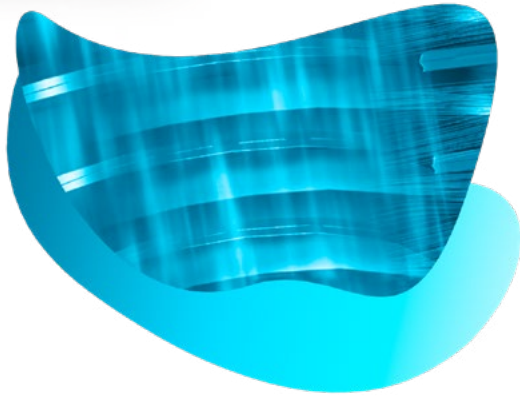
SANHUA

Stainless Steel

Brazed Plate Heat Exchanger

A magnificent turn into new chapter

SANHUA's patented asymmetric plate design has in average 25% lower pressure drop on secondary side compared to other solutions available on the market.



40 years innovating together

1984-2024

SANHUA

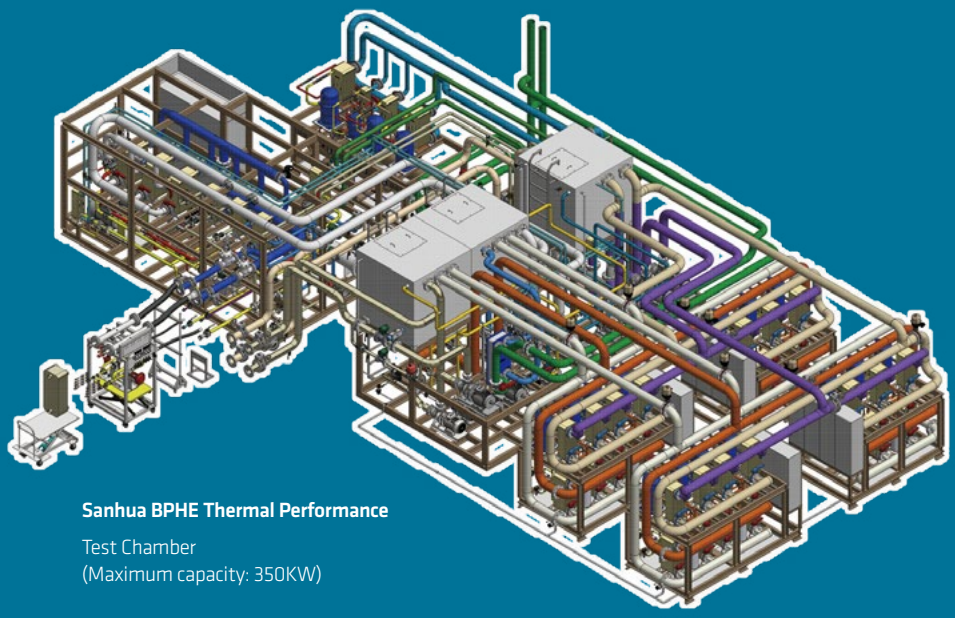
Introduction

With the carbon neutralization goal, it is the top priority of most industries to apply renewable energies and technologies to save energies and reduce the emissions. In the field of HVAC&R, such as heat pump, electric bus A/C and energy storage battery cooling are typical applications where renewable energies are used and inside of those you will find brazed plate heat exchangers (BPHEs) are playing very important roles.

On the other side the most direct and effective way to save energies is to improve our system efficiency. Compared with other heat exchangers of the same purpose, properly designed BPHE can provide higher heat transfer efficiency and lower secondary side pressure drop. It is also widely used for heat reclaim circuit to deliver hot water or heating while cooling, thus to improve the overall efficiency of the system.

Obviously BPHE is able to contribute from both sides. In year 2021, Sanhua officially entered to stainless steel BPHE industry, and we strongly believe BPHE will contribute greatly to our eco-friendly solutions to customers.

Prior to the acquisition, Sanhua has studied in the field of aluminium BPHE for many years and been leading the industry of automotive and residential appliances. A series of optimization designs were immediately introduced to the stainless steel BPHE portfolio. Thanks to Sanhua's professional and powerful laboratory, the advantages of these new designs could be presented to our customers with visible values. Meanwhile the availability of these data is greatly benifical to our customers since many tests we did in our lab are under comprehensive conditions. Hereby we are very glad to introduce some of our new technologies and the portfolio they go into.



Sanhua BPHE Thermal Performance

Test Chamber
(Maximum capacity: 350KW)

innovating
TOGETHER

Visible performance and reliability

PLATE WITH REDUCED DEPTH

By reducing the depth of the plate, the heat transfer efficiency is improved but the pressure drop is still within acceptable range. BPHE with reduced plate depth is especially suitable for economizer functions.

TEMPERATURE FATIGUE RESISTANCE

Temperature fatigue happens mostly in heat pump or cascade systems where high and low temperatures exchanges frequently, as a result the brazing between the plates will fail. The mixing of medien of both sides will damage the entire system and even lead to more serious consequences.

