 110, universal K insert size) |
| Heating method                                     | Cover                         | invisible coating heater             |
|  | Main body                     | thin layer heater                    |
|  | Humidifier                    | cartridge heater                     |
|  | Lens warmer                   | thin layer heater                    |
| Sensor   | PT 100 ohm                    |                                      |
| Incubator material                                 | Black anodized aluminum alloy |                                      |



**Model No.**  
TC-W-10

**Product**  
Chamlide TC-W-10

# Chamlide TC Series for Piezo Stage

## Incubator System for Piezo Z-stage

**Chamlide TC-A (Chamlide TC for ASI or LUDL Piezo Z-stage)**  
**Chamlide TC-N (Chamlide TC for Nikon Piezo Z-stage)**  
**Universal K Insert Size**



- TC-A is able to use with an Applied Scientific Instrumentation (ASI) or LUDL Electronic Piezo Z-stages.
- The exterior dimensions of the incubator are the same as universal mounting frame K.
- The weight of the incubator body including the adaptor and chamber(s) does not exceed 500g.
- Other functions and features are the same as the standard type Chamlide TC.
- Chamlide TC-N is used with Nikon Piezo Z-stages.
- Chamlide TC-N has different fixing holes but other shapes are the same with Chamlide TC-A.

Incubator physical dimension (mm)

160 (W) x 110 x 28.5 (H), universal K insert size

Incubator material

Black polycarbonate, black anodized aluminum alloy

**Chamlide TC-L Commercial Well Plate Size**  
**(Chamlide TC for Piezo Z-stage, Thorlabs Piezo Z-stage, PI Piezo Z-stage Madcity Lab Nano Stage) Commercial Well Plate Size**



- Chamlide TC-L is for the Piezo Z-stage with the well plate size insert.
- The exterior dimensions of the incubator are the same as those of commercial well plates.
- The weight of the incubator body including the adaptor and chamber(s) does not exceed 500g.
- Other functions and features are the same as the standard type Chamlide TC.

Incubator physical dimension (mm)

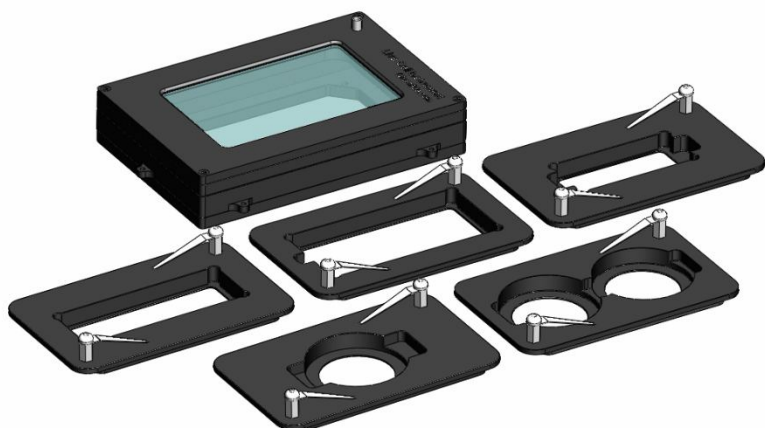
128 (W) x 86 (D) x 23.0 (H), commercial well plate size

Incubator material

Black polycarbonate, black anodized aluminum alloy



### Chamlide TC-G (Chamlide TC for Leica Z-Galvo, Nikon Piezo Z-stage)



- Chamlide TC-G is for use with a Z-Galvo stage.
- The weight of the incubator body including the adaptor and chamber(s) does not exceed 200g.
- Other functions and features are the same as the standard type Chamlide TC.

Incubator physical dimension (mm)

136.0 mm (W) x 90.0 (D) x 23.0 (H)

Incubator material

Black polycarbonate, black anodized aluminum alloy

### Chamlide TC-P (Chamlide TC for Prior, PI Piezo Z-stage, Mad City Labs Nano Stage)



- Chamlide TC-P is for use with a Prior Scientific Piezo Z-stage or small size Z-galvo stage.
- This incubator is only for a 35mm dish type magnetic chamber or dish and a chambered cover glass. (There are two kinds of TC adaptors).
- The weight of the incubator body including a chamber does not exceed 200g.
- Other functions and features are the same as the standard type Chamlide TC.

Incubator physical dimension (mm)

92.5 (W) x 65.0 (D) x 23.0 (H)

Incubator material

Black polycarbonate, black anodized aluminum alloy

#### Model No.

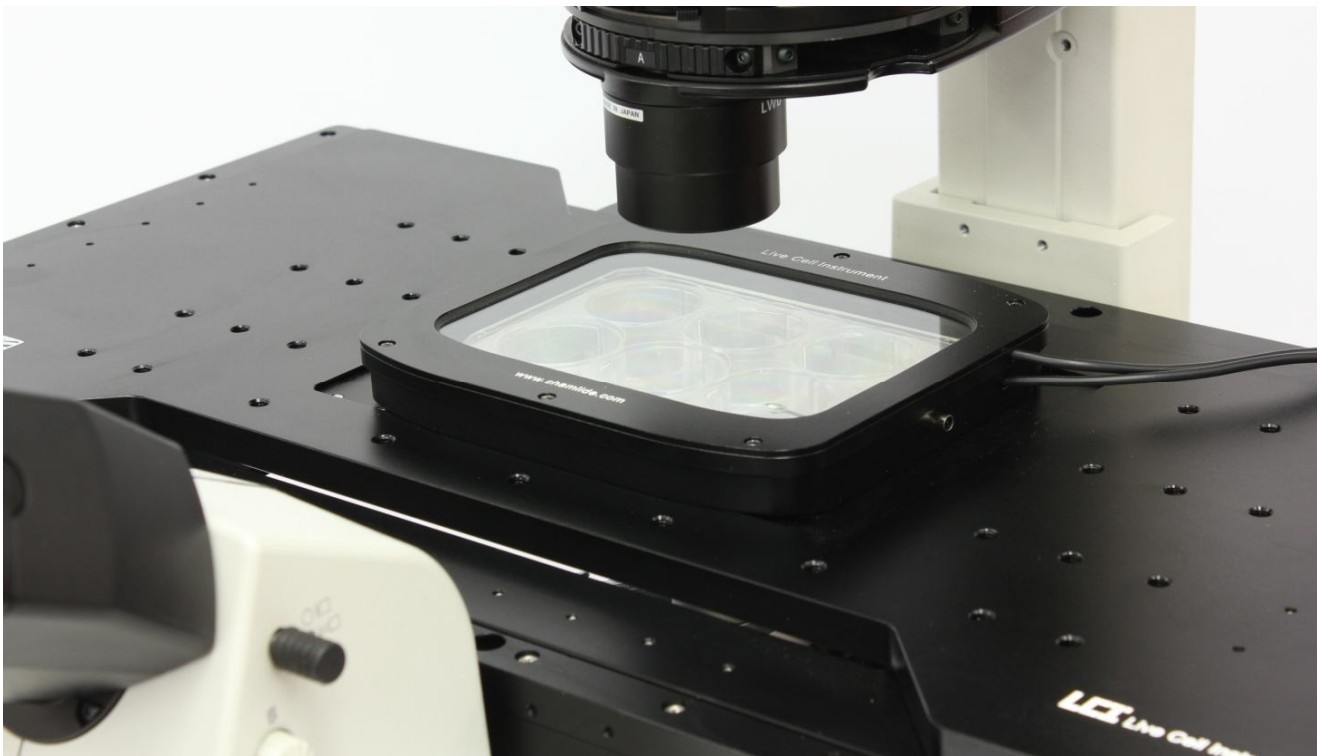
#### Product

|         |  |
|---------|--|
| TC-L-20 | Chamlide TC-A (Chamlide TC for ASI or LUDL Piezo Z-stage)      |
| TC-L-30 | Chamlide TC-L (Chamlide TC for Piezo Z-stage, well plate size) |
| TC-L-40 | Chamlide TC-P (Chamlide TC for prior or Leica Piezo Z-stage)   |
| TC-L-50 | Chamlide TC-G (Chamlide TC for Z-Galvo stage)                  |
| TC-L-60 | Chamlide TC-N (Chamlide TC for Nikon Piezo Z-stage)            |
| TC-L-XX | Chamlide TC-X (Chamlide TC for other stage)                    |

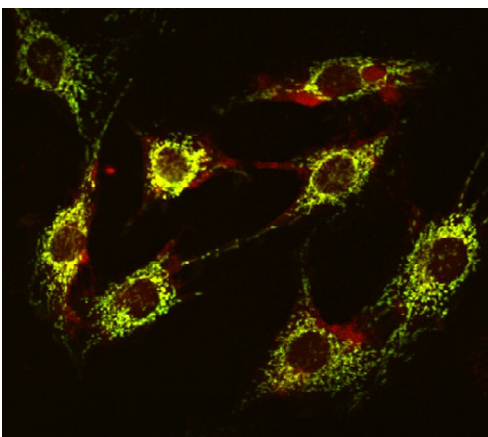
- Chamlide TC of any sizes or shapes for various Piezo Z-stage are customizable upon request.

# Chamlide WP

## Incubator System for Commercial Well Plates & Chamlide Chambers



- Best for high throughput screening (HTS) during live cell imaging.
- Usable with any microscope stage. (The Chamlide WP requires a stage adaptor depending on the stage type.)
- Designed to fit the microscope stage with universal mounting frame K (e.g. Zeiss standard stage or most of the XY-motorized stages).
- CU-501 controls the temperature of the incubator main body, incubator cover, humidifier, and lens warmer and adjust the flow rate of the mixed CO<sub>2</sub> gas by the flow meter.
- Incubator cover of Chamlide WP made by clear glass which is coated heating element.
- FC-5N or FC-9 can provide optimum mixed gas to all incubator systems (e.g. Chamlide TC, WP, and IC).
- Chamlide WP can accept various commercial plastic-bottom or coverslip-bottom well plates (6, 12, 24, 48 or 96-well plates) as well as Chamlide PT, Chamlide MB or Chamlide MD. (see page 47, 61 and 62).
- Chamlide WP includes special glass covers for disposable well plates to maintain humidity and provide excellent transmission for imaging.
- Able to control the temperature and gas concentration, and to program the temperature and the gas concentration gradients.
- Able to record the temperature and gas concentration over time using CCP ver.7 software or MetaMorph software.



### ■ Various Chambers in the Chamlide WP for 6-Well Plate



commercial 6-well plate



Chamlide PT  
(Well plate type magnetic chamber)



Chamlide MB  
(6-hole bottom plate)



Chamlide MD  
(6-dish holder)

- Usable with commercial well plates, Chamlide PT (well plate type magnetic chamber), six commercial 35mm culture dishes, six Chamlide magnetic chambers with the respective adaptors (Chamlide MD or MB).
- Chamlide PT/ MB/ WP, which can perfuse the fresh medium or inject some drugs, are customizable upon user's request.

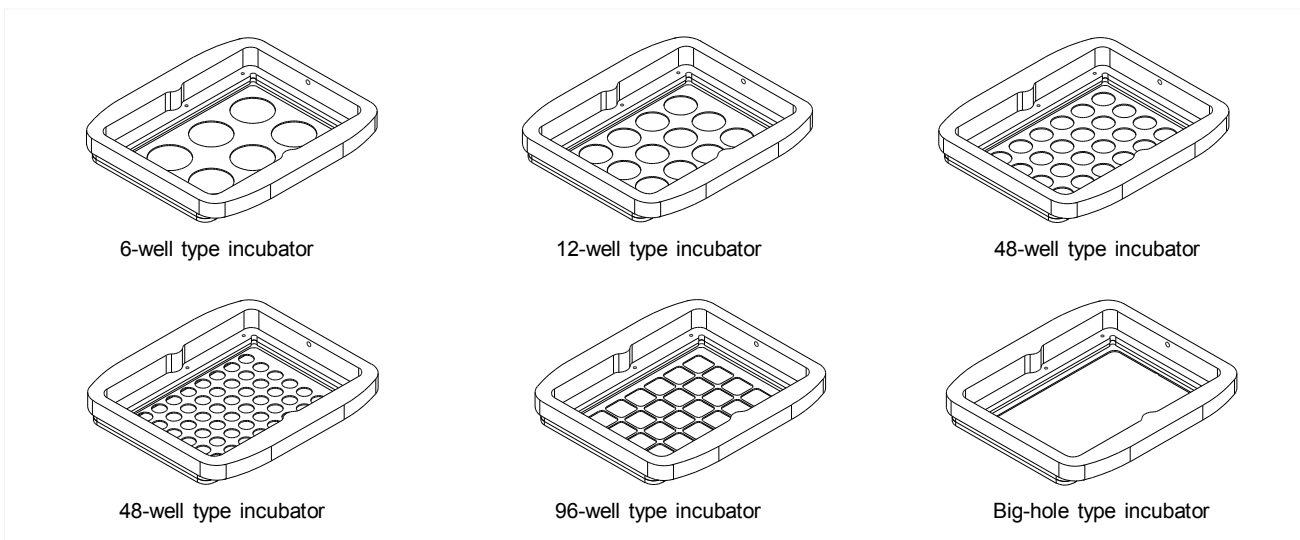
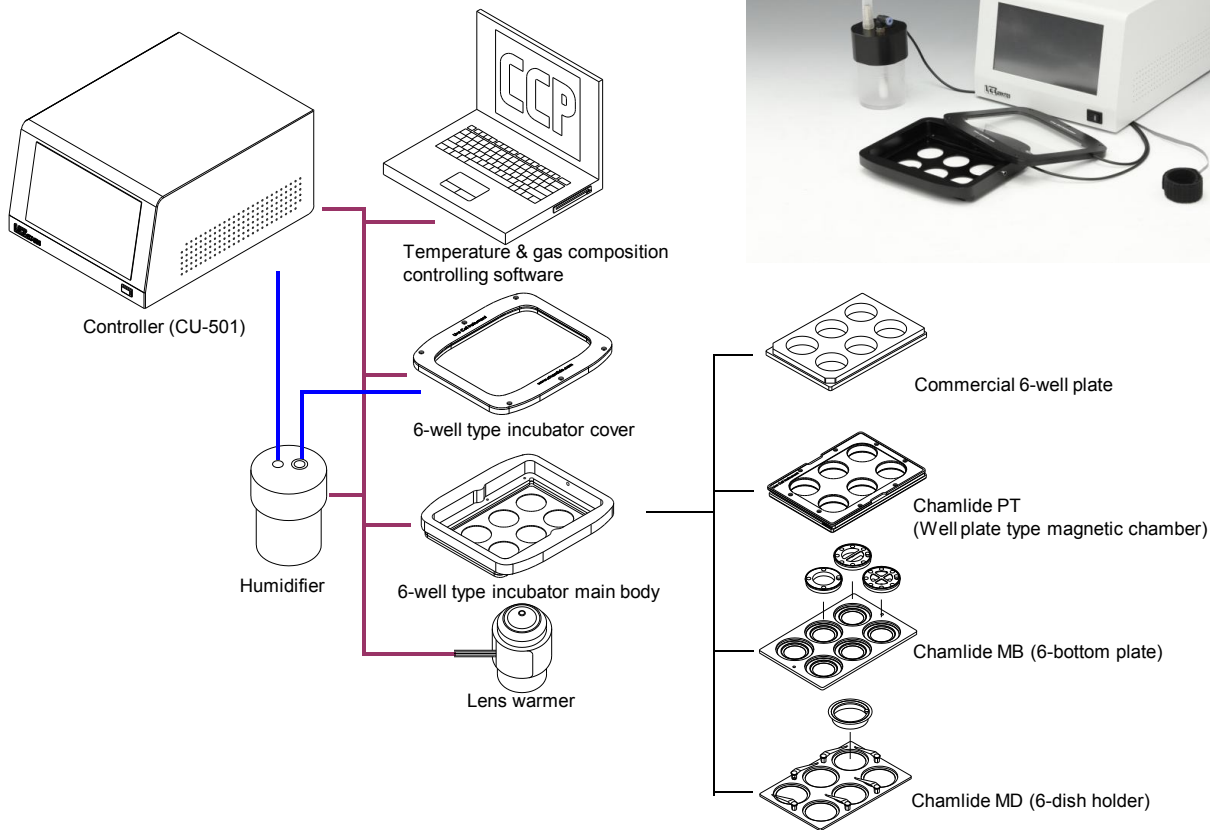
### ■ Chamlide WP for 96-Well Plate



- Chamlide WP for 96-well plate to surround every 4-single well for easy approach of the objective lens. It makes high resolution images possible.
- Able to provide 1 big hole for easy movement of the high resolution objective lens.

### Specifications

|  |                               |                                      |
|--|-------------------------------|--------------------------------------|
| Temperature range                                  | Ambient +3°C ~ +45°C          |                                      |
| Recommended 5% CO <sub>2</sub> / 95% Air flow rate | 100 ml/ min                   |                                      |
| Incubator physical dimension (mm)                  | Cover                         | 164 (W) x 134 (D) x 10 (H)           |
|  | Main body                     | 160 (W) x 130 (D) x 21 (H)           |
|  | (insert part)                 | (160 x 110, universal K insert size) |
| Heating method                                     | Cover                         | transparent coated heater            |
|  | Main body                     | thin layer heater                    |
|  | Humidifier                    | cartridge heater                     |
|  | Lens warmer                   | thin layer heater                    |
| Sensor   | PT 100 ohm                    |                                      |
| Incubator material                                 | Black anodized aluminum alloy |                                      |



| Model No. | Product                       |
|-----------|-------------------------------|
| WP-S-10A  | Chamlide WP for 6-well plate  |
| WP-S-10B  | Chamlide WP for 12-well plate |
| WP-S-10C  | Chamlide WP for 24-well plate |
| WP-S-10D  | Chamlide WP for 48-well plate |
| WP-S-10E  | Chamlide WP for 96-well plate |
| WP-S-10F  | Chamlide WP (1 big hole type) |



# Chamlide WP for Piezo Z-stage

## Incubator System for Piezo Z-stage

### Chamlide WP-A (Chamlide WP for ASI or LUDL Piezo Z-stage) Universal K Insert Size



- Chamlide WP-A is used with an Applied Scientific Instrumentation (ASI) or LUDL Piezo Z-stages.
- The weight of the incubator body including chambers does not exceed 500g.
- Other functions and features are the same as the standard type Chamlide WP.
- The exterior dimensions of the incubator are the same as universal mounting frame K.

Incubator physical dimension (mm)

160 (W) x 110 (D) x 28.5 (H), universal K insert size.

Incubator material

Black polycarbonate, black anodized aluminum alloy

#### Model No.

#### Product

|          |                                   |
|----------|-----------------------------------|
| WP-S-20A | Chamlide WP-A for 6-well plate    |
| WP-S-20B | Chamlide WP-A for 12-well plate   |
| WP-S-20C | Chamlide WP-A for 24-well plate   |
| WP-S-20D | Chamlide WP-A for 48-well plate   |
| WP-S-20E | Chamlide WP-A for 96-well plate   |
| WP-S-20F | Chamlide WP-A (one big hole type) |

# Chamlide TC-ST & WP-ST

## Incubator System for Stereo Microscope



- Every concept is the same as standard TC and WP system except the cover heating method.
- For perfect fluorescence imaging, the cover is used with a thin layered line heater and a clear glass
- A thin layered line heater is located in the blur area.

#### Model No. Product

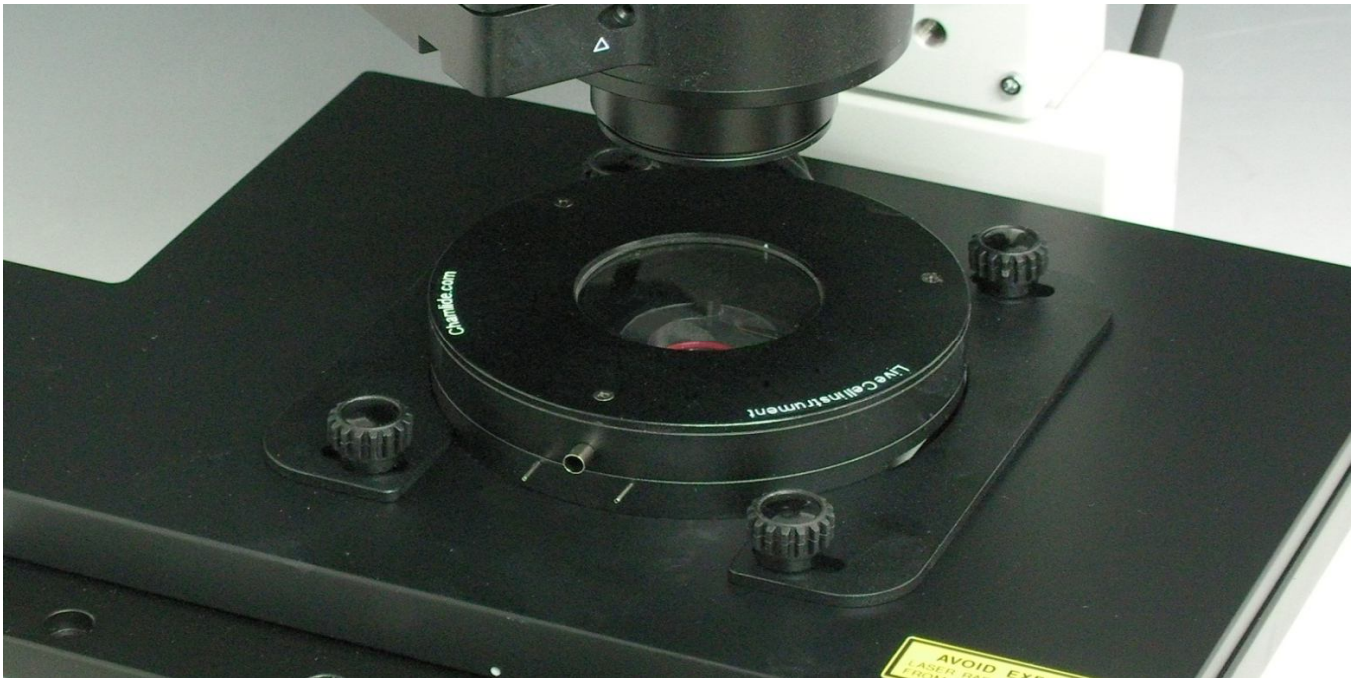
TC-ST-10 Chamlide TC for stereo microscope

#### Model No. Product

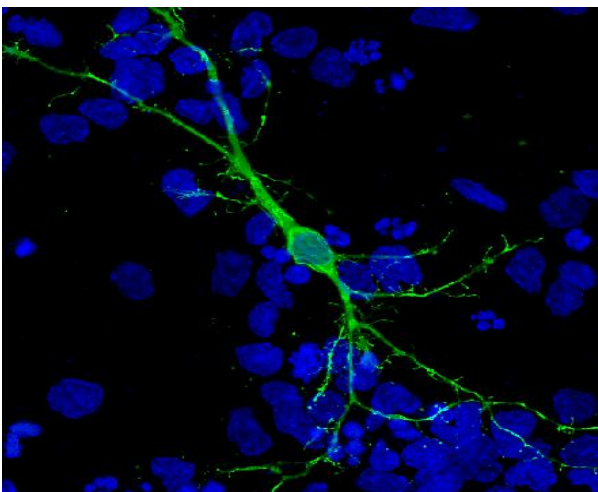
WP-ST-10 Chamlide WP-A for the stereo microscope  
(6/ 12/ 24/ 48/ 96-well plate type)

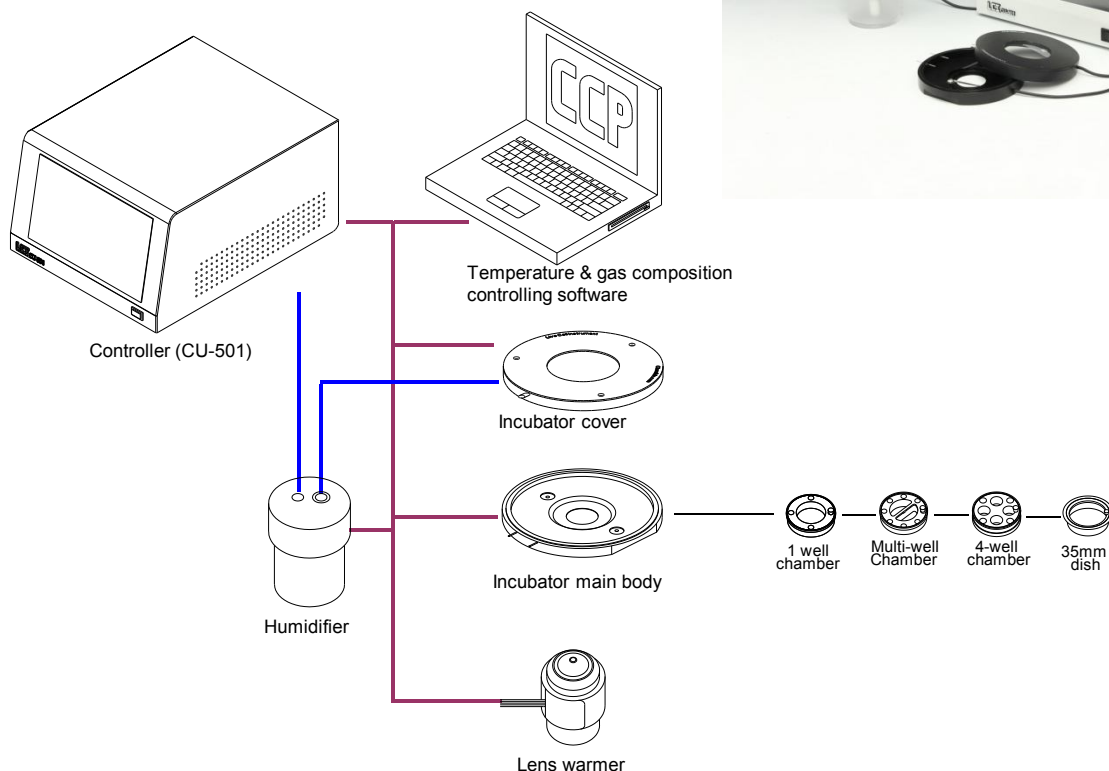
# Chamlide IC

Incubator System for Commercial 35mm Dishes & Chamlide chambers



- Designed to fit microscope stages with a round hole to insert (e.g. Olympus (110 mm) and Nikon (108 mm) standard manual stages).
- CU-501 controls the temperature of the incubator main body, incubator cover, humidifier, and lens warmer and adjust the flow rate of the mixed CO<sub>2</sub> gas with a flow meter.
- Incubator cover is made of clear glass which is coated with the heating element.
- FC-5N or FC-9 provide optimum mixed gas to all incubator systems (e.g. Chamlide TC, WP, and IC).
- Usable with various Chamlide chambers or consumable 35mm culture dishes.
- Special glass cover for disposable 35mm dishes to maintain humidity and provide excellent transmission for imaging.
- Able to control temperature and gas concentration, and to program the temperature and gas concentration gradients.
- Able to record the temperature and gas concentration over time with CCP ver.7 software or MetaMorph software.
- Available with in/out ports for perfusion or injection of liquids or drugs without opening the incubator cover. (with CM-B-PA, CM-B-PB, see page 42)





## Specifications

|   |   |
|---|---|
| Temperature range                                 | Ambient +3°C ~ +45°C  |
| Recommended 5% CO <sub>2</sub> /95% air flow rate | 100 ml /min   |
| Incubator physical dimension (mm)                 | Cover 110ø x 12<br>Main body 110ø x 15 (for Olympus)<br>108ø x 15 (for Nikon)   |
| Heating method                                    | Cover invisible coating heater<br>Main body thin layer heater<br>Humidifier cartridge heater<br>Lens warmer thin layer heater |
| Sensor  | PT 100 ohm  |
| Incubator material                                | Black anodized aluminum alloy   |

**Model No.**

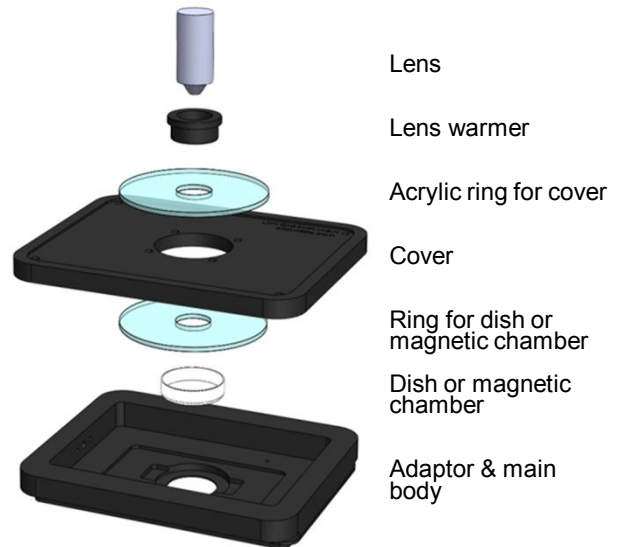
IC-L-10

**Product**

Chamlide IC

# Chamlide UM

## Incubator System for Upright Microscope



- An incubator system with upright microscopes to provide the capability of performing live cell imaging for long term.
- Lens rings are provided to fit all types of objectives including high-resolution immersion lenses.
- Usable with the most standard microscope stages depending on the stage type. (The Chamlide UM may require an incubator holder).
- Designed to fit stages with the universal mounting frame K (e.g. Zeiss standard stage or most XY-motorized stages).
- The rings fit around the objective lens for the experiment. Easy to install the system.
- Various kinds of sample holders are usable including plastic dishes and patented magnetic chambers.
- Cover rings provided with the system to fit either disposable culture dishes or magnetic chambers to maintain the humidity inside of the chamber.
- Compatible with high-resolution condensers and dark field condensers top on inverted microscopes.
- FC-5N or FC-9 are attachable to provide defined concentrations of CO<sub>2</sub> and O<sub>2</sub>.
- Able to program the temperature gradients and to record gas concentrations and temperatures over time.

