



AIRSYS

**BALANCE THE
ENVIRONMENT.**

AIRSYS Group Introduction

Contents



About AIRSYS



**Products and
Solutions**



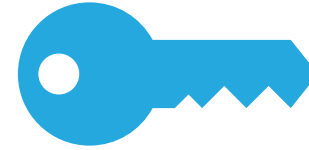
**Certificates &
Honors**



About AIRSYS

www.air-sys.com

AIRSYS Strategy



Global Footprint

Americas

SEA

China

EMEA

...

Product Integration

Medical

Semicon

Energy Storage

Datacenter

Telecom

...

Services

Consultation

Design

Installation

Operation

Maintenance

Uniqueness

Combination of
the three is the
core competence
and advantage of
AIRSYS

Business Areas

Medical Cooling

- Magnetic Resonance-MR
- CT/PETCT
- Laboratory Diagnosis-LD
- Radiotherapy-RT

Data Center Cooling

- Central Cooling Equipment
- Energy Saving Cooling Solution

Telecom Cooling

- Telecom Cabinet
- Shelter Cooling Solution
- Energy Saving Cooling Solution

Semiconductor Manufacture Cooling

- Manufacture Processing Cooling

Energy Storage Cooling

- Customize solution
- Energy Saving Cooling Solution
- Global service network

Milestone

1999

- Beijing factory started to produce air cooled and heat pump units
- Shanghai Service Company started to run
- **ISO 9001 Certificate** approved



2002

- Medicool products won **GE** Technology and Innovation Award
- The Best Employer by Fortune China
- Beijing factory expanded



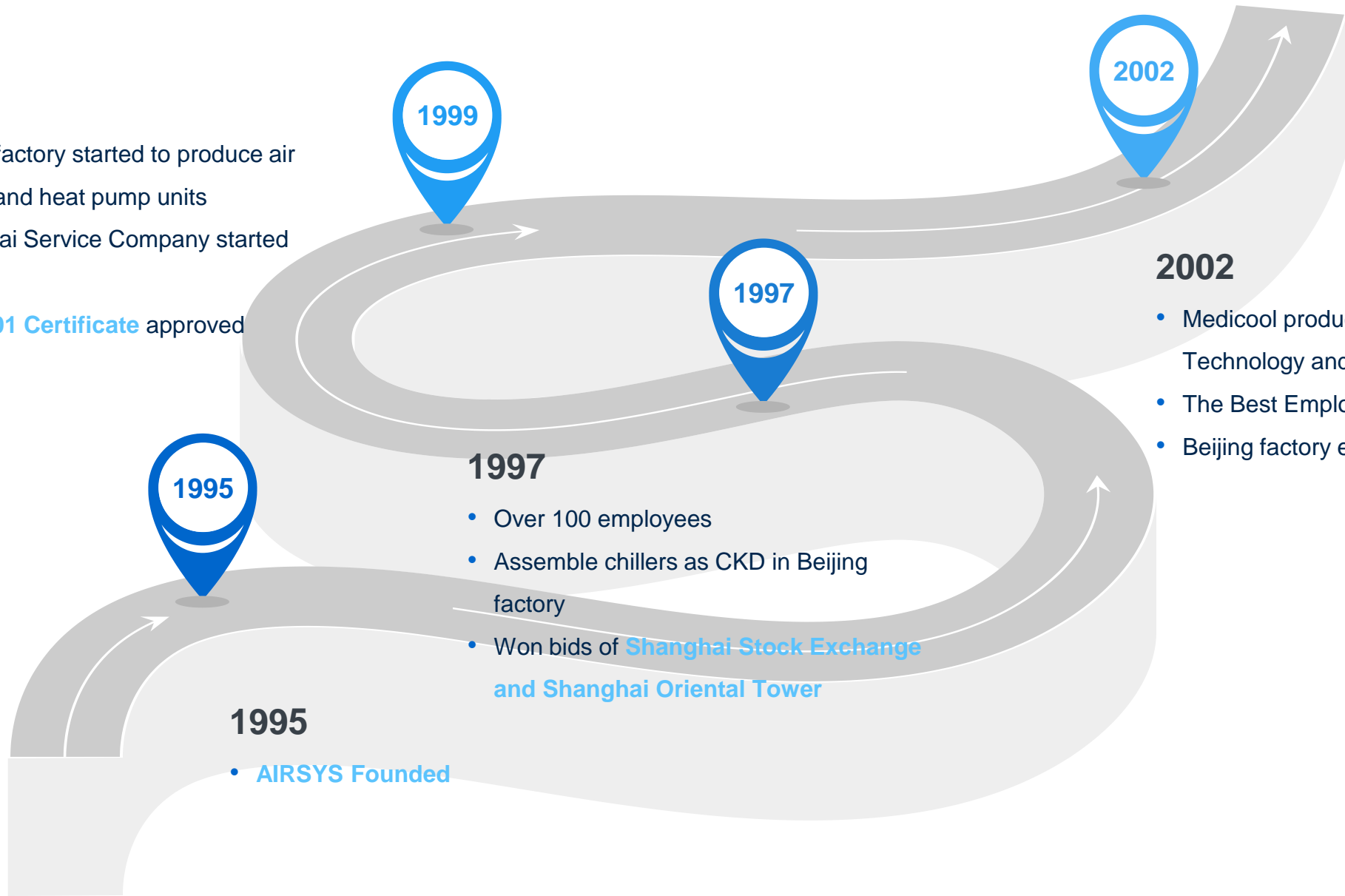
1997

- Over 100 employees
- Assemble chillers as CKD in Beijing factory
- Won bids of **Shanghai Stock Exchange** and **Shanghai Oriental Tower**



