

Instructions:

The homepage list shows all Sanhua standard micro-channel heat exchanger. This list provides products structure information and recommended fan information.

You can click [Standard Products Selection](#) to enter the calculation page to filter products based on heat exchange capacity.



Standard Products Selection

Model Name	Heat Transfer Area of MCHE	Thickness of MCHE	Shape Size			Installation size		I/O Pipe Diameter		HE Type	Fin Type	Proposed Fan (Optional)		
			Length	Height	Width	C	D	Inlet	Outlet			Fan Diameter	Quantity	Nominal Air Flow
	m ²	mm	mm	mm	mm	mm	mm	mm	mm			mm		m ³ /h
SD10	2.43	16	330	301	20	-	-	6.35	6.35	P	L	-	-	-
SD11	3.39	16	385	348	20	-	-	6.35	6.35	P	L	-	-	-
SD12	5.2	16	480	432	20	-	-	8	6.35	P	L	-	-	-
SD13	7.63	16	550	517	20	-	-	9.52	8	P	L	-	-	-
SD14	16.79	16	780	771	20	-	-	12.7	12.7	P	L	-	-	-
SD15	25.37	25.4	1074	517	32	-	-	12.7	12.7	P	L	-	-	-

Notes:

1. HE Type(heat exchanger type): 'S' is serpentine, 'P' is Parallel flow;
2. Fin Type: 'L' is louver fin, 'F' is flat fin;
3. The parallel flow design pressure is 4.5MPa, the serpentine design pressure is 3.1MPa.

[Help](#)

II. If you need to get the sketch of the product, you can click the column of the selected product and continue to click “Preview” button.

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SD11	3.39	16	385	348	20	-	-	6.35	6.35	P	L	-	-	-
<input type="button" value="Preview"/> <input checked="" type="button" value="Calculate"/>														
SD12	5.2	16	480	432	20	-	-	8	6.35	P	L	-	-	-

III. If you need to calculate the heat transfer capacity, pressure drop and other information of the products under certain working conditions, you can continue to click “Calculate” to enter a separate calculation page.

IV. Please fill "Selection Condition" with refrigerant type, working condition and target heat load. **These inputs are required!** In addition you can click "Size" and input the size requirement. The screening calculation will quickly locate the standard products that meet the size requirements. It's recommended to select by size first, the calculation time is shorter.

Selection Conditions

Refrigerant Side	R134a
Condensing T*	40-55°C
Discharg T	65-110°C
Sub-cooling	1-10°C
Air Side	
Ambient T*	20-40°C
Inlet RH	0-100%
Air Flow	0 m³/h
<input checked="" type="checkbox"/> Fan Curve 2	
AirFlow / m³/h	Pressure / Pa
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
Requirement	
Heat Load*	W
<input checked="" type="checkbox"/> Size	
Length	mm
Height	mm

Reset Calculate

Selection Results

Model Name	Heat Load	Ref.DP	Air DP	Air In Volum Flow	Air Outlet T	Air Outlet RH	Ref. Mass Flow	Length	Height
	W	kPa	Pa	m³/h	°C	%	kg/hr	mm	mm

T: temperature; RH: relative humidity; Ref: refrigerant; DP: pressure drop;

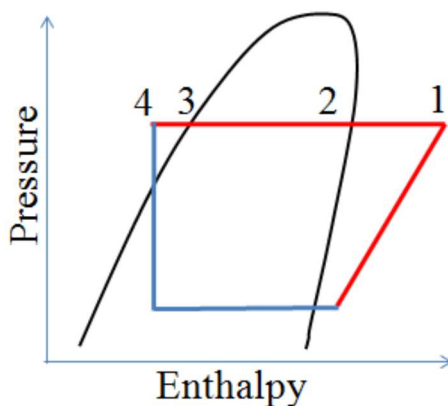
Back

[Warning&Error](#)

About air flow, air velocity and Fan curve, you can select one for calculation. If you have fan curve, please check "fan curve" and fill in airflow-drop according to fan curve.

