

Zehnder Freetime™

Technical specification

always the best climate

Application

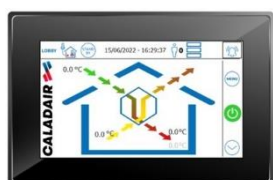
Self-regulating heat recovery unit, high efficiency and performance, for tertiary and industrial applications such as offices, schools, care homes, shopping malls, catering facilities, multi-family housing, etc.

Monobloc communicating unit for inside installation in a technical room.

All internal components are factory mounted and programmed according to the chosen configuration. It's our PLUG&PLAY - SET& FORGET™ concept.

Aluminium variable-speed rotary heat exchanger with over 80% efficiency (EN308), compliant with RE2020 and ErP Directive 2009/125/EC.

Air filtration and temperature management for optimal comfort and IAQ.



Benefit for the user

- 6 different sizes with airflows ranging from 100 m³/h to 3 500 m³/h, so you can always choose the optimum unit size.
- Top-mounted duct connections for easy installation in small technical rooms. With their small footprint, Zehnder Silvertop units can also be easily integrated into corridor niches, storage rooms, dressing rooms, etc.
- Version (S) incorporating a rotary sorption heat exchanger, providing energy savings in temperate zones and exploiting the humidity in the air. This creates a comfortable indoor climate for the well-being of the occupants.
- Optimal inside air quality thanks to possible dual filtration on fresh air (ePM1 55% [F7] + ePM10 50% [M5] or ePM1 80%[F9]). Included ePM10 50% [M5] filter for exhausted air.
- Silent operation is ensured by double-skinned panels with high-density thermal insulation (25 or 50 mm mineral wool). Thermal class T3 and airtightness class L1(M) [-400Pa] in accordance with EN 1886.
- User interfaces installed as standard with remoting possibility. Flexible and easy connection to BMS with on-board communication protocols (Modbus, BACnet and Web)
- Eurovent (N°21.03.72) certified solution, compliant with the requirements of the ErP 2018 directive.

Range

The Freetime™ range is available in 6 sizes which cover airflows from 100 m³/h to 3 500 m³/h and in 3 versions :

FIRST : unit used for temperate climatic zones, with dynamic temperature management to optimize energy consumption and comfort.

PREMIUM : unit equipped with a heating coil, either electric (BE) or hot water (BC).

SEASON : unit used for temperate climatic zones, designed for air renewal in buildings with energy recovery, airflow adjustment by potentiometer.

Air flow modulation

5 airflow modulation solutions with EASY 5.0 control ensure optimum energy consumption (RE 2020, EN 15232).

ECO : 2 speed settings (LS/HS) per fan.

MAC 2 : 2 constant airflows.

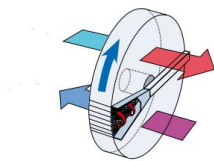
DIVA : proportional fan speed modulation on CO₂ levels.

QUATTRO : proportional airflow modulation on CO₂ levels.

LOBBY : constant pressure airflow modulation on each fan.

Rotary heat exchanger

High-efficiency aluminium rotary exchanger with variable speed (except SEASON). Exchanger in a rigid frame mounted on guides for easy extraction and maintenance, Eurovent certified in accordance with the AARE program with an efficiency of over 80% (EN 308).



Variable exchanger speed to improve unit performance, particularly in mid-season. Rotation detector connected to the EASY control unit to indicate operating status (except SEASON).

Version (S) featuring a rotary sorption heat exchanger, providing energy savings of around 65% in summer and 12.5% in winter in temperate zones.

Constitution

The Freetime™ range features the self-supporting Eurovent certified AIRSLIM™ and AIRTOP™ model boxes (L1(M) [-400Pa]/D2/T3/TB3/F9) in accordance with EN1886.

- 10/10th double-skin panels and 25 or 50 mm of M0 (A2-S1) high-density 60 kg/m³ mineral wool insulation.
- Exterior panels in RAL 9007 coated steel with protective film and interior in galvanized steel
- Unit fitted as standard with dual seal round spigot on intake and outlet panels to guarantee network sealing. Complaint with French CSTB ATE_x n°13-224-V2).
- EASY 5.0 technical cabinet containing the electrical components and the control system (in the case of SEASON versions, the potentiometers).
- Access to all components and filters via a hinged lockable door featuring a IP65 LCD display and lockable main power cut-off switch.
- Acoustic panel at the fan outlet for improved acoustic comfort.

Filters

As standard, the Freetime™ unit features factory-mounted filters that ensure an optimal indoor air quality.

Fresh Air

ePM1 filter 55% [F7] + optional double filtration stage (ePM10 50% [M5] or ePM1 80% [F9])

Extracted Air

ePM10 filter 50% [M5]

Filters are always mounted on slides for easy replacement, and ahead for components protection.

Fan motor

DC motor with high-efficiency electronic commutation (EC), thermal protection and integrated speed control. EC technology is an eco-friendly™ solution which brings low energy consumption and allows operating point monitoring, managing and controlling (airflow modulation from 10 to 100%). Low noise level for greater acoustic comfort.

Equipment and functions

The FIRST and PREMIUM versions are supplied as standard with an EASY 5.0 control system, communicating via MODBUS, BACNET or WEB (choice of language can be activated on site). It includes a PG 5.0 touchscreen control (IP54 protection class) for simple and direct access to parameters and functions.

EASY 5.0 can be optionally fitted with an USER room remote touch control EDT2, featuring a user interface and display for the main functions (temperature control, restart, fault...) (remote control up to 100 m).

- Internal timers for scheduled operation with 2 different airflows, programmable as required on site.
- Weekly and vacation schedule.
- Fresh air filter pressure switch with error feedback on the touchscreen control (dry contact relay for SEASON).
- Airflow pressure switch for each fan, with error feedback on the touchscreen control (dry contact relay for SEASON).
- Lockable main power cut-off switch and power cable pass-through integrated near the extracted air duct.

High-efficiency aluminium rotary exchanger with variable speed, managed by the controller providing FREE-COOLING, FREE-HEATING and NIGHT-COOLING functions. For the SEASON version, the rotary exchanger provides summer/winter management in On/Off mode using integrated thermostats.

- **FREE COOLING** : in summer, when the outdoor temperature is lower than the set indoor temperature, the rotary heat exchanger slows down and rotates until it stops completely, bringing cold fresh air into the building. If this function is not sufficient to reach the set temperature, the optional cooling coil is activated.
- **FREE HEATING** : mainly in the off-season, when the outdoor temperature is higher than the indoor temperature, the rotary heat exchanger slows down and rotates until it stops completely, bringing warm fresh air into the building. If this function is not sufficient to reach the set temperature, the optional heating coil is activated.

- **NIGHT COOLING** : The Night Cooling function lowers the building's indoor temperature according to the weather conditions of the last 24 hours. For example, between midnight and 7 a.m. (adjustable time range), the Night Cooling function is activated if the outside temperature has exceeded 22°C (adjustable value) during the day (between 6 a.m. and 10 p.m.). The Night Cooling function is activated if the outdoor temperature is between 10 and 18°C (adjustable value) and if the extract air temperature is above 18°C (adjustable value).

4 temperature control modes to guarantee optimal energy consumption (RT2012, EN15232).

- **Constant supply air temperature** : Keeps the supply temperature at the setpoint.
- **Supply air temperature adjustable according to outdoor temperatures** : Outdoor conditions considered.
- **Constant extract air temperature** : Extract temperature management acting in cascade on the supply temperature.
- **Extracted air temperature adjustable according to outdoor temperatures** : Outdoor conditions considered.

Fire safety function (except SEASON) to control supply and extract fans according to 5 available modes in the control parameters (function can be activated on site). A pictogram of a fire alarm is displayed on the screen:

- **Stop** : Complete unit shutdown.
- **Continue** : Continuous start-up or operation of the unit without taking time schedules into account.
- **Under normal start/stop conditions** : Maintains the unit according to the schedule and parameters set on site.
- **Supply only** : Start or maintain supply air fan (extract at stop).
- **Extract only** : Start or maintain extract air fan (supply at stop).

Moreover, the Freetime™ features an "External Stop" digital input that enables a manually operated control (to be connected on site). In this case, the external control takes priority over any fire safety activated by one of the 5 modes above.

Installation

The Freetime™ unit has no roof. It must only be installed inside a technical room.

Compact dimensions and small depth, top connection by round spigots with seals (except size 52) for simple, quick, airtight and economical installation (0 transformation parts).

Climatic version

The Freetime™ features finishes to ensure optimal climatic comfort (except SEASON). These features are managed automatically by the "EASY 5.0" control system. The sensors needed to regulate the coils and fans built into the unit are factory-mounted, wired and tested to make the Hexamotion™ a true PLUG&PLAY - SET& FORGET™ unit:

- Temperature sensors (x3) integrated into the unit: supply, extract, and outdoor temperature.
- Integrated anti-frost thermostat (THA) to protect the hot coil on PREMIUM BC versions.
- Integrated overheating safety thermostat (THS) with manual reset to protect the electric heater on PREMIUM BE version.

The "EASY 5.0" control can manage the CBX-BF and CBX-DX external modules:

- Cold water module (CBX-BF) on all versions and changeover possible on FIRST version.
- CBX-DX R410A direct expansion module.

