



# KaniStar UC-2007/2008 TSaaS ICU



**TSaaS-ICU**  
ICU with Temperature self-adaption  
adjustment system



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# Main Models of TSAAS ICU



Stacked UC-2005 for cats/small dogs



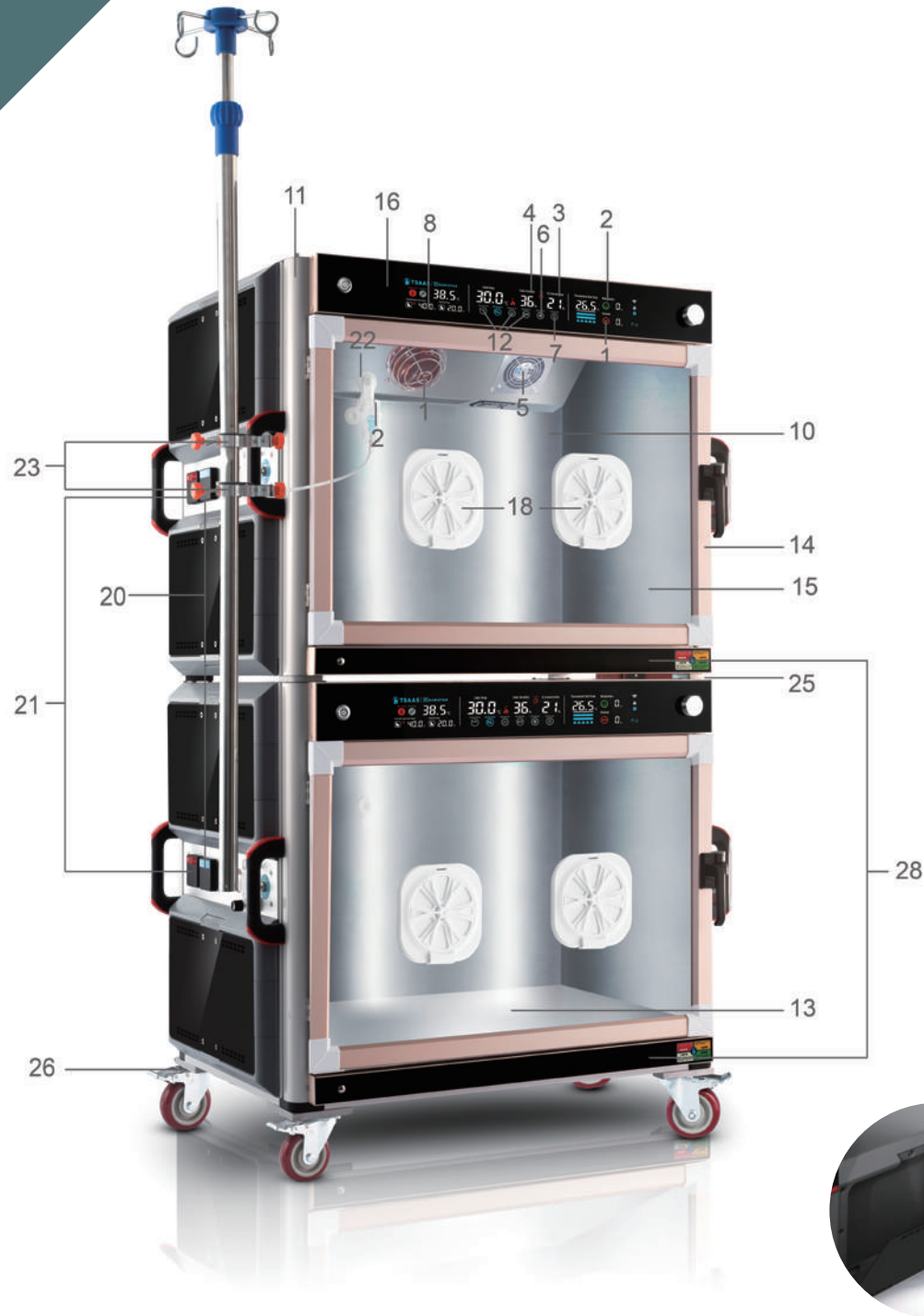
Stacked UC-2007 for medium-sized dogs



Stacked UC-2008 for large dogs (Separable)



