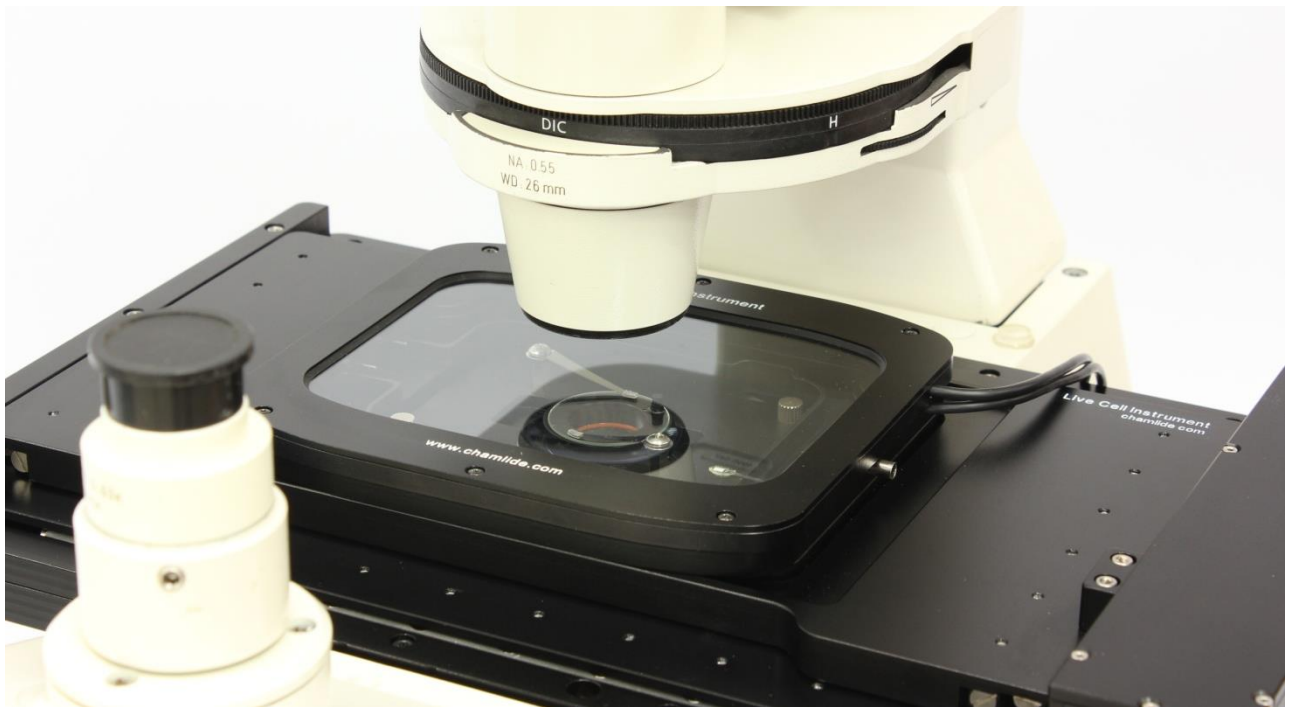


# Chamlide TC

## Incubator System for Various Types of Chambers

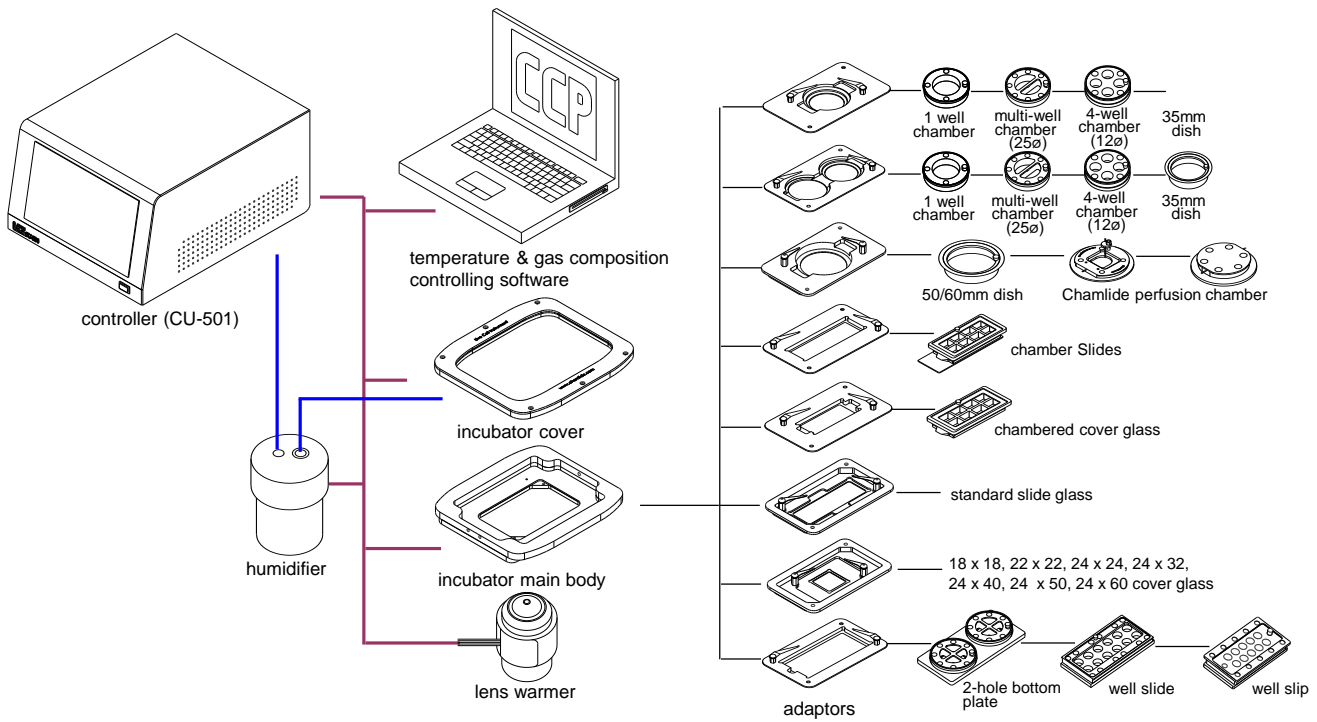



- Usable on the most microscope stages
- Usable with a variety of Chamlide magnetic chambers, commercial culture dishes, and commercial culture dishes using 8 types of adaptors (5 adaptors provided as standard)
- Special glass covers for disposable culture wares to maintain humidity and provide excellent 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 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

<p>Temperature range</p> <p>Recommended 5% CO<sub>2</sub> / 95% Air flow rate</p> <p>Incubator physical dimension (mm)</p> <p>Heating method</p> <p>Sensor</p> <p>Incubator material</p>	<p>Ambient +3°C ~ +45°C</p> <p>100 ml/ min</p> <p>Cover                    164.9 (W) x 134 (D) x 11 (H)</p> <p>Main body            160.0 (W) x 130 (D) x 14 (H)</p> <p>(insert part)        (160 x 110, universal K insert size)</p> <p>Adaptor                110 (W) x 62 (D) x 7 (H)</p> <p>Cover                    invisible coating heater</p> <p>Main body            thin layer heater</p> <p>Humidifier            cartridge heater</p> <p>Lens warmer        thin layer heater</p> <p>PT 10 ohm</p> <p>Black anodized aluminum alloy</p>
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<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.
- Usable on most microscope stages
- Usable 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 of the Chamlide TC 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

