

DOMESTIC HOT WATER

TECHNICAL-SALES DOCUMENTATION



Aldes
Connect

T.Flow® Hygro+
T.Flow® Nano

THE CONNECTED SOLUTION
ADAPTED TO EACH DWELLING
TO REDUCE ENERGY BILLS
AND INCREASE COMFORT

#HealthyLiving



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Let's face it.

We spend over 90% of our time indoors and consume nearly 20,000 litres of domestic hot water per person per year*. This is why it is urgent to save more whilst enjoying improved comfort by becoming

REVOLUTIONAIR

The Aldes T.Flow® Hygro+/T.Flow® range can meet domestic hot water requirements constantly for a family of up to six people and provide healthy air whilst making savings.

**DOMESTIC HOT WATER IN A DWELLING
IS A MAJOR ENERGY CONSUMPTION ITEM
ACCOUNTING FOR 11.4%
OF THE AVERAGE ENERGY CONSUMPTION*.**





T.Flow[®] Hygro+
T.Flow[®] Nano

T.FLOW[®] CAN PRODUCE UP TO 73%

OF YOUR HOT WATER FREE OF CHARGE.**

* Source Ceren©: <https://www.ceren.fr/download/891/>; Energy data 1990-2018 for the residential sector; Energy data for residential applications in Metropolitan France; Updated 18 December 2019; Breakdown per use of consumption of main residences in Metropolitan France; Energy consumption for the production of domestic hot water in a normal climate (by central heating and stand-alone equipment) in systems installed in 2018; 47.3 TWh.

** COP EN 16147 at maximum airflow (228 m³/h) of T.Flow[®] Hygro+ Single-family house.

**WHY CHOOSE
T.Flow® Hygro+/T.Flow® Nano?**

More savings

T.Flow® can produce up to 73% of your hot water free of charge*.

More comfort

The T.Flow® Hygro+/T.Flow® Nano range covers the domestic hot water requirements of a family of one to six people.

More control

AldesConnect™ can be used to monitor and manage your domestic hot water production in real time, directly from a Smartphone.

More air quality

Thanks to its ventilation function, the dwelling's indoor air is constantly renewed, providing a healthier environment.

More discretion

The quietest** and slimmest connected product in its class, designed to be built into a standard cupboard or laundry room.

*COP of T.Flow® Hygro+ for single-family houses acc. EN 16147 at maximum airflow (228 m³/h)

** Multi-family dwelling version: less than 20 dB(A) - Max. value at 150 m³/h, Lp at 2 m in free field.

T.Flow® Hygro+
200 L, 2-bed and larger



T.Flow® Nano
100 L, studio and 1-bed



Aldes
Connect



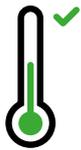
* Complies with Eco-design Regulation 1814/2013 and Energy Labelling Regulation 812/2013 for domestic hot water.
Complies with eco-design regulation 1253/2014 and energy labelling regulation 1254/2014 for ventilation.

** Domestic hot water.

*** Ventilation.

PRODUCT

Air contains calories; these are recovered through ventilation to heat water.



WATER HEATED
BY THE CALORIES
FROM THE AIR



HYGRO SYSTEM VIEW

MULTI-FAMILY DWELLING

Fresh air enters the dwelling.
 The air inside the dwelling (loaded with calories) is drawn in by the EasyVEC® C4 ventilation box fan to renew the air.
 The T.Flow® solution uses the heat extracted from the dwelling's indoor air to heat the water.
 The air discharged of its calories is exhausted outside the dwelling.



CMEV exhaust grills
(wet rooms)



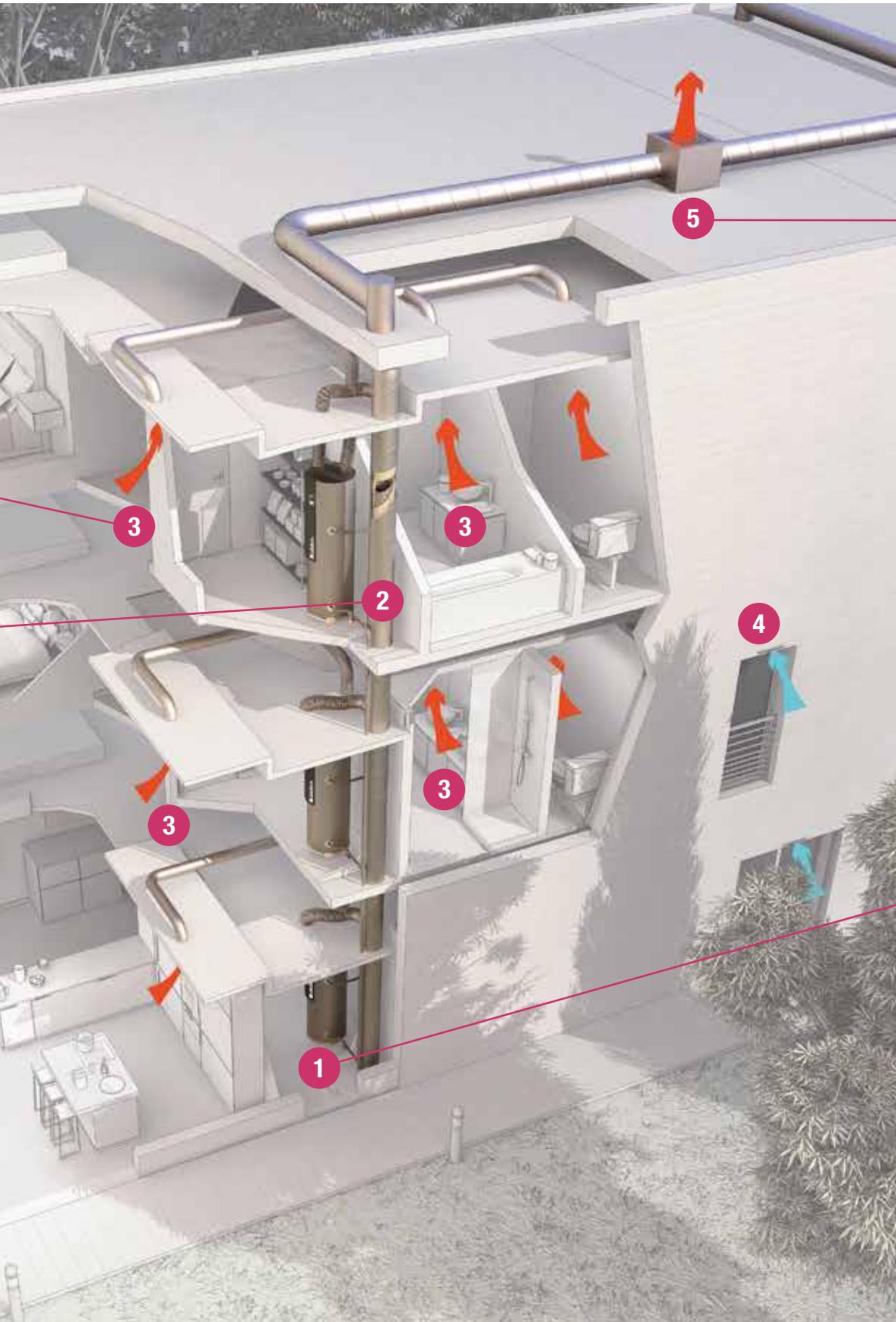
Collective CMEV
vent shaft



Air inlets
(living room, bedrooms)



- 1 T.Flow® Hygro+ or T.Flow® Nano water heater (without fan)
- 2 Collective CMEV vent shaft
- 3 CMEV exhaust grills (wet rooms)
- 4 Air inlets (living room, bedrooms)
- 5 CMEV box fan: type EasyVEC®



EasyVEC® C4 box fan



T.Flow® Hygro+
or T.Flow® Nano
water heater
without fan

HYGRO SYSTEM VIEW

SINGLE-FAMILY HOUSE

Fresh air enters the dwelling.

The air inside the dwelling (loaded with calories) is drawn in by the ventilation to renew the air.

The T.Flow® solution uses the heat extracted from the dwelling's indoor air to heat the water.

