

## Hexamotion-S

- Non residential
- Sorption
- R-COVERY by ZEHNDER CALADAIR
- $Q_v \leq 8000 \text{ m}^3/\text{h}$
- Horizontal
- Heat recovery unit with efficiency  $\geq 80\%$



## HRU with post heating coil 450 to 8000 $\text{m}^3/\text{h}$ - sorption wheel type Hexamotion-S

Air handling unit with heat recovery, **regenerative heat exchanger (sorption wheel), very high efficiency > 80%** (EN 308), for tertiary and industrial applications **in ventilation and heat recovery**. Available in 9 models.

Compact unit with lateral round connections and lip seal, takes up little space in the depth and has a low noise level. (the largest size, 080, has rectangular connections).

Indoor or outdoor installation thanks to the unique design with a roof fitted as standard.

**Regenerative heat exchanger with backward curved blades.**

**EC motor** with direct drive

Communication via MODBUS, BACNET or WEB (to be chosen on site).



### Brand

- R-COVERY by ZEHNDER CALADAIR

### Application

- Autoregulating ventilation and heat recovery with very high efficiency for tertiary and industrial installations. Efficiency at least 80% (EN308).
- Air filtration, temperature control and climate comfort
- Monoblock, compact, lateral duct connections, plug and play and communicating

### Composition

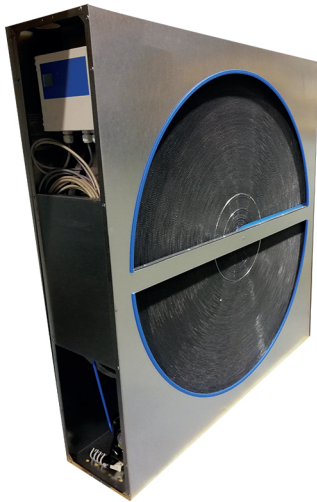
- Double-walled housing 10 / 10th.
- Insulation: mineral wool M0 with high density 50 mm A1 (Class T3 and L1 for airtightness of the housing according to EN1886).
- Outer panel: prelacquered steel plate RAL 7035 with protective film.
- Inner panel: prelacquered steel plate.
- Round connections with lip seal for airtightness of the systems (ATEC CSTB n ° 13-224-12), rectangular connections for model 80.
- Mounting feet contained in the frame for easy transport and fixation in the ground.
- Access by means of hinged inspection doors for easy maintenance.
- Maintenance switch and control display on the inspection hatch. Power cable gland on the side.
- Outputs of the hydraulic connections (version PREMIUM CO) and the condensation drain (version PREMIUM CO and DXR) on the side.
- Access to the filters and internal parts by means of hinged inspection hatches with locking.
- Monoblock version up to model 45 included. Other versions in duo block with simplified mechanical and electrical connections by means of a connector.
- Equipped as standard with a canopy for outdoor or indoor installation.
- Built-in control with communication via MODBUS, BACNET or WEB (selection on site)
- Display IP65
- The internal timers provide operation at two flow rates, programmable on site.
- Weekly timer and holiday timer
- Pressure switch for filter pollution of fresh air intake with alarm indication on the controller
- Pressure switch flow control on each fan with alarm indication on the controller
- Lockable safety switch provided on the air handling unit
- Built-in temperature sensors for outside air, room temperature (air return) and air supply
- Free cooling, free heating, heat and cold recovery and night cooling
- Built-in fire protection

### Fan

- Free-running wheel with backward curved blades.
- DC motors with direct drive and electrical commutation (EC), high efficiency, thermal protection and speed controller included.
- The EC technology is an econologic<sup>®</sup> solution that stands for low energy consumption (RT2012) for monitoring and controlling of the operating point (flow control from 10 to 100%)
- Low noise level for better comfort

### Exchanger

- Rotary heat exchanger (sortion wheel) made of aluminium with high efficiency and variable speed, high thermal and humidity efficiency
- Exchanger in a rigid frame mounted on slides for easy extraction and maintenance.
- Rotary air-air heat exchangers produced by Klingenburg for the Eurovent certification programme of AARE. Efficiency higher than 80% (EN 308).
- The exchanger is equipped with a rotation detector connected to the regulation indicating the state of operation



### Filter

The Hexamotion-S air handling unit has high efficiency filters F7 (ePM1 - 55%) / M5 (ePM10 50%) (large filtering surface) as standard on the fresh air intake and the extraction air outlet

- The filters are always mounted in front of the components to ensure their protection
- Filters mounted on slides for easy replacement with bead seal to ensure air tightness
- An additional filter on the fresh air intake is available as an option
- A double filtration can be provided on the fresh air. However, the pressure drop (see spare filters) must also be taken into account in the technical selection of your device!

### Versions

- PREMIUM BE (built-in electric heating)
- PREMIUM CO (change-over water battery, heating/cooling, built-in)
- PREMIUM DXR (DX battery R410A and R32 change-over heating/cooling, built-in)  
See Hexamotion-S downloads for more info about the batteries per size

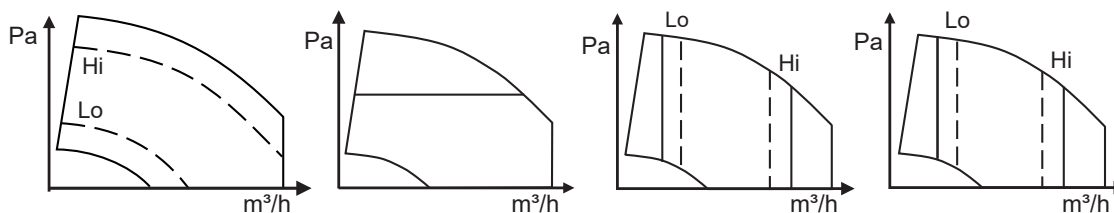
Delivery parts Hexamotion-S:

The Hexamotion-S in sizes 05 to 45 is supplied in one part.  
The Hexamotion-S in sizes 60 and 80 is supplied in two parts.