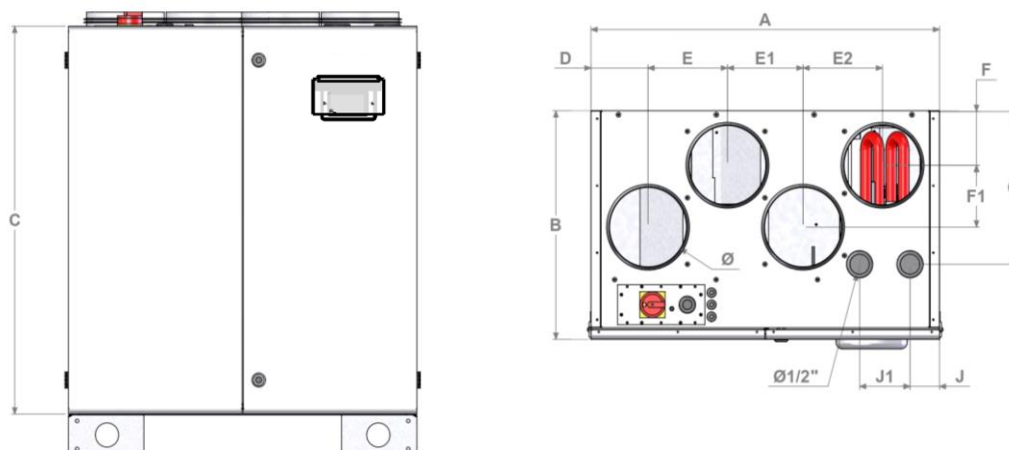


Unit version with different coils

Zehnder Freetime™	Integrated coils (s)		Module de batterie externe					
	Heating		Heating		Cooling		Changeover (Hot/Cold)	
	Electric	Water	Water	DX	Water	DX	Water	DX
SEASON	-	-	-	-	-	-	-	-
FIRST	-	-	BC	DXR	BF	DX	-	-
	-	-	-	-	-	-	BF	DXR
PREMIUM BE	■	-	-	-	BF	DX	-	-
PREMIUM BC	-	■	-	-	BF	DX	-	-

Dimensions characteristics

Zehnder Freetime™	Ø mm	A mm	B mm	c mm	D mm	E mm	E1 mm	E2 mm	F mm	F1 mm	G mm	J mm	J1 mm	L mm	SEASON FIRST	PREMIUM BE PREMIUM BC
500	200	900	570	970	145	205	195	205	135	155	385	75	130	520	130	135
800	250	1080	700	1090	170	235	240	260	160	235	485	75	180	650	170	175
1500	315	1400	750	1140	230	315	310	315	210	190	585	100	230	720	225	232
2000	355	1500	830	1220	250	335	330	335	230	230	660	100	230	770	270	278
2700	400	1610	920	1420	270	345	345	375	250	290	755	100	230	820	345	355
3500	450	1730	1085	1420	300	365	370	400	275	390	795	100	305	980	420	432



Electrical characteristics

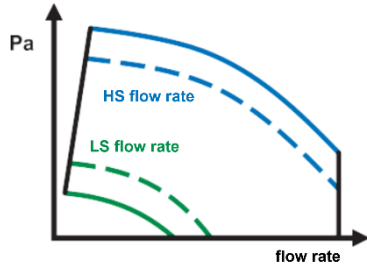
Modèle Zehnder Freetime™	Motor fan Power (W)	Operation temp. (°C / °C)	IP Motor fan /Class	Thermal protection*	SEASON / FIRST & PREMIUM BC		PREMIUM BE	
					Voltage	Protection intensity	Voltage	Protection intensity
					(V / Ph / Hz)	(A)	(V / Ph / Hz)	(A)
500	2 x 169 W	-20 / 60	IP54 / B	PTI	230 / 1 / 50	3,8	230 / 1 / 50	14,7
800	2 x 220 W	-20 / 60	IP44 / B	PTI	230 / 1 / 50	4,1	230 / 1 / 50	20,4
1500	2 x 480 W	-20 / 40	IP54 / B	PTI	230 / 1 / 50	5,3	230 / 1 / 50	28,1
2000	2 x 750 W	-20 / 40	IP54 / B	PTI	230 / 1 / 50	7,6	400 / 3+N / 50	18,5
2700	2 x 1000 W	-20 / 50	IP54 / B	PTI	400 / 3+N / 50	4,3	400 / 3+N / 50	23,8
3500	2 x 1000 W	-20 / 50	IP54 / B	PTI	400 / 3+N / 50	4,3	400 / 3+N / 50	28,1

* PTI : Integrated thermal protection

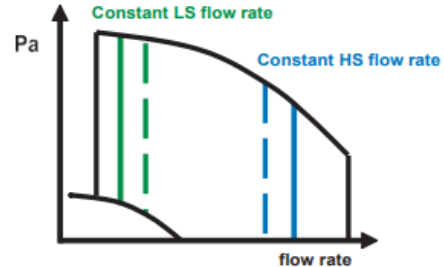
Airflow modulation

The Zehnder Freetime™ unit is equipped as standard with a factory-programmable control, which allows you to configure the following operating modes:

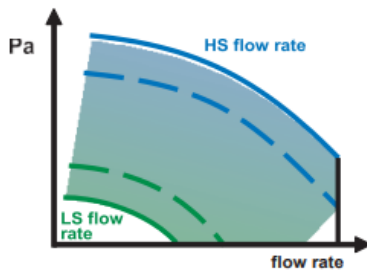
ECO : 2 speed settings (LS/HS) per fan.



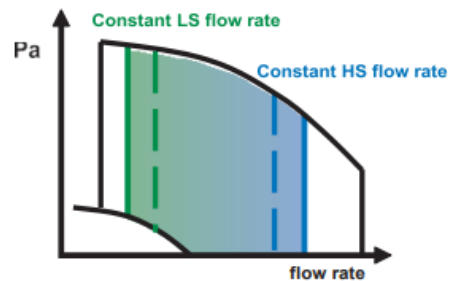
MAC 2 : 2 constant airflows.



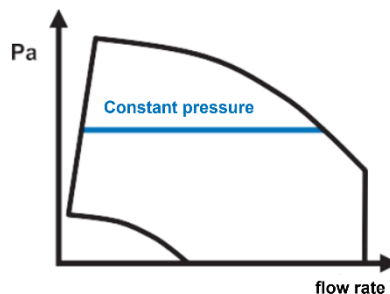
DIVA : proportional fan speed modulation on CO2 levels.



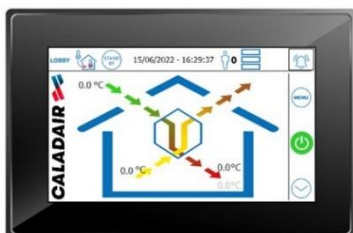
QUATTRO : proportional airflow modulation on CO2 levels.



LOBBY : constant pressure airflow modulation on each fan.



EASY 5.0 : MASTER touchscreen control close to the Freetime™ power switch, which can be remote-controlled on the wall (second screen optional) to set clocks, airflows, setpoint temperatures, self-regulating internal bypass, night-cooling, fault(s) control and reading...



EDT2 : USER room remote touch control, temperature setpoint offset, 120 min restart, or information display (fan speed and status, operating mode, external forcing, temperature setpoint, and alarms).



General characteristics

Equipment	SEASON	FIRST	PREMIUM BE	PREMIUM BC
Low energy consumption EC motor fans	●	●	●	●
Fresh air filter, ePM1 55 % (F7)	●	●	●	●
Extract air filter, ePM10 50 % (M5)	●	●	●	●
High-efficiency rotary heat exchanger (>80%), EUROVENT certified	●	●	●	●
Variable heat exchanger speed	-	●	●	●
50 mm double skin (except sizes 500 and 800 in 25 mm), RAL9007	●	●	●	●
Dual seal round spigot (ATEC CSTB number 13-224-V2).	●	●	●	●
Communicative control via Modbus in RS485 or TCP/IP, BACnet IP, WEB TCP/IP (selectable)	-	●	●	●
Speed control (PV/GV) via EASY 5.0	-	●	●	●
Speed regulation potentiometer	●	-	-	-
Supply air temperature sensor	-	●	●	●
Extract air temperature sensor	-	●	●	●
Outdoor temperature sensor	●	●	●	●
Water coil anti-frost thermostat (THA)	-	-	-	●
Electric heater over-heating thermostat	-	-	●	-
Lockable main power cut-off switch	●	●	●	●
Power cable pass-through	●	●	●	●

● : Equipment or function as standard

■ : Equipment or function as an option. Supplied mounted and wired at the factory

◆ : Equipment or function as an option. Supplied unmounted

General characteristics

Functions	SEASON	FIRST	PREMIUM BE	PREMIUM BC
Self-regulating electric preheater	-	-	●	-
Self-regulating hot water coil	-	-	-	●
Free Cooling management	-	●	●	●
Free heating management	-	●	●	●
Night Cooling management	-	●	●	●
Optimum cold recovery control	-	●	●	●
Thermostatic cold recovery control (adjustable)	●	-	-	-
Optimum heat recovery control	-	●	●	●
Thermostatic heat recovery control (adjustable)	●	-	-	-
Fan overheating prevention	●	●	●	●
Supply air temperature management	-	●	●	●
Extract air temperature management	-	●	●	●
Weekly schedule	-	●	●	●
Holidays and vacation schedule	-	●	●	●
Fresh air filter pressure switch	●	●	●	●
Airflow pressure switch (supply + extract)	●	●	●	●
Fire safety functions following 5 available modes	-	●	●	●

●: Equipment or function as standard

■: Equipment or function as an option. Supplied mounted and wired at the factory

◆: Equipment or function as an option. Supplied unmounted

General characteristics

Airflow modulation options	SEASON	FIRST	PREMIUM BE	PREMIUM BC
ECO : 2 speed settings (LS/HS) per fan	-	■	■	■
MAC 2 : 2 constant airflow per fan. Integrated pressure sensor	-	■	■	■
DIVA : proportional modulation for each fan speeds	-	■	■	■
QUATTRO : proportional airflow modulation on CO2 levels	-	■	■	■
LOBBY : constant-pressure airflow modulation for each fan	-	■	■	■

Further options	SEASON	FIRST	PREMIUM BE	PREMIUM BC
Summer / Winter thermostat	-	◆	-	◆
USER room remote touch control (EDT2)	-	◆	◆	◆
Extracted air filter pressure switch	◆	◆	◆	◆

● : Equipment or function as standard

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◆ : Equipment or function as an option. Supplied unmounted

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The information provided in this documentation are general information for the Hexamotion™ range. All technical performances refer to the nominal airflow of each size. Therefore, it is recommended for your projects to dimension your units using the Softwair selection software, with Eurovent EN1886 certified results.

Acoustic characteristics

The Lp4m dB(A) curves correspond to the sound pressure level at 4m in a hemispherical open field on a reflecting plan, with the "fresh air" and "exhaust air" sides unconnected, and the "supply air" and "extract air" sides connected.