1995

- **AIRSYS** Founded



Milestone

2008

- Gu'an factory started to run
- Launch DATACOOOL and OPTIMA family
- Become qualified supplier of **Siemens** Healthcare



2009

- Awarded Beijing Enterprise Technology Center
- **ISO14000 and OHSAS18000** certificate approved
- Become qualified supplier of **Vodafone Turkey, Turk Telecom and Verizon**



2007

- Entered India markets
- Become qualified supplier of **highspeed railway** in China
- Made a procurement record of shelter AC from Reliance bid



2005

- Launched Free Cooling Box and packaged AC
- Participated ITU exhibition, entered international market

Milestone

2010



- Launched DATACOOOL-PACKAGE series
- Launched FREECOOL-HD series
- Become qualified supplier of **PHILIPS** Healthcare

2012



- Setup AIRSYS (UK) LIMITED
- Medical products won PHILIPS Excellent Project Support Award
- Launched OPTIMA-FC series precision AC with free cooling
- Become qualified supplier of **British Telecom**

2013



- Won Beijing municipal science and technology award
- Developed CHILLROW series in-rack units
- Won State Technological Innovation Award
- Launched inverter precision AC

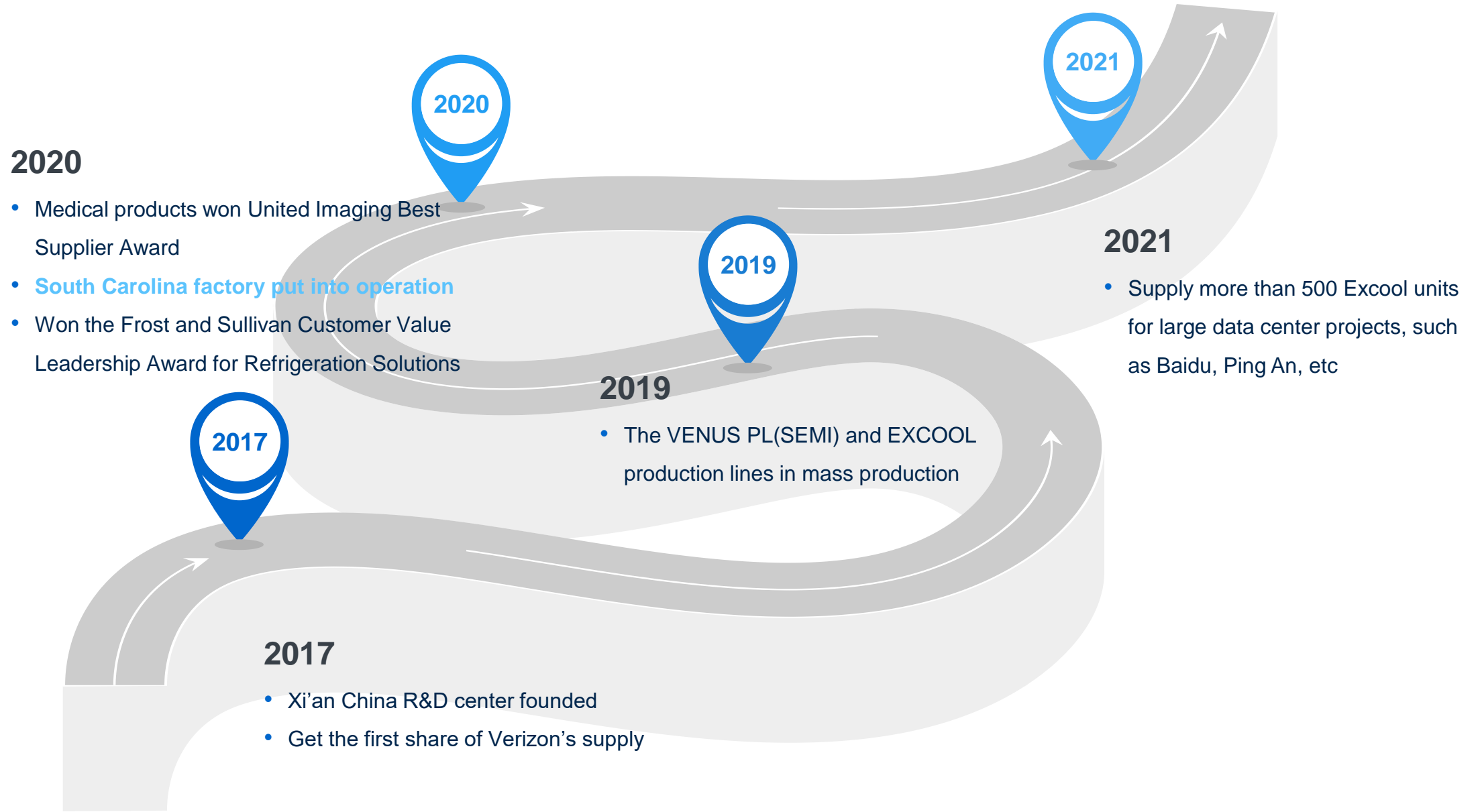
2015



2015

- Received **Frost & Sullivan's 2015** Product Line Strategy Leadership Award
- AIRSYS Germany, Brazil , and North America branches founded

