

RotorLine

For over 15 years, the most proven and efficient method of heat and moisture recovery.





**A healthy and
comfortable
indoor climate**

with the Ned Air RotorLine

Made in Holland

Ned Air is an innovative company specializing in air treatment technology. For more than 30 years, we have been designing and manufacturing air handling units for many sectors. We accomplish this with a team of experts at our production site in Kampen.

The RotorLine is an air handling unit equipped with the latest energy-saving heat wheels. These wheels can recover both heat and recuperation, resulting in significant savings.

Are you considering the switch to an all-electric working environment? Then the RotorLine is ideally suited for you, as it can be equipped with electric heat pumps. It can be equipped with electric heat pumps.

The RotorLine consists of 8 models with air volumes varying between 2,400 and 44,000 m³/h.

Numerous custom options are also available. All technical data can be found further in this brochure.





RotorLine

in a nutshell

Fresh air for everyone—that's Ned Air's mission. That's why we've been producing and supplying air treatment systems to sectors such as education, utilities, industry, agriculture and maritime.

The RotorLine is a series of energy-efficient air handling units with heat and humidity recovery, featuring the following:

- Equipped with energy saving heat wheels
- Numerous options, including heaters, chillers, air dampers and built-in controls
- Low Total Cost of Ownership
- Plug & Play
- Energy investment deduction possible
- ErP compliant

Attractive design

Robust and durable

The robust housing of the RotorLine consists of 40 mm thick sandwich panels made of Sendzimir-galvanized steel with a plastic coating. The panels are fitted with environmentally friendly and fire-resistant insulation, contributing to high thermal insulation and additional acoustic damping.

The design of the RotorLine is tailored to meet the current ErP requirements. This means that the dimensions of the cabinets have been optimized to reduce air velocity, resulting in the lowest possible energy consumption and achieving a long lifetime for components.



Newest generation of heat wheels

The RotorLine can be equipped with 3 types of heat wheels. Each heat wheel is positioned with one half in the supply air and the other half in the return air. As the wheel rotates, it transfers heat and moisture from the return air to the supply air, and vice versa, making it suitable for both heat and moisture recovery.

The 3 types of heat wheels are:

Condensing wheel

Primarily designed for sensible heat recovery, this wheel has a lower efficiency for moisture recovery.

Sorption wheel

Characterized by higher efficiency in both heat and moisture recovery.

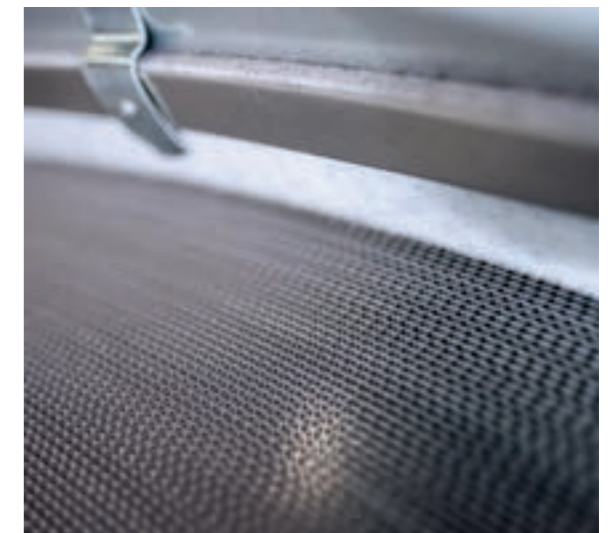
Enthalpy wheel

Combining features of the condensing and sorption wheels, this wheel offers average efficiency in both heat and moisture recovery.



Heat wheels are standardly equipped with sealing strips to prevent air leakage. The aluminum fins of the heat wheels are optimized in terms of shape and thickness in order to achieve the highest possible efficiency.

As a result, the wheels exceed the ErP requirements by a wide margin.



Robust housing

The casing of the RotorLine consists of 44 mm thick sandwich panels. The panels are made of Sendzimir steel with a plastic coating and are filled with insulation material. These sturdy panels create an airtight cabinet. The RotorLine features hinged doors with an “elevator & turn” closing mechanism.

