

Comfort air conditioning unit with highly efficient regenerative heat storage packages



Resolair 62 26 01 - simplified illustration



Automatically selects the most economical operating mode!

Resolair

Resolair 62 and 66

AIR VOLUME FLOW: 1,200 – 4,300 m³/h

At a glance:

- ▶ **For heat and cooling recovery**
- ▶ **Over 90% temperature efficiency**
- ▶ **Energy efficiency class H1 according to EN 13053:2012**
- ▶ **Corrosion-free heat storage packages made from polypropylene for more compact and lighter units**
- ▶ **Energy-saving EC fans**
- ▶ **Integrated compressor refrigeration system (66 series)**
- ▶ **Compact design**
- ▶ **Humidity recovery up to 70%**
- ▶ **Integrated control and regulation system, compatible with all conventional building management systems**
- ▶ **Fulfils the requirements of VDI 6022**

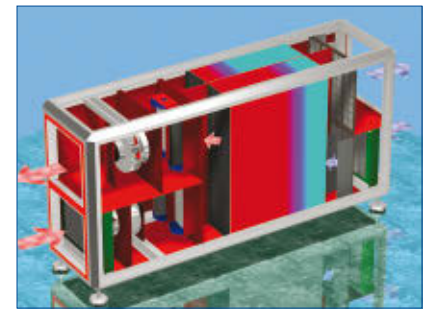
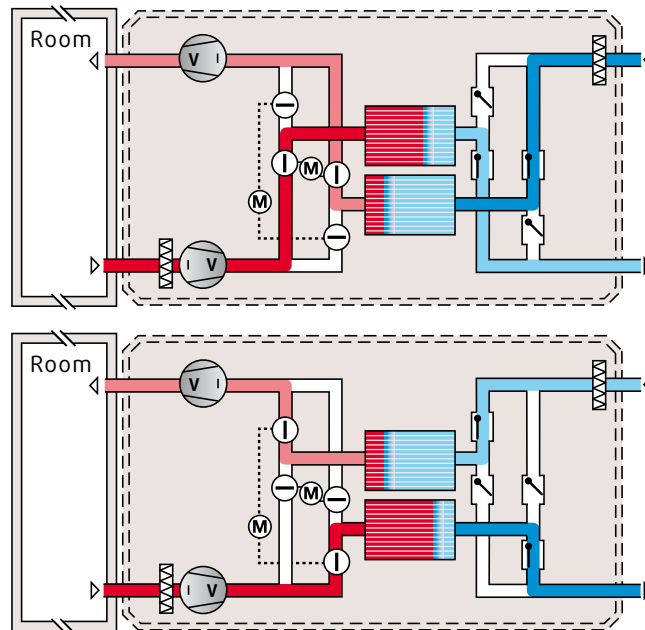
Units in the Resolair 62 and 66 series use a regenerative heat recovery system to achieve the highest heat recovery efficiency with low internal pressure losses. These are characterised by both high thermal and high electrical efficiency and are therefore appropriate for a wide range of comfort air conditioning applications. The combination of first-class

components with precise control and regulation systems guarantees economical operation at all times, while ensuring the highest degree of comfort air conditioning. A compressor refrigeration system integrated into the 66 series increases the cooling capacity of the overall system at high temperatures.

Further performance parameters and options:

- | | |
|--|---|
| <ul style="list-style-type: none"> - Filtering the air in any operating mode - Heat recovery bypass - Individually controllable performance parameters - Complete unit, ready to connect, contains all structural elements for comfort air conditioning, including all control and regulation fittings - Intensive quality inspection with factory test run | <p>Options</p> <ul style="list-style-type: none"> - Recirculation air heating damper - Pumped hot water heating coil - Pumped chilled water cooling coil (62 series) - Reversible compressor refrigeration system (66 series) - Outdoor installation - Thermal bridge factor TB1 - Remote maintenance - And many more |
|--|---|

Functional description



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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 able to capture heat from a warm air flow very rapidly and transferring this just as rapidly to the cold air flow.

There is a damper system installed upstream and downstream of the packets. The damper system at RA/SA side is actuated by electric motors, while the damper system at OA/EA side operates dynamically.

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

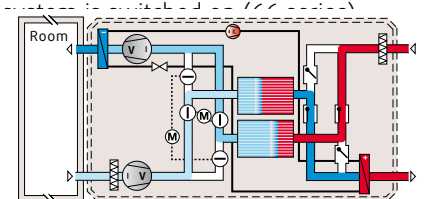
stored heat into the outside air. The temperature efficiency of the regenerative energy exchanger is over 90%. Thus the unit obtains virtually all the heat energy back from the return air. This means that an additional supply air heating coil is not needed and the internal heat load covers the transmission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

Where outside air temperatures are rising, variable alteration of the switching cycles allows heat recovery to be reduced all the way down to free cooling.