ANTI-FREEZING DESIGN

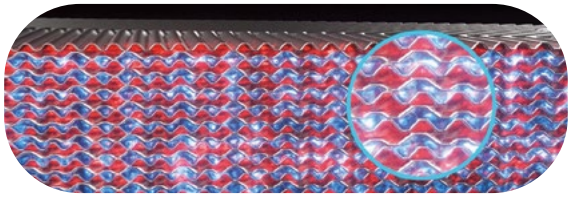
In the scenario of refrigerant/water exchange, it is necessary to prevent water temperature from falling to the freezing point and the plates from cracking. The mixing of refrigerant and water will damage the entire system and even lead to more serious consequences. Especially in chillers and heat pumps, during the start-up low pressure and low temperature may happen and resulting in icing on the water side. When the heat pump is switched from heating to defrosting, there is also a high risk of water freezing. Although proper system control can minimize the risk, there are still a lot of work can be done with BPHE itself. The BPHE is designed in the way that the water bypasses the risky areas and the areas with very low velocity, as a result the risk of freezing is much lower. Such extreme conditions are always challenges to achieve in customer's system test but Sanhua's freezing test bench can verfiy the freezing temperature at various conditions, so that customers can use them with confidence.

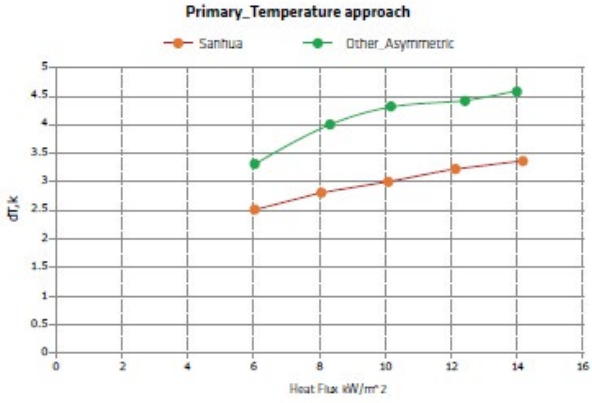
HIGHLY EFFICIENT DISTRIBUTOR

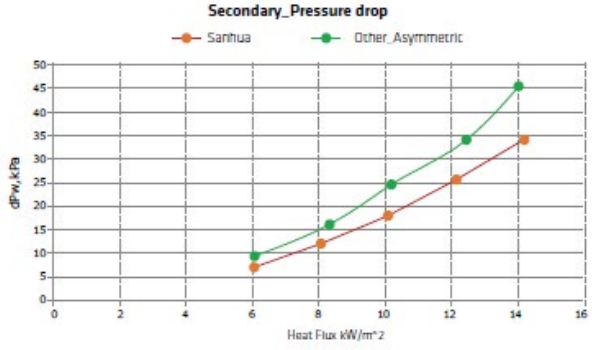
The design of distributor is especially critical for medium and large size evaporators. Sanhua distributor has its own design patent, and the distribution holes are part of the plates and making the heat exchanger extremely compact. Through the thermal imager in our laboratory, we can find how equally the distributor is distributing the refrigerant into all channels, maximizing the use of heat exchange area.

ASYMMETRIC PLATE

With traditional symmetrical design, the channel area of primary and secondary sides are almost identical, it is simple and easy to produce. In reality different channel are required for primary and secondary side. By introducing asymmetric plate design, we properly reduced the volume of primary side to increase the evaporating temperature and heat transfer efficiency but still control the pressure drop within acceptable range. We take care of pressure drop more on secondary side, by increasing the volume of secondary side, the pressure drop is reduced dramatically and as a result the power consumption of the pump will be reduced drastically as well. Sanhua's thermal performance test chamber is able to test the temperature approach (dT) and pressure drop with various refrigerant and conditions. The data is showing in average 1K lower in dT and 25% lower in pressure drop even compared to asymmetric design from others.







Brazed plate heat exchanger

Sanhua is always thinking and working globally, and we have obtained EU PED certification from authorized 3rd party. Our BPHEs legally work with fluid group 1 and group 2, including water, ethylene glycol solution, common HCFC, HFC, HC and HFO refrigerants such as R410A, R32, R454B, R290, R134a, R404A, R507, R448A, R449A, R1234yf, R1234ze and R452A etc. The design pressure is up to 50 bar.

