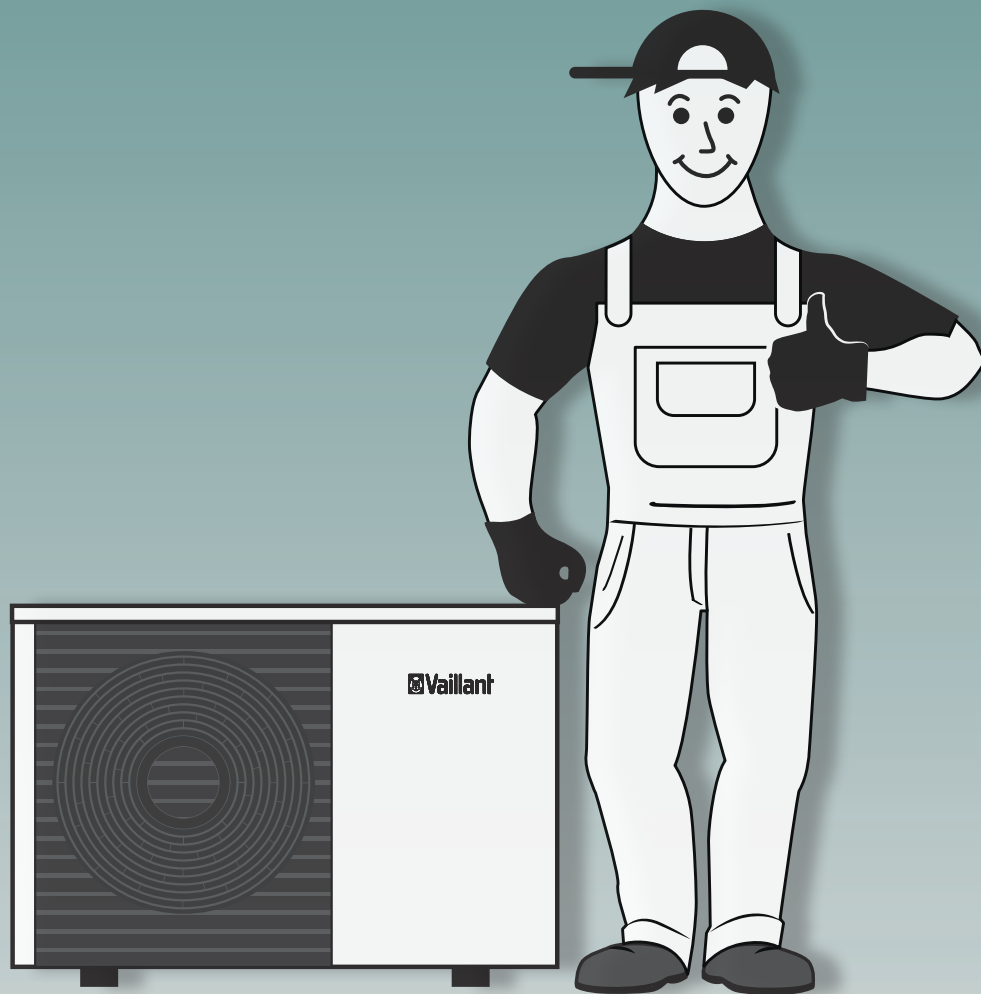




aroTHERM plus



Important Note:

This quick guide shall support the professional installer in planning, installing and commissioning the appliance. It shall on no account replace or modify the installation, operating and maintenance instructions delivered with the appliance which always have to be observed.

The non-observance of the instructions delivered with the appliance can lead to malfunctions of the appliance and can result in death or serious injuries. Some characteristics of the appliance shown in this quick guide may vary from those of the most current series version. Vaillant GmbH shall not be held liable for any damages or injuries arising directly or indirectly from the use of this quick guide.

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Hint:

Follow the symbol to dedicated documents for more detailed information.



Hint:

Scan the QR code to download the digital version of the Quick Guide.





Get started quickly!

Your perfect installation with aroTHERM plus step-by-step:

Plan your Work ...	
» Select the ideal aroTHERM plus to fit your needs: performance, dimensions, sound	4
» Find the perfect space for your installation: quiet, vented, safe	7
» Select the perfect domestic hot water and buffer storage	12
» Dimension the expansion vessel	13
» Select your system scheme (system components, hydraulics and wiring)	14
» Decide on installation type to select required accessories (ground, wall, roof)	15
» Tick your planning checklist <input checked="" type="checkbox"/>	18
... work your Plan: Install the aroTHERM plus system	
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» Proceed to the power supply and eBUS connection	21
» Connect the uniTOWER or MEH 97	23
» Tick your installation checklist <input checked="" type="checkbox"/>	27
... and start your System	
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Find technical data...	
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» uniTOWER plus, hydraulic module VWZ MEH 97/6	31

Check the product installation manuals for further information.

We are here to help you!

Don't hesitate to contact us for further support:

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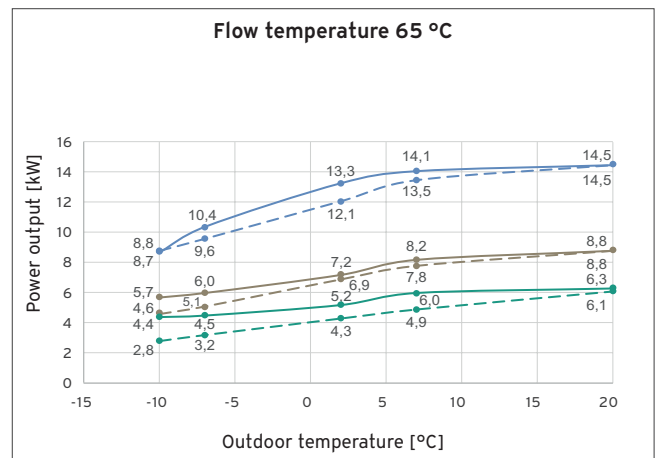
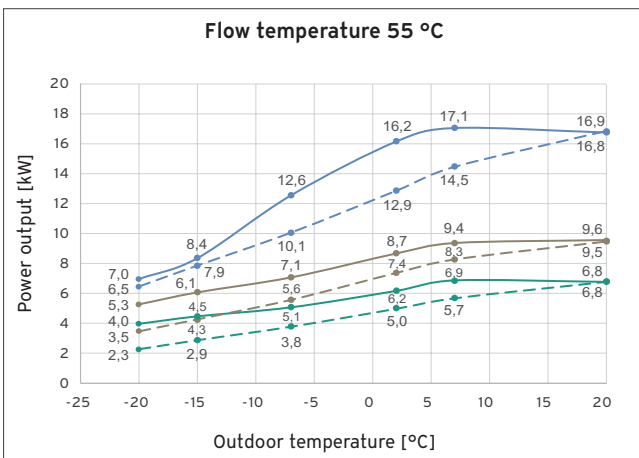
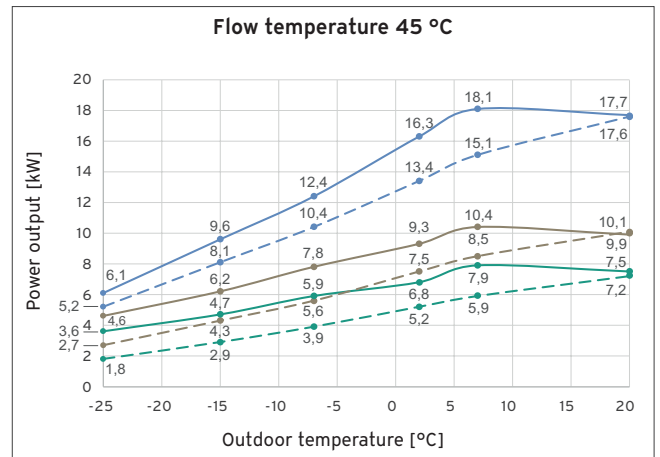
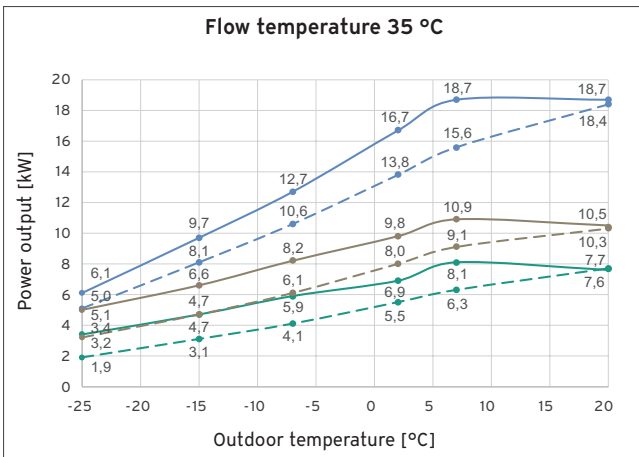


Plan your work ...