# Features and Advantages



1. Infrared Physiotherapy
2. Built-in Medical Nebulization
3. Oxygen Concentration Control
4. Humidity Control (External Humidifier Needed)
5. Overhead Double Circulation Heating System
6. Adjustable Amber Light for Comfortable Illumination
7. White Examination Light
8. Self-Adaptive Temperature Control System (PRO Model Only)
9. IP Camera for Real-time Observation on Smart Devices (Pro Model&Optional)
10. Large Transparent Door to Easily Check Animal Status
11. Double Insulated Body for Better Heat and Oxygen Preservation
12. Triple Air Purification System -Ultraviolet, Negative Ion, and External Circulation
13. Thermostatic Bed with Mutual Accurate Temperature Control
14. Aluminum frame on Front Door for Better Oxygen Sealing
15. Food/Medical Grade Stainless Steel Inner Body for Effective Sanitation Management
16. Large Touch Screen for Ease of Use and to Aide in More Visible Alerts
17. AI (Artificial Intelligence) Controlled Alarm System for Machine Errors like Abnormal Temp inside the Cabin, Abnormal Humidity, Abnormal Oxygen Concentration, and Abnormal Temp of the Thermostatic Bed
18. Hand Access for Easy Treatment with Ventilation Adjustment
20. Programmed Power Supply for External Devices like Humidifier
21. Uninterrupted Power Supply for Other Add-on Devices like Vital Sign Monitor
22. Oxygen Sealing Transfusion Portal
23. Infusion Post Fixture(optional)
24. Side Storage Cabins
25. Easy to Stack Design, Two Levels for Better Space Efficiency.
26. Stack-on Detachable Wheel Base for Mobility
28. Interactive Indicator Light Band at the Front Bottom

# Features and Advantages



- 11. Double Insulated Body for Better Heat and Oxygen Preservation
- 19. Enclosing Large Enough to Accommodate a Large Dog Standing Comfortably
- 20. Programmed Power Supply for External Devices like Humidifier.
- 21. Uninterrupted Power Supply for Other Add-on Devices like Vital Sign Monitor
- 25. Easy to Stack Design, Two Levels for Better Space Efficiency.
- 26. Stack-on Detachable Wheel Base for Mobility
- 27. Patented Emergency Ventilation Port

# Main Functions



## 1. Accurate temperature control

The TSAAS ICU heating system is equipped with an overhead double duct circulating heating system and a thermostatic bed system to ensure uniform temperature in the cabin;



Relying on the semi-conduction system in thermostatic bed, TSAAS ICU can provide quick cooling at the bottom, where the patient can have their full abdomen in contact with the floor to help cool the body.



Other ICU models help cool animal patients by using compressor refrigeration. While this method does cool down the chamber, it comes at a negative cost to the care of your animal patient. Compressor refrigeration blows air into the compartment, which can cause unwanted cross contamination. It also creates a direct cold air stream that blows on the animal, creating an overall uncomfortable situation for a patient trying to heal. Additionally, most compressor refrigeration coolers are very noisy, making it difficult to maintain a peaceful environment for skittish or post-op patients. In the Kanistar TSAAS ICUs, we use a thermostatic bed refrigeration, replacing cold air refrigeration with “cold compress refrigeration”. With this method, the floor of the unit will help cool the animal without disturbing the warm ambient atmosphere, allowing you to help your patient get to a comfortable body temperature without putting them in harm’s way.





To effectively care for an animal patient, a method to cool the ICU is needed. However, because most animal facilities are in airconditioned spaces, a compressor refrigeration unit is not needed. Rather, a comfortable thermostatic bed for a quick cooling of a pet patient's body in cases of high fever, heat stroke or hyperthermia is more effective and efficient in caring for animals. An optional add-on compressor refrigerator is available, which may be needed when the facility is not well air-conditioned.

**Heating System:** Unlike most ICUs on the market with a singular heating fan on the ceiling, our heating system has both a left and right duct that create a cross circulation. With a dual heating duct system, our ICU can ensure an even temperature distribution in the enclosure where a single duct can only unilaterally heat. In addition to the cross circulation, the thermostatic bed can also provide a source of heat at the floor of the enclosure. No matter where the animal is resting, a consistency in temperature can be maintained.