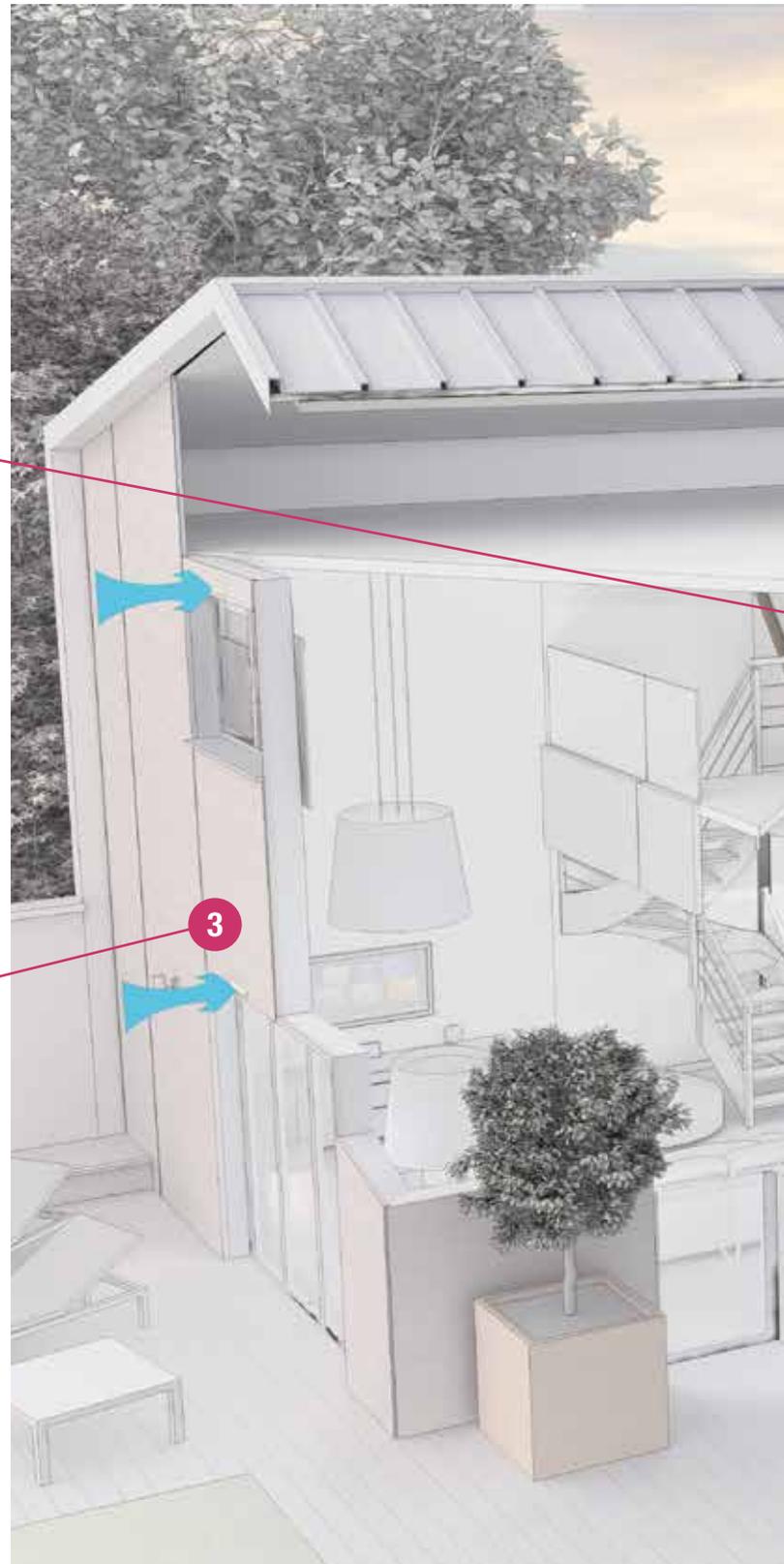
The air discharged of its calories is exhausted outside the dwelling.



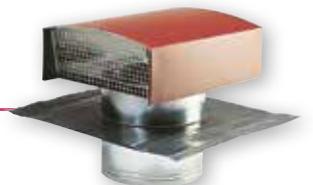
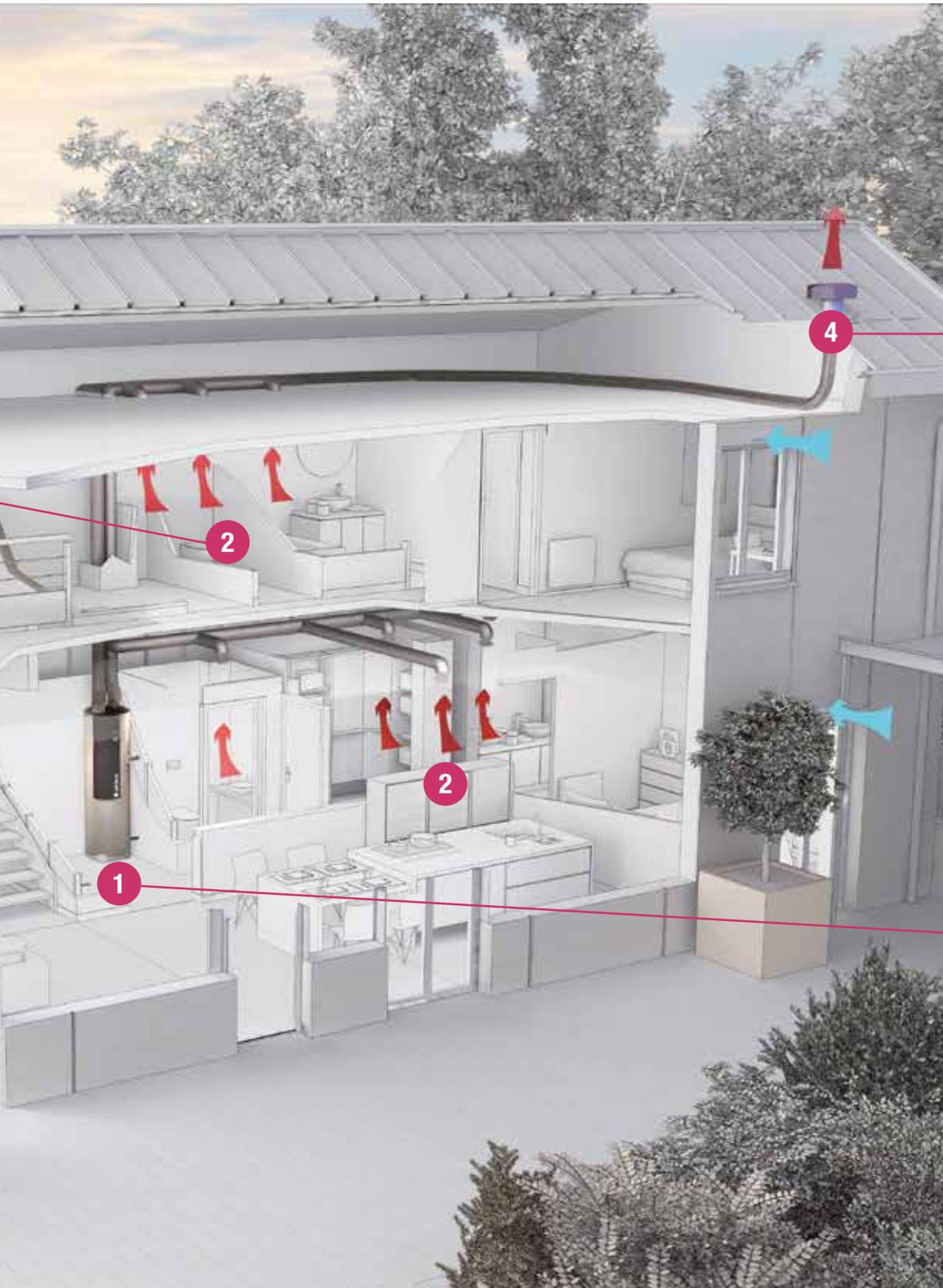
CMEV exhaust grills
(wet rooms)



Air inlets
(living room, bedrooms)



- 1 T.Flow® Hygro+ or T.Flow® Nano water heater (with fan)
- 2 CMEV exhaust grills (wet rooms)
- 3 Air inlets (living room, bedrooms)
- 4 Roof outlet



STS roof outlet



T.Flow® Hygro+
or T.Flow® Nano
water heater
with fan

ALDESCONNECT™

The first Aldes application to monitor and control your domestic hot water production using a smartphone!

Real time monitoring of the quantity of hot water available.