Optional removable panels (inspection hatches) can be installed, also equipped with handles. Removable panels are useful when the cabinet is placed in

a small place and there is insufficient room to open hinged doors. In either case, all functions are easily accessible for maintenance and inspection. The panels are insulated with environmentally friendly and fire-resistant rock wool. The high thermal insulation value of the stone wool prevents condensation and energy loss. Additionally, the insulation is moisture-resistant, making it insensitive to microorganisms. In addition, the insulation material provides additional acoustic damping.

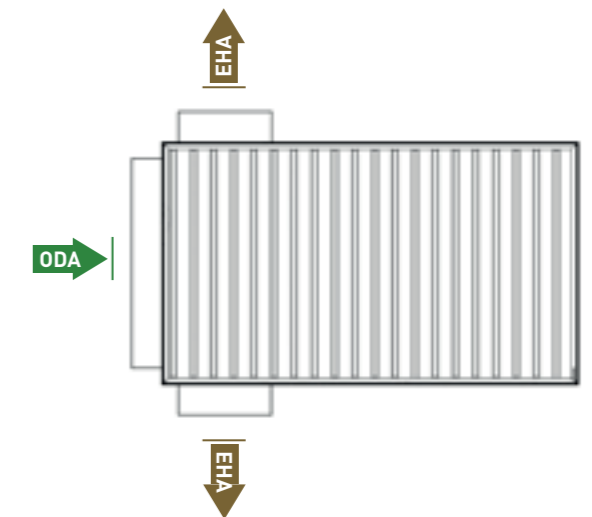




Solid outdoor arrangement

The eight RotorLine models are available in both indoor and outdoor installations. Outdoor installations are equipped with droplet eliminators and roof sheeting. Below is the schematic view of a RotorLine outdoor setup. Outdoor installations have standard connections on both ends and sides.

Top view



Front view



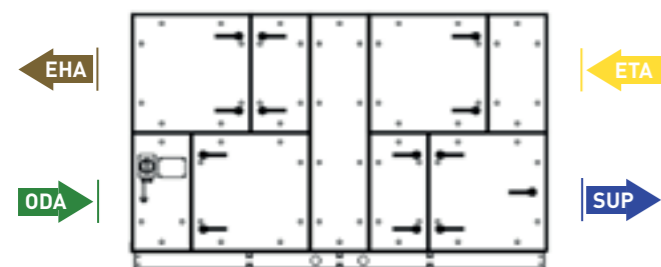
Tight indoor arrangement

The indoor installation differs from the outdoor installation in the way it is connected and are executed without roof sheeting and drip traps. In the indoor installation, the connections are placed on the side. Below are schematic representations of the indoor installation.

Top view



Side view / top view



Wide choice of additional components

The RotorLine can be equipped with numerous additional components, allowing you to configure the air handling unit to your specific needs. In this way you can configure the air handling unit to your specific needs. To provide you with an overview of the possibilities, you will find detailed information on these pages. If you have additional requirements, please contact the sales department. They will be happy to assist you.



Air filters keep supply and return air clean. Ned Air offers a wide range of premium air filters, ensuring there's always a suitable solution for every specific application.



The **silencers** or coulisse dampers help maintain the noise levels produced by the air handling unit within the desired standards.



A **heater** or reheater warms the air to a desired temperature, either electrically or with water.



With **air valves**, air flows to and from outside can be completely shut off.

A RotorLine 17 C Outdoor Installation



A **plenum section** is an empty space that can function as an expansion section or recessed section for components supplied by third parties.

A **cooling coil** or **cold water coil** cools the air flowing through the air handling system.

A **cooling battery** DX has the same function as a water-based cooling battery but uses a refrigerant as the cooling medium.

A **Changeover battery** can both cool and heat. This battery can operate using water, but is also available in DX, meaning it can use with a refrigerant.

Accessories

In addition to the many components that we can add to your unit, we can also supply a variety of smaller accessories. Most of these accessories can be found on these pages. A complete overview of accessories is available in the technical documentation of the RotorLine.



Sight glass: allows for quick inspection of the interior of the air handling unit without the need to open it.



Extra set of filters: handy for replacement when the current filters are due for replacement.



Differential pressure switch: effective measuring instrument to assess if there is a differential pressure across the filter and whether filters need replacement.