### Options

- **DIVA**<sup>®</sup>: Proportional modulating flow rate (between a set min. and max. flow rate) of each fan by means of a built-in CO<sub>2</sub> measurement. The CO<sub>2</sub> content (number of ppm) can be set in the control.
- **LOBBY**<sup>®</sup>: Constant pressure for each fan for use with eg VAV boxes.
- **MAC2**<sup>®</sup>: Two constant flow rates for each fan (except for types 05 and 08). Pressure transmitters provided in the air handling unit.
- **QUATTRO**<sup>®</sup>: Proportional ventilation between two constant flow rates (high and low speed) for each fan (except for types 05 and 08). Pressure transmitters and CO<sub>2</sub> sensor (on exhaust air) integrated into the air handling unit. Low speed, high speed and CO<sub>2</sub> content (ppm) adjustable on site by means of the controller

Hexamotion + DIVA EC    Hexamotion + LOBBY EC    Hexamotion + MAC2 EC    Hexamotion QUATTRO EC



### Certification

- The unit is scheduled to be tested this year in accordance with the NBN EN 308 standard.
- Heat exchanger efficiency at least 80% (EN308) in accordance with RT2012 and ErP 2009/125 / EC directives
- Tested according to EUROVENT classifications according to EN1886 and EN13053
- Standard double-walled construction with 50 mm thickness
- Mechanical resistance class: D2
- Air tightness class: L1

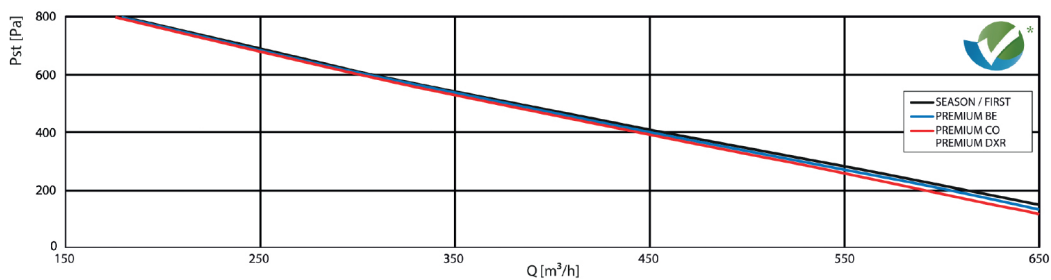
- Thermal transfer class: T3
- Thermal bridge factor: TB3
- Filter leakage class: F9
- Outer panel in prepainted steel plate 10/10, coating RAL7035 with protective film
- Inner panel in sheet steel 10/10
- Insulation: high density mineral wool 50 mm, fire class A1 (M0)
- Structure with aluminum profiles and thermal breaks

### Accessories

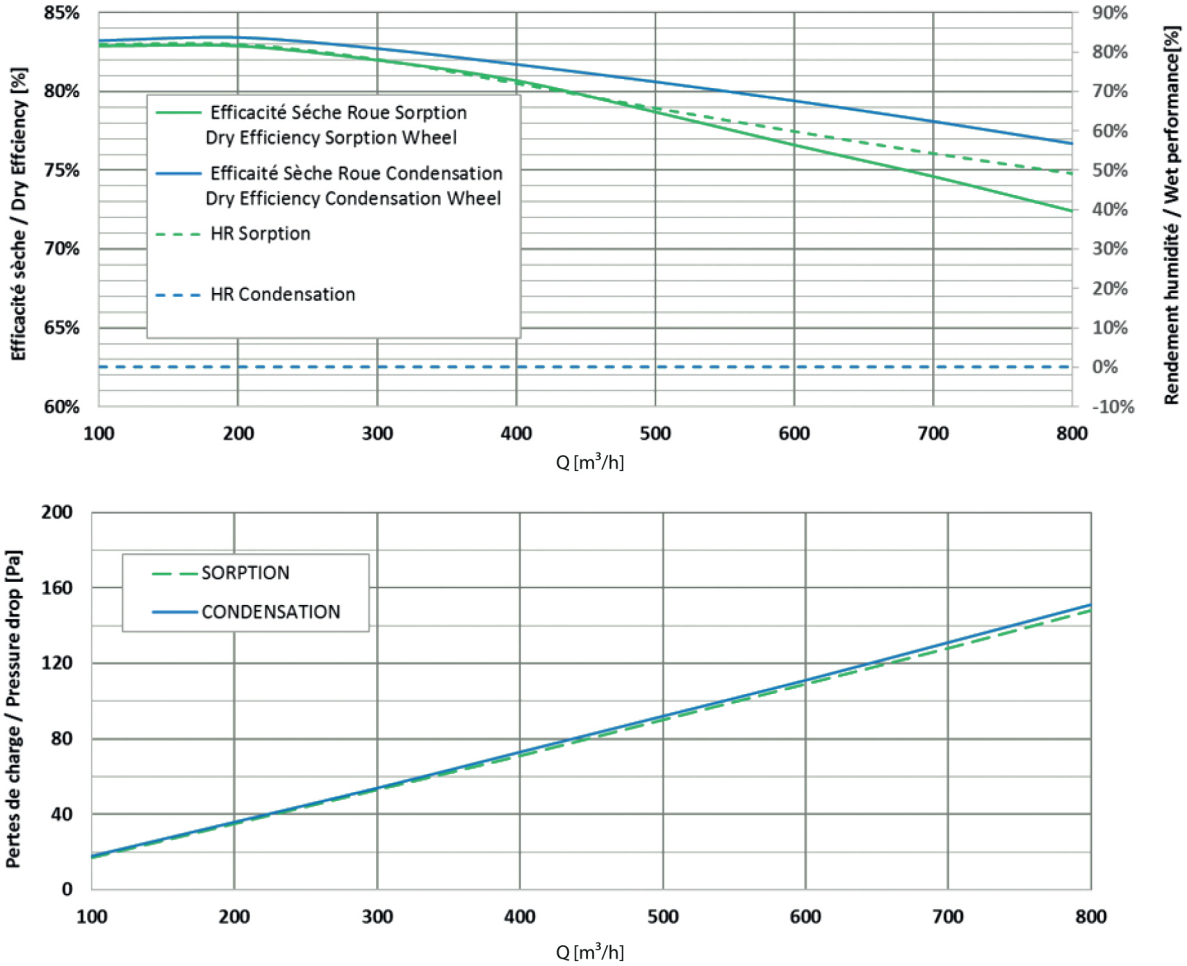
- Airtight control valve **AKH**
- **Controllers for Hexamotion-S up to serial number 225190:**
  - **E3-DSP** controller mounted on the unit as standard
  - Remote controller available as an option
    - **E3-DSP** remote display (up to 100 metres, to be provided by the installer) with 3-metre **EDSP-K3** or 10-metre **EDSP-K10** Belden cable
    - **ED Touch** digital controller for units type GTDHR/V, Hexamotion(-S), Freetime(-S), Silvertop, Neotime (First and Premium)
      - Cable 4-wire 24 Vdc (Corrigo C+/GO) of 10 rmt included
- **Controllers for Hexamotion-S from serial number 225191:**
  - **Easy 5.0** controller mounted on the unit as standard
    - Master touch screen controller
  - **EDT2** remote controller available as an option
    - Touch screen controller for end user
- Room temperature control by means of remote control with touchscreen
- Pressure switch filter pollution on air return
- Round flexibles for all smaller types **MTS** (HEXA 05 to 60)
- Round regulating valves for all smaller types **KDM** (HEXA 05 to 60)
- Rectangular flexibles for large types **MTS MO** (HEXA 80)
- Rectangular regulating valves for large types **MVX RM 80** (HEXA 80)
- Actuators
- Spare filter FS-HEXA