### Specifications

|  |                               |                                      |
|--|-------------------------------|--------------------------------------|
| Temperature range                                  | Ambient +3°C ~ +45°C          |                                      |
| Recommended 5% CO <sub>2</sub> / 95% Air flow rate | 100 ml/ min                   |                                      |
| Incubator physical dimension (mm)                  | Cover                         | 164.9 (W) x 134 (D) x 11 (H)         |
|  | Main body                     | 160.0 (W) x 130 (D) x 14 (H)         |
|  | (insert part)                 | (160 x 110, universal K insert size) |
| Heating method                                     | Cover                         | invisible coating heater             |
|  | Main body                     | thin layer heater                    |
|  | Humidifier                    | cartridge heater                     |
|  | Lens warmer                   | thin layer heater                    |
| Sensor   | PT 100 ohm                    |                                      |
| Incubator material                                 | Black anodized aluminum alloy |                                      |

|                  |                |
|------------------|----------------|
| <b>Model No.</b> | <b>Product</b> |
| UM-L-10          | Chamlide UM    |

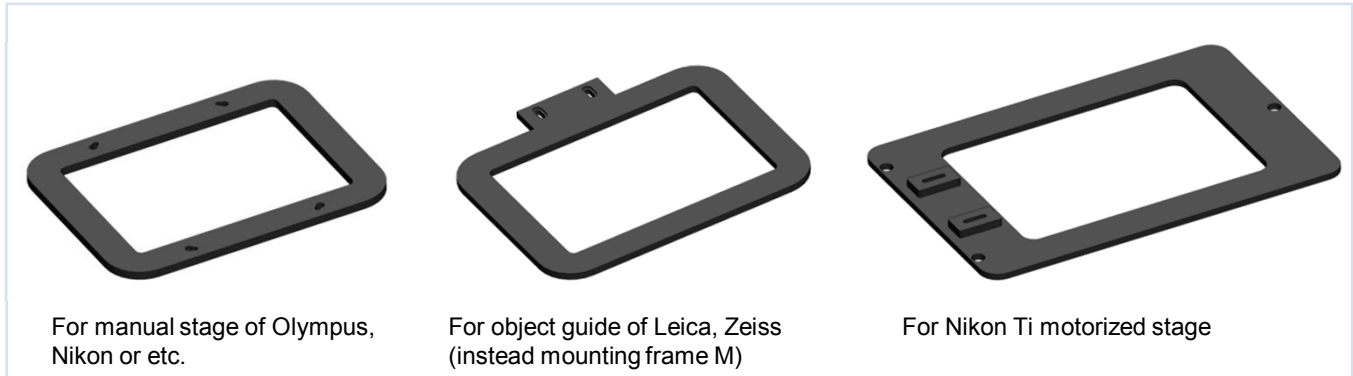


# Incubator Holder

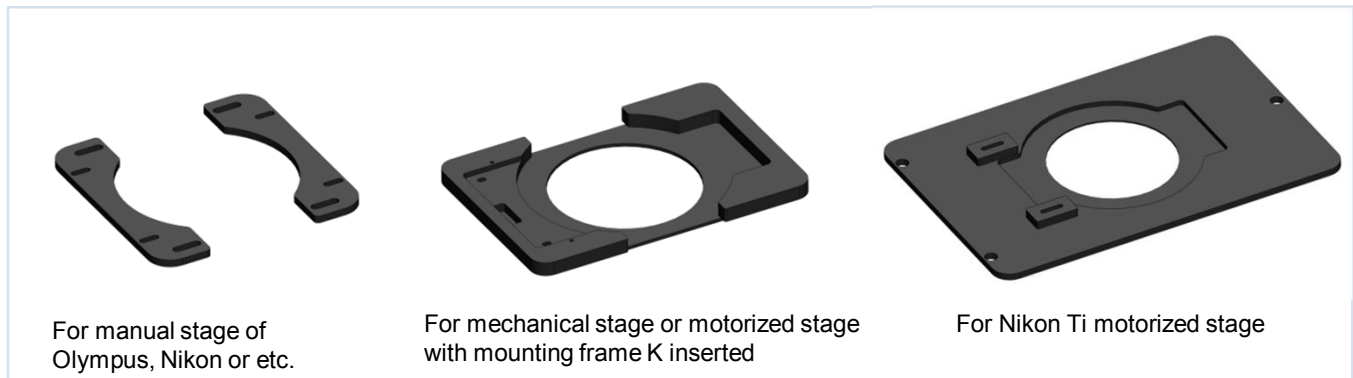
## Stage Adaptors for Chamlide Incubator Systems

- Any types of the incubator holder is customizable to fix the Chamlide incubator system onto any microscopes.

### Incubator Holders for Chamlide TC and Chamlide WP



### Incubator Holders for Chamlide IC



## Specifications

Material

Black anodized aluminum alloy

| Model No. | Product  | Model No. | Product  |
|-----------|--|-----------|--|
| HS-T-10   | Olympus manual stage type incubator holder for Chamlide TC     | HS-W-50   | Nikon Ti motorized stage type incubator holder for Chamlide WP |
| HS-T-20   | Nikon manual stage type incubator holder for Chamlide TC       | HS-W-XX   | Other stage type incubator holder for Chamlide WP              |
| HS-T-30   | Leica mounting frame M type incubator holder for Chamlide TC   | HS-I-10   | Olympus manual stage type incubator holder for Chamlide IC     |
| HS-T-40   | Zeiss mounting frame M type incubator holder for Chamlide TC   | HS-I-20   | Nikon manual stage type incubator holder for Chamlide IC       |
| HS-T-50   | Nikon Ti motorized stage type incubator holder for Chamlide TC | HS-I-30   | Leica mounting frame K type incubator holder for Chamlide IC   |
| HS-T-XX   | Other stage type incubator holder for Chamlide TC              | HS-I-40   | Zeiss mounting frame K type incubator holder for Chamlide IC   |
| HS-W-10   | Olympus manual stage type incubator holder for Chamlide WP     | HS-I-50   | Leica mounting frame M type incubator holder for Chamlide IC   |
| HS-W-20   | Nikon manual stage type incubator holder for Chamlide WP       | HS-I-60   | Zeiss mounting frame M type incubator holder for Chamlide IC   |
| HS-W-30   | Leica mounting frame M type incubator holder for Chamlide WP   | HS-I-70   | Nikon Ti motorized stage type incubator holder for Chamlide IC |
| HS-W-40   | Zeiss mounting frame M type incubator holder for Chamlide WP   | HS-I-XX   | Other stage type incubator holder for Chamlide IC              |

# FC-5N

## Automatic CO<sub>2</sub>/ Air Mixer



- Automatic CO<sub>2</sub> gas mixing and supply system. (Maximum flow rate is 200 ml/min)
- PID control system for precise control of the CO<sub>2</sub> concentration.
- Produces CO<sub>2</sub>/ air mixed gas from 100% CO<sub>2</sub> gas cylinder and ambient air.
- Solenoid valve and a reservoir for gas ripening.
- Internal air pump to provide a large flow.
- Able to regulate the concentration, to program the concentration gradients and to record CO<sub>2</sub> concentration over time with CCP ver.7 software or MetaMorph software.
- 3 kinds of the automatic CO<sub>2</sub>/ air gas mixer depending on the flow rate



2.5 L/min CO<sub>2</sub>/ air mixer



30 L/min CO<sub>2</sub>/ air mixer

### Specifications

|                                |                                     |
|--------------------------------|-------------------------------------|
| Sensor                         | NDIR CO <sub>2</sub> sensor         |
| Control range                  | 1 – 20 % CO <sub>2</sub>            |
| Flow rate                      | Max. 200ml/min, 2.5 L/min, 30 L/min |
| CO <sub>2</sub> control method | PID, solenoid valve                 |

#### Model No.

FC-N-10

FC-HF-30

FC-HF-300

#### Product

FC-5N (meter (Automatic CO<sub>2</sub>/Air mixer), Max 200 ml/min

High flow rate automatic CO<sub>2</sub>/Air mixer, Max 2.5 L/min

Very high flow rate automatic CO<sub>2</sub>/Air mixer, Max 30 L/min

# FC-9

## Automatic O<sub>2</sub>/ CO<sub>2</sub>/ N<sub>2</sub> Mixer



- Automatic O<sub>2</sub> / CO<sub>2</sub> / N<sub>2</sub> gas mixing and supply system.
- Dynamic orifice control valve
- Digital flow meter
- A reservoir for gas ripening
- PID control system for the precise control of the O<sub>2</sub> and CO<sub>2</sub> concentrations.
- Internal air pump to make CO<sub>2</sub> /air mixed gas
- Usable 100% O<sub>2</sub> cylinder to control full range of the O<sub>2</sub> levels from 0% to 100% O<sub>2</sub>.
- Produces mixed gas from 100% CO<sub>2</sub>, 100% O<sub>2</sub> and 100% N<sub>2</sub> gas cylinders

- Produces very low to high concentrations of O<sub>2</sub> mixed gas.
- Able to regulate the concentration, to program concentration gradients and to record the gas concentrations over time with CCP ver.7 software or MetaMorph software.
- FC-9 are customizable and able to adjust the high-flow rate of the mixed gas.

### Specifications

|                |                 |                                    |
|----------------|-----------------|------------------------------------|
| Sensor         | O <sub>2</sub>  | Thermal conductive flow sensor     |
|                | N <sub>2</sub>  | Thermal conductive flow sensor     |
|                | CO <sub>2</sub> | NDIR CO <sub>2</sub> sensor        |
| Control range  | O <sub>2</sub>  | 1 ~99 %                            |
|                | CO <sub>2</sub> | 1 ~ 20 %                           |
|                | Flow rate       | Max. 200 ml/min                    |
| Control method | O <sub>2</sub>  | PID, dynamic orifice control valve |
|                | CO <sub>2</sub> | PID, solenoid valve                |
|                | N <sub>2</sub>  | PID, dynamic orifice control valve |

#### Model No.

FC-R-50

#### Product

FC-9 (Automatic O<sub>2</sub>/CO<sub>2</sub>/N<sub>2</sub> mixer)

# Chamlide HX

## Acrylic Cage Incubator



acrylic cage incubator for Nikon Ti microscope

- Stage-top incubator provides the perfect environment to control most of the live-cell experiments. Super-resolution microscopy is extremely sensitive to the temperature change should use a cage-incubator.
- Cage-incubator provides the precise and synchronized temperature control of the microscope and other devices.
- CO<sub>2</sub> is controllable with a stage-top incubator.
- Use with a humidifier without heating element to keep the humidity in the cage incubator.
- Able to control the temperature and the gas concentration, and to program the temperature and gas concentration gradients.
- Able to record the temperature and the gas concentration over time with CCP ver.7 software or MetaMorph software.
- Any sizes and shapes are customizable.

### Heating Type A



**Temperature controller and a warm air blower**  
Warm air goes into the cage incubator through 2 air tubes from the outlet of blower.

### Heating Type B



**Temperature controller and 2-fan heater modules**  
2-fan heater modules are attached to the right and the left of the cage incubator directly.



acrylic cage incubator for Zeiss Axiovert microscope



Humidifier without heater



Chamlide TC without heater

## Specifications

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Temperature range                 | Ambient +3°C ~ 45°C              |
| CO <sub>2</sub> control           | Use premixed gas or FC-5N, FC-9  |
| Incubator physical dimension (mm) | Variable depending on microscope |
| Heating method                    | Blower heater or 2- fan heater   |
| humidity                          | Humidifier without heater        |
| Sensor                            | Thermo-couple                    |
| Incubator material                | Acrylic plastic                  |

### Model No.

| Model No. | Product                             |
|-----------|-------------------------------------|
| HX-S-10   | Chamlide HX for Olympus microscopes |
| HX-S-20   | Chamlide HX for Nikon microscopes   |
| HX-S-30   | Chamlide HX for Leica microscopes   |
| HX-S-40   | Chamlide HX for Zeiss microscopes   |
| HX-S-XX   | Chamlide HX for other microscopes   |

# Heating Plate

## Heating Plate for Various Types of Chambers



- CU-301 (1 channel temperature controller) with the PID for precise temperature control of the heating plate
- CU-302 (2-channel temperature controller) to control 2 heating plates or an external temperature sensor
- State-of-the-art, ultra-thin thermo-technology (patent pending) to transmit the heat evenly
- Able to regulate the temperature, to program temperature gradients, and to record temperature over time with CCP ver.7 software or MetaMorph software
- Any sizes and/or shapes of the heating plates are customizable upon user's request.

### Specifications

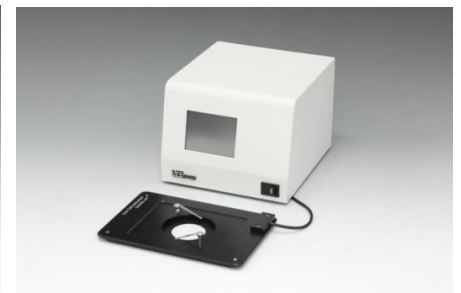
|                     |                               |
|---------------------|-------------------------------|
| Temperature range   | Ambient +3°C ~ +45°C          |
| Temperature control | PID method                    |
| Heating method      | Thin layer heater             |
| Sensor              | PT 100 ohm                    |
| Material            | Black anodized aluminum alloy |



**Heating plate** for 50/60 mm dish type or magnetic chamber for Olympus/Nikon manual stage

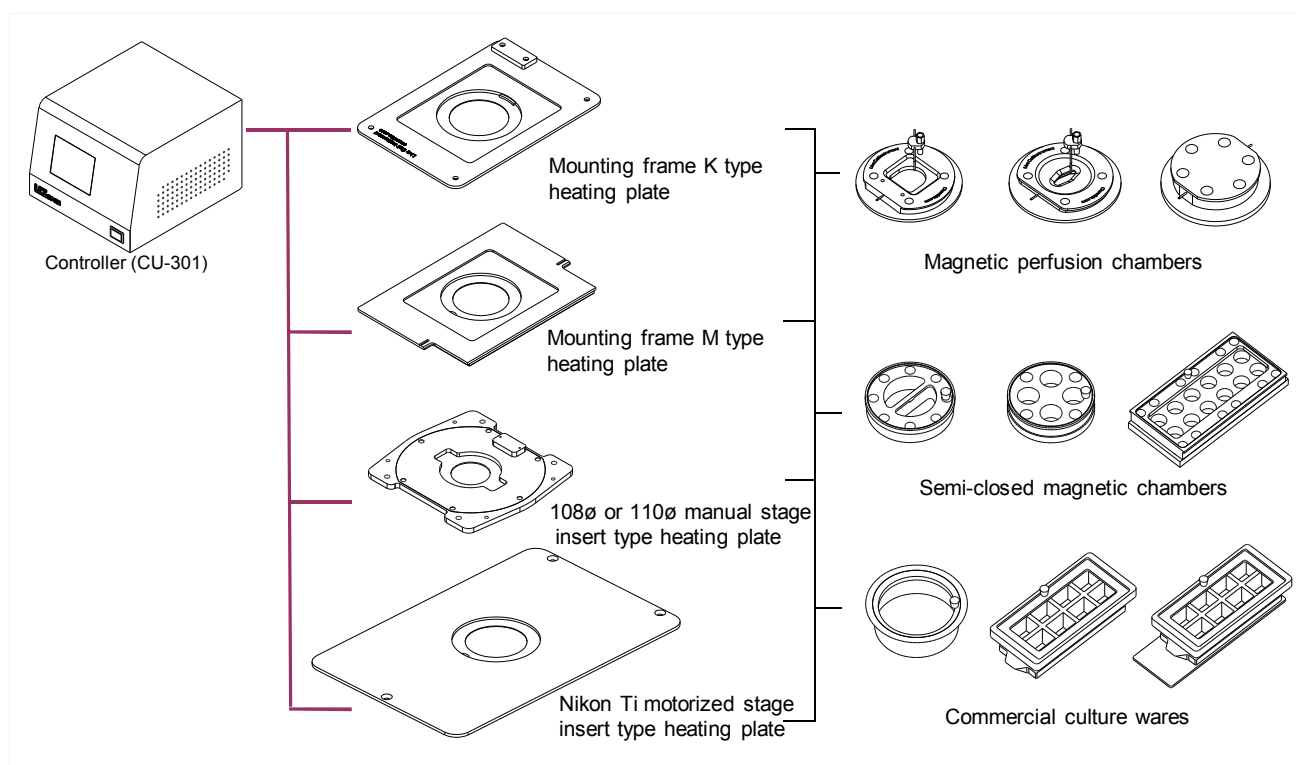


**Heating plate** for 35mm dish type or magnetic chamber for Zeiss/Leica manual stage, most motorized stage, & universal K insert size



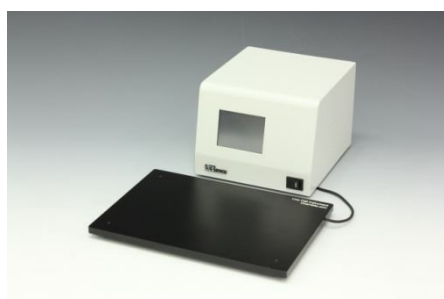
**Heating plate** for 50/60mm dish type or magnetic chamber for Zeiss/Leica manual stage or most motorized stage, & universal K insert size





| Model No. | Product                                     |
|-----------|---|
| HP-R-10   | Olympus manual stage type heating plate     |
| HP-R-20   | Nikon manual stage type heating plate       |
| HP-R-30   | Leica mounting frame K type heating plate   |
| HP-R-40   | Zeiss mounting frame K type heating plate   |
| HP-R-50   | Leica mounting frame M type heating plate   |
| HP-R-60   | Zeiss mounting frame M type heating plate   |
| HP-R-70   | Nikon Ti motorized stage type heating plate |
| HP-R-80   | ASI, LUDL piezo Z-stage type heating plate  |
| HP-R-90   | Well plate size heating plate               |
| HP-R-XX   | Other type heating plate                    |

## Pre-Heating Plate



- Uniform temperature around the surface of the plate
- PID control system for precise temperature
- Various sizes are available

### Specifications

|                                  |  |
|----------------------------------|--|
| Pre-heating plate dimension (mm) | 210 (W) x 160 (D) x 15 (H) (standard size) |
| Temperature range                | Ambient +3°C ~ 45°C                        |

| Model No. | Product           |
|-----------|-------------------|
| PH-S-10   | Pre-heating plate |

# Heating Glass

## Heating Glass for Various Types of Chambers



universal K type



round type

- CU-301 (1 channel temperature controller) with the PID for precise temperature control of the heating glass.
- CU-302 (2 channel-temperature controller) to control 2 heating plates or an external temperature sensor.
- Glass heater is suitable with the upright microscope.
- Able to regulate the temperature, and to program the temperature gradients and to record temperature over time with CCP ver.7 software or MetaMorph software.
- Any sizes and/or shapes of the heating glass are customizable upon user's request.



table type for the stereo microscope with height adjustable legs

### Specifications

|                     |                               |
|---------------------|-------------------------------|
| Temperature range   | Ambient +3°C ~ +45°C          |
| Temperature control | PID method                    |
| Heating method      | Glass heater                  |
| Sensor              | PT 100 ohm                    |
| Material            | Black anodized aluminum alloy |

| Model No. | Product                                     |
|-----------|---|
| HG-S-10   | Olympus manual stage type heating glass     |
| HG-S-20   | Nikon manual stage type heating glass       |
| HG-S-30   | Leica mounting frame K type heating glass   |
| HG-S-40   | Zeiss mounting frame K type heating glass   |
| HG-S-50   | Leica mounting frame M type heating glass   |
| HG-S-60   | Zeiss mounting frame M type heating glass   |
| HG-S-70   | Nikon Ti motorized stage type heating glass |
| HG-S-80   | ASI, LUDL piezo Z-stage type heating glass  |
| HG-S-90   | Well plate size heating glass               |
| HG-C-XX   | Heating glass cover                         |
| HG-T-XX   | Table type heating glass                    |
| HG-S-XX   | Other type heating glass                    |



### customized heating glass cover and base

- cover to control temperature precisely and keep CO<sub>2</sub> gas composition inside
- controlled by CU-302( 2 channel-controller).



# Chamlide CH

## Cooling/ Heating Plate for Various Types of Chambers



- Accurate temperature control from 4°C to 70°C.
- Rapid changes of the temperature setting
- PID controller for precise temperature control
- Cooling and heating are accomplished by Peltier device.
- Cooling fan effectively dissipates heat from the system.
- Peltier device removes the heat with the circulating water radiator.
- Changeable heating and cooling rates depending on the chambers and/or the media
- Inline cooling/ heating fluidic controller are for perfusion.
- Able to program temperature gradients and to record temperatures over time with CCP ver. 7. software or MetaMorph software
- Any sizes or shapes of the cooling/ heating plates are customizable upon user's request.

### Specifications

|                        |  |             |
|------------------------|--|-------------|
| Temperature range      | Cooling fan                                  | 15°C ~ 80°C |
|                        | Radiator                                     | 5°C ~ 80 °C |
| Temperature control    | PID method                                   |             |
| Cooling/heating method | Peltier                                      |             |
| Sensor                 | PT 100 ohm                                   |             |
| Material               | Black anodized aluminum alloy, polycarbonate |             |

#### Model No.

CH-R-10

CH-R-20

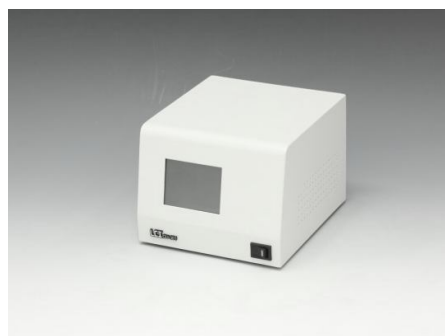
#### Product

Cooling fan type cooling/heating plate

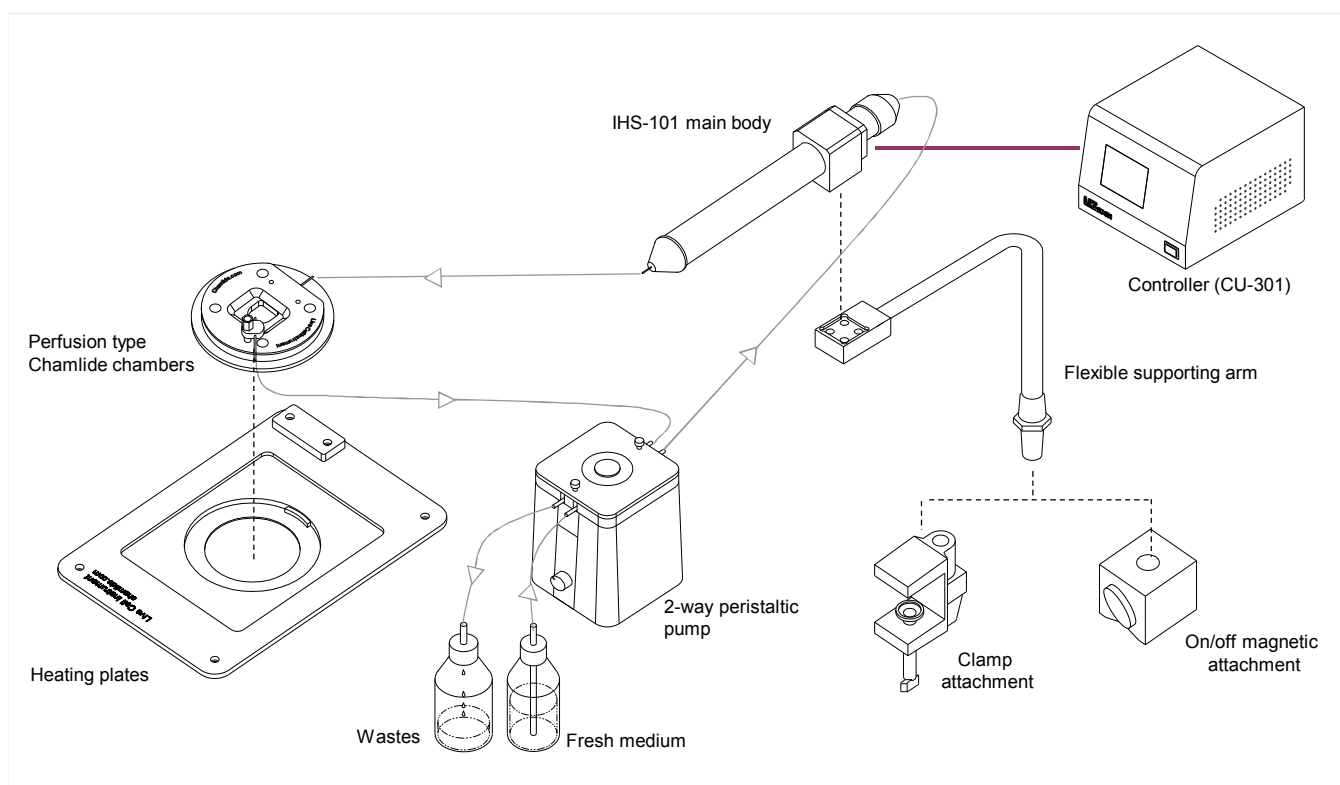
Radiator type cooling/heating plate

# IHS-101

## Fluidic Inline Heater



- Very simple and effective in-line solution heating to warm perfusion solutions.
- Minimal dead volume of 150  $\mu\text{l}$ .
- Magnetic system connects the body of HIS-101 to the supporting arm which is flexible for easy installation on the microscope.
- Attachable supporting arm either directly to the microscope or to elsewhere with a clamp or an on/off magnetic attachment.
- CU-301 with the PID system for the precise temperature control of the medium to flow directly into the chamber.
- Able to regulate the temperature, and to program the temperature gradients and to record the temperature over time with CCP ver.7 software or MetaMorph software.



Perfusion Experiment

### Specifications

|                                  |   |
|----------------------------------|---|
| Internal dead volume             | 150 $\mu\text{l}$   |
| Inlet/outlet tubing size         | O.D 1.1mm, ID 0.7mm   |
| Heating method                   | Cartridge heater  |
| Temperature range                | Ambient +3°C ~ +45°C  |
| Inline heater dimension          | 20 mm $\varnothing$ x 139 mm  |
| Supporting arm length            | 500 mm  |
| Inline heater main body material | Main body      acetal component and aluminum alloy<br>Supporting arm    steel stainless, plastic or on/off magnet |

**Model No.**

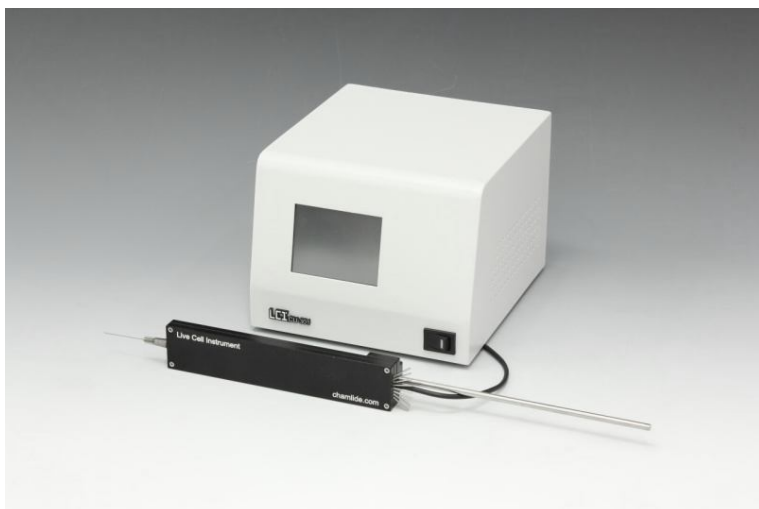
IL-H-10

**Product**

IHS-101 (Fluidic inline heater)

# IHS-801

## 8-Channel Fluidic Inline Heater



- Able to apply 8 different solutions to the cells.
- Combined with X-Y-Z micromanipulator, movable outlet of IHS-801 close to the cells. (option)
- Other functions are the same as the IHS-101.
- CU-301 controller with the PID system for precise temperature control of the medium to flow directly into the chamber.
- Able to regulate the temperature, and to program the temperature gradients and to record the temperature over time with CCP ver.7 software or MetaMorph software.



Outlet needle (different sizes)



8 channels connected to the end of the outlet to minimize the dead volume during solution change

### Specifications

|                         |  |
|-------------------------|--|
| Internal dead volume    | 35 $\mu$ l /each tubing                      |
| Tubing size             | OD 1.1mm                                     |
| Heating method          | Cartridge heater                             |
| Temperature range       | Ambient +3°C ~ +45°C                         |
| Inline heater dimension | 20mm (W) X 20mm (D) X 100mm (L) without pole |
| Inline heater material  | Acetal component and aluminum alloy          |

### Model No.

IL-H-80

### Product

IHS-801 (8 channel-fluidic inline heater)

# IHC-101

## Fluidic Inline Solution Cooler & Heater



- Very simple and effective of cooling and warming perfusion solutions
- Minimal dead volume is 150  $\mu\text{l}$ .
- Solutions are adjustable from low to high temperatures quickly.
- Cooling and heating is accomplished by Peltier device.
- Peltier device generates the heat and a cooling fan dissipates the heat.
- Radiator removes the temperature below 15°C, generated by the Peltier device, with circulating water.
- Usable with a cooling/ heating plate
- Customizable designs upon the request
- The controller with the PID system for the precise temperature control of the medium to flow directly into the chamber
- Able to program the temperature gradients and to record the temperature over time with CCP ver. 7 software or MetaMorph software

### Specifications

|                        |  |             |
|------------------------|--|-------------|
| Temperature range      | Cooling fan                                  | 15°C ~ 45°C |
|                        | Radiator                                     | 5°C ~ 45°C  |
| Temperature control    | PID method                                   |             |
| Cooling/heating method | Peltier                                      |             |
| Sensor                 | PT 100 ohm                                   |             |
| Material               | Black anodized aluminum alloy, polycarbonate |             |

### Model No.

IHC-R-10

IHC-R-20

### Product

Cooling fan type Fluidic inline solution cooler/heater

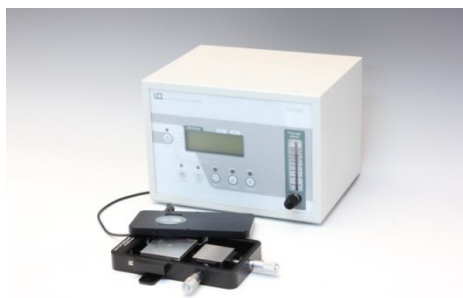
Radiator type Fluidic inline solution cooler/heater



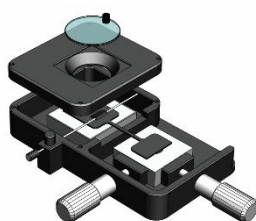


# Chamlide TR

## Temperature Ramping Control System (TRCS)



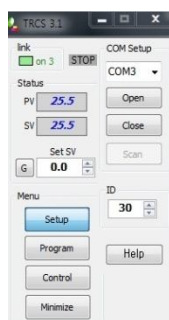
- Dynamic temperature control.
- Programmable temperature gradient.
- Fit to any type of microscopes.
- Various types and shapes of heating stages are available.
- Magnetic XY micro movement stage for the sample.
- 300°C is the standard (500°C is optional).
- Control program is essential for the temperature ramping system.