Designation of SANHUA BPHE

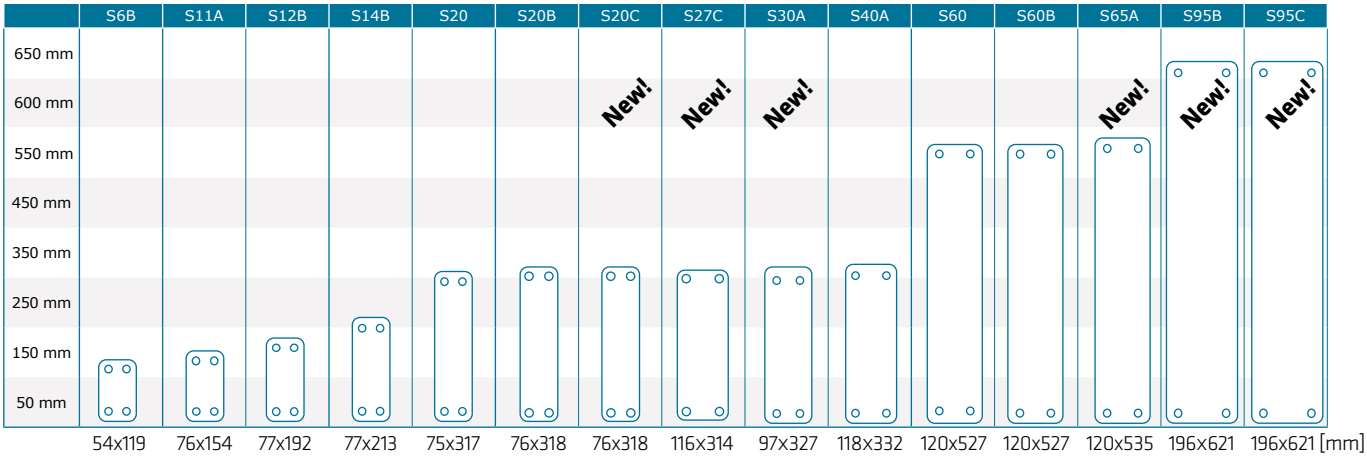
S 200 A H - 50 H Z - XX

- XX: Design serial number (except boiler), 2 digits like 01, 02..., including connections and bolts etc.
- Z: Presence of distributor such as Z, in case of vacant: w/o distributor.
- H: Fishbone angle: H (large angle), L (small angle) and M (mixed).
- 50: Numbers of plate, such as 8,20 and 50 etc.
- H: Design Pressure, H: up to 50 bar, L: up to 30 bar.
- A: Internal structure, with letter of A, B, C... including layout of plate, depth of plate and pitch of holes etc.
- 200: Nominal heat transfer area, such as 20, 95 and 200, unit: 1/1000m^2.
- S: Application: S=Standard HVAC&R, A=Air drier, B=Boiler, L=Open Type.

Please visit our website www.sanhuaeurope.com and link to the technical information section to find the complete information of every product.

Designation of SANHUA BPHE

Below table is showing the recommended applications with different models:



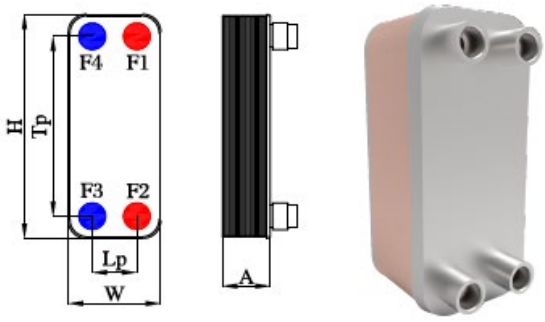
	S6B	S11A	S12B	S14B	S20	S20B	S20C	S27C	S30A	S40A	S60	S60B	S65A	S95B	S95C
Capacity (kW)*	1~5	1~8	1~10	2~15	2~25	2~25	2~25	2~30	5~30	5~40	10~90	10~90	10~90	30~200	30~200
Capactiy (Ton)*	0.3~1.4	0.3~2.3	0.3~2.8	0.6~4.3	0.6~7	0.6~7	0.6~7	0.6~8.5	1.4~8.5	1.4~11	2.8~26	2.8~26	2.8~26	8.5~56	8.5~56
Asymmetric	-	-	-	-	-	-	-	-	x	x	-	x	x	-	x
Reduced Depth	-	x	x	-	-	x	-	-	x	-	-	-	x	x	x
Distributor Option							-	-	x	x		x	x	x	x
VRF_Eco	x		x		x	x	x								
ATW/ATA HP_Eco					x	x	x	x	x	x	x	x	x		
ATW/GHP HP_Con								x	x	x	x	x	x		x
Mini Chiller_Con/Evp					x	x	x		x	x		x	x		x
E-Bus_Battery Cooling		x					x	x	x					x	
Energy Storage Cooling								x	x	x	x	x	x	x	x
Transport_Eco/SuctionGas HX				x	x	x	x						x		x
Water Chiller_Evp					x	x			x	x		x	x	x	x
Water Chiller_Eco									x	x	x	x	x	x	x
Ref. Rack_Eco					x	x	x								
Ref._Waterloop_Con	x	x					x								
Oil Cooler								x			x	x		x	

Note: * The cooling capacities are based on R410A, condensing temperature 40°C, 5K subcooling, water inlet/outlet temperature 12°C/7°C, 5K superheat.

S6B

INTRODUCTION

SANHUA S6B is widely used as economizer on VRF or as evaporator and condenser on small capacity heat pump. S6B has the compact structure and enhanced heat transfer advantages. The heat transfer capacity range is 1~5 kW. Its mechanical design and reliability performance makes it suitable for high-pressure refrigerant such as R410A and R32.



Size Code	mm	IN
H	119	4.69
W	54	2.13
Tp	91	3.58
Lp	26	1.02
A	6+(1.3 x NoP)	(0.051 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	1.7
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.005/0.005
Weight w/o connection (kg)	0.12+(0.018 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Evaporation side	solder 1/4", 3/8"
F1-F2 Subcooling side	thread 1/4", 3/8"

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).
For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

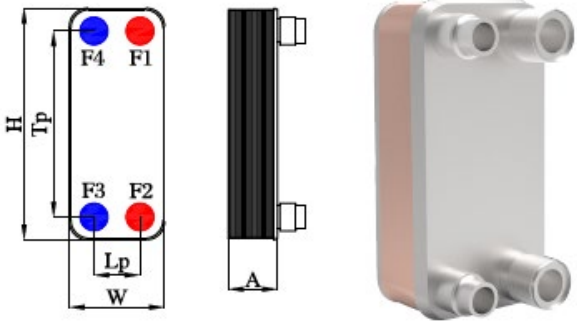
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S11A

INTRODUCTION

SANHUA S11A is widely used as economizer for VRF and heat pump. It can also be used for E-bus battery cooling or as evaporator for chiller with capacity below 5 kW.

With the optimized shallow fishbone design, the heat transfer is enhanced and the pressure drop of water side (or secondary side) is decreased. The lower hold-up volume reduces the system refrigerant charge. S11A is offering 2 options of design pressure, they are 3 MPa and 5 MPa for low and high-pressure refrigerant respectively.