Notes:

- Condensing T - Condensing temperature (refrigerant inlet saturation temperature), as the temperature at working point 2 in P-h diagram below;
- Discharge T - Discharge temperature (refrigerant inlet temperature), as the temperature at working point 1 in P-h diagram below;
- Sub-cooling - Refrigerant outlet sub-cooling, as the temperature difference between working point 3 and 4 in P-h diagram below;
- Ambient T - Ambient temperature (ambient temperature);
- Inlet RH - Air inlet relative humidity.



V. Clicking “Calculate” to start selecting standard products, the prompt “Loading, Please do not click the button repeatedly” means its calculating.

If you need to reset inputs to their original data, please click the “Reset” button.

VI. The output list “selection result” displays the standard product that meets the requirements and provides the performance information of this product under a given working condition. You can get the sketch of the product by clicking “preview”, and simulate the performance of the selected product separately by clicking “Calculate”.

The screenshot shows a software interface for selecting products based on specific conditions. On the left, the 'Selection Conditions' panel includes fields for Refrigerant Side (R134a), Condensing T* (45°C), Discharge T (80°C), Sub-cooling (5°C), Ambient T* (32°C), Inlet RH (50%), Velocity (2 m/s), and Fan Curve 2. Below this is a 'Requirement' section with Heat Load* (2000 W), Length (0 mm), and Height (0 mm). A 'Reset' button is located at the bottom left. On the right, the 'Selection Results' table lists several models with their respective performance metrics. A 'Back' button is at the bottom right, with a warning message 'Warning&Error' below it.

Model Name	Heat Load	Ref.DP	Air DP	Air In Volum Flow	Air Outlet T	Air Outlet RH	Ref. Mass Flow	Length	Height
EU010	2046	11	29	877	39	34	36	380	380
EU014	2186	37	29	917	39	33	38	600	240
JD151	2005	5	36	803	40	33	35	380	350
JD227	1967	13	36	736	40	32	35	441	280
JD159	2145	36	29	899	39	33	38	586	240

T: temperature; RH: relative humidity; Ref: refrigerant; DP: pressure drop;

Notes:

- Ref DP - Refrigerant pressure drop; Air DP - Air pressure drop;
- Air Outlet T - Air outlet temperature; Air In Volume Flow - Air outlet relative humidity;
- Air Outlet RH - Air outlet relative humidity; Ref. Mass Flow - Refrigerant mass flow.

VII. The Error in red comes with unreasonable input, the warning in black comes with the beyond suggested range input, you can ignore these warnings if you are sure of the inputs. For more explanation about the warnings and errors please refer to “Warning & Error”

Warning

I. Warning: “Unreasonable *** input!”, please check if the input data is entered and numerical.

II. Warning: “No suitable product. Contact us for special design. ” means there is no standard product meet the performance and dimension requirements. Please contact Sanhua for product customization services.

III. Warning 1~4: “*** is out of the suggested range”, the suggested value range is the content displayed in gray text of the initial state of the input box. This range is a common value. If you are sure of the inputs, please disregard these warnings.

IV. Warning 5, 6: “The air flow or velocity maybe too low (or high)” means the air velocity is beyond common range, please check the air flow or velocity and maximum dimension. If you are sure of the inputs, please ignore these warnings.

Error

- I.** Error 1: Please check the refrigerant inlet condition, the refrigerant inlet superheat must be larger than 0.1K.
- II.** Error 2: Please check the refrigerant outlet sub-cooling; the data should be larger than 0.1K.
- III.** Error 3: Please check the ambient temperature (air inlet temperature) and the refrigerant temperature; the air inlet temperature must be lower than the condensing temperature.
- IV.** Error 4: If the simulation cannot converge quickly under these working conditions, please contact us for the simulation support.