

Zehnder ComfoAir Maxi

Technical specification

General

The Zehnder ComfoAir Maxi low-maintenance, large ventilation units with heat recovery are ideal for new buildings and renovation projects. They can be used in any situation where models need to be energy-efficient, feature modulating power control and operate quietly. The pre-installed, pre-configured plug-and-play design as well as the innovative TACtouch touch screen interactive display make installing, configuring and operating the unit child's play.

The acoustically and thermally insulated, galvanised unit housing guarantees durability, silent operation and energy efficiency. The Zehnder ComfoAir Maxi large ventilation units are available in right and left-hand versions and can be installed indoors or outdoors (optional accessories required).

Zehnder ComfoAir Maxi units are available up to a maximum airflow volume of 7,080 m³/h

Level of efficiency

The highly efficient, Eurovent-certified counterflow heat exchanger has a temperature efficiency level of up to 85% and complies with the EN 308 standard.

Fans

The direct-driven EC fans come equipped with fan impellers made of composite materials as standard. Aluminium fan impellers are available as an option.

Control

The innovative TAC5 control system with TACtouch touch screen interactive display guarantees maximum operating convenience due to its simple, intuitive configuration and commissioning. A commissioning menu is also integrated into the interface. The fully integrated control unit controls and monitors temperatures, airflow volumes and additional functions – it is also configured with default settings set at the factory.



TACtouch
touch screen interactive display

Filters

All Zehnder ComfoAir Maxi large ventilation units are equipped with bag filters.

The filters consist of fibreglass. The filter keeps the air and the heat exchanger clean.

The fresh air bag filter corresponds to class ePM1 ≥ 70%; the extract air bag filter corresponds to class ePM10 ≥ 50%. The filters are installed in lockable guides in order to make filter replacement and filter section cleaning easier. The filter guides comply with requirements for filter bypass leaks in accordance with class ePM1 ≥ 80% (F9) (EN 1886). The filter monitor function is integrated into the standard configuration for the TAC5 control unit. A compact G4 / COARSE prefilter is available as an option.

Unit housing

The housing for Zehnder ComfoAir Maxi large ventilation units is made of aluminium profile sections held together by plastic corner pieces. The outer shell is made of painted sheet steel, RAL 7016. The inner casing is produced using galvanised sheet steel. The cladding is 50 mm thick with intermediary insulation made of mineral wool. The doors are mounted on four hinges. Each side has two hinges with integrated handles. The doors can be opened in two directions.

EN 1886 housing performance:

- Air leakage, class: L2 (M)
- Thermal bridges: TB2
- Thermal transfer: T3 (T2 optional)
- Mechanical strength: D1
- Filter bypass leakage: F9

The three main modes

Airflow volume or pressure

Whether the ventilation system is operated under a constant pressure, a constant airflow volume, or via a control system with 0–10 V depends on the area of application and the specific demands on site. The integrated master/slave control system always ensures an optimally balanced operation.

The advantages in detail

- Sufficiently high reserve pressure
- Constant airflow volume
- Demand control: constant airflow volume linked with 0–10 V signal
- Constant pressure via external pressure sensor

Mode for constant airflow volume

A typical application area would be non-residential buildings, e.g. offices and business premises as well as schools, nursery schools and sports halls with stable air volumes.

Mode for demand control

Alternatively, the airflow volume can be automatically adjusted to the ventilation demands as well as to user-specific requirements via a 0–10 V input, e.g. via a CO₂ sensor. In addition, the building management system or the measurement and control system of the customer can be used.

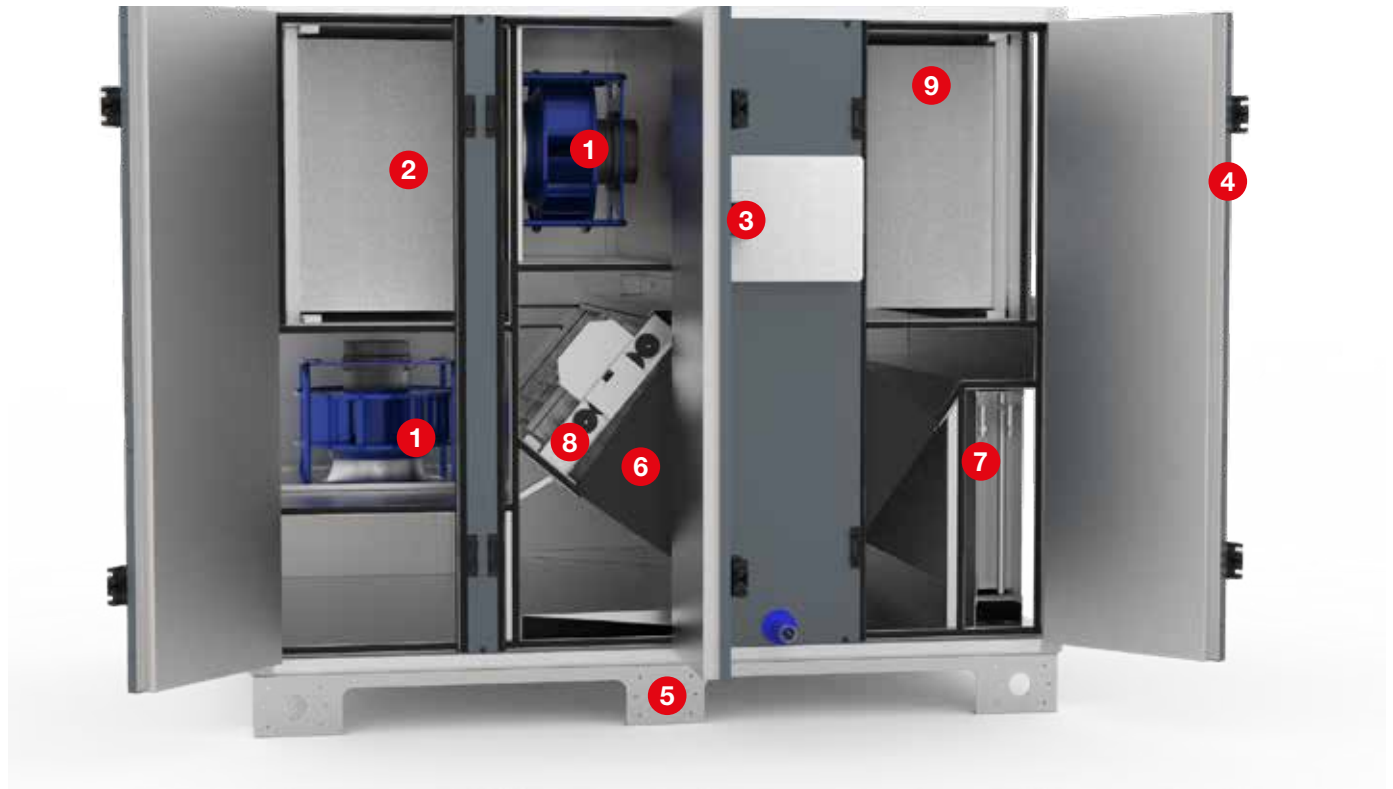
Mode for constant pressure

One truly textbook example here can be found in residential buildings that have the possibility of regulating ventilation separately in individual residential units. The pressure remains constant even when ventilation is increased or decreased as needed – via a unit for airflow volume control.

The airflow volume remains the same in all other apartments. This means that the ventilation system always operates in the ideal range. An external pressure sensor is required for the constant pressure mode.

Advantages at a glance

- The best indoor climate and supreme comfort due to efficient, quiet ventilation with heat recovery for new buildings and renovation projects
- Maximum airflow volume up to 7,080 m³/h
- Highly efficient, Eurovent-certified counterflow heat exchanger with temperature efficiency of up to 85%
- Highly efficient centrifugal fans: with backwards-curved blades and EC technology
- Outstanding control system with new TACtouch touch screen interactive display and integrated commissioning menu
- Scroll housing with an open base frame construction made of anodised aluminium frame profiles and acoustically and thermally insulated sandwich panels, painted steel on the outside (RAL7016), galvanised steel on the inside
- For indoor and outdoor installation (additional accessories required)
- Right or left-hand version available
- Fresh air filter / extract air filter ePM1 70% / ePM10 50% (COARSE prefilter at the fresh air inlet is available as an option)
- EN 1886 classifications (T3 / TB2 / F9 / L2 / D1) guarantee compliance with regulations
- Optional integrated electrical pre-heater and optional integrated post-heater (electrical or water-based)
- Continuous adjustment of the output according to the need
- Free-running EC centrifugal fans with impellers made of composite material for an optimum level of efficiency and reduced noise levels. (Aluminium fan impeller is available as an option)
- 3 large, full-size doors for easy access
All doors are equipped with double hinges
- Galvanised sheet steel construction with RAL7016 and thermal insulation with 50 mm thick mineral wool as well as durable construction with aluminium profiles
- Round duct connections with double rubber lip seal
- Pre-wired plug-and-play unit (unit and accessories largely pre-installed, pre-wired and factory pre-configured)
- Construction optimised according to ErP2018
- Complies with VDI standard 6022
- Complies with ISO EN 16890, ISO EN 16798-3 standard



- 1** FREE-RUNNING EC CENTRIFUGAL FAN WITH IMPELLERS MADE OF COMPOSITE MATERIAL (ALUMINIUM IMPELLERS AVAILABLE AS AN OPTION)

2 FRESH AIR FILTER ePM1 ≥ 70% FILTER CLASS

3 INTEGRATED TAC5 CONTROL UNIT

4 GUIDES FOR EASY ACCESS

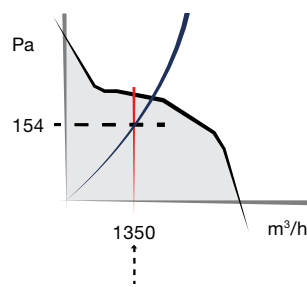
5 BASE FRAME FOR EASY ON-SITE TRANSPORT
- 6** COUNTERFLOW HEAT EXCHANGER WITH HIGH LEVEL OF EFFICIENCY

7 INTEGRATED POST-HEATING (WATER/ELECTRICAL)

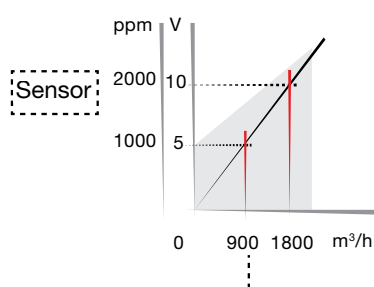
8 MODULATING 100% BYPASS

9 EXTRACT AIR FILTER ePM10 ≥ 50% FILTER CLASS

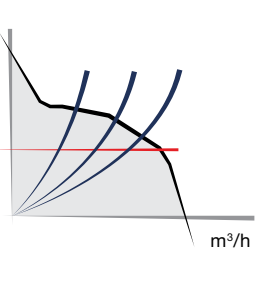
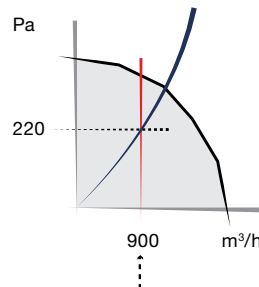
The 3 main modes:



Mode for constant airflow volume
 The airflow is kept constant regardless of external pressure changes.



