

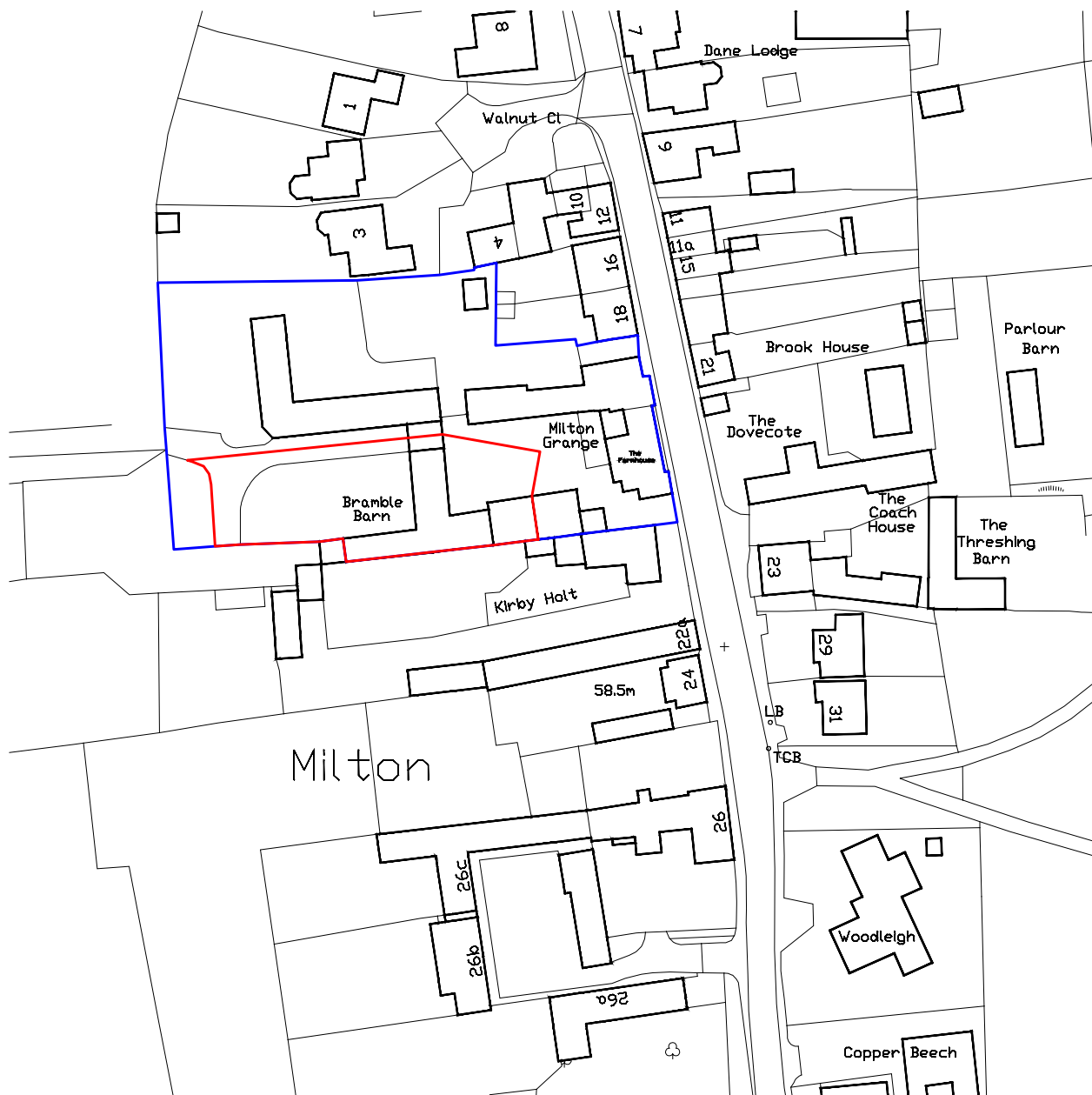


Bramble Barn, 4 Milton Grange, Main Street, Milton, Derby, DE65 6EF
November 2021

Introduction

Our Client recently purchased their home, Bramble Barn, 4 Milton Grange - a former agricultural barn located within the curtilage of *The Farmhouse* (1 Milton Grange), a Grade II Listed Building, and the Milton Conservation Area. The family are local, having always lived in South Derbyshire.

The house is in need of updating and alteration to improve both the quality of internal living accommodation in terms of admitting more natural light, access to the garden and upgrading the heating and domestic hot water systems to be more sustainable.



KEY

- Site Boundary - Bramble Barn
- Curtilage of Listed Building - The Farmhouse

Above: Site Location Plan

Site & Context

Bramble Barn, 4 Milton Grange, is set back from Main Street, Milton, and accessed via the Milton Grange courtyard. All of the original agricultural buildings that form the courtyard to the North, South and West, were converted to residential accommodation at the same time as Bramble Barn, circa 2002.

Left: Access to Milton Grange Courtyard from Main Street, Bramble Barn Garages (Two Doors to Right), and Bramble Barn North Facing Front Door & Off Street Parking Spaces

Right: North Facing Front Door & East Facade



Right: Bramble Barn to Right of Access Route. Pedestrian Access to West End of Garden via Shared Driveway



The dwelling is constructed of red brick walls under a slate tile roof. The elevations are punctured with uneven asymmetrical openings, typical of an agricultural building of this type.

Bramble Barn is located in the small rural village of Milton between Repton and Foremark Reservoir. The nearby towns of Melbourne, Burton-upon-Trent and Ashby-de-la-Zouch provide a variety of facilities and amenities. The property is also well located for access to Derby, Nottingham, Birmingham and Leicester via the A38, A50 and M1, and several local and mainline rail services at Willington, Burton-upon-Trent, Derby and East Midlands Parkway.

The front door to Bramble Barn is accessed via the main courtyard. The property benefits from several off street parking spaces within the courtyard and garages with space for two cars. The private garden is bounded by Bramble Barn to the East & partially to the South, with the remaining perimeter bounded by tall red brick walls. The property can also be accessed from the shared access drive via a pedestrian gate at the far West end of the Garden.

Layout

Bramble Barn is orientated perpendicular to Main Street which runs North-South, with the front door located on the North facade at the East end of the dwelling and Garden to the West. The current Lounge and Kitchen/Dining areas both border the Garden. These spaces currently have only small and narrow openings which result in the spaces remaining dark on even the most sunny days, despite the light internal decorations, and restrict views and access to the Garden.

The proposal is to create brighter internal spaces with improved visual and physical access to the Garden from both the Lounge and Kitchen/Dining areas by increasing the size and number of openings to these rooms. The proposed alterations are all intended to maintain the uneven asymmetrical appearance of the existing facades. This strategy was discussed and agreed with the SDDC Conservation Officer during a Pre-Application Site Visit to Bramble Barn on 25.10.21 - See meeting summary included in post meeting correspondence with the SDDC Conservation Officer in Appendix.

Top Right Proposed
Openings to Lounge & Log
Burner Flue - Outlined in Red

Bottom Right: Proposed
Openings to Kitchen/
Dining & Log Burner Flue -
Outlined in Red



As illustrated in red on the photographs on the previous page, the proposal includes widening the existing door set to the Lounge and adding a second set of doors, of narrower width, to the right. Also illustrated on the photographs on the previous page is the proposal to increase the width of the existing Kitchen/Dining door and drop the cill height of the window to the left to door threshold height.

The proposed design of the replacement and new timber framed glazed doors and windows is simpler than the existing. The existing doors have a number of vertical mullions that reduce the amount of light admitted to the interior and obscure the view out. The proposed doors and windows are to have the same timber frames, painted to match the existing, but with a single pane of double glazing in each without vertical mullions. See reference image below:

Right Proposed Design for Replacement & New Window & Doors - Simple Painted Timber Framed Double-Glazing



The proposals also include updating the existing heating systems. Firstly, by replacing the existing LPG central heating with a more sustainable 15kW Vaillant aroTHERM Air Source Heat Pump (ASHP) or equivalent. However, the heat loss of the current building, to be calculated accurately by the installer, may be too high for an ASHP alone, due to the heat loss properties of areas of the building envelope such as the large double storey glazed window to the stair (which demarcates the extents of the original cart entrance to the barn). If so, the ASHP would be set up with a back up boiler to boost the system on the coldest days. This would not effect the size or look of the external ASHP unit.

Right Vaillant aroTHERM 15kW Air Source Heat Pump



The Client would like to replace the existing non-original boxed out LPG fireplace to the Lounge with a Log Burner, and replace the existing flue in the wall, currently discharging straight through the wall into the garden, with a simple black vertical flue to run up through the roof. The Client would also like to add a Log Burner to the corner of the Kitchen/Dining Room, also with a simple black vertical flue to run up through the roof. See proposed locations marked in red on the photographs on the previous page.

The final proposal is to replace the existing timber potting shed (2x2.6m) located in the North-West Corner of the garden with a simple timber storage shed (2.4x3m) in the same location. See existing and proposed photos below.

Right: Existing Potting Shed

Far Right: Proposed Replacement Storage Shed



All proposals are substantially hidden from *The Farmhouse* (1 Milton Grange), the main Milton Grange courtyard and Main Street by Bramble Barn itself and the brick boundary wall to the Garden.

Scale & Appearance

The scale, proportion, asymmetry and painted timber frame finish of the proposed replacement and new door and window openings facing the Garden are in keeping with the existing barn conversion and its context.

The Client intends to cover the external ASHP unit with a simple open louvered or latticed timber screen, (not solid as this would impede air flow and efficiency), to blend with the garden scene.

The proposed black vertical log burner flues are slim and simple in appearance and will rise to the minimum height dictated by current Building Regulations.

The proposed replacement timber shed is only marginally bigger than the existing in plan, of similar height and construction, and is tucked away in the far corner of the Garden.

Access

Pedestrian and vehicular access from Main Street and Milton Grange courtyard will remain unchanged.

Landscaping & Trees

No changes are proposed to accommodate the items included in this application, as all of the proposals are intended to sit within the existing landscaping.

No trees will be affected

Building Regulations

All proposed renovation works are to be fully compliant with current Building Regulations at the time of construction.

Sustainability

The proposals include replacing the existing fossil fuel boiler with a more energy efficient ASHP as described above.

Pre-Application Advice

21st October 2021 – Site Meeting – James Bate, SDDC Conservation Officer, Faber Architects, Agent, & Applicant.

We understood at the end of the meeting that the Conservation Officer was satisfied that all of the proposals had been well thought through and he would recommend all items discussed Listed Building Consent approval following an application. This was confirmed in correspondence following the meeting. See full correspondence attached in the appendix.

Planning History

Bramble Barn, 4 Milton Grange, is located within the curtilage of **The Farmhouse, 20 Main Street, Milton**, now split and known as 1 Milton Grange, and within the Milton Conservation Area.

**The Farmhouse and Attached Walls & Railings, Main Street, was Grade II Listed on 24th October 1986
Entry Number: 1096504**

'Farmhouse. C17, extensively rebuilt mid C18. Red brick, plain tile roof, brick gable stacks and brick coped gables with plain kneelers. Lower hipped roof wings to north and south. Dentil eaves cornice. Two storeys. East elevation of 1-3-1 bays. Three bay centre part taller and slightly set back. Central doorway with C19 half glazed door under a wedge brick lintel. Flanked by glazing bar sashes under wedge brick lintels. Three segmental arched glazing bar sashes above, the centre one narrower. Circular Nottingham and Derby Insurance plaque above. Lower square projecting wings on either side, each with a glazing bar sash under a wedge brick lintel to the ground floor and a 2-light casement above. Low sandstone wall surmounted by iron railings encloses the front of the central section. The interior has exposed beams at the north end and the remains of an inglenook.'

Listing NGR: SK3203826533

Previous Applications

9/2017/1406 - Listed Building Consent for internal works to enclose study area, replacement of window with new door and an additional rooflight on rear elevation at Bramble Barn
Granted: 13.02.2018

9/2016/1007 - Listed Building Consent for the insertion of 2 rooflights on the rear roof slope and the insertion of a window on the rear elevation at Bramble Barn
Granted: 21.11.2016

9/1990/0093 & 9/1990/0094 - Planning Approval & Listed Building Consent for the conversion into four dwellings of the outbuildings and Grade II Listed farmhouse [at The Farm, 20 Main Street]
Granted: 25.09.1990

Conclusion

We believe that the proposals are well considered in terms of both design and context and will improve the quality of living for occupants as well as reducing energy consumption which benefits the environment.

Heritage Statement

This statement will provide a description of the significance of any heritage assets potentially affected by the proposal and the contribution of their setting to that significance. The level of detail produced is proportionate to the importance of the heritage asset and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset.

The following sources were used in the production of this Heritage Statement:

- Faber Architects Existing and Proposed Drawings
- Faber Architects Design, Access & Heritage Statement
- SDDC Conservation Pre Application Advice
- Heritage Gateway – 2021
- National Heritage List for England - 2021
- Derbyshire HER - 2021

From the research undertaken the following heritage assets and significance should be considered in relation to the application:

1- The Farmhouse and Attached Walls & Railings, Main Street, was Grade II Listed on 24th October 1986

Entry Number: 1096504

'Farmhouse. C17, extensively rebuilt mid C18. Red brick, plain tile roof, brick gable stacks and brick coped gables with plain kneelers. Lower hipped roof wings to north and south. Dentil eaves cornice. Two storeys. East elevation of 1-3-1 bays. Three bay centre part taller and slightly set back. Central doorway with C19 half glazed door under a wedge brick lintel. Flanked by glazing bar sashes under wedge brick lintels. Three segmental arched glazing bar sashes above, the centre one narrower. Circular Nottingham and Derby Insurance plaque above. Lower square projecting wings on either side, each with a glazing bar sash under a wedge brick lintel to the ground floor and a 2-light casement above. Low sandstone wall surmounted by iron railings encloses the front of the central section. The interior has exposed beams at the north end and the remains of an inglenook.'

Listing NGR: SK3203826533

Potential impact of proposed works on heritage assets

1- The Farmhouse and Attached Walls & Railings – It's significance being a Grade II Listed Building with architectural and historical character.

The proposed works to Bramble Barn, located within the curtilage of a Listed Building, will improve the quality of internal spaces as well as the energy performance with minimal changes to the fabric of the original barn, and will not affect the Listed Building - The Farmhouse and Attached Walls & Railings.

Conclusion

The proposal is considered to result in less than substantial harm to the Listed Building and the setting of the Listed Building.

Appendix



THE FARMHOUSE AND ATTACHED WALLS AND RAILINGS

Overview

Heritage Category:
Listed Building

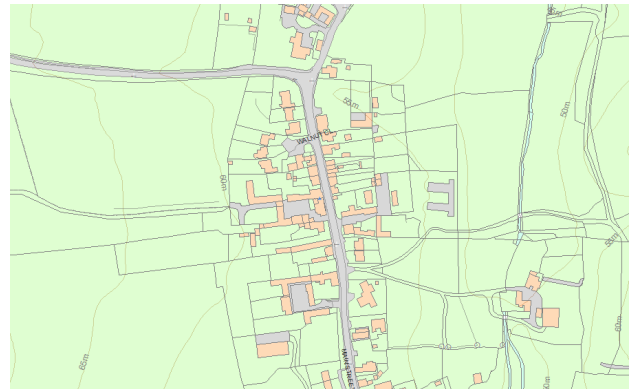
Grade:
II

List Entry Number:
1096504

Date first listed:
24-Oct-1986

Statutory Address:
THE FARMHOUSE AND ATTACHED WALLS AND RAILINGS, MAIN STREET

Map



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The above map is for quick reference purposes only and may not be to scale. For a copy of the full scale map, please see the attached PDF - _____

The PDF will be generated from our live systems and may take a few minutes to download depending on how busy our servers are. We apologise for this delay.

This copy shows the entry on 10-Nov-2021 at 18:21:18.

Location

Statutory Address:
THE FARMHOUSE AND ATTACHED WALLS AND RAILINGS, MAIN STREET

The building or site itself may lie within the boundary of more than one authority.

County:
Derbyshire

District:
South Derbyshire (District Authority)

Parish:
Repton

National Grid Reference:
SK3203826533

Details

SK 32 NW 3/75

PARISH OF REPTON MAIN STREET, MILTON (West slide) The Farmhouse and attached Walls and Railings

GV II

Farmhouse. C17, extensively rebuilt mid C18. Red brick, plain tile roof, brick gable stacks and brick coped gables with plain kneelers. Lower hipped roof wings to north and south. Dentil eaves cornice. Two storeys. East elevation of 1-3-1 bays. Three bay centre part taller and slightly set back. Central doorway with C19 half glazed door under a wedge brick lintel. Flanked by glazing bar sashes under wedge brick lintels. Three segmental arched glazing bar sashes above, the centre one narrower. Circular Nottingham and Derby Insurance plaque above. Lower square projecting wings on either side, each with a glazing bar sash under a wedge brick lintel to the ground floor and a 2-light casement above. Low sandstone wall surmounted by iron railings encloses the front of the central section. The interior has exposed beams at the north end and the remains of an inglenook.

Listing NGR: SK3203826533

Legacy

The contents of this record have been generated from a legacy data system.

Legacy System number:
82758

Legacy System:
LBS

Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

End of official listing

James Bate <james.bate@southderbyshire.gov.uk>

25/10/2021 11:17

RE: Bramble Barn – Meeting Summary 21.10.21

To: louise@faberarchitects.com <louise@faberarchitects.com> Copy
Tim Barwell <tim@faberarchitects.com>

Good Morning Louise,

Thank you for the attached plans and for your summary of discussions on site last Thursday, I agree these as an accurate reflection of our discussions and confirm that I would support these approaches.

Whilst my site visit was during mid-autumn it was a particularly bright and sunny afternoon and even so, and with interiors largely painted in light colours, the interior of the buildings was decidedly dull so I do appreciate the desire to get some additional daylight into the building.

In respect of the further two items I would be of the view that the omission of mullions in favour of a more simplified glazing scheme would arguably improve the agricultural character of the building and should be something which could be supported. For item 2 there is no permitted development rights for outbuildings within the curtilage of a listed building and as such a replacement shed would require planning permission. That being said we would not usually refuse permission for small garden sheds and outbuildings provided they are in reasonably discrete positions within the plot. I don't recall seeing the shed at all during my visit so I would be happy to say that the current location is well tucked away and a slightly larger shed in the same location is not likely to have an adverse effect upon the setting of the listed buildings and so should be supported.

Yours,

James Bate
Conservation Officer
T: 01283 595983
M: 07920 446894
www.southderbyshire.gov.uk



From: louise@faberarchitects.com <louise@faberarchitects.com>
Sent: 25 October 2021 10:06
To: James Bate <james.bate@southderbyshire.gov.uk>
Cc: Tim Barwell <tim@faberarchitects.com>
Subject: Bramble Barn - Meeting Summary 21.10.21

Importance: High

Good Morning James,

Thank you for meeting us at Bramble Barn, 4 Milton Grange, Main Street, Milton, Derby, DE65 6EF, on 21.10.21 to review proposals for several alterations.

