

2017 TAECHANG ICE VISION

The only sand glass ice in the world

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Company status, Business background

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Company status & Business background

~2007



Refrigeration and Air conditioning R&D laboratory

2010~2013



Exhibition & Participation in Trade Missions

- Vietnam(Hanoi) EXPO (2010)
- China(Guangzhou) Spring Canton Fair (2010)
- Ho Chi Minh Chungcheongnam-do Excellent product Business meeting (2011)
- Chungcheongnam-do Nanjing Excellent product Exhibition (2012)
- Chungcheongnam-do North America Trade Mission (2012)
- Chungcheongnam-do China Third Trade Mission (2012)
- Cheonan South Asia Trade Mission (2013)

~2016



Patent Possesion Status

- Ice-Making Module Patent (2016)
- China Patent (2016)

~2017



NEW VISION

- GO GO GLOBAL (2017)
- Plant Registration (2017)
- TAECHANGICE Co., Ltd. Establishment of corporate conversion (2016)
 - TAECHANG ENG Co., Ltd. transfer to subsidiary

TAECHANG ENG Co., Ltd. is a plant maker specialized in the production of pipe spool, tank and vessel, structure and post-treatment (painting) items in one stop method in the field of land plant and marine plant.

Hydro / PWHT



Hydro Test



PWHT



Heat Treatment Furnace

- PWHT : 2,000 Pc's / Month

Pipe / Support Fabrication



Welding



Pipe



Support

- Ferrous : 27,000 Pc's / Month

- Non-Ferrous : 8,000 Pc's / Month

Bending



High Frequency



Bending M/C



Cutting Plane

- High Frequency Bending : 2,000 Pc's / Month

- Cold Bending : 3,000 Pc's / Month

Painting (Ferrous , Non-Ferrous)



Shot Blasting



Painting



Marking

- Shot & Paint : 1,800 Ton / Month

Management Philosophy

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Business Philosophy

"Based on nature-friendly technology, we create new ice industry through creative thinking and endless challenge." As a management philosophy, we are developing into a spirit of responsibility to provide the best quality.



**Environmental
Management**



**Infinite Sprit
Of Responsibility**



**Realization
of possibility**

Core Value

We will make every effort to make our customers a top priority, realize their potential through challenges, provide pure ice with unrivaled technology, and enjoy pleasant and healthy leisure activities for consumers.

Customer first

**Challenge
and Execution**

**Communication
and Cooperation**

Pure ice

Healthy leisure life

Vision

Taechang Ice Co., Ltd. establishes a company-wide quality management system to produce Global Top products in the global era, creating customer value with the best quality and service.