Milestone



Global Network

NORAM

USA
Canada

AIRSYS Cooling Technologies

AIRSYS US Factory

LATAM

Brazil
Argentina
Peru
Ecuador
Colombia

AIRSYS Brazil Ltda.

Europe

UK Germany Italy Turkey

AIRSYS (UK) Ltd.

AIRSYS Deutschland GmbH

AIRSYS Klima Sanayi ve Ticaret A.Ş.

Africa

South Africa
Kenya
Nigeria

AIRSYS Singapore Pte. Ltd.

AIRSYS Company & Branches

AIRSYS Australia Sales Office.

AIRSYS Malaysia Sdn. Bhd.

AIRSYS Hongkong Co.,

AIRSYS China Factory

AIRSYS China Service

AIRSYS RET Beijing

Employee

Sales & Service : 320

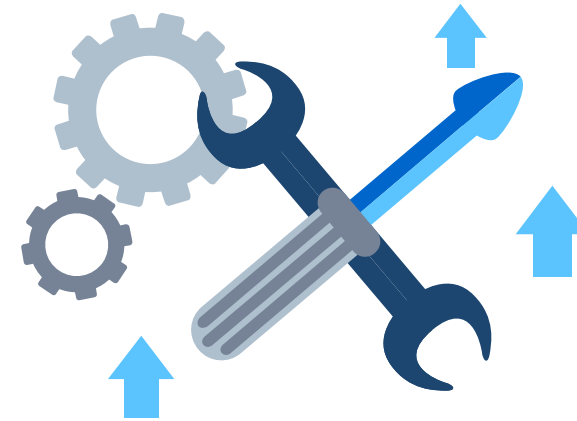
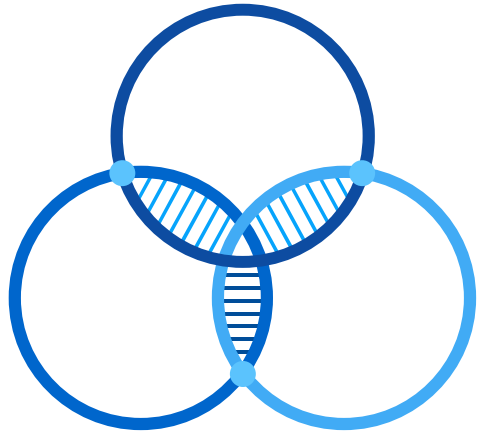
R&D: 90

Manufacture & QA: 350

APAC

China
Singapore
Malaysia
Philippines
Indonesia
Australia

Global Revenue and Semi BU



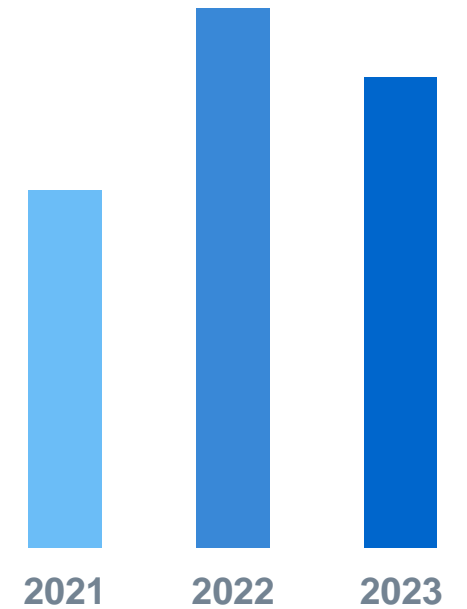
Global Revenue

2021	\$ 95M
2022	\$ 107M
2023	\$ 100M



Semi Business

2021	\$ 9M
2022	\$ 15M
2023	\$ 13M



R&D and Technology

Lab and Equipment

- Enthalpy & AC performance lab
- Chiller performance lab
- Climate Room
- Waterproof test
- Reliability lab



Patents

- Invention patents: 71
- Total number of patents: 150



R&D Tools

- Product Lifecycle Management Sys.
- SOLIDWORKS 3D design
- Performance simulation
- CFD simulation