Four programming modes: Holidays, Auto, Boost, Guests. Ideal for adapting hot water production to the pace of your family's lifestyle.

Alerts to indicate filter clogging levels and that it needs changing.



Daily, weekly or monthly consumption monitoring.



Quantity of hot water to be produced adjusted to the size of household.



Non-connected version, compatible with AldesConnect™ (option)





INTERFACE

An intuitive interface to control hot water production.

MANAGING PRODUCTION OF DOMESTIC HOT WATER

FOUR OPERATING MODES:

AUTO: for hot water production adapted to everyday needs.

BOOST: to respond to an occasional urgent need for additional hot water.

COMFORT/GUESTS: to increase hot water production over a programmed period (configurable number of days).

HOLIDAYS: to maintain ventilation and shut down hot water production during a programmed period of absence.

CONFIGURATION AND USE

Indication of active component running (heat pump in this example).

Operating mode selected:

AUTO: automatic operation according to hot water needs and hourly tariffs.

BOOST: need to reach the temperature setpoint as fast as possible.

COMFORT/GUESTS: more hot water needed for a programmed period.

HOLIDAYS: operation in CMEV only for a programmed period (with tank heated at end of period).

Indication of filter clogging level (info menu).

Adjustable temperature setpoint.

Quantity of hot water available.

Selector buttons.

USB port:
- AldesConnect™ Box
- Aldes After-sales service.

Monitoring of associated electricity consumption.



INFO MENU

This is an informative menu that has no impact on the thermo-dynamic water heater operation. It allows the user to know the estimated electrical consumption (total, fan only & DHW heating only) and the state of the filter. It also allows the data to be reset (when the filter is changed, for instance). The thermo-dynamic water heater continues to operate in the selected mode whilst the info menu is being consulted.

CONFIGURATION

SETTING	DESCRIPTION	POSSIBLE VALUES	FACTORY SETTINGS
BATH*	Number of BATHROOM type exhaust grills		1
WC*	Number of WC type exhaust grills	Possible values 0 to 3 for T.Flow® Nano and 0 to 6 for T.Flow® Hygro+	1
CELLAR*	Number of CELLAR type exhaust grills (exhaust grills installed in a cellar, laundry room or wash-up room)		0
BATHWC*	Number of BATHROOM/WC type exhaust grills (shared)		0
ANTILEGIO	Anti-Legionella function (heats to 65°C once a week)	No = the product does not carry out an anti-Legionella heating operation. Yes = the product does carry out an anti-Legionella heating operation.	No
PA T.Flow® Hygro+	Allows the pressure to increase to offset a greater ductwork pressure loss	Possible values of 110 to 130 Pa in increments of 5 Pa	110
RAPID<>RISE T.Flow® Hygro+	Heats the water in the tank faster	Possible settings Yes or No	Yes

* Exhaust grills connected to the water heater.

N.B. : if necessary, the product will automatically detect the presence of a dual tariff system (no configuration required). The product adapts automatically to the types of grills installed: humidity-controlled or self-balanced (no configuration required). French is the default interface language. To switch to another language, simply select the “LANG” menu (listed first in the advanced menu) by pressing on “OK”, display the desired language using the “+” key and confirm by “OK”.

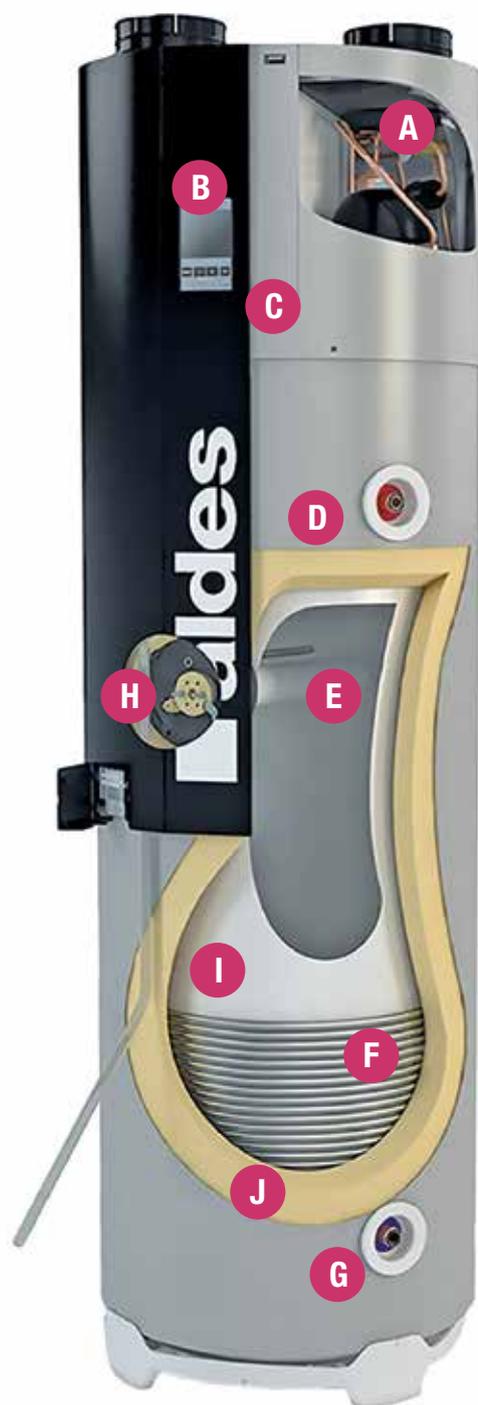
OPERATING MODES AND USE

SYMBOLS	MEANING
	Anti-Legionella function activated.
	Electric heating element running.
	Compressor running. Flashes during anti-short cycle (awaiting compressor start-up).
	Displayed in the advanced MODE+OK menu (incl. Config. settings). Flashes if an error is detected.
	Shows the filter clogging level. - Displays in the info. menu. - Displays automatically on the screen when the filter is clogged: backlight remains on.
	Indicates the quantity of hot water available in the tank: : available DHW high : available DHW low : available DHW moderate : available DHW very low
AUTO	Running in automatic mode.
BOOST	Temporary increase in the need for hot water.
COMFORT	Increase in the need for hot water for a given period.
	No hot water requirements.
	Info menu active.

- **Setpoint temperature adjustable from 45°C to 65°C (T.Flow® Hygro+) and 50°C to 65°C (T.Flow® Nano).**
 - To produce domestic hot water economically, you are advised to set the temperature below 55°C. This will then give priority to the heat pump use.
 - If a dual tariff system is used, during peak periods the thermo-dynamic water heater will maintain the temperature of the stored water at less than the setpoint and lock out the electrical top-up heating element (unless the boost mode is activated).
- **Comfort/guests mode:** increases the renewal of the hot water in the tank for a programmed period.
The additional comfort demand period is defined by indicating the number of days requiring extra hot water.
- **Holiday mode:** deactivates domestic hot water production during extended absences.
 - Ventilation still active.
 - Mode activated for a set number of days - user configurable.
 - Water temperature reset to the setpoint at the end of the period and moves automatically into auto mode.
- **Boost mode:** one-off need for the water heater to reach its setpoint as quickly as possible. The product will then revert automatically to auto mode.
- **Anti-Legionella mode:**
 - Increases the temperature of the water to 65°C once a week. Change the setting to activate this function. Caution: this mode will downgrade the overall performance of your system.
- **Forced electric mode:**
 - Electrical operation awaiting complete aeraulic connection of the thermo-dynamic water heater.

EXPLODED VIEW

T.Flow® Hygro+ / T.Flow® Nano



- A** Inverter heat pump
- B** Micro-watt fan (single-family dwelling)
- C** Dust filter
- D** Hot water outlet
- E** 1500W steatite heating element
- F** Condenser
- G** Cold water inlet
- H** Titanium impressed current and magnesium starter anodes
- I** Enamelled steel tank
- J** 55 mm expanded polyurethane foam insulation

FIELD OF USE



Use in new-build or refurbished single-family house

- Ideal with T.One® AIR* for maximum comfort in terms of hot water, air heating and cooling and continuous air renewal.
- In addition to a boiler or pellet stove for hot water production and air renewal via a renewable energy source.
- To replace a standard electrical water heater and provide both domestic hot water and continuous air renewal.



Use in new-build or refurbished multi-family dwellings

- Ideal for new, 100% electric dwellings eligible for RT2012.
- As a replacement for the standard electrical water heater providing domestic hot water to the whole of an apartment building.