### Selection curves

#### HEXAMOTION-S 05

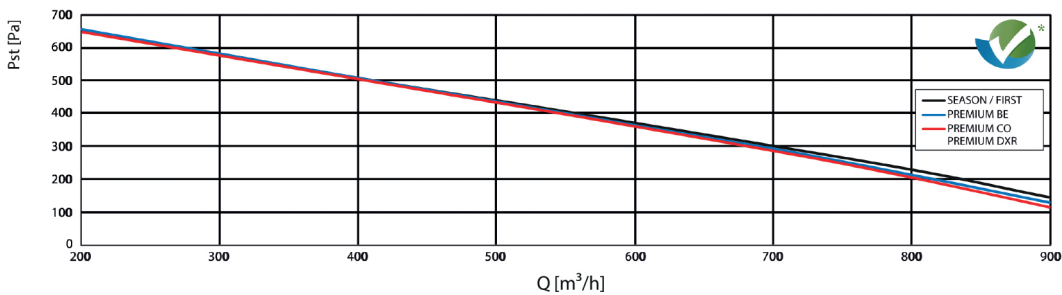


HEXAMOTION-S 05

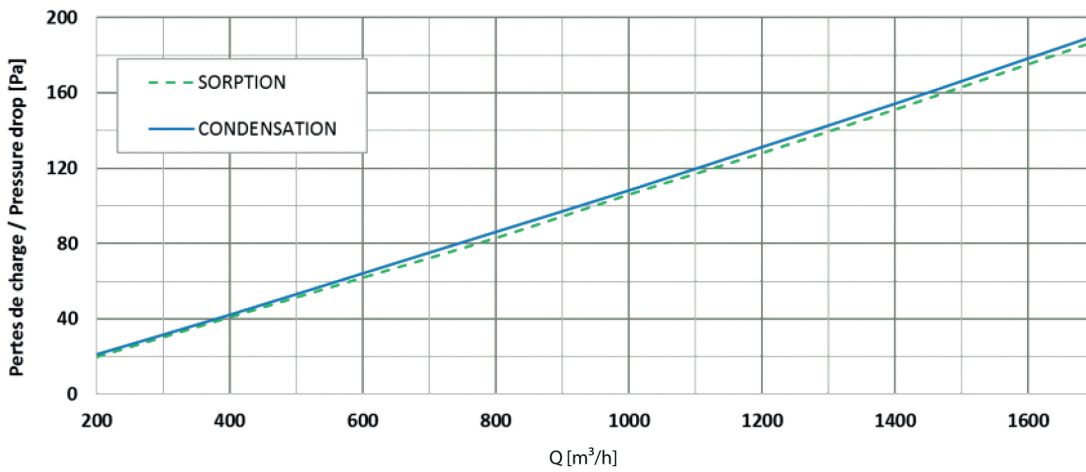
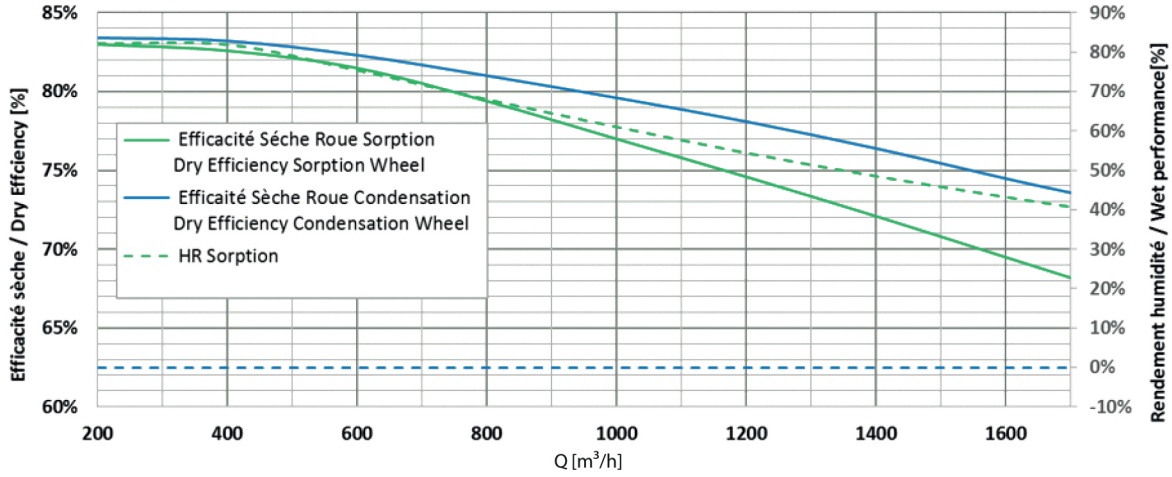


