

# STØNE Don't hide it anymore.

The heat pump we were waiting for now is here.



STØNE vertical air delivery



STØNE vertical air delivery

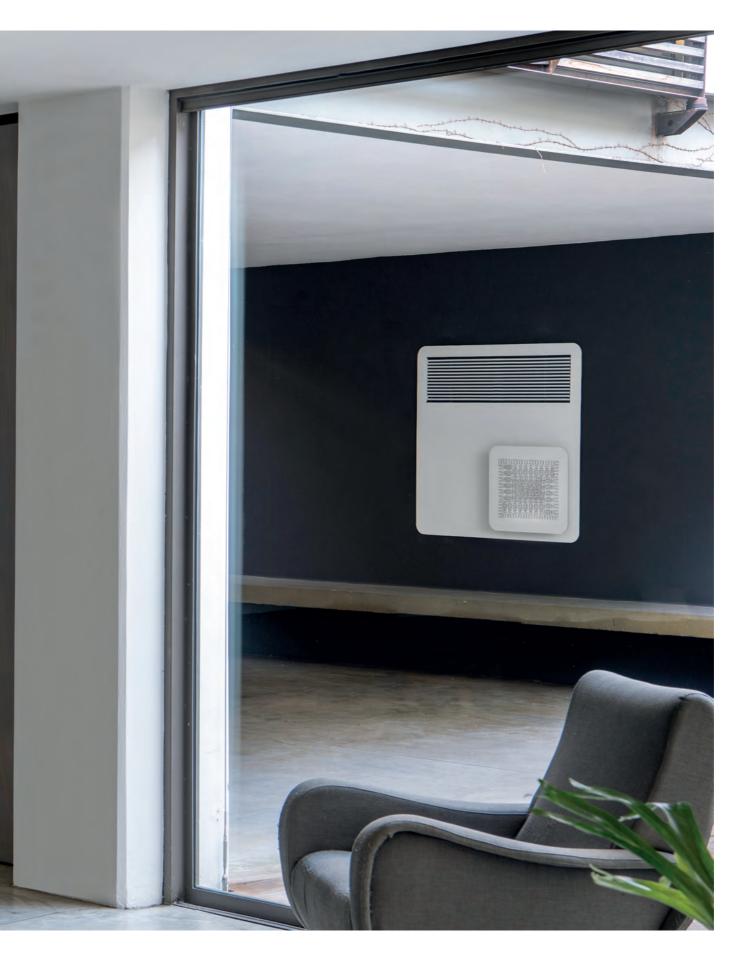


STØNE vertical air delivery





STØNE built-in



# STØNE

Don't hide it anymore.

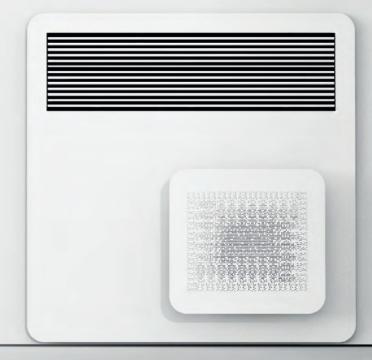


# Design and integration with the building

The heat pumps currently available on the market are all characterised by a bulky and visually unpleasant outdoor unit. They are hard to insert in a refined architectural context. It is almost impossible to imagine them in a block of flats. STØNE originates from a new and comprehensive approach to design that blends:

- A "ground-breaking" design that demolishes existing design paradigms to merge the elements into a new and bold combination.
- Components designed and manufactured to size, of extremely high quality and capable of providing optimal performances in terms of efficiency, comfort and silence.

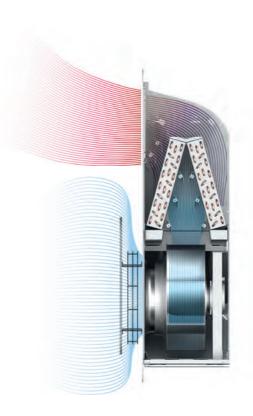
STØNE is an extremely advanced technological solution that is inconspicuous outdoors and optimally blends into any setting – even improving it.



### Silence and comfort

- . Air extraction from the front.
- Plug fan inside the structure, which extracts air from the front of the unit and directs the air flow towards the heat exchange batteries.
- . The noise generated by the fan is very low and absorbed within the structure.
- . The batteries dampen the noise generated by the air flow.
- Thanks to the vertical or horizontal flow of the delivery air, the air flow and the resulting noise can be directed towards a spot where they do not annoy, avoiding air recirculation.







# Efficiency

#### A. Overturned "V" heat exchange coils

- · Greater heat exchange surface
- · Even distribution of air over the entire surface
- · Reduced pressure loss
- · Lower air flow given the same level of efficiency
- · Lower air flow = greater silence during operation

#### B. Heat exchange coils inside the unit

- · The unit can be installed against the wall
- The coils do not get dirty and guarantee constant efficiency over time
- Faster defrosting because the heat generated does not disperse into the outside air but is used for melting the ice on the fin
- Coils with hydrophilic fin and undercooling circuit for reducing defrosting cycles and ice build-up on the base

#### C. Two condensate trays

- The coil does not adhere to the tray so that condensate can be discharged effectively and rapidly
- The trays are highly inclined, allowing condensation to drain rapidly. The integrated heating cable prevents the risk of icing even in the harshest weather conditions
- The discharge outlet of the condensate trays lies 40 cm above the ground, inside the compressor compartment which is hot



# Low-bulk installation and modularity

STØNE eliminates any unnecessary bulkiness and makes it possible to create unprecedented modular combinations, always with a minimal visual impact outdoors.



# Outdoor configurations

STØNE heat pumps can be installed also in contexts and ways that are currently unheard of. Thanks to its innovative design, STØNE can be placed entirely against the home's wall, blending elegantly into the setting.

In the built-in version, it can disappear completely into the wall.







Exposed with vertical air delivery.





H Exposed with horizontal air delivery.

IN

Built-in.

# STØNE

## The versions

#### Range:

5 kW 20 kW



### STØNE M1

Monobloc heat pump complete with pump, safety valve and expansion vessel. A compact solution that does not require any specific expertise in connecting the refrigeration lines.



## STØNE H1

An exposed tower indoor unit with integrated 200-litre storage tank for domestic hot water, connected to the outdoor unit through water connections. A complete, reliable solution with compact dimensions that does not require any specific expertise in connecting the refrigerant lines.





## STØNE B1

Indoor hydraulic module <u>connected</u> to the outdoor unit <u>through</u> <u>refrigerant lines</u>. A flexible solution suitable for creating tailor-made systems.



### STØNE TI

An exposed tower indoor unit with integrated 200-litre storage tank for domestic hot water, <u>connected</u> to the outdoor unit <u>through</u> <u>refrigerant lines</u>. A complete solution guaranteeing reliability and compact overall dimensions.

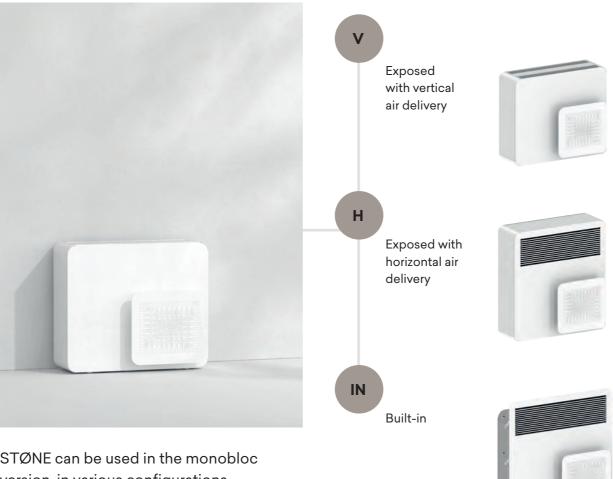


### STØNE C1

A built-in cabinet with integrated 170-litre storage tank for domestic hot water, <u>connected</u> to the outdoor unit <u>through refrigerant lines</u>. Ideal for apartments with installation in the perimeter wall.

# STØNE M1

## OUTDOOR CONFIGURATIONS



STØNE can be used in the monobloc version, in various configurations.

This version, with hermetic monobloc cooling circuit, contains all the hydraulic devices such as, for example, the electronic pump and the expansion vessel.

The connection with the system is made through water connection.