* Air/Air Heat Pump

YOU ARE...	SYSTEM	FUNCTION	TANK AND PRINCIPAL COMPONENTS
 In multi-family dwelling	T.Flow® Hygro+ T.Flow® Nano	Humidity-controlled	<ul style="list-style-type: none"> • B200 T.Flow® Hygro+/B100 T.Flow® Nano, connected or unconnected versions. • Bahia humidity-controlled exhaust grills (not included) • Humidity-controlled air inlets (not included) • EasyVEC® C4 (not included)
	T.Flow® Hygro+ T.Flow® Nano	Self-balanced	<ul style="list-style-type: none"> • B200 T.Flow® Hygro+/B100 T.Flow® Nano, connected or unconnected versions. • Bap'Si exhaust grills (not included) • Self-balancing fresh air inlets (not included) • EasyVEC® C4 (not included)
 In single-family house	T.Flow® Hygro+ T.Flow® Nano	Humidity-controlled	<ul style="list-style-type: none"> • B200-FAN T.Flow® Hygro+/B100-FAN T.Flow® Nano, connected or unconnected versions. • Bahia humidity-controlled exhaust grills (not included) • Humidity-controlled air inlets (not included)
	T.Flow® Hygro+ T.Flow® Nano	Self-balanced	<ul style="list-style-type: none"> • B200-FAN T.Flow® Hygro+/B100-FAN T.Flow® Nano, connected or unconnected • Bap'Si exhaust grills (not included) • Self-balancing fresh air inlets (not included)

STANDARDS AND REGULATIONS

Model	Reference	Technical Report	HUMIDITY CONTROLLED VENTILATION
B200-FAN_T.Flow® Hygro+ (with built-in fan)	11023198	 Technical Report 14.5/17-2266	 70/02_CHY5_2266 www.eurovent-certification.com
B100-FAN_T.Flow® Nano (with built-in fan)	11023394		
B200 T.Flow® Hygro+ (without fan)	11023199	 Technical Report 14.5/17-2267	-
B100 T.Flow® Nano (without fan)	11023395		-

B200-FAN_T.Flow® Hygro+			
Fields of use		2 bed (1 sanitary area) to 6 bed (7 sanitary area)	2 bed (1 sanitary area) to 6 bed (7 sanitary area)
Types of system		Hygro B	Hygro A
Weighted electric outputs (in W-Th-C)		17.8 to 26.8 W-Th-C	19.2 to 28.7 W-Th-C
Maximum number of sanitary area		7	7
Use indications		Aeraulic output diameter: Ø 160 mm	Aeraulic output diameter: Ø 160 mm
3-bed configuration, 2 bathrooms: 1 Bath, 1 WC	Weighted electric outputs (in W-Th-C)	Octopus: 18.4 W-Th-C Linear: 18.3 W-Th-C	Octopus: 19.6 W-Th-C Linear: 19.5 W-Th-C
B100-FAN_T.Flow® Nano			
Fields of use		Studio (1 sanitary area) to 2 bed (5 sanitary area)	Studio (1 sanitary area) to 2 bed (5 sanitary area)
Types of system		Hygro B	Hygro A
Weighted electric outputs (in W-Th-C)		14.4 to 18 W-Th-C	14.4 to 20 W-Th-C
Maximum number of sanitary area		5	5
Use indications		Aeraulic output diameter: Ø 160 mm	Aeraulic output diameter: Ø 160 mm
Max. config. of 2-bed use: 2 bathrooms, 2 WC, 1 wet room	Weighted electric outputs (in W-Th-C)	Linear: 18 W-Th-C	Linear: 20 W-Th-C

RANGE AND REFERENCES

DESCRIPTION	CONNECTED	CODE	ENERGY CLASS - DOMESTIC HOT WATER	ENERGY CLASS - VENTILATION
B200 T.Flow® Hygro+ connected (multi-family dwelling)	yes	11023385	A+	-
B200-FAN T.Flow® Hygro+ connected (single-family house)	yes	11023384	A+	B
B200 T.Flow® Hygro+ (multi-family dwelling)	No	11023199	A+	-
B200-FAN T.Flow® Hygro+ (single-family house)	No	11023198	A+	B
B100 T.Flow® Nano Connected (multi-family dwelling)	yes	11023397	A+	-
B100-FAN T.Flow® Nano Connected (single-family house)	yes	11023396	A+	B
B100 T.Flow® Nano (multi-family dwelling)	No	11023395	A+	-
B100-FAN T.Flow® Nano (single-family house)	No	11023394	A+	B

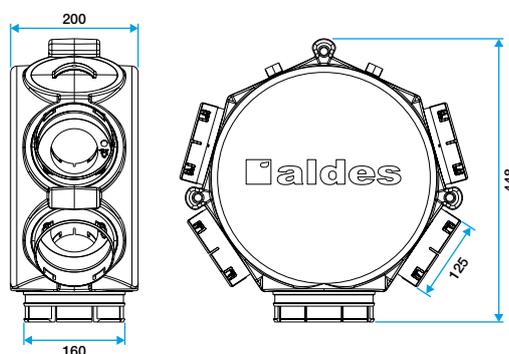
ACCESSORIES



AldesConnect™ Box



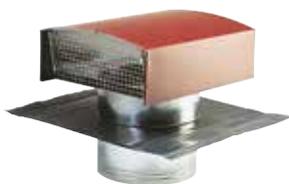
Circular distribution box



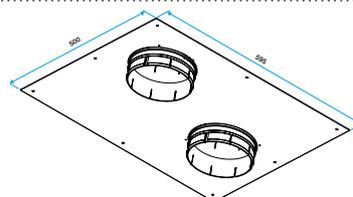
Insulated distribution box (T.Flow® Hygro+)
Location of branch connections Ø 125 mm and Ø 80 mm
to be defined on-site during installation



Filter



Roof outlet



Ceiling penetration manifold (airtightness)



Tripod (T.Flow® Nano)

DESCRIPTION	CODE
AldesConnect™ Box	11023386
*Insulated distribution box 1 Ø 160 mm + 1 Ø 125 mm + 5 Ø 80 mm or 1 Ø 160 mm + 6 Ø 80 mm. Delivered with three plugs	11023194
Dust filter*	35112055
Ceiling penetration manifold	11023286
T.Flow® Nano tripod	11023309

*Filter ISO Coarse 65% as per standard ISO 16890 (formerly G4 as per standard EN 779).

GENERAL CHARACTERISTICS

	T.Flow® Hygro+	T.Flow® Nano
Dimensions (mm)	H 1941 x w 566 x D 573	H 1311 x w 566 x D 582
Tank	Capacity 200 litres, enamelled steel	Capacity 105 litres, enamelled steel
	Service pressure 7 bar	
Insulation	55 mm-thick polyurethane foam without CFC	
DHW	Cold water inlet and hot water outlet connections G3/4" (dielectric connectors supplied but not mounted)	
Anti-corrosion protection	1 titanium impressed current anode + 1 magnesium starter anode	
Electrical connection (voltage/frequency)	230 V single-phase/50 Hz	
IP rating	IPX1	
Heating element	Steatite 1500 W	
Trim	Painted steel sheet	
	Inverter variable speed compressor	
Heat pump	Refrigerant R513A *(GWP: 631). Initial load: 650 g, i.e. 0.41 tCO ₂ eq.	Refrigerant R513A *(GWP: 631). Initial load: 580 g, i.e. 0.37 tCO ₂ eq.
	Heat pump operating range (exhaust air temperature): min. 10°C to max. 35°C	
	Micro-watt low-consumption fan	
CMEV	G4 pleated filter**	
	Aeraulic connections Ø160 mm	
	Average airflow range 49.1 to 222.8 m ³ /h	Average airflow range 27.8 to 137.5 m ³ /h
Weight	T.Flow® Hygro+ multi-family dwelling: 77 Kg T.Flow® Hygro+ single-family house: 79 Kg	T.Flow® Nano multi-family dwelling: 69 Kg T.Flow® Nano single-family house: 71 Kg