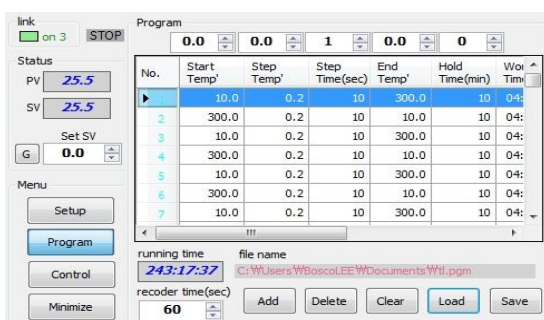
Heating stage with pushing bars to spread the sample solution



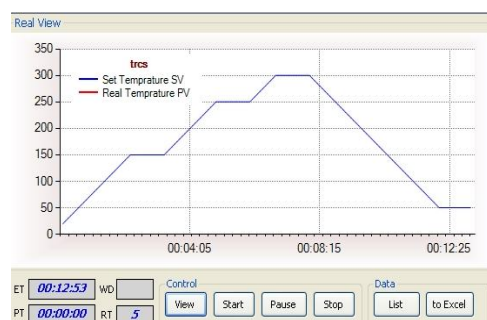
Gas heating stage with inlet/outlet port to apply gas



main window



program window to set the value



set temperature value & real temperature value in the window

- TRCS version 3.1 provides excellent and easy environment to control the system.
- Ramping temperature is controlled in every second to obtain desired temperature and rate.
- Able to set the desired temperature and rate in the program, which automatically presents in a new window.
- Real temperature value with set temperature value to observe the progress of the experiment conveniently.
- Able to save and to export all data to Excel.

### Specifications

Temperature range

Ambient +3°C ~ +300°C (TR-H-30)

Ambient +3°C ~ +500°C (TR-H-50)

Material

Steel, Black anodized aluminum

Stage movement

10mm to XY axis

### Model No.

TR-H-30

TR-H-50

### Product

TR heating stage for microscope (Max temp 300°C)

TR heating stage for microscope (Max temp 500°C)

# Chamlide CP

## Water Circulation Incubator with Water Circulation Bath



- Temperature of the water circulation bath is controllable with CCP program.
- Water circulation incubator, water circulation bath, and temperature controller are the standard option.
- Water circulation lens winder to prevent heat dissipation
- Water circulation plate/ cover/ lens winder can separately be provided with a water circulation bath.
- Water circulation incubator is to control low to high temperature for Chamlide magnetic chambers (e.g. Chamlide AC, EC, CF or commercial culture dishes).
- Water circulation incubator should be used with a circulation water bath to control the temperature of the chamber and to adjust the temperature.
- Any size of water circulation plate are customizable to fit all microscope stages.



Water circulation incubator (plate, cover, and adaptors)



Water circulation lens winder

### Model No.

CP-R-10

CP-C-10

CP-L-10

CP-W-10

### Product

Water circulation plate

Water circulation cover

Water circulation lens winder

Water circulation bath (control temp. - 20 ~ 100°C)



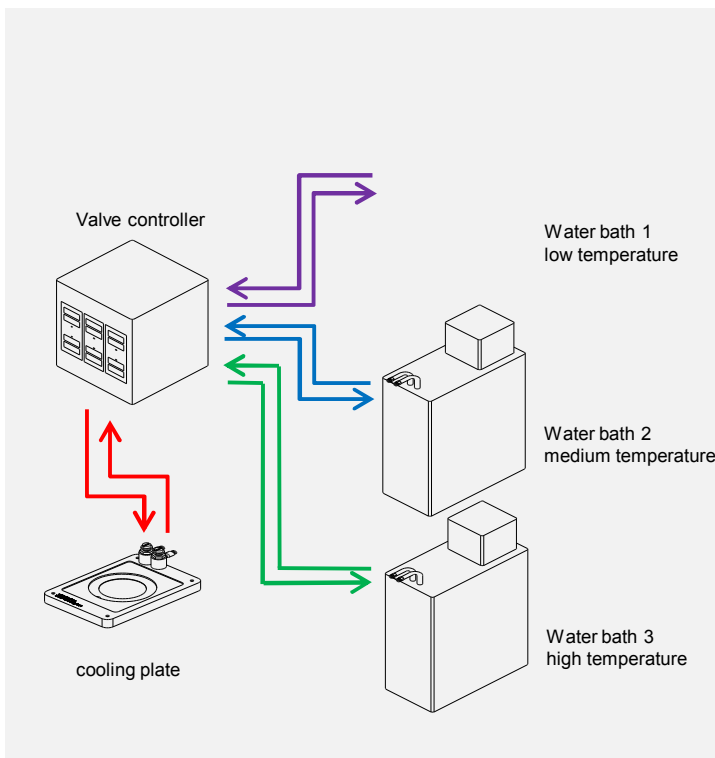
# VC-3

## Valve Controller for 3 Water Circulation Baths

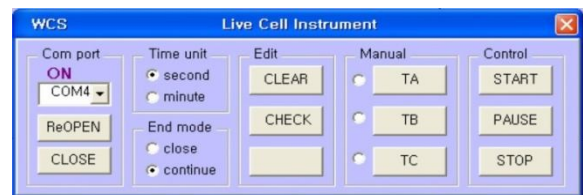


Water circulation plate with 3-channel valve system

- Most effective way to use water circulation baths is to set different temperatures and circulate water to the valve system.
- For immediate temperature change, flow the water from a the bath of the desired temperature to the water circulation plate.



Rapid temperature change experiment



Valve control program

| Status | step/t | c.data | c.delay | t.delay | time   |
|--------|--------|--------|---------|---------|--------|
|        | 5/36   | TA     | 1s      | 36s     | 0:04.6 |
| TA     | 1      |        |         | 1       | 1      |
| TB     | 1      |        | 1       | 1       | 1      |
| TC     |        | 1      |         |         | 1      |
| step   | 1      | 2      | 3       | 4       | 5      |
| data   | TA:1   | TB:1   | TC:1    | TB:1    | TA:1   |

Program windows to show user-programmable sequence of the valve control

**Model No.**

VC-R-3

**Product**

Valve controller for 3 water circulation baths

# In Vivo Imaging Stage System

## Mouse and Rat In Vivo Imaging Stage for Upright Microscope



- Microscope plate to stabilize the animal during the experiment.
- Our motorized stage fit to all upright microscopes.
- Observation area is movable with a joystick in micro-level.
- Height is adjustable by 2 hand-knobs depending on an animal size.
- Controllable with software to acquire multi-positional image.

| Model No. | Product  |
|-----------|--|
| US-M-10   | Motorized stage for animal-experimental upright microscope |

### Heating Plate with Traditional Stereotaxic Fixation

- A heating plate to maintain the body temperature of the animal.
- Traditional stereotaxic device with ear bars and a tooth holder
- Tooth holder parts of the heating plate contains an anesthesia mask adaptor that connects to anesthesia tubing.



### Heating Plate with Block Type Fixation



- A heating plate with a block type fixation can be used on bones (e.g. skull) with dental cement or adhesive.
- Shapes and sizes are customizable according to experimental purposes.
- Forceps pusher to experiment specific areas for imaging
- Heating plate to maintain an animal's body temperature
- Fixed part is assembled to a heating plate with screws.
- Anesthesia mask adaptor to connect anesthesia tubing



A block type fixation part to attach bones (e.g. skull)

## Heating Plate with Ring Type Fixation



- Designed to image the skull of small animals through a ring hole fixed on the skull.
- Usable coverslip on the hole (standard OD12mm).
- Able to allow coverslips to get a good imaging without dried tissues and diffused media reflection.
- Ring is made of titanium to increase strength and to reduce weight.
- Fixed ring type should be used after fixing bones with adhesive or dental cement.
- Without anesthesia, the device can be easily dis/assembled by the magnetic force.
- Useable with a heating plate to maintain the body temperature of the animal.
- Equipped with an application of gas anesthesia.
- Anesthesia mask adaptor to connect anesthesia tubing.



**Model No.**

US-R-10

US-R-10R

US-R-20

US-R-30

**Product**

Heating plate with traditional stereotaxic type fixation device for mouse

Heating plate with traditional stereotaxic type fixation device for rat

Heating plate with block type fixation device for mouse

Heating plate with ring type fixation device for mouse

## Heating plate with the small intestine holder



**Model No.**

US-R-40

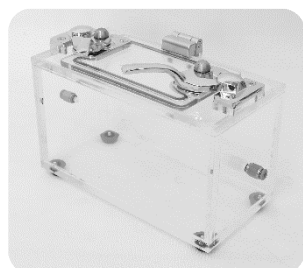
**Product**

Heating plate for mouse's small intestine

## Anesthesia Machine with Anesthesia Chamber for mouse



Anesthesia machine



Anesthesia chamber

**Model No.**

US-A-70

US-A-70C

**Product**

Anesthesia machine

Anesthesia chamber

# DS-1 (IVF Chamber)

## In Vitro Fertilization Environmental System



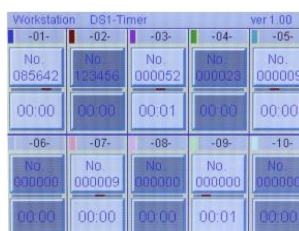
DS-1, 10-chamber type

- 3-Touchscreen control panel for ease of use: temperature, gas flow, and timer
- Controllable gas concentration, and amount of gas influx by computer software
- Temperature sensor, CO2 and O2 sensor for monitoring for each chamber
- Rapid CO2 recovery in each chamber after chamber opening

- Dry Incubator System (DS-1) has pre-heating culture media to prevent evaporation and contamination of the embryo that is highly effective in the IVF procedure.
- Easily attachable HEPA filter eliminates the fine dust.
- Temperature regulation for each chamber
- Separate gas line for each chamber
- Alarm system alerts the undesired parameter changes.
- Able to check the operating status via real-time graphs of all control parameters.
- Optional humidifying reservoir for each chamber without risk of contamination.



11-channel temperature control touch screen



Timer & numbering function



Tri-gas control & flow meter

### Model No.

DS-R-02  
DS-R-04  
DS-R-06  
DS-R-10

### Product

Table-top incubator 2 - chamber type  
Table-top incubator 4 - chamber type  
Table-top incubator 6 - chamber type  
Table-top incubator 10 - chamber type

# FS-1 (IVF Chamber)

## In Vitro Fertilization Environmental System



FS-1, single IVF chamber

- Organ of FS-1 controls the suitable temperature, CO2 level for the screening egg cells or embryos, and other procedures.
- Movable, roomy enough to fit any kinds of microscope including the stereo microscope
- Effective magnetic revolving open/close system for each opening to prevent the air flow from outside
- Lockup holder to fix a CO2 tank in a position
- Polycarbonate or reinforced acrylic plate are customizable for the front transparent panel. (Standard type: polycarbonate plate)
- Touchscreen monitor to display microscopic camera images
- Separate on/off switches for CO2, humidity, and HEPA filter.

### Model No.

FS-R-10

FS-R-12

### Product

Single IVF environmental chamber for 1 operator

Double IVF environmental chambers for 2 operators (in the front and the back)

# LS-1(IVF work station)

## In Vitro Fertilization Environmental System



LS-1, Work station for single operator

- Work station for various biomedical experiment.
- Built-in heating system on the work surface.
- Customizable size of the work station.
- Compatible with all types of microscopes.
- Installable with additional CO2 / O2 gas modules.

### Model No.

LS-R-10

LS-R-20

### Product

Single IVF work station for 1 operator

Double IVF work station for 2 operators



# CR Series

## Temperature Indicators

3 different types of the temperature indicators (medium volume) are thin and sensitive not to cause a temperature change.



TS-M

### Specifications

|                             |                |
|-----------------------------|----------------|
| Temperature range           | - 200 ~ 500°C  |
| Step                        | 0.1 °C         |
| Communication with computer | Not available. |
| Power                       | 100 ~ 240 V    |



TS-C

### Specifications

|                             |                 |
|-----------------------------|-----------------|
| Temperature range           | - 200 ~ + 500°C |
| Step                        | 0.1 °C          |
| Communication with computer | via CU-501      |
| Power                       | 100 ~ 240 V     |

CCP program saves and monitors all data.



TS-CD

### Specifications

|                             |               |
|-----------------------------|---------------|
| Temperature range           | - 200 ~ 500°C |
| Step                        | 0.1 °C        |
| Communication with computer | via RS-232    |
| Power                       | 100 ~ 240 V   |

CCP program saves and monitors all data.

### Model No.

TS-B

### Product

PT 100 sensor only (Can be connect with CU-501)

TS-M

Temperature indicator with ultra thin thermocouple (No communication with computer)

TS-C

Temperature indicator with ultra thin thermocouple (communication with computer via CU-501)

TS-CD

Temperature indicator with ultra thin thermocouple (communication with computer via RS-232 port)



## Chamlide Magnetic Chambers

### 1. Easy Installation

Patented magnetic system to allow quick and easy assembly

### 2. Cost-effective

Semi-permanent, replacing consumable culture-ware and expensive coverslip-bottomed dishes.

### 3. High resolution of the live cell imaging

Coverslips (thickness 0.15mm~0.20 mm) to allow high resolution imaging

## Chamber with Coverslip

- For high resolution microscopy, the high numerical aperture of an optical system is required with very short working distance.
- Coverslip with 0.15mm~0.20 mm thickness
- Coverslip has an appropriate reflective index (~1.515) using oil or water immersion objective lenses.

## Types of Observation Chambers

### 1. Non-perfusion Semi-closed Chambers

- Required to control the temperature, CO<sub>2</sub> concentration and humidity in the chamber
- Put into the incubator systems such as Chamlide TC, Chamlide WP, and Chamlide IC.

### 2. Perfusion Closed Chambers

- For small volume-perfusion or rapid perfusion.
- Fresh medium perfused into the chamber, not need to control CO<sub>2</sub> concentration and humidity.
- Maintain the temperature of the chamber and the fresh medium with a heating plate and a fluidic inline heater

### 3. Perfusion Opened Chambers

- Usable with the exterior manipulator or able to inject some solutions (e.g. chemical agents or drugs)
- Fresh medium perfused into the chamber, not need to control CO<sub>2</sub> concentration and humidity.
- Maintain the chamber temperature and the fresh medium with a heating plate and a fluidic inline heater

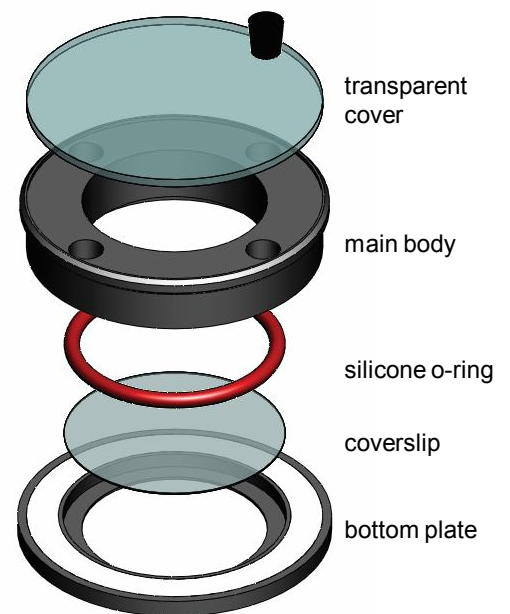
# Chamlide CMB

## 35mm Dish Type 1 Well Magnetic Chambers for Round Coverslip

- Patented magnetic system for easy assembly
- User friendly and safe
- Installation takes a few seconds.
- The exterior size is the same as 35mm culture dish.
- Re-useable and replaceable coverslip-bottomed 35mm dishes
- Usable with the Chamlide MB (multi-hole bottom plate) and the Chamlide MD (6 dish holder)
- Controllable biological environment with Chamlide incubator systems (e.g. Chamlide TC, Chamlide IC, or Chamlide WP) for 6-well plate and gas mixing systems (e.g. FC-5 or FC-7)



Chamlide CMB for 18mm and 25mm coverslip

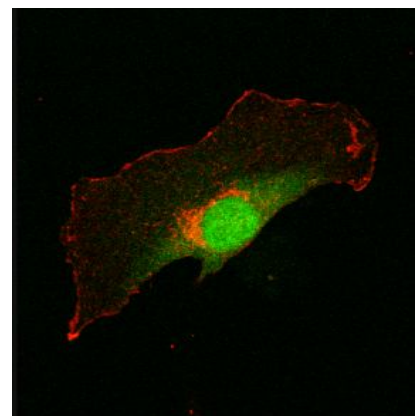


patented magnetic chamber system

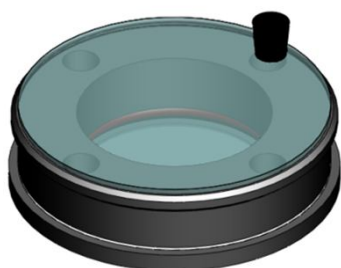
### How to use Chamlide magnetic chambers

1. Culture the cells on a coverslip.
2. With a forceps, transfer a coverslip to the bottom plate.
3. Place the main body close to the bottom plate.  
(The main body will automatically attach to the bottom plate by magnetic force.)
4. Fill the chamber with an observation medium.

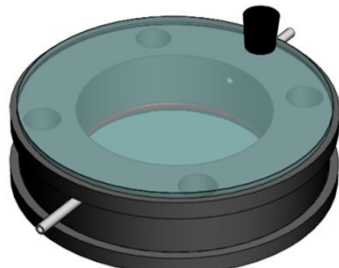
\* You can also use pre-assembled chamber to directly seed the cells.



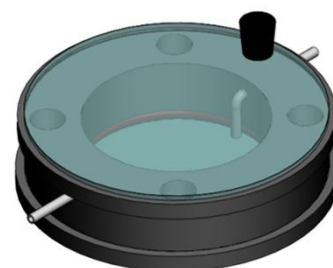
## ■ Chamlide CMB for Injection



standard Chamlide CMB



straight tubing type Chamlide CMB



L-shape tubing type Chamlide CMB

- Chamlide CMBs for injection: straight tubing type Chamlide CMB and L-shape tubing type Chamlide CMB.
- Straight / L-shape tubing type are injectable to the fresh medium or drug into the chamber.
- L-shape tubing type Chamlide CMB is removable to the medium inside the chamber with suction.

## Specifications

35mm dish type magnetic chamber for 18mm coverslip internal volume

Maximum 1.2 ml

35mm dish type magnetic chamber for 25mm coverslip internal volume

Maximum 2.7 ml

Chamber material

|        |                       |
|--------|-----------------------|
| Body   | Black polycarbonate   |
| Bottom | Aluminum alloy, steel |
| Cover  | Glass                 |
| O-ring | Silicone              |

| Model No.  | Product                                | Model No.  | Product                                |
|------------|--|------------|--|
| CM-B12-1   | Chamlide CMB for 12mm round coverslips | CM-B20-1   | Chamlide CMB for 20mm round coverslips |
| CM-B12-1PA | Straight tubing type CM-B12-1          | CM-B20-1PA | Straight tubing type CM-B20-1          |
| CM-B12-1PB | L-shape tubing type CM-B12-1           | CM-B20-1PB | L-shape tubing type CM-B20-1           |
| CM-B15-1   | Chamlide CMB for 15mm round coverslips | CM-B22-1   | Chamlide CMB for 22mm round coverslips |
| CM-B15-1PA | Straight tubing type CM-B15-1          | CM-B22-1PA | Straight tubing type CM-B22-1          |
| CM-B15-1PB | L-shape tubing type CM-B15-1           | CM-B22-1PB | L-shape tubing type CM-B22-1           |
| CM-B18-1   | Chamlide CMB for 18mm round coverslips | CM-B25-1   | Chamlide CMB for 25mm round coverslips |
| CM-B18-1PA | Straight tubing type CM-B18-1          | CM-B25-1PA | Straight tubing type CM-B25-1          |
| CM-B18-1PB | L-shape tubing type CM-B18-1           | CM-B25-1PB | L-shape tubing type CM-B22-1           |

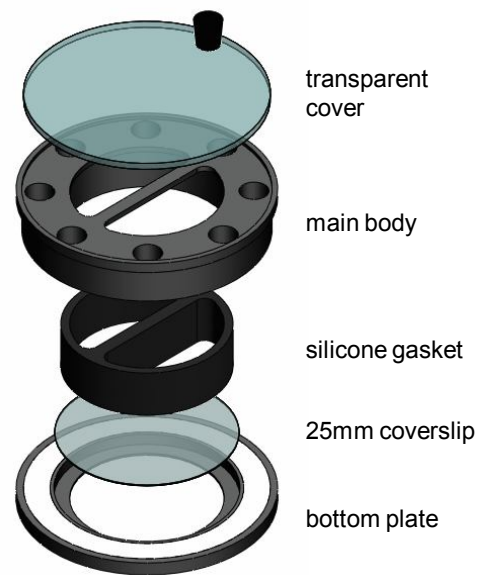
# Chamlide CMM

## 35mm Dish Type Multi-Well Magnetic Chambers for Round Coverslip

### 2 / 4-Well Chamlide CMM with 25mm Round Coverslip



- 2-well chamber and 4-well chamber for 25mm round coverslip
- Silicon gasket prevents leaking of the medium between wells.
- Exterior size of CM-M25-2/4 is the same as 35mm culture dish.
- Usable with the Chamlide MB (multi-hole bottom plate) and the Chamlide MD (6-dish holder).
- Controllable biological environment using Chamlide incubator systems (e.g. Chamlide TC, Chamlide IC, or Chamlide WP) for 6-well plate and gas mixing systems (e.g. FC-5 or FC-7)
- Other features are the same as Chamlide magnetic chamber.



### Specifications

25mm coverslip type 2-well magnetic chamber (CM-M25-2) internal volume  
 25mm coverslip type 4-well magnetic chamber (CM-M25-4) internal volume  
 12mm coverslip type 4-well magnetic chamber (CM-M12-4) internal volume  
 Chamber material

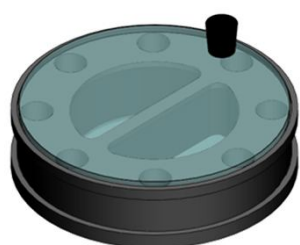
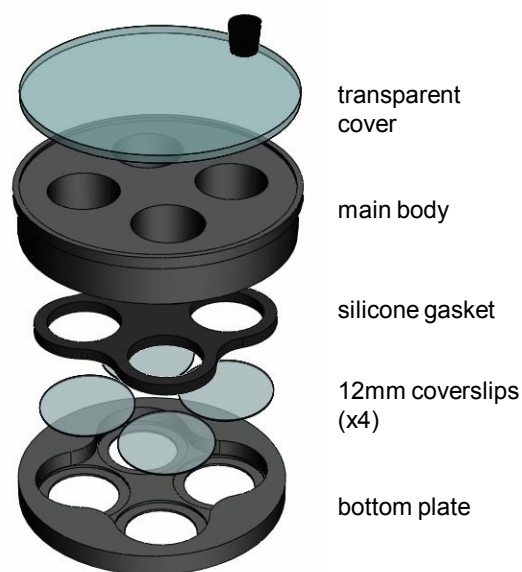
Maximum 1.0 ml / well  
 Maximum 450  $\mu$ l / well  
 Maximum 400  $\mu$ l / well

|        |                       |
|--------|-----------------------|
| Body   | Black polycarbonate   |
| Bottom | Aluminum alloy, steel |
| Cover  | Glass                 |
| Gasket | Silicone              |

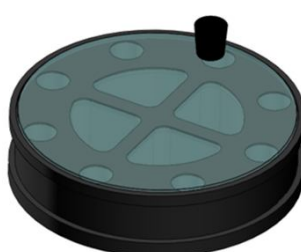
## 4-Well Chamlide CMM for 12mm Round Coverslip



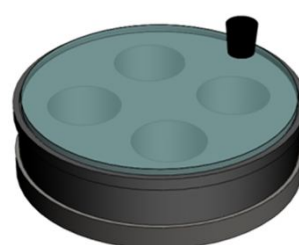
- 4-well chamber for 12mm round coverslips.
- Four 12mm coverslips and a silicone gasket are usable.
- The exterior size of Chamlide CM-M12-4 is the same as 35mm culture dish.
- Other features are the same as Chamlide magnetic chamber.
- Usable with Chamlide MD (6-dish holder).
- The biological environment is controllable using Chamlide incubator systems (e.g. Chamlide TC, Chamlide IC, or Chamlide WP) for 6-wellplate and gas mixing systems (e.g. FC-5 or FC-7) for live cell imaging.



2-well Chamlide CMM  
for 25mm round coverslip



4-well Chamlide CMM  
for 25mm round coverslip



4-well Chamlide CMM  
for 12mm round coverslip

### Model No.

CM-M25-2

CM-M25-4

CM-M12-4

### Product

2-well Chamlide CMM for 25mm round coverslip

4-well Chamlide CMM for 25mm round coverslip

4-well Chamlide CMM for 12mm round coverslip



# Chamlide CMS

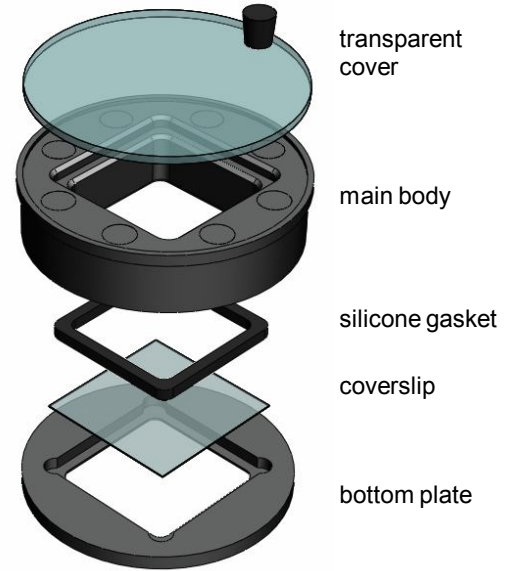
## 35mm Dish Type Magnetic Chambers for Square Coverslip

### 1 Well Chamlide CMS



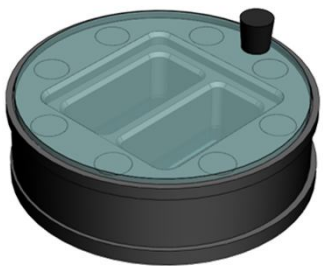
#### Coverslip

18 mm x 18 mm  
20 mm x 20 mm  
22 mm x 22 mm  
24 mm x 24 mm



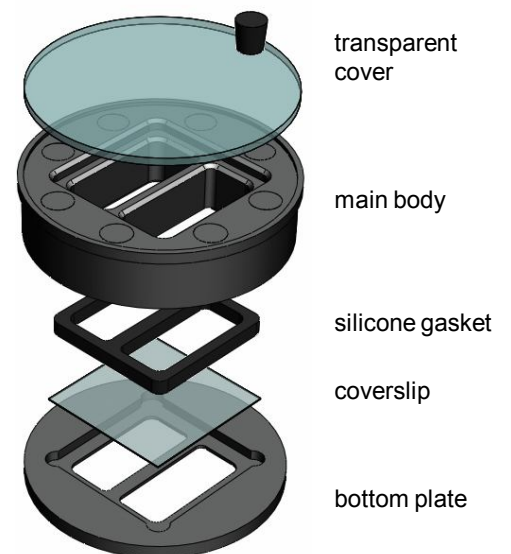
- 1 well Chamlide CMS is for the square coverslip, and 18 x 18 / 20 x 20 / 22 x 22 / 24x24mm coverslips are available.
- Other functions and features are the same as the standard type Chamlide CMB.

### 2-Well Chamlide CMS



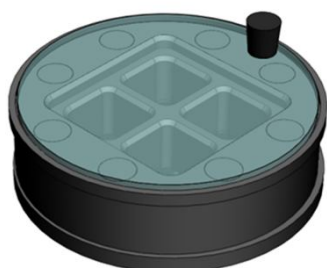
#### Coverslip

18 mm x 18 mm  
20 mm x 20 mm  
22 mm x 22 mm  
24 mm x 24 mm



- 2-well Chamlide CMS is for the square coverslip, and 18 x 18 / 20 x 20 / 22 x 22 / 24x24mm coverslips are available.
- Other functions and features are the same as the standard type Chamlide CMM.