Powder Coating



**Gu'an
Manufacturing
Base
75,000m2**

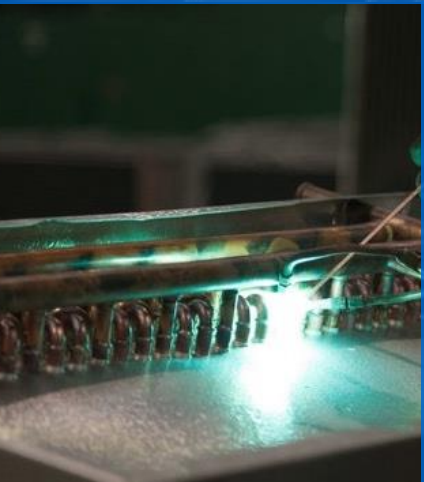


Fabrication



The most advanced manufacturing equipment and assembly line, sheet metal production line, heat exchanger production line, automatic spraying line

Manufacture Center Gu'an



Brazing



Sheet Metal



Assembling



South Carolina Factory 21,000 m²



Office

Manufacture Center South Carolina

The most advanced manufacturing equipment and assembly line,
sheet metal production line, heat exchanger production line,
automatic spraying line

Assembling Line 1



Assembling Line 2



Storage



Service Capabilities

AIRSERVE



Product expertise

- Common technical knowledge base;
- QA review PM and Emergencies.



Installation

- Pre-site visit
- Installation turn-key
- Complete within 2 days
- Product improvement



Maintenance

- 2 times / year;
- 3-4hrs every time;
- Clean, service, confirm, operation.



Spare parts

- Local supply options for common parts;
- Local stock depending upon needs



Training

- Factory training;
- Field training;
- service checklists & procedures.



Emergency service

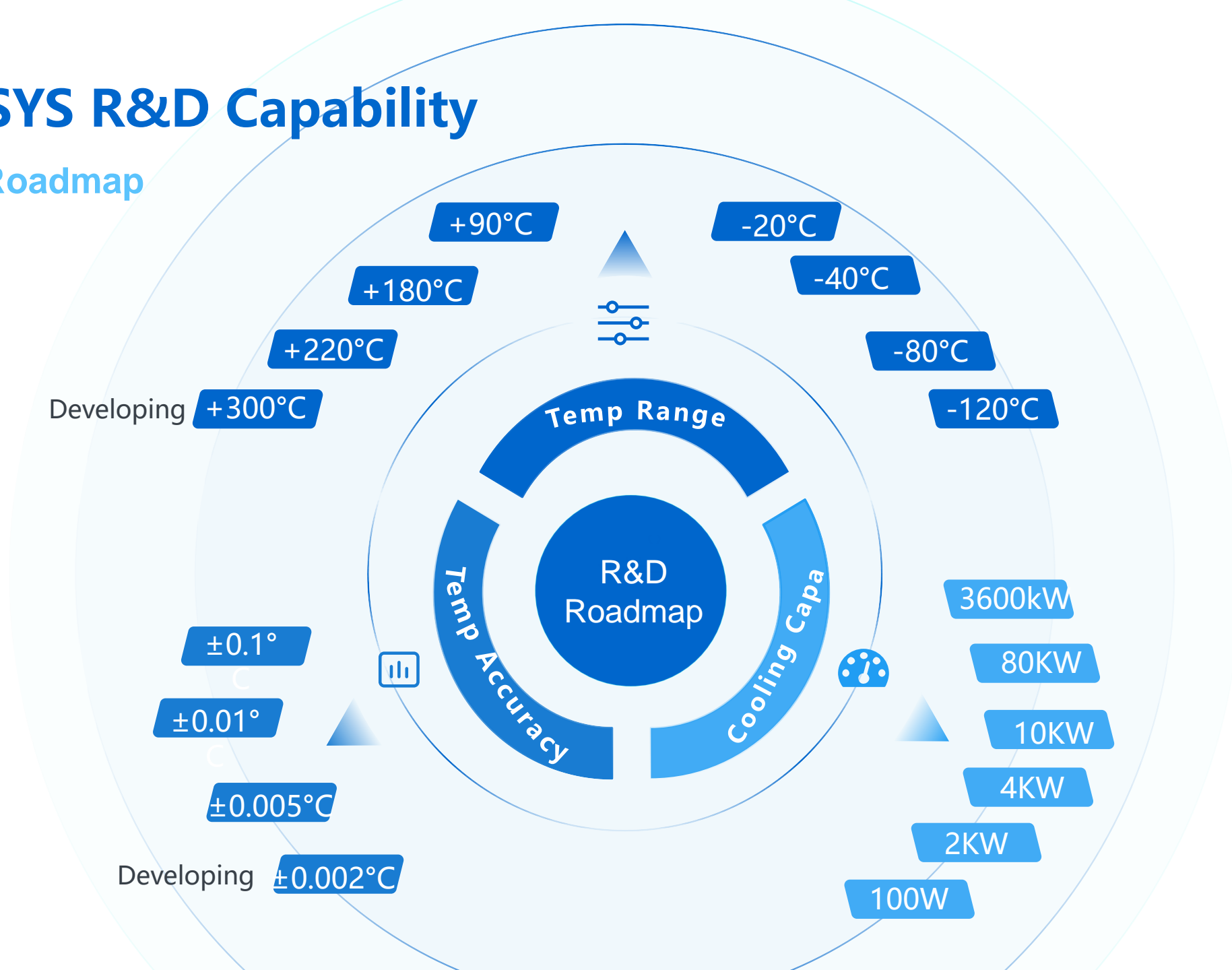
- 24*7 dispatched emergency service;
- Spin up new areas as needed.