Please download, via the following WeTransfer link, an accompanying marked up plan and several photographs, some marked up (valid for 5 days):

<https://we.tl/t-KdPtjP2lx2>

We understood at the end of the meeting that you were satisfied that all of the proposed alterations to the existing barn conversion, which is located within the Curtilage of a Listed Building (Milton Grange), were in keeping with the asymmetry and irregular pattern of openings and features of the existing facades and building typology, and that you would recommend that all of items discussed be granted Listed Building Consent/Planning Approval.

We will shortly be submitting a Listed Building Consent & Planning application to SDDC to confirm these works.

Items discussed at the meeting:

1. Increasing areas of glazing for views and access to the garden from the Kitchen/Dining room - The outcome of the discussion was that the most sympathetic way to achieve this was by replacing the existing timber glazed single leaf door with timber glazed french doors and extending the arched window to the left (as viewed from exterior) down to door threshold height. The openings should remain plain, not adding any border features. These changes would maintain the asymmetry & irregularity of the existing facade. See plan & North facade photo.
2. Increasing areas of glazing for views and access to the garden from the Sitting Room - The outcome of the discussion was that the most sympathetic way to achieve this was by replacing the existing timber glazed french doors with a wider three leaf timber glazed set of bi-folding doors and add a set of narrower french doors to the right (as viewed from the exterior). The openings should remain plain, not adding any border features. The location and sizing of the new set of french doors should maintain the asymmetry & irregularity of the existing facade. See plan & West facade photo.
3. Locate a new Air Source Heat Pump in front of the North facing Garden wall, approximately 5m from the end of the existing Utility Room, to assist with providing a more sustainable heating and domestic hot water source for the dwelling. See plan.
4. Replace the existing original boxed-out LPG fireplace to the South-West corner of the Sitting Room with a more compact Log Burner, with a simple black vertical flue extending up through the roof. See plan & West facade photo.
5. Install a Log Burner to the South-West corner of the Kitchen/Dining Room, with a simple black vertical flue extending up through the roof. See plan & North facade photo.

The following items were not discussed, however we would appreciate your view:

1. The current timber glazed doors have a number of vertical mullions and small panes of glass. The Client would prefer the replacement and new doors to maximise the view of the garden and admission of light. Would there be good chance of being granted permission for simple timber frames with larger single panes of glazing? See example photo attached.
2. The Client would like to replace the existing Potting shed (2x2.5m) located in the North-West corner of his garden with a slightly larger timber storage shed (2x3m) - see photo of existing Potting Shed attached. Does this require LBC/Planning consent? If so, does this have a good chance of being granted permission?

Please do not hesitate to contact us with any questions.

Kind regards

Louise Charlton ARB
+44 7973 343053

FABER
ARCHITECTS

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<https://www.southderbyshire.gov.uk/privacy>

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- image002.png (1 KB)
- image003.jpg (10 KB)



Why Vaillant?

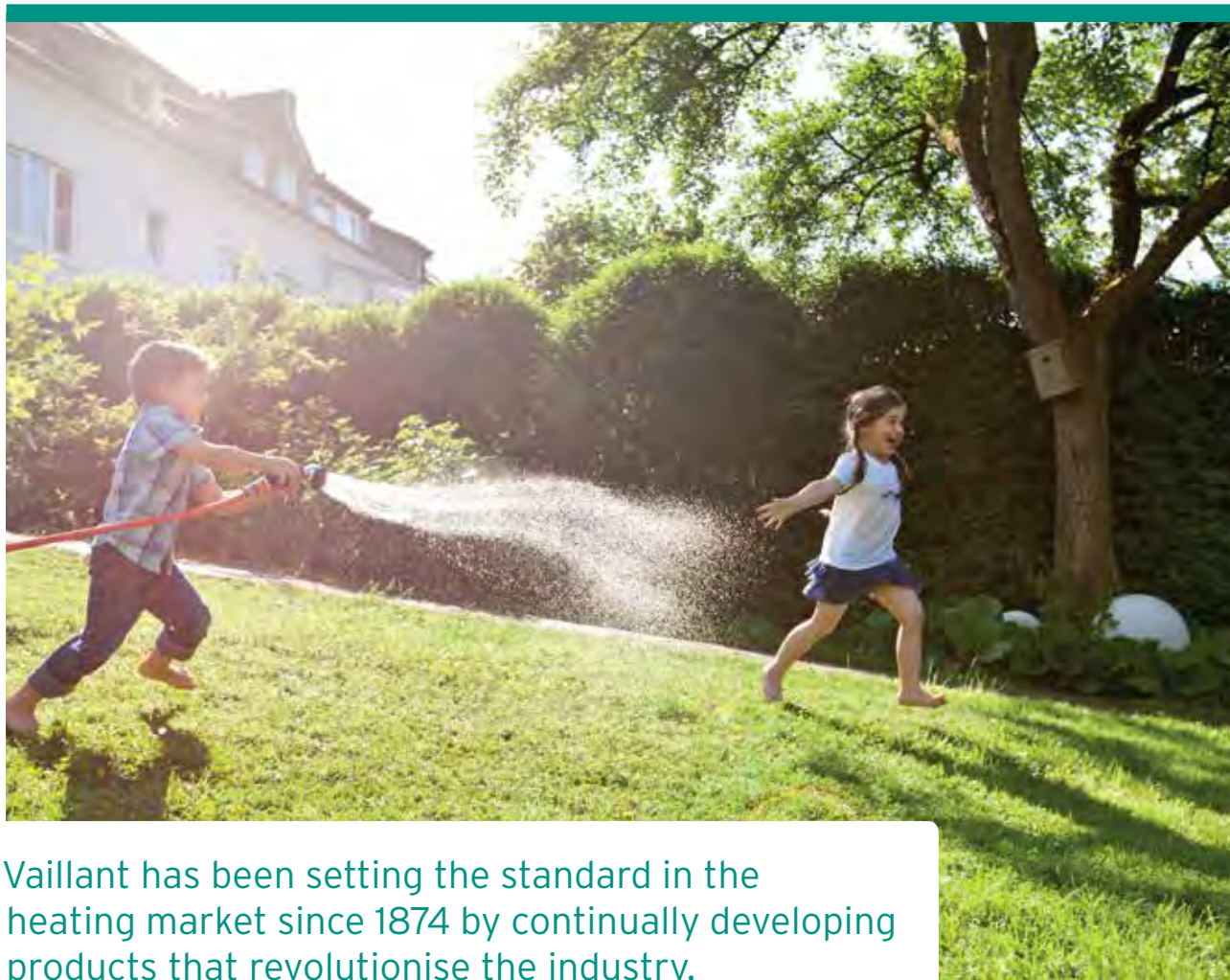
Because saving energy can be so easy

aroTHERM air-to-water heat pump

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Vaillant has been setting the standard in the heating market since 1874 by continually developing products that revolutionise the industry.

Today, our innovative solutions are still setting the standard in the heating marketplace. We have produced a comprehensive range of renewable technologies designed to utilise sustainable sources of energy.

Our products are at the very forefront of technology and deliver on the Vaillant promise to 'think ahead', safeguarding our planet for future generations whilst delivering energy efficient products that can reduce the cost of providing heating and hot water to the home.

Every product developed by Vaillant is routinely subjected to rigorous materials analysis, robustness testing, lifetime testing and acoustics analysis. This meticulous and unremitting commitment to quality is evident at every stage in the product development process, which is applied to every spare part that we sell.

Furthermore, we are committed to finding new and ever more imaginative ways to provide service excellence before, during and long after the installation of Vaillant appliances. We strongly believe that the most advanced heating solutions on the market demand the most forward-thinking service solutions - that is why we pride ourselves on our unrivalled service support.



Air-to-water heat pumps are becoming an increasingly popular choice for those looking to install renewable products in the home. The main advantage of air-to-water heat pumps is that they can help safeguard against the fluctuations in oil and LPG prices that leave homeowners vulnerable to the ever-rising costs of heating their home.

The air-to-water pumps can be integrated into UK heating systems with ease, causing minimal disruption to the homeowner. They also eliminate the need for on-site fuel storage and can be used as part of an efficient all-electric heating solution. Furthermore, air-to-water heat pumps offer excellent energy savings compared to alternatives like standard electric, LPG or oil, especially as all Vaillant

heat pumps are MCS accredited and may therefore be eligible for government funding. They can also reduce carbon emissions, whilst offering a more sustainable heating solution than oil and LPG sources.

As experts within the heating industry, Vaillant can help you to develop bespoke heating systems that meet the requirements of even the most complex installations. With our extensive range of products and system accessories, you'd be hard pressed to find another manufacturer that can match our offering of flexible system solutions.



aroTHERM is Vaillant's second generation air-to-water heat pump range. Developed in-line with the exacting standards and precision engineering you would expect when you choose Vaillant.



What's more, with a 'Quiet Mark' award you can be assured knowing the aroTHERM air-to-water heat pump is one of the most understated miracles of engineering we've ever produced.

Key features and benefits

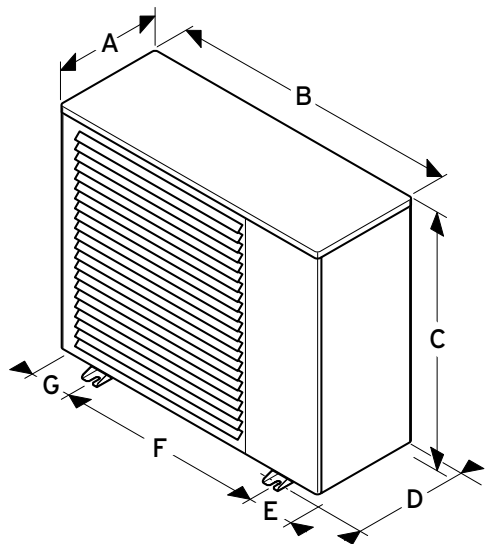
- **Four models**
aroTHERM 5kW, 8kW, 11kW and 15kW
- **Compact size for easy siting**
Possible to fit 5kW, 8kW and 11kW models under a standard window
- **Quiet operation**
'Quiet Mark' approved thanks to its ultra quiet operation. Sound power as low as 58dB(A) (5kW) with permitted planning available as low as three metres
- **Blue fin coated evaporator with anti-hydro coating**
Gives improved performance and extra protection against corrosion
- **Set-up wizard for first installation**
With simple steps to help speed up commissioning
- **Ability to cascade up to seven aroTHERM heat pumps**
Suitable for larger domestic and commercial properties
- **Solid case design with in-built anti-vandalism measure**
No requirement for extra vandalism cages
- **Wider fin spacing and tray heater**
Improves de-icing efficiency
- **MCS accredited**
Eligible for RHI schemes

Key

1. Electronic box
2. Condenser
3. Four-way valve
4. CH pump
5. Compressor
6. Gas buffer (refrigerant heat exchanger)
7. Fan
8. Evaporator

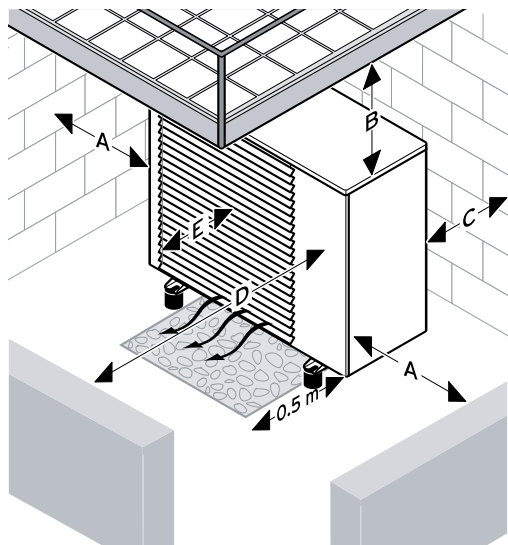


Dimensions



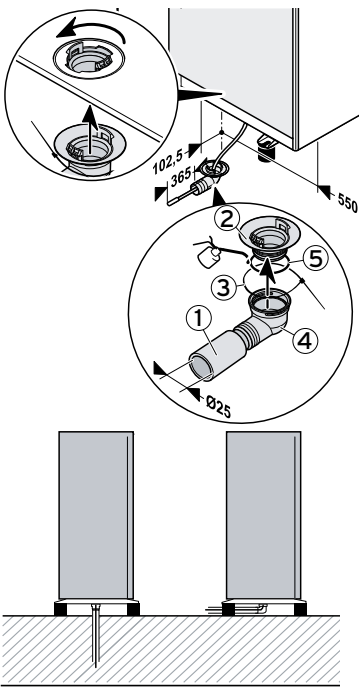
Dimension	Unit	5kW	8kW	11kW	15kW
A	mm	408	463	463	463
B	mm	980	1103	1103	1103
C	mm	840	975	975	1380
D	mm	437	437	437	437
E	mm	120	162	162	162
F	mm	740	778	778	778
G	mm	120	162	162	162

Clearances



Clearance	Unit	For heating mode
A	mm	> 250
B	mm	> 1000
C	mm	> 120
D	mm	> 600
E	mm	> 300

Condensate connections



Connection	Description
1	Condensate drain pipe
2	Adaptor
3	Cable tie
4	Elbow
5	Seal

Technical Data	Unit	aroTHERM 5kW	aroTHERM 8kW	aroTHERM 11kW	aroTHERM 15kW
Article number		0020257346	0020257347	0020257348	0020257349
Heat pump type		Monoblock air-to-water heat pump			
Flow / return heating connections	BSP	1 ¼"			
Product dimensions, width	mm	980	1,103	1,103	1,103
Product dimensions, height	mm	840	975	975	1,380
Product dimensions, depth	mm	408	463	463	463
Net weight	kg	86	102	126	165
Hydraulic lines material		Copper			
Hydraulic connections material		Brass			
Hydraulic seals material		EPDM			
Plate heat exchanger material		AISI 304 stainless steel			
Pump casing material		Painted cast iron			
Supply voltage / frequency	V / Hz	230 / 50			
Fuse type C or D	A	16	16	20	32
Inverter controller fuse	A / V	HRC 20 / 550			
IP rating		IP 25			
Maximum inrush current	A	16	16	20	25
Maximum current consumption	A	16	16	20	25
Pump power consumption	W	15 - 70	15 - 70	15 - 70	6 - 87
Fan power consumption	W	15 - 42	15 - 42	15 - 76	17 - 76 (2 x fan)
Electrical classification		I			
Overvoltage category		II			
Fan rotational speed	rpm	550	550	700	600
Sound power level for A7/W35 according to EN 12102 and EN ISO 9614-1	dB(A)	58	59	65	65
Sound power level for A7/W45 according to EN 12102 and EN ISO 9614-1	dB(A)	58	59	65	65
Sound power level for A7/W55 according to EN 12102 and EN ISO 9614-1	dB(A)	58	60	66	66
Maximum DHW flow temperature	°C	60	63	63	63
Minimum air temperature (heating and cylinder charging)	°C	-15	-20	-20	-20
Maximum air temperature (heating)	°C	28			
Maximum air temperature (cylinder charging)	°C	46			
Maximum air flow	m³/h	2,000	2,700	3,400	5,500
Energy-related Products at 35°C*	band	A++	A++	A+	A++
Energy-related Products at 55°C*	band	A+	A++	A+	A+

* when installed with a VRC 700 / VRC 700f

Heating Circuit	Unit	aroTHERM 5kW	aroTHERM 8kW	aroTHERM 11kW	aroTHERM 15kW
Minimum operating pressure	bar	1.0			
Maximum operating pressure	bar	3.0			
Heating circuit water contents in the heat pump	l	1.1	1.6	2.1	2.7
Minimum heating circuit water contents	l	17	21	35	60
Minimum volume flow rate	l/h	380	380	540	1,200
Nominal volume flow rate	l/h	860	1,400	1,900	2,590
Hydraulic pressure difference	mbar	640	450	300	370

NOTE: see page 26 for VRC 700 / VRC 700f system controls



At Vaillant, we believe that everyone should be able to utilise renewable heating technologies, not only to protect the planet, but also to benefit from savings in running costs.

Vaillant has developed the aroTHERM hybrid system for those properties that have heat loss outside the scope of a single heat pump and/or have a relatively new heating system which can be costly to run. aroTHERM hybrid is designed to be operated with the VRC 700 / VRC 700f control. The VRC 700 / VRC 700f features the unique Vaillant triVAI® hybrid management system, which ensures the most efficient generator (air source heat pump, gas, oil or LPG) can be calculated and selected, to help reduce energy consumption and help customers to save money on their bills.

What is triVAI®?

aroTHERM hybrid is controlled via the VRC 700 / VRC 700f* which features Vaillant's triVAI® intelligent tariff selection tool. This ensures the system works as efficiently as possible at all times, whilst automatically selecting the most cost-effective heat source, regardless of the heating and hot water demands the system has to respond to. The VRC 700 / VRC 700f triVAI® feature selects the most cost-effective heat source based on a variety of coexisting variables, and crucially, does not require any intervention from the end user. It achieves this by analysing the Coefficient of Performance of the heat pump, efficiency of the auxiliary boiler and energy tariff prices for each heat source option. This smart approach to integrating renewable technology with existing heating systems offers more scope and flexibility for a wider range of properties.

