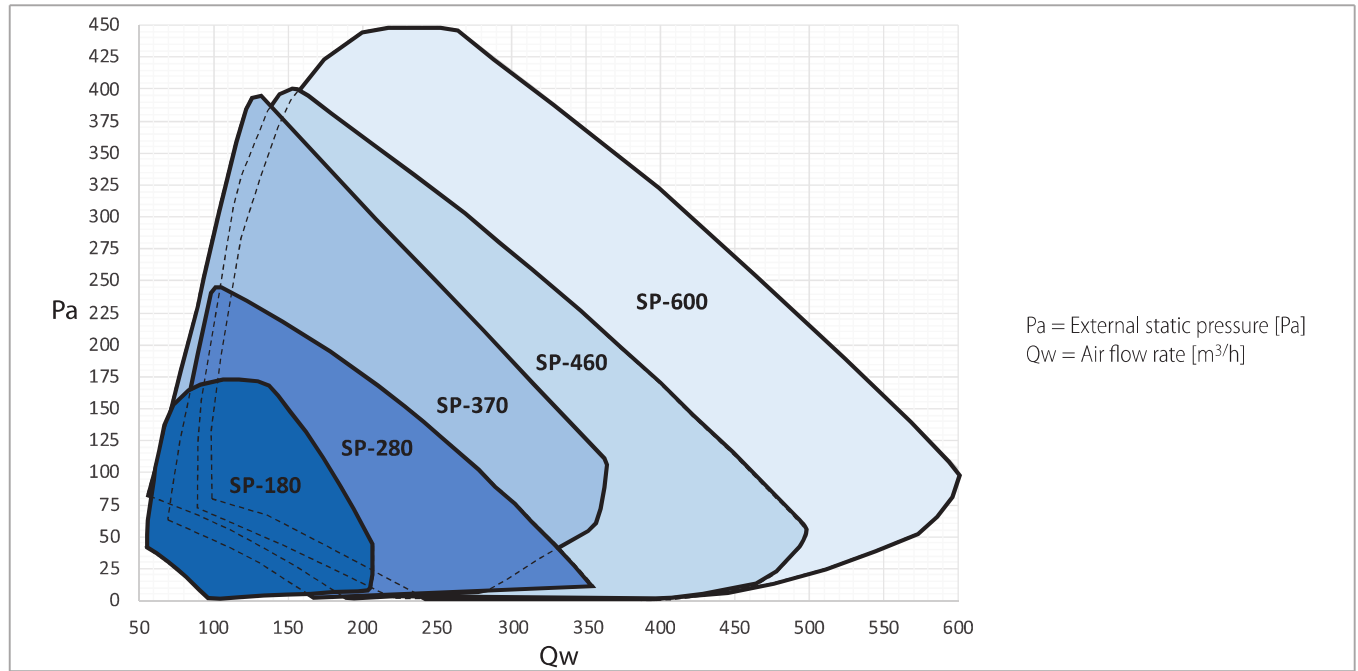


FAST UNIT SELECTION

YKH2G units are suitable for operation in balanced or slightly unbalanced flow and return conditions. They ensure residential air exchange, recovering the heat from the extracted air and conveying it to the clean air. The chart below shows the recommended operating ranges in terms of volumetric supply air flow rate at standard conditions and available external static pressure.