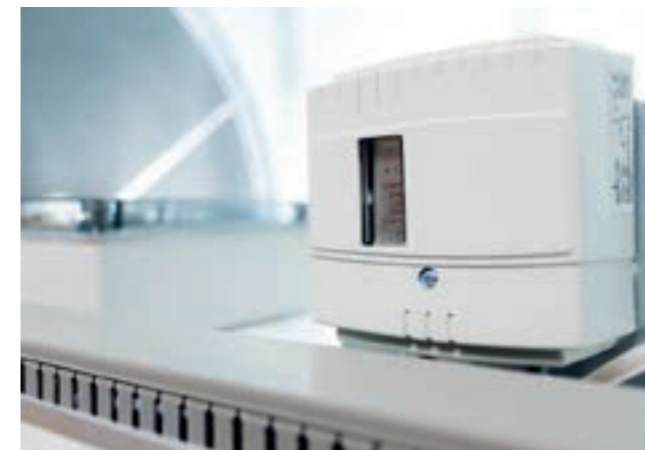
Touchscreen: for optimal ease of operation.



Balsifon: allows condensation water from the air handling unit directly into the sewer.



Stainless steel sheet metal housing: hygienic and sleek in appearance.



Frost thermostat: used for measuring the battery temperature.

Other accessories include:

- Vibration mats
- CO₂ -sensor
- Electronic pressure transmitter
- Web-based controller
- Another cabinet color or coating

All-electric within reach

Many installers, when purchasing an air handler for a cabinet with included heat pumps, find the following advantages over connection to existing central heating systems:

1. A Step toward all-electric:

While central heating systems still run on gas, the heat pumps supplied with the RotorLine can run on electricity. This is ideal if you want to detach your building from gas. Heat pumps are then the perfect choice.

2. Saving time and materials:

An air handling unit with heat pumps no longer needs to be connected to existing central heating systems or cooling machines.

3. One point of contact during commissioning:

Because the air handling units and heat pumps are delivered on the same frame, there is only one installer responsible for commissioning the system.

4. Sustainable:

Electric heat pumps do not emit any CO₂ and do not use fossil fuels.

5. Higher energy label:

The application of heat pumps contributes to a higher energy label and lower energy consumption.



Control technology

Full freedom of choice

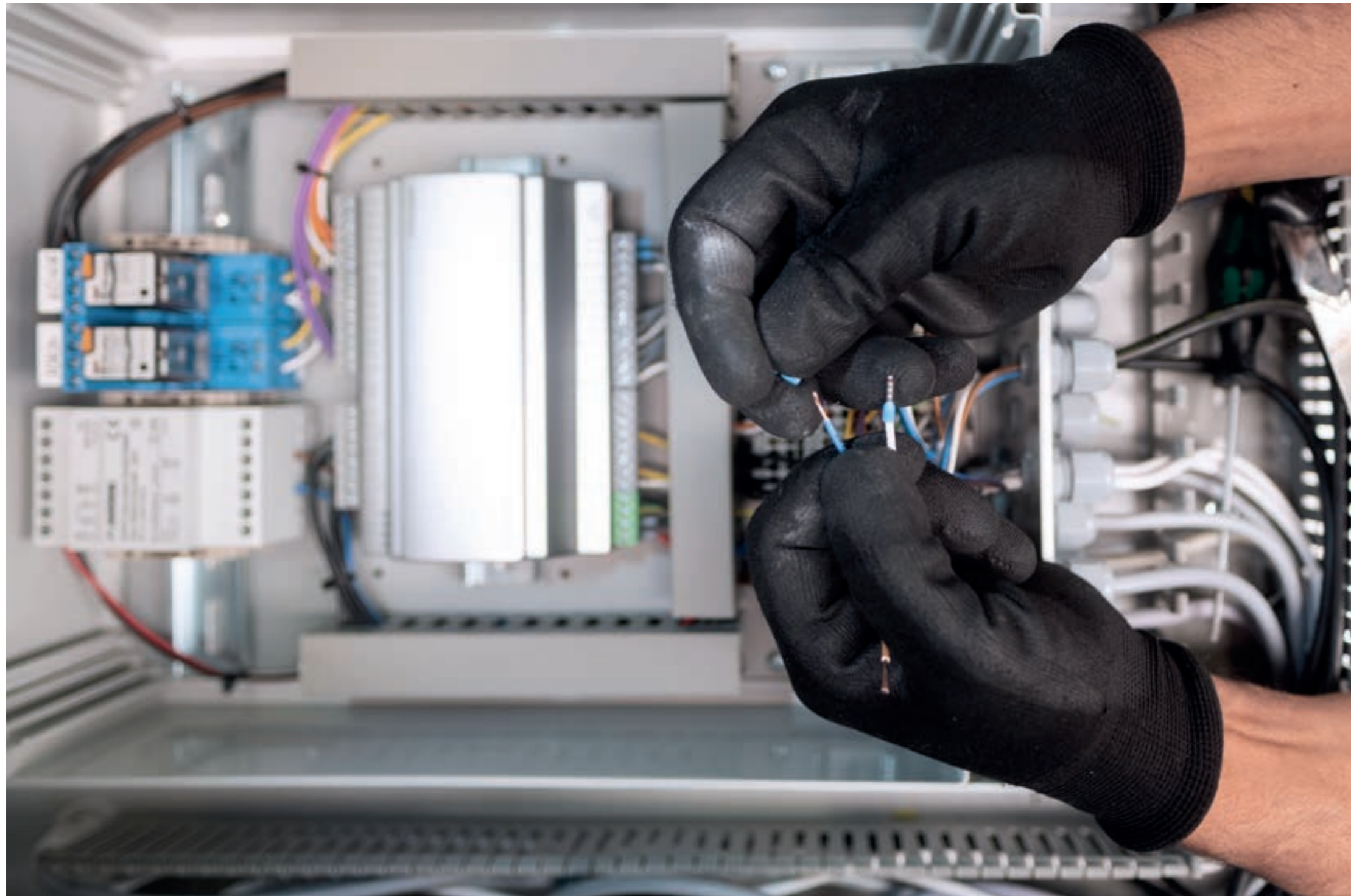
We supply all RotorLine air handling units with full wiring. The cabinet is standard equipped with a control system. The complete wiring is connected by us. If you choose to use your own measurement and control technology, that is also possible.

