Product catalog Non Residential Heat Recovery Units

Maxivent by Econox











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Maxivent by Econox unit Family

Contents

The Maxivent by Econox non residential heat recovery units are available in various versions. In addition to horizontal models, horizontal low profile models are also available for floor mounting. It is also possible to purchase a non residential heat recovery unit for ceiling mounting. You can also choose between units with a counter-flow heat exchanger or rotary wheel for heat recovery. If you opt for a rotary wheel, you can choose between a condensation or sorption wheel, depending on your project. The ceiling units are equipped with a counter-flow heat exchanger as standard. Finally, HRU's are available on two different versions for the maintenance purposes as left and right hand sided.

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Specifications

High efficiency with counter-flow or rotary heat exchanger

- ERP 2016 & 2018 complaint Sendzimir galvanized

Plug & play energy recovery

- Flow rate from 400 to 6500 m³/h

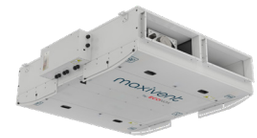
Horizontal low profile and Horizontal installation options



M45



MR45



M40

PHE

Horizontal low profile	Horizontal
M4512H	M4512V
M4516H	M4516V
M4523H	M4523V
M4540H	M4540V
M4555H	M4555V

Rotary

Condensation	Sorption
MR4512	MR4512
MR4521	MR4521
MR4528	MR4528
MR4535	MR4535
MR4545	MR4545
MR4565	MR4565

PHE

M4004
M4007
M4012
M4020
M4027

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M45

Maxivent by Econox M45

The Maxivent by Econox M45 installation is a highly efficient, powerful, advanced and versatile balanced ventilation unit with heat recovery, specially designed for offices, practices and small-scale commercial buildings. With a nominal air flow rate up to 5500 m³/h and heat recovery up to 90%, this air handling unit is ideal for your next commercial project where continuous ventilation without energy loss is a priority. The air handling unit operates using an efficient counterflow exchanger, EC fans and an integrated control panel. The air handling unit is plug & play, designed for floor mounting and has handles on the left or right side, which can be used for maintenance purpose.

Advantages and features

- **Sustainable housing:** Made from aluminium profiles with a polyamide thermal break (TB2 class) to prevent cold bridges. According to EN 1886, the cabinet achieves class D1, L1, T2 and TB2. The double-walled panels are insulated with 45 mm rock wool to minimise heat loss and noise.
- **Counterflow exchanger:** The integrated, efficient counterflow heat exchanger recovers up to 90% of thermal efficiency from the return air without mixing air streams.
- **EC fans:** Direct-drive EC motorised plug fans with high-efficiency electronic commutation (EC) offer an ecological solution with low energy consumption and a lower noise level.
- **Easy maintenance:** Easy access to the air handling unit via the handles on the left or right side. Filters and optional accessories can be easily replaced and/or installed.
- **Control panel:** Regin's fully integrated control panel is suitable for constant pressure or constant flow control. It can be equipped with a CO□ or humidity sensor and allows the display and control of many functions (such as air flow control, temperature control, dirty filter alerts, freeze protection and more).
- **Additional components:** Thanks to its flexible design, the cabinet can be easily expanded with additional functionalities, such as hot and cold water batteries, dampers and protective devices, tailored to the user's requirements.



Specifications

- Brand: Maxivent by Econox
- Up to 5500 m³/h
- Up to 90% thermal efficiency
- Integrated constant flow or constant pressure regulator

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Optional accessories

For maximum flexibility, the air handling unit can be expanded with various accessories tailored to the specific requirements of the project. The non residential heat recovery units can be expanded with the following components:

- **Hot water coil:** Heating based on hot water from the central heating system or heat pump, for energy-efficient and accurate temperature control of the supply air. To be installed in the reserved space inside the unit.
- **Cold water coil:** Cooling based on cold water from a cooling system or heat pump, for energy-efficient and accurate temperature control of the supply air. To be mounted on the outside of the supply air side.
- **Reversible DX coil:** Provides direct cooling or heating of the supply air via a refrigerant circuit, reducing or increasing the temperature quickly and efficiently. To be mounted on the outside of the supply air side.
- **Automatic changeover water coil:** Heats or cools the supply air via a water circuit and automatically switches between hot and cold water. To be mounted on the outside of the supply air side.
- **Roof:** Available for outdoor installations to protect the top of the unit from water and dirt.
- **Hood**: Available for outdoor installations to protect the air inlet of the unit from water and dirt.
- **Silencer:** Reduces the sound level in the duct. The silencer can be used on either connection side.
- **Motorized damper:** Used for controlling the air stream of the unit by means of 0-100% controllable damper motors and blades.
- **Connection pieces:** Ensure compatibility with both round and rectangular rigid or flexable ducts for connection. Their flexibility absorbs vibrations and reduces noise.
- **Filters:** G4 (Iso Coarse 55%) and M5 (ePM10 50%) filters for filtering exhaust air. F9 (ePM1 85%) and F7 filters (ePM1 50%) for filtering supply air.
- **Louver grilles with fixed blades:** Protect the unit against dust and weather influences.

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Application

High efficient and high-performance ventilation and self-regulating energy recovery for office and industrial installations. Performance is greater than 80% (EN308), compliant with ErP directive 2018. Air filtration, temperature control, one-piece, smart and Plug & Play unit.

Range

The HRU models are automatically equipped with a Mode 4+ controller. This controller regulates based on a constant flow rate or constant pressure and can be equipped with a CO2 sensor or a humidity sensor (not both at the same time). 2 different configurations (left or right handed). HRU range covers flow rates from 1200 to 5500 m³/h.

Fan and motors

Direct drive EC motorized Plug Fans with high-efficiency electronic commutation (EC), integral thermal cut-out and speed variation. EC technology is an ecological® solution guaranteeing low energy consumption for the management, checking and control of the operating point of flow rates from 10 to 100%. Low sound levels for better acoustic comfort.

Filters

As standard, the HRU has a high-efficiency ePm1 50% filter on the fresh air intake and an ePm10 50% panel filter on the return air intake. Filters are always mounted upstream of components to ensure they are protected. Mounted on sliders fitted with lip sealings to ensure effective air tightness.

Construction

Thermal brake aluminum profiles with polyamide spacers between the profiles provide a TB2 Thermal Bridging class according to EN 1886. Glass fiber reinforced corners improves the durability of the casing. Insulation between the double-skin panels is 45 mm (70 kg/m³) of rock wool, resulting in a T2 thermal transmittance class. The exterior panels are powder coated in RAL 7047. The M45 casing achieves class D1, L1, T2, TB2 according to EN1886. The device is equipped witha technical control panel containing the electrical components and controls. This section which is accessible via a lockable hinged door on one of the lateral sides also contains an LCD display and the isolating switch. Access to the other internal components, such as the stainless steel condensate drain pan, automatic bypass dampers, filters or the heat exchanger, are via the removable safety interlock panels.

Heat exchanger

Equipped with high-efficient and certified plate heat exchangers. Efficiency is greater than 80% under EN308 conditions (OA:5C/70%RH, RA:25C/28%RH). Automatic defrosting via bypass damper and if necessary adjustment of the fresh air flow and by self-regulating electrical coil.

Optional

- External water or dx coil
- Internal water or electric heating coil
- External water auto change over coil
- Dampers with actuators
- Roof for outdoor installation
- Hood for outdoor installation for connection parts
- Flexible connectors, round connections
- Silencers

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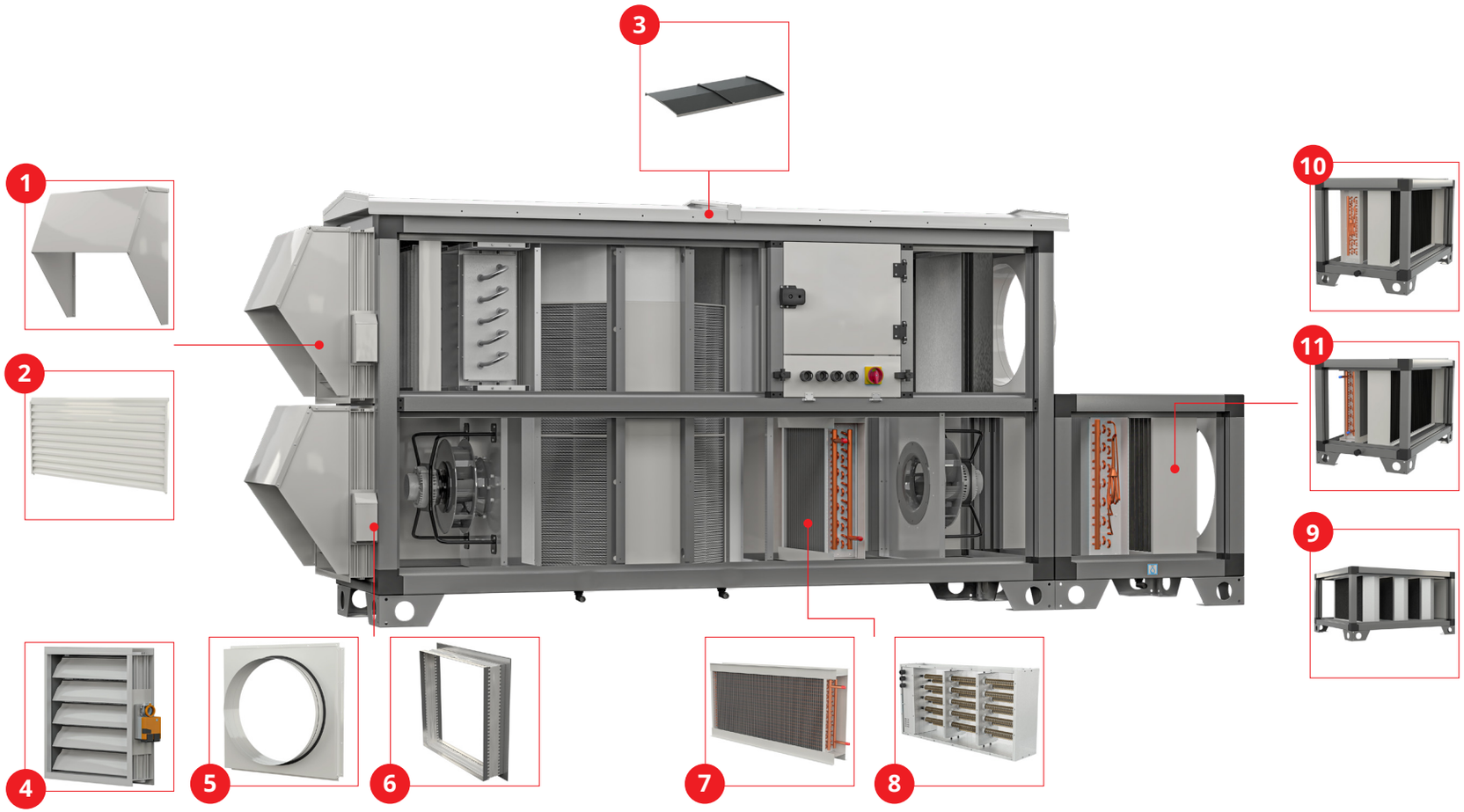
Optional accessories drawing



1. Hood
2. Louvres
3. Roof
4. Damper and actuators
5. Round duct connections
6. Flexible Connectors
7. Water Heating Coil
8. Electrical Post-Heaters
9. Silencer Modules
10. DX Cooler Modules
11. Water cooler modules

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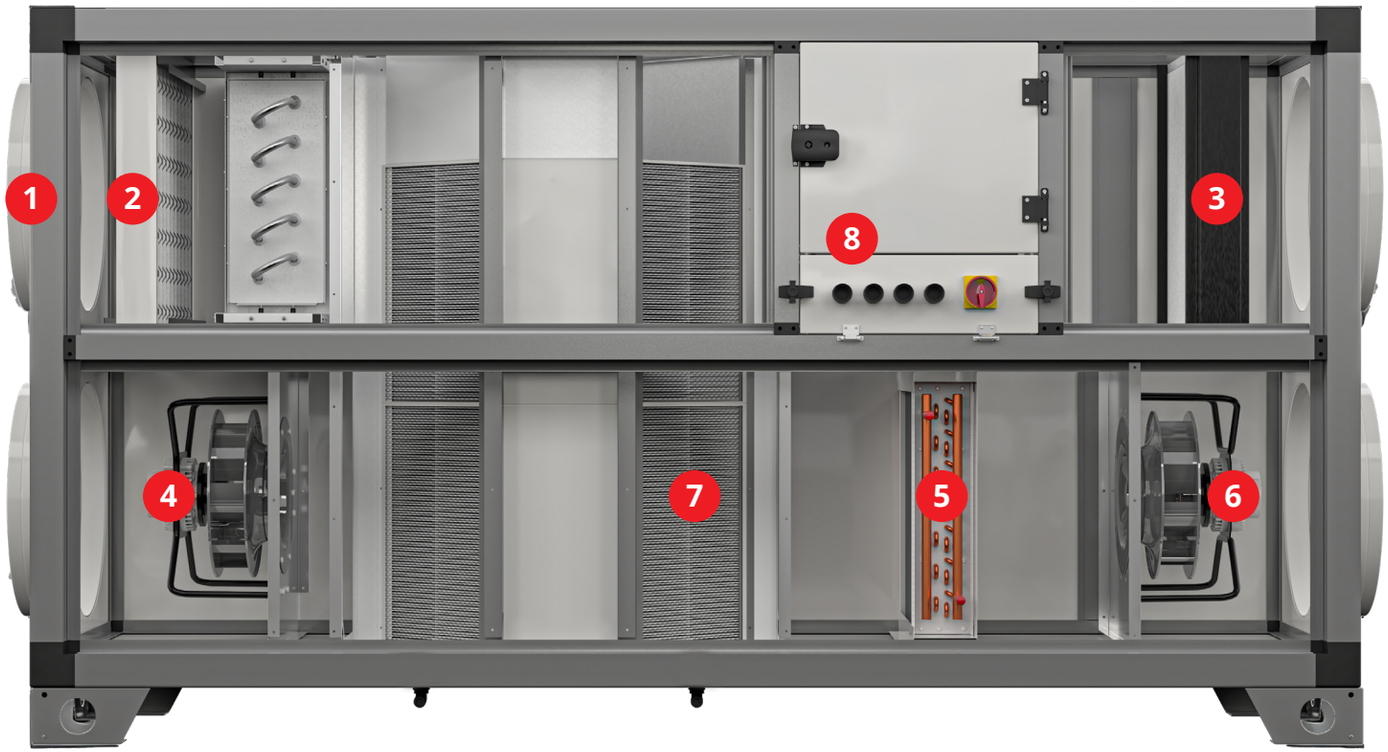
Design & details