Pro YKH2G-SP Vertical Version



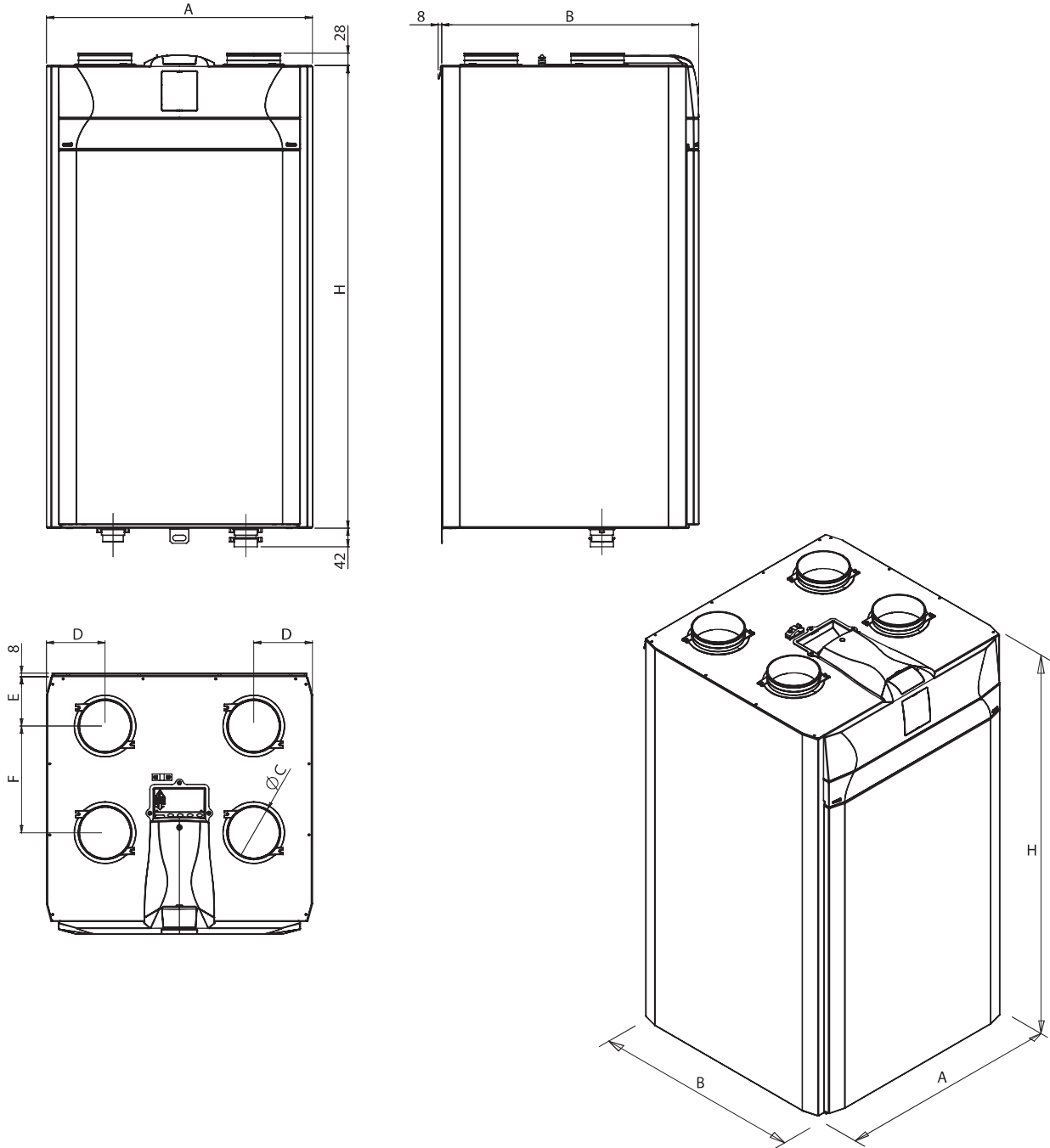
		YKH2G-SP-180	YKH2G-SP-280	YKH2G-SP-370	YKH2G-SP-460	YKH2G-SP-600
Q _{max}	[m ³ /h]	180	280	370	460	600
Q _{ref}	[m ³ /h]	130	200	260	320	420
P _{el}	[W]	23	35	47	76	105
η _{t,rvu}	[%]	91,5%	91,4%	92,5%	88,6%	88,0%
SPI	[W/m ³ /h]	0,174	0,174	0,179	0,237	0,247
CTRL	-	0,85	0,85	0,85	0,85	0,85
SEC	[kWh/m ² a]	-42,32	-42,29	-42,47	-40,10	-39,71
Energy class	-	A+	A+	A+	A	A
Filter efficiency	-	ePM ₁ 55% - F7				
		ePM ₁₀ 50% - M5				
L _{WA}	[dBA]	38,9	43,1	46,3	47,9	52,4
LK _I	[%]	1,2%	0,7%	0,5%	0,3%	0,60%
LK _E	[%]	1,7%	1,0%	0,8%	0,7%	1,84%
HEP	[W]	500	900	1250	1600	2000