*VRC 700 / VRC 700f control supplied separately

aroTHERM hybrid heat pump packs for Vaillant boilers

Description	Article number
aroTHERM 5kW hybrid heat pump for Vaillant boiler	0020257350
aroTHERM 8kW hybrid heat pump for Vaillant boiler	0020257351
aroTHERM 11kW hybrid heat pump for Vaillant boiler	0020257352
aroTHERM 15kW hybrid heat pump for Vaillant boiler	0020257353

aroTHERM hybrid heat pump packs for incumbent boilers

Description	Article number
aroTHERM 5kW hybrid heat pump for incumbent boiler	0020257354
aroTHERM 8kW hybrid heat pump for incumbent boiler	0020257355
aroTHERM 11kW hybrid heat pump for incumbent boiler	0020257356
aroTHERM 15kW hybrid heat pump for incumbent boiler	0020257357

NOTE: see page 26 for VRC 700 / VRC 700f system controls

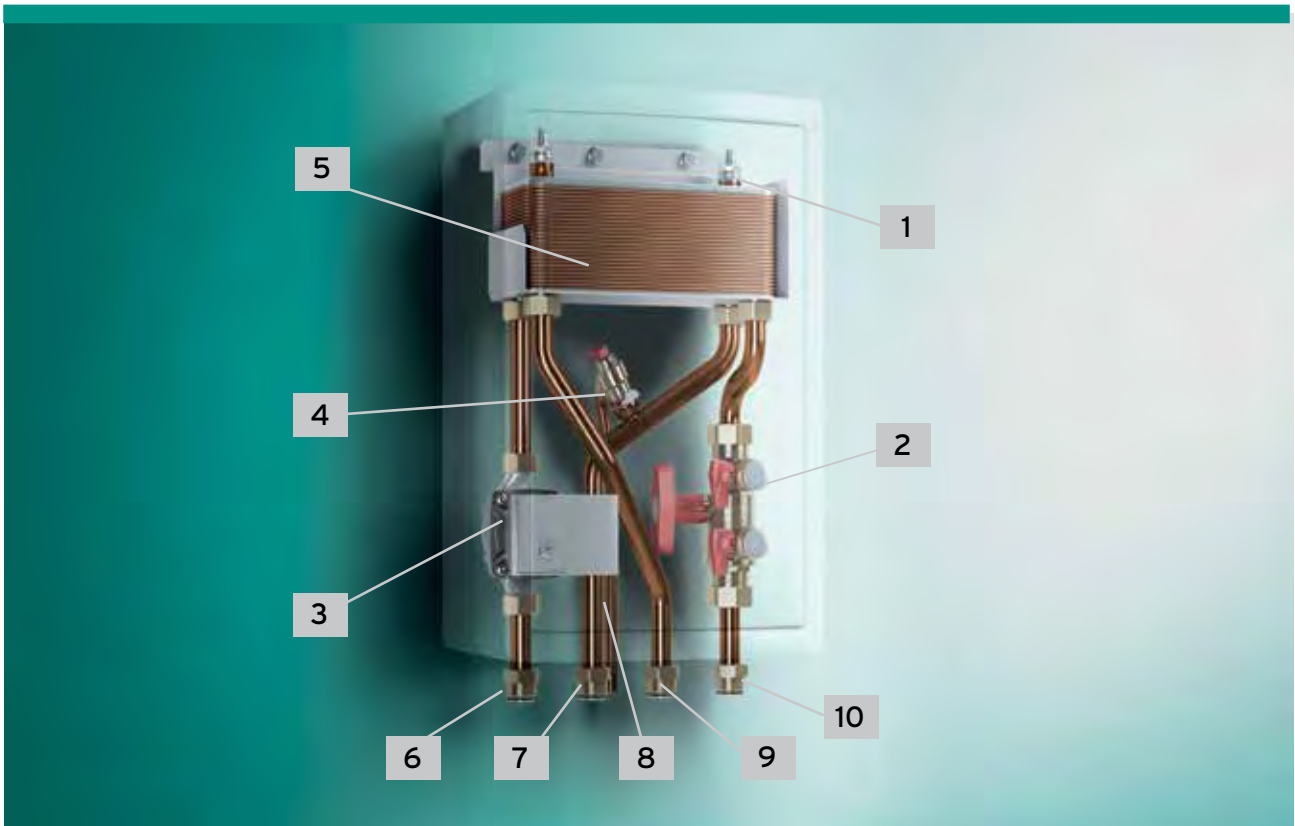
Key features and benefits

- **Unique triVAI® intelligent control system feature controlled via the VRC 700 / VRC 700f**
Three possible energy tariffs can be entered - providing maximum cost savings
- **Excellent green credentials**
Provides significant carbon and energy bill savings
- **Compatible with all boiler systems**
Including gas, oil and LPG
- **Reduced maintenance costs**
Glycol only needed in the outdoor circuit to the heat pump
- **Easy to install and commission**
Uses the Vaillant set-up wizard
- **Suitable for a wide range of properties**
Can be installed in new build properties as well as retrofitted into older properties or those that already use an expensive heating system

Pack components

- 5kW, 8kW, 11kW or 15kW aroTHERM hybrid heat pump
- VWZ MWT 150 heat exchanger module
- VWZ MPS 40 litre decoupler module
- VR 32 eBUS coupler controls address board for use with Vaillant boilers





As the heat pump is fitted outside the property, it is subjected to changing weather conditions and as such, requires the fluid flowing through the heat pump to have frost protection, to ensure that it does not freeze and damage the heat pump. Filling the entire heating system with glycol can be expensive; the heat exchanger module allows connected glycol circuits to be separated from heating circuits. The heat exchanger module will prevent the contamination of glycol circuits in the event that radiators are removed or drained and re-filled. In addition, the heat exchanger module is supplied with integral fill and flush points for a simpler installation.

The forty plates within the module ensure that the energy is transferred from the heat pump circuit to the heating circuit as efficiently as possible. Air bleed vents/valves within the module also help prevent air getting trapped within the system.

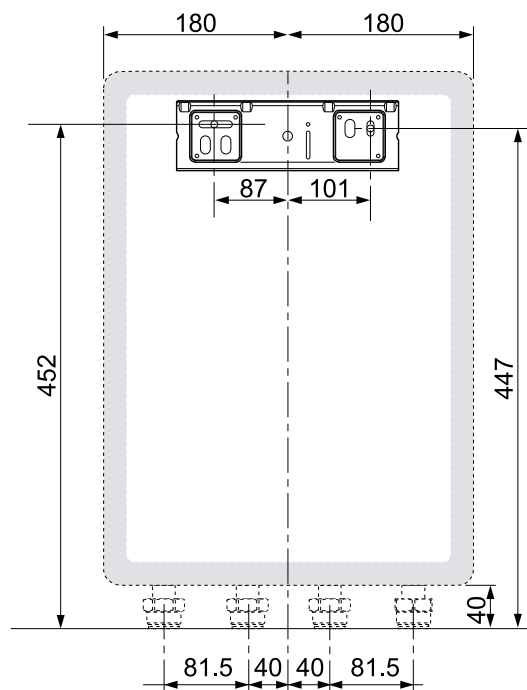
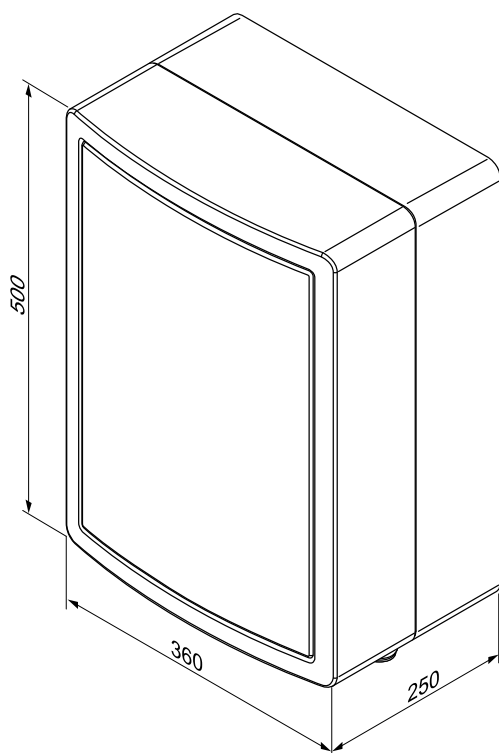
Key

1. Air bleed vent
2. Fill and flush points
3. High efficiency CH pump
4. PRV central heating side
5. Forty plate-to-plate heat exchanger
6. Installation heating circuit inlet 1"
7. Installation heating circuit outlet 1"
8. Safety valve drain
9. Glycol water circuit outlet to heat pump 1"
10. Glycol water circuit inlet from heat pump 1"

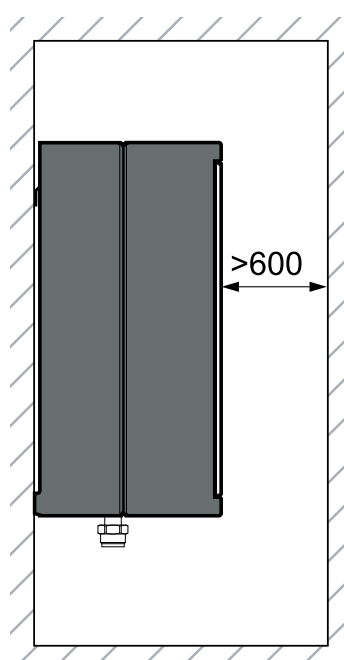
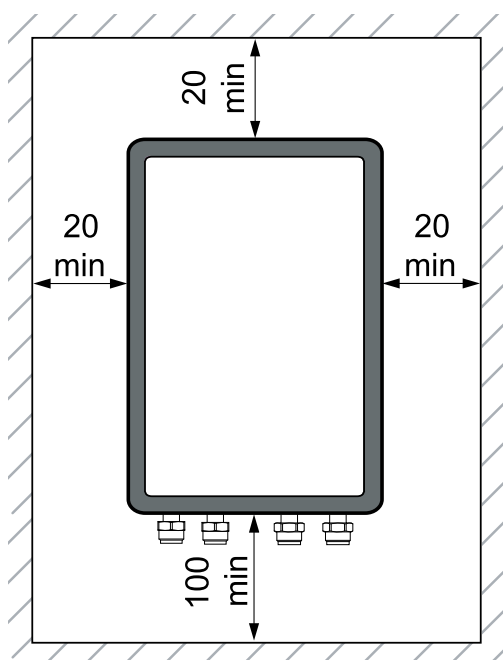
Key features and benefits

- **Designed to separate the heat pump glycol circuit from the heating circuit**
Only a small proportion of the system is required to be filled with glycol
- **Wall-mounted, compact and lightweight**
500mm (H) x 250mm (D) x 360mm (W) for easy and flexible siting
- **Modulating circuit pump ErP A rated**
35% more energy efficient than a standard pump, making the heating circuit ready to comply with future legislation
- **Fill and flush points for the heat pump glycol circuit**
Quick and easy to install with no extra cost

Dimensions



Clearances

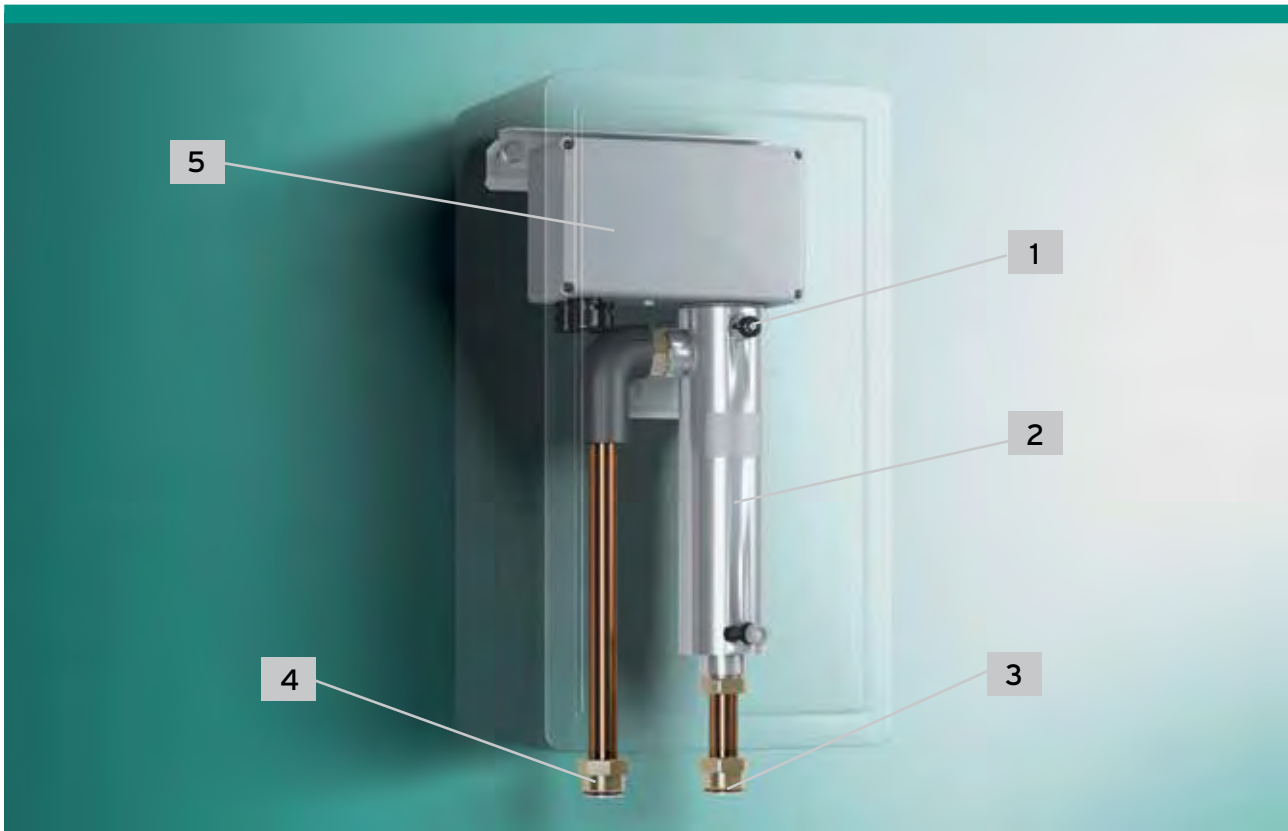


NOTE: All measurements are millimetres. Clearance necessary for the installation or maintenance of the appliance

Technical Data	Unit	Heat exchanger module VWZ MWT 150
Article number		0020222285
Product dimensions, width	mm	360
Product dimensions, height	mm	500
Product dimensions, depth	mm	250
Net weight	kg	12
Maximum admissible water pressure	bar	3.0
Minimum admissible water pressure	bar	0.05
Heating and glycol circuit connections	BSP	1"
Supply voltage / frequency	V / Hz	230 / 50
Maximum electrical consumption (pump)	W	45
IP rating		IP X4



This back-up heater is an inline immersion heater developed to give the system an extra boost when required, to ensure comfort levels are maintained in severe weather conditions such as extended cold snaps.



The back-up heater comes with a temperature sensor and sensor pocket to ensure that it only comes on when required and to limit its usage time as much as possible.

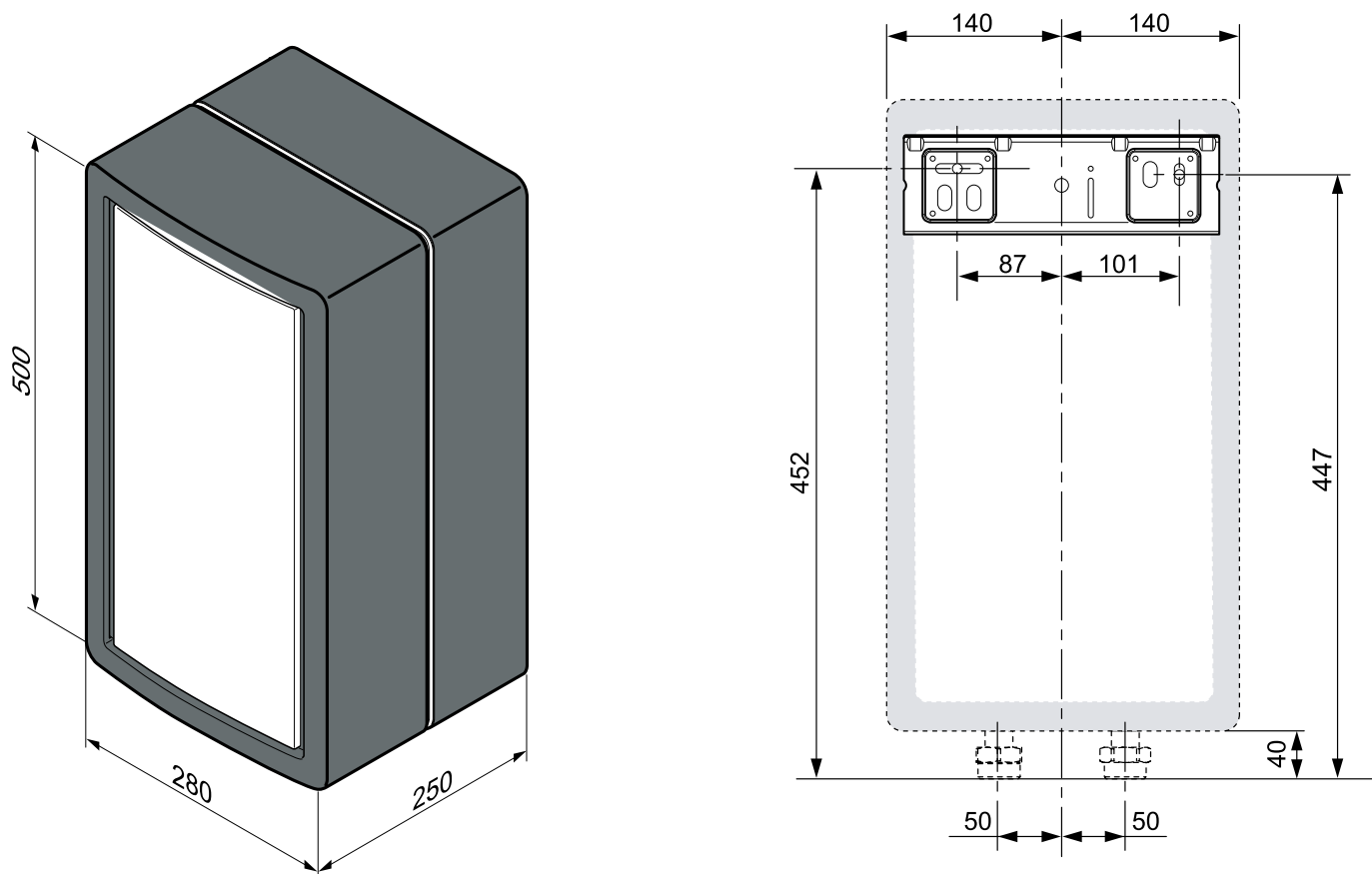
Key features and benefits

- **Provides a back-up boost to the heating system**
Ensures comfort levels are maintained during extreme weather conditions
- **Wall-mounted, compact and lightweight**
500mm (H) x 250mm (D) x 280mm (W) for easy and flexible installation
- **Flexible outputs**
Can be wired to give 2kW, 4kW, 6kW or staged output

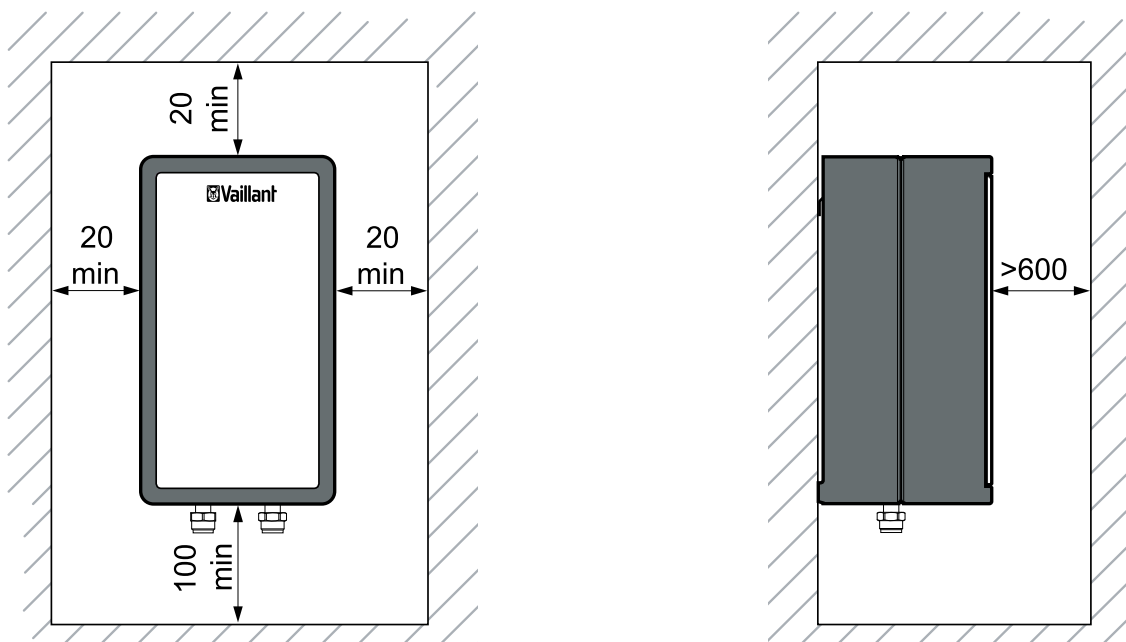
Key

1. Air bleed vent
2. Heating element
3. Heat pump input 1"
4. Installation output 1"
5. Electrical box

Dimensions



Clearances



Technical Data	Unit	Inline 6kW back-up heater
Article number		0020222286
Product dimensions, width	mm	280
Product dimensions, height	mm	500
Product dimensions, depth	mm	250
Net weight	kg	4
Central heating maximum hydraulic pressure (PSH maximum)	bar	3.0
Central heating minimum hydraulic pressure (PSH minimum)	bar	0.5
Connections	BSP	1"
Supply voltage / frequency	V / Hz	230 / 50
Maximum electrical consumption (pump)	W	6
Maximum current	A	30
IP rating		IP 20
Cable size		3 G4



The wall-mounted 45 litre decoupler module gives added system flexibility to the aroTHERM range as it can act as both a hydraulic nil point in the system and a low-loss header, ensuring system flow through the heat pump and the system.