Options

- Heating Coil / Cooling Coil
- Electrical Heating Coil
- DX Coil
- With different combinations in
- Mode4+ integrated plug&play controller for constant pressure or constant flow control

1 Insulation
Thermal Barrier in Profiles
45 mm Rockwool Insulated Panels

2 F7 fresh air filter

3 M5 exhaust air filter

4 High efficient EC fan exhaust

5 Electrical or water heating coil

6 High efficient EC fan supply

7

- High efficient Counterflow Heat Exchanger with automated Bypass Damper
- Frost protection
- Sliding exchanger for easy maintenance

8

- Fully Automated Built-in Control Panel
- Mode4+ integrated plug&play controller for constant pressure or constant flow control
- Supply Air Temperature Control with Outdoor Compensation
- Operation Based on CO2 Concentration /Optional

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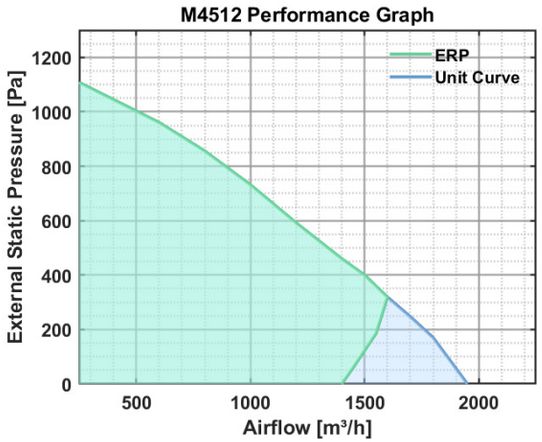
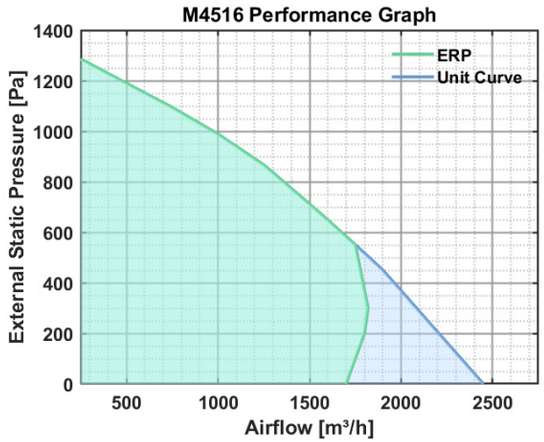
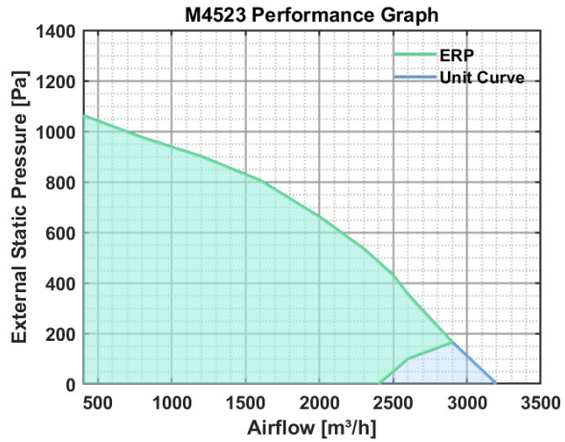
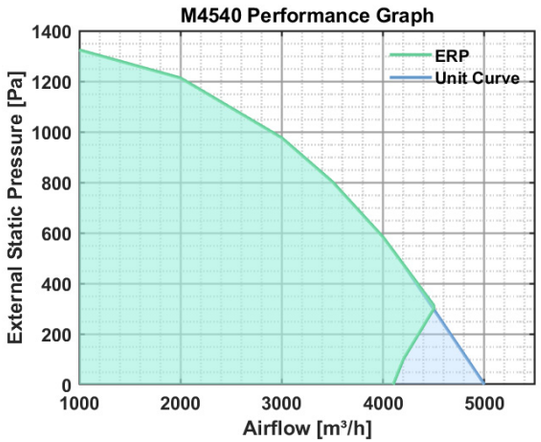
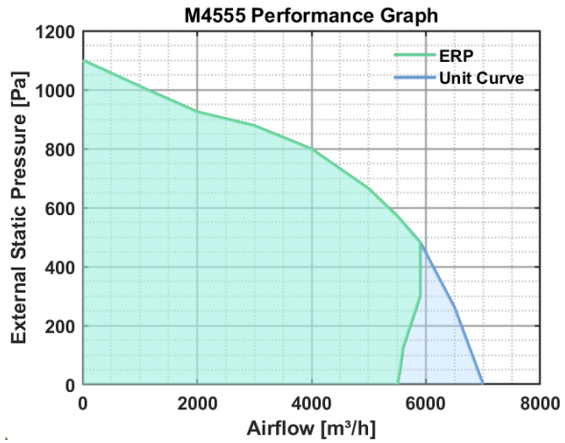
Performance graphs











The fan curves have been generated based on the condition where no additional modules are included in the unit. If any internal or external modules (such as an electric heater or a DX coil and so on...) are to be added to the unit, the pressure losses of these modules must be added to the external static pressure drop on below fan curve, and the corresponding airflow value should then be read from the graph. The additional pressure losses caused by these modules can be found in the relevant sections of these modules on the catalog.

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Capacity charts - electric heater

Unit Description	Model Type	Model Name	Q (m3/h)	P (kW)	Ti (C°)	To (C°)	ΔP (Pa)
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200	3,75	-10	-0,70	15
			1200	3,75	0	9,30	12
			1200	3,75	10	19,30	10
		M4516H	1600	5,25	-10	-0,23	15
			1600	5,25	0	9,77	12
			1600	5,25	10	19,77	10
		M4523H	2300	6,75	-10	-1,27	16
			2300	6,75	0	8,73	12
			2300	6,75	10	18,73	11
		M4540H	4000	13,5	-10	0,04	19
			4000	13,5	0	10,04	14
			4000	13,5	10	20,04	12
		M4555H	5500	18	-10	-0,26	21
			5500	18	0	9,74	17
			5500	18	10	19,74	14
	Horizontaal Units	M4512V	1200	3,75	-10	-0,70	15
			1200	3,75	0	9,30	12
			1200	3,75	10	19,30	10
		M4516V	1600	5,25	-10	-0,23	15
			1600	5,25	0	9,77	12
			1600	5,25	10	19,77	10
		M4523V	2300	6,75	-10	-1,27	16
			2300	6,75	0	8,73	12
			2300	6,75	10	18,73	11
		M4540V	4000	13,5	-10	0,04	19
			4000	13,5	0	10,04	14
			4000	13,5	10	20,04	12
		M4555V	5500	18	-10	-0,26	21
			5500	18	0	9,74	17
			5500	18	10	19,74	14

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module

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Capacity charts - water heating coil

			Q (m3/h)	ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	**Model Type**	**Model Name**				**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**	**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200 m3/h	41,02	-10	15,9	11,63	500	6,3	6,6	7,46	642	10,5
				37,83	10	28,4	7,69	331	2,9	18,7	3,63	313	2,7
		M4516H	1600 m3/h	48,14	-10	19,1	17,48	752	34	8,7	11,22	967	56,9
				44,26	10	30,9	11,68	502	16	20,1	5,66	487	15,8
		M4523H	2300 m3/h	58,73	-10	17,5	23,71	1020	32,6	7,7	15,22	1311	54,4
				55,18	10	29,8	15,91	684	15,4	19,6	7,72	665	15,3
		M4540H	4000 m3/h	35,06	-10	17,5	41,17	1770	11,4	7,6	26,4	2274	19,1
				32,89	10	29,7	27,47	1181	5,4	19,5	13,22	1138	5,3
		M4555H	5500 m3/h	29,41	-10	18,8	59,47	2558	11,7	8,5	38,14	3285	19,6
				26,99	10	30,7	39,78	1711	5,6	20	19,31	1655	5,5
	Horizontaal Units	M4512V	1200 m3/h	41,02	-10	15,9	11,63	500	6,3	6,6	7,46	642	10,5
				37,83	10	28,4	7,69	331	2,9	18,7	3,63	313	2,7
		M4516V	1600 m3/h	48,14	-10	19,1	17,48	752	34	8,7	11,22	967	56,9
				44,26	10	30,9	11,68	502	16	20,1	5,66	487	15,8
		M4523V	2300 m3/h	58,73	-10	17,5	23,71	1020	32,6	7,7	15,22	1311	54,4
				55,18	10	29,8	15,91	684	15,4	19,6	7,72	665	15,3
		M4540V	4000 m3/h	35,99	-10	18,1	42,09	1810	31,5	8	27	2326	52,9
				33,13	10	30,4	28,39	1221	15,3	19,9	13,86	1193	15,6
		M4555V	5500 m3/h	26,66	-10	19,9	61,65	2651	29,2	9,2	39,56	3407	49
				24,97	10	31,7	41,55	1787	14,1	20,6	20,28	1747	14,3

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW1 water cooling coil

			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%			
Unit Description	**Model Type**	**Model Name**				**To (C°)**	**P (kW)**	**Qw (l/s)**	**ΔPw (kPa)**
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200 m3/h	38,82	25	19,5	2,51	358	9,3
				47,77	30	23	4,24	605	24,6
		M4516H	1600 m3/h	78,43	25	19,4	3,04	434	5,3
				93,69	30	22,6	5,29	756	14,8
		M4523H	2300 m3/h	52,9	25	19,5	4,53	647	6,1
				64,9	30	23	7,82	1117	16,9
		M4540H	4000 m3/h	36	25	19,6	7,76	1109	5
				45,05	30	23,1	13,51	1931	14,1
		M4555H	5500 m3/h	26,61	25	19,4	11,56	1653	5,8
				33,19	30	22,9	19,73	2820	15,5
	Horizontaal Units	M4512V	1200 m3/h	38,82	25	19,5	2,51	358	9,3
				47,77	30	23	4,24	605	24,6
		M4516V	1600 m3/h	78,43	25	19,4	3,04	434	5,3
				93,69	30	22,6	5,29	756	14,8
		M4523V	2300 m3/h	52,9	25	19,5	4,53	647	6,1
				64,9	30	23	7,82	1117	16,9
		M4540V	4000 m3/h	34,63	25	19,3	8,48	1212	7,5
				42,64	30	22,8	14,39	2057	19,8
		M4555V	5500 m3/h	23,46	25	19,5	11	1572	3,4
				29,77	30	22,9	19,37	2768	9,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW2 water cooling coil

			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%			
Unit Description	**Model Type**	**Model Name**				**To (C°)**	**P (kW)**	**Qw (l/s)**	**ΔPw (kPa)**
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200 m3/h	78,76	25	15,8	4,37	625	9,8
				94	30	18	7,44	1063	26,6
		M4516H	1600 m3/h	150,9	25	16,9	4,36	623	2,2
				185,49	30	18,5	8,38	1197	7,3
		M4523H	2300 m3/h	104,3	25	16,3	7,26	1037	4,1
				127,66	30	18,4	13,06	1867	12,4
		M4540H	4000 m3/h	69,03	25	15,3	15,97	2282	11
				80,95	30	17,4	26,53	3792	28,1
		M4555H	5500 m3/h	54,1	25	15,8	20,02	2862	5,5
				65,49	30	17,9	34,49	4929	15,1
	Horizontaal Units	M4512V	1200 m3/h	78,76	25	15,8	4,37	625	9,8
				94	30	18	7,44	1063	26,6
		M4516V	1600 m3/h	150,9	25	16,9	4,36	623	2,2
				185,49	30	18,5	8,38	1197	7,3
		M4523V	2300 m3/h	104,3	25	16,3	7,26	1037	4,1
				127,66	30	18,4	13,06	1867	12,4
		M4540V	4000 m3/h	72,85	25	15,3	16,06	2296	13,9
				85,26	30	17,4	26,51	3790	35,1
		M4555V	5500 m3/h	47,54	25	16	18,69	2671	2,6
				59,06	30	18	33,64	4808	7,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW1 auto change over coils

				COOLING MODE						HEATING MODE									
			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%				ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	Model Type	Model Name				To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)			To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)	To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200 m3/h	38,82	25	19,5	2,51	358	9,3	41,91	-10	16,8	12,03	518	16,9	7,2	7,72	665	28,2
				47,77	30	23	4,24	605	24,6	38,6	10	29,3	8,06	347	8	19,3	3,9	336	7,9
		M4516H	1600 m3/h	78,43	25	19,4	3,04	434	5,3	92,78	-10	18,1	16,88	726	12,8	8,1	10,83	933	21,4
				93,69	30	22,6	5,29	756	14,8	85,43	10	29,9	11,13	478	478	19,5	5,29	455	5,5
		M4523H	2300 m3/h	52,9	25	19,5	4,53	647	6,1	59,82	-10	16,9	23,22	998	12,5	7,3	14,9	1283	20,9
				64,9	30	23	7,82	1117	16,9	55,12	10	29,3	15,45	664	5,8	19,3	7,42	639	5,7
		M4540H	4000 m3/h	36	25	19,6	7,76	1109	5	39,54	-10	16,6	39,9	1716	10,2	7,1	25,59	2204	17,1
				45,05	30	23,1	13,51	1931	14,1	37,1	10	29,1	26,58	1143	4,8	19,1	12,75	1098	4,7
		M4555H	5500 m3/h	26,61	25	19,4	11,56	1653	5,8	28,77	-10	17,3	56,28	2420	10,5	7,5	36,09	3109	17,6
				33,19	30	22,9	19,73	2820	15,5	26,45	10	29,6	37,67	1620	5	19,5	18,17	1565	5
	Horizontaal Units	M4512V	1200 m3/h	38,82	25	19,5	2,51	358	9,3	41,91	-10	16,8	12,03	518	16,9	7,2	7,72	665	28,2
				47,77	30	23	4,24	605	24,6	38,6	10	29,3	8,06	347	8	19,3	3,9	336	7,9
		M4516V	1600 m3/h	78,43	25	19,4	3,04	434	5,3	92,78	-10	18,1	16,88	726	12,8	8,1	10,83	933	21,4
				93,69	30	22,6	5,29	756	14,8	85,43	10	29,9	11,13	478	478	19,5	5,29	455	5,5
		M4523V	2300 m3/h	52,9	25	19,5	4,53	647	6,1	59,82	-10	16,9	23,22	998	12,5	7,3	14,9	1283	20,9
				64,9	30	23	7,82	1117	16,9	55,12	10	29,3	15,45	664	5,8	19,3	7,42	639	5,7
		M4540V	4000 m3/h	34,63	25	19,3	8,48	1212	7,5	37,56	-10	17,3	41,01	1763	13,3	7,5	26,31	2266	22,4
				42,64	30	22,8	14,39	2057	19,8	34,57	10	29,7	27,44	1180	6,3	19,5	13,26	1142	6,3
		M4555V	5500 m3/h	23,46	25	19,5	11	1572	3,4	26,22	-10	17,6	56,82	2443	6,6	7,7	36,42	3137	11,1
				29,77	30	22,9	19,37	2768	9,4	24,07	10	29,7	37,85	1628	3,1	19,5	18,15	1563	3,1

