

PURESTREAM

CWV CHILLERS

BY FRIULAIR



CWV
Screw Compressor Liquid Chillers
From 79 -338 Tons

DESCRIPTION

The PURESTREAM CWV chillers were built from the ground up to meet today's rigorous equipment cooling requirements and advanced processes. The new PURESTREAM CWV chiller series are suited for outdoor installations and are intended for comfort and process cooling applications. The series consists of 13 models ranging from 79 to 338 Tons (260 kW to 1150 kW). All PURESTREAM CWV chillers are built for reliability, the frame and cabinet cover material are made of powder coated galvanized steel making the CWV range chillers perfectly suited for outdoor installations and for protection against harsh environments. The chiller's compressor is easily accessible and the CWV also allows for easy access for repair and maintenance ensuring safety for the operator. The PURESTREAM CWV chiller meets CSA standards and are approved for use nationally. All CWV chillers have been tested at full load. Pressure and leak test of refrigerant circuit, as well as complete assembly and pressurization of the hydraulic circuit. The refrigerant circuit is made with quality materials by experienced personnel with strict brazing procedures which includes:

- Electronic expansion valve
- Refrigerant solenoid valve
- Sight glass flow indicating presence of moisture
- High and low pressure switches
- High and low pressure transducers
- Refrigerant gauges

Other features of the PURESTREAM CWV chiller include:



MICROPROCESSOR CONTROLLER

The electronic microprocessor controls and optimizes all CWV chiller components and operations, which includes:

- Adjusts the water temperature at the evaporator outlet
- Pump on and off indicator (optional)
- The fan operation
- Controls the on and off cycles of compressors according to the water temperature required
- Measures and displays the evaporator water inlet and outlet temperatures
- Measures and displays the condensation and evaporator pressure
- Monitors and manages the screw compressor safety systems (minimum oil level and oil temperature)
- Manages alarm warnings



COMPRESSORS

- Screw compressors provide smooth operation with high efficiency
- Stepless capacity control system
- Oil level sensor
- Crankcase heaters



HYDRAULIC CIRCUIT

- Standard models are equipped with a shell and tube evaporator without a pump
- Pumps are available as an option (P2 & P3) upon request
- Temperature probe for setpoint control
- Able to work with mixtures up to 30% ethylene glycol. (Contact factory for more options)



FANS

- Axial fans equipped with protection grid and class F insulation
- Fans speed regulation made with cut-phase, as a standard (Contact factory for more options)



EVAPORATOR

- Antifreeze protection operated by the electronic controller
- Equipped with water differential pressure switch
- Shell and tube type



CONDENSERS

- Microchannel aluminum coils
- Less refrigerant charge
- Risk free from galvanic corrosion

Performance Data

		CWV 280	CWV 330	CWV 380	CWV 450	CWV 520
Cooling capacity	[Tons]	79.55	92.68	109.53	128.83	150.71
Compressors power input	[kW]	103.81	114.02	131.95	146.35	172.99
Total power input	[kW]	113.81	126.52	146.95	163.85	192.99
Total absorbed current	[A]	130.45	145.00	164.80	181.34	218.20
Energy efficiency (pump excluded)	COP[Btu/Btu]	2.46	2.58	2.62	2.77	2.75
Water flow	[gal/min]	190.67	222.16	262.55	308.82	361.26
Evaporator pressure drop	[psig]	6	6	6	5	5

Electrical Data

Maximum power input (total)	[kW]	145.24	166.44	188.79	212.11	246.51
Maximum absorbed current (total)	[A]	161.84	184.82	207.88	230.78	272.62
Starting current	[A]	543.60	594.00	413.40	447.80	543.20
Fan power	[kW]	2.50	2.50	2.50	2.50	2.50
Fan current	[A]	3.40	3.40	3.40	3.40	3.40
Number of fans	[#]	4	5	6	7	8
Power supply	[V/Ph/Hz]	575/3/60	575/3/60	575/3/60	575/3/60	575/3/60
IP protection degree	---	IP54	IP54	IP54	IP54	IP54

Technical Data

N° of compressors	[#]	1	1	1	1	1
N° of refrigerant circuits	[#]	1	1	1	1	1
Air flow	[cfm]	50,618	63,272	75,927	88,581	101,235
Sound pressure level at 10 m in free field	[dbA]	60.35	61.35	61.85	62.85	63.35
Water connection size	[inch]	5	5	5	5	5
Width	[inch]	89	89	89	89	89
Depth	[inch]	142	142	142	181	181
Height	[inch]	99	99	99	99	99
Weight - standard version	[lb]	5,732	6,834	7,055	7,937	8,378

Options

Pump power input P2	[kW]	8.36	8.36	8.36	8.36	8.36
Pump absorbed current P2	[A]	9.12	9.12	9.12	9.12	9.12
Pump power input P3	[kW]	10.2	10.2	10.2	10.2	10.2
Pump absorbed current P3	[A]	11.36	11.36	11.36	11.36	11.36

- [1] Data referred to: water temp. in/out: 54/44°F - ambient air temp. 95°F
- [2] Data referred to unit without pump
- [3] Data related to most heavy condition allowed by safety devices
- [4] Referred at 10 m and a height of 1.5 m in free field

