fujiair
AIR-CONDITIONERS

COMMERCIAL
AIR CONDITIONERS
PRODUCT CATALOGUE

WATER COOLED SCREW CHILLER

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FEATURES

STABLE AND RELIABLE

Self-Diagnosis

Self-diagnosis is always performed prior to start-up to enable safe operation. Only after all the requirements are met, the chiller will start. If any malfunction occurs, it will be displayed on the screen.

Multiple protection

Multiple protection features guarantee the safety and stability of the unit.

Items	Function
High/low pressure protection	Guarantees the Comp. runs in the right range thus ensuring its lifespan
Power open phase protection	Protects Comp. from damage in case of open phase or anti-phase
Anti-freeze protection under cooling mode	Protects the evaporators' copper pipes from damage caused by water freeze
Frequent startup protection	Protects Comp. motor winding from burnout caused by frequent startup
Overcurrent protection of Comp.	Protects Comp. from burnout caused by heavy current
Overheat protection of compressor	Protects Comp. from damage caused by a lack of refrigerant or lubricant
Water flow protection	Protects Comp. from burnout caused by heat-exchanger failure
Reversal protection control(APRS)	Guarantees the comp. motor runs in the right direction

Advanced twin-rotor screw compressor

Adjustable capacity valve

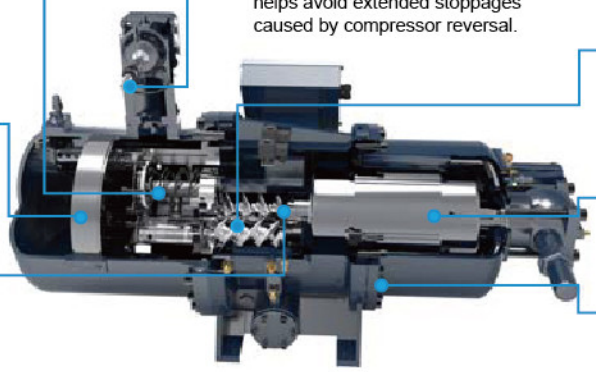
Four stage adjustable capacity or stepless adjustment.

Built-in oil separator

High precision filter,oilseparation efficency up to 99.5%.

Direct motor drive

High mechanical efficiency,low compressor speed, low noise levels.



Refrigerant discharge

Exhaust cavity with check valve, it helps avoid extended stoppages caused by compressor reversal.

Twin screw rotor

Patented type line design, high volumetric efficiency, smooth operation.

Hermetic motor

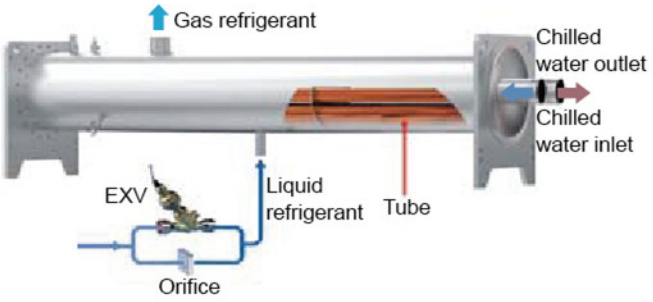
Refrigerant cooled motor, no expelled heat.

Semi- hermetic structure

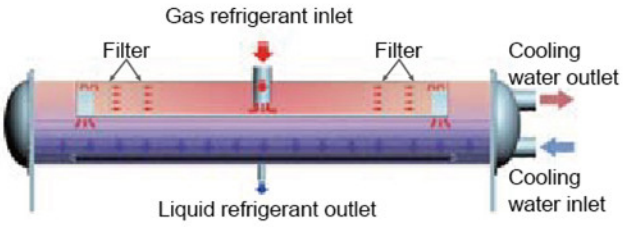
Semi-hermetic compressor, moveable bolts, easy maintenance.

HIGH EFFICIENCY HEAT EXCHANGE TECHNOLOGY

Evaporator



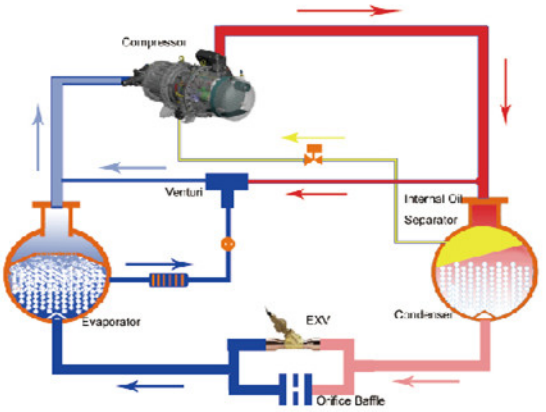
Condenser



High efficiency shell and tube heat exchanger, 2 pass, straight water pipe, easy to clean. Both two side cover can be exchanged to meet customer's requirement for condenser.

ADVANCED OIL SYSTEM

Adoption of the special oil separation and return system, built-in oil separator, ensure the systems' stability.The lubrication system can heat oil to match the chillers exact requirements, guaranteeing the system is always protected against unnecessary wear.



INTELLIGENT CONTROL

By monitoring all parameters, the intelligent control logic decides the best load adjustment method, it optimizes the EXV and the capacity slider to guarantee safe operation under various load conditions. Conventional BMS systems only focus on the interlock control, operation status and parameter monitoring, which achieves automation and energy management, but fails to realize the benefits of equipment synchronization. Fujiair centralized energy management system attaches importance to building load prediction and control, and coordinates the operation of air-conditioner, fan and water pumps to realize optimum energy management.