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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M45

Capacity charts - CCW2 auto change over coils

				COOLING MODE						HEATING MODE									
			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%				ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	Model Type	Model Name				To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)			To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)	To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)
Maxivent by Econox M45 UNITS	Horizontaal Low Profile Units	M4512H	1200 m3/h	78,76	25	15,8	4,37	625	9,8	81,88	-10	34,5	20,01	860	16,8	18,5	12,82	1104	27,8
				94	30	18	7,44	1063	26,6	74,42	10	41,7	13,26	570	7,7	25,3	6,42	553	7,5
		M4516H	1600 m3/h	150,9	25	16,9	4,36	623	2,2	188,33	-10	35,8	27,44	1180	6,7	19,2	17,52	1509	11
				185,49	30	18,5	8,38	1197	7,3	170,89	10	42,1	17,89	769	3	25	8,39	722	2,7
		M4523H	2300 m3/h	104,3	25	16,3	7,26	1037	4,1	121,04	-10	34,9	38,67	1663	9,3	18,7	24,71	2128	15,4
				127,66	30	18,4	13,06	1867	12,4	109,96	10	41,8	25,5	1097	4,2	25,2	12,16	1047	4
		M4540H	4000 m3/h	69,03	25	15,3	15,97	2282	11	72,41	-10	36,2	69,3	2980	16,2	19,6	44,39	3823	27
				80,95	30	17,4	26,53	3792	28,1	65,68	10	43,1	46,14	1984	7,6	26,1	22,45	1933	7,7
		M4555H	5500 m3/h	54,1	25	15,8	20,02	2862	5,5	58,19	-10	36	94,77	4075	9,6	19,4	60,53	5213	15,9
				65,49	30	17,9	34,49	4929	15,1	52,73	10	42,9	63,06	2712	4,5	25,9	30,42	2620	4,4
	Horizontaal Units	M4512V	1200 m3/h	78,76	25	15,8	4,37	625	9,8	81,88	-10	34,5	20,01	860	16,8	18,5	12,82	1104	27,8
				94	30	18	7,44	1063	26,6	74,42	10	41,7	13,26	570	7,7	25,3	6,42	553	7,5
		M4516V	1600 m3/h	150,9	25	16,9	4,36	623	2,2	188,33	-10	35,8	27,44	1180	6,7	19,2	17,52	1509	11
				185,49	30	18,5	8,38	1197	7,3	170,89	10	42,1	17,89	769	3	25	8,39	722	2,7
		M4523V	2300 m3/h	104,3	25	16,3	7,26	1037	4,1	121,04	-10	34,9	38,67	1663	9,3	18,7	24,71	2128	15,4
				127,66	30	18,4	13,06	1867	12,4	109,96	10	41,8	25,5	1097	4,2	25,2	12,16	1047	4
		M4540V	4000 m3/h	72,85	25	15,3	16,06	2296	13,9	76,16	-10	36,6	69,91	3006	20,6	19,8	44,69	3849	34,3
				85,26	30	17,4	26,51	3790	35,1	69,06	10	43,5	46,78	2012	9,8	26,3	22,78	4974	9,8
		M4555V	5500 m3/h	47,54	25	16	18,69	2671	2,6	53,25	-10	37,7	98,35	4229	5,2	20,3	62,46	5380	8,6
				59,06	30	18	33,64	4808	7,4	48,16	10	44,3	65,75	2827	2,5	26,4	31,46	2710	2,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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M45

Capacity charts - DX coil

		COOLING MODE							HEATING MODE						
Model Name	**Q (m3/h)**	**Tai (C°)**	**Tev (C°)**	**ΔP (Pa)**	**P (kW)**	**Tao C°)**	**RH (%)**	**ΔPr410a (kPa)**	**Tev (C°)**	**Ta,i (°C)**	**ΔP (Pa)**	**P (kW])**	**Ta,o (°C)**	**RH (%)**	**ΔPr410a (kPa)**
M4512H	1200 m3/h	25	7/45	88,214	4,84	15,1	83,54	19,1	40	11	76,55	7,34	28,6	16,75	16,7
		30	7/45	101,89	7,9	17,5	81,72	54,9		15	75,21	6,15	30	20,14	11,5
M4512V	1200 m3/h	25	7/45	88,214	4,84	15,1	83,54	19,1	40	11	76,55	7,34	28,6	16,75	16,7
		30	7/45	101,89	7,9	17,5	81,72	54,9		15	75,21	6,15	30	20,14	11,5
M4516H	1600 m3/h	25	7/45	157,8	5,79	16,1	79,8	28	40	11	137,73	8,71	26,7	18,76	22,3
		30	7/45	183,13	9,21	18,9	77,89	76,8		15	135,42	7,27	28,3	22,22	15,2
M4516V	1600 m3/h	25	7/45	157,8	5,79	16,1	79,8	28	40	11	137,73	8,71	26,7	18,76	22,3
		30	7/45	183,13	9,21	18,9	77,89	76,8		15	135,42	7,27	28,3	22,22	15,2
M4523H	2300 m3/h	25	7/45	87,58	6,06	17,8	75,68	9,6	40	11	81,49	10,38	24	22,01	10,4
		30	7/45	108,26	10,99	20,7	73,29	34		15	80,2	8,63	25,9	25,44	7,1
M4523V	2300 m3/h	25	7/45	87,58	6,06	17,8	75,68	9,6	40	11	81,49	10,38	24	22,01	10,4
		30	7/45	108,26	10,99	20,7	73,29	34		15	80,2	8,63	25,9	25,44	7,1
M4540H	4000 m3/h	25	7/45	39,91	8,6	19,2	69,41	10,4	40	11	36,8	14,5	21,4	25,69	10,9
		30	7/45	49,22	15	22,7	67,32	34		15	36,25	12,08	23,8	28,88	7,5
M4540V	4000 m3/h	25	7/45	39,71	8,67	19,2	69,4	9,3	40	11	36,41	14,55	21,5	25,64	9,6
		30	7/45	48,93	15,14	22,7	67,36	30,3		15	35,96	12,12	23,8	28,84	6,6
M4555H	5500 m3/h	25	7/45	34,74	11,54	19,2	69,95	7,7	40	11	32,59	20,45	21,7	25,27	9
		30	7/45	43,44	20,84	12,3	67,75	26,9		15	32,09	17,03	24	28,5	6,2
M4555V	5500 m3/h	25	7/45	33,43	12,04	19	70,14	7,8	40	11	30,97	20,81	21,9	24,98	8,6
		30	7/45	41,49	21,54	22,4	68,03	26,4		15	30,49	17,34	24,2	28,23	5,9

Q: Air Volume
P: Power
Tai: Air inlet temperature
Tao: Air outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop
Tev: Evaporation temperature
RH: Relative humidity

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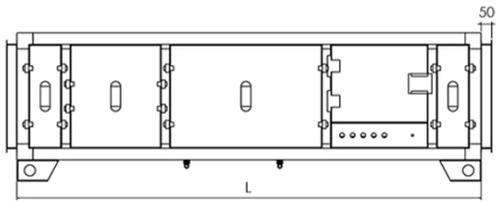
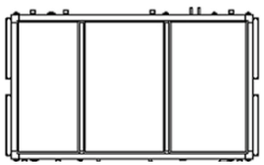
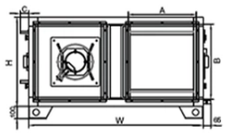
M45 - Horizontal low profile

Unit dimensions

	Lenght (mm) L	Width (mm) W	Height (mm) H	Feet (mm)	Connention sizes (mm) (AxB)	Coil (C)	Weight (kg)
M4512H	2190	1230	600	100	460x490	135	289
M4516H	2250	1230	600	100	460x490	135	299
M4523H	2395	1430	730	100	560x620	135	377
M4540H	2980	1630	1050	100	680x940	135	607
M4555H	3240	1750	1334	100	730x1225	135	1047

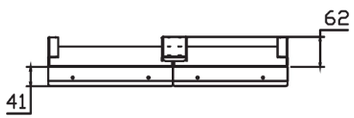


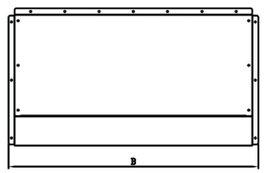


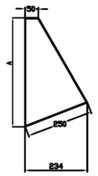


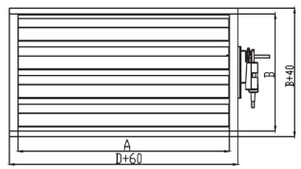
Accessories dimensions

	Accessories dimensions				
	Roof (mm)	Hood (AxB) (mm)	Damper (AxB) (mm)	Louvre (AxB) (mm)	Round connection (D) (mm)
M4512H	62	520x550	460x510	520x550	315
M4516H	62	520x550	460x510	520x550	400
M4523H	62	620x650	560x610	620x650	450
M4540H	62	740x950	680x910	740x950	630
M4555H	62	790x1250	730x1210	790x1250	630

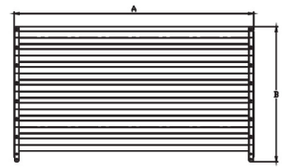


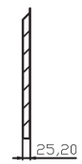


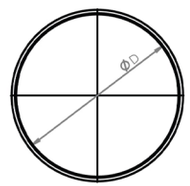


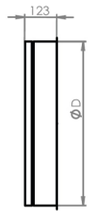












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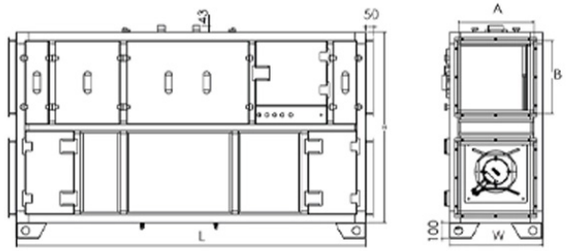
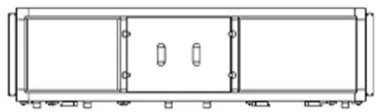
M45 - Horizontal

Unit dimensions

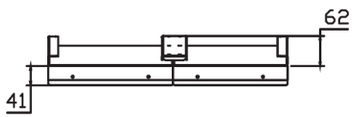
	Lenght (mm) L	Width (mm) W	Height (mm) H	Feet (mm)	Connention sizes (mm) (AxB)	Coil (C)	Weight (kg)
M4512V	2190	600	1230	100	490x470	135	301
M4516V	2250	600	1230	100	490x470	135	301
M4523V	2395	730	1430	100	620x560	135	393
M4540V	2980	1050	1630	100	940x670	135	632
M4555V	3240	1334	1750	100	1224x730	135	1089

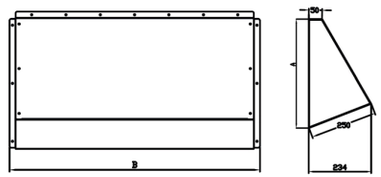


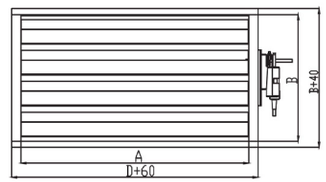


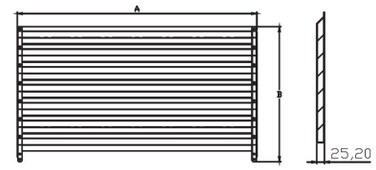
Accessories dimensions

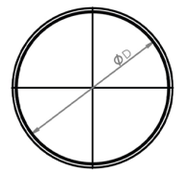
	Accessories dimensions				
	Roof (mm)	Hood (AxB) (mm)	Damper (AxB) (mm)	Louvre (AxB) (mm)	Round connection (D) (mm)
M4512V	62	550x550	490x510	550x550	315
M4516V	62	550x550	490x510	550x550	400
M4523V	62	680x650	620x610	680x650	450
M4540V	62	1000x750	940x710	1000x750	630
M4555V	62	1284x750	1224x710	1284x750	630

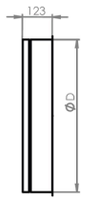












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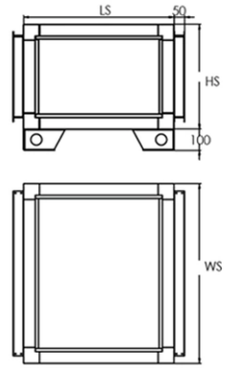
M45

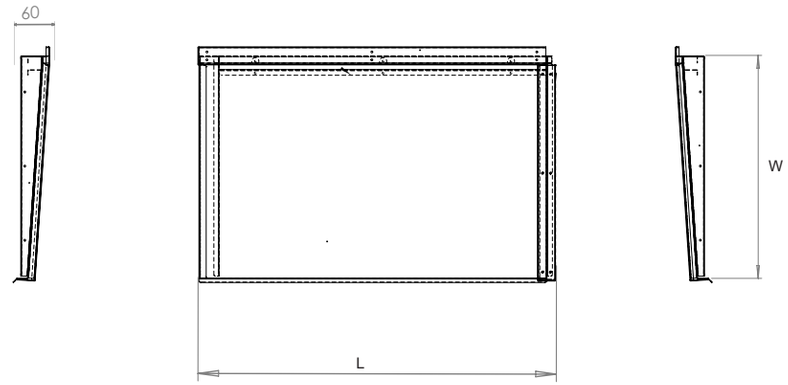
Dimensions coils

	Cooler / CCW / DX			Silencer-1 module			Silencer-2 module		
	LS (mm)	WS (mm)	HS (mm)	LS (mm)	WS (mm)	HS (mm)	LS (mm)	WS (mm)	HS (mm)
M4512H	660	615	600	910	615	600	1350	615	600
M4512V	660	600	615	910	600	615	1350	600	615
M4516H	660	615	600	910	615	600	1350	615	600
M4516V	660	600	615	910	600	615	1350	600	615
M4523H	660	715	730	910	715	730	1350	715	730
M4523V	660	730	715	910	730	715	1350	730	715
M4540H	660	815	1050	910	815	1050	1350	815	1050
M4540V	660	1050	815	910	1050	815	1350	1050	815
M4555H	660	875	1334	910	875	1334	1350	875	1334
M4555V	660	1334	875	910	1334	875	1350	1334	875