You just need to connect a power cable to the main switch and connect yours to our terminal strip. Our control system (Regin) has a built-in web server, which allows the RotorLine unit to be accessed 24/7 via a web browser. For this, only a network cable (TCP/IP)

needs to be connected to the unit. Additionally, we also supply a Ned Air remote control. This allows you to operate the RotorLine unit from within your building.

The control manual is included with the unit

so that the software in your control system can be optimally tuned to the RotorLine.





Sophisticated and cost-effective

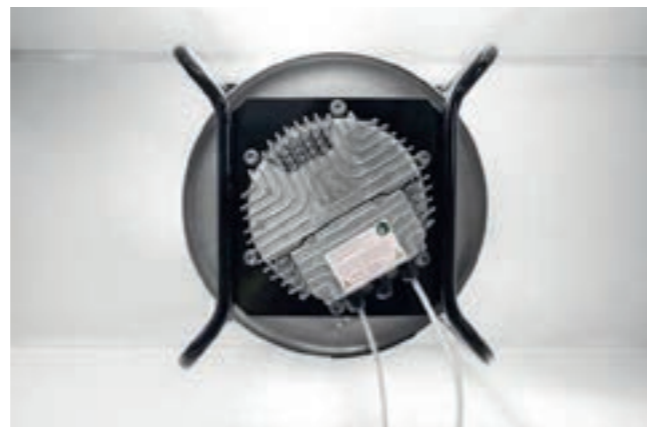
If you invest in a new air handling unit, then this investment does not stop at the purchase price and installation costs. Throughout the lifetime of the cabinet, you will also face additional costs, including energy, maintenance, disposal and recycling costs. Together, these make up the Total Cost of Ownership (TCO).

In developing the RotorLine, we have carefully considered how we could keep this TCO as low as possible. Among other things, we optimized the dimensions in order to keep the air speed as low as possible, and the combination of low air velocity and the large filter surface area guarantees a longer life for the filters. This keeps the maintenance costs low.

The combination of a low air velocity with large filter surface area ensures a longer life of the filters. This reduces the maintenance costs.

The **EC fans** are energy-efficient and highly efficient, which saves on energy costs and has a positive impact on the total cost of ownership.

The **RotorLine** features a high-efficiency heat wheel, compliant with NEN308 standards. The wheel is automatically controlled via the built-in control technology.