**BUTLER** (optional)

Remote WiFi control using



Highest energy class A+++



Refrigerant with low GWP for the entire range

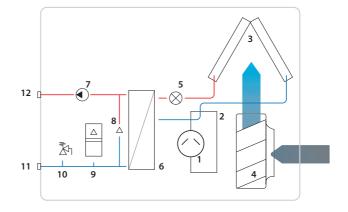


Available power range of up to 20 kW

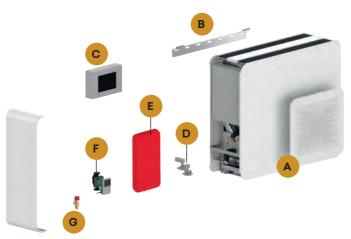


# Diagrams STØNE ™

- Compressor
- 4-way valve 2.
- Finned-pack heat exchanger 3.
- Electronic thermostatic valve
- Brazed plate heat exchanger
- Differential pressure switch
- Expansion vessel
- 3-bar safety valve 10.
- System return plumbing connection
- System delivery plumbing connection



#### Standard components



#### STANDARD COMPONENTS

- Structure and RAL9003 panels
- Wall-mounting brackets
- Remote control panel with control interface C. display (supplied separately)
- Differential pressure switch D.
- Expansion vessel (not present in the 5M E.
- Primary circuit circulator pump
- 3-bar safety valve

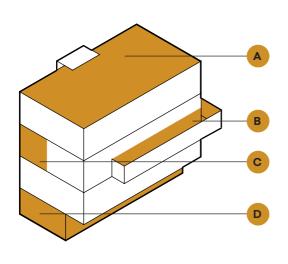
#### **ACCESSORIES (SUPPLIED SEPARATELY)**

- BUTLER  $^{\mbox{\scriptsize PRO}}$  (installed in the remote electrical cabinet) BUTLER  $^{\mbox{\scriptsize PRO}}$  TOUCH
- 3-way DHW valve
- DHW preparation tank
- Inertial storage tank
- Anti-frost safety valve
- Heating elements 6 kW (3 steps of 2 kW). Factory setting 2 kW for single-phase heat pumps.

#### **Accessories** (supplied separately)



# Installing STØNE ™



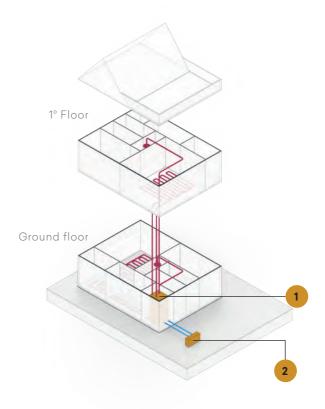
STØNE M1 is a flexible solution suitable for all applications. The unit and the system are connected through plumbing connections. STØNE M1 is a heat pump that can be modular and used in cascade mode for satisfying high power levels.



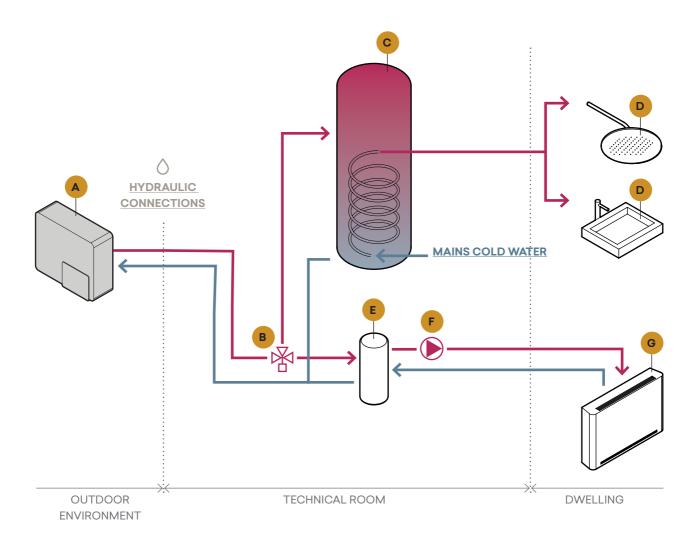
- A. Roof
- B. Terrace / Balcony
- C. Wall
- D. Floor

# Example of a system

- 1. Indoor unit
- 2. Outdoor unit
- Hydraulic connections
- Domestic hot water / heating



# Diagram of STØNE <sup>M1</sup> system



- A. STØNE M1 outdoor unit
- B. 3-way valve
- Thermal storage tank for instantaneous preparation of domestic hot water
- D. Domestic hot water point of use
- E. Hydraulic separator
- F. Secondary circuit pump
- G. Heating and cooling system

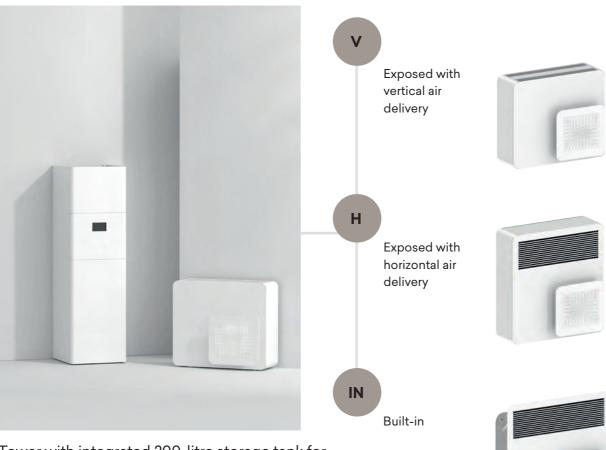
Domestic hot water

Cold water

# STØNE H1

Water connection between the outdoor unit and the indoor unit

#### OUTDOOR CONFIGUATION



Tower with integrated 200-litre storage tank for domestic hot water, connected to an outdoor unit through water pipes. Not special expertise requested for installation of connections. Ideal for houses and apartments for 4 people with normal consumption of domestic hot water. All options are factory buit in and included in the indoor unit not more need of a separate technical room.





The indoor unit has all the hydraulic components integrated into it



Production of domestic hot water from -20 °C to 40 °C outside air

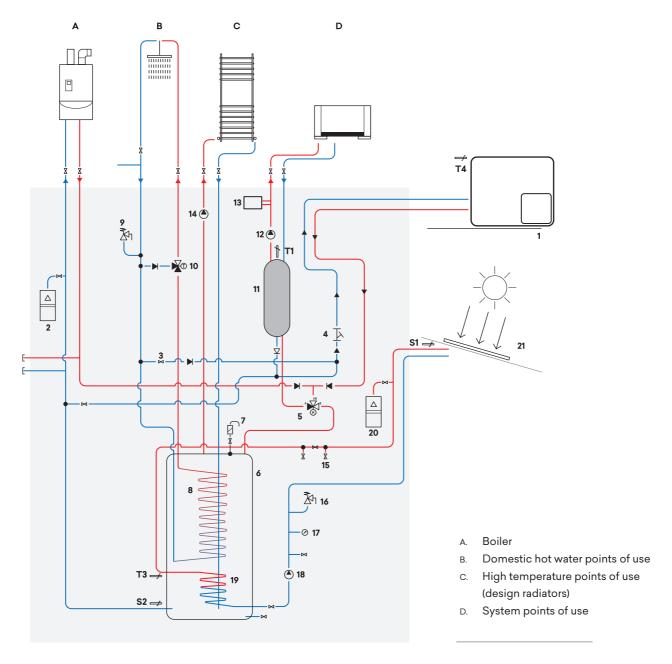


Remote WiFi control using BUTLER (optional)



Highest energy class A+++

# Diagrams STØNE H1



- 1. Outdoor unit
- 2. 24-litre system expansion vessel
- 3. Filling unit
- 4. Y-shaped filter
- 5. 3- way valve DHW system
- 6. 200-litre domestic hot water preparation storage tank
- 7. Hot water tank relief valve
- 8. DHW instantaneous heating stainless steel coil
- 7-bar domestic hot water safety valve

- Domestic hot water thermostatic mixer (optional)
- 11. Hydraulic separator (optional)
- Secondary circuit pump (optional)
- 13. 20-litre inertial tank (optional)
- Heated towel rail pump (optional)
- 15. Solar heating system fill valve (optional)
- 16. 3-bar solar heating system safety valve (optional)

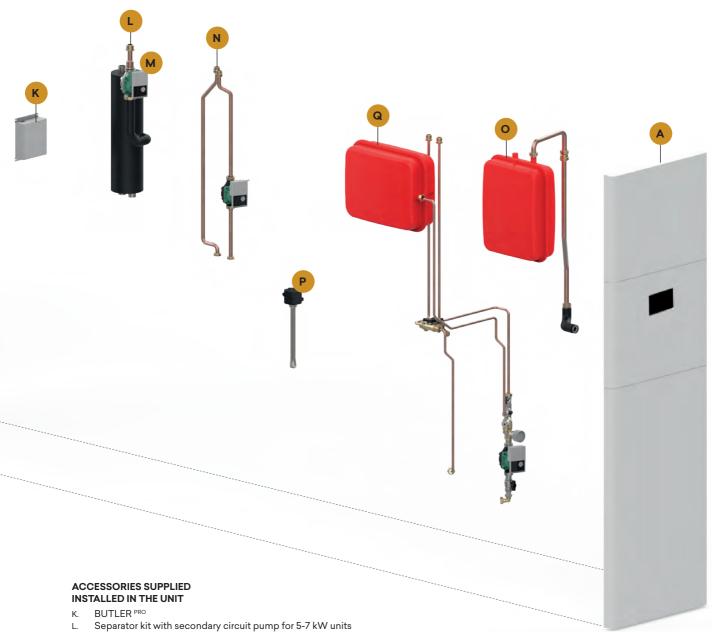
- Solar heating circuit pressure gauge (optional)
- 18. Solar heating circuit pump (optional)
- Solar heating system coil (optional)
- 24-litre solar heating system expansion vessel (optional)
- 21. Solar panel