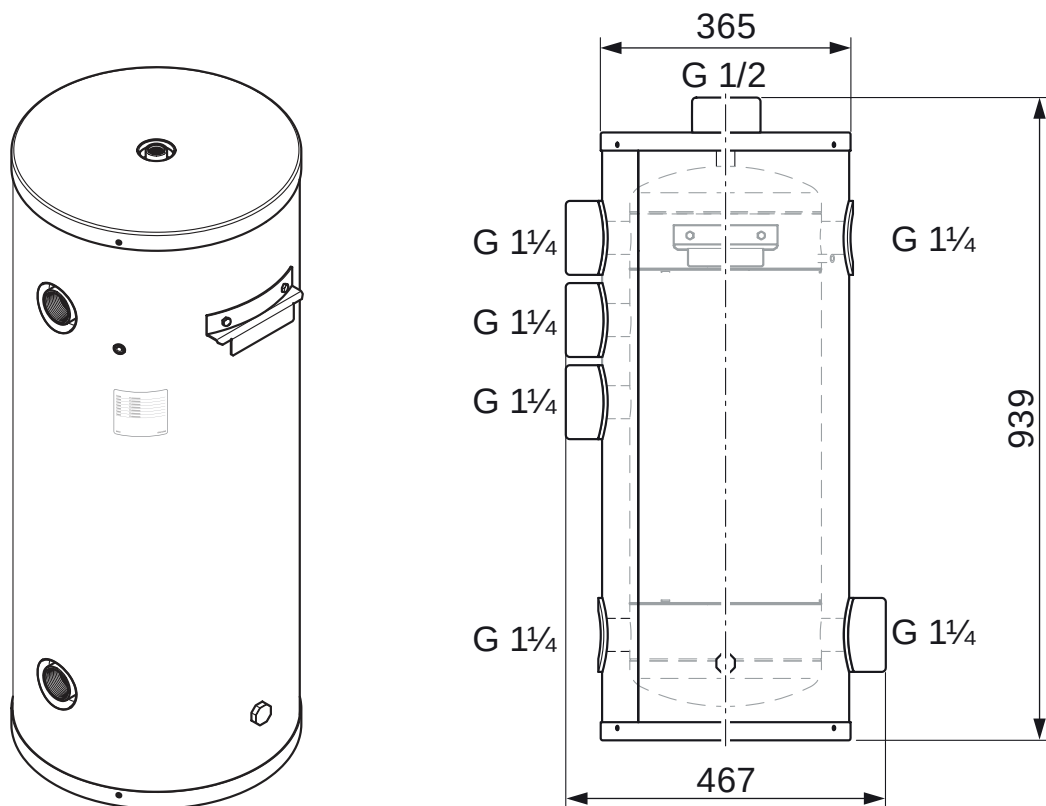
Should the system have multiple zones and/or require an additional pump to support the complete heating system, the decoupler module provides an excellent solution and is easy to site and install. The tank comes complete with an NTC sensor and pocket at the top of the tank as well as an air bleed valve/vent to help remove air from the system.

The four inlets can be used to link two heating sources and heat pumps into one heating set-up to create a hybrid system. In these cases, the decoupler module acts as a mixing module in which the heat pump acts as the primary heat source with the boiler acting as a boost or taking over once the boiler becomes less cost-effective and/or efficient than the heat pump.

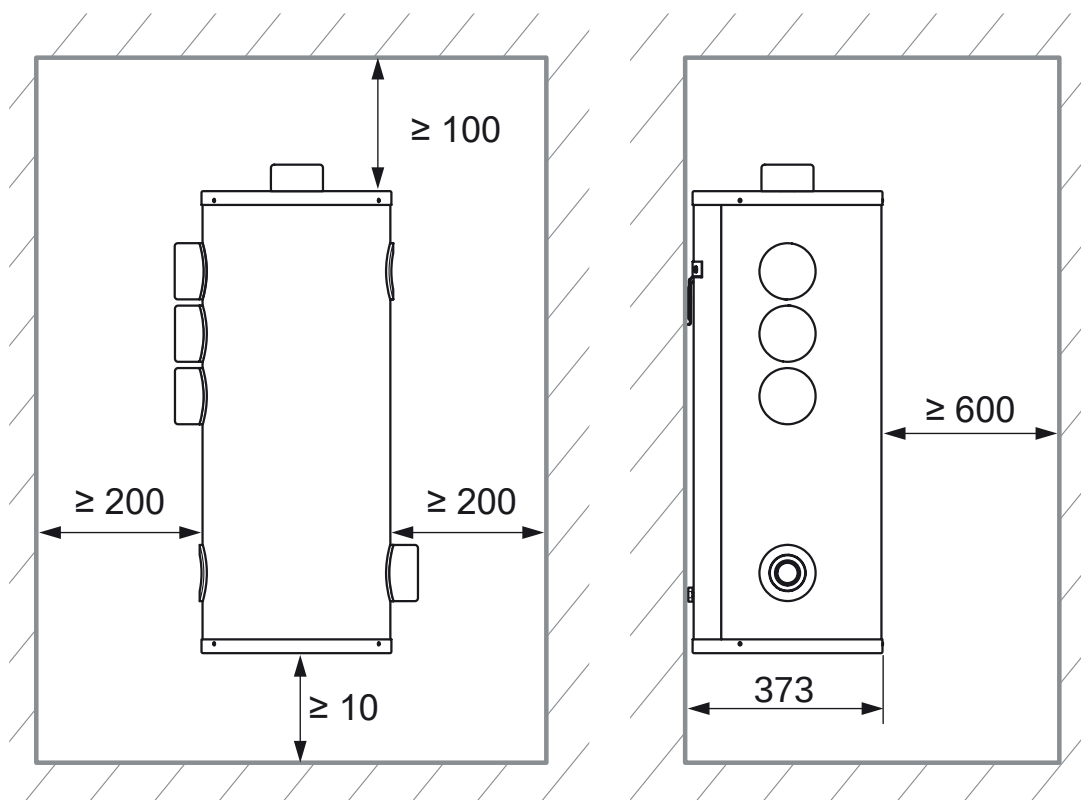
Key features and benefits

- **Helps maintain heat pump and back-up appliance differentials**
Better efficiency and performance
- **Four inlets**
Allows more system volume to be added to meet the requirements of the heat pump or to link two heat sources together in one heating circuit for a hybrid system
- **Multiple tappings**
Flexible system design
- **Thermally layered**
Increased performance
- **Wall-mounted and compact**
939mm (H) x 365mm (W) x 467mm (D) for easy and flexible installation

Dimensions



Clearances



NOTE: All measurements are millimetres. Clearance necessary for the installation or maintenance of the appliance

Technical Data	Unit	Decoupler module VP RW 45/2 B
Article number		0010038365
Product dimensions, width	mm	365
Product dimensions, height	mm	939
Product dimensions, depth	mm	467
Net weight	kg	18
Nominal capacity of tank	l	45
Maximum admissible water pressure	bar	3.0
Minimum admissible water pressure	bar	0.5
Left hand side connections	BSP	1 ¼"
Right hand side connections	BSP	1 ¼"



The uniSTOR heat pump cylinder range has been developed to work in harmony with Vaillant aroTHERM heat pumps, to provide highly efficient heating and hot water systems.

uniSTOR's large surface area and smooth coil design maximises heat transfer, to ensure connected Vaillant heat pumps run at their optimum efficiency, to reduce running costs and increase hot water performance.

Ranging from 150 up to 800 litres, our uniSTOR heat pump cylinders are available in both pre-plumbed (150 to 300 litres only) and standard options, giving you and your customers even more flexibility. In addition to this, the 250 and 300 litre cylinders have an increased coil size making them compatible with a wider range of heat pump systems.

uniSTOR cylinders also have a Global Warming Potential of less than 5, thanks to thermal injected insulation, as well as a 100% recyclable stainless steel tank with an ultra-hard-wearing outer shell, to deliver a highly efficient and sustainable heating system.

Key features and benefits

- **Thermal injected polyurethane insulation combined with vacuum panels**
Superior insulation and efficiency
- **Large diameter, smooth bore coil technology**
Provides quiet operation, reduces build-up of scale and aids in long-term efficiency through automatic descaling
- **Global Warming Potential less than 5 and ozone depletion of 0**
Designed around environmental requirements
- **Factory fitted immersion heater (150 to 300 litre uniSTOR cylinders)**
Emergency back-up in case of main heat source failure
- **Thermodynamically positioned sensor pocket**
Optimises system performance
- **Expansion vessels included or available as accessories**
Complete system solution offering whilst meeting all building regulations

Compatibility matrix

aroTHERM	uniSTOR 150 litre cylinder	uniSTOR 200 litre cylinder	uniSTOR 250 litre cylinder	uniSTOR 300 litre cylinder	uniSTOR 500 litre cylinder	auroSTOR 500 litre cylinder*	uniSTOR 800 litre cylinder
5kW	✓	✓					
8kW	✓	✓	✓	✓			
11kW	✓	✓	✓	✓	✓	✓	
15kW		✓	✓	✓	✓	✓	✓

uniSTOR cylinders

Description	Article number
150 litre pre-plumbed slimline uniSTOR	0020237129
200 litre pre-plumbed uniSTOR	0020237130
250 litre pre-plumbed uniSTOR	0020237131
300 litre pre-plumbed uniSTOR	0020237132
150 litre standard uniSTOR	0020235271
200 litre standard uniSTOR	0020235272
250 litre standard uniSTOR	0020235273
300 litre standard uniSTOR	0020235274
500 litre large capacity uniSTOR	0010019228
800 litre large capacity uniSTOR	0010019229
500 litre large capacity auroSTOR*	0010019234

* auroSTOR 500 litre cylinder for combined heat pump and solar thermal systems.

Accessories (500 and 800 litre cylinders only)	Article number
Immersion heater 7kW (800 litre only)	0020235671
Unvented cylinder kit 1"	0020235964
Unvented cylinder kit 1¼"	0020235965
Unvented cylinder kit 1½"	0020235966
Unvented cylinder kit 2"	0020235967
Expansion vessel 50 litre (for uniSTOR and auroSTOR 500 litre)	0020229941
Expansion vessel 80 litre (for uniSTOR 800 litre)	0020229942

NOTE: One unvented kit and expansion vessel required with each 500 and 800 litre cylinder

For further details on heat pump cylinders please see the Heat Pump Cylinder Brochure.



The Vaillant wired VRC 700 and wireless VRC 700f system controls allow your customer to take control of their Vaillant heating and hot water system.

Designed to work harmoniously with all current Vaillant products, the VRC 700 and VRC 700f effortlessly use weather compensation technology to ensure your customers appliances are working to their peak performance and always maintaining optimum efficiency.

Key features and benefits

- **Designed with simplicity and familiarity in mind**
The VRC 700 and VRC 700f controls are designed with ease of use in mind. Using a familiar menu structure, it makes controlling the system easy and efficient
- **Takes care of all Vaillant equipment automatically**
Intelligently communicates with all Vaillant appliances. The hybrid management system will also automatically choose the most efficient appliance, to deliver the most cost effective and energy efficient solution
- **Flexible time programs**
Three heating and three hot water time periods can be set for each week, day or over a 24 hour period
- **Holiday function**
Prevents the heating and hot water coming on whilst away and reinstates it upon return
- **Programs stored in memory permanently**
Holds time and temperature programs permanently, even in the event of a power failure
- **Up to three heating circuits with domestic hot water control**
Additional heating zone controls are available in wired (VR 91) and wireless (VR 91f) options and are designed to mirror the functionality of the VRC 700 and VRC 700f. This is to provide your customers with a familiar user experience anywhere in their property
- **Clear, high contrast backlit display**
Blue backlit display, offers outstanding contrast, resulting in clear information, with low energy consumption on both the VRC 700 / VRC 700f and VR 91 / VR 91f
- **Controls multiple heat pumps**
Control up to seven heat pumps with a single boiler in cascade whilst also supporting solar thermal
- **Cascade functionality utilises degree minutes in order to calculate when best to use each appliance in turn**
It simultaneously records the individual running hours to ensure every appliance is run for an equal amount of time

Pack enables control of the aroTHERM heat pump system, one wired/wireless heating zone and hot water system



Pack includes:
VRC 700(f)

Wired pack:
0020236291
Wireless pack:
0020259829



Pack enables control of the aroTHERM heat pump system, one wired/wireless heating zone using Vaillant controls and one heating zone using third party controls, hot water and heat exchanger module



Pack includes:
VRC 700(f)
and VR 70

Wired pack:
0020236292
Wireless pack:
0020259830



Pack enables control of the aroTHERM heat pump system, two wired/wireless heating zones and hot water system



Pack includes:
VRC 700(f), VR
70 and VR 91(f)

Wired pack:
0020236293
Wireless pack:
0020259831



Pack enables control of the aroTHERM heat pump system, three wired/wireless heating zones and hot water system



Pack includes:
VRC 700(f),
VR 71 and two
VR 91(f)

Wired pack:
0020236294
Wireless pack:
0020259832



Pack enables control of the aroTHERM heat pump system, one wired/wireless heating zone and solar thermal hot water system



Pack includes:
Wired VRC 700(f),
VR 70 and VR 11

Wired pack:
0020236295
Wireless pack:
0020259833



Pack enables control of the aroTHERM heat pump system, two wired/wireless heating zones and solar thermal hot water system



Pack includes:
VRC 700(f), VR 71
VR 11 and VR 91(f)

Wired pack:
0020259834
Wireless pack:
0020259835



VRC 700 and VRC 700f controls and components

Description	Article number
VRC 700 wired, weather compensating, programmable room thermostat	0020236291
VRC 700f wireless, weather compensating, programmable room thermostat	0020259829
VR 91 wired, programmable, room thermostat	0020171334
VR 91f wireless, programmable, room thermostat	0020231566
VR 70 wiring centre	0020184844
VR 71 wiring centre	0020184847
VR 32 eBUS coupler	0020139895
VR 40 two-in-seven multifunctional module	0020017744

Performance data

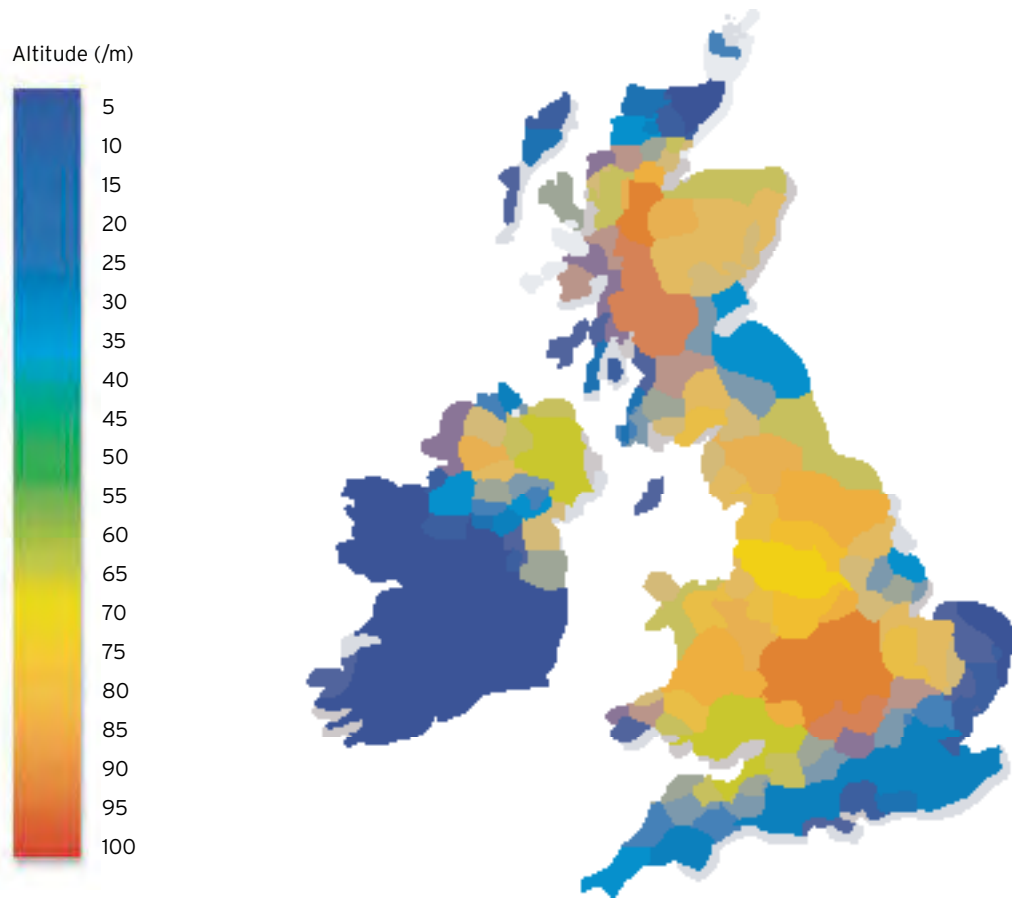
When designing a heating system that utilises a heat pump, there are a number of design factors that need to be considered.

Heat loss

MCS recommend using the MIS 3005 installation standard for designing a heat pump system. Systems should be specified at peak winter requirements, depending on location, to ensure year round comfort as detailed in the table below.

Location	Altitude (/m)	Hourly dry-bulb temperature (/°C) equal to or exceeded for 99% of the hours in a year
Belfast	68	-1.2
Birmingham	96	-3.4
Cardiff	67	-1.6
Edinburgh	35	-3.4
Glasgow	5	-3.9
London	25	-1.8
Manchester	75	-2.2
Plymouth	27	-0.2

A room-by-room heating requirement check will then need to be carried out at the set outside temperature in order to understand the heating needs of the total property.