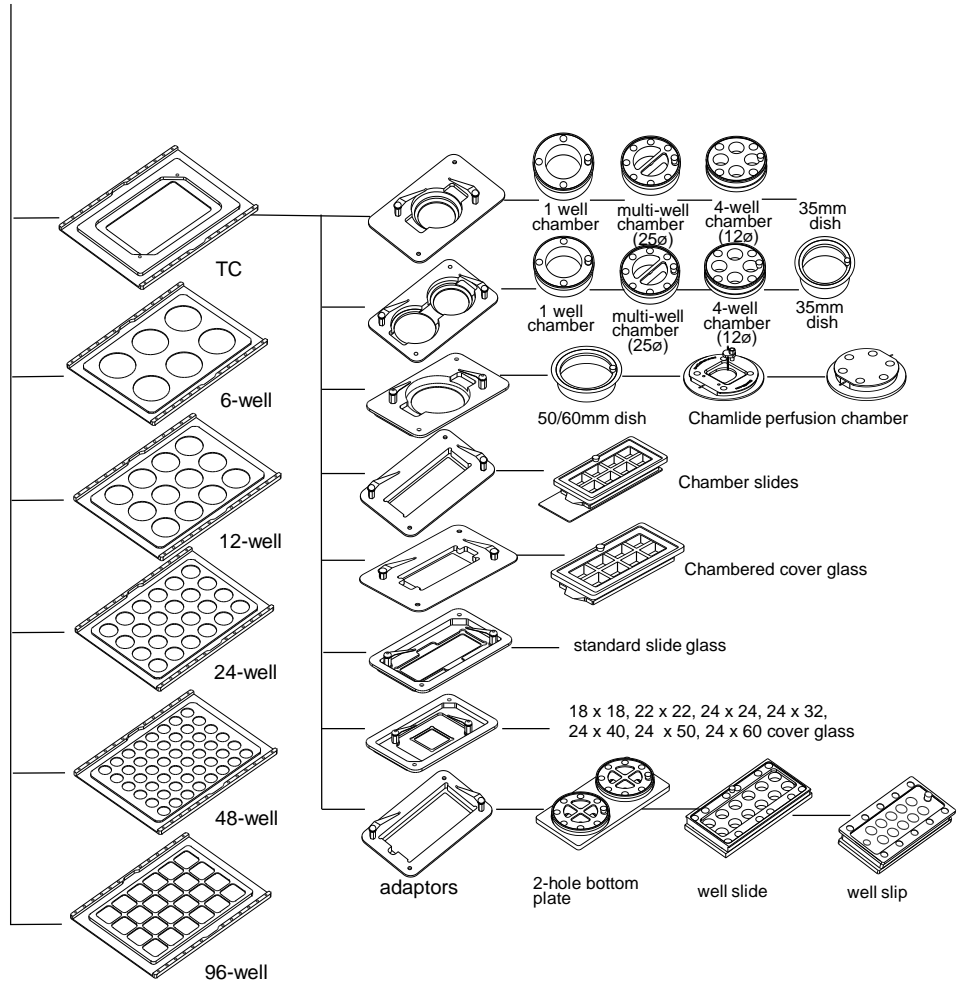
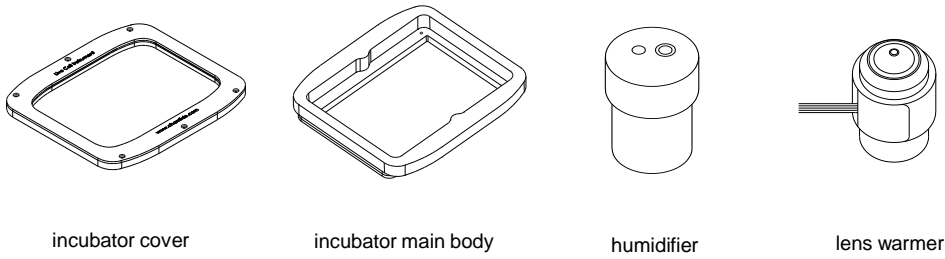
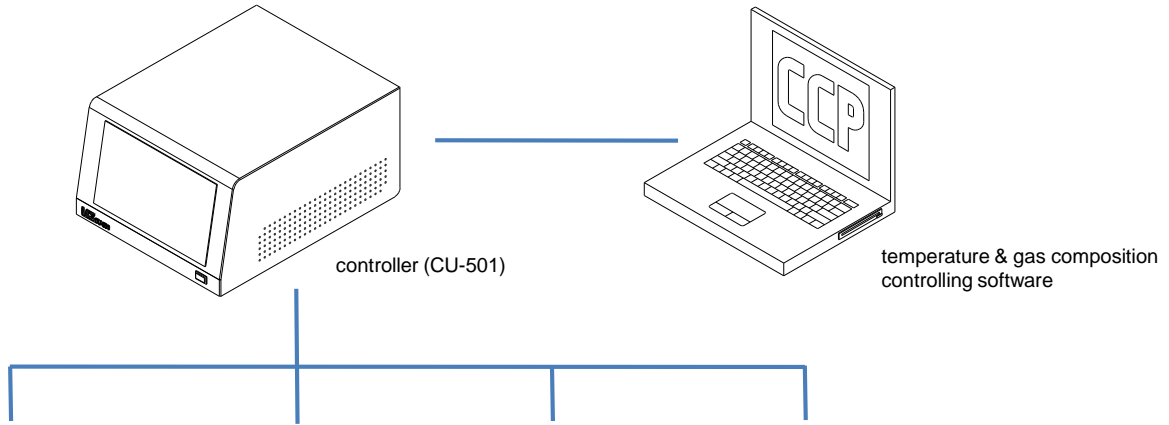
Temperature range	Ambient +3°C ~ +45°C	
Recommended 5% CO <sub>2</sub> / 95% Air flow rate	100 ml/ min	
Incubator physical dimension (mm)	Cover	164.9 (W) x 134 (D) x 11 (H)
	Main body	160.0 (W) x 130 (D) x 14 (H)
	(insert part)	(160 x 110, universal K insert size)
Heating method	Cover	invisible coating heater
	Main body	thin layer heater
	Humidifier	cartridge heater
	Lens warmer	thin layer heater
Sensor	PT 10 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 for 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.
- TC-N is used with Nikon Piezo Z-stages.
- 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 (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.