Mode for demand control.
Linear voltage/airflow volume ratio.
 The volume flow can be controlled via a 0–10 V signal.



Mode for constant pressure.
 The pressure is kept constant regardless of external pressure changes. A pressure sensor is required.

Unit control

The ventilation unit can be operated using an HMI TACtouch touch screen interactive display. Other options include the SAT MODBUS module, which connects to the building management system, and the SAT ETHERNET (TCP/IP) module, which enables intranet configuration (more information about this can be found in the operating manual).

HMI TACtouch

4.3" touch screen interactive display

- Dimensions: 97 x 149 x 32 mm
- Control unit cable: drilled twisted-pair two-wire line in accordance with the RS-485 standard; wire cross section > 0.2 mm²; can be extended on site up to a maximum of 100 m



SAT TAC5 BA/KW MODULE

- Controls 2 external heat exchangers (water, heating and/or cooling)
- Set contains SAT TAC5 BA/KW, 3 temperature sensors, 1 sensor holder and clip

SAT ETHERNET (TCP/IP)

- Configuration and visualisation via the website



SAT3 MODULE

- Displays bypass status / FAN-ON
- Displays alarm status and pressure alarm
- Controls ventilation flaps (external)



MODBUS RTU network

- Direct communication with building technology system



SAT KNX MODULE



General technical specifications

	800	1050	1350	1650	1850
Air volume	200–800 m ³ /h 55–220 l/s	200–1,060 m ³ /h 55–295 l/s	200–1,380 m ³ /h 55–380 l/s	200–1,680 m ³ /h 55–465 l/s	250–1,860 m ³ /h 70–515 l/s
Dimensions (L x W x H)	1,680 x 610 x 1,465	1,680 x 610 x 1,465	1,680 x 815 x 1,465	1,680 x 815 x 1,465	1,680 x 995 x 1,465
Weight	330 kg	330 kg	370 kg	370 kg	410 kg
Mains power supply	1 x 230 V / 5.3 A	1 x 230 V / 5.3 A	1 x 230 V / 5.3 A	1 x 230 V / 5.3 A	1 x 230 V / 4.9 A
Recommended fuses	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3
Filter class	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%
supply/extract air duct connections	Ø 315	Ø 315	Ø 400	Ø 400	Ø 400
Exhaust/outdoor air duct connections	Ø 315	Ø 315	Ø 400	Ø 400	Ø 400
Operating range	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C
EN 1886 classification	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1

	2300	2500	3000	3200	4700
Air volume	400–2,300 m ³ /h 110–640 l/s	400–2,800 m ³ /h 110–770 l/s	300–3,000 m ³ /h 85–830 l/s	300–3,230 m ³ /h 85–895 l/s	600–4,700 m ³ /h 170–1,300 l/s
Dimensions (L x W x H)	1,680 x 1,182 x 1,465	1,680 x 1,182 x 1,465	1,680 x 1,382 x 1,465	1,680 x 1,640 x 1,465	2,557 x 1,640 x 1,825
Weight	420 kg	420 kg	480 kg	520 kg	930 kg
Mains power supply	1 x 230 V / 7.7A	1 x 230 V / 7.7A	1 x 230 V / 7.7A	1 x 230 V / 7.7A	1 x 230 V / 12.7A
Recommended fuses	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3	4A / D-10000A-AC3
Filter class	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%
Supply/exhaust air duct connections	opt	opt	opt	opt	opt
Exhaust/outdoor air duct connections	opt	opt	opt	opt	opt
Operating range	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C
EN 1886 classification	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1

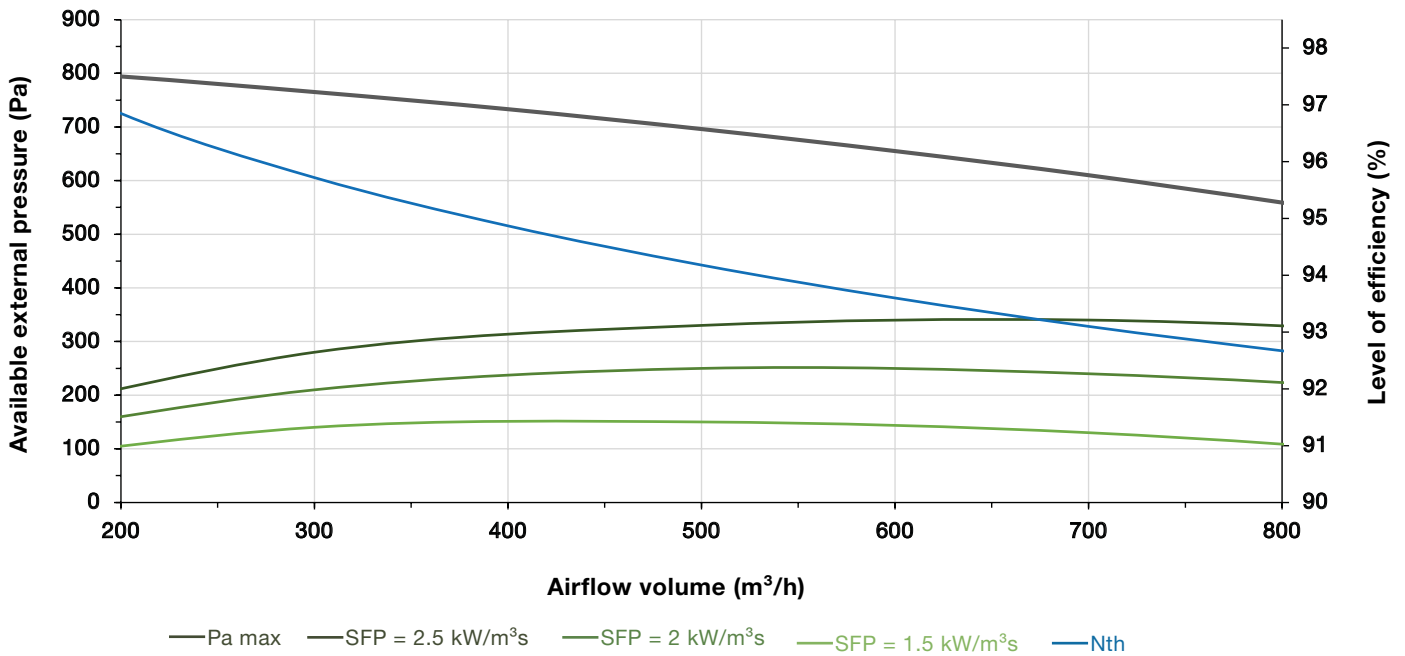
General technical specifications

	6300	7100
Air volume	600–6,260 m ³ /h 170–1,740 l/s	600–7,080 m ³ /h 170–1,960 l/s
Dimensions (L x W x H)	2,557 x 2,015 x 1,825	2,557 x 2,396 x 1,825
Weight	1120 kg	1260 kg
Mains power supply	3 x 400 V + N / 6.5 A	3 x 400 V + N / 6.5 A
Recommended fuses	4A / D-10000A-AC3	4A / D-10000A-AC3
Filter class	ePM1 ≥ 70% / ePM10 ≥ 50%	ePM1 ≥ 70% / ePM10 ≥ 50%
Supply/exhaust air duct connections	Ø opt	Ø opt
Exhaust/outdoor air duct connections	Ø opt	Ø opt
Operating range	-20 °C to +50 °C	-20 °C to +50 °C
EN 1886 classification	T3 / TB2 / F9 / L2 / D1	T3 / TB2 / F9 / L2 / D1

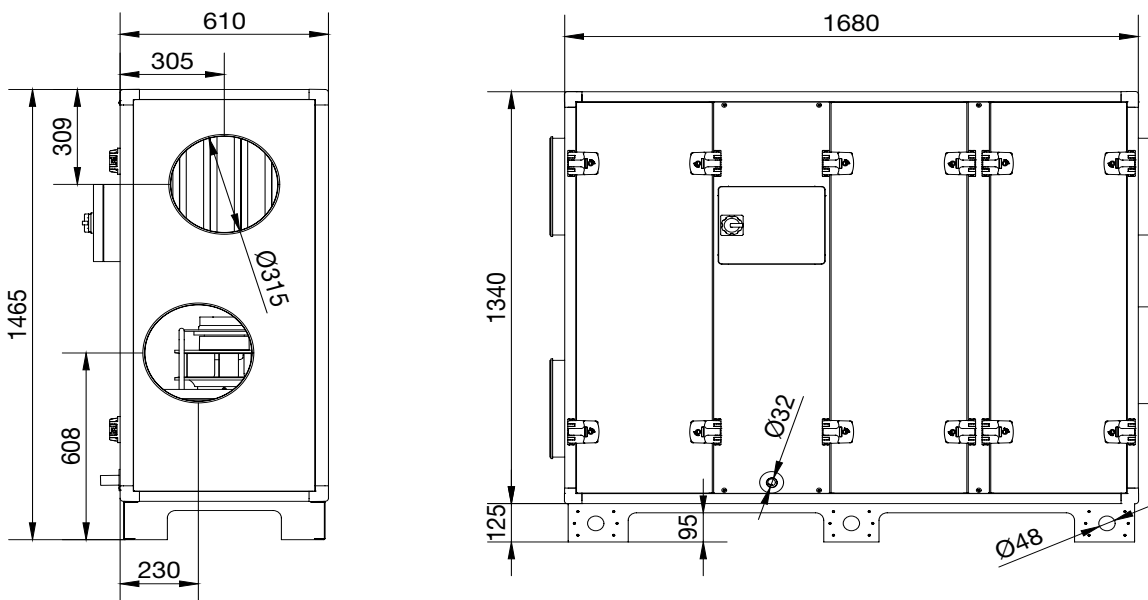
Zehnder ComfoAir Maxi 800

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
300	83	160	1.92	89	82.8	17.0	34.1
400	111	196	1.76	88	80.6	16.5	35.6
500	138	239	1.72	87	79.0	16.1	38.2
600	166	288	1.73	89	77.7	15.8	40.0