Future

- Company with proprietary technology
- Company trusted by customers

**Strategy
direction**

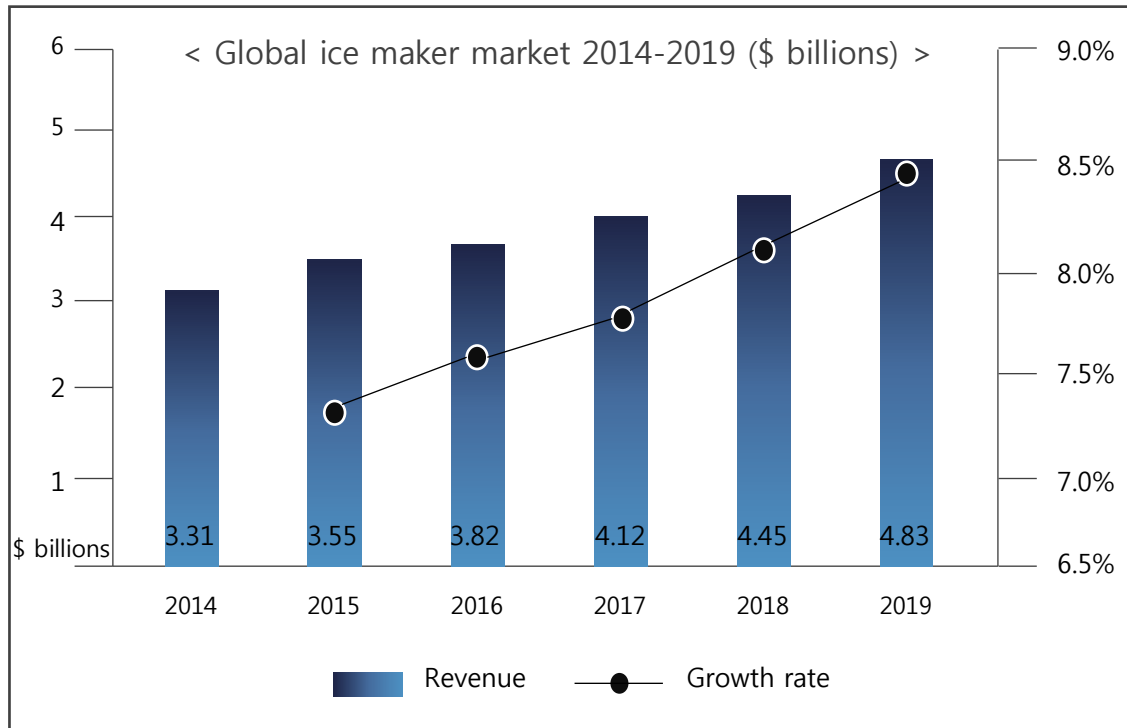
- Focus on new technology area
- Established enterprise-wide quality management system

**Sustainable
growth companies**

Business background

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The global ice maker market was valued at \$3.31 billion in 2014 and is expected to reach \$4.83 billion by 2019, growing at a CAGR of 7.9%



GOLOBAL ICE MAKER MARKET 2015-2019 Reference

	2014	2015	2016	2017	2018	2019	Unit
시장규모	33.1	35.5	38.2	41.2	44.5	48.3	\$ billions
성장률(%)		7.2	7.6	7.8	8.2	8.5	%

Environmental factor

- Increased income and improved living standards raise interest in health and drinking water
- Increased consumption of ice due to abnormal weather and prolonged summer heat due to long summer (**Continuous increase in demand for SUMMER products**)
- Expanding the market of composite household appliances that incorporate various functions of small kitchen appliances trend

Market growth

- Rapid growth of the ice-making and refrigeration technology industry due to the development of the food and storage industry
- Demand for ice-making machines to expand due to popularization of eating-out culture and growing franchise chain
- Activation of preservation of food such as meat, seafood in retail, grocery store, large supermarket
- Increasing demand for ice water purifiers as a combined appliance at home (**universal use of ice makers in overseas homes**)

Advantages of Ice Making Modules

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Ice Module

There are many ways to generate ice.

Taechang Ice Co., Ltd.'s ice-making module is different from the existing method.



Rotating Method of Freezing and Cooling Water

By rotating the water in the ice-making module,
A clear and transparent sand-glass appearance will be produced.



The ice shape is the most important factor

The shape of ice should be efficient for various drinks and uses.
The world's only ice form, sandglass Ice, is shaped to fit these need elements and has a Visual beauty that can further enhance your style.



Safe Ice Module

The material of the module uses SUS316L to implement safety and hygiene at the same time.
This is a spoon-like material used at our table.



Form of Module Outside Space Limit

The developed ice-making module is able to increase and decrease the number of modules in the 1st stage 4 pipes, so the stylization of design and space is high.
It can be combined with various types of products and you can make cold water of direct water type freely when applying ice water purifier.



Two or more ice from one pipe without separate molding

The existing ice-hole type module can cut the ice only by using the cutting machine,
Unique core technology allows the creation of multiple ice from one or more pipes in two or more stages.



※ We started as a Water R&D company in 2004, established a solid foundation with unique technology, began developing new technologies in 2009.