LEGEND | all terms must be considered in compliance with Standard EU 1253/2014
 Q_{max}: Maximum flow rate, at max. motor speed and external static pressure of 100 Pa
 Q_{ref}: Reference flow rate - 70% of Q_{max}
 P_{el}: Power supply at Q_{ref} and external static pressure of 50 Pa
 η_{t,rvu}: Thermal efficiency at Q_{ref}
 SPI: Specific power input
 CTRL: Control factor - Centralised automatic control
 SEC: Specific energy consumption
 L_{WA}: Sound power level emitted by structure
 LK_I: Internal leakage at 100 Pa compared to Q_{ref}
 LK_E: External leakage at 250 Pa compared to Q_{ref}
 HEP: Pre-heater power (only mod. SPEL, SPER)

DIMENSIONS AND WEIGHT

Version Pro YKH2G SP-180, SP-280, SP-370, SP-460 and SP-600

All Pro Versions are equipped with a humidity sensor and automatic flow rate calibration system; the units are also equipped with panels with insulating features that ensure a reduction in sound emissions in the environment.



Model	A	B	ø C	H	D	E	F	Weight with packaging	Weight without packaging
YKH2G-SP-180	600	580	125	1041	132	111	240	63 kg	47 kg
YKH2G-SP-280	600	630	160	1041	132	111	290	67 kg	51 kg
YKH2G-SP-370	660	680	160	980	147	126	305	75 kg	56 kg
YKH2G-SP-460	660	680	180	980	147	126	305	75 kg	59 kg
YKH2G-SP-600	660,	680	180	980	147	126	305	75 kg	60 kg

TECHNICAL DATA

Pro YKH2G-SP version with advanced air flow control

Model		YKH2G-SP-180	YKH2G-SP-280	YKH2G-SP-370	YKH2G-SP-460	YKH2G-SP-600
Depth	mm	580	630	680	680	680
Width	mm	600	600	660	660	660
Height	mm	1041	1041	980	980	980
Duct connection	-	DN125	DN160	DN160	DN180	DN180
Weight ¹	kg	47	51	56	59	60
Maximum flow rate	m ³ /h	180	280	370	460	600
External static pressure at maximum flow rate	Pa	100	100	100	100	100
Reference flow rate	m ³ /h	130	200	260	320	420
External static pressure at reference flow rate	Pa	50	50	50	50	50
Minimum flow rate	m ³ /h	50	70	50	90	100
Maximum supply external static pressure	Pa	160	240	390	400	450
Thermal efficiency at reference flow rate (EN 13141-7)	%	91%	91%	92%	89%	88%
Filtering efficiency (ISO 16980)	-	ePM ₁ 55% - F7 supply / ePM ₁₀ 50% - M5 extraction				
Fan type	-	Centrifugal fan with EC brushless motor and backward-curved blades				
Maximum power absorbed by controls and fans	W	50	70	120	215	300
Maximum current absorbed by controls and fans	A	0,6	1,0	1,0	2,0	2,2
Power supply	-	Single phase – 230 V – 50 Hz via 1.5 m cable with Schuko CEE 7/7 connection				
Standby power		< 1 W				
Safety features		IP protection rating: IP21 CE compliance ²				
Components and general materials	-	T-EP capacitive touch pad integrated control				
	-	Main power board with Modbus interface				
	-	Main structure: Polystyrene or polyurethane				
	-	External covering: Painted galvanized steel plate				
	-	Plastic components: ABS				
	-	Acoustic insulation: Polyester fibre where present				
	-	Recovery unit: Counterflow plate heat recovery unit - PET				
	-	Fan blades and housings: PA6 in plastic, reinforced fibreglass or ABS				
	-	Filters: Micro-pleated type - Synthetic				
	-	Motorised bypass dampers: 1) ON/OFF - ABS; 2) ON/OFF - Steel plate				
	-	Temperature sensors PT1000				
Accessories	-	Feet				
	-	External Electric Heater				
Maximum Defrost Pre-Heater power	W	500	900	1250	1600	2000
Maximum electric heater current	A	3,0	5,0	7,0	9,2	10,0

