Ventilation technology
for industry and trade

Resolair 65 26 01 - simplified illustration

Automatically selects the most economical operating mode!

Resolair

Resolair 65

AIR VOLUME FLOW: 10,000 – 40,000 m³/h

At a glance:

- **For heat and cooling recovery**
- **Over 90% temperature efficiency thanks to highly sensitive heat storage packages**
- **Energy efficiency class H1 according to EN 13053:2012**
- **Energy-saving EC fans**
- **Compact design**
- **Humidity recovery up to 70%**
- **Integrated control and regulation system, compatible with all conventional building management systems**
- **Ideal for retrofitting**

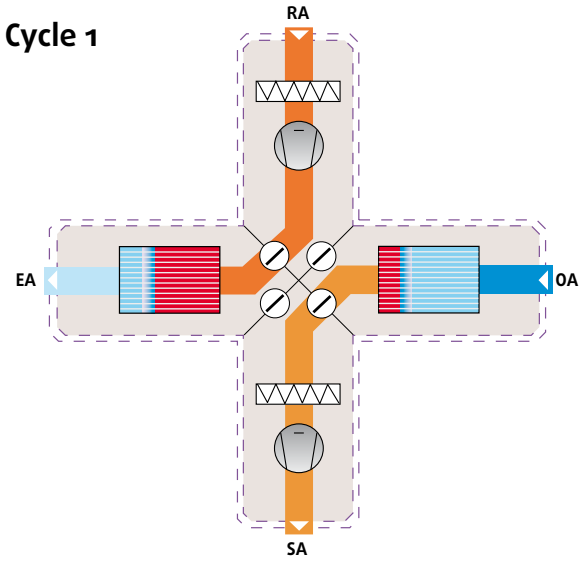
Units in the 65 series use a regenerative heat recovery system to achieve the highest heat recovery efficiency with low internal pressure losses. The system was specially developed for industrial purposes, for outdoor installation. Its unique construction makes it ideal for retrofitting, as the effort for installation is reduced to the supply of electrical power to the unit and the generally very short supply and return air ducts. The combination of first-class components with precise control and regulation systems guarantees economical operation at all times.

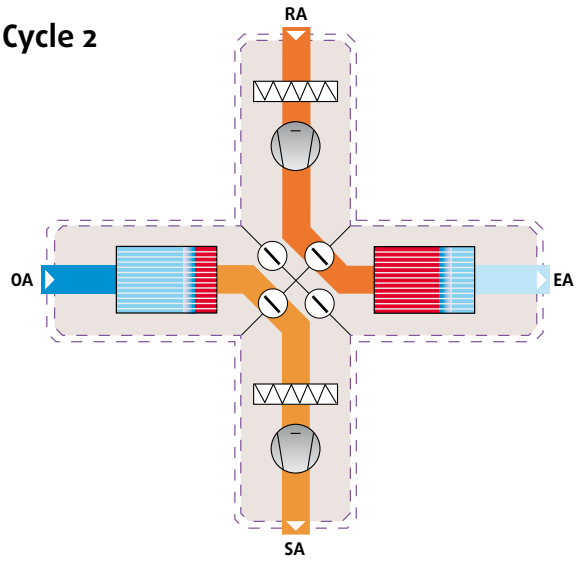
Further performance parameters and options:

- Filtering the air in any operating mode
- Integrated bypass function
- Individually controllable performance parameters
- Complete unit, ready to connect, contains all structural elements for air conditioning, including all control and regulation fittings
- Intensive quality inspection with factory test run
- Outdoor installation

Options
- Pumped hot water heating coil
- Pumped chilled water cooling coil
- Attenuator
- Remote maintenance
- And many more

Functional description





The unit contains two heat storage packets with highly sensitive accumulator mass, through which the outside and return air are transported alternately. The accumulator mass is capable of capturing heat from a warm air flow very rapidly and transferring this just as rapidly to the cold air flow.

In the middle of the unit there is a cross-shaped damper system which allows alternating loading of the heat accumulators. The fans in the return air and supply air sections simultaneously supply cold outside air through one packet and warm return air through the other. One packet stores the heat from the return air, which the other packet simultaneously discharges stored heat into the outside air.

The temperature efficiency of the Menerga regenerative energy exchanger is over 90%. Thus the unit obtains virtually all the heat energy back from the return air. This means that an additional supply air heating coil is not needed and the internal heat load covers the transmission heat loss.