## 4-Well Chamlide CMS



### Coverslip

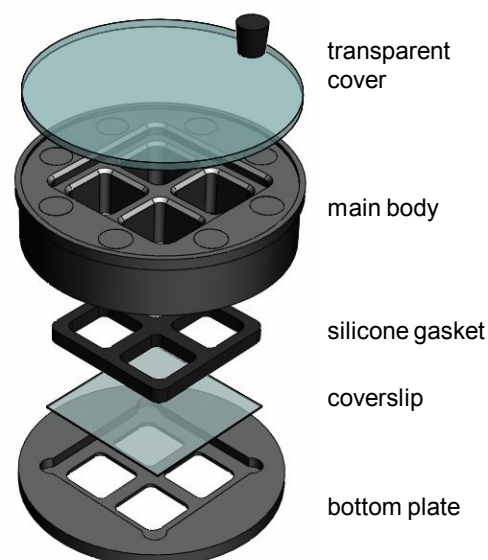
18 mm x 18 mm

20 mm x 20 mm

22 mm x 22 mm

24 mm x 24 mm

- 4-well Chamlide CMS is for the square coverslip, and 18 x 18 / 20 x 20 / 22 x 22 / 24x24 coverslip is available.
- Other functions and features are the same as the standard type Chamlide CMM.



## Specifications

24x24 coverslip type 1 well magnetic chamber internal volume

24x24 coverslip type 2-well magnetic chamber internal volume

24x24 coverslip type 4-well magnetic chamber internal volume

Chamber material

Maximum 2.0 ml / well

Maximum 800  $\mu\text{l}$  / well

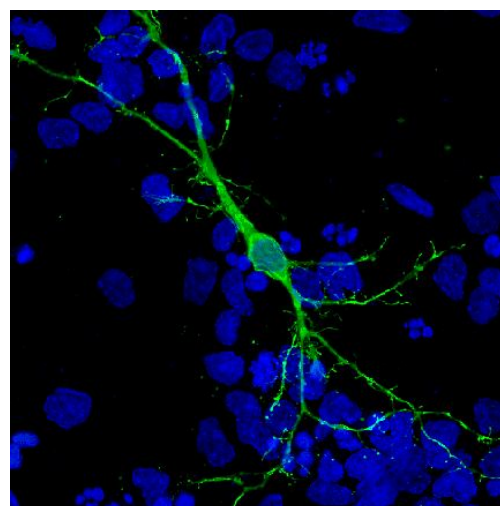
Maximum 400  $\mu\text{l}$  / well

|        |                     |
|--------|---------------------|
| Body   | Black polycarbonate |
| Bottom | Aluminum alloy      |
| Cover  | Glass               |
| Gasket | Silicone            |

### Model No.

### Product

|          |   |
|----------|---|
| CM-S18-1 | 1 well Chamlide CMS for 18mmx18mm coverslip |
| CM-S20-1 | 1 well Chamlide CMS for 20mmx20mm coverslip |
| CM-S22-1 | 1 well Chamlide CMS for 22mmx22mm coverslip |
| CM-S24-1 | 1 well Chamlide CMS for 24mmx24mm coverslip |
| CM-S18-2 | 2-well Chamlide CMS for 18mmx18mm coverslip |
| CM-S20-2 | 2-well Chamlide CMS for 20mmx20mm coverslip |
| CM-S22-2 | 2-well Chamlide CMS for 22mmx22mm coverslip |
| CM-S24-2 | 2-well Chamlide CMS for 24mmx24mm coverslip |
| CM-S18-4 | 4-well Chamlide CMS for 18mmx18mm coverslip |
| CM-S20-4 | 4-well Chamlide CMS for 20mmx20mm coverslip |
| CM-S22-4 | 4-well Chamlide CMS for 22mmx22mm coverslip |
| CM-S24-4 | 4-well Chamlide CMS for 24mmx24mm coverslip |



# Chamlide PT

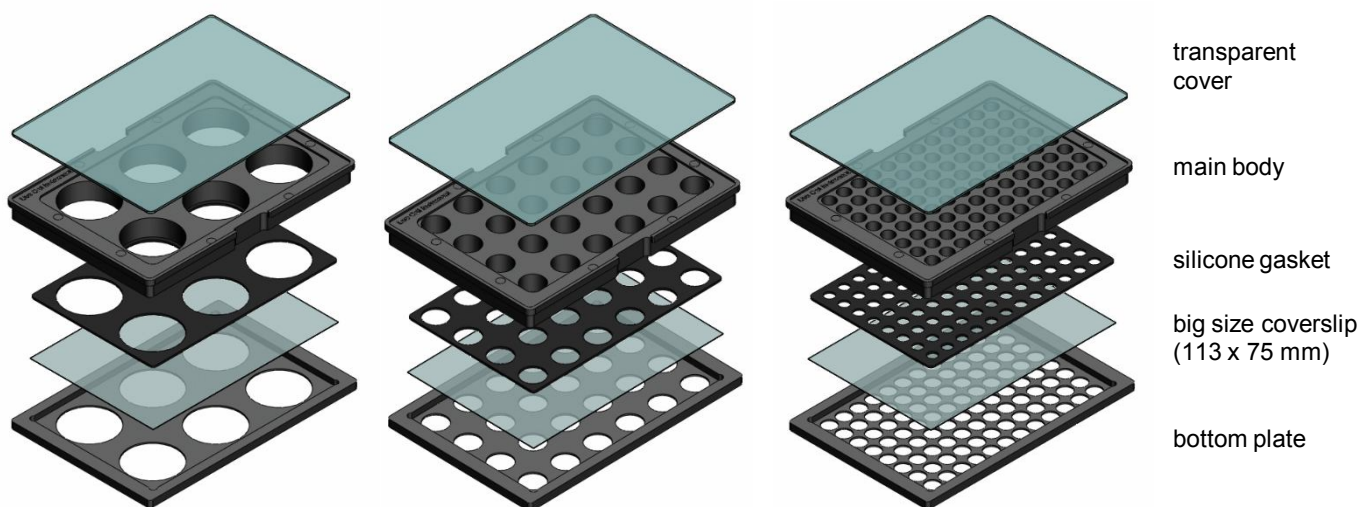
## Well Plate Type Multi-Well Magnetic Chamber



- Disposable cover glass bottomed well plate is replaceable.
- Semi-permanent
- The bottom cover glass are simply removable and replaceable for the next use.
- Auto-cleavable
- Silicone gaskets to prevent leaking
- Big size (113mm x 75mm, #1.5, thickness ~0.17mm) coverslip. (See Page 49, 70091137B)
- Metal bottom for stable temperature control during the live cell imaging
- Non-toxic and non-reactive polycarbonate material
- Patented magnetic multi-well chamber system for easy installation
- Temperature and CO2 level are controllable with Chamlide WP and FC-5 for live cell imaging.

### How to use Chamlide PT

1. Put the big size coverslip (113mm x 75 mm) into the bottom plate.
2. Fit the main body with the silicone gasket.
3. Place the main body close to the bottom plate  
(The main body will automatically attach to the bottom plate by **magnetic force**.)
4. Seed the cells into the chamber
5. Use it with Chamlide WP for the live cell imaging or put it in the CO2 incubator for cell culture.



6-well Chamlide PT

24-well Chamlide PT

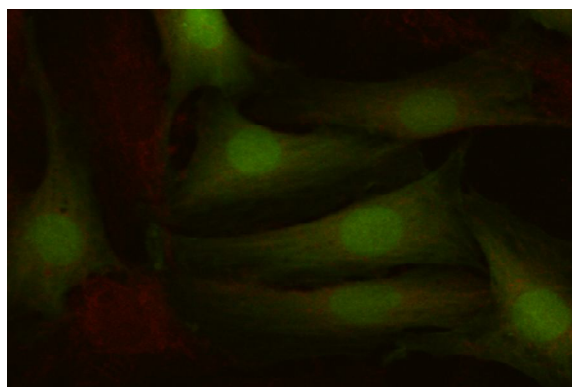
96-well Chamlide PT



**Specifications**

|   |           |                                      |
|---|-----------|--------------------------------------|
| 6-well plate type magnetic chamber internal volume  | Maximum   | 5.5 ml / well                        |
| 24-well plate type magnetic chamber internal volume | Maximum   | 1.0 ml / well                        |
| 96-well plate type magnetic chamber internal volume | Maximum   | 230 $\mu$ l / well                   |
| Material  | Main body | Black polycarbonate                  |
|   | Bottom    | Black anodized aluminum alloy, steel |
|   | Cover     | Glass                                |
|   | Gasket    | Silicone                             |

| Model No. | Product             |
|-----------|---------------------|
| PT-S-06   | 6-well Chamlide PT  |
| PT-S-12   | 12-well Chamlide PT |
| PT-S-24   | 24-well Chamlide PT |
| PT-S-48   | 48-well Chamlide PT |
| PT-S-96   | 96-well Chamlide PT |

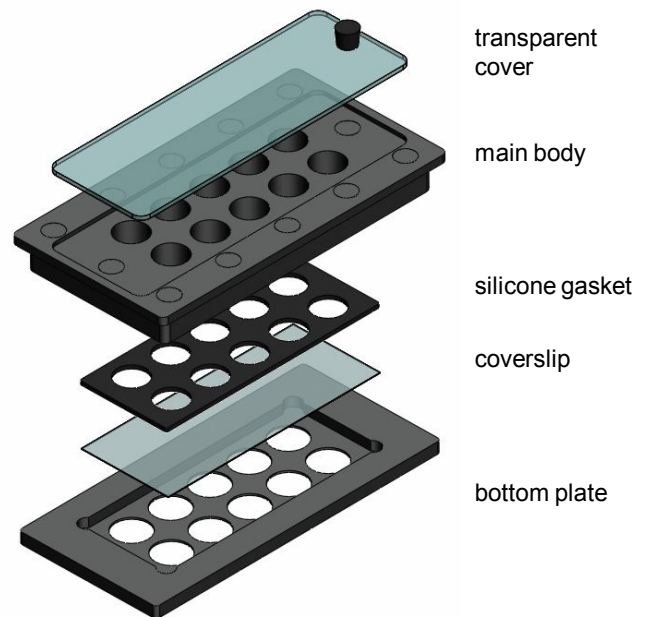


# Well Slip

## Coverslip Bottom Magnetic Chamber for Rectangular Coverslip



- Consumable chambered cover glass is replaceable.
- Semi-permanent and re-useable
- Bottom coverslip is simply removable and replaceable for next use.
- Auto cleavable
- Silicone gaskets to prevent leaking
- Metal bottom for stable temperature control during the live cell imaging
- Non-toxic and non-reactive polycarbonate material
- Patented magnetic system for easy assembly
- Temperature and CO2 level are controllable using Chamlide TC and FC-5 for live cell imaging.

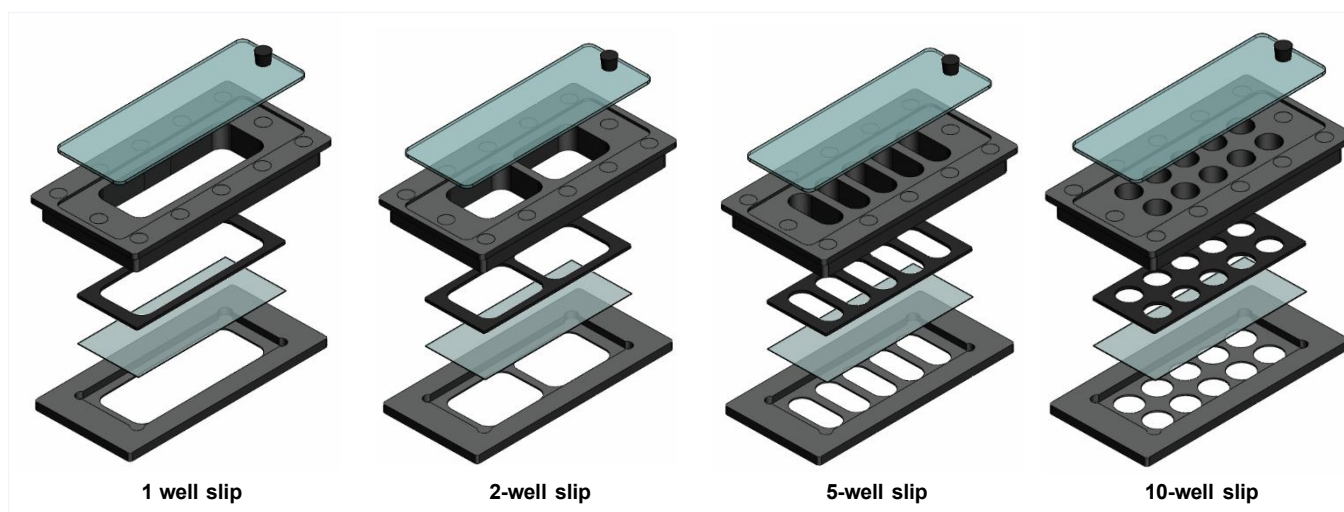


### Specifications

|          |           |                               |
|----------|-----------|-------------------------------|
| Material | Main body | Black polycarbonate           |
|          | Bottom    | Black anodized aluminum alloy |
|          | Cover     | Glass                         |
|          | Gasket    | Silicone                      |



| Coverslip     | Well Quantity                         |
|---------------|---------------------------------------|
| 22 mm x 32 mm | 1 well / 2 wells                      |
| 22 mm x 40 mm | 1 well / 2 wells / 4 wells            |
| 22 mm x 50 mm | 1 well / 2 wells / 4 wells / 8 wells  |
| 22 mm x 60 mm | 1 well / 2 wells / 5 wells / 10 wells |
| 24 mm x 32 mm | 1 well / 2 wells                      |
| 24 mm x 40 mm | 1 well / 2 wells / 4 wells            |
| 24 mm x 50 mm | 1 well / 2 wells / 4 wells / 8 wells  |
| 24 mm x 60 mm | 1 well / 2 wells / 5 wells / 10 wells |



Well slip for 22(24) x 60mm

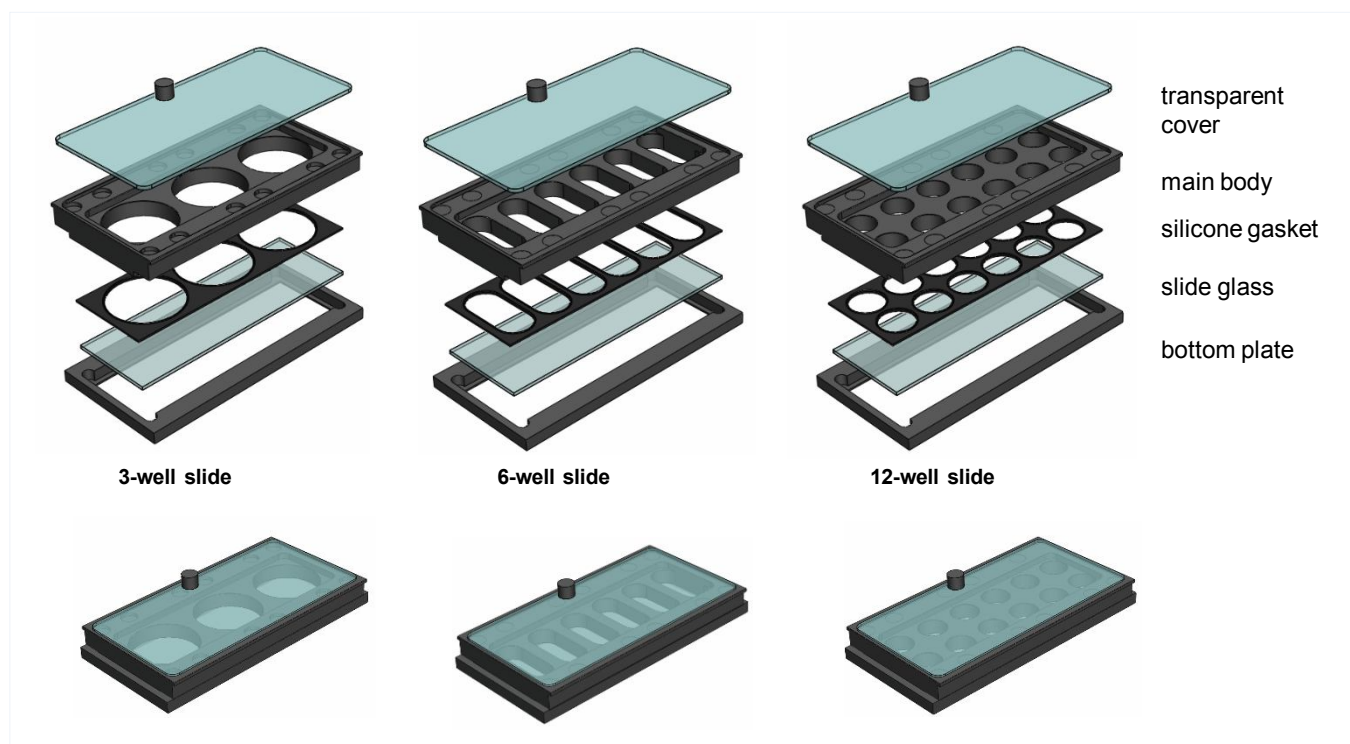
| Model No. | Product                             |
|-----------|-------------------------------------|
| WL-2232-1 | 1 well slip for 22mmx32mm coverslip |
| WL-2240-1 | 1 well slip for 22mmx40mm coverslip |
| WL-2250-1 | 1 well slip for 22mmx50mm coverslip |
| WL-2260-1 | 1 well slip for 22mmx60mm coverslip |
| WL-2432-1 | 1 well slip for 24mmx32mm coverslip |
| WL-2440-1 | 1 well slip for 24mmx40mm coverslip |
| WL-2450-1 | 1 well slip for 24mmx50mm coverslip |
| WL-2460-1 | 1 well slip for 24mmx60mm coverslip |
| WL-2232-2 | 2-well slip for 22mmx32mm coverslip |
| WL-2240-2 | 2-well slip for 22mmx40mm coverslip |
| WL-2250-2 | 2-well slip for 22mmx50mm coverslip |
| WL-2260-2 | 2-well slip for 22mmx60mm coverslip |
| WL-2432-2 | 2-well slip for 24mmx32mm coverslip |

| Model No.  | Product                              |
|------------|--------------------------------------|
| WL-2440-2  | 2-well slip for 24mmx40mm coverslip  |
| WL-2450-2  | 2-well slip for 24mmx50mm coverslip  |
| WL-2460-2  | 2-well slip for 24mmx60mm coverslip  |
| WL-2240-4  | 4-well slip for 22mmx40mm coverslip  |
| WL-2250-4  | 4-well slip for 22mmx50mm coverslip  |
| WL-2440-4  | 4-well slip for 24mmx40mm coverslip  |
| WL-2450-4  | 4-well slip for 24mmx50mm coverslip  |
| WL-2260-5  | 5-well slip for 22mmx60mm coverslip  |
| WL-2460-5  | 5-well slip for 24mmx60mm coverslip  |
| WL-2250-8  | 8-well slip for 22mmx50mm coverslip  |
| WL-2450-8  | 8-well slip for 24mmx50mm coverslip  |
| WL-2260-10 | 10-well slip for 22mmx60mm coverslip |
| WL-2460-10 | 10-well slip for 24mmx60mm coverslip |

# Well Slide

## Slide Glass Bottom Multi-Well Magnetic Chamber

- Best for immunohistochemistry staining
- Chamber slide is consumable and replaceable.
- Semi-permanent and re-useable
- Bottom slide glass is simply removable and replaceable for the next use.
- Auto cleavable
- Silicone gaskets to prevent leaking
- Metal bottom for stable temperature control during the live cell imaging
- Non-toxic and non-reactive polycarbonate material
- Patented magnetic system for easy assembly
- Temperature and CO2 level are controllable with Chamlide TC and FC-5 for the live cell imaging.



### Specifications

|                            |              |                               |
|----------------------------|--------------|-------------------------------|
| Well slide internal volume | 12-well type | 400 $\mu\text{l}$ / well      |
|                            | 6-well type  | 1 ml / well                   |
|                            | 3-well type  | 2 ml / well                   |
| Material                   | Main body    | Polycarbonate                 |
|                            | Bottom       | Black anodized aluminum alloy |
|                            | Cover        | Glass                         |
|                            | Gasket       | Silicone                      |

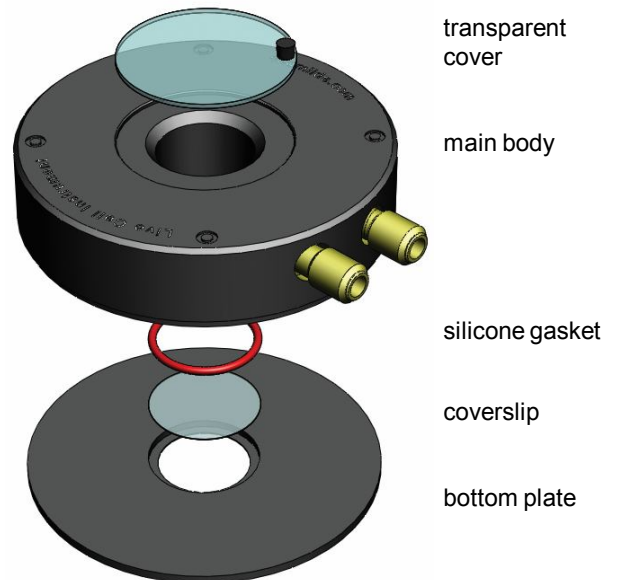
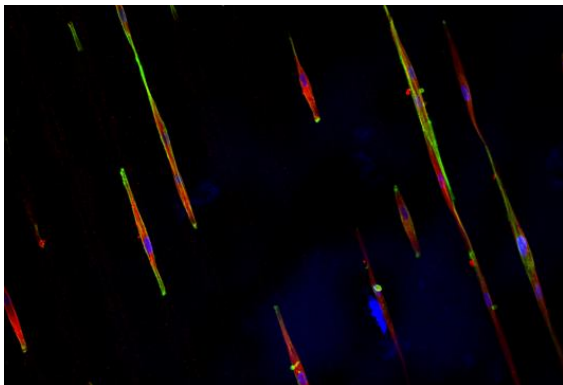
| Model No. | Product       |
|-----------|---------------|
| WS-S-03   | 3-well slide  |
| WS-S-06   | 6-well slide  |
| WS-S-12   | 12-well slide |

# Chamlide WC

## Water Circulation Magnetic Chamber



- For the low and high temperature experiment
- Use Chamlide WC with the water-circulation bath to control the temperature of the chamber.



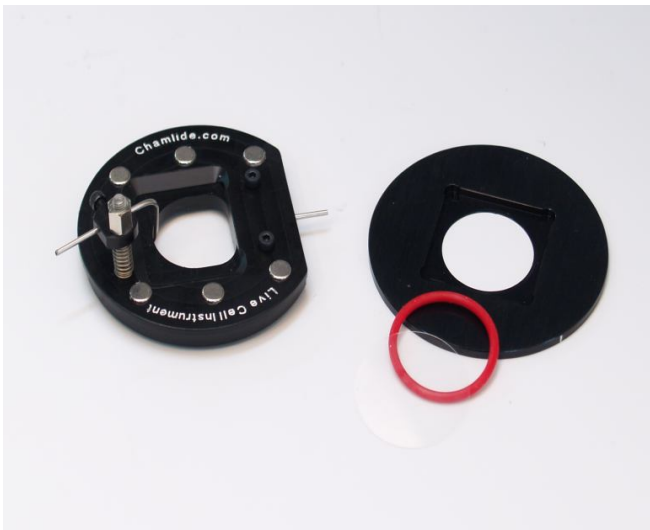
### Specifications

|  |                                     |                                |
|--|-------------------------------------|--------------------------------|
| Temperature range                        | Depending on water circulation bath |                                |
| Circulation water inlet/outlet port size | 4mm (O.D)                           |                                |
| Material                                 | Main body                           | Polycarbonate & Aluminum alloy |
|  | Bottom plate                        | Black anodized aluminum alloy  |

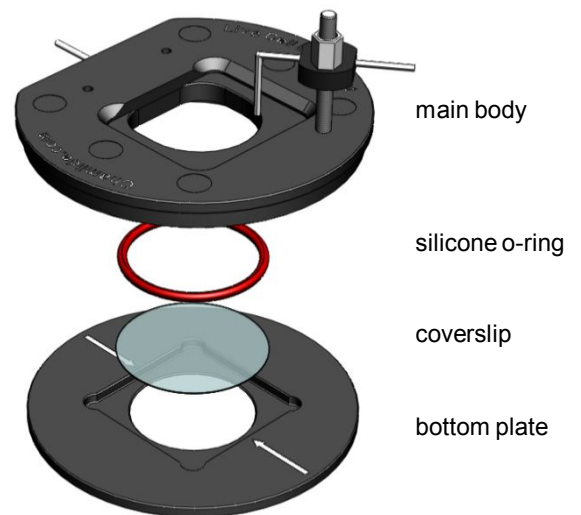
| Model No. | Product                              |
|-----------|--------------------------------------|
| WC-R12    | Chamlide WC for 12mm round coverslip |
| WC-R15    | Chamlide WC for 15mm round coverslip |
| WC-R18    | Chamlide WC for 18mm round coverslip |
| WC-R20    | Chamlide WC for 20mm round coverslip |
| WC-R22    | Chamlide WC for 22mm round coverslip |
| WC-R25    | Chamlide WC for 25mm round coverslip |

# Chamlide AC

## Perfusion Type Water Volume Adjustable Magnetic Chamber



- Perfusion type opened chamber
- Eliminate the problem of swirling and to achieve the laminar flow during perfusion, Chamlide AC uses an oval shaped well in the chamber.
- Wide fluid inlet prevents the shear damage from cells during perfusion.
- The height of the outlet port (or suction port) are adjustable to control the media volume inside the chamber.
- The temperature of the chamber are controllable with a heating plate.
- The fluidic inline heater (IHS-101) for controlling medium temperature



### Specifications

Internal volume of perfusion chamber for 18 $\phi$  coverslip

Maximum 0.6 ml

Internal volume of perfusion chamber for 25 $\phi$  coverslip

Maximum 1.5 ml

Material

Main body Black polycarbonate

Bottom plate Black anodized aluminum alloy

Inlet/outlet port tubing size

1.0 mm (O.D)

Chamber physical dimension

Main body 55mm $\phi$  x 5T

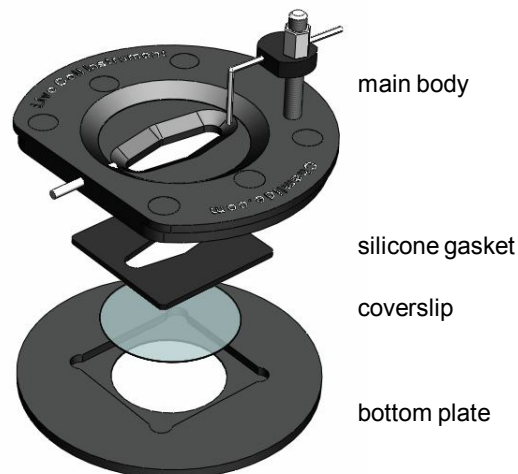
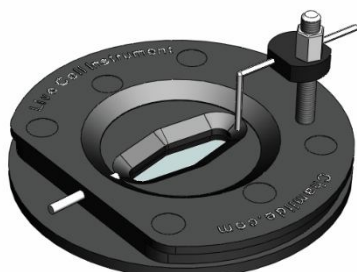
Bottom plate 55mm $\phi$  x 2T

### Model No.

### Product

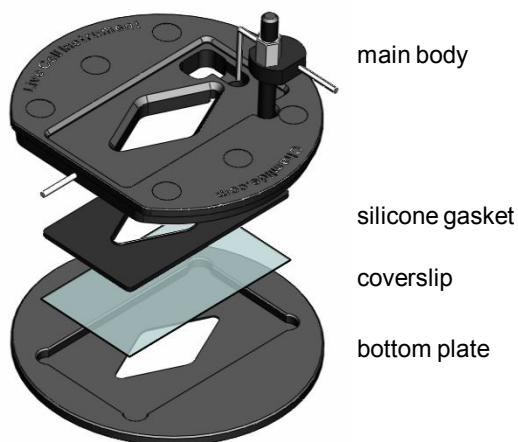
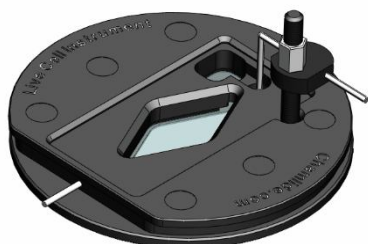
|        |                                      |
|--------|--------------------------------------|
| AC-B15 | Chamlide AC for 15mm round coverslip |
| AC-B18 | Chamlide AC for 18mm round coverslip |
| AC-B20 | Chamlide AC for 20mm round coverslip |
| AC-B22 | Chamlide AC for 22mm round coverslip |
| AC-B25 | Chamlide AC for 25mm round coverslip |

**Chamlide AC-P (Chamlide AC for Patch Clamp)**



- For the patch clamp experiment
- The opening of the patch clamp Chamlide AC is wider than the standard type for easy access of external manipulators.
- For fast medium change, the opening is elliptical.

**Chamlide AC-PS (Chamlide AC for Patch Clamp)**



- Minimize water surface fluctuation during perfusion.
- Use 24(22)mm x 40mm rectangular coverslip.
- Other functions and shapes are same as Chamlide AC-P.