#### STØNE H1 STANDARD COMPONENTS

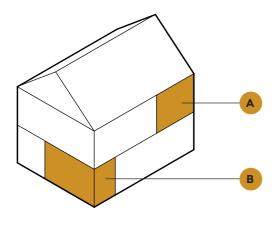
- STØNE H1 structure and RAL9003 covering panels Automatic relief valve
- 3-bar system safety valve
- D.
- 24-litre system expansion vessel System filling unit and Y-shaped filter
- Pressure gauge
- G.
- 3-way DHW system valve
  200-litre domestic hot water preparation storage tank
- 7-bar domestic hot water safety valve
- Control panel with control interface display

# STØNE <sup>H1</sup> accessories supplied installed in the unit



- M. Separator kit with secondary circuit pump for 5-15 kW units
- N. Heated towel rail kit
- O. Solar heating kit (can be used if the inertial tank kit is not present): power pack, pump, safety valve, 24-litre expansion tank, filling unit, system fill valve, thermostatic mixer for domestic hot water and storage tank with solar coil
- P. 20-litre inertial tank kit (as an alternative to the solar kit)

## Installing STØNE <sup>H1</sup>



- A. Kitchen / Living room
- B. Laundry room / Basement

STØNE  $^{\rm H1}$  is a complete solution.

All the system's elements are contained within the cabinet, resulting in lower overall dimensions and greater reliability, since all the elements are installed, adjusted and tested at the factory.



Medium-size dwellings

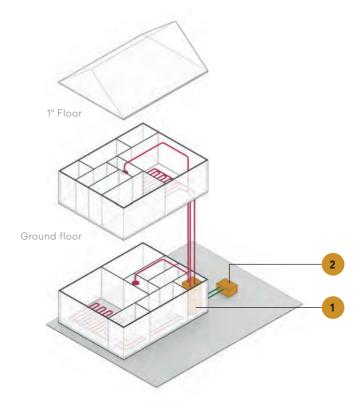


Apartments

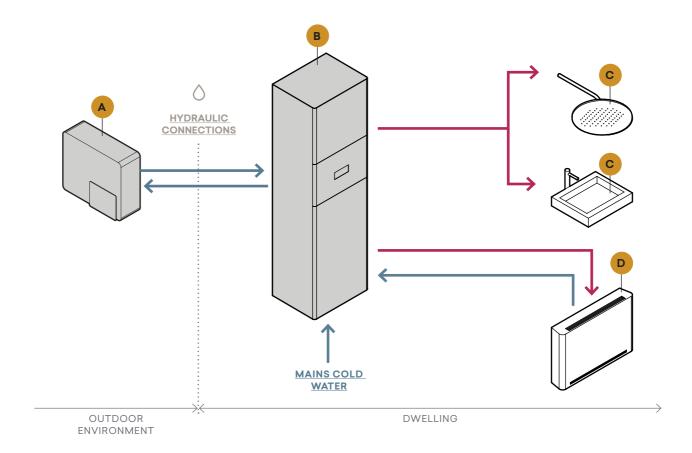
The indoor unit is suitable for being installed in any room thanks to its compact size and elegant forms.

# Example of a system

- 1. Indoor unit
- 2. Outdoor unit
  - Hydraulic connections
- Domestic hot water / heating



# Diagram of STØNE H1 system

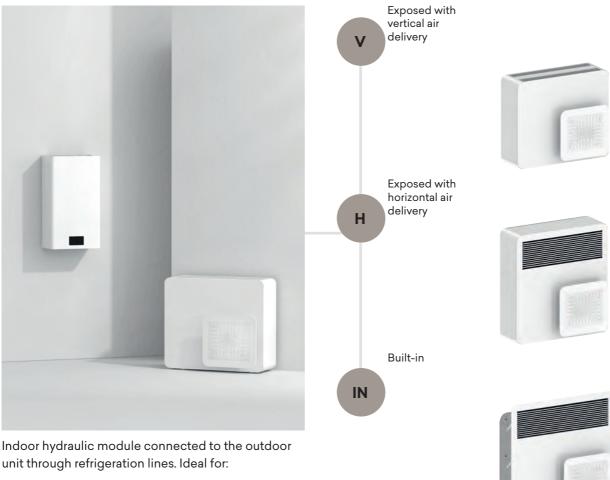


- A. Outdoor unit
- B. Indoor unit
- C. Domestic hot water supply
- D. Heating system
- Domestic hot waterCold water

# STØNE B1

Split version with refrigerant connection between the indoor and outdoor units.

#### **OUTDOOR** CONFIGURATION



unit through refrigeration lines. Ideal for:

- Offices, where there is no need to produce domestic hot water.
- · Villas, thanks to the combination with a domestic hot water storage tank suitably sized for satisfying high requirements.
- · Multi-family central heating systems with the possibility of installing multiple units in cascade mode and the availability of domestic hot water storage tanks of suitable capacity for several users.



Indoor unit with compact dimensions. Merely 30 cm deep



Extensive power range available, up to 20 kW maximum power



Remote WiFi control using **BUTLER** (optional)

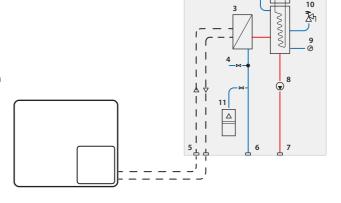


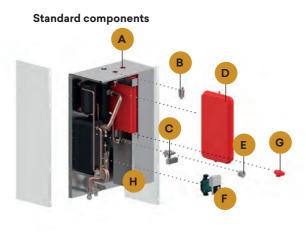
Highest energy class A+++

## Diagram of STØNE B1

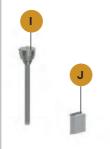


- 2. Electrical heater manifold (optional)
- 3. Plate heat exchanger
- 4. Differential pressure switch
- 5. Refrigeration connections
- 6. System return plumbing connection
- 7. System delivery plumbing connection
- 8. Pump
- 9. Pressure gauge
- 10. 3-bar safety valve
- 11. 6-litre expansion vessel
- - Refrigeration connections





#### Accessories (supplied installed in the unit)



# Accessories (supplied separately)





- A. Structure and RAL9003 covering panels
- B. Automatic relief valve
- C. Differential pressure switch
- D. 6-litre expansion tank
- E. Pressure gauge
- F. Primary circuit circulator pump
- G. 3-bar safety valve
- H. Control panel with control interface display

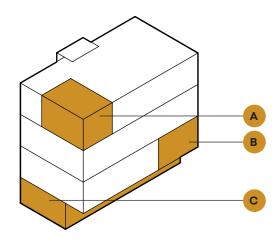
#### ACCESSORIES (SUPPLIED INSTALLED ON THE UNIT)

- 2-4-6 kW heater kit for system and DHW (4 kW limitation for single phase heat pumps)
- J. BUTLER PRO

#### ACCESSORIES (SUPPLIED SEPARATELY)

- K. 3-way DHW valve
- L. DHW preparation tank
- M. Inertial storage tank

## Installing STØNE <sup>B1</sup>



#### INDOOR UNIT POSITION

- A. Loft
- B. Laundry room
- C. Basement

STØNE B1 is a flexible solution.

Suitable accessories are supplied depending on the application.

For large-size dwellings or blocks of flats, for example, the domestic hot water requirements can be satisfied by choosing the adequate capacity for the storage tank between 200 and 2000 litres.







Offices

Large dwellings

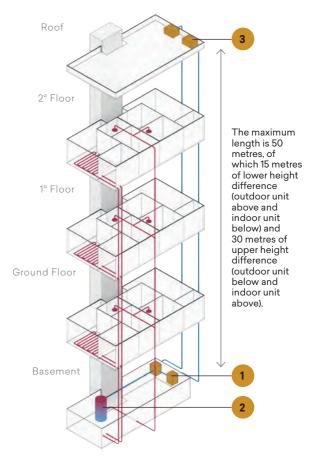
Central heating systems

STØNE <sup>B1</sup> is a heat pump that can be modular and used in cascade mode for satisfying high power levels.

