

# Modular Air-cooled Scroll Chiller(Heat Pump)

D Series R410A



65/80kW

130/160kW

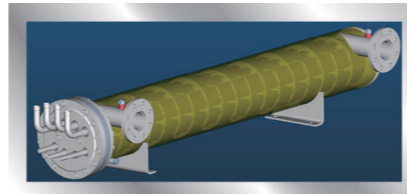
249/280kW

D series modular air-cooled scroll chillers can be widely used at newly-built or retrofitted industrial and civil buildings in various sizes, such as hotels, apartments, restaurants, office buildings, shopping malls, theaters, gyms, workshops, hospitals and other places where there are high requirements on noise level and air quality but it is troublesome to install the cooling tower.

Item	Water side (water temperature)				Air side (outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(°C)	Outlet(°C)	Outlet(°C)	I/O difference(°C)	DB(°C)	WB(°C)	DB(°C)
Cooling	12	7	5~20	2.5~6	35	-	15~45
Heating	40	45	35~50	2.5~6	7	6	-15~24

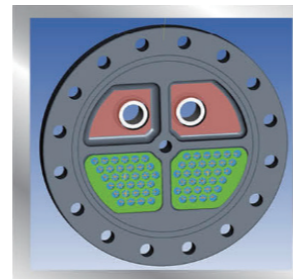
## Features

As for the shell and tube heat exchanger, water inside it flows along the tube, which leaves large heat exchanging space and effectively prevents clogging caused by foreign matters or scale. As for the plate heat exchanger, the distance between plates is less than 3mm, which is vulnerably clogged owing to the bad water quality and causes the heat exchanger frozen up.



### U-shaped Pipe Two-pass Design

The dual flow design of the U-shaped tube can enhance the heat exchange efficiency and effective superheating degree, thus increasing the performance of the unit.



### Compressor Operation Balance Technology

The unique compressor operation balance technology makes sure that each compressor operates in turn, which greatly prolongs the lifespan of compressor.



### Free Master Module Design

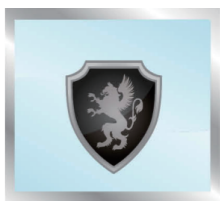
Any single unit can operate as the master once connected with the wired controller. It overcomes the problem which would occur to the product of other manufacturer that the whole system would fail to work properly when there's malfunction for the fixed master unit.



### Advanced Flow Dividing Technology

The pipeline and flow equalization plate are especially designed for D series modular air-cooled scroll chillers, which greatly improve flow dividing uniformity and heat exchange capacity.

This series is equipped with advanced microcomputer control system, completed protection functions and powerful error diagnosis function. Main protection functions: compressor high pressure protection, compressor low pressure protection, compressor overload protection, anti-freezing protection, overheating protection, auto anti-freezing protection in winter, water-flow switch protection, temperature sensor protection, phase sequence protection, high discharge temperature protection, etc.



The units of the same model or different models can be combined freely. For model 65 and model 80, each system can combine up to 16 modules. For model 130 and model 160, each system can combine up to 8 modules.



## Specifications:

Model	Heat pump	SACMC065	SACMC080	SACMC130	SACMC160	SACMC249	SACMC280M	
Capacity	Cooling/Heating	kW	60/65	71/79.5	120/130	145/170	249/275	280/325
		RT	17.06/18.48	20.19/22.61	34.12/36.97	41.23/48.34	70.80/78.20	79.62/92.42
Capacity steps	%	0-50%-100%			0-25%-50%-75%-100%			
EER/COP	W/W	2.84/3.09	2.76/2.94	2.84/2.93	2.74/3.04	2.95/3.25	2.85/3.10	
Power supply	V-Ph-Hz	380-415V-3N-50Hz						
Power input	Cooling	kW	21.1	25.7	42.3	53	84.4	98.2
	Heating	kW	21	27	44.4	56	84.6	104.8
Compressor	Type	Constant speed scroll						
	Starting mode	Direct starting						
	Quantity	-	2	2	4	4	4	4
Water side heat exchanger	Type	Dry expansion evaporator						
	Water flow volume	l/s	2.87	3.39	5.73	6.93	11.89	13.39
		GPM	46	54	91	110	189	212
	Pressure drop	kPa	15	20	30	35	75	85
		ft.WG	4.92	6.56	9.84	11.48	24.60	27.88
Connection pipe	-	DN65		DN80		DN100		
Air side heat exchanger	Type	Aluminum fin-copper tube						
	Fan type and quantity	-	Axial-flow/2	Axial-flow/2	Axial-flow/4	Axial-flow/4	Axial-flow/8	Axial-flow/8
	Total fan air flow	l/s	2×0.375×10 <sup>4</sup>	2×0.417×10 <sup>4</sup>	4×0.375×10 <sup>4</sup>	4×0.417×10 <sup>4</sup>	8×0.39×10 <sup>4</sup>	8×0.43×10 <sup>4</sup>
		CFM	2×0.795×10 <sup>4</sup>	2×0.882×10 <sup>4</sup>	4×0.795×10 <sup>4</sup>	4×0.882×10 <sup>4</sup>	8×0.8239×10 <sup>4</sup>	8×0.918×10 <sup>4</sup>
Total fan motor power	kW	2×0.65	2×0.95	4×0.65	4×0.95	8×0.65	8×0.75	
Sound pressure level	dB(A)	70	71	72	74	67	69	
Dimension	Outline(W×D×H)	mm	2040×1000×2230	2040×1000×2230	2226×1650×2230	2226×1650×2230	3980×2260×2450	3980×2260×2450
	Package(W×D×H)	mm	2120×1080×2230	2120×1080×2230	2306×1730×2230	2306×1730×2230	4040×2260×2450	4040×2260×2450
Net/Gross/Operating weight	kg	740/745/814	792/797/871	1315/1320/1447	1504/1509/1654	2985/2995/3284	3278/3288/3606	
Loading quantity	40'GP/40'HQ	set	10/10	10/10	6/6	6/6	2/2	2/2

Notes: This product model is under development. Sinclair reserves the right to modify the specifications without prior notice. Please confirm the final specifications with our sales representatives