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**KRONOTERM** 1976  
HEAT PUMPS

—  
**DATA SHEET**



—  
**ADAPT 2**  
*Heat pump*  
*ADAPT System*

Data Sheet – ADAPT 2 - EN / 98-25-46-220241-00 / 01\_2026

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**TABLE OF CONTENTS**

	DESCRIPTION .....	4
	NOMENCLATURE.....	6
	CONFIGURATION.....	7
	ADAPT 2 M, L .....	8
	ADAPT 2 S.....	10
	ADAPT 2 ADDITIONAL EQUIPMENT .....	12
	Sample installation diagram .....	12
	Equipment for operation with anti-freeze fluid.....	14
	ADAPT 2 configuration matrix .....	14
	KSM 1.0 REGULATION SYSTEM.....	15
<b>KSM 1.0</b>	KSM+ EXPANSION REGULATOR .....	15
	CONTROL EQUIPMENT .....	16
	CLOUD.KRONOTERM .....	17
	KSM 1.0 REGULATION SYSTEM ADDITIONAL EQUIPMENT.....	18
	HYDRO C2 .....	19
	HYDRO S2 .....	22
	WR KSM 2.....	24
	WR KSM+ .....	24
	WR KSM C.....	25
	HYDRO C2 ADDITIONAL EQUIPMENT .....	26
	HYDRO S2 ADDITIONAL EQUIPMENT.....	26
	KSM 2.0 REGULATION SYSTEM.....	27
	PORTAL.KRONOTERM.....	29
	CONTROL.....	30
<b>KSM 2.0</b>	HMI .....	30
	MOBILE APP .....	30
	KT-3.....	31
	KSM 2.0 REGULATION SYSTEM ADDITIONAL EQUIPMENT .....	32
	HYDRO C3.....	33
	HYDRO S3 .....	36
	HYDRO C3 ADDITIONAL EQUIPMENT .....	38
	HYDRO S3 ADDITIONAL EQUIPMENT.....	38
	CORA .....	39
	CORA+ .....	39
	* HEATING SYSTEM ADDITIONAL EQUIPMENT WITH KSM 1.0 .....	40
	HEATING SYSTEM ADDITIONAL EQUIPMENT WITH KSM 2.0 .....	41
	HEATING SYSTEM ADDITIONAL EQUIPMENT (KSM 1.0 AND KSM 2.0) .....	42
	TECHNICAL DATA - HEAT PUMP.....	45
TECHNICAL DATA - INDOOR UNIT WITH KSM 1.0 .....	49	
TECHNICAL DATA - INDOOR UNIT WITH KSM 2.0 .....	52	
SOUND .....	54	
NOISE DIAGRAM .....	55	
CAPACITY CURVES.....	56	
OPERATING ENVELOPE .....	58	
SYSTEM DIAGRAMS & PLANNING RESOURCES.....	59	

## WELCOME TO THE KRONOTERM FAMILY!

*This data sheet describes the technical features of the ADAPT 2 heat pump system.*

## DESCRIPTION

The KRONOTERM ADAPT 2 heat pump, together with the HYDRO indoor unit, forms a fully integrated and flexible heating system that can be configured on both the refrigerant and hydraulic sides to meet the building's specific heating needs. The outdoor unit, a compact air-to-water heat pump, stands out for its exceptionally quiet operation and premium design.

ADAPT 2 heat pump is hermetically sealed and factory tested outdoor unit that uses a simple water source to transfer energy to the indoor unit. ADAPT 2 heat pump is distinguished by cutting-edge technology, specifications, and energy efficiency.

### Usage

Heating, cooling, and preparation of domestic hot water.

### Technology

- **MyDesign** – the tailorable appearance of the outdoor ADAPT 2 unit, gives customers plenty of choices for their favourite colour and material.
- **MinimalDesign** – Designed for enduring aesthetics and minimal alteration to the overall spatial appearance.
- **NMS™ – Noise Management System** – combines a large evaporator with minimal air resistance, a large variable-speed fan, special materials to dampen noise and vibration, premium construction, and a specially developed control logic to reduce noise to incredibly low levels.
- **CWP™ – Complete Weather Protection** – protects the evaporator's surface and protective guards against climatic conditions while ensuring a constant and appropriate flow of air, protection against indirect precipitation or flash freezes, small amounts of defrosting, higher efficiency, and more reliable operation. Their exceptional construction and advantageous height give ADAPT 2 heat pumps the right amount of airflow through the evaporator even during snowstorms.
- **IAH™ – Intelligent Adaptive Heating** – provides perfect adaptability of heating power based on the building's needs. Special control algorithms adjust the water temperature in the heating system according to the desired indoor temperature, current indoor temperature, and current outdoor temperature. The building's response dictates the power level at which the ADAPT 2 heat pump operates. This exceptional flexibility ensures that the device operates almost continuously, moderately, quietly, and comfortably.
- **HTR™ – High Temperature Reliability** – achieves supply water temperatures of up to 75 °C and maintains 60 °C even at extreme outdoor temperatures of -25 °C.
- **NZF™ – Near Zero Frost** – the evaporator's extremely large surface area means that it has very low specific load. This results in reduced extraction of humidity from the air and slower buildup of frost. Less frost means less defrosting, and therefore greater effective heating capacity for the heat pump and ultimately increased efficiency for the whole system.
- **CDHRS™ – Compressor Drive Heat Recovery System** – specially designed cooling and waste heat recovery system of the electronic drive of the compressor makes it possible to exceed 96% of its operating efficiency.
- **ECL™ – Enhanced Compressor Lifetime** – an advanced technology from industrial systems that keeps lubricant where it matters most – in the compressor – while continuously monitoring and protecting operation within safe limits.
- **CCP™ – Cool Comfort Plus** – active water cooling up to +10 °C as standard.
- **MPC™ – Micro-Power Cooling** – enables ultra-precise cooling modulation down to just 1 kW. This high level of control eliminates the need for large buffer tanks while maintaining a stable and finely tuned indoor climate even during low-demand summer days.
- **MSR™ – Multi-Source Ready** – enables seamless integration with solar PV systems and smart grids. The system automatically prioritizes the use of surplus self-generated electricity to store heat, acting as a thermal battery to maximize energy independence and minimize operating costs.

- **EcoThrive™** – Achieving high efficiency with lower operating costs, improved energy balance, and a sustainable design centred on resilience, durability, and modularity for enduring benefits to both the environment and our communities.
- **MSH™ – Modular Step Heating** – features an integrated three-stage electric heater for precise power modulation. Unlike standard single-stage backups, this system activates only the exact amount of additional energy required during extreme conditions or defrost cycles, preventing power grid spikes and ensuring maximum energy efficiency.
- **Low GWP** – the heat pump has a low environmental impact, using eco-friendly, non-toxic R290 refrigerant with a GWP100 of 0,02.
- **IGS™ – Integrated Gas Separation** – a specialized safety system designed for R290 applications. It automatically removes any refrigerant from the water circuit in the unlikely event of a leak, ensuring maximum safety for indoor installations and full compliance with the strictest safety standards.
- **KSM 2.0™** – KSM 2.0 is a regulation ecosystem that enables unprecedented heat pump system functionality. From heat pump management, to heating, cooling, DHW, pool, solar, PV, loops, zone heating and much more all while connecting everything into a coherent and smart system to maximize system energy efficiency.
- **SHC™ – Smart Home Connectivity** – provides native support for Apple HomeKit and Google Home. This enables effortless voice control and the inclusion of the heat pump into automated home scenes for a fully connected living experience.
- **LRC™ – LoRa Room Control** – utilizes advanced long-range wireless technology for precise temperature management in individual rooms. Unlike standard sensors, LoRa technology ensures a stable signal through thick walls and multiple floors without relying on Wi-Fi, while offering exceptional battery life and decentralized control for maximum energy savings.
- **K-Link™ – Unified Digital Ecosystem** – connects users and professionals through the KRONOTERM Link and Link Pro applications. It provides full remote control, advanced energy management, and proactive diagnostics, ensuring the system is always optimized via the PORTAL.KRONOTERM.
- **RASS™ – Remote Administrator System** – remote diagnostics system that can identify malfunctions. Enables remote software updates for flawless operation of the heat pumps.
- **BBS™ – Building Blocks System** – features a modular design with standardized interfaces and dimensions.
- **CMS™ – Cascade Management System** enables control and management of all heat pumps connected in the cascade solution via a single interface.
- **HiveMind™ – “The power of many”** – Bringing multiple heat pumps together into one intelligent system. Working as a coordinated network, they adapt to the building’s needs — operating as a single powerful unit or simultaneously delivering heating and cooling. If one unit fails, the others seamlessly take over. The result is reliable, flexible comfort that keeps everything running smoothly.

NOTES

KSM 1.0

KSM 2.0\*

KSM 1.0 is available today, while KSM 2.0 is planned for release in Q4 2026, with availability expected from October 2026 onward. Throughout the document, all content related to KSM 2.0 has been clearly marked with a “KSM 2.0” tab.

## NOMENCLATURE

### ADAPT 2 M / HK 3F

<b>ADAPT</b>	Heat pump family designation
<b>2</b>	Device generation
<b>S</b>	Range of heat output: 1,8 – 8 kW <i>(coming in 2026)</i>
<b>M</b>	Range of heat output: 3 – 13 kW
<b>L</b>	Range of heat output: 5 – 18 kW
<b>HK</b>	Heating and cooling
<b>1F</b>	Single-phase electrical connection 230 V
<b>3F</b>	Three-phase electrical connection 3N 400 V

### WR KSM 2

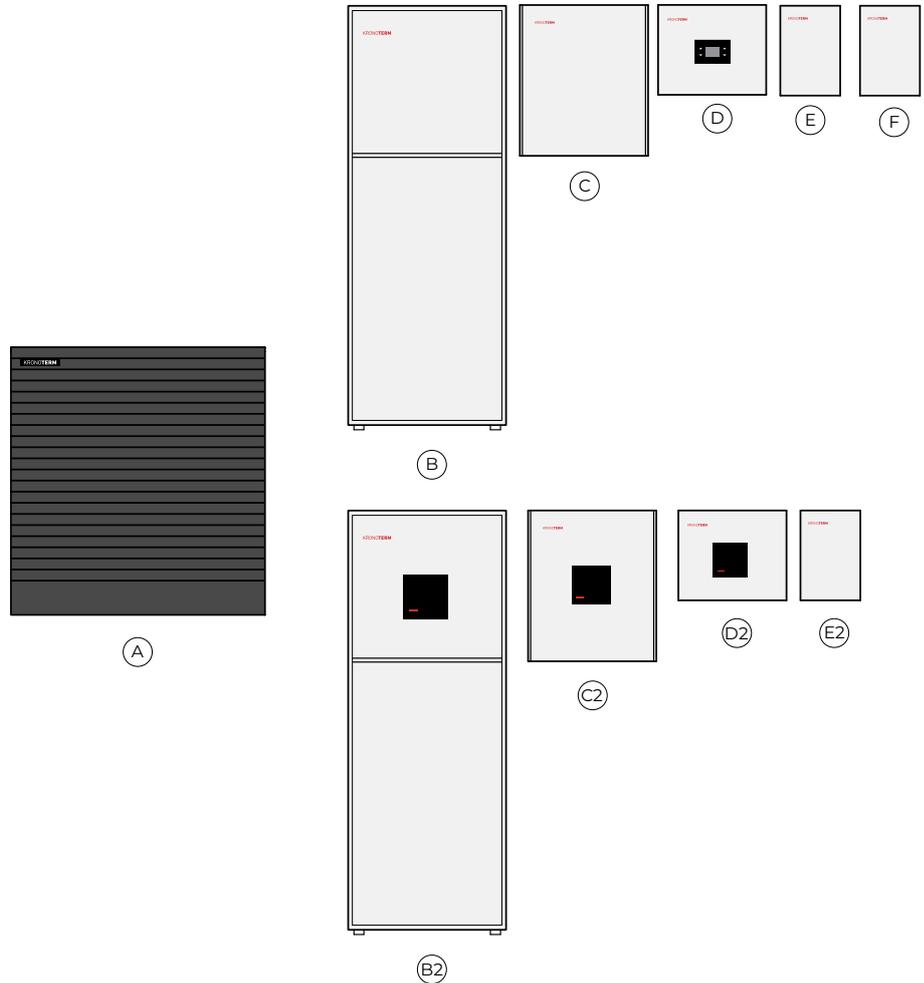
<b>WR KSM</b>	The core indoor wall mounted control unit for heat pump and heating system management
<b>2</b>	Device generation
<b>+</b>	Wall-mounted expansion indoor control unit
<b>C</b>	Wall-mounted control unit for additional heat pump in cascade

### CORA

<b>CORA</b>	The core indoor wall mounted control unit for heat pump and heating system management
<b>+</b>	Wall-mounted expansion indoor control unit

### HYDRO C2 / HK UF E A2

<b>HYDRO</b>	Indoor hydraulic unit
<b>S</b>	Wall-mounted hydraulic unit
<b>C</b>	Hydraulic unit with integrated DHW tank
<b>2/3</b>	Device generation
<b>HK</b>	Heating and cooling
<b>UF</b>	Three-phase 3N 400V and single-phase 230 V electrical connection
<b>E</b>	Integrated 3-stage backup electric heater
<b>A</b>	Variant without DHW expansion vessel
<b>B</b>	Variant with thermal safety valve
<b>-/1</b>	Version, compatible with: ADAPT 0312 ADAPT 0416 ADAPT 0724
<b>2</b>	Version, compatible with: ADAPT 2 S ADAPT 2 M ADAPT 2 L



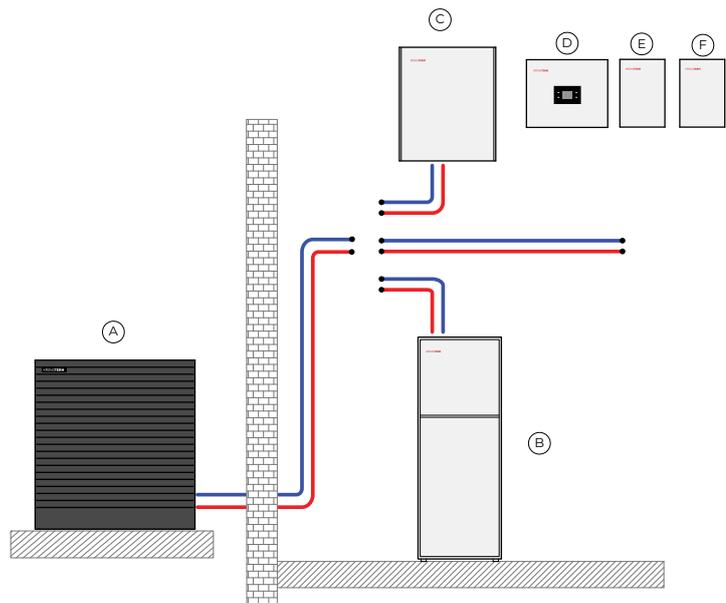
### Legend

- A** ADAPT 2 S heat pump *(coming in 2026)*  
ADAPT 2 M heat pump  
ADAPT 2 L heat pump
- B** HYDRO C2 hydraulic unit with DHW tank
- C** HYDRO S2 wall-mounted hydraulic unit
- D** WR KSM 2 wall-mounted control unit
- E** WR KSM+ wall-mounted expansion control unit
- F** WR KSM C - wall-mounted unit for activating an additional heat pump in cascade
- B2** HYDRO C3 hydraulic unit with DHW tank
- C2** HYDRO S3 wall-mounted hydraulic unit
- D2** CORA wall-mounted control unit
- E2** CORA+ wall-mounted expansion control unit

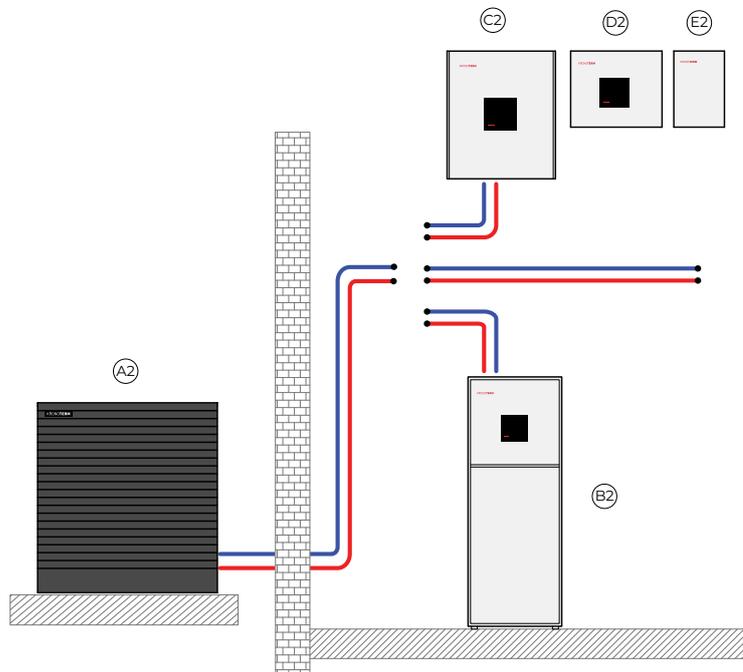
## CONFIGURATION

ADAPT 2 heat pumps are combined with the HYDRO C2, HYDRO S2 and WR KSM 2 indoor units.

Description	Key	Indoor unit name	ADAPT 2 S	ADAPT 2 M	ADAPT 2 L
Hydraulic unit with DHW tank	B	HYDRO C2	✓	✓	
Wall-mounted hydraulic unit	C	HYDRO S2	✓	✓	✓
Wall-mounted control unit	D	WR KSM 2	✓	✓	✓
Wall-mounted expansion control unit	E	WR KSM +	✓	✓	✓
Wall-mounted unit for activating an additional heat pump in cascade	F	WR KSM C	✓	✓	✓



Description	Key	Indoor unit name	ADAPT 2 S	ADAPT 2 M	ADAPT 2 L
Hydraulic unit with DHW tank	B2	HYDRO C3	✓	✓	
Wall-mounted hydraulic unit	C2	HYDRO S3	✓	✓	✓
Wall-mounted control unit	D2	CORA	✓	✓	✓
Wall-mounted expansion control unit	E2	CORA+	✓	✓	✓
Wall-mounted unit for activating an additional heat pump in cascade	D2	part of CORA	✓	✓	✓



**ADAPT 2 M, L**

**Version**

Compact air/water heat pump

**Model mark**

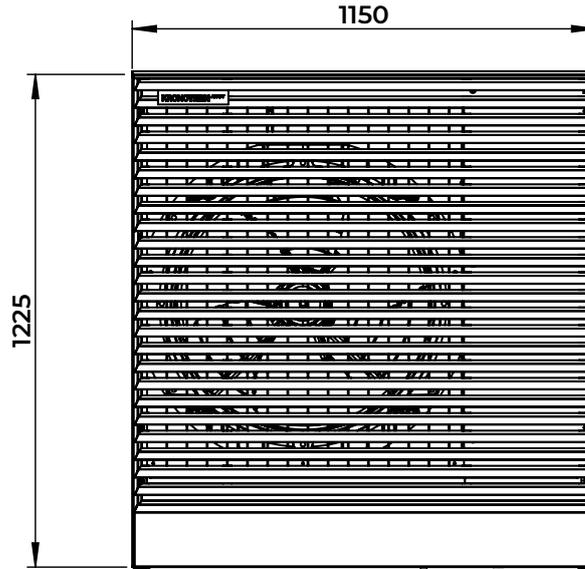
ADAPT 2 M / HK 1F  
ADAPT 2 M / HK 3F  
ADAPT 2 L / HK 3F

**Description and dimensions**

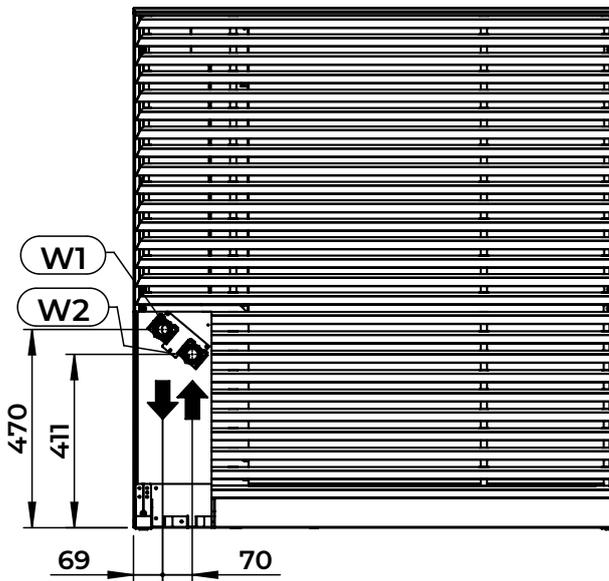
- Powder coated, galvanised, steel sheet metal housing
- Standard colours: NERO, OLIO, ANTHRACITE, and NEBBIA
- Optional: other colours, stainless steel (INOX), or CORTEN steel
- Evaporator and fan protected against the weather
- Bionically designed fan wings for minimum noise emissions
- Adjustable heat output
- Adaptive heating
- Integrated circulation pump
- Large surface area evaporator with enlarged fin spacing for reduced frequency of defrosting
- Special acoustically insulated housing
- Underground and above-ground connection possible

KSM 1.0

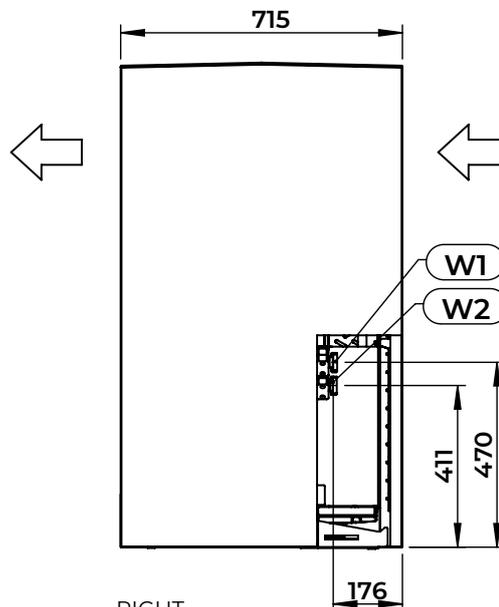
KSM 2.0



FRONT



BACK



RIGHT

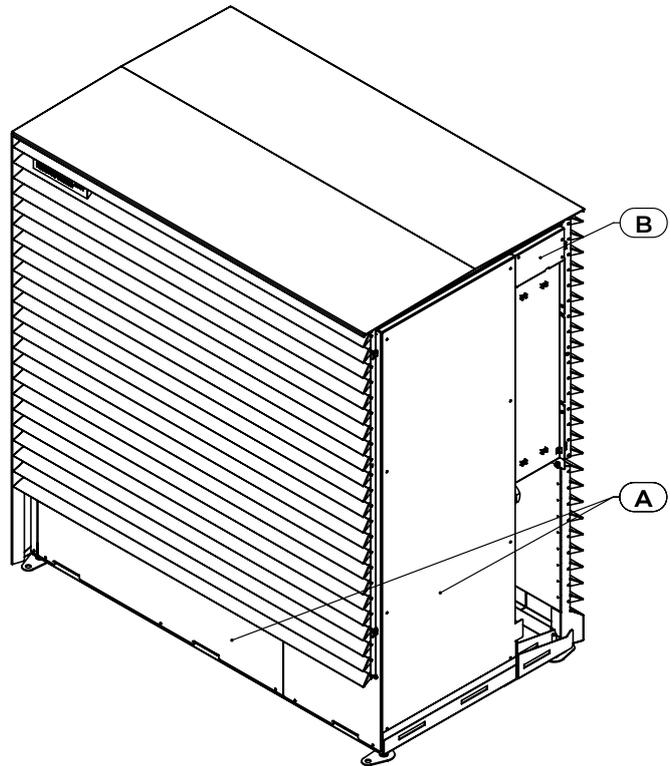
**Legend**

- W1 Outlet – G 1 ¼" IT
- W2 Inlet – G 1 ¼" IT
- Water flow direction
- Air flow direction