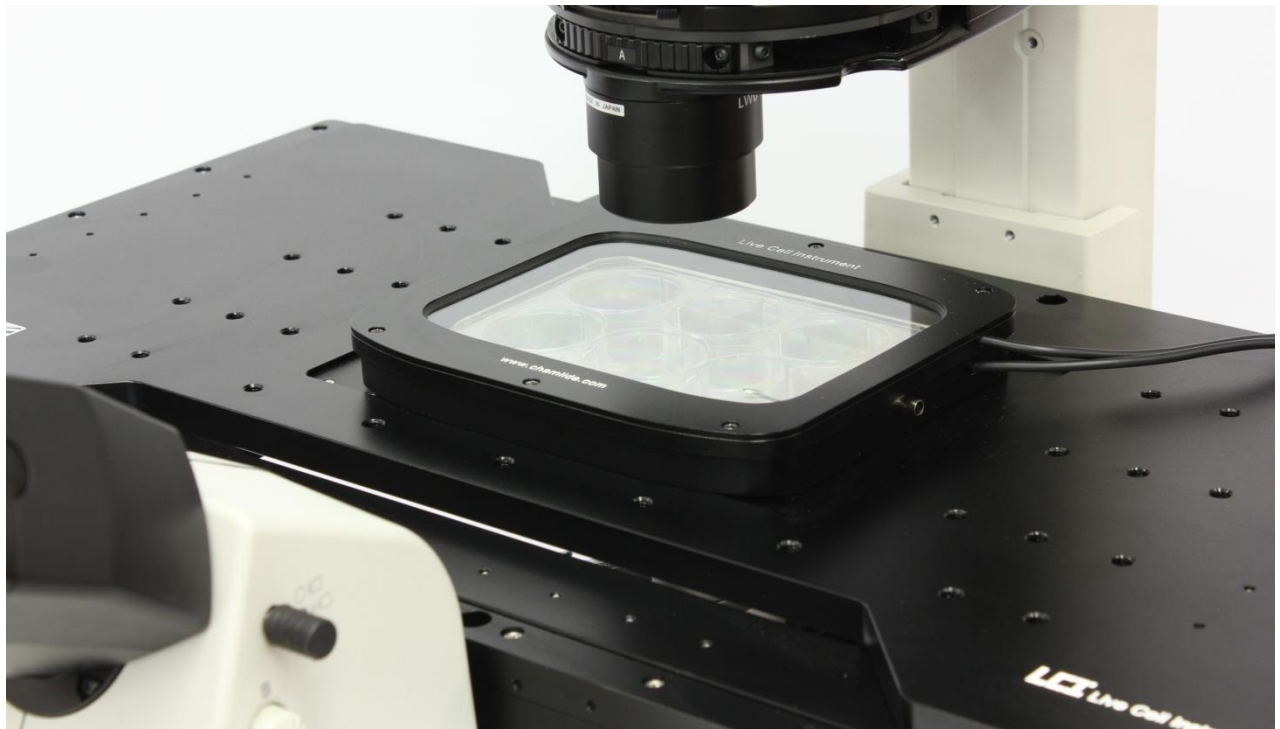
### Product

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)

