Andromeda EC

3000 - 18000

Complete Environmental Control System

- Integral dehumidifying heat pump
- 'Blue-EC' ultra efficient digital inverter fan system
- 'Auto fan' intelligent air recirculation fan management
- Active heat recycling into pool room air and pool water via dehumidifier
- Outside air dilution provision
- Pool room air and pool water integral support heating provision
- Central ventilation with room air recirculation
- Pool room air cooling options

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ENERGY TECHNOLOGY SYSTEMS

Engineered with Excellence, Specified with Confidence.

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Complete Environmental Control System

Ideal for residential and light use swimming pools, the Andromeda combines a dehumidifying heat pump with low energy digital fan technology, enabling highly effective environmental control with minimal energy use.

Dehumidifying heat pump with 'Active' heat recycling

The pool room air is re-circulated through the Andromeda by the integral fan. Inside the unit the humid room air is passed through the cold refrigerated coil matrix of the dehumidifying heat pump where, upon contact, the excess humidity condenses to cold water, thus the air is dehumidified prior to being returned back to the room.

The warm, moisture laden pool room air is rich in energy and the dehumidifying heat pump is able to absorb both 'Sensible' (dry heat) and 'Latent' (steam-like energy available within the airborne water vapour). This absorbed heat, together with ALL the electrical energy used to operate the dehumidifying heat pump, is then returned back into either the pool room air OR the pool water. Active energy recycling efficiencies of up to 380% are possible through this process.

Control over where the heat recycled by the heat pump is placed is completely automatic, with the system giving priority to establishing the optimum pool room air temperature prior to transferring the available heat into the pool water.

During the summer, to provide a cooling effect to the pool room, excess energy can be diverted and dissipated by the Andromeda using integral or external condensers.

This ideal method of heat recycling control is possible as the Andromeda features full capacity heat recycling coils both for the air and the pool water. Therefore, 100% control is achieved over where the heat is placed, ensuring maximum energy efficiency and preventing unnecessary overheating.

'Blue EC' Ultra-efficient digital inverter fan system

Against the consideration that the permanent operation of an air fan motor may represent the largest consumer of energy within an indoor pool, the Andromeda employs a very special type of digital fan to offer the best possible energy efficiency and, so, the lowest operating cost of any such system. The digital fan uses a directly driven, backward curved, centrifugal impellor, which features a DC motor coupled to an AC inverter.

'Intelligent' Auto-Fan – Why run the fan at full power when you don't need to?

The Andromeda features 'auto-fan' technology, whereby the speed and power of the air recirculation fan is managed automatically to enable significant energy savings whenever there is low demand for dehumidification or air heating.

For a pool equipped with a surface cover, there will typically be long durations of low demand and the energy saved by 'auto-fan' would be very considerable. Additionally, when the fan is operating on low power, ventilation air noise in the pool room can also be reduced.

Fully adjustable air re-circulation air flow

The air flow rate provided by the fan system can be adjusted on-site to precisely match the exact requirement of the pool room.

Pool room air quality – automated outside air facility

To maintain optimum pool room air quality, the Andromeda is equipped with a outside air dilution facility.

Integral support heating provision

To ensure that the optimum pool room air and pool water temperatures are always achieved, during periods when the heating requirements exceed the heat recycled and introduced by the dehumidifying heat pump, supplementary heat emitters can be incorporated within the Andromeda.

These heat exchanging coils transfer heat piped from a separate heat source, typically a fuel or heat pump boiler, into the pool room air or pool water. For installations where a separate heat pump boiler is used, special up-rated emitters and fan systems are used to compensate for the lower heating circuit temperature. If there is no boiler available, then direct electric heat emitters are also offered as an option.

A high capacity pool water heat emitter is used to ensure a swift initial warm-up period for the pool from cold and, for salt water pools, special titanium coils are available.

The Andromeda features a 'heat demand' signal which can be used to activate the heat source and which also incorporates a pool water overheat safety feature.

Central Ventilation - perfect air distribution and air curtain effects

Positioned out of sight within the pool equipment room, the Andromeda is able to be connected to an air duct channel, enabling central ventilation around the pool room for optimum condensation control.

The duct channel would feature air outlet grilles, positioned at strategic points around the room, to provide coverage to all areas and to discharge air directly over surfaces prone to condensation, such as glazing, creating an air curtain effect. The duct channel can be located either overhead or concealed under the floor.