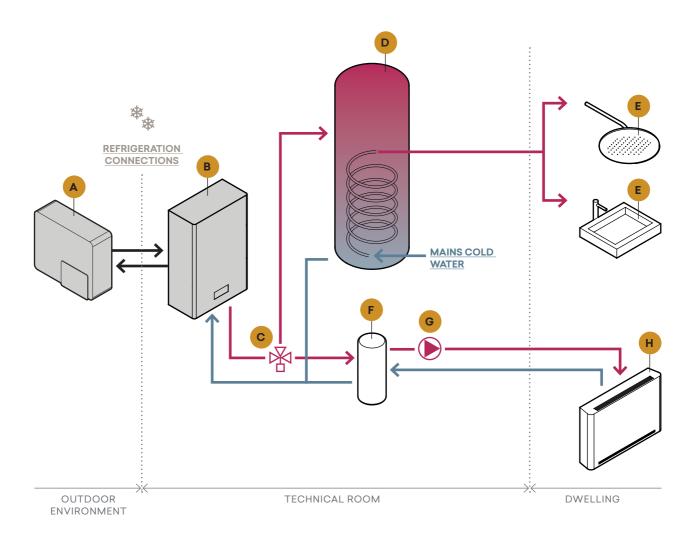
The indoor unit must be installed inside a room that can house all the system's components.

# Example of a central heating system

- 1. Indoor unit
- 2. Domestic hot water storage tank
- 3. Outdoor unit
- Refrigeration lines
- Domestic hot water / heating



# Diagram STØNE B1

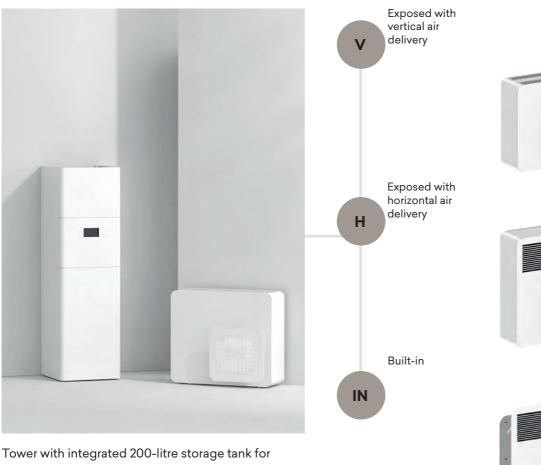


- A. Outdoor unit
- B. Indoor unit
- C. 3-way valve
- D. Thermal storage tank for instantaneous preparation of domestic hot water
- Domestic hot water point of use
- F. Hydraulic separator
  - . Secondary circuit pump
- H. Heating and cooling system
- Domestic hot waterCold water

# STØNE T1

Split version with refrigerant connection between the indoor and outdoor units.

# OUTDOOR CONFIGURATION









Tower with integrated 200-litre storage tank for domestic hot water, connected to an outdoor unit through refrigerant lines.

Ideal for houses and apartments for 4 people with normal consumption of domestic hot water. All options are factory built in and included in the indoor unit not more need of a separate technical room.



The indoor unit has all the hydraulic components integrated into it



Production of domestic hot water from –20°C to 40°C outside air

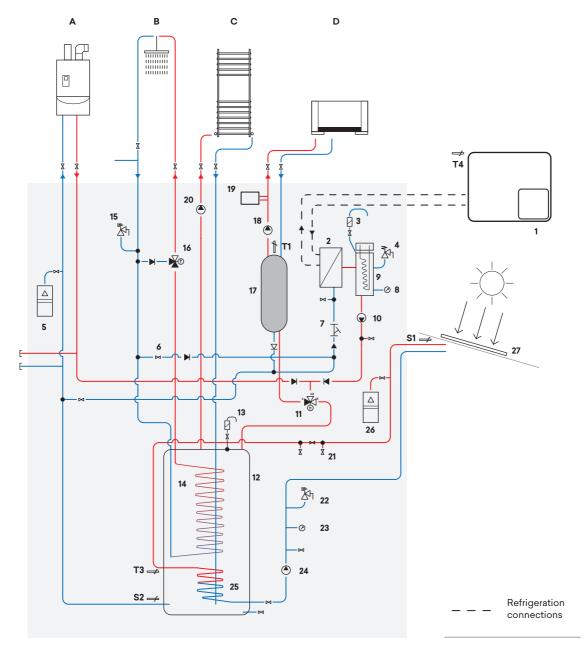


Remote WiFi control using BUTLER (optional)



Highest energy class A+++

## Diagram STØNE TI



- Boiler
- B. Domestic hot water points of use
- High temperature points of use (design radiators)
- System points of use
- Outdoor unit
- Plate heat exchanger
- 3. Automatic relief valve
- 3-bar system safety valve
- 24-litre system expansion vessel
- Filling unit
- Y-shaped filter

- System pressure gauge
- 2-4-6 kW electrical heater manifold (optional)
- Primary circuit pump
- 3-way system/DHW 11. valve
- 200-litre domestic hot water preparation storage tank
- Hot water tank relief
- DHW instantaneous heating stainless steel
- 7-bar domestic hot water safety valve

- Domestic hot water thermostatic mixer (optional)
- Hydraulic separator (optional)
- Secondary circuit pump 18. (optional)
- 20-litre inertial tank (optional)
- Heated towel rail pump (optional)
- Solar heating system fill valve (optional)
- 3-bar solar heating system safety valve

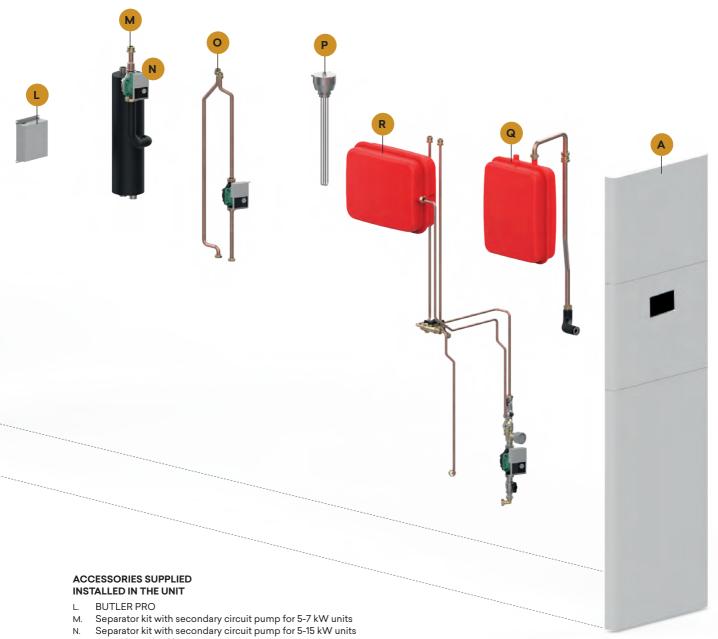
- (optional)
- Solar heating circuit pressure gauge (optional) Solar heating circuit
- pump (optional)
- Solar heating system coil 25. (optional)
- 24-litre solar heating system expansion vessel (optional)
- Solar panel



#### STØNE T1 STANDARD COMPONENTS

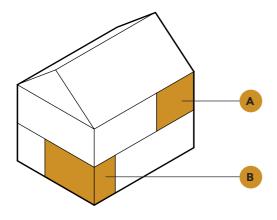
- Structure and RAL9003 covering panels A.
- Automatic relief valve B.
- 3-bar system safety valve
- 24-litre system expansion vessel System filling unit and Y-shaped filter
- Pressure gauge
- Primary circuit circulator pump 3-way DHW system valve
- 200-litre domestic hot water preparation storage tank
- 7-bar domestic hot water safety valve Control panel with control interface display

# STØNE T1 accessories supplied installed in the unit



- 2-4-6 kW heater kit for system and DHW (limitation 4 kW for single-phase heat pump)
- Solar heating kit (can be used if the inertial tank kit is not present): power pack, pump, safety valve, 24-litre expansion vessel, filling unit, system fill valve, domestic hot water thermostatic mixer
- 20-litre inertial tank kit ( as an alternative to the solar kit)

## Installing STØNE <sup>™</sup>



- A. Kitchen / Living room
- A. Laundry room / Basement

STØNE  $^{T1}$  is a complete solution.

All the system's elements are contained within the cabinet, resulting in lower overall dimensions and greater reliability, since all the elements are installed, adjusted and tested at the factory.





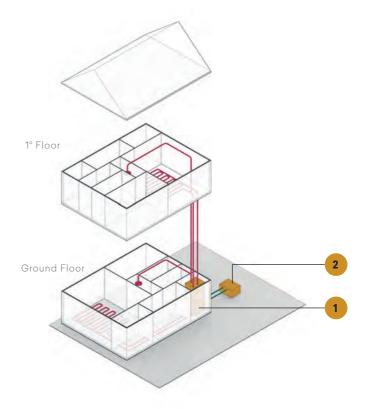
The indoor unit is suitable for being installed in any room thanks to its compact size and elegant forms.