Select the ideal aroTHERM plus to fit your needs

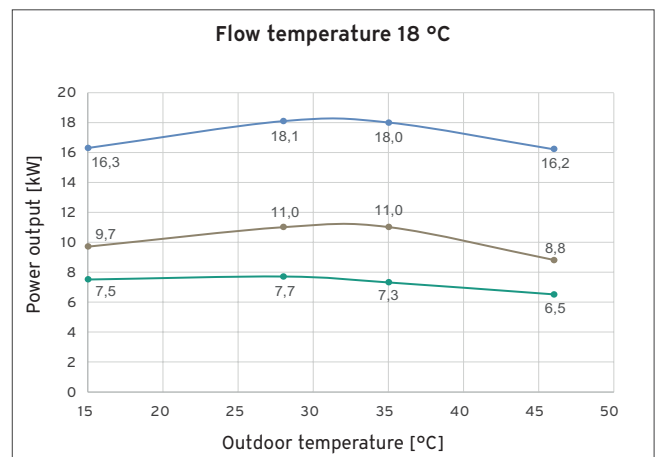
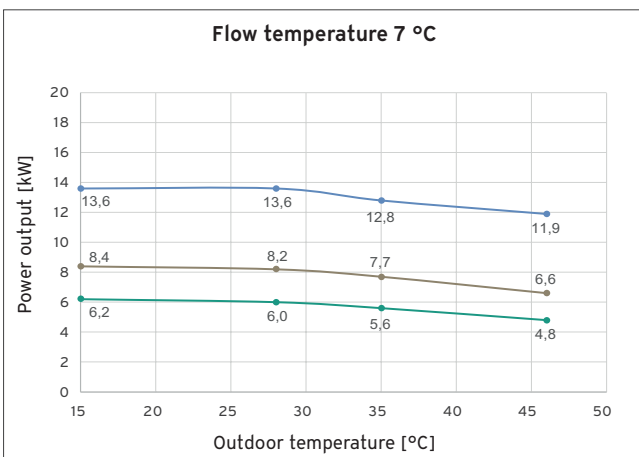
Heating

—●— VWL 45/6 S3
 —●— VWL 65/6 S3
 —●— VWL 125/6 (230 V/400 V) S3
—●— VWL 55/6 S3
 —●— VWL 85/6 S3
 —●— VWL 155/6 (230 V/400 V) S3

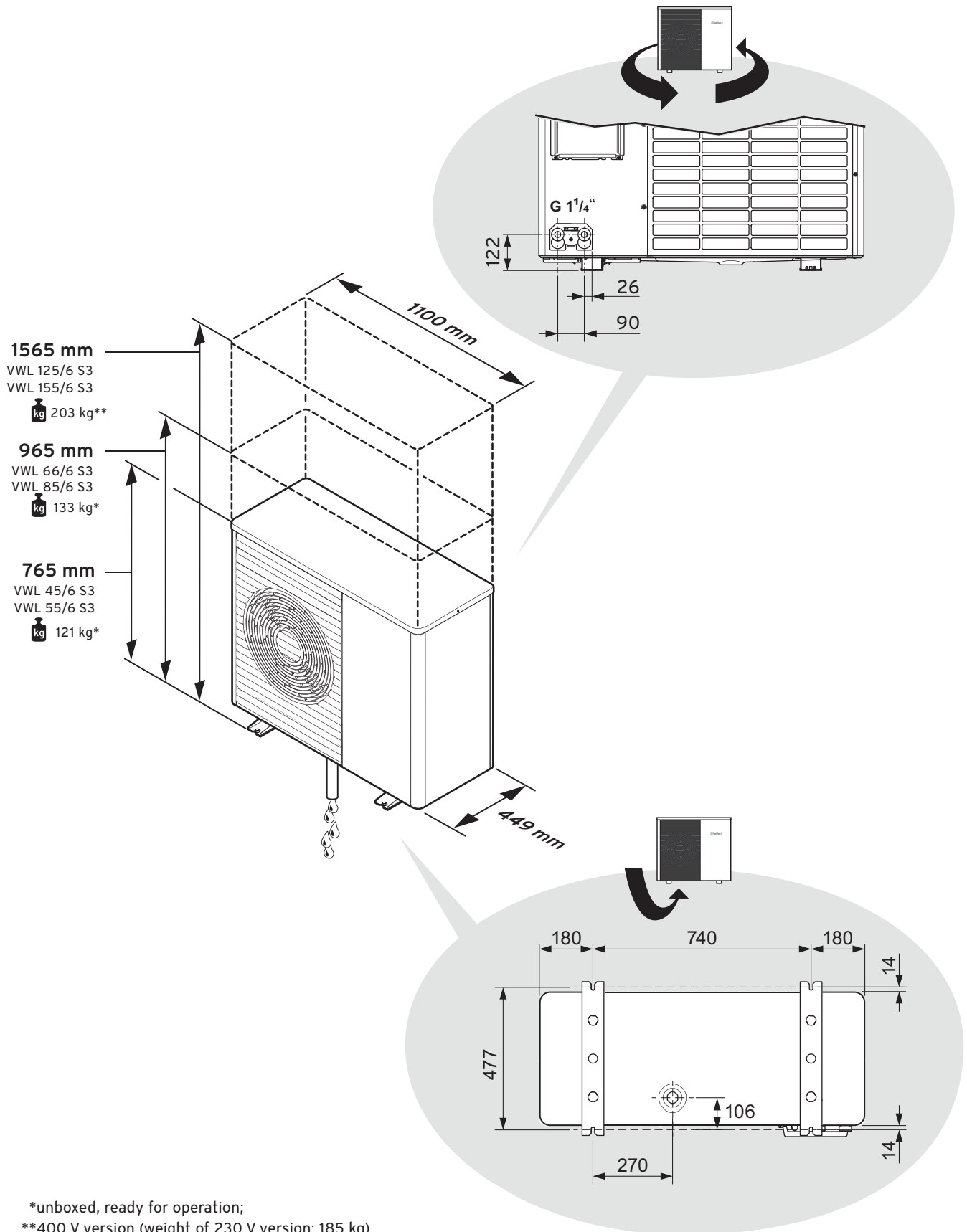


Cooling

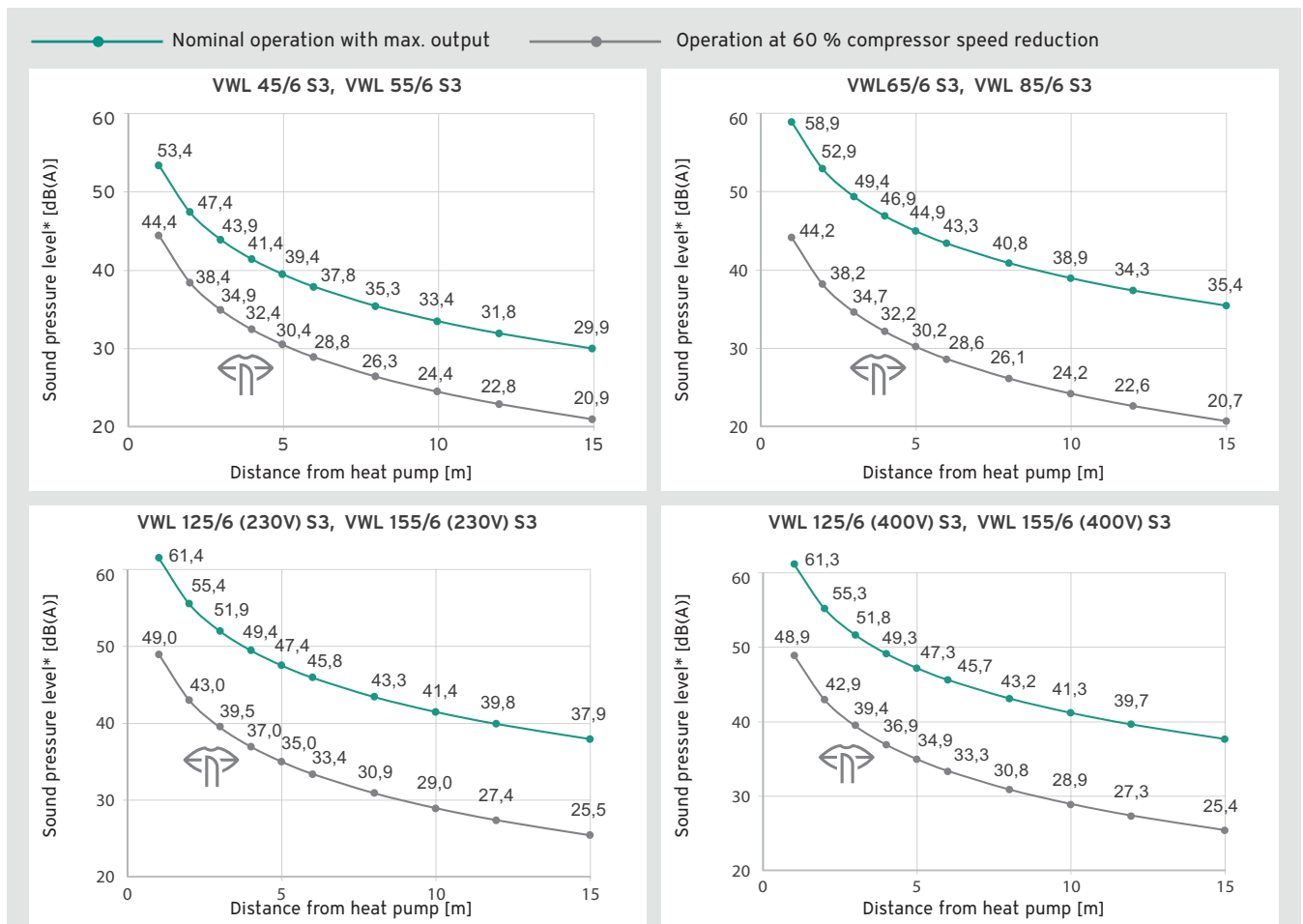
—●— VWL 45/6 S3
 —●— VWL 65/6 S3
 —●— VWL 125/6 (230 V/400 V) S3
—●— VWL 55/6 S3
 —●— VWL 85/6 S3
 —●— VWL 155/6 (230 V/400 V) S3