Although the duct work would normally be designed and installed by a specialist ducting contractor, Recoswim are pleased to advise on this aspect as necessary.

Digital control panel

All functions of the Andromeda are completely automatic with the actual temperatures, conditions and system status clearly displayed upon the control panel.

Once the desired temperatures are set on the intuitive and easy-to-use controller, the integral sensors and processors accurately self-govern the various modes of operation. The controls permit the pool room temperature to automatically be reduced to a 'set back' to save energy when the pool is not in use, via a link to the pool surface cover or other switch facility.

The controls feature robust digital technology and are specifically selected for assured long term operation and serviceability within the equipment room atmosphere. Various optional BMS interfaces are also available.

Total Flexibility of Configuration

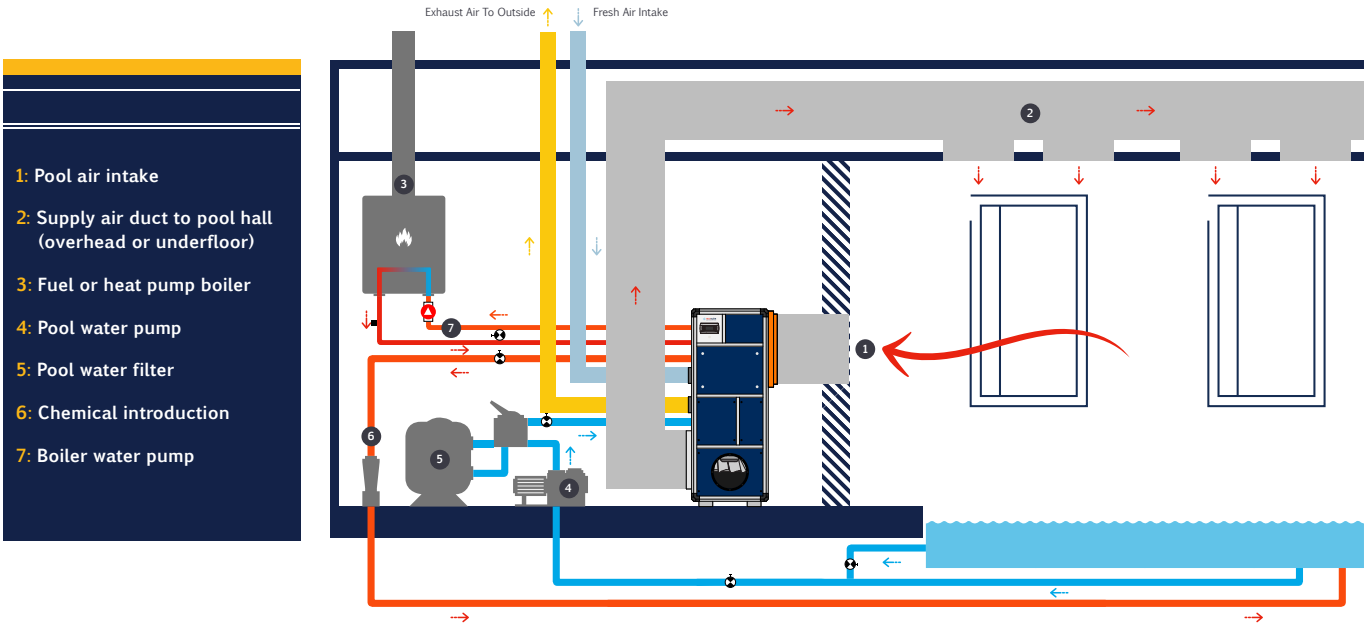
Each Andromeda unit is tailored to the precise individual requirements of the application, obviating the need to under or oversize performance aspects or tolerate inappropriate equipment room layout.

Dehumidification rates, air flows and heating duties are all selected individually to give a completely balanced, highly effective system, operating at ideal efficiency.

Therefore, whether the pool room is a large conservatory or a small basement, the Andromeda will always be the perfect uncompromised approach.

The unit can be configured to be vertical or horizontal and the position of the control panel, pipes, air duct spigots and maintenance access can also all be orientated during manufacture to accommodate the ideal equipment room layout. Even special 'weatherproof' models are available for external positioning.