Products and Solutions

AIRSYS R&D Capability

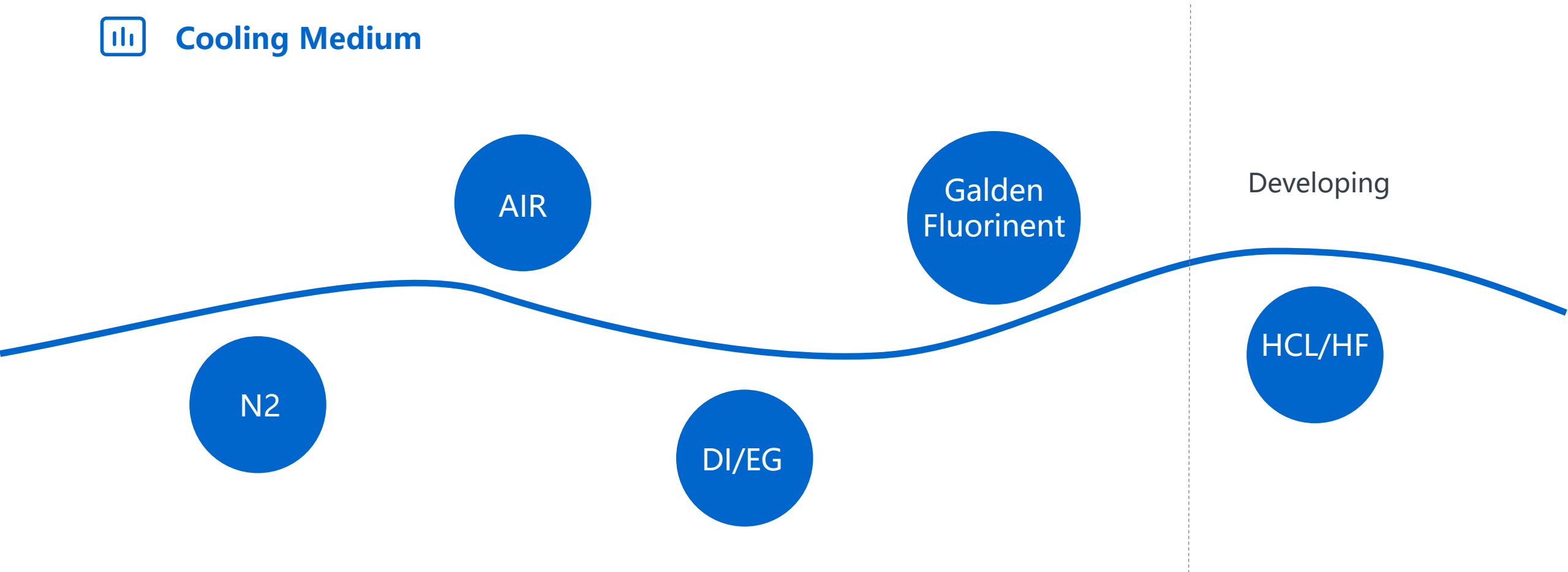
R&D Roadmap



AIRSYS R&D Capability

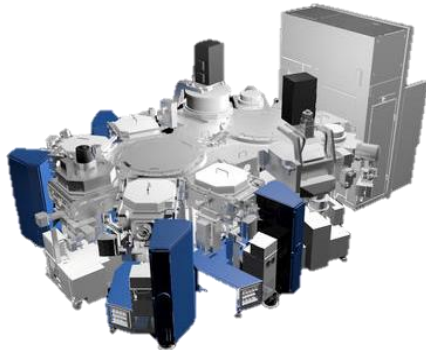
R&D Roadmap

 **Cooling Medium**



Products and Solutions

Semiconductor Manufacture TCU



Compressor Chiller



Heat Exchanger



Thermoelectric Chiller



THC

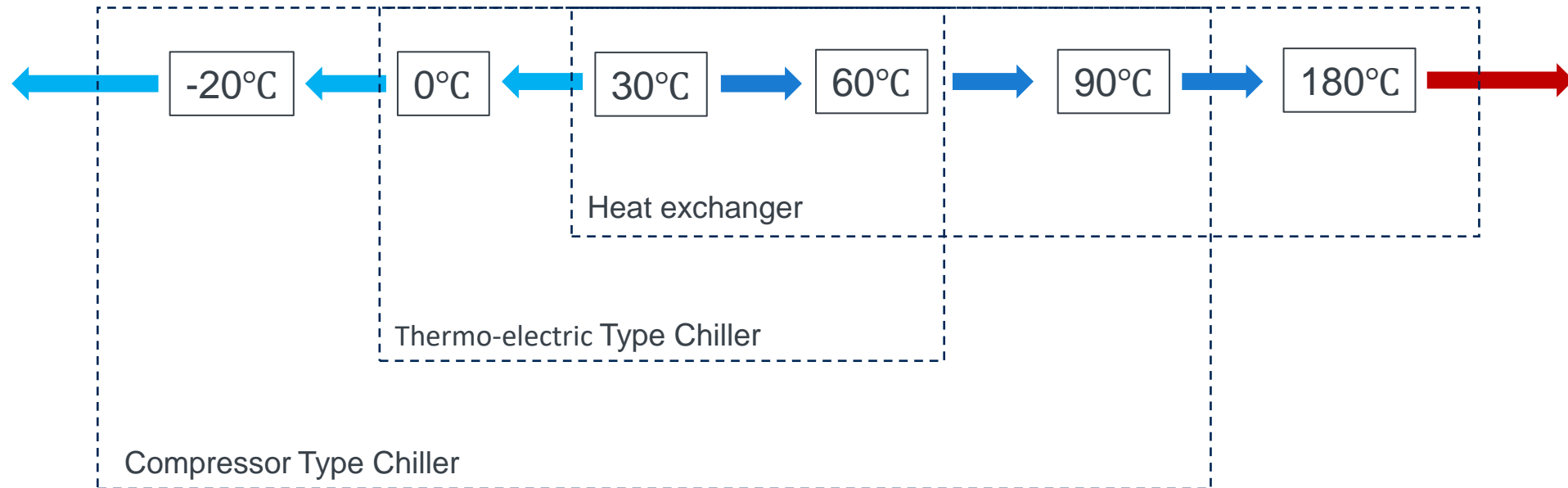


Customized Product



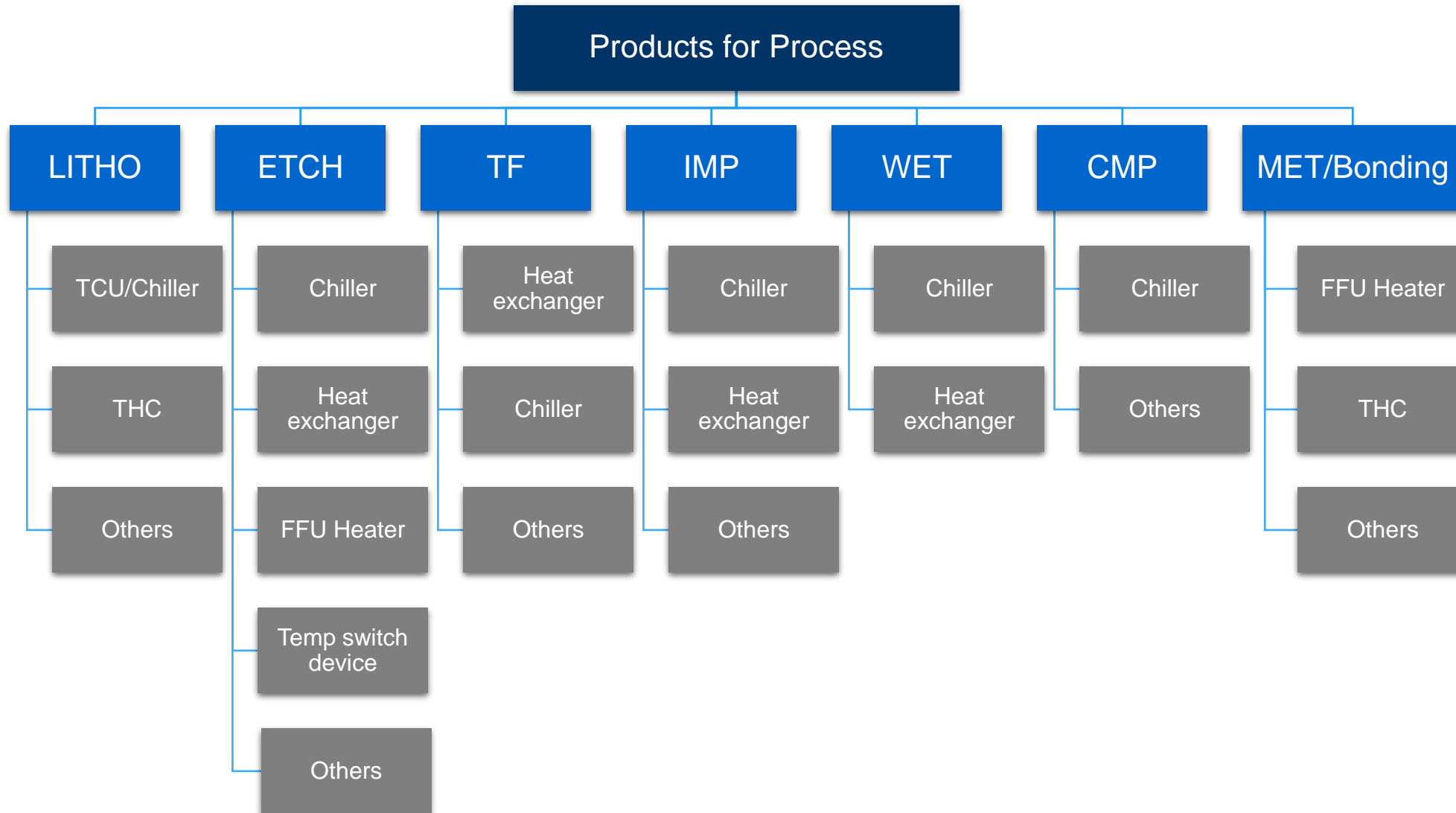
Products and Solutions

Semiconductor Manufacture TCU



Products for SEMI

Products for SEMI Process



Products for SEMI

Products for Litho & MET



Three-channel temperature zoning control

Temp range: +16°C ~ +28°C

Temp accuracy: $\pm 0.01^{\circ}\text{C}$

Cooling Capa: 2KW

Products for SEMI

Products for Litho & MET & Bonding



T&H control unit

Temp range : +21°C ~ +24°C

Temp accuracy : ±0.1/0.05/0.01°C

Air volume : 500~2500m³/h

Products for SEMI

Products for ETCH



Temp range

-80 °C ~+40 °C