Selection curves

HEXAMOTION-S 08

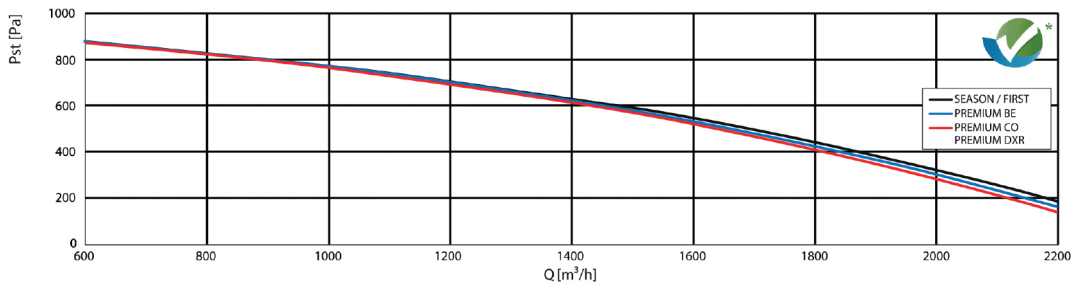


HEXAMOTION-S 08-15

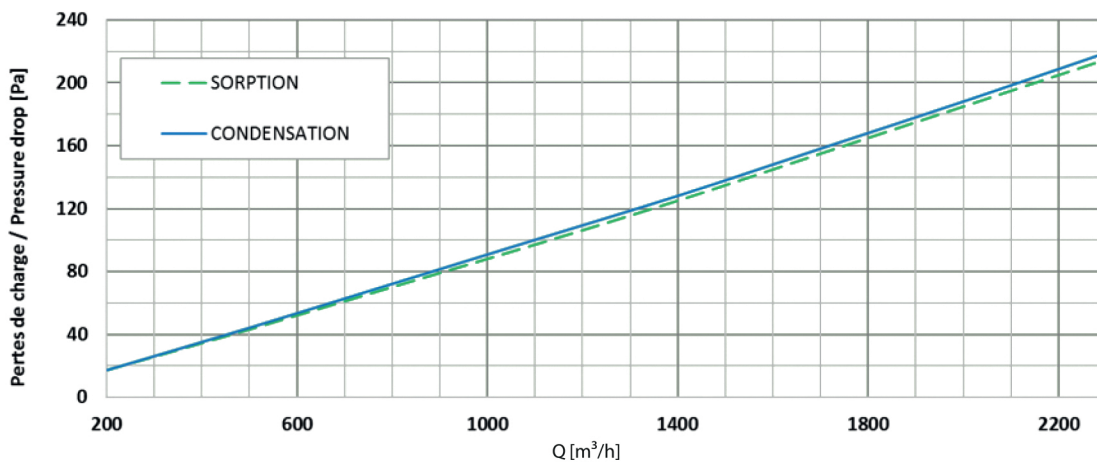
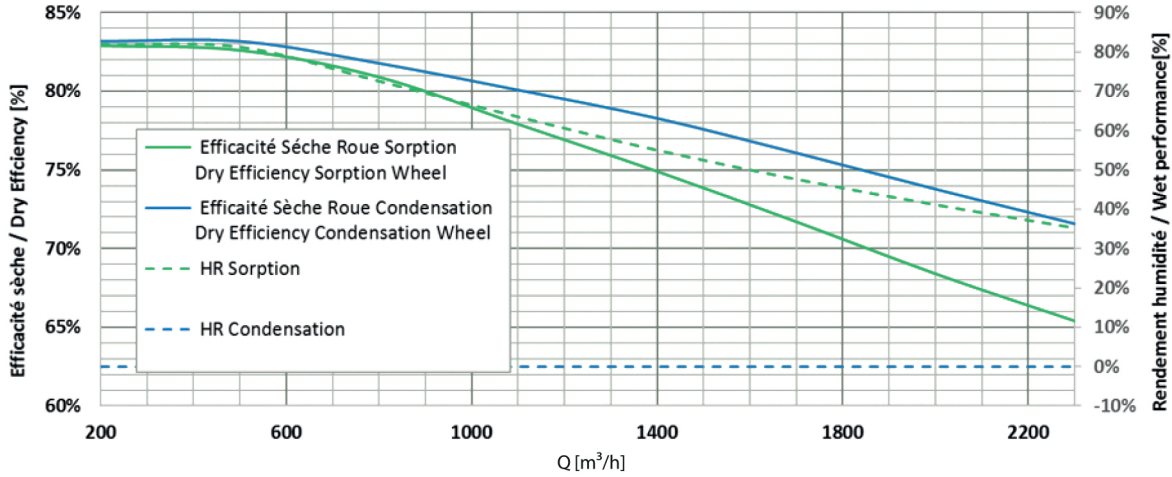


Selection curves

HEXAMOTION-S 20

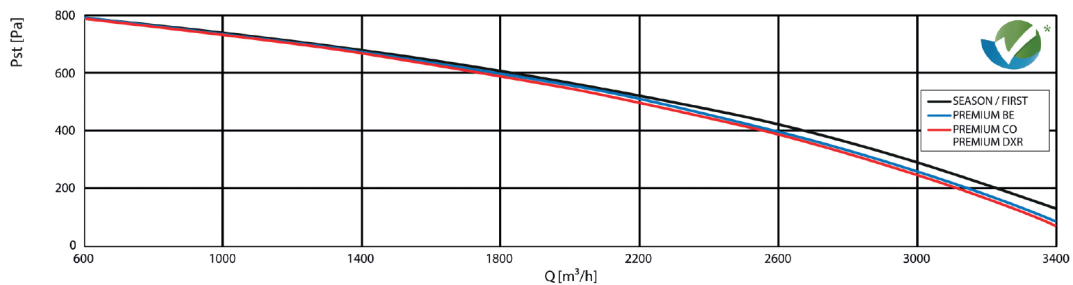


HEXAMOTION-S 20

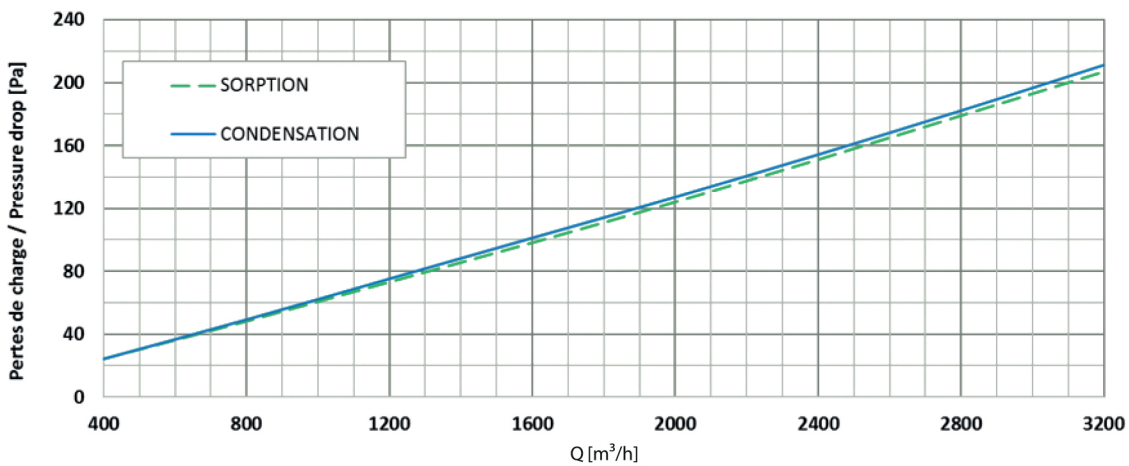
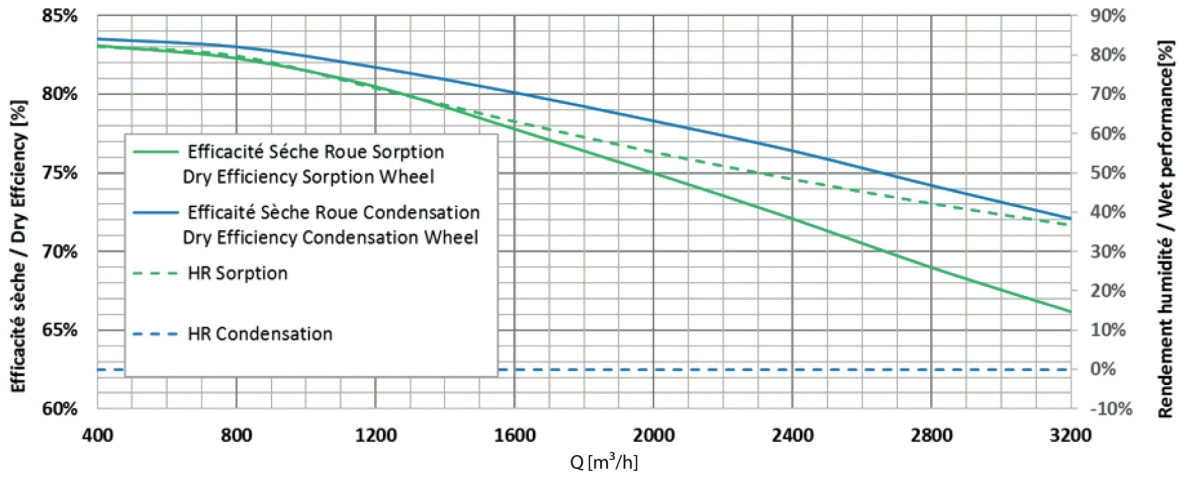