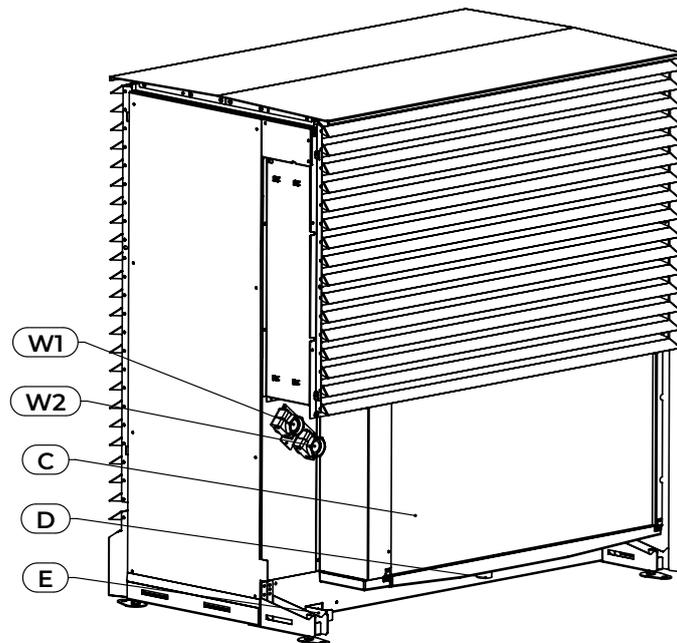
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

- A** Refrigerant system module:
- Compressor
  - Inverter drive for compressor
  - Expansion valves
  - Filter dryer
  - Receiver
  - Oil separator
  - 4-way valve
  - High-pressure switch
  - High-pressure sensor
  - Low-pressure sensor
  - Temperature sensors
  - Gas separator with safety valve
  - Circulation pump
  - Flow sensor
- B** Electrical power and communication connection to the indoor unit
- C** Evaporator
- D** Condensate drain
- E** Transport protection



FRONT



REAR RIGHT

### Legend

- W1** Outlet – G 1 ¼" IT
- W2** Inlet – G 1 ¼" IT

**ADAPT 2 S**

**Version**

Compact air/water heat pump

**Model mark**

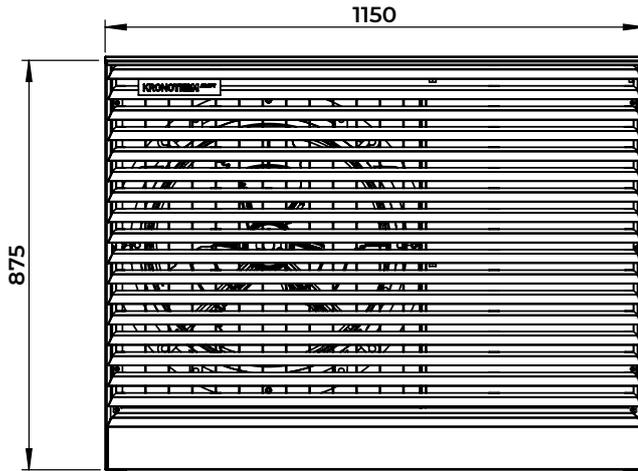
ADAPT 2 S / HK 1F (coming in 2026)

**Description and dimensions**

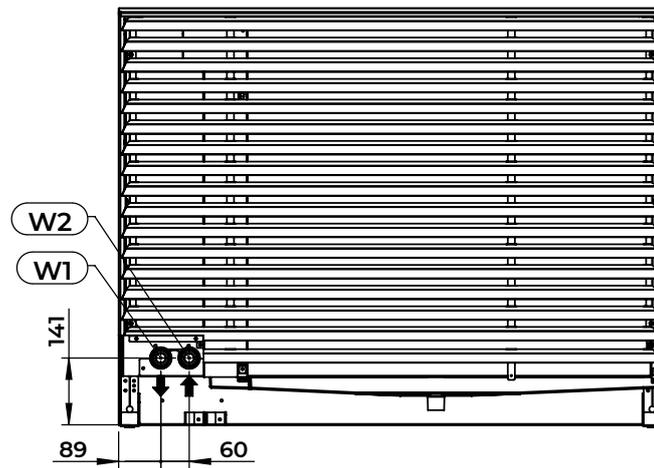
- Powder coated, galvanised, steel sheet metal housing
- Standard colours: NERO, OLIO, ANTHRACITE, and NEBBIA
- Optional: other colours, stainless steel (INOX), or CORTEN steel
- Evaporator and fan protected against the weather
- Bionically designed fan wings for minimum noise emissions
- \* • Adjustable heat output
- Adaptive heating
- Integrated circulation pump
- Large surface area evaporator with enlarged fin spacing for reduced frequency of defrosting
- Special acoustically insulated housing
- Underground and above-ground connection possible

KSM 1.0

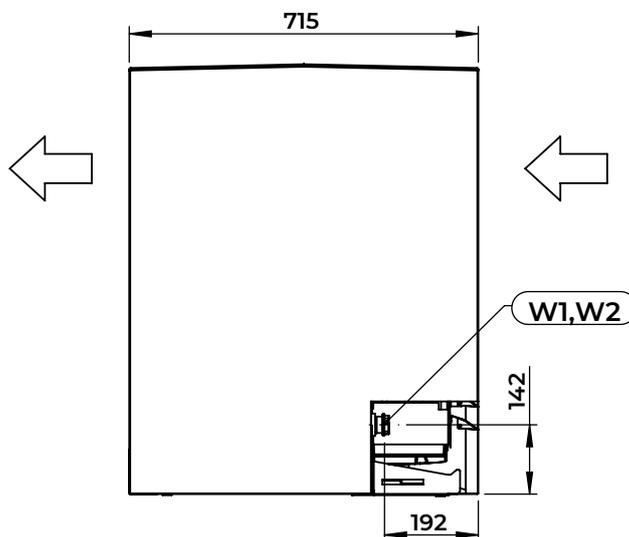
KSM 2.0



FRONT



BACK



RIGHT

**Legend**

W1 Outlet – G 1" IT

W2 Inlet – G 1" IT

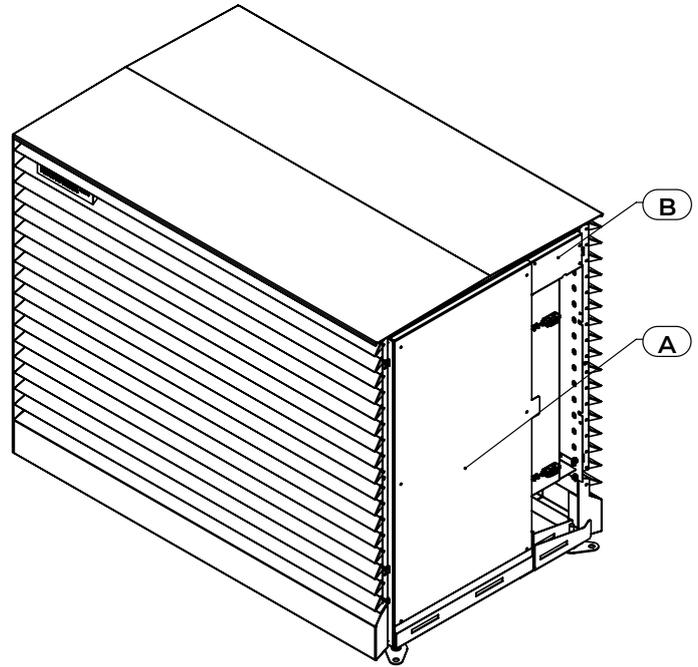
← Water flow direction

↔ Air flow direction

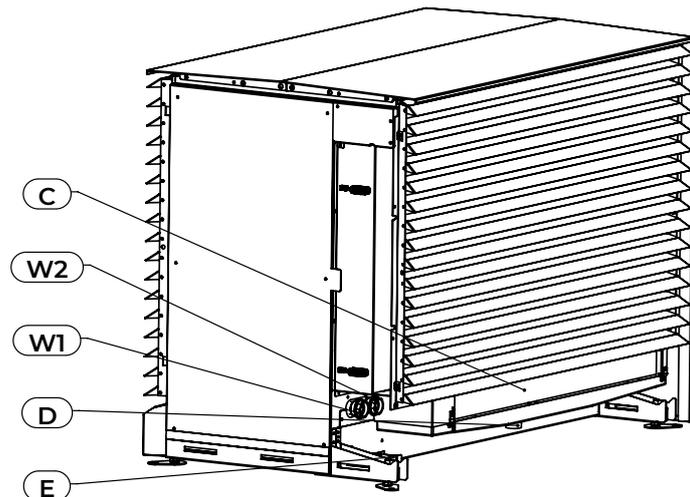
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

- A** Refrigerant system module:
  - Compressor
  - Inverter drive for compressor
  - Expansion valves
  - Filter dryer
  - Receiver
  - Oil separator
  - 4-way valve
  - High-pressure switch
  - High-pressure sensor
  - Low-pressure sensor
  - Temperature sensors
  - Gas separator with safety valve
  - Circulation pump
  - Flow sensor
- B** Electrical power and communication connection to the indoor unit
- C** Evaporator
- D** Condensate drain
- E** Transport protection



FRONT



REAR RIGHT

### Legend

- W1** Outlet – G 1" IT
- W2** Inlet – G 1" IT

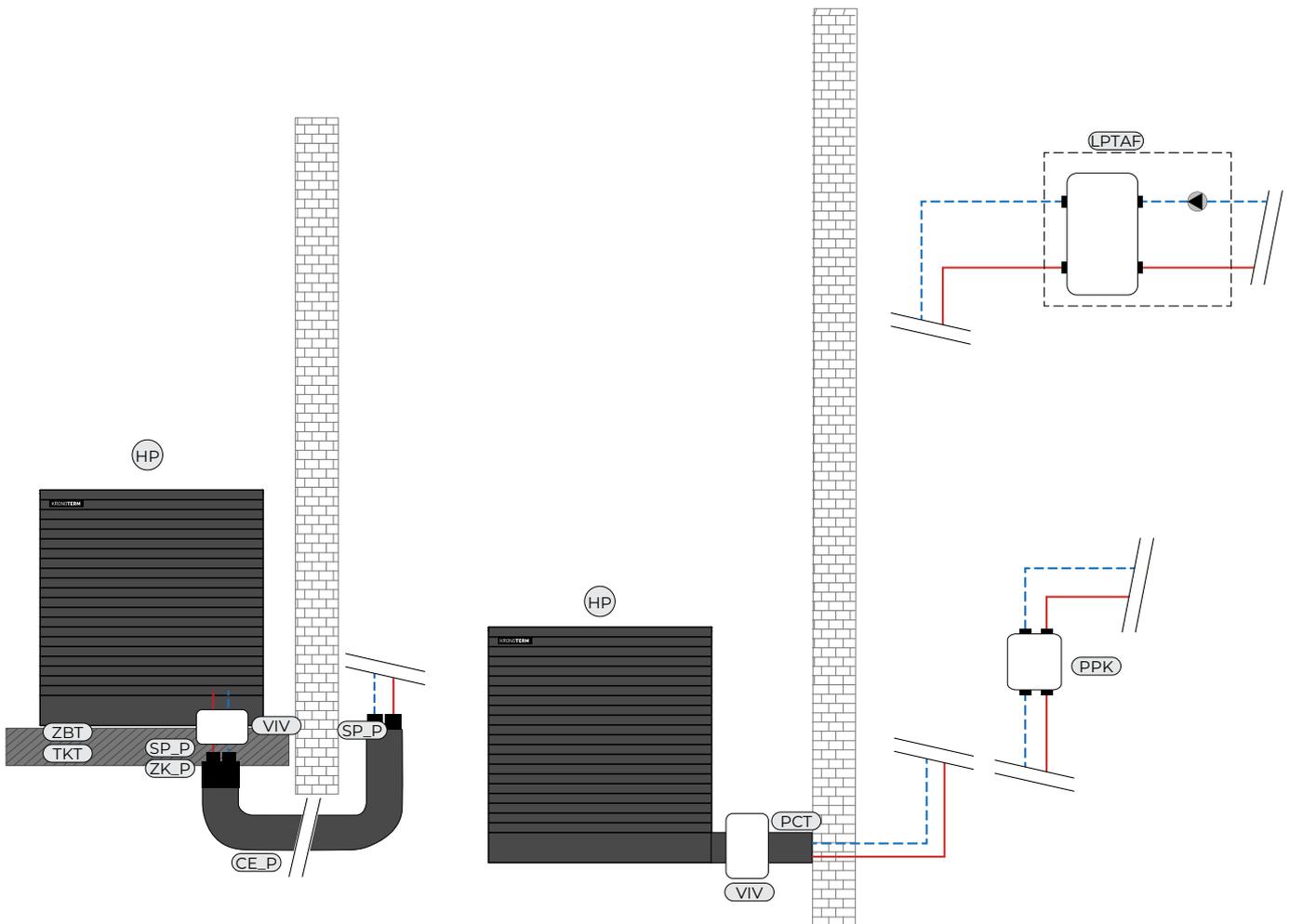
## ADAPT 2 ADDITIONAL EQUIPMENT

### Sample installation diagram

KSM 1.0

KSM 2.0

\*



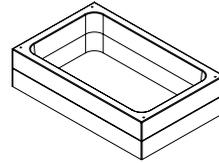
- CE\_P Pre-insulated connecting pipes
- HP Heat pump
- LPTAF Equipment set for anti-freeze fluid
- PCT Cover for connecting pipes
- PPK Protection package for the heat pump
- SP\_P Connection fittings for connecting pipes
- TKT Metal foundation
- VIV Anti-freeze valve
- ZBT Concrete foundation
- ZK\_P Rubber cap for connecting pipes
- PYM Heating loop group (mixing)

## ADAPT 2 ADDITIONAL EQUIPMENT

### ZBT CONCRETE FOUNDATION

Prefabricated stackable concrete foundation, partial below ground installation

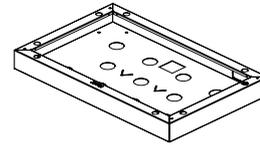
- ZBT\_ADAPT 2



### TKT METAL FOUNDATION

Metal foundation, above ground installation

- TKT\_ADAPT 2



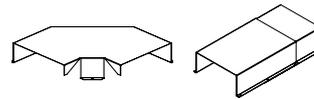
### PCT COVER FOR CONNECTING PIPES

Angular

- PCT\_K

Straight

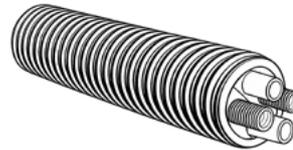
- PCT\_350-700



### CE CONNECTING PIPES

Pre-insulated connecting pipes between heat pump and indoor unit

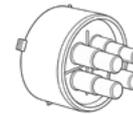
- CE\_P 2x32/140 Q
- CE\_P 2x40/175 Q



### ZK RUBBER CAP FOR CONNECTING PIPES

End cap for pre-insulated pipe  
Includes: end cap, stainless steel clamping ring and sealing ring

- ZK\_P 140 Q
- ZK\_P 175 Q



### SP CONNECTION FITTINGS FOR CONNECTING PIPES

Brass coupling for pre-insulated pipe, connection

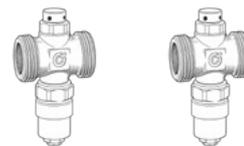
- SP\_P 32x2,9 G 1" ET
- SP\_P 40x3,7 G 1 1/4" ET



### VIV ANTI-FREEZE VALVE SET

Includes: 2x anti-freeze valve, connection fittings

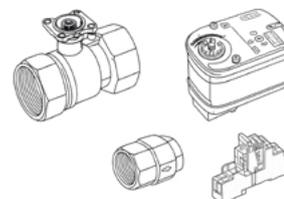
- SET\_VIV ADAPT DN 25
- SET\_VIV ADAPT DN 32



### PPK PROTECTION PACKAGE FOR THE HEAT PUMP

Includes: 2-way valve, electric motor drive with safety function, check-valve, electro-mechanical relay

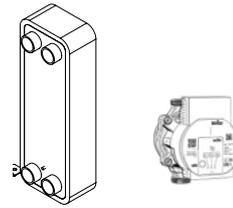
- PA\_PPK DN25
- PA\_PPK DN32



**Equipment for operation with anti-freeze fluid****LPTAF EQUIPMENT SET FOR ANTI-FREEZE FLUID**

For operation with anti-freeze fluid  
Includes: 1 x insulated plate heat exchanger, heat exchanger brackets, circulation pump

- PA\_LPTAF 0210
- PA\_LPTAF 1018

**TPT ANTI-FREEZE FLUID**

Ethylene-glycol concentrate, 10 l

- TPT\_EG

**ADAPT 2 configuration matrix**

Drawing ID	Component type	Description	Item name	ADAPT 2 S	ADAPT 2 M	ADAPT 2 L
ZBT	Foundation	Concrete	ZBT_ADAPT 2	✓	✓	✓
TKT		Metal	ZKT_ADAPT 2	✓	✓	✓
PCT		Angular cover	PCT_K	✓	✓	✓
		Straight cover	PCT_350-700	✓	✓	✓
CE	Pipes equipment	Connecting pipes	CE_P 2x32/140 Q	✓	✓	
			CE_P 2x40/175 Q		✓	✓
ZK		Rubber cap	ZK_P 140 Q	✓	✓	
			ZK_P 175 Q		✓	✓
SP		Connection fittings	SP_P 32x2,9 G1"	✓	✓	
			SP_P 40x3,7 G1 ¼"		✓	✓
VIV	Anti-freeze valve set	SET_VIV DN25	✓			
		SET_VIV DN32		✓	✓	
PPK	Protection package	PA_PPK DN25	✓			
		PA_PPK DN32		✓	✓	
LPTAF	Equipment set for anti-freeze fluid	PA_LPTAF 0210	✓			
		PA_LPTAF 1080		✓	✓	
TPT	Anti-freeze fluid operation	Mixture	TPT_EG	✓	✓	✓

## KSM 1.0 REGULATION SYSTEM

### Model mark

KSM (KRONOTERM System Manager)

### Description

Basic heat pump and heating system regulator.

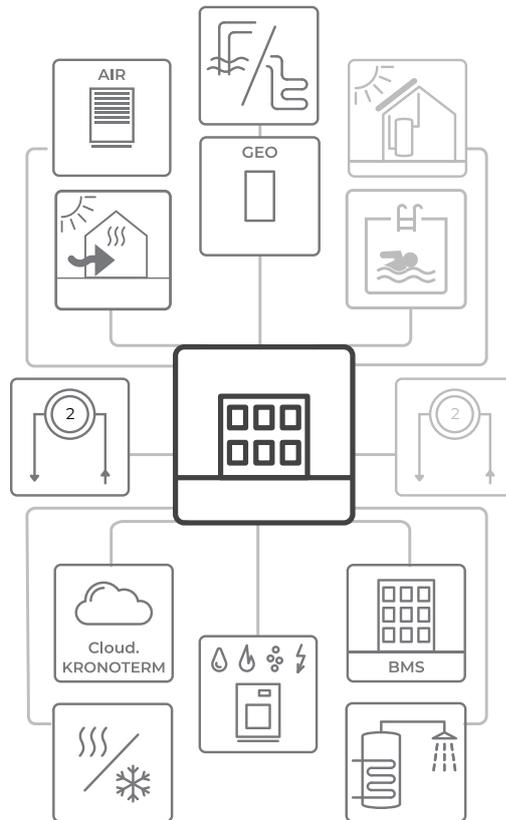
Control via the KT-2A controller or the CLOUD.KRONOTERM mobile/web application.

### Functional characteristics

- Heat pump control
- Control of additional heat generators (gas, oil or pellet boiler)
- Circulation control
- Domestic hot water heating
- Domestic hot water thermal disinfection
- Adaptive weather control of individual loops based on outdoor and room temperatures (requirement: KT-1 or KT-2A accessory)
- Active cooling
- Use of excess energy from the PV module (PV program)
- Screed drying program

Control functions for:

- 1x direct loop (radiators/convectors/in-floor heating)
- 1x direct or mixing loop (radiators/convectors/in-floor heating) room temperature regulation with KT-1 and KT-2A daily and weekly schedules
- WEB module for internet connection (RJ45 connection – Ethernet)
- BMS connection via MODBUS RS485 protocol
- Smart-Grid ready (SG ready)



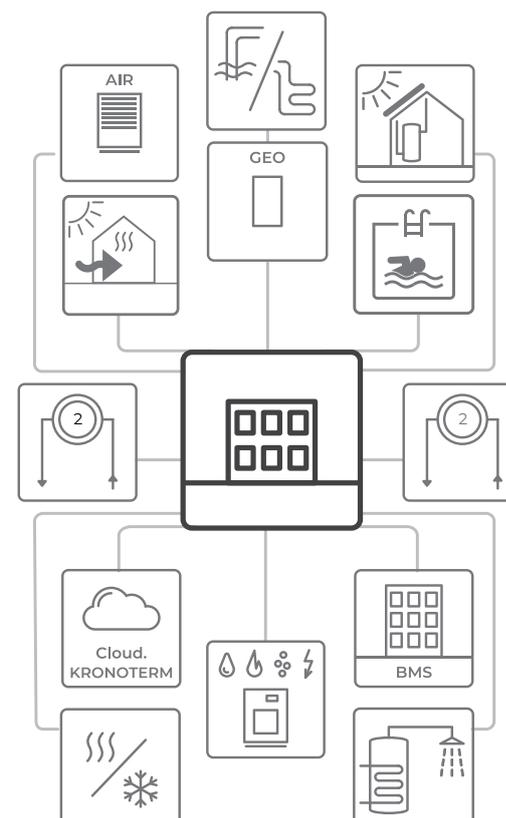
## KSM+ EXPANSION REGULATOR

### Model mark

KSM+ (KRONOTERM System Manager+)

### Functional characteristics

- Manages 2 additional heating loops (direct or mixed)
- Utilizes the heat of solar collectors
- Utilizes the heat of biomass boilers (wood chips)
- Pool heating
- Pool heating with solar collectors



## CONTROL EQUIPMENT

### KT-2A CONTROLLER

#### Model mark

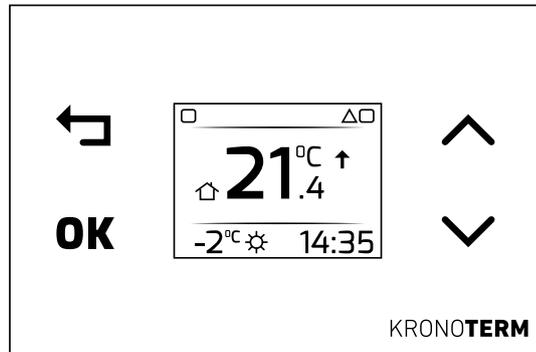
KT-2A

#### Description and dimensions

Operation of the heat pump and heating system.