¹ Without packaging

² EN 60335-1, EN 60335-2-80, EN 62233, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3, EN 50581, Reg. 1253/14, Reg. 1254/14 (EU Directives: 2014/35/EU, 2014/30/EU, 2006/42/EU, 2011/65/EU)

YKH2G-SP and YKH2G-S Versions - Construction features of the main components

1 YKH2G-SP version external structure

made of hot-dip galvanised steel sheet panels painted in RAL 9003 and satin finish obtained with epoxy paint dried in oven at 180 °C; the side panels are insulated with a 25 mm thick padding, while the inspection cover is completely removable and is insulated with a 30 mm thick padding.

YKH2G-S version external structure

made of hot-dip galvanised steel sheet panels painted in RAL 9003 and satin finish obtained with epoxy paint dried in oven at 180 °C; the inspection cover is completely removable and is insulated with a 30 mm thick padding.

2 EPDM fan access closure

3 Filter access closure

4 Electric defrosting pre-heater

Hot filament electric heater with reinforced metal lining, controlled by PWM signal (only versions with integrated electric heater).

5 High efficiency filters compliant with Standard ISO 16890;

The filters have the following features:

- ePM₁ 55% - F7 class for the supply air;
- ePM₁₀ 50% - M5 class for the extract air.

6 ABS air distribution connections for inlet/outlet air flows

7/11 Extract air (7) and air supply (11) electric fan

consisting of:

- Permanent single-phase synchronous **EC motor**.
- High efficiency **ABS fans** with backward-curved blades.
- ABS **Motor/fan housing**.

8 High efficiency static heat recovery unit

with PET counterflow exchange plates. The reachable efficiency obtainable may be higher than 90% because they ensure counterflow heat transfer between two air flows at different inlet temperatures. The static heat recovery units do not feature moving parts and guarantee high reliability and safe operation. In order to increase the efficiency of the heat exchanger, the plate surfaces feature special swirlers.

