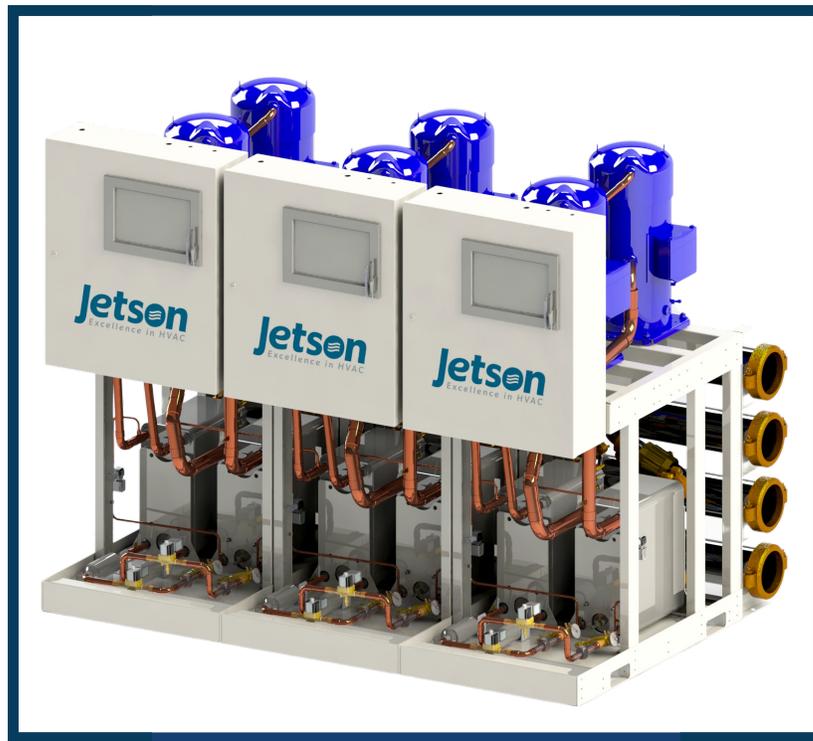


Modular Water-Cooled Chillers (FWCD)



Jetson Modular Water-Cooled Chillers feature a compact modular design that makes them ideal for easy replacement, retrofit, or new construction applications. Modular chillers offer superior expandability for future expansion and are uniquely suited for applications with critical cooling or heating systems that have redundancy requirements.

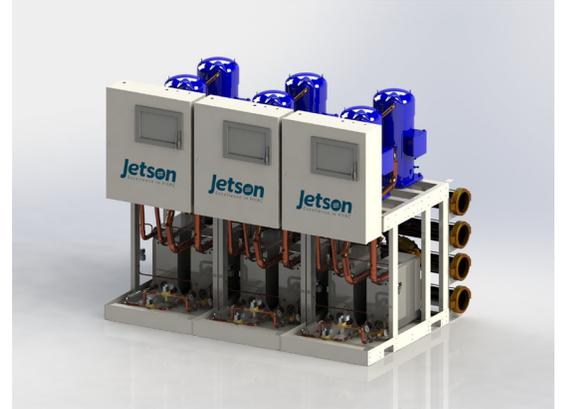
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MODULAR WATER-COOLED CHILLERS

Flexibility of Design

With model sizes ranging from 20 to 85 tons and configurable into arrays up to 600 tons the FWCD water-cooled chillers can suit any job. The installation of small chillers as needed is both more economically practical and energy efficient than a single large centralized chilled water plant, especially at part load and in application where chiller uptime and redundancy are important.