#### Functional characteristics

- Operation of the heat pump modules and heating system
- Control and setting of all heating/cooling loops
- Control and setting of DHW
- Control and setting of room temperature
- Operating status indicators
- Service access and troubleshooting
- Ambient temperature measurement and display
- Weather forecast
- Night mode
- Measurement accuracy: 0.1 °C
- Setting step: 0.1 °C
- Modbus RS485 cable connection
- Color LCD display and capacitive keys
- Depending on the settings, the KT-2A controller can be operated in three modes:
  - As a thermostat
  - As a controller of the heat pump and the heating system
  - As a combined thermostat and controller of the heat pump and the heating system.



KT-2A controller (W: 122, H: 80, D: 8.6)

### KT-1 THERMOSTAT

#### Model mark

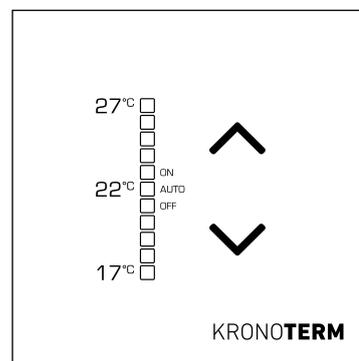
KT-1

#### Description and dimensions

Control and setting of room temperature and operation of each individual heating/cooling loop.

#### Functional characteristics

- Room temperature measurement and display
- Room temperature setting
- Operation mode of the heating loop (OFF/ON/AUTO)
- Night mode
- Measurement accuracy: 0.1 °C
- Setting step: 0.5 °C
- Setting range: 17 – 27 °C
- Modbus RS485 cable connection.
- LED illumination and capacitive keys



KT-1 thermostat (W: 80, H: 80, D: 8.6)

## CLOUD.KRONOTERM

### Description

CLOUD.KRONOTERM provides oversight and control over your heat pump, its heating loops, and its consumption and operating costs.

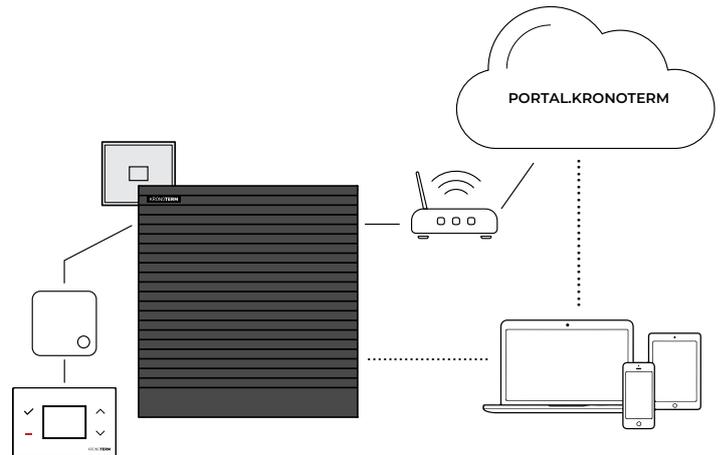
The only requirement is that your appliance is connected to the internet.

Recording all events and over 30 operational parameters gives the support team a comprehensive overview and instantaneous diagnostics in the event of a malfunction. All of the data collected are used for permanent improvements which automatically get fed into the appliance, increasing your comfort and reducing operational costs.

CLOUD.KRONOTERM makes your installed appliance smarter and better.

### Functional characteristics

- The CLOUD.KRONOTERM mobile or web application is a clear and transparent graphic interface, which allows easy setting of desired room or domestic water temperatures.
- Temperature setting step: 0.1 °C
- In the app, user can also set:
  - Daily and weekly schedule
  - Heat pump operation mode
  - Screed drying
  - Pool heating
  - Anti-Legionella program
  - Holiday program etc.
- Users can monitor indicators such as:
  - Heat pump heating power
  - Operating hours of heating, cooling, passive cooling, additional heater 1 and/or additional heater 2 and outdoor temperature
  - Theoretical electricity consumption for individual components of the heating system
  - Information, warnings and alarms about the operation of the heat pump
- The app provides easy access to remote diagnostics support for users.



Test of the web app demo version:

USER NAME: demo2

PASSWORD: demo2



Test of the mobile app

demo version HOME.CLOUD:

USER NAME: demo2

PASSWORD: demo2



## KSM 1.0 REGULATION SYSTEM ADDITIONAL EQUIPMENT

### COMMUNICATION CABLE

Between indoor and outdoor unit

- KK\_7M 8x0,20 FTP (FTP 8 x 0,20 mm<sup>2</sup>, 7m)
- KK\_15M 8x0,20 FTP (FTP 8 x 0,20 mm<sup>2</sup>, 15m)
- KK\_25M 8x0,20 FTP (FTP 8 x 0,20 mm<sup>2</sup>, 25m)



### ELECTRICAL CABINET

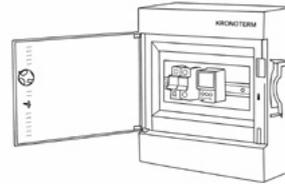
With integrated circuit breakers - fuses

1-phase versions:

- EO\_S 1F 2kW
- EO\_S 1F 4kW
- EO\_M 1F 2kW
- EO\_M 1F 4kW

3-phase versions:

- EO\_S/M 3F 6kW
- EO\_L 3F 6kW



### ELECTRICITY METER

Electricity meter for installation in the building's electrical power supply cabinet. Measures the electric power of the heat pump and monitors actual electricity consumption in CLOUD.KRONOTERM (instead of displaying calculated energy consumption values).

- EO\_WM1-6  
(for installation in a 1-phase electrical cabinet)
- EO\_WM3-6  
(for installation in a 3-phase electrical cabinet)

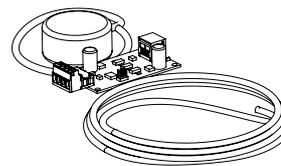


### KIT FOR UPGRADING A 2-WIRE CABLE

Kit for connecting a KT-2A or KT-1 to a 2-wire instead of 4-wire cable.

Includes: power supply, optical separator, cable for optical separator

- KIT\_P2P KT-1/KT-2A



### PRESSURE SENSOR KIT

Kit for measuring the heating water pressure in the heating system; voltage probe

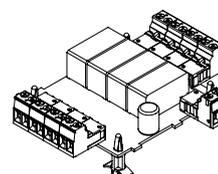
KIT\_PP WR KSM 2



### RELAY MODULE FOR REGULATING CIRCULATION PUMPS WITHOUT PWM SIGNAL

Converts a continuous signal into an ON/OFF signal. Solution for controlling existing circulation pumps without a continuous control input.

- HYDRO PWM-R  
(Integrates into HYDRO C2, HYDRO S2)
- WR PWM-R  
(integrates into WR KSM 2, WR KSM+)



## HYDRO C2

### Version

Indoor hydraulic unit with DHW tank

### Model mark

HYDRO C2 / HK UF E 2  
HYDRO C2 / HK UF E A2  
HYDRO C2 / HK UF E B2

### Description and dimensions

- Powder coated, zinc, steel plate housing
- Supports both heating and cooling

### Integrated:

- 3-way valve for switching between heating/cooling and heating DHW
- 3-stage 6 kW electric heater (3 x 2 kW)
- KSM regulator and WEB module
- Heating system pressure sensor
- Magnetic dirt separator
- DHW safety valve (B2 variant: 6 bar + 7 bar thermal safety valve)
- Heating system safety valve
- DHW expansion vessel (8 l) (not in A2 variant)
- Heating system expansion vessel (12 l)
- 200 l DHW tank
- Manual air vent for system venting
- Supplied with an outdoor temperature sensor

### Compatibility:

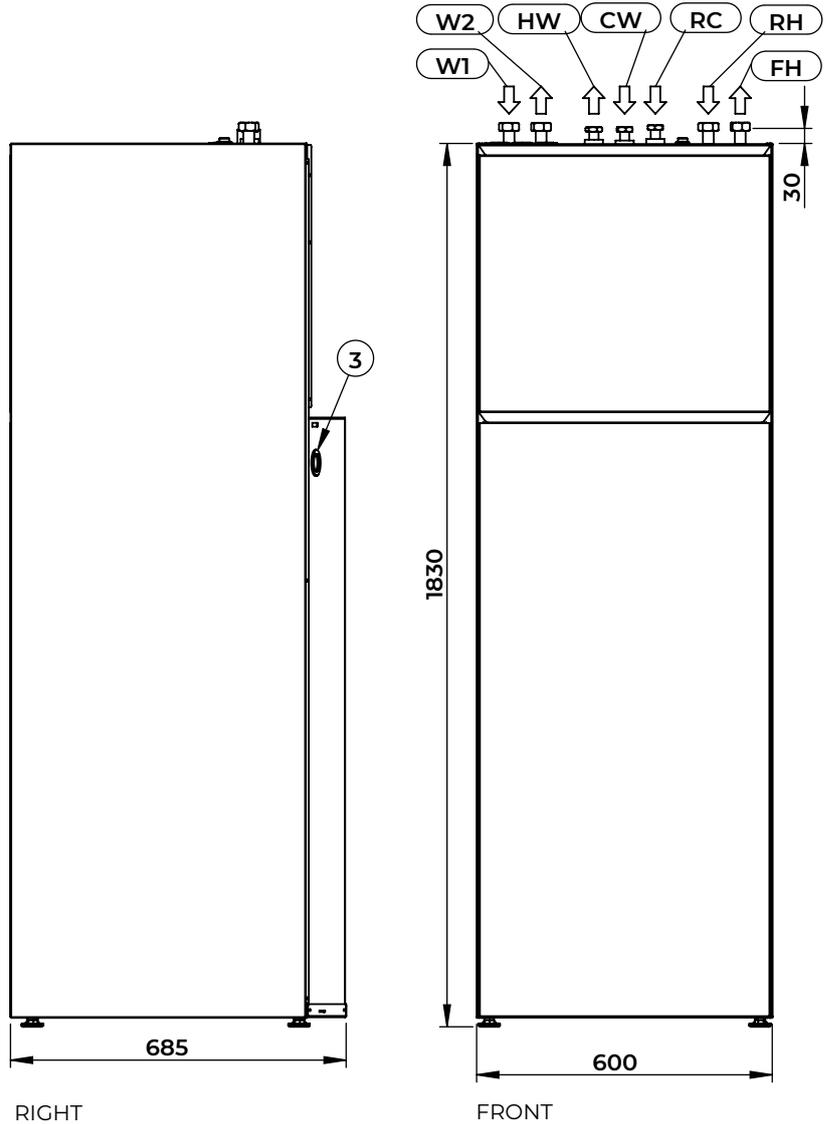
ADAPT 2 S, M

### Optional

- Expansion regulation module KSM+ 2
- Additional kit for remote filling of heating system
- Additional 40 l buffer tank ZA\_P40
- HYDRO PWM-R module (integrated into A2 variant)

### Legend

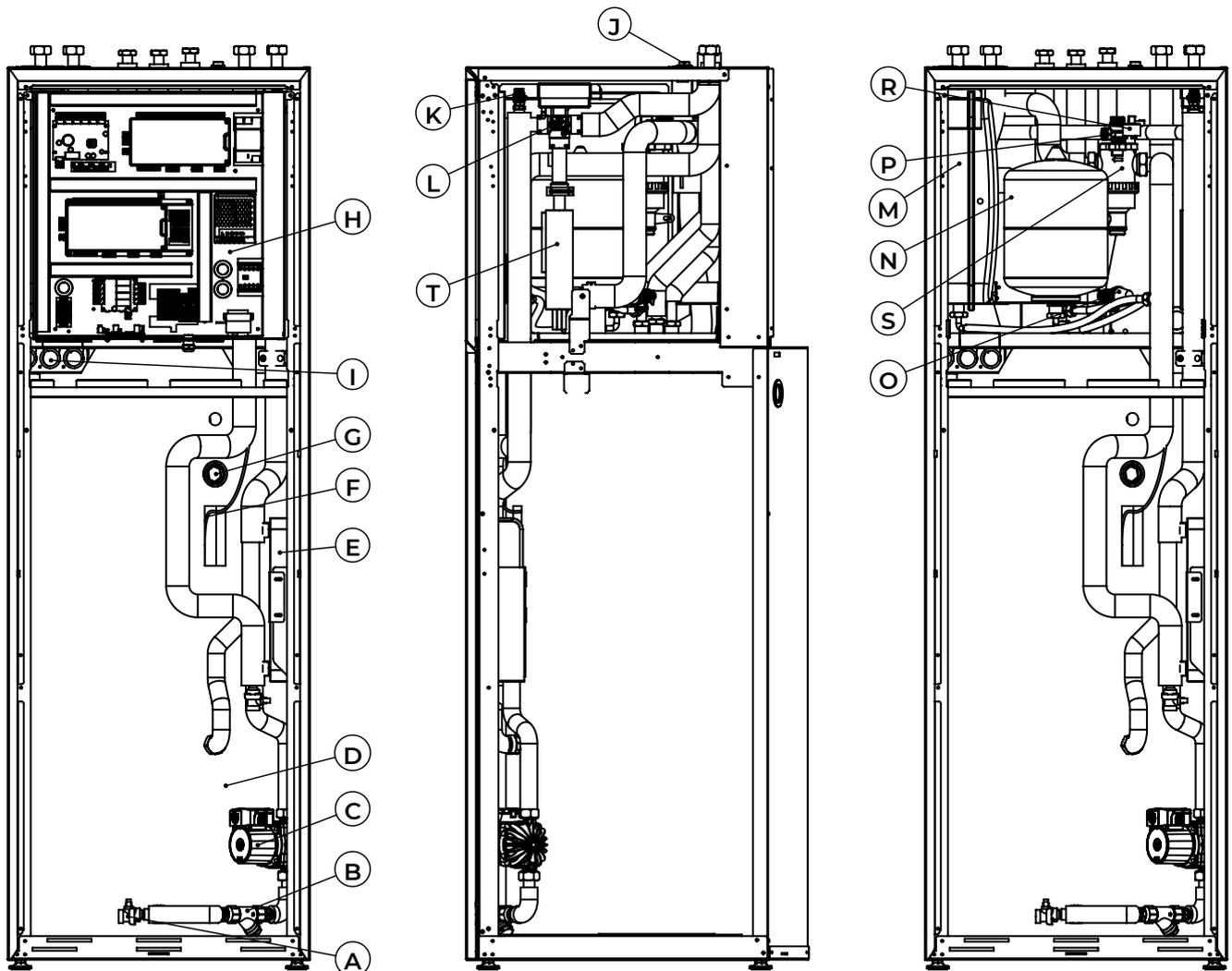
- W1** Inlet G 1" IT
- W2** Outlet G 1" IT
- HW** DHW G 3/4" IT
- CW** Cold domestic water G 3/4" IT
- RC** Recirculation G 3/4" IT
- RH** Heating/cooling – inlet pipe G 1" IT
- FH** Heating/cooling – outlet pipe G 1" IT
- 1** Electrical connection grommets
- 2** Internet cable jack
- 3** Connection for condensate drain



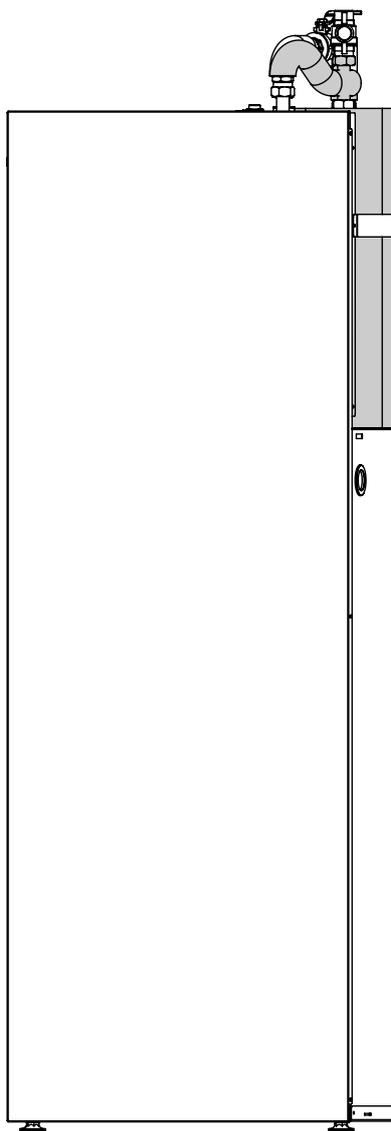
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

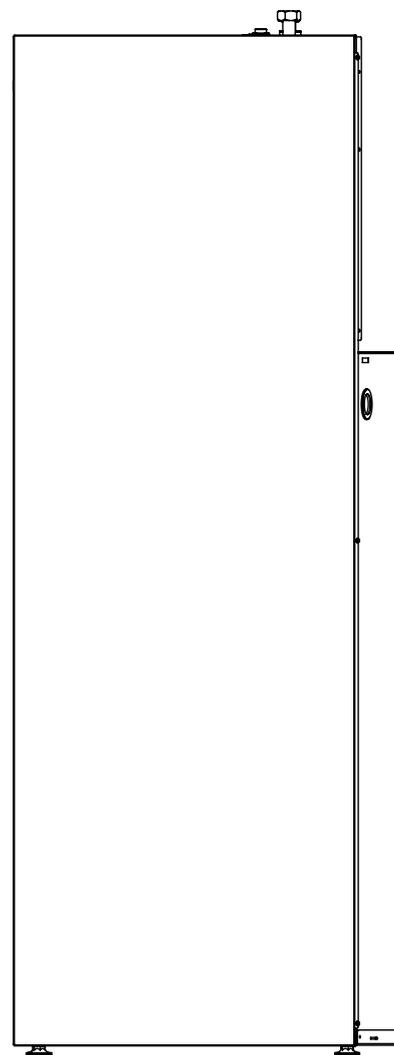
- A Drain valve
- B DHW filter
- C Recirculation pump for DHW
- D 200 l DHW tank
- E Plate heat exchanger for DHW
- F DHW temperature sensor
- G Magnesium anode
- H Electrical cabinet with KSM 1.0 regulation system
- I Conduits for electric cables
- J Internet cable jack
- K Manual air vent
- L 3-way zone valve
- M Expansion vessel – heating system – 12 l
- N Expansion vessel – DHW – 8 l (*not in variant A2*)
- O Safety valve – DHW – 10 bar (*B2 variant: 6 bar + 7 bar thermo-safety valve*)
- P Safety valve – heating system – 3 bar
- R Heating system pressure sensor
- S Magnetic dirt separator
- T 3-stage 6 kW electric heater (3 x 2 kW)



*HYDRO C2 configurations*



HYDRO C2 + ZA\_P40



HYDRO C2

**HYDRO S2****Version**

Indoor wall-mounted hydraulic unit.

**Model mark**

HYDRO S2 / HK UF E 2  
HYDRO S2 / HK UF E A2

**Description and dimensions**

- Powder coated, zinc, steel plate housing
- Supports both heating and cooling

**Integrated:**

- 3-way valve for switching between heating/cooling and heating DHW
- 3-stage 6 kW electric heater (3 x 2 kW)
- KSM regulator and WEB module
- Magnetic dirt separator
- Heating system pressure sensor
- Safety valve for heating system – 3 bar
- Manual air vent for system venting
- Supplied with an outdoor temperature sensor

**Compatibility:**

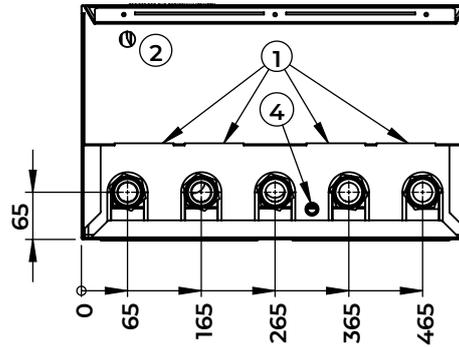
- ADAPT 2 S, M on low and high temperature systems
- ADAPT 2 L on high temperature systems

**Optional**

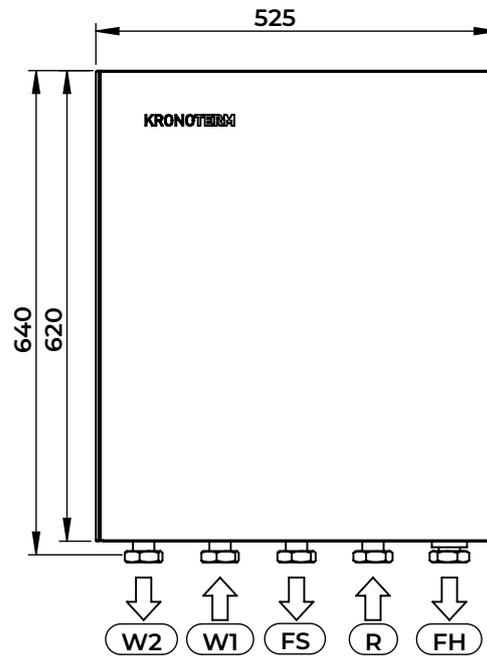
- Expansion regulation module KSM+ 2
- Additional kit for remote filling of heating system
- 40 l HYDRO P2 buffer tank
- Additional spacer for pipe installation
- HYDRO PWM-R module (integrated into A2 variant)

**Legend**

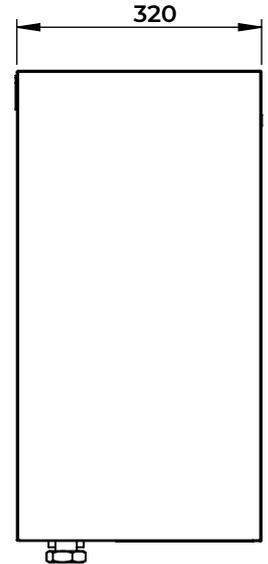
- W2** Outlet – G 1 ¼" IT
- W1** Inlet – G 1 ¼" IT
- FS** DHW heating outlet – G 1 ¼" IT
- R** Heating/cooling/DHW heating inlet – G 1 ¼" IT
- FH** Heating/cooling – outlet – G 1 ¼" IT
- 1** Cable conduit
- 2** Internet cable jack
- 3** Connection for condensate drain