We are Team Ned Air


Ned Air has a ready-made solution for every technical air question. We always strive to stay ahead of the market, pursuing this goal passionately with our entire team of experts.

Our organization is strongly characterized by four key elements: Together, Expert, Agile and Ownership. These principles are deeply embedded in our company and are essential in everything we do.


Collaboration

 We believe in the power of collaboration. By working closely with our customers, partners and experts, we create synergy and achieve the best results. We listen to your needs and wishes and collaborate with you to create the most effective solutions. Together, we build a healthy and sustainable living environment.


Flexibility

 The world around us is changing rapidly, and that's why flexibility is key. Due to our size and working method, we are agile and can quickly adapt to your wishes and specific needs.

Expertise

 With more than 30 years of passion for air treatment, we have become expert professionals with extensive experience and knowledge in the field. We stay up-to-date with of the latest developments and can therefore always provide the most sustainable solutions. We enjoy taking on complex challenges and offering reliable products that meet the highest standards.

Ownership

 We take ownership of the entire process, from initial contact to to after-sales service. Striving to be your reliable partner, we assume responsibility for the successful implementation of air technology solutions. We ensure a streamlined process and provide appropriate support.

Innovative strength is in our DNA. We are always at the forefront of the air treatment industry, offering high-quality solutions that contribute to a healthy and comfortable indoor climate. This is how we give substance to our mission .

Technical data (according to ErP requirements)

The Ned Air RotorLine meets the latest requirements of the ErP, a set of regulations established by the European Commission concerning energy saving measures. These requirements apply to all energy-related products (Energy Related Products).

the RotorLine models when they are matched only to the ErP requirements.

This page shows the most important technical data for

Technical data per RotorLine model with condensing wheel (according to ErP requirements)

Data	Unit	Model							
		10	14	17	21	24	28	31	35
Max. airflow (ErP)	(m³/h)	3.200	6.500	11.000	16.200	22.000	29.200	35.500	44.000
Power (ErP)	(kW)	1,7	2,8	5,1	7,8	10,2	15,0	17,7	22,5
External pressure	(Pa)	200	200	250	250	250	300	300	300
SFPint	(W/m³/s)	762	662	655	633	622	602	601	590
V-casing	(m/s)	2,02	2,18	2,28	2,28	2,24	2,25	2,14	2,13
V-class	(class)	V4	V4	V5	V5	V5	V5	V4	V4
H-class	(class)	H1	H1	H1	H1	H1	H1	H1	H1
P-class	(class)	P1	P1	P1	P1	P1	P1	P1	P1

Technical data per RotorLine model with sorbent wheel (according to ErP requirements)

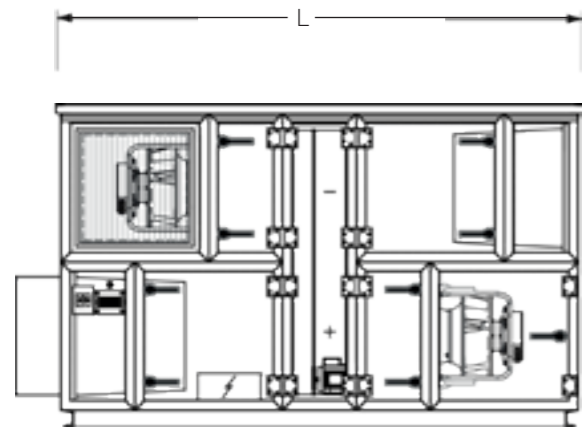
Data	Unit	Model							
		10	14	17	21	24	28	31	35
Max. airflow (ErP)	(m³/h)	3.200	6.500	11.000	16.200	22.000	29.200	35.500	44.000
Power (ErP)	(kW)	1,8	3,0	5,3	8,2	10,2	13,6	18,0	23,4
External pressure	(Pa)	200	200	250	250	250	300	300	300
SFPint	(W/m³/s)	840	733	708	696	650	655	641	644
V-casing	(m/s)	2,02	2,18	2,28	2,28	2,24	2,25	2,14	2,13
V-class	(class)	V4	V4	V5	V5	V5	V5	V4	V4
H-class	(class)	H1	H1	H1	H1	H1	H1	H1	H1
P-class	(class)	P1	P1	P1	P1	P1	P1	P1	P1