Afmetingen dak accessoires

Cooler / CCW / DX			
	Length	width	Height
M4512-H-RF	715	645	60
M4512-V-RF	715	630	60
M4516-H-RF	715	645	60
M4516-V-RF	715	630	60
M4523-H-RF	715	745	60
M4523-V-RF	715	760	60
M4540-H-RF	715	845	60
M4540-V-RF	715	1080	60
M4555-H-RF	715	905	60
M4555-V-RF	715	1364	60



Silencer-1-module			
	Length	width	Height
M4512-H-SL1-RF	965	645	60
M4512-V-SL1-RF	965	645	60
M4516-H-SL1-RF	965	645	60
M4516-V-SL1-RF	965	630	60
M4523-H-SL1-RF	965	745	60
M4523-V-SL1-RF	965	760	60
M4540-H-SL1-RF	965	845	60
M4540-V-SL1-RF	965	1080	60
M4555-H-SL1-RF	965	905	60
M4555-V-SL1-RF	965	1364	60

Silencer-2-module			
	Length	width	Height
M4512-H-SL2-RF	1405	645	60
M4512-V-SL2-RF	1405	645	60
M4516-H-SL2-RF	1405	645	60
M4516-V-SL2-RF	1405	630	60
M4523-H-SL2-RF	1405	745	60
M4523-V-SL2-RF	1405	760	60
M4540-H-SL2-RF	1405	845	60
M4540-V-SL2-RF	1405	1080	60
M4555-H-SL2-RF	1405	905	60
M4555-V-SL2-RF	1405	1364	60

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MR45

Maxivent by Econox MR45

The Maxivent by Econox MR45 installation is a highly efficient, powerful, advanced and versatile balanced ventilation unit with heat recovery, specially designed for offices, practices and small-scale utility buildings. With a nominal air flow rate up to 6500 m³/h and heat recovery up to 85%, this air handling unit is ideal for your next utility project where continuous ventilation without energy loss is a priority. The air handling unit works by means of an efficient condensation or sorption wheel, EC fans and an integrated control panel. The air handling unit is designed for floor mounting and has handles on the left or right side which can be used for maintenance purpose.

Advantages and features

- **Durable housing:** Made of aluminum profiles with a polyamide thermal break in between, ensuring a TB2-class thermal bridge. The unit achieves class D1, L1, T2, and TB2 in accordance with EN 1886. Double-walled panels are insulated with 45 mm rock wool to minimize heat loss and noise.
- **Condensation or sorption wheel:** The condensation or sorption wheel optimally recovers energy from the return air, reclaiming both heat and moisture while significantly reducing energy consumption.
- **EC fans:** Direct-driven EC motorized plug fans with high-efficiency electronic commutation (EC) provide an ecological solution with low energy consumption and reduced noise levels.
- **Easy maintenance:** Convenient access to the air handling unit via the handles on the left or right side. Filters and optional accessories can be easily replaced and/or installed.
- **Control panel:** The fully integrated Regin control panel is suitable for constant pressure or constant airflow control. It can be equipped with a CO□ or humidity sensor and allows monitoring and control of many functions (such as airflow regulation, temperature control, dirty filter alarms, frost protection, and more).
- **Compact solution:** All components are integrated into a single unit, making installation simple, efficient, and space-saving.
- **Additional components:** Thanks to the flexible design, the unit can easily be expanded with additional functionalities tailored to the user's requirements.



Specifications

- Brand: Maxivent by Econox
- Up to 6500 m³/h
- Up to 85% thermal efficiency
- Integrated constant flow or constant pressure regulator

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Optional accessories

For maximum flexibility, the non residential heat recovery units can be expanded with various accessories tailored to the specific requirements of the project. The non residential heat recovery units can be expanded with the following components:

- **Hot water coil:** Post-heating based on hot water from the boiler system or heat pump, providing energy-efficient and precise temperature control of the supply air. To be installed in the reserved space inside the unit.
- **Cold water coil:** Post-cooling based on cold water from a chiller system or heat pump, providing energy-efficient and precise temperature control of the supply air. To be mounted on the outside of the supply air side.
- **Reversible DX coil:** Provides direct cooling or heating of the supply air via a refrigerant circuit, reducing or increasing the temperature quickly and efficiently. To be mounted on the outside of the supply air side.
- **Automatic changeover water coil:** Heats or cools the supply air through a water circuit, automatically switching between hot and cold water. To be mounted on the outside of the supply air side.
- **Roof:** Available for outdoor installations to protect the top of the unit against water and dirt.
- **Hood**: Available for outdoor installations to protect the air intake of the unit against water and dirt.
- **Silencer:** Reduces the noise level in the ductwork. The silencer can be used on any connection side.
- **Motorized damper:** Used for controlling the air stream of the unit by means of 0-100% controllable damper motors and blades.
- **Connection pieces:** Ensure compatibility with both round and rectangular rigid or flexable ducts for connection. Their flexibility absorbs vibrations and reduces noise.
- **Filters:** G4 (ISO Coarse 55%) and M5 (ePM10 50%) filters for exhaust air filtration. F9 (ePM1 85%) and F7 (ePM1 50%) filters for supply air filtration.
- **Louver grilles with fixed blades:** Protect the unit against dust and weather influences.

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MR45

Application

High efficient and high-performance ventilation and self-regulating energy recovery for office and industrial installations. Performance is greater than 80% (EN308), compliant with ErP directive 2018. Air filtration, temperature control, one-piece, smart and Plug & Play unit.

Range

The HRU models are automatically equipped with a Mode 4+ controller. This controller regulates based on a constant flow rate or constant pressure and can be equipped with a CO2 sensor or a humidity sensor (not both at the same time). 2 different configurations (left or right handed). HRU range covers flow rates from 1200 to 6500 m³/h.

Fan and motors

Direct drive EC motorized Plug Fans with high-efficiency electronic commutation (EC), integral thermal cut-out and speed variation. EC technology is an ecological® solution guaranteeing low energy consumption for the management, checking and control of the operating point of flow rates from 10 to 100%. Low sound levels for better acoustic comfort.

Filters

As standard, the HRU has a high-efficiency ePm1 50% filter on the fresh air intake and an ePm10 50% panel filter on the return air intake. Filters are always mounted upstream of components to ensure they are protected. Mounted on sliders fitted with lip sealings to ensure effective air tightness.

Construction

Thermal brake aluminum profiles with polyamide spacers between the profiles provide a TB2 Thermal Bridging class according to EN 1886. Glass fiber reinforced corners improves the durability of the casing. Insulation between the double-skin panels is 45 mm (70 kg/m³) of rock wool, resulting in a T2 thermal transmittance class. The exterior panels are powder coated in RAL 7047. The MR45 casing achieves class D1, L1, T2, TB2 according to EN1886. The device is equipped with a technical control panel containing the electrical components and controls. This section which is accessible via a lockable hinged door on one of the lateral sides also contains an LCD display and the isolating switch. Access to the other internal components, such as the stainless steel condensate drain pan, filters or the heat exchanger, are via the removable safety interlock panels.

Heat exchanger

Equipped with high-efficient and certified rotary heat exchangers. The exhangers can be selectable as condensation or sorption (molecular sieve). Efficiency is greater than 80% under EN308 conditions (OA: 5C/70%RH, RA:25C/28%RH). Automatic defrosting by regulated speed of the rotor and if necessary adjustment of the fresh air flow and by self-regulating electrical coil.

Optional

- External water or dx coil
- Internal water or electric heating coil
- External water auto change over coil
  Dampers with actuators
- Roof for outdoor installation
- Hood for outdoor installation for connection parts
- Flexible connectors, round connections
- Silencers

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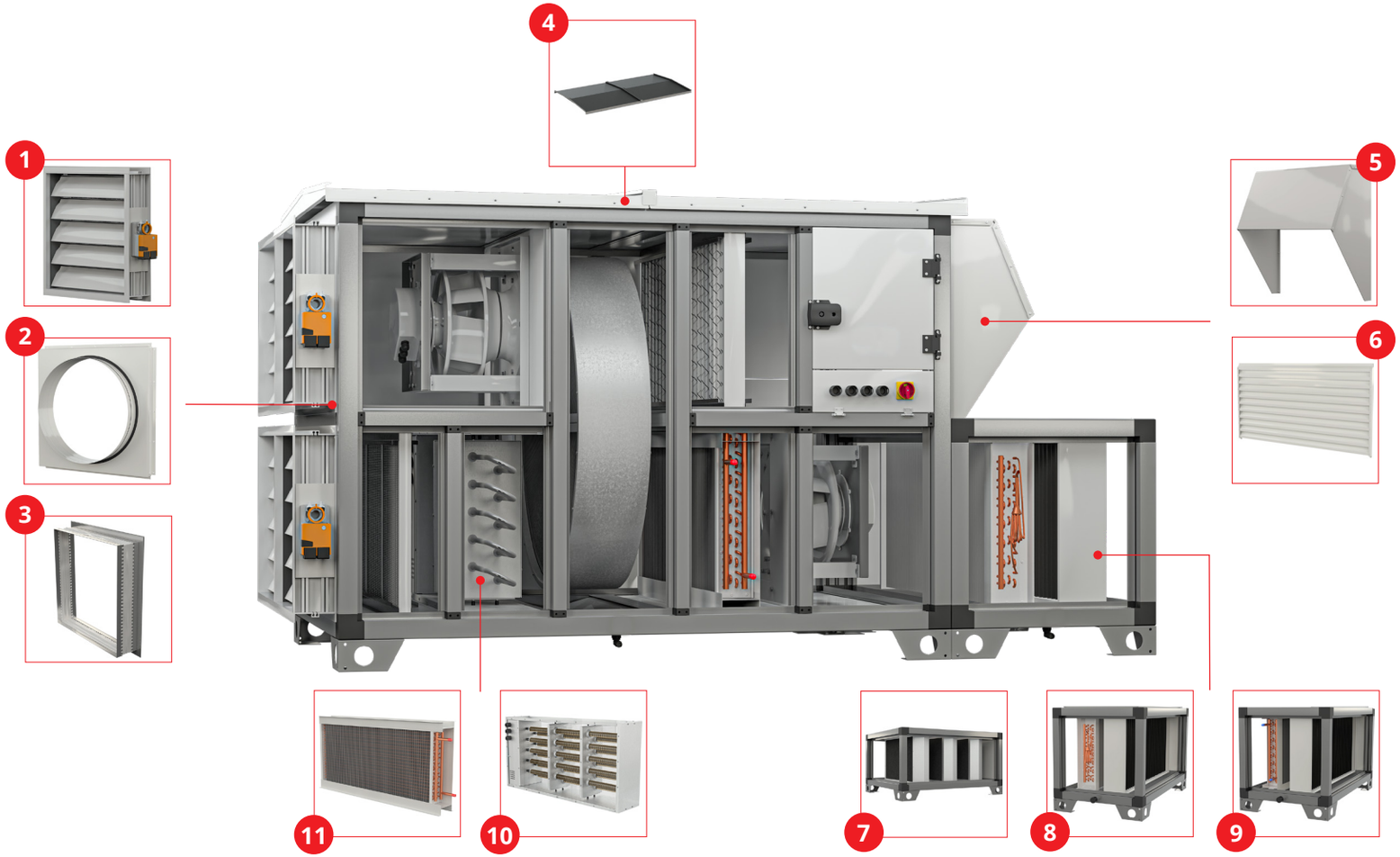
Optional accessories drawing



1. Damper and actuators
2. Round duct connections
3. Flexible Connectors
4. Roof
5. Hood
6. Louvres
7. Silencer Modules
8. DX Cooler Modules
9. Water Cooler Modules
10. Electrical Post Heaters
11. Water Heating Coil

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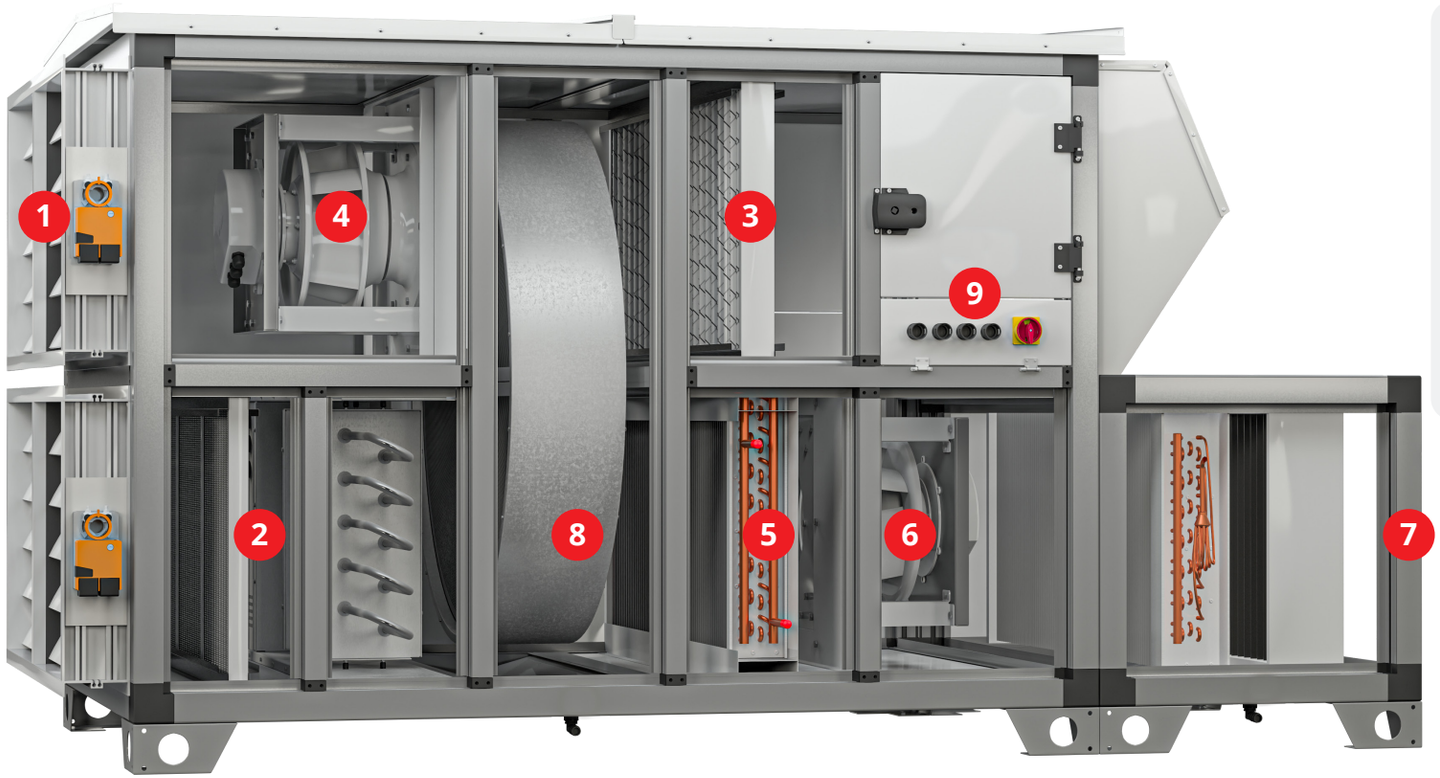
Design & details