System control functions:

- Pragmatic control modes
- Equalized operation time
- Optimum operation schedule
- System data report
- Strategies to address problems
- Remote communication function

Fujiair water cooled screw chiller adopts a Microprocessor controller which enables the user to monitor and control the chiller with precise accuracy. The Microprocessor control system guarantees high precision and stability. The module-designed control system is easy for installation and maintenance. The chiller comes with a reserved RS485 port which can be interfaced with BAS (Building Automation system). Remote monitoring and control of the chiller is possible.

SPECIFICATIONS

FSRWW		340	440	540	720	805	890
Cooling capacity	kW	340	440	540	720	805	890
Power input	kW	60.0	77.0	94.0	123.1	140.0	155.0
COP	kW/kW	5.66	5.71	5.74	5.85	5.75	5.74
Semi-hermetic screw compressor							
Circuit A	Quantity	1	1	1	1	1	1
Circuit B	Quantity	-	-	-	-	-	-
Oil recharge							
Circuit A	L	18	20	23	28	40	40
Circuit B	L	-	-	-	-	-	-
Refrigerant	Type	R134a					
Circuit A	kg	130	145	160	200	230	250
Circuit B	kg	-	-	-	-	-	-
Control Type	Type	EXV+Orifice					
Evaporator	Type	Shell and Tube Flooded					
Water content	L	150	170	190	210	240	270
Water flow	m^3/h	58	76	93	124	138	153
Pressure drop	kPa	30	32	31	34	33	31
Max.pressure	kPa	1000	1000	1000	1000	1000	1000
Connection Type	Type	Victaulic coupling					
Water inlet / outlet pipe dim	mm	DN150	DN150	DN150	DN200	DN200	DN200
Condenser	Type	Shell and Tube					
Water content	L	150	170	190	210	240	270
Water flow	m^3/h	73	95	116	155	173	191
Pressure drop	kPa	38	40	36	35	40	40
Max.pressure	kPa	1000	1000	1000	1000	1000	1000
Connection Type	Type	Victaulic coupling					
Water inlet / outlet pipe dim.	mm	DN150	DN150	DN150	DN200	DN200	DN200
Unit length	mm	3500	3500	3500	3525	3525	3525
Unit wudth	mm	1200	1200	1200	1400	1400	1400
Unit height	mm	1730	1800	1900	2000	2020	2020
Packing length	mm	3950	3950	3950	3950	3950	3950
Packing width	mm	1340	1340	1340	1560	1560	1560
Packing height	mm	1950	2020	2120	2220	2240	2240
Net weight	kg	2380	2460	2830	3400	3900	4000
Shipping weight	kg	2500	2580	2950	3550	4050	4150
Running weight	kg	2700	2820	3220	3870	4420	4550

Notes:

Nominal cooling capacities are based on following conditions: Chilled water inlet/outlet temperature 12/7°C(53.6°F /44.6°F);
Cooling water inlet/outlet temperature 30/35°C(86°F /96°F).
The design fouling factor for both evaporator and condenser is 0.086m^2•°C/kW (0.0005ft^2 F.hr/Btu).

FSRWW		1080	1300	1410	1620	1780
Cooling capacity	kW	1080	1300	1410	1620	1780
Power input	kW	186.0	231.7	242.7	278.0	306.0
COP	kW/kW	5.80	5.61	5.81	5.82	5.81
Semi-hermetic screw compressor						
Circuit A	Quantity	1	1	1	1	1
Circuit B	Quantity	-	1	1	1	1
Oil recharge						
Circuit A	L	46	28	28	40	40
Circuit B	L	-	28	28	40	40
Refrigerant	Type	R134a				
Circuit A	kg	360	190	190	210	220
Circuit B	kg	-	190	190	210	220
Control Type	Type	EXV+Orifice				
Evaporator	Type	Shell and Tube Flooded				
Water content	L	350	460	460	520	580
Water flow	m^3/h	186	224	243	279	306
Pressure drop	kPa	30	65	63	66	61
Max.pressure	kPa	1000	1000	1000	1000	1000
Connection Type	Type	Victaulic coupling				
Water inlet / outlet pipe dim	mm	DN200				
Condenser	Type	Shell and Tube				
Water content	L	350	460	460	520	560
Water flow	m^3/h	232	280	303	348	383
Pressure drop	kPa	37	78	75	78	72
Max.pressure	kPa	1000	1000	1000	1000	1000
Connection Type	Type	Victaulic coupling				
Water inlet / outlet pipe dim.	mm	DN200				
Unit length	mm	3590	4650	4650	4850	4850
Unit wudth	mm	1500	1500	1500	1600	1600
Unit height	mm	2150	2035	2035	2250	2250
Packing length	mm	3950	5050	5050	5050	5050
Packing width	mm	1660	2080	2080	2180	2180
Packing height	mm	2370	2255	2255	2470	2470
Net weight	kg	4520	6690	6940	8090	8190
Shipping weight	kg	4700	6900	7150	8350	8450
Running weight	kg	6040	7490	7820	9200	9350

Notes:

Nominal cooling capacities are based on following conditions: Chilled water inlet/outlet temperature 12/7°C(53.6°F /44.6°F);

Cooling water inlet/outlet temperature 30/35°C(86°F /96°F).

The design fouling factor for both evaporator and condenser is $0.086 m^2 \cdot °C/kW$ ($0.0005 ft^2$ F.hr/Btu).

Due to FUJIAIR's ongoing commitment to quality, the specifications and dimensions are subject to change without notice and without incurring liability.

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