BOTTOM



FRONT

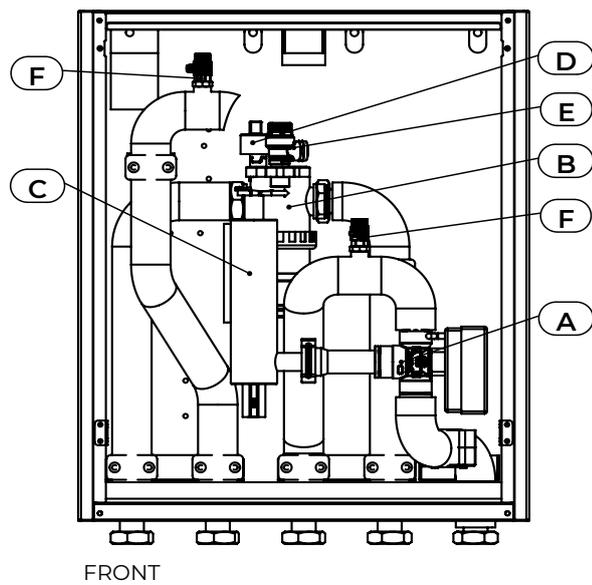
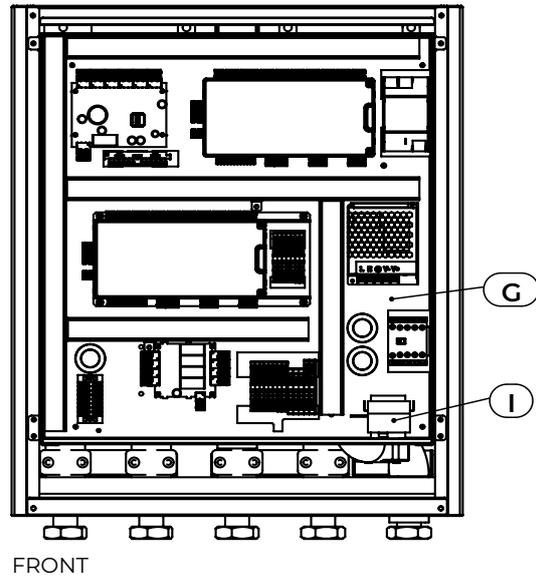


RIGHT

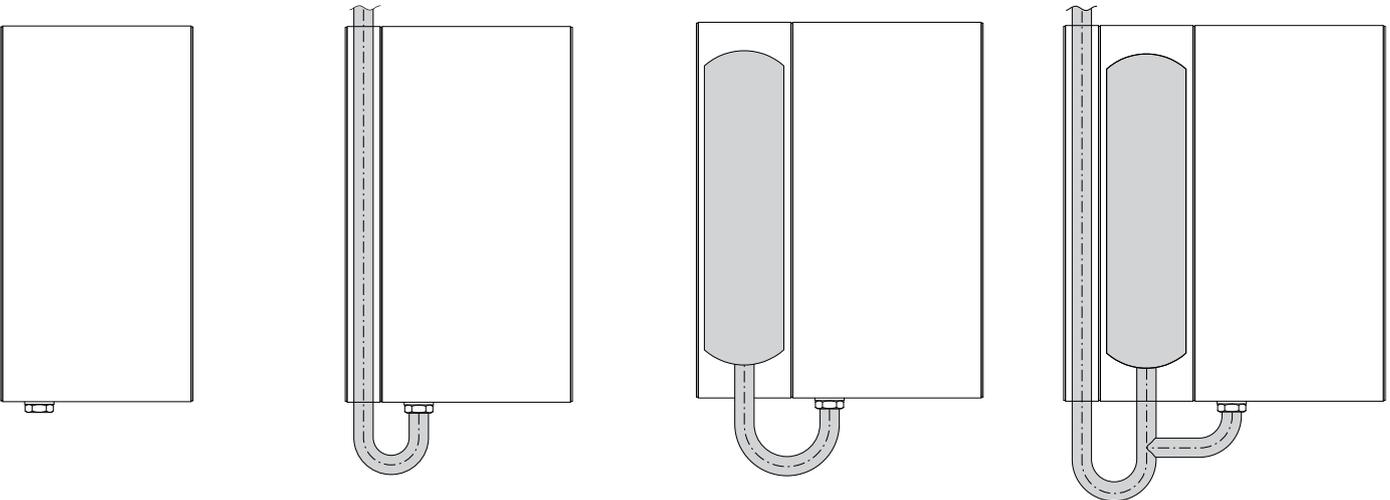
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

- A 3-way zone valve
- B Magnetic dirt separator
- C 3-stage 6 kW electric heater (3 x 2 kW)
- D Heating system pressure sensor
- E Safety valve – heating system – 3 bar
- F Manual air vent
- G Electrical cabinet with KSM 1.0 regulation system
- I Safety thermostat for electric heater



### HYDRO S2 configurations



**HYDRO S2**  
Basic model

**HYDRO S2 + HYDRO A2**  
Basic connection with the console spacer for pipe connection

**HYDRO S2 + HYDRO P2**  
Model with 40 l buffer tank

**HYDRO S2 + HYDRO A2 + HYDRO P2**  
Model with 40 l buffer tank and spacer for pipe connection

**WR KSM 2****Version**

Basic wall-mounted unit

**Model mark**

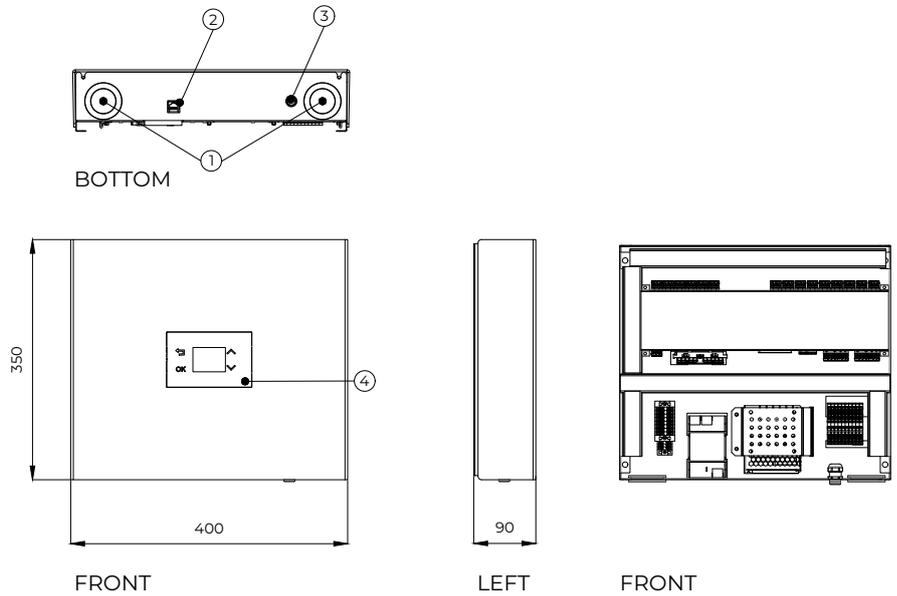
WR KSM 2

**Description and dimensions**

- Wall-mounted indoor unit
- KSM regulator
- Integrated WEB module
- Supplied with an outdoor temperature sensor

**Legend**

- 1 Conduits for control cable
- 2 Internet cable jack
- 3 Threaded power cable conduit
- 4 KT-2A controller

**WR KSM+****Version**

Wall-mounted expansion unit

**Model mark**

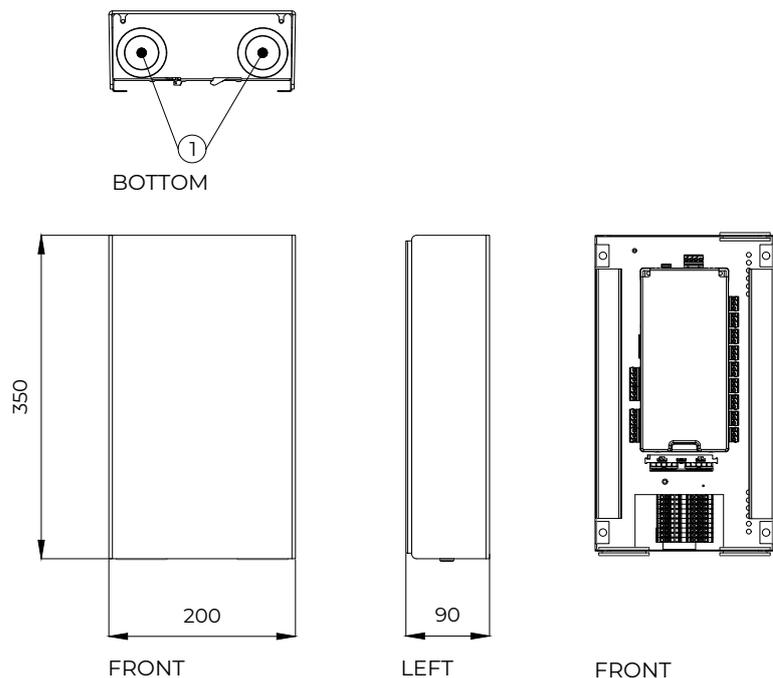
WR KSM+

**Description and dimensions**

- Wall-mounted indoor unit
- Regulator KSM+

**Legend**

- 1 Conduits for control cable



## WR KSM C

### Version

Indoor unit for activating an additional heat pump in cascade.

### Model mark

WR KSM C

### Description and dimensions

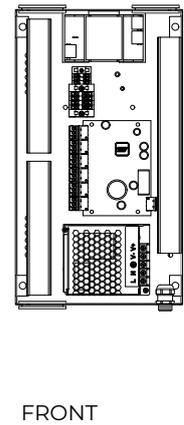
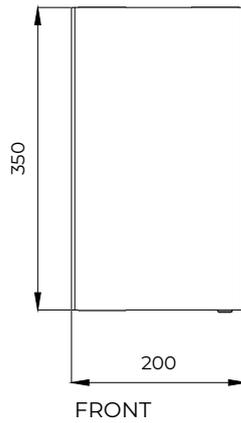
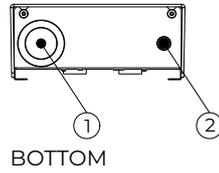
- Wall-mounted indoor unit
- Integrated WEB module

### Functional characteristics

- Activate an additional heat pump in cascade
- Register a heat pump with CLOUD. KRONOTERM
- Manage a heat pump in cascade via the cloud-based CMS™ management system

### Legend

- 1 Conduits for control cable
- 2 Threaded power cable conduit

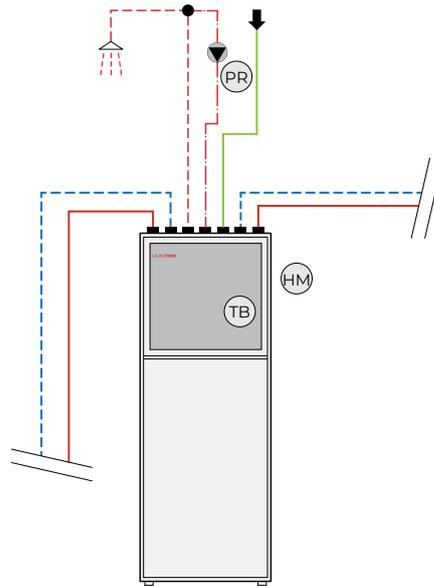
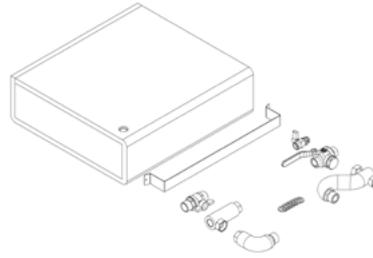


## HYDRO C2 ADDITIONAL EQUIPMENT

### TB FLAT BUFFER TANK

Simple mounting on the rear of HYDRO C3  
Includes: buffer tank, connection set,  
insulation

- ZA\_P 40 (40 l, 3 bar)



## HYDRO S2 ADDITIONAL EQUIPMENT

### HYDRO P FLAT BUFFER TANK

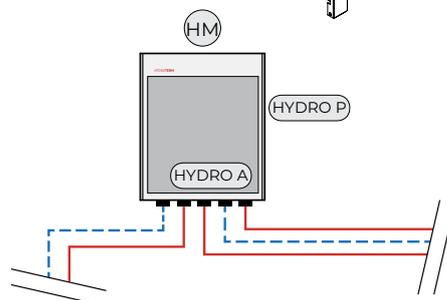
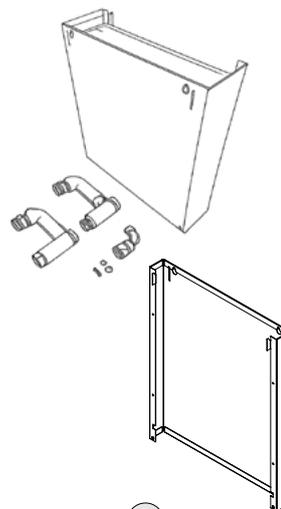
Includes: buffer tank, connection set

- HYDRO P2 (40 l, 3 bar)

### HYDRO A SPACER

For pipe installation behind the  
HYDRO S3

- HYDRO A2 (58 mm)



## KSM 2.0 REGULATION SYSTEM

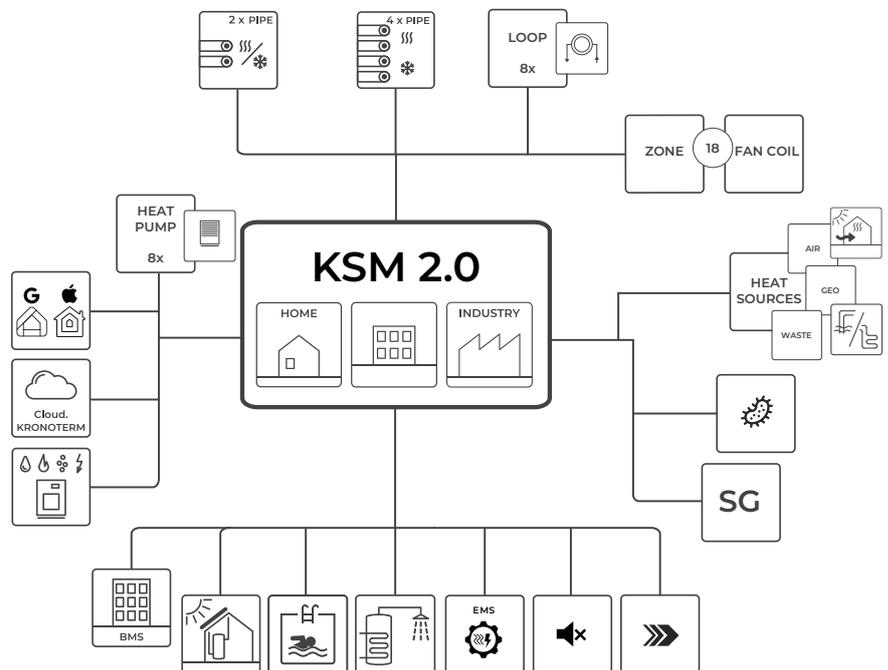
### Description

Kronoterm System Management regulation, generation 2.

System of electronic modules and software that enables regulation, monitoring, and control of our heat pumps and heating systems. It consists of multiple interconnected electronic modules, each with its own embedded software. All components are integrated via the new cloud and user applications.

### Functional characteristics

- Heat pump management – up to 8 heat pumps in a 2-pipe or 4-pipe system (simultaneous heating and cooling)
- Heating and cooling (without/single/two buffer tanks)
- Control of additional heat generators (3 x on/off, 1 x 0-10V)
- DHW heating
- DHW thermal disinfection
- DHW recirculation
- Utilisation of solar or wood-fired boiler heat
- Pool heating
- SG signals – utilisation of excessive PV energy
- Up to 8 mixing loops with dT regulation and auto flow adaptation (with HLC controllers)
- Adaptive heating curve with reference indoor temperature (KSI, KT-3)
- Daily and weekly schedules for DHW, temperature zones, buffer tanks, pool
- Heat pump mode schedule – OPTIMAL, SILENT and BOOST mode
- Up to 18 temperature zones – individual room temperature control or fan coils (with ZC6 controllers)
- Wireless LoRa outdoor sensor
- Up to 18 wireless LoRa indoor temperature and humidity sensors
- Fan coil control (with KT-3 smart thermostat – coming soon)
- Energy management
- CLOUD 2.0 – mobile app for end users and professional users
- CLOUD 2.0 – web app for professional users
- Screed drying function



**Communication:**

- Internet (Cloud) via Ethernet cable or Wi-Fi
- Mobile App – Bluetooth for local connection if no internet is available; otherwise Wi-Fi to cloud connection
- LoRa – wireless long-range indoor and outdoor sensors
- KT3 – Modbus RTU, RS485, 2/4 wire or wireless (coming soon)
- BMS – Modbus RTU, RS485

**System integrations**

- Waste heat recovery with booster (coming soon)
- With ESSENTA DHW heat pump
- BMS
- PV inverter (SolarEdge, others coming soon)
- Electrical energy meter
- Heat meter
- Central heat recovery ventilation (coming soon)
- Apple HomeKit
- Google Home

\*

## PORTAL.KRONOTERM

### Description

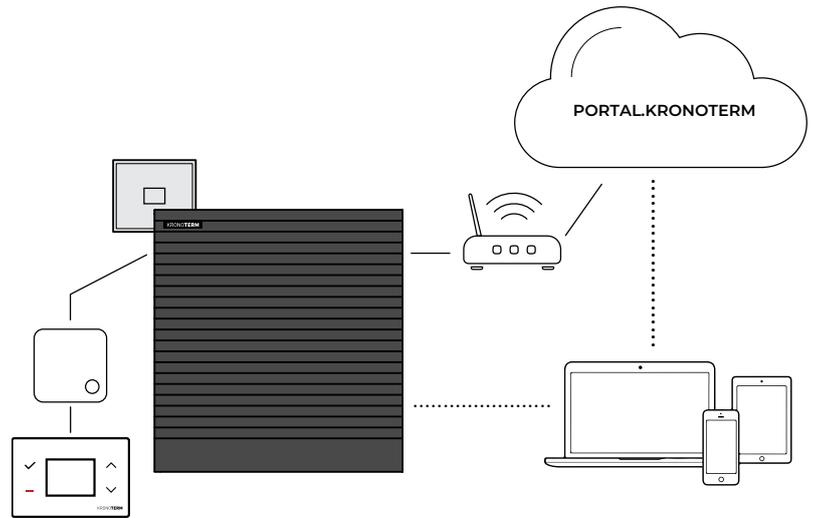
PORTAL.KRONOTERM provides oversight and control over your heat pump, its heating loops, and its energy consumption and operating costs. The only requirement is that the device has an active internet connection.

The recording of events and operational parameters ensures that the support team has full insight and can carry out immediate diagnostics in the event of a malfunction.

All the data collected is used for continuous improvements that are automatically applied to the device, enhancing comfort and reducing operating costs.

PORTAL.KRONOTERM makes your existing device, more efficient, easier to use, and better overall.

**NOTE: The device will be compatible with the new PORTAL.CLOUD platform, which will be available soon.**



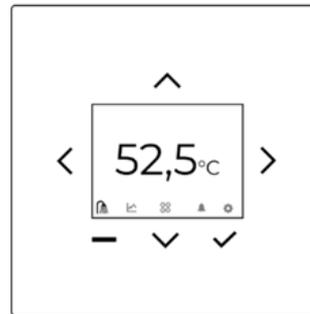
## CONTROL

### HMI

HMI (Human Machine Interface) is the built-in user interface integrated into indoor units with the KSM 2.0 regulation system.

#### Functional characteristics

- Real-time overview and status of all heating system elements
- Setting of all heating system elements:
  - Temperatures
  - Heating curves
  - Schedules including smart schedule wizard
  - On / Off toggles
  - Operating modes
  - Etc.
- Basic energy management overview



Indoor unit user interface (HMI)

### MOBILE APP

The mobile app can operate offline via a Bluetooth connection to the indoor unit or online mode via an internet connection to CLOUD 2.0.

#### Offline mode

- No internet required
- Limited range due to Bluetooth communication
- Live-data only
- All settings available

#### On-line mode

- Internet connection required for both the heat pump and mobile device
- Control from anywhere in the world
- Live and historical data available
- All settings available

#### Functional characteristics

- Real-time overview and status of all heating system elements
- Setting of all heating system elements:
  - Temperatures
  - Heating curves
  - Schedules including smart schedule wizard
  - On/Off toggles
  - Operating modes
  - Etc.
- Energy management:
  - Current heating/cooling capacity
  - Current electrical power consumption
  - Current COP
  - Daily and historical heat delivered for heating, cooling, and DHW
  - Daily and historical electric energy consumption
  - SCOP, SEER, STER
  - Energy-saving tips

## KT-3

### Version

KT-3 (Kronoterm Thermostat, 3rd generation) is a smart room thermostat that enables adaptive temperature control for individual zones.

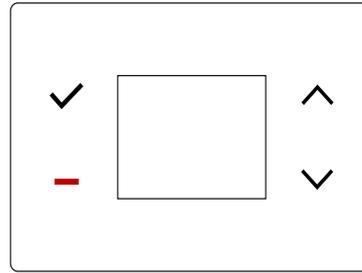
### Model mark

KT-3

### Description

The KT-3 smart thermostat synchronises with the heat pump to supply heat at the lowest possible temperature while maintaining the desired comfort level. Its hybrid sensor system measures air temperature, radiant (IR) temperature, and humidity, allowing the system to adapt to perceived comfort rather than air temperature alone.

KT-3 also supports control of fan coil units in both heating and cooling modes and connects wirelessly to the KSM 2.0 control system.



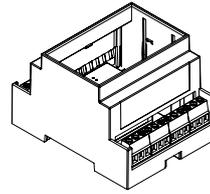
KT-3 smart thermostat (W: 122, H: 80, D: 8,6)

## KSM 2.0 REGULATION SYSTEM ADDITIONAL EQUIPMENT

### HLC HEATING LOOP CONTROLLER

Controller for one heating loop, mixing or direct, with Modbus RS485 communication, dT regulation.  
Includes: temperature sensors, power supply cable, communication cable

- HLC



### ZC ZONE CONTROLLER\*

Controller for individual room temperature control. Compatible with KT-3 or KSI.

- ZC6 (6 zones)

\*coming soon

### KT3 SMART KRONOTERM THERMOSTAT\*

- KT-3

\*coming soon

### KSI WIRELESS INDOOR SENSOR

Wireless LoRa indoor temperature and humidity sensor, battery-powered.

- KSI (full IDENT name)



### KSO WIRELESS OUTDOOR SENSOR

Wireless LoRa outdoor temperature and humidity sensor, battery-powered.

- KSO (full IDENT name)



### TI TEMPERATURE SENSORS

Wired temperature sensors for the KSM 2.0 regulation system, set.  
Includes:

- 1 temperature sensor
- TI\_KSM 2.0
- 4 temperature sensors
- PA\_TI KSM 2.0 – 4



### S-TI TEMPERATURE SENSOR SLEEVE

For temperature sensors TSI, set.  
Includes: 2 temperature sensor sleeves

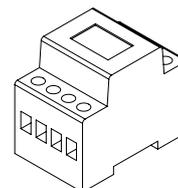
- 1 temperature sensor
- PA\_S-TI KSM 2.0
- 4 temperature sensor sleeves
- PA\_S-TI KSM 2.0 – 4



### EO ELECTRIC ENERGY METER

Electricity meter.