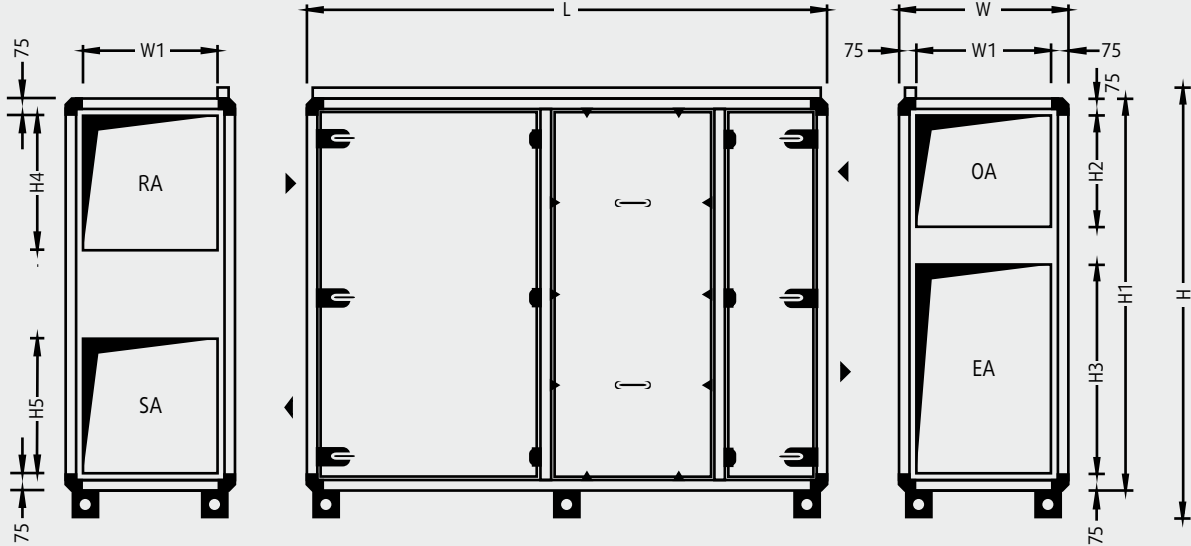
If the outside temperatures exceed the indoor temperature, the unit switches back into the basic cycle and then operates in "cooling recovery mode" with the same high degree of efficiency as for heat recovery.

For the removal of higher internal heat loads at high outside air temperatures the integrated compressor refrigeration system is activated.



Resolair Type 62

System dimensions and weights



Important! Where a system is operated in parallel, the supply air and return air ducts of the two units have to be brought together.

Where units are run in parallel, each unit has a controls cabinet.
Mirror-image design possible.

Unit feet 100 mm
Optional: adjustable feet from 100 to 120 mm

Unit Type	L	W ¹	H ²	W1	H1	H2	H3	H4	H5	Weight
62 12 01	2,010	570	1,210*	420	1,050	325	420	325	420	410
62 18 01	2,170	730	1,530*	580	1,370	485	580	485	580	550
62 26 01	2,330	730	1,850	580	1,690	485	900	580	580	600
62 36 01	2,330	1,050	1,850	900	1,690	485	900	580	580	810

Controls cabinet

Unit Type	H x W x D	Position at unit
62 12 01	480 x 640 x 210	on top of unit
62 18 01	480 x 640 x 210	on top of unit
62 26 01	900 x 480 x 210	OA/EA side
62 36 01	900 x 480 x 210	OA/EA side

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. For service work above the unit, please allow 50 mm working height clearance above the cable duct.

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

Partitioning of unit for smaller apertures possible (at extra cost).

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
- 2 Height incl. 100 mm unit feet and 60 mm cable duct
- * Controls cabinet arranged on top of unit, please add controls cabinet height (480 mm).