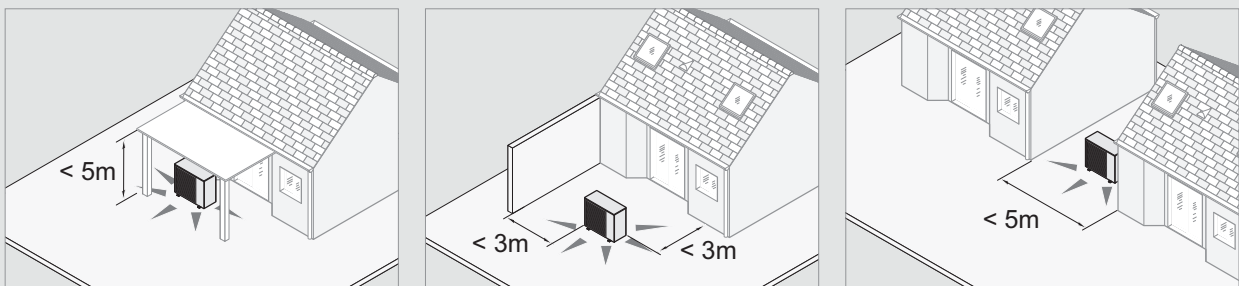
Product dimensions



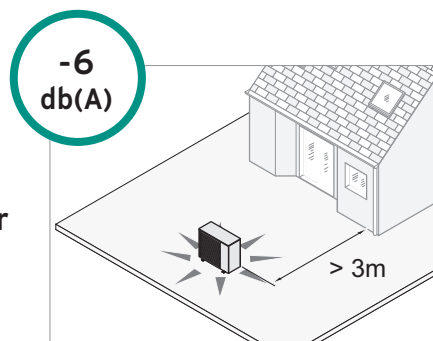
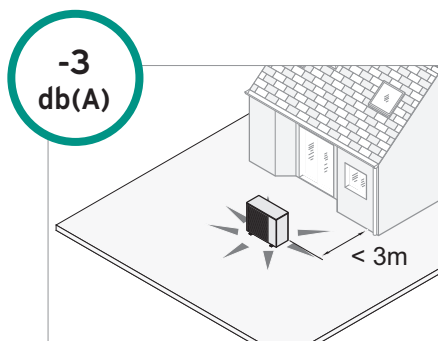
Sound pressure level



* Sound pressure level applicable to the following installation situations:



... this sound pressure level is **reduced** as follows:



or



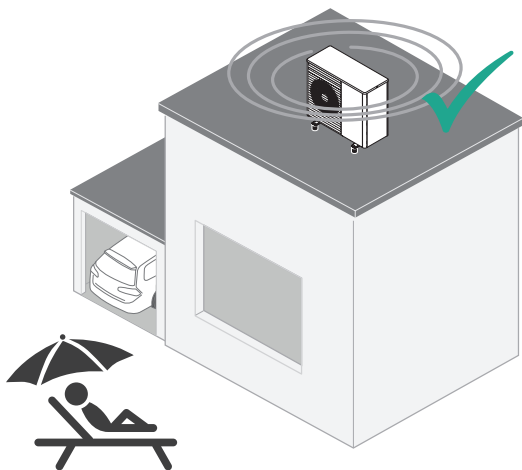
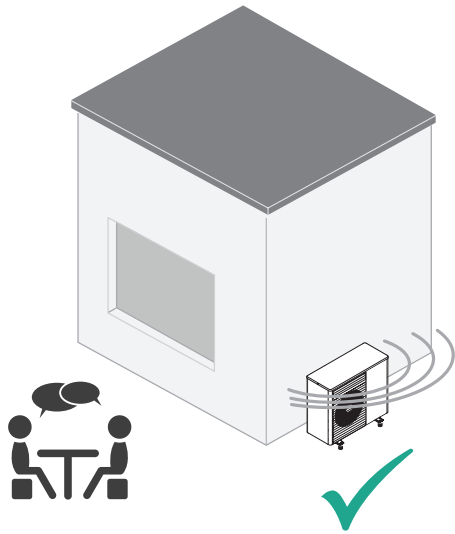
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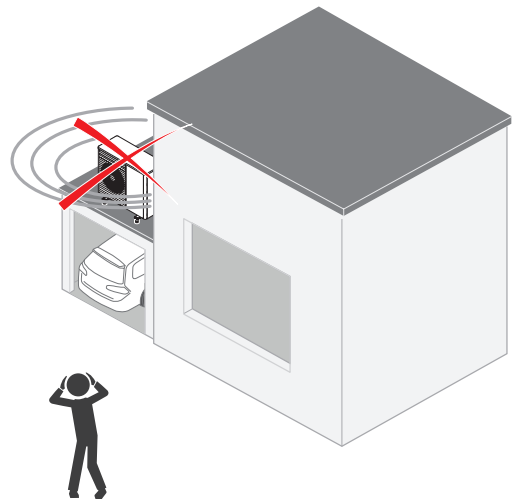
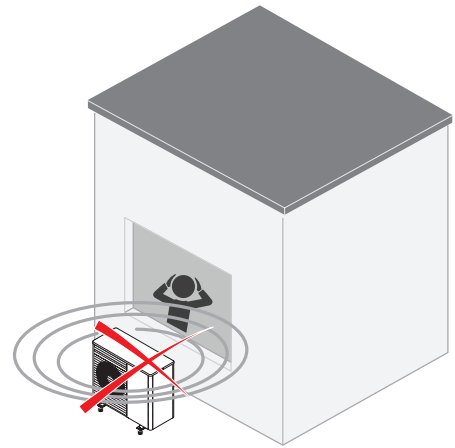
Find the perfect space for your installation