Serviceability

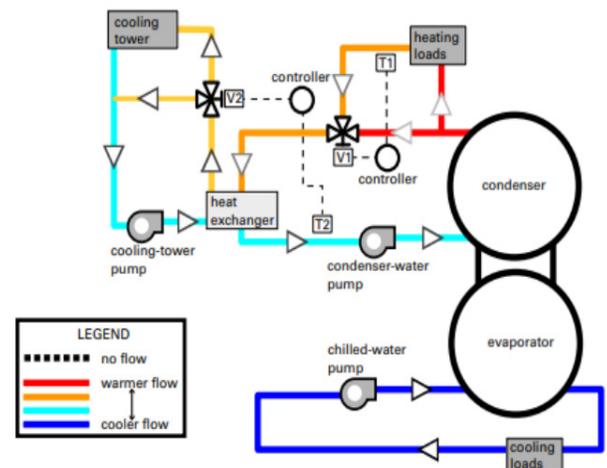
Standard, integral valving makes it possible to isolate the FWCD heat exchangers for routine maintenance. Once isolated, both heat exchangers have inlet and outlet grooved pipe connections readily accessible to allow for service. If a heat exchanger must be removed and replaced, all necessary work can be performed at the front of the chiller without having to remove other unrelated parts.

Low GWP Refrigerant

All Jetson water-cooled chillers are available with R-454B refrigerant. Featuring a low Global Warming Potential (GWP) of merely 466 and no Ozone Depletion Potential (ODP), the R-454B refrigerant is classified as an HFO, effectively eliminating ODP and minimizing GWP.

Heat Recovery Capability

Heat recovery can be accomplished with the FWCD water-cooled chillers by recovering heat from the water leaving the standard condenser and using it in conjunction with a third party heat exchanger. The FWCD Series chiller uses smart control logic to switch the control point between the cooling set point and heating set point, based on the smaller of the loads. This allows the machine to operate in heat recovery mode longer - maximizing the energy saved.



Units with a brazed plate heat exchanger can reach 140°F, while those with a shell and tube heat exchanger can reach 125°F.

FEATURES & OPTIONS

- ≡ Can be operated as a single module from 20 to 85 tons.
- ≡ Modular capability to install up to ten (10) modules together to reach capacities up to 600 tons.
- ≡ ASHRAE 90.1 compliant.
- ≡ Intuitive, factory installed microprocessor-based controller compatible with BACnet®, Modbus®, and LonTalk®. N+1 or N+2 redundant control logic.
- ≡ Dual circuit refrigeration systems for greater operating redundancy.
- ≡ Variable speed compressor on the lead circuit for a lower turndown.
- ≡ Heat Recovery capability up to 140°F (60°C) to conserve energy by reusing condenser leaving water to serve heat loads like boiler loops, reheat coils and more.
- ≡ High-capacity evaporators are available for 40°F (4°C) leaving water applications or for applications requiring glycol to offset capacity reduction of glycol system.
- ≡ Single point electrical connection for array or separate module electrical feeds provide electrical redundancy.
- ≡ Constant or variable primary flow systems with factory provided valve packages.
- ≡ Compressor acoustic hoods and/or sound isolating cabinets are available for sound sensitive applications.
- ≡ Shipped with R-454B for water-cooled systems or nitrogen holding charge for split systems.
- ≡ Available as compressor chiller to be paired with a remote air-cooled or a water-cooled condenser.
- ≡ Modes of Operation: Cooling, Heating, Heat Recovery (Auto Changeover) and Ice Making.

Single module



Array Configuration



Designed for easy retrofit - fits through a standard three-foot door and can be serviceable from the front of the unit.