# Example of a system

- 1. Indoor unit
- 1. Outdoor unit

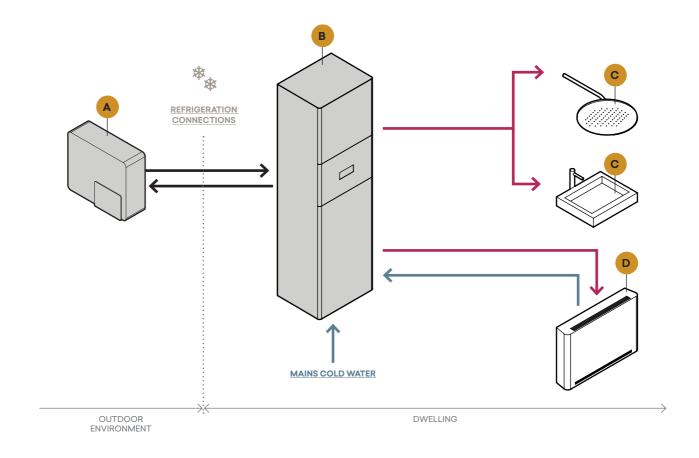
— Refrigerant

Domestic hot water / heating





# Diagram of STØNE T1 system

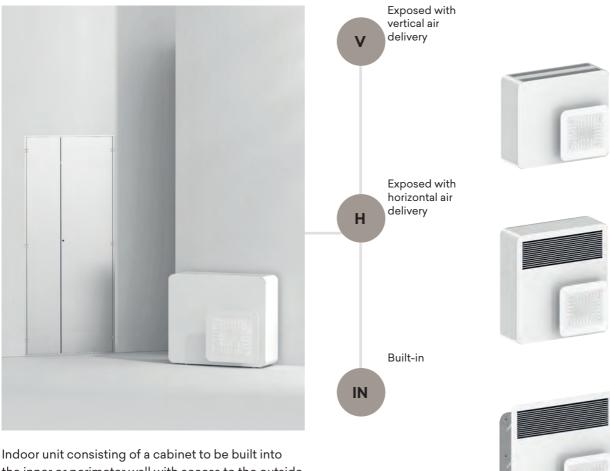


- Outdoor unit
- Indoor unit
- Domestic hot water point of use Heating system
- Domestic hot water Cold water

# STØNE C1

Split version with refrigerant connection between the outdoor and indoor units.

# OUTDOOR CONFIGURATION



Indoor unit consisting of a cabinet to be built into the inner or perimeter wall with access to the outside through, for example, a balcony, and connected to the outdoor unit through refrigerant lines.

Ideal for apartments with 3/4 people with adequate domestic hot water consumption, thanks to the 170-litre storage tank.

Modular indoor unit with various options for satisfying all requirements of an apartment.



Modularity, thanks to various optional modules for satisfying all the system configurations



Refrigerant with low GWP for the entire range



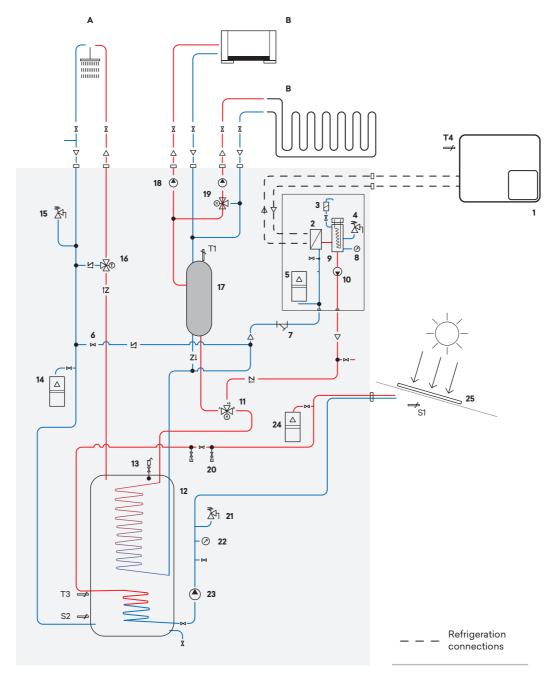
Remote WiFi control using BUTLER (optional)



Highest energy class A+++



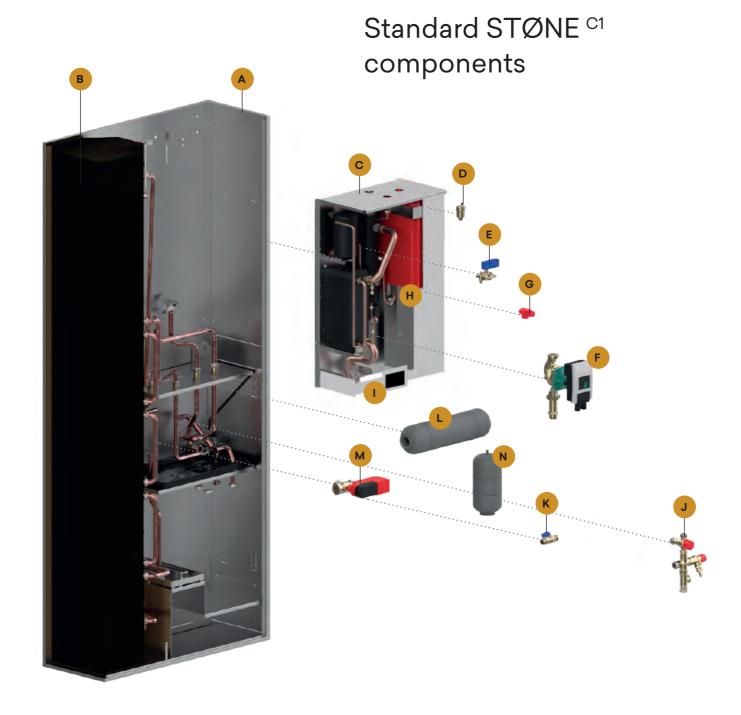
# Diagram STØNE C1



- A. Domestic hot water points of use
- B. Points of use
- 1. Outdoor unit
- 2. Plate heat exchanger
- 3. Automatic relief valve
- 4. 3-bar system safety valve
- 5. 8-litre system expansion vessel
- 6. Filling unit
- 7. Y-shaped filter

- 8. System pressure gauge
- 2-4-6 kW electrical heater manifold (optional)
- 10. Primary circuit pump
- 11. 3-way system/DHW valve
- 12. 170-litre domestic hot water storage tank
- Hot water tank relief
- 14. 4-litre expansion vessel
- 7-bar domestic hot water safety valve

- Domestic hot water thermostatic mixer
- Inertial storage tank / 30-litre hydraulic separator (optional)
- Secondary circuit pump (optional)
- Secondary circuit pump and mixing valve (optional)
- 20. Solar heating system fill valve (optional)
- 3-bar solar heating system safety valve (optional)
- 22. Solar heating circuit pressure gauge (optional)
- 3. Solar heating circuit pump (optional)
- Solar heating system expansion vessel (optional)
- 25. Solar panel



#### STANDARD COMPONENTS

- Casing with doors on the front
- 170-litre domestic hot water storage tank
- C. Hydronic module
- Automatic relief valve D.
- Differential pressure switch
- Primary circuit circulator pump 3-bar safety valve F.
- G.
- 8-litre expansion vessel
- Control panel with control interface display System filling unit and Y-shaped filter 3-way DHW system valve

- L. 7-bar domestic hot water safety valve
  M. 4-litre domestic hot water expansion vessel

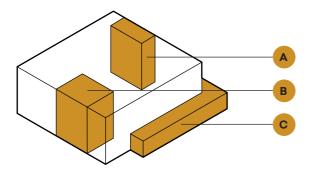
# STØNE <sup>C1</sup> accessories supplied separately



#### **ACCESSORIES KIT**

- N. 30-litre inertial storage tank
- O. 30-litre hydraulic separator kit and control board for the secondary circuit pumps kit
- P. Secondary circuit pump kit
- Q. Secondary circuit pump+mixing valve kit
- R. Solar heating kit: power pack, pump, safety valve, filling unit expansion vessel, domestic hot water thermostatic mixer
- S. 2-4-6 kW heater kit for system and DHW (limitation 4 kW for single-phase heat pump)
- T. BUTLER PRO

### Installing STØNE <sup>C1</sup>



STØNE  $^{\text{C1}}$  is a flexible solution with various modules that can be installed also at a later stage, depending in the system's configuration.





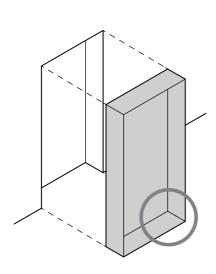
Medium-size dwellings

Apartments

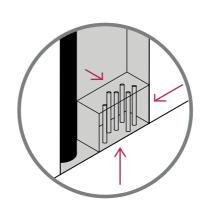
The unit's casing is fitted into the wall recess during the masonry works. The casing includes the hydraulic fittings for connection to the system. The various modules are installed subsequently, once the system has been completed.