- EO\_WM3-6



## HYDRO C3

### Version

Indoor hydraulic unit with DHW tank

### Model mark

HYDRO C3 / HK UF E  
HYDRO C3 / HK UF E A1  
HYDRO C3 / HK UF E B1

### Description and dimensions

- Powder coated, zinc, steel plate housing
- Supports both heating and cooling functions

### Integrated:

- 3-way valve for switching between heating/cooling and heating DHW
- 3-stage 6 kW electric heater (3 x 2 kW)
- KSM 2.0 regulation system (integrated MSR regulator, KSM Link IoT module, HMI, possibility to integrate up to 4 HLC modules)
- Magnetic dirt separator
- Heating system pressure sensor
- Safety valve for DHW 10 bar (B1 variant: 6 bar + 7 bar thermal safety valve)
- Safety valve for heating system – 3 bar
- DHW expansion vessel (8 l) – (not in A1 variant)
- Heating system expansion vessel (12 l)
- 200 l DHW tank
- HMI display
- Supplied with an outdoor temperature sensor

### Compatibility

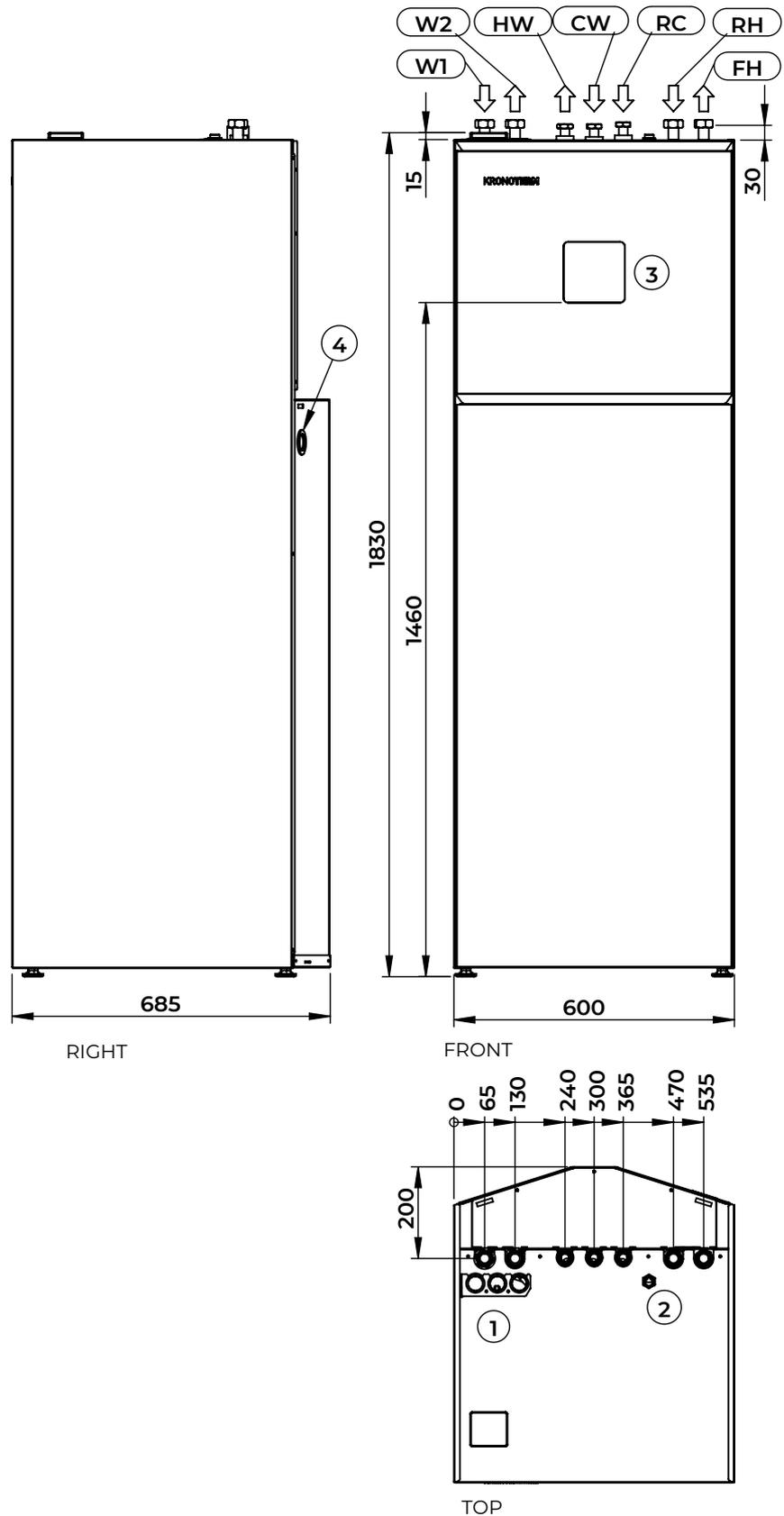
ADAPT 2 S, M

### Optional

- Additional 40 l buffer tank ZA\_P40

### Legend

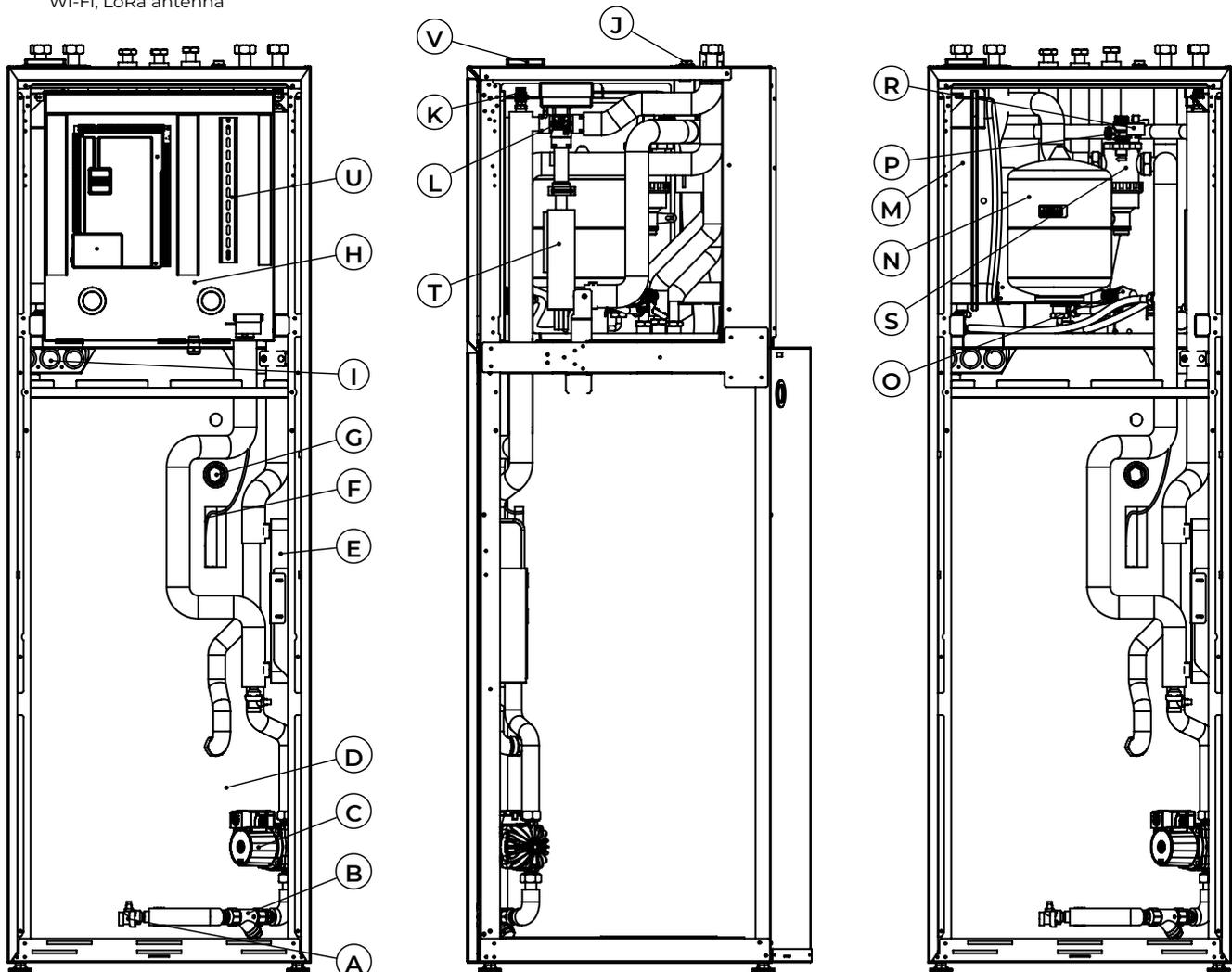
- |           |                                       |
|-----------|---------------------------------------|
| <b>W1</b> | Inlet G 1" IT                         |
| <b>W2</b> | Outlet G 1" IT                        |
| <b>HW</b> | DHW G ¾" IT                           |
| <b>CW</b> | Cold domestic water G ¾" IT           |
| <b>RC</b> | Recirculation G ¾" IT                 |
| <b>RH</b> | Heating/cooling – inlet pipe G 1" IT  |
| <b>FH</b> | Heating/cooling – outlet pipe G 1" IT |
| <b>1</b>  | Electrical connection grommets        |
| <b>2</b>  | Internet cable jack                   |
| <b>3</b>  | HMI (human machine interface)         |
| <b>4</b>  | Connection for condensate drain       |



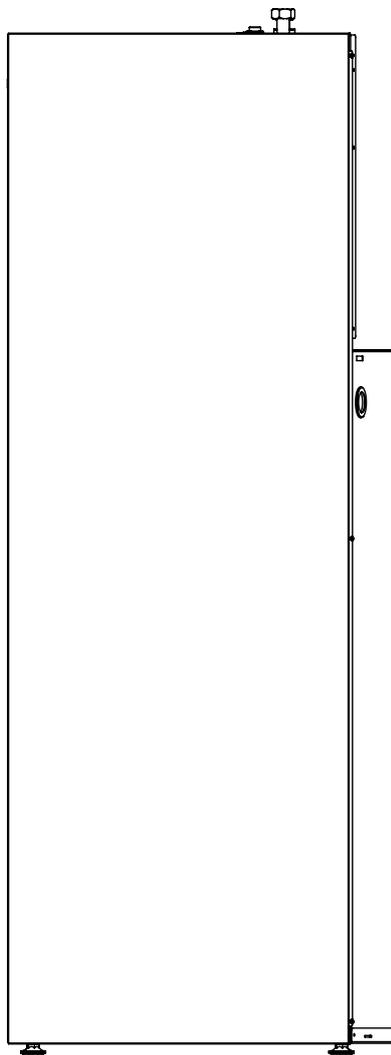
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

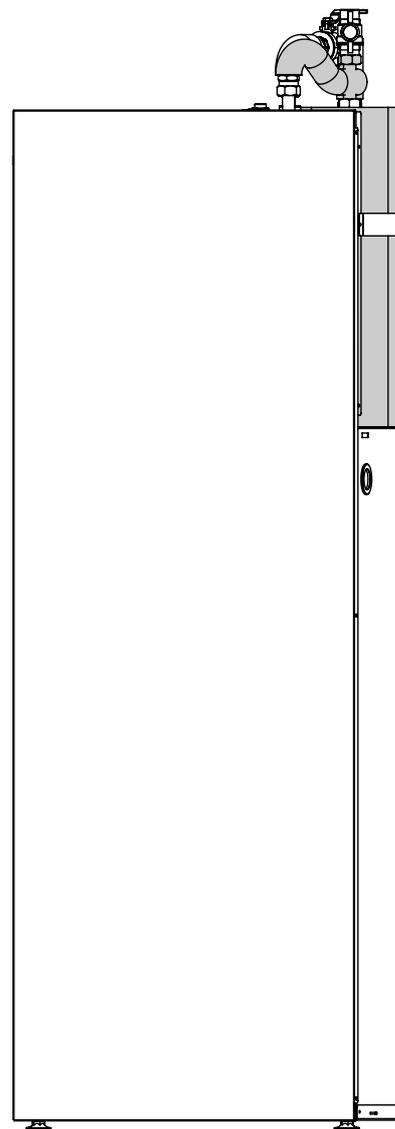
- A Drain valve
- B DHW filter
- C Recirculation pump for DHW
- D 200 l DHW tank
- E Plate heat exchanger for DHW
- F DHW temperature sensor
- G Magnesium anode
- H Electrical cabinet with KSM 2.0 regulation system (MSR regulator, KSM Link IoT module)
- I Conduits for electric cables
- J Internet cable jack
- K Manual air vent
- L 3-way zone valve
- M Expansion vessel – heating system – 12 l
- N Expansion vessel – DHW – 8 l (*not in variant A1*)
- O Safety valve – DHW – 10 bar (*B1 variant: 6 bar + 7 bar thermo-safety valve*)
- P Safety valve – heating system – 3 bar
- R Heating system pressure sensor
- S Magnetic dirt separator
- T 3-stage 6 kW electric heater (3 x 2 kW)
- U DIN rail for HLC controllers
- V Wi-Fi, LoRa antenna



*HYDRO C3 configurations*



HYDRO C3



HYDRO C3 + ZA\_P40

KSM 2.0  
\*

**HYDRO S3****Version**

Indoor wall-mounted hydraulic unit

**Model mark**

HYDRO S3 / HK UF E

**Description and dimensions**

- Powder coated, zinc, steel plate housing
- Supports both heating and cooling functions

**Integrated:**

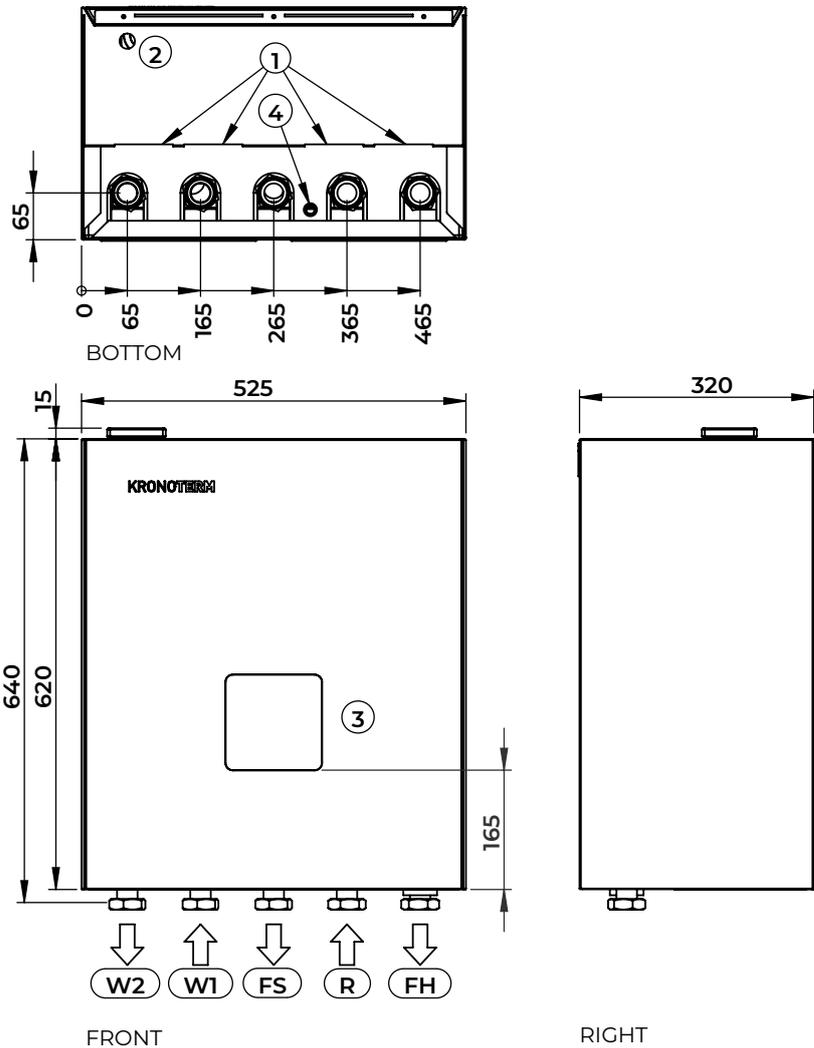
- 3-way valve for switching between heating/cooling and heating DHW
- 3-stage 6 kW electric heater (3 x 2 kW)
- KSM 2.0 regulation system (integrated MSR regulator, KSM Link IoT module, HMI, possibility to integrate up to 4 HLC modules)
- Magnetic dirt separator
- Heating system pressure sensor
- Safety valve for heating system – 3 bar
- HMI display
- Supplied with an outdoor temperature sensor

**Compatibility**

- ADAPT 2 S, M on low and high temperature systems
- ADAPT 2 L on high temperature systems

**Optional**

- 40 l HYDRO P2 buffer tank
- Additional spacer for pipe installation

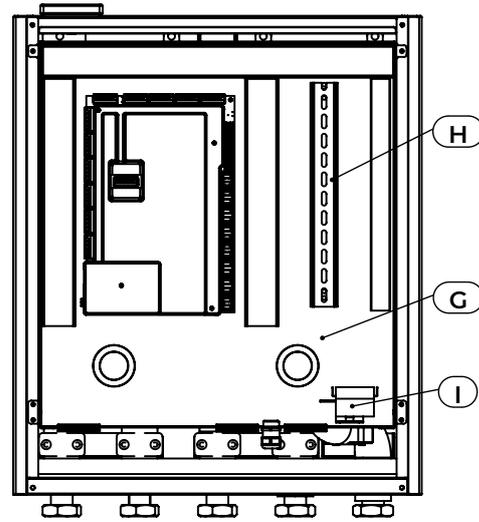
**Legend**

- W2** Outlet G 1 ¼" IT
- W1** Inlet G 1 ¼" IT
- FS** DWH heating outlet G 1 ¼" IT
- R** Heating/cooling/DHW heating inlet G 1 ¼" IT
- FH** Heating/cooling outlet G 1 ¼" IT
- 1** Cable conduit
- 2** Internet cable jack
- 3** HMI (human machine interface)
- 4** Connection for condensate drain

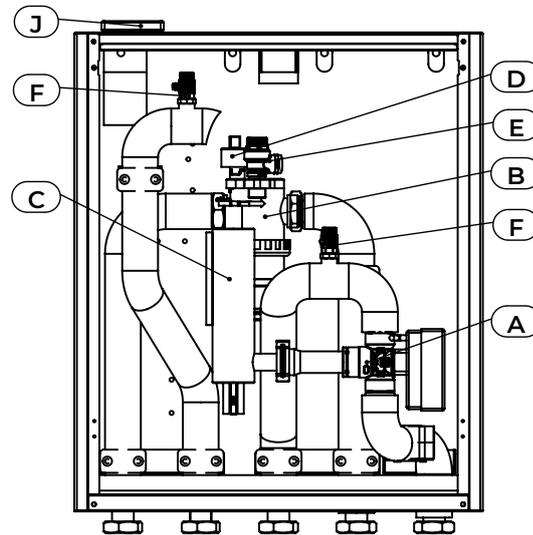
## PRIMARY COMPONENTS AND CONNECTIONS

### Primary components

- A 3-way zone valve
- B Magnetic dirt separator
- C 3-stage 6 kW electric heater (3 x 2 kW)
- D Heating system pressure sensor
- E Safety valve – heating system – 3 bar
- F Manual air vent
- G Electrical cabinet with KSM 2.0 regulation system (MSR regulator, KSM Link IoT module)
- H DIN rail for HLC controllers
- I Safety thermostat for electric heater
- J WI-Fi, LoRa antenna

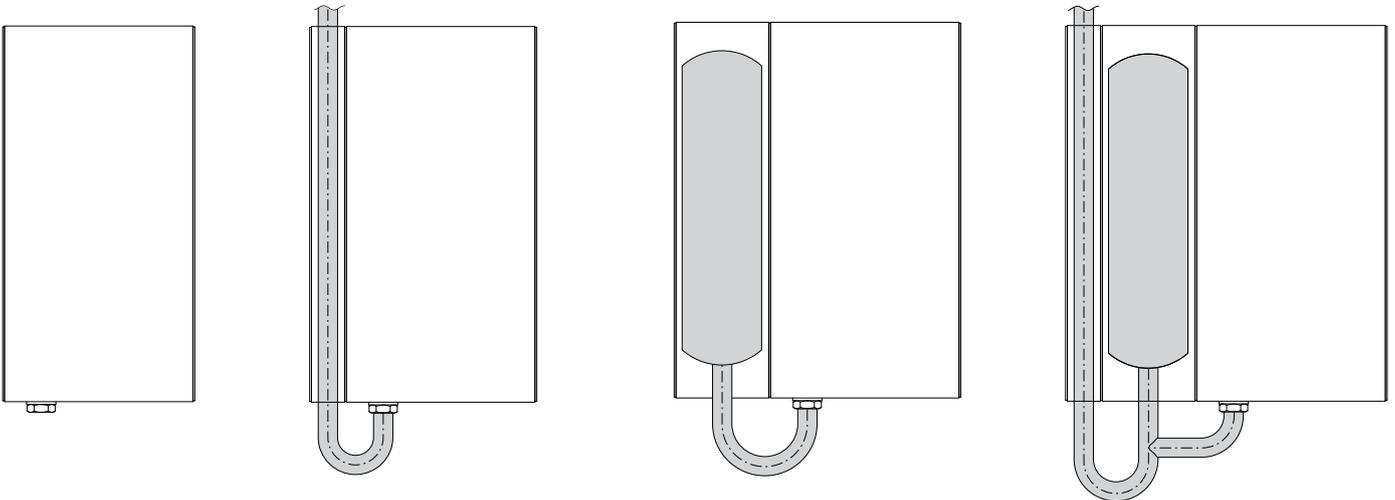


FRONT



FRONT

### HYDRO S3 configurations



**HYDRO S3**  
Basic model

**HYDRO S3 + HYDRO A2**  
Basic connection with the console spacer for pipe connection

**HYDRO S3 + HYDRO P2**  
Model with 40 l buffer tank

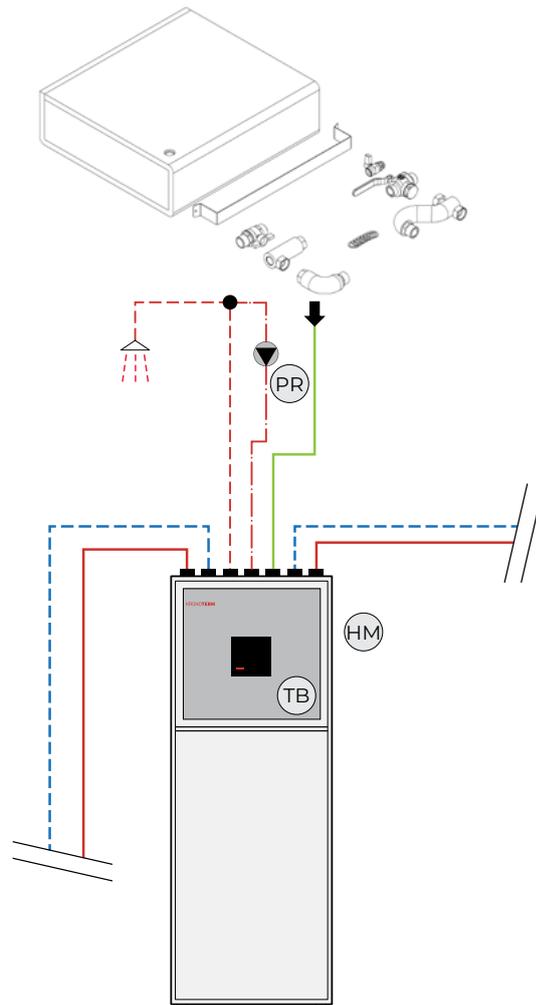
**HYDRO S3 + HYDRO A2 + HYDRO P2**  
Model with 40 l buffer tank and spacer for pipe connection

## HYDRO C3 ADDITIONAL EQUIPMENT

### TB FLAT BUFFER TANK

Simple mounting on the rear of HYDRO C3  
Includes: buffer tank, connection set,  
insulation

- ZA\_P 40 (40 l, 3 bar)