Andromeda EC installation



Andromeda EC standard performance specifications

	Type	3000		4000		6000		9000		12000		18000	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Supply air fan duty	cfm	1200	2300	1450	2900	2200	4400	2850	5700	3900	7800	5100	10200
Maximum external resistance	in. WG	1		1		1		1		1		1	
Variable speed control range	%	0	100	0	100	0	100	0	100	0	100	0	100
Fan type		'Blue EC' backward curved, direct drive, electronically commutated, brushless DC motor											
Outside air	cfm	300	575	362.5	725	550	1100	714.5	1425	975	1950	1275	2550
Dehumidification													
Dehumidifying heat pump	lbs/Hr.	15.3		20.2		29.2		41.0		60.7		87.9	
Outside air	lbs/Hr.	6.4	12.3	7.7	15.5	11.8	23.5	15.3	30.4	20.8	41.7	27.2	54.5
Total refrigeration capacity	MBh	36.1		47.7		69.1		96.9		143.6		208.0	
Room air heating potential													
Dehumidifying heat pump recycled heat	MBh	48		63		90		128		184		273	
LTHW coil	MBh	58	111	70	140	106	213	138	276	189	377	247	493
Pool water heating potential													
Dehumidifying heat pump recycled heat	MBh	48		63		90		128		184		273	
LTHW coil	MBh	100		136		238		355		478		713	

Rated conditions:
Pool air: 84°F/60% R.H. - Pool water: 82°F - Outside air: 50°F/50% R.H - LPHW: 180°F Flow/160°C return

Due to continuous development the right to alter specifications without notice is reserved. E&OE.

Pre-Packaged for easy installation

To reduce installation work and complexity to a minimum, the Andromeda is offered as a completely pre-assembled package, incorporating all heating coils, controls and motorised heating valves, providing efficient dehumidification, heat recycling, air heating, pool water heating and fresh air dilution, all from a single, easily installed unit.

Therefore, the Andromeda would usually only require an electricity supply and simple pipe connections to a boiler, pool water filtration circuit and waste water drain.

Highest Quality Construction

The Andromeda is designed and constructed to the highest possible standard. All components are sourced from USA or Europe and have been especially selected for use within corrosive swimming pool environments.

For maximum strength and durability, the units are constructed from a 1" thick anodized aluminum skeleton frame. All exterior access panels are formed from galvanized steel, with a tough PVC coating to prevent corrosion, fixed via chrome latches.

All air heat exchange coils feature 'gold' epoxy coating to protect against corrosion.

The heat pump utilizes zero ozone depletion eco refrigerant and is completely hermetically sealed to guard against leakage. The units are designed to UL and EU(CE) standards.

High Efficiency Orbital Scroll Compressor

The refrigeration compressor which drives the heat pump uses a special 'orbital scroll' design, manufactured by Copeland, offering the best possible operating efficiency.

Rigorous Testing Procedures

Prior to every new Andromeda unit leaving the Recoswim factory, it is first subjected to a thorough procedure of testing and appraisal within Recoswim's own climatic chamber to ensure that all aspects meet the required quality and performance standards. Individual certificates of testing are provided.

Warranty and Maintenance

The Andromeda comes with the assurance and peace of mind of a comprehensive warranty with extended warranty options available.

Free System Design Service

Recoswim offer a free, computer-aided system design facility providing accurate and precise equipment selections, installation schemes and economic assessments. Recoswim's highly experienced team of experts are available for consultation on all related aspects, without charge or obligation.

Why choose Recoswim – leaders for more than 40 years

Recoswim is a specialist manufacturer and the renowned leading authority for the application of environmental control technology for indoor swimming pools. Recoswim have pioneered the innovation, design and development of modern, highly energy efficient, systems and are specified with total confidence by leading dehumidification experts.

A flag-bearer for energy-efficiency for over four decades, Recoswim continue to play a huge part in making swimming pools role models for energy savings and reduced carbon emissions.

Recoswim have been producing pre-packaged climate control units like the Andromeda longer than any other company and this experience is evident throughout the product range. Through the years, over 15,000 Recoswim systems have been supplied.

When investing in equipment of this nature, confidence and assurance in the brand are important considerations. Needless to say, the performance, quality and, very importantly, the long-term reliability and durability of Recoswim and their products systems have been demonstrated beyond question.

Contact us

Contact Recoswim for detailed specifications and a full analysis of your swimming pool heating and environmental control requirements.

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