Temp accuracy

±0.1°C

Cooling Capacity

5kw@-30°C

Single Channel/Dual Channel



Temp range

-10°C~+60°C/-20°C~+80°C

Temp accuracy

±0.1°C

Cooling Capacity

10kw@20°C

Single Channel/Dual Channel



Temp range

0 °C ~+60 °C

Temp accuracy

±0.01°C

Cooling Capacity

6kw@20°C



Temp range

+40°C ~+220°C

Temp accuracy

±0.1°C

Cooling Capacity

2kw@50°C

Products for SEMI

Products for CVD



Temp range: +30°C ~ +90 °C
Temp accuracy: ±0.1°C
Cooling Capacity
15kw@50°C



Temp range: +40°C ~ +180°C
Temp accuracy: ±0.1°C
Cooling Capacity
8kw@50°C



Temp range : +30 °C ~ +90 °C
Temp accuracy: ± ±0.01°C
Cooling Capacity
6kw@50°C

Products for SEMI

Products for PVD



Temp range
+15 °C ~ +60°C
Temp accuracy
±0.3°C
Cooling Capacity
30kW~240kW



Temp range
+40°C ~ +180°C
Temp accuracy
±0.2°C
Cooling Capacity
8kw@50°C

Products for SEMI

Products for IMP



Temp range: -10°C ~ +60°C
Temp accuracy: ±0.1°C
Cooling Capacity
2kw@20°C