Selection curves

HEXAMOTION-S 27

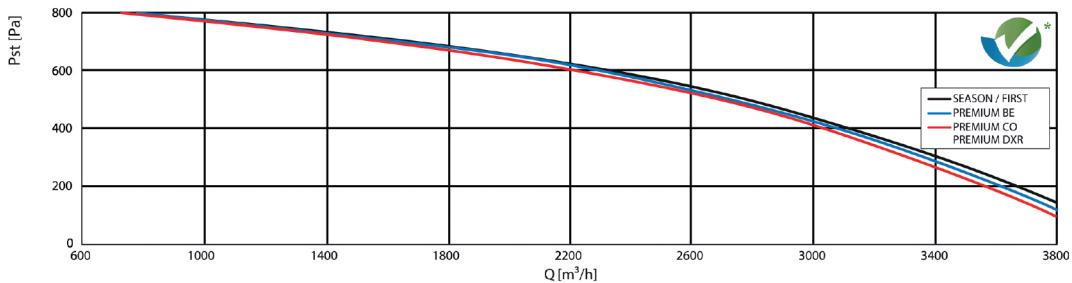


HEXAMOTION-S 27



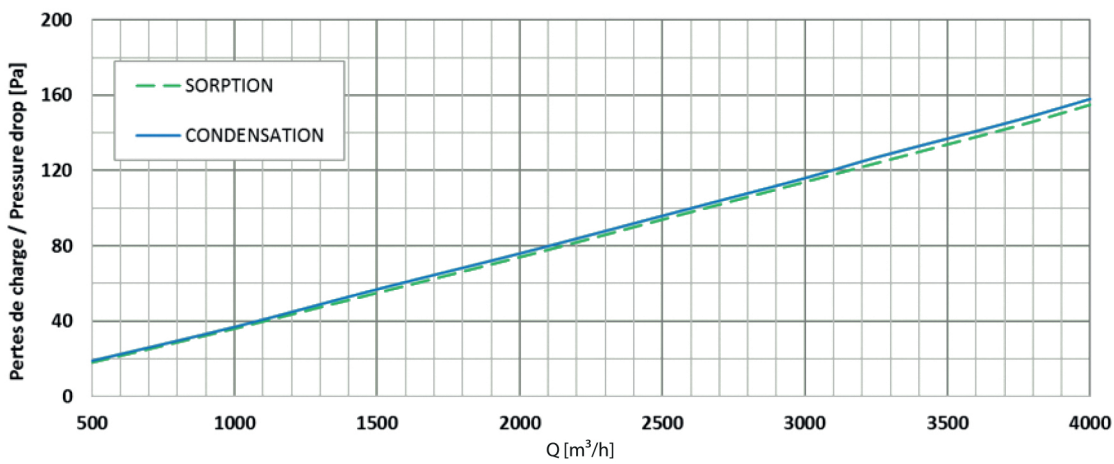
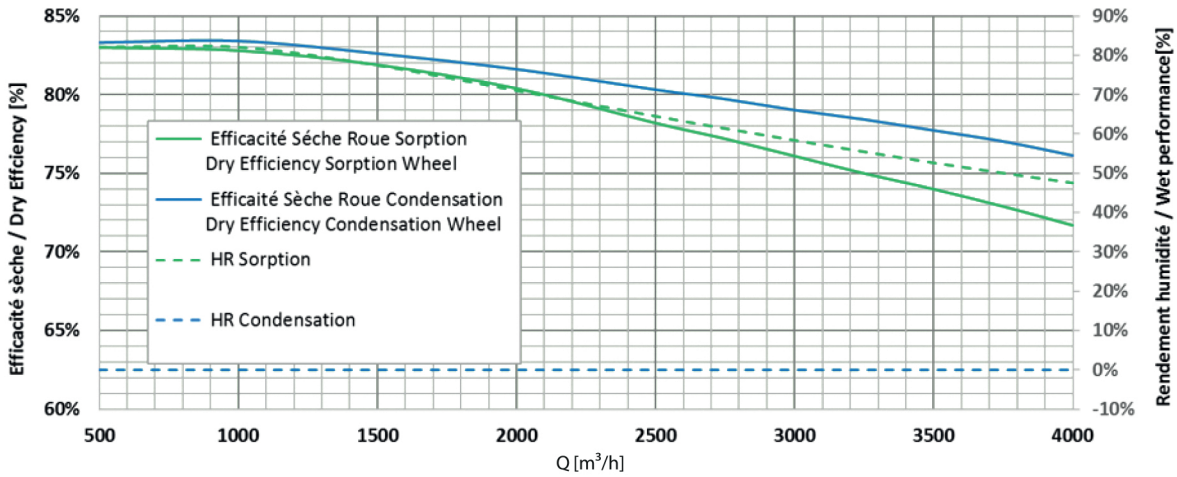
Selection curves