## 2. Relative Humidity Controls

Whether heating or cooling the enclosure, our ICU can maintain adequate relative humidity levels for your pet patients. Generally, a comfortable range for most animal patients is 45%-55% relative humidity. With our ICU machine you can achieve high temperatures with low humidity to help meet the requirements needed for some treatments. You can also achieve an environment with high temperature and high humidity in cases where 65%-75% relative humidity is needed.

Temperature \ Relative humidity	80 °F (27 °C)	82 °F (28 °C)	84 °F (29 °C)	86 °F (30 °C)	88 °F (31 °C)	90 °F (32 °C)	92 °F (33 °C)	94 °F (34 °C)	96 °F (36 °C)	98 °F (37 °C)	100 °F (38 °C)	102 °F (39 °C)	104 °F (40 °C)	106 °F (41 °C)	108 °F (42 °C)	110 °F (43 °C)
40%	80 °F (27 °C)	81 °F (27 °C)	83 °F (28 °C)	85 °F (29 °C)	88 °F (31 °C)	91 °F (33 °C)	94 °F (34 °C)	97 °F (36 °C)	101 °F (38 °C)	105 °F (41 °C)	109 °F (43 °C)	114 °F (46 °C)	119 °F (48 °C)	124 °F (51 °C)	130 °F (54 °C)	136 °F (58 °C)
45%	80 °F (27 °C)	82 °F (28 °C)	84 °F (29 °C)	87 °F (31 °C)	89 °F (32 °C)	93 °F (34 °C)	96 °F (36 °C)	100 °F (38 °C)	104 °F (40 °C)	109 °F (43 °C)	114 °F (46 °C)	119 °F (48 °C)	124 °F (51 °C)	130 °F (54 °C)	137 °F (58 °C)	
50%	81 °F (27 °C)	83 °F (28 °C)	85 °F (29 °C)	88 °F (31 °C)	91 °F (33 °C)	95 °F (35 °C)	99 °F (37 °C)	103 °F (39 °C)	108 °F (42 °C)	113 °F (45 °C)	118 °F (48 °C)	124 °F (51 °C)	131 °F (55 °C)	137 °F (58 °C)		
55%	81 °F (27 °C)	84 °F (29 °C)	86 °F (30 °C)	89 °F (32 °C)	93 °F (34 °C)	97 °F (36 °C)	101 °F (38 °C)	106 °F (41 °C)	112 °F (44 °C)	117 °F (47 °C)	124 °F (51 °C)	130 °F (54 °C)	137 °F (58 °C)			
60%	82 °F (28 °C)	84 °F (29 °C)	88 °F (31 °C)	91 °F (33 °C)	95 °F (35 °C)	100 °F (38 °C)	105 °F (41 °C)	110 °F (43 °C)	116 °F (47 °C)	123 °F (51 °C)	129 °F (54 °C)	137 °F (58 °C)				
65%	82 °F (28 °C)	85 °F (29 °C)	89 °F (32 °C)	93 °F (34 °C)	98 °F (37 °C)	103 °F (39 °C)	108 °F (42 °C)	114 °F (46 °C)	121 °F (49 °C)	128 °F (53 °C)	136 °F (58 °C)					
70%	83 °F (28 °C)	86 °F (30 °C)	90 °F (32 °C)	95 °F (35 °C)	100 °F (38 °C)	105 °F (41 °C)	112 °F (44 °C)	119 °F (48 °C)	126 °F (52 °C)	134 °F (57 °C)						
75%	84 °F (29 °C)	88 °F (31 °C)	92 °F (33 °C)	97 °F (36 °C)	103 °F (39 °C)	109 °F (43 °C)	116 °F (47 °C)	124 °F (51 °C)	132 °F (56 °C)							
80%	84 °F (29 °C)	89 °F (32 °C)	94 °F (34 °C)	100 °F (38 °C)	106 °F (41 °C)	113 °F (45 °C)	121 °F (49 °C)	129 °F (54 °C)								
85%	85 °F (29 °C)	90 °F (32 °C)	96 °F (36 °C)	102 °F (39 °C)	110 °F (43 °C)	117 °F (47 °C)	126 °F (52 °C)	135 °F (57 °C)								
90%	86 °F (30 °C)	91 °F (33 °C)	98 °F (37 °C)	105 °F (41 °C)	113 °F (45 °C)	122 °F (50 °C)	131 °F (55 °C)									
95%	86 °F (30 °C)	93 °F (34 °C)	100 °F (38 °C)	108 °F (42 °C)	117 °F (47 °C)	127 °F (53 °C)										
100%	87 °F (31 °C)	95 °F (35 °C)	103 °F (39 °C)	112 °F (44 °C)	121 °F (49 °C)	132 °F (56 °C)										