Seasonal Coefficient of Performance

As the outside air temperature drops, the amount of energy the heat pump can extract decreases, meaning the heating output will decrease to ensure end user comfort at peak heating times.

aroTHERM output and SCoP table										
5kW		35°C flow		40°C flow		45°C flow		50°C flow		55°C flow
		output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	SCoP
	-5°C	5.26	4.07	5.33	3.66	5.39	3.26	4.94	3.15	3.03
	-3°C	5.66		5.97		6.28		5.68		
	0°C	6.12		6.40		6.68		6.11		
	2°C	6.43		6.71		6.98		6.41		
8kW		35°C flow		40°C flow		45°C flow		50°C flow		55°C flow
		output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	SCoP
	-5°C	7.15	4.58	6.46	4.22	5.76	3.86	5.27	3.41	2.95
	-3°C	7.70		6.76		5.81		5.27		
	0°C	7.81		7.20		6.58		5.98		
	2°C	8.27		7.74		7.20		6.47		
11kW		35°C flow		40°C flow		45°C flow		50°C flow		55°C flow
		output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	SCoP
	-5°C	8.23	3.15	7.70	3.03	7.17	2.91	5.65	2.9	2.9
	-3°C	8.42		7.86		7.30		6.00		
	0°C	9.25		8.57		7.88		6.70		
	2°C	9.81		9.02		8.28		7.00		
15kW		35°C flow		40°C flow		45°C flow		50°C flow		55°C flow
		output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	output (kW)	SCoP	SCoP
	-5°C	12.65	3.28	12.07	3.15	11.00	3.01	10.25	3.01	3.01
	-3°C	12.90		12.20		11.50		10.65		
	0°C	13.20		12.85		12.40		11.78		
	2°C	14.00		13.55		13.10		12.45		

Seasonal Coefficient of Performance data is calculated as per EN 14825 for aroTHERM 5kW and 8kW. aroTHERM 11kW and 15kW are calculated as per EN 14511.

Planning permission

As air-to-water heat pumps are installed on the outside of the property and produce a certain level of sound (the pumps use a fan to move air which will generate noise), it must be determined if a single heat pump installation meets permitted development rules. The Vaillant MCS 020 tool can help determine sound pressure levels from our full range of air-to-water heat pumps. If the sound pressure level is 42dB(A) or above, planning permission is likely to be required. However, it is worth noting that planning permission for each county within the UK varies and that Scotland has its own rules regarding air-to-water heat pumps, which you will need to refer to.



System sizing

Determine the estimated heat loss from the property, taking into consideration the year of build. The value in table A will determine the approximate amount of kW required from the heat pump and will indicate which aroTHERM is required in table B. aroTHERM and aroTHERM hybrid heat pumps can also be installed in cascade for larger domestic and commercial properties. Contact Vaillant for further details.

Heat loss calculation table A

No house upgrade		Total m²																		
Year	Unit	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
1970-1995	100W/m²	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00											
1996-2005	80W/m²	5.60	6.40	7.20	8.00	8.80	9.60	10.40	11.20	12.00	12.80	13.60	14.40	15.20						
2006-2010	50W/m²	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50
2010	40W/m²	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00
House upgrade for double glazing and loft insulation		Total m²																		
Year	Unit	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
1970-1995	85W/m²	5.95	6.80	7.65	8.50	9.35	10.20	11.05	11.90	12.75	13.60	14.45	15.30							
1996-2005	70W/m²	4.90	5.60	6.30	7.00	7.70	8.40	9.10	9.80	10.50	11.20	11.90	12.60	13.30	14.00	14.70	15.40			
2006-2010	50W/m²	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50
2010	40W/m²	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.04	8.80	9.20	9.60	10.00
House upgrade for double glazing, loft insulation and cavity wall insulation		Total m²																		
Year	Unit	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250
1970-1995	70W/m²	4.90	5.60	6.30	7.00	7.00	8.40	9.10	9.80	10.50	11.20	11.90	12.60	13.30	14.00					
1996-2005	60W/m²	4.20	4.80	5.40	6.00	6.60	7.20	7.80	8.40	9.00	9.60	10.20	10.80	11.40	12.00	12.60	13.20	13.80	14.40	15.00
2006-2010	50W/m²	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50
2010	40W/m²	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00

Auxiliary heater required for peak heating requirements (-3°C and below)

aroTHERM calculation table B

Based on 35°C flow temperature and -3°C outside air temperature	
0 - 6kW	aroTHERM 5kW
4.5kW - 7.7kW	aroTHERM 8kW
6.5kW - 8.4kW	aroTHERM 11kW
8kW - 12.9kW	aroTHERM 15kW
11kW and above	hybrid systems

This estimating tool is to be used as a guide only and does not replace a full heat loss calculation for a property. Vaillant will not accept responsibility for the mis-sizing of a heating system. Please contact your local sales representative for more details.



750mm flexi hose

- Pre-insulated with 20mm weatherproof high-grade insulation to improve system efficiency and cut installation time
- Right angled fixing to the heat pump to minimise rear clearance
- 28mm copper compression fitting for a fast and easy installation
- 'Kink-free' bending designed to minimise the possibility of 'kinking' in the hose
- 750mm length to suit most site requirements

Description	Article number
750mm flexi hose	0020165288



Raised rubber feet

- Available in 600mm length therefore meeting all site requirements
- Raised rubber mounting that offers excellent vibration absorption to minimise noise
- Extra clearance at the base, which improves access to the condensation pipe and drainage
- Improves air flow

Description	Article number
Raised rubber feet	0020175140



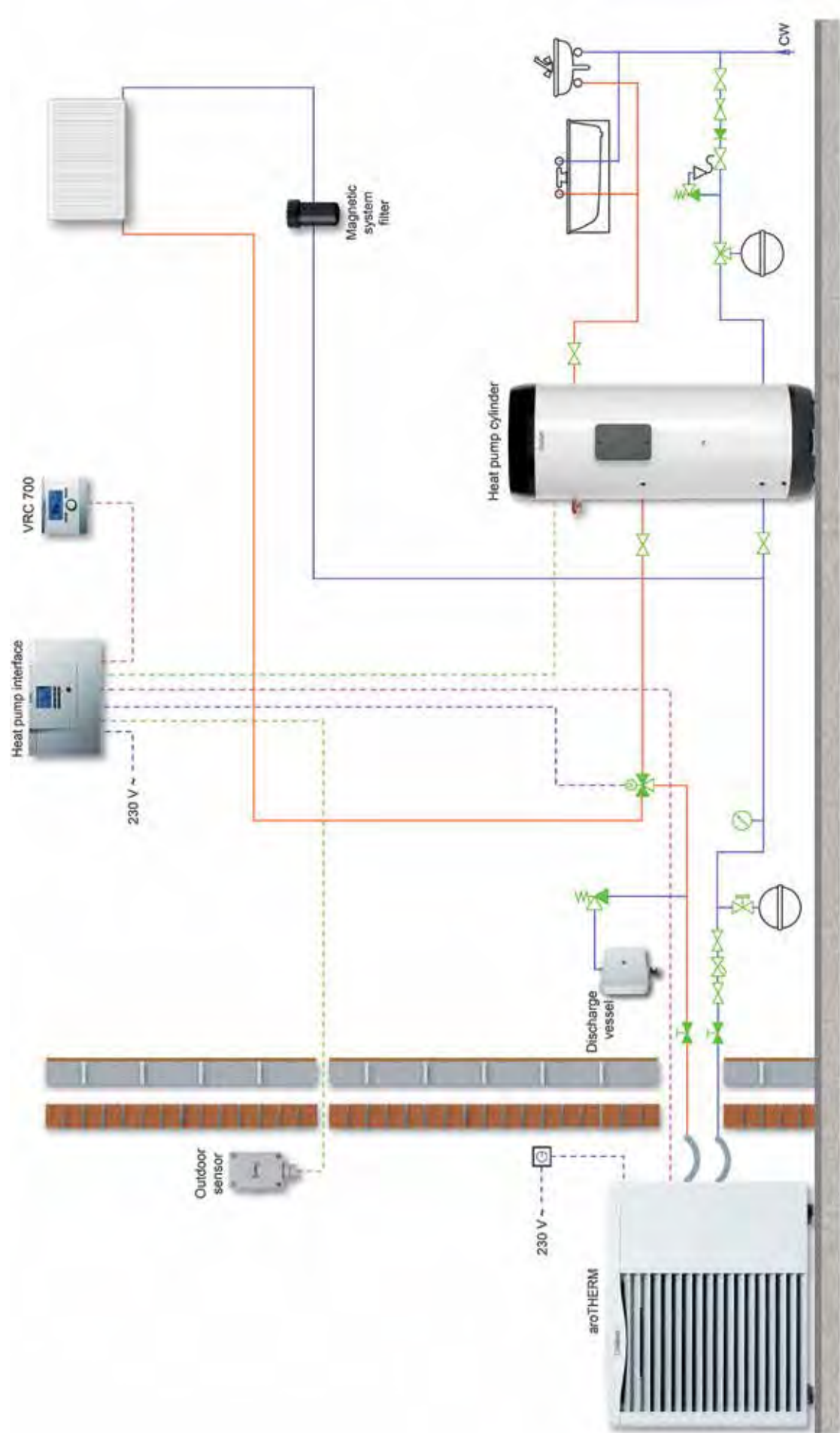
Discharge vessel

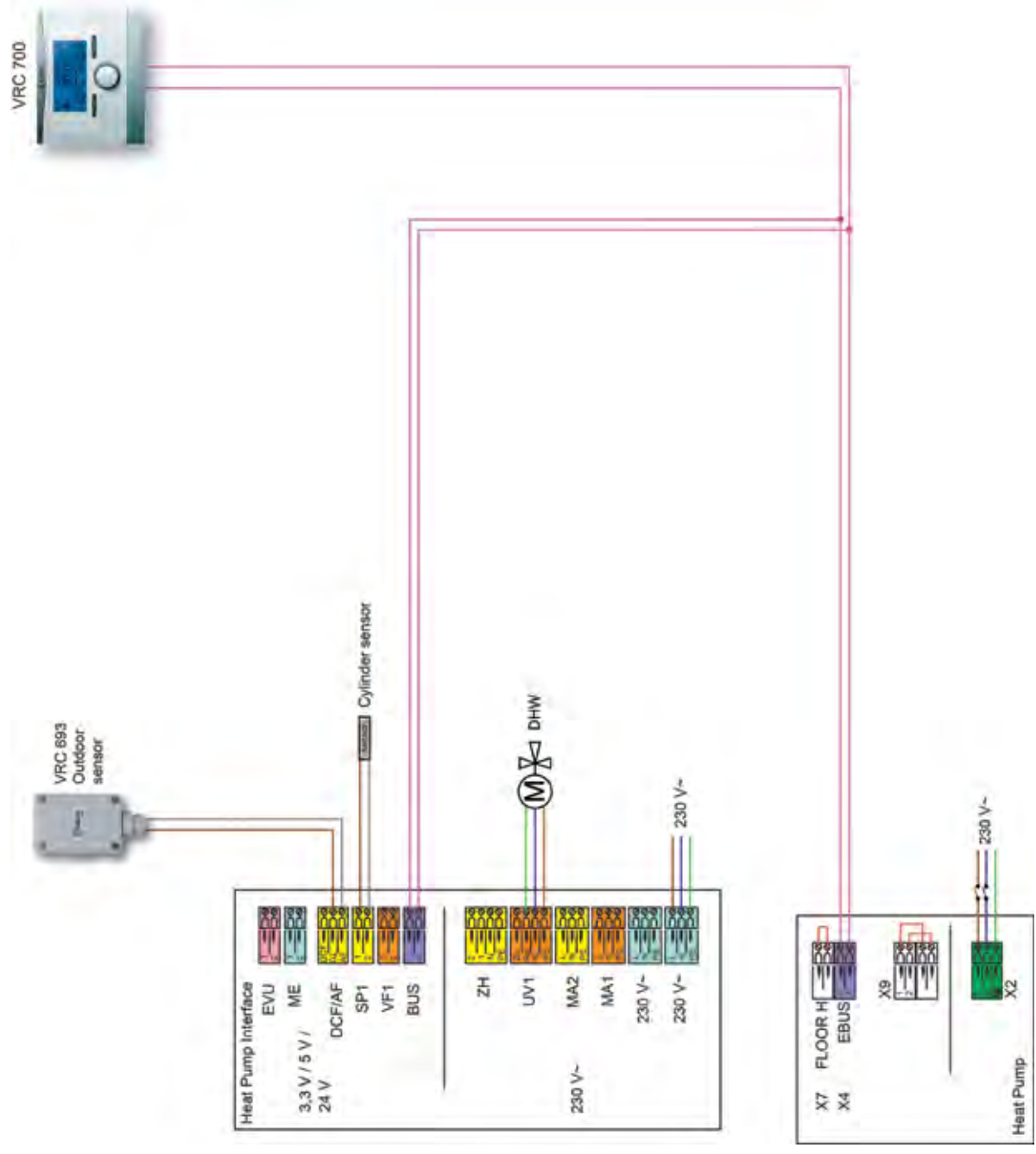
- Small wall-mounted vessel
- Collects heating system glycol if the PRV opens
- Ensures glycol does not discharge into the drainage system

Description	Article number
Discharge vessel	0020145563

Heat pump, DHW tank, single zone - schematic

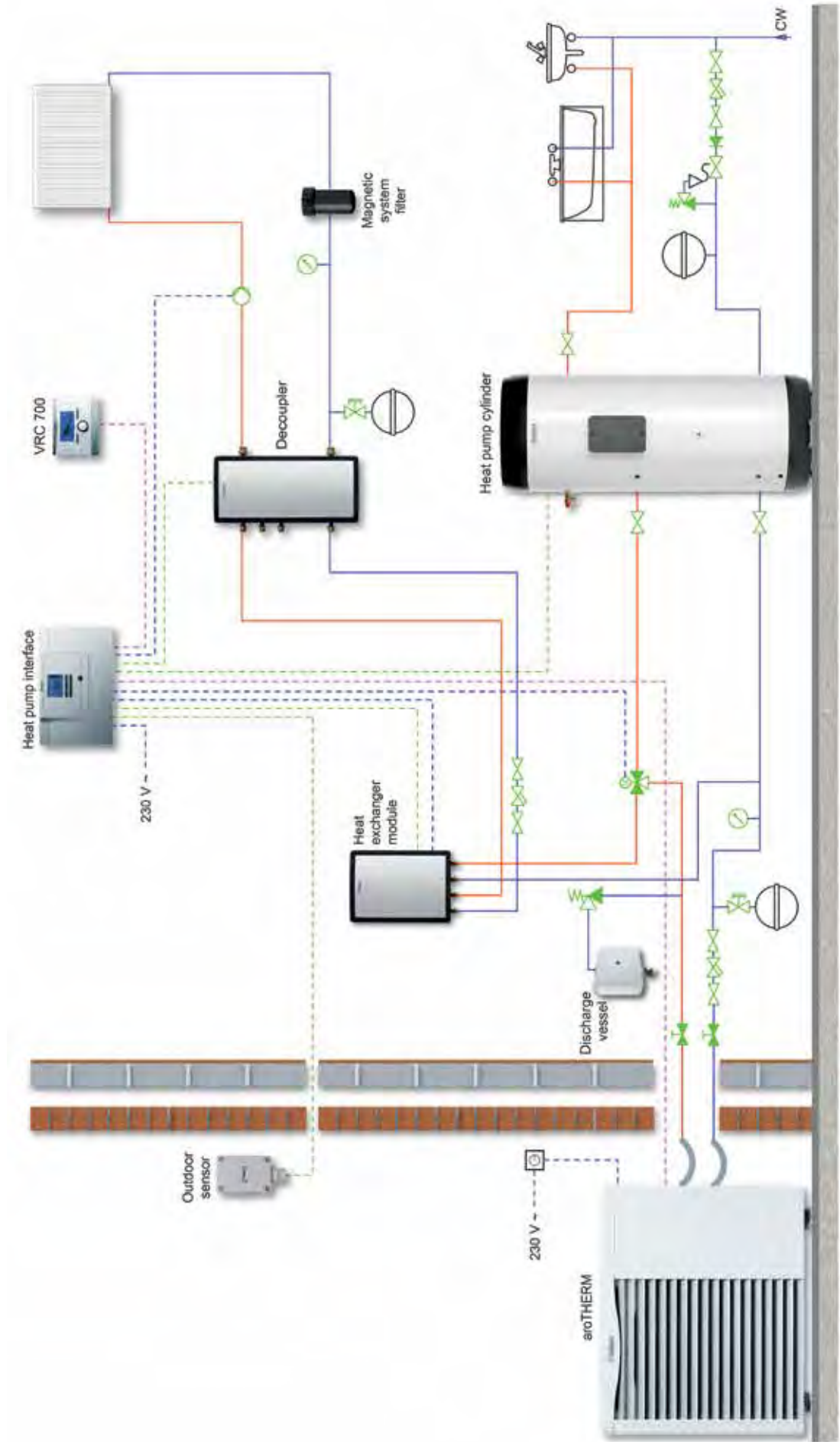
On first commissioning please select system No. 8 for VRC 700 / VRC 700f

