

POOLPAK POOL DEHUMIDIFIERS

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This section contains product and technical information only.

For additional information and product pricing please contact your local ECCO Supply Sales Branch.

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POOLPAK POOL DEHUMIDIFIERS

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INTRODUCTION

Indoor pools are highly corrosive environments requiring a delicate balance of humidity, space and water temperature, ventilation, and pool water chemistry. PoolPak engineers have developed an environmental comfort system to control the damaging humidity and to act as an alternative to wasting energy through conventional ventilation.

A PoolPak system efficiently extracts heat and moisture from the warm humid air of the pool enclosure, and returns comfortable, dry air back to the room. Energy normally wasted through conventional ventilation is recycled back to the air and water as it is needed. Interior and exterior conditions are constantly monitored, with the lowest cost energy source used to deliver the most efficient operation. PoolPak units are exceptionally efficient, recovering energy used in the pool enclosure.

Available in the SWHP SR design are additional energy savings through use of a full economizer that utilizes outside air when it makes economic and comfort sense. PoolPak also employs "smart economizing" that expands the range of outside temperatures for free heating and dehumidification beyond the range of conventional economizers. All PoolPak units meet the ASHRAE Standard 62-2004 ventilation standard.

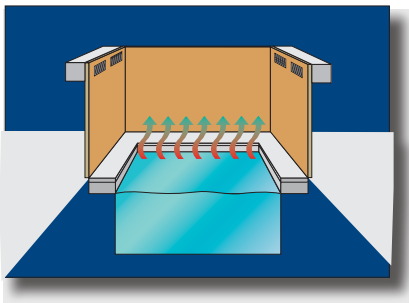
You'll find PoolPak and PoolComPak units wherever comfort is paramount and humidity control is essential. This includes schools, athletic centers, hotel/motels, wellness centers and fine homes worldwide. You can also improve performance in existing enclosures by retrofitting with a PoolPak dehumidification unit.

Applications:

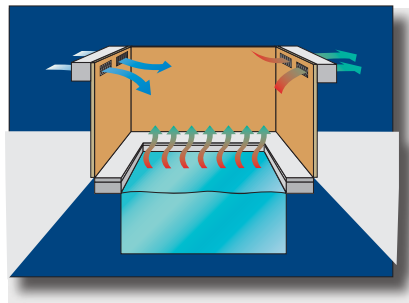
- Large natatoriums
- Hotel/Motel indoor pools
- Residential indoor pools
- Health & Therapy
- Critical Environments

Features and Benefits:

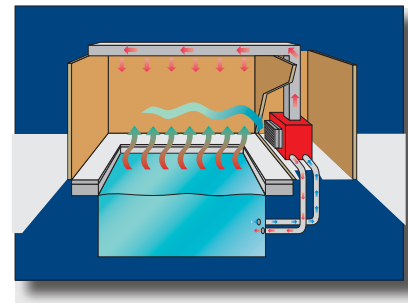
- Controls poolroom humidity
- Recovers energy in the exhaust air
- Heats poolroom air and pool water with recovered energy
- Provides proper ventilation for good indoor air quality
- Packaged control system-standard
- Major components out of the airstream
- Indoor and outdoor applications
- Cold wall condensation prevention system
- BAS Interface



A natatorium continuously produces large quantities of chlorine-laden water vapor through pool water evaporation. As the water temperature increases, so does the rate of evaporation.



The conventional method of removing humidity relies on venting the warm moist air to the outside. Dry outside air must then be heated to a suitable temperature before being delivered to the enclosure, only to be exhausted again.



A PoolPak system removes excess humidity from the pool enclosure, and recycles heat recovered during dehumidification back to the air and water resulting in dramatically lower energy costs.

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SWHP S SERIES

Optimum performance over a wide range of operating conditions.

SWHP-S

Models are designed specifically for installations where the SWHP-SR, SE, and SEP models are too large – for example, retrofit applications and inside installations or where low first-cost considerations outweigh lower operating cost.

SWHP-SE, SWHP-SEP, SWHP-SR

Designed for large natatoriums, a total environmental control system made to efficiently remove unwanted moisture, using up to 100% outside air (SR), in wide ranges of pool enclosures such as YMCAs, schools, waterparks, and Olympic swim centers.

ECC CONTROLLER

It's now easier to ensure maximum control over your PoolPak dehumidification system. The all new ECC control centre permits the pool manager to monitor and control the PoolPak dehumidification unit from any location around the world that has access to the internet. The ECC controller takes advantage of modular microprocessor technology to improve performance and enhance information processing as never before.