## 3. Oxygen Containment



Oxygen flow rate: 10L/min  
Time: 60 mins  
Oxygen concentration: 60%+

For proper oxygen treatments, an ICU must provide an airtight compartment, precise oxygen control, and a safe ventilation system. Our TSAAS units do just that to help you achieve a desired level greater than or equal to 40% oxygen concentration. The airtight cabin can easily reach 60% oxygen concentration within one hour at a flow rate of 10L/min (93%+). The emergency vent automatically opens when the oxygen concentration is lower than 18% or there is a power outage.



4. Our TSAAS ICUs can monitor the changes of animal body temperature 7 days a week, 24 hours a day. The monitor can alarm according to the changes of animal body temperature or automatically adjust the ICU according to the preset temperature. This function takes our unit from your basic incubator setup to an intelligent automatic inductive medical device (available on Pro model).

5. TSAAS ICUs can remotely monitor the overall status of the machine, monitor the temperature of the patient, and remotely control all the function of the machine. All vet, technicians and nurses can efficiently and effectively monitor all ICUs with a mobile phone or tablet for timely and accurate responses to the pet's needs.



## 6. Triple purification function

Each TSAAS unit has a triple purification system. The first is an easy-to-use ultraviolet disinfection light. This light uses ultraviolet rays with a wavelength of 200nm to 280nm. Ultraviolet rays at this frequency have been proven to eradicate bacteria and effectively kill microbial cells. Second, each unit is equipped with negative ion purification. High-concentration negative ion generators in a closed treatment chamber can significantly reduce odor pollution and help support the immune system of your pet patients. As a third measure of purification, we have equipped the machine an external cycle fresh air system. When oxygen supply is not required in treatment, the "external cycle" function can be turned on to help refresh and improve the cabin air quality.

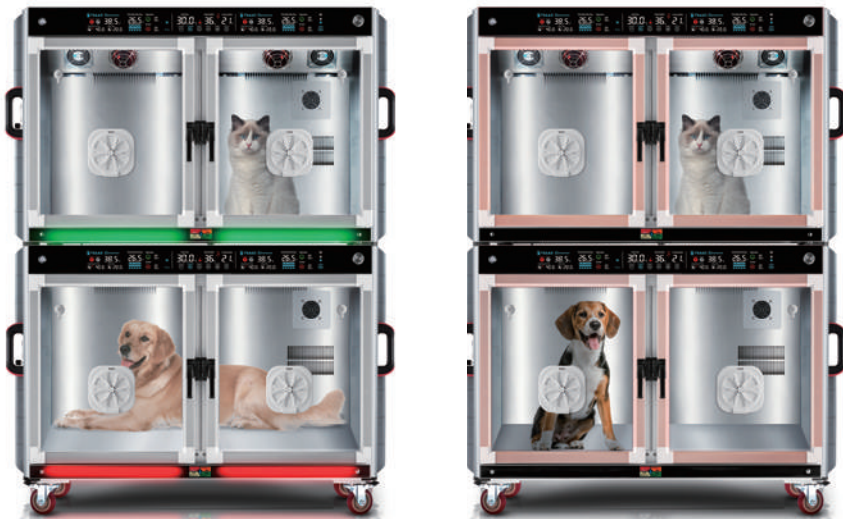




# Other functions

## Separable Cabin (UC-2008)

The cabin of the UC-2008, which can hold a large dog, can be separated into two compartments which can hold medium-sized dogs and have individual ICU control systems for heating/cooling.



## Infrared Physiotherapy

The infrared physiotherapy light is an added bonus to this model. Research has shown that infrared light helps tissue temperature increase, capillaries dilate, blood flow increases, healing of wounds accelerates, tissue cell vitality increases. It improves metabolism, acts as an anti-inflammatory treatment and helps create an overall sterile and improved environment.



## Built-in Nebulizer

In many cases, especially with exotic and avian patients, where transfusion is not easy, nebulization through respiratory system is one of the most efficient treatment ways to administer drugs. This is why we found it necessary to include a built-in nebulizer on our TSAAS ICUs.

