

Water-Cooled Chiller Packaged (WCCP)



The Jetson WCCP Series is designed for quiet, reliable, and high-efficiency performance. Featuring scroll compressors, brazed plate evaporators and durable shell-and-tube condensers, these chillers are ideal for educational and healthcare facilities, office buildings, municipal applications, and light industrial environment.

JET17-105

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Water-Cooled Chiller Packaged

Flexibility of Design

Capacities range from 20 to 75 tons. For the 40, 50, 65, and 75-ton models, WCCP chillers feature dual independent refrigerant circuits. These circuits consist of tandem scroll compressors in one circuit and a single scroll compressor in the other, reducing capacity loss in the event of a compressor failure and optimizing capacity steps.



Serviceability

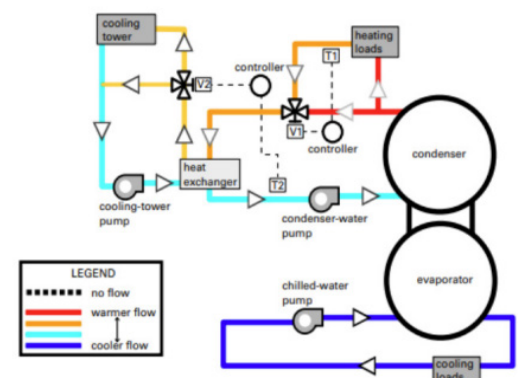
WCCP scroll chillers feature a service-friendly design, enabling the replacement of all major components without the need for a complete unit tear down. This ensures easy maintenance and reduces downtime, keeping operations running smoothly.

Active Freeze Protection

Active Freeze Protection is standard on all WCCP chillers. The chiller's unit controller continually monitors the saturated suction pressure and will open (energize) the Active Freeze Protection solenoid if the suction pressure falls to approximately 101 psig (32°F). The solenoid closes (de-energizes) when the pressure climbs to approximately 105 psig (34°F) and the freezing potential no longer exists.

Heat Recovery Capability (Simultaneous Cooling and Heating)

Heat recovery can be accomplished with the WCCP chillers by recovering heat from the water leaving the standard condenser and using it in conjunction with a third party heat exchanger. The WCCP 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 paired with a third-party brazed plate heat exchanger can reach 140°F, while those with a third-party shell and tube heat exchanger can reach 125°F.

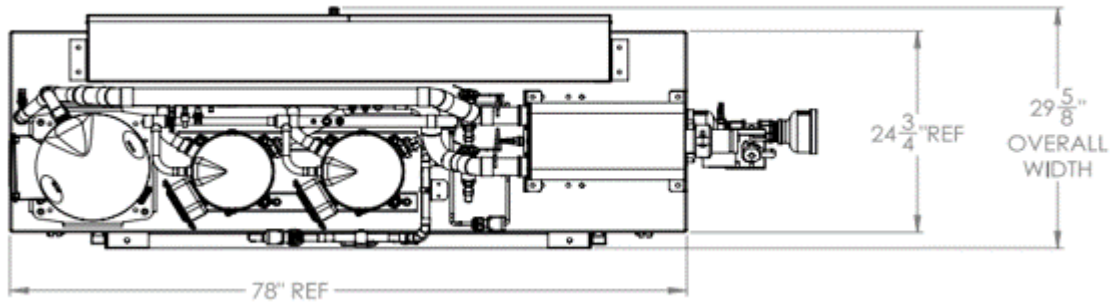
Features & Options

- ≡ Available in six sizes ranging from 20 to 75 nominal tons.
- ≡ Dual circuit refrigeration systems for greater operating redundancy.
- ≡ Ice making mode available for skating rinks, thermal storage, and more.
- ≡ Intuitive, factory installed microprocessor-based controller compatible with BACnet®, Modbus®, and LonTalk®. N+1 or N+2 redundant control logic.
- ≡ ASHRAE 90.1 compliant.
- ≡ Scroll compressors as standard and optional 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.
- ≡ Robust cleanable shell-and-tube condensers are uniquely suited for open loop cooling tower applications.
- ≡ Compressor acoustic hoods and/or sound isolating cabinets are available for sound sensitive applications.
- ≡ Available as water-cooled condensing unit (WCCU) for DX applications.
- ≡ Available as compressor chiller (CCAC) to be paired with a remote air-cooled or a water-cooled condenser.
- ≡ Factory tested.
- ≡ Built-in R-454B refrigerant leak detectors and an enclosure that improve the precision of the detection system.