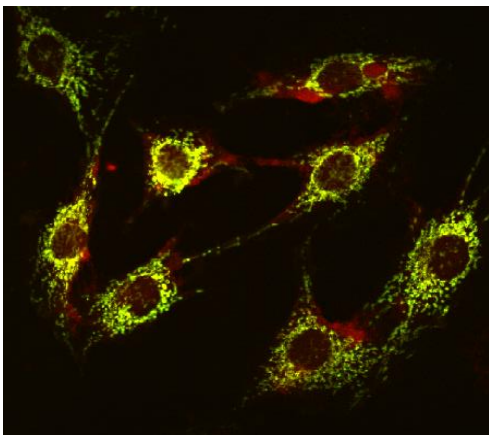
- **Chamlide TC of any sizes or shapes for various Piezo Z-stage are customizable upon request.**

# Chamlide WP

Incubator System for Commercial Well Plates & Chamlide Chambers



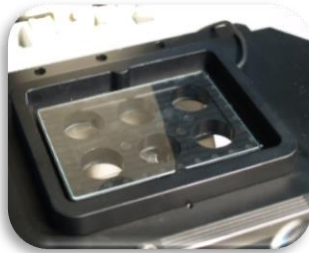
- Best for high throughput screening (HTS) during live cell imaging
- Usable with any microscope stage (The Chamlide WP requires a stage adaptor depending on the stage type.)
- Designed to fit the microscope stage with universal mounting frame K (e.g. Zeiss standard stage or most of the XY-motorized 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)



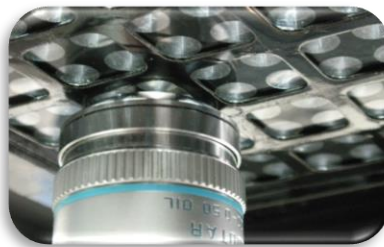
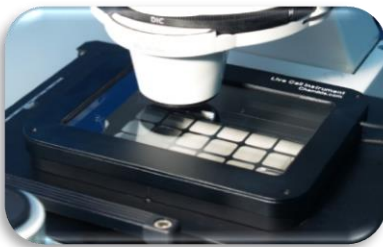
Chamlide MB  
(6-hole bottom plate)