Advantages of Ice Making Modules

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TM34 (Three-stage form)

Pipe quantity : 4

Length : 170mm



TM38U (Three-stage form)

Pipe quantity : 8

Length : 170mm

※ Adjustable from 1 to 4 stages



TM38B (Three-stage form)

Pipe quantity : 8

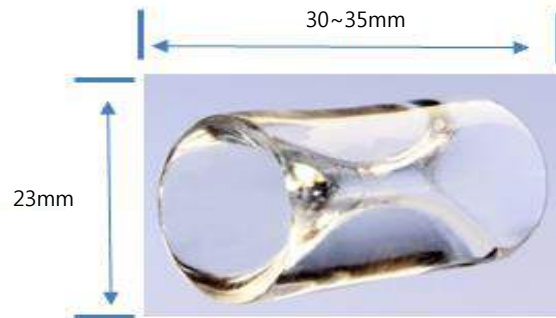
Length : 170mm

Ice shape and specifications

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The only sand glass ice in the world

Clear, clean ice produced by the independent technology of Taechang Ice Co., Ltd.



Specifications

- Refrigerant : R-134A
- Diameter : 23mm
- Length : 30~35mm
- Weight : 7g

The size and length of ice can be changed depending on the application of refrigerant and refrigeration cycle.

- Length : 30~35mm
- Weight : 7g

- The above Specification : refrigerant 134a / outside temperature 21°C / water temperature 18°C

- As soon as the temperature reaches the maximum temperature at which the ice starts to cool, clear ice is produced.
- When drinks are used, both ends of the ice are cold so that both ends are thin, and the solid center part keeps the coolness for a long time.

Module usage line

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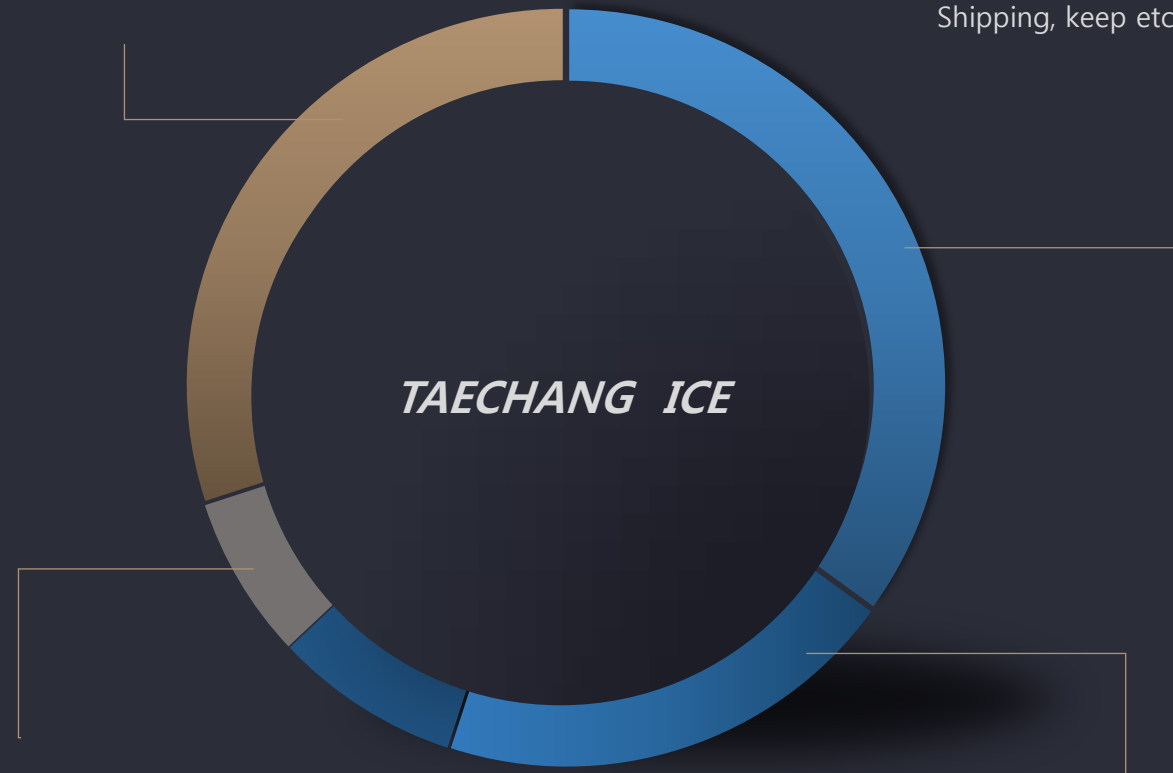
- *Small ice maker*
- *Water purifier*
- *Refrigerator*
- *Industrial ice maker*
- *etc. (medical industry, laboratory, ,
Display)*