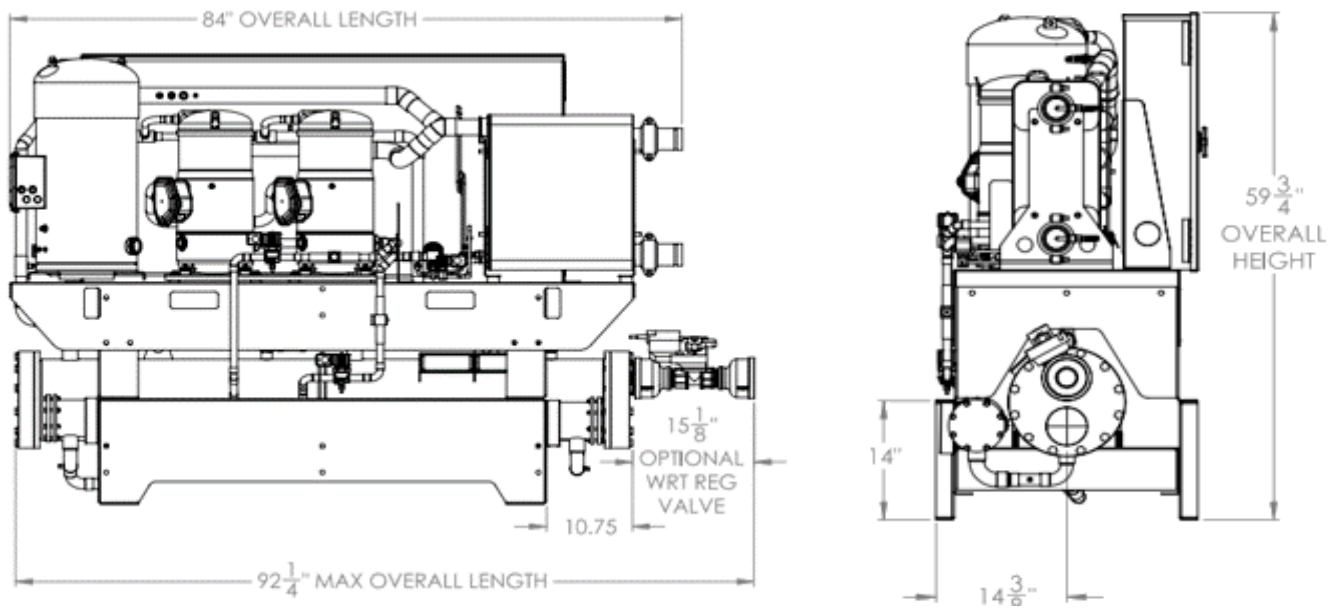
General Data

Unit Size			20	30	40	50	65	75
Compressor								
Quantity	each		2	2	3	3	3	3
Nominal @ 60 Hz	tons		10/10	15/15	10/10, 20	12/12, 25	15/15, 30	15/15, 40
Steps of Unloading	%		100-50	100-50	100-75-50-25	100-75-50-25	100-75-50-25	100-79-57-21
Compressor Sound Power Data ^(a)	dBA		81.0	84.0	87.2	87.5	90.2	91.8
Compressor Sound Data with Sounds Blankets Only ^(a)	dBA		75.0	78.0	82.8	83.0	85.8	87.5
Evaporator								
Water Storage	gal		2.1	3.0	3.1	3.7	4.6	6.6
Minimum Flow	gpm		30	45	66	82	104	75
Maximum Flow	gpm		104	151	207	237	295	264
Shell and Tube Condenser								
Water Storage	gal		3.0	4.5	5.5	7.4	9.2	9.2
Minimum Flow	gpm		28	39	49	65	84	84
Maximum Flow	gpm		119	167	207	271	342	342
General Unit								
Refrigerant			R-454B	R-454B	R-454B	R-454B	R-454B	R-454B
Number of Independent Refrigerant Circuits			1	1	2	2	2	2
Refrigerant Charge Per Circuit (approximately)	lb		25	37	24, 24	26, 26	31, 31	33, 33
Oil Type			POE 160SZ	POE 160SZ	POE 160SZ	POE 160SZ	POE 160SZ	POE 160SZ
Oil Charge (each compressor)	oz		112/112	113/113	112/122, 227	112/122, 227	112/122, 227	112/122, 227