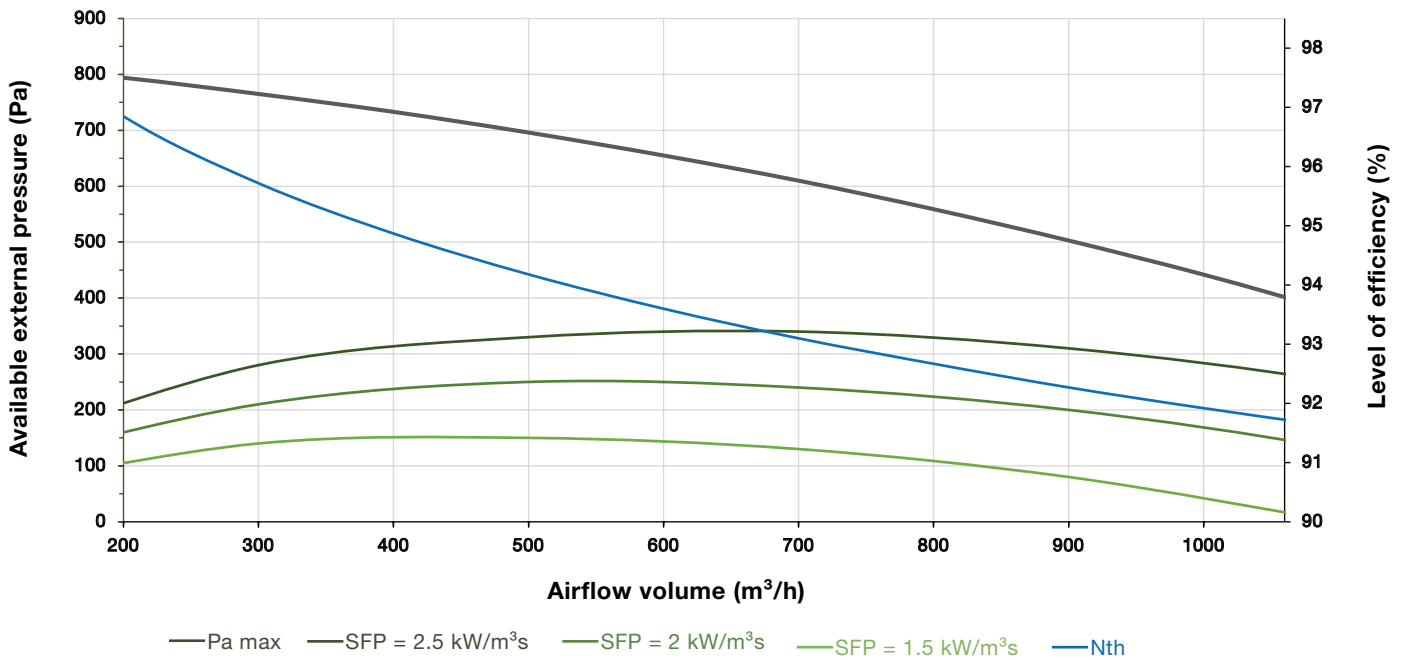
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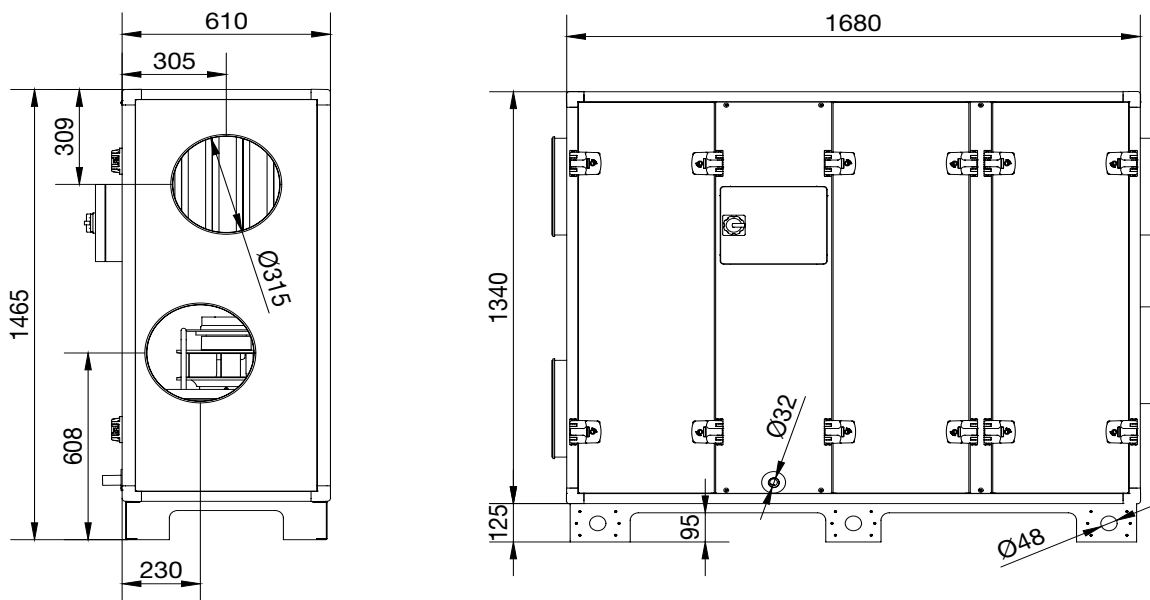
Zehnder ComfoAir Maxi 1050

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
600	165	286	1.72	93	86	19.9	27.8
800	220	412	1.85	92	84	19.6	30.8
900	250	496	1.98	92	84	18.6	31.5
1,000	277	587	2.11	92	83	18.5	30.7



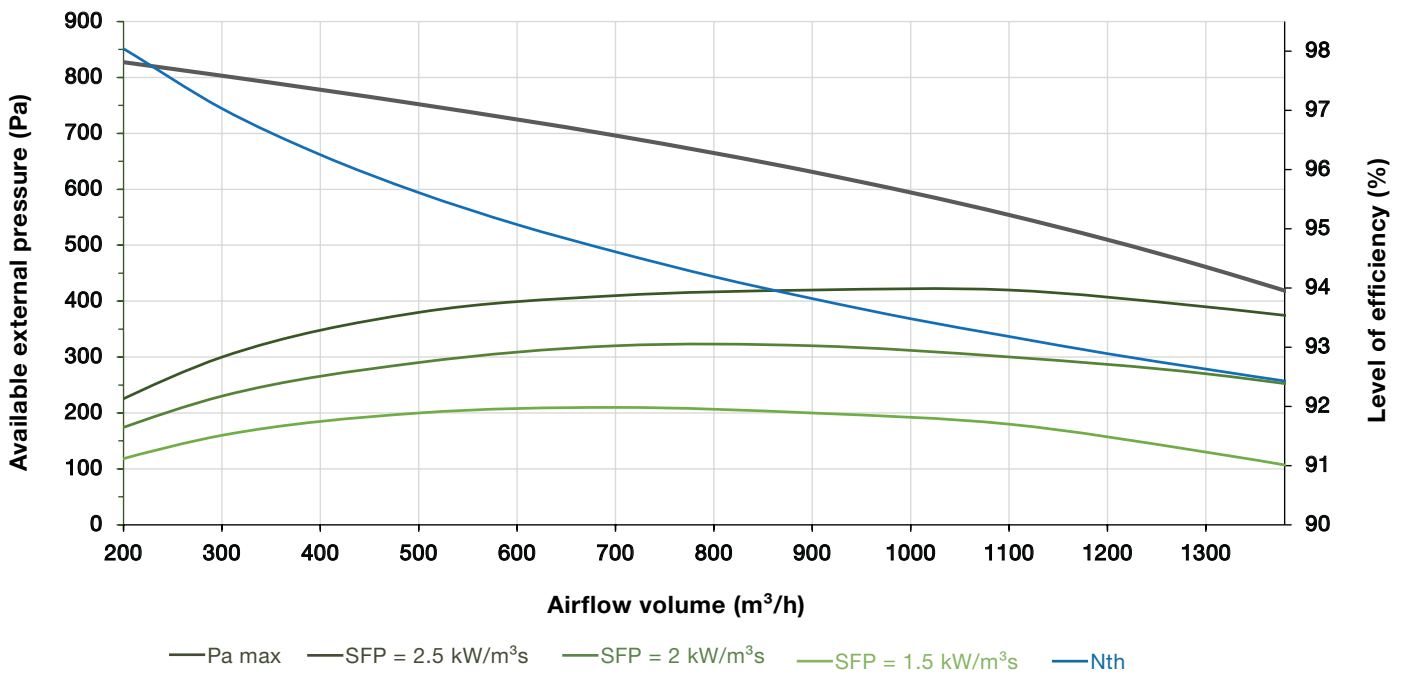
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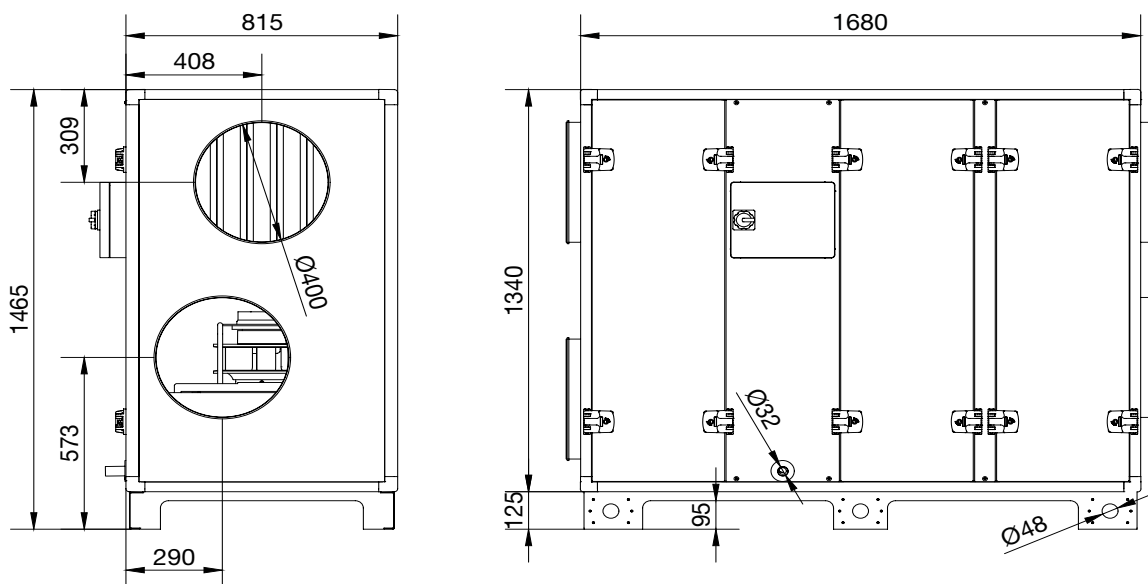
Zehnder ComfoAir Maxi 1350