HEXAMOTION-S 35



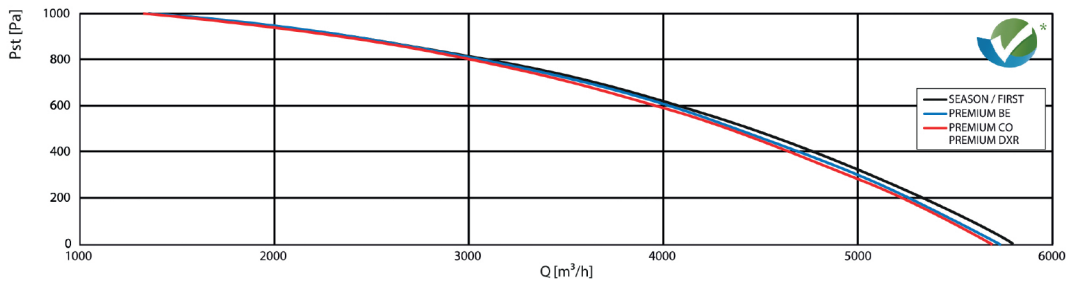


HEXAMOTION-S 35

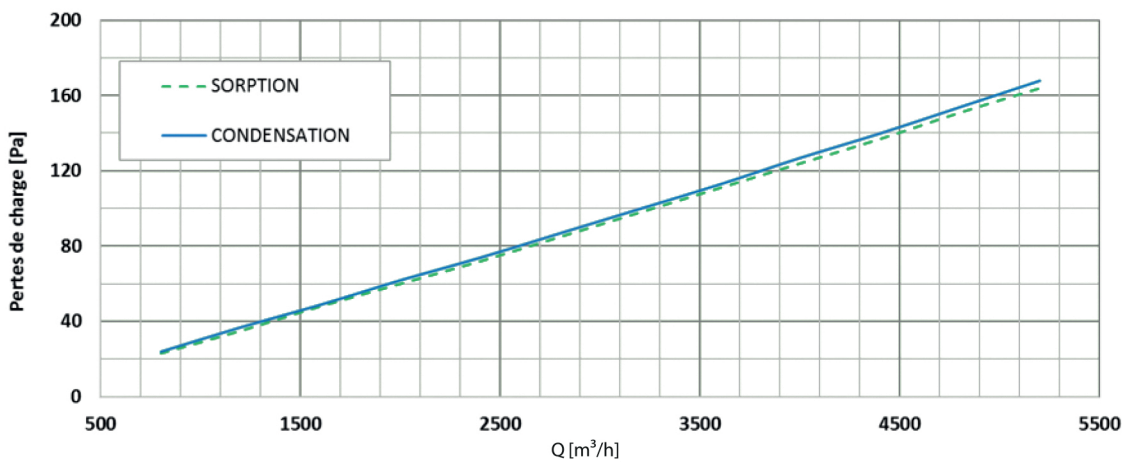
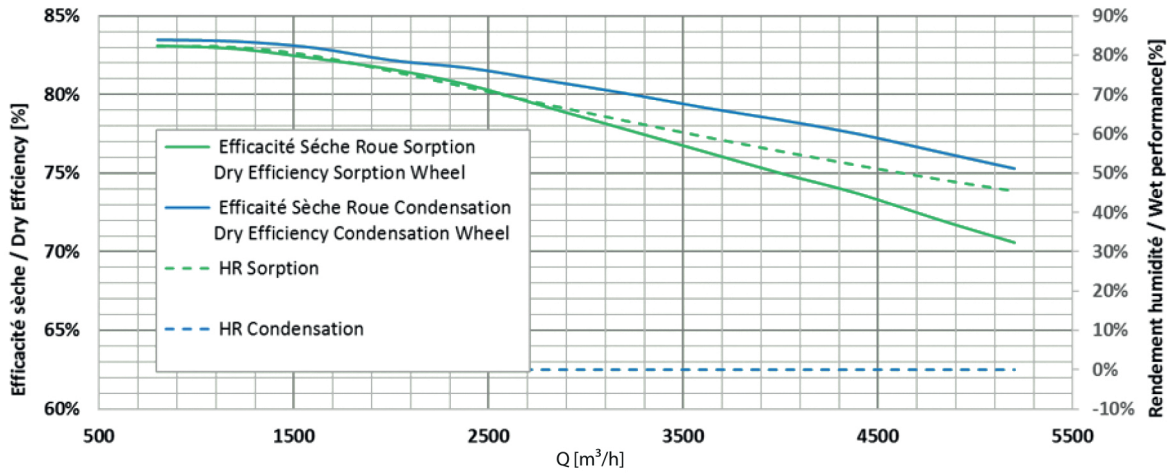