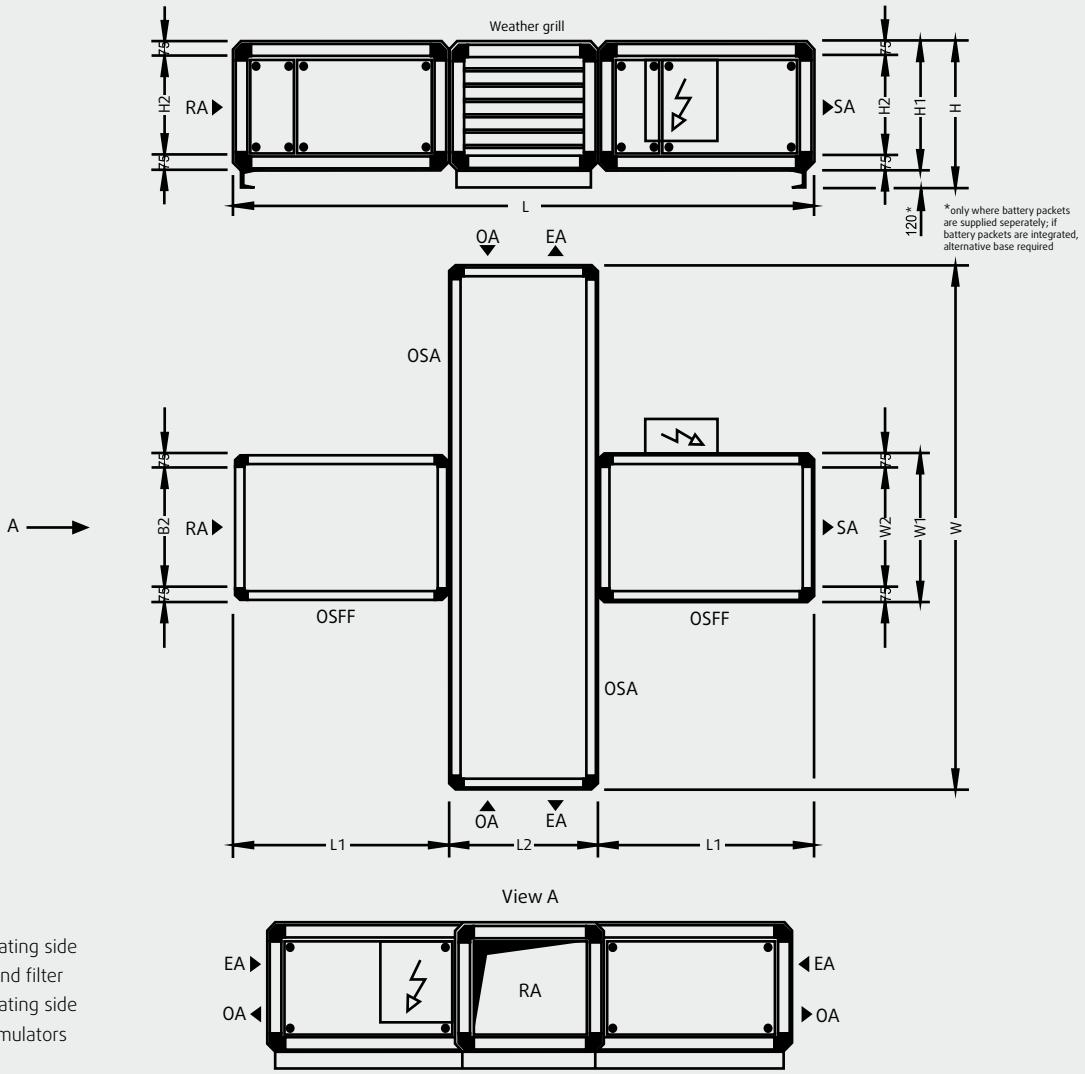
Despite the very high heat recovery efficiency of the Resolair series, the regenerative heat recovery system used requires no defrost mode. The heating capacity normally needed is not required in this case.

In wintertime conditions, the humidity recovery of the regenerative heat recovery system is up to 70%, which in most applications makes an additional humidification of the supply air obsolete in wintertimes.

Where OA temperatures are rising, variable alteration of the switching cycles allows heat recovery to be reduced all the way down to free cooling. If the outside temperatures exceed the indoor temperature, the unit switched back into the basic cycle and then operates in “cooling recovery mode” with the same high degree of efficiency as for heat recovery.

Resolair Type 65

System dimensions and weights



OSFF = Operating side fan and filter

OSA = Operating side accumulators

Unit type	L	W [1]	H	L1	L2	B1	B2	H1	H2	Weight	Weight battery packets	Weight fan cube
65 07 91	4,110	3,700	1,170	1,530	1,050	1,050	900	1,050	900	2,300	700	480
65 17 91	5,390	4,340	1,490	1,850	1,690	1,690	1,540	1,370	1,220	4,550	1,600	660
65 26 91	6,030	4,660	1,810	2,010	2,010	2,010	1,860	1,690	1,540	6,100	2,000	1,000
65 36 91	6,030	4,980	2,130	1,850	2,330	2,330	2,180	2,010	1,860	8,050	4,700	1,200