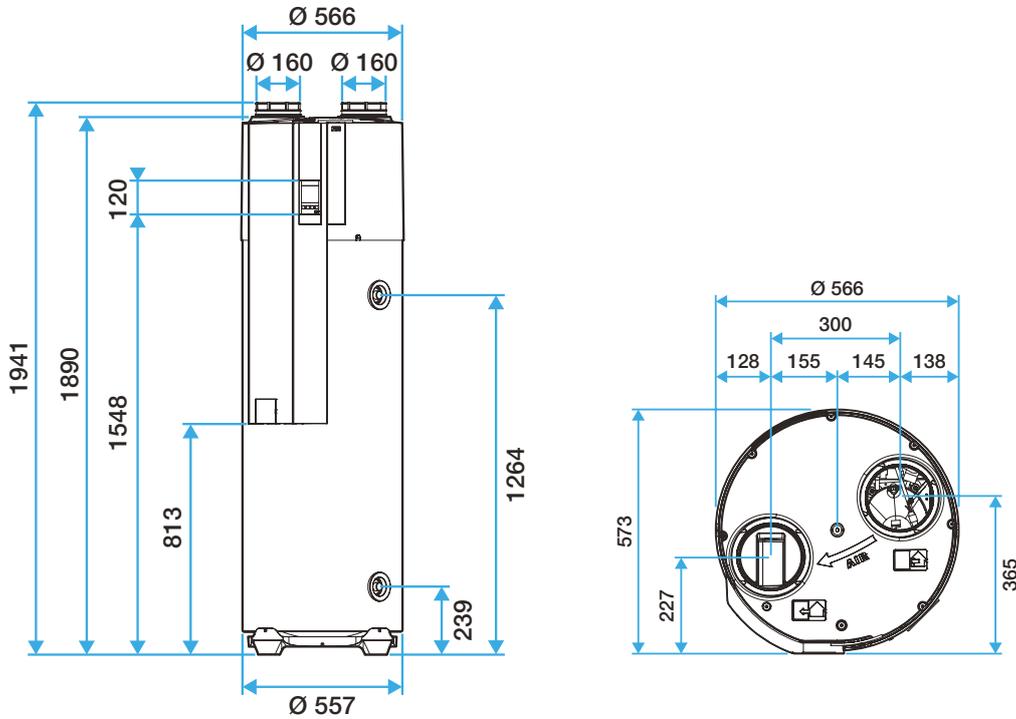
* Fluorinated greenhouse gas contained in a hermetically-sealed unit.

** Filter ISO Coarse 65% as per standard ISO 16890 (formerly G4 as per standard EN 779).

DIMENSIONS AND WEIGHT

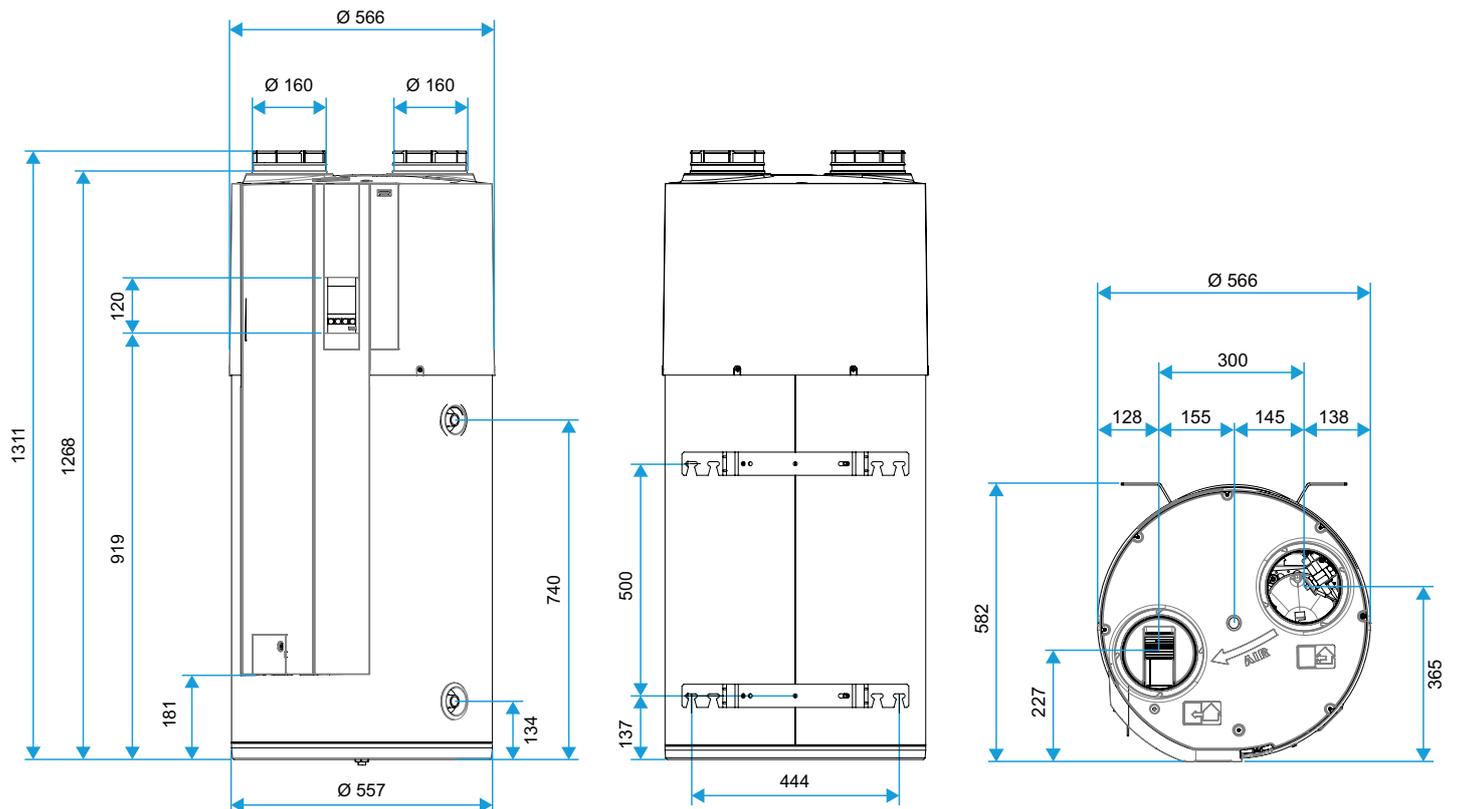
T.FLOW® Hygro+

- B200-FAN T.Flow® Hygro+: Product weight with empty water tank: 79 kg. Product indicative weight with full water tank: 283 kg
- B200 T.Flow® Hygro+: Product weight with empty water tank: 77 kg. Product indicative weight with full water tank: 281 kg



T.FLOW® NANO

- B100-FAN T.Flow® Nano: Product weight with empty water tank: 71 kg. Product indicative weight with full water tank: 178 kg
- B100 T.Flow® Nano: Product weight with empty water tank: 69 kg. Product indicative weight with full water tank: 176 kg



ELECTRICAL CHARACTERISTICS

DATA

Permanent mode

- Power supply 230 V-50 Hz + Earth.
- IP rating: IPx1.
- Current protection: 16 A.
- Rated power of electric heating element: 1500 W.

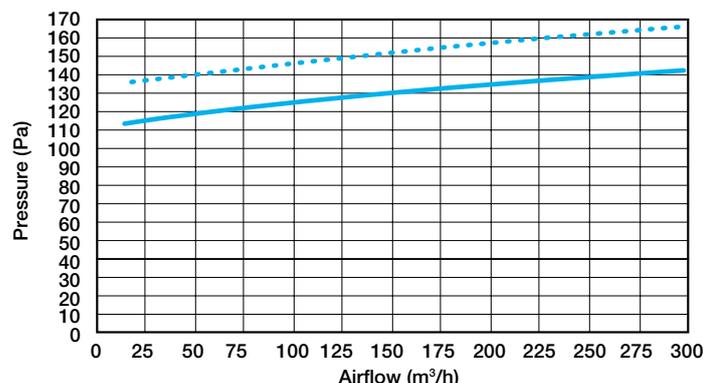
Off-peak hour/Peak hour mode

- 230 V power supply.
- Current protection: 2 A.