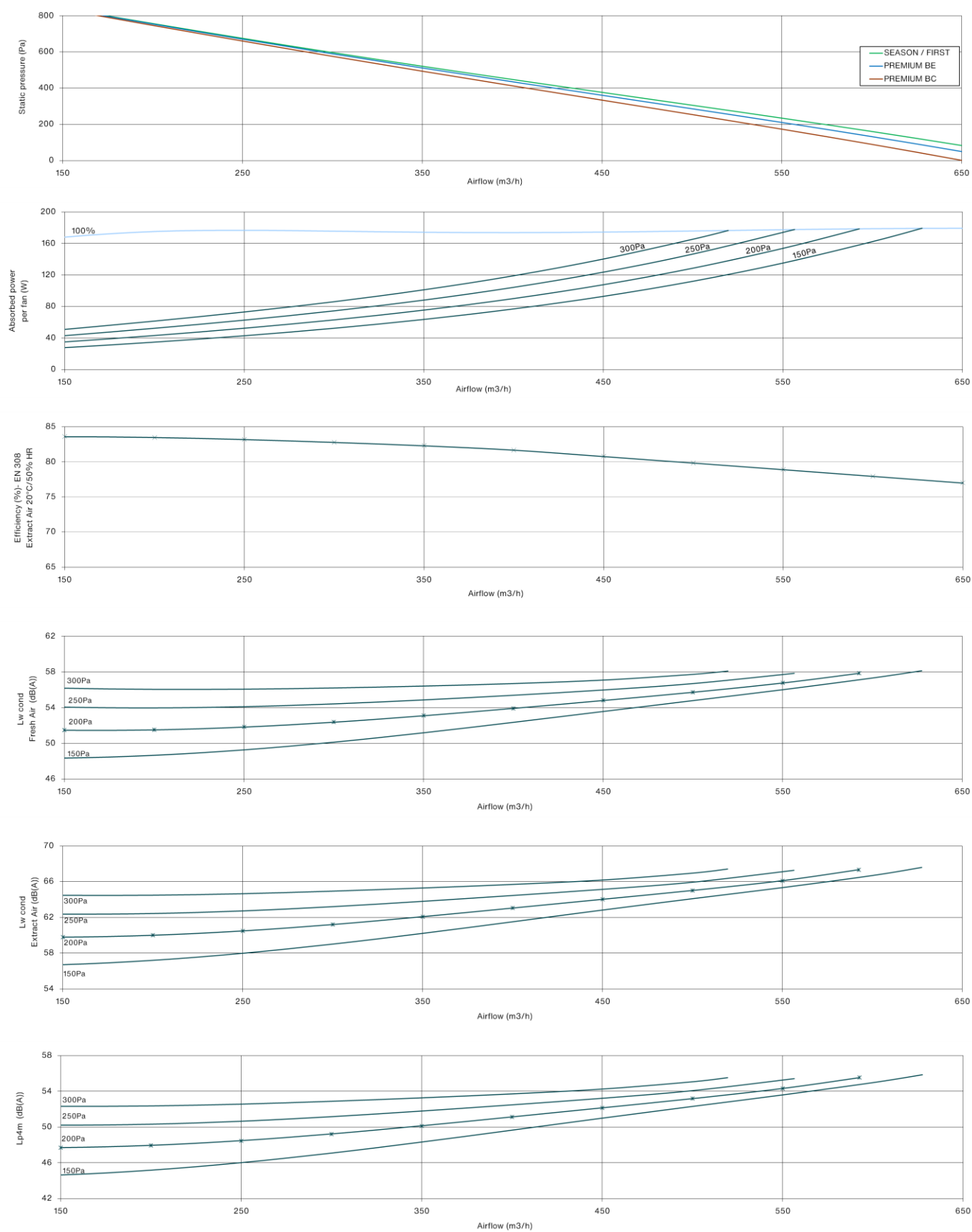
To obtain the global sound pressure level Lp dB(A), at a certain distance, add the values below to Lp4m.

Distance (m)	1,5	3	4	5	7	10
Weighting dB(A)	9	3	0	-2	-5	-8

Tolerance : global value +/- 3 dB(A)
acoustic spectrum +/- 5 dB(A)



Selection curves Zehnder Freetime™ 500



Hot water coil performance characteristics Zehnder Freetime™ 500

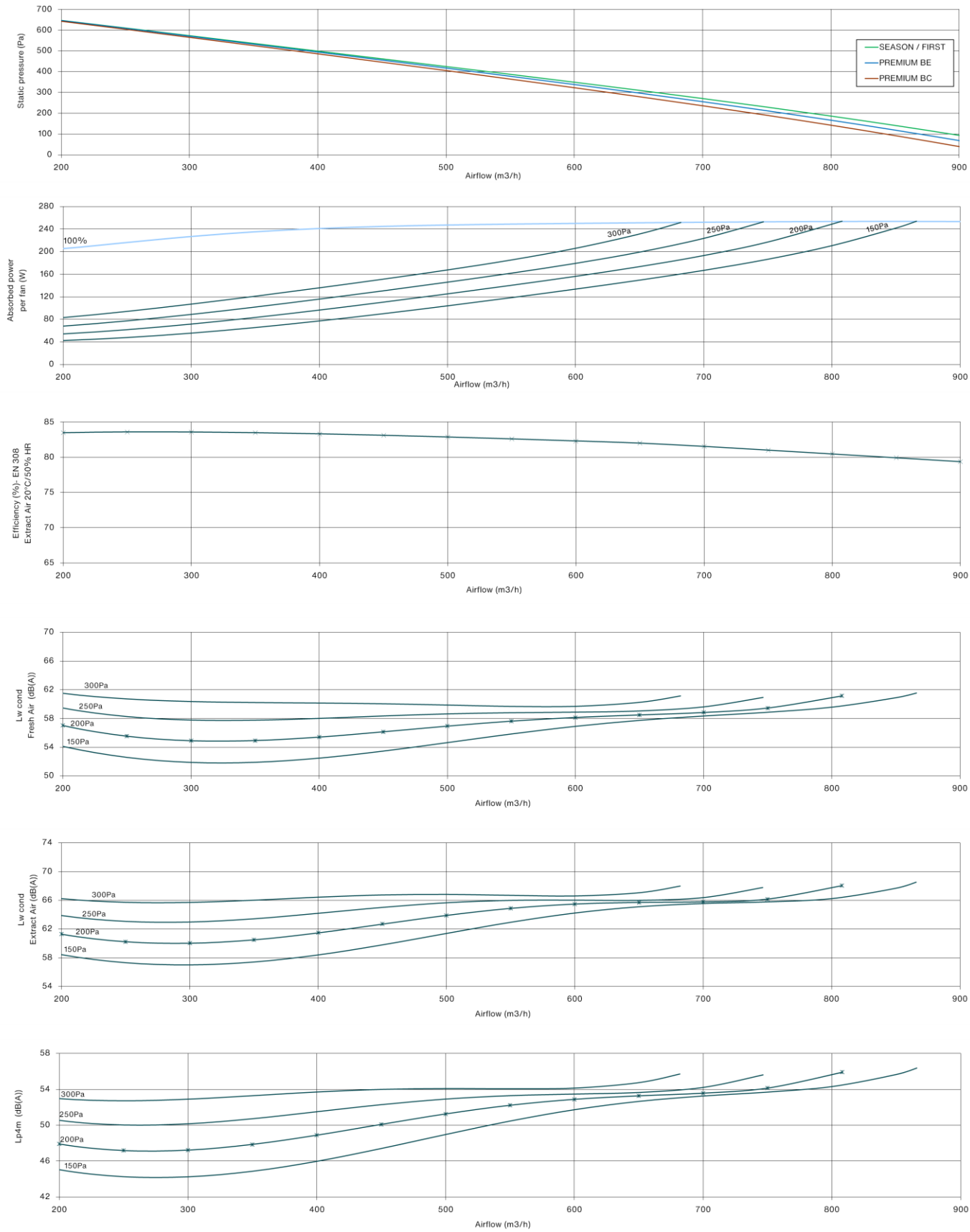
BC for PREMIUM version							Hot water coil	
Water Temp.	Air entry Temp.	Airflow	100	200	300	400	500	600
°C / °C	°C	m3/h						
80 / 60	11	Power (kW) / Supply air (°C)	1,6 / 56,7	2,6 / 48,7	3,4 / 43,9	4 / 40,5	4,6 / 38	5,1 / 36
		Waterflow (l/h) / Water DP (kPa)	68,5 / 1,3	113 / 3,2	148 / 5,2	177 / 7,3	202 / 9,2	225 / 11,2
	15	Power (kW) / Supply air (°C)	1,5 / 57,6	2,4 / 50	3,1 / 45,6	3,8 / 42,4	4,3 / 40,1	4,8 / 38,2
		Waterflow (l/h) / Water DP (kPa)	63,8 / 1,2	105 / 2,8	137 / 4,6	164 / 6,4	188 / 8,1	209 / 9,8
60 / 50	11	Power (kW) / Supply air (°C)	1,2 / 45	1,9 / 39,2	2,5 / 35,7	3 / 33,3	3,5 / 31,4	3,9 / 29,9
		Waterflow (l/h) / Water DP (kPa)	101 / 2,8	168 / 6,9	220 / 11,4	265 / 15,8	303 / 20,2	337 / 24,5
	15	Power (kW) / Supply air (°C)	1,1 / 45,9	1,8 / 40,6	2,3 / 37,4	2,8 / 35,2	3,2 / 33,5	3,5 / 32,1
		Waterflow (l/h) / Water DP (kPa)	91,7 / 2,3	152 / 5,8	200 / 9,5	240 / 13,2	275 / 16,9	306 / 20,5
45 / 40	11	Power (kW) / Supply air (°C)	0,8 / 35,2	1,4 / 31,2	1,8 / 28,8	2,2 / 27	2,5 / 25,7	2,8 / 24,7
		Waterflow (l/h) / Water DP (kPa)	143 / 5,4	239 / 13,7	315 / 22,6	379 / 31,7	435 / 40,6	485 / 49,4
	15	Power (kW) / Supply air (°C)	0,7 / 36,1	1,2 / 32,6	1,6 / 30,5	1,9 / 21,3	2,2 / 27,8	2,4 / 26,9
		Waterflow (l/h) / Water DP (kPa)	125 / 4,3	208 / 10,7	274 / 17,6	330 / 24,6	378 / 31,5	421 / 38,3

Electric coil performance characteristics Zehnder Freetime™ 500

BE for unit version							Electric coil	
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20	
(m³/h)	500		500					
Version	FIRST, SEASON		PREMIUM BE Heater coil					
Power (kW)	-		2,5					
Outlet temperature (°C)	16,2	15,3	31,2	30,3	29,3	28,3	27,3	

These data are provided for optimal control configuration according to the outdoor temperatures in question.

