

# ADIATEC<sup>®</sup> HUMIDIFIER

*High-Pressure System*



- *Energy efficient*
- *Outdoor and indoor models available*
- *Provides both direct and indirect evaporative cooling*  
*12 lbs/hr (5 kg/hr) = 1 ton of cooling*
- *Multiple zone capabilities in air handlers, ducts, and open spaces*
- *Complete water treatment options available from DriSteem*
- *Fan-assist available for open space applications*

# SUSTAINED QUALITY AND DEPENDABILITY

## HIGH-PRESSURE SYSTEM

Evaporative cooling and humidification systems draw heat from air to evaporate unheated water introduced by high-pressure nozzles. This process raises the relative humidity (RH) level and lowers the dry bulb air temperature. Consequently, these systems humidify and cool air very efficiently. In space type applications allow for the cooling and humidification to take place right next to the specific application need. This type of application has 100% of evaporation as the nozzles have "anti-drip" check valves integral to them. High-pressure atomization is advantageous when the end user has a large load, multiple zones and can benefit from free cooling. Lifetime operating cost can be much less than other technologies when these three items are present.

### REDUCES COOLING LOAD

As water is absorbed in air, the evaporative cooling effect reduces the building's cooling load. Twelve pounds of unheated evaporated water (vapor) reduces the cooling load by about one ton, saving about 12,000 Btus (3.5 kW).

### APPLICATIONS

Adiabatic humidifiers use the heat gain from sources such as printing/packaging, data centers, indoor agriculture, and manufacturing facilities to evaporate water for humidification and free cooling. An outdoor enclosure is available to facilitate installation in virtually any environment.

### LOW MAINTENANCE

High-Pressure Systems are very low maintenance systems.

The High-Pressure System's stainless-steel pump is designed to run for 8000 hours before its first maintenance check, and the stainless-steel dispersion nozzles and manifolds are maintenance free.

The High-Pressure System uses ultra-pure water that leaves no white dust when used with water treatment options available from DriSteem.



The DriSteem High-Pressure System delivers evaporative cooling and humidification to multiple zones in air handlers, ducts, and open spaces. The Vaporlogic controller provides comprehensive management of all system variables.

Learn More

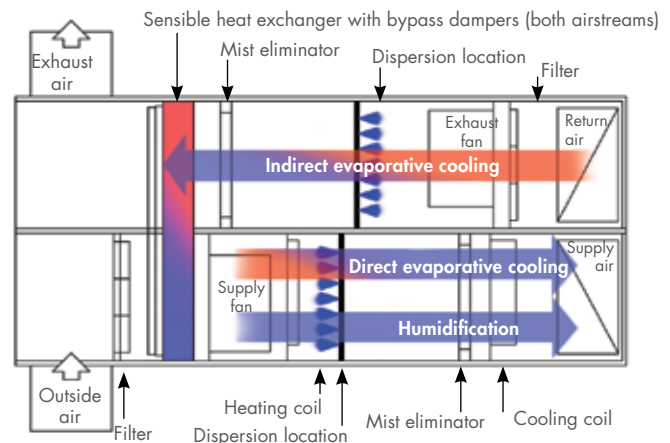


## DIRECT OR INDIRECT EVAPORATIVE COOLING

Direct evaporative cooling adds moisture to the supply air while humidifying and cooling the space at the same time.

Indirect evaporative cooling occurs in the heat exchanger without adding moisture. Cooling air before it enters the space without adding moisture to the space.

A High-Pressure System is shown here.