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

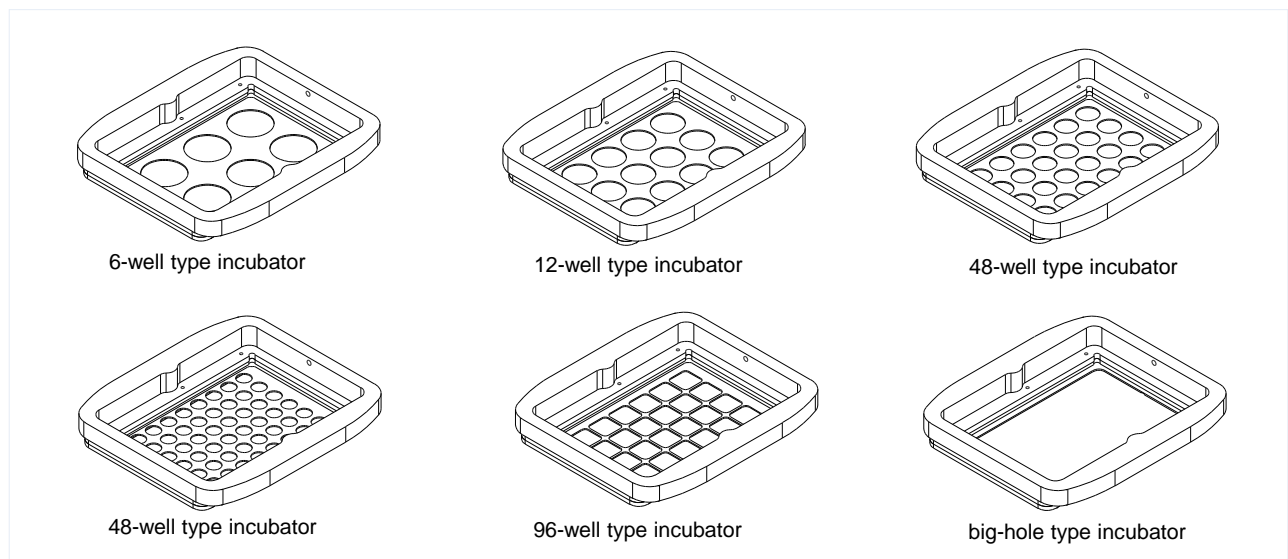
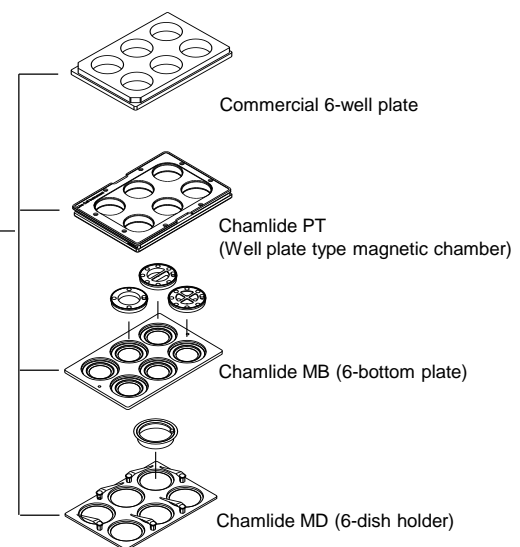
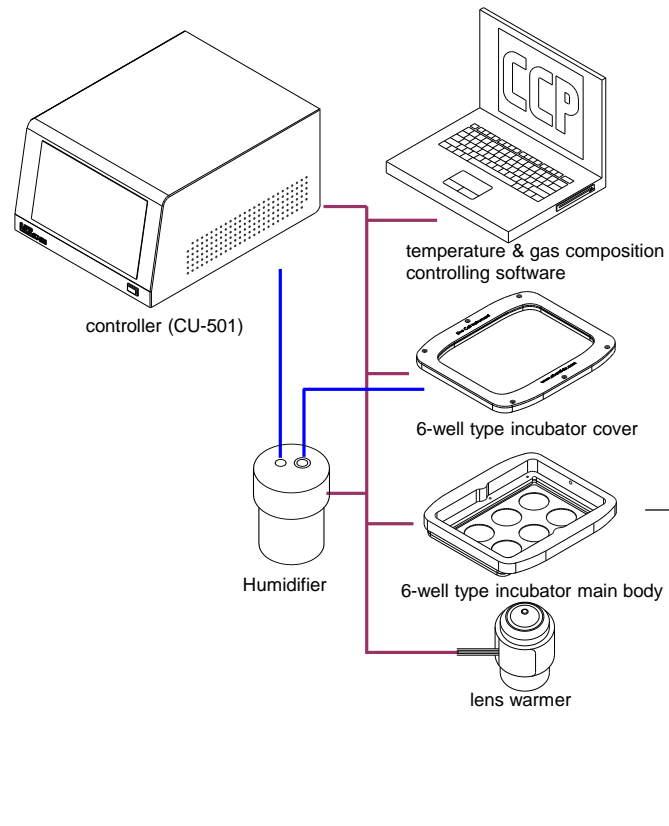


- Chamlide WP for 96-well plate to surround every 4-single well for easy approach of the objective lens. It makes high resolution images possible.
- Able to provide 1 big hole for easy movement of the high resolution objective lens.

### 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



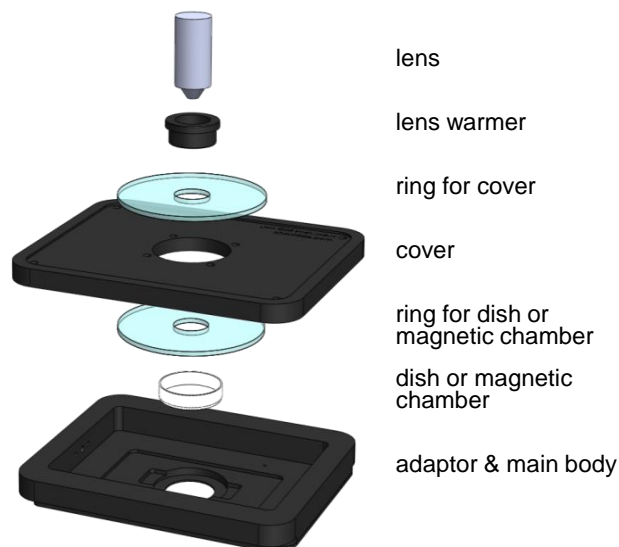
- Every concept is the same as standard TC and WP system except the cover heating method.
- For perfect fluorescence imaging, the cover is used with a thin layered line heater and a clear glass
- A thin layered line heater is located in the blur area.

