

# CLATUU<sup>TM</sup>

**Non-invasive Fat Reduction**  
by 360° Surround Cooling Method



# CLATUU™

**Non-invasive Fat Reduction** by 360° Surround Cooling Method





## Why CLATUU?

### ■ Non-Invasive

Non-invasive treatment with no pain using strong and precise cooling energy.

### ■ Natural Body Shaping and Contouring

-9°C of temperature brings apoptosis which induces fat cells suicide, and that helps natural body shaping with no harm to body.

### ■ Dual Applicators

2 applicators working at the same time that allows fast treatment

### ■ User Friendly Operating System

Control panel on the touch screen LCD of the handpiece makes operation easy.

### ■ No Pain !

Adjustable suction pressure minimizes discomforts.

### ■ No Downtime !

It causes fat cell to undergo natural cell death through Apoptosis.

### ■ Effective Result !

Selectively targets fat without harm to surrounding tissue.

## Technology

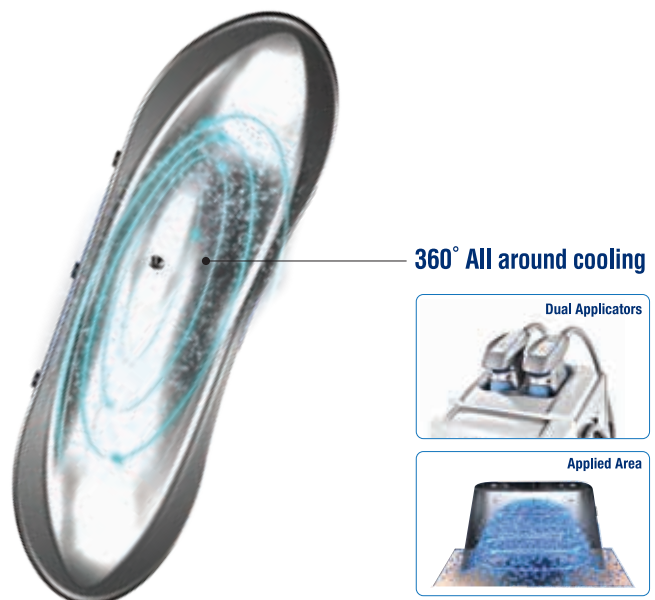
### ■ Strong and Powerful Cooling System

Cooling system by Chiller and Heat Exchanger maintains stable cooling energy consistently that enables non-stop operations.



### ■ Dual Applicators & Strong Suction

Dual handpieces with 360° of cooling mechanism and strong suction make better cooling effect



### ■ 360° of cooling mechanism



### ■ All around suction with strong power.



## Mechanism

Non-invasive fat reduction by idealistic  $-9^{\circ}\text{C}$  of cooling energy which known as apoptosis.

Apoptosis is a form of natural cell death in which a programmed sequence of events leads to the elimination of fat cells without releasing harmful substances into the surrounding area.



## Development



CLATUU project has started from understanding on human body. CLASSYS has been analyzing various subjects of clinical trials using 3D scanner. After gathering data, CLASSYS found out that suctioning treatment area would be effective for clinical results since it reduces blood circulation of the area and helps to remain target temperature. Efficacy of CLATUU has proved again via numbers of tests using animal tests. CLATUU has been completed by the enthusiastic efforts of R&D department.

# Research

## Background/Aims

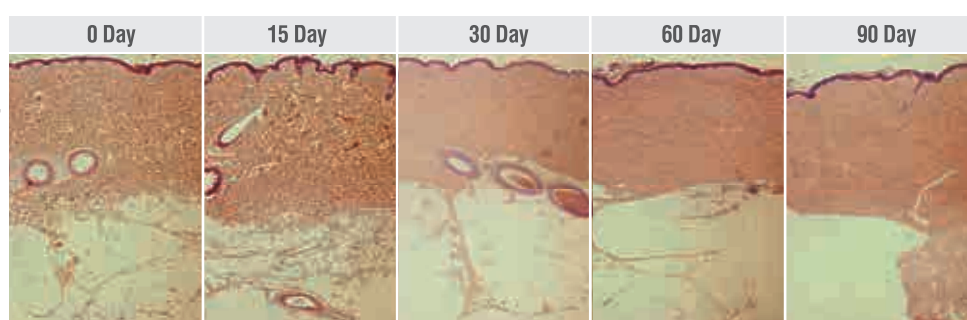
Freezing Fat Away is a noninvasive method for the selective reduction of localized fat tissues. It has demonstrated efficacy in both clinical and preclinical trials; however, despite its popularity, its mechanisms of action and evaluation methods are not yet fully defined. The purpose of this study was to improved methods for Freezing Fat Away using a porcine model.