Size Code	mm	IN
H	154	6.06
W	76	2.99
Tp	120	4.72
Lp	42	1.65
A	8+(NoP)	0.314+(0.039 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	1.7
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.0069/0.0069
Weight w/o connection (kg)	0.53+(0.034 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 3/8", 1/2" , 5/8" , 3/4"
F1-F2 Water side	thread: 3/8", 1/2" , 5/8" , 3/4"
	solder: 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA). US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

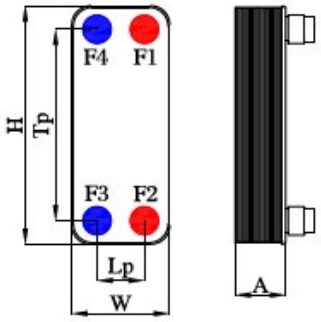
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S12B

INTRODUCTION

SANHUA S12B is widely used in chillers and heat pumps as evaporator, condenser and economizer. With optimized shallow fishbone design, it enhances the heat transfer and decreases the pressure drop of secondary side. The lower hold-up volume reduces the system refrigerant charge. S12B is suitable for high-pressure refrigerant like R410A and R32. Its heat transfer capacity is up to 10kW.



Size Code	mm	IN
H	192	7.56
W	77	3.03
Tp	154	6.06
Lp	40	1.57
A	9+(NoP)	0.354+(0.039 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	1.7
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.009/0.009
Weight w/o connection (kg)	0.66+(0.042 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 3/8", 1/2" , 5/8" , 3/4"
F1-F2 Water side	thread: 3/8", 1/2" , 5/8" , 3/4"
	solder: 3/8", 1/2" , 5/8" , 3/4"

THIRD-PARTY APPROVALS

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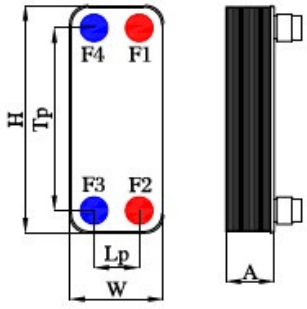
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S14B

INTRODUCTION

SANHUA S14B can be used as condensers or evaporators in chillers, heat pumps and cascade systems. The plate adopts optimized fishbone design, which has high reliability and high heat transfer efficiency, reduces water side pressure drop and refrigerant charge.



Size Code	mm	IN
H	213	8.39
W	77	3.03
Tp	172	6.77
Lp	42	1.65
A	10+(2.15 x NoP)	0.394+ (0.048 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	4
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.026/0.026
Weight w/o connection (kg)	0.68+0.048N
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

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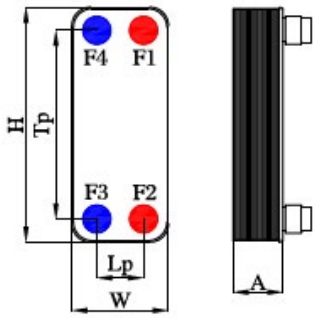
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S20

INTRODUCTION

SANHUA S20 can be used as an evaporator, condenser, economizer and desuperheater in chillers and heat pumps. It is also used as economizer or intercooler for commercial and transportation refrigeration, or as water cooled condenser in semi-plug in display case (waterloop). The plate adopts optimized fishbone design, which has high reliability and high heat transfer efficiency.



Size Code	mm	IN
H	317	12.48
W	75	2.95
Tp	278	10.94
Lp	42	1.65
A	10+(2.25 x NoP)	0.394+ (0.089 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	4
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.04/0.04
Weight w/o connection (kg)	0.72+(0.068 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"
	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

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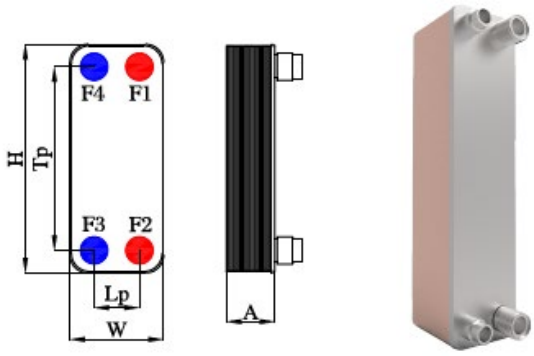
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S20B

INTRODUCTION

SANHUA S20 can be used as an evaporator, condenser, economizer and desuperheater in chillers and heat pumps. It is also used as economizer or intercooler for commercial and transportation refrigeration, or as water cooled condenser in semi-plug in display case (waterloop). With optimized shallow fishbone design, S20B is compact and has high heat transfer efficiency.



Size Code	mm	IN
H	318	12.52
W	76	2.99
Tp	278	10.94
Lp	42	1.65
A	9+(1.5 x NoP)	0.354+(0.059 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	4
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.024/0.024
Weight w/o connection (kg)	0.97+(0.069 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"
	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA). US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

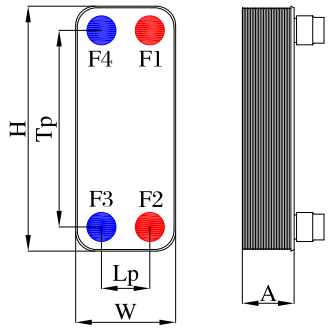
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

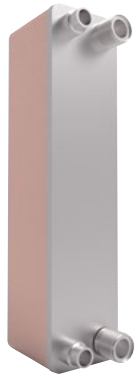
S20C

New!

INTRODUCTION

SANHUA S20C can be used as an evaporator, condenser, economizer and desuperheater in chillers and heat pumps. It is also used as economizer or intercooler for commercial and transportation refrigeration, or as water cooled condenser in semi-plug in display case (waterloop). With optimized shallowfishbone design, S20C is compact and has high heat transfer efficiency.