Biomedical engineering research has shown that drugs with atomized particles of about 3-6 microns can enter the bronchi, and drugs with atomized particles of less than 2 microns can enter the alveoli.

TSAAS ICU has a built-in air compression medical nebulizer, which produces drug atomized particles below 0.5 microns, creating an ultra-fine mist for pets to inhale. There is little to no drug residue at this size of micron, and the rate of utilization of the administered drug increases, making it very suitable for the treatment of diseases of the lower respiratory tract of pets. The medical nebulizer is installed outside the ICU inner cabin to reduce noise and aiding in a quieter environment for the pet to recover.



# Nursing Level Indicator



Found at the bottom of every unit, is a nursing level indicator. There is a 4-stage lighting that helps caretakers visually identify if their patient is in need. The varying levels of how severe the illness or injury is can be indicated by these lights. Level 1 is White. Level 2 is a Green color. Level 3 is an Amber color. These first three colors indicate what condition the patient is in based on their current needs. The fourth light is a red light. This light is used if a patient reaches critical condition. More details on the nursing level indicator light can be found in our suggested application form.



# Economic Benefits of ICU for Pet Hospitals

A high-end product like the Kanistar TSAAS ICUs can dramatically improve the quality of care given, improve the survival rate of both mother pets and neonatal pets and enhance the comprehensive strength of your hospital or clinic. The various functions on these ICU units can help increase services that you can offer, allowing you to bring in additional income per patient, including but not limited to charging increased hospital fees and treatment fees for offering a premium service, physiotherapy fees, oxygen treatment fees, rehabilitation fees, and more, which could mean an increase in your ability to generate revenue while providing top notch care to your patients.

## Application Form

Included with your purchase, we will include a small pamphlet called the Application Form. This is Not medical advice. We do not give medical advice and all treatments and decisions of care of animal patients should ultimately be left to the attending DMV. However, we have compiled a list of suggested applications for the use of the TSAAS ICUs.

Category	Section	Case (Used for Nursing before and after the cases)		
Neurosurgery		Fenestration of Disk(laminectomy); Internal Fixation for Atlantoaxial Subluxation; Relevant Surgery of Cerebrospinal and Vertebral systems		
		ICU Standard Operation	Selection of ICU auxiliary function	Principles
		Set temperature at 30 or so and humidity at 40% or so; Supply oxygen at the flow rate of 8-10L/min during the 2 hours after surgery.	Check vital signs at regular time. Turn on medical-level negative ion generator. Optical therapy (the sixth-level simulated sunlight lamp).	Maintain normal body temperature to accelerate postoperative recovery and muscle organ rehabilitation. Create a clean and comfortable cabin environment, to accelerate wound recovery and avoid secondary infection.
Surgery		Case (Used for Nursing before and after the cases)		
		Castration	Removal of Undescended Testicle	Repair of Utrine Prolapse
		Sterilization	Undescended testicle repair	Caesarian section
		Hysterectomy	Repair of Vaginal Prolapse	
Obstetric Surgery		ICU Standard Operation	Selection of ICU auxiliary function	Principles
		Set temperature at 27 or so and humidity at 30% or so; Supply oxygen at the flow rate of 5-8L/min during the 1 hour after surgery. It is recommended to change the CO2 alarm value to a value which is 700ppm higher than normal value.	Check vital signs at regular time. Turn on medical-level negative ion generator. Optical therapy (the fourth-level simulated sunlight lamp). Connect to the infusion port.	Maintain normal body temperature to accelerate postoperative recovery and muscle organ rehabilitation. Create a clean and comfortable cabin environment, to accelerate wound recovery and avoid secondary infection. Darker lighting creates a soft and warm condition.