Dimensions without enclosure



75-ton
WCCP



WCCP Dimensions without enclosure

Unit Size	20	30	40	50	65	75
Length	67.75"	65.50"	83.60"	85.37"	83.75"	83.75"
Max Length **	78.50"	79.20"	89.50"	93.00"	93.00"	92.25"
Width	28.75"	28.75"	29.70"	30.75"	29.70"	29.70"
Height	59.75"	59.75"	59.75"	59.75"	59.75"	59.75"

** Max length when motorized water-regulating valve is added.

For dimensions of the unit with enclosure, please contact sales@jetsonhvac.com.

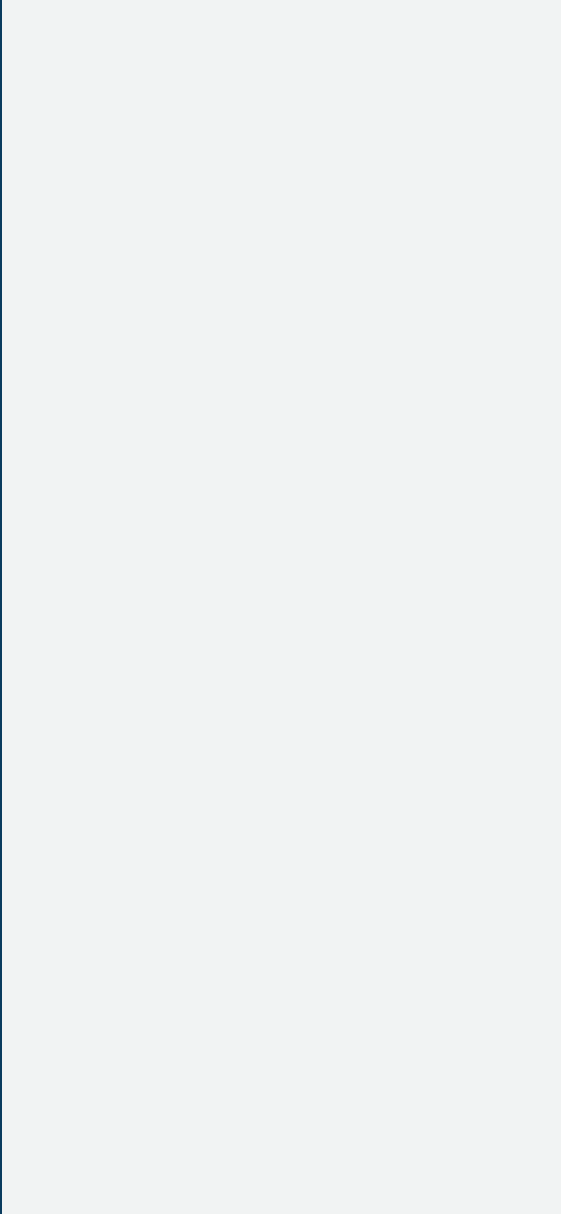
Cooling Performance

Nominal Tonnage			30	50	75	
Performance	Cooling	Net Capacity		30.32	47.23	66.19
		Cooling Efficiency	KW/ton	0.68	0.72	0.73
		IPLV/IP	KW/ton	0.49	0.50	0.51
		Input Power	Kw	20.64	33.98	48.67
Compressor	Type	Scroll On/Off Compressors				
	Quantity	No.	2	3	3	
	Circuits	No.	2	2	2	
Refrigerant	Type	R-454B				
Evaporator	Type	Brazed Plate				
	Flow Rate Evaporator	gpm	69.80	113.00	158.30	
Condenser	Type	Shell & Tube				
	Flow Rate Condenser	gpm	85.00	147.50	207.60	
Electrical	Voltage	V/ph/Hz	460/3/60			
	RLA	Amps	25	19/40	25/68	
	MCA	Amps	56	88	134	
	MOP	Amps	80	125	200	
Weight	Shipping Weight (+/-5%)	lbs	1452	2047	2526	

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.



Jetson
by **MODINE**

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