## HYDRO S3 ADDITIONAL EQUIPMENT

### HYDRO P FLAT BUFFER TANK

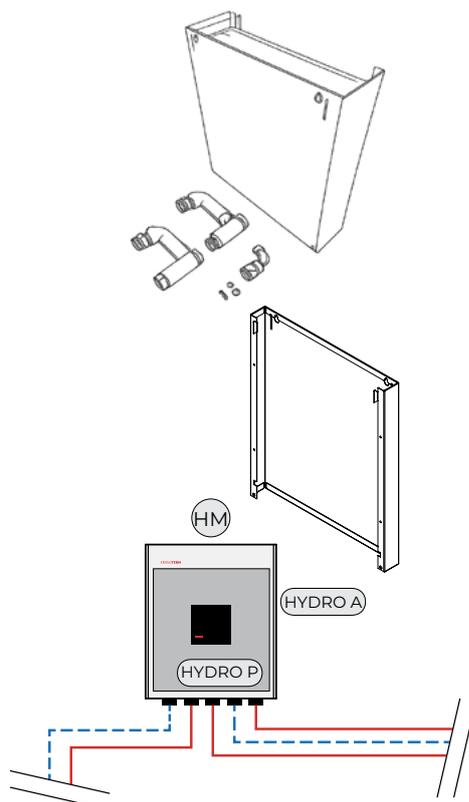
Includes: buffer tank, connection set

- HYDRO P2 (40 l, 3 bar)

### HYDRO A SPACER

For pipe installation behind the  
HYDRO S3

- HYDRO A2 (58 mm)



## CORA

### Version

Wall-mounted control unit

### Model mark

CORA

### Description and dimensions

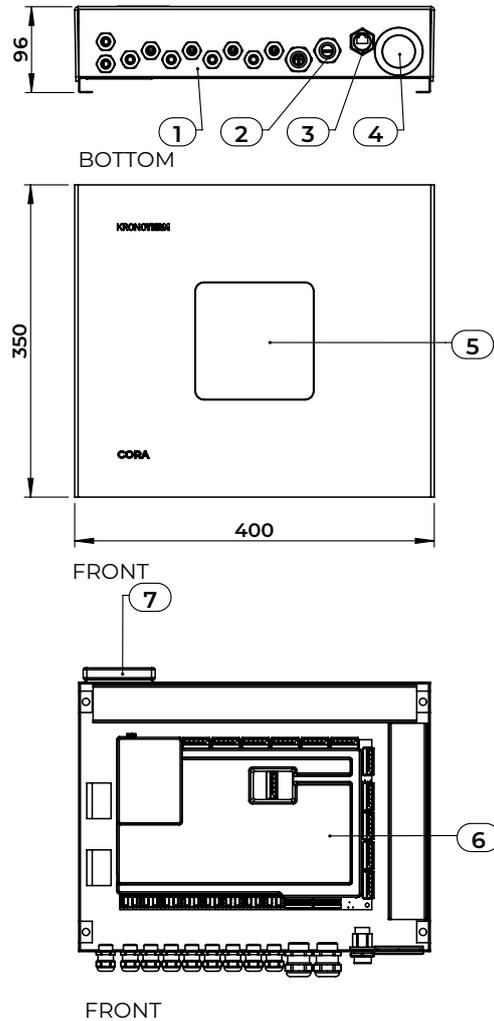
- Wall-mounted indoor unit
- KSM 2.0 regulation system
- Integrated: MSR controller, KSM Link IOT module, HMI
- Supplied with an outdoor temperature sensor

### Functional characteristics

- Heat pump management – up to 8 heat pump modules (CMS™ management system)
- Heating system management
- WiFi, Bluetooth, LoRa sensors
- Mobile app cloud management

### Legend

- 1 Low voltage output cable glands (>200 V)
- 2 Power supply cable gland
- 3 Internet cable jack
- 4 Inlet grommet for sensors and small voltage outputs (<48 V)
- 5 HMI (human machine interface)
- 6 MSR regulator
- 7 Wi-Fi, LoRa antenna



## CORA+

### Version

Wall-mounted expansion unit

### Model mark

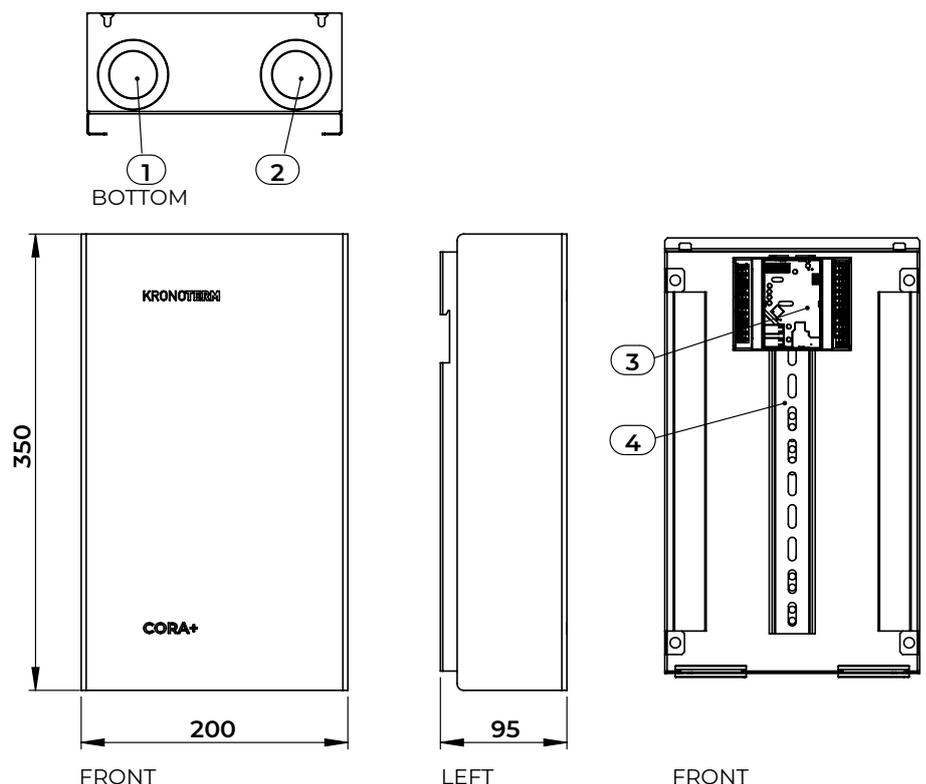
CORA+

### Description and dimensions

- Wall-mounted indoor unit
- KSM 2.0 regulation system

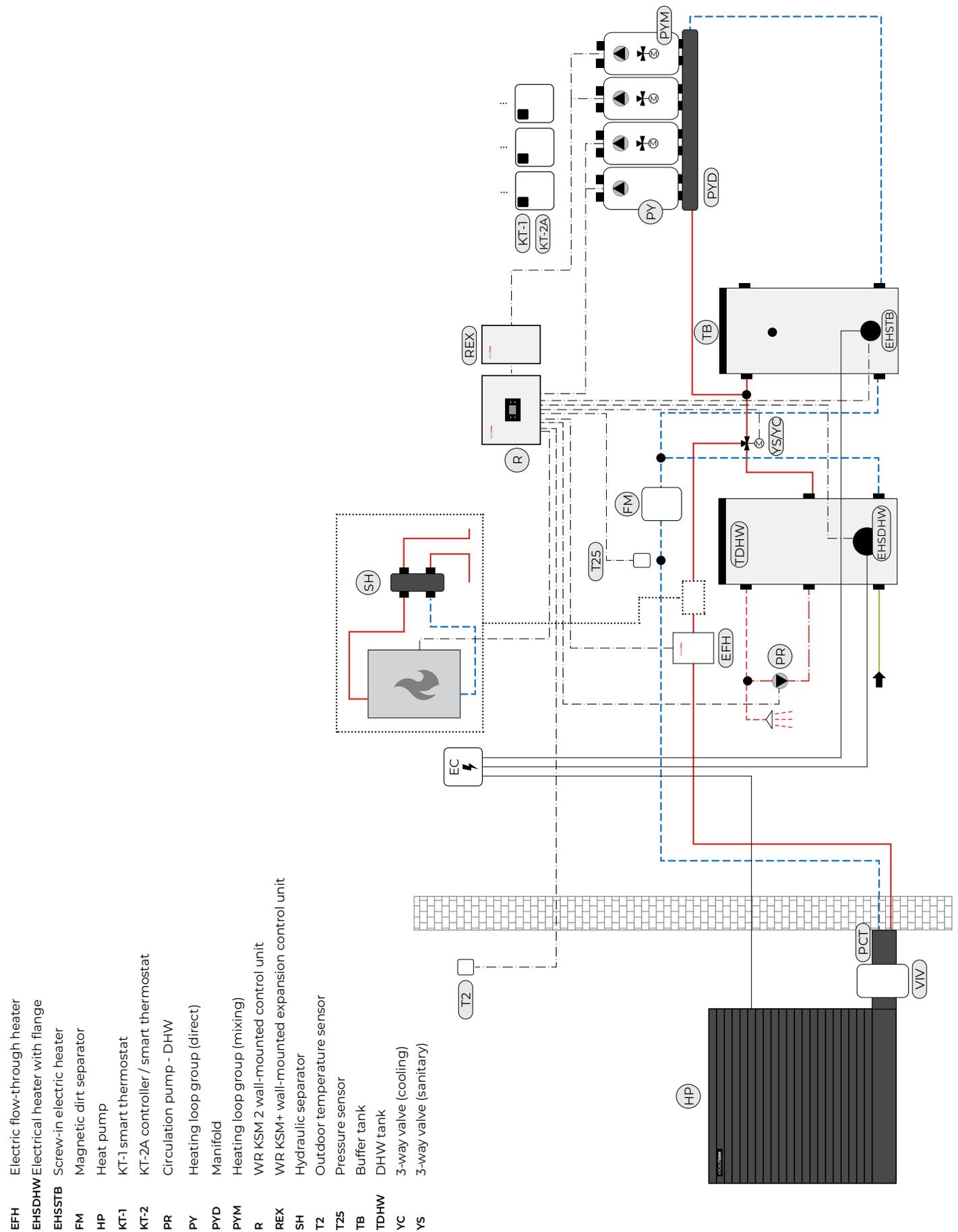
### Legend

- 1 Inlet grommet for power supply and low voltage outputs (> 200 V)
- 2 Inlet grommet for sensors and small voltage outputs (< 48 V)
- 3 HLC controller (max. 4 pcs)
- 4 DIN rail for additional HLC controllers



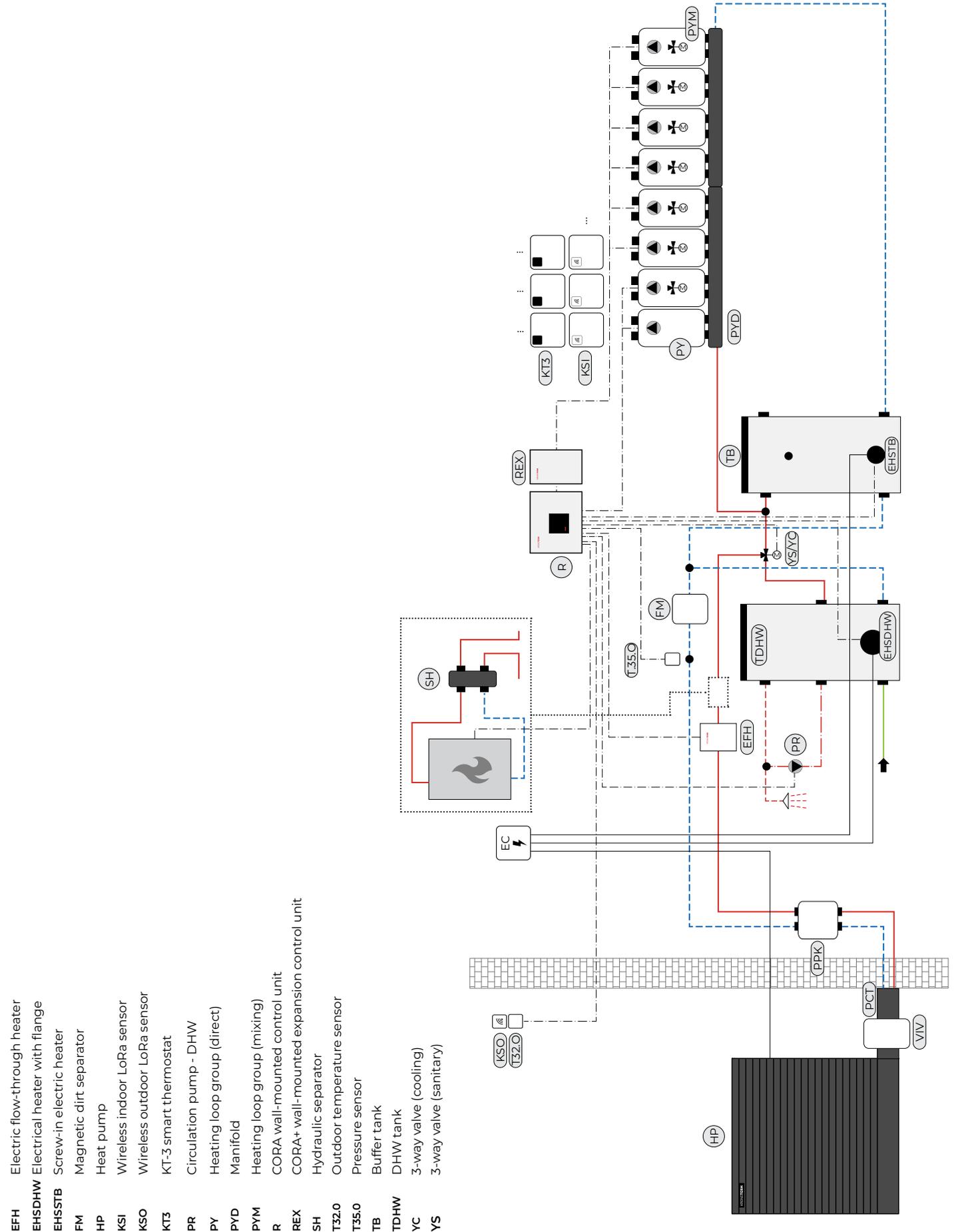
## HEATING SYSTEM ADDITIONAL EQUIPMENT WITH KSM 1.0

Sample installation diagram



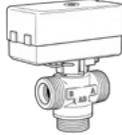
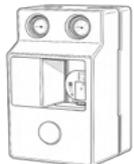
## HEATING SYSTEM ADDITIONAL EQUIPMENT WITH KSM 2.0

### Sample installation diagram



\*KSM 2.0 – available from Q4 2026

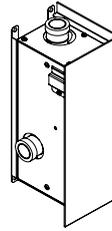
## HEATING SYSTEM ADDITIONAL EQUIPMENT (KSM 1.0 AND KSM 2.0)

KSM 1.0	<b>TDHW</b>	<b>DOMESTIC HOT WATER TANK</b> For heat pumps, enamelled, 10 bar <ul style="list-style-type: none"> <li>· BO_200 (200 l, 1,8 m<sup>2</sup>)</li> <li>· BO_300 (300 l, 2,6 m<sup>2</sup>)</li> <li>· BO_500 (500 l, 4 m<sup>2</sup>)</li> </ul>	
	<b>PR</b>	<b>RECIRCULATION PUMP</b> For DHW recirculation <ul style="list-style-type: none"> <li>· OC_STAR-Z NOVA T</li> </ul>	
KSM 2.0	<b>YC/YS</b>	<b>3-WAY VALVE SET</b> For switching between heating, cooling and domestic hot water heating Includes: 3-way zone valve, electro-motor drive <ul style="list-style-type: none"> <li>· PA_TPV DN25 2P</li> <li>· PA_TPV DN32 2P</li> </ul>	
	<b>FM</b>	<b>MAGNETIC DIRT SEPARATOR</b> For heating system <ul style="list-style-type: none"> <li>· MLN_UE028WJ</li> <li>· MLN_UE100WJ</li> <li>· MLN_UE125WJ</li> <li>· MLN_UE150WJ</li> </ul>	
	<b>TB/TDHW</b>	<b>COMBINED DOMESTIC HOT WATER AND BUFFER TANK</b> For heating and cooling, with closed-cell hard PU foam insulation <ul style="list-style-type: none"> <li>· BZ_100/300 (100 l buffer tank, 3 bar; 284 l DHW tank, 10 bar, 3 m<sup>2</sup>)</li> </ul>	
	<b>TB</b>	<b>BUFFER TANK</b> For heating and cooling, with closed-cell hard PU foam insulation. <ul style="list-style-type: none"> <li>· ZA_200 DN40 (214 l, 3 bar)</li> <li>· ZA_300 DN40 (284 l, 3 bar)</li> <li>· ZA_500 DN50 (470 l, 3 bar)</li> </ul>	
	<b>PYD</b>	<b>HEATING LOOP DISTRIBUTOR</b> <ul style="list-style-type: none"> <li>· HR_DN25-2V I</li> <li>· HR_DN25-3V I</li> <li>· HR_DN25-4V-I</li> </ul>	
	<b>PY/PYM</b>	<b>HEATING LOOP GROUP</b> With PWM pump for dynamic flow management in combination with the KSM 2.0 regulation system <ul style="list-style-type: none"> <li>· CS_DN25 D PWM2</li> <li>· CS_DN25 M PWM2</li> </ul>	
	<b>SH</b>	<b>HYDRAULIC SEPARATOR</b> For gas or oil boiler integration <ul style="list-style-type: none"> <li>· HL_DN25</li> <li>· HL_DN32</li> </ul>	

**EFH ELECTRIC HEATER – FLOW-THROUGH**

Flow-through 1-stage electric heater

- PG\_6 (6 kW)
- PG\_12 (12 kW)

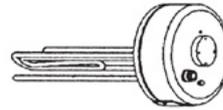


**EHS, EHSTB**

**ELECTRIC HEATER – SUBMERGED**

For installation in DHW and buffer tanks  
Built-in electric heater:

- PEG\_REU 18-2,0 (2,0 kW, 230V, Ø180 x 445 mm)
- PEG\_REU 18-3,3 (3,3 kW, 230 V, Ø180 x 445 mm)
- PEG\_RDU 18-6,0 (6,0 kW, 400 V, Ø180 x 445 mm)



Screw-in electric heater:

- NEG\_SH 2,0 (2,0 kW, 230/400V, G 1 ¼" ET x 320 mm)
- NEG\_SH 3,0 (3,0 kW, 230/400V, G 1 ¼" ET x 390 mm)
- NEG\_SH 4,5 (4,5 kW, 400V, G 1 ¼" ET x 470 mm)

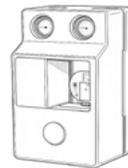


**HEATING SYSTEM ADDITIONAL EQUIPMENT (KSM 2.0)**

**PY/PYM HEATING LOOP GROUP**

For KSM 2.0 regulation system; the HLC controller automatically adjusts the flow to match the actual heating demand. This ensures optimal balancing with the heat pump and maximises overall system efficiency by eliminating mixing losses. Anti-condensation insulation is supplied as standard. The installation is quicker, as only two cables are required for up to 8 heating loop groups.

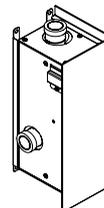
- CS\_DN25 D KSM2 / HK 1F 1
- CS\_DN25 M KSM2 / HK 1F 1



**EFH ELECTRIC HEATER – FLOW-THROUGH**

Flow-through 3-stage electric heater

- PG\_6S (3 x 2 kW)
- PG\_12S (3 x 4 kW)



## Configuration matrix for heating system additional equipment

Drawing ID	Component type	Item name	ADAPT 2 S	ADAPT 2 M	ADAPT 2 L
TDHW	Domestic hot water tank	BO_200	✓	✓	
		BO_300	✓	✓	✓
		BO_500	✓	✓	✓
TB/TDHW	Combined domestic hot water and buffer tank	BZ_100/300	✓	✓	✓
TB	Buffer tank	ZA_200 DN40	✓	✓	✓
		ZA_300 DN40	✓	✓	✓
		ZA_500 DN50	✓	✓	✓
YC/YS	3-way valve	PA_TPV DN25 2P	✓	✓	
		PA_TPV DN32 2P			✓
FM	Magnetic dirt separator	MLN_UE028WJ	✓	✓	
		MLN_UE100WJ	✓	✓	
		MLN_UE125WJ			✓
		MLN_UE150WJ			✓
PYD	Heating loop distributor	HR_DN25-2V I	✓	✓	✓
		HR_DN25-3V I	✓	✓	✓
		HR_DN25-4V-I	✓	✓	✓
SH	Hydraulic separator	HL_DN25	✓	✓	✓
		HL_DN32	✓	✓	✓
EFH	Electric heater – flow- through	PG_6 (6 kW)	✓	✓	
		PG_12 (12 kW)	✓	✓	✓

\*

Drawing ID	Component type	Description	Item name	BO_200	BO_300	BO_500	BZ_100/300	ZA_200 DN40	ZA_300 DN40	ZA_500 DN50
EHSDHW	Electric heater	With flange	PEG_REU 18-2,0 (2,0 kW, 230V, Ø180 x 445 mm)	✓	✓	✓	✓			
			PEG_REU 18-3,3 (3,3 kW, 230 V, Ø180 x 445 mm)	✓	✓	✓	✓			
			PEG_RDU 18-6,0 (6,0 kW, 400 V, Ø180 x 445 mm)	✓	✓	✓	✓			
EHSTB	Screw-in		NEG_SH 2,0 (2,0 kW, 230/400V, G 1 ¼" x 320 mm)					✓	✓	✓
			NEG_SH 3,0 (3,0 kW, 230/400V, G 1 ¼" x 390 mm)					✓	✓	✓
			NEG_SH 4,5 (4,5 kW, 400V, G 1 ¼" x 470 mm)					✓	✓	✓
PR	Recirculation pump		OC_STAR-Z NOVA T	✓	✓	✓	✓			

## Compatible only with KSM 2.0 regulation system

Drawing ID	Component type	Item name	ADAPT 2 S	ADAPT 2 M	ADAPT 2 L
PY(M)	Heating loop group	CS_DN25 D KSM2 / HK 1F 1	✓	✓	✓
		CS_DN25 M KSM2 / HK 1F 1	✓	✓	✓
		CS_DN25 D PWM2	✓	✓	✓
		CS_DN25 M PWM2	✓	✓	✓
EFH	Electric heater – flow- through	PG_6S (3 x 2 kW)	✓	✓	
		PG_12S (3 x 4 kW)	✓	✓	✓

## TECHNICAL DATA - HEAT PUMP

DEVICE	Unit	ADAPT 2 M	ADAPT 2 L
<b>DEDICATED INDOOR UNIT (KSM 1.0)</b>			
Dedicated indoor unit		HYDRO C2, HYDRO S2, WR KSM 2, WR KSM C, WR KSM+	HYDRO S2, WR KSM 2, WR KSM C, WR KSM+
Controller			KSM 1.0
Controller position		In the indoor unit	In the indoor unit
<b>DEDICATED INDOOR UNIT (KSM 2.0)</b>			
Dedicated indoor unit		HYDRO C3, HYDRO S3, CORA, CORA+	HYDRO S3, CORA, CORA+
Controller		KSM 2.0	KSM 2.0
Controller position		In the indoor unit	In the indoor unit
<b>VERSION</b>			
Heat source		Air	Air
Heat sink		Water/Water-ethylene glycol 30%	Water/Water-ethylene glycol 30%
Heat pump location		Outdoor	Outdoor
Compressor		1x scroll with variable speed	1x scroll with variable speed
Compressor drive		DC Inverter	DC Inverter
Fan		1x Axial with variable flow	1x Axial with variable flow
Defrosting		Active (refrigerant reverses flow)	Active (refrigerant reverses flow)
Recirculation pump		Integrated	Integrated
Water flow sensor		Integrated	Integrated