Selection curves

HEXAMOTION-S 45

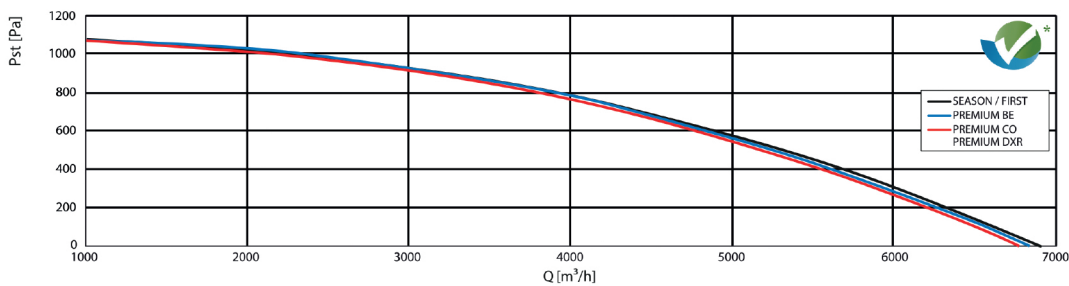


HEXAMOTION-S 45

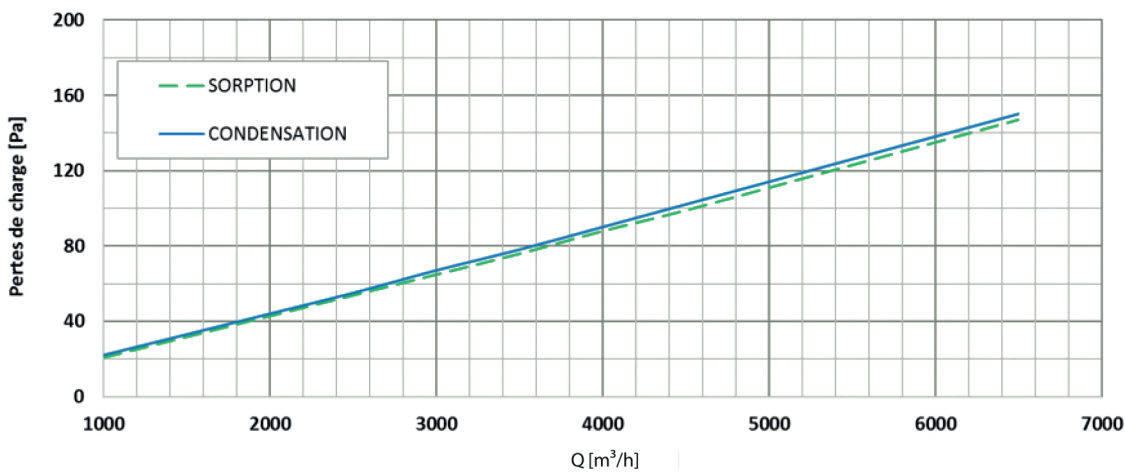
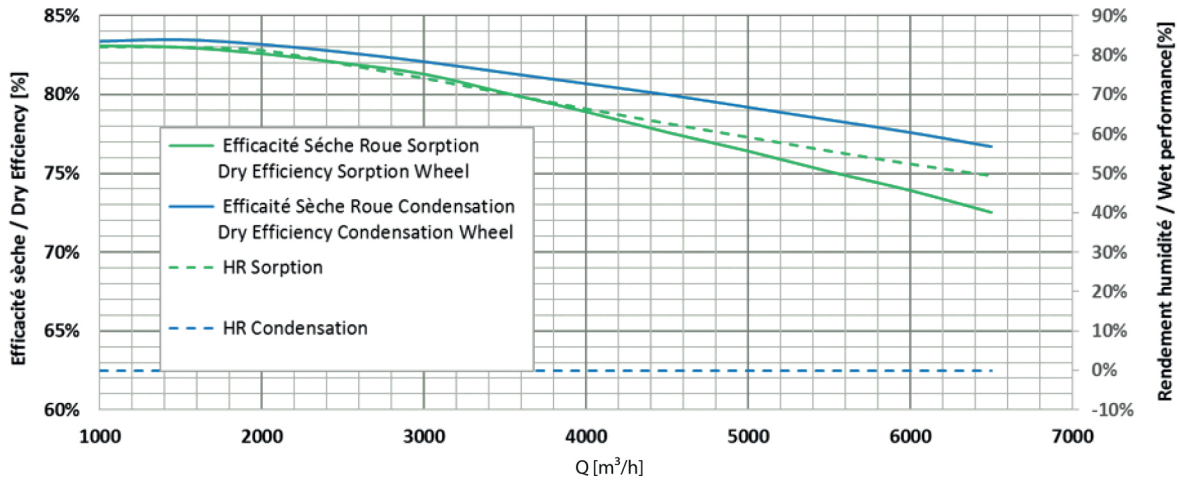


Selection curves

HEXAMOTION-S 60

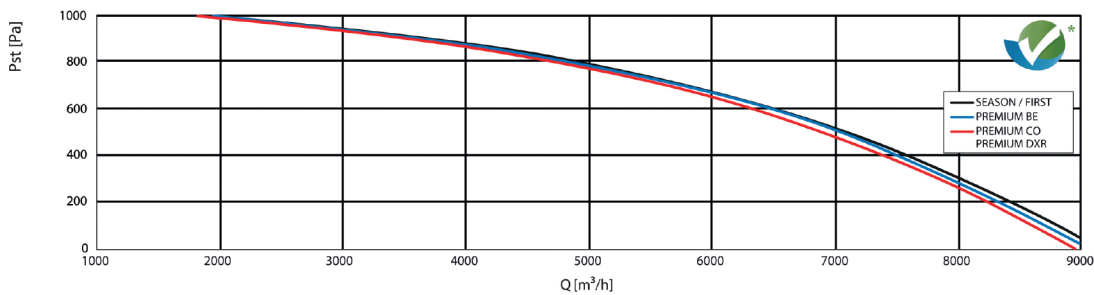


HEXAMOTION-S 60

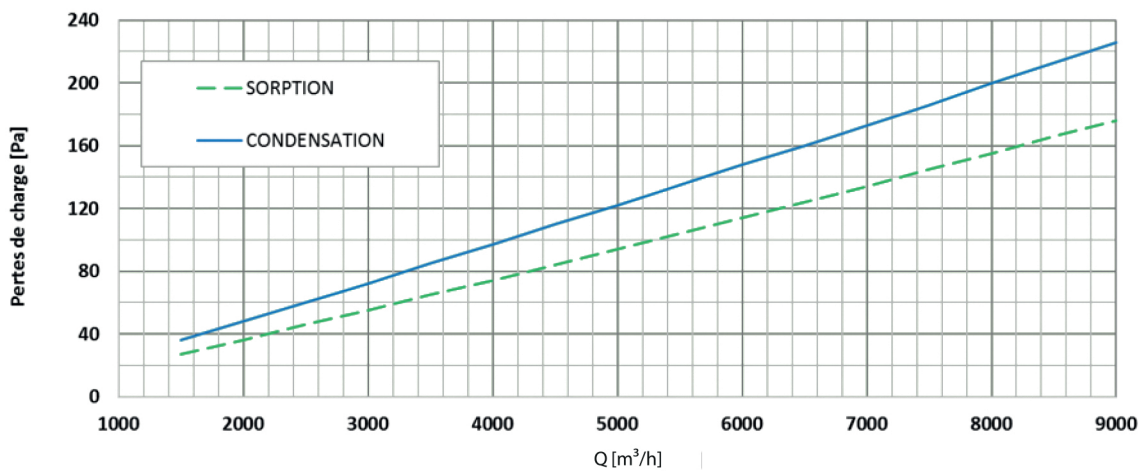
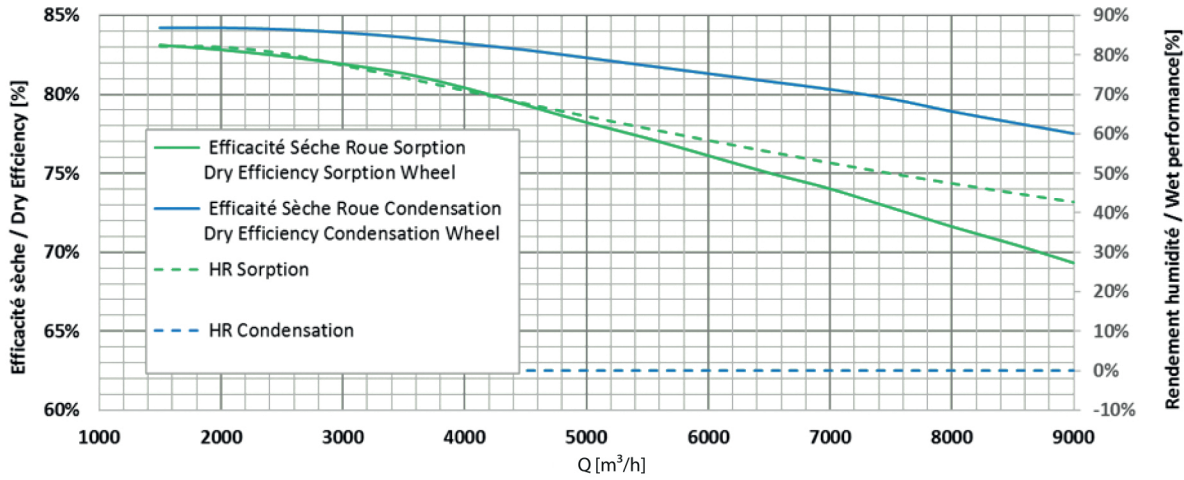