Options

- Heating Coil / Cooling Coil
- Electrical Heating Coil
- DX Coil
- With different combinations in
- Mode4+ integrated plug&play controller for constant pressure or constant flow control

1 Insulation
Thermal Barrier in Profiles
45 mm Rockwool Insulated Panels

2 F7 Fresh Air Filter

3 M5 Exhaust Air Filter

4 High Efficient EC Fan Exhaust

5 Electrical or Water Heating

6 High Efficient Ec Fan Supply

7 Insulation Thermal barrier in profiles 45 mm rockwool insulated panels

8
- High efficient Counterflow Heat Exchanger with automated Bypass Damper
- Frost protection
- Sliding exchanger for easy maintenance

9
- Fully Automated Built-in Control Panel
- Mode4+ integrated plug&play controller for constant pressure or constant flow control
- Supply Air Temperature Control with Outdoor Compensation
- Operation Based on CO2 Concentration /Optional

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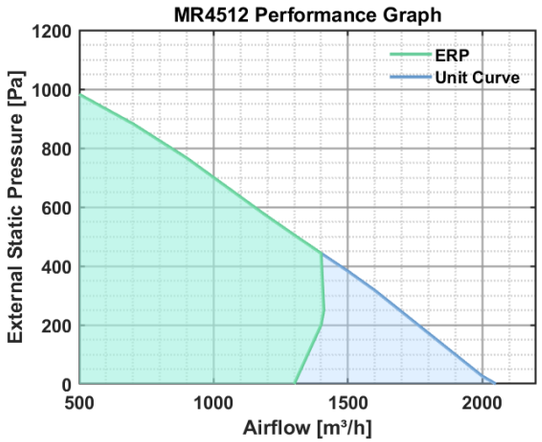
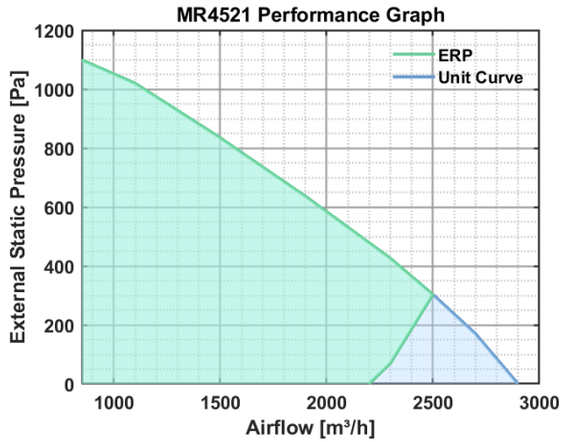
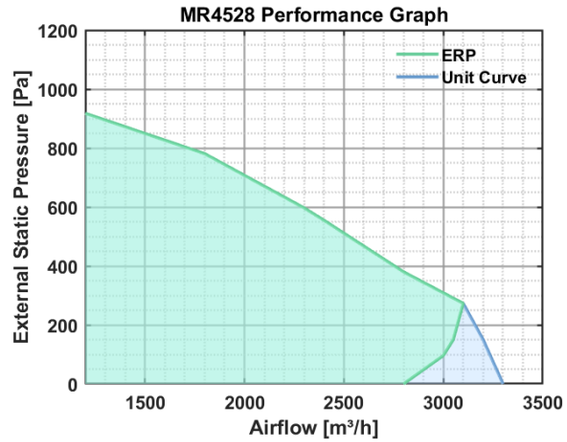
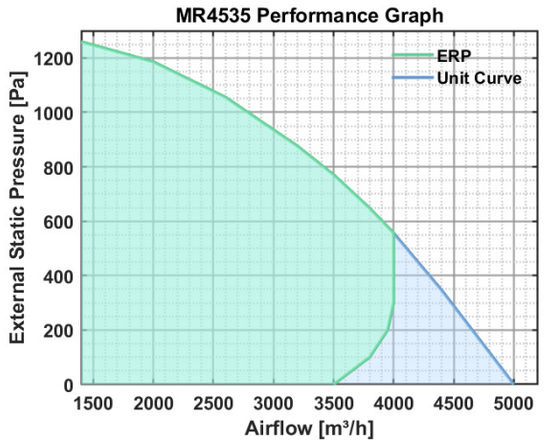
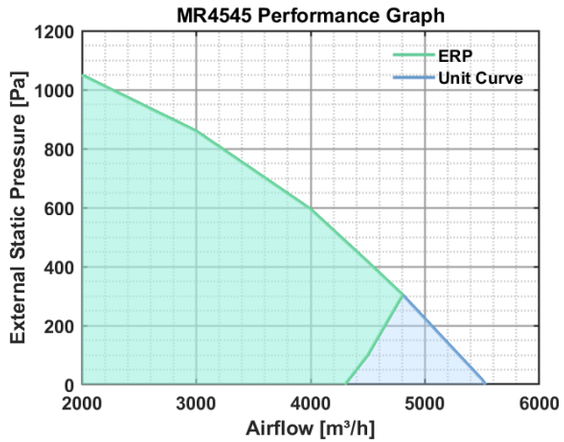
Performance graphs

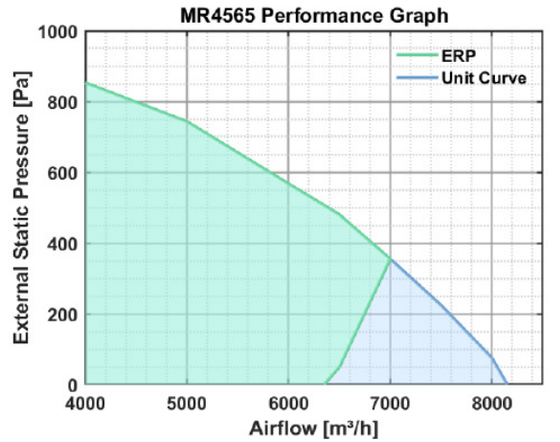












The fan curves have been generated based on the condition where no additional modules are included in the unit. If any internal or external modules (such as an electric heater or a DX coil and so on...) are to be added to the unit, the pressure losses of these modules must be added to the external static pressure drop on below fan curve, and the corresponding airflow value should then be read from the graph. The additional pressure losses caused by these modules can be found in the relevant sections of these modules on the catalog.

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Capacity charts - electric heater

Unit Description	Model Type	Model Name	Q (m3/h)	P (kW)	Ti (C°)	To (C°)	ΔP (Pa)
Maxivent by Econox MR45 UNITS	Condensation Units	MR4512	1.200	4,80	-10	1,90	15,00
				4,80	0	11,90	12,00
				4,80	10	21,90	10,00
		MR4521	2.100	7,00	-10	-0,08	16,00
				7,00	0	9,92	12,00
				7,00	10	19,92	11,00
		MR4528	2.800	11,50	-10	2,22	16,00
				11,50	0	12,22	12,00
				11,50	10	22,22	11,00
		MR4535	3.500	14,00	-10	1,90	18,00
				14,00	0	11,90	14,00
				14,00	10	21,90	12,00
		MR4545	4.500	17,00	-10	1,24	18,00
				17,00	0	11,24	14,00
				17,00	10	21,24	12,00
		MR4565	6.500	28,00	-10	2,82	21,00
				28,00	0	12,82	17,00
				28,00	10	22,82	14,00
	Sorption Units	MR4512	1.200	4,80	-10	1,90	15,00
				4,80	0	11,90	12,00
				4,80	10	21,90	10,00
		MR4521	2.100	7,00	-10	-0,08	16,00
				7,00	0	9,92	12,00
				7,00	10	19,92	11,00
		MR4528	2.800	11,50	-10	2,22	16,00
				11,50	0	12,22	12,00
				11,50	10	22,22	11,00
		MR4535	3.500	14,00	-10	1,90	18,00
				14,00	0	11,90	14,00
				14,00	10	21,90	12,00
		MR4545	4.500	17,00	-10	1,24	18,00
				17,00	0	11,24	14,00
				17,00	10	21,24	12,00
		MR4565	6.500	28,00	-10	2,82	21,00
				28,00	0	12,82	17,00
				28,00	10	22,82	14,00

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module

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Capacity charts - water heating coil

			Q (m3/h)	ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	**Model Type**	**Model Name**				**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**	**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**
Maxivent by Econox MR45 UNITS	Condensation Units	MR4512	1200	32,86	-10	21,2	14,05	604	21,5	10	9,02	777	36,1
				30,82	10	32,5	9,43	405	10,3	20,9	4,58	394	10,4
		MR4521	2100	25,66	-10	21,6	24,85	1069	3,8	10,2	15,92	1371	6,4
				23,5	10	32,3	16,5	703	1,8	20,5	7,71	664	1,7
		MR4528	2800	43,77	-10	18,2	29,65	1275	5,3	8,1	19	1637	8,9
				40,26	10	30	19,54	840	2,5	19,5	9,25	796	2,3
		MR4535	3500	36,54	-10	21,2	40,93	1760	50,6	10	26,28	2263	84,9
				33,53	10	32,6	27,63	1188	24,5	21,1	13,52	1165	25,2
		MR4545	4500	38,25	-10	20,5	51,39	2210	30	9,6	32,99	2841	50,5
				35,15	10	32	34,58	1487	14,5	20,7	16,86	1452	14,8
		MR4565	6500	29,25	-10	20,2	73,59	3164	3,1	9,3	47	4048	5,1
				27,4	10	31,2	48,05	2066	1,4	19,8	22,16	1909	1,2
	Sorption Units	MR4512	1200	32,86	-10	21,2	14,05	604	21,5	10	9,02	777	36,1
				30,82	10	32,5	9,43	405	10,3	20,9	4,58	394	10,4
		MR4521	2100	25,66	-10	21,6	24,85	1069	3,8	10,2	15,92	1371	6,4
				23,5	10	32,3	16,5	703	1,8	20,5	7,71	664	1,7
		MR4528	2800	43,77	-10	18,2	29,65	1275	5,3	8,1	19	1637	8,9
				40,26	10	30	19,54	840	2,5	19,5	9,25	796	2,3
		MR4535	3500	36,54	-10	21,2	40,93	1760	50,6	10	26,28	2263	84,9
				33,53	10	32,6	27,63	1188	24,5	21,1	13,52	1165	25,2
		MR4545	4500	38,25	-10	20,5	51,39	2210	30	9,6	32,99	2841	50,5
				35,15	10	32	34,58	1487	14,5	20,7	16,86	1452	14,8
		MR4565	6500	29,25	-10	20,2	73,59	3164	3,1	9,3	47	4048	5,1
				27,4	10	31,2	48,05	2066	1,4	19,8	22,16	1909	1,2

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature

ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW2 water cooling coil

			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%			
Unit Description	**Model Type**	**Model Name**				**To (C°)**	**P (kW)**	**Qw (l/s)**	**ΔPw (kPa)**
Maxivent by Econox MR45 UNITS	Condensation Units	MR4512	1200	52,33	25	15,7	4,58	654	10,6
				62,64	30	18	7,62	1090	27,6
		MR4521	2100	42	25	15,2	8,66	1237	11,6
				49,65	30	17,3	14,23	2034	29,1
		MR4528	2800	71,71	25	16	10,45	1494	16,4
				85,45	30	18,5	17,1	2443	40,9
		MR4535	3500	53,41	25	16,7	10,61	1517	2,5
				68,31	30	18,9	19,49	2786	7,6
		MR4545	4500	64,73	25	15,9	17,03	2434	13,1
				77,18	30	18,3	27,94	3993	32,5
		MR4565	6500	47,93	25	15,7	24,33	3477	6,6
				57,86	30	17,9	41,1	5874	17,4
	Sorption Units	MR4512	1200	52,33	25	15,7	4,58	654	10,6
				62,64	30	18	7,62	1090	27,6
		MR4521	2100	42	25	15,2	8,66	1237	11,6
				49,65	30	17,3	14,23	2034	29,1
		MR4528	2800	71,71	25	16	10,45	1494	16,4
				85,45	30	18,5	17,1	2443	40,9
		MR4535	3500	53,41	25	16,7	10,61	1517	2,5
				68,31	30	18,9	19,49	2786	7,6
		MR4545	4500	64,73	25	15,9	17,03	2434	13,1
				77,18	30	18,3	27,94	3993	32,5
		MR4565	6500	47,93	25	15,7	24,33	3477	6,6
				57,86	30	17,9	41,1	5874	17,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature

ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW2 auto change over water coil