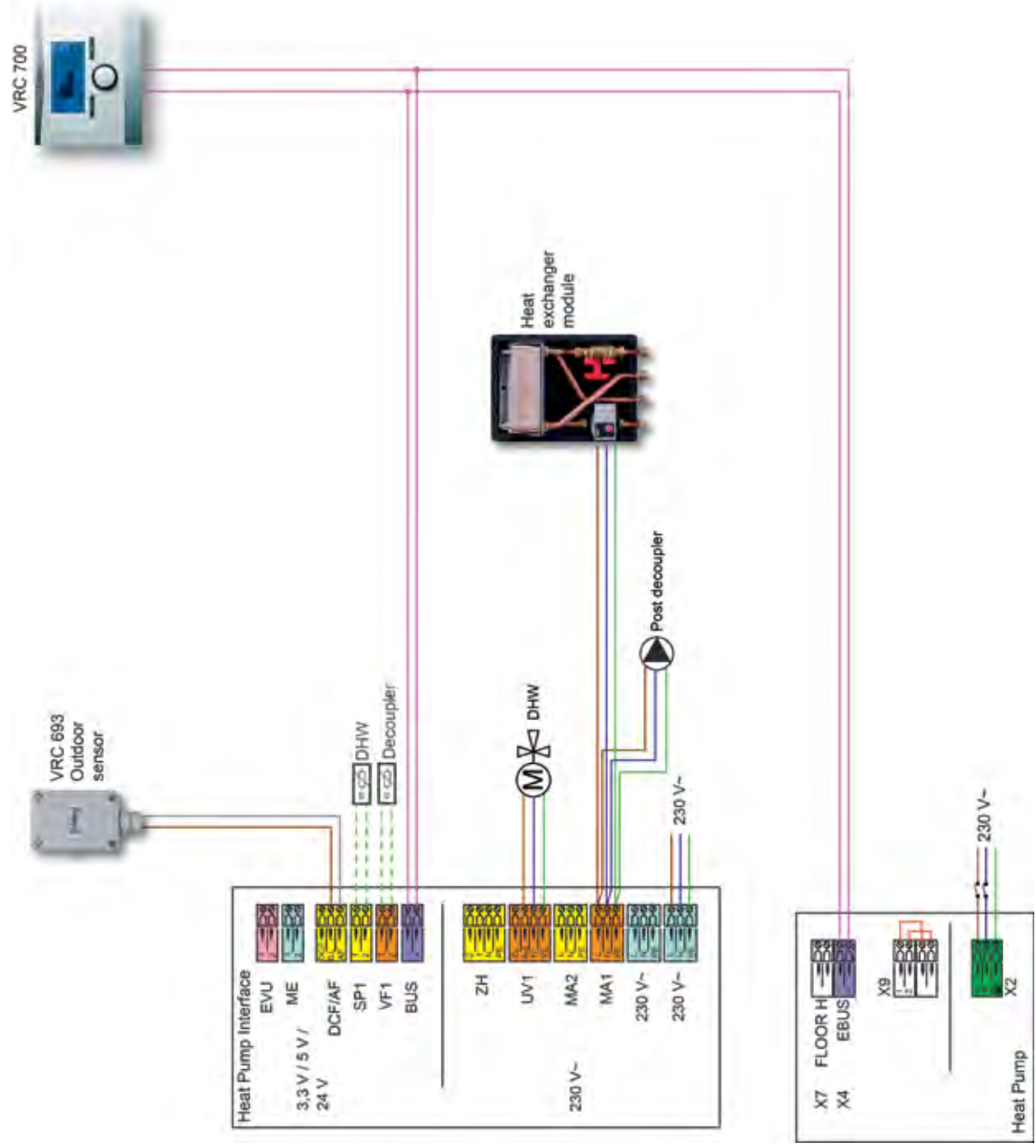




Heat pump, heat exchanger module, decoupler, DHW tank, single zone - schematic

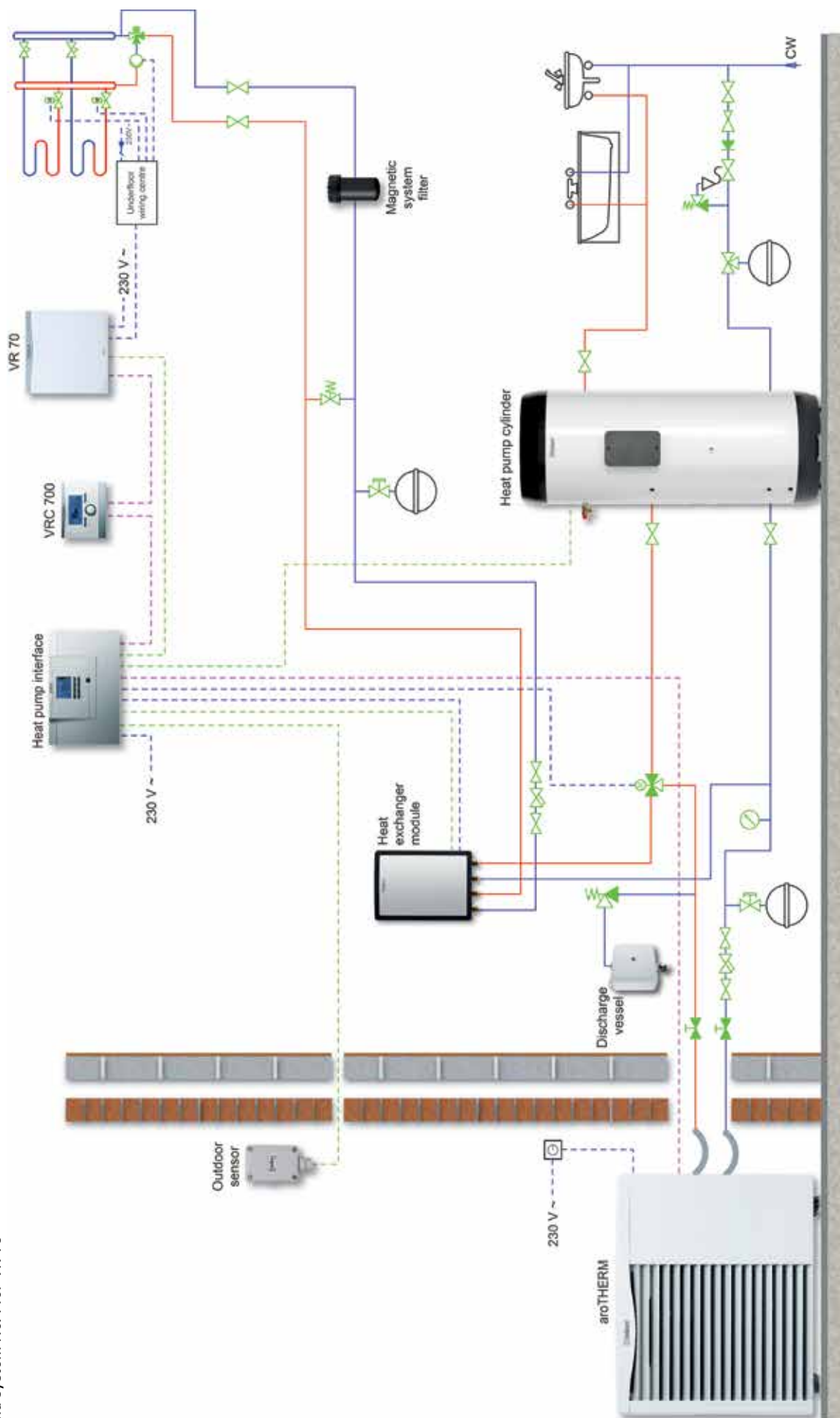
On first commissioning please select system No. 10 for VRC 700 / VRC 700f



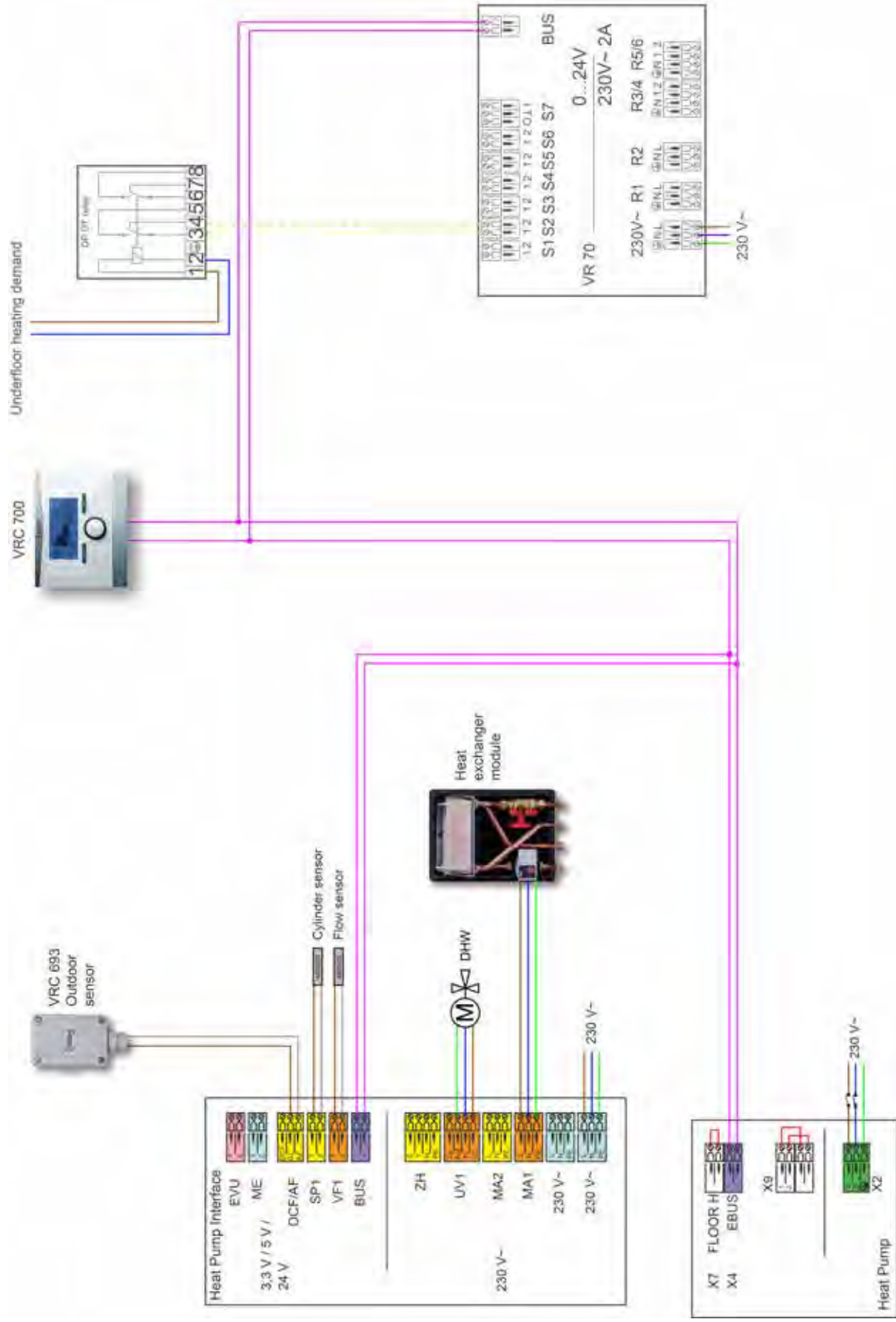


Heat pump, heat exchanger module, DHW tank, underfloor heating - schematic

On first commissioning please select system No.10 for VRC 700 / VRC 700f and system No.1 for VR 70

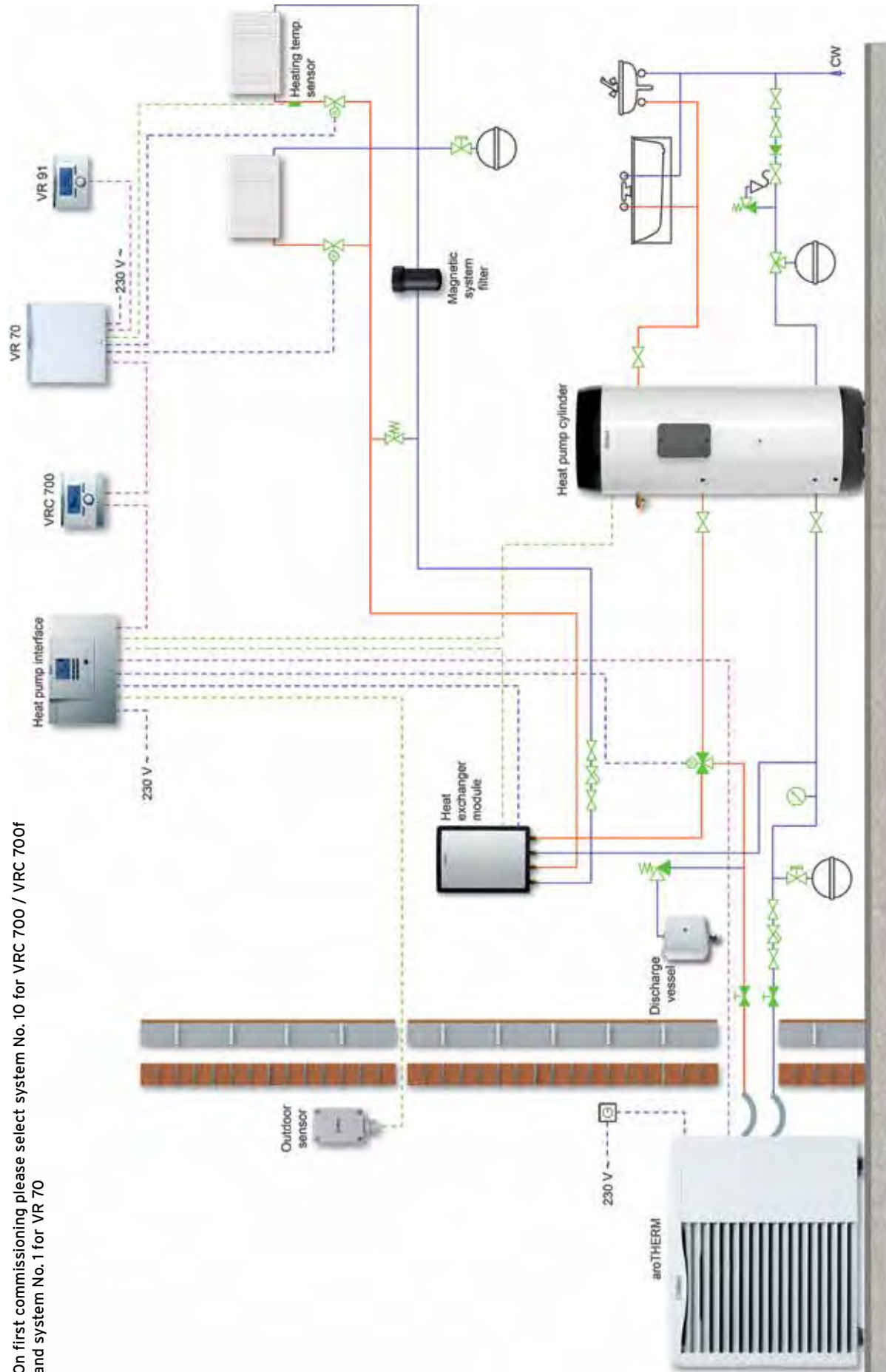


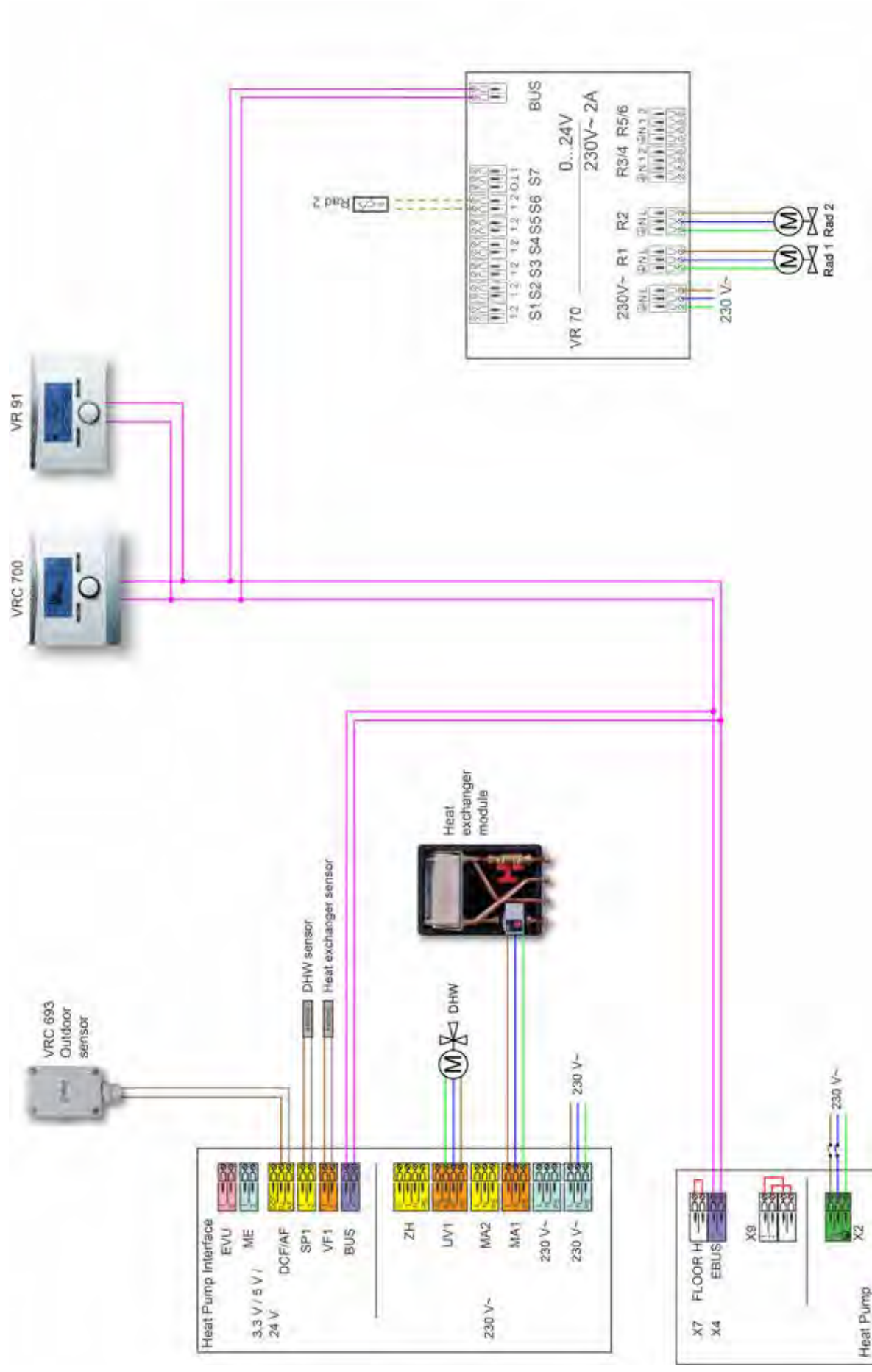
Heat pump, heat exchanger module, DHW tank, underfloor heating - wiring



Heat pump, heat exchanger module, DHW tank, two zone - schematic

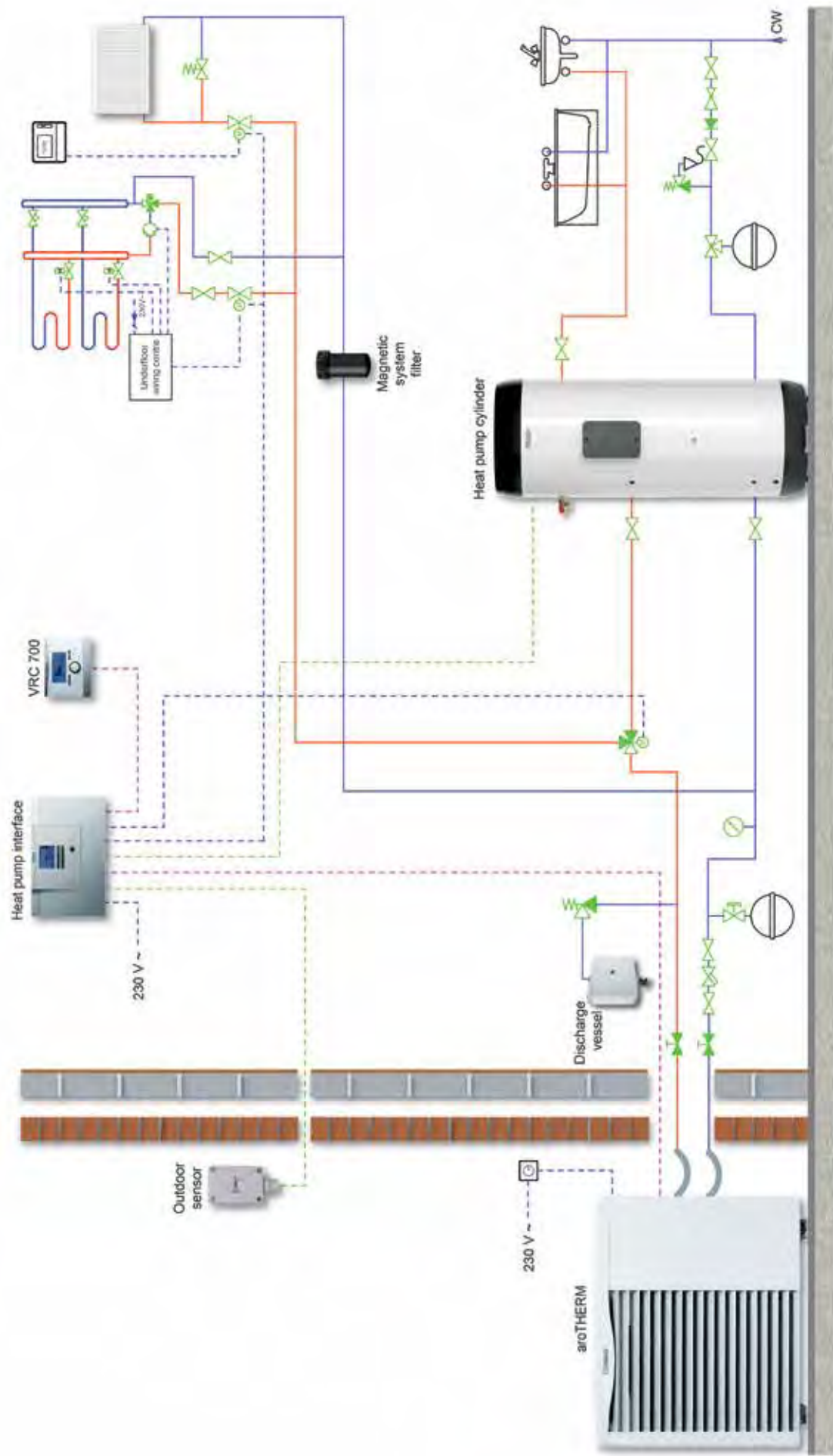
On first commissioning please select system No. 10 for VRC 700 / VRC 700f and system No. 1 for VR 70