**Specifications**

|   |   |
|---|---|
| Internal volume of AC-P(PS) for 18 $\phi$ coverslip | Maximum 0.6 ml  |
| Internal volume of AC-P(PS) for 25 $\phi$ coverslip | Maximum 1.5 ml  |
| Material  | Main body      Black polycarbonate<br>Bottom plate    Black anodized aluminum alloy |
| Inlet/outlet port tubing size                       | 1.0 mm (O.D)  |
| Chamber physical dimension                          | Main body      55mm $\phi$ x 5mmT<br>Bottom plate    55mm $\phi$ x 2mmT             |

| Model No. | Product                                |
|-----------|--|
| AC-P15    | Chamlide AC-P for 15mm round coverslip |
| AC-P18    | Chamlide AC-P for 18mm round coverslip |
| AC-P20    | Chamlide AC-P for 20mm round coverslip |
| AC-P22    | Chamlide AC-P for 22mm round coverslip |
| AC-P25    | Chamlide AC-P for 25mm round coverslip |

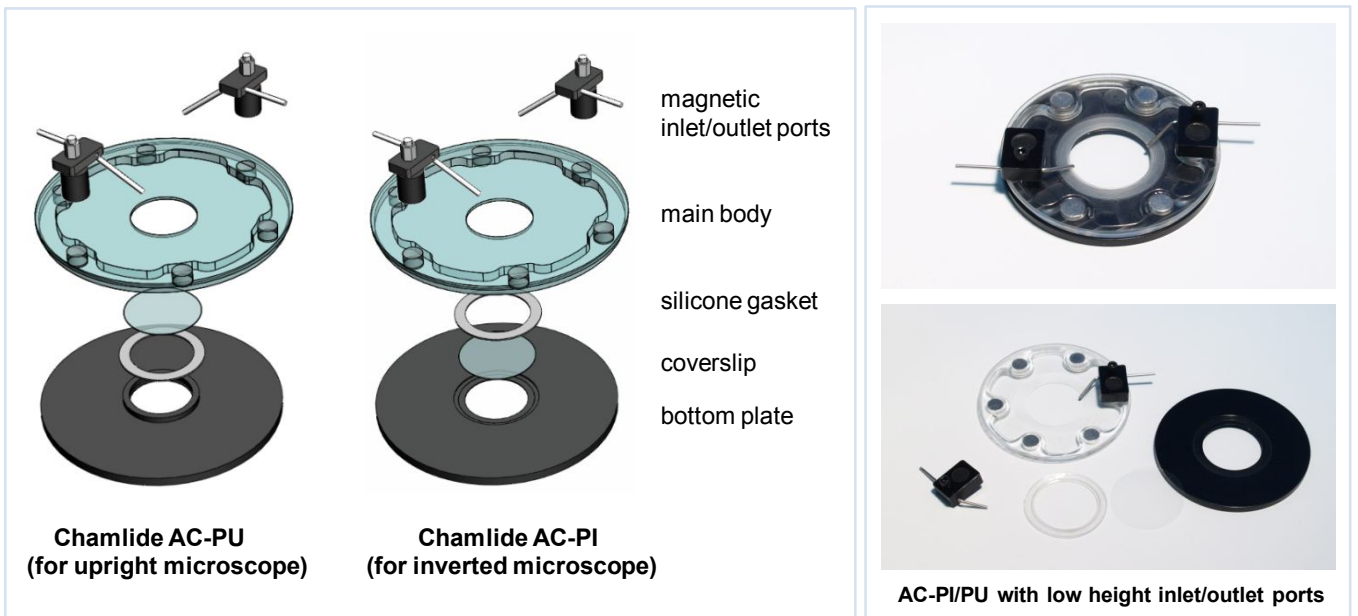
| Model No. | Product   |
|-----------|---|
| AC-PS2240 | Chamlide AC-PS for 22mm x 40 mm rectangular coverslip |
| AC-PS2440 | Chamlide AC-PS for 24mm x 40 mm rectangular coverslip |



## Chamlide AC-PI / Chamlide AC-PU (Wide Chamlide AC-P)



- For the patch clamp experiment.
- AC-PI is the perfusion chamber for the inverted microscope.
- AC-PU is for the upright microscope.
- The opening of the Chamlide AC-PI/PU is wider than the Chamlide AC-P for easy access of external manipulators.
- For convenient approach of the external manipulator, perfusion inlet/outlet ports can be moved and attached with magnetic force.

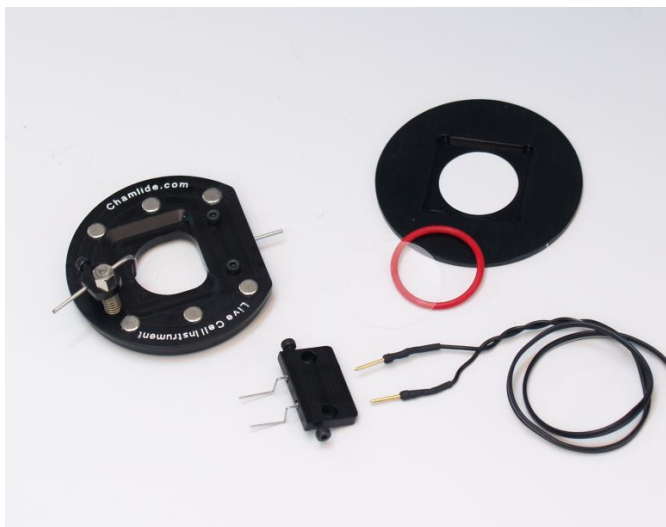


| Model No. | Product                                 |
|-----------|---|
| AC-PI15   | Chamlide AC-PI for 15mm round coverslip |
| AC-PI18   | Chamlide AC-PI for 18mm round coverslip |
| AC-PI20   | Chamlide AC-PI for 20mm round coverslip |
| AC-PI22   | Chamlide AC-PI for 22mm round coverslip |
| AC-PI25   | Chamlide AC-PI for 25mm round coverslip |

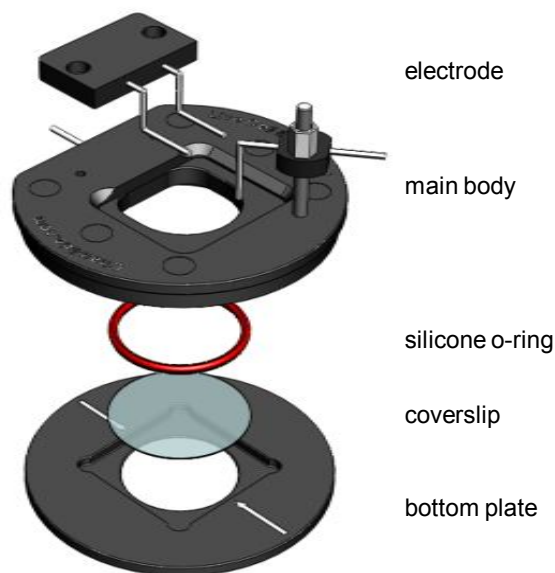
| Model No. | Product                                 |
|-----------|---|
| AC-PU15   | Chamlide AC-PU for 15mm round coverslip |
| AC-PU18   | Chamlide AC-PU for 18mm round coverslip |
| AC-PU20   | Chamlide AC-PU for 20mm round coverslip |
| AC-PU22   | Chamlide AC-PU for 22mm round coverslip |
| AC-PU25   | Chamlide AC-PU for 25mm round coverslip |

# Chamlide EC

## Perfusion Type Electric Stimulation Magnetic Chamber



- For applications requiring the field stimulation, Chamlide EC is supplied with a pair of platinum electrodes. The electrodes are installed along two parallel sides of the bath.
- Pin connector to supply the electric current from the stimulator is removed for diverse uses.
- Other features are the same as the Chamlide AC except the electrode part.
- Patented magnetic system for easy assembly
- IHS-101 (the fluidic inline heater ) for controlling medium temperature.
- The temperature of the chamber is controllable with a heating plate.



### Specifications

Internal volume of perfusion chamber for 18mm $\phi$  coverslip

Maximum 0.6ml

Internal volume of perfusion chamber for 25mm $\phi$  coverslip

Maximum 1.5ml

Pt electrode

0.5 mm (O.D) x 30

Inlet/outlet port tubing size

1.0 mm (O.D)

Chamber physical dimension

Main body 55mm $\phi$  x 5mmT

Bottom plate 55mm $\phi$  x 2mmT

### Model No.

EC-B15

### Product

Chamlide EC for 15mm round coverslip

EC-B18

Chamlide EC for 18mm round coverslip

EC-B20

Chamlide EC for 20mm round coverslip

EC-B22

Chamlide EC for 22mm round coverslip

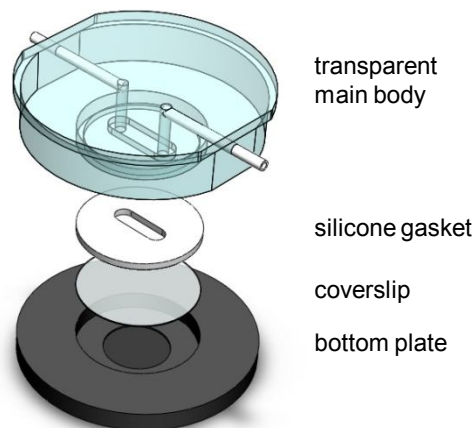
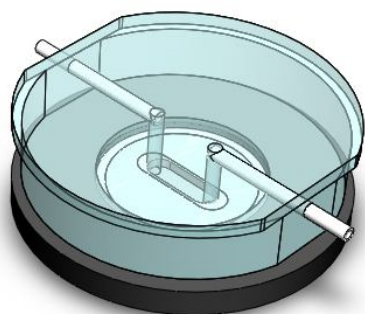
EC-B25

Chamlide EC for 25mm round coverslip

# Chamlide CF, Chamlide CF-EC

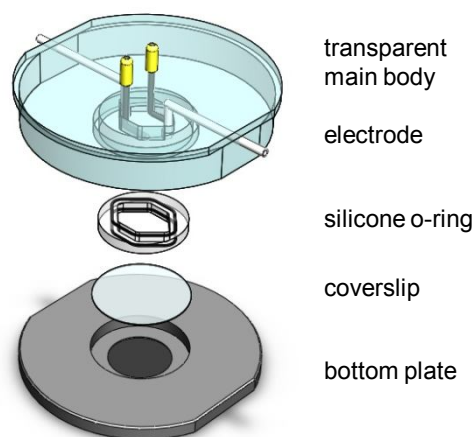
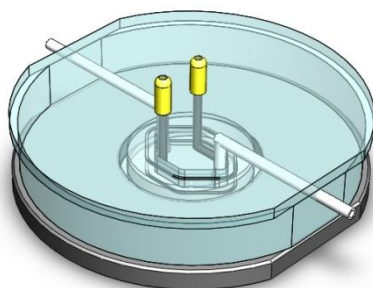
## Perfusion Type Closed Magnetic Chamber/ Shear Stress Chamber

- Fast medium exchange
- The thickness of the silicone gasket is even.
- The internal volume depends on the height of the projecting part toward the bottom of the main body.
- If the height of the channel is **200 $\mu$ m**, it can be used for cell adhesion studies by **shear stress**.
- The shape of the inside gasket is customizable.



### Chamlide CF-EC/ Electric Stimulation CF

- For applications requiring field stimulation, Chamlide CF-EC is supplied with a pair of platinum electrodes.
- The electrodes are installed along two parallel sides of the bath.



### Specifications

Magnetic closed chamber internal volume

Depending on channel shape and size

Material

|           |                               |
|-----------|-------------------------------|
| Main body | Invisible polycarbonate       |
| Bottom    | Black anodized aluminum alloy |
| Gasket    | Silicone                      |
| Electrode | Platinum                      |

| Model No.         | Product                              |
|-------------------|--------------------------------------|
| CF-S15-A , B or C | Chamlide CF for 15mm round coverslip |
| CF-S18-A , B or C | Chamlide CF for 18mm round coverslip |
| CF-S20-A , B or C | Chamlide CF for 20mm round coverslip |
| CF-S22-A , B or C | Chamlide CF for 22mm round coverslip |
| CF-S25-A , B or C | Chamlide CF for 25mm round coverslip |

| Model No.            | Product                                 |
|----------------------|---|
| CF-EC-S15-A , B or C | Chamlide CF-EC for 15mm round coverslip |
| CF-EC-S18-A , B or C | Chamlide CF-EC for 18mm round coverslip |
| CF-EC-S20-A , B or C | Chamlide CF-EC for 20mm round coverslip |
| CF-EC-S22-A , B or C | Chamlide CF-EC for 22mm round coverslip |
| CF-EC-S25-A , B or C | Chamlide CF-EC for 25mm round coverslip |

◆ "A" has 0.2mm internal height, "B" has 0.5mm internal height, "C" has 1.0mm internal height

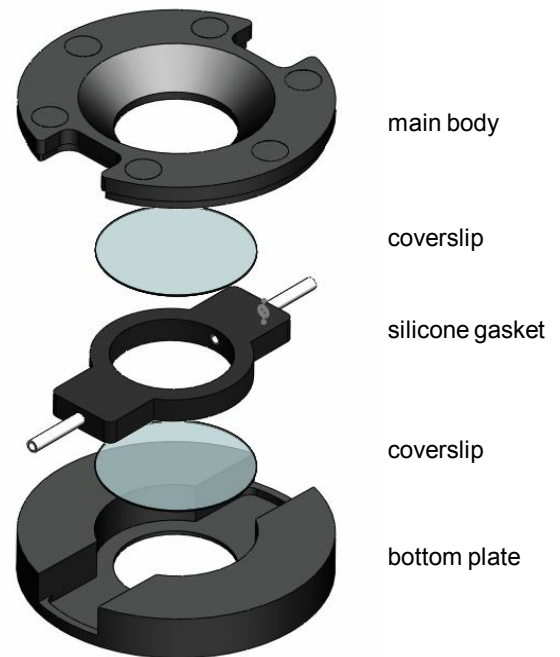
# Chamlide CF-T

## Chamlide CF with Two Coverslips



### For perfect transmission imaging use:

- A coverslip is a lid.
- High quality transmission imaging (e.g. DIC)
- Closed type perfusion is available.
- Patented magnetic system for easy assembly
- Silicone gasket (2.5mm thickness is the standard).
- The size of chamber and the width of gasket are customizable.
- IHS-101 (the fluidic inline heater) for controlling the medium temperature
- The temperature of the chamber is controllable with a heating plate.
- Other functions and features are the same as the standard type Chamlide CF.
- Gasket shape is customizable.



### Specifications

Magnetic closed chamber internal volume

Depending on the gasket shape

Material

|           |                               |
|-----------|-------------------------------|
| Main body | Black anodized aluminum alloy |
| Bottom    | Black anodized aluminum alloy |
| Gasket    | Silicone                      |

### Model No.

CF-T12  
CF-T15  
CF-T18  
CF-T20  
CF-T22  
CF-T25

### Product

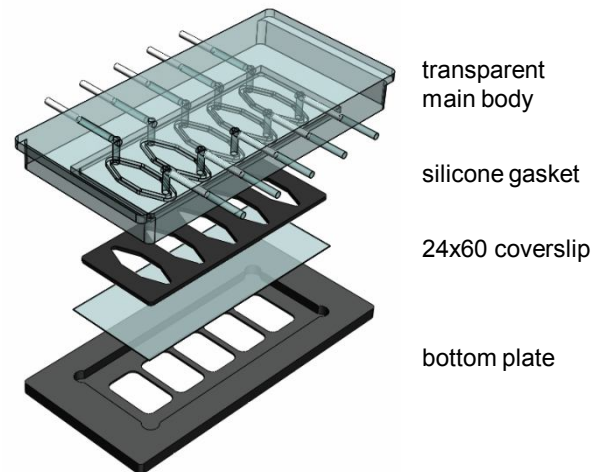
Chamlide CF-T for 12mm round coverslip  
Chamlide CF-T for 15mm round coverslip  
Chamlide CF-T for 18mm round coverslip  
Chamlide CF-T for 20mm round coverslip  
Chamlide CF-T for 22mm round coverslip  
Chamlide CF-T for 25mm round coverslip

# Chamlide PM, PM-T

## Perfusion Type Multi-Well Closed Magnetic Chamber



Chamlide PM

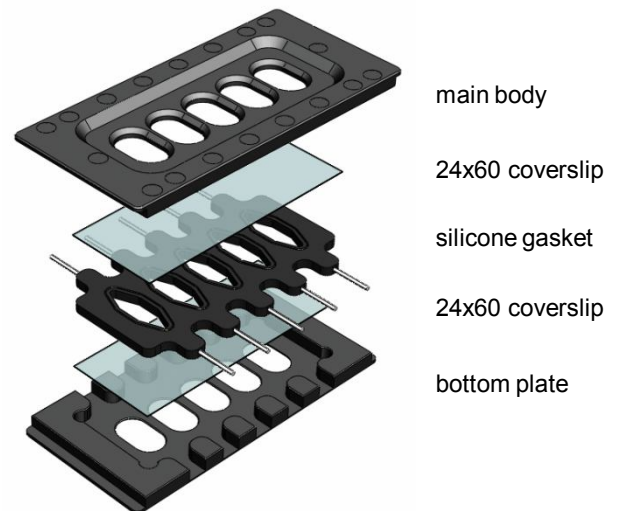


transparent main body  
silicone gasket  
24x60 coverslip  
bottom plate

- Use a 24mm x 60mm coverslip as a bottom for high magnification microscopy.
- Closed perfusion type is available.
- 5-well type is standard but more or less wells are customizable.
- Individual multi-experiments on a coverslip by the media perfusion are available.
- Patented magnetic system for easy assembly.
- The temperature of the chamber is controllable with a heating plate.

### For perfect transmission imaging use:

- A coverslip is a lid.
- High quality transmission imaging such as DIC
- Silicone gasket (2.5mm thickness is the standard)
- Other functions are same as Chamlide PM



main body  
24x60 coverslip  
silicone gasket  
24x60 coverslip  
bottom plate

### Specifications

Magnetic closed chamber internal volume

Depends on the channel size and number

Material

|           |  |
|-----------|--|
| Main body | Transparent polycarbonate (PM)<br>Anodized aluminum alloy (PM-T) |
| Bottom    | Black anodized aluminum alloy                                    |
| Gasket    | Silicone   |

#### Model No.

PM-S-10

PM-T-10

#### Product

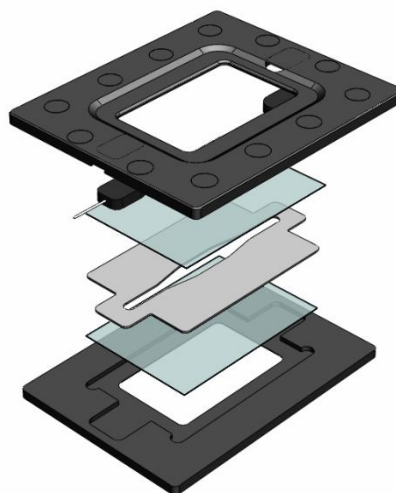
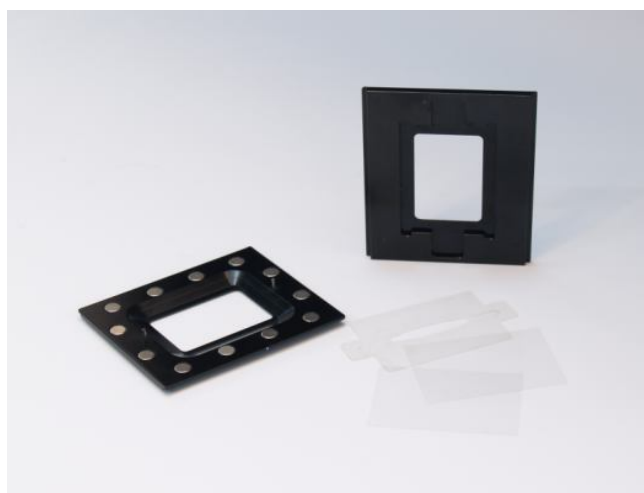
Chamlide PM

Chamlide PM -T



# Chamlide DF

## Dark Field Chamber

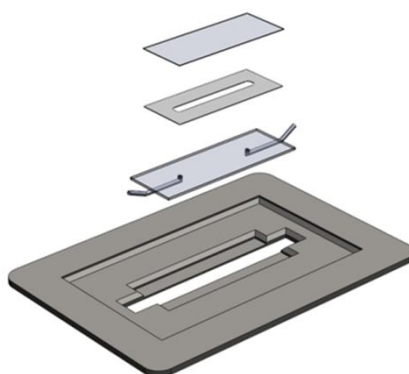
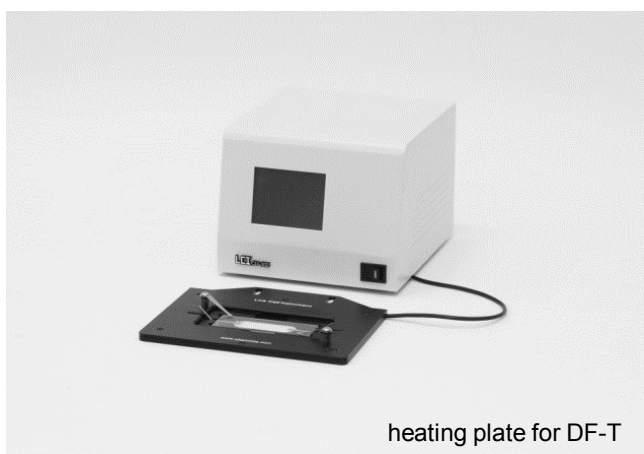


main body  
inlet/outlet port  
35x50 coverslip  
silicone gasket  
35x50 coverslip  
bottom plate

- Easy access of the condenser and the short working distance lens for the dark field microscope
- Two 35 x 50mm coverslip internal height is 0.5 mm.
- Patented magnetic system for easy assembly
- Fluid inlet/outlet to connect to a peristaltic pump or a syringe pump.
- Chamber temperature is controllable with a heating plate.
- Fluidic inline heater to control the medium temperature

# Chamlide DF-T

## 0.1mm Internal Height Chamber



24 x 60 Cover slip  
paraffin film gasket  
(0.1mm)  
slide glass with  
inlet/outlet port  
heating plate

- Heating plate for Chamlide DF-T.
- Use 24mm x 50mm coverslip for the upper layer.
- Lower slide glass has inlet/outlet ports.
- Gasket is made by 0.1mm paraffin film and internal chamber height is 0.1mm.
- Heater (e.g. hair dryer) to attach or detach the gasket

### Model No.

DF-S-10

DF-T-10

### Product

Chamlide DF

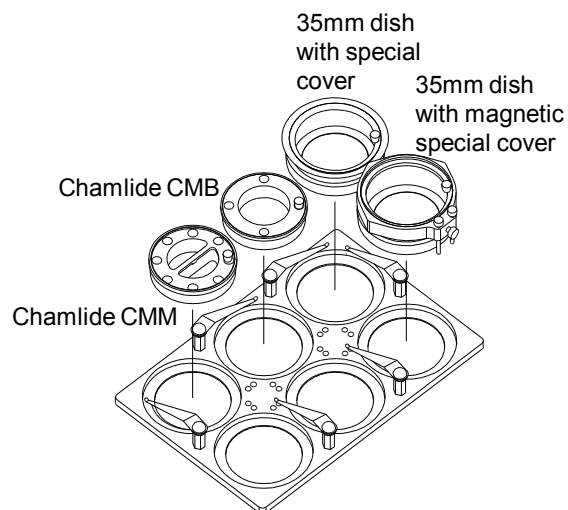
Chamlide DF-T

# Chamlide MD

## 6-dish Holder for 35mm Dish Type Magnetic Chambers & Dishes



- The size of Chamlide MD is the same as a commercial well-plate.
- Loaded with consumable 35mm culture dishes or 35mm dish type magnetic chambers.
- Made to fit any type of commercial 35mm culture dish.
- Used with 35mm culture dish and the magnetic special cover to allow the removal of dishes and reloading without altering the position of the sample.



### Specifications

|          |                |   |
|----------|----------------|---|
| Material | Body<br>Holder | Black anodized aluminum alloy<br>Stainless steel clip or magnet |
|----------|----------------|---|

#### Model No.

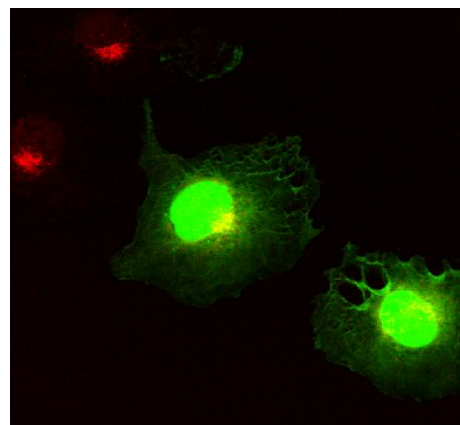
MD-S-10

MD-S-20

#### Product

Chamlide MD

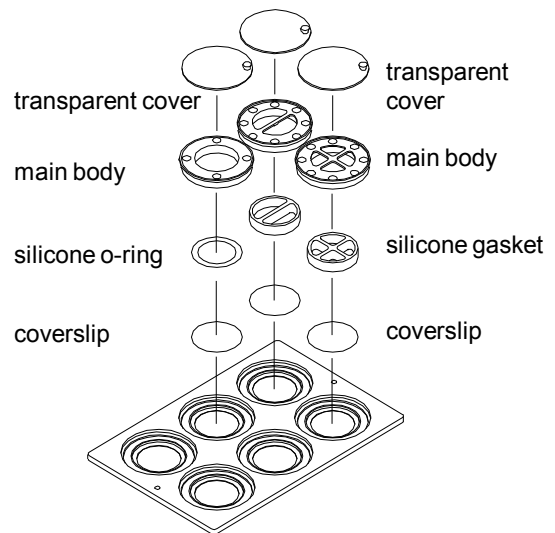
Chamlide MD for magnetic special cover



# Chamlide MB

## Multi-Hole Bottom Plate for 35mm Dish Type Magnetic Chambers

- Chamlide MB is for 35mm dish type magnetic chambers. (Chamlide CMB or Chamlide CMM)
- 6-hole Chamlide MB is the same size as a commercial plastic culture well plate.
- The hole size is the same as the bottom plate of the 35mm dish type Chamlide magnetic chamber for 12/15/18 /20/22/25mm round coverslips.
- 6-hole Chamlide MB allows users to install variety of Chamlide magnetic chambers in many different combinations.
  - Minimum 6 wells with 1 well Chamlide CMB to maximum 24 wells with 4-well Chamlide CMM when using with 6-hole Chamlide MB
  - Minimum 2 wells with 1 well Chamlide CMB to maximum 8 wells with 4-well Chamlide CMM when using with 2-hole Chamlide MB
- The incubator of the Chamlide TC (2-hole Chamlide MB) and Chamlide WP for 6-well plate (6-hole Chamlide MB).