Selection curves Zehnder Freetime™ 800



Hot water coil performance characteristics Zehnder Freetime™ 800

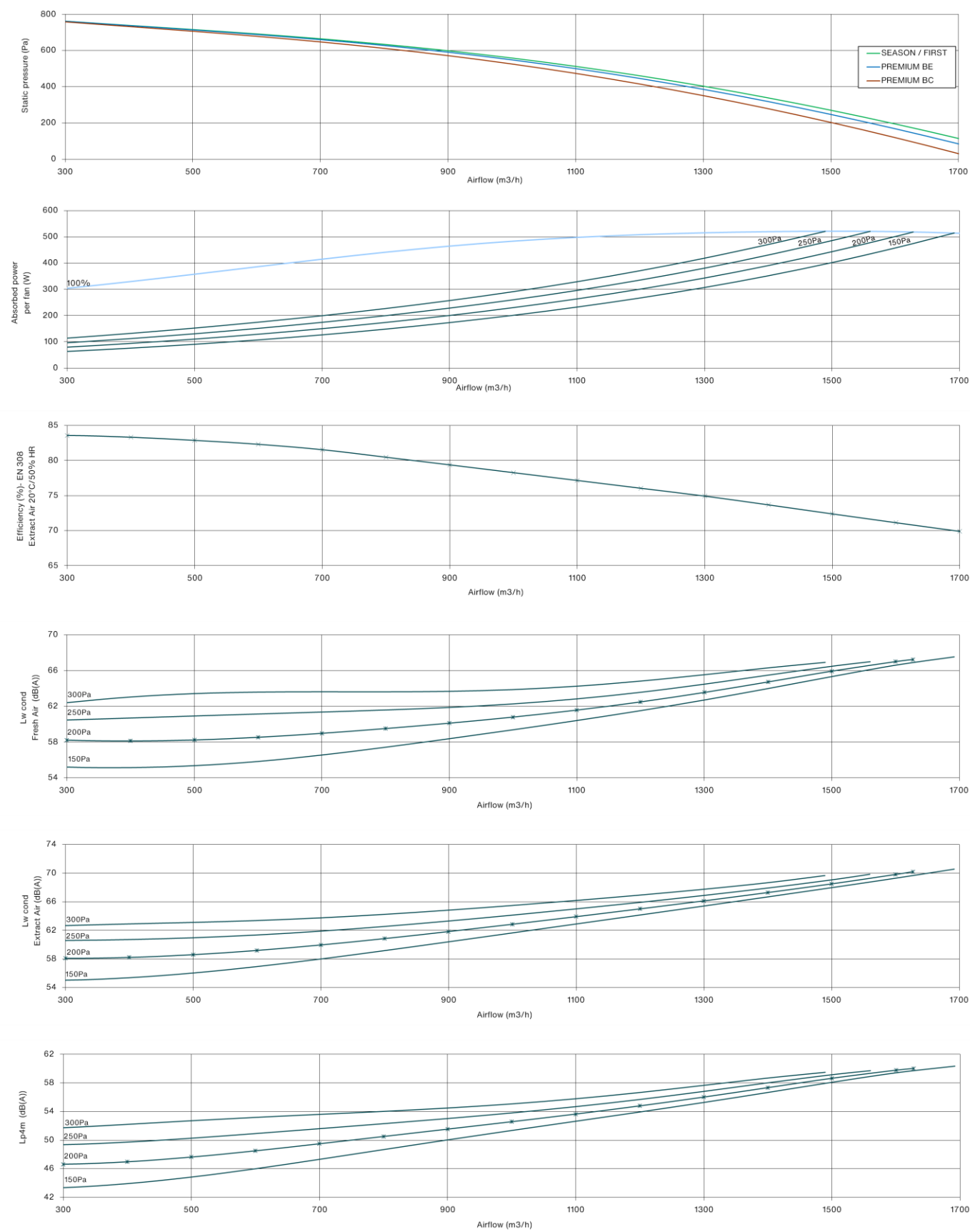
BC for PREMIUM version									Hot water coil
Water Temp. °C / °C	Air entry Temp. °C	Airflow m3/h	200	300	400	500	600	700	800
80 / 60	11	Power (kW) / Supply air (°C)	3 / 54,8	4 / 50	4,9 / 46,7	5,6 / 44	6,3 / 41,9	7 / 40,1	7,6 / 38,6
		Waterflow (l/h) / Water DP (kPa)	131 / 1	175 / 1,6	214 / 2,3	247 / 3	278 / 3,8	306 / 4,5	331 / 5,2
	15	Power (kW) / Supply air (°C)	2,8 / 55,7	3,7 / 51,3	4,5 / 48,2	5,2 / 45,7	5,9 / 43,7	6,5 / 42,1	7 / 40,7
		Waterflow (l/h) / Water DP (kPa)	122 / 0,8	163 / 1,4	199 / 2	230 / 2,7	258 / 3,3	284 / 3,9	307 / 4,5
60 / 50	11	Power (kW) / Supply air (°C)	2,2 / 43,6	3 / 40,3	3,7 / 37,8	4,3 / 35,9	4,8 / 34,3	5,3 / 33	5,7 / 31,9
		Waterflow (l/h) / Water DP (kPa)	194 / 2,1	261 / 3,5	319 / 5,1	370 / 6,6	416 / 8,2	459 / 9,8	498 / 11,4
	15	Power (kW) / Supply air (°C)	2 / 44,6	2,7 / 41,5	3,3 / 39,3	3,9 / 37,6	4,3 / 36,1	4,8 / 35	5,2 / 33,9
		Waterflow (l/h) / Water DP (kPa)	176 / 1,7	237 / 2,9	289 / 4,2	335 / 5,5	377 / 6,9	415 / 8,2	450 / 9,5
45 / 40	11	Power (kW) / Supply air (°C)	1,6 / 34,3	2,2 / 32	2,6 / 30,3	3,1 / 28,9	3,5 / 27,8	3,8 / 26,9	4,1 / 26,1
		Waterflow (l/h) / Water DP (kPa)	276 / 4,1	372 / 7	456 / 10,1	530 / 13,3	597 / 16,5	659 / 19,8	715 / 23
	15	Power (kW) / Supply air (°C)	1,4 / 35,3	1,9 / 33,3	2,3 / 31,8	2,7 / 30,6	3 / 29,6	3,3 / 28,8	3,6 / 28,1
		Waterflow (l/h) / Water DP (kPa)	240 / 3,2	324 / 5,4	397 / 7,8	461 / 10,3	519 / 12,8	572 / 15,3	621 / 17,8

Electric coil performance characteristics Zehnder Freetime™ 800

BE for unit version								Electric coil
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20	
(m³/h)	800		800					
Version	FIRST, SEASON		PREMIUM BE Heater coil					
Power (kW)	-		3,75					
Outlet temperature (°C)	16,4	15,5	30,5	29,6	28,7	27,7	26,8	

These data are provided for optimal control configuration according to the outdoor temperatures in question.

Selection curves Zehnder Freetime™ 1500



Hot water coil performance characteristics Zehnder Freetime™ 1500

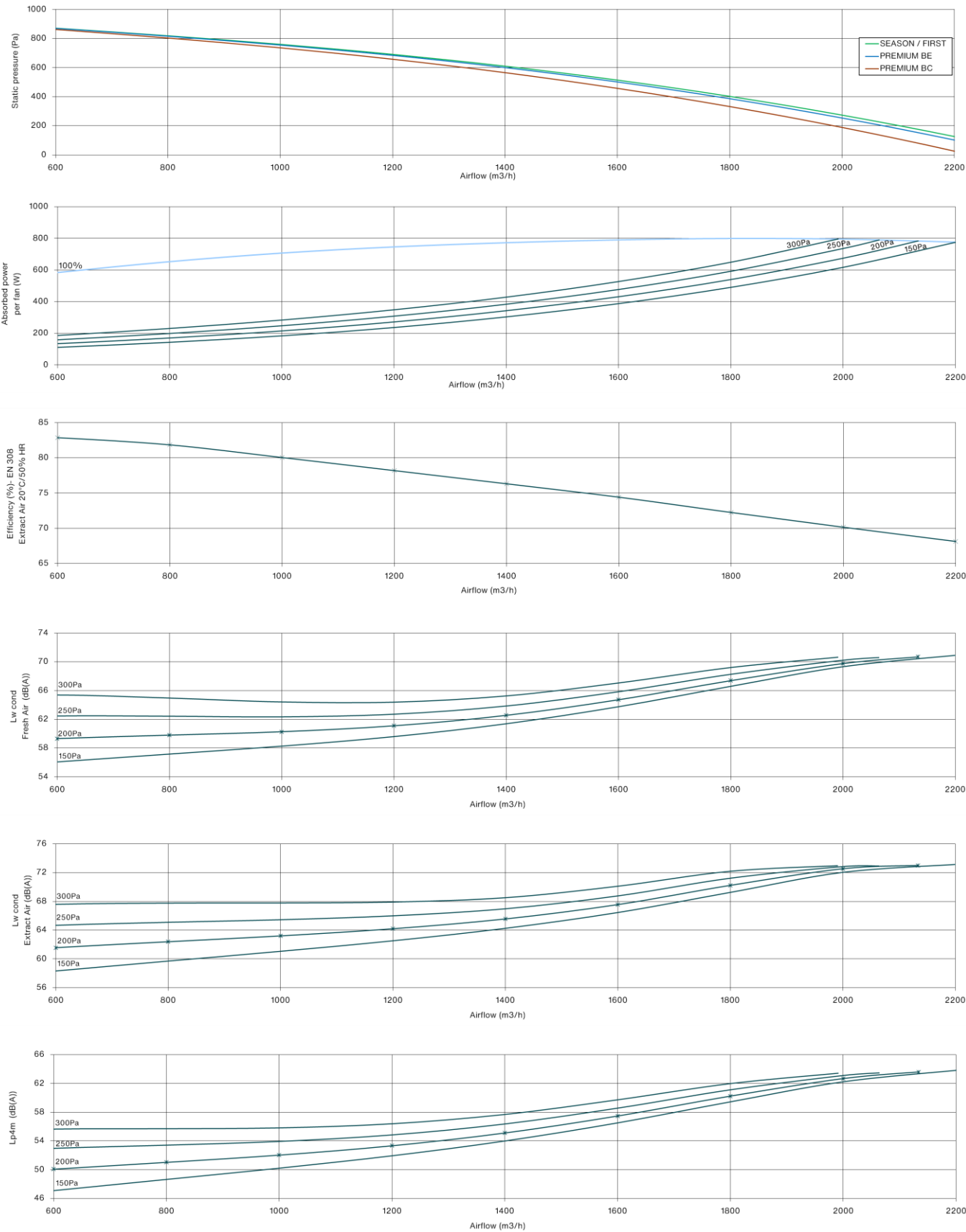
BC for PREMIUM version									Hot water coil
Water Temp. °C / °C	Air entry Temp. °C	Airflow m3/h	500	700	900	1100	1300	1500	1700
80 / 60	11	Power (kW) / Supply air (°C)	6,4 / 48,6	8 / 44,6	9,4 / 41,7	10,7 / 39,4	11,8 / 37,5	12,8 / 36	13,7 / 34,6
		Waterflow (l/h) / Water DP (kPa)	281 / 1,9	352 / 2,9	413 / 3,9	467 / 4,9	516 / 5,8	561 / 6,8	601 / 7,7
	15	Power (kW) / Supply air (°C)	6 / 49,9	7,5 / 46,2	8,8 / 43,5	9,9 / 41,3	10,9 / 39,6	11,9 / 38,1	12,7 / 36,9
		Waterflow (l/h) / Water DP (kPa)	261 / 1,7	327 / 2,5	384 / 3,4	434 / 4,2	479 / 5,1	520 / 5,9	558 / 6,7
60 / 50	11	Power (kW) / Supply air (°C)	4,8 / 39,2	6,1 / 36,3	7,1 / 34,2	8,1 / 32,5	8,9 / 31,1	9,7 / 29,9	10,4 / 29
		Waterflow (l/h) / Water DP (kPa)	419 / 4,1	527 / 6,3	620 / 8,5	702 / 10,7	777 / 12,9	845 / 15,1	907 / 17,2
	15	Power (kW) / Supply air (°C)	4,4 / 40,6	5,5 / 37,9	6,5 / 36	7,3 / 34,4	8,1 / 33,2	8,8 / 32,1	9,4 / 31,2
		Waterflow (l/h) / Water DP (kPa)	380 / 3,5	477 / 5,3	561 / 7,1	636 / 8,9	703 / 10,7	764 / 12,5	821 / 14,3
45 / 40	11	Power (kW) / Supply air (°C)	3,5 / 31,2	4,4 / 29,2	5,1 / 27,7	5,8 / 26,5	6,5 / 25,5	7 / 24,7	7,6 / 24
		Waterflow (l/h) / Water DP (kPa)	599 / 8,3	755 / 12,7	889 / 17,2	1009 / 21,7	1118 / 26,2	1217 / 30,6	1308 / 35
	15	Power (kW) / Supply air (°C)	3 / 32,6	3,8 / 30,8	4,5 / 29,5	5,1 / 28,5	5,6 / 27,6	6,1 / 26,9	6,6 / 26,3
		Waterflow (l/h) / Water DP (kPa)	521 / 6,4	656 / 9,8	773 / 13,3	876 / 16,7	970 / 20,2	1056 / 23,6	1134 / 26,9

