

SPL

Air handling unit with high energy efficiency for wellness areas.

Air flow rates from 4.000 to 13.000 m3/h



>Version

The SPL units represent the ideal solution to grant comfort conditions in small-medium wellness areas, spa, fitness centres, small swimming pools, sports centres, etc.

The unit combines a cooling circuit and a heat recovery system for the sensible and latent heat, specifically optimised to minimize the energy consumptions.

The main function of the unit, which is supplied as a "plug & play" machine, is to dehumidify and at the same time to grant the wellness conditions of the served ambience.

The units equipped with an efficient heat exchange system on the water side, which is necessary to partially heat the swimming pool water without additional costs.

The frame and all internal components are designed to guarantee the maximum resistance to corrosion.

5 available sizes.

Bearing structure with anodized aluminium frame.

Sandwich panels 50 mm thick.

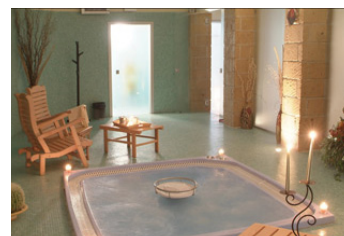
Cross flow heat recuperators and cooling circuit.

Hot water coil with standard 3-way valve.

"Plug fan" fans

Plug and play: the unit is equipped with electric panel, regulation and cooling circuit.

AERMEC remains at disposal for any information or specific requests.





> Main technical data

SPL		025	040	060	100	130
Nominal air flow (supply/exhaust)	m ³ /h	2.500	4.000	6.300	10.000	13.000
Available pressure (supply/exhaust)	Pa	400	400	400	400	400
Recovered power heat recuperators ¹	kW	7,9	12,6	20,4	32,0	41,5
Max. efficiency heat recuperators ¹	%	80,8	79,3	80,1	79,5	79,4
Recovered capacity cooling circuit ¹	kW	7,5	10,5	21,3	31,7	45,7
Total recovered capacity ¹	kW	15,4	23,1	41,6	63,7	87,3
Compressors input power ¹	kW	1,3	1,6	3,7	6,0	8,4
COP ¹	-	11,8	14,4	11,2	10,6	10,4
COP ² (EN 14511)	-	3,9	4,0	4,1	4,0	4,1
Total dehumidification capacity ¹	kg/h	15,5	25,2	40,1	63,7	82,7
Fans input power on supply	kW	1,6	2,6	3,7	5,9	7,6
Fans input power on exhaust	kW	1,2	1,9	2,7	4,5	5,7
Type / Compressors	n°	Scroll / 1				
Water reheating coil (standard)						
Capacity (without cooling circuit) ¹	kW	26,1	35,4	61,6	95,3	124,5
Water flow ³	l/h	2.250	3.050	5.300	8.200	10.700
Pressure drop on water side ³	kPa	34,7	61	37	56,3	48
Plate heat exchanger R410A/ non aggressive water (standard)						
Nominal water flow ⁴	l/h	950	1.120	2.500	3.600	5.400
Pressure drop ⁴	kPa	19	19	31	32	33
Inspectionable plate heat exchanger with not aggressive water / swimming pool water (standard)						
Nominal water flow swimming pool ⁵	l/h	1.200	1.400	3.100	4.500	6.800
Pressure drop on swimming pool side ⁵	kPa	32,4	34	31,4	33	34,5
Pressure drop on intermediate circuit side ⁵	kPa	21,2	22,3	20,6	21,6	22,5
Electrical data						
Power supply		400 V - 3 ph - 50 Hz				
Total fans absorbed current on supply	A	3,5	6,2	11	14,6	15
Total fans absorbed current on exhaust	A	2,6	4,9	6,4	11,3	11,3
Total absorbed current unit	A	11,6	17,1	32,4	49,3	61,3
Starting current unit	A	32,1	46,1	91,4	181,9	184,3

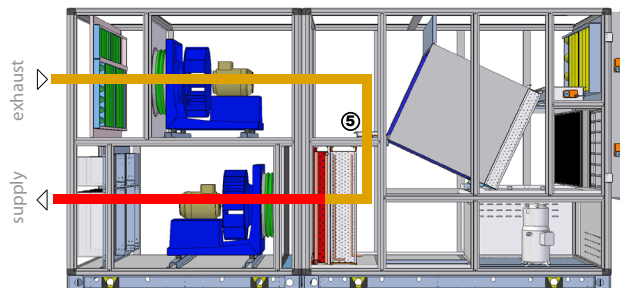
1 External air 0°C, RH 80%; internal air 29°C, RH 60%.
 2 Data referring to the EN 14511 norm for unit with reheating only function
 3 Inlet/ outlet water temperature 70/60°C; pressure drop on water side including the 3-way valve
 4 Inlet/ outlet not aggressive water temperature 27/37°C
 5 Inlet/ outlet water temperature of intermediate circuit 37/27°C; inlet/ outlet swimming pool water temperature 25/33°C
 Technical data subject to change.

>Operating schemes - SPL

Here under are the schemes of the main operating modes of the unit.