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
1,000	277	421	1.52	85	94	19.0	26.4
1,100	305	480	1.57	85	93	18.9	27.3
1,200	333	545	1.64	85	93	18.8	27.8
1,350	375	660	1.76	84	93	18.7	28.9



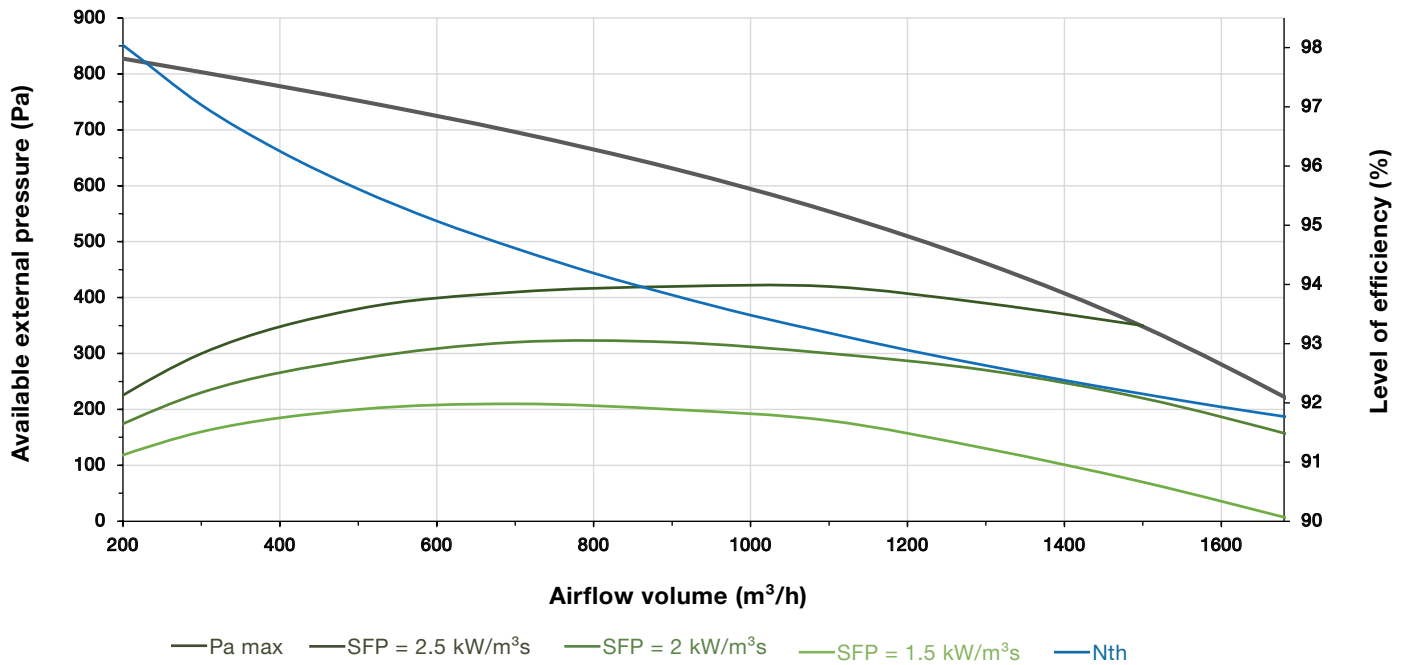
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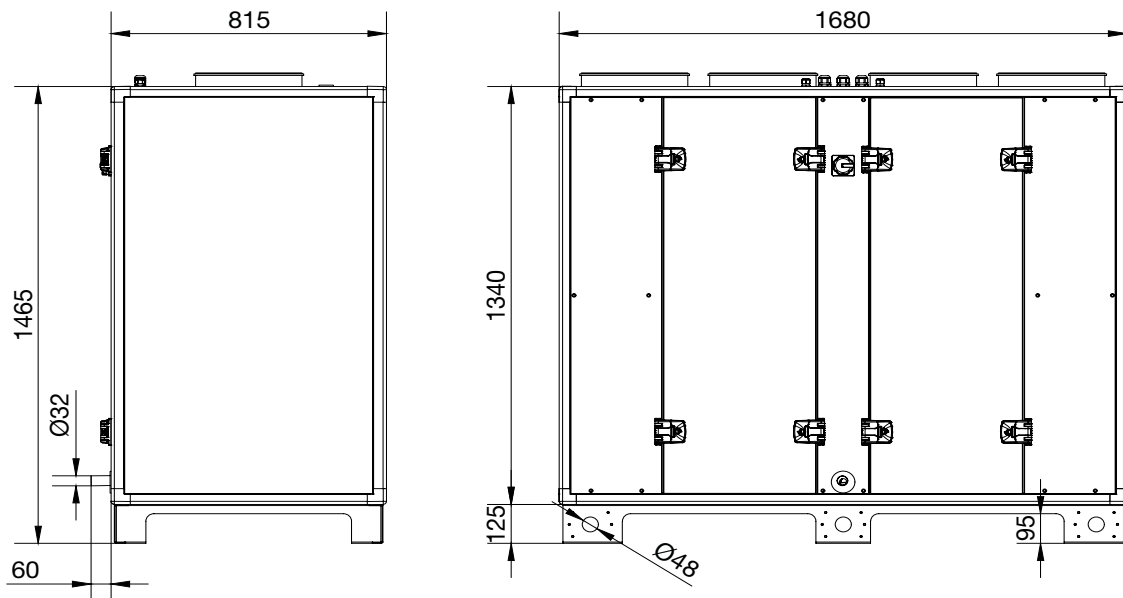
Zehnder ComfoAir Maxi 1650

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
1,000	280	421	1.52	85	93	19.0	26.4
1,200	330	545	1.64	84	93	18.8	27.8
1,400	390	704	1.81	84	92	18.6	29.4
1,600	445	895	1.02	83	92	18.5	31.2



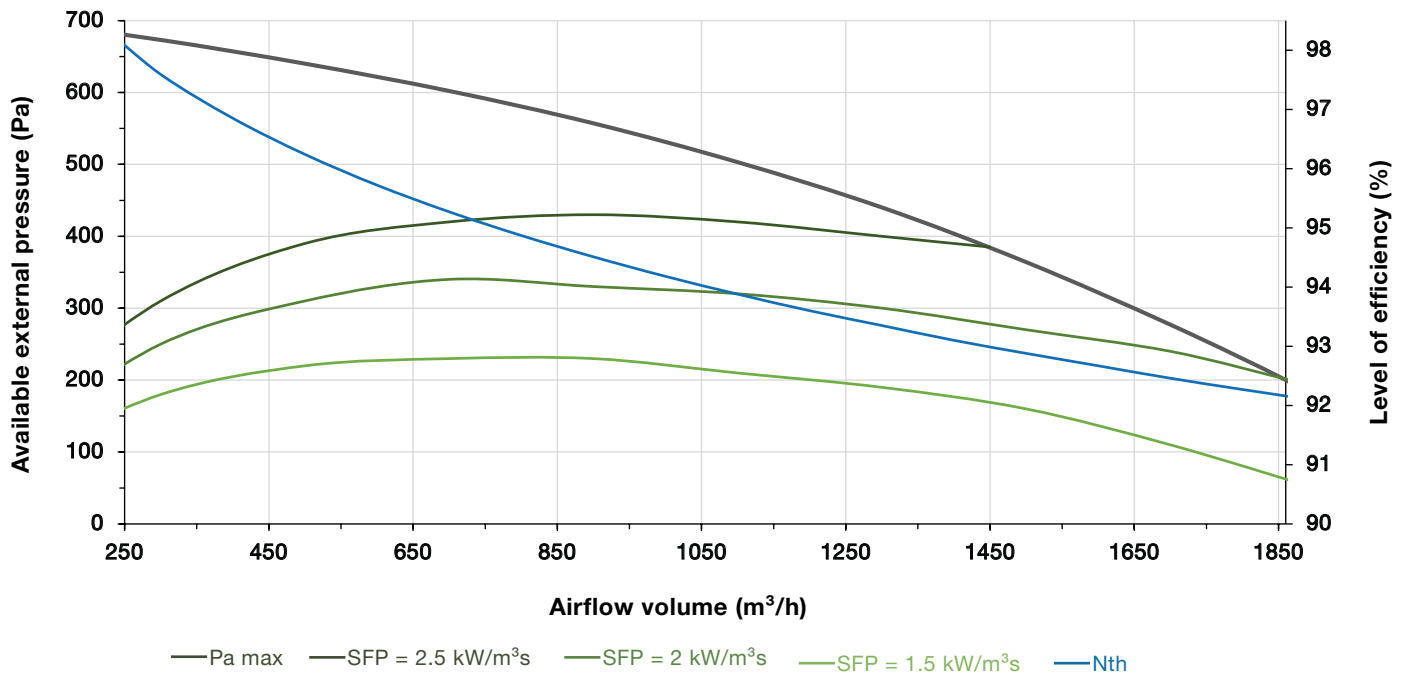
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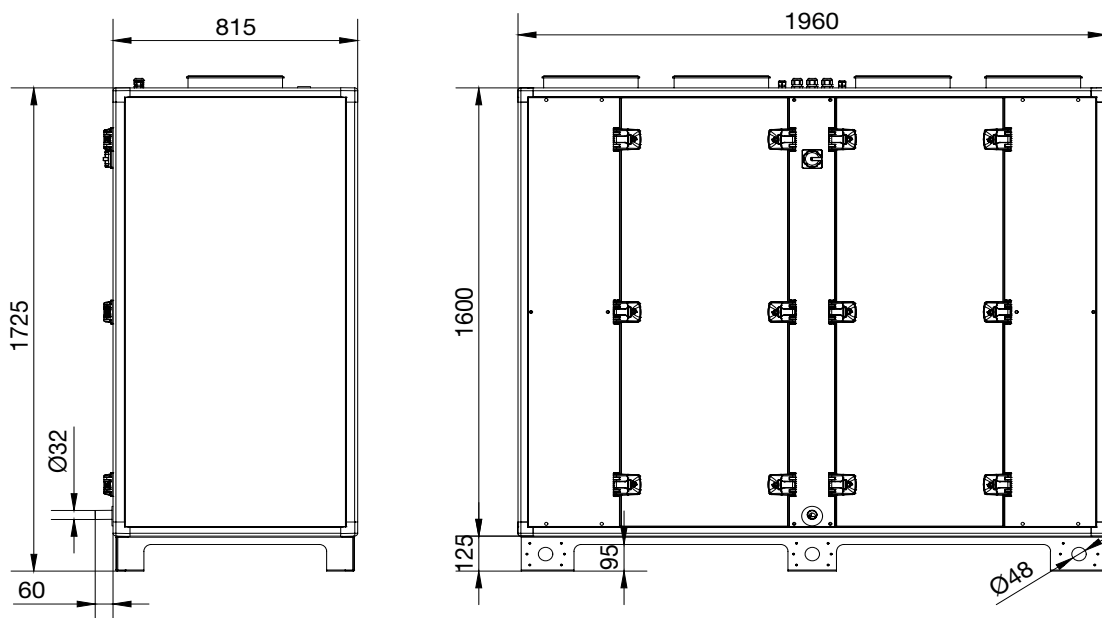
Zehnder ComfoAir Maxi 1850