Electric coil performance characteristics Zehnder Freetime™ 1500

BE for unit version								Electric coil
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20	
(m³/h)	1500		1500					
Version	FIRST, SEASON		PREMIUM BE Heater coil					
Power (kW)	-		5,25					
Outlet temperature (°C)	14,5	13,1	25	23,6	22,2	20,8	19,4	

These data are provided for optimal control configuration according to the outdoor temperatures in question.

Selection curves Zehnder Freetime™ 2000



Hot water coil performance characteristics Zehnder Freetime™ 2000

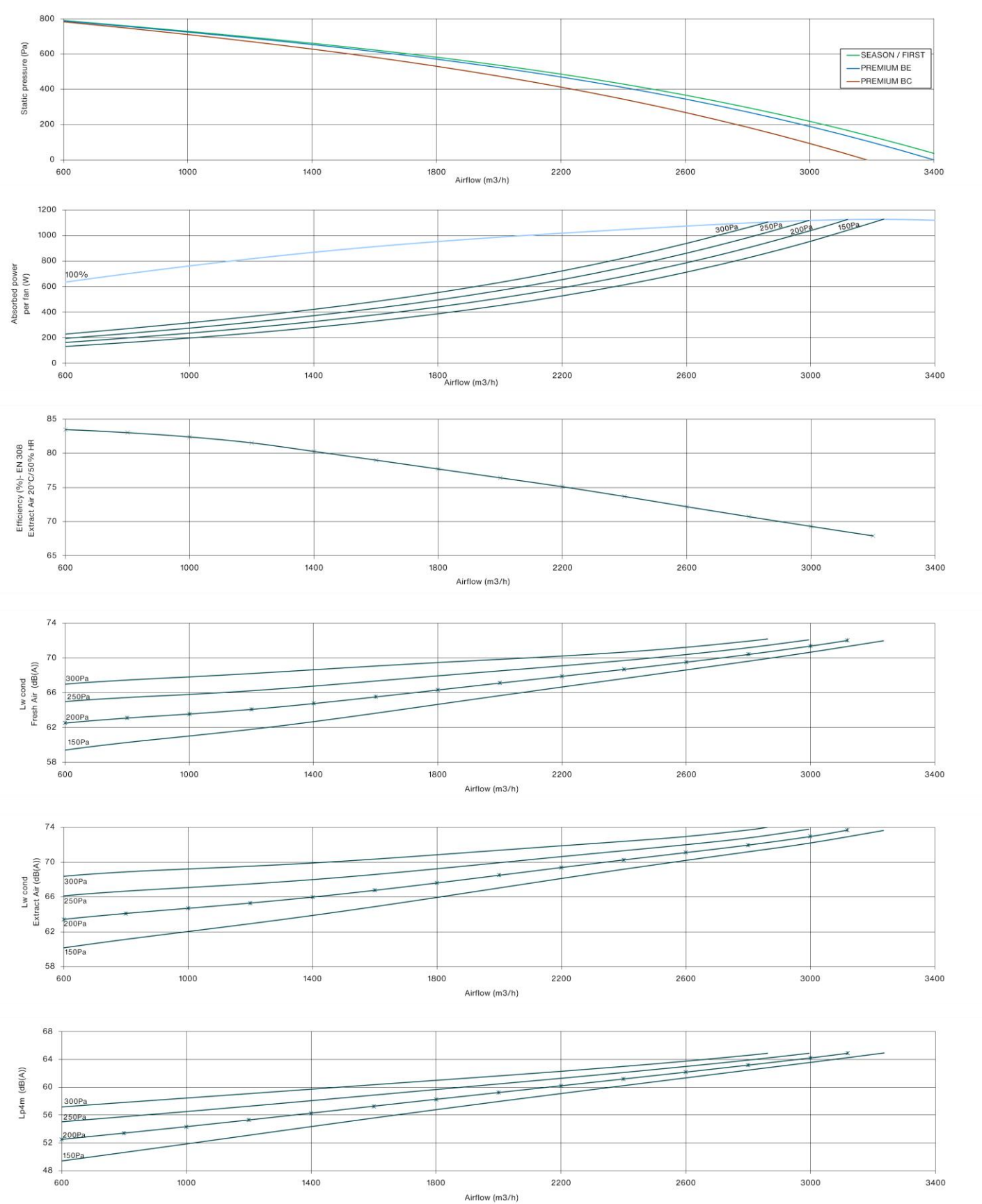
BC for PREMIUM version									Hot water coil
Water Temp. °C / °C	Air entry Temp. °C	Airflow m3/h	800	1000	1200	1400	1 600	1800	2000
80 / 60	11	Power (kW) / Supply air (°C)	9,4 / 45,3	10,8 / 42,6	12,1 / 40,5	13,3 / 38,8	14,4 / 37,3	15,4 / 36	16,3 / 34,9
		Waterflow (l/h) / Water DP (kPa)	411 / 4,1	474 / 5,4	530 / 6,6	582 / 7,8	630 / 9	674 / 10,2	715 / 11,4
	15	Power (kW) / Supply air (°C)	8,7 / 46,9	10 / 44,4	11,2 / 42,4	12,3 / 40,8	13,3 / 39,4	14,3 / 38,2	15,1 / 37,2
		Waterflow (l/h) / Water DP (kPa)	382 / 3,6	440 / 4,7	493 / 5,8	541 / 6,8	585 / 7,9	626 / 8,9	664 / 10
60 / 50	11	Power (kW) / Supply air (°C)	7 / 36,7	8,1 / 34,8	9,1 / 33,3	10 / 32	10,9 / 30,9	11,6 / 29,9	12,4 / 29,1
		Waterflow (l/h) / Water DP (kPa)	612 / 9	709 / 11,7	794 / 14,4	873 / 17,2	945 / 19,9	1012 / 22,6	1075 / 25,2
	15	Power (kW) / Supply air (°C)	6,4 / 38,3	7,4 / 36,6	8,3 / 35,2	9,1 / 34	9,8 / 33	10,5 / 32,1	11,2 / 31,4
		Waterflow (l/h) / Water DP (kPa)	555 / 7,5	642 / 9,8	719 / 12	791 / 14,3	856 / 16,6	917 / 18,8	973 / 21
45 / 40	11	Power (kW) / Supply air (°C)	5,1 / 29,5	5,9 / 28,1	6,6 / 27	7,2 / 26,1	7,9 / 25,4	8,4 / 24,7	8,9 / 24,1
		Waterflow (l/h) / Water DP (kPa)	875 / 17,9	1013 / 23,5	1138 / 29,1	1252 / 34,7	1358 / 40,2	1455 / 45,7	1546 / 51,1
	15	Power (kW) / Supply air (°C)	4,4 / 31,1	5,1 / 29,9	5,7 / 29	6,3 / 28,2	6,8 / 27,5	7,3 / 26,9	7,8 / 26,4
		Waterflow (l/h) / Water DP (kPa)	761 / 13,9	881 / 18,2	990 / 22,5	1089 / 26,8	1180 / 31,1	1264 / 35,3	1343 / 39,4

Electric coil performance characteristics Zehnder Freetime™ 20

BE for unit version								Electric coil
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20	
(m³/h)	2000		2000					
Version	FIRST, SEASON		PREMIUM BE Heater coil					
Power (kW)	-		10,5					
Outlet temperature (°C)	14,7	13,4	30,5	29,2	27,8	26,5	25,1	

These data are provided for optimal control configuration according to the outdoor temperatures in question.