In all of the following schemes please consider that the hot water coil is always operating, as it must be referred to external air temperatures lower than 10°C with required supply temperature which has to balance the heat loss of the building.

Cycle "start-up"



This operating mode aims at reducing to zero the external air capacity.

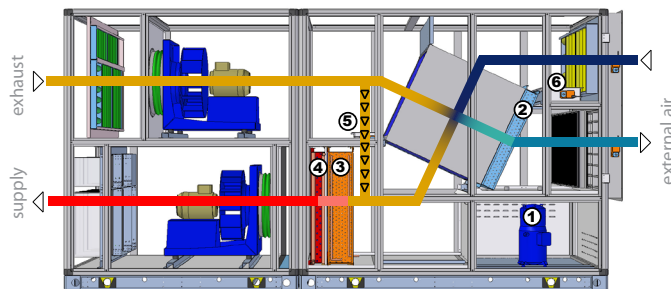
The total air flow is recirculated through the damper n° 5 and re-introduced in the swimming pool.

The water reheating coil is operating.

The "operating" cycle is activated for the necessary time to reheat the room.

Cycle "dehumidifying"

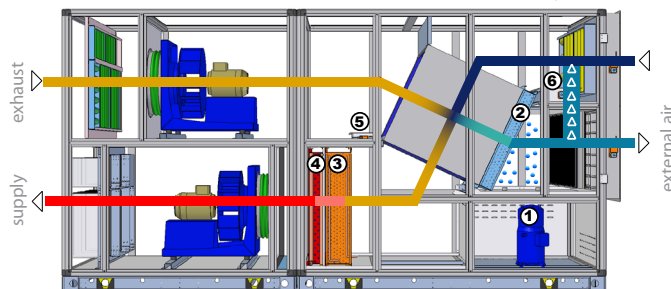
With outdoor air dehumidification



This operating mode aims at dehumidifying the ambience with the external air, by balancing the pool rain evaporation. The cooling circuit (composed of compressor n.1 and coils n. 2 and 3) allows to recover the sensible and latent heat of the exhaust air, and transfer it to the inlet air or water by means of the heat exchange system composed of the double exchanger on the water side.

The hot water coil n. 4 integrates, if necessary, the heating capacity supplied by the cooling circuit, housed on the inlet air flow (condensing coil n.3).

Dehumidification with outside air and alpha cycle

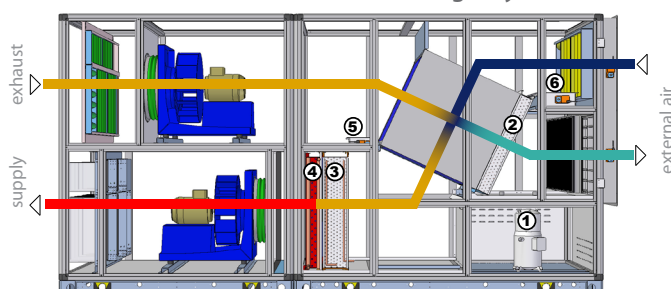


If it becomes convenient, the compressor also contributes to the swimming pool dehumidifying.

The fresh air flow rate is modulated by the fans inverters to reach the required wellness conditions.

According to the external ambience temperature the unit adjusts the operation in order to reach the best energy savings

Dehumidification with outside air (night cycle)



During the night operation the unit adjusts the function settings to adapt to the evaporating variations of the pool and reduce the consumptions at minimum.

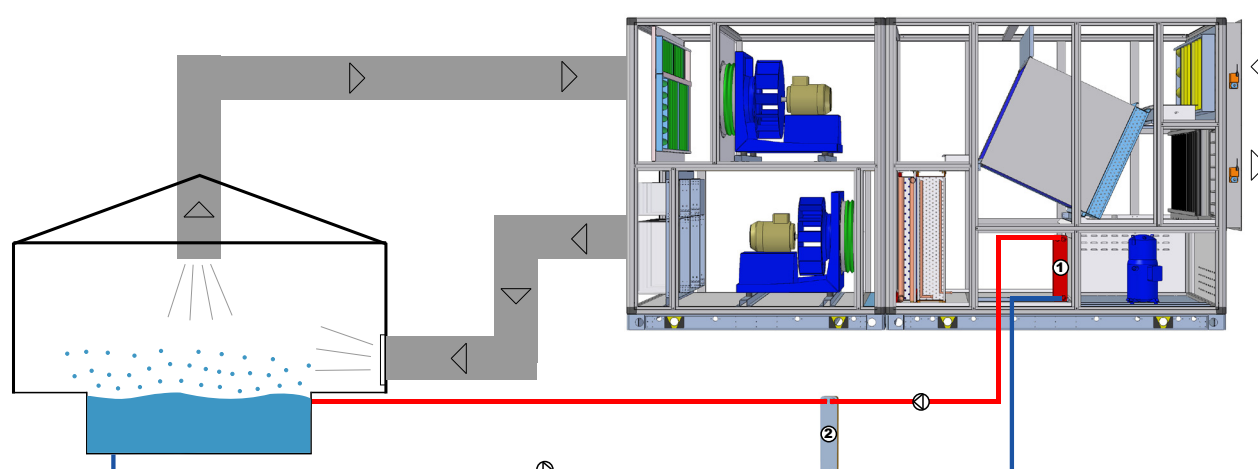


Cycle with heat transfer to water

If the air temperature conditions in the ambience are satisfied, the heat so rejected by the cooling circuit will be given to the swimming pool water, by means to a double plate exchanger (standard).