A quiet space for your installation

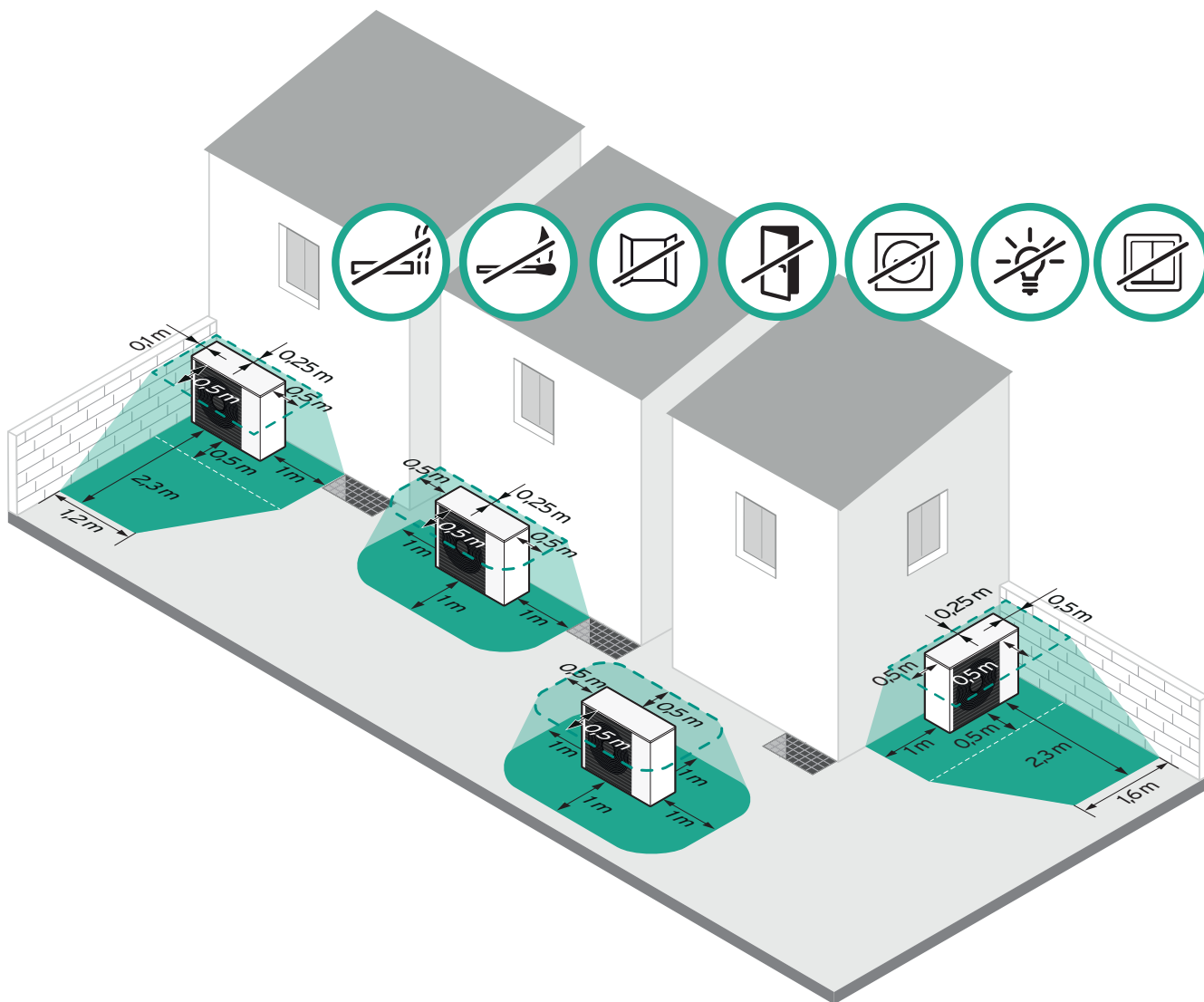
Do! 



Don't 



A safe space for carefree operation

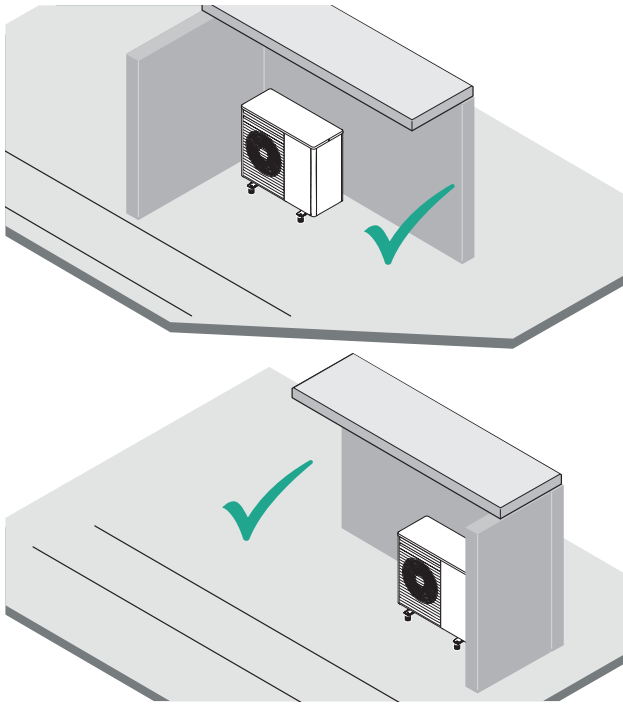


0020297937

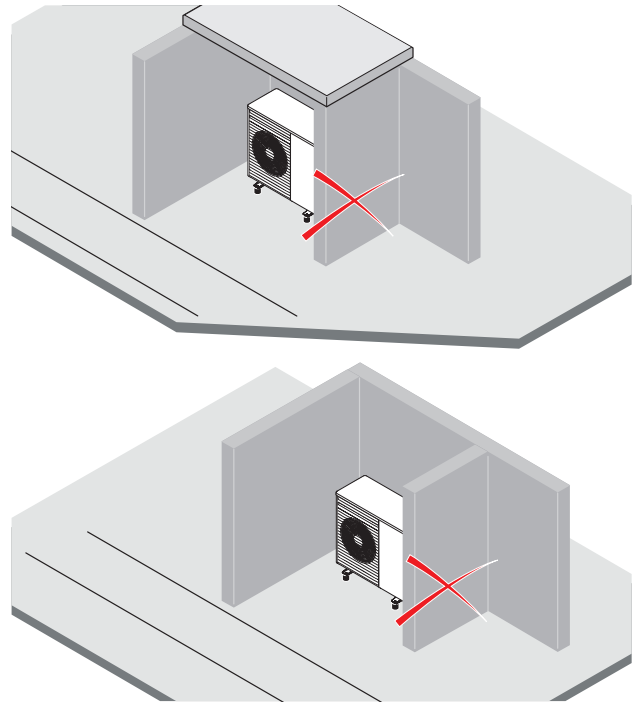


A vented space for perfect operation

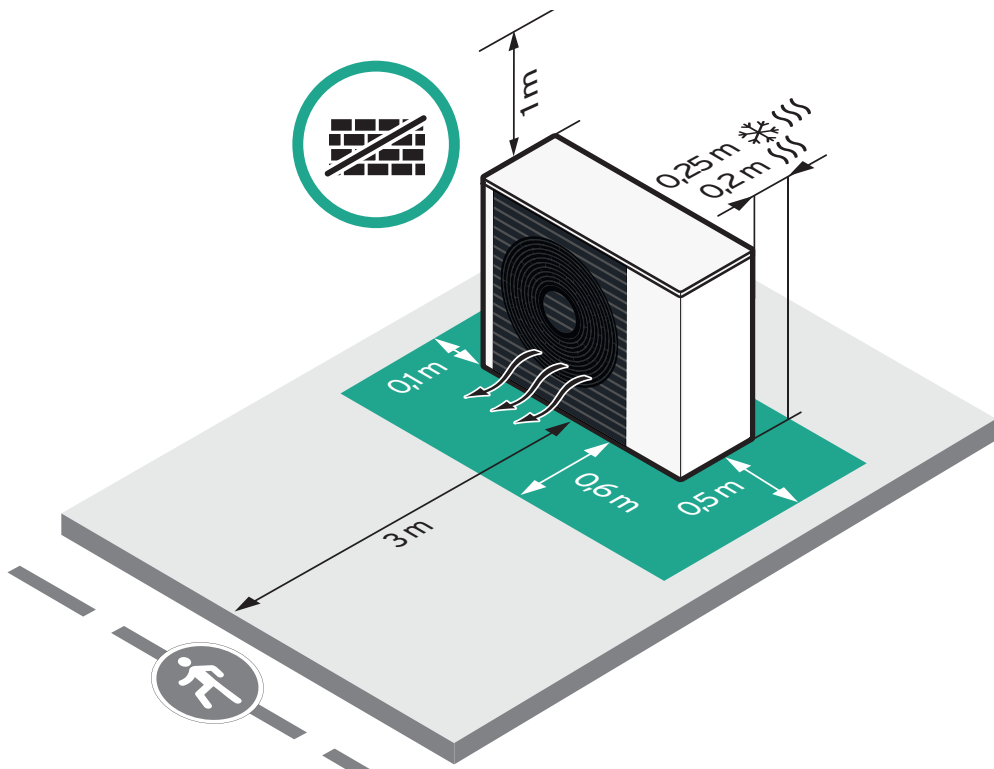
Do! 