Size Code	mm	IN
H	318	12.52
W	76	2.95
Tp	278	10.94
Lp	40	1.57
A	10+(2.25 x NoP)	0.394+(0.088 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	60
Max flow (m^3/h)	4
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.040/0.040
Weight w/o connection (kg)	0.72+(0.068 x NoP)
Flow Direction	Parallel flow
Plate	316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"
	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

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ACCESSORIES–STUD BOLTS

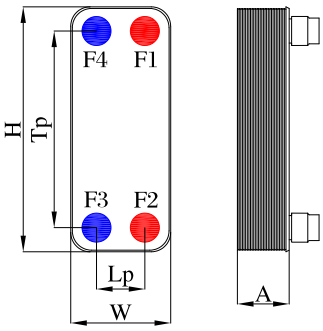
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

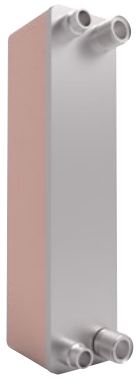
S27C

New!

INTRODUCTION

SANHUA S27C can be used as an evaporator, condenser, economizer and desuperheater in chillers, heat pumps and also suitable for 6~9kW energy storage system. S27C is compact, has high heat transfer efficiency and high reliability.





Size Code	mm	IN
H	314	12.52
W	116	2.99
Tp	250	10.94
Lp	50	1.57
A	12+(2.25 x NoP)	0.472+(0.088 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	5.5
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.050/0.050
Weight w/o connection (kg)	1.4+(0.1 x NoP)
Flow Direction	Parallel flow
Plate	316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"
	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).

US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

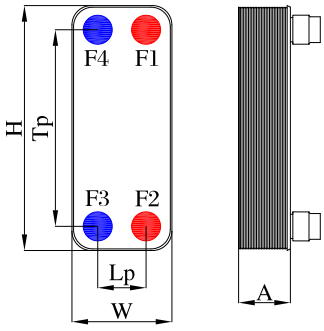
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

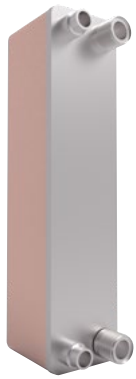
S30A

New!

INTRODUCTION

SANHUA S30A is widely used as condenser or evaporator in air-cooled chillers (or heat pumps) with capacity up to 30kW. Its high reliable structural design makes it suitable for high-pressure refrigerants such as R410A and R32. The plate adopts optimized asymmetric fishbone design and innovative distributor design, which has high heat transfer efficiency and reduces water side pressure drop. The lower hold-up volume will help to reduce the refrigerant charge.





Size Code	mm	IN
H	327	12.87
W	97	3.82
Tp	269	10.59
Lp	39	1.54
A	11+(1.55 x NoP)	0.433+(0.061 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	6
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.038 (F1F2)/0.032 (F3F4)
Weight w/o connection (kg)	0.90+(0.084 x NoP)
Flow Direction	Parallel flow
Plate	316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"
	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

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US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

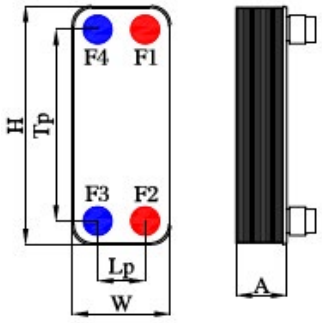
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S40A

INTRODUCTION

SANHUA S40A is widely used as condenser or evaporator in air-cooled chillers (or heat pumps) with capacity up to 50kW. Its high reliable structural design makes it suitable for high-pressure refrigerants such as R410A and R32.The plate adopts optimized asymmetric fishbone design and innovative distributor design, which has high heat transfer efficiency and reduces water side pressure drop. The lower hold-up volume will help to reduce the refrigerant charge.



Size Code	mm	IN
H	332	13.07
W	118	4.65
Tp	279 (F1F2)	10.98
	286 (F3F4)	11.26
Lp	68 (F1F4)	2.68
	75 (F2F3)	2.95
A	10.5+(1.5 x NoP)	0.433+(0.061 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	8.8
Max. working pressure (MPa)	4.9
Working temperature (°C)	-196/+200
Volume per channel (L)	0.049 (F1F2)/0.042 (F3F4)
Weight w/o connection (kg)	1.26+ (0.106 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder: 1/4", 3/8", 1/2" , 5/8" , 3/4", 7/8"
F1-F2 Water side	thread: 1/4", 3/8", 1/2" , 5/8" , 3/4"

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).

US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

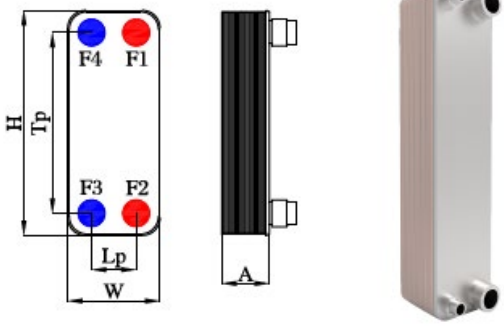
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S60

INTRODUCTION

SANHUA S60 is widely used in chillers,heat pumps and IT cooling as evaporator or condenser. It is also used as economizer or oil cooler for screw chillers. The optimized plate technology can reduce the water side pressure drop and provide efficient heat transfer performance at the same design temperature.



Size Code	mm	IN
H	527	20.75
W	120	4.72
Tp	470	18.5
Lp	63	2.48
A	9+(2.3 x NoP)	0.354+(0.091 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	17
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.11/0.11
Weight w/o connection (kg)	2.6+(0.18 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder, up to 1 3/8”
F1-F2 Water side	thread, up to 1 1/4”

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).