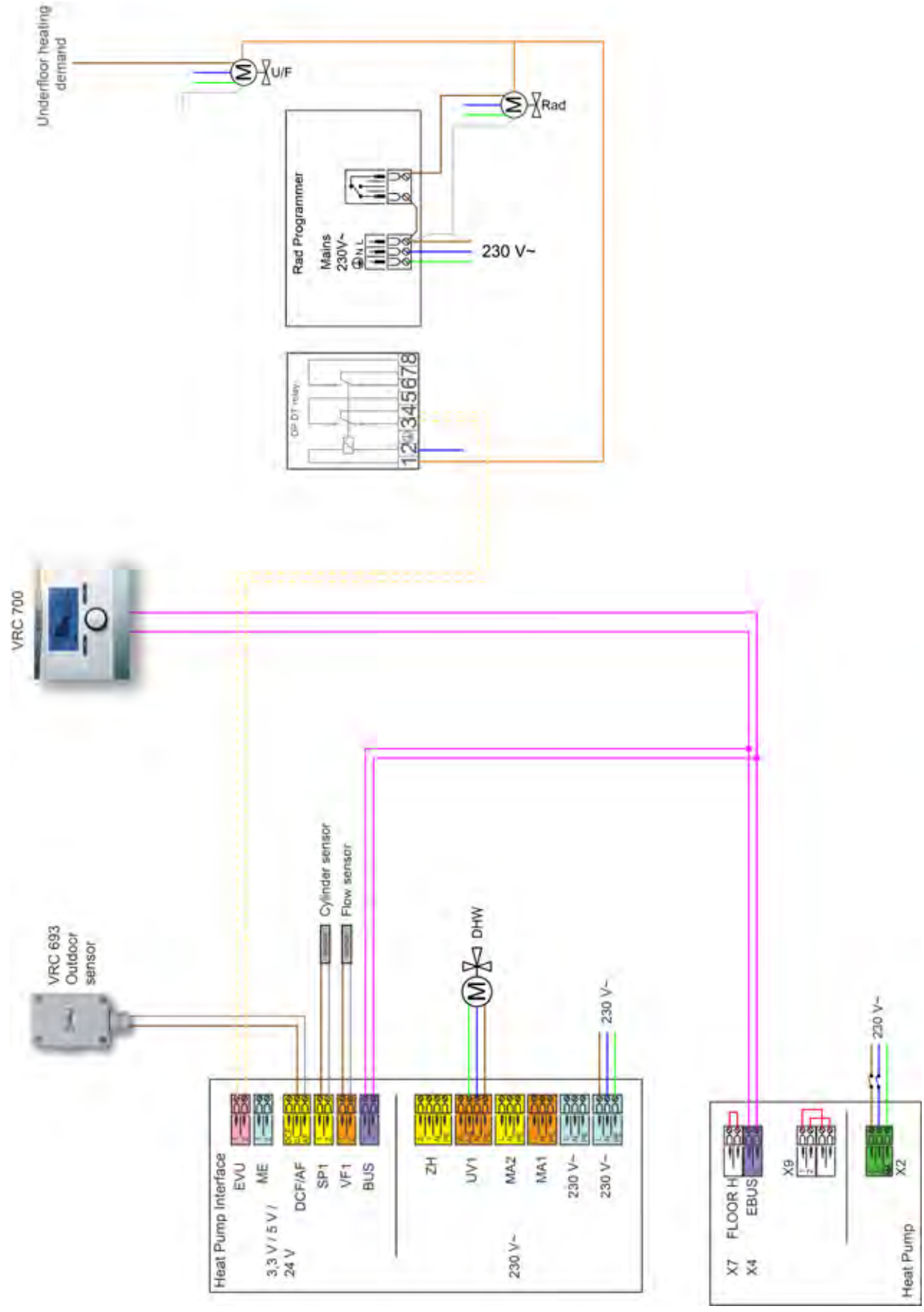


Heat pump, DHW tank, underfloor heating, one rad zone - schematic

On first commissioning please select system No. 10 for VRC 700 / VRC 700f

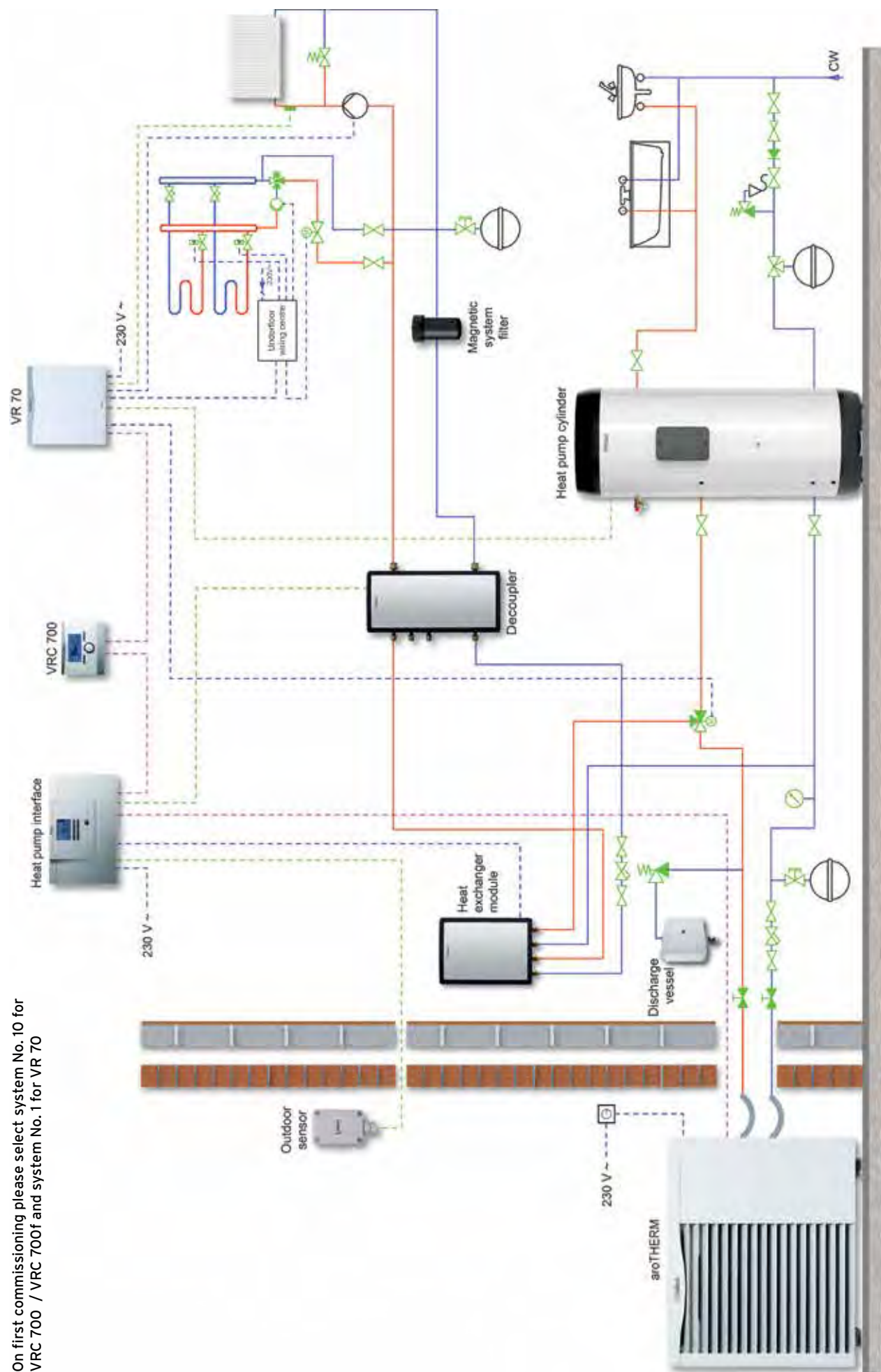


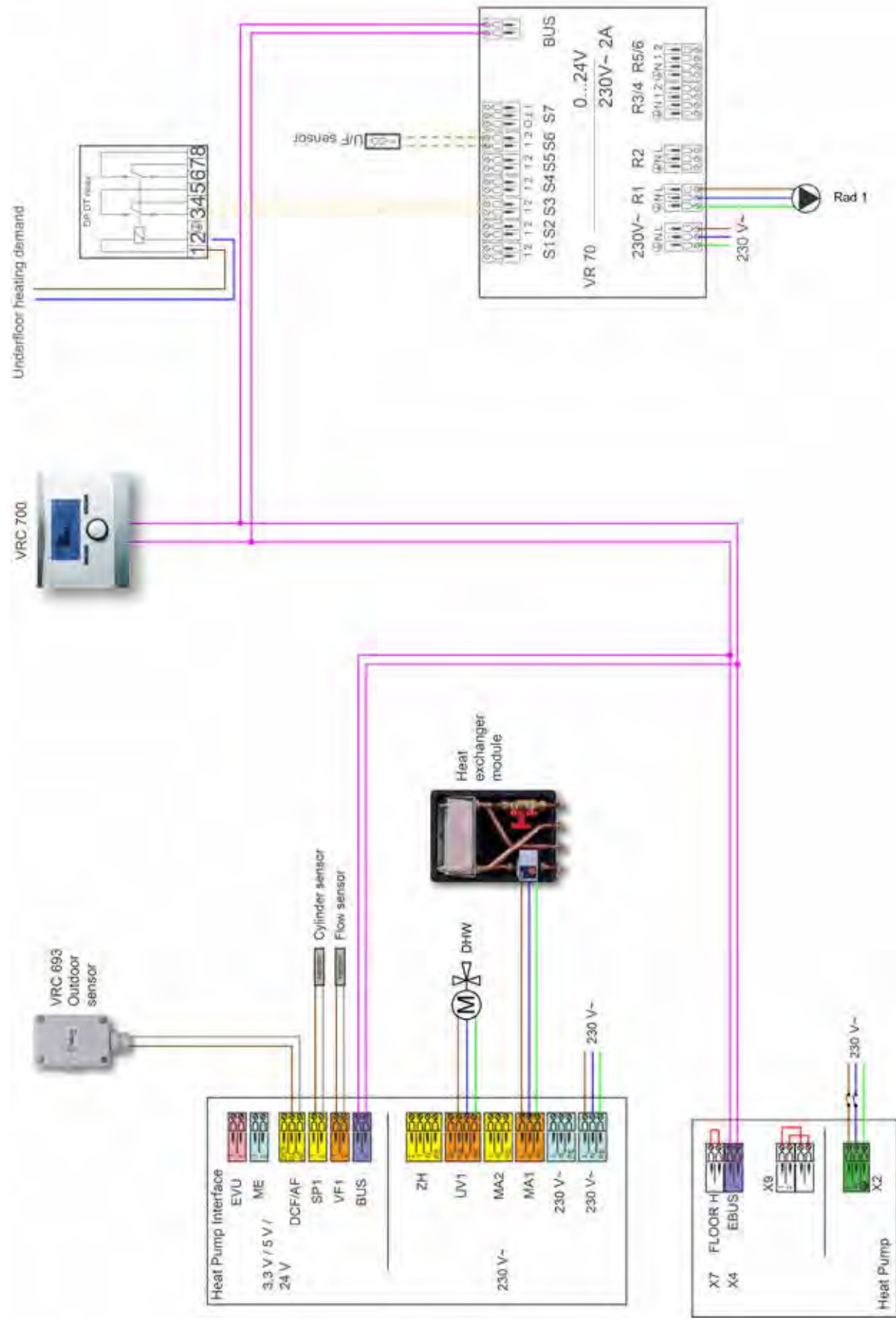
Heat pump, DHW tank, underfloor heating, one rad zone - wiring



Heat pump, heat exchanger module, decoupler, DHW tank, U/F, one zone - schematic

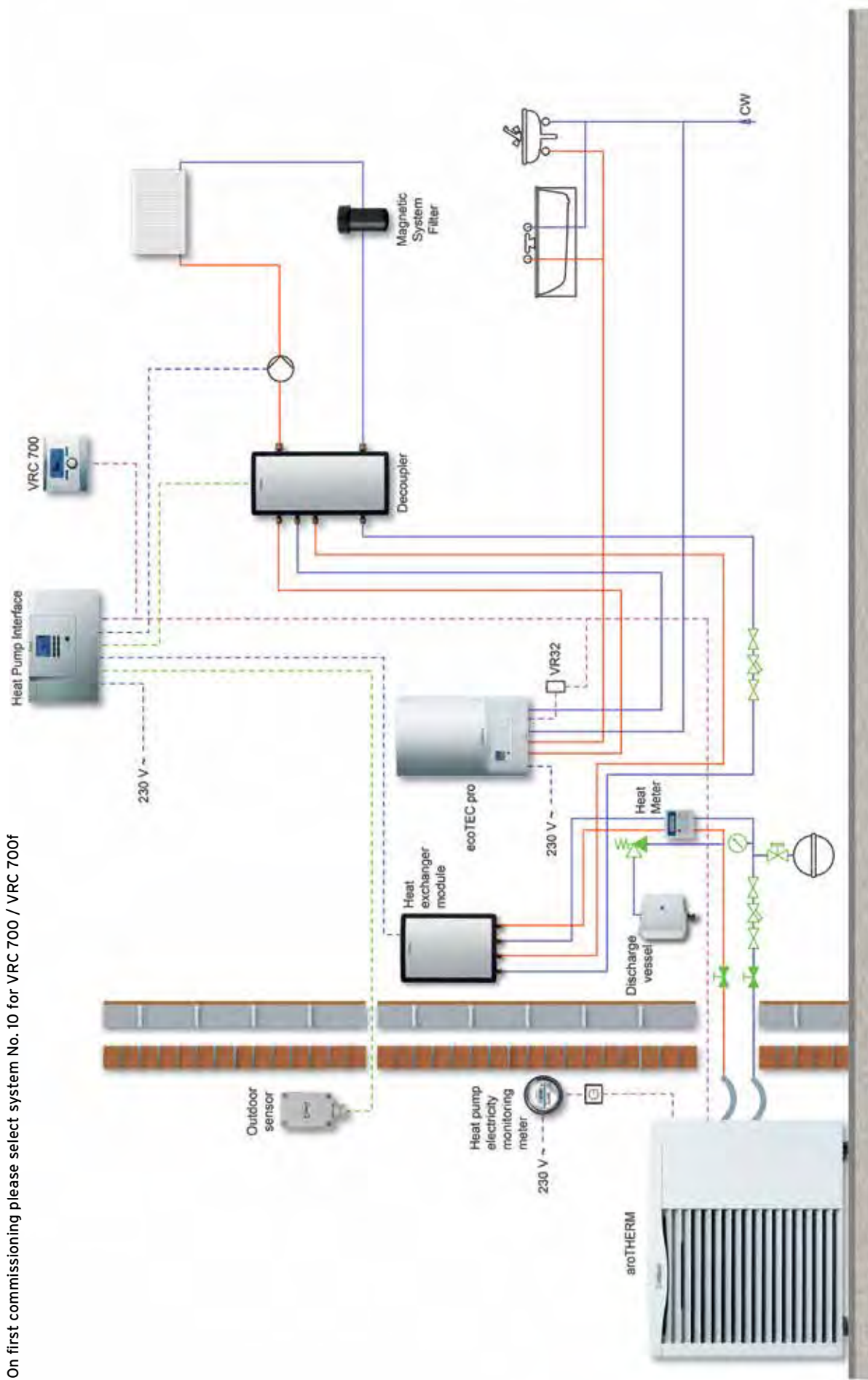
On first commissioning please select system No. 10 for VRC 700 / VRC 700f and system No. 1 for VR 70





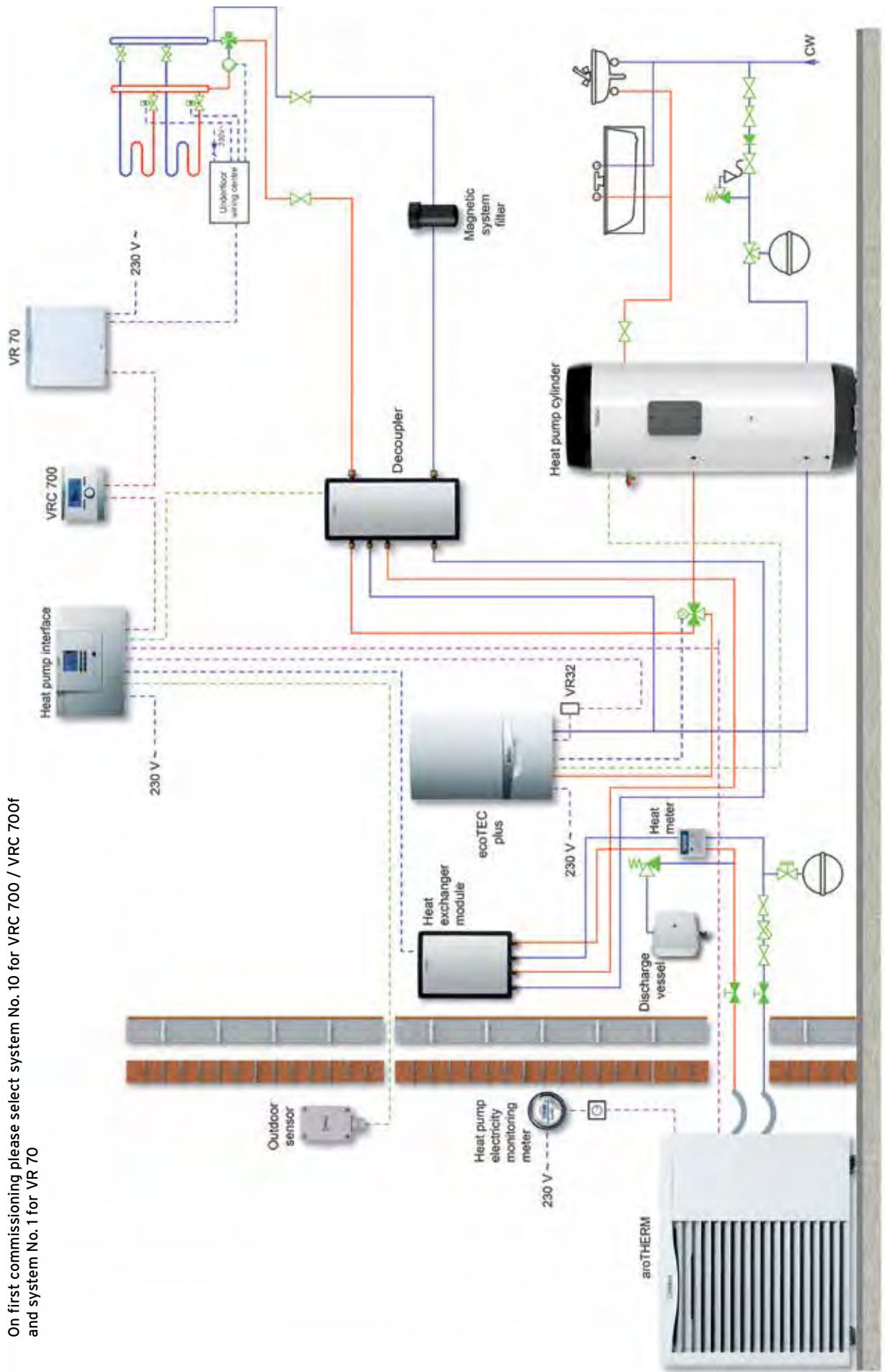
Hybrid, Vaillant combi boiler, heat exchanger module, decoupler, one zone - schematic