Sound enclosure option

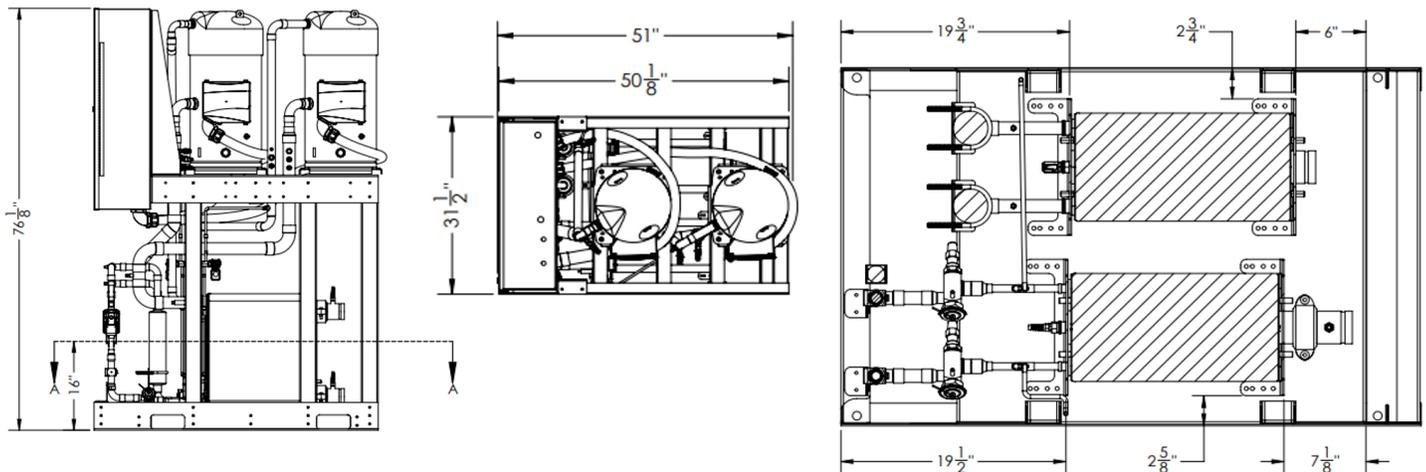
Cooling Mode Performance - Single Module (20 Tons to 85 Tons)

Single Module			FWCD020	FWCD055	FWCD085	
Performance	Cooling	Cooling Capacity	Ton	21.46	50.53	82.83
		Input Power	Kw	14.88	36.36	58.32
		EER	Btu/W*h	17.31	16.68	17.04
		IPLV	Btu/W*h	22.51	21.07	21.65
Compressor	Type		Scroll On/Off Compressors			
	Quantity	No.	2	2	2	
	Circuits	No.	2	2	2	
Refrigerant	Type		R-454B			
Water-Side Heat Exchanger	Type		Brazen Plate			
	Flow Rate Evaporator	gpm	51.36	120.91	198.19	
	Flow Rate Condenser	gpm	66.52	157.8	257.91	
Electrical	Voltage	V/ph/Hz	460/3/60			
	RLA	Amps	19	40	68	
	MCA	Amps	43	90	153	
	MOP	Amps	60	125	200	
Dimension	Length	Inches	60	60	60	
	Width		31.50	31.50	31.50	
	Height		76	76	76	
Weight	Shipping Weight (+/-5%)	lbs	1302	1900	2717	

Rated Cooling Performance:

EWT/LWT 54°F/44°F (Evaporator), EWT/LWT 85°F/ 94.3°F (Condenser) and 100% water.

Contact sales@JetsonHVAC.com or your local Jetson representative for a specific performance.



SECTION A-A
SCALE 1 : 8

Cooling Mode Performance - Array Configuration

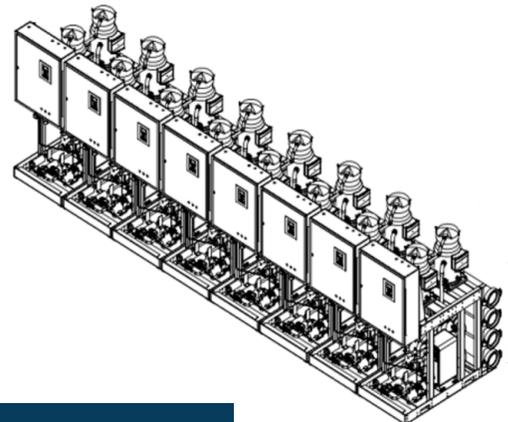
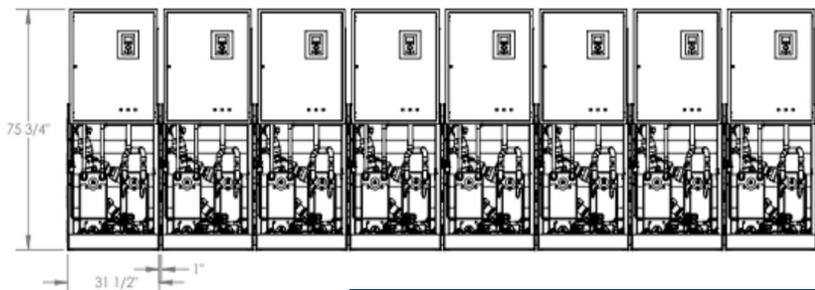
Chiller modules can be combined either within the same capacity or with other capacities.
The maximum array flow rate should be less than 900 GPM.