## Methods

The abdomens of female PWG micro-pigs were treated with a cooling device, and we examined the treatment effects using photography, three-dimensional photography, ultrasound, gross, and microscopic pathology, and serum lipid level analyses in order to determine the mechanism of action, efficacy, and safety.

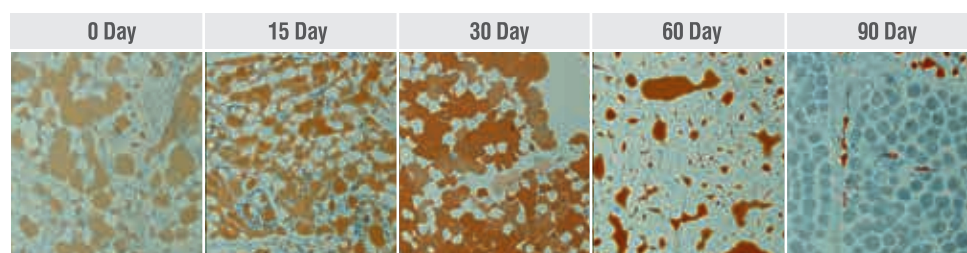
### H & E stain

H & E staining test of the cell after 0, 15, 30, 60, 90th day from the CLATUU treatment, indicates that fat cells decreased after 30 days from the treatment. There were no Parakeratosis in epidermis, abnormal inflammation in dermis, or parenchyma necrosis.



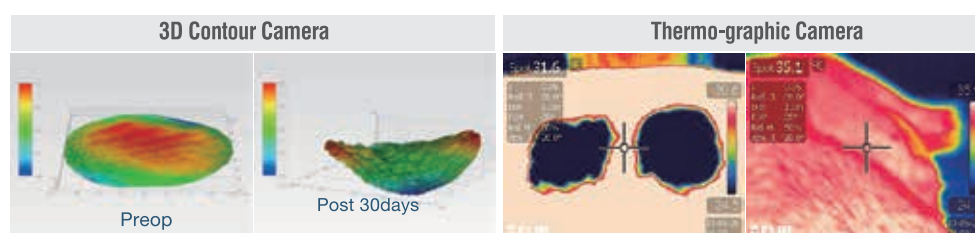
### Adipocyte Oil red O stain

Oil red O staining test of the cell after 0, 15, 30, 60, 90th day from the CLATUU treatment, indicates that fat cells decreased after 30 days from the treatment.



### Preclinical Test

It shows that CLATUU is working well during the treatment.



## Results

CLATUU successfully reduced abdominal fat in our porcine model. Gross and microscopic histological results confirmed the noninvasive cold-induced selective subcutaneous fat destruction, and showed increases in pre-adiposity differentiation and in the activation of lipid catabolism. In particular, we found that CLATUU may increase PPAR $\delta$  levels in adipose tissue at 30–60 days post-treatment.

## Conclusion

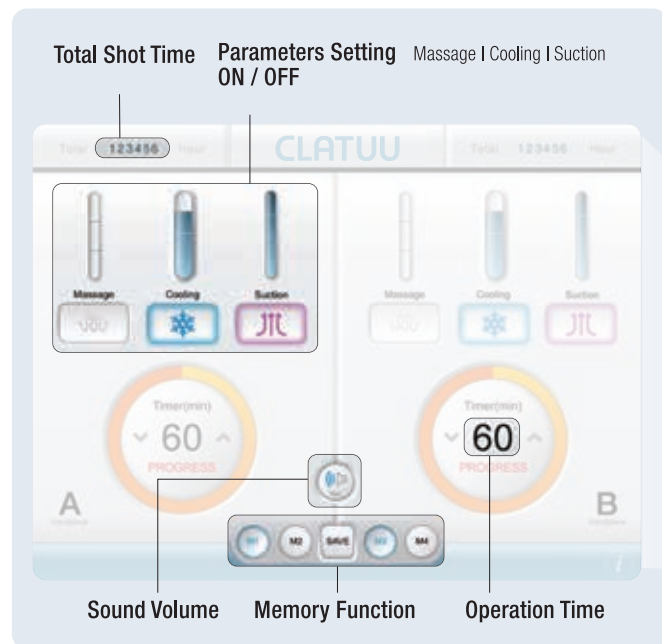
**Key words** Freezing Fat Away • fat reduction • noninvasive cooling • PPAR $\delta$



## User Interface

### User Interface

Temperature and suction level can be precisely adjusted according to patient's thickness of fat layer.



### Touch panel on HP

Easy to operate CLATUU by simply touching button on handpiece LCD without using UI on body LCD monitor.