Technical specifications and services

Unit Type		62 12 01	62 18 01	62 26 01	62 36 01
Optimum flow rate	m ³ /h	1,200	1,800	2,600	3,600
Max, volume flow rate	m ³ /h	1,400	2,100	3,100	4,300
Heat recovery efficiency ¹	%	over 90			
"Cooling recovery system" ²	kW	1.9	2.8	4.1	5.7
Coefficient of power efficiency according to EN 13053:2012	%	90	90	90	90
Recovery of humidity	%	up to 70			
Total electrical power rating ³	kW	0.24	0.57	0.63	0.86
Current consumption ³	A	2.7	6.0	6.0	6.0
Operating voltage		1 / N / PE 230 V 50 Hz		3 / N / PE 400 V 50 Hz	
Ext, pressure loss					
Supply and fresh air channel	Pa	300	300	300	300
Return and exhaust air channel	Pa	300	300	300	300
Sound power level ⁴					
Supply air vent	dB(A)	70	70	69	68
RA connection	dB(A)	65	65	64	63
Outside air vent	dB(A)	58	58	57	56
EA connection	dB(A)	63	63	62	61
Acoustic pressure at a distance of 1 m from the device ⁴	dB(A)	51	51	50	49
Fan units					
Rated fan input for supply air ⁵	kW	0.35	0.63	0.83	1.09
Rated fan input for return air ⁵	kW	0.36	0.65	0.86	1.12
SFP category supply air return air		2 2	3 3	3 3	2 2
Nominal rating supply air return air	kW	0.7 0.7	1.4 1.4	2.5 2.5	2.0 2.0
Efficiency classes according to EN 13053:2012					
Heat recovery class		H1	H1	H1	H1
Power consumption of fans SA RA		P1 P1	P2 P2	P1 P1	P1 P1
Air velocity class		V1	V1	V1	V1
Filtration according to DIN EN 779					
Outside air				F7	
Return Air				F7	
LPHW (optional) ⁶					
Heating capacity SA=22°C ⁷	kW	0.9	1.1	1.8	2.6
Heating capacity SA=30°C ⁷	kW	4.1	5.9	8.8	12.2
Additional power consumption for supply air ⁵	W	40	30	60	60
Water flow rate and pressure losses					
LPHW	m ³ /h kPa	0.25 5.5	0.50 5.4	0.51 5.4	0.50 7.2
LPHW (pump warm water) valve	m ³ /h kPa	0.10 6.6	0.15 5.5	0.23 5.3	0.28 7.8
Connections					
LPHW connection	DN	32	32	32	32
LPHW control valve connection	DN	10	10	10	10
LPCW (optional) ⁶					
Cooling capacity SA ≈ 17°C ⁸	kW	5.9	9.2	11.8	19.6
Additional power consumption for supply air ⁵	W	220	40	100	100
Water flow rate and pressure losses					
LPCW	m ³ /h kPa	0.85 7.5	1.31 2.8	1.68 4.4	2.80 13.0
LPCW valve	m ³ /h kPa	0.85 11.5	1.31 10.8	1.68 7.1	2.80 19.7
Connections					
LPCW connection	DN	32	32	32	32
LPCW control valve-connection	DN	15	20	25	25

Specifications of technical data relate to the optimum 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 Supplementary equipment, device length extend at least 410 mm. Note higher power consumption of SA fan units

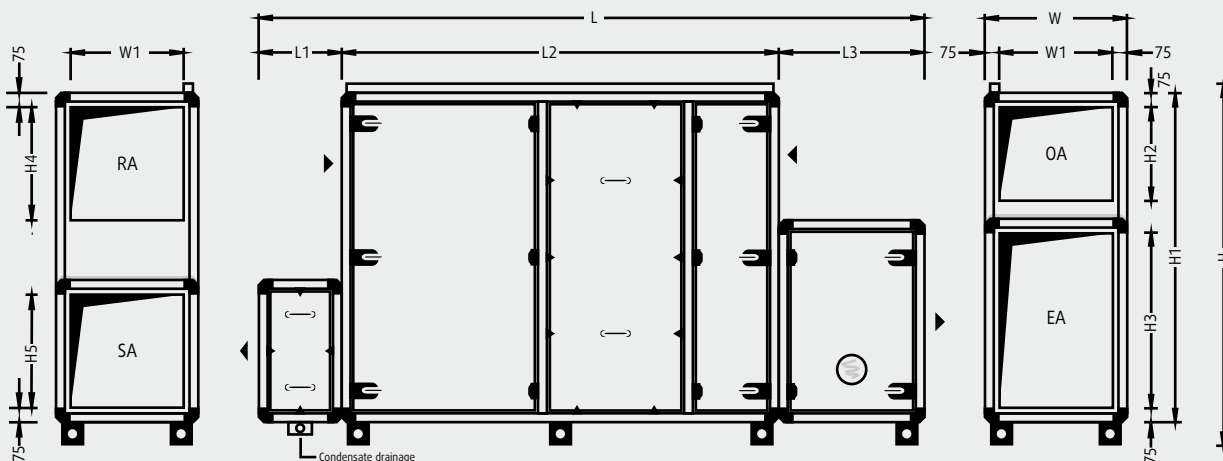
7 FL = 70°C

8 FL = 6°C

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

Resolair Type 66

System dimensions and weights



Important! Where a system is operated in parallel, the supply air and return air ducts of the two units have to be brought together.