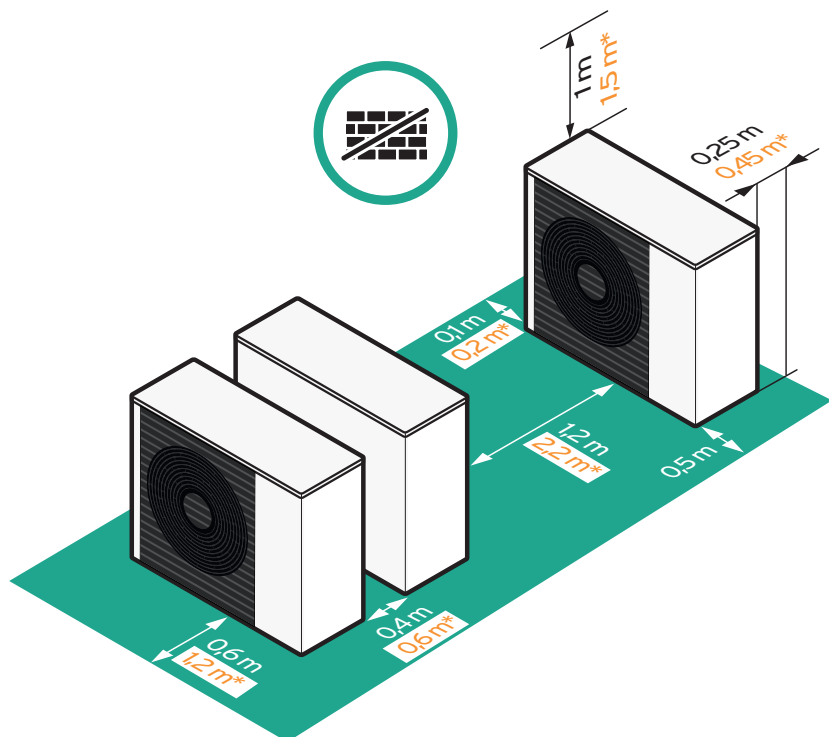
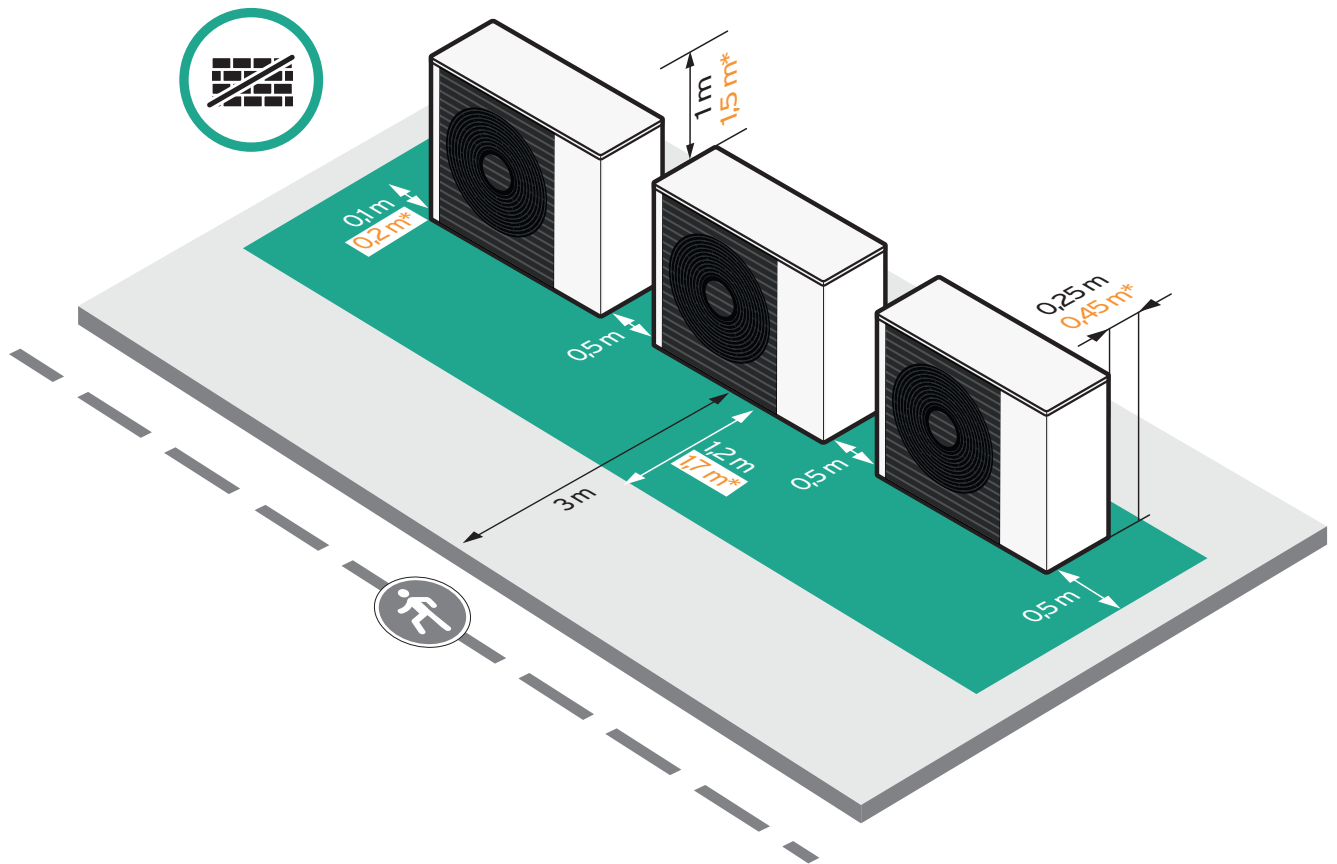
Don't 



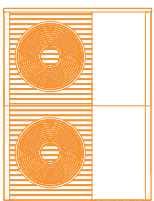
Minimum distances for flawless operation



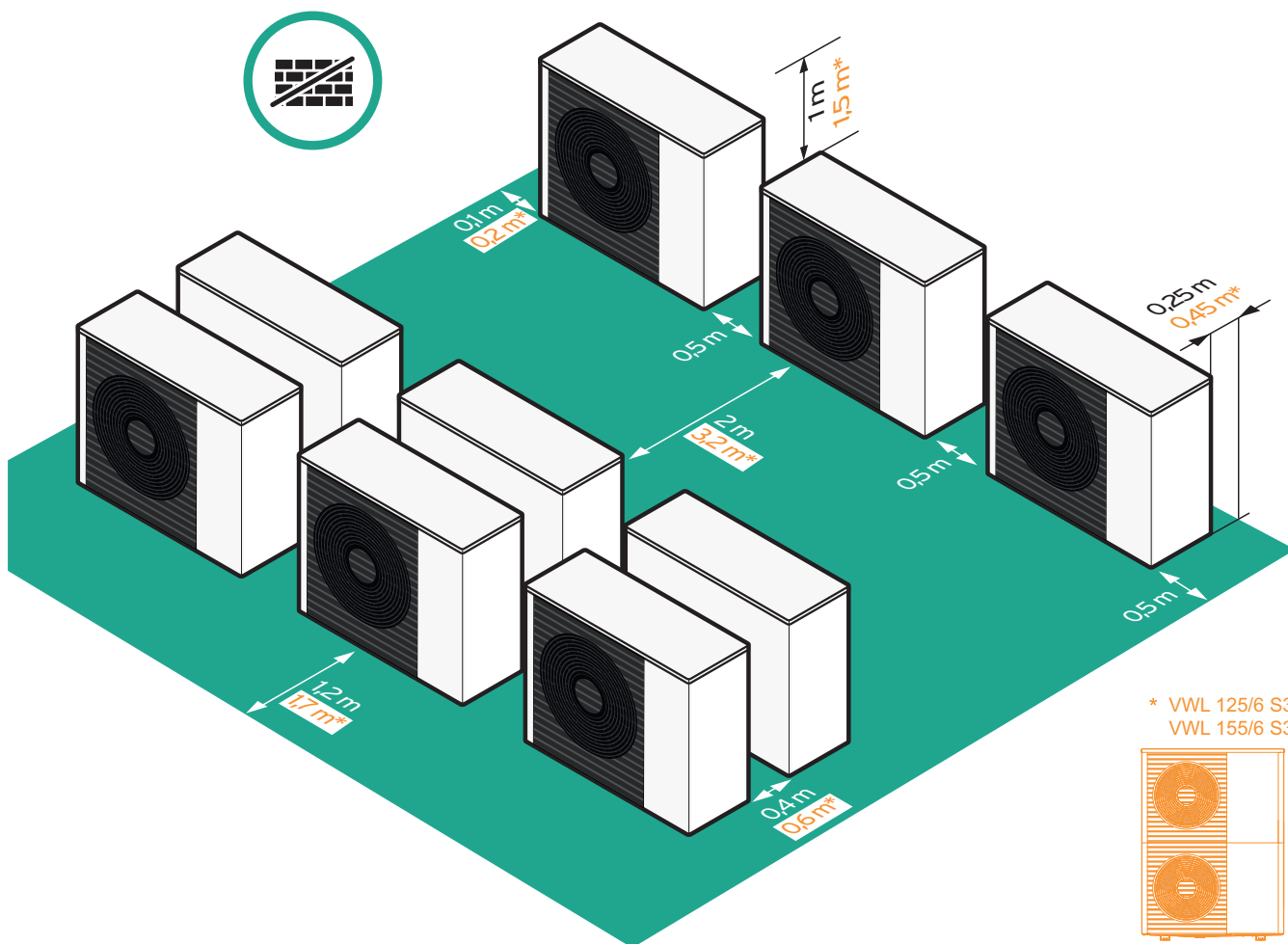
Install several aroTHERM plus in one spot: quiet, vented, safe!