A plate exchanger is an essential part of the cooling circuit of the unit (exchanger R410A/water of intermediate circuit, in the following figure indicated with n. 1). A further inspectionable exchanger (operating with recirculation water of the intermediate circuit/ swimming pool water, in the following figure indicated with n. 2) is supplied together with the unit. The heat system thus constituted is of very easy maintenance.

The components and the connections among the exchangers are responsibility of the client.



The scheme is indicative. For simplicity, all the components needed to complete the water circuit are not shown.

> Main components

Frame and components resistant to corrosion	●
Cooling circuit with scroll compressor and refrigerant R410A	●
Cross flow plate heat recuperators	●
Plug fans with inverter	●
Electric motors with efficiency class EFF1	●
Water coil with 3-way valve and actuator	●
G4 Panel filter + F9 bag filters on the supply	●
Electric panel with controller and remote panel	●
RS485 Serial interface card (MOD-BUS protocol)	●
Plate heat exchanger on the cooling circuit	●
Plate heat exchanger with inspection possibility for swimming pool water	●
Refrigerant heat exchanger /swimming pool water (in alternative to the previous ones)	○

● Standard, ○ Optional, - Not available

>Characteristics

Bearing frame in anodized aluminium profiles with nylon reinforced corners. The casing is made of sandwich panels (50mm thick), with internal surface in pre-painted galvanized steel, external surface in pre-painted galvanized steel and insulation by means of injected polyurethane with density 42 kg/m³, fixed without screws but with blocking profiles, doors with self-closing handles.

This fixing system permits uniform pressure over the casing, providing excellent air and water tightness. The bearing elements and the components closings and are completely painted to guarantee the maximum resistance to corrosion. The inferior surface of the unit is equipped with draining panels in pre-painted galvanized steel with central discharge.

Cooling circuit equipped with scroll compressor with rubber anti-vibration dampers, exchange coils refrigerant gas/air with copper pipes and painted aluminium fins and frame, filtration devices, electronic expansion valve, liquid receiver, drier filter, control (pressure transducers and lights) and protection (high and low pressure switches), connections in brazed copper, ecologic refrigerant R410A. The cooling circuit is inserted in a compartment isolated from the air flow to facilitate the control and maintenance operations.

High efficiency cross flow recuperators in pre-painted aluminium. Dampers section: recirculation dampers used for the quick temperature set of the room, recirculation damper for the "alpha" cycle, damper on the external air intake and exhaust. All dampers are made of anodized aluminium and are individually controlled by an external actuator for a fine regulation of the air flow.

Fan sections epoxy painted resistant to corrosion, equipped with "plug fans" with wheels with high performance backward-curved blades.

Electric motors with high efficiency class driven to the wheel, to be controlled by inverter (standard).

Filter section: panel filters in the exhaust air flow (efficiency class G4 in compliance with EN779) and panel + bag filters in the supply (efficiency class G4 + F9 in compliance with EN779) which allow to respect the norms currently in force referring to the air quality. A differential flow switch for the closing filters is supplied as standard.

Water reheating coil with copper pipes and painted aluminium fins and frame with air reheating function on supply after dehumidifying, controlled by a modulating 3-way valve (standard); this device allows to finely regulate the air temperature on supply. The coil frame is made of painted galvanized aluminium, in order to guarantee the maximum resistance to corrosion.

Complete control board installed inside the. Electrical installation for the connections of power and signal, placed in pipe with cable-fixing clamp or rubber sleeve accessories, protection class IP44. Standard remote panel for the control of the main functions and visualization of the alarms.

Microprocessor control board and cabinet capable of managing the different operating modes, granting the maximum energy saving in each operating condition. Standard RS485 interface card (MODBUS protocol) for connection with a BMS system.

Heat exchange system to reheat the swimming pool water composed by a double plate condenser. One of the exchangers is installed in the cooling circuit of the unit inside the machine: the heat exchange takes place between the refrigerant and not aggressive water. The second one is for the swimming pool water, with possibility of inspection, in stainless steel AISI 316L and is supplied (alongside) loose.

The hydraulic circuit between the two plate exchangers has to be completed with the necessary components (pump, water filter, expansion valve, valves, etc.)