**Table 3-1:**  
**Adiatec high-pressure pump station specifications (60Hz)**

<b>Model</b>	<b>250</b>	<b>500</b>	<b>1000</b>	<b>1750</b>	<b>2500</b>	<b>3500</b>	<b>5500</b>
System capacity, lbs/hr (kg/h)	250 (113)	500 (227)	1000 (454)	1750 (794)	2500 (1134)	3500 (1588)	5500 (2495)
System voltage/phase, Amp draw	240/1, 5.2 480/3, 1.6 600/3, 1.3	240/1, 7.3 480/3, 2.2 600/3, 1.8	240/1, 13.8 480/3, 4.0 600/3, 3.2	480/3, 6.6 600/3, 5.3	480/3, 6.6 600/3, 5.3	480/3, 9.2 600/3, 7.3	480/3, 12.6 600/3, 10.1
Fuse size (see Note 1)	240/1, 15 480/3, 6 600/3, 3	240/1, 20 480/3, 6 600/3, 6	240/1, 40 480/3, 10 600/3, 10	480/3, 15 600/3, 15	480/3, 15 600/3, 15	480/3, 25 600/3, 20	480/3, 30 600/3, 20
Dimensions (W/D/H), inches (mm)	24/24/60 (610/610/1524)	24/24/60 (610/610/1524)	24/24/60 (610/610/1524)	24/24/60 (610/610/1524)	24/30/60 (610/762/1524)	24/30/60 (610/762/1524)	24/30/60 (610/762/1524)
Dimensions (W/D/H) with redundant high-pressure pump option, inches (mm)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)	24/30/76 (610/762/1930)
Operating weight, lbs (kg)	275 (125)	300 (136)	325 (147)	325 (147)	350 (159)	400 (181)	450 (204)
Operating weight with redundant high-pressure pump option, lbs (kg)	375 (170)	400 (181)	475 (216)	475 (216)	500 (227)	625 (284)	700 (318)
Operating weight, lbs (kg) Outdoor single pump	645 (292.57)	670 (303.91)	695 (315.25)	695 (315.25)	720 (326.59)	770 (349.27)	820 (371.95)
Shipping weight, outdoor single, lbs (kg)	735 (333.39)	760 (344.73)	785 (356.07)	785 (356.07)	810 (367.41)	860 (390.90)	910 (412.77)
Shipping weight, lbs (kg)	296 (134)	323 (146)	349 (158)	349 (158)	376 (171)	430 (195)	484 (219)
Shipping weight with redundant high-pressure pump option, lbs (kg)	403 (183)	430(195)	511 (232)	511 (232)	538 (244)	672 (305)	753 (341)
Operating weight with redundant high-pressure pump option outdoor, lbs (kg)	745 (337.93)	770 (349.27)	845 (383.29)	845 (383.29)	870 (394.63)	995 (451.32)	1070 (485.34)
Shipping weight, outdoor redundant, lbs (kg)	835 (378.75)	860 (390.09)	935 (424.11)	935 (424.11)	960 (435.45)	1085 (492.15)	1160 (526.17)
Supply water connection diameter, inches (see Note 2)	1/2	1/2	1/2	1/2	3/4	3/4	3/4
High-pressure water connection diameter, inches (see Note 2)	1/2	1/2	1/2	1/2	1/2	1/2	1/2
5-micron prefilter diameter x height, inches (mm)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)	2.5 x 40 (64 x 1016)
High-pressure pump flow rate, gpm (L/m)	0.5 (1.89)	1.0 (3.78)	2.0 (7.57)	3.5 (13.2)	5 (18.9)	7 (26.5)	11 (41.6)
High-pressure pump motor power, hp (kW)	1 (0.75)	1.5 (1.1)	3 (2.2)	5 (3.7)	5 (3.7)	7.5 (5.5)	10 (7.5)
High-pressure pump motor rpm	1000–1500	1000–2550	1000–2250	1000–2550	1000–2250	1000–2550	700–2450

**Notes:**

1. Wiring and branch circuit protection (Type RK1, J, or T fusing) to be provided by installer in accordance with NEC requirements.
2. High-pressure compression fittings.
3. Unit ships with 36" x 1/2" high-pressure flexible hose and a 1/2" union for easy connection to dispersion piping.
4. 25 psi (170 kPa) supply water pressure at 125% of maximum flow rate, 60 psi (415 kPa) maximum
5. Prefilter included, 5 micron, on pump station.



**DRI-STEEM Corporation**

a subsidiary of Research Products Corporation  
DriSteem U.S. operations are  
ISO 9001:2015 certified

U.S. Headquarters:  
14949 Technology Drive  
Eden Prairie, MN 55344  
800-328-4447 or 952-949-2415  
952-229-3200 (fax)

Europe, Middle East, Asia Pacific  
+32 11 82 35 95  
sales.europe@dristeem.com

Continuous product improvement is a policy of DriSteem; therefore, product features and specifications are subject to change without notice.

DriSteem, DriCalc, Adiatec and Vapor-logic are registered trademarks of Research Products Corporation and are filed for trademark registration in Canada and the European community.

Product and corporate names used in this document may be trademarks or registered trademarks. They are used for explanation only without intent to infringe.

© 2025 Research Products Corporation



Form No. HPA-BRO-EN-2025-0725

**Expect quality from the industry leader**

Since 1965, DriSteem has been leading the industry with creative and reliable humidification solutions. Our focus on ease of ownership is evident in the construction of DriSteem products. DriSteem leads the industry with a Two-year Limited Warranty and optional extended warranty.

For more information:  
[www.dristeem.com](http://www.dristeem.com)  
sales@dristeem.com

For the most recent product information visit our website:  
[www.dristeem.com](http://www.dristeem.com)