Efficiency of the heat wheels (according to ErP requirements)

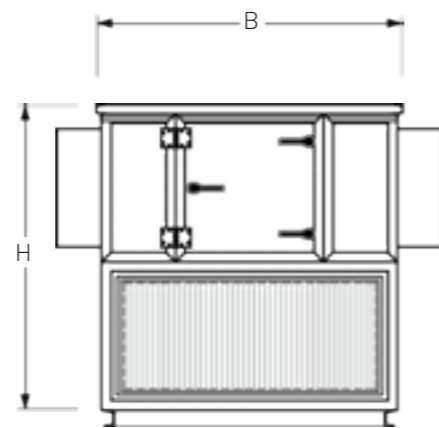
Efficiency	Unit	Model							
		10	14	17	21	24	28	31	35
η perceptable (condensationwheel)	%	79,80	79,13	79,03	79,30	79,29	79,43	79,51	79,68
η latent (condensationwheel)	%	51,56	50,67	50,54	50,89	50,86	51,05	51,14	51,38
η perceptable (sorptionwheel)	%	80,63	80,03	79,94	80,19	80,17	80,31	80,37	80,52
η latent (sorpnieuwiel)	%	79,53	77,56	77,29	78,03	77,98	78,38	78,57	79,13



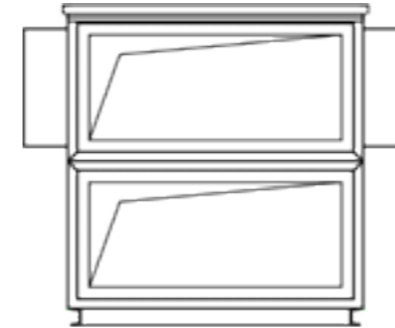
Dimensions & weights



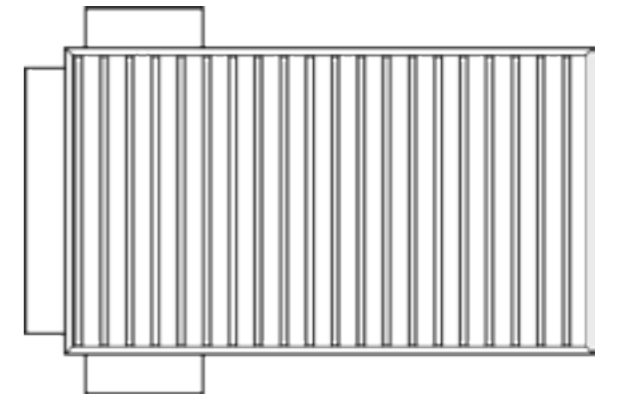
Front view



Side view left



Side view right



Top view

Noise data by RotorLine model with sorbent wheel

Model	Max. airflow**	External pressure (Pa)	Produced dB(A)*				
			2 m	4 m	8 m	16 m	32 m
10	3.200	200	75	69	63	57	51
14	6.500	200	68	62	56	50	44
17	11.000	250	71	65	58	52	46
21	16.200	250	73	67	61	55	49
24	22.000	250	73	67	61	55	49
28	29.200	300	79	73	67	61	55
31	35.500	300	77	71	65	59	53
35	44.000	300	81	75	69	63	57

* ref. 10⁻¹² W.

** For all models, the ErP requirements were assumed to be met with 100% control, measured on the discharge side of the unit.

Noise data per RotorLine model with condensing wheel

Model	Max. airflow**	External pressure (Pa)	Produced dB(A)*				
			2 m	4 m	8 m	16 m	32 m
10	3.200	200	75	69	63	57	51
14	6.500	200	68	62	56	50	44
17	11.000	250	70	64	58	52	46
21	16.200	250	73	67	61	55	49
24	22.000	250	73	67	61	55	49
28	29.200	300	79	73	67	61	55
31	35.500	300	77	71	65	59	53
35	44.000	300	81	75	69	63	57

* ref. 10⁻¹² W.