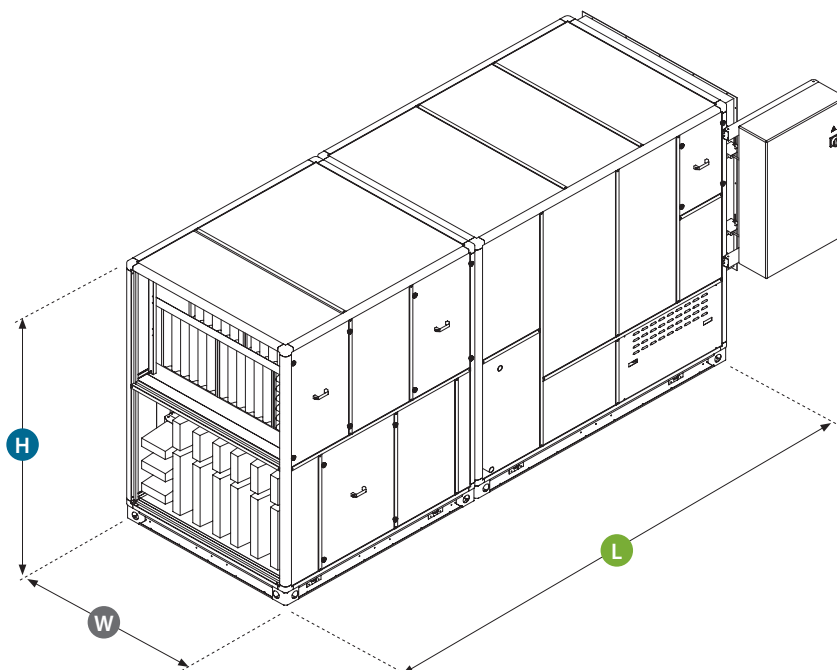
Upon request: Refrigerant heat exchanger/swimming pool water (in alternative to the precedent system).



> Dimensions and weights

SPL		025	040	060	100	130
Height	mm	1.765	1.765	2.245	2.405	2.405
Width	mm	895	895	1.055	1.375	1.695
Length	mm	3.230	3.390	4.190	4.510	4.670
Weight	kg	900	1.000	1.350	2.060	2.600

The dimensions and weights are subject to change



SPL 025/130

Swimming Pool Lines
Air handling unit
high efficiency for health centres.
Air flow from 4,000 to 13,000 m³/h.

Swimming
Pool Lines

HFC
Refrigerant
R410A

TECHNOLOGY
HIGH EFFICIENCY



The units from the SPL series represent the ideal solution to guarantee the comfort conditions in small-medium spaces such as health centres, spa areas, fitness centres, small swimming pools, sports facilities, etc.

The unit contains a refrigerant circuit and a system for the recovery of sensible and latent heat coming from the humid air extracted from the space, thereby being optimised for the reduction of energy consumption. The main function of the unit, which is a "plug and play" machine ready for use, is that of dehumidifying and at the same time ensuring control of the temperature and humidity conditions of the area served.

The unit is fitted with an efficient heat recovery system on the water side, to be used to partially heat the swimming pool water at no cost.

The structure and all the internal components are built to ensure the **maximum resistance to corrosion**.

Characteristics

VERSIONS

- 7 sizes available.

STRUCTURE:

- Anodised aluminium profile with reinforced nylon corner pieces. Casing made from sandwich type panels (50mm thickness), with internal surface pre-painted galvanised steel, external in pre-painted galvanised steel and insulating material hot injected polyurethane with a density of 42 kg/m³, fixed without screws but with panel locking profiles, doors with keyless handles. This fixing method allows a uniform pressure on the casing, ensuring an excellent resistance to the leakage of air and water. The support structures and the seals around components are completely painted to ensure the maximum corrosion resistance. The bottom surfaces of the unit are fitted with drain panels in pre-painted galvanised steel with a central drain point piped sideways.

THERMAL RECOVERY SECTION:

- High efficiency static cross flow in pre-painted aluminium. Including dampers: recirculating damper used for the quick start up of the space, recirculating damper for the "primary" cycle, dampers on the air inlet and extract. All dampers are manufactured in anodised aluminium and are individually controlled by an external actuator for precise air flow control.

REFRIGERANT CIRCUIT:

- Fitted with scroll compressor supplied with rub-

ber anti-vibration feet, refrigerant gas/air heat exchanger coil with copper tubes and pre-painted aluminium fins and painted frame, filter, electronic expansion valve, liquid receiver, filter drier, controls (pressure transducers and visual indicators) and safeties (high and low pressure presostats), brazed copper connections, refrigerant charge of environmentally friendly R410A. The refrigerant circuit is installed in a compartment isolated from the air flow to facilitate checks and maintenance.

FAN SECTIONS:

- Treated with epoxy paint resistant to corrosion, fitted with "plug fans" with backward curved impeller of high output. Electrical motor directly coupled to the impeller suitable for inverter control (standard).

FILTRATION SYSTEMS:

- Fitted as standard with panel filters in extract (G4 efficiency class according to EN779) and panel + bag filters (G4 + F9 efficiency class according to EN779) meet the requirements for the applicable standards for indoor air quality. Dirty filter differential pressure switches are provided as standard.