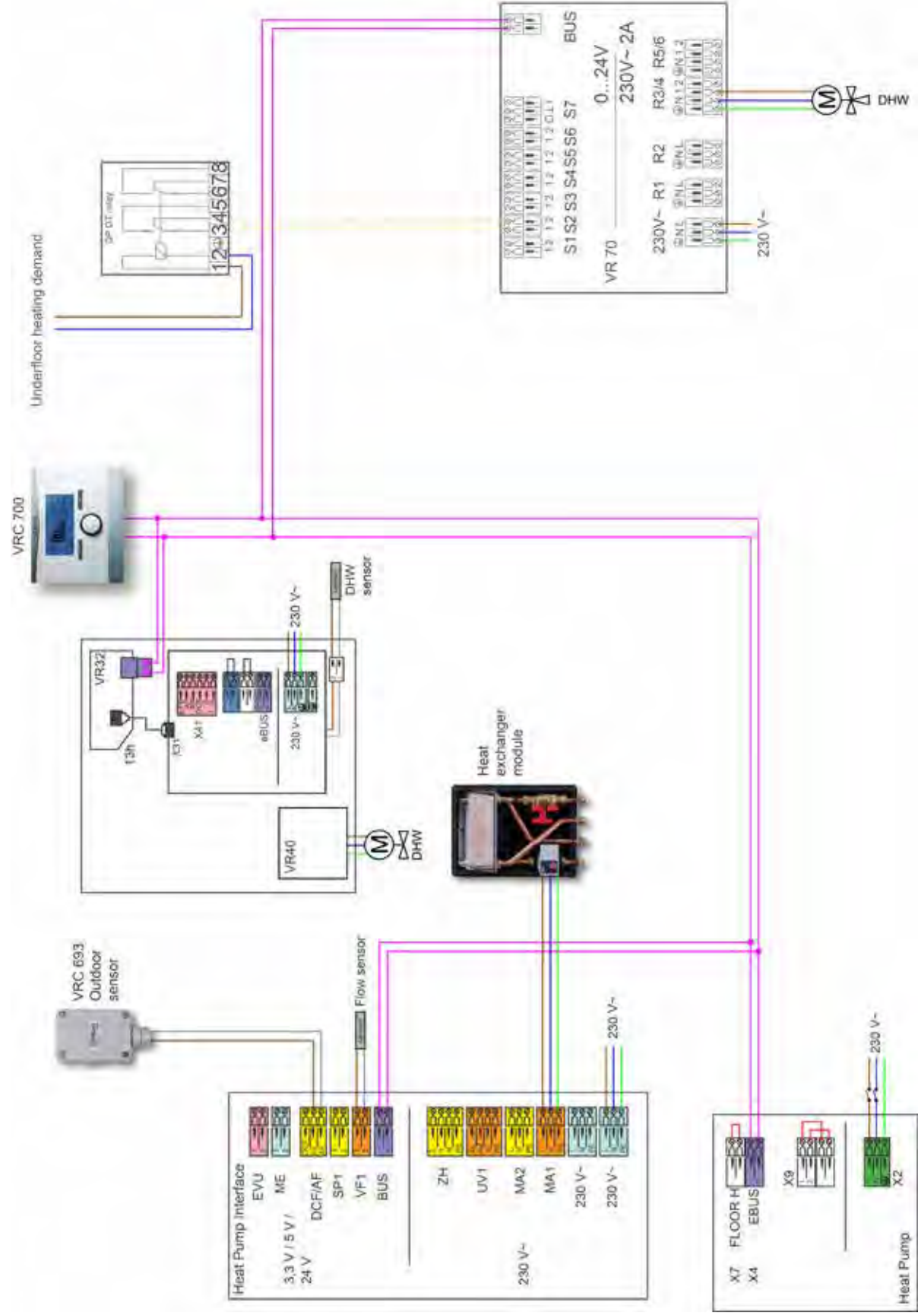
On first commissioning please select system No. 10 for VRC 700 / VRC 700f



Hybrid, Vaillant system boiler, heat exchanger module, decoupler, U/F - schematic

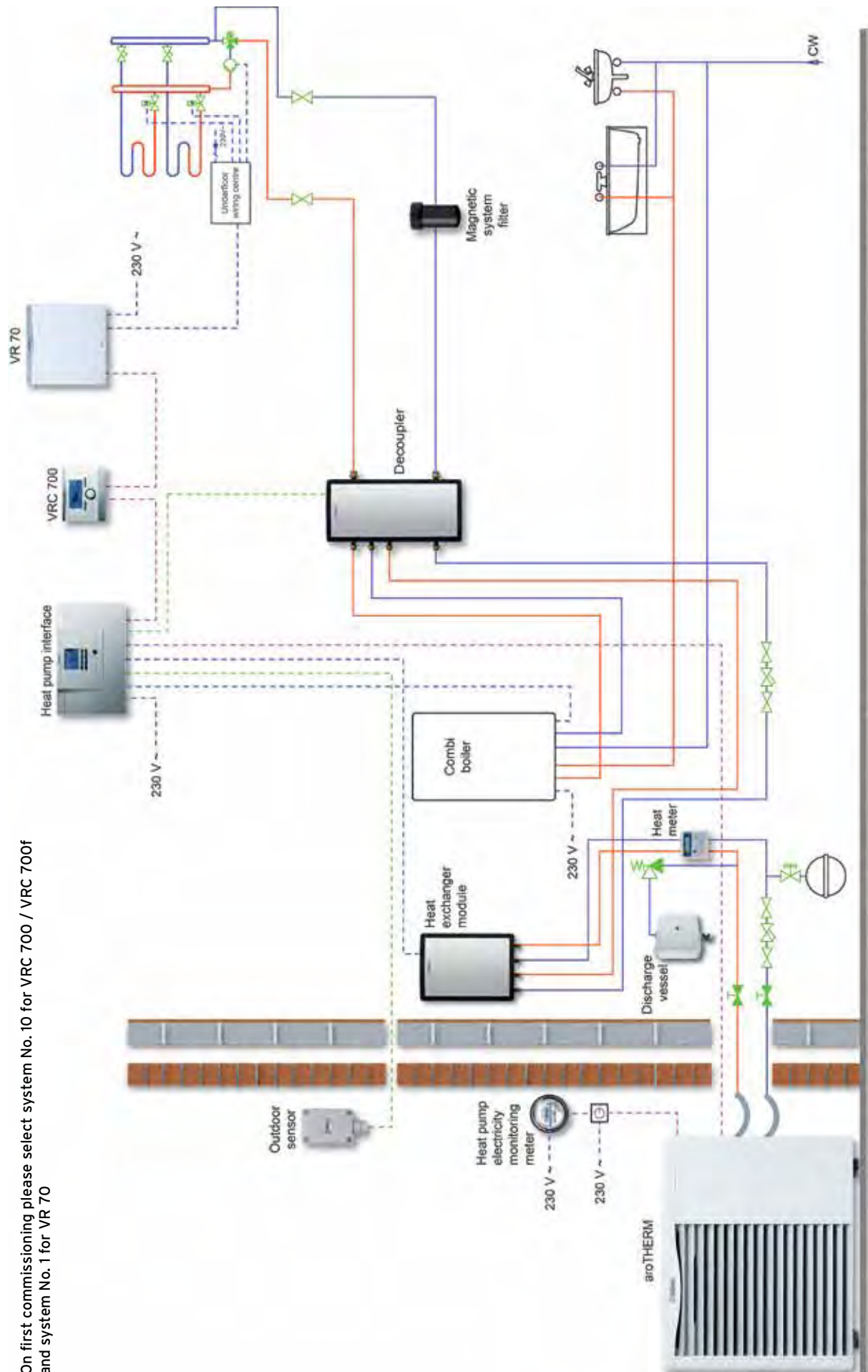
On first commissioning please select system No. 10 for VRC 700 / VRC 700f and system No. 1 for VR 70



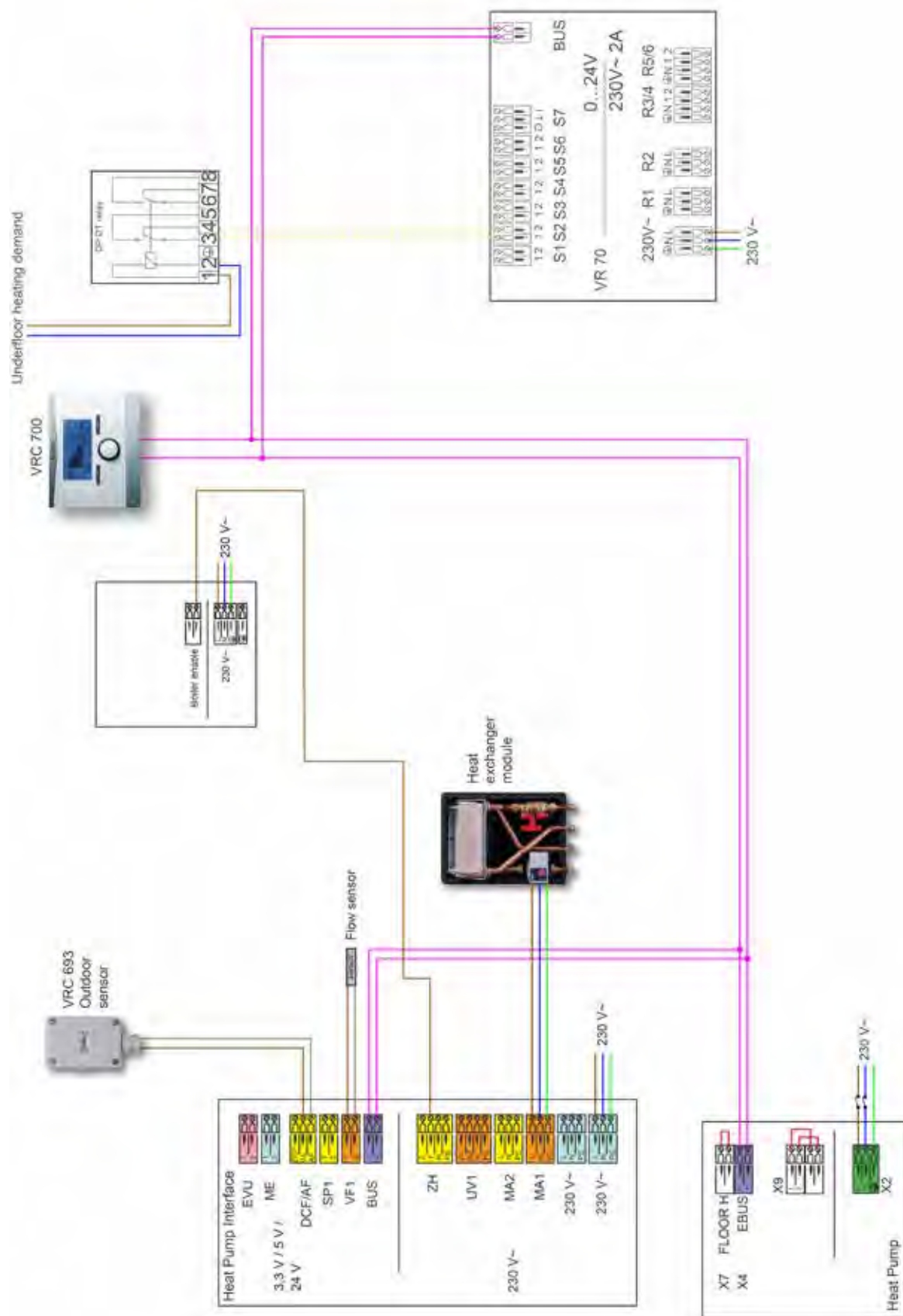


Hybrid, on/off third-party combi boiler, heat exchanger module, decoupler, U/F - schematic

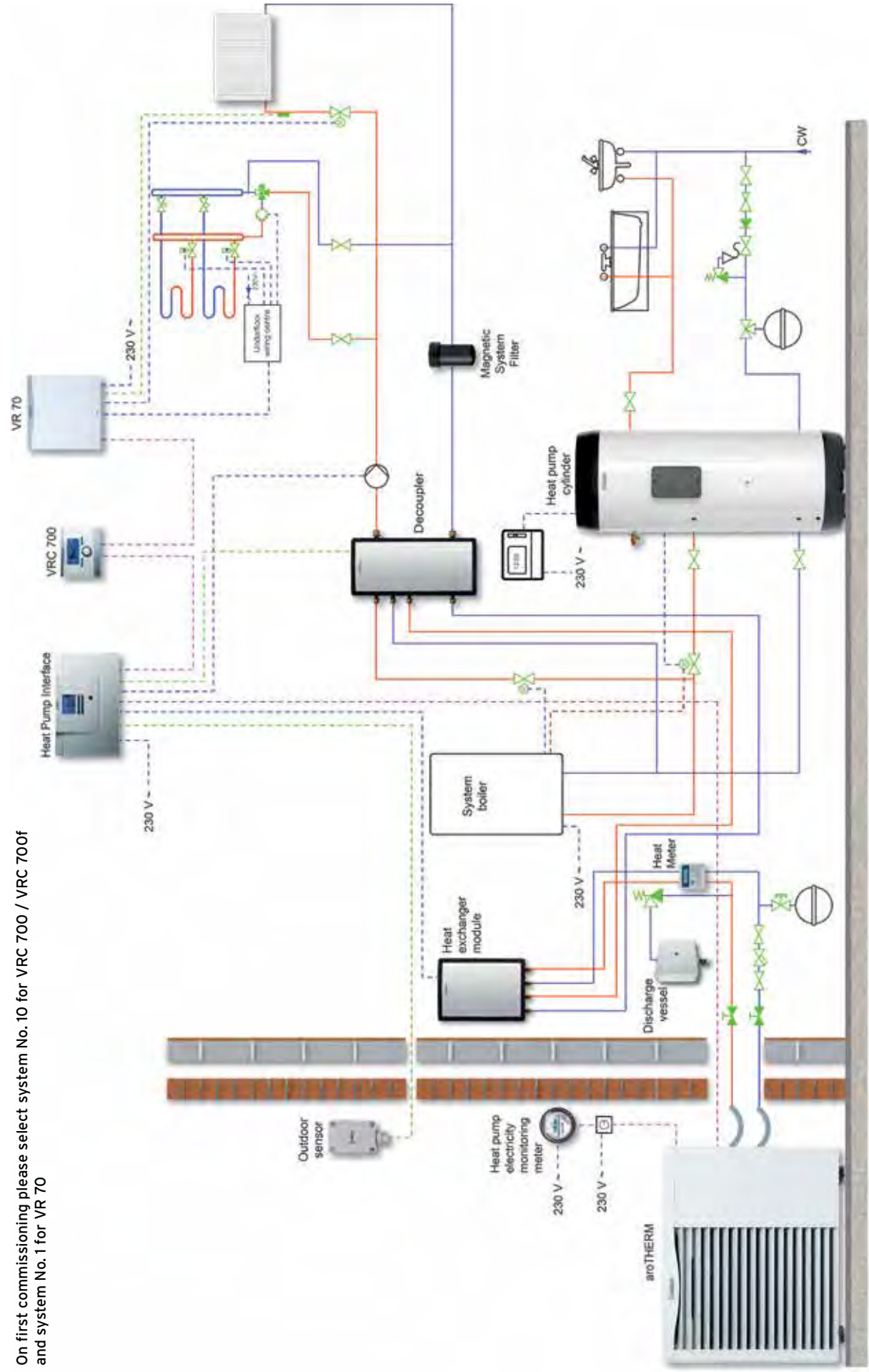
On first commissioning please select system No. 10 for VRC 700 / VRC 700f and system No. 1 for VR 70



Hybrid, on/off third-party combi boiler, heat exchanger module, decoupler, U/F - wiring



On first commissioning please select system No. 10 for VRC 700 / VRC 700f and system No. 1 for VR 70





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Our dedicated team of specialist engineers support any manufacturer in the UK.

Backed by an expertly trained call centre, they're available to assist you whenever you're installing renewable products. We also have an in-house systems design team, who are on hand to answer any queries you may have during the design stage.

Straightforward delivery

We will deliver your renewable system anywhere you want, be it directly to site or to the local trade counter where you place your order. On-site deliveries will arrive with the correct lifting equipment to ensure that the goods can be unloaded safely – it couldn't be easier.

Assisted commissioning*

Service engineers will visit the installation and guide you through the first system commissioning, helping with the final stages and the handover of the installation as needed.

* A charge may apply for this service.

Spares

Our UK stockists hold extensive supplies of our heat pump ranges and the majority of Vaillant spare parts so long lead times can be avoided, removing the need for extensive notice on orders. Should you have any difficulty in sourcing a particular item, then our customer service representatives are only a phone call away and will be happy to help you locate the spares you require.

Customer service support contact details

Sales Support

Vaillant products are available to purchase from reputable heating merchants in the UK. To find contact details for your nearest Vaillant representative:

Telephone: 0345 602 0262

Renewable Service

For renewable products aftersales servicing and commissioning:

Telephone: 0330 100 3540

Email: aftersales@vaillant.co.uk

Technical Enquiries

For technical assistance:

Telephone: 0330 100 3540

Email: aftersales@vaillant.co.uk

Training Enquiries

Vaillant provide many different training courses, for more information:

Telephone: 0345 601 8885

Email: training.enquiries.uk@vaillant-group.com

General enquiries

If you have a general enquiry our friendly reception staff will happily point you in the right direction:

Telephone: 0345 602 2922

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