** All models assume the latest ErP requirements, at 100% control, measured on the discharge side of the unit.

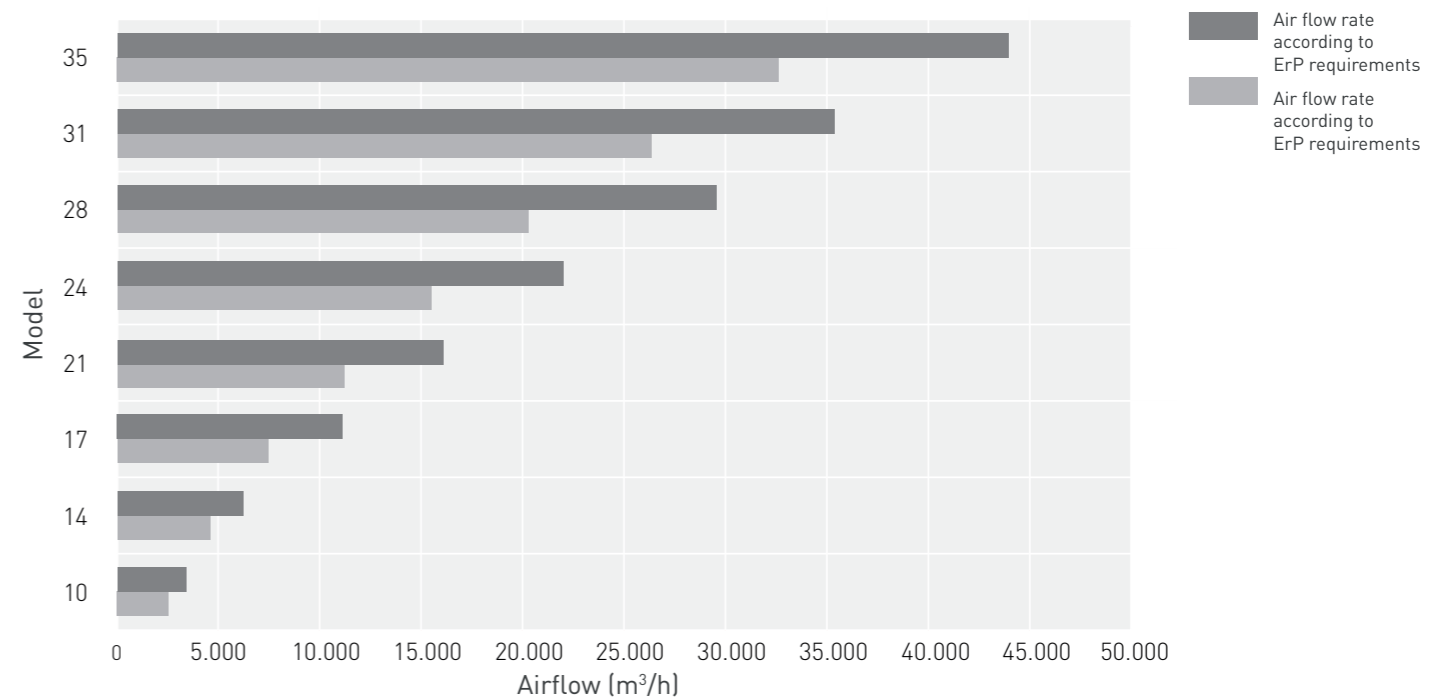
Dimensions and weights per RotorLine model

Data	Unit	Model								
		10	14	17	21	24	28	31	35	
L: Length*	(mm)	2.100	2.450	2.450	2.800	3.150	3.150	3.150	3.500	
B: Width*	(mm)	1.050	1.400	1.750	2.100	2.450	2.800	3.150	3.500	
H: Height**	(mm)	1.050	1.400	1.750	2.100	2.450	2.800	3.150	3.500	
Height	(kg)	600	900	1.200	1.700	2.200	2.600	3.000	3.700	

* Length and width do not include drip catcher dimensions. Drip catchers are 210 mm deep for all models.

** The dimensions provided do not include the frame height. Models 10 through 24 feature a frame height of 80 mm, while Model 28 has a frame height of 100 mm. Models 31 and 35 are equipped with a frame height of 120 mm.

Quick selection: which RotorLine do you need?



Ned Air more than 30 years of business sense

The RotorLine has been meticulously developed by our own technical experts, with careful attention to detail. The entire manufacturing process takes place in our production facility in Kampen. Grounded in innovative entrepreneurship, we take pride in offering clients products of exceptional quality.

Interested in what Ned Air has to offer?
Visit nedair.nl/products/rotorline or
contact our sales department at
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