HOT WATER HEATING COIL:

- With copper tubes and pre-painted aluminium fins to heat the supply air after dehumidification, controlled by a modulating 3 way valve (standard); this allows the accurate control of the supply air temperature. The frame of the

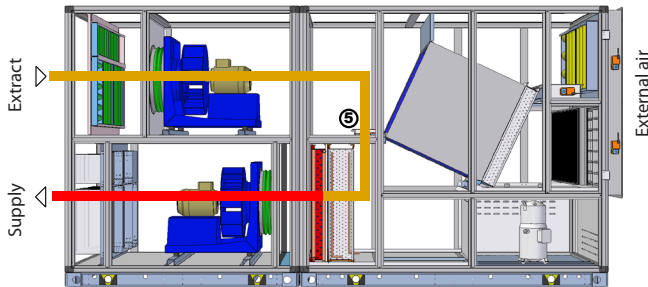
coil is in painted galvanised steel to ensure the maximum resistance to corrosion.

ELECTRICAL PANEL:

- Power and controls panel unit mounted. Electrical installation for the connection of power and controls, set in tubes or conduits with glands and grommets, IP55 protective rating. Remote panel supplied as standard for the control of all the main functions and display of alarms.

The principal operation modes of the unit are shown in the example schematics below.
 In all the following schematics the hot water coil is always operating because the external air temperature is below 10°C with a required supply air temperature to compensate for the heat losses from the building.

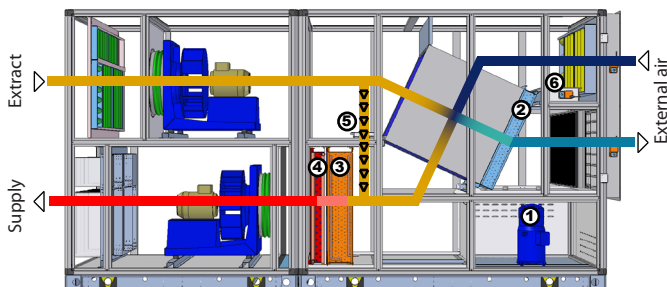
"Start up" cycle



The operating mode is with no external air flow. The whole air flow is recirculated through damper 5 and returned to the pool area. The hot water coil is operational. The "start up cycle" is activated for the time necessary to heat up the area.

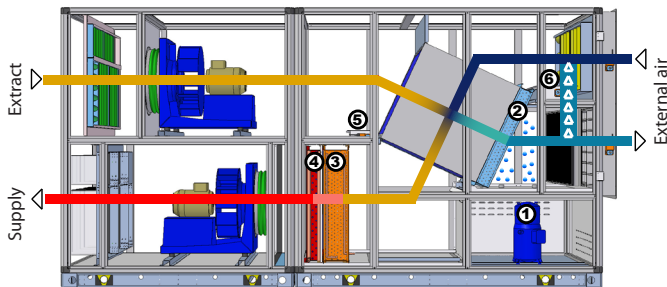
"Dehumidification" cycle

Dehumidification with external air



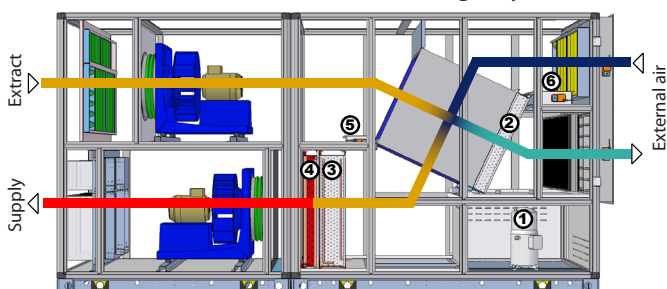
The operating mode is with external air dehumidifying the space, compensating for evaporation from the pool. The refrigerant circuit (consisting of the compressor 1 and the coils 2 and 3) allows the sensible and latent heat recovery of the extracted air to be transferred to the supply air or the water, through the thermal heat exchange consisting of the double heat exchanger on the water side. The hot water coil 4 supplements, if necessary, the heating capacity provided by the refrigerant circuit, placed downstream of the entering air flow (condensing coil 3).

Dehumidification with external air and primary cycle



When required the compressor also assists in the dehumidification of the pool area. The supply air flow is modulated by the fan inverter to reach the required hygrometric conditions. As a function of the external ambient temperature the unit modifies the operating mode to achieve the best efficiency possible.

Dehumidification with external air (night cycle)



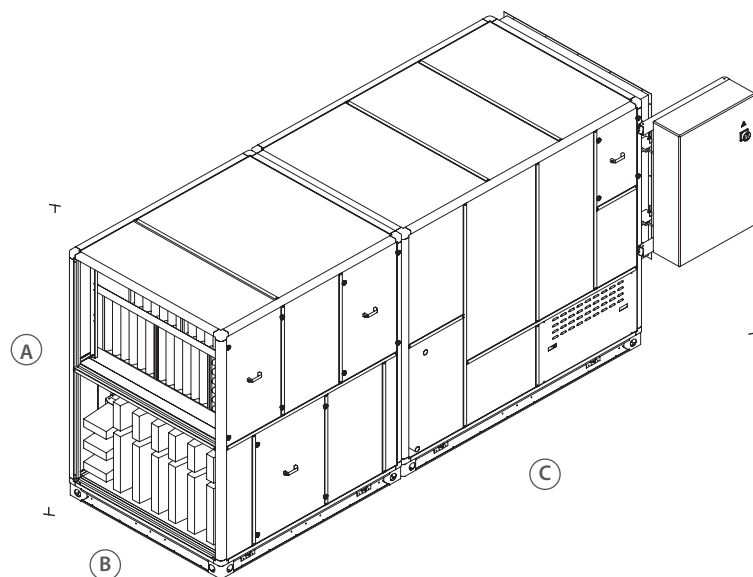
In night time mode the unit modifies the operating settings to adapt to the changes of evaporation from the pool and reduce consumption to the minimum.