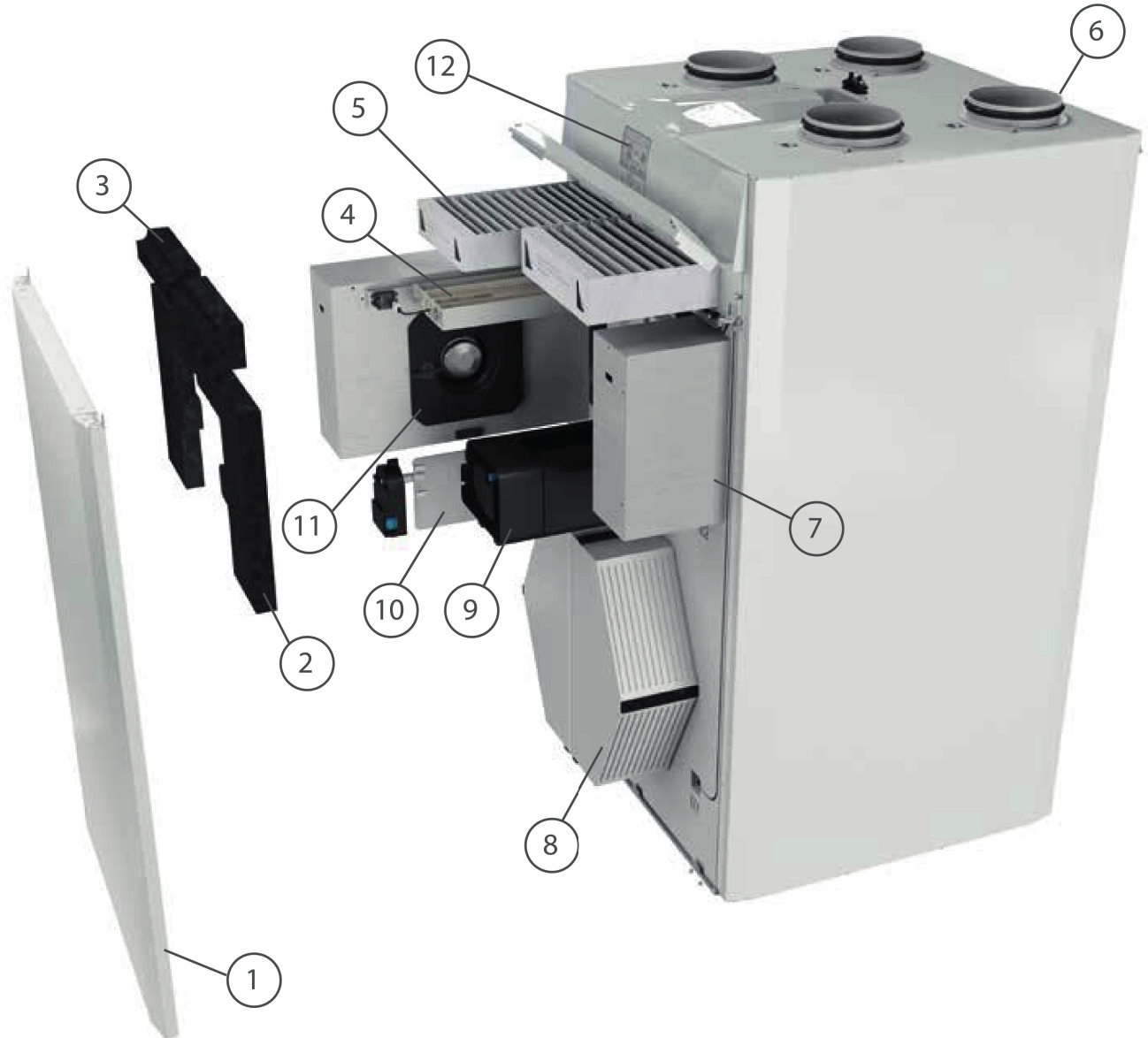
9 Main by-pass damper

made entirely of ABS and motorised with a Valemo actuator.

10 Secondary by-pass damper

consisting of a steel blade and motorised with a Valemo actuator.