DEVICE	Unit	ADAPT 2 M 1F	ADAPT 2 M 3F	ADAPT 2 L
<b>INDOOR UNIT</b>				
<b>HEATING</b>		<b>Heating capacity / Electrical power / COP</b>	<b>Heating capacity / Electrical power / COP</b>	<b>Heating capacity / Electrical power / COP</b>
A7/W30-35, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	13,16 / 2,72 / 4,84	13,14 / 2,72 / 4,83	18,38 / 3,82 / 4,81
A-7/W30-35, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	12,66 / 4,08 / 3,10	12,78 / 4,24 / 3,02	18,22 / 5,94 / 3,06
A-10/W30-35, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	11,41 / 5,18 / 2,20	11,41 / 5,18 / 2,20	17,92 / 8,06 / 2,22
A-7/W47-55, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	12,18 / 5,36 / 2,27	12,18 / 5,36 / 2,27	17,88 / 7,57 / 2,36
A7/W47-55, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	12,95 / 3,88 / 3,33	13,05 / 3,99 / 3,28	18,49 / 5,44 / 3,40
A-10/W47-55, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	12,13 / 4,21 / 2,88	12,13 / 4,21 / 2,88	18,23 / 6,31 / 2,89
<b>COOLING</b>		<b>Cooling capacity / Electrical power / EER</b>	<b>Cooling capacity / Electrical power / EER</b>	<b>Cooling capacity / Electrical power / EER</b>
A35/W12-7, part load <sup>1</sup>	<b>kW/kW/-</b>	8,10 / 2,69 / 3,01	8,10 / 2,69 / 3,01	14,28 / 4,94 / 2,89
A35/W23-18, part load <sup>1</sup>	<b>kW/kW/-</b>	8,03 / 1,73 / 4,64	8,03 / 1,73 / 4,64	13,84 / 3,03 / 4,57
A35/W12-7, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	10,12 / 3,59 / 2,82	10,07 / 3,64 / 2,77	18,17 / 7,63 / 2,38
A35/W23-18, max. capacity <sup>2</sup>	<b>kW/kW/-</b>	9,98 / 2,23 / 4,48	10,02 / 2,30 / 4,39	18,25 / 4,87 / 3,75

<sup>1</sup> Standard rating condition, part load

<sup>2</sup> Operation at maximum capacity

DEVICE	Unit	ADAPT 2 M 1F	ADAPT 2 M 3F	ADAPT 2 L
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**ELECTRICAL DATA\*****ELECTRICAL DATA**

Rated voltage; Frequency	v/Hz	~ 230v; 50	3N~ 400; 50	3N~ 400; 50
Max. operating current	A	24,4	9,1	13,4
Max. electric capacity	kW	5,60	6,14	9,10
Fuses	A	1 x 25	3 x 10	3 x 16
Power supply cable**	mm <sup>2</sup>	3 x 4	5 x 2,5	5 x 2,5

**COMMUNICATION**

Connection between outdoor and indoor unit		FTP 5e cable/2x2x0,6 mm2 (LiYCY)	FTP 5e cable/2x2x0,6 mm2 (LiYCY)	FTP 5e cable/2x2x0,6 mm2 (LiYCY)
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**COOLING SYSTEM**

Refrigerant - type		R290	R290	R290
Refrigerant - industrial designation		HC-290 (R290)	HC-290 (R290)	HC-290 (R290)
GWP (global warming potential) refrigerants		0,02	0,02	0,02
Total CO <sub>2</sub> equivalent of charged refrigerant		0,04	0,04	0,04
Refrigerant - quantity	kg	2	2	2,5
Max. refrigerant system operating pressure	MPa	3,2	3,2	3,2

**PRIMARY SIDE (HEAT SOURCE) – AIR**

Max. air flow	m <sup>3</sup> /h	4400	4400	6000
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**SECONDARY SIDE (HEAT SINK) – WATER****BUILT-IN CIRCULATION PUMP**

Rated flow at maximum heating capacity and ΔT 5K according to standard EN 14511	m <sup>3</sup> /h	2,30	2,30	3,22
Max. available external pressure drop at nominal water flow	kPa	50,1	50,1	54,3

**HEATING**

Operating envelope - min./max. air temperature	°C	-25 / 40	-25 / 40	-25 / 40
Operating envelope - min./max. water temperature	°C	15 / 75	15 / 75	15 / 75
Minimal flow rate	m <sup>3</sup> /h	1,15	1,15	1,61
Minimal flow rate during defrosting	m <sup>3</sup> /h	1,3	1,3	1,9

**COOLING**

Operating envelope - min./max. air temperature	°C	10 / 45	10 / 45	10 / 45
Operating envelope - min./max. water temperature	°C	7 / 25	7 / 25	7 / 25
Minimal flow rate	m <sup>3</sup> /h	1,89	1,89	2,64

**DIMENSIONS AND WEIGHT - TRANSPORT**

Dimensions (W x H x D)	mm	1200 x 1405 x 800	1200 x 1405 x 800	1200 x 1405 x 800
Weight	kg	262,5	277,5	280,5

**DIMENSIONS AND WEIGHT - NET**

Dimensions (W x H x D)	mm	1150 x 1225 x 715	1150 x 1225 x 715	1150 x 1225 x 715
Weight	kg	242	257	260

\* For the system's connection power, power cables, and fuse dimensions, see the instructions on preparing for installation.

\*\*Installation method C, table A.52.4 of IEC 60364-5-52

DEVICE	Unit	ADAPT 2 M 1F	ADAPT 2 M 3F	ADAPT 2 L
<b>SEASONAL ENERGY EFFICIENCY FOR HEATING ACCORDING TO DIRECTIVE (EU) 811/2013 – DATA SHEET</b>				
Temperature mode	°C	35 / 55	35 / 55	35 / 55
Seasonal energy efficiency class		A+++ / A+++	A+++ / A+++	A+++ / A+++
Rated heating capacity $P_{designH}$ average climate zone	kW	10,5 / 10,5	10,5 / 10,5	14,5 / 14,5
Seasonal space heating energy efficiency $\eta_s$ , average climate zone	%	237 / 168	236 / 168	246 / 175
Annual energy consumption average climate zone	kWh	3614 / 5068	3636 / 5062	4819 / 6733
Level of sound power LWA, indoor	dB	-	-	-
Rated heating capacity $P_{designH}$ colder climate zone	kW	12,0 / 12,0	12,0 / 12,0	16,0 / 16,0
Rated heating capacity $P_{designH}$ warmer climate zone	kW	12,4 / 12,5	12,4 / 12,7	15,5 / 15,9
Seasonal space heating energy efficiency $\eta_s$ , colder climate zone	%	204 / 151	202 / 151	214 / 158
Seasonal space heating energy efficiency $\eta_s$ , warmer climate zone	%	294 / 199	293 / 204	301 / 210
Annual energy consumption, colder climate zone	kWh	5711 / 7698	5783 / 7675	7270 / 9782
Annual energy consumption, warmer climate zone	kWh	2228 / 3314	2240 / 3283	2727 / 3997
Level of sound power LWA, outdoor	dB	41 / 44	41 / 44	38 / 40

**SEASONAL ENERGY EFFICIENCY FOR HEATING ACCORDING TO DIRECTIVE (EU) 811/2013 – DATA SHEET FOR PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE**

Controller model		KSM	KSM	KSM
Temperature mode	°C	35 / 55	35 / 55	35 / 55
Class of controller for adjusting temperature		VI	VI	VI
Temperature controller's contribution to seasonal efficiency	%	4,0	4,0	4,0
Seasonal energy efficiency class for packages of space heaters		A+++ / A+++	A+++ / A+++	A+++ / A+++
Seasonal space heating energy efficiency $\eta_s$ for packages of space heater, average climate zone	%	241 / 172	240 / 172	250 / 179
Seasonal space heating energy efficiency $\eta_s$ for packages of space heater, colder climate zone	%	208 / 155	206 / 155	218 / 162
Seasonal space heating energy efficiency $\eta_s$ for packages of space heater, warmer climate zone	%	298 / 203	297 / 208	305 / 214

DEVICE	Unit	ADAPT 2 M 1F	ADAPT 2 M 3F	ADAPT 2 L
<b>SEASONAL HEATING PERFORMANCE ACCORDING TO STANDARD EN 14825</b>				
Rated heating capacity P <sub>designh</sub> 35 °C/55 °C – average climate zone	<b>kW</b>	10,5 / 10,5	10,5 / 10,5	14,5 / 14,5
SCOP, 35 °C/55 °C – average climate zone		6,01 / 4,28	5,97 / 4,29	6,22 / 4,45
Rated heating capacity P <sub>designh</sub> 35 °C/55 °C – warmer climate zone	<b>kW</b>	12,4 / 12,5	12,4 / 12,7	15,5 / 15,9
SCOP, 35 °C/55 °C – warmer climate zone		7,48 / 5,06	7,43 / 5,19	7,62 / 5,33
Rated heating capacity P <sub>designh</sub> 35 °C/55 °C – colder climate zone	<b>kW</b>	12,0 / 12,0	12,0 / 12,0	16,0 / 16,0
SCOP, 35 °C/55 °C – colder climate zone		5,18 / 3,84	5,12 / 3,86	5,43 / 4,03
<b>SEASONAL COOLING PERFORMANCE ACCORDING TO STANDARD EN 14825</b>				
Rated cooling capacity P <sub>designc</sub> 7 °C/18 °C	<b>kW</b>	10,0 / 10,0	10,0 / 10,0	14,5 / 14,5
SEER, 7 °C/18 °C		5,03 / 6,83	4,93 / 6,76	5,07 / 6,95

\*

## TECHNICAL DATA - INDOOR UNIT WITH KSM 1.0

APPLIANCE	Unit	HYDRO C2		HYDRO S2	
<b>ELECTRICAL DATA*</b>					
<b>ELECTRICAL DATA 1F</b>					
Rated voltage; Frequency	V/Hz	~ 230 V; 50	~ 230 V; 50	~ 230 V; 50	~ 230 V; 50
Electric heater	kW ~ 230 V	1 x 2	2 x 2	1 x 2	2 x 2
Max. operating current	A	11,8	20,6	11,8	20,6
Max. electric power	kW	2,6	4,6	2,6	4,6
Fuses	A	1 x C16	1 x C20	1 x C16	1 x C20
Power cable	mm <sup>2</sup>	3 x 2,5	3 x 4	3 x 2,5	3 x 4
Type of power cable		H05VV-F	H05VV-F	H05VV-F	H05VV-F
<b>ELECTRICAL DATA 3F</b>					
Rated voltage; Frequency	V/Hz	3N ~ 400; 50		3N ~ 400; 50	
Electric heater	kW ~ 230 V	3 x 2		3 x 2	
Max. operating current	A	11,8		11,8	
Max. electric power	kW	6,6		6,6	
Fuses	A	3 x C16		3 x C16	
Power cable	mm <sup>2</sup>	5 x 2,5		5 x 2,5	
Type of power cable		H05VV-F		H05VV-F	
<i>*For system Max. power, power cables and fuse dimensions, see Installation guidelines</i>					
<b>SECONDARY SIDE (HEAT SINK) – WATER</b>					
<b>RECOMMENDED NOMINAL DIAMETER OF THE PIPE TO</b>		<b>Low temperature heating W35</b>	<b>High temperature heating W55</b>	<b>Low temperature heating W35</b>	<b>High temperature heating W55</b>
ADAPT 2 S		DN 25	DN 25	DN 25	DN 25
ADAPT 2 M		DN 32	DN 25	DN 32	DN 25
ADAPT 2 L		/	/	/	DN 32
<b>PRESSURE DROP AT RATED FLOW*</b>					
ADAPT 2 S	kPa	12,4		13,7	
ADAPT 2 M	kPa	32,7		34,6	
ADAPT 2 L	kPa	/		/	
<i>*Calculated at condition A2/W30-35</i>					
<b>VOLUME</b>					
<b>DHW TANK</b>	l	200		/	
Heat losses $Q_{st}$ according to EN 12897	kWh / 24 h	1,27		/	
<b>BUFFER TANK (ADDITIONAL EQUIPMENT)</b>		<b>ZA_P40</b>		<b>HYDRO P2</b>	
Volume	l	40		40	
Heat losses $Q_{st}$ at 55 °C	kWh / 24 h	1,2		1,2	
Heat losses $Q_{st}$ at 35 °C	kWh / 24 h	0,335		0,335	
<b>DIMENSIONS AND WEIGHT – TRANSPORT</b>					
Dimensions (W x H x D)	mm	640 x 2035 x 790		600 x 750 x 450	
Weight	kg	148		36	
<b>DIMENSIONS AND WEIGHT – NET</b>					
Dimensions (W x H x D)	mm	602 x 1812 x 684		525 x 620 x 320	
Weight	kg	135		27	
<b>COMMUNICATION</b>					
Connection between the outdoor and indoor units		FTP 5e cable/2x2x0,6 mm2 (LiYCY)		FTP 5e cable/2x2x0,6 mm2 (LiYCY)	
Connection to BMS		MODBUS protocol (UTP cable – RJ45 connection) – RS 485		MODBUS protocol (UTP cable – RJ45 connection) – RS 485	
Connection to the internet		UTP cable – connection RJ45 - Ethernet		UTP kabel – connection RJ45 - Ethernet	

## APPLIANCE\*

		WR KSM 2	WR KSM+	WR KSM C
<b>ELECTRICAL DATA 1F</b>				
Frequency	Hz	50	50	50
Nominal voltage	V	~ 230	~ 230	~ 230
Max. operation current	A	2,2	2,2	2,2
Max. electrical power	kW	0,5	0,5	0,5
Fuses	A	1 x C10	1 x C10	1 x C10
Power cable	mm <sup>2</sup>	3 x 1,5	3 x 1,5	3 x 1,5
Type of power cable		H05VV-F	H05VV-F	H05VV-F

\*For system Max. power, power cables and fuse dimensions, see Installation guidelines

## DIMENSIONS AND WEIGHT – TRANSPORT

Dimensions (W x H x D)	mm <sup>2</sup>	420 X 370 X 120	220 X 370 X 120	220 X 370 X 120
Weight	kg	5	2,5	2,8

## DIMENSIONS AND WEIGHT – NET

Dimensions (W x H x D)	mm <sup>2</sup>	400 X 350 X 90	200 X 350 X 90	200 X 350 X 90
Weight	kg	4,3	2,3	2,6

## COMMUNICATION

Connection between heat pump and wall controller	FTP 5e cable / 2x2x0.6 mm2 (LiYCY)	FTP 5e cable / 2x2x0.6 mm2 (LiYCY)	FTP 5e cable / 2x2x0.6 mm2 (LiYCY)
Connection to BMS	MODBUS protocol (UTO cable connection RJ45) – RS485	MODBUS protocol (UTO cable connection RJ45) – RS485	MODBUS protocol (UTO cable connection RJ45) – RS485
Connection to the internet	UTP cable – connection RJ45 – Ethernet	UTP cable – connection RJ45 – Ethernet	UTP cable – connection RJ45 – Ethernet

APPLIANCE

PG\_6

PG\_12

HEATING MEDIUM - WATER

Minimum water temperature	°C	5	5
Maximum water temperature	°C	80	80
Rated flow at dT 5K according to standard EN 14511	m <sup>3</sup> /h	1,035	2,07
Maximum available pressure drop	kPa	0,43	0,63

ELECTRICAL DATA\*

ELECTRICAL DATA 1F

Frequency	Hz	50	50	50
Rated voltage	V	~230	~230	~230
Electrical heater		1 x 2 kW ~230 V	2 x 2 kW ~230 V	2 x 2 kW ~230 V
Max. operating current	A	8,7	17,4	17,4
Max. electrical power	kW	2	4	4,0
Fuses	A	1 x C10	1 x C20	1 x C20
Power cable	mm <sup>2</sup>	3 x 1,5	3 x 2,5	3 x 2,5
Type of power cable		H05VV-F	H05VV-F	H05VV-F

ELECTRICAL DATA 3F

Frequency	Hz	50	50	50
Nominal voltage	V	3N ~400	3N ~400	3N ~400
Electrical heater		3 x 2 kW ~230 V	4 x 2 kW 2f ~230 V	6 x 2 kW 3f ~230 V
Max. operating current	A	8,7	17,4	17,4
Max. electrical power	kW	6	8	12
Fuses	A	3 x C10	2 x C20	3 x C20
Power cable	mm <sup>2</sup>	5 x 1,5	4 x 2,5	5 x 2,5
Type of power cable		H05VV-F	H05VV-F	H05VV-F

\*For the system's connection power, power cables, and fuse dimensions, see the instructions on preparing for installation

DIMENSIONS AND WEIGHT - TRANSPORT

Dimensions (W x H x D)	mm	140 x 160 x 350	220 x 230 x 460
Weight	kg	4,3	10,5

DIMENSIONS AND WEIGHT - NET

Dimensions (W x H x D)	mm	124 x 145 x 330	200 x 213 x 440
Weight	kg	4,1	10,1

## TECHNICAL DATA - INDOOR UNIT WITH KSM 2.0

DEVICE	Unit	HYDRO C3	HYDRO S3
<b>ELECTRICAL DATA*</b>			
<b>ELECTRICAL DATA 1F</b>			
Rated voltage; Frequency	v/Hz	~ 230; 50	~ 230; 50
Electric heater	kW (~ 230 V)	1 x 2	2 x 2
Max. operating current	A	11,8	20,6
Max. electric power	kW	2,6	4,6
Fuses	A	1 x C16	1 x C20
Power cable	mm <sup>2</sup>	3 x 2,5	3 x 4
Type of power cable		H05VV-F	H05VV-F
<b>ELECTRICAL DATA 3F</b>			
Rated voltage; Frequency	v/Hz	3N ~ 400; 50	3N ~ 400; 50
Electric heater	kW (~ 230 V)	3 x 2	3 x 2
Max. operating current	A	11,8	11,8
Max. electric power	kW	6,6	6,6
Fuses	A	3 x C16	3 x C16
Power cable	mm <sup>2</sup>	5 x 2,5	5 x 2,5
Type of power cable		H05VV-F	H05VV-F

\*For system max. power, power cables and fuse dimensions, see Installation guidelines.

### SECONDARY SIDE (HEAT SINK) – WATER

Recommended nominal diameter of the pipe to	Low temperature heating W35	High temperature heating W55	Low temperature heating W35	High temperature heating W55
ADAPT 2 S	DN 25	DN 25	DN 25	DN 25
ADAPT 2 M	DN 32	DN 25	DN 32	DN 25
ADAPT 2 L	/	/	/	DN 32

### Pressure drop at rated flow\*

ADAPT 2 S	kPa	12,4	13,7
ADAPT 2 M	kPa	32,7	34,6
ADAPT 2 L	kPa	/	/

\*Calculated at condition A2/W30-35

### VOLUME

DHW tank	Integrated	
Volume	l	200
Heat losses Q <sub>st</sub> according to EN 12897	kWh / 24h	1,27
<b>Buffer tank (Additional equipment)</b>	<b>ZA_P40</b>	<b>HYDRO P2</b>
Volume	l	40
Heat losses Q <sub>st</sub> at 55 °C	kWh / 24h	1,2
Heat losses Q <sub>st</sub> at 35 °C	kWh / 24h	0,335

### DIMENSIONS AND WEIGHT – TRANSPORT

Dimensions (W x H x D)	mm	640 x 2035 x 790	600 x 750 x 450
Weight	kg	148	36

### DIMENSIONS AND WEIGHT – NET

Dimensions (W x H x D)	mm	600 x 1845 x 685	525 x 655 x 320
Weight	kg	135	27

### COMMUNICATION

Connection between heat pump and wall controller	FTP 5e cable / 2x2x0,6 mm <sup>2</sup> (LIYCY)	FTP 5e cable / 2x2x0,6 mm <sup>2</sup> (LIYCY)
Connection to BMS	MODBUS protocol (UTP cable connection RJ45) - Ethernet	MODBUS protocol (UTP cable connection RJ45) - Ethernet
Connection to the internet	UTP cable - connection R45 - Ethernet	UTP cable - connection R45 - Ethernet

DEVICE	Unit	CORA	CORA+
<b>ELECTRICAL DATA*</b>			
<b>ELECTRICAL DATA 1F</b>			
Rated voltage; Frequency	v/Hz	~ 230; 50	~ 230; 50
Electric heater	kW (~ 230 V)	1 x 2	/
Max. operating current	A	15,1	5,2
Max. electric power	kW	2,5	0,6
Fuses	A	1 x C16	1 x C10
Power cable	mm <sup>2</sup>	3 x 2,5	3 x 1,5
Type of power cable		H05VV-F	H05VV-F

<b>ELECTRICAL DATA 3F</b>			
Rated voltage; Frequency	v/Hz	3N ~ 400; 50	/
Electric heater	kW (~ 230 V)	3 x 2	/
Max. operating current	A	15,1	/
Max. electric power	kW	6,5	/
Fuses	A	3 x C16	/
Power cable	mm <sup>2</sup>	5 x 2,5	/
Type of power cable		H05VV-F	/

\*For system max. power, power cables and fuse dimensions, see Installation guidelines.

**DIMENSIONS AND WEIGHT – TRANSPORT**

Dimensions (W x H x D)	mm	420 X 370 X 120	220 X 370 X 120
Weight	kg	5	2,5

**DIMENSIONS AND WEIGHT – NET**

Dimensions (W x H x D)	mm	400 X 350 X 90	200 X 350 X 90
Weight	kg	4,3	2,3

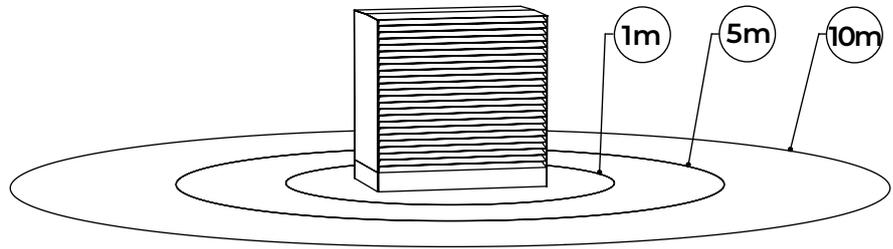
**COMMUNICATION**

Connection between heat pump and wall controller	FTP 5e cable / 2x2x0.6 mm <sup>2</sup> (LiYCY)	FTP 5e cable / 2x2x0.6 mm <sup>2</sup> (LiYCY)
Connection to BMS	MODBUS protocol (UTO cable connection RJ45) – RS485	MODBUS protocol (UTO cable connection RJ45) – RS485
Connection to the internet	UTP cable – connection RJ45 – Ethernet	UTP cable – connection RJ45 – Ethernet

## SOUND

### Description

- Sound power is a characteristic of a sound source and is not related to distance; describes the total sound energy of an appropriate source that is emitted in all directions.
- Sound pressure depends on the measurement site in the sound field and describes the sound pressure at that location.
- When sound is transmitted through the structure, it is necessary to equip the connection with absorbers or compensators in order to prevent the transmission of unwanted structural sound.