Technical data

SPL		025	040	060	100	130
Nominal airflow (supply/extract)	m ³ /h	2.500	4.000	6.300	10.000	13.000
Available pressure (supply/extract)	Pa	400	400	400	400	400
Heat recovery capacity recovered ¹	kW	7,9	12,6	20,4	32,0	41,5
Max heat recovery efficiency ¹	%	80,8	79,3	80,1	79,5	79,4
Refrigerant circuit recovered capacity ¹	kW	7,5	10,5	21,3	31,7	45,7
Total recovered capacity ¹	kW	15,4	23,1	41,6	63,7	87,3
Compressor power input ¹	kW	1,3	1,6	3,7	6,0	8,4
COP ¹	-	11,8	14,4	11,2	10,6	10,4
COP ²	-	3,9	4,0	4,1	4,0	4,1
Total dehumidification capacity ¹	kg/h	15,5	25,2	40,1	63,7	82,7
Supply fan power input	kW	1,6	2,6	3,7	5,9	7,6
Extract fan power input	kW	1,2	1,9	2,7	4,5	5,7
Type / number of compressors	n°			Scroll / 1		
Hot water heating coil (standard)						
Capacity (without recovery active) ¹	kW	26,1	35,4	61,6	95,3	124,5
Water flow rate ³	l/h	2.250	3.050	5.300	8.200	10.700
Water pressure drop ³	kPa	23,5	43,7	33,1	48,8	46,3
Plate heat exchanger R410A/non aggressive water (standard)						
Water flow rate nominal ⁴	l/h	950	1.120	2.500	3.600	5.400
Pressure drop ⁴	kPa	19	19	31	32	33
Plate heat exchanger accessible non aggressive water/pool water (standard)						
Water flow rate nominal pool ⁵	l/h	1.200	1.400	3.100	4.500	6.800
Pressure drop pool side ⁵	kPa	32,4	34	31,4	33	34,5
Pressure drop intermediate circuit side ⁵	kPa	21,2	22,3	20,6	21,6	22,5
Electrical data						
Unit power supply				400 V - 3 ph - 50 Hz		
Maximum total current input supply fan	A	3,5	6,2	11	14,6	15
Maximum total current input extract fan	A	2,6	4,9	6,4	11,3	11,3
Unit maximum current input	A	11,6	17,1	32,4	49,3	61,3
Unit starting current	A	32,1	46,1	91,4	181,9	184,3

- 1 External air 0°C,80% RH; internal air 29°C,60% RH.
2 Values as per conditions of D.M. 7 april 2008 for heating only operation.
3 Water temperature inlet/outlet 70/60°C; water pressure drop including 3 way valve.
4 Water temperature inlet/outlet non aggressive 27/37°C.
5 Water temperature inlet/outlet intermediate circuit 37/27°C; water temperature inlet/outlet pool 25/35°C
Preliminary technical data, subject to modification.

Dimensional data (mm)



SPL			025	040	060	100	130
Height (including base H=120mm)	A	mm	1.765	1.765	2.245	2.405	2.405
Width	B	mm	895	895	1.055	1.375	1.695
Length	C	mm	3.230	3.390	4.190	4.190	4.670
Weight		kg	900	1.000	1.350	2.060	2.600

SPL 160/250

Swimming Pool Lines
Air handling unit
high efficiency for health centres,
Air flow from 16,000 to 25,000 m³/h.

Swimming
Pool Lines

HFC
Refrigerant
R410A



The units from the SPL series represent the ideal solution to guarantee the comfort conditions in medium-large spaces such as health centres, spa areas, fitness centres, swimming pools, sports facilities, etc.

The unit contains a refrigerant circuit and a system for the recovery of sensible and latent heat coming from the humid air extracted from the space, thereby being optimised for the reduction of energy consumption. The main function of the unit, which is a "plug and play" machine ready for use, is that of dehumidifying and at the same time ensuring control of the temperature and humidity conditions of the area served.

The unit is fitted with an efficient heat recovery system on the water side, to be used to partially heat the swimming pool water at no cost.

The structure and all the internal components are built to ensure the **maximum resistance to corrosion**.

Characteristics

VERSIONS

- 3 sizes available.