				COOLING MODE						HEATING MODE									
			Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%				ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	Model Type	Model Name				To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)			To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)	To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)
Maxivent by Econox MR45 UNITS	Condensation Units	MR4512	1.200	52,33	25	15,7	4,58	654	10,6	53,91	-10	34,8	20,13	866	16,6	18,6	12,89	1110	27,6
				62,64	30	18	7,62	1090	27,6	48,9	10	42,1	13,43	577	7,7	25,6	6,53	562	7,7
		MR4521	2.100	42	25	15,2	8,66	1237	11,6	42,76	-10	37,2	37,16	1598	16,8	20,2	23,74	2044	27,9
				49,65	30	17,3	14,23	2034	29,1	38,66	10	44	24,89	1070	8	26,6	12,13	1045	8
		MR4528	2.800	71,71	25	16	10,45	1494	16,4	72,86	-10	33,2	45,39	1952	24,5	17,7	29,03	2500	40,7
				85,45	30	18,5	17,1	2443	40,9	66,27	10	41,2	30,46	1310	11,6	25,2	14,85	1279	11,7
		MR4535	3.500	53,41	25	16,7	10,61	1517	2,5	60,57	-10	34,5	58,39	2511	5,7	18,3	37,11	3197	9,4
				68,31	30	18,9	19,49	2786	7,6	54,98	10	41,9	38,97	1676	2,7	25,2	18,58	1600	2,6
		MR4545	4.500	64,73	25	15,9	17,03	2434	13,1	66,1	-10	34,7	75,38	3241	19,8	18,5	48,07	4140	32,8
				77,18	30	18,3	27,94	3993	32,5	60,04	10	42,4	50,77	2183	9,5	25,8	24,74	2130	9,6
		MR4565	6.500	47,93	25	15,7	24,33	3477	6,6	50,31	-10	37	114,43	4921	11,3	19,9	72,74	6265	18,5
				57,86	30	17,9	41,1	5874	17,4	45,56	10	44	77,06	3314	5,4	26,5	37,29	3211	5,4
	Sorption Units	MR4512	1.200	52,33	25	15,7	4,58	654	10,6	53,91	-10	34,8	20,13	866	16,6	18,6	12,89	1110	27,6
				62,64	30	18	7,62	1090	27,6	48,9	10	42,1	13,43	577	7,7	25,6	6,53	562	7,7
		MR4521	2.100	42	25	15,2	8,66	1237	11,6	42,76	-10	37,2	37,16	1598	16,8	20,2	23,74	2044	27,9
				49,65	30	17,3	14,23	2034	29,1	38,66	10	44	24,89	1070	8	26,6	12,13	1045	8
		MR4528	2.800	71,71	25	16	10,45	1494	16,4	72,86	-10	33,2	45,39	1952	24,5	17,7	29,03	2500	40,7
				85,45	30	18,5	17,1	2443	40,9	66,27	10	41,2	30,46	1310	11,6	25,2	14,85	1279	11,7
		MR4535	3.500	53,41	25	16,7	10,61	1517	2,5	60,57	-10	34,5	58,39	2511	5,7	18,3	37,11	3197	9,4
				68,31	30	18,9	19,49	2786	7,6	54,98	10	41,9	38,97	1676	2,7	25,2	18,58	1600	2,6
		MR4545	4.500	64,73	25	15,9	17,03	2434	13,1	66,1	-10	34,7	75,38	3241	19,8	18,5	48,07	4140	32,8
				77,18	30	18,3	27,94	3993	32,5	60,04	10	42,4	50,77	2183	9,5	25,8	24,74	2130	9,6
		MR4565	6.500	47,93	25	15,7	24,33	3477	6,6	50,31	-10	37	114,43	4921	11,3	19,9	72,74	6265	18,5
				57,86	30	17,9	41,1	5874	17,4	45,56	10	44	77,06	3314	5,4	26,5	37,29	3211	5,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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MR45

Capacity charts - DX coil

		COOLING MODE							HEATING MODE						
Model Name	**Q (m3/h)**	**Tai (C°)**	**Tev (C°)**	**ΔP (Pa)**	**P (kW)**	**Tao C°)**	**RH (%)**	**ΔPr410a (kPa)**	**Tev (C°)**	**Ta,i (°C)**	**ΔP (Pa)**	**P (kW])**	**Ta,o (°C)**	**RH (%)**	**ΔPr410a (kPa)**
MR4512	1200	25	7/45	54,18	4,91	15,6	79,18	18	40	11	45,28	7,16	28,2	17,19	14,9
		30	7/45	63,31	7,68	18,1	78,23	47,2		15	44,48	6,03	29,7	20,48	10,5
MR4521	2100	25	7/45	43,04	8,71	15,4	80,19	13,6	40	11	36,13	13,02	28,9	16,52	11,9
		30	7/45	50,49	13,87	17,8	79,2	36,4		15	35,47	10,97	30,2	19,81	8,4
MR4528	2800	25	7/45	76,68	10,56	16,2	76,8	20,4	40	11	64,24	15,6	27	18,36	16,9
		30	7/45	90,15	16,46	19,1	75,74	52,5		15	63,14	13,1	28,7	21,71	11,8
MR4535	3500	25	7/45	64,44	14,51	15,7	77,23	44,2	40	11	52,94	20,9	28,2	17,17	36,1
		30	7/45	73,77	21,11	18,8	76,47	100,5		15	52,02	17,65	29,7	20,42	25,3
MR4545	4500	25	7/45	68,31	17,93	15,9	77,01	24	40	11	56,48	26,12	27,7	17,66	19,9
		30	7/45	79,28	27,2	18,8	76,19	59		15	55,5	21,97	29,2	20,97	14
MR4565	6500	25	7/45	52,43	27,89	15,4	77,99	39,8	40	11	42,99	40,43	28,9	16,47	33,2
		30	7/45	59,97	40,92	18,4	77,37	91,5		15	42,21	34,14	30,3	19,71	23,4
MR4512	1200	25	7/45	54,18	4,91	15,6	79,18	18	40	11	45,28	7,16	28,2	17,19	14,9
		30	7/45	63,31	7,68	18,1	78,23	47,2		15	44,48	6,03	29,7	20,48	10,5
MR4521	2100	25	7/45	43,04	8,71	15,4	80,19	13,6	40	11	36,13	13,02	28,9	16,52	11,9
		30	7/45	50,49	13,87	17,8	79,2	36,4		15	35,47	10,97	30,2	19,81	8,4
MR4528	2800	25	7/45	76,68	10,56	16,2	76,8	20,4	40	11	64,24	15,6	27	18,36	16,9
		30	7/45	90,15	16,46	19,1	75,74	52,5		15	63,14	13,1	28,7	21,71	11,8
MR4535	3500	25	7/45	64,44	14,51	15,7	77,23	44,2	40	11	52,94	20,9	28,2	17,17	36,1
		30	7/45	73,77	21,11	18,8	76,47	100,5		15	52,02	17,65	29,7	20,42	25,3
MR4545	4500	25	7/45	68,31	17,93	15,9	77,01	24	40	11	56,48	26,12	27,7	17,66	19,9
		30	7/45	79,28	27,2	18,8	76,19	59		15	55,5	21,97	29,2	20,97	14
MR4565	6500	25	7/45	52,43	27,89	15,4	77,99	39,8	40	11	42,99	40,43	28,9	16,47	33,2
		30	7/45	59,97	40,92	18,4	77,37	91,5		15	42,21	34,14	30,3	19,71	23,4

Q: Air Volume
P: Power
Tai: Air inlet temperature
Tao: Air outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop
Tev: Evaporation temperature
RH: Relative humidity

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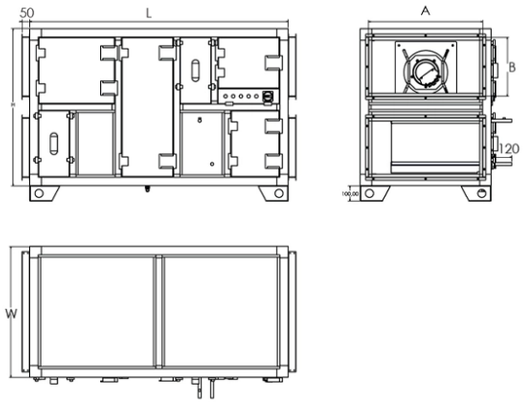
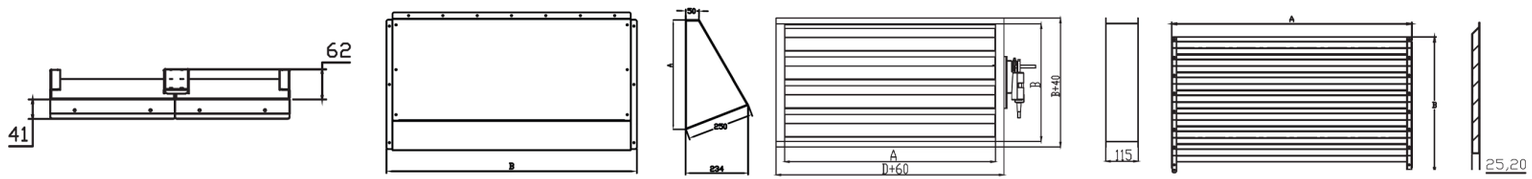
Unit dimensions

	Lenght (mm) L	Width (mm) W	Height (mm) H	Feet (mm)	Connention sizes (mm) (AxB)	Weight (kg)
MR4512	1680	850	1020	100	740x385	438
MR4521	1680	1090	1140	100	980x410	534
MR4528	1730	1090	1140	100	980x410	562
MR4535	1880	1260	1300	100	1150x510	682
MR4545	2080	1360	1400	100	1250x575	784
MR4565	2130	1640	1640	100	1530x710	993



Accessories dimensions

	Accessories dimensions			
	Roof (mm)	Hood (AxB) (mm)	Damper (AxB) (mm)	Louvre (AxB) (mm)
MR4512	62	800x450	740x410	800x450
MR4521	62	1040x450	980x410	1040x450
MR4528	62	1040x450	980x410	1040x450
MR4535	62	1210x550	1150x510	1210x550
MR4545	62	1310x650	1250x610	1310x650
MR4565	62	1590x750	1530x710	1590x750



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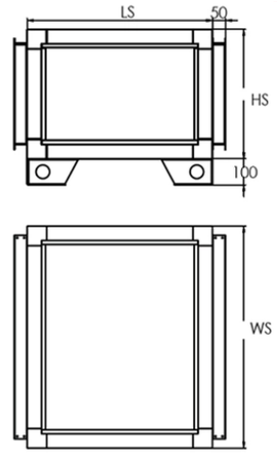
Coil dimensions

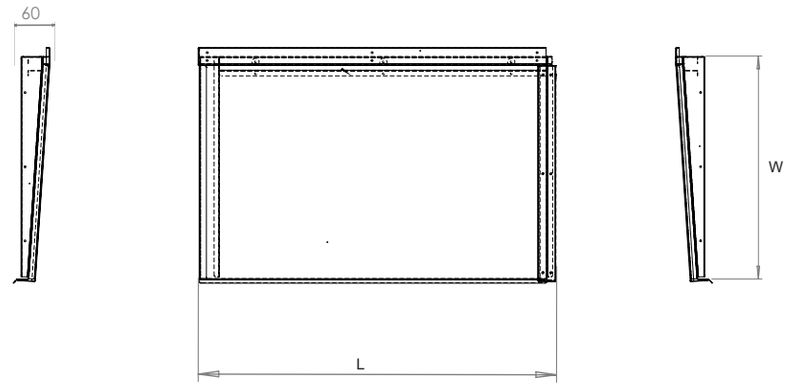
	Cooler / CCW / DX			Silencer-1 module			Silencer-2 module		
	LS (mm)	WS (mm)	HS (mm)	LS (mm)	WS (mm)	HS (mm)	LS (mm)	WS (mm)	HS (mm)
MR4512	710	850	495	710	850	495	1110	850	495
MR4521	710	1090	520	710	1090	520	1110	1090	520
MR4528	710	1090	520	710	1090	520	1110	1090	520
MR4535	710	1260	620	710	1260	620	1110	1260	620
MR4545	710	1360	685	710	1360	685	1110	1360	685
MR4565	710	1340	820	710	1640	820	1110	1640	820



Model	Length x Heigth (mm)	Thickness (mm)
MR4512	750x400	150
MR4521	990x400	150
MR4528	990x400	150
MR4535	1160x500	150
MR4545	1260x600	150
MR4565	150x700	150

dimensions roof accessories

Cooler / CCW / DX			
	Lenght	Width	Height
MR4512-RF	765	880	60
MR4521-RF	765	1120	60
MR4528-RF	765	1120	60
MR4535-RF	765	1290	60
MR4545-RF	765	1390	60
MR4565-RF	765	1670	60



Silencer-1-module			
	Lenght	Width	Height
MR4512-SL1-RF	765	880	60
MR4521-SL1-RF	765	1120	60
MR4528-SL1-RF	765	1120	60
MR4535-SL1-RF	765	1290	60
MR4545-SL1-RF	765	1390	60
MR4565-SL1-RF	765	1670	60

Silencer-2-module			
	Lenght	Width	Height
MR4512-SL2-RF	1155	880	60
MR4521-SL2-RF	1155	1120	60
MR4528-SL2-RF	1155	1120	60
MR4535-SL2-RF	1155	1290	60
MR4545-SL2-RF	1155	1390	60
MR4565-SL2-RF	1155	1670	60

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Maxivent by Econox M40

The Maxivent by Econox M40 ceiling unit is a highly efficient, powerful, advanced and versatile balanced ventilation unit with heat recovery, specially designed for offices, practices and small-scale commercial buildings. With a nominal air flow rate of up to 2700 m³/h and heat recovery of up to 90%, this air handling unit is ideal for your next commercial project where continuous ventilation without energy loss is a priority. The air handling unit operates using an efficient counterflow exchanger, EC fans and an integrated control panel. The air handling unit is designed for ceiling mounting and has handles on the left or right side, which can be used to open and maintain the unit.

Advantages and features

- **Sustainable housing:** Made from aluminium profiles with a polyamide thermal break between them, ensuring a TB2-class thermal bridge. The cabinet achieves class D1, L1, T2 and TB2 according to EN 1886. Double-walled panels are insulated with 45 mm rock wool to minimise heat loss and noise.
- **Counterflow exchanger:** The integrated, efficient counterflow heat exchanger recovers up to 90% of the thermal energy from the return air without mixing air streams.
- **EC fans:** Direct-drive EC motorised plug fans with high-efficiency electronic commutation (EC) offer an ecological solution with low energy consumption and a lower noise level.
- **Easy maintenance:** Easy access to the air handling unit via the handles on the left or right side. Filters and optional accessories can be easily replaced and/or installed.
- **Control panel:** The fully integrated Regin control panel is suitable for constant pressure or constant flow control. It can be equipped with a CO□ or humidity sensor and allows the display and control of many functions (such as air flow control, temperature control, dirty filter alerts, freeze protection and more).
- **Compact solution:** All components are integrated into a single cabinet, making installation simple, efficient and space-saving.
- **Additional components:** Thanks to its flexible design, the cabinet can be easily expanded with additional functionalities tailored to the user's requirements.