Product	Max. power consumption (W)
T.Flow® Hygro+	1900
T.Flow® Nano	1900

T.FLOW® Hygro+

Aeraulic curve in linear assembly (single branch connection)

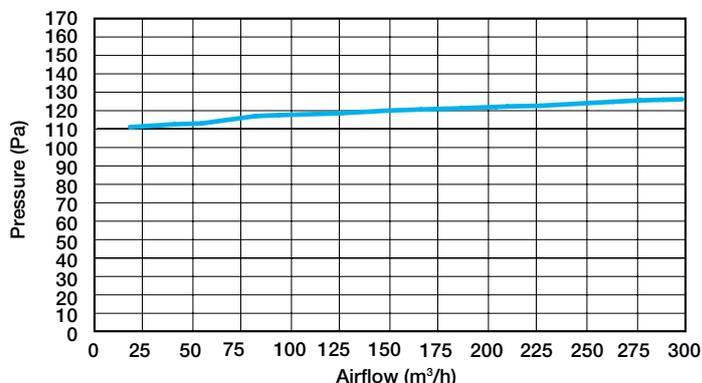


Pressure set to 110 Pa ———
 Pressure set to 130 Pa ·····

AERAULIC CHARACTERISTICS

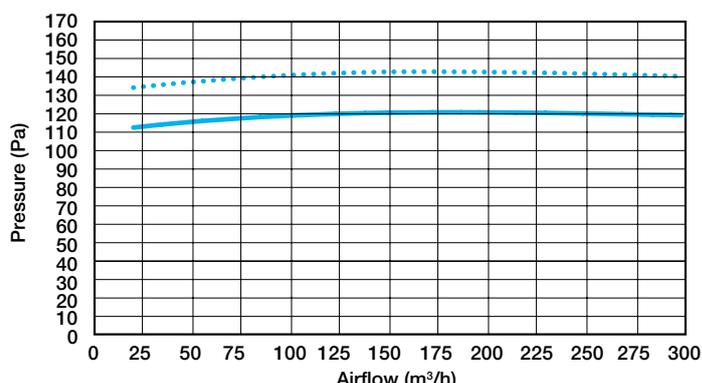
T.FLOW® Nano

Aeraulic curve in linear assembly (single branch connection)



T.FLOW® Hygro+

Aeraulic curve in octopus assembly (multiple branch connections)



ACOUSTIC DETAILS

RADIATED ACOUSTIC POWER LEVEL IN DB

	Airflow (m³/h)	Frequency (Hz)							Global (dB(A))*	Sound pressure**
		125	250	500	1000	2000	4000	8000		
B100-FAN T.Flow® Nano	56	41	41	40	37	29	24	21	41	24
	150	42	43	45	41	32	28	22	45	28
B200-FAN T.Flow® Hygro+	56	41	41	40	37	29	24	21	41	24
	150	42	43	45	41	32	28	22	45	28
B200 T.Flow® Hygro+	56	35	27	28	21	16	18	21	30	13
	150	35	32	33	24	19	20	21	33	16
B100 T.Flow® Nano	56	35	27	28	21	16	18	21	30	13
	150	35	32	33	24	19	20	21	33	16

*Average values calculated from data measured at three water temperatures (25°C, 40°C, 55°C), aeraulic ductwork with 110 Pa input pressure.

**At two metres in free field, compressor running at maximum speed. B100-FAN and B200-FAN: water heater, fan included. B100 and B200: water heater.

THERMAL EFFICIENCY

DOMESTIC HOT WATER

Independent of the outdoor temperature conditions, the thermo-dynamic performances of the water heater on the exhaust air are given in terms of the airflow exhausted via the humidity-controlled or self-balanced ventilation.

- Maximum hot water production temperature:
 - with heat pump only: 55°C,
 - with auxiliary heating element: 65°C.

MODEL	T.FLOW® Hygro+	T.FLOW® Nano
- Hot water reference temperature	53.1°C to 53.6°C	52.8°C to 52.9°C
Storage capacity	200 L	105 L
Load profile	M	M
Volume of water mixed at 40°C as per NF Electrical Performance	286 L*	150 L**

* at 100 m³/h

** at 27.8 m³/h

RT 2012 DATA



Values obtained as part of the NF Electrical Performance certification as per EN 16147

	EXHAUST AIRFLOW (M ³ /H)	49.1	100	222.8
T.Flow® Hygro+	SINGLE-FAMILY HOUSE			
	COP (EN 16147)	2.99	3.31	3.72
	• Reserve power PES (kW)	0.027	0.023	0.020
	MULTI-FAMILY DWELLING			
	COP (EN 16147)	3.14	3.35	3.43
	• Reserve power PES (kW)	0.023	0.022	0.025
	EXHAUST AIRFLOW (M ³ /H)	27.8	50.5	137.5
T.Flow® Nano	SINGLE-FAMILY HOUSE			
	COP (EN 16147)	2.86	3.03	3.56
	• Reserve power PES (kW)	0.026	0.024	0.018
	MULTI-FAMILY DWELLING			
	COP (EN 16147)	3.05	3.17	3.47
	• Reserve power PES (kW)	0.021	0.020	0.020

INSTALLATION GUIDELINES

For all implementation details, please refer to the manual supplied with the product.

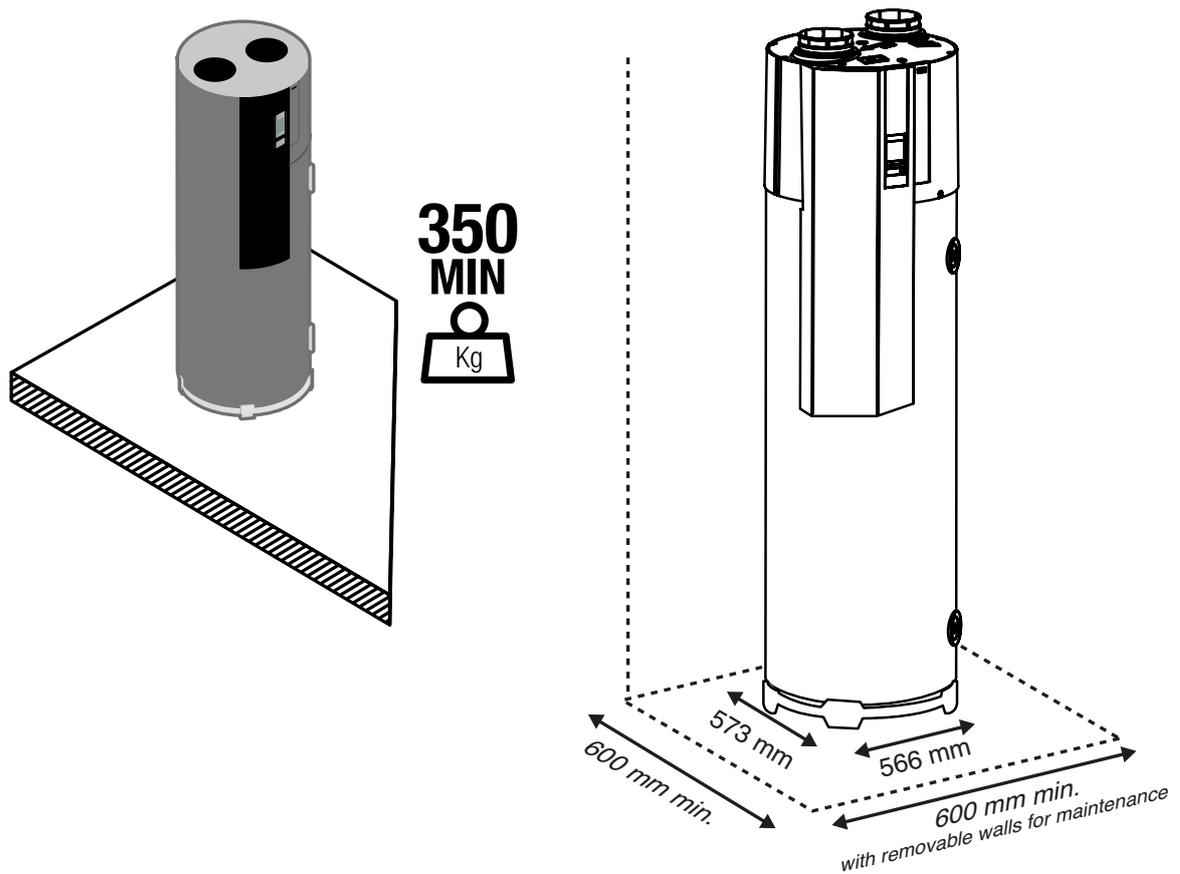
The installation site must meet the following conditions:

- Compliance with standard NF C 15-100.
- Installation in the heated space recommended to ensure optimal thermal performances of the system (if this is impossible, the product must be installed without fail in a frost-free room).
- As this water heater operates using exhaust air, it must be ducted and therefore there are no restrictions in the volume of the installation room.
- Level surface essential (condensate discharge).
- Enclosed space with soundproofed door and walls.
- Avoid installing the product near sleeping accommodation (acoustic comfort). If this is not possible, install soundproofed cupboard.
- As close as possible to the discharge points to minimize the energy lost through the pipework.
- Check for easy access to the cover fastening screws (front side and lid) for any maintenance work.
- Ceiling height of > 2.3 m necessary to be able to remove the top cover during any repair work (T.Flow® Hygro+).
- Minimum surface area needed (see drawing below): dependant on the position and type of water duct, the available width must be adjusted to guarantee that the product remains operable for servicing.