- A. Landing of the apartment
- A. Laundry room
- A. Terrace / Balcony

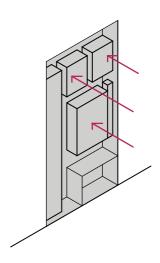
# STØNE <sup>C1</sup> installation phases



 Positioning of the casing to be recessed into the wall.



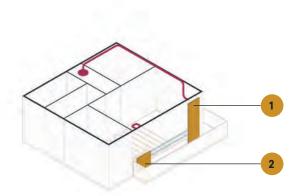
 Connections to the system from three different positions: from the rear, side and below.



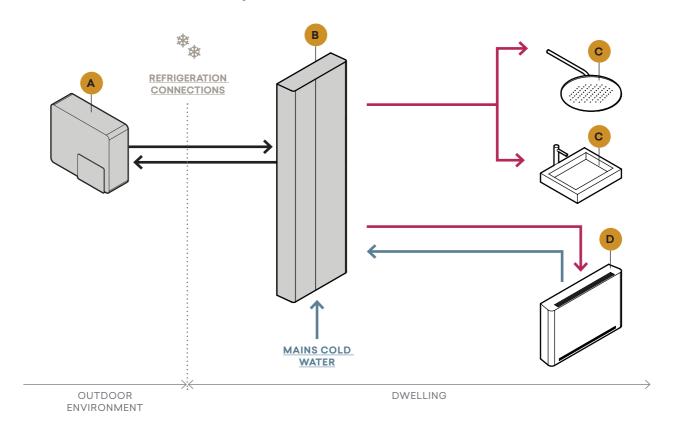
 Install the internal components and make the relative connections.

# Example of a system

- —1. Indoor unit
- Outdoor unitRefrigerantDomestic hot water / heating



# Diagram of STØNE <sup>C1</sup> system

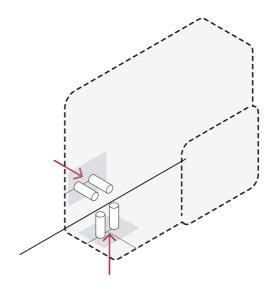


- A. Outdoor unit
- B. Indoor unit
- C. Domestic hot water point of use
- D. Heating and cooling system

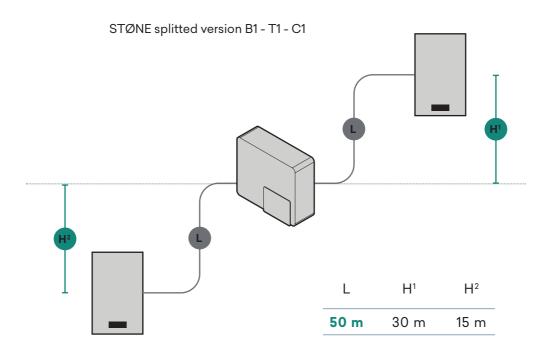
Domestic hot waterCold water

### Position of STØNE connection

The input for the electronic, hydraulic (STØNE M1 e H1) or refrigeration connections (STØNE B1, T1, C1) are on the rear or lower side of the STØNE.



### Distances between components



### Dimensions STØNE M1-H1

# STØNE exposed with vertical air delivery



			M1-H1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T		
Widht	mm	1089	1089	1343	1343	1343	1539	1539	1539	1539		
Height	mm	924	924	1089	1089	1089	1422	1422	1422	1422		
Depht	mm	321	321	348	348	348	407	407	407	407		
Net weight	Kg	120	120	134	140	140	154	154	160	160		

#### STØNE exposed with horizontal air delivery



			M1-H1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T		
Widht	mm	1089	1089	1343	1343	1343	1539	1539	1539	1539		
Height	mm	1151	1151	1316	1316	1316	1649	1649	1649	1649		
Depht	mm	321	321	348	348	348	407	407	407	407		
Net weight	Kg	125	125	140	145	145	160	160	165	165		

### STØNE built-in



			M1-H1										
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T			
Widht	mm	1089	1089	1343	1343	1343	1539	1539	1539	1539			
Height	mm	1151	1151	1316	1316	1316	1649	1649	1649	1649			
Depht	mm	333	333	358	358	358	415	415	415	415			
Net weight	Kg	110	110	120	125	125	140	140	145	145			

# Dimensions of the outdoor units STØNE <sup>B1</sup>, STØNE <sup>T1</sup>, STØNE <sup>C1</sup>

#### STØNE exposed with vertical air delivery



			B1 - T1 - C1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T		
Widht	mm	972	972	1226	1226	1226	1423	1423	1423	1423		
Height	mm	924	924	1089	1089	1089	1422	1422	1422	1422		
Depht	mm	321	321	348	348	348	407	407	407	407		
Net weight	Kg	100	100	113	119	119	133	133	139	139		

#### STØNE exposed with horizontal air delivery



		B1 - T1 - C1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T	
Widht	mm	973	973	1226	1226	1226	1423	1423	1423	1423	
Height	mm	1151	1151	1316	1316	1316	1649	1649	1649	1649	
Depht	mm	321	321	348	348	348	407	407	407	407	
Net weight	Kg	105	105	118	123,5	123,5	138	138	143,5	143,5	

#### STØNE built-in



		B1 - T1 - C1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T	
Widht	mm	1089	1089	1343	1343	1343	1539	1539	1539	1539	
Height	mm	1151	1151	1316	1316	1316	1649	1649	1649	1649	
Depht	mm	333	333	358	358	358	415	415	415	415	
Net weight	Kg	90	91	101	106	106	121	121	126	126	

# Dimensions of the indoor units STØNE <sup>B1</sup>, STØNE <sup>H1-T1</sup>, STØNE <sup>C1</sup>

#### STØNE B1



			B1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T		
Widht	mm	501	501	501	501	501	501	501	501	501		
Height	mm	825	825	825	825	825	825	825	825	825		
Depht	mm	321	321	321	321	321	321	321	321	321		
Net weight	Kg	41	41	41	41	41	43	43	43	43		

#### STØNE H1 - T1



			H1 - T1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T		
Widht	mm	600	600	600	600	600	600	600	600	600		
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000	2000		
Depht	mm	600	600	600	600	600	600	600	600	600		
Net weight	Kg	172	172	172	172	172	172	172	172	172		

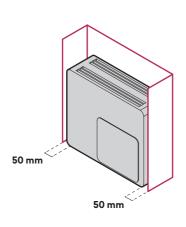
#### STØNE C1

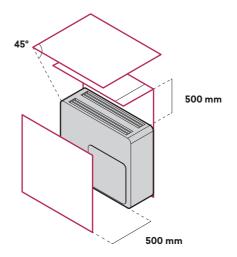


		C1									
SIZES		5M	7M	9M	11M	11T	13M	13T	15M	15T	
Widht	mm	950	950	950	950	950	950	950	950	950	
Height	mm	2201	2201	2201	2201	2201	2201	2201	2201	2201	
Depht	mm	360	360	360	360	360	360	360	360	360	
Net weight	Kg	172	172	172	172	172	172	172	172	172	