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
1,300	360	561	1.55	85	93	18.9	27.5
1,500	415	700	1.68	84	93	18.7	29.4
1,700	470	862	1.83	84	93	18.7	31.4
1,800	415	954	1.91	84	92	18.6	32.1



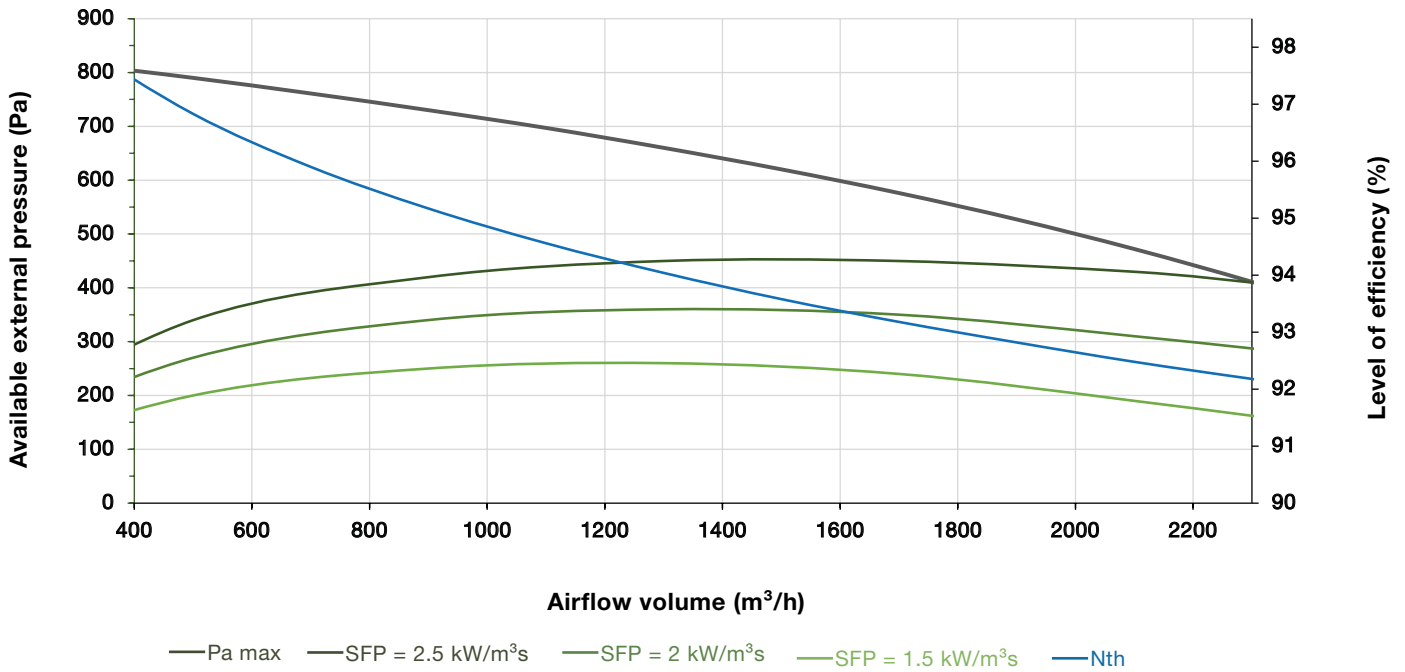
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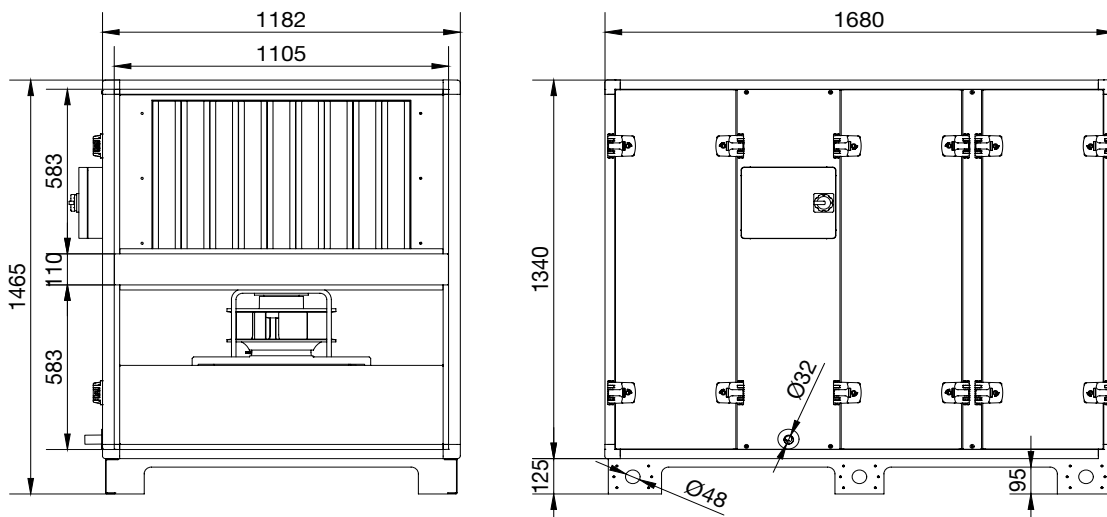
Zehnder ComfoAir Maxi 2300

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
1,500	415	554	1.33	86	94	19.9	26.5
1,900	525	776	1.47	84	93	18.7	28.9
2,100	583	912	1.58	84	93	18.7	30.3
2,300	638	1066	1.67	83	92	18.6	31.3



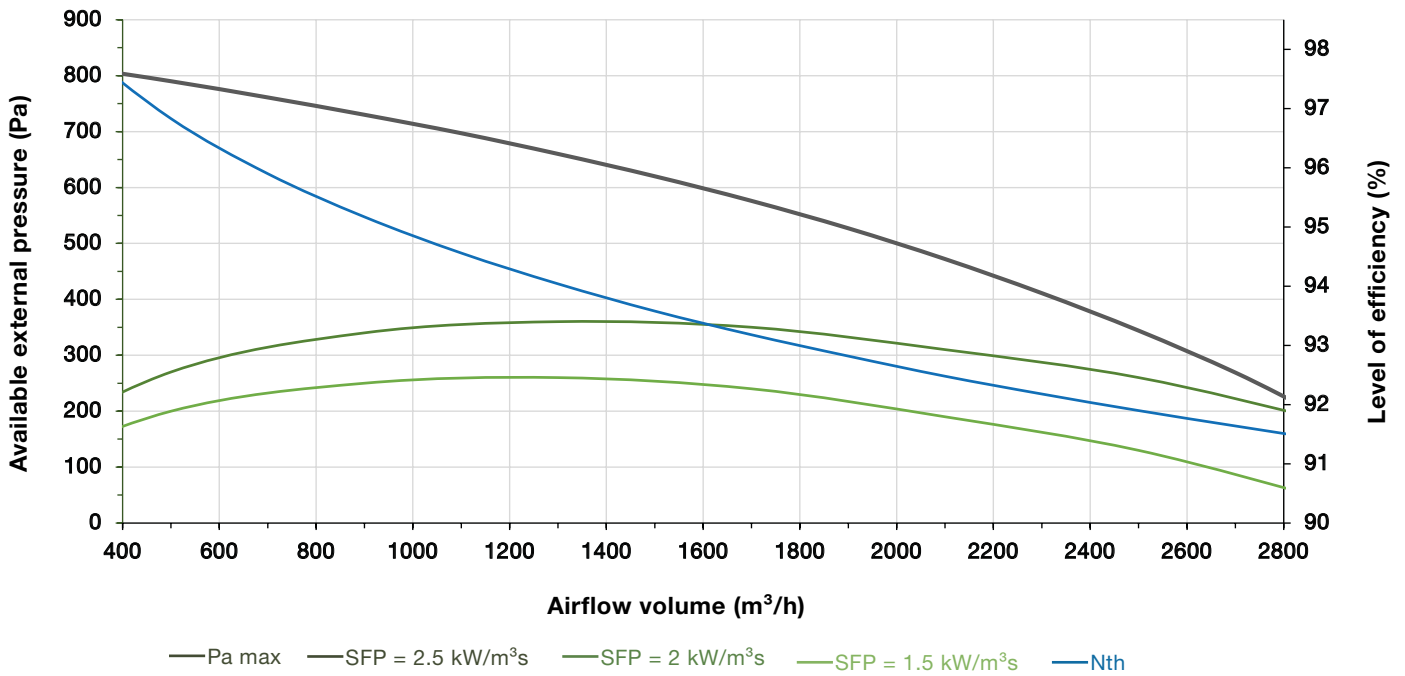
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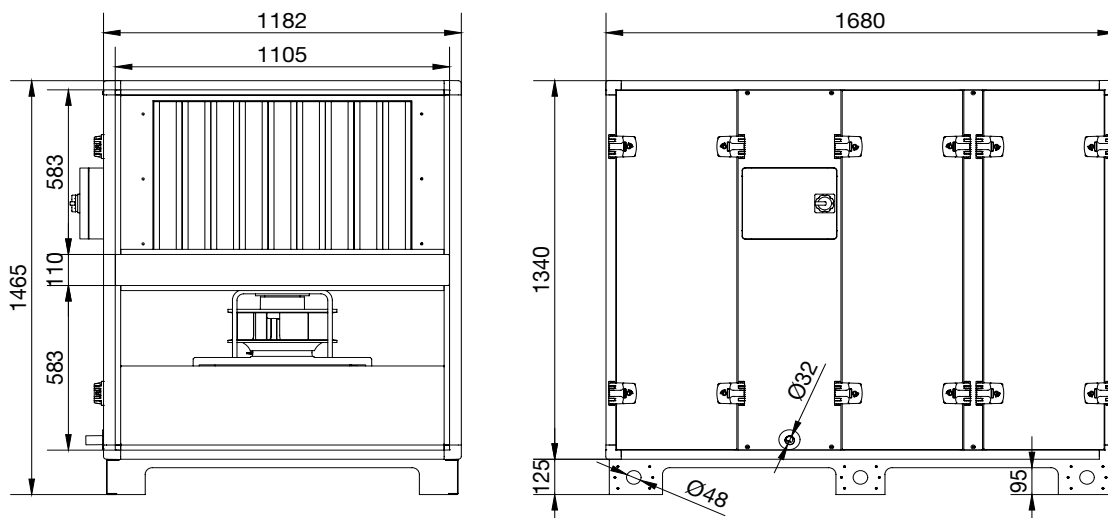
Zehnder ComfoAir Maxi 2500