US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

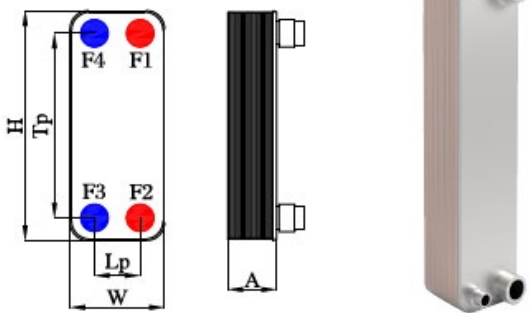
ACCESSORIES–STUD BOLTS

Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S60B

INTRODUCTION

SANHUA S60B is widely used in chillers, heat pumps and IT cooling as evaporator and condenser. It is also be used as economizer or oil cooler for screw chillers. The capacity range is 10~90kW. The asymmetric heat plate and optimized distributor can reduce the water side pressure drop and provide efficient heat transfer performance at the same design temperature.



Size Code	mm	IN
H	526	20.71
W	119	4.69
Tp	470	18.5
Lp	63	2.48
A	12+(1.93 x NoP)	0.315+(0.076 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	17
Max. working pressure (MPa)	3.0/4.9 (optional)
Working temperature (°C)	-196/+200
Volume per channel (L)	0.0967 (F1F2)/0.0863 (F3F4)
Weight w/o connection (kg)	2.2+ (0.168 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder, up to 1 3/8”
F1-F2 Water side	thread, up to 1 1/4”

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).
US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

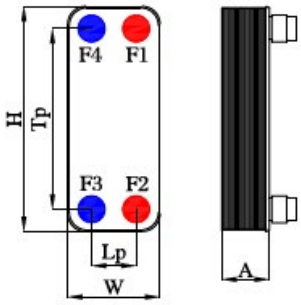
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

S65A

New!

INTRODUCTION

SANHUA S65A special developed for new refrigerants used in Chillers, Heat pumps and IT cooling as evaporator and condenser. The capacity range is 10~90 kW. The plate adopts optimized asymmetric fishbone design and innovative distributor design, which has high heat transfer efficiency and reduces water side pressure drop. The lower hold-up volume will help to reduce the refrigerant charge, suitable in R290 applications.



Size Code	mm	IN
H	535	21.06
W	120	4.72
Tp	476	18.74
Lp	60	2.36
A	12+(1.4 x NoP)	0,472+(0.055 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	120
Max flow (m^3/h)	8.8
Max. working pressure (MPa)	26
Working temperature (°C)	-196/+200
Volume per channel (L)	0.082 (F1F2) / 0.054 (F3F4)
Weight w/o connection (kg)	1.75+(0.15 x NoP)
Flow Direction	Parallel flow
Plate	SS 316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder, up to 1 3/8”
F1-F2 Water side	thread, up to 1 1/2”

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

Europe: Pressure Equipment Directive (PED) III. UK: UK Conformity Assessed Marking (UKCA).

US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

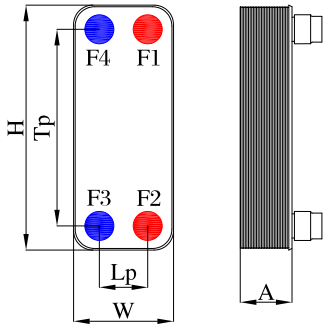
Stud bolts and feet on front /end cover plate for mounting support are available upon request.

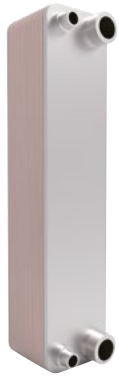
S95B

New!

INTRODUCTION

SANHUA S95B is widely used in chillers, heat pumps and energy storage system as evaporator and condenser. It is also used as economizer or oil cooler for screw chillers. The capacity range is 30~200kW. The optimized distributor can reduce the water side pressure drop and provide efficient heat transfer performance at the same design temperature.





Size Code	mm	IN
H	621	24.45
W	196	7.72
Tp	519	20.4
Lp	92	3.62
A	14+ (2.28 x NoP)	0.551+(0.090 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	250
Max flow (m^3/h)	35
Max. working pressure (MPa)	4.5
Working temperature (°C)	-196/+200
Volume per channel (L)	0.220 (F1F2)/0.220 (F3F4)
Weight w/o connection (kg)	6.2+(0.367x NoP)
Flow Direction	Parallel flow
Plate	316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder, up to 1 3/8”
F1-F2 Water side	thread, up to 1 1/4”

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

THIRD-PARTY APPROVALS

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US: Underwriter Laboratories Inc. (UL). For additional requirements, please contact Sanhua.

ACCESSORIES–STUD BOLTS

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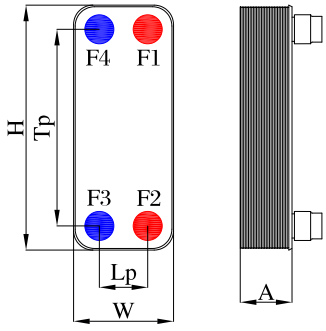
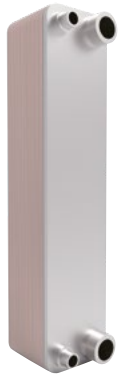
S95C

New!

INTRODUCTION

SANHUA S95C is developed for use in Chillers, Heat pumps and IT cooling as evaporator and condenser. It is also to be used as economizer or oil cooler for screw chillers. The capacity range is 30~200 kW. The plate adopts optimized asymmetric fishbone design and innovative distributor design, which has high heat transfer efficiency and reduces water side pressure drop.