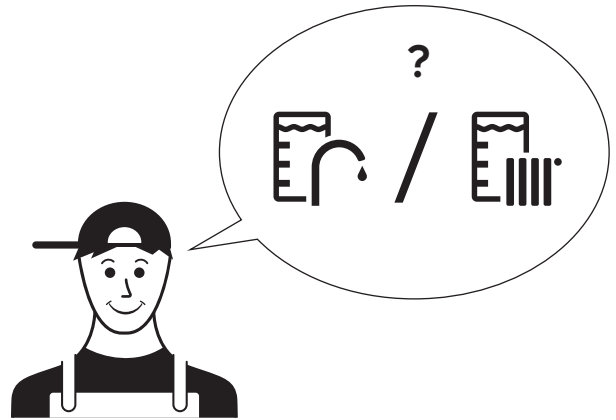
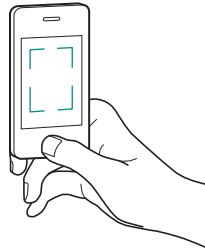
* VWL 125/6 S3
 VWL 155/6 S3



Install several aroTHERM plus in one spot: quiet, vented, safe!



Select the perfect domestic hot water and buffer storage



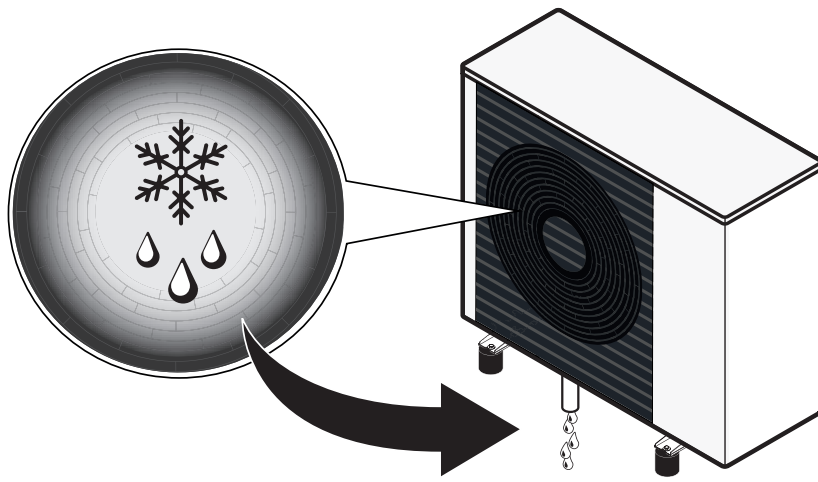
Scan the QR code to quickly calculate the required buffer volume

Storage heated up by heat pump only					... heat pump and solar heat	
Storage	uniTOWER QW 190	uniSTOR VIH RW 200	uniSTOR VIH RW 300	uniSTOR VIH RW 400	uniSTOR VIH RW 500	uniSTOR VIH SW 400	uniSTOR VIH SW 500
Capacity heated up by the heat pump	190 l	200 l	300 l	400 l	500 l	200 l	250 l
Tap capacity with 38 °C at 55 °C inside the storage	305 l	321 l	482 l	643 l	804 l	321 l	402 l
aroTHERM plus	Time to reheat storage to 55°C without backup heater, once temperature falls below 46°C at 7°C outdoor temperature						
VWL 45/6 S3	28 min	29 min	44 min	58 min*	73 min*	29 min	37 min
VWL 55/6 S3	28 min	29 min	44 min	58 min *	73 min *	29 min	37 min
VWL 65/6 S3	18 min	19 min	28 min	37 min*	46 min	28 min	35 min
VWL 85/6 S3	18 min	19 min	28 min	37 min*	46 min	28 min	35 min
VWL 125/6 S3	16 min	16 min	23 min	31 min	39 min	16 min	20 min
VWL 155/6 S3	16 min	16 min	23 min	31 min	39 min	16 min	20 min

* Limited comfort -> We recommend to select the aroTHERM plus next in size.

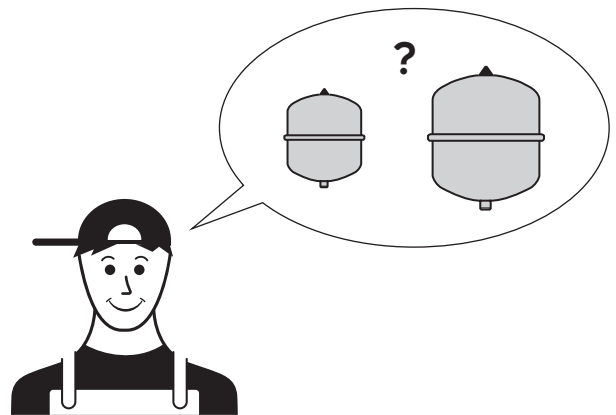
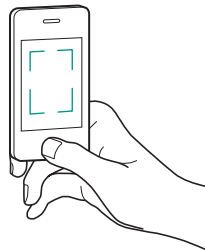
Minimum required buffer/ water volume for deicing

aroTHERM plus	With active backup heater, system temperature > 25°C	Without active backup heater, system temperature > 15°C
VWL 45/6 S3, VWL 55/6 S3	15 l	40 l
VWL 65/6 S3, VWL 85/6 S3	20 l	55 l
VWL 125/6 S3, VWL 155/6 S3	45 l	150 l