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
2,200	610	987	1.62	84	92	18.6	30.8
2,400	666	1148	1.72	83	92		31.9
2,600	722	1329	1.84	83	92	18.4	33.1
2,800	777	1527	2.96	82	92	18.4	34.6



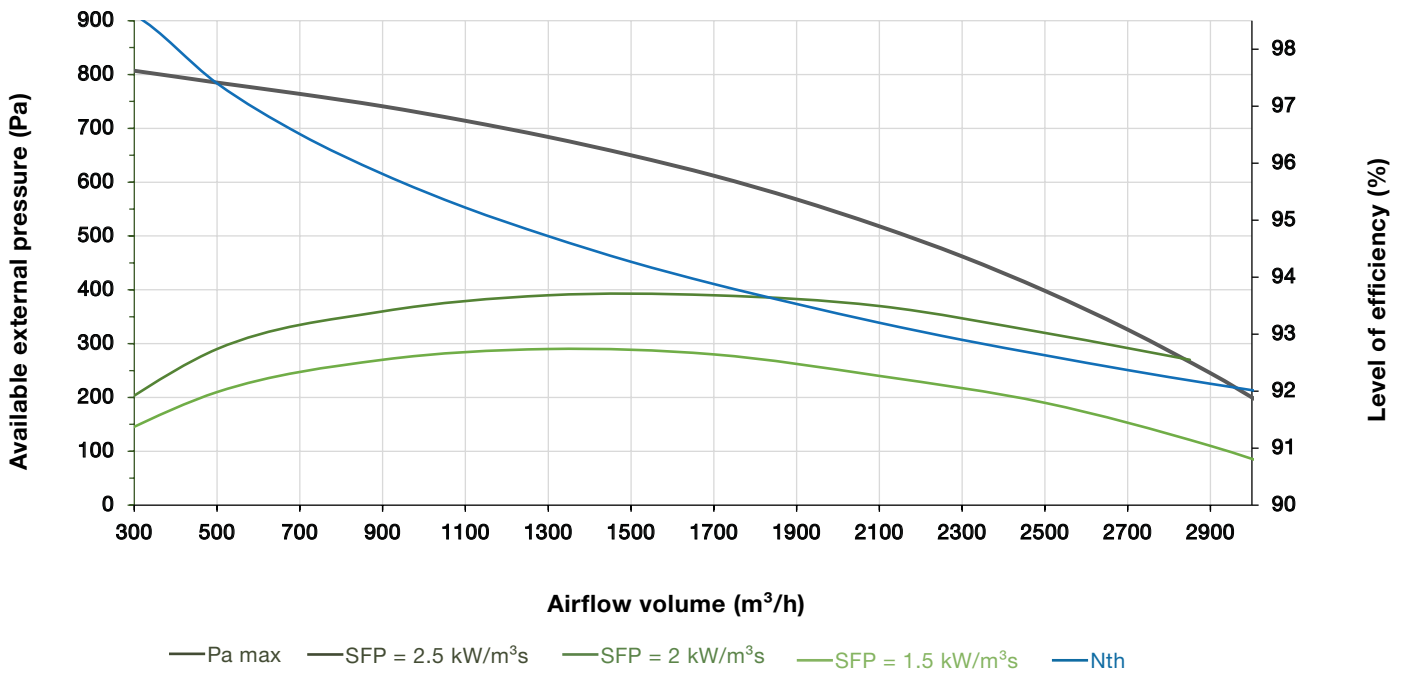
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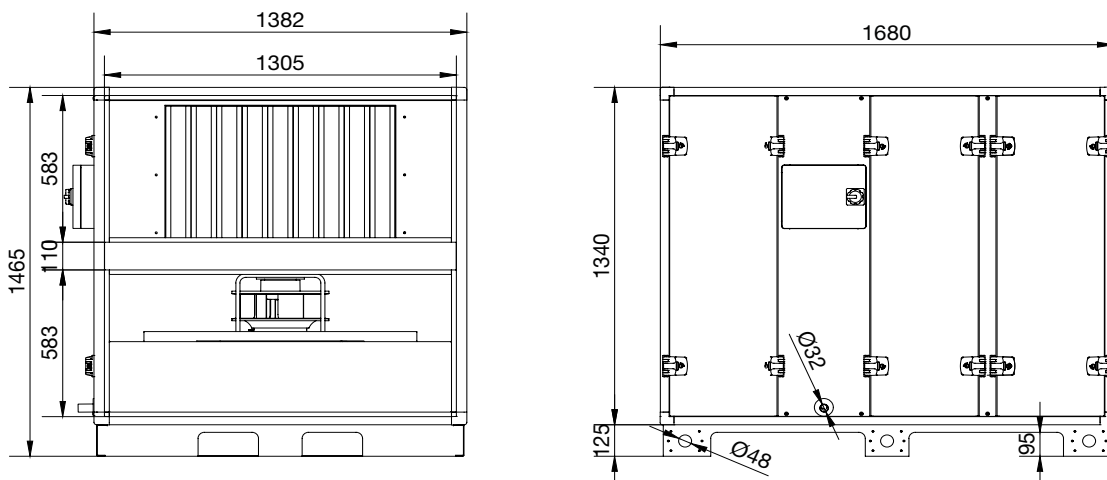
Zehnder ComfoAir Maxi 3000

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
2,400	665	1014	1.52	84	93	18.8	30.8
2,600	720	1172	1.62	84	93	18.7	32.0
2,800	777	1347	1.73	84	92	18.6	33.4
3,000	833	1541	1.85	83	92	18.5	34.8



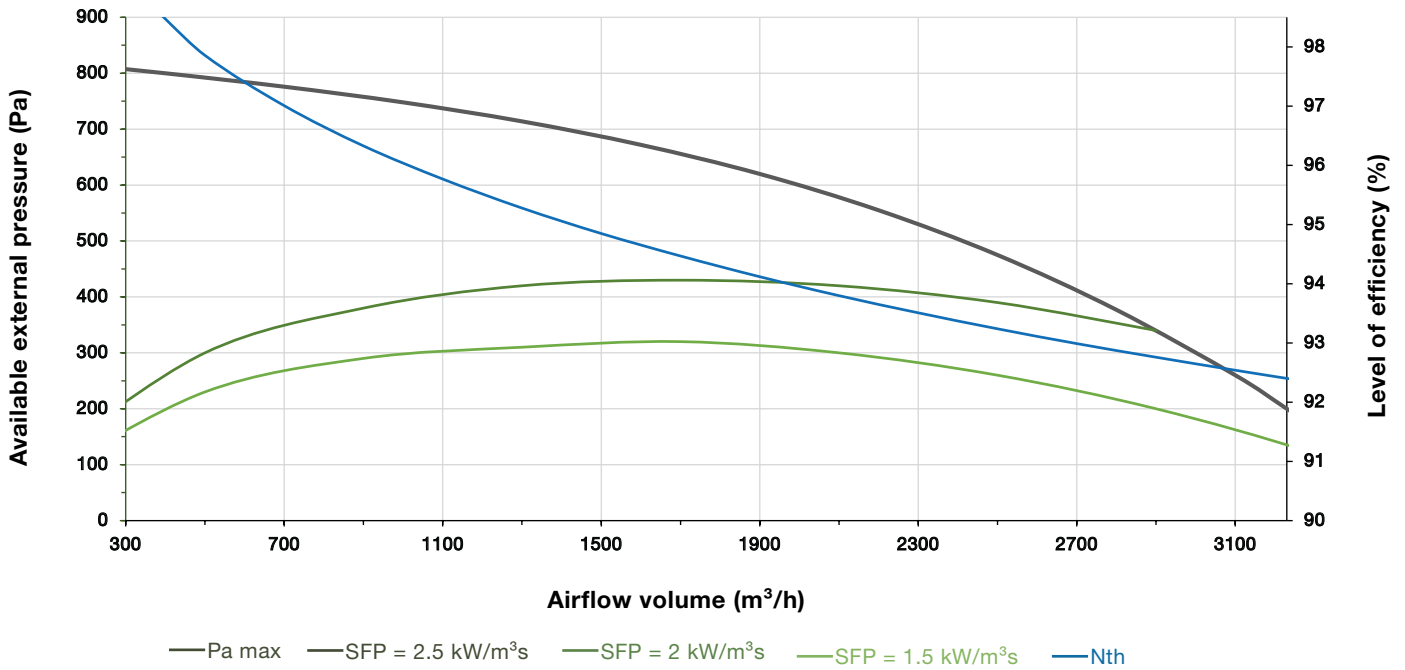
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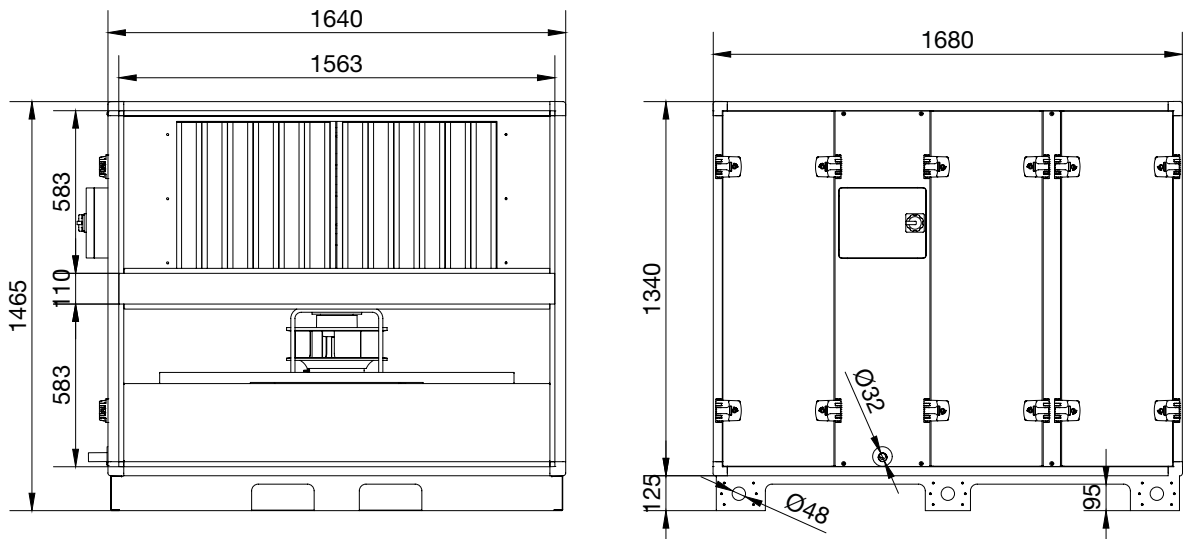
Zehnder ComfoAir Maxi 3200