Array Performance				FWCD020	FWCD055	FWCD085
Performance	Cooling	Quantity of Modules	No.	8	3	2
		Single Unit Capacity	Ton	21.46	50.53	82.83
		Array Capacity	Ton	171.68	151.59	165.66
		Array Input Power	Kw	119.03	109.09	116.64
		Array EER	Btu/W*h	17.31	16.68	17.04
		Array IPLV	Btu/W*h	22.51	21.07	21.65
Compressor	Type			Scroll On/Off Compressors		
	Quantity	No.	16	6	4	
	Circuits	No.	16	6	4	
Refrigerant	Type		R-454B			
Water-Side Heat Exchanger	Type		Brazen Plate			
	Flow Rate Evaporator	gpm	410.84	362.73	396.38	
	Flow Rate Condenser	gpm	532.19	473.41	515.81	
Electrical	Voltage		V/ph/Hz			
			460/3/60			
	RLA	Amps	19	40	68	
	MCA	Amps	309	250	289	
Dimension	MOP	Amps	350	300	350	
	Length	Inches	255.50	95.50	63.50	
	Width		60	60	60	
Height	76		76	76		
Weight	Shipping Weight (+/-5%)	lbs	10416	5700	5434	

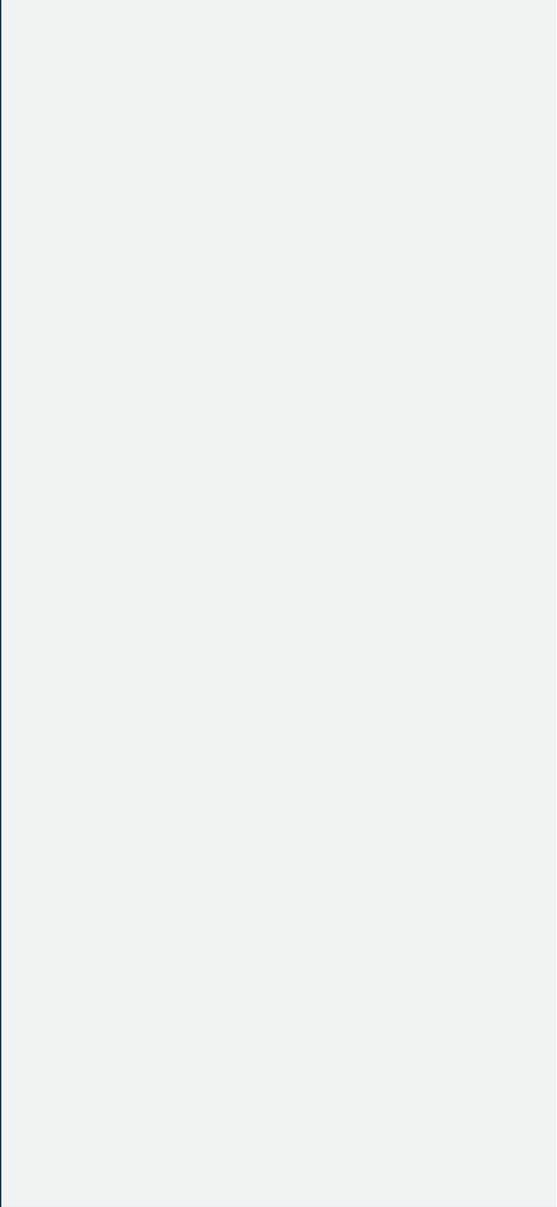
Rated Cooling Performance:

EWT/LWT 54°F/44°F (Evaporator), EWT/LWT 85°F/ 94.3°F (Condenser) and 100% water.

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**Array of (8) 20-ton FWCD chillers:
Nominal 160 tons, 16 compressors, 8 circuits**



Jetson
by **MODINE**

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