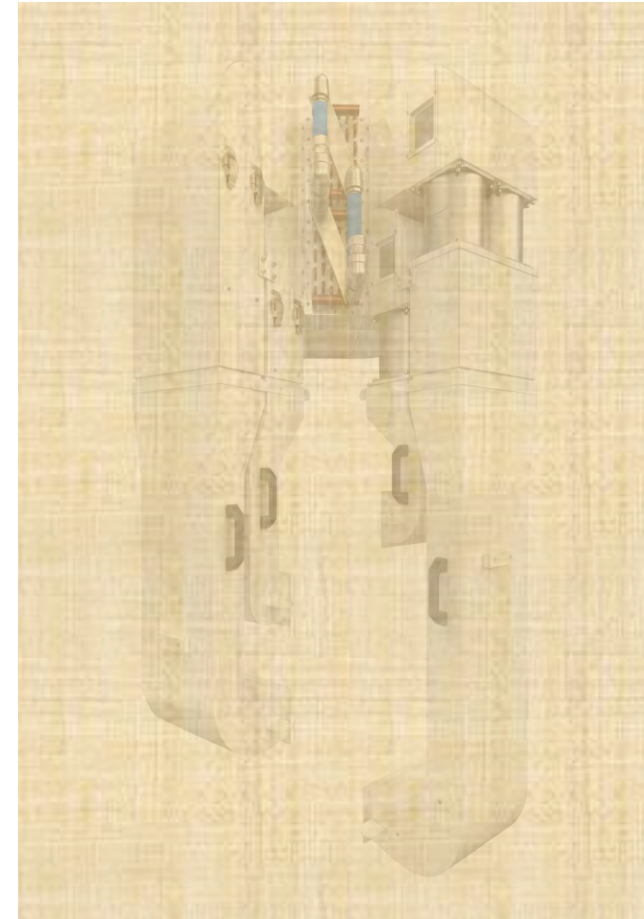
Customized cooling system

Products for SEMI

Products for EPI

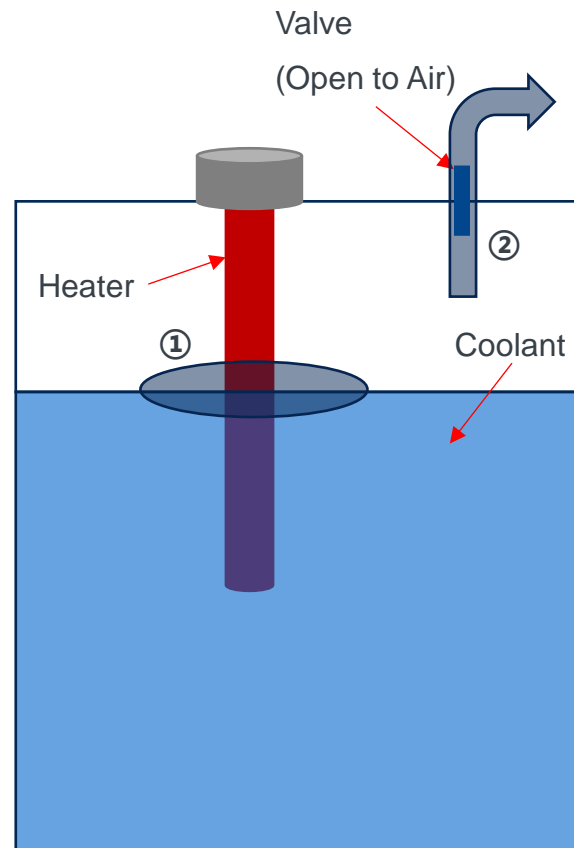


Customized cooling system



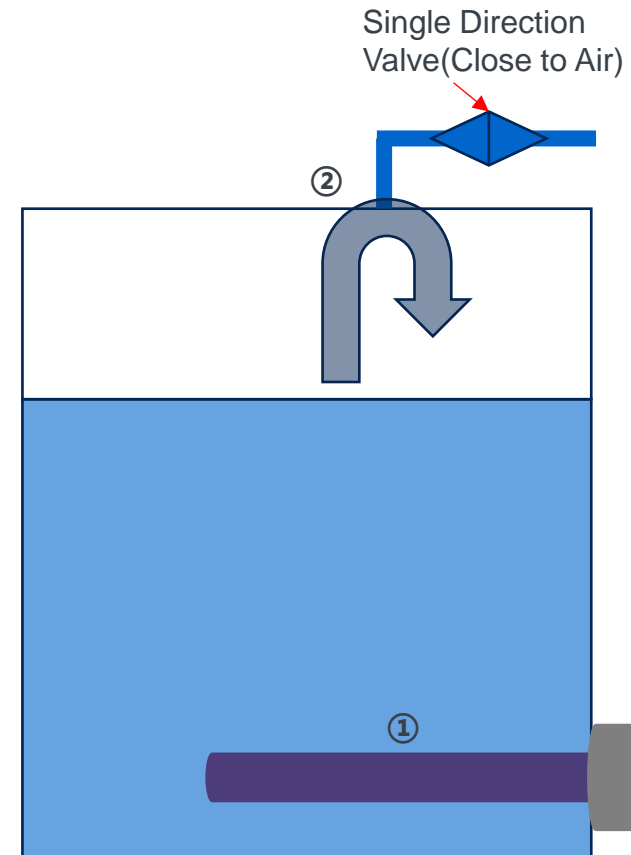
Customized cooling system

Coolant Saving with new design



Traditional Chiller Tank Design

- ❑ Heater at topside and coolant easy to be heat-up and evaporate to environment.



Airsys Chiller Tank

- ❑ Heater at bottom and heat up coolant evenly and reduce the evaporation to environment with valve used, 80% saving.

Products for SEMI

Customer	Process	QTY
CXMT	ETCH/TF/WET/CMP	150
YMTC	ETCH/TF	50
HUA HONG	TF/ETCH	52
SMIC	TF/IMP	10
SIEN	ETCH/TF/CMP/MI	374
RONG SEMI	ETCH/TF	47
JIE JIE	ETCH/TF	135
NAURA	ETCH/TF/DF	1420
PIOTECH	TF	700
KINGSEMI	LITHO/WET	34
AMEC	ETCH	7
Others	ETCH/TF/IMP	667
Total		3646

Customer Resources

Semiconductor Industry

Main Tool

NAURA 北方华创

AMEC

拓荆科技 PIOTECH CO. LTD

mattson technology

KINGSEMI 芯源

ACM RESEARCH

中科飞测 SKYVERSE