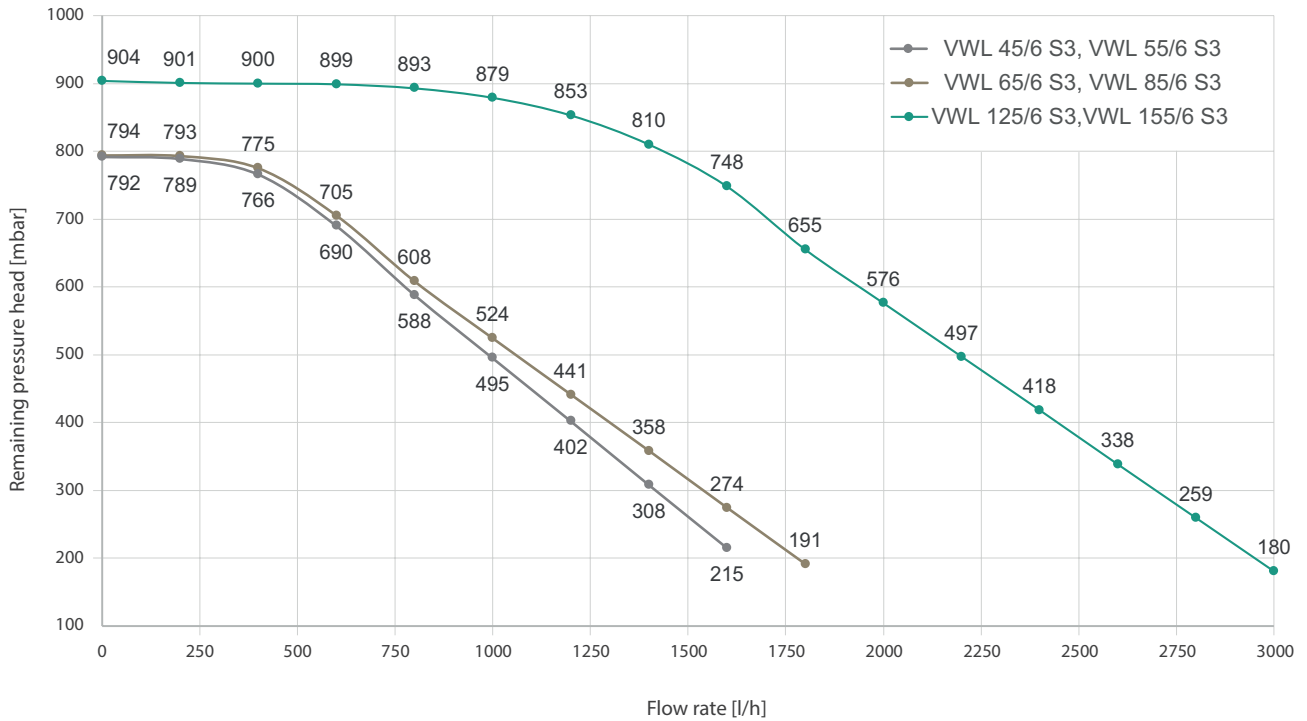
Dimension the expansion vessel

Scan the QR code to easily dimension your expansion vessel



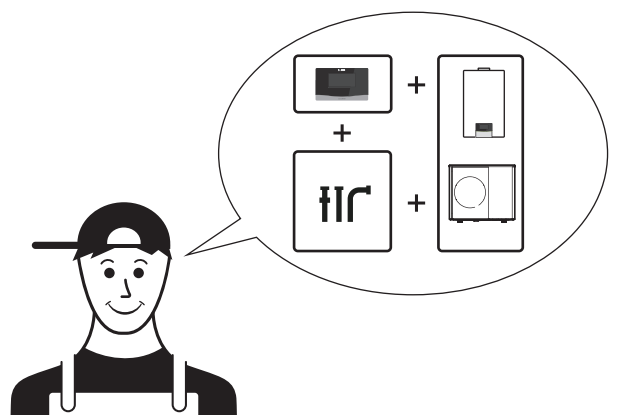
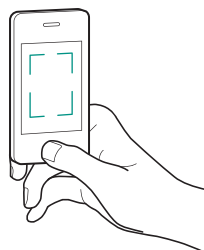
Scan or Click QR-Code for dimensions
of the expansion vessel

Remaining pressure head of heating circuit pump



Select your system scheme (system components, hydraulics and wiring)

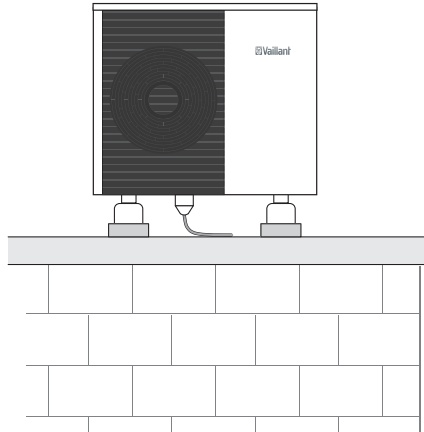
Scan the QR code to select a system scheme from our broad data base



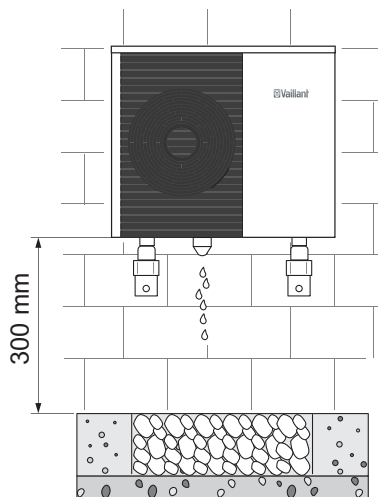
Scan or Click QR-Code to select system scheme

Decide on the installation type

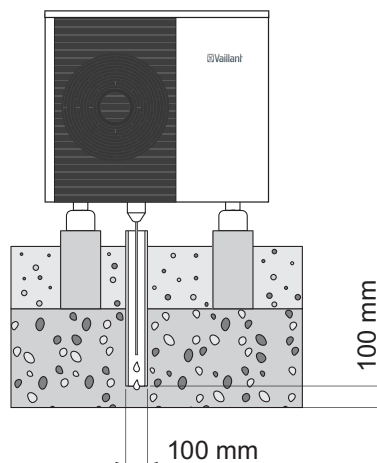
On the roof ...



On the wall ...

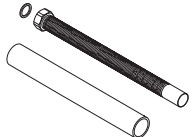



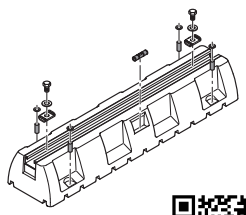

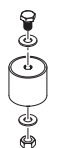

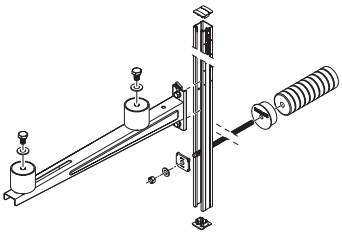

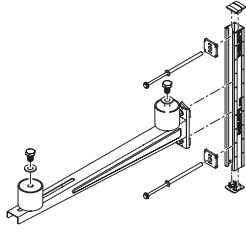



On the ground ...



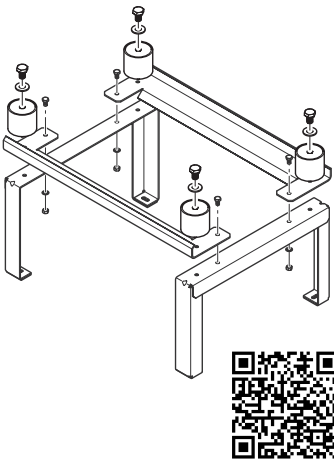
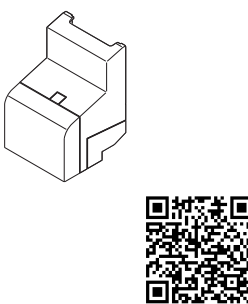
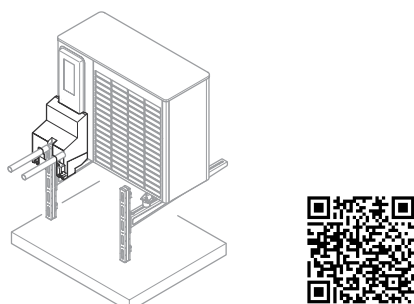
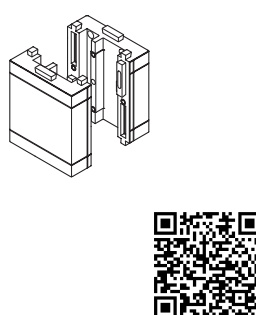
Select mounting accessories



Connection	Installation option		
	Ground/Roof	Wall	
Plain	<p>Connection kit plain tube Art.-No.: 0010027976</p>  		
Nut	<p>Connection kit floating nut Art.-No.: 0010027989</p>  		
Mounting			
Simple	<p>Big rubber feet Art.-No.: 0020250226</p>  		
	<p>Small rubber feet Art.-No.: 0020252091</p>  	<p>Wall brackets for insulated walls Art.-No.: 0020250224</p>  	<p>Wall brackets for non-insulated walls Art.-No.: 0020250225</p>  

Click on images for installation instructions



	Installation option	
	Ground/Roof	Wall
Mounting		
Snow	<p>Snow spacer Art.-No.: 0010027984</p> 	
Pipe insulation		
Simple	<p>Floor EPP insulation kit Art.-No.: 0010027971</p> 	<p>Wall EPP insulation kit Art.-No.: 0010027974</p> 
Snow	<p>Floor EPP extension kit Art.-No.: 0010027972</p> 	

Check your plan!

Tick your planning checklist 

- Heat pump depending on the heating and cooling load calculation chosen
- Installation site planned (quiet, vented, safe)
- System temperatures chosen (underfloor, radiator, fan coil)
- Domestic hot water and buffer tank chosen
- Expansion vessel determined
- System scheme selected
- System components incl. accessories for installation ordered



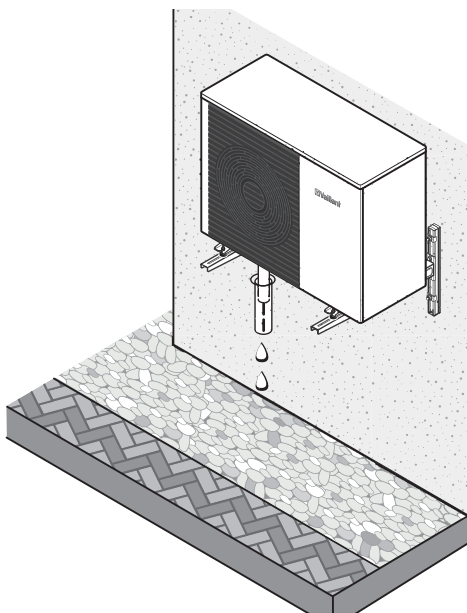
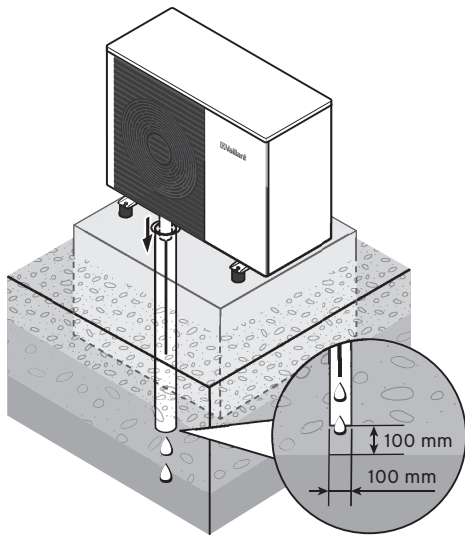
... work your Plan

Install the aroTHERM plus system.