CONSTRUCTION

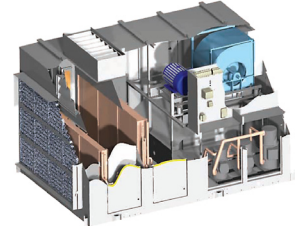
- All copper coils (standard) or optional coated coils
- All critical components are located outside the air stream:
 - Compressors
 - Pool Water Condenser(s)
 - Refrigeration Controls
 - Electrical Components
 - Electronic Controls
 - Evaporator THX Valves
- Insulated cabinet
- Heavy gauge G90 galvanized steel with baked on epoxy powder coating for corrosion prevention
- Easy accessibility for maintenance and service

STANDARD FEATURES

- Removes unwanted moisture from indoor pool environments
- Designed for maximum operating efficiency with optimum energy recovery
- Precision humidity and air and water temperature control is provided by the microprocessor based ECC control system

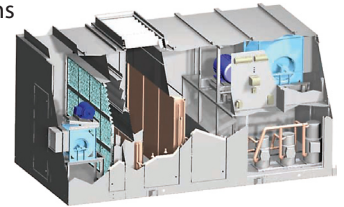
SWHP S – BASIC

- Simplest design
- Remote exhaust or purge fans (not supplied) are required
- Supply Fan only
- Partial outside air economizer
- Available with optional return plenum



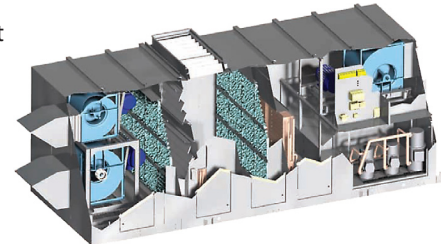
SWHP SE – BASIC / PLUS

- Room Pressure control and ventilation
- Supply and Exhaust Fans
- Partial outside air economizer
- Return plenum



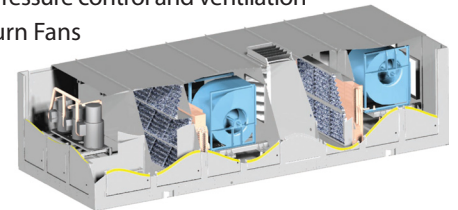
SWHP SEP – FULLY FEATURED

- Purge Fan for rapid ventilation cycle
- Provides Room Pressure control and ventilation
- Supply, Exhaust and Purge Fans
- Partial outside air economizer
- Dry bulb based economizer mode
- Return plenum



SWHP SR – FULLY FEATURED / PLUS

- Smart Economizer for Energy Conservation
- Rapid ventilation cycle for purge
- Provides Room Pressure control and ventilation
- Supply and Return Fans
- Standard 100% outside air economizer
- Standard "Smart" outside air economizer operates by systematically staging compressors as needed



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SWHP S SERIES (cont'd)

QUICK SELECTION CHARTS

SWHP S, SE, SEP

MODEL	ESTIMATED POOL SURFACE AREA (FT ²)	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/60% RH] (LBS/HR)	SIZE L x W x H (FT)	STANDARD AIRFLOW RANGES (CFM)	MAXIMUM OUTSIDE AIR (CFM)
SWHP060	1,500 – 2,200	88	"A" Cabinet 11 x 5.2 x 6.8	3,500 / 7,000	1,800
SWHP080	2,000 – 2,800	98		5,000 / 8,000	1,900
SWHP100	2,500 – 3,400	125		6,000 / 10,000	3,000
SWHP120	3,400 – 4,800	146	"B" Cabinet 12 x 8 x 7.5	7,000 / 12,000	3,500
SWHP140	3,400 – 4,800	178		9,000 / 15,000	3,800
SWHP190	4,500 – 6,100	218		11,000 / 18,000	4,900
SWHP220	6,000 – 7,100	259	"C" Cabinet 15 x 8 x 8.5	14,000 / 20,000	6,000
SWHP260	7,000 – 8,000	305		16,000 / 24,000	6,500
SWHP300	8,000 – 9,000	355		19,000 / 30,000	7,500

SWHP SR

MODEL	ESTIMATED POOL SURFACE AREA (FT ²)	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/60% RH] (LBS/HR)	SIZE L x W x H (FT)	STANDARD AIRFLOW RANGES (CFM)
SWHP060SR	1,500 – 2,200	88	"A" Cabinet 15.75 x 4.5 x 5	3,500 / 4,000
SWHP080SR	2,000 – 2,800	98		5,500 / 8,000
SWHP100SR	2,500 – 3,400	125		6,500 / 8,000
SWHP120SR	3,400 – 4,800	146	"B" Cabinet 20 x 8 x 6	8,000 / 15,000
SWHP140SR	3,400 – 4,800	178		10,000 / 18,000
SWHP190SR	4,800 – 6,100	218		11,000 / 18,000
SWHP220SR	6,000 – 7,100	254	"C" Cabinet 24.5 x 8 x 8.5	15,000 / 24,000
SWHP260SR	7,000 – 8,000	305		18,000 / 28,000
SWHP300SR	8,000 – 9,000	355		21,000 / 28,000

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POOLCOMPAK SERIES

AW 550 – 3500

For smaller indoor pool applications such as hotel / motel, therapy or residential installations, the PoolComPak – AW is the ideal solution for comfort and cost control.