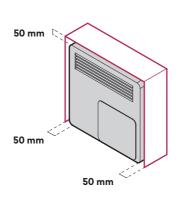
### Installation distances

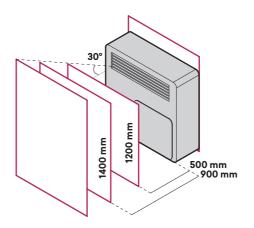
STØNE exposed with top air delivery V



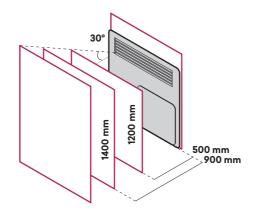


STØNE exposed with front air delivery H



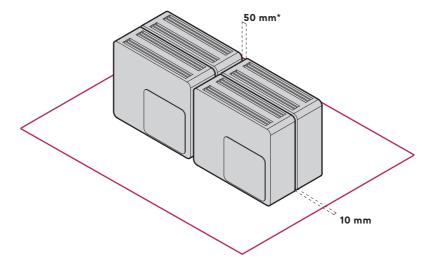


STØNE built-in IN and semi built-in PI

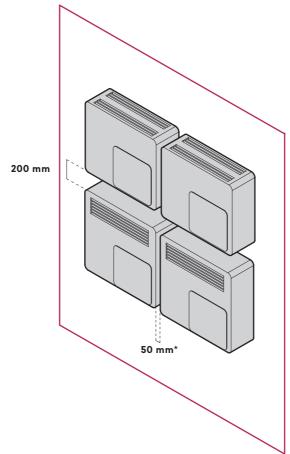


# Multiple installation

#### **Ground installation**



#### Wall installation



# **Technical datas sheets**

TECHNICAL DATAS		STØNE M1 - H1 - B1 - T1 - C1								
	u.m.	5M	7M	9М	11M	11T	13M	13T	15M	15T
HEATING PERFORMANCES (A7°C BS; W35°C)										
Max heat power (1)	kW	7,54	10,75	11,45	13,53	13,53	15,20	15,20	19,05	19,05
Nominal heat power (1)	kW	5,51	7,46	9,12	10,63	10,63	12,48	12,48	15,15	15,15
Total absorbed power (1)	kW	1,16	1,62	1,83	2,37	2,37	2,62	2,62	3,23	3,23
COP (1)		4,74	4,43	4,67	4,48	4,48	4,76	4,76	4,70	4,70
SCOP (5)		4,55	4,22	4,52	4,25	4,25	4,68	4,68	4,53	4,53
Energy efficiency class (5)		A+++	A++	A+++	A++	A++	A+++	A+++	A+++	A+++
HEATING PERFORMANCES (A-7°C BS; W35°C)										
Max heat power (2)	kW	4,85	6,45	7,05	7,88	7,88	9,05	9,05	11,42	11,42
Total absorbed power (2)	kW	1,62	2,26	2,38	2,91	2,91	2,87	2,87	3,91	3,91
COP (2)		2,98	2,85	2,95	2,70	2,70	3,15	3,15	2,92	2,92
COOLING PERFORMANCES (A35°C; W18°C)										
Nominal cooling power (3)	kW	9,20	11,55	13,05	14,35	14,35	16,90	16,90	20,50	20,50
Nominal cooling power (3)	kW	6,90	9,50	10,50	12,15	12,15	13,05	13,05	17,45	17,45
Total absorbed power (3)	kW	1,59	2,25	2,44	2,87	2,87	2,96	2,96	4,04	4,04
EER (3)		4,33	4,23	4,31	4,23	4,23	4,41	4,41	4,32	4,32
	'							1		
COOLING PERFORMANCES (A35°C; W7°C)										
Max cooling power (4)	kW	6,70	8,85	9,50	11,15	11,15	12,45	12,45	15,90	15,90
Nominal cooling power (4)	kW	4,19	6,44	7,78	8,75	8,75	9,98	9,98	12,04	12,04
Total absorbed power (4)	kW	1,22	2,00	2,33	2,65	2,65	2,99	2,99	3,71	3,71
EER (4)		3,43	3,22	3,34	3,31	3,31	3,34	3,34	3,24	3,24
HYDRAULIC DATA										
Nominal flow rate in heating (A7/W35 °C) (1)	l/min	15,9	21,5	26,3	30,6	30,6	35,9	35,9	43,6	43,6
Nominal flow rate in cooling (A35/W7 °C) (4)	l/min	11,7	18,6	22,4	25,3	25,3	28,9	28,9	34,9	34,9
M1-H1-B1 available pressure primary circuit	kPa	71	60	54	70	70	60	60	58	58
T1-C1 available pressure primary circuit	kPa	71	60	54	45	45	40	40	43	43
Diameter of hydraulic fittings	" GAS					1"				
M1 expansion vessel capacity	L	2	2	4	4	4	6	6	6	6
B1 expansion vessel capacity	L					6				
H1-T1-C1 expansion vessel capacity	L					24				
Minimum system water content	L	20	25	30	35	35	40	40	50	50
H1-T1 tank capacity	L					200				
C1 tank capacity	L					170				



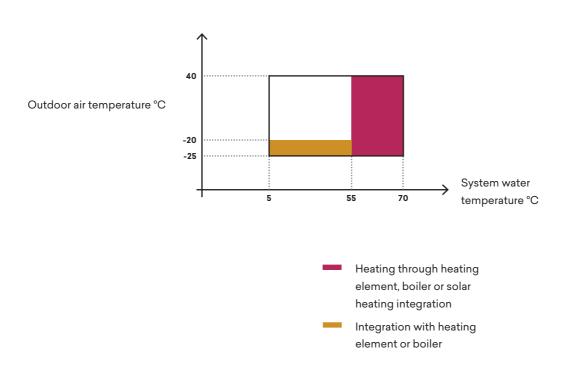
TECHNICAL DATAS		STØNE M1 - H1 - B1 - T1 - C1								
	u.m.	5M	7M	9M	11M	11T	13M	13T	15M	15T
REFRIGERATOR FITTINGS (versioni B1 - T1 - C1)	" SAE					5/8				
Aspiration	"SAE					3/8				
Liquid										
REFRIGERATION CIRCUIT					Twin R	otary DC	Inverter			
Compressor	kg					R32				
Refrigerant charge R32 M1	kg	1,8	1,8	2,8	2,8	2,8	3,8	3,8	3,8	3,8
Refrigerant charge R32 B1-T1-C1	kg	1,8	1,8	2,7	2,7	2,7	3,8	3,8	3,8	3,8
SOUND DATA										
Outdoor unit sound pressure Cooling/Heating 50% of the load (6)	dB(A)	30	30	30	31	31	31	31	31	31
Sound pressure external Cooling/Heating unit (7)	dB(A)	48	49	50	52	52	50	50	54	54
Sound pressure internal unit (7)	dB(A)	45	47	48	49	49	47	47	51	51
ELECTRICAL DATA	dB(A)	57	58	59	61	61	59	59	63	63
Power Supply	dB(A)	54	56	57	58	58	56	56	60	60
Max power input										
Max current absorbed										
Indoor unit protection degree	V/50Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	230/1/50	400/3/50	230/1/50	400/3/5
Degree of protection outdoor unit	kW	2,9	3,8	4,5	5,3	5,3	5,9	5,9	7,3	7,3
	Α	14,00 18,00 21,30 25,00 8,50 28,00 9,30 34,50 11,50								
						IPX2				
						IPX4				

- (1) In/Out. water T 30/35 °C; Outside air T 7 °C; R.H. 85%
- (2) In/Out. water T 30/35 °C; Outside air T -7 °C
- (3) In/Out. water T 23/18 °C; Outside air T 35 °C
- (4) In/Out. water T 12/7  $^{\circ}$ C; Outside air T 35  $^{\circ}$ C
- (5) Seasonal efficiency according to UNI 14825. Energy Efficiency Class referred to the climatic profile Average for flow temperature of 35 °C in compliance with regu lation 811/2013
- (6) Sound pressure at a distance of 1 metre in open field with compressor in 50% load modulation
- (7) Sound pressure at a distance of 1 metre in open field at rated power

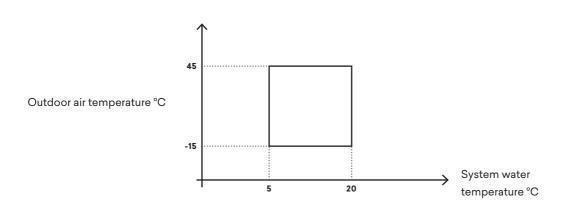
Rated performances as per the UNI EN 14511 standard

The performance data indicated may be subject to change

# Heating and domestic hot water



# Cooling





# BUTLER PRO, advanced control of the system

The BUTLER PRO web server is the system that INNOVA has developed to control an entire winter and summer air conditioning system from a local and remote network. BUTLER PRO allows you to connect the heat pump, controlled mechanical ventilation system, fan coils and all the other system elements via a serial connection. BUTLER PRO is complete, simple and intuitive at the same time: you can configure a weekly calendar with time zones, create specific zones and change the settings so your home is at the right comfort level for your needs.

#### **TWO VERSIONS**

#### BUTLER PRO

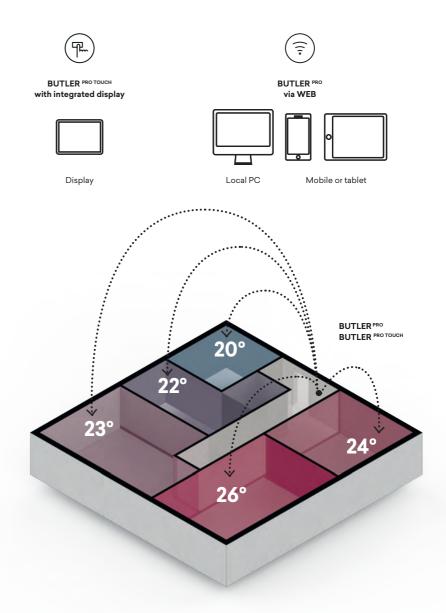
settings and display via smartphone / tablet / computer only with internet connection. Installation on a 35 mm DIN rail in the electrical cabinet of the heat pump or in the electrical cabinet of the house.