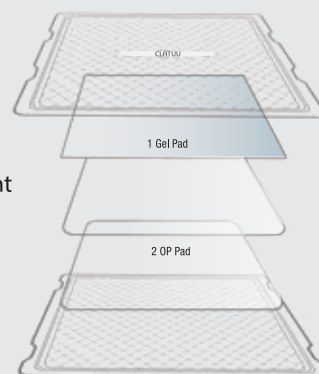


## Gel Pad & Applicator

### All in one Gel Pad

1 Gel Pad + 2 OP Pad

CLASSYS proudly introduces 3 in 1 Gel Pad which increases treatment convenience, and reduces treatment time and chance of side effects.



### 2 Types of Applicator

Various body parts can be treated simultaneously and separately.

#### Flat type applicator

Small areas such as upper arms.

#### Wing type applicator

Big bulges such as belly, back, flanks.



Flat type



Wing type



# Applications



Abdomen (muffin top), flanks (love handles), thighs, hip, upper back (bra rolls), lower back and arms

Abdomen



Arm



Thigh



Flank



Dual Handpiece(wide area)



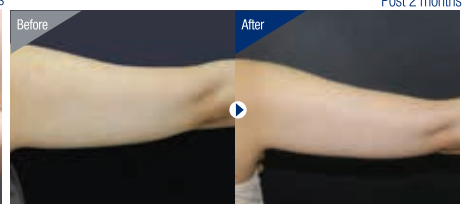
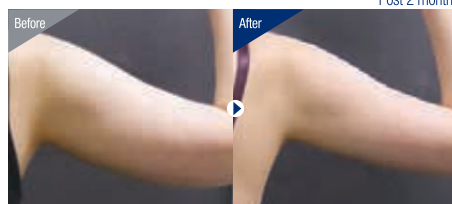
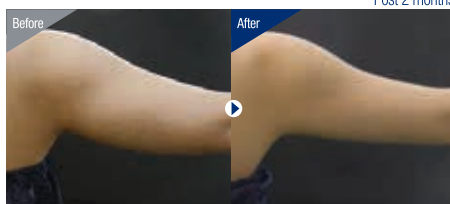
Dual Handpiece(multiple area )



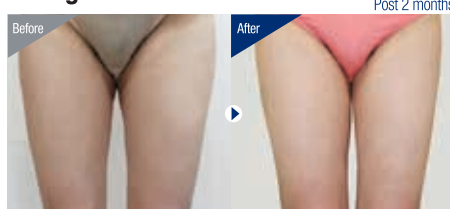
Dual handpieces enable to treat wide and/or multiple area at once. Patient could sleep comfortably or read books during treatment, and physician could observe patient freely after attaching hanpieces to body.

# Clinical cases

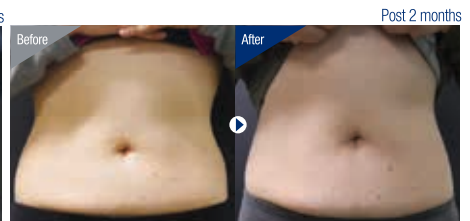
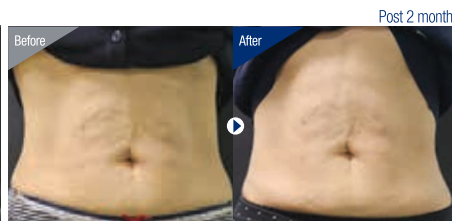
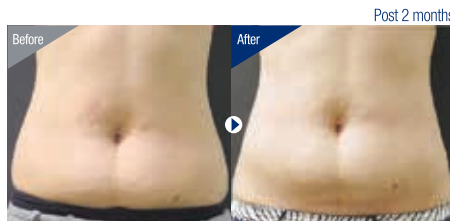
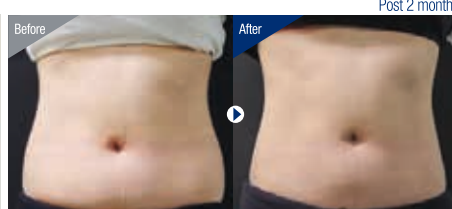
## ■ Arm



## ■ Thigh



## ■ Abdomen



# CLATUU™

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*CLASSYS products are  
being sold and used worldwide*

## ○ SYSTEM SPECIFICATIONS

Performance	Specification
Display	LCD 10.4 inch touch screen (Main body) LCD 4.3 inch touch screen (Hand-piece)
Electrical Requirement	200-240V~, 50/60 Hz
Electric Power Consumption	1250 VA
Classification of Applied Part	Class 1, Type BF applied parts
Dimensions	490 (D) x 715 (W) x 1140 (H) mm
Weight	92 kg
Model	CL2-M360

CE approved

 **CLASSYS**  
Technology for better life

