anSal
REFRIGERACION S.A.
Desde 1946

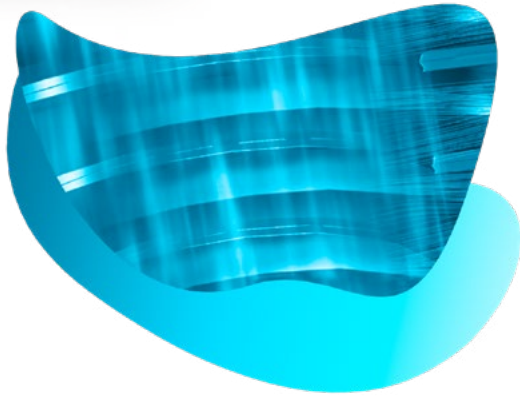
SANHUA

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.



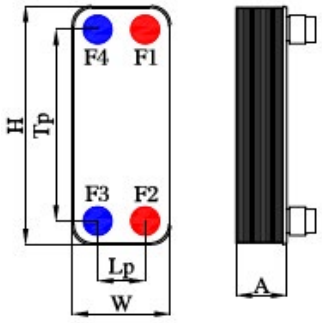
40 years innovating together

1984-2024

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.

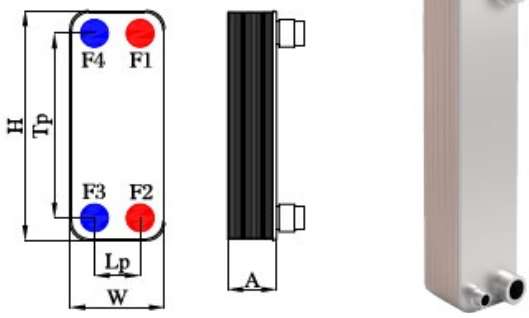
ACCESSORIES–STUD BOLTS

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

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.

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.

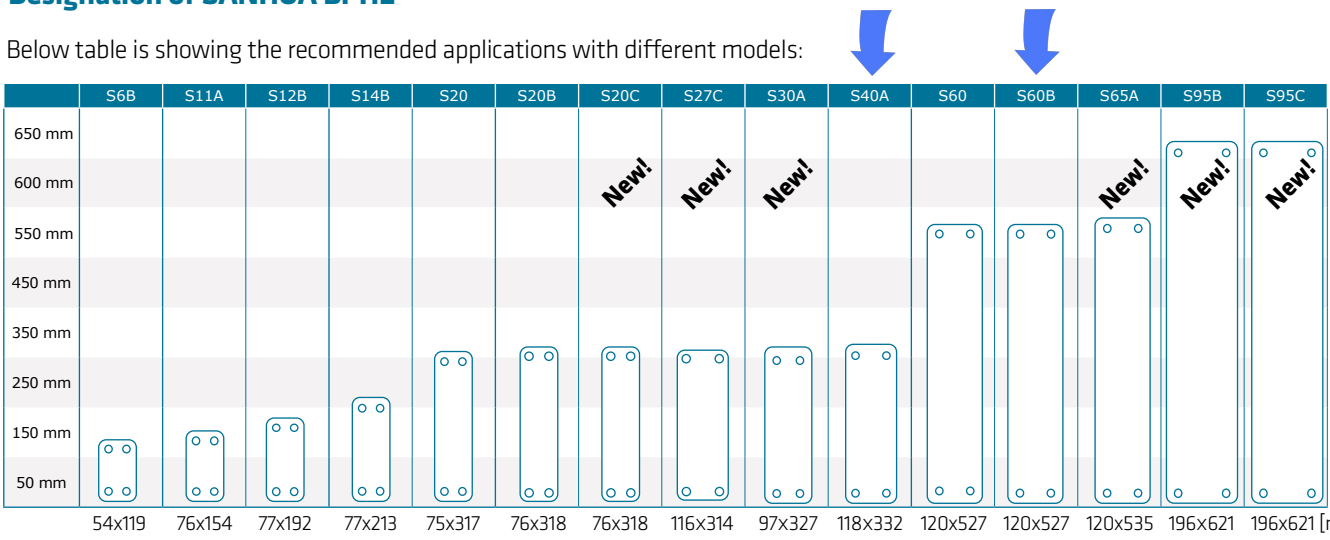
Designation of SANHUA BPHE

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.

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.