Size Code	mm	IN
H	621	24.45
W	196	7.72
Tp	519	20.43
Lp	92	3.62
A	14+ (2.28 x NoP)	0.551+(0.090 x NoP)

NoP = number of plates

TECHNICAL DATA	
Max. no. of plates	250
Max flow (m^3/h)	35
Max. working pressure (MPa)	45
Working temperature (°C)	-196/+200
Volume per channel (L)	0.243 (F1F2) / 0.202 (F3F4)
Weight w/o connection (kg)	6.2+(0.367x NoP)
Flow Direction	Parallel flow
Plate	316L/SS 304
Connection	SS 304
Solder	Copper

STANDARD CONNECTIONS	
F3-F4 Refrigerant side	solder, up to 2 1/8”
F1-F2 Water side	thread, up to 2”

Note: The BPHE is used as an evaporator, F3/F4 is the refrigerant inlet/outlet.

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ACCESSORIES–STUD BOLTS

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Inquiry form	
Company	
Contact person	
Address	
Annual need	

Evaporator			
	Primary side	Secondary side	Units
Fluids			
Temp. In			
Temp. Out			
EXV Inlet Temp.			
Superheat temp.			
Evap. Temp.			
Max. allowed Pd			
Capacity			

Condenser			
	Primary side	Secondary side	Units
Fluids			
Temp. In			
Temp. Out			
Ref. Inlet Temp.			
Subcooling temp.			
Cond. Temp.			
Max. allowed Pd			
Capacity			

Economizer (Ref./Ref.)			
	Primary side	Secondary side	Units
Fluids			
Temp. In			
Temp. Out			
EXV Inlet Temp.			
Superheat temp.			
Evap. Temp.			
Max. allowed Pd			
Capacity			

Boiler (Water/Water)			
	Primary side	Secondary side	Units
Fluids			
Temp. In			
Temp. Out			
Mass flow			
Max. allowed Pd			
Capacity			

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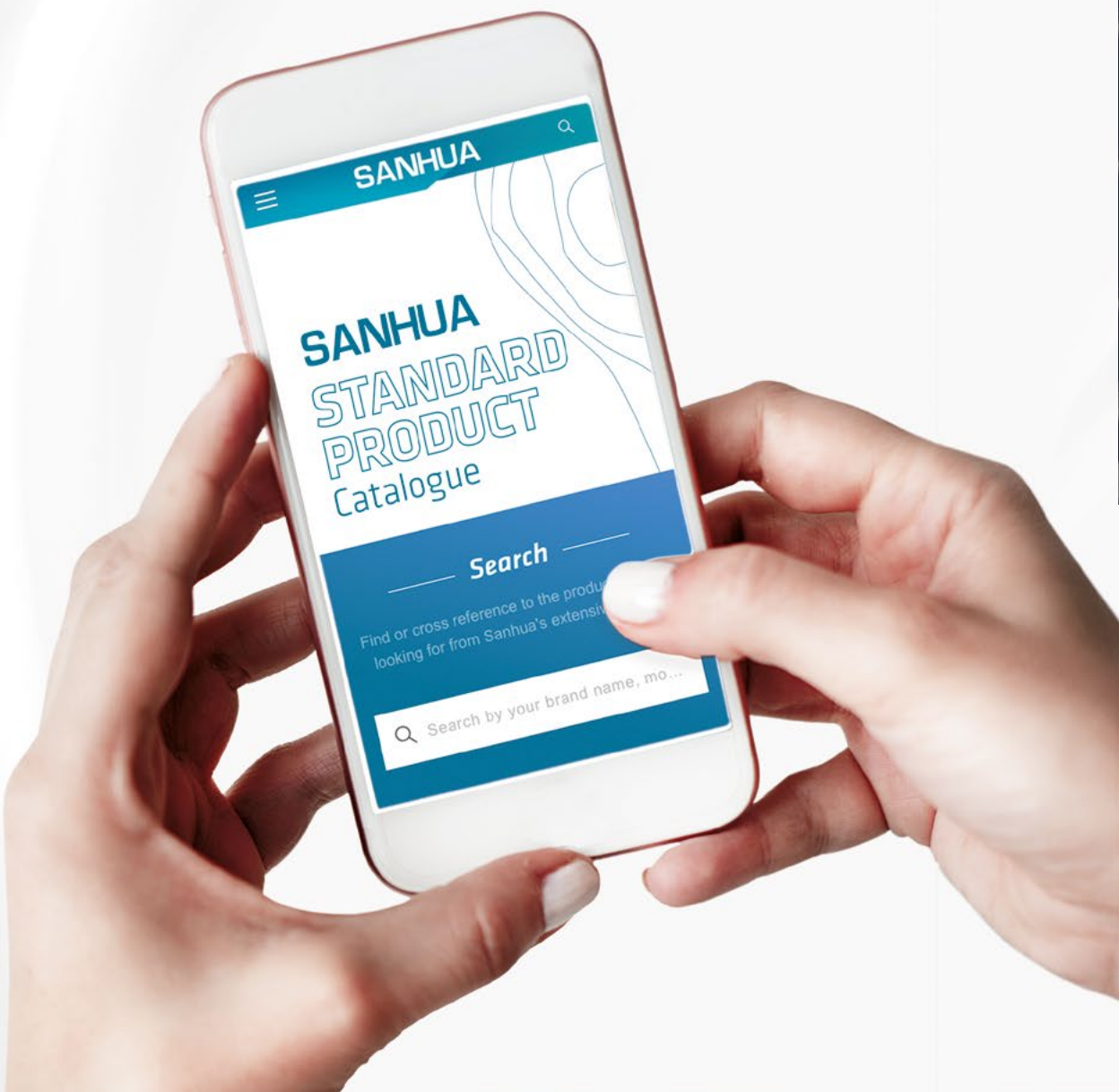