Small ice maker

Household, Catering , Restaurant, Fast food etc.

Industrial ice maker

Aquatic products · Meat processing facility, Food processing, Dye processing, Shipping, keep etc.



Refrigerator

Freezer ice production, Home Appliances etc.

Water purifier

Ice water purifier , Original water purifier, Carbonic acid · Coffee water purifier etc.

Major Equipment Related to Refirgeration Systems

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◆ *Brazing furnace*

Specification : (19.5M x 1.2M x 3M)

Usage : Various heat exchangers and heat treatment facilities

- It has equipment for the direct production of heat exchangers for heat treatment systems.

Major Equipment Related to Refirgeration Systems

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◆ *Brazing work*

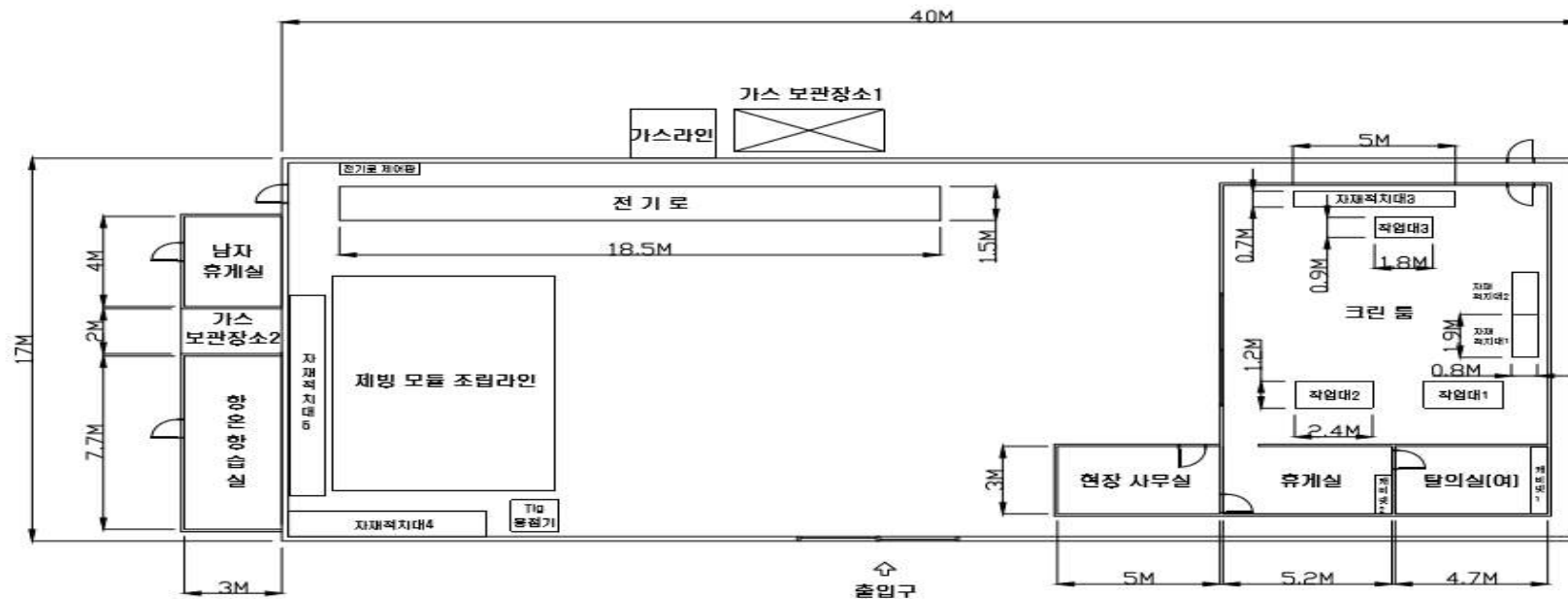
- ① Check temperature / belt condition for brazing work.
- ② Modules that have completed the application of welding material to the module proceed with brazing.
- ③ Put the stainless steel plate on the belt so that the welding agent does not adhere.
- ④ Fix the module by adding a ceramic material to prevent the welding agent from sticking on the stainless steel plate.
- ⑤ Make sure the module is balanced and fixed so that it does not shake or move on the belt.