PoolComPak environmental control system removes excessive moisture from the pool facility while controlling the air and water temperature for the perfect balance. The PoolComPak is more than just a dehumidification system. It eliminates the unsightly and destructive condensate that forms on windows, walls, and other cold surfaces, creating a pool facility that looks better and requires less maintenance.

Features

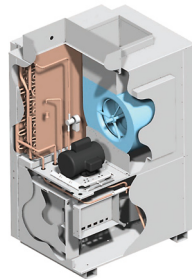
- Compressors out of air stream
- High-Efficiency scroll compressors
- Galvanized steel cabinet with epoxy-coated finish
- Outside air duct connection
- Wall condensation prevention
- Microprocessor controls

Functions

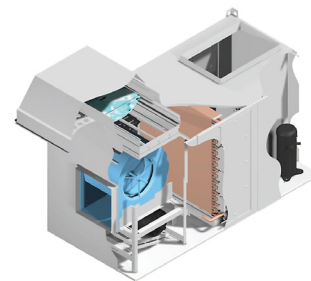
- Space humidity control
- Space heating
- Space cooling (with optional air- or water-cooled condenser)
- Ventilation
- Pool water heating

Applications

- Indoor Pools
- Waterparks



PoolComPak AW Vertical (indoor installation only)



PoolComPak AW Horizontal (indoor and outdoor installation)

Quick Selection Chart for AW

MODEL	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/50% RH] (LBS/HR)	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/60% RH] (LBS/HR)	SUPPLY AIR FLOW (CFM)	MAXIMUM OUTSIDE AIR (CFM)
AW0550	7.6	9.5	800 – 2,400	800
AW0800	12.3	15.5	1,100 – 2,400	800
AW1200	16.7	21.0	1,300 – 2,550	800
AW1400	20.1	25.3	1,900 – 4,500	2,000
AW1800	25.0	31.4	2,100 – 6,500	2,000
AW2600	35.9	45.2	2,300 – 6,500	2,500
AW3500	46.9	59.0	3,500 – 9,000	3,000

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POOLCOMPAK SERIES (cont'd)

HCD 550 – 3500

PoolPak International manufactures high capacity dehumidification (HCD) systems made specifically for high moisture environments found in commercial and industrial applications. The HCD system is designed to operate in situations where moisture control is paramount and the environmental conditions are harsh.

The high capacity and rugged construction of the HCD make it ideal when standard dehumidifiers cannot meet performance expectations such as prolonged operation and corrosive environments. The HCD can be configured in an air conditioning mode where recovered heat is rejected through either remote air cooled condensers or a water condenser.

Features

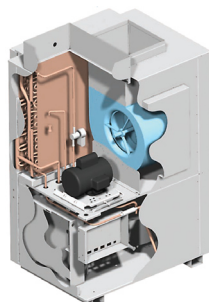
- Compressors out of air stream
- High-efficiency scroll compressors
- Galvanized steel cabinet with epoxy-coated finish
- Outside air duct connection
- Wall condensation prevention
- Microprocessor controls

Functions

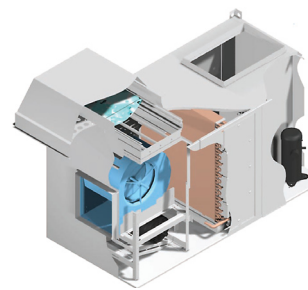
- Space humidity control
- Space heating
- Space cooling (with optional air- or water-cooled condenser)
- Ventilation

Applications

- Museums
- Libraries
- Art Galleries
- Warehouses
- Printing Plants
- Water/Waste Treatment Plants
- Basements



PoolComPak HCD Vertical (indoor installation only)



PoolComPak HCD Horizontal (indoor and outdoor installation)

Quick Selection Chart for HCD

MODEL	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/50% RH] (LBS/HR)	DEHUMIDIFICATION CAPACITY [ENTERING AIR 82°F/60% RH] (LBS/HR)	SUPPLY AIR FLOW (CFM)	MAXIMUM OUTSIDE AIR (CFM)
HCD0550	7.0	9.5	800 – 2,400	800
HCD0800	12.0	15.5	1,100 – 2,400	800
HCD1200	15.0	21.0	1,300 – 2,550	800
HCD1400	18.0	25.3	1,900 – 4,500	2,000
HCD1800	21.0	31.4	2,100 – 6,500	2,000
HCD2600	28.0	45.2	2,300 – 6,500	2,500
HCD3500	41.0	59.0	3,500 – 9,000	3,000

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CLIMATEPAK

VENTILATION HEAT RECOVERY (VHR)

There are several proven approaches to indoor pool dehumidification with 100% ventilation being another economical method for waterparks and natatorium facilities.