### Specifications

Material

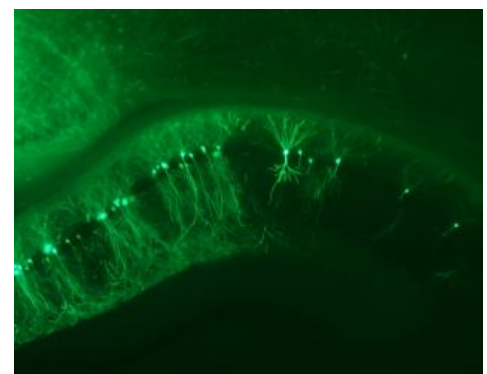
Black anodized aluminum alloy

#### Model No.

MB-R12-2  
MB-R15-2  
MB-R18-2  
MB-R20-2  
MB-R22-2  
MB-R25-2  
MB-R12-6  
MB-R15-6  
MB-R18-6  
MB-R20-6  
MB-R22-6  
MB-R25-6

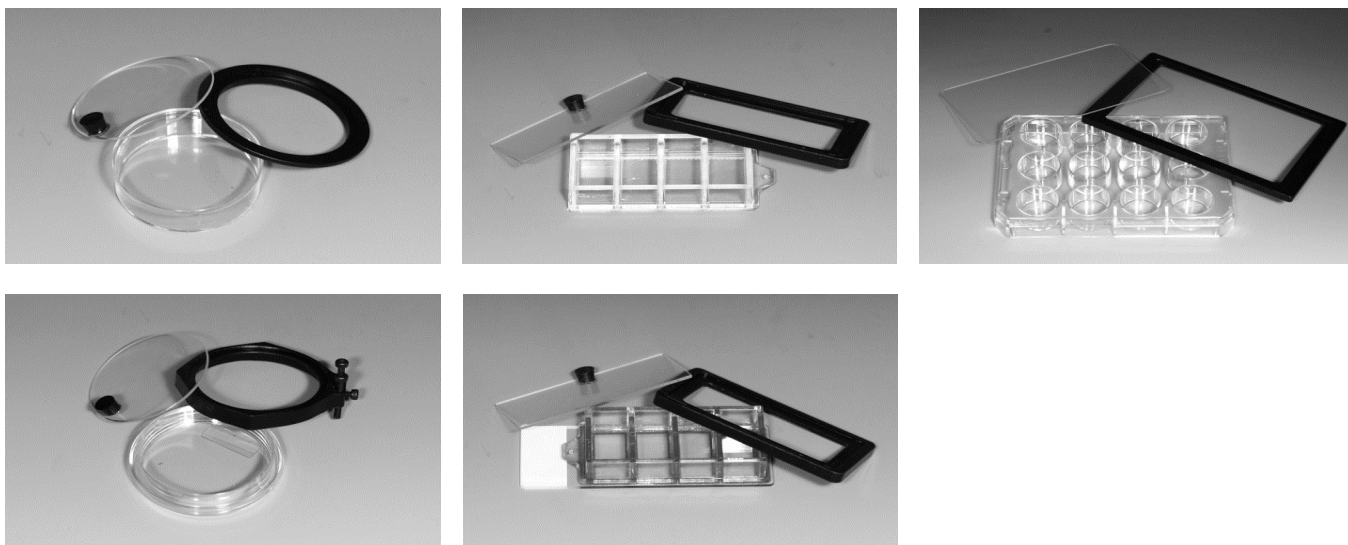
#### Product

2-hole Chamlide MB for 12mm round coverslip  
2-hole Chamlide MB for 15mm round coverslip  
2-hole Chamlide MB for 18mm round coverslip  
2-hole Chamlide MB for 20mm round coverslip  
2-hole Chamlide MB for 22mm round coverslip  
2-hole Chamlide MB for 25mm round coverslip  
6-hole Chamlide MB for 12mm round coverslip  
6-hole Chamlide MB for 15mm round coverslip  
6-hole Chamlide MB for 18mm round coverslip  
6-hole Chamlide MB for 20mm round coverslip  
6-hole Chamlide MB for 22mm round coverslip  
6-hole Chamlide MB for 25mm round coverslip

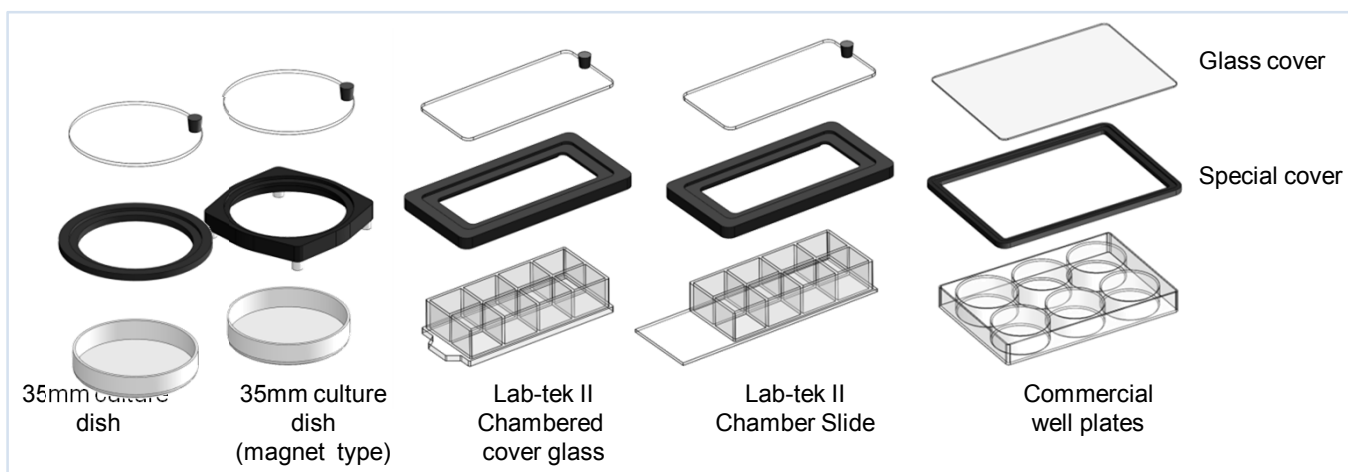


# Special Glass Cover

## Special Glass Cover for Various Commercial Culture Wares



- Various types of special covers for consumable culture ware instead of lids
- Special covers for maintaining humidity in the culture ware and for transmission during live cell imaging



### Specifications

|          |                             |  |
|----------|-----------------------------|--|
| Material | Special cover body<br>Cover | Black anodized aluminum alloy<br>Glass |
|----------|-----------------------------|--|

#### Model No.

#### Product

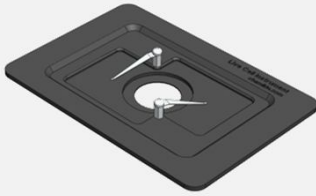
|         |   |
|---------|---|
| SG-C-10 | Special glass cover for 35mm culture dish                                 |
| SG-C-20 | Magnetic special glass cover for 35mm culture dish                        |
| SG-C-30 | Special glass cover for consumable chamber slide or chambered cover glass |
| SG-C-40 | Special glass cover for commercial well plate                             |



# Stage Insert

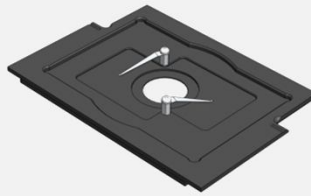
## Stage Insert for Various Types of Specimen

Universal K Insert Size



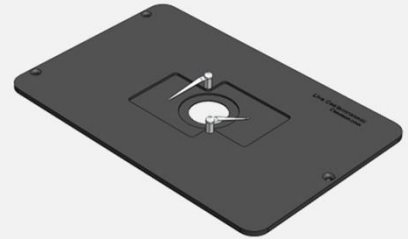
SI-K-10

Universal M Insert Size



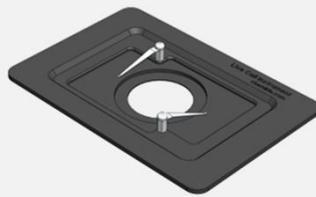
SI-M-10

Nikon Motorized XY Stage Inset Size

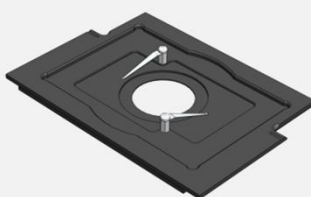


SI-N-10

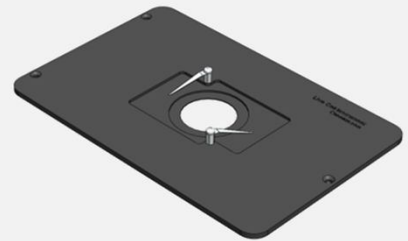
Conventional 35mm Culture Dish or Chamlide Magnetic Chambers



SI-K-20

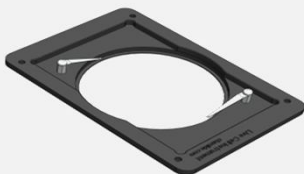


SI-M-20

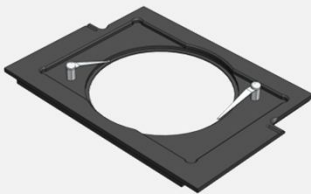


SI-N-20

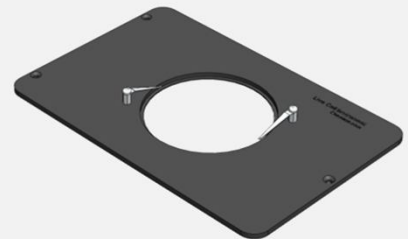
Conventional 60mm Culture Dish or Chamlide Magnetic Chambers



SI-K-30

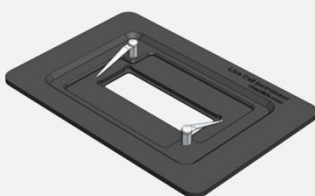


SI-M-30

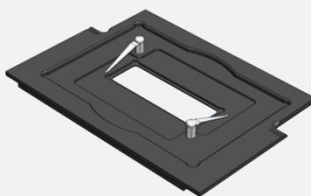


SI-N-30

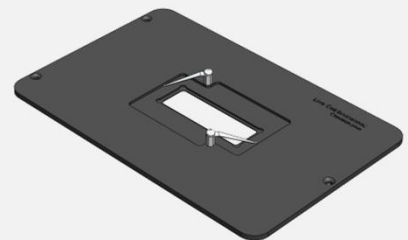
Conventional 100mm Culture Dish or Chamlide Magnetic Chambers



SI-K-40



SI-M-40

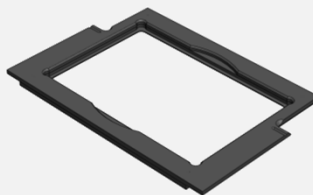


SI-N-40

Slide Glass or Chamlide Magnetic Chambers



SI-K-50



SI-M-50



SI-N-50

Conventional Well Plate or Chamlide Magnetic Chambers



## Chamlide Glassware

### **1. Highest Quality Glass**

Chamlide glassware are made of the best quality glass whose thickness and size are even.

### **2. A Variety of Sizes**

Chamlide glassware is diverse for the special purposes.

### **3. Convenient Packaging**

50, 100 or 200 glassware per box is packed in the proper thickness and size for the applications.

# Chamlide Glassware

## Slide Glass/ Coverslip

### Chamlide Microscope Slide Glass



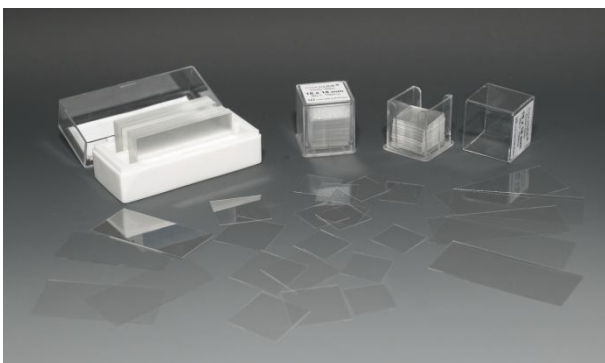
| Model No. | Product  |
|-----------|--|
| 70010128H | Slide glass, Ground Edges, Plain, 45° Clipped Corners. 50pcs/box                     |
| 70010528H | Slide glass, Ground Edges Frosted One End Both Sides, 45° Clipped Corners. 50pcs/box |

### Adhesive Microscope Slide Glass



| Model No. | Product                                     |
|-----------|---|
| 70039534A | Adhesion slide glass, silanized., 50pcs/box |

### Square / Rectangular Coverslip



| Model No. | Product  |
|-----------|--|
| 70051818S | Cover Glass, 18x18mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 200pcs/box.                                |
| 70052020S | Cover Glass, 20x20mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 200pcs/box.                                |
| 70052222S | Cover Glass, 22x22mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 200pcs/box.                                |
| 70052424S | Cover Glass, 24x24mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 200pcs/box.                                |
| 70072232F | Cover Glass, 22x32mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072432F | Cover Glass, 24x32mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072240F | Cover Glass, 22x40mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072440F | Cover Glass, 24x40mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072250F | Cover Glass, 22x50mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072450F | Cover Glass, 24x50mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072260F | Cover Glass, 22x60mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70072460F | Cover Glass, 24x60mm. Borosilicate Glass. Thickness 1.0#. Hinged-lid box. 100pcs/box.                                |
| 70091137B | Cover Glass, 113x75mm. Borosilicate Glass. Thickness 1.5#. 100pcs/box. For Chamlide magnetic well plate type chamber |



## What is Chamlide™

Chamlide™ is the trademark for observation chambers and incubator systems developed by **Live Cell Instrument Co.,LTD (LCI)**.

Chamlide™ includes Chamlide Chamber Systems and Chamlide Incubator Systems.

Chamlide™ is a combined word for "chamber" and "slide".



**All Chamlide magnetic chambers and Chamlide Incubator Systems are patented or pending patents.**

| ChamLide TC (Incubator System for Various Types of Chambers)       |   | TC-L-2006-22<br>TC-L-2006-32<br>TC-L-2006-xx   |   |
|--|---|--|---|
| TC-L-10  | ChamLide TC   | TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  |
| TC-L-2101  | TC incubator cover  | TC-L-2006-32   | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber      |
| TC-L-2102  | TC incubator main body  | TC-L-2006-xx   | (Option) Adaptor for other type   |
| TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) | <b>TC-L-60 ChamLide TC-N (Nikon Piezo Z-stage Type)</b>                                  |   |
| TC-L-2004  | Lens warmer   | TC-L-2601  | TC-N incubator cover (Nikon Piezo Z-stage type)   |
| TC-L-2005  | Humidifier  | TC-L-2602  | TC-N incubator main body (Nikon piezo z-stage type)   |
| TC-L-2006-11   | Adaptor for Nunc Lab-Tek™ II Chamber Slides   | TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   | TC-L-2004  | Lens warmer   |
| TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           | TC-L-2005  | Humidifier  |
| TC-L-2006-41   | Adaptor for well-slide & ChamLide 2-hole bottom plate                                       | TC-L-2006-11   | Adaptor for Nunc Lab-Tek™ II Chamber Slides   |
| TC-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                    | TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   |
| TC-L-2006-00   | Adaptor bolts   | TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           |
| TC-L-2007  | Gas control speed valve for 4ø tubing   | TC-L-2006-41   | Adaptor for well-slide & ChamLide 2-hole bottom plate                                       |
| TC-L-2109  | Communication cable (RS232-communication with computer)                                     | TC-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                    |
| TC-L-2009  | 2ø(O.D) tubing (for perfusion)  | TC-L-2006-00   | Adaptor bolts   |
| TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     | TC-L-2007  | Gas control speed valve for 4ø tubing   |
| TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   | TC-L-2008  | Communication cable (RS232-communication with computer)                                     |
| TC-L-2012  | Spare fuse  | TC-L-2009  | 2ø(O.D) tubing (for perfusion)  |
| TC-L-2013  | AC power cable  | TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2014  | Ring holder for small 35mm culture dish   | TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   |
| CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                | TC-L-2012  | Spare fuse  |
| CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                | TC-L-2013  | AC power cable  |
| SG-C-10  | Special glass cover for 35mm culture dish   | TC-L-2014  | Ring holder for small 35mm culture dish   |
| SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   | CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                |
| SW-C-007   | Software ChamLide CCP 7 (CD)  | CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                |
| TC-L-2120  | (Option) ChamLide TC water reservoir  | SG-C-10  | Special glass cover for 35mm culture dish   |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    | SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   |
| LW-M-10  | (Option) Metal Lens warmer  | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TC-L-2006-21   | (Option) Adaptor for slide glass (slim type)  | TC-L-2120  | (Option) ChamLide TC water reservoir  |
| TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| TC-L-2006-32   | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber      | LW-M-10  | (Option) Metal Lens warmer  |
| TC-L-2006-xx   | (Option) Adaptor for other type   | TC-L-2006-21   | (Option) Adaptor for slide glass (slim type)  |
| <b>TC-L-20 ChamLide TC-A (ASI or LUDL Piezo Z-stage Type)</b>      |   | TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  |
| TC-L-2201  | TC-A incubator cover (ASI or LUDL Piezo Z-stage type)                                       | TC-L-2006-32   | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber      |
| TC-L-2202  | TC-A incubator main body (ASI or LUDL Piezo Z-stage type)                                   | TC-L-2006-xx   | (Option) Adaptor for other type   |
| TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) | <b>TC-L-XX ChamLide TC-X (Other Stage Type)</b>  |   |
| TC-L-2004  | Lens warmer   | <b>ChamLide WP (Incubator System for Commercial Well Plates &amp; ChamLide Chambers)</b> |   |
| TC-L-2005  | Humidifier  | WP-S-10A   | ChamLide WP (6-Well Plate)  |
| TC-L-2006-11   | Adaptor for Nunc Lab-Tek™ II Chamber Slides   | WP-S-2101  | WP incubator cover  |
| TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   | WP-S-2102A   | WP incubator main body for 06 well plate  |
| TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2006-41   | Adaptor for well-slide & ChamLide 2-hole bottom plate                                       | WP-S-2004  | Lens warmer   |
| TC-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                    | WP-S-2005  | Humidifier  |
| TC-L-2006-00   | Adaptor bolts   | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2007  | Gas control speed valve for 4ø tubing   | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| TC-L-2008  | Communication cable (RS232-communication with computer)                                     | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2009  | 2ø(O.D) tubing (for perfusion)  | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     | WP-S-2012  | Spare fuse  |
| TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   | WP-S-2013  | AC power cable  |
| TC-L-2012  | Spare fuse  | SG-C-40  | Special glass cover for commercial well plates  |
| TC-L-2013  | AC power cable  | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TC-L-2014  | Ring holder for small 35mm culture dish   | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                | LW-M-10  | (Option) Metal Lens warmer  |
| SG-C-10  | Special glass cover for 35mm culture dish   | <b>WP-S-10B ChamLide WP (12-Well Plate)</b>  |   |
| SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   | WP-S-2101  | WP incubator cover  |
| SW-C-007   | Software ChamLide CCP 7 (CD)  | WP-S-2102B   | WP incubator main body for 12 well plate  |
| TC-L-2120  | (Option) ChamLide TC water reservoir  | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    | WP-S-2004  | Lens warmer   |
| LW-M-10  | (Option) Metal Lens warmer  | WP-S-2005  | Humidifier  |
| TC-L-2006-21   | (Option) Adaptor for slide glass (slim type)  | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| TC-L-2006-32   | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber      | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2006-xx   | (Option) Adaptor for other type   | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| <b>TC-L-30 ChamLide TC-L (Piezo Z-Stage, Well Plate Size Type)</b> |   | WP-S-2012  | Spare fuse  |
| TC-L-2301  | TC-L incubator cover (piezo z-stage, Well plate size type)                                  | WP-S-2013  | AC power cable  |
| TC-L-2302  | TC-L incubator main body (piezo z-stage, Well plate size type)                              | SG-C-40  | Special glass cover for commercial well plates  |
| TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TC-L-2004  | Lens warmer   | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| TC-L-2005  | Humidifier  | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| TC-L-2006-11   | Adaptor for Nunc Lab-Tek™ II Chamber Slides   | LW-M-10  | (Option) Metal Lens warmer  |
| TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   | <b>WP-S-10C ChamLide WP (24-Well Plate)</b>  |   |
| TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           | WP-S-2101  | WP incubator cover  |
| TC-L-2006-41   | Adaptor for well-slide & ChamLide 2-hole bottom plate                                       | WP-S-2102C   | WP incubator main body for 24 well plate  |
| TC-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                    | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2006-00   | Adaptor bolts   | WP-S-2004  | Lens warmer   |
| TC-L-2007  | Gas control speed valve for 4ø tubing   | WP-S-2005  | Humidifier  |
| TC-L-2008  | Communication cable (RS232-communication with computer)                                     | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2009  | 2ø(O.D) tubing (for perfusion)  | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| TC-L-2012  | Spare fuse  | WP-S-2012  | Spare fuse  |
| TC-L-2013  | AC power cable  | WP-S-2013  | AC power cable  |
| TC-L-2014  | Ring holder for small 35mm culture dish   | SG-C-40  | Special glass cover for commercial well plates  |
| CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| SG-C-10  | Special glass cover for 35mm culture dish   | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   | LW-M-10  | (Option) Metal Lens warmer  |
| SW-C-007   | Software ChamLide CCP 7 (CD)  | <b>WP-S-10D ChamLide WP (48-Well Plate)</b>  |   |
| TC-L-2120  | (Option) ChamLide TC water reservoir  | WP-S-2101  | WP incubator cover  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    | WP-S-2102D   | WP incubator main body for 48 well plate  |
| LW-M-10  | (Option) Metal Lens warmer  | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2006-21   | (Option) Adaptor for slide glass (slim type)  | WP-S-2004  | Lens warmer   |
| TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  | WP-S-2005  | Humidifier  |
| TC-L-2006-32   | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber      | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2006-xx   | (Option) Adaptor for other type   | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| <b>TC-L-40 ChamLide TC-P (Prior or Leica Piezo Z-Stage Type)</b>   |   | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2401  | TC-P incubator cover  | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| TC-L-2402  | TC-P incubator main body  | WP-S-2012  | Spare fuse  |
| TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) | WP-S-2013  | AC power cable  |
| TC-L-2004  | Lens warmer   | SG-C-40  | Special glass cover for commercial well plates  |
| TC-L-2005  | Humidifier  | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| TC-L-2006-00   | Adaptor bolts   | LW-M-10  | (Option) Metal Lens warmer  |
| TC-L-2007  | Gas control speed valve for 4ø tubing   | <b>WP-S-10E ChamLide WP (96-Well Plate)</b>  |   |
| TC-L-2008  | Communication cable (RS232-communication with computer)                                     | WP-S-2101  | WP incubator cover  |
| TC-L-2009  | 2ø(O.D) tubing (for perfusion)  | WP-S-2102E   | WP incubator main body for 96 well plate  |
| TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   | WP-S-2004  | Lens warmer   |
| TC-L-2012  | Spare fuse  | WP-S-2005  | Humidifier  |
| TC-L-2013  | AC power cable  | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2014  | Ring holder for small 35mm culture dish   | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| SG-C-10  | Special glass cover for 35mm culture dish   | WP-S-2012  | Spare fuse  |
| SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   | WP-S-2013  | AC power cable  |
| SW-C-007   | Software ChamLide CCP 7 (CD)  | SG-C-40  | Special glass cover for commercial well plates  |
| TC-L-2120  | (Option) ChamLide TC water reservoir  | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| LW-M-10  | (Option) Metal Lens warmer  | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| TC-L-2006-22   | (Option) Adaptor for cover glass (slim type)  | LW-M-10  | (Option) Metal Lens warmer  |
| TC-L-2006-xx   | (Option) Adaptor for other type   | <b>WP-S-10F ChamLide WP (A Hole for Multi-Well Plate)</b>                                |   |
| <b>TC-L-50 ChamLide TC-G (Leica Z-Galvo Stage Type)</b>            |   | WP-S-2101  | WP incubator cover  |
| TC-L-2501  | TC-G incubator cover (Leica Z-Galvo stage type)   | WP-S-2102F   | WP incubator main body for multi-well plate (A hole type)                                   |
| TC-L-2502  | TC-G incubator main body (Leica Z-Galvo stage type)   | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| TC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) | WP-S-2004  | Lens warmer   |
| TC-L-2004  | Lens warmer   | WP-S-2005  | Humidifier  |
| TC-L-2005  | Humidifier  | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| TC-L-2006-11   | Adaptor for Nunc Lab-Tek™ II Chamber Slides   | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| TC-L-2006-12   | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                           | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| TC-L-2006-41   | Adaptor for well-slide & ChamLide 2-hole bottom plate                                       | WP-S-2012  | Spare fuse  |
| TC-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                    | WP-S-2013  | AC power cable  |
| TC-L-2006-00   | Adaptor bolts   | SG-C-40  | Special glass cover for commercial well plates  |
| TC-L-2007  | Gas control speed valve for 4ø tubing   | SW-C-007   | Software ChamLide CCP 7 (CD)  |
| TC-L-2008  | Communication cable (RS232-communication with computer)                                     | WP-S-2120  | (Option) ChamLide WP water reservoir  |
| TC-L-2009  | 2ø(O.D) tubing (for perfusion)  | TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| TC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     | LW-M-10  | (Option) Metal Lens warmer  |
| TC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   | <b>WP-S-20A ChamLide WP-A (ASI / LUDL Piezo Z-Stage Type 6-Well Plate)</b>               |   |
| TC-L-2012  | Spare fuse  | WP-S-2201  | WP-A incubator cover  |
| TC-L-2013  | AC power cable  | WP-S-2202A   | WP-A incubator main body for 6-well plate   |
| TC-L-2014  | Ring holder for small 35mm culture dish   | WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| CM-B18-1   | ChamLide CMB for 18mm round coverslips include spare o-rings                                | WP-S-2004  | Lens warmer   |
| CM-B25-1   | ChamLide CMB for 25mm round coverslips include spare o-rings                                | WP-S-2005  | Humidifier  |
| SG-C-10  | Special glass cover for 35mm culture dish   | WP-S-2006  | Gas control speed valve for 4ø tubing   |
| SG-C-30  | Special glass cover for disposable chamber slides or chambered coverglass                   | WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| SW-C-007   | Software ChamLide CCP 7 (CD)  | WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| TC-L-2120  | (Option) ChamLide TC water reservoir  | WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    | WP-S-2012  | Spare fuse  |
| LW-M-10  | (Option) Metal Lens warmer  | WP-S-2013  | AC power cable  |
| TC-L-2006-21   | (Option) Adaptor for slide glass (slim type)  | SG-C-40  | Special glass cover for commercial well plates  |

|  |   |
|--|---|
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-20B</b>  | <b>Chamlide WP-A (ASI / LUDL Piezo Z-Stage Type – 12-Well Plate)</b>                        |
| WP-S-Z201  | WP-A incubator cover  |
| WP-S-Z202B   | WP-A incubator main body for 12 well plate  |
| WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| WP-S-2004  | Lens warmer   |
| WP-S-2005  | Humidifier  |
| WP-S-2006  | Gas control speed valve for 4ø tubing   |
| WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| WP-S-2012  | Spare fuse  |
| WP-S-2013  | AC power cable  |
| SG-C-40  | Special glass cover for commercial well plates  |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-20C</b>  | <b>Chamlide WP-A (ASI / LUDL Piezo Z-Stage Type – 24-Well Plate)</b>                        |
| WP-S-Z201  | WP-A incubator cover  |
| WP-S-Z202C   | WP-A incubator main body for 24 well plate  |
| WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| WP-S-2004  | Lens warmer   |
| WP-S-2005  | Humidifier  |
| WP-S-2006  | Gas control speed valve for 4ø tubing   |
| WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| WP-S-2012  | Spare fuse  |
| WP-S-2013  | AC power cable  |
| SG-C-40  | Special glass cover for commercial well plates  |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-20D</b>  | <b>Chamlide WP-A (ASI / LUDL Piezo Z-Stage Type – 48-Well Plate)</b>                        |
| WP-S-Z201  | WP-A incubator cover  |
| WP-S-Z202D   | WP-A incubator main body for 48 well plate  |
| WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| WP-S-2004  | Lens warmer   |
| WP-S-2005  | Humidifier  |
| WP-S-2006  | Gas control speed valve for 4ø tubing   |
| WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| WP-S-2012  | Spare fuse  |
| WP-S-2013  | AC power cable  |
| SG-C-40  | Special glass cover for commercial well plates  |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-20E</b>  | <b>Chamlide WP-A (ASI / LUDL Piezo Z-Stage Type – 96-Well Plate)</b>                        |
| WP-S-Z201  | WP-A incubator cover  |
| WP-S-Z202E   | WP-A incubator main body for 96 well plate  |
| WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| WP-S-2004  | Lens warmer   |
| WP-S-2005  | Humidifier  |
| WP-S-2006  | Gas control speed valve for 4ø tubing   |
| WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| WP-S-2012  | Spare fuse  |
| WP-S-2013  | AC power cable  |
| SG-C-40  | Special glass cover for commercial well plates  |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-20F</b>  | <b>Chamlide WP-A (ASI / LUDL Piezo Z-Stage Type - A hole for Multi-Well Plate)</b>          |
| WP-S-Z201  | WP-A incubator cover  |
| WP-S-Z202F   | WP-A incubator main body for multi-well plate (A hole type)                                 |
| WP-S-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| WP-S-2004  | Lens warmer   |
| WP-S-2005  | Humidifier  |
| WP-S-2006  | Gas control speed valve for 4ø tubing   |
| WP-S-2007  | Communication cable (RS232-communication with computer)                                     |
| WP-S-2008  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| WP-S-2009  | 6ø(O.D) tubing (from humidifier to incubator)   |
| WP-S-2012  | Spare fuse  |
| WP-S-2013  | AC power cable  |
| SG-C-40  | Special glass cover for commercial well plates  |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| WP-S-Z120  | (Option) Chamlide WP water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>WP-S-XXX</b>  | <b>Chamlide WP-X (Other Stage Type / XX Well Plate)</b>                                     |
| <b>Chamlide IC (Incubator System for Commercial 35mm Dishes &amp; Chamlide Chambers)</b> |   |
| IC-L-10  | Chamlide IC   |
| IC-L-2101  | IC incubator cover  |
| IC-L-2102  | IC incubator main body  |
| IC-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| IC-L-2004  | Lens warmer   |
| IC-L-2005  | Humidifier  |
| IC-L-2007  | Gas control speed valve for 4ø tubing   |
| IC-L-2008  | Communication cable (RS232-communication with computer)                                     |
| IC-L-2009  | 2ø(O.D) tubing (for perfusion)  |
| IC-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| IC-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   |
| IC-L-2012  | Spare fuse  |
| IC-L-2013  | AC power cable  |
| CM-B18-1   | Chamlide CMB for 18mm round coverslips include spare o-rings                                |
| CM-B25-1   | Chamlide CMB for 25mm round coverslips include spare o-rings                                |
| SG-C-10  | Special glass cover for 35mm culture dish   |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| IC-L-Z120  | (Option) Chamlide IC water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| <b>Chamlide UM (Incubator System for Upright Microscope)</b>                             |   |
| UM-L-10  | Chamlide UM   |
| UM-L-Z101  | UM incubator cover  |
| UM-L-Z102  | UM incubator main body  |
| UM-L-2003  | Touch screen 4-channel temperature & Gas flow rate controller with EX. Sensor port (CU-501) |
| UM-L-2004  | Lens warmer   |
| UM-L-2005  | Humidifier  |
| UM-L-2006-21   | Adaptor for slide glass (slim type)   |
| UM-L-2006-31   | Adaptor for 35 mm culture dish or 35mm dish upright type magnetic chamber                   |
| UM-L-2006-51   | Adaptor for 50/60 mm culture dish or 50/60 mm dish upright type magnetic chamber            |
| UM-L-2006-00   | Adaptor bolts   |
| UM-L-2007  | Gas control speed valve for 4ø tubing   |
| UM-L-2008  | Communication cable (RS232-communication with computer)                                     |
| UM-L-2009  | 2ø(O.D) tubing (for perfusion)  |
| UM-L-2010  | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller)     |
| UM-L-2011  | 6ø(O.D) tubing (from humidifier to incubator)   |
| UM-L-2012  | Spare fuse  |
| UM-L-2013  | AC power cable  |
| UM-L-2014  | Ring holder for small 35mm culture dish   |
| UM-L-2015  | 3 kinds of upper rings (depends on lens diameter)   |
| UM-L-2016  | 3 kinds of under rings (depends on lens diameter)   |
| SW-C-007   | Software Chamlide CCP 7 (CD)  |
| UM-L-Z120  | (Option) Chamlide UM water reservoir  |
| TS-B   | (Option) PT 100 sensor to connect with CU-501 controller                                    |
| LW-M-10  | (Option) Metal Lens warmer  |
| UM-L-2006-22   | (Option) Adaptor for cover glass (slim type)  |
| UM-L-2006-xx   | (Option) Adaptor for other type   |
| <b>Incubator holder (Stage adaptors for Chamlide incubator systems)</b>                  |   |
| <b>Incubator Holder for Chamlide IC</b>  |   |
| HS-T-10  | Olympus manual stage type incubator holder for Chamlide IC                                  |
| HS-T-20  | Nikon manual stage type incubator holder for Chamlide IC                                    |
| HS-T-30  | Leica mounting frame M type incubator holder for Chamlide IC                                |
| HS-T-40  | Zeiss mounting frame M type incubator holder for Chamlide IC                                |
| HS-T-50  | Nikon Ti motorized stage type incubator holder for Chamlide IC                              |
| HS-T-XX  | Other stage type incubator holder for Chamlide IC   |