#### BUTLER PRO TOUCH

settings and display via the integrated 10" touch screen.
Can be connected to the internet remotely via smartphone / tablet / computer.
Recessed wall installation.
The pre-installation box is supplied separately.

#### **ROOM-BASED CONTROL**

You can control each room with BUTLER PRO by configuring a weekly calendar with time zones, creating settings for each room or area, modifying the settings so your home is at just the right comfort level for your needs.





#### **MAIN FUNCTIONS**

Supervision and control through local network or remotely

The system can be managed through a smartphone, tablet or computer

- Summer and winter personalised programming

  Different programmes can be set for each season
- Setting of three temperature levels on the INNOVA fan coil network

For each room or zone it is possible to select 3 different work temperatures, which can be modified at any time

- Weekly time programming
  In each room it is possible to set different operating times
- Etwork interface like the one on PCs
   Once the bus network between the heat pump and the fan coils has been made, the connection with the Web server is the same as that of a normal computer
- · Remote assistance

With the user's consent, BUTLER can automatically access the INNOVA cloud for diagnostics and assistance in case of need

- A WEEKLY SCHEDULING
- B DOMESTIC HOT WATER SETTINGS





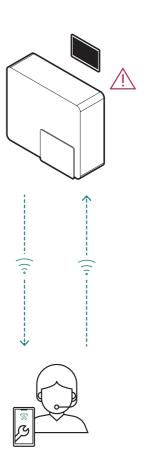




### Remote assistance

With the user's consent, BUTLER can automatically access the INNOVA cloud for diagnostics and assistance in case of need. Thanks to the Internet connection, it is possible to verify remotely the correct operation of INNOVA products connected to the BUTLER.

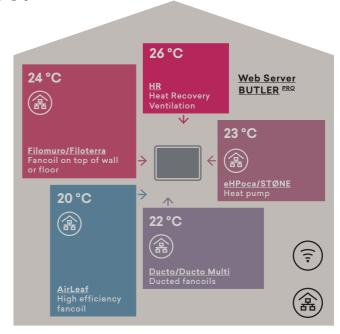
Any operating anomalies can be transmitted automatically from the BUTLER to the assistance centre which can in-tervene by modifying the functional parameters or decide to physically intervene by providing a quick and timely service.



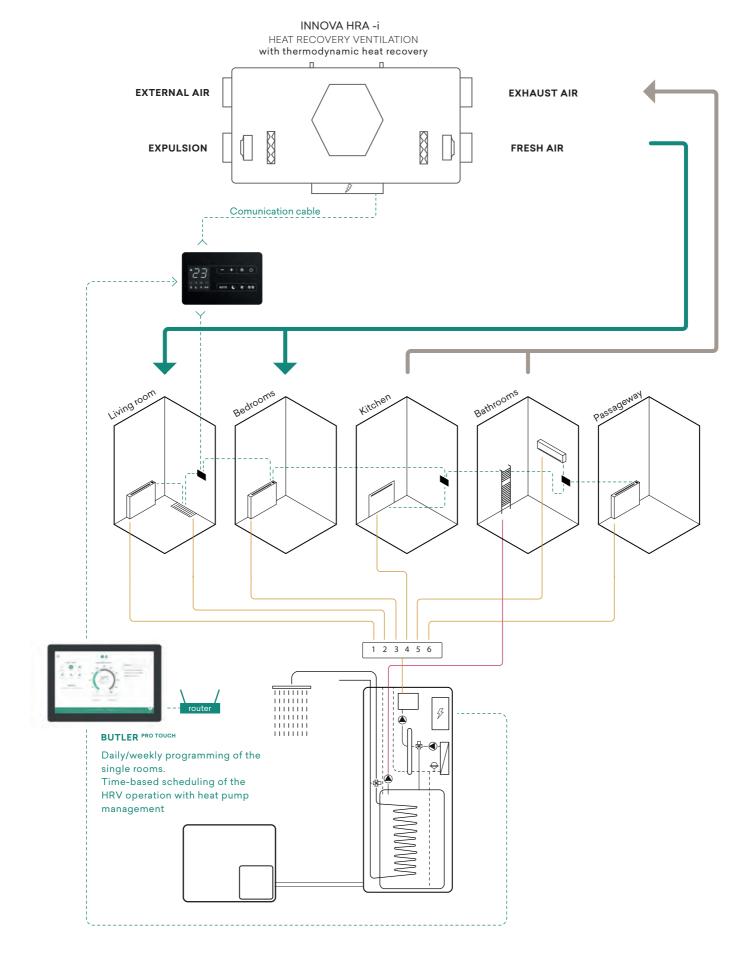


Total control

The advantage of choosing a complete INNOVA system is that, for any need, we are the only reference both for routine maintenance and for assistance purposes. A complete and high quality service.







# What is a heat pump?

A refrigerator does not cool: it removes heat from a low-temperature environment and transfers it to a warmer environment.

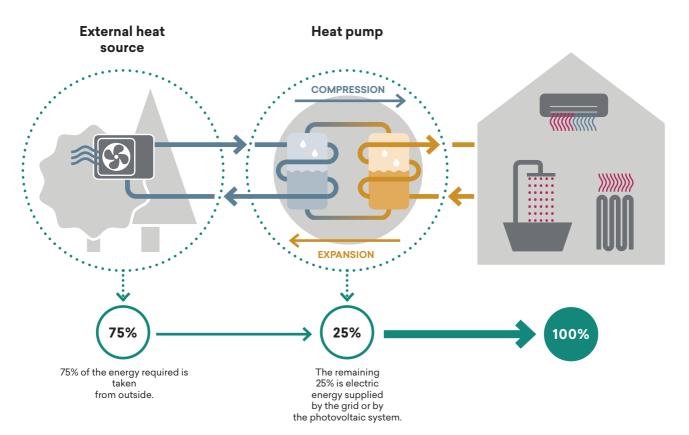
A heat pump works with the same principle: it removes heat from a cool outdoor environment and transfers it to a warmer indoor environment.

The cycle can be inverted during summer, as indoor environments can be cooled by releasing the heat towards the outside.

This process uses thermal energy already present in nature.

A heat pump needs electricity to activate but it produces heat by absorbing energy from outside sources: air, water or, in the case of geothermal systems, the ground.

If the electricity is generated by a photovoltaic system or by wind turbines, the thermal energy produced is entirely free and renewable.





# Comparison between a boiler and a heat pump

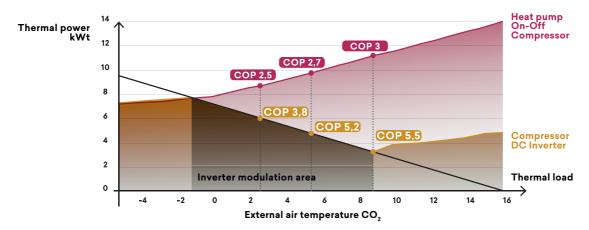
ENERGY REQUIRED	ENERGY PRODUCED	ENERGY PRODUCED
	BY A BOILER	BY THE HEAT PUMP

HEATING	10 kWh	1,75 €	0,90 €	-50 %
DOMESTIC HOT WATER (DHW)	1,3*	0,23 €	0,14 €	-40 %
RENEWABLE ENERGY		0	4,6 kWh	100 %
EMISSIONS		2,68 kg co <sub>2</sub>	1,25 kg** co2	-50 %

 $<sup>^{\</sup>star}$  daily energy requirements of a person = 50 litres of hot water at 40°C  $^{\star\star}$  indirect CO $_2$  emissions produced by the national electricity production system 1 kWhe = 0.4332 kg of CO $_2$ 



# Efficiency of a Heat pump Inverter <u>vs</u> on/off



COP: represents the power supplied and the power absorbed

The requirement of a building is maximum at the design temperature and decreases linearly as the outside temperature increases.

The heat pump with inverter compressor adjusts the power supplied on the basis of the building's requirements.

The higher the outside temperature the lower the power supplied and, consequently, the higher the efficiency.

The heat pump with on/off compressor always works at 100% and, the higher the outside temperature the higher the power generated, conversely to the building's requirements. In these conditions, to satisfy the requested load the compressor works with repeated stops and starts, which sensibly reduce its efficiency.



### **Energy saving**

The INNOVA DC Inverter heat pumps ensure considerable energy saving both during heating and when producing domestic hot water, thanks to their high SCOP (Seasonal Coefficient of Performance). Compared to a boiler, the heating cost for the entire winter season can be 30/50% lower.





STØNE semi built-in





STØNE vertical air delivery



STØNE built-in



STØNE vertical air delivery



STØNE built-in



STØNE built-in



STØNE horizontal air delivery

#### **CREDITS**

Product Designer Luca Papini Art Direction & Graphic Federico Castelli Photography Ottavio Tomasini Special thanks to: Akira Nishikawa

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STØNE vertical air delivery





Ideas that become reality.







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