STRUCTURE:

- Anodised aluminium profile with reinforced nylon corner pieces. Casing made from sandwich type panels (50mm thickness), with internal surface pre-painted galvanised steel, external in pre-painted galvanised steel and insulating material hot injected polyurethane with a density of 42 kg/m³, fixed without screws but with panel locking profiles, doors with keyless handles. This fixing method allows a uniform pressure on the casing, ensuring an excellent resistance to the leakage of air and water. The support structures and the seals around components are completely painted to ensure the maximum corrosion resistance. The bottom surfaces of the unit are fitted with drain panels in pre-painted galvanised steel with a central drain point piped sideways.

THERMAL RECOVERY SECTION:

- High efficiency static cross flow double plate heat exchanger in pre-painted aluminium. Including dampers: recirculating damper used for the quick start up of the space, recirculating damper for the "primary" cycle, dampers on the air inlet and extract. All dampers are manufactured in anodised aluminium and are individually controlled by an external actuator for precise air flow control.

REFRIGERANT CIRCUIT:

- Fitted with scroll compressor supplied with rubber anti-vibration feet, refrigerant gas/air heat exchanger coil with copper tubes and pre-painted aluminium fins and painted frame, filter, electronic expansion valve, liquid receiver, filter drier, controls (pressure transducers and visual indicators) and safeties (high and low pressure pressostats), brazed copper connections, refrigerant charge of environmentally friendly R410A. The refrigerant circuit is installed in a compartment isolated from the air flow to facilitate checks and maintenance.

FAN SECTIONS:

- Treated with epoxy paint resistant to corrosion, fitted with "plug fans" with backward curved impeller of high output. Electrical motor directly coupled to the impeller suitable for inverter control (standard).

FILTRATION SYSTEMS:

- Fitted as standard with panel filters in extract (G4 efficiency class according to EN779) and panel + bag filters (G4 + F9 efficiency class according to EN779) meet the requirements for the applicable standards for indoor air quality. Dirty filter differential pressure switches are provided as standard.

HOT WATER HEATING COIL:

- Water coil with copper tubes and pre-painted aluminium fins and painted frame to heat the supply air after dehumidification, controlled by

a modulating 3 way valve (standard); this allows the accurate control of the supply air temperature. The frame of the coil is in painted galvanised steel to ensure the maximum resistance to corrosion.

ELECTRICAL PANEL:

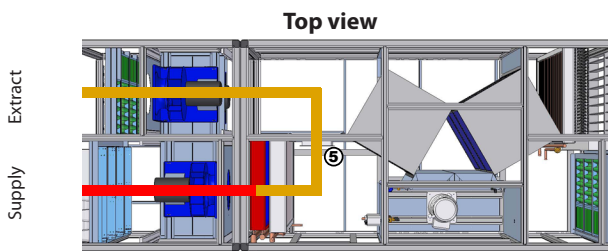
- Power and controls panel unit mounted. Electrical installation for the connection of power and controls, set in tubes or conduits with glands and grommets, IP55 protective rating. Remote panel supplied as standard for the control of all the main functions and display of alarms.

Operating schematics

The principal operation modes of the unit are shown in the example schematics below.

In all the following schematics the hot water coil is always operating because the external air temperature is below 10°C with a required supply air temperature to compensate for the heat losses from the building.

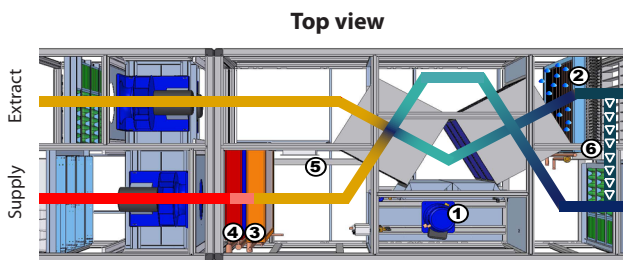
"Start up" cycle



The operating mode is with no external air flow. The whole air flow is recirculated through damper 5 and returned to the pool area. The hot water coil is operational. The "start up cycle" is activated for the time necessary to heat up the area

"Dehumidification" cycle

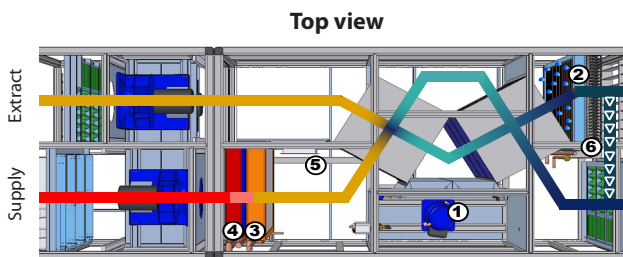
Dehumidification with external air



The operating mode is with external air dehumidifying the space, compensating for evaporation from the pool. The refrigerant circuit (consisting of the compressor 1 and the coils 2 and 3) allows the sensible and latent heat recovery of the extracted air to be transferred to the supply air or the water, through the thermal heat exchange consisting of the double heat exchanger on the water side.

The hot water coil 4 supplements, if necessary, the heating capacity provided by the refrigerant circuit, placed downstream of the entering air flow (condensing coil 3).