Specifications

- Brand: Maxivent by Econox
- Up to 2700 m³/h
- Up to 90% thermal efficiency
- Integrated constant flow or constant pressure regulator

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Optional accessories

For maximum flexibility, the non residential heat recovery units can be expanded with various accessories tailored to the specific requirements of the project. The non residential heat recovery units can be expanded with the following components:

- **Hot water coil:** Post-heating based on hot water from the central heating system or heat pump, for energy-efficient and accurate temperature control of the supply air. To be mounted on the outside of the supply air side.
- **Cold water coil:** Cooling based on cold water from a cooling system or heat pump, for energy-efficient and accurate temperature control of the supply air. To be mounted on the outside of the supply air side.
- **Reversible DX coil:** Provides direct cooling or heating of the supply air via a refrigerant circuit, reducing or increasing the temperature quickly and efficiently. To be mounted on the outside of the supply air side.
- **Automatic changeover water coil:** Heater or cools the supply air via a water circuit and automatically switches between hot and cold water. To be mounted on the outside of the supply air side.
- **Silencer:** Reduces the sound level in the duct. The silencer can be used on either connection side.
- **Motorized damper:** Used for controlling the air stream of the unit by means of 0-100% controllable damper motors and blades.
- **Connection pieces:** Ensure compatibility with both round and rectangular rigid or flexable ducts for connection. Their flexibility absorbs vibrations and reduces noise.
- **Filters:** G4 (Iso Coarse 55%) and M5 (ePM10 50%) filters for filtering exhaust air. F9 (ePM1 85%) and F7 filters (ePM1 50%) for filtering supply air.

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Application

High efficient and high-performance ventilation and self-regulating energy recovery for office and industrial installations. Performance is greater than 80% (EN308), compliant with ErP directive 2018. Air filtration, temperature control, one-piece, smart, Plug & Play and slim unit.

Range

The HRU models are automatically equipped with a Mode 4+ controller. This controller regulates based on a constant flow rate or constant pressure and can be equipped with a CO2 sensor or a humidity sensor (not both at the same time). 2 different configurations (left or right handed). HRU range covers flow rates from 400 to 2700 m³/h.

Fan and motors

Direct drive EC motorized Plug Fans with high-efficiency electronic commutation (EC), integral thermal cut-out and speed variation. EC technology is an ecological® solution guaranteeing low energy consumption for the management, checking and control of the operating point of flow rates from 10 to 100%. Low sound levels for better acoustic comfort.

Filters

As standard, the HRU has a high-efficiency ePm1 50% filter on the fresh air intake and an ePm10 50% panel filter on the return air intake. Filters are always mounted upstream of components to ensure they are protected. Mounted on clamp on frames with gaskets to ensure effective air tightness.

Construction

Profiless construction is provide smooth surfaces inner and outer sides of the unit. Insulation between the double-skin panels is 40 mm (70 kg/m³) of rock wool. The exterior panels are powder coated in RAL 7047 Thedevice is equipped with a technical control panel containing the electrical components and controls. This section which is accessible easily with remove the handle-bolts. Access to the other internal components, such as the stainless steel condensate drain pan, automatic bypass damperactuator, filters, fans and heat exchangers, are via the sliding doors and removable bottom panels.

Heat exchanger

Equipped with high-efficient and certified plate heat exchangers. Efficiency is greater than 80% under EN308 conditions (OA:5C/70%RH, RA:25C/28%RH). Automatic defrosting via bypass damper and if necessary adjustment of the fresh air flow and by self-regulating electrical coil.

Optional

- External heater and coolers.
- Round connectors
- Outdoor dampers
- Condensate pump
- Duct type silencer

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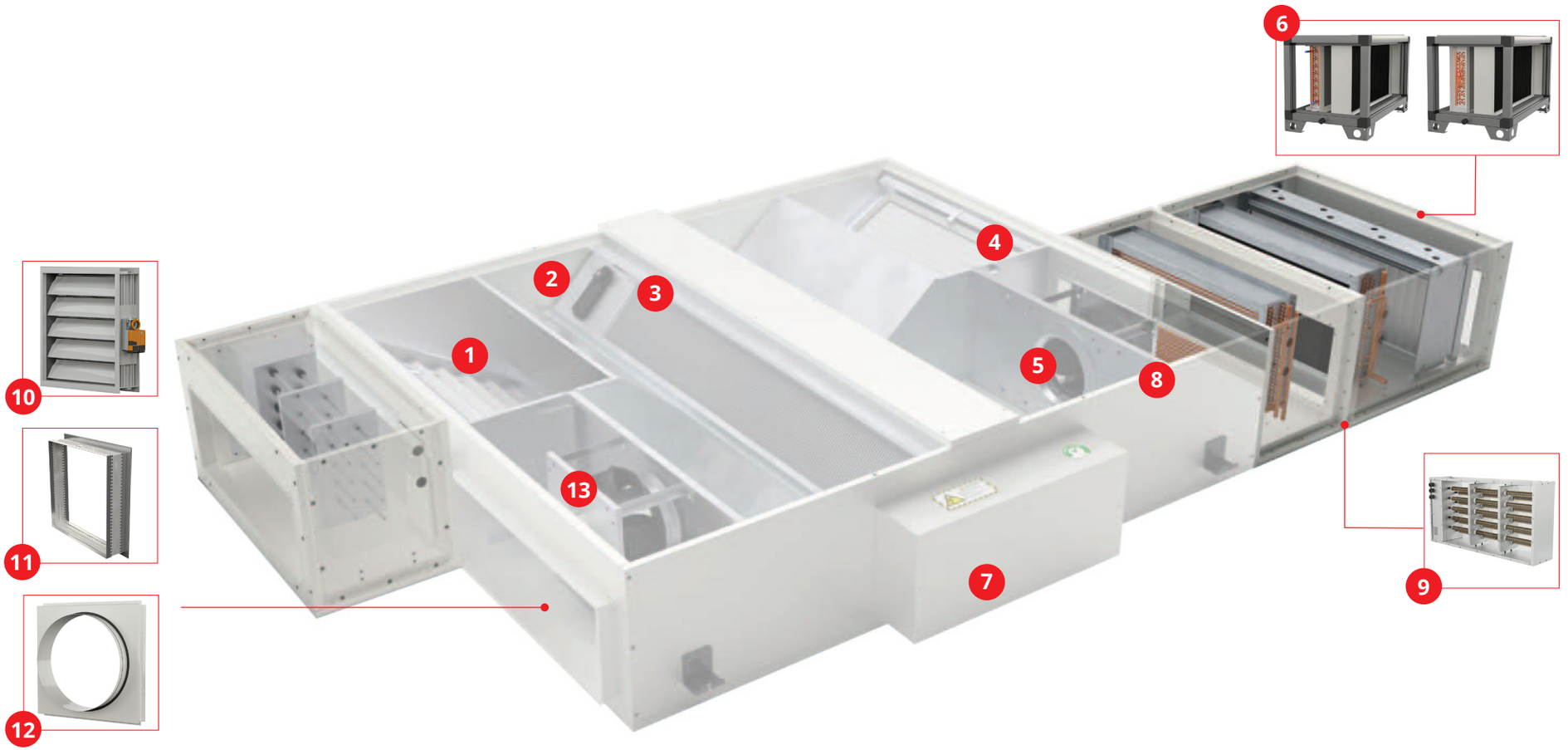
Design details & optional accessories



1. Outdoor filter
2. Bypass damper
3. Countwerflow heat Exchanger
4. Exhaust filter
5. Flow grid
6. Water Cooler /Changeover Dx Cooler / Heatpump
7. Controle box
8. Supply fan
9. Electrical After Heater(0-10V) Water Heater
10. Dampers and actuators
11. Flexible Connector
12. Round Duct Connection
13. Exhaust Fan

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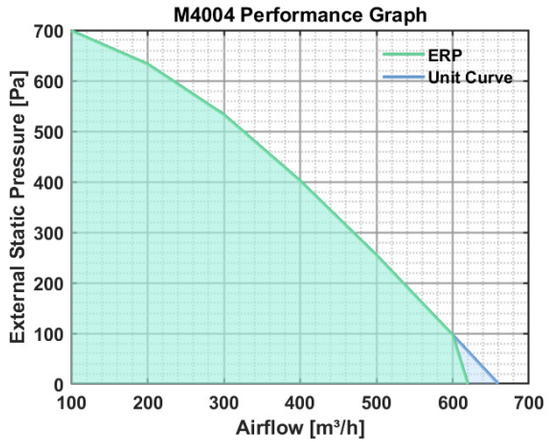
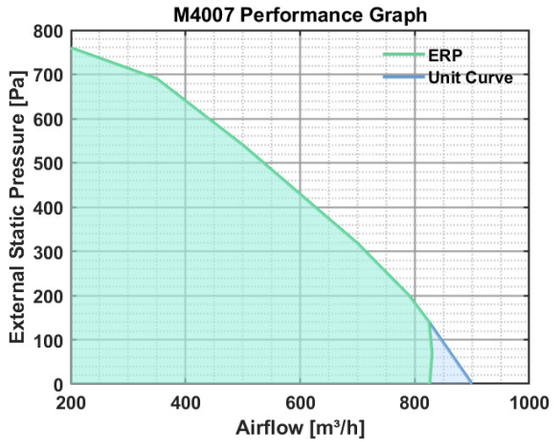
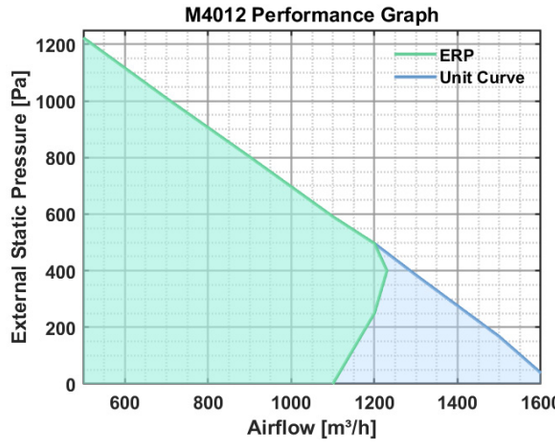
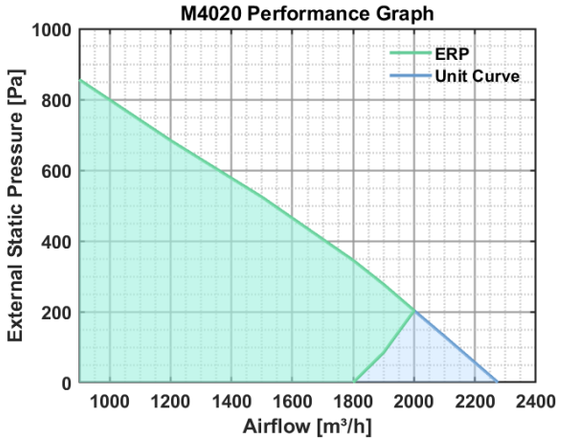
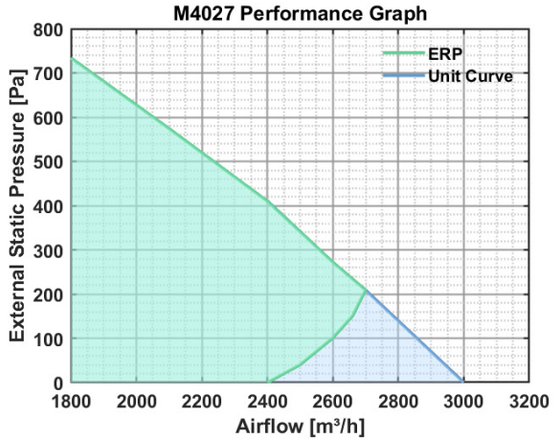
Performance graphs











The fan curves have been generated based on the condition where no additional modules are included in the unit. If any internal or external modules (such as an electric heater or a DX coil and so on...) are to be added to the unit, the pressure losses of these modules must be added to the external static pressure drop on below fan curve, and the corresponding airflow value should then be read from the graph. The additional pressure losses caused by these modules can be found in the relevant sections of these modules on the catalog.

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Capacity charts - electric heater

Unit Description	Model Name	Q (m3/h)	P (kW)	Ti (C°)	To (C°)	ΔP (Pa)
Maxivent by Econox M40 UNITS	M4004	400	1,5	-10	1,16	6
		400	1,5	0	11,16	8
		400	1,5	10	21,16	10
	M4007	700	2,25	-10	-0,43	8
		700	2,25	0	9,57	10
		700	2,25	10	19,57	12
	M4012	1200	4,25	-10	0,54	15
		1200	4,25	0	10,54	12
		1200	4,25	10	20,54	10
	M4020	2000	6,75	-10	0,04	16
		2000	6,75	0	10,04	12
		2000	6,75	10	20,04	11
	M4027	2700	9	-10	-0,08	16
		2700	9	0	9,92	12
		2700	9	10	19,92	11

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module

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Capacity charts - water heating coil

		Q (m3/h)	ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	**Model Name**				**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**	**To (C°)**	**P (kW)**	**Qw (kg/h)**	**ΔPw (kPa)**
Maxivent by Econox M40 UNITS	M4004	400	30,57	-10	21,2	4,68	201	10	10	3	258	16,6
			28,03	10	32,3	3,11	134	4,6	20,7	1,49	129	4,5
	M4007	700	36,31	-10	17,9	7,32	315	2	7,8	4,67	403	3,2
			33,33	10	29,2	4,69	202	0,8	18,5	2,07	178	0,7
	M4012	1.200	75,63	-10	20,1	13,53	582	16,8	9,3	8,68	748	28,2
			69,32	10	31,5	8,99	387	7,9	20,3	4,3	372	7,7
	M4020	2.000	60,3	-10	19,1	21,81	938	2,4	8,6	13,95	1201	4
			55,42	10	30,1	13,98	601	1,1	19	6,29	542	0,9
	M4027	2.700	48,98	-10	21,7	33,12	1381	4,9	10,3	20,58	1773	8,2
			44,92	10	32,3	20,99	902	2,2	20,4	9,83	847	2,1

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW1 water cooling coil

		Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%			
Unit Description	**Model Name**				**To (C°)**	**P (kW)**	**Qw (l/s)**	**ΔPw (kPa)**
Maxivent by Econox M40 UNITS	M4004	400	31,67	25	19	0,84	121	4
			39,1	30	22,2	1,5	215	11,6
	M4007	700	37,73	25	20,2	1,11	158	1,3
			46	30	23	2,15	307	4,4
	M4012	1.200	56,39	25	19,5	2,35	335	6,6
			69,07	30	23,1	4,04	577	18,1
	M4020	2.000	43,55	25	21,4	2,41	344	0,4
			44,88	30	24	4,14	592	1,2
	M4027	2.700	34,28	25	20,3	4,21	602	1,2
			41,66	30	22,9	8,37	1196	4,1