The ClimatePak differs from traditional dehumidification systems by utilizing outside air to remove moisture rather than mechanical refrigeration. It takes advantage of the naturally dry outdoor air to control humidity and ventilate the facility, while reducing the cost of operation. It relies on a sophisticated control system along with air measuring stations and air management systems to maintain setpoint conditions through dilution with outside air.

The ClimatePak is not simply an air handler. It is designed specifically to operate in the harsh, corrosive environment found in all indoor pools. Unlike the packaged self-contained units normally used, it does not require a refrigeration system, making the ClimatePak up to 45 percent lower in initial cost than conventional mechanical dehumidification systems.

The ClimatePak incorporates a passive heat-pipe energy recovery system that captures heat from the exhausted air and recycles it to the incoming air stream. Heating with fossil fuels is reduced by up to 50 percent while maintaining occupant comfort and reducing greenhouse gas emissions. Air measuring stations constantly monitor air flows throughout the unit and control system air flows at all times.

A steam or hot water heating coil is typically provided to supplement the warmed air from the heat recovery coil. Likewise, a cooling coil with chilled water from a chiller plant can be included for summertime cooling and additional dehumidification if desired.

Standard Features

- Airfoil supply and exhaust fans
- Uses dry outside air to remove unwanted moisture from indoor poolroom environments
- Passive heat pipe and damper system to recover approximately 50-80% of energy from the exhaust airstream
- Airflow measuring stations to monitor and control airflow and maintain a negative poolroom pressure
- Humidity and temperature control provided through the proven ECC control system
- Variable frequency drives for better control of airflow and pressure to maintain the facility environment

Options

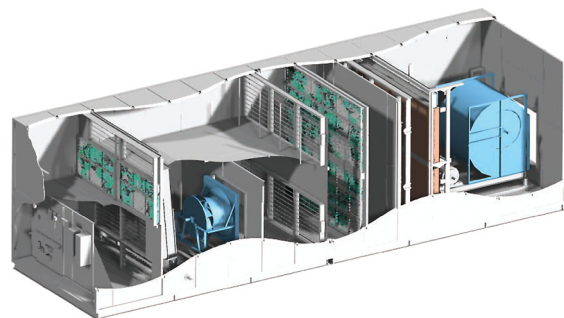
- Hot water heating coil
- Steam heating coil
- Gas furnace
- Chilled water cooling coil

Construction

- Coated heat pipe recovery coil (exhaust side) to control corrosion
- All critical microprocessor and motor control components out of the corrosive airstream
 - Controller
 - VFDs
 - Power panel
 - Easy access panel
- Corrosion resistant construction
 - Aluminum modular framing system
 - Diamond plate aluminum sloped floor system with drains for superior water management
 - Double wall foam filled wall panel system

Applications

- School Natatoriums
- YMCA and Club Pools
- Waterparks



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CLIMATEPAK (cont'd)

VENTILATION HEAT RECOVERY (VHR) (cont'd)

Quick Selection Chart for ClimatePak

MODEL	MAX SUPPLY AIR (CFM)	MAX EXHAUST AIR (CFM)	NOMINAL DIMENSIONS W x H x L (FT/IN)	RECOVERY MODULE SECTION LENGTH	SUPPLY AND COIL MODULE SECTION LENGTH
VHR 020	20,000	20,000	8' x 8' x 27'5"	N/A	N/A
VHR020 Approximate Maximum (outdoor) weight: 10,496 lbs – with Chilled Water Cooling add (max): 775 lbs					
VHR 030	30,000	30,000	8' x 9' x 27'5"	N/A	N/A
VHR030 Approximate Maximum (outdoor) weight: 11,808 lbs – with Chilled Water Cooling add (max): 1,000 lbs					
VHR 040	40,000	26,000	8'6" x 11' x 38'2"	1 @ 19'1"	1 @ 19'1"
VHR040 Approximate Maximum (outdoor) weight: 15,289 lbs – with Chilled Water Cooling add (max): 1,328 lbs					
VHR 050	50,000	36,000	11' x 11' x 38'2"	1 @ 19'1"	1 @ 19'1"
VHR050 Approximate Maximum (outdoor) weight: 18,348 lbs – with Chilled Water Cooling add (max): 1,652 lbs					
VHR 060	60,000	46,000	12' x 12' x 41'7-9/16"	3 @ 78-1/4"=19'6-3/4"	2 @ 11'3-13/32"= 22'6-13/16"
VHR060 Approximate Maximum (outdoor) weight: 23,245 lbs – with Chilled Water Cooling add (max): 1,816 lbs					

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