Largest transportation unit (accumulator/ damper cube)

Unit Type	L	W	H	Weight
65 07 91	1,050	3,700	1,170	1,540
65 17 91	1,690	4,340	1,490	3,160
65 26 91	2,010	4,660	1,810	3,900
65 36 91	2,330	4,980	2,130	5,560

Controls cabinet

Unit Type	H x W x D	Position
65 07 91	760 x 760 x 300	At unit
65 17 91	760 x 760 x 300	At unit
65 26 91	760 x 760 x 300	At unit
65 36 91	1,000 x 800 x 300	At unit

For service work, a clearance corresponding to dimension W is required on the operating side of the unit. If dimension W is smaller than one metre, please leave a clearance of one metre.

Please comply with the dimensions for body size, air duct connections and electrical switch cabinet.

All lengths are given in mm, weights in kg, weight incl. Controls cabinet.

1 Door fitting assembly increase unit width by 25 mm each operating side

Technical specifications and services

Unit Type		65 07 91	65 17 91	65 26 91	65 36 91
Max. flow rate	m^3/h	10,000	20,000	30,000	40,000
Heat recovery efficiency [1]	%	over 90			
"Cooling recovery system" [2]	kW	15.9	32.0	48.8	63.9
Coefficient of power efficiency according to EN 13053:2012	%	88	89	89	89
Recovery of humidity	%	up to 70			
Total electrical power rating[3]	kW	7.37	12.74	18.54	24.48
Current consumption [3]	A	16.8	33.6	43.8	67.2
Operating voltage		3 / N / PE 400 V 50 Hz			
Ext. pressure loss					
Supply air	Pa	200	150	190	160
Return Air	Pa	200	150	190	160
Sound power level [4]					
Supply air vent	dB(A)	76	78	79	80
RA connection	dB(A)	76	78	76	82
Outside air vent	dB(A)	76	79	76	83
EA connection	dB(A)	77	81	82	84
Acoustic pressure at a distance of 1 m from the device[4]	dB(A)	59	62	63	64
Fan units					
Rated fan input for supply air [5]	kW	3,63	6,28	9,15	12,08
Rated fan input for return air [5]	kW	3,74	6,46	9,39	12,40
SFP category supply air | return air		3 | 3	3 | 3	3 | 3	3 | 3
Nominal rating supply air | return air	kW	5,5 | 5,5	11,0 | 11,0	14,1 | 14,1	22,0 | 22,0
Efficiency classes according to EN 13053:2012					
Heat recovery class		H1	H1	H1	H1
Power consumption of fans SA | RA		P1 | P1	P1 | P1	P1 | P1	P1 | P1
Filtration according to DIN EN 779					
Outside air		G4			
Return Air		G4			
LPHW (optional) [6]					
Heating capacity SA=22°C [7]	kW	7.1	14.9	24.2	30.3
Heating capacity SA=30°C [7]	kW	34.0	68.3	105.3	136.6
Additional power consumption supply air [5]	W	520	540	600	1,080
Water flow rate and pressure losses					
LPHW	m^3/h | kPa	2.79 | 4.9	5.58 | 4.0	7.38 | 4.0	8.84 | 4.0
LPHW (pump warm water) valve	m^3/h | kPa	0.75 | 8.9	1.58 | 6.3	2.38 | 5.7	3.30 | 4.2
Connections					
LPHW connection	DN	32	50	65	65
LPHW control valve connection	DN	15	20	25	32
LPCW (optional) [6]					
Cooling capacity SA ≈ 18°C [2, 8]	kW	35.7	79.5	119.1	157.6
Additional power consumption supply air [5]	W	800	1,160	1,260	2,000
Water flow rate and pressure losses					
LPCW	m^3/h | kPa	5.61 | 7.6	12.89 | 8.3	19.33 | 6.9	24.26 | 4.3
LPCW valve	m^3/h | kPa	5.61 | 12.3	12.89 | 10.4	19.33 | 9.4	24.26 | 5.9
Connections					
LPCW connection	DN	40	65	80	80
LPCW control valve-connection	DN	25	50	50	50

Specifications of technical data relate to the max. flow rate and return air condition 22°C / 40% r.h., outside air condition -12°C / 90% r.h. and an altitude height of zero metres above sea level, unless otherwise specified

1 Depends on operating condition
2 at OA = 32°C / 40% r.h., RA = 26°C / 55% r.h.
3 dependent on configuration of measurement and control system/unit
4 at 250 Hz mid-band frequency
5 with average filter contamination
6 Note higher power consumption of SA fan units; deviating max. flow rate if no optional flow rate control system is selected. Note changes in device dimensions
7 FL = 70°C
8 FL = 6°C

Please seek approval of technical data and specifications prior to start of the planning process.