FOR FLOOR IMPLEMENTATION:

Once the water heater is on the installation site, it must be installed on a smooth, horizontal surface (+/- 1°). Otherwise, it must be levelled by wedging the tank leg. Problems with condensate discharge may occur without this precaution.

T.Flow® Hygro+



INSTALLATION GUIDELINES

T.Flow® Nano (see installation template 35033150)

Weight empty and full, multi-family version and single-family house version.

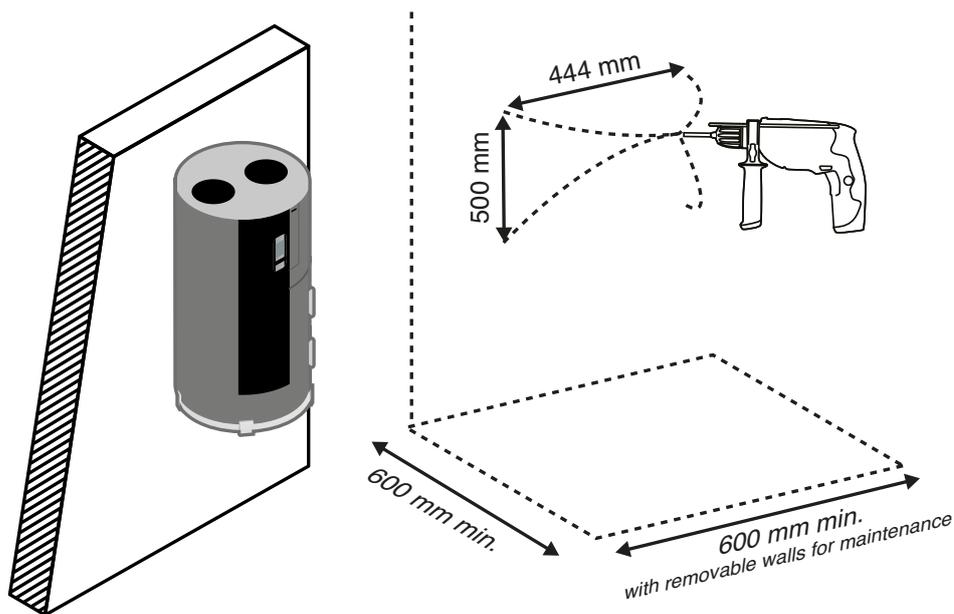
The water heater WALL-MOUNTED installation must comply with the requirements of NF DTU 60. A tripod installation may be mandatory depending on the type of wall.

In accordance with standard EN 60335-1, the water heater must be fixed to the wall with the appropriate anchors and screws for the wall and the weight of the equipment. The water heater must be fixed to the wall with the appropriate anchors and screws for the wall and the weight of the equipment.

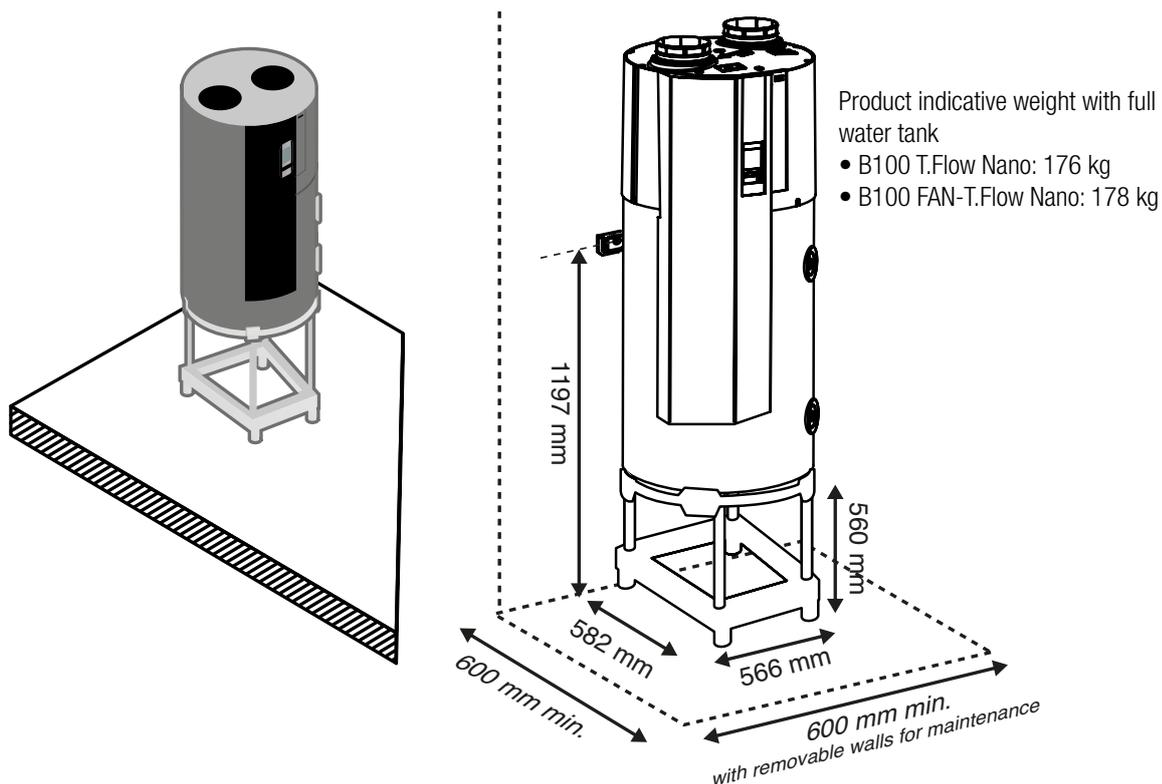
When installing ON A TRIPOD, it is mandatory to fasten the product to the wall (at least on top fastening support).

Wall mounting

Make sure that the wall is suitable for this type of installation (otherwise, mandatory tripod mounting).



Tripod mounting



COMMISSIONING

HYDRAULIC CONNECTION

- Cold/hot water connection - G3/4" male.
- Dielectric connectors, as per DTU 60.1 (supplied).



IMPORTANT RECOMMENDATIONS:

- The hot water ductwork must be insulated,
- Do not create a DHW loop - this type of installation greatly increases thermal losses.

Accessories required for fitting:

- A new safety unit pre-set to 7 bar compliant with standard NF EN 1487,
- Isolation valves on the cold water supply (before the safety unit) and the hot water outlet,
- **One or more temperature limiters.**

Electrical connectors

The "cold water inlet" and "hot water outlet" branch connections must be fitted with dielectric connectors (supplied with the equipment), even if the tank is connected with PEX tubing. Our warranty may not be valid if these connectors are missing. **Do not apply more than 25 N-m torque.**

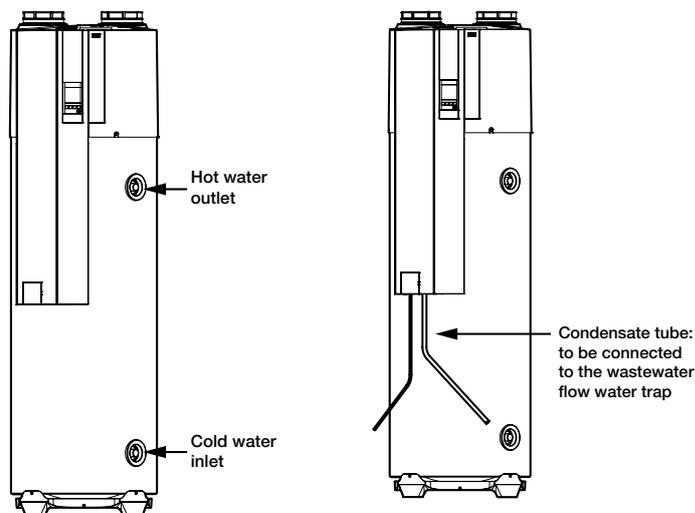
Hot water connection

It is advisable to install one or more temperature limiters (not supplied).