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
2,700	750	1073	1.43	85	93	18.8	31.9
2,900	805	1226	1.52	84	93	18.8	33.3
3,100	860	1396	1.62	84	93	18.7	34.9
3,200	888	1487	1.67	84	92	18.7	35.7



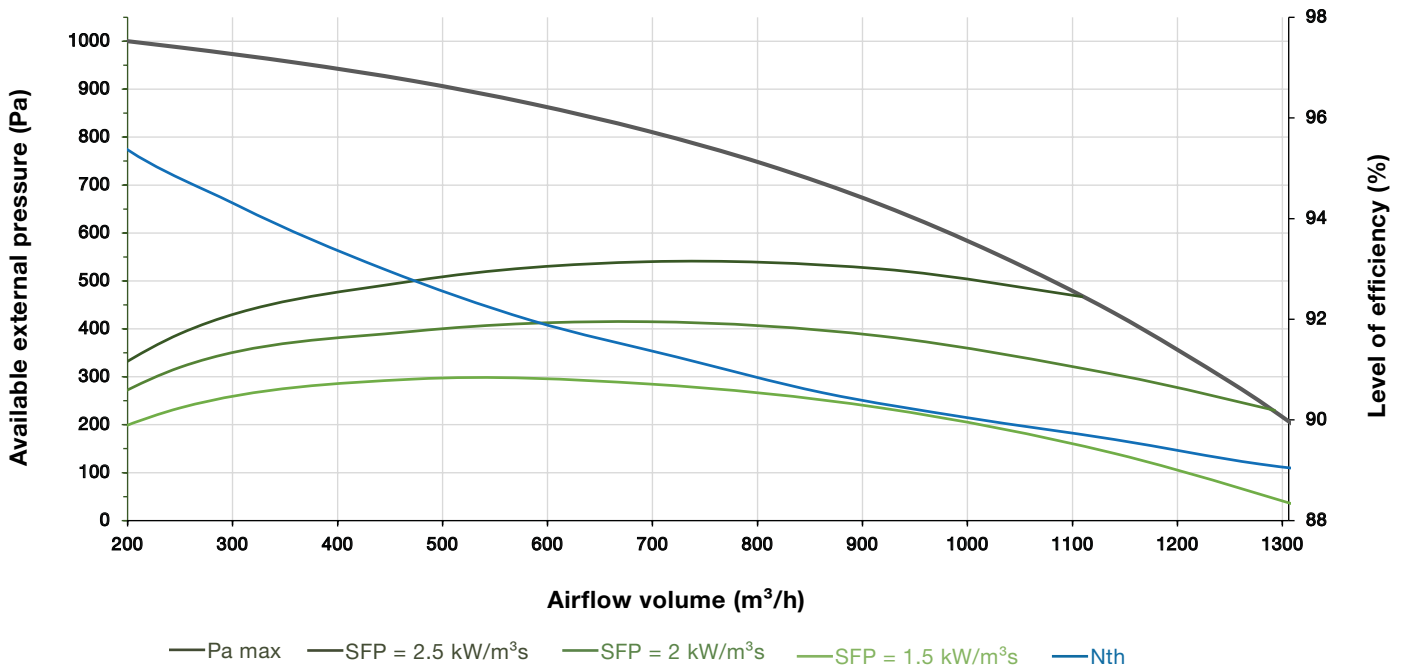
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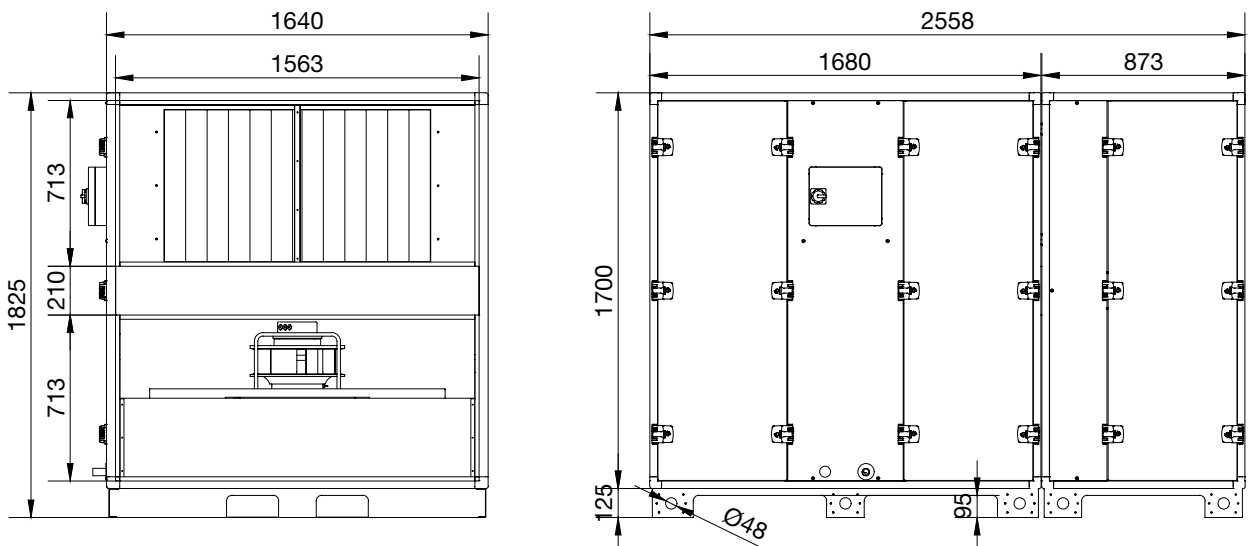
Zehnder ComfoAir Maxi 4700

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
3,000	830	1,089	1.31	85	91	19.1	26.1
3,500	970	1,405	1.45	84	90.3	18.9	28.8
4,000	1,110	1,805	1.63	83.2	89.9	18.8	32.4
4,500	1,250	2,313	1.85	82.5	89.6	18.7	35