|  |  |
|--|--|
| <b>Incubator Holder for Chamlide WP</b>                                      |  |
| HS-W-10  | Olympus manual stage type incubator holder for Chamlide WP   |
| HS-W-20  | Nikon manual stage type incubator holder for Chamlide WP   |
| HS-W-30  | Leica mounting frame M type incubator holder for Chamlide WP   |
| HS-W-40  | Zeiss mounting frame M type incubator holder for Chamlide WP   |
| HS-W-50  | Nikon Ti motorized stage type incubator holder for Chamlide WP   |
| HS-W-XX  | Other stage type incubator holder for Chamlide WP  |
| <b>Incubator Holder for Chamlide IC</b>                                      |  |
| HS-I-10  | Olympus manual stage type incubator holder for Chamlide IC   |
| HS-I-20  | Nikon manual stage type incubator holder for Chamlide IC   |
| HS-I-30  | Leica mounting frame K type incubator holder for Chamlide IC   |
| HS-I-40  | Zeiss mounting frame K type incubator holder for Chamlide IC   |
| HS-I-50  | Leica mounting frame M type incubator holder for Chamlide IC   |
| HS-I-60  | Zeiss mounting frame M type incubator holder for Chamlide IC   |
| HS-I-70  | Nikon Ti motorized stage type incubator holder for Chamlide IC   |
| HS-I-XX  | Other stage type incubator holder for Chamlide IC  |
| <b>FC-5N (Automatic CO2/Air mixer)</b>                                       |  |
| FC-N-10  | FC-5N  |
| FC-N-2101  | Touch screen automatic CO2/Air mixer with electronic flow meter  |
| FC-N-2102  | Gas control speed valve for 4ø tubing  |
| FC-N-2103  | Communication cable (RS232-communication with computer)  |
| FC-N-2104  | Communication cable (RS485-communication with CU-501)  |
| FC-N-2105  | 4ø(O.D) tubing (from gas cylinder to gas-in fitting of CU-501 controller - via gas-in,out fitting of FC-5) |
| FC-N-2106  | 6ø(O.D) tubing (from 4ø(O.D) tubing to incubator)  |
| FC-N-2107  | Spare fuse   |
| FC-N-2108  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| <b>FC-5F-30 (High Flow Rate Automatic CO2/Air Mixer, Max 2.5 L/min)</b>      |  |
| FC-HF-Z101   | Automatic CO2/Air mixer with high flow meter (2.5L/min)  |
| FC-HF-Z102   | Gas control speed valve for 4ø tubing  |
| FC-HF-Z105   | 4ø(O.D) tubing (from gas cylinder to gas-in fitting of CU-501 controller - via gas-in,out fitting of FC-5) |
| FC-HF-Z106   | 6ø(O.D) tubing (from 4ø(O.D) tubing to incubator)  |
| FC-HF-Z107   | Spare fuse   |
| FC-HF-Z108   | AC power cable   |
| <b>FC-5F-300 (Very High Flow Rate Automatic CO2/Air Mixer, Max 30 L/min)</b> |  |
| FC-HF-Z301   | Automatic CO2/Air mixer with high flow meter (30L/min)   |
| FC-HF-Z102   | Gas control speed valve for 4ø tubing  |
| FC-HF-Z105   | 4ø(O.D) tubing (from gas cylinder to gas-in fitting of CU-501 controller - via gas-in,out fitting of FC-5) |
| FC-HF-Z106   | 6ø(O.D) tubing (from 4ø(O.D) tubing to incubator)  |
| FC-HF-Z107   | Spare fuse   |
| FC-HF-Z108   | AC power cable   |
| <b>FC-5HF for Other Flow Rate</b>  |  |
| FC-HF-XX   | FC-5HF for Other Flow Rate   |
| <b>FC-9 (Automatic O2/CO2/N2 Mixer)</b>                                      |  |
| FC-R-50  | Chamlide FC-9 (Automatic CO2/O2/N2 Mixer)  |
| FC-R-Z501  | Touch screen automatic CO2/O2/N2 mixer with electronic flow meter  |
| FC-R-Z502  | Gas control speed valve for 4ø tubing  |
| FC-R-Z503  | Communication cable (RS232-communication with computer)  |
| FC-R-Z504  | Communication cable (RS485-communication with CU-501)  |
| FC-R-Z505  | 4ø(O.D) tubing (from gas cylinder to gas-in fitting of CU-501 controller - via gas-in,out fitting of FC-9) |
| FC-R-Z506  | 6ø(O.D) tubing (from 4ø(O.D) tubing to incubator)  |
| FC-R-Z507  | Spare fuse   |
| FC-R-Z508  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| <b>Chamlide HX (Acrylic Cage Incubator)</b>                                  |  |
| HX-S-10  | Chamlide HX for Olympus Microscope   |
| HX-S-Z101  | Acrylic cage incubator for Olympus microscope with other devices   |
| HX-S-2002  | Touch screen HX temperature controller with warm air blower controller                                     |
| HX-S-2003  | Flex hose (from warm air blower to acrylic cage incubator)   |
| HX-S-2004  | Communication cable (RS232-communication with computer)  |
| HX-S-2005  | Extension cable (from warm air blower to controller)   |
| HX-S-2006  | Spare fuse   |
| HX-S-2007  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| NH-TC-L-001  | (Option) One of Chamlide TC without heater system & a hole type Chamlide WP main body without heater       |
| HX-S-2002  | (Option) Touch screen HX type 2-channel temperature controller (CU-302)                                    |
| HX-S-2003  | (Option) Touch screen HX type 1-channel temperature controller with EX. Sensor port (CU-303)               |
| <b>HX-S-20 Chamlide HX for Nikon Microscope</b>                              |  |
| HX-S-2201  | Acrylic cage incubator for Nikon microscope with other devices   |
| HX-S-2002  | Touch screen HX temperature controller with warm air blower controller                                     |
| HX-S-2003  | Flex hose (from warm air blower to acrylic cage incubator)   |
| HX-S-2004  | Communication cable (RS232-communication with computer)  |
| HX-S-2005  | Extension cable (from warm air blower to controller)   |
| HX-S-2006  | Spare fuse   |
| HX-S-2007  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| NH-TC-L-001  | (Option) One of Chamlide TC without heater system & a hole type Chamlide WP main body without heater       |
| HX-S-2002  | (Option) Touch screen HX type 2-channel temperature controller (CU-302)                                    |
| HX-S-2003  | (Option) Touch screen HX type 1-channel temperature controller with EX. Sensor port (CU-303)               |
| <b>HX-S-30 Chamlide HX for Zeiss Microscope</b>                              |  |
| HX-S-Z301  | Acrylic cage incubator for Zeiss microscope with other devices   |
| HX-S-2002  | Touch screen HX temperature controller with warm air blower controller                                     |
| HX-S-2003  | Flex hose (from warm air blower to acrylic cage incubator)   |
| HX-S-2004  | Communication cable (RS232-communication with computer)  |
| HX-S-2005  | Extension cable (from warm air blower to controller)   |
| HX-S-2006  | Spare fuse   |
| HX-S-2007  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| NH-TC-L-001  | (Option) One of Chamlide TC without heater system & a hole type Chamlide WP main body without heater       |
| HX-S-2002  | (Option) Touch screen HX type 2-channel temperature controller (CU-302)                                    |
| HX-S-2003  | (Option) Touch screen HX type 1-channel temperature controller with EX. Sensor port (CU-303)               |
| <b>HX-S-40 Chamlide HX for Leica Microscope</b>                              |  |
| HX-S-Z401  | Acrylic cage incubator for Leica microscope with other devices   |
| HX-S-2002  | Touch screen HX temperature controller with warm air blower controller                                     |
| HX-S-2003  | Flex hose (from warm air blower to acrylic cage incubator)   |
| HX-S-2004  | Communication cable (RS232-communication with computer)  |
| HX-S-2005  | Extension cable (from warm air blower to controller)   |
| HX-S-2006  | Spare fuse   |
| HX-S-2007  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| NH-TC-L-001  | (Option) One of Chamlide TC without heater system & a hole type Chamlide WP main body without heater       |
| HX-S-2002  | (Option) Touch screen HX type 2-channel temperature controller (CU-302)                                    |
| HX-S-2003  | (Option) Touch screen HX type 1-channel temperature controller with EX. Sensor port (CU-303)               |
| <b>HX-S-XX Chamlide HX for Other Microscope</b>                              |  |
| <b>Heating plate (Heating Plate for Various Types of Chambers)</b>           |  |
| HP-R-10  | Olympus Manual Stage Type Heating Plate  |
| HP-R-2101  | One of the heating plate base for Olympus manual stage   |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)   |
| HP-R-2003  | Communication cable (RS232-communication with computer)  |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| HP-R-2002  | (Option) Touch screen 2-channel temperature controller (CU-302)  |
| HP-R-2003  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)                       |
| <b>HP-R-20 Nikon Manual Stage Type Heating Plate</b>                         |  |
| HP-R-Z201  | One of the heating plate base for Nikon manual stage   |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)   |
| HP-R-2003  | Communication cable (RS232-communication with computer)  |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| HP-R-2002  | (Option) Touch screen 2-channel temperature controller (CU-302)  |
| HP-R-2003  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)                       |
| <b>HP-R-30 Leica Mounting Frame K Type Heating Plate</b>                     |  |
| HP-R-Z301  | One of the heating plate base for Leica mounting frame K type  |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)   |
| HP-R-2003  | Communication cable (RS232-communication with computer)  |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| HP-R-2002  | (Option) Touch screen 2-channel temperature controller (CU-302)  |
| HP-R-2003  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)                       |
| <b>HP-R-40 Zeiss Mounting Frame M Type Heating Plate</b>                     |  |
| HP-R-Z401  | One of the heating plate base for Zeiss mounting frame M type  |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)   |
| HP-R-2003  | Communication cable (RS232-communication with computer)  |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| HP-R-2002  | (Option) Touch screen 2-channel temperature controller (CU-302)  |
| HP-R-2003  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)                       |
| <b>HP-R-50 Leica Mounting Frame M Type Heating Plate</b>                     |  |
| HP-R-Z501  | One of the heating plate base for Leica mounting frame M type  |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)   |
| HP-R-2003  | Communication cable (RS232-communication with computer)  |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamlide CCP 7 (CD)   |
| HP-R-2002  | (Option) Touch screen 2-channel temperature controller (CU-302)  |
| HP-R-2003  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)                       |



|  |  |
|--|--|
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HP-R-60</b>   | <b>Zeiss Mounting Frame M Type Heating Plate</b>   |
| HP-R-2001  | One of the heating plate base for Zeiss mounting frame M type                              |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HP-R-2003  | Communication cable (RS232-communication with computer)                                    |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HP-R-70</b>   | <b>Nikon Ti Motorized Stage Type Heating Plate</b>   |
| HP-R-2701  | One of the heating plate base for Nikon Ti motorized stage type                            |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HP-R-2003  | Communication cable (RS232-communication with computer)                                    |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HP-R-80</b>   | <b>ASI.LUDL Piezo Z-Stage Type Heating Plate</b>   |
| HP-R-2801  | One of the heating plate base for ASI.LUDL piezo z-stage type                              |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HP-R-2003  | Communication cable (RS232-communication with computer)                                    |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HP-R-90</b>   | <b>Well Plate Size Heating Plate</b>   |
| HP-R-2901  | One of the heating plate base for Well plate size  |
| HP-R-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HP-R-2003  | Communication cable (RS232-communication with computer)                                    |
| HP-R-2004  | Spare fuse   |
| HP-R-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| HP-R-XX  | Other Type Heating Plate   |
| <b>Pre-Heating Plate</b>   |  |
| <b>PH-S-10</b>   | <b>Pre Heating Plate</b>   |
| PH-S-2001  | One of the pre-heating plate base (160mm x 230mm)  |
| PH-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| PH-S-2003  | Communication cable (RS232-communication with computer)                                    |
| PH-S-2004  | Spare fuse   |
| PH-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>PH-S-XX</b>   | <b>Other Size Pre-Heating Plate</b>  |
| <b>Heating Glass (Heating Glass for Various Types of Chambers)</b> |  |
| <b>HG-S-10</b>   | <b>Olympus Manual Stage Type Heating Glass</b>   |
| HG-S-2101  | One of the heating glass base for Olympus manual stage                                     |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-20</b>   | <b>Nikon Manual Stage Type Heating Glass</b>   |
| HG-S-2201  | One of the heating glass base for Nikon manual stage                                       |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-30</b>   | <b>Leica Mounting Frame K Type Heating Glass</b>   |
| HG-S-2301  | One of the heating glass base for Leica mounting frame K type                              |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-40</b>   | <b>Zeiss Mounting Frame M Type Heating Glass</b>   |
| HG-S-2401  | One of the heating glass base for Zeiss mounting frame M type                              |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-50</b>   | <b>Leica Mounting Frame M Type Heating Glass</b>   |
| HG-S-2501  | One of the heating glass base for Leica mounting frame M type                              |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-60</b>   | <b>Zeiss Mounting Frame M Type Heating Glass</b>   |
| HG-S-2601  | One of the heating glass base for Zeiss mounting frame M type                              |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-70</b>   | <b>Nikon Ti Motorized Stage Type Heating Glass</b>   |
| HG-S-2701  | One of the heating glass base for Nikon Ti motorized stage type                            |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-80</b>   | <b>ASI.LUDL Piezo Z-Stage Type Heating Glass</b>   |
| HG-S-2801  | One of the heating glass base for ASI.LUDL piezo z-stage type                              |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| <b>HG-S-90</b>   | <b>Well Plate Size Heating Glass</b>   |
| HG-S-2901  | One of the heating glass base for Well plate size  |
| HG-S-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-S-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-S-2004  | Spare fuse   |
| HG-S-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| HP-R-XX  | Other Type Heating Glass   |
| <b>Table Type Heating Glass</b>                                    |  |
| <b>HG-T-10</b>   | <b>Table Type Heating Glass</b>  |
| HG-T-2101  | Table type heating glass, 430(w) x 209(d) x 75-115(h), 330 x 171mm rectangular glass size. |
| HG-T-2002  | Touch screen 1-channel temperature controller (CU-301)                                     |
| HG-T-2003  | Communication cable (RS232-communication with computer)                                    |
| HG-T-2004  | Spare fuse   |
| HG-T-2005  | AC power cable   |
| SW-C-007   | Software Chamide CCP 7 (CD)  |
| HP-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                            |
| HP-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)       |
| HP-R-XX  | Other Table Type Heating Glass   |

|   |   |
|---|---|
| <b>Chamide CH (Cooling/Heating Plate for Various Types of Chambers)</b> |   |
| <b>CH-R-10</b>  | <b>Cooling Fan Type Cooling/Heating Plate</b>   |
| HP-R-2101   | One of the Cooling fan type cooling/heating plate   |
| HP-R-2002   | 1-channel temperature controller  |
| HP-R-2003   | Communication cable (RS232-communication with computer)   |
| HP-R-2004   | Spare fuse  |
| HP-R-2005   | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| <b>CH-R-20</b>  | <b>Radiator type cooling/heating plate</b>  |
| HP-R-2201   | One of the Radiator type cooling/heating plate  |
| HP-R-2002   | 1-channel temperature controller  |
| HP-R-2003   | Communication cable (RS232-communication with computer)   |
| HP-R-2004   | Spare fuse  |
| HP-R-2005   | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| <b>IHS-101 (Fluidic Inline Heater)</b>                                  |   |
| <b>ILH-10</b>   | <b>IHS-101</b>  |
| IL-H-2101   | IHS fluidic inline heater main body   |
| IL-H-2002   | Touch screen 1-channel temperature controller (CU-301)  |
| IL-H-2003C  | Supporting arm on/off magnetic type   |
| IL-H-2003M  | (Option) Can be chosen "supporting arm clamp type" instead of "supporting arm on/off magnet type" |
| IL-H-2003   | 2ø(O.D) tubing (for perfusion)  |
| IL-H-2005   | Tubing connectors for 2ø(O.D) tubing  |
| IL-H-2006   | Communication cable (RS232-communication with computer)   |
| IL-H-2007   | Spare fuse  |
| IL-H-2008   | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| IL-H-2010   | (Option) Peristaltic pump   |
| IL-H-20022  | (Option) Touch screen 2-channel temperature controller (CU-302)                                   |
| IL-H-20023  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)              |
| <b>IHS-801 (8-Channel Fluidic Inline Heater)</b>                        |   |
| <b>ILH-80</b>   | <b>IHS-801</b>  |
| IL-H-2801   | IHS fluidic inline heater main body   |
| IL-H-2002   | Touch screen 1-channel temperature controller (CU-301)  |
| IL-H-2003C  | Supporting arm on/off magnetic type   |
| IL-H-2003M  | (Option) Can be chosen "supporting arm clamp type" instead of "supporting arm on/off magnet type" |
| IL-H-2003   | 2ø(O.D) tubing (for perfusion)  |
| IL-H-2005   | Tubing connectors for 2ø(O.D) tubing  |
| IL-H-2006   | Communication cable (RS232-communication with computer)   |
| IL-H-2007   | Spare fuse  |
| IL-H-2008   | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| IL-H-2010   | (Option) Peristaltic pump   |
| IL-H-20022  | (Option) Touch screen 2-channel temperature controller (CU-302)                                   |
| IL-H-20023  | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)              |
| <b>IHC-101 (Fluidic Inline Solution Cooler/Heater)</b>                  |   |
| <b>IHC-R-10</b>   | <b>Cooling Fan Type Fluidic Inline Solution Cooler/Heater</b>                                     |
| IHC-R-2101  | Cooling fan type fluidic inline solution cooler/heater main body                                  |
| IHC-R-2002  | Touch screen 1-channel temperature controller (CU-301)  |
| IHC-R-2003S   | (Option) Customized supporting arm  |
| IHC-R-2004  | 2ø(O.D) tubing (for perfusion)  |
| IHC-R-2005  | Tubing connectors for 2ø(O.D) tubing  |
| IHC-R-2006  | Communication cable (RS232-communication with computer)   |
| IHC-R-2007  | Spare fuse  |
| IHC-R-2008  | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| IHC-R-2010  | (Option) Peristaltic pump   |
| IHC-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                                   |
| IHC-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)              |
| <b>IHC-R-20</b>   | <b>Radiator Type Fluidic Inline Solution Cooler/Heater</b>  |
| IHC-R-2201  | Radiator type fluidic inline solution cooler/heater main body                                     |
| IHC-R-2002  | Touch screen 1-channel temperature controller (CU-301)  |
| IHC-R-2003S   | (Option) Customized supporting arm  |
| IHC-R-2004  | 2ø(O.D) tubing (for perfusion)  |
| IHC-R-2005  | Tubing connectors for 2ø(O.D) tubing  |
| IHC-R-2006  | Communication cable (RS232-communication with computer)   |
| IHC-R-2007  | Spare fuse  |
| IHC-R-2008  | AC power cable  |
| SW-C-007  | Software Chamide CCP 7 (CD)   |
| IHC-R-2010  | (Option) Peristaltic pump   |
| IHC-R-20022   | (Option) Touch screen 2-channel temperature controller (CU-302)                                   |
| IHC-R-20023   | (Option) Touch screen 1-channel temperature controller with EX. Sensor port (CU-303)              |
| <b>Chamide TR (Temperature Ramping Control System)</b>                  |   |
| <b>TRH-30</b>   | <b>Chamide TR Heating Stage System for Microscope (Max 300°C)</b>                                 |
| TR-H-2301   | Heating stage of TR-H-30  |
| TR-H-2002   | Heating stage temperature controller (CU-109H)  |
| TR-H-2003   | Communication cable (RS232-communication with computer)   |
| TR-H-2004   | Spare fuse  |
| TR-H-2005   | AC power cable  |
| TR-H-2006   | TRCS ver 3.1 (Temperature ramping control system)   |
| <b>TRH-50</b>   | <b>Chamide TR Heating Stage System for Microscope (Max 500°C)</b>                                 |
| TR-H-2301   | Heating stage of TR-H-50  |
| TR-H-2002   | Heating stage temperature controller (CU-109H)  |
| TR-H-2003   | Communication cable (RS232-communication with computer)   |
| TR-H-2004   | Spare fuse  |
| TR-H-2005   | AC power cable  |
| TR-H-2006   | TRCS ver 3.1 (Temperature ramping control system)   |
| <b>TRH-XX</b>   | <b>Chamide TR Heating Stage System for Microscope (Max XX°C)</b>                                  |
| <b>MPS-8 (Multi-Valve Perfusion System)</b>                             |   |
| <b>MV-S-10</b>  | <b>8-Channel Valve Perfusion System for 10cc Syringe</b>  |
| MV-S-2101   | MPS-8 devices for 10cc syringe  |
|   | - MPS-8 prop with pole  |
|   | - MPS-8 syringe holder for 10cc syringe   |
| MV-S-2002   | MPS-8 controller  |
| MV-S-2103   | 10cc syringes (8ea)   |
| MV-S-2004   | 3-way cocks for syringes (8ea)  |
| MV-S-2005   | 2ø(O.D) tubing (for perfusion)  |
| MV-S-2006   | Communication cable (RS232-communication with MPS-8 controller)                                   |
| MV-S-2007   | Communication cable (RS232-communication with computer)   |
| MV-S-2008   | Spare fuse  |
| MV-S-2009   | AC power cable  |
| SW-C-005  | Software Chamide MPS v1.00 (CD)   |
| MV-S-2010   | (Option) Aqua pump with air distributor   |
| <b>MV-S-30</b>  | <b>8-Channel Valve Perfusion System for 30cc Syringe</b>  |
| MV-S-2301   | MPS-8 devices for 30cc syringe  |
|   | - MPS-8 prop with pole  |
|   | - MPS-8 syringe holder for 30cc syringe   |
| MV-S-2002   | MPS-8 controller  |
| MV-S-2303   | 30cc syringes (8ea)   |
| MV-S-2004   | 3-way cocks for syringes (8ea)  |
| MV-S-2005   | 2ø(O.D) tubing (for perfusion)  |
| MV-S-2006   | Communication cable (RS232-communication with MPS-8 controller)                                   |
| MV-S-2007   | Communication cable (RS232-communication with computer)   |
| MV-S-2008   | Spare fuse  |
| MV-S-2009   | AC power cable  |
| SW-C-005  | Software Chamide MPS v1.00 (CD)   |
| MV-S-2010   | (Option) Aqua pump with air distributor   |
| <b>MV-S-50</b>  | <b>8-Channel Valve Perfusion System for 50cc Syringe</b>  |
| MV-S-2501   | MPS-8 devices for 50cc syringe  |
|   | - MPS-8 prop with pole  |
|   | - MPS-8 syringe holder for 50cc syringe   |
| MV-S-2002   | MPS-8 controller  |
| MV-S-2503   | 50cc syringes (8ea)   |
| MV-S-2004   | 3-way cocks for syringes (8ea)  |
| MV-S-2005   | 2ø(O.D) tubing (for perfusion)  |
| MV-S-2006   | Communication cable (RS232-communication with MPS-8 controller)                                   |
| MV-S-2007   | Communication cable (RS232-communication with computer)   |
| MV-S-2008   | Spare fuse  |
| MV-S-2009   | AC power cable  |
| SW-C-005  | Software Chamide MPS v1.00 (CD)   |
| MV-S-2010   | (Option) Aqua pump with air distributor   |
| <b>MV-S-XX</b>  | <b>8-Channel Valve Perfusion System for Other Size Syringe</b>                                    |
| <b>Chamide CP (Water Circulation Plate with Water Circulation Bath)</b> |   |
| <b>CP-R-10</b>  | <b>Chamide CP (Water Circulation Plate with Water Circulation Bath)</b>                           |
| CP-R-2001   | Water circulation plate   |
| CP-R-2002   | Water circulation cover   |
| CP-R-2003   | Water circulation lens winder   |
| CP-R-2004   | Table-top controller with water circulation bath (control temp. -20~100°C)                        |
| CP-R-2006-11  | Adaptor for Nunc Lab-Tek™ II Chamber Slides   |
| CP-R-2006-12  | Adaptor for Nunc Lab-Tek™ II Chambered Coverglass   |
| CP-R-2006-31  | Adaptor for 35 mm culture dish or 35mm dish type magnetic chamber                                 |
| CP-R-2006-41  | Adaptor for well-slide & Chamide 2-hole bottom plate  |
| CP-R-2006-51  | Adaptor for 50/60 mm culture dish or 50/60 mm dish type magnetic chamber                          |
| CP-R-2006-00  | Adaptor bolts   |
| CP-R-2007   | Gas control speed valve for 4ø tubing   |
| CP-R-2008   | Communication cable (RS232-communication with computer)   |

|                                   |   |
|-----------------------------------|---|
| CP-R-2009                         | 2ø(O.D) tubing (for perfusion)  |
| CP-R-2010                         | 4ø(O.D) tubing (from gas cylinder to humidifier - via gas-in,out fitting of controller) |
| CP-R-2011                         | 6ø(O.D) tubing (from humidifier to incubator)   |
| CP-R-2012                         | Spare fuse  |
| CP-R-2013                         | AC power cable  |
| CP-R-2014                         | Ring holder for small 35mm culture dish   |
| CM-B18-1                          | Chamlide CMB for 18mm round coverslips include spare o-rings                            |
| CM-B25-1                          | Chamlide CMB for 25mm round coverslips include spare o-rings                            |
| SG-C-10                           | Special glass cover for 35mm culture dish   |
| SG-C-30                           | Special glass cover for disposable chamber slides or chambered coverglass               |
| SW-C-007                          | Software Chamlide CCP 7 (CD)  |
| CP-R-2006-21                      | (Option) Adaptor for slide glass (slim type)  |
| CP-R-2006-22                      | (Option) Adaptor for cover glass (slim type)  |
| CP-R-2006-32                      | (Option) Adaptor for 35mm 2-dishes type chamber or 35mm 2-dishes type magnetic chamber  |
| CP-R-2006-xx                      | (Option) Adaptor for other type   |
| VC-3                              | (Valve Controller for 3-Circulation Water Chiller)                                      |
| VC-R-3                            | VC-3  |
| In Vivo Imaging Stage System      | (Mouse and Rat In Vivo Imaging Stage for Upright Microscope)                            |
| US-M-10                           | Motorized stage for animal experimental up-right microscope                             |
| US-A-70                           | Anesthesia machine  |
| US-R-20                           | Heating plate with stereotaxic device for mouse   |
| US-R-11                           | (Option) Heating plate with stereotaxic device for mouse (rectangular block type)       |
| US-R-12                           | (Option) Heating plate with stereotaxic device for mouse (ring type)                    |
| US-R-13                           | (Option) Heating plate with stereotaxic device for mouse (stereotaxic type)             |
| US-R-14                           | (Option) Heating plate with stereotaxic device for mouse (intestine holder type)        |
| FS-1 (IVF Chamber)                |   |
| FS-R                              | IVF Environmental Chamber   |
| FS-R-10                           | IVF environmental chamber for Olympus microscope  |
| FS-R-20                           | IVF environmental chamber for Nikon microscope  |
| FS-R-30                           | IVF environmental chamber for Zeiss microscope  |
| FS-R-40                           | IVF environmental chamber for Leica microscope  |
| FS-R-XX                           | IVF environmental chamber for other microscope  |
| CR Series (Temperature Indicator) |   |
| TS-B                              | PT 100 Sensor Connector   |
|                                   | (Can be connect with CU-109/CU-501)   |
| TS-M                              | Temperature Indicator with Ultra Thin Thermocouple                                      |
|                                   | (No communication with computer)  |
| TS-C                              | Temperature Indicator with Ultra Thin Thermocouple                                      |
|                                   | (communication with computer via CU-109)  |
| TS-CD                             | Temperature Indicator with Ultra Thin Thermocouple                                      |
|                                   | (communication with computer via RS-232 port)   |