Selection curves Freetime™ 2700



Hot water coil performance characteristics Zehnder Freetime™ 2700

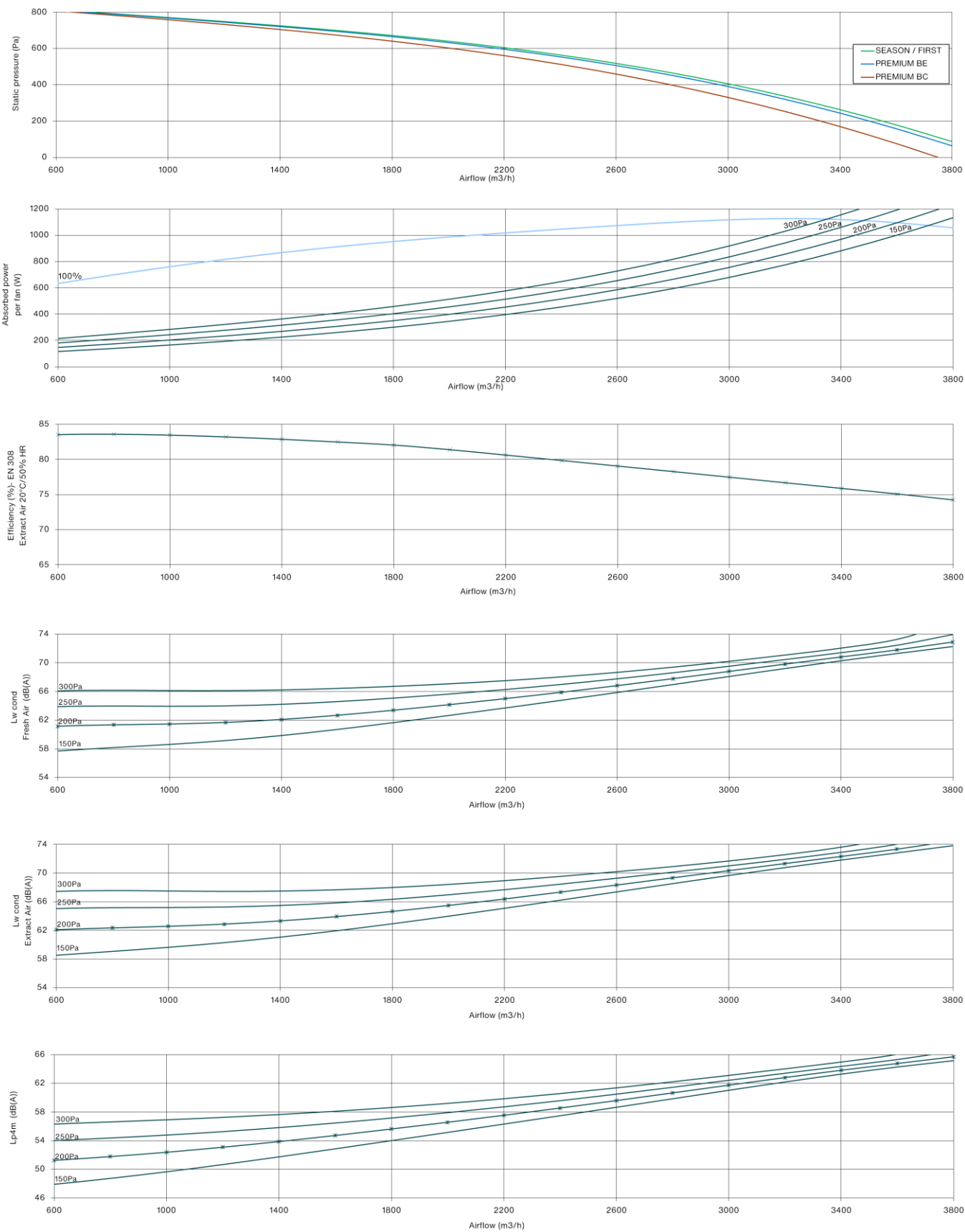
BC for PREMIUM version								Hot water coil
Water Temp.	Air entry Temp.	Airflow	600	1400	1800	2200	2600	3000
°C / °C	°C	m3/h						
80 / 60	11	Power (kW) / Supply air (°C)	8,1 / 50,5	11,4 / 44,5	14,1 / 40,5	16,4 / 37,7	18,4 / 35,5	20,2 / 33,8
		Waterflow (l/h) / Water DP (kPa)	355 / 1,9	501 / 3,7	620 / 5,5	720 / 7,2	808 / 9	887 / 10,6
	15	Power (kW) / Supply air (°C)	7,5 / 51,7	10,6 / 46,1	13,1 / 42,4	15,3 / 39,8	17,1 / 37,8	18,8 / 36,1
		Waterflow (l/h) / Water DP (kPa)	330 / 1,7	466 / 3,2	575 / 4,8	669 / 6,3	750 / 7,8	823 / 9,3
60 / 50	11	Power (kW) / Supply air (°C)	6,1 / 40,6	8,6 / 36,2	10,7 / 33,3	12,4 / 31,2	14 / 29,6	15,4 / 28,3
		Waterflow (l/h) / Water DP (kPa)	527 / 4,2	749 / 8,1	929 / 12	1083 / 16	1218 / 19,9	1338 / 23,8
	15	Power (kW) / Supply air (°C)	5,5 / 41,8	7,8 / 37,8	9,7 / 35,2	11,3 / 33,3	12,7 / 31,9	13,9 / 30,7
		Waterflow (l/h) / Water DP (kPa)	478 / 3,5	679 / 6,7	841 / 10	980 / 13,3	1102 / 16,5	1210 / 19,7
45 / 40	11	Power (kW) / Supply air (°C)	4,4 / 32,2	6,2 / 29,1	7,7 / 27,1	9 / 25,6	10,1 / 24,5	11,1 / 23,5
		Waterflow (l/h) / Water DP (kPa)	752 / 8,4	1072 / 16,3	1334 / 24,4	1557 / 32,6	1753 / 40,6	1928 / 48,5
	15	Power (kW) / Supply air (°C)	3,8 / 33,4	5,4 / 30,8	6,7 / 29	7,8 / 27,7	8,8 / 26,7	9,7 / 25,9
		Waterflow (l/h) / Water DP (kPa)	654 / 6,5	932 / 12,5	1158 / 18,8	1352 / 25	1521 / 31,2	1673 / 37,2

Electric coil performance characteristics Zehnder Freetime™ 2700

BE for unit version							Electric coil
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20
(m³/h)	2700		2700				
Version	FIRST, SEASON		PREMIUM BE Heater coil				
Power (kW)	-		13,5				
Outlet temperature (°C)	14,9	13,7	29,9	28,7	27,4	26,1	24,7

These data are provided for optimal control configuration according to the outdoor temperatures in question.

Selection curves Freetime™ 3500



Hot water coil performance characteristics Zehnder Freetime™ 3500

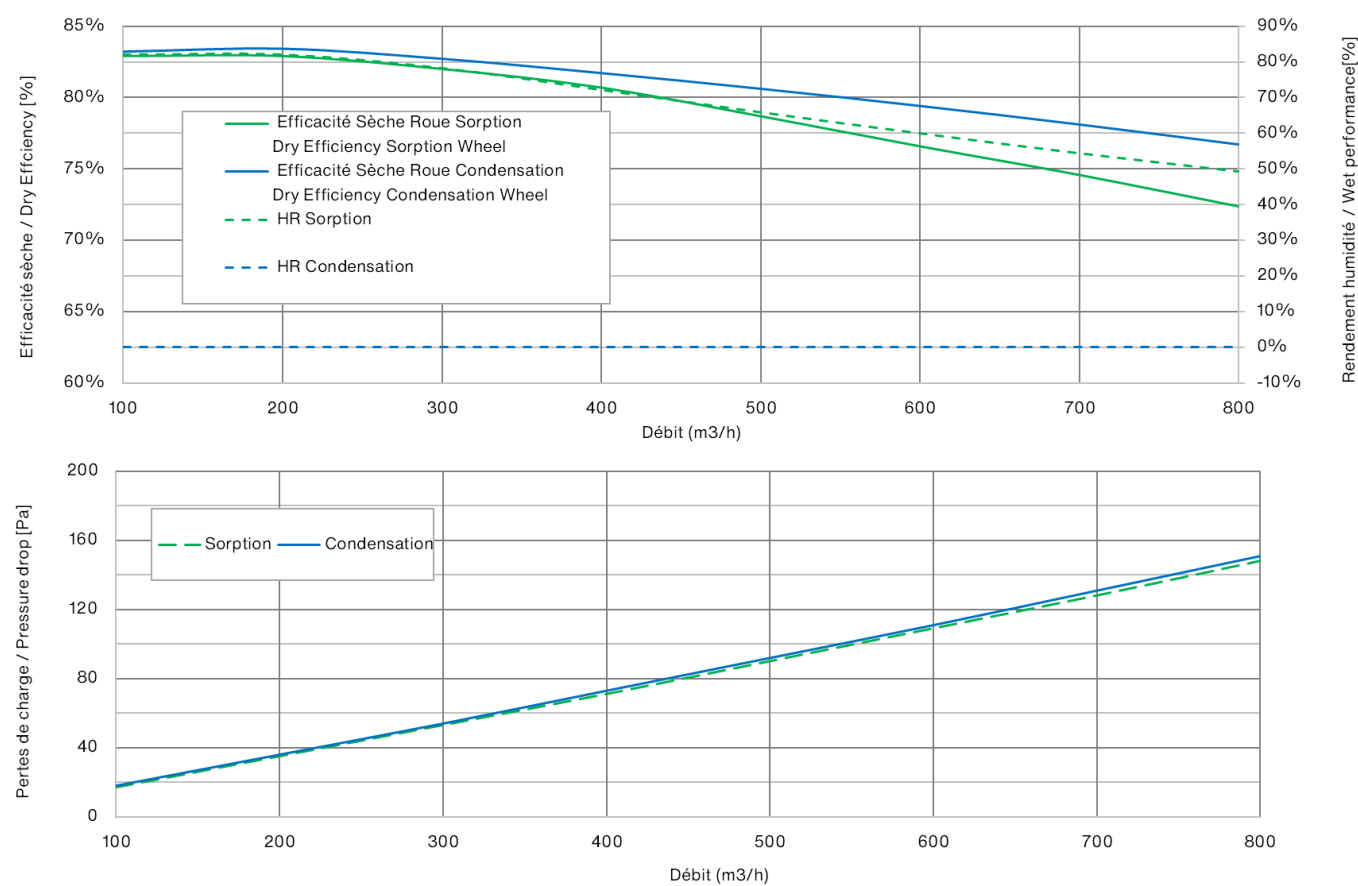
BC for PREMIUM version									Hot water coil
Water Temp. °C / °C	Air entry Temp. °C	Airflow m3/h	1000	1400	1800	2200	2600	3000	3400
80 / 60	11	Power (kW) / Supply air (°C)	12,7 / 48,3	15,9 / 44,3	18,7 / 41,4	21,1 / 39,1	23,3 / 37,2	25,3 / 35,7	27,1 / 34,3
		Waterflow (l/h) / Water DP (kPa)	558 / 2,5	683 / 3,7	819 / 5	925 / 6,2	1021 / 7,4	1108 / 8,6	1188 / 9,8
	15	Power (kW) / Supply air (°C)	11,9 / 49,7	14,8 / 45,9	17,4 / 43,2	19,6 / 41,1	21,6 / 39,6	23,5 / 37,9	25,2 / 36,7
		Waterflow (l/h) / Water DP (kPa)	519 / 2,2	649 / 3,2	761 / 4,3	859 / 5,4	948 / 6,5	1029 / 7,5	1103 / 8,6
60 / 50	11	Power (kW) / Supply air (°C)	9,6 / 38,9	12 / 36	14,1 / 33,9	15,9 / 32,2	17,6 / 30,8	19,2 / 29,7	20,6 / 28,7
		Waterflow (l/h) / Water DP (kPa)	830 / 5,3	1042 / 8,1	1225 / 10,9	1387 / 13,6	1533 / 16,4	1666 / 19,1	1788 / 21,8
	15	Power (kW) / Supply air (°C)	8,7 / 40,3	10,9 / 37,7	12,8 / 35,7	14,4 / 34,2	16 / 33	17,3 / 31,9	18,6 / 31
		Waterflow (l/h) / Water DP (kPa)	753 / 4,5	945 / 6,7	1110 / 9,1	1256 / 11,4	1388 / 13,7	1508 / 15,9	1619 / 18,1
45 / 40	11	Power (kW) / Supply air (°C)	6,9 / 31	8,6 / 29	10,2 / 27,5	11,5 / 26,3	12,7 / 25,3	13,8 / 24,5	14,9 / 23,8
		Waterflow (l/h) / Water DP (kPa)	1185 / 10,6	1491 / 16,2	1756 / 21,8	1991 / 27,5	2203 / 33,1	2396 / 38,7	2574 / 44,1
	15	Power (kW) / Supply air (°C)	6 / 32,5	7,5 / 30,7	8,8 / 29,3	10 / 28,3	11,1 / 27,4	12 / 26,7	12,9 / 26,1
		Waterflow (l/h) / Water DP (kPa)	1032 / 8,2	1297 / 12,5	1527 / 16,9	1730 / 21,2	1914 / 25,6	2081 / 29,8	2235 / 34