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW2 water cooling coil

		Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%			
Unit Description	**Model Name**				**To (C°)**	**P (kW)**	**Qw (l/s)**	**ΔPw (kPa)**
Maxivent by Econox M40 UNITS	M4004	400	60,88	25	16,3	1,21	173	1,4
			71,31	30	19,1	1,86	266	3,1
	M4007	700	66,58	25	15,2	2,67	381	7,1
			79,17	30	16,9	4,67	667	20,6
	M4012	1.200	67,94	25	17,2	3,18	455	3,1
			88,93	30	18,9	6,41	916	11,9
	M4020	2.000	86,62	25	16,2	6,71	959	5,8
			105,51	30	18,5	11,64	1664	16,2
	M4027	2.700	68,2	25	18	6,26	894	0,8
			86,72	30	18,6	14,03	2005	3,5

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW1 Auto change over water coil

			COOLING MODE						HEATING MODE								
		Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%				ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	Model Name				To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)			To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)	To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)
Maxivent by Econox M40 UNITS	M4004	400	31,67	25	19	0,84	121	4	36,47	-10	19,9	4,48	193	8,9	9,2	2,87	247	14,7
			39,1	30	22,2	1,5	215	11,6	33,47	10	31,3	2,97	128	4,1	20,2	1,42	122	3,9
	M4007	700	37,73	25	20,2	1,11	158	1,3	45,26	-10	17,7	7,27	313	4,1	7,7	4,66	401	6,8
			46	30	23	2,15	307	4,4	41,64	10	29,5	14,86	205	1,9	19,1	2,23	192	1,7
	M4012	1.200	56,39	25	19,5	2,35	335	6,6	63,52	-10	16,6	11,97	515	13,4	7,1	7,68	661	22,4
			69,07	30	23,1	4,04	577	18,1	58,55	10	29	7,97	343	6,3	19,2	3,83	330	6,1
	M4020	2.000	43,55	25	21,4	2,41	344	0,4	51,89	-10	15,8	19,32	831	1,9	6,5	12,35	1063	3,2
			44,88	30	24	4,14	592	1,2	46,91	10	27,8	12,4	533	0,8	17,9	5,52	475	0,7
	M4027	2.700	34,28	25	20,3	4,21	602	1,2	41,22	-10	18,2	28,54	1227	3,9	8,1	18,27	1574	6,5
			41,66	30	22,9	8,37	1196	4,1	37,9	10	29,9	18,68	803	1,8	19,3	8,72	751	1,6

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - CCW2 Auto change over water coil

			COOLING MODE						HEATING MODE								
		Q (m3/h)	ΔP (Pa)	Ti (C°)	6 - 12°C / RH 50%				ΔP (Pa)	Ti (C°)	70/50°C				40/30°C			
Unit Description	Model Name				To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)			To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)	To (C°)	P (kW)	Qw (l/s)	ΔPw (kPa)
Maxivent by Econox M40 UNITS	M4004	400	60,88	25	16,3	1,21	173	1,4	73,62	-10	36	6,9	297	3,6	19,4	4,4	379	5,9
			71,31	30	19,1	1,86	266	3,1	66,59	10	41,8	4,43	497	1,5	24,4	2,01	173	1,3
	M4007	700	66,58	25	15,2	2,67	381	7,1	74,04	-10	38,2	12,65	544	13,2	20,9	8,1	698	21,9
			79,17	30	16,9	4,67	667	20,6	66,97	10	44,2	8,33	358	5,9	26,4	4,01	346	5,7
	M4012	1.200	67,94	25	17,2	3,18	455	3,1	83,17	-10	34	19,78	851	9,9	18,1	12,63	1087	16,2
			88,93	30	18,9	6,41	916	11,9	75,53	10	41,1	12,99	559	4,4	24,7	6,13	528	4
	M4020	2.000	86,62	25	16,2	6,71	959	5,8	95,74	-10	33,9	32,93	1416	11,1	18,1	21,04	1812	18,3
			105,51	30	18,5	11,64	1664	16,2	87,04	10	41,4	21,86	940	5,1	25,1	10,51	905	5
	M4027	2.700	68,2	25	18	6,26	894	0,8	84,43	-10	31	41,51	1190	1,2	20,3	30,7	2644	5,7
			86,72	30	18,6	14,03	2005	3,5	76,28	10	35,3	23,78	682	0,4	25,7	14,77	1272	1,4

Q: Air Volume
P: Power
Ti: Inlet temperature
To: Outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop

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Capacity charts - DX coil

		COOLING MODE							HEATING MODE						
Model Name	**Q (m3/h)**	**Tai (C°)**	**Tev (C°)**	**ΔP (Pa)**	**P (kW)**	**Tao C°)**	**RH (%)**	**ΔPr410a (kPa)**	**Tev (C°)**	**Ta,i (°C)**	**ΔP (Pa)**	**P (kW])**	**Ta,o (°C)**	**RH (%)**	**ΔPr410a (kPa)**
M4004	400	25	7/45	54,65	1,29	16,3	81,85	0,6	40	11	50,33	2,01	25,5	20,11	0,5
		30	7/45	66,27	2,21	18,8	80,96	1,9		15	49,49	1,7	27,4	23,36	0,4
M4007	700	25	7/45	58,09	2,4	16	82,36	1,4	40	11	52,48	3,8	26,6	18,81	1,2
		30	7/45	69,52	4,04	18,5	81,11	3,9		15	51,58	3,2	28,4	22,08	0,8
M4012	1200	25	7/45	78,15	4,1	15,8	84,27	2,9	40	11	71,66	6,63	26,9	18,5	2,7
		30	7/45	92,84	6,92	18,3	82,51	8,4		15	70,45	5,56	28,5	21,88	1,9
M4020	200	25	7/45	87,18	6,52	16,1	82,92	2,6	40	11	80,46	10,54	26,2	19,33	2,3
		30	7/45	103,92	11	18,8	81,45	7,5		15	79,13	8,84	27,9	22,68	1,6
M4027	2700	25	7/45	71,54	9,53	15,7	84,25	3,8	40	11	64,92	15,72	27,8	17,6	3,6
		30	7/45	84,06	15,74	18,2	82,77	10,5		15	63,78	13,17	29,2	20,99	2,6

Q: Air Volume
P: Power
Tai: Air inlet temperature
Tao: Air outlet temperature
ΔP: Pressure loss of the electric heater module
Qw: Water mass flow rate
ΔPw: Water-side pressure drop
Tev: Evaporation temperature
RH: Relative humidity

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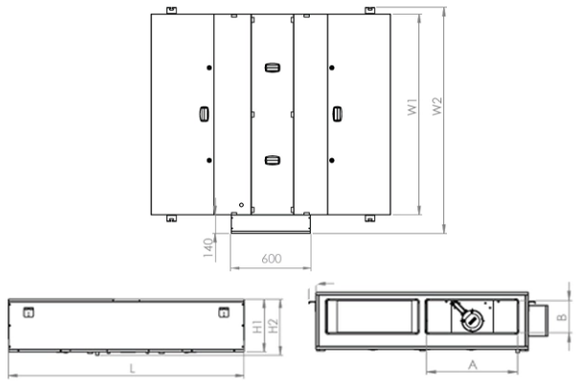
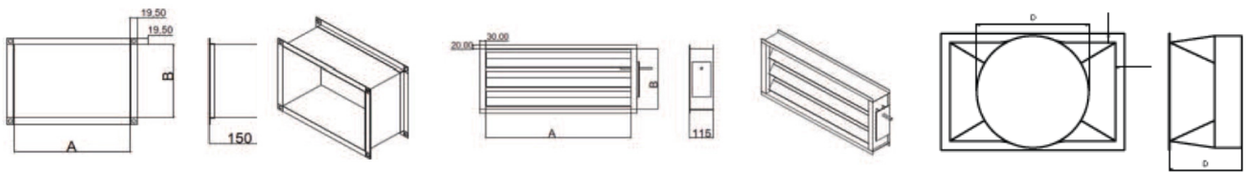
Unit dimensions

	Lenght	Width	Width	Height	Height	Connection sizes	Weight	Height with sliding doors
	(mm) L	(mm) W1	(mm) W2	(mm) H1	(mm) H2	(mm) AxB	KG	
M4004	1335	813	1003	324	349	300x150	89	414
M4007	1335	1118	1303	324	349	370x150	120	414
M4012	1425	1213	1403	365	390	500x200	143	455
M4020	1817	1513	1703	406	431	650x230	259	496
M4027	1899	1863	2053	488	513	700x300	326	578



Accessories dimensions

	Accessories dimensions		
	Flex connection (AxB) (mm)	Damper (AxB) (mm)	Round connection (D) (mm)
M4004	300x150	300x210	200
M4007	370x150	370x210	250
M4012	500x200	500x210	315
M4020	650x230	650x210	400
M4027	700x300	700x210	450



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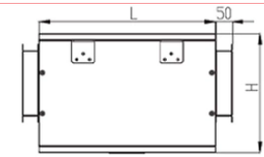
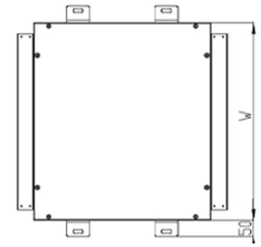
Coil dimensions

	Cooler / CCW / DX			HC			Silencer-1 module			Silencer-2 module		
	L (mm)	W (mm)	H (mm)	L (mm)	W (mm)	H (mm)	L (mm)	W (mm)	H (mm)	L (mm)	W (mm)	H (mm)
M4004	550	406	324	540	406	324	686	406	324	1086	406	324
M4007	550	559	324	540	559	324	686	559	324	1086	559	324
M4012	550	606	365	540	606	367	686	606	365	1086	606	365
M4020	550	756	408	540	756	406	686	756	406	1086	756	406
M4027	550	931	488	540	931	488	686	931	488	1086	931	488







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Electrical Characteristics

M45

Model	Power Details		Cable Cross Sections							RCD Details
	Default Unit	EH	Default Unit			Unit+EH			Rec. Type	Rec. Current
			Max Current	Rec. Cable	Rec. Fuse	Max Current	Rec. Cable	Rec. Fuse		
	(kW)	(kW)	(A)	(mm2)	(A)	(A)	(mm2)	(A)		(mA)
M4512 H/V	1,1	3,75	5,1	5x2,5	16	9,9	5x2,5	16	B or B+	300
M4516 H/V	1,6	5,25	7,1	5x2,5	16	13,8	5x2,5	20	B or B+	300
M4523 H/V	2,2	6,75	3,7	5x2,5	16	16,5	5x2,5	20	B or B+	300
M4540 H/V	3,7	13,5	6,1	5x2,5	16	31,7	5x4	32	B or B+	300
M4555 H/V	5,46	18	8,7	5x2,5	16	42,9	5x6	50	B or B+	300

Cable section calculations are based on max 50m cable length and %10 drop of supply voltage. Please contact with Maxivent by Econox for different installations!

MR45

Model	Power Details		Cable Cross Sections							RCD Details
	Default Unit	EH	Default Unit			Unit+EH			Rec. Type	Rec. Current
			Max Current	Rec. Cable	Rec. Fuse	Max Current	Rec. Cable	Rec. Fuse		
	(kW)	(kW)	(A)	(mm2)	(A)	(A)	(mm2)	(A)		(mA)
MR4512	1,1	4,8	5,5	5x2,5	16	13,6	5x2,5	16	B or B+	300
MR4521	1,6	7	7,7	5x2,5	16	19,5	5x4	20	B or B+	300
MR4528	2,2	11,5	3,9	5x2,5	16	19,5	5x4	25	B or B+	300
MR4535	3,7	14	6,6	5x2,5	16	30,2	5x6	32	B or B+	300
MR4545	5,46	17	9,5	5x2,5	16	38,2	5x6	40	B or B+	300
MR4565	5,1	28	8,8	5x2,5	16	56,1	5x16	63	B or B+	300

Cable section calculations are based on max 50m cable length and %10 drop of supply voltage. Please contact with Maxivent by Econox for different installations!

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Electrical Characteristics

M40

Model	Power Details		Cable Cross Sections							RCD Details
	Default Unit	EH	Default Unit			Unit+EH			Rec. Type	Rec. Current
			Max Current	Rec. Cable	Rec. Fuse	Max Current	Rec. Cable	Rec. Fuse		
	(kW)	(kW)	(A)	(mm2)	(A)	(A)	(mm2)	(A)		(mA)
M4004	0,27	1,5	2,0	5x2,5	10	4,43	5x2,5	10	B or B+	300
M4007	0,44	2,25	3,1	5x2,5	10	6,73	5x2,5	10	B or B+	300
M4012	1,1	4,25	5,4	5x2,5	10	12,23	5x2,5	16	B or B+	300
M4020	1,1	6,75	5,0	5x2,5	10	15,83	5x2,5	20	B or B+	300
M4027	1,6	9	7,0	5x2,5	10	21,42	5x4	32	B or B+	300

Cable section calculations are based on max 50m cable length and %10 drop of supply voltage. Please contact with Maxivent by Econox for different installations!

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Sound levels

			Duct Sound Power Levels (LwA) (dBA)				
Units	**Nominal Airflow (m³/h)**	**Static Pressure (Pa)**	**Outdoor Duct**	**Supply Duct**	**Return Duct**	**Exhaust Duct**	**Distance (3m)**
M4004	400	200	59	73	59	73	35,9
M4007	700	200	63	77	63	77	41,4
M4012	1200	200	65	69	66	80	46
M4020	2000	200	65	82	66	84	51,6
M4027	2700	200	69	85	69	85	57,9
M4512V	1200	200	63	74	64	74	43,3
M4516V	1600	200	63	75	64	75	41
M4523V	2300	200	64	77	64	77	44,6
M4540V	4000	200	67	84	67	84	52,3
M4555V	5500	200	67	81	67	81	44,3
M4512H	1200	200	63	74	64	74	43,3
M4516H	1600	200	63	75	64	75	41
M4523H	2300	200	64	77	64	77	44,6
M4540H	4000	200	67	84	67	84	52,3
M4555H	5500	200	67	81	67	81	44,3
MRC4512	1200	200	64	75	64	75	45,1
MRC4521	2100	200	65	80	65	80	46,3
MRC4528	2800	200	66	80	66	80	46,38
MRC4535	3500	200	64	82	64	81	45,5
MRC4545	4500	200	69	84	68	84	49,8
MRC4565	6500	200	70	84	69	84	47,4
MRS4512	1200	200	65	76	65	76	46,6
MRS4521	2100	200	65	80	65	80	46,5
MRS4528	2800	200	66	80	66	80	47
MRS4535	3500	200	64	82	64	82	45,7
MRS4545	4500	200	69	84	69	84	50,1
MRS4565	6500	200	70	84	70	84	47,5

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