Cold water branch connection

The installation must be fitted with a new safety unit (not supplied) pre-set to 7 bar and compliant with standard NF EN 1487.

The installation must have a pressure reducing valve (not supplied) if the supply pressure is higher than 0.45 MPa. The pressure reducing valve must be installed at the general distribution outlet,



CONDENSATE DISCHARGE

- Connection of discharge pipe (\varnothing 12 mm) to the wastewater ductwork, ensuring that there is a flow water trap and downward flow.
- Provide for a flow water trap and fill it with water (a diaphragm water trap can also be used that does not have to be filled with water). Check the routing of the tube once connected to avoid it catching anywhere. Failure to comply with these instructions could invalidate our warranty.

AERAILIC CONNECTION

Water heater performance is linked directly to the quality of the aeraulic ductwork. It is thus of the utmost importance to pay careful attention to the whole system.

Exhaust network:

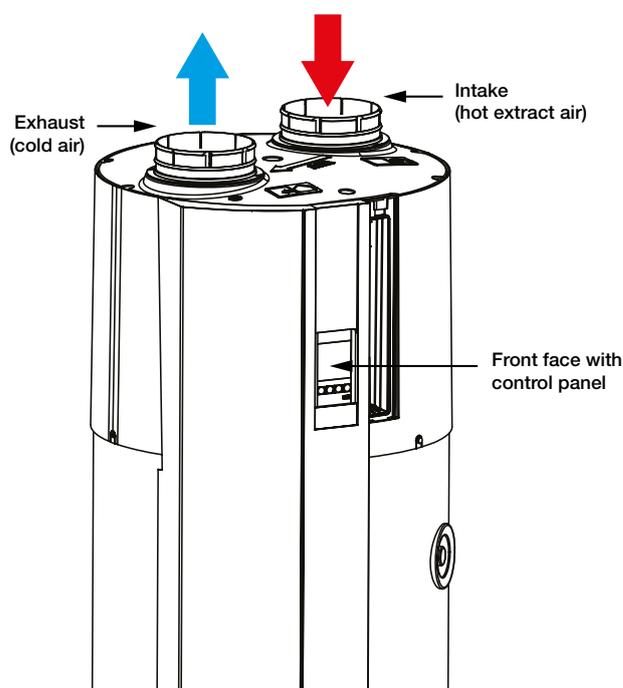
- Preferably fitted in a heated space (suspended ceiling, insulated attic) in order to limit energy losses.
- If the exhaust ductwork is required to cross unheated areas, insulate it with 50 mm-thick insulation.
- The ducts must be one with the water heater, for example by using the collars supplied as accessories. Make sure, nevertheless, that it will still be possible to dismantle the aeraulic ductwork in the future.
- Use the distribution box to simplify installation (T.Flow® Hygro+).

Discharge ductwork:

- To avoid any risk of condensation, the network must be thermally insulated.
- As the heat pump takes the energy contained in the exhaust air, the stale air discharged by the system is cold. To avoid all risks of condensation inside or outside the duct, the ductwork must have at least 25 mm-thick insulation. In all cases, the air outlet will be designed suitably to avoid generating major pressure losses. An air outlet that generates too much aeraulic pressure loss can cause the system to malfunction. Ideally use ALDES aeraulic roof/wall outlet.

Maximum permissible pressure loss at discharge (Single-family house model):

- Duct + Grille = 60 Pa, in basic airflow.

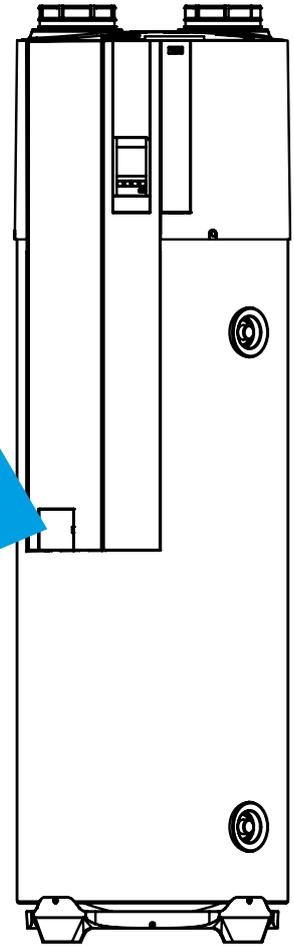
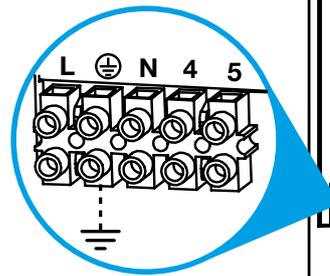


COMMISSIONING

ELECTRICAL CONNECTION



- The power supply should be single-phase, 230 V-50 Hz + Earth, connected by a professional, in accordance with standard NF C 15 100.
- The thermo-dynamic water heater must have a constant supply to guarantee the production of domestic hot water and the operation of the imposed current titanium anode.
- The thermo-dynamic water heater must not be connected electrically until it has been filled with water.
- The electrical installation must include:
 - 16 A circuit breaker (permanent power supply).
 - 30 mA differential circuit breaker protection.
 - 2 A circuit breaker (off-peak power supply).



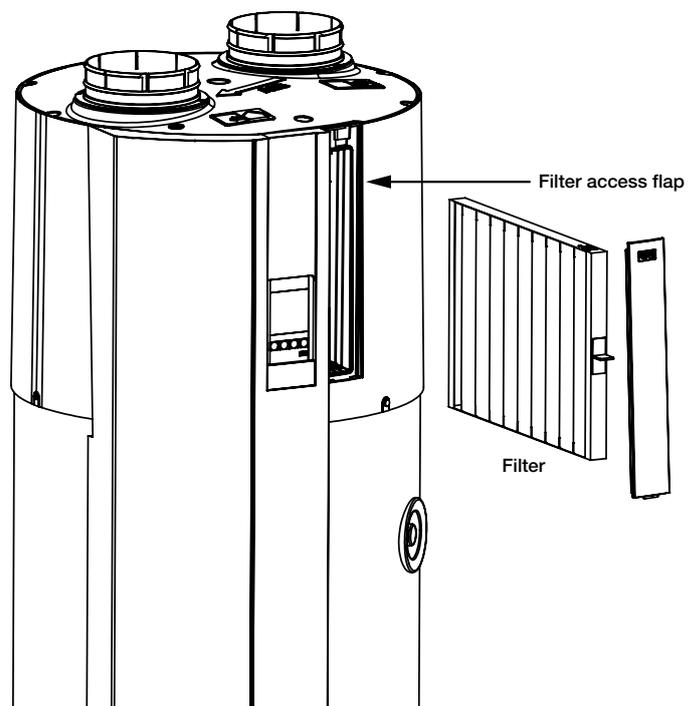
LIFETIME - MAINTENANCE

The periodic inspection includes:

- Operation of the safety unit. Operate the safety unit once or twice a month to eliminate any residual build-up of limescale and check that it is not blocked.
- Check that no alarm is displayed on the screen. In the event of a 'check filter' alarm, replace the filter as indicated below. For an error code alarm, please refer to the product installation guide.

Filter replacement

It is recommended that the filter is changed every year to guarantee optimum operation of your water heater.



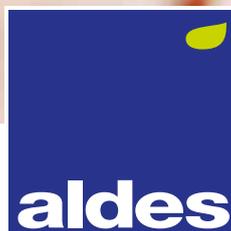
#HealthyLiving

Because air is not just for us to breathe but it also helps us live a healthier life, Aldes commits to taking care of the health of each building occupant.

Our skills in air management enables us to help design indoor living spaces that are smart and caring. Where we live, work and have fun, Aldes watches over our well-being through innovative solutions that improve indoor air quality.

High-performance solutions that respect the environment, enabling the renewal and purification of indoor air, heating it, cooling it, and providing domestic hot water.

More than just a movement, **#HealthyLiving** embodies our principles of being caring and responsible, as well as our pioneering spirit.



For more information about **T.Flow® Hygro+ / T.Flow® Nano**,
contact your Aldes advisor,
visit aldes.com or find us at:



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