12 T-EP control

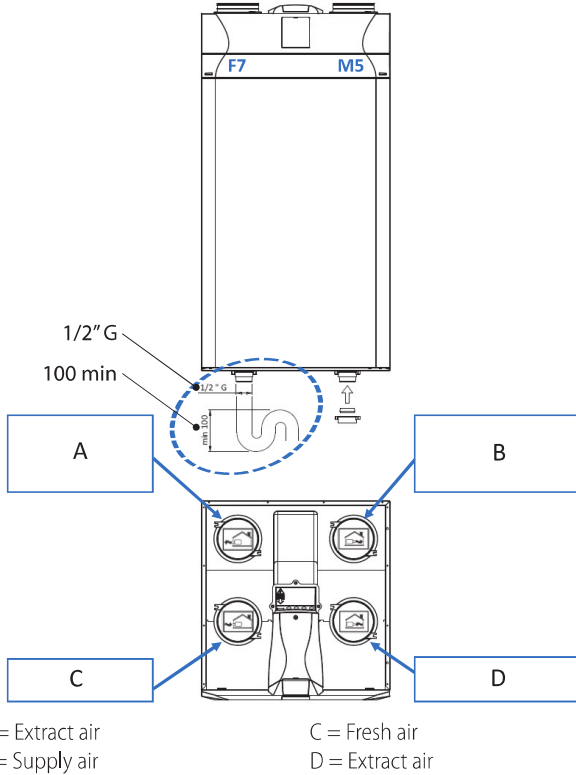
YKH2G-SP and YKH2G-S versions

MODES

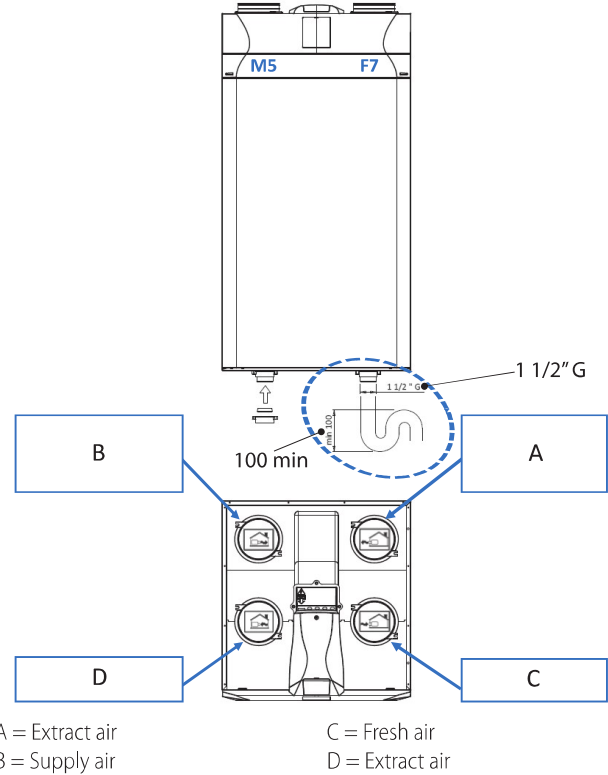
YKH2G-SP and YKH2G-S versions

The units are configured with the fresh air fan on the front left side and that of the extracted air on the right side. If necessary, it is possible to invert the flows by inverting the position of the filters, the position of the condensate drain, the position of the humidity probe (YKH2G-SP versions only) and paying attention to the proper connection of the ducts to the machine; below is the standard configuration and the inverted flow configuration.

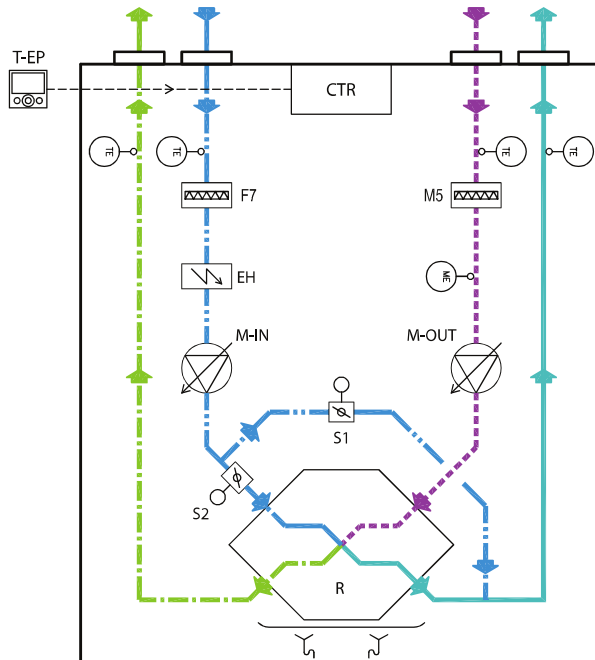
Left side configuration default



Right side configuration optional



Basic diagram



- CTR = Main power board
- EH = Electric pre-heater
- M-IN = Supply fan
- M-OUT = Extract fan
- S1 = Main by-pass damper motor
- S2 = Secondary by-pass damper motor
- R = Heat recovery system