|                                      |  |
|--------------------------------------|--|
| <b>Stage Insert</b>                  |  |
| <b>Universal K Stage Insert</b>      |  |
| SI-K-10                              | Universal K stage insert for 35mm dish or chamlide chambers                                      |
| SI-K-20                              | Universal K stage insert for 60mm dish or chamlide chambers                                      |
| SI-K-30                              | Universal K stage insert for 100mm dish or chamlide chambers                                     |
| SI-K-40                              | Universal K stage insert for slide glass or chamlide chambers                                    |
| SI-K-50                              | Universal K stage insert for well plate or chamlide chambers                                     |
| SI-K-001                             | Universal K stage insert for 35mm-60mm dish, chamlide chambers and slide glass (adjustable type) |
| SI-K-XX                              | Universal K stage insert for others  |
| <b>Universal M Stage Insert</b>      |  |
| SI-M-10                              | Universal M stage insert for 35mm dish or chamlide chambers                                      |
| SI-M-20                              | Universal M stage insert for 60mm dish or chamlide chambers                                      |
| SI-M-30                              | Universal M stage insert for 100mm dish or chamlide chambers                                     |
| SI-M-40                              | Universal M stage insert for slide glass or chamlide chambers                                    |
| SI-M-50                              | Universal M stage insert for well plate or chamlide chambers                                     |
| SI-M-001                             | Universal M stage insert for 35mm-60mm dish, chamlide chambers and slide glass (adjustable type) |
| SI-M-XX                              | Universal M stage insert for others  |
| <b>Nikon XY Stage Insert</b>         |  |
| SI-N-10                              | Nikon XY stage insert for 35mm dish or chamlide chambers   |
| SI-N-20                              | Nikon XY stage insert for 60mm dish or chamlide chambers   |
| SI-N-30                              | Nikon XY stage insert for 100mm dish or chamlide chambers  |
| SI-N-40                              | Nikon XY stage insert for slide glass or chamlide chambers                                       |
| SI-N-50                              | Nikon XY stage insert for well plate or chamlide chambers  |
| SI-N-001                             | Nikon XY stage insert for 35mm-60mm dish, chamlide chambers and slide glass (adjustable type)    |
| SI-N-XX                              | Nikon XY stage insert for others   |
| <b>Other Stage Insert for Others</b> |  |
| <b>Chamlide CMB</b>                  |  |
| CM-B12-1                             | Chamlide CMB for 12mm Round Coverslips   |
| CM-B12-1PA                           | Straight Tubing Type CM-B12-1  |
| CM-B12-1PB                           | L-Shape Tubing Type CM-B12-1   |
| CM-B12-Z11                           | CMB main body for 12mm round coverslip   |
| CM-B12-Z11A                          | Straight tubing typ CMB body for 12mm round coverslip  |
| CM-B12-Z11B                          | L-shape tubing type CMB body for 12mm round coverslip  |
| CM-B12-Z12                           | CMB bottom plate for 12mm round coverslip  |
| CM-B12-Z13                           | Glass cover for CMB  |
| CM-B12-Z14                           | Silicone o-ring for 12mm round coverslip   |
| CM-B15-1                             | Chamlide CMB for 15mm Round Coverslips   |
| CM-B15-1PA                           | Straight Tubing Type CM-B15-1  |
| CM-B15-1PB                           | L-Shape Tubing Type CM-B15-1   |
| CM-B15-Z11                           | CMB main body for 12mm round coverslip   |
| CM-B15-Z11A                          | Straight tubing typ CMB body for 15mm round coverslip  |
| CM-B15-Z11B                          | L-shape tubing type CMB body for 15mm round coverslip  |
| CM-B15-Z12                           | CMB bottom plate for 15mm round coverslip  |
| CM-B15-Z13                           | Glass cover for CMB  |
| CM-B15-Z14                           | Silicone o-ring for 15mm round coverslip   |
| CM-B18-1                             | Chamlide CMB for 18mm Round Coverslips   |
| CM-B18-1PA                           | Straight Tubing Type CM-B18-1  |
| CM-B18-1PB                           | L-shape Tubing Type CM-B18-1   |
| CM-B18-Z11                           | CMB main body for 12mm round coverslip   |
| CM-B18-Z11A                          | Straight tubing typ CMB body for 18mm round coverslip  |
| CM-B18-Z11B                          | L-shape tubing type CMB body for 18mm round coverslip  |
| CM-B18-Z12                           | CMB bottom plate for 18mm round coverslip  |
| CM-B18-Z13                           | Glass cover for CMB  |
| CM-B18-Z14                           | Silicone o-ring for 18mm round coverslip   |
| CM-B20-1                             | Chamlide CMB for 20mm Round Coverslips   |
| CM-B20-1PA                           | Straight Tubing Type CM-B20-1  |
| CM-B20-1PB                           | L-Shape Tubing Type CM-B20-1   |
| CM-B20-Z11                           | CMB main body for 20mm round coverslip   |
| CM-B20-Z11A                          | Straight tubing type CMB body for 20mm round coverslip   |
| CM-B20-Z11B                          | L-shape tubing type CMB body for 20mm round coverslip  |
| CM-B20-Z12                           | CMB bottom plate for 20mm round coverslip  |
| CM-B20-Z13                           | Glass cover for CMB  |
| CM-B20-Z14                           | Silicone o-ring for 20mm round coverslip   |
| CM-B22-1                             | Chamlide CMB for 22mm Round Coverslips   |
| CM-B22-1PA                           | Straight Tubing Type CM-B22-1  |
| CM-B22-1PB                           | L-Shape Tubing Type CM-B22-1   |
| CM-B22-Z11                           | CMB main body for 22mm round coverslip   |
| CM-B22-Z11A                          | Straight tubing typ CMB body for 22mm round coverslip  |
| CM-B22-Z11B                          | L-shape tubing type CMB body for 22mm round coverslip  |
| CM-B22-Z12                           | CMB bottom plate for 22mm round coverslip  |
| CM-B22-Z13                           | Glass cover for CMB  |
| CM-B22-Z14                           | Silicone o-ring for 22mm round coverslip   |
| CM-B25-1                             | Chamlide CMB for 25mm Round Coverslips   |
| CM-B25-1PA                           | Straight Tubing Type CM-B25-1  |
| CM-B25-1PB                           | L-Shape Tubing Type CM-B25-1   |
| CM-B25-Z11                           | CMB main body for 25mm round coverslip   |
| CM-B25-Z11A                          | Straight tubing typ CMB body for 25mm round coverslip  |
| CM-B25-Z11B                          | L-shape tubing type CMB body for 25mm round coverslip  |
| CM-B25-Z12                           | CMB bottom plate for 25mm round coverslip  |
| CM-B25-Z13                           | Glass cover for CMB  |
| CM-B25-Z14                           | Silicone o-ring for 25mm round coverslip   |
| <b>Chamlide CMM</b>                  |  |
| CM-M25-2                             | 2-Well Chamlide CMM for 25mm Round Coverslip   |
| CM-M25-Z21                           | 2-Well CMM main body for 25mm round coverslip  |
| CM-M25-Z22                           | 2-Well CMM bottom plate for 25mm round coverslip   |
| CM-M25-Z23                           | Glass cover for CMM  |
| CM-M25-Z24                           | Silicone gasket of 2-well CMM for 25mm round coverslip   |
| CM-M-PC                              | (Option) Chamlide CMM perfusion holder   |
| CM-M25-4                             | 4-Well Chamlide CMM for 25mm Round Coverslip   |
| CM-M25-Z41                           | 4-well CMM main body for 25mm round coverslip  |
| CM-M25-Z42                           | 4-well CMM bottom plate for 25mm round coverslip   |
| CM-M25-Z43                           | Glass cover for CMM  |
| CM-M25-Z44                           | Silicone gasket of 4 well CMM for 25mm round coverslip   |
| CM-M-PC                              | (Option) Chamlide CMM perfusion holder   |
| CM-M12-4                             | 4-Well Chamlide CMM for 12mm Round Coverslip   |
| CM-M12-Z41                           | 4-well CMM main body for 12mm round coverslip  |
| CM-M12-Z42                           | 4-well CMM bottom plate for 12mm round coverslip   |
| CM-M12-Z43                           | Glass cover for CMM  |
| CM-M12-Z44                           | Silicone gasket of 4-well CMM for 25mm round coverslip   |
| CM-M-PC                              | (Option) Chamlide CMM perfusion holder   |
| <b>Chamlide CMS</b>                  |  |
| CM-S18-1                             | 1 Well Chamlide CMS for 18mm x 18mm Coverslip  |
| CM-S18-Z11                           | 1 well CMS main body for 18mm x18mm coverslip  |
| CM-S18-Z12                           | 1 well CMS bottom plate for 18mm x 18mm coverslip  |
| CM-S18-Z13                           | Glass cover for CMS  |
| CM-S18-Z14                           | Silicone gasket of 1 well CMS for 18mm x 18mm coverslip  |
| CM-S20-1                             | 1 Well Chamlide CMS for 20mm x 20mm Coverslip  |
| CM-S20-Z11                           | 1 well CMS main body for 20mm x 20mm coverslip   |
| CM-S20-Z12                           | 1 well CMS bottom plate for 20mm x 20mm coverslip  |
| CM-S20-Z13                           | Glass cover for CMS  |
| CM-S20-Z14                           | Silicone gasket of 1 well CMS for 20mm x 20mm coverslip  |
| CM-S22-1                             | 1 Well Chamlide CMS for 22mm x 22mm Coverslip  |
| CM-S22-Z11                           | 1 well CMS main body for 22mm x 22mm coverslip   |
| CM-S22-Z12                           | 1 well CMS bottom plate for 22mm x 22mm coverslip  |
| CM-S22-Z13                           | Glass cover for CMS  |
| CM-S22-Z14                           | Silicone gasket of 1 well CMS for 22mm x 22mm coverslip  |
| CM-S24-1                             | 1 Well Chamlide CMS for 24mm x 24mm Coverslip  |
| CM-S24-Z11                           | 1 well CMS main body for 24mm x 24mm coverslip   |
| CM-S24-Z12                           | 1 well CMS bottom plate for 24mm x 24mm coverslip  |
| CM-S24-Z13                           | Glass cover for CMS  |
| CM-S24-Z14                           | Silicone gasket of 1 well CMS for 24mm x 24mm coverslip  |
| CM-S18-2                             | 2-Well Chamlide CMS for 18mm x 18mm Coverslip  |
| CM-S18-Z21                           | 2-well CMS main body for 18mm x 18mm coverslip   |
| CM-S18-Z22                           | 2-well CMS bottom plate for 18mm x 18mm coverslip  |
| CM-S18-Z23                           | Glass cover for CMS  |
| CM-S18-Z24                           | Silicone gasket of 2 well CMS for 18mm x 18mm coverslip  |
| CM-S20-2                             | 2-Well Chamlide CMS for 20mm x 20mm Coverslip  |
| CM-S20-Z21                           | 2-well CMS main body for 20mm x 20mm coverslip   |
| CM-S20-Z22                           | 2-well CMS bottom plate for 20mm x 20mm coverslip  |
| CM-S20-Z23                           | Glass cover for CMS  |
| CM-S20-Z24                           | Silicone gasket of 2 well CMS for 20x20mm coverslip  |
| CM-S22-2                             | 2-Well Chamlide CMS for 22mm x 22mm Coverslip  |
| CM-S22-Z21                           | 2-well CMS main body for 22mm x 22mm coverslip   |
| CM-S22-Z22                           | 2-well CMS bottom plate for 22mm x 22mm coverslip  |
| CM-S22-Z23                           | Glass cover for CMS  |
| CM-S22-Z24                           | Silicone gasket of 2 well CMS for 22x22mm coverslip  |
| CM-S24-2                             | 2-Well Chamlide CMS for 24mm x 24mm Coverslip  |
| CM-S24-Z21                           | 2-well CMS main body for 24mm x 24mm coverslip   |
| CM-S24-Z22                           | 2-well CMS bottom plate for 24mm x 24mm coverslip  |
| CM-S24-Z23                           | Glass cover for CMS  |
| CM-S24-Z24                           | Silicone gasket of 2-well CMS for 24mm x 24mm coverslip  |
| CM-S18-4                             | 4-Well Chamlide CMS for 18mm x18mm Coverslip   |
| CM-S18-Z41                           | 4-well CMS main body for 18mm x18mm coverslip  |
| CM-S18-Z42                           | 4-well CMS bottom plate for 18mm x18mm coverslip   |
| CM-S18-Z43                           | Glass cover for CMS  |
| CM-S18-Z44                           | Silicone gasket of 4-well CMS for 18mm x18mm coverslip   |



|                            |  |
|----------------------------|--|
| AC-P118                    | ChamClide AC-PI for 18mm Round Coverslip                                 |
| AC-P118-Z1                 | AC-PI main body for 18mm round coverslip                                 |
| AC-P118-Z2                 | AC-PI bottom plate for 18mm round coverslip                              |
| AC-P118-Z3                 | Silicone gasket for 18mm round coverslip                                 |
| AC-P118-Z4                 | Suction port (spring included)   |
| AC-P118-Z5                 | 2a silicone tubing   |
| AC-P120                    | ChamClide AC-PI for 20mm Round Coverslip                                 |
| AC-P120-Z1                 | AC-PI main body for 20mm round coverslip                                 |
| AC-P120-Z2                 | AC-PI bottom plate for 20mm round coverslip                              |
| AC-P120-Z3                 | Silicone gasket for 20mm round coverslip                                 |
| AC-P120-Z4                 | Suction port (spring included)   |
| AC-P120-Z5                 | 2a silicone tubing   |
| AC-P122                    | ChamClide AC-PI for 22mm Round Coverslip                                 |
| AC-P122-Z1                 | AC-PI main body for 22mm round coverslip                                 |
| AC-P122-Z2                 | AC-PI bottom plate for 22mm round coverslip                              |
| AC-P122-Z3                 | Silicone gasket for 22mm round coverslip                                 |
| AC-P122-Z4                 | Suction port (spring included)   |
| AC-P122-Z5                 | 2a silicone tubing   |
| AC-P125                    | ChamClide AC-PI for 25mm Round Coverslip                                 |
| AC-P125-Z1                 | AC-PI main body for 25mm round coverslip                                 |
| AC-P125-Z2                 | AC-PI bottom plate for 25mm round coverslip                              |
| AC-P125-Z3                 | Silicone gasket for 25mm round coverslip                                 |
| AC-P125-Z4                 | Suction port (spring included)   |
| AC-PU15                    | ChamClide AC-PU for 15mm Round Coverslip                                 |
| AC-PU15-Z1                 | AC-PU main body for 15mm round coverslip                                 |
| AC-PU15-Z2                 | AC-PU bottom plate for 15mm round coverslip                              |
| AC-PU15-Z3                 | Silicone gasket for 15mm round coverslip                                 |
| AC-PU15-Z4                 | Suction port (spring included)   |
| AC-PU15-Z5                 | 2a silicone tubing   |
| AC-PU18                    | ChamClide AC-PU for 18mm Round Coverslip                                 |
| AC-PU18-Z1                 | AC-PU main body for 18mm round coverslip                                 |
| AC-PU18-Z2                 | AC-PU bottom plate for 18mm round coverslip                              |
| AC-PU18-Z3                 | Silicone gasket for 18mm round coverslip                                 |
| AC-PU18-Z4                 | Suction port (spring included)   |
| AC-PU18-Z5                 | 2a silicone tubing   |
| AC-PU20                    | ChamClide AC-PU for 20mm Round Coverslip                                 |
| AC-PU20-Z1                 | AC-PU main body for 20mm round coverslip                                 |
| AC-PU20-Z2                 | AC-PU bottom plate for 20mm round coverslip                              |
| AC-PU20-Z3                 | Silicone gasket for 20mm round coverslip                                 |
| AC-PU20-Z4                 | Suction port (spring included)   |
| AC-PU20-Z5                 | 2a silicone tubing   |
| AC-PU22                    | ChamClide AC-PU for 22mm Round Coverslip                                 |
| AC-PU22-Z1                 | AC-PU main body for 22mm round coverslip                                 |
| AC-PU22-Z2                 | AC-PU bottom plate for 22mm round coverslip                              |
| AC-PU22-Z3                 | Silicone gasket for 22mm round coverslip                                 |
| AC-PU22-Z4                 | Suction port (spring included)   |
| AC-PU22-Z5                 | 2a silicone tubing   |
| AC-PU25                    | ChamClide AC-PU for 25mm Round Coverslip                                 |
| AC-PU25-Z1                 | AC-PU main body for 25mm round coverslip                                 |
| AC-PU25-Z2                 | AC-PU bottom plate for 25mm round coverslip                              |
| AC-PU25-Z3                 | Silicone gasket for 25mm round coverslip                                 |
| AC-PU25-Z4                 | Suction port (spring included)   |
| AC-PU25-Z5                 | 2a silicone tubing   |
| <b>ChamClide EC</b>        |  |
| EC-B15                     | ChamClide EC for 15mm Round Coverslip                                    |
| EC-B15-Z1                  | EC main body for 15mm round coverslip                                    |
| EC-B15-Z2                  | EC bottom plate for 15mm round coverslip                                 |
| EC-B15-Z3                  | Silicone o-ring for 15mm round coverslip                                 |
| EC-B15-Z4                  | Suction port (spring included)   |
| EC-B15-Z5                  | 2a silicone tubing   |
| EC-B15-Z6                  | Stimulation cable with male connector                                    |
| EC-B15-Z7                  | Platinum electrode with female connector                                 |
| EC-B15-Z8                  | Electrode guide  |
| EC-B18                     | ChamClide EC for 18mm Round Coverslip                                    |
| EC-B18-Z1                  | EC main body for 18mm round coverslip                                    |
| EC-B18-Z2                  | EC bottom plate for 18mm round coverslip                                 |
| EC-B18-Z3                  | Silicone o-ring for 18mm round coverslip                                 |
| EC-B18-Z4                  | Suction port (spring included)   |
| EC-B18-Z5                  | 2a silicone tubing   |
| EC-B18-Z6                  | Stimulation cable with male connector                                    |
| EC-B18-Z7                  | Platinum electrode with female connector                                 |
| EC-B18-Z8                  | Electrode guide  |
| EC-B20                     | ChamClide EC for 20mm Round Coverslip                                    |
| EC-B20-Z1                  | EC main body for 20mm round coverslip                                    |
| EC-B20-Z2                  | EC bottom plate for 20mm round coverslip                                 |
| EC-B20-Z3                  | Silicone o-ring for 20mm round coverslip                                 |
| EC-B20-Z4                  | Suction port (spring included)   |
| EC-B20-Z5                  | 2a silicone tubing   |
| EC-B20-Z6                  | Stimulation cable with male connector                                    |
| EC-B20-Z7                  | Platinum electrode with female connector                                 |
| EC-B20-Z8                  | Electrode guide  |
| EC-B22                     | ChamClide EC for 22mm Round Coverslip                                    |
| EC-B22-Z1                  | EC main body for 22mm round coverslip                                    |
| EC-B22-Z2                  | EC bottom plate for 22mm round coverslip                                 |
| EC-B22-Z3                  | Silicone o-ring for 22mm round coverslip                                 |
| EC-B22-Z4                  | Suction port (spring included)   |
| EC-B22-Z5                  | 2a silicone tubing   |
| EC-B22-Z6                  | Stimulation cable with male connector                                    |
| EC-B22-Z7                  | Platinum electrode with female connector                                 |
| EC-B22-Z8                  | Electrode guide  |
| EC-B25                     | ChamClide EC for 25mm Round Coverslip                                    |
| EC-B25-Z1                  | EC main body for 25mm round coverslip                                    |
| EC-B25-Z2                  | EC bottom plate for 25mm round coverslip                                 |
| EC-B25-Z3                  | Silicone o-ring for 25mm round coverslip                                 |
| EC-B25-Z4                  | Suction port (spring included)   |
| EC-B25-Z5                  | 2a silicone tubing   |
| EC-B25-Z6                  | Stimulation cable with male connector                                    |
| EC-B25-Z7                  | Platinum electrode with female connector                                 |
| EC-B25-Z8                  | Electrode guide  |
| <b>ChamClide CF</b>        |  |
| CF-S15-A                   | ChamClide CF for 15mm Round Coverslip (0.2mm)                            |
| CF-S15-B                   | ChamClide CF for 15mm Round Coverslip (0.5mm)                            |
| CF-S15-C                   | ChamClide CF for 15mm Round Coverslip (1.0mm)                            |
| CF-S15-Z1A                 | CF main body for 15mm round coverslip(0.2mm)                             |
| CF-S15-Z1B                 | CF main body for 15mm round coverslip(0.5mm)                             |
| CF-S15-Z1C                 | CF main body for 15mm round coverslip(1.0mm)                             |
| CF-S15-Z2                  | CF bottom plate for 15mm round coverslip                                 |
| CF-S15-Z3                  | Silicone gasket for 15mm round coverslip                                 |
| CF-S15-Z4                  | 2a silicone tubing   |
| CF-S18-A                   | ChamClide CF for 18mm Round Coverslip (0.2mm)                            |
| CF-S18-B                   | ChamClide CF for 18mm Round Coverslip (0.5mm)                            |
| CF-S18-C                   | ChamClide CF for 18mm Round Coverslip (1.0mm)                            |
| CF-S18-Z1A                 | CF main body for 18mm round coverslip(0.2mm)                             |
| CF-S18-Z1B                 | CF main body for 18mm round coverslip(0.5mm)                             |
| CF-S18-Z1C                 | CF main body for 18mm round coverslip(1.0mm)                             |
| CF-S18-Z2                  | CF bottom plate for 18mm round coverslip                                 |
| CF-S18-Z3                  | Silicone gasket for 18mm round coverslip                                 |
| CF-S18-Z4                  | 2a silicone tubing   |
| CF-S20-A                   | ChamClide CF for 20mm Round Coverslip (0.2mm)                            |
| CF-S20-B                   | ChamClide CF for 20mm Round Coverslip (0.5mm)                            |
| CF-S20-C                   | ChamClide CF for 20mm Round Coverslip (1.0mm)                            |
| CF-S20-Z1A                 | CF main body for 20mm round coverslip(0.2mm)                             |
| CF-S20-Z1B                 | CF main body for 20mm round coverslip(0.5mm)                             |
| CF-S20-Z1C                 | CF main body for 20mm round coverslip(1.0mm)                             |
| CF-S20-Z2                  | CF bottom plate for 20mm round coverslip                                 |
| CF-S20-Z3                  | Silicone gasket for 20mm round coverslip                                 |
| CF-S20-Z4                  | 2a silicone tubing   |
| CF-S22-A                   | ChamClide CF for 22mm Round Coverslip (0.2mm)                            |
| CF-S22-B                   | ChamClide CF for 22mm Round Coverslip (0.5mm)                            |
| CF-S22-C                   | ChamClide CF for 22mm Round Coverslip (1.0mm)                            |
| CF-S22-Z1A                 | CF main body for 22mm round coverslip(0.2mm)                             |
| CF-S22-Z1B                 | CF main body for 22mm round coverslip(0.5mm)                             |
| CF-S22-Z1C                 | CF main body for 22mm round coverslip(1.0mm)                             |
| CF-S22-Z2                  | CF bottom plate for 22mm round coverslip                                 |
| CF-S22-Z3                  | Silicone gasket for 22mm round coverslip                                 |
| CF-S22-Z4                  | 2a silicone tubing   |
| CF-S25-A                   | ChamClide CF for 25mm Round Coverslip (0.2mm)                            |
| CF-S25-B                   | ChamClide CF for 25mm Round Coverslip (0.5mm)                            |
| CF-S25-C                   | ChamClide CF for 25mm Round Coverslip (1.0mm)                            |
| CF-S25-Z1A                 | CF main body for 25mm round coverslip(0.2mm)                             |
| CF-S25-Z1B                 | CF main body for 25mm round coverslip(0.5mm)                             |
| CF-S25-Z1C                 | CF main body for 25mm round coverslip(1.0mm)                             |
| CF-S25-Z2                  | CF bottom plate for 25mm round coverslip                                 |
| CF-S25-Z3                  | Silicone gasket for 25mm round coverslip                                 |
| CF-S25-Z4                  | 2a silicone tubing   |
| CF-T12                     | ChamClide CF-T for 12mm Round Coverslip                                  |
| CF-T12-Z1                  | CF-T main body for 12mm round coverslip                                  |
| CF-T12-Z2                  | CF-T bottom plate for 12mm round coverslip                               |
| CF-T12-Z3                  | Silicone gasket for 12mm round coverslip                                 |
| CF-T12-Z4                  | 2a silicone tubing   |
| CF-T15                     | ChamClide CF-T for 15mm Round Coverslip                                  |
| CF-T15-Z1                  | CF-T main body for 15mm round coverslip                                  |
| CF-T15-Z2                  | CF-T bottom plate for 15mm round coverslip                               |
| CF-T15-Z3                  | Silicone gasket for 15mm round coverslip                                 |
| CF-T15-Z4                  | 2a silicone tubing   |
| CF-T18                     | ChamClide CF-T for 18mm Round Coverslip                                  |
| CF-T18-Z1                  | CF-T main body for 18mm round coverslip                                  |
| CF-T18-Z2                  | CF-T bottom plate for 18mm round coverslip                               |
| CF-T18-Z3                  | Silicone gasket for 18mm round coverslip                                 |
| CF-T18-Z4                  | 2a silicone tubing   |
| CF-T20                     | ChamClide CF-T for 20mm Round Coverslip                                  |
| CF-T20-Z1                  | CF-T main body for 20mm round coverslip                                  |
| CF-T20-Z2                  | CF-T bottom plate for 20mm round coverslip                               |
| CF-T20-Z3                  | Silicone gasket for 20mm round coverslip                                 |
| CF-T20-Z4                  | 2a silicone tubing   |
| CF-T22                     | ChamClide CF-T for 22mm Round Coverslip                                  |
| CF-T22-Z1                  | CF-T main body for 22mm round coverslip                                  |
| CF-T22-Z2                  | CF-T bottom plate for 22mm round coverslip                               |
| CF-T22-Z3                  | Silicone gasket for 22mm round coverslip                                 |
| CF-T22-Z4                  | 2a silicone tubing   |
| CF-T25                     | ChamClide CF-T for 25mm Round Coverslip                                  |
| CF-T25-Z1                  | CF-T main body for 25mm round coverslip                                  |
| CF-T25-Z2                  | CF-T bottom plate for 25mm round coverslip                               |
| CF-T25-Z3                  | Silicone gasket for 25mm round coverslip                                 |
| CF-T25-Z4                  | 2a silicone tubing   |
| <b>ChamClide CF-EC</b>     |  |
| CF-EC-10                   |  |
| <b>ChamClide PM</b>        |  |
| PM-S-10                    | ChamClide PM   |
| PM-S-2001                  | PM main body   |
| PM-S-2002                  | PM bottom plate  |
| PM-S-2003                  | Silicone gasket for PM   |
| PM-S-2004                  | 2a silicone tubing   |
| PM-T-10                    | ChamClide PM-T   |
| <b>ChamClide DF</b>        |  |
| DF-S-10                    | ChamClide DF   |
| DF-S-2001                  | DF main body   |
| DF-S-2002                  | DF bottom plate  |
| DF-S-2003                  | Silicone gasket for DF   |
| DF-S-2004                  | 2a silicone tubing   |
| <b>ChamClide DF-T</b>      |  |
| DF-T-10                    |  |
| <b>ChamClide MD</b>        |  |
| MD-S-10                    | ChamClide MD   |
| MD-S-20                    | ChamClide MD for magnetic special cover                                  |
| <b>ChamClide MB</b>        |  |
| MB-R12-2                   | 2 hole ChamClide MB for 12mm round coverslip                             |
| MB-R15-2                   | 2 hole ChamClide MB for 15mm round coverslip                             |
| MB-R18-2                   | 2 hole ChamClide MB for 18mm round coverslip                             |
| MB-R20-2                   | 2 hole ChamClide MB for 20mm round coverslip                             |
| MB-R22-2                   | 2 hole ChamClide MB for 22mm round coverslip                             |
| MB-R25-2                   | 2 hole ChamClide MB for 25mm round coverslip                             |
| MB-R12-6                   | 6 hole ChamClide MB for 12mm round coverslip                             |
| MB-R15-6                   | 6 hole ChamClide MB for 15mm round coverslip                             |
| MB-R18-6                   | 6 hole ChamClide MB for 18mm round coverslip                             |
| MB-R20-6                   | 6 hole ChamClide MB for 20mm round coverslip                             |
| MB-R22-6                   | 6 hole ChamClide MB for 22mm round coverslip                             |
| MB-R25-6                   | 6 hole ChamClide MB for 25mm round coverslip                             |
| <b>Special Glass Cover</b> |  |
| SG-C-10                    | Special glass cover for 35mm culture dish                                |
| SG-C-20                    | Magnetic special glass cover for 35mm culture dish                       |
| SG-C-30                    | Special glass cover for consumable chamber slide or chambered coverglass |
| SG-C-40                    | Special glass cover for commercial well plate                            |



## Headquarters

### Live Cell Instrument Co., LTD

Tel. +82-2-906-0596 / +82-2-3391-0596 Fax. +82-2-903-0597

E-mail: support@chamlide.com, sales@chamlide.com

Website: www.chamlide.com

A 404 Hagye-Technotown, 10 Nowon-ro 15-gil, Nowon-gu, Seoul, South Korea (ROK)

## Distributors

### • Canada

#### Quorum Technologies Inc.

Tel. +1-519-824-0854

Fax. +1-519-824-5845

Website: www.quorumtechnologies.com

Address: 4673 Wellington Road #35 RR#6, Guelph, ON, Canada N1H6J3

### • USA

#### Innova Plex, Inc.

Tel. +1-713-554-4143

Fax. +1-713-554-4144

Website: www.innovaplex.com

Address: P.O. Box 19951, Sugar Land, TX 77496, USA

### • Japan

#### Nihon Molecular Devices Co.

Tel. +81-3-6362-5260

Fax. +81-3-6362-5269

Website: www.nihonmdc.com

Address: 2-7-8 NihonbashiBakuro-cho, Bakuro-cho, Tokyo, 103-0002, Japan

### • Taiwan

#### Major Instrument Co., Ltd.

Tel. +886-2-2808-1452

Fax. +886-2-2808-2354

Website: www.major.com/tw

Address: 9F. 69-3 Chung-cheng E.road, Sec 2, Tan-shui, Taipei, Taiwan

### • China

#### Will-Tek Electro-Optical Ltd.

Tel. +86-21-6406-4668

Fax. +86-21-5422-5188

Website: www.will-tek.com.cn

Address: 2C, No.1, Alley 889, Wuzhong Road, Shanghai, China

#### HUA YUE ENTERPRISE HOLDINGS LTD.

Tel. +86 020-34821111

Fax. +86 020-34820098

Website: http://www.huayueco.com

Address: No.483, Xingnan Road, Panyu, Guangzhou, China

### • Singapore & Malaysia

#### microLAMBDA pte Ltd.

Tel. +65-6440-1934

Fax. +65-6233-9134

Website: www.microlambda.com.sg

Address: 16 Jalan Kilang Timor #04-03, Redhill Forum, Singapore 159308

### •Sweden & Finland

#### Micro System AB

Tel. +46-8-754-0840

Fax. +46-8-5947-0280

Website: www.microsystem.se

Address: Spanga Torg 4, 163 51 SPÅNGA Sweden

### •France

#### Roper Scientific

Tel. +33-1-6086-0365

Fax. +33-1-6086-0709

Website: www.roperscientific.fr

Address: Z.I. Petite Montagne Sud- 8, rue du Forez, CE1702-LISSES, 91017 Evry Cedex, France

### •Israel

#### Eisenberg Bros. Ltd.

Tel. +972-3-977-7000

Fax. +972-3-977-7001

Website: www.eisenbros.co.il

Address: Arava St. Airport City, P.O.Box 1134, Ben-Gurion Airport, ISRAEL 70100



**LCI** Live Cell Instrument Co.,LTD

A 404 Hage-technotown, 10 Nowon-ro 15-gil, Nowon-gu, Seoul, South Korea (ROK)

**Tel.** +82-2-3391-0596 **Fax.** +82-2-903-0597

**E-mail:** support@chamlide.com, sales@chamlide.com, info@chamlide.com

**Website:** www.chamlide.com