DEVICE	Unit	ADAPT 2 M	ADAPT 2 L
<b>SOUND ACCORDING TO EN 12102 AT THE CONDITION OF A7W35</b>			
<b>THE DECLARED SOUND POWER ON THE ECOLABEL ENERGY LABEL</b>			
Sound power (A7W35)	dB (A)	41	38
Sound pressure level at the distance of 1 m	dB (A)	33	30
Sound pressure level at the distance of 5 m	dB (A)	19	16
Sound pressure level at the distance of 10 m	dB (A)	13	10
<b>SOUND POWER AT STANADRD RATED CONDITION (A7W35)</b>			
Sound power	dB (A)	47	49
Sound pressure level at the distance of 1 m	dB (A)	39	41
Sound pressure level at the distance of 5 m	dB (A)	25	27
Sound pressure level at the distance of 10 m	dB (A)	19	21
<b>MAXIMUM SOUND POWER (A7W35)</b>			
Sound power	dB (A)	55	61
Sound pressure level at the distance of 1 m	dB (A)	47	53
Sound pressure level at the distance of 5 m	dB (A)	33	39
Sound pressure level at the distance of 10 m	dB (A)	27	33
<b>MINIMUM SOUND POWER (A7W35)</b>			
Sound power	dB (A)	41	38
Sound pressure level at the distance of 1 m	dB (A)	33	30
Sound pressure level at the distance of 5 m	dB (A)	19	16
Sound pressure level at the distance of 10 m	dB (A)	13	10
<b>MAXIMUM SOUND POWER IN SILENT MODE (A7W35)</b>			
Sound power	dB (A)	47	45
Sound pressure level at the distance of 1 m	dB (A)	39	37
Sound pressure level at the distance of 5 m	dB (A)	25	23
Sound pressure level at the distance of 10 m	dB (A)	19	17
<b>SOUND POWER AT STANADRD RATED CONDITION A2W35 (EN14825, PART LOAD)</b>			
Sound power	dB (A)	46	52
Sound pressure level at the distance of 1 m	dB (A)	38	44
Sound pressure level at the distance of 5 m	dB (A)	24	30
Sound pressure level at the distance of 10 m	dB (A)	18	24

The device's sound power depends on the building's actual heating needs. The lower the heating needs, the lower the noise levels, and vice versa. Sound pressure is calculated from the sound power at the hemispherical layout ( $Q = 2$ ).

#### Tonality:

No tonal sounds or frequencies throughout the entire operating range.

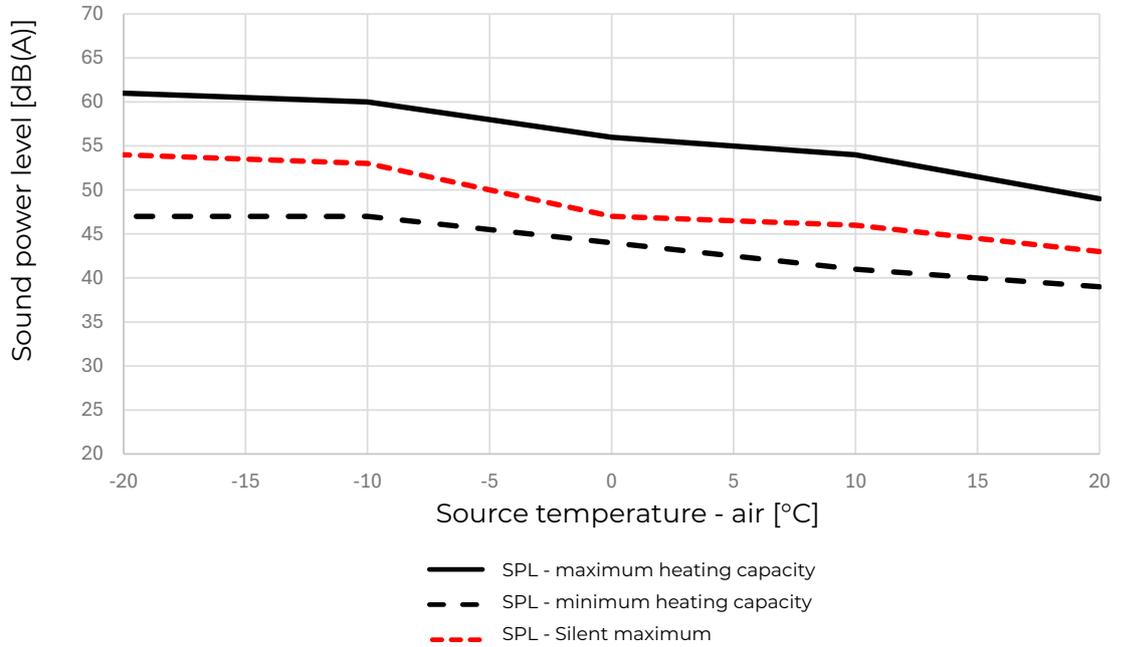
#### Measurement Uncertainty:

The sound power level was determined according to ISO 9614-2. The standard deviation of the sound power level is 1.5 dB. At a confidence level of 95%, the actual A-weighted sound power level falls within the range of  $\pm 3$  dB around the measured values.

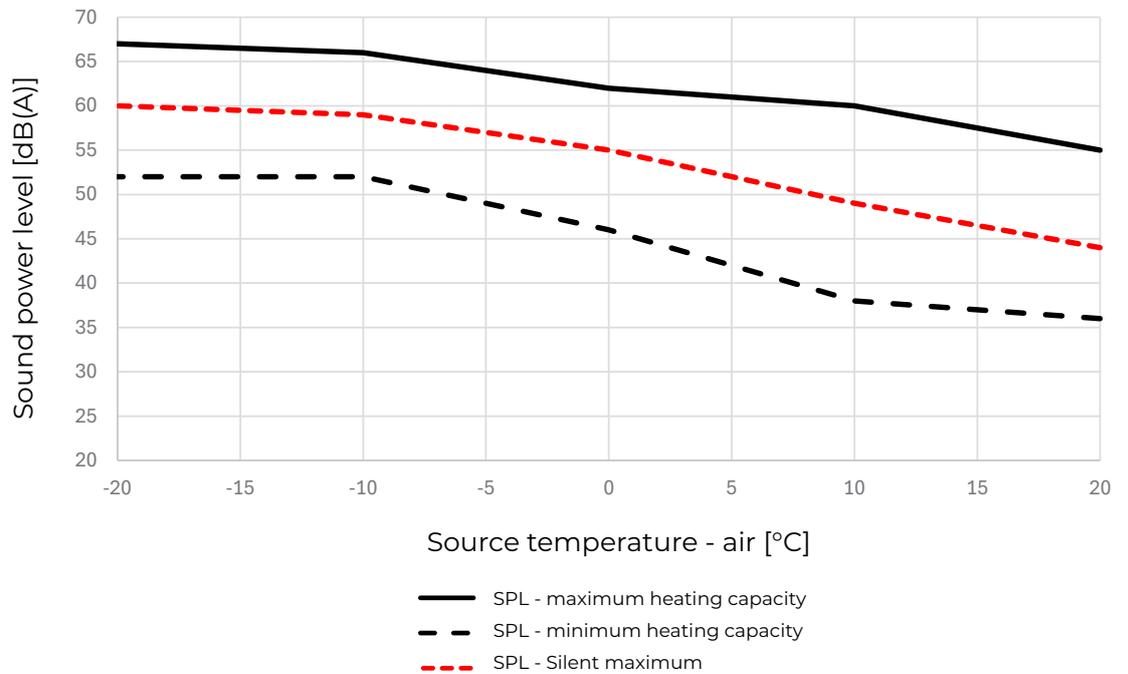
**NOISE DIAGRAM**

Adapt heat pump at different inlet air temperatures and operating modes

ADAPT 2 M



ADAPT 2 L

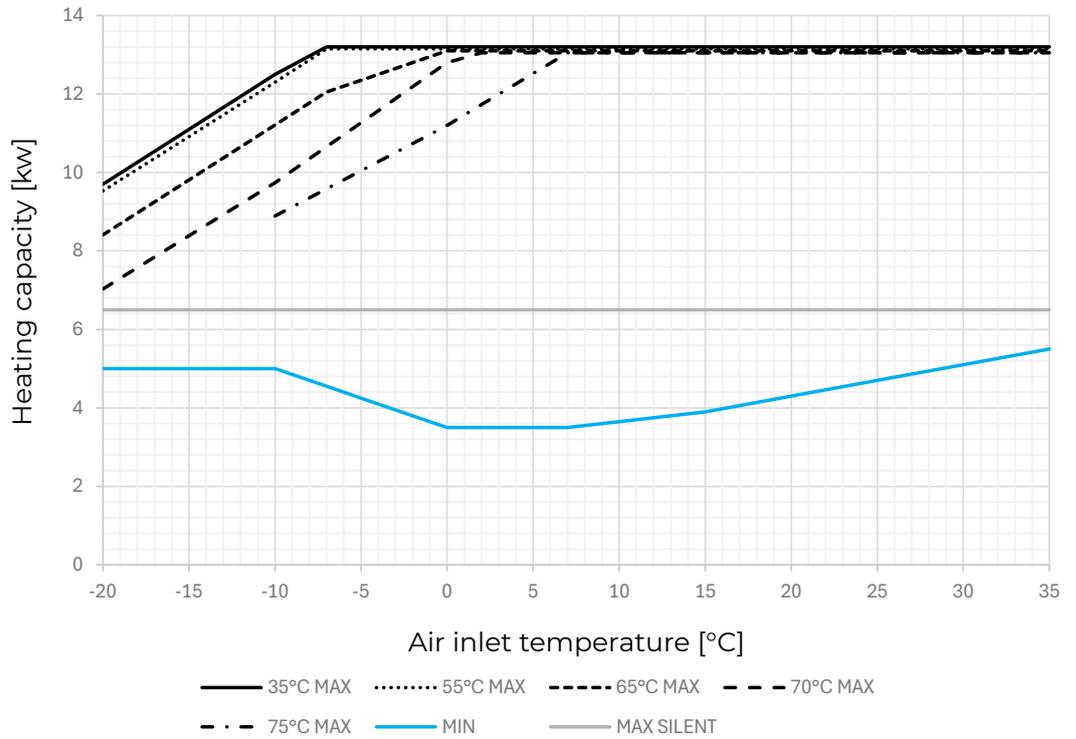


KSM 1.0  
KSM 2.0

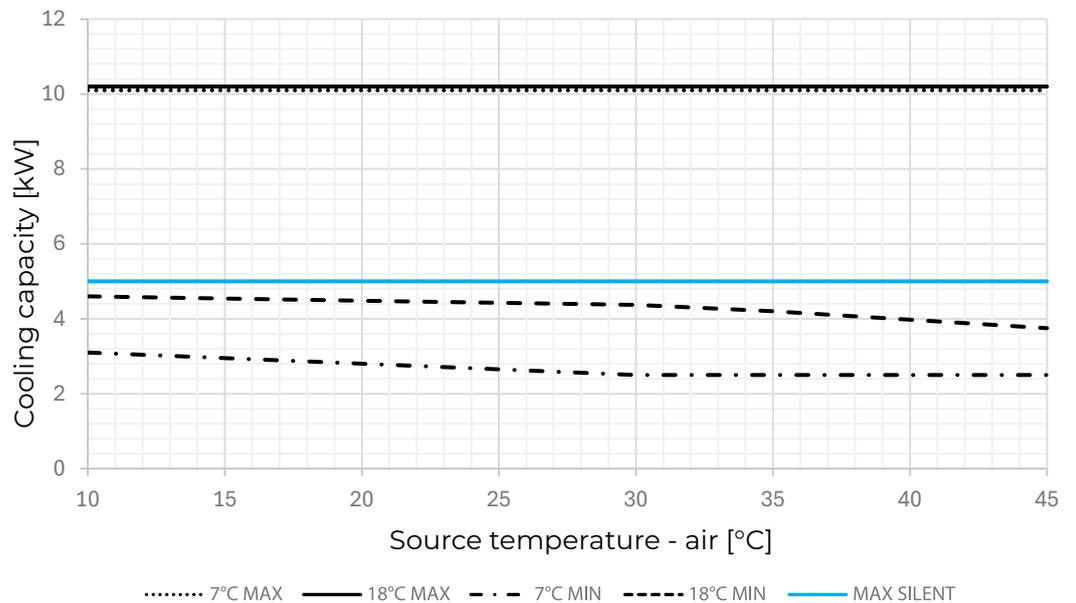
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CAPACITY CURVES

ADAPT2 M  
Heating capacity



ADAPT2 M  
Cooling capacity



The minimum heating capacity depends on the operating conditions.  
Heating capacity is shown without defrost cycles.

The maximum heat power of the heat pump depends on selected operation mode.

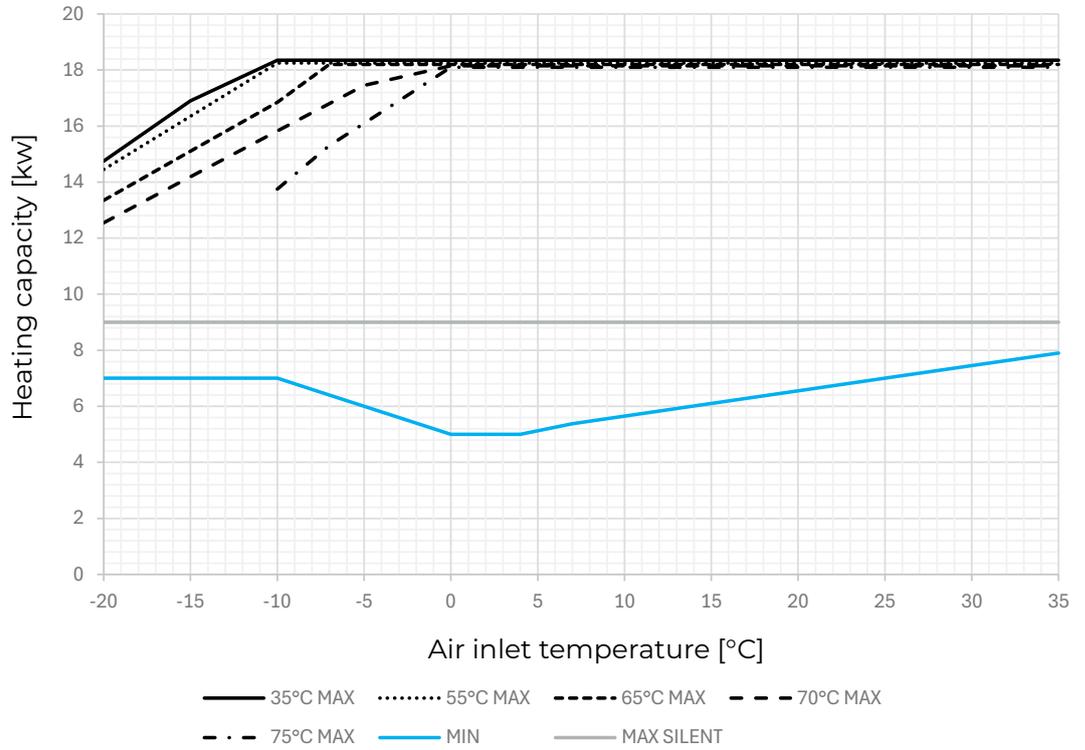
**BOOST:** in this mode the heat pump has a higher maximum capacity, high levels of noise, and low efficiency.

**OPTIMAL:** in this mode the heat pump has the highest level of efficiency and the best ratio between heating capacity and noise levels.

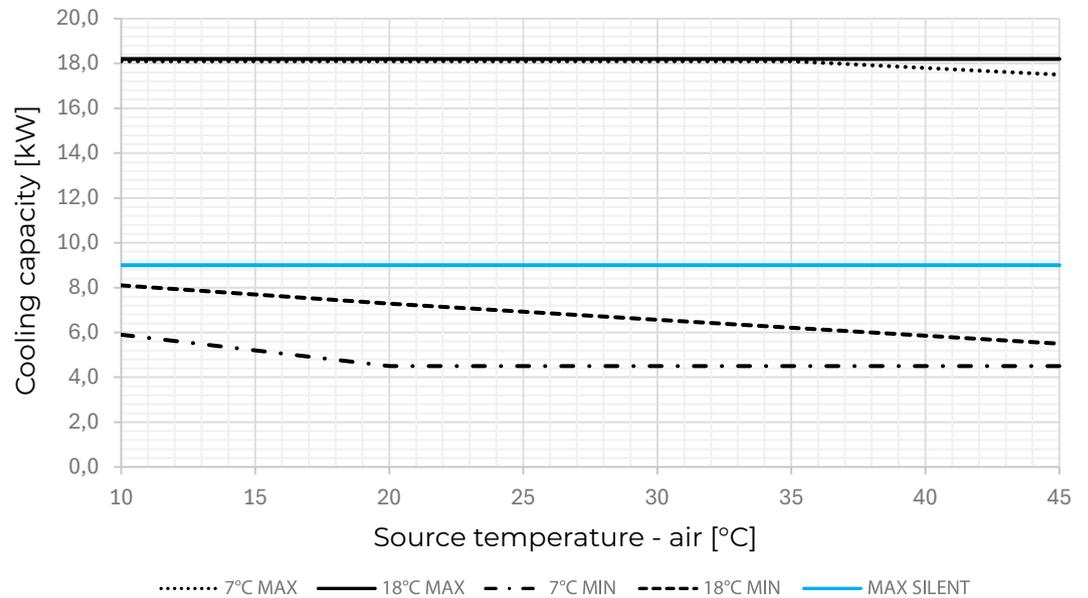
**SILENT:** in this mode the heat pump has low noise level, a lower maximum heating capacity, and low efficiency.

KSM 1.0  
KSM 2.0  
\*

**ADAPT 2 L**  
Heating capacity



**ADAPT 2 L**  
Cooling capacity



The minimum heating capacity depends on the operating conditions.  
Heating capacity is shown without defrost cycles.

The maximum heat power of the heat pump depends on selected operation mode.

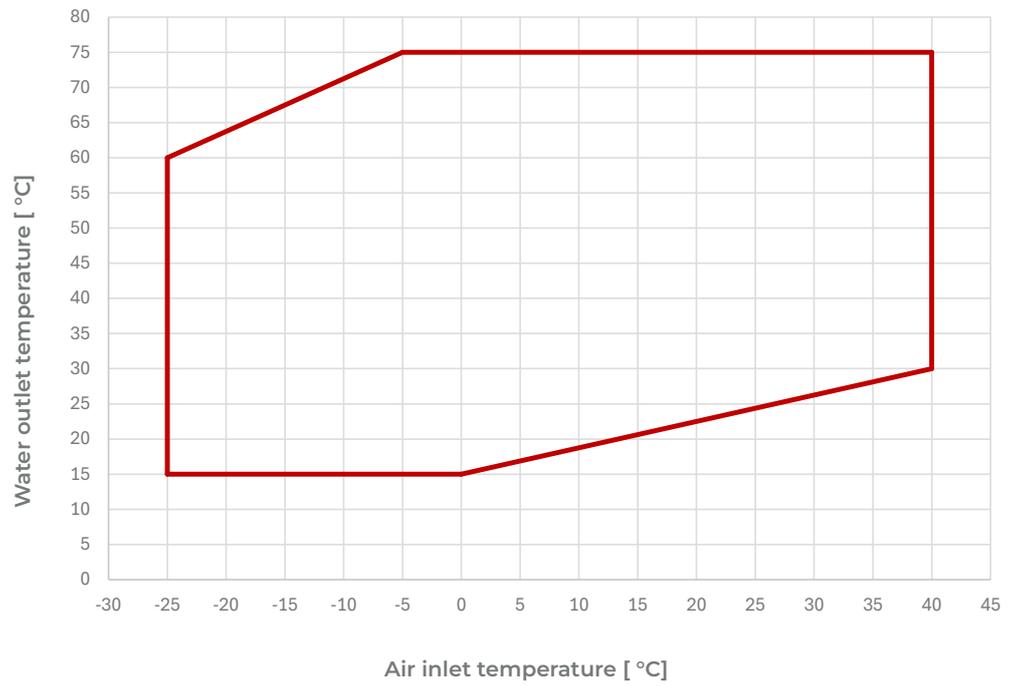
**BOOST:** in this mode the heat pump has a higher maximum capacity, high levels of noise, and low efficiency.

**OPTIMAL:** in this mode the heat pump has the highest level of efficiency and the best ratio between heating capacity and noise levels.

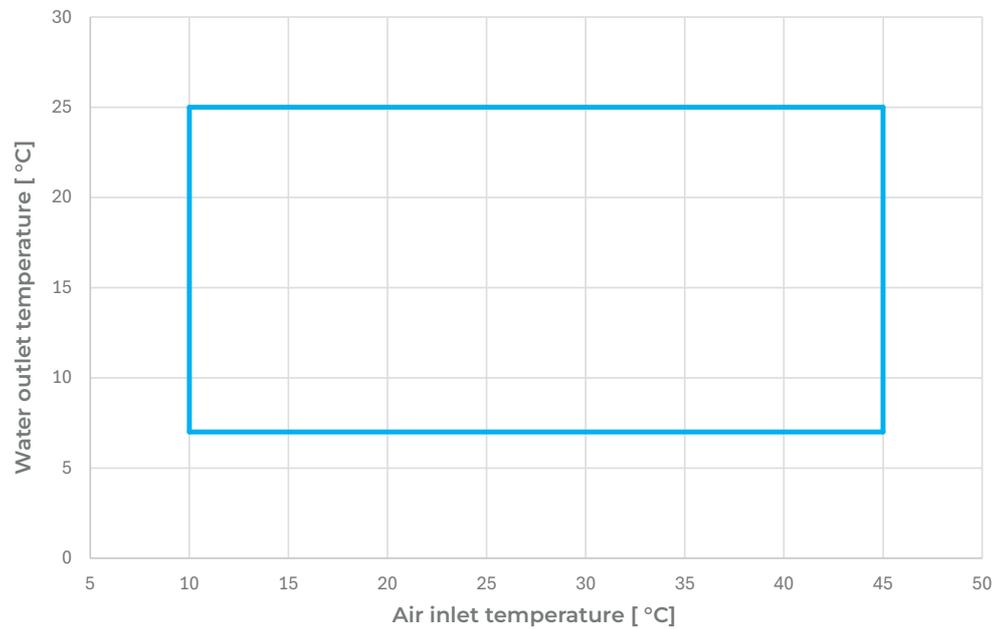
**SILENT:** in this mode the heat pump has low noise level, a lower maximum heating capacity, and low efficiency.

## OPERATING ENVELOPE

Heating



Cooling



Operating conditions may affect the operating envelope. Temperatures above 60 °C are achieved with a  $\Delta T$  of 10 K.

KSM 1.0  
KSM 2.0  
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## SYSTEM DIAGRAMS & PLANNING RESOURCES

All system planning documentation including hydraulic diagrams, electrical wiring diagrams, system inventory, BIM data, and other project documents is available on the KRONOTERM Partner Portal under the KRONOTERM Solutions tab.



Scan the QR code to access the materials and support your planning process.

KSM 1.0

KSM 2.0

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