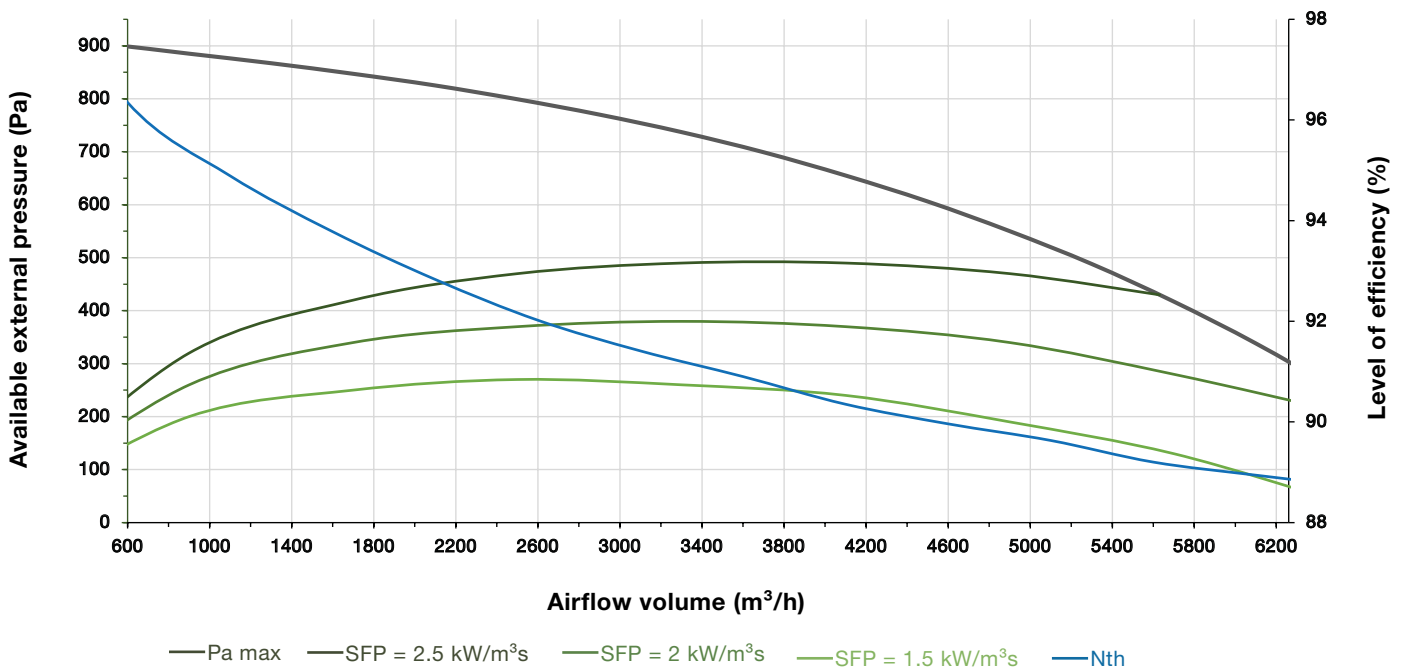
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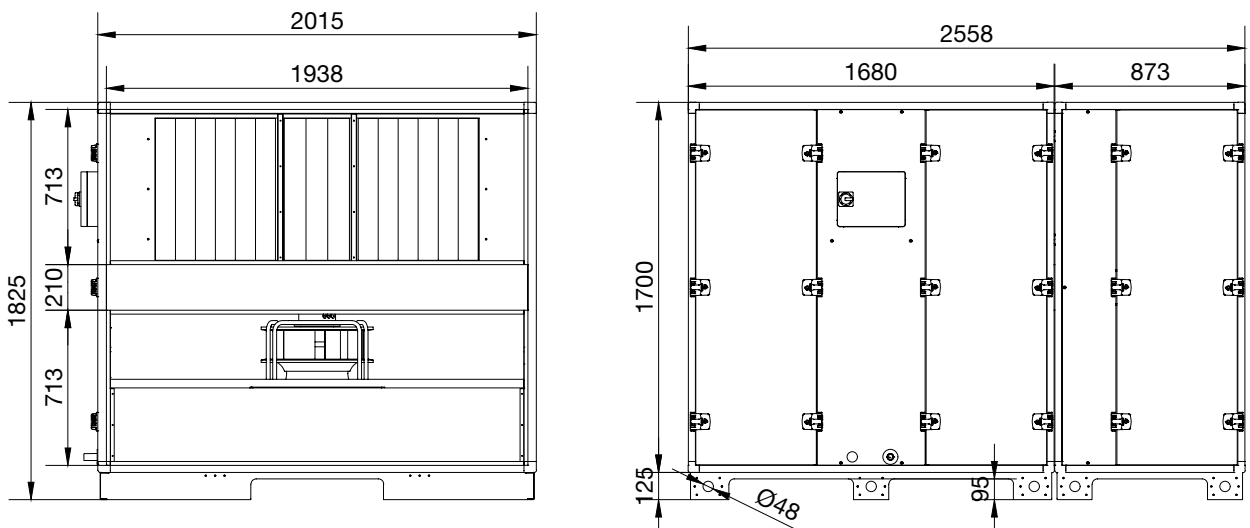
Zehnder ComfoAir Maxi 6300

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
4,500	1,250	1,790	1.43	83.8	90.3	18.9	27.9
5,000	1,390	2,132	1.54	83.2	89.9	18.8	29.4
5,500	1,530	2,532	1.66	82.6	89.6	18.7	31.5
6,000	1,670	3,000	1.8	82.1	89.2	18.6	33.2



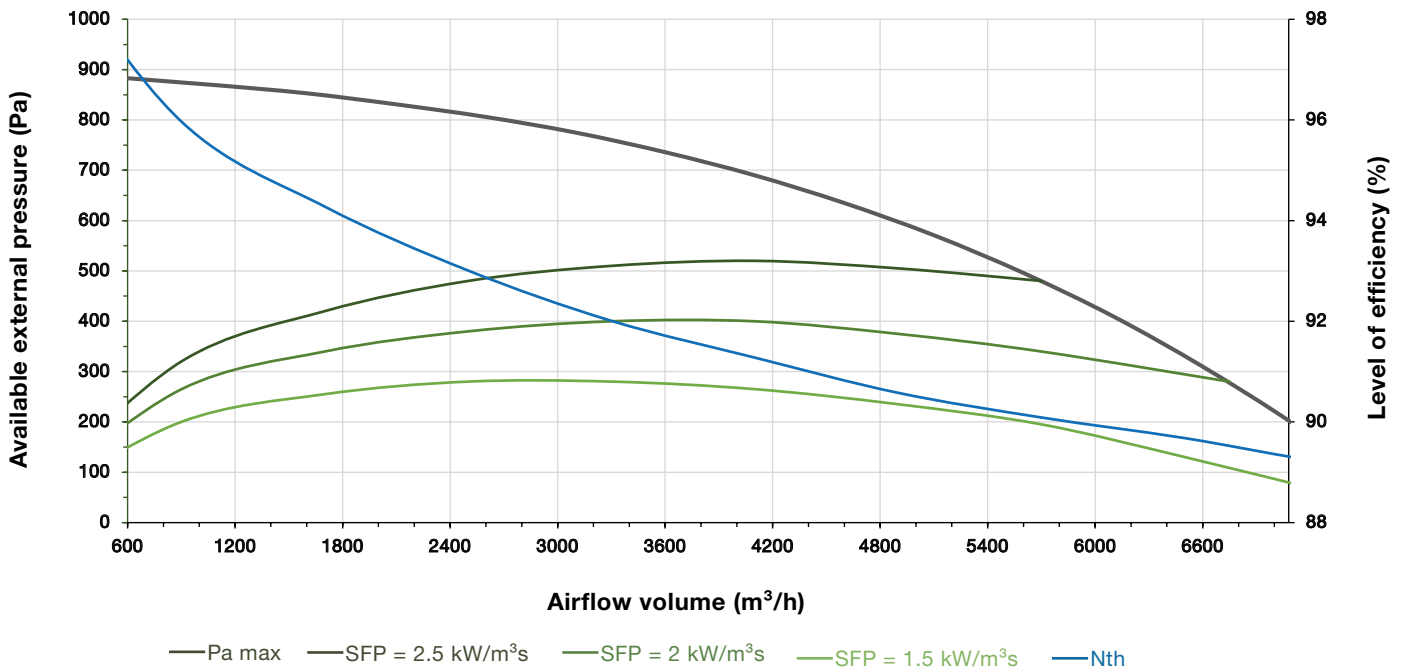
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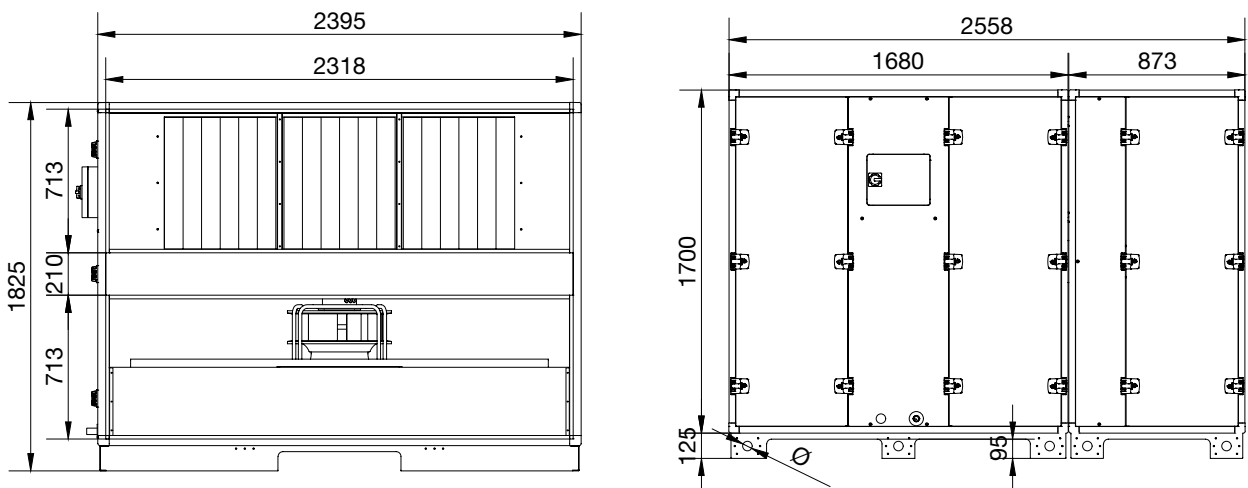
Zehnder ComfoAir Maxi 7100

Performance data

Airflow		Power consumption	SFP	Thermal efficiency Dry	Thermal efficiency Wet	T° after heat exchanger	Sound Pressure
m³/h	l/s	W	kW/m³/s	%	%	°C	dB(A)
5,500	1,530	2,253	1.48	83.7	90.2	18.9	30.7
6,000	1,670	2,640	1.58	83.2	89.9	18.8	33
6,500	1,810	3,078	1,705	82.7	89.68	18.7	34.7
7,000	1,950	3,563	1.83	82.3	89.45	18.6	36.7













Dimensional drawing



Options & Accessoires

Option	Shortcut	Category		ComfoAir Max	ComfoAir Maxi Flat	ComfoAir Maxi Top
TACTouch	HMI	Controls		x	x	x
BACnet gateway	BACnet	Controls		x	x	x
Modbus RTU	Modbus	Controls		x	x	x
Ethernet	Ethernet	Controls		x	x	x
Wifi	Wifi	Controls		x	x	x
SAT 3	SAT	Controls		x	x	x
KNX	KNX	Controls		x	x	x
Internal water post heating	IBA	Coils		x	x	x
Internal electrical pre heating	Kwin	Coils		x	x	x
Internal electrical post heating	Kwout	Coils			x	x
External insulated casing for coils	ECA	Coils		x	x	x
Coils for external casing	EBA	Coils		x	x	x

Options & Accessoires

Option	Shortcut	Category		ComfoAir Max	ComfoAir Maxi Flat	ComfoAir Maxi Top
Roof	OUT	Outdoor		x		
Motorised damper	CT	Outdoor		x		x
Air inlet	AUi	Outdoor		x		
Air Outlet	AUe	Outdoor		x		
Flexible sleeves	MS	Adapters		x	x	x
Circular adapters	IRS	Adapters		x	x	x
Prefilter G4	G4	Filters		x		x
Filter kits	Filters	Filters		x	x	x
Condensate pump	Pump	Others			x	
Silencer	GD	Others				x

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