Electric coil performance characteristics Zehnder Freetime™ 3500

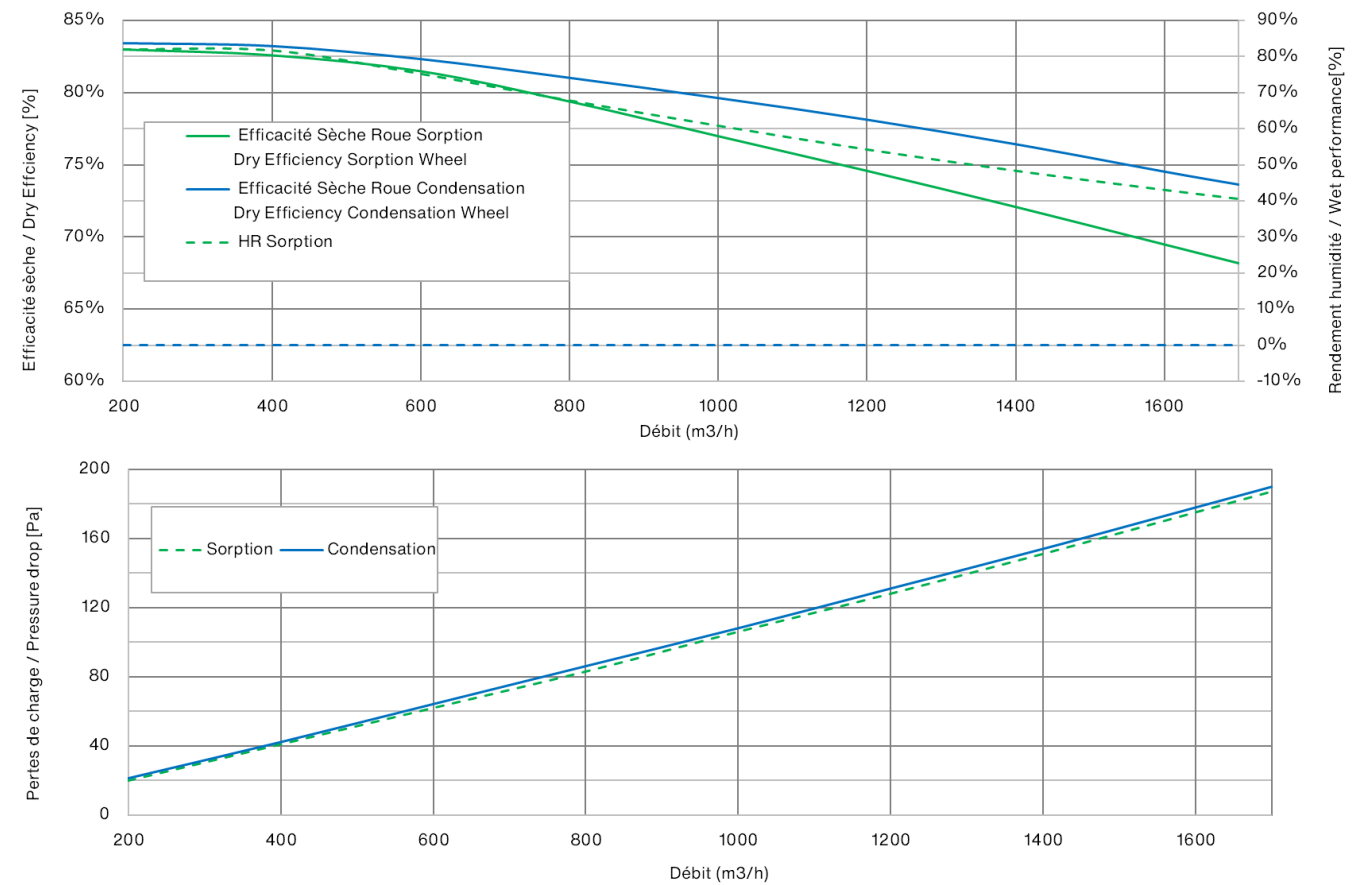
BE for unit version								Electric coil
Fresh airflow	0°C	-5	0°C	-5°C	-10°C	-15	-20	
(m³/h)	3500		3500					
Version	FIRST, SEASON		PREMIUM BE Heater coil					
Power (kW)	-		16,5					
Outlet temperature (°C)	15,7	14,6	29,8	28,7	27,1	26,4	25,3	

These data are provided for optimal control configuration according to the outdoor temperatures in question.

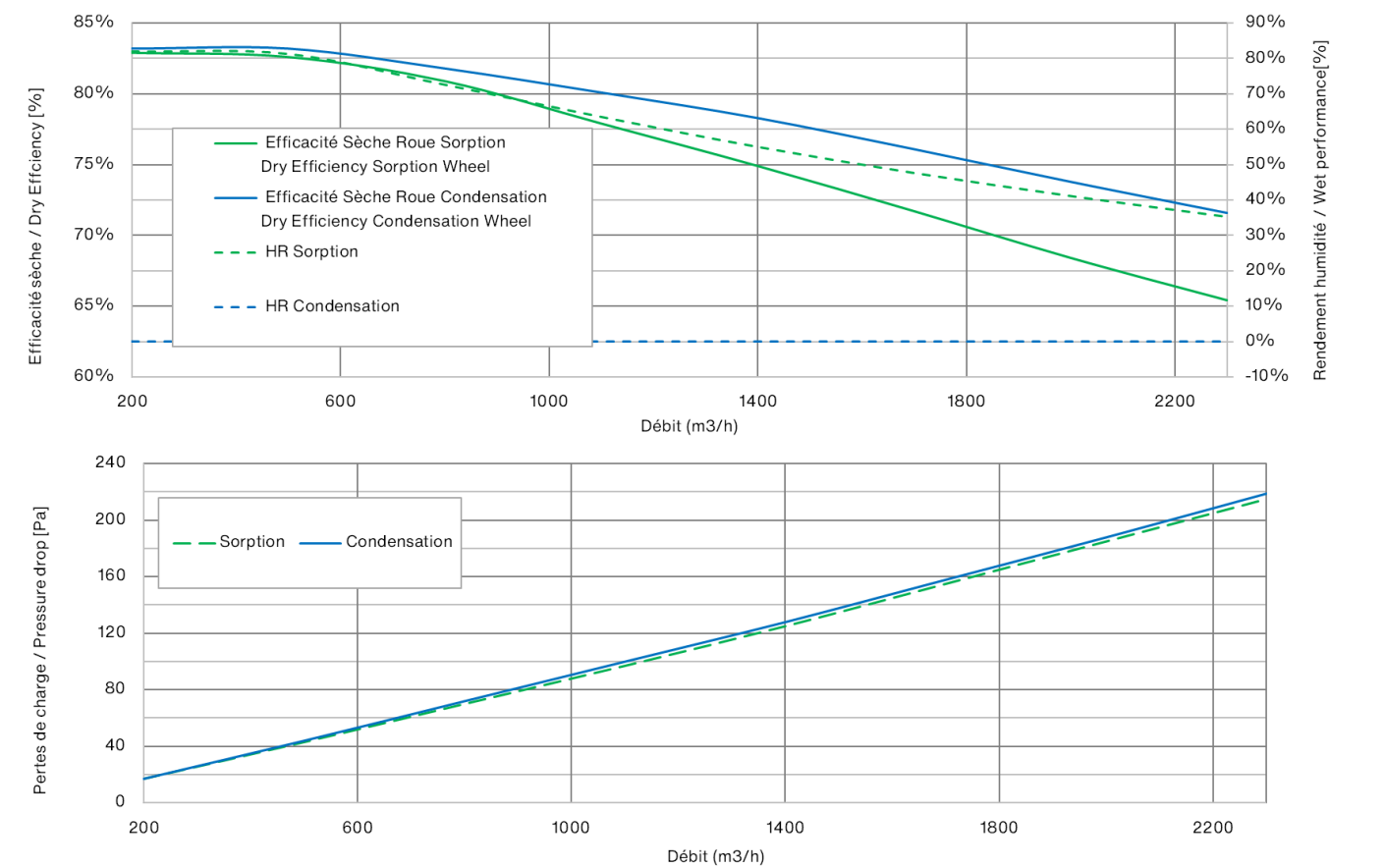
Rotary sorption heat exchanger aeraulic performance Freetime 500