Model No.	Product
TC-ST-10	Chamlide TC for stereo microscope

Model No.	Product
WP-ST-10 (A,B,C,D,E)	Chamlide WP-A for the stereo microscope (6/ 12/ 24/ 48/ 96-well plate type)

# 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-5 or FC-7 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	

#### Model No.

UM-L-10

#### Product

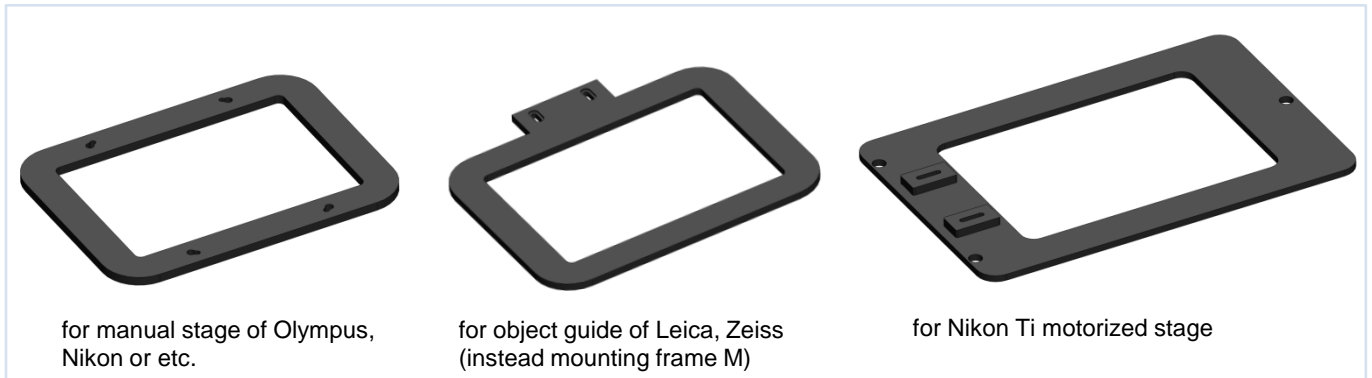
Chamlide UM

# Incubator Holder

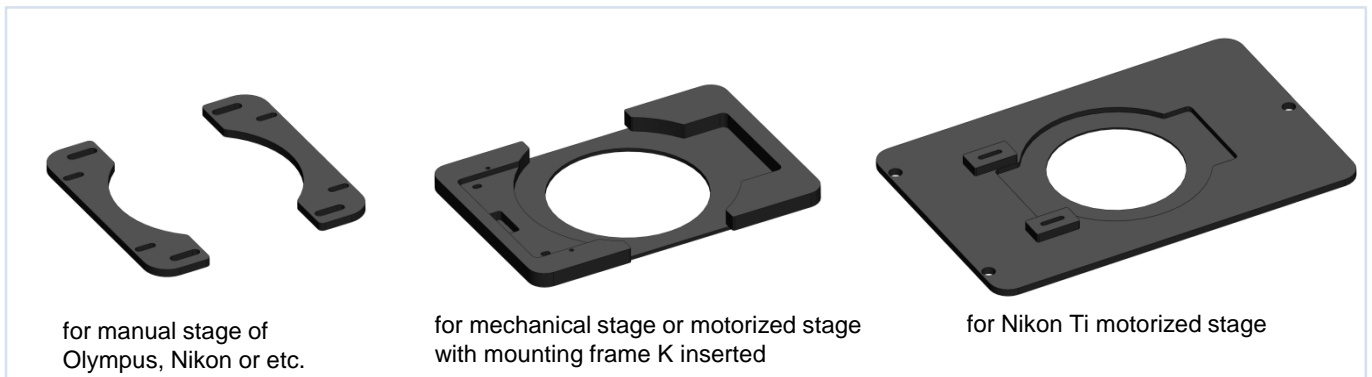
## Stage Adaptors for Chamlide Incubator Systems

- 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

# 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
- Usable 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.

### 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