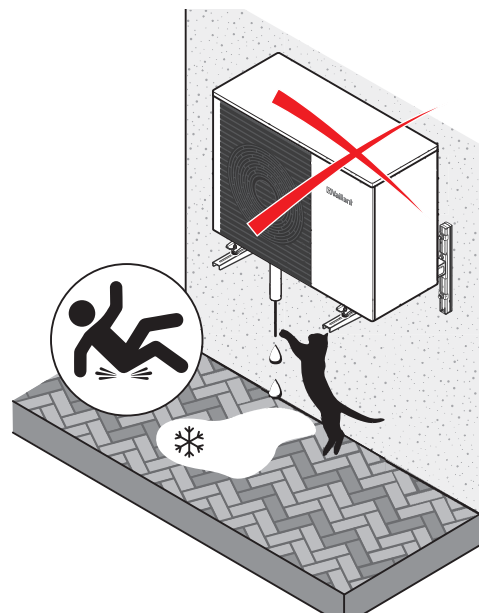
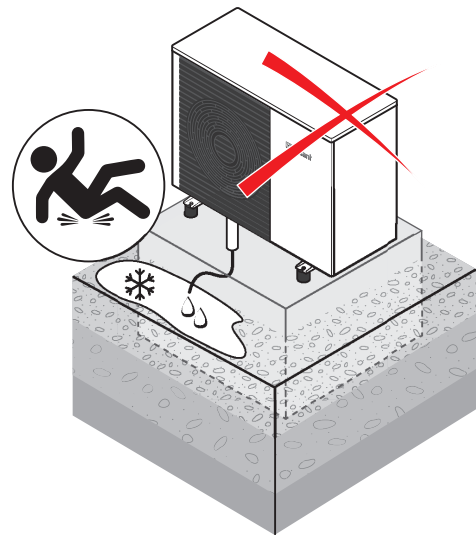
Start with the hydraulic installation

Realize the condensate drain

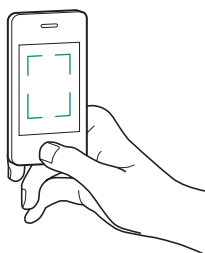
Do! 



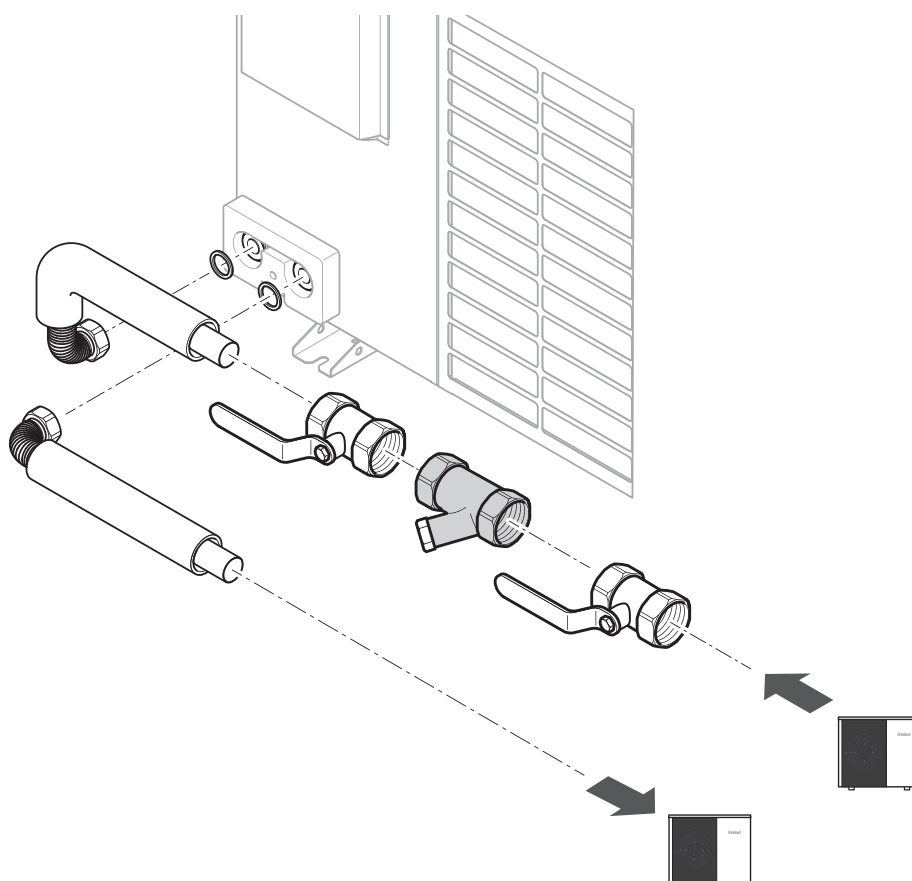
Don't 



Hydraulic connection



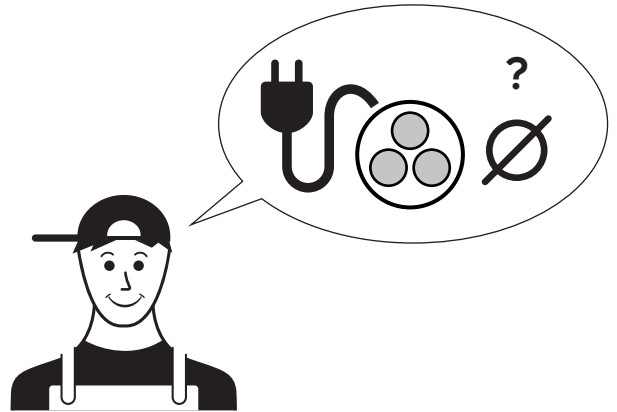
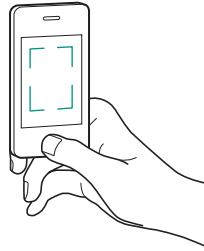
Scan or Click QR-Code for installation video



Proceed to the power supply and eBUS connection

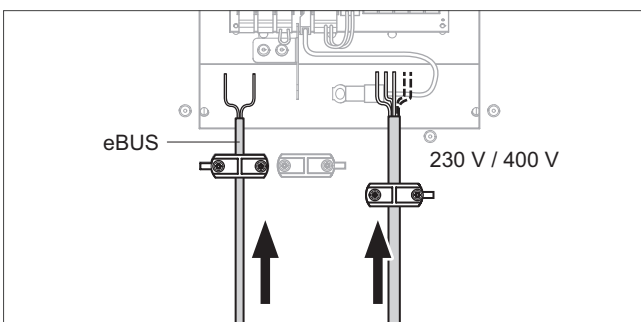
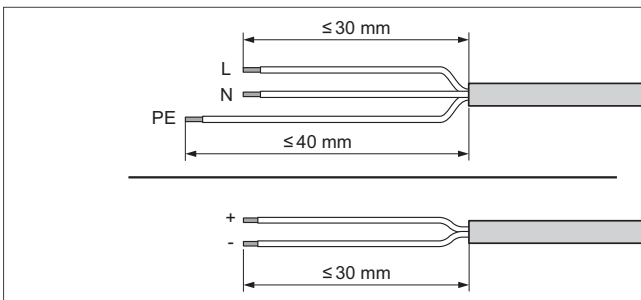
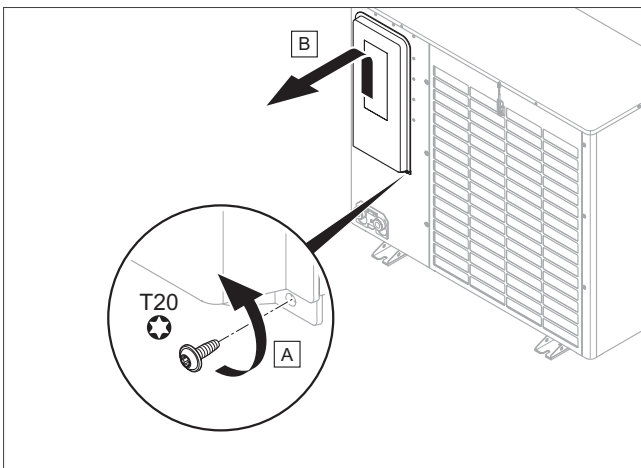
Calculate the cable cross section

Scan the QR-Code to easily calculate the required cable cross section for the wiring