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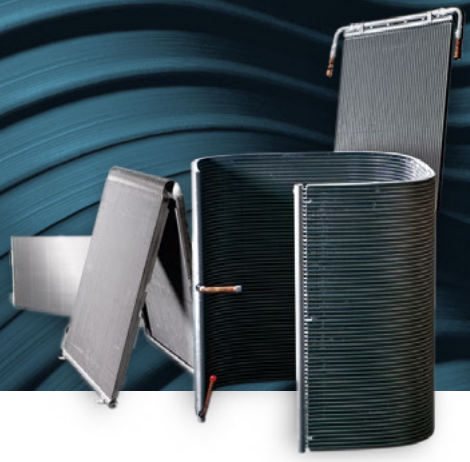
MICRO-CHANNEL HEAT EXCHANGERS

SANHUA DELIVERED OVER 5 MILLION MCHE CONDENSERS (CO&HP) AND EVAPORATORS HELPING TO IMPROVE SYSTEM EFFICIENCY BY UP TO 30%



SANHUA IS THE WORLD'S LARGEST PRODUCER OF MICRO-CHANNEL HEAT EXCHANGERS FOR STATIONARY HVAC&R APPLICATION

IMPROVES EFFICIENCY BY 30%

REFRIGERANT CHARGE REDUCTION BY 30% ENVIRONMENTAL FRIENDLY

MCHE IS LIGHTER IN WEIGHT, SMALLER IN VOLUME COMPACT DESIGN

DISCOVER WHY
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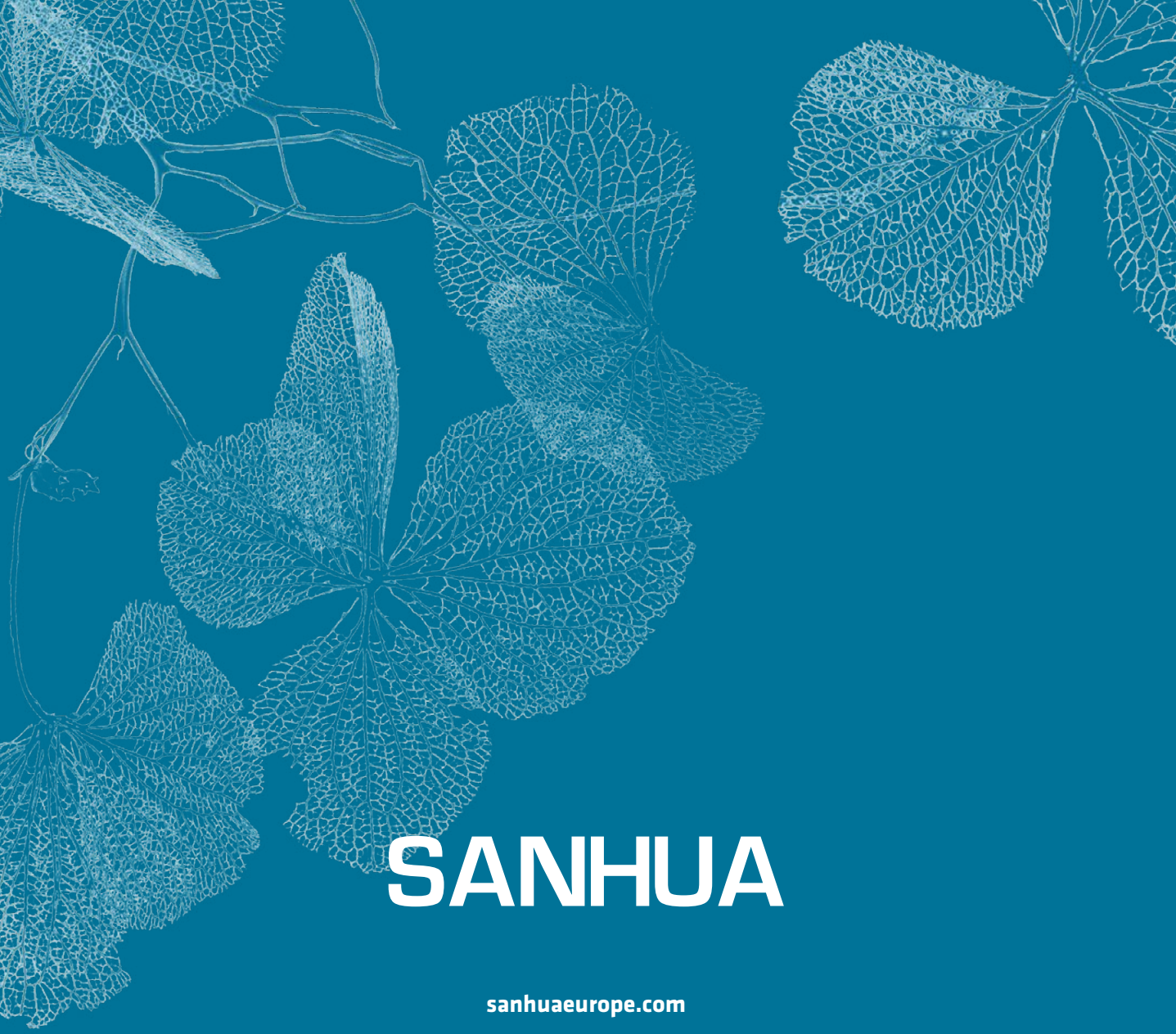

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