Plant Lay-out

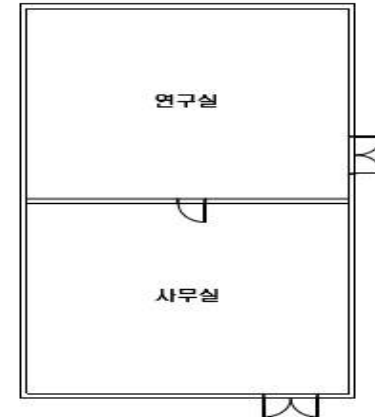
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Plant : 680m²

Office : 170m²



10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
품번	품명	재질	수량	비고



작성자	일자	비고
김주희	2017.08.31	
제품명		
도면번호		
TAECHANG ICE CO., LTD		

Patent

Unique core source technology with unique cooling technology that turns the flow of flowing water

제 10-1669605호



발명의 명칭 Title of the Invention
제빙장치용 회전식 물 분사노즐 및 이를 이용한 제빙장치

특허권자 Patentee
주식회사 태창아이스(195011-*****)
충청남도 천안시 서북구 성거읍 모전1길 354-46

발명자 Inventor
강남영(670815-*****)
충청남도 천안시

위의 발명은 「특허법」에 따라 특허등록원부에 등록되었음을 증명합니다.
This is to certify that, in accordance with the Patent Act, a patent for the invention
has been registered at the Korean Intellectual Property Office.

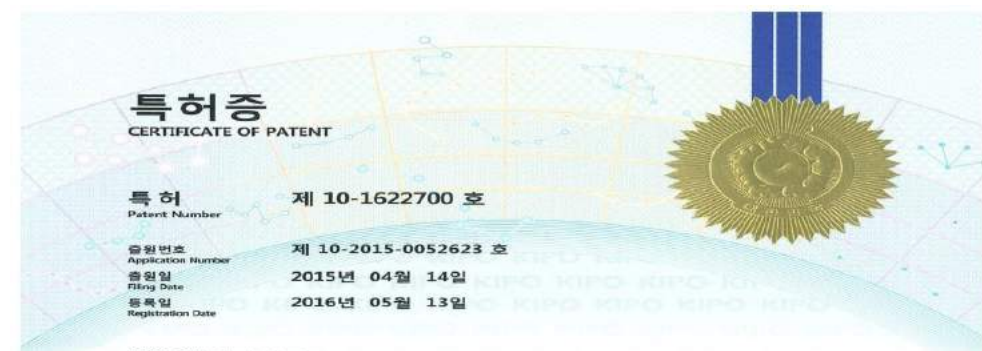


2016년 10월 20일

특허청장
COMMISSIONER,
KOREAN INTELLECTUAL PROPERTY OFFICE

최 동 규

제 10-1627700호



발명의 명칭 Title of the Invention
제빙장치용 열교환기 제조방법 및 그 방법으로 제조된 제빙장치용 열교환기

특허권자 Patentee
주식회사 태창아이스(195011-*****)
충청남도 천안시 서북구 성거읍 모전1길 354-46

발명자 Inventor
강남영(670815-*****)
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2016년 10월 19일

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TAECHANG ICE Co., Ltd.

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