- = fresh air
- = supply air
- = extract air
- = exhaust air
- = micro pleat filter
- = remote or on board control
- = electric pre-heater optional only required for cold climates
- = temperature sensor
- = humidity sensor central demand control
- = condensate drainage

TABLE OF COMPLIANCE WITH REGULATIONS EU 1253/14 AND EU 1254/14

In Compliance with EU 1254/14 - Annex IV

Table of compliance with Regulations EU 1254/14 Annex IV - YKH2G

Supplier name or brand	York														
	YKH2G-SP-180			YKH2G-SP-280			YKH2G-SP-370			YKH2G-SP-460			YKH2G-SP-600		
Supplier model identification															
Specific energy consumption SEC in [kWh/(m ² a)] for each applicable climate zone (temperate, hot, cold, climate)	-42,32	-17,2	-81,6	-42,29	-17,2	-81,6	-42,47	-17,2	-82,0	-40,10	-15,4	-78,6	-39,71	-15,1	-78,1
SEC class - temperate climatic zone	A+			A+			A+			A			A		
Type declared according to EU 1253/14	BVU			BVU			BVU			BVU			BVU		
Type of drive installed	Continuous speed variator														
Type of heat recovery system	Static sensitive heat recovery unit														
Thermal efficiency	91,5%			91,4%			92,5%			88,6%			88,0%		
Max. flow rate [m ³ /h]	180			280			370			460			600		
Power absorbed by the fan drive, including all motor control devices, at maximum flow rate [W]	50			70			120			215			300		
Sound power level (LWA) in [dB(A)]	38,9			43,1			46,3			47,9			52,4		
Reference flow rate [m ³ /h]	130			200			260			320			420		
Reference pressure difference [Pa]	50			50			50			50			50		
SPI [W/(m ³ /h)]	0,174			0,174			0,179			0,237			0,247		
Control factor and type of control	0,85			0,85			0,85			0,85			0,85		
	Centralised ambient control with humidity sensor			Centralised ambient control with humidity sensor			Centralised ambient control with humidity sensor			Centralised ambient control with humidity sensor			Centralised ambient control with humidity sensor		
Maximum percentages declared [%] of internal and external leakage	Internal leakage: 1,2%			Internal leakage: 0,7%			Internal leakage: 0,5%			Internal leakage: 0,3%			Internal leakage: 0,6%		
	External leakage: 1,7%			External leakage: 1,0%			External leakage: 0,8%			External leakage: 0,7%			External leakage: 1,84%		
Position and description of the visual warning signal relating to the filter for RVUs intended for use with filters, including a text that emphasizes the importance of replacing the filter at regular intervals in order to safeguard unit performance and energy efficiency.	<p>Please refer to the following parts of the brochure:</p> <ul style="list-style-type: none"> - T-EP control description; - recommendations for filter replacement: filters clogging could result into relevant flow rate reduction, which implies the need of frequent windows opening and consequent thermal demand increase. Proper replacement period depends on background air quality, which can broadly vary between city centers and countryside. <p>In order to prevent filters clogging, optimum average period for filters replacement is 3 month. However, due to normal dust collection and spring pollens, maximum suggested period should not exceed 6 months.</p> <p>Filters replacement period can be modified by maintainer with a precision of days (min 30, max 360).</p>														
Internet address with the disassembly instructions	www.york.com														
AEC (Annual Energy Consumption) [kWh/a]	203	158	740	203	158	740	207	162	744	260	215	797	269	224	806
AHS - (Annual Heating Energy Savings) [kWh/a]	4670	2111	9136	4667	2110	9131	4697	2124	9189	4591	2076	8982	4576	2069	8951