# Main models of TSAAS ICU

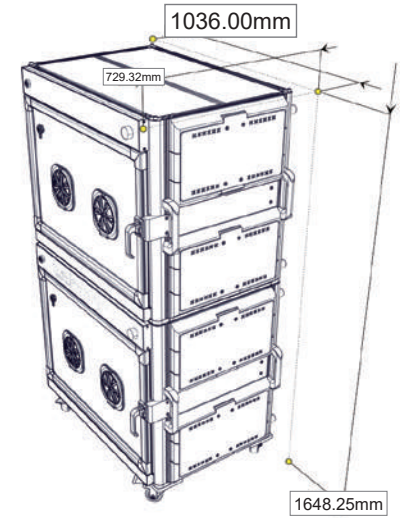
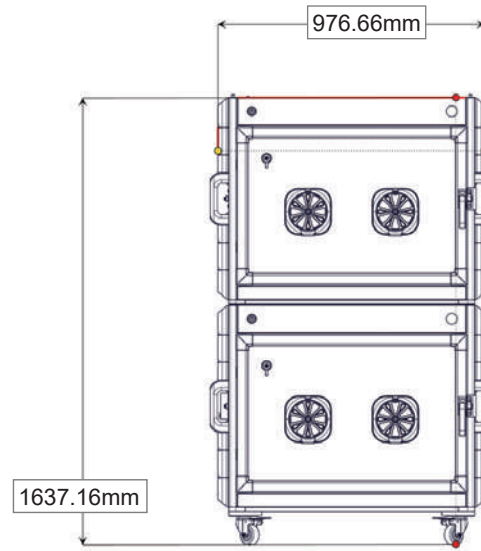
MODEL	UC-2007	UC-2008
DUAL AIR DUCT CIRCULATING HEATING SYSTEM	✓	✓
THERMOSTATIC BED COOLING/HEATING	✓	✓
HUMIDIFICATION (UP TO HIGH HUMIDITY AT HIGH TEMPERATURE )	✓	✓
OXYGEN CONCENTRATION CONTROL	✓	✓
MEDICAL NEBULIZER	✓	✓
INFRARED THERAPY	✓	✓
UV DISINFECTION	✓	✓
NEGATIVE ION	✓	✓
INTERNAL/EXTERNAL CYCLE SYSTEM	✓	✓
7×24 HOURS MONITORING OF PET BODY TEMPERATURE	Pro Model	Pro Model
REMOTE MONITORING AND ADJUSTMENT (MOBILE DEVICE)	✓	✓
SECURITY SYSTEM (EMERGENCY VENTS)	✓	✓
TEMPERATURE CONTROL ADAPTIVE ADJUSTMENT	✓	✓
FOUR-LEVEL NURSING INDICATOR	✓	✓
SEPARABLE CABIN WITH INDEPENDENT TEMPERATURE CONTROL	N/A	✓
COMPRESSOR REFRIGERATION	N/A	Optional
OXYGEN GENERATOR SYSTEM	Optional	Optional
IP CAMERA	Pro Model	Pro Model



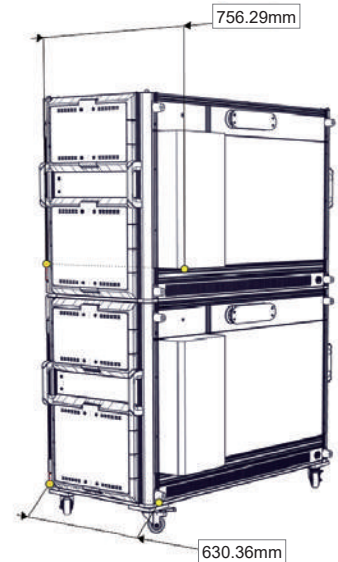
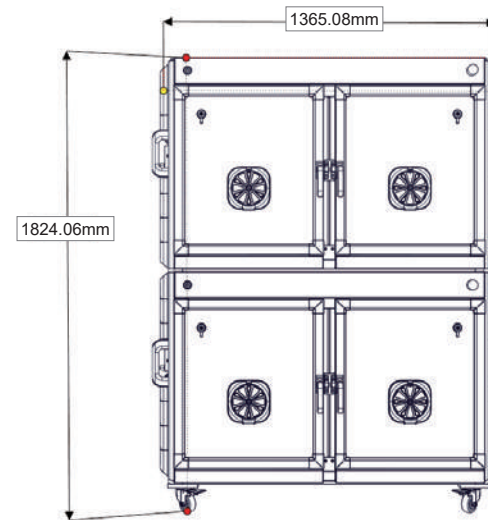
# Optional accessories

1. The fixture clamp of the IV pole
2. Mobile platform with casters
3. Pet shading curtain
4. External compressor refrigeration system of UC-2008
5. Side tray for medical devices
6. External humidifier
7. 10L/min Oxygen generator

# Dimension of TSAAS ICU



UC-2007-2BK



UC-2008-2BK