Where units are run in parallel, each unit has a controls cabinet.

Unit feet 100 mm
Optional: adjustable feet from 100 to 120 mm

Mirror-image design possible

Unit Type	L	W ¹	H ²	L1	L2	L3	W1	H1	H2	H3	H4	H5	Weight
66 18 01	3,310	730	1,530	410	2,170	730	580	1,370	485	580	485	580	790
66 26 01	3,470	730	1,850	410	2,330	730	580	1,690	485	900	580	580	850
66 36 01	3,470	1,050	1,850	410	2,330	730	900	1,690	485	900	580	580	1,100

Controls cabinet

Unit Type	H x W x D	Position
66 18 01	1,120 x 640 x 210	Wall mounting
66 26 01	1,120 x 640 x 210	Wall mounting
66 36 01	1,120 x 640 x 210	Wall mounting

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. For service work above the unit, please allow 50 mm working height clearance above the cable duct.

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

Partitioning of unit for smaller apertures possible (at extra cost).

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

- Door fitting assembly increase unit width by 25 mm each operating side.
Refrigerant pipe duct on backside of the unit increases unit width by 80 mm.
- Height incl. 100 mm unit feet and 60 mm cable duct

Technical specifications and services

Unit Type		66 18 01	66 26 01	66 36 01
Optimum flow rate	m ³ /h	1,800	2,600	3,600
Max. volume flow rate	m ³ /h	2,100	3,100	4,300
Heat recovery efficiency ¹	%	over 90		
"Cooling recovery system" ²	kW	2.8	4.1	5.7
Coefficient of power efficiency according to EN 13053:2012	%	90	90	90
Recovery of humidity	%	up to 70		
Total electrical power rating ³	kW	4.07	6.19	7.92
Current consumption ³	A	20.8	18.0	21.6
Operating voltage		3 / N / PE 400 V 50 Hz		
Ext. pressure loss				
Supply and fresh air channel	Pa	300	300	300
Return and exhaust air channel	Pa	300	300	300
Sound power level ⁴				
Supply air vent	dB(A)	70	70	66
RA connection	dB(A)	66	65	63
Outside air vent	dB(A)	61	61	57
EA connection	dB(A)	64	63	61
Acoustic pressure at distance of 1 m from device ⁴	dB(A)	53	53	50
Fan units				
Rated fan input for supply air ⁵	kW	0.70	1.00	1.27
Rated fan input for return air ⁵	kW	0.67	0.89	1.15
SFP category supply air return air		3 3	3 3	3 2
Nominal rating supply air return air	kW	1.4 1.4	2.5 2.5	2.0 2.0
Compressor refrigeration system				
Filling volume for refrigerant type R410A	kg	4.0	4.5	5.5
Rated compressor input	kW	2.7	4.3	5.5
Mechanical cooling capacity ^{2,6}	kW	8.5	12.6	23.1
Energy Efficiency Ratio ⁷	EER	4.2	3.9	5.2
Efficiency classes according to EN 13053:2012				
Heat recovery class		H1	H1	H1
Power consumption of fans SA RA		P2 P2	P1 P1	P1 P1
Air velocity class		V1	V1	V1
Filtration according to DIN EN 779				
Outside air			F7	
Return Air			F7	
LPHW (optional) ⁸				
Heating capacity SA=22°C ⁹	kW	1.1	1.7	2.5
Heating capacity SA=30°C ⁹	kW	5.9	8.7	12.2
Additional power consumption supply air ⁵	W	20	60	50
Water flow rate and pressure losses				
LPHW	m ³ /h kPa	0.50 5.4	0.50 5.3	0.50 7.3
LPHW (pump warm water) valve	m ³ /h kPa	0.15 5.4	0.23 5.1	0.28 7.8
Connections				
LPHW connection	DN	32	32	32
LPHW control valve connection	DN	10	10	10

Specifications of technical data relate to the optimum 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
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- 3 dependent on configuration of measurement and control system/unit

- 4 at 250 Hz mid-band frequency
- 5 with average filter contamination
- 6 at SA ≈ 17°C
- 7 incl. "cooling recovery"
- 8 Supplementary equipment, device length extend 320 mm. Note higher power consumption of SA fan units.
- 9 FL = 70°C

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