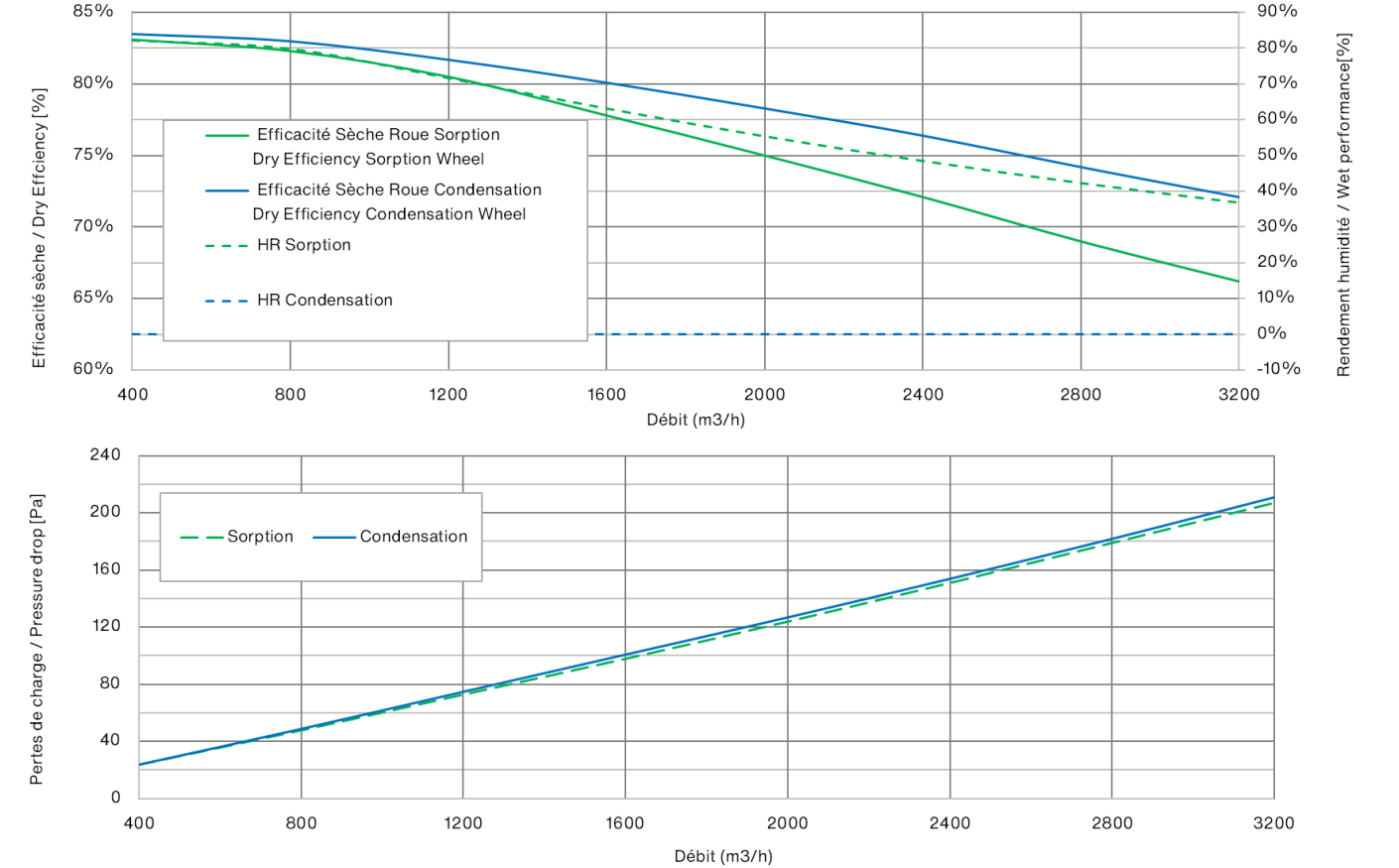
Rotary sorption heat exchanger aeraulic performance Freetime 800-1500



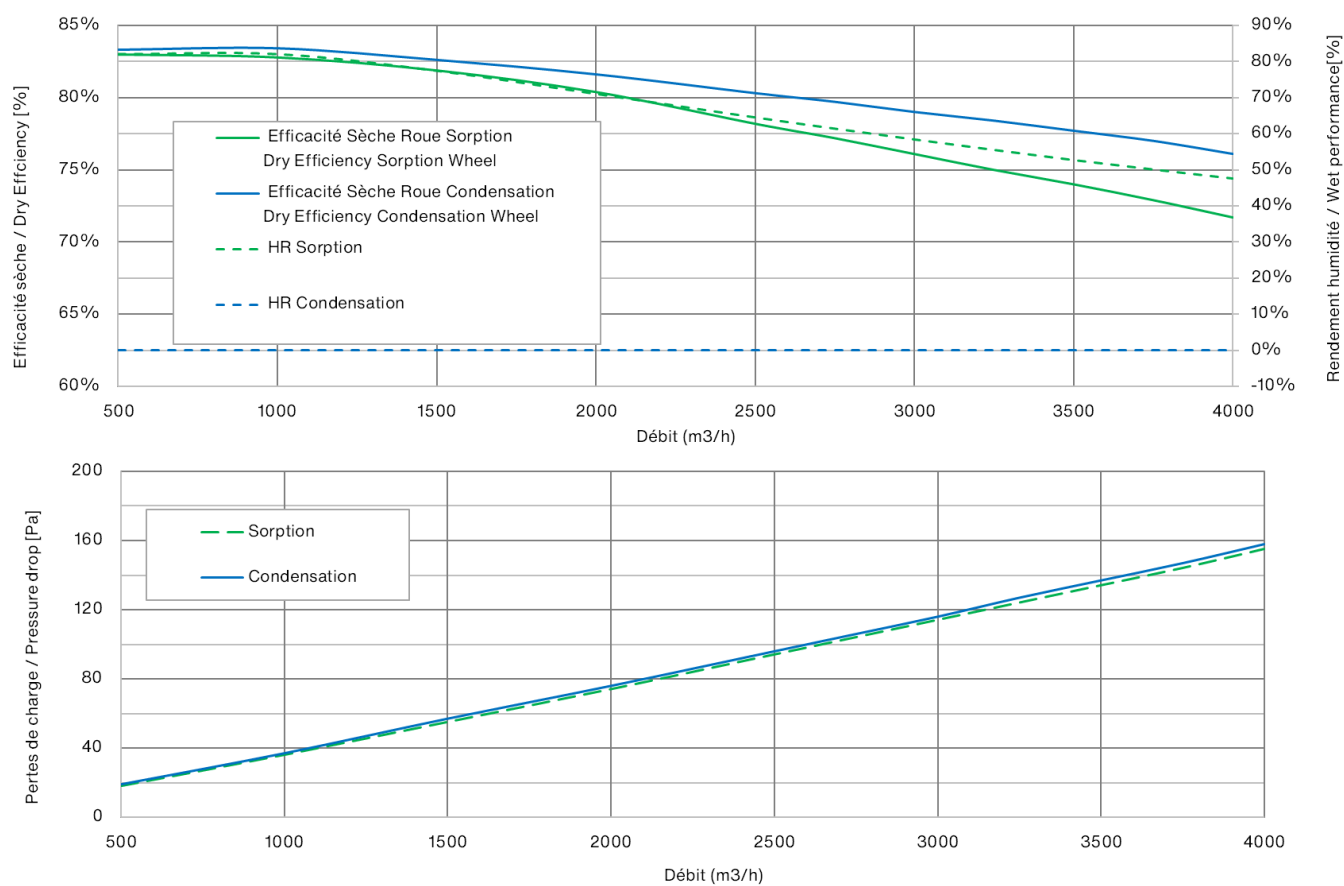
Rotary sorption heat exchanger aeraulic performance Freetime 2000



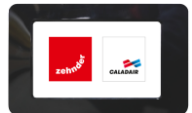
Rotary sorption heat exchanger aeraulic performance Freetime 2700



Rotary sorption heat exchanger aeraulic performance Freetime 3500



Options

Climatic		Security and control	
	Summer / Winter thermostat ref. PASTILLE CHANGEOVER Combined with an external Combibox Concept module		Air pressure switch ref. DEP Extract air filter (IP54)
	Condensate pump kit ref. PRC ESI10 5ML NON MONTE Direct connections to EASY controller and overflow safety management.		Liquid manometer J ref. 0-1000 Pa VDI6022 DISPOSITIF
	Kit 3 way valve 24V IP54 ref. DN15 PREMIUM CO versions		Smoke detection ref. CDAD (IP54)
	Circular damper antifreeze 24V ref. RC4A Frost prevention. Airtight class 4		Trigger box ref. BD TBTS 24/48 Vcc 24 or 48 Vdc low-voltage box (IP67)
Airflow modulation			
	Filter F9 ePM1 80%		Potentiometer 0-10 V ref. POT 230 Potentiometer only for SEASON (IP54)
	Filter M5 ePM10 50%		Presence sensor ref. 360 TOR SA ON/OFF or LS/HS (SEASON version not compatible)
	Chilled water module Combibox ref. CBX4 BF Duct installation (see COMBIBOX CONCEPT™ documentation for descriptions). SEASON version not compatible		2 speed comfort remote control ref. CDC 2V2 OFF/LS/HS, 2 fans, box (IP54)
	DX module Combibox R410A ref. CBX4 DX Duct installation (see COMBIBOX CONCEPT™ documentation for descriptions). SEASON version not compatible		2 speed comfort remote control ref. CDC PVGV2 LS/HS, 2 fans, box (IP54)
			2 speed comfort remote control ref. CDC 1V2 ON/OFF, 2 fans, box (IP54)
Controller		Installation	
	Wall touch screen MASTER ref. EASY 5.0 SEASON version not compatible.		Flexible sleeve ref. MTS M0 Fire Class: M0 Male (network side) / Female (unit side) diameters
	Wall-mounted touch screen USER ref. EDT2 100ML SEASON version not compatible.		Anti-vibration plot ref. PAV Set of 4 (height 100 mm). For floor mounting.

zehnder



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