Performance Data

CWV 600

CWV 650

CWV 700

CWV 760

Cooling capacity	[Tons]	168.93	184.23	207.01	222.60
Compressors power input	[kW]	195.04	227.35	248.62	265.75
Total power input	[kW]	217.54	252.35	276.12	295.75
Total absorbed current	[A]	244.44	289.31	312.44	331.46
Energy efficiency (pump excluded)	COP[Btu/Btu]	2.73	2.57	2.64	2.65
Water flow	[gal/min]	404.93	441.61	496.21	533.58
Evaporator pressure drop	[psig]	6	5	5	5

Electrical Data

Maximum power input (total)	[kW]	278.56	332.88	355.23	377.57
Maximum absorbed current (total)	[A]	307.55	369.65	392.70	415.76
Starting current	[A]	603.60	778.82	792.05	621.28
Fan power	[kW]	2.50	2.50	2.50	2.50
Fan current	[A]	3.40	3.40	3.40	3.40
Number of fans	[#]	9	10	11	12
Power supply	[V/Ph/Hz]	575/3/60	575/3/60	575/3/60	575/3/60
IP protection degree	---	IP54	IP54	IP54	IP54

Technical Data

N° of compressors	[#]	1	2	2	2
N° of refrigerant circuits	[#]	1	2	2	2
Air flow	[cfm]	113,890	126,544	139,199	151,853
Sound pressure level at 10 m in free field	[dbA]	64.35	64.35	64.85	64.85
Water connections size	[inch]	5	5	5	5
Width	[inch]	89	89	89	89
Depth	[inch]	220	260	260	260
Height	[inch]	99	99	99	99
Weight - standard version	[lb]	9,259	13,228	13,669	13,889

Options

Pump power input P2	[kW]	10.2	12.10	12.10	20.2
Pump absorbed current P2	[A]	11.36	18.84	18.84	23.04
Pump power input P3	[kW]	12.10	20.2	20.2	23.6
Pump absorbed current P3	[A]	13.84	23.04	23.04	26.4

- [1] Data referred to: water temp. in/out: 54/44°F - ambient air temp. 95°F
- [2] Data referred to unit without pump
- [3] Data related to most heavy condition allowed by safety devices
- [4] Referred at 10 m and a height of 1.5 m in free field

Performance Data

CWV 830

CWV 900

CWV 1050

CWV 1200

		CWV 830	CWV 900	CWV 1050	CWV 1200
Cooling capacity	[Tons]	242.96	259.88	296.61	338.69
Compressors power input	[kW]	280.61	293.79	343.42	390.51
Total power input	[kW]	313.11	328.79	383.42	435.51
Total absorbed current	[A]	348.48	363.79	433.84	489.31
Energy efficiency (pump excluded)	COP[Btu/Btu]	2.73	2.78	2.72	2.74
Water flow	[gal/min]	582.38	622.94	710.99	811.85
Evaporator pressure drop	[psig]	4	5	6	6

Electrical Data

Maximum power input (total)	[kW]	400.89	424.21	493.03	557.12
Maximum absorbed current (total)	[A]	438.66	461.56	545.25	615.09
Starting current	[A]	665.43	678.58	815.82	911.15
Fan power	[kW]	2.50	2.50	2.50	2.50
Fan current	[A]	3.40	3.40	3.40	3.40
Number of fans	[#]	13	14	16	18
Power supply	[V/Ph/Hz]	575/3/60	575/3/60	575/3/60	575/3/60
IP protection degree	---	IP54	IP54	IP54	IP54

Technical Data

N° of compressors	[#]	2	2	2	2
N° of refrigerant circuits	[#]	2	2	2	2
Air flow	[cfm]	164.508	177.62	202.471	227.780
Sound pressure level at 10 m in free field	[dbA]	65.35	65.85	66.35	67.35
Water connections size	[inch]	5	5	5	5
Width	[inch]	89	89	89	89
Depth	[inch]	299	339	339	417
Height	[inch]	99	99	99	99
Weight - standard version	[lb]	14.550	15.212	15.873	18.298
Options					
Pump power input P2	[kW]	20.2	20.2	20.20	20.20
Pump absorbed current P2	[A]	23.04	23.04	23.04	23.04
Pump power input P3	[kW]	23.6	23.6	23.6	23.6
Pump absorbed current P3	[A]	26.40	26.4	26.4	26.4

- [1] Data referred to: water temp. in/out: 54/44°F - ambient air temp. 95°F
- [2] Data referred to unit without pump
- [3] Data related to most heavy condition allowed by safety devices
- [4] Referred at 10 m and a height of 1.5 m in free field

OPTIONS:

Single P2 Pump	P2
Single P3 Pump	P3
Shut-off compressor valve	VSC
Evaporator anti freeze heater	RA1
Evaporator and pump anti freeze heater	RA2
Electrical switchboard anti-condensation resistor	RS
Condensing Control: Electronic fans	CE
Water double setpoint (from MODBUS and/or keyboard)	WE
Electric board: 230V electric plug on	EBS
Lifting plates	FL
Electric board: forced ventilation	EBV
Compressors soft starter	SFS
Electronic controller sun/rain protection	SRP
Acoustic shield for compressors	AI1
Condenser air filters	FP
Flanged water Connections (EN1092-1)	WC1
Control panel roof	FPR
Rubber anti-vibration	FA1
Spring anti-vibration	FA3
Remote Panel	ER
Net biter	ENB
Container loading	PCL
Packing with barrier bag	PBB

- Tropicalize version on demand.



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