Selection curves

HEXAMOTION-S 80



HEXAMOTION-S 80



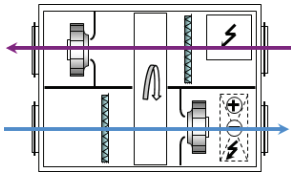
	Electrical data							
	P	T			PREMIUM CO&DXR		PREMIUM BE	
[W]	[°C/°C]	[V/Ph/Hz]			[A]	[V/Ph/Hz]	[A]	
05	2 x 169	-20 / 60	IP54/B	PTI	230/1/50	3.8	230/1/50	14.7
08	2 x 220	-20 / 60	IP54/B	PTI	230/1/50	4.4	230/1/50	20.7
15	2 x 480	-20 / 40	IP54/B	PTI	230/1/50	5.3	230/1/50	28.1
20	2 x 750	-20 / 40	IP54/B	PTI	230/1/50	7.6	400/3+N/50	18.5
27	2 x 1000	-20 / 50	IP54/B	PTI	400/3+N/50	4.3	400/3+N/50	23.8
35	2 x 1000	-20 / 50	IP54/B	PTI	400/3+N/50	4.3	400/3+N/50	28.1
45	2 x 1700	-20 / 40	IP54/B	PTI	400/3+N/50	6.2	400/3+N/50	40.9
60	2 x 1950	-20 / 50	IP54/B	PTI	400/3+N/50	7.3	400/3+N/50	59.3
80	2 x 2730	-20 / 60	IP54/F	PTI	400/3+N/50	9.4	400/3+N/50	78.7

Model	Info DX coil			
	Number of circuits	Battery volume (L)	Connection size IN	Connection size OUT
Hexamotion-S 05	1	0,7	9,52	12
Hexamotion-S 08	1	1,1	12	16
Hexamotion-S 15	1	1,4	12	16
Hexamotion-S 20	1	1,8	12	18
Hexamotion-S 27	1	2,6	16	22
Hexamotion-S 35	1	3,2	16	22
Hexamotion-S 45	2	2,2 + 2,6	2 x 12	2 x 20
Hexamotion-S 60	2	2,7 + 3,1	2 x 16	2 x 22
Hexamotion-S 80	2	3,5 + 4,0	2 x 20	2 x 28

2 circuits require 2 outdoor units in cascade! The unit sends a 0-10V signal to the MASTER outdoor unit!  
See downloads for extra info

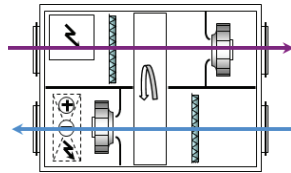
**Configurations**

**Configuration D**



→ Air neuf  
Verse lucht

**Configuration G**



→ Air repris  
Teruggenomen lucht

Configuration D = right  
Configuration G = left

Dimensions																							
Hexamotion-S	Ø [mm]	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	C [mm]	D [mm]	E [mm]	G [mm]	J [mm]	J1 [mm]	J2 [mm]	J3 [mm]	L [mm]	M [mm]	M1 [mm]	M2	T1* EAU	T2** OUT DXR	T3** IN DXR	PREMIUM BE [kg]	PREMIUM CO PREMIUM DXR [kg]
05	200	1215	-	-	675	620	805	305	350	95	245	-	-	375	555	180	820	-	1/2"	12	9,52	180	185
08	250	1345	-	-	805	750	925	335	410	95	250	-	-	430	620	310	950	-	1/2"	16	12	230	235
15	355	1500	-	-	805	750	925	335	425	95	250	-	-	430	700	310	1105	-	1/2"	16	12	255	260
20	400	1525	-	-	885	830	1005	355	465	95	250	-	-	470	710	390	1130	-	1/2"	18	12	290	300
27	450	1730	-	-	975	920	1205	405	550	95	250	-	-	570	745	480	1335	-	1/2"	22	16	375	385
35	500	1730	-	-	1140	1085	1205	405	565	95	250	-	-	570	910	645	1335	-	3/4"	22	16	435	450
45	630	1860	-	-	1265	1210	1495	475	715	105	250	405	475	715	1035	770	635	635	1"	20	12	530	545
60	630	2050	1045	1005	1465	1410	1495	475	715	105	250	405	475	715	1235	970	652	612	1"	22	16	675	690
80	-	2260	1155	1105	1545	1490	1645	-	-	105	250	435	515	790	1315	1050	762	712	1"	28	20	820	835

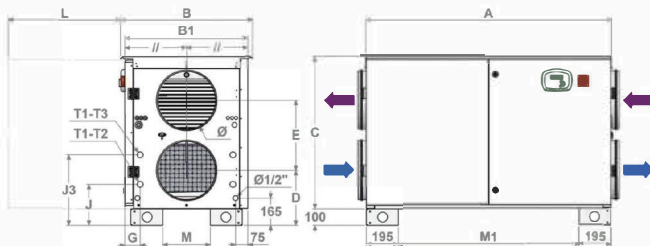
\*Stalen aansluiting met gasdraad / Tube acier fileté gaz

\*\* Koperen buis / Tube cuivre

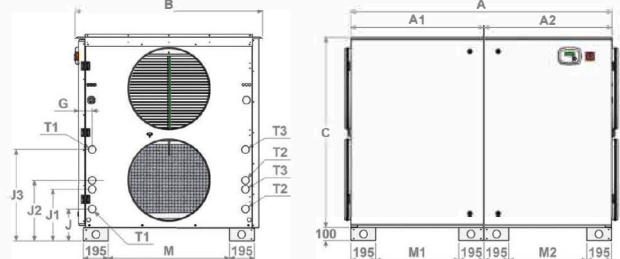
G-J-J3-T1: waterbatterij changeover (CO) / batterie à eau changeover (CO)

G-J-J1-J2-J3-T2-T3 : Directe expansie batterij (DXR) / batterie détente directe (DXR)

05-35 (1 part)

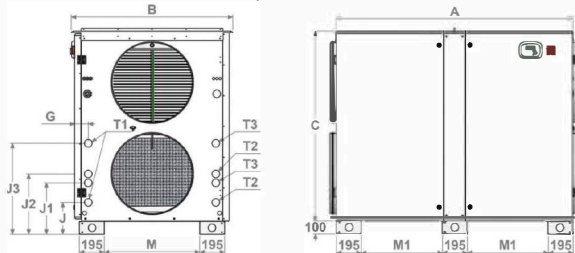


60 (2 parts)



**HEXAMOTION-S**

45 (1 part)



80 (2 parts)