INSTRUMENTS LEUVEN

KINGSTONE Semiconductor

盛吉盛 SGSSEMI

XIMI 矽微

JET PLASMA

FAB

长江存储 YANGTZE MEMORY

Gxmt

SMIC

HGIRACE 华虹宏力

SiEn

Rong Semicond Corporation 荣芯半导

中国中车 CRRC

Silan 士兰微电子

捷捷微电 JIEJIE MICROELECTRONICS



Certificates & Honors

AIRSYS Group Introduction

www.air-sys.com

Certificates

PRODUCT MANAGEMENT



- BAUART GEPRÜFT
- TYPE APPROVED



Honors



2015

BEST PRACTICES AWARD

**Global Cooling Solutions
Product Line Strategy
Leadership Award**



2020

BEST PRACTICES AWARD

**Global Cooling Solutions
Customer Value Leadership
Award**



2023

**TECHNOLOGY INNOVATION LEADERSHIP
AWARD**

**Identified as best in class in the
global cooling solutions industry**

Honors



Technology or Innovation Award
2003 by GE

Excellent Project Support Award
2011 by PHILIPS



Best Supplier Award
2019&2020 by UNITED IMAGING

Best Supplier Award
2022 by Siemens



Strategic partner Award
2023 by NAURA



AIRSYS

Balance the Environment