Dehumidification with external air and primary cycle

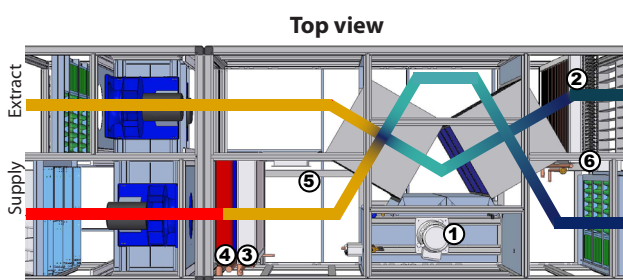


When required the compressor also assists in the dehumidification of the pool area.

The supply air flow is modulated by the fan inverter to reach the required hygrometric conditions.

As a function of the external ambient temperature the unit modifies the operating mode to achieve the best efficiency possible.

Dehumidification with external air (night cycle)



In night time mode the unit modifies the operating settings to adapt to the changes of evaporation from the pool and reduce consumption to the minimum.

Technical data

SPL		160	200	250
Nominal airflow (supply/extract)	m ³ /h	16.000	20.000	25.000
Available pressure (supply/extract)	Pa	400	400	400
Heat recovery capacity recovered ¹	kW	59,6	68,6	89,2
Max heat recovery efficiency ¹	%	93	86	89
Refrigerant circuit recovered capacity ¹	kW	46,3	53,6	69,4
Total recovered capacity ¹	kW	105,9	122,2	158,6
Compressor power input ¹	kW	8,5	9,2	12,8
COP ¹	-	12,5	13,3	12,4
COP ²	-	4,0	3,9	3,9
Total dehumidification capacity ¹	kg/h	102,2	127,6	159,5
Supply fans power input	kW	10,9	13,7	17,7
Extract fans power input	kW	8,3	9,8	12,4
Type / number of compressors	n°		Scroll / 1	
Hot water heating coil (standard)				
Capacity (without recovery active) ¹	kW	131,9	182,7	205,9
Water flow rate ³	l/h	11.300	15.700	17.700
Water pressure drop ³	kPa	43,7	37,9	42,2
Plate heat exchanger R410A/non aggressive water (standard)				
Water flow rate nominal ⁴	l/h	5.760	6.450	8.260
Pressure drop ⁴	kPa	33	33	33
Plate heat exchanger accessible non aggressive water/pool water (standard)				
Water flow rate nominal pool ⁵	l/h	7.200	8.100	10.400
Pressure drop pool side ⁵	kPa	34,2	34,7	34,2
Pressure drop intermediate circuit side ⁵	kPa	22,3	22,7	22,2
Electrical data				
Unit power supply			400 V - 3 ph - 50 Hz	
Maximum total current input supply fans	A	29,2	41	42
Maximum total current input extract fans	A	22	22,6	30
Unit maximum current input	A	86,2	99,6	123
Unit starting current	A	209	223	287

1 External air 0°C,80% RH; internal air 29°C,60% RH.

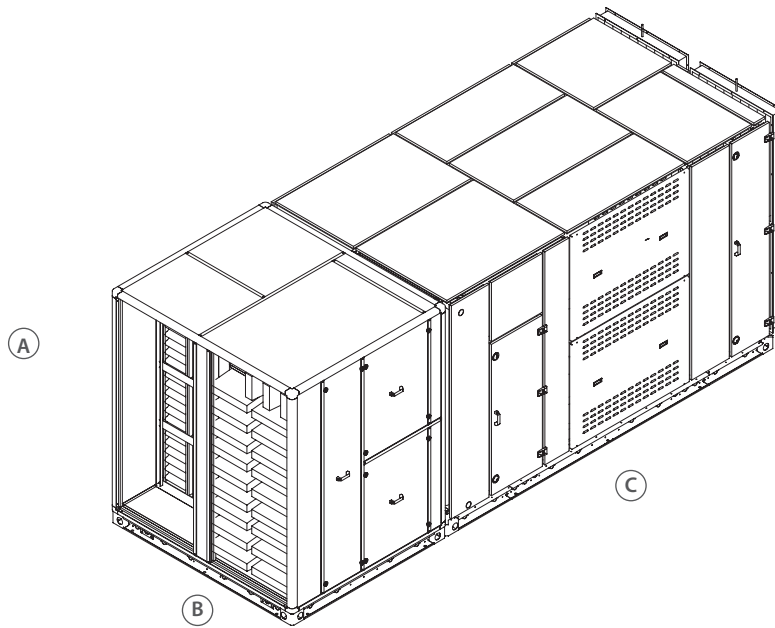
2 Values as per conditions of D.M. 7 april 2008 for heating only operation.

3 Water temperature inlet/outlet 70/60°C; water pressure drop including 3 way valve.

4 Water temperature inlet/outlet non aggressive 27/37°C.

5 Water temperature inlet/outlet intermediate circuit 37/27°C; water temperature inlet/outlet pool 25/35°C
Preliminary technical data, subject to modification.

Dimensional data (mm)



SPL			160	200	250
Height	A	mm	2.085	2.405	2.405
Width	B	mm	2.015	2.175	2.335
Length	C	mm	5.790	5.790	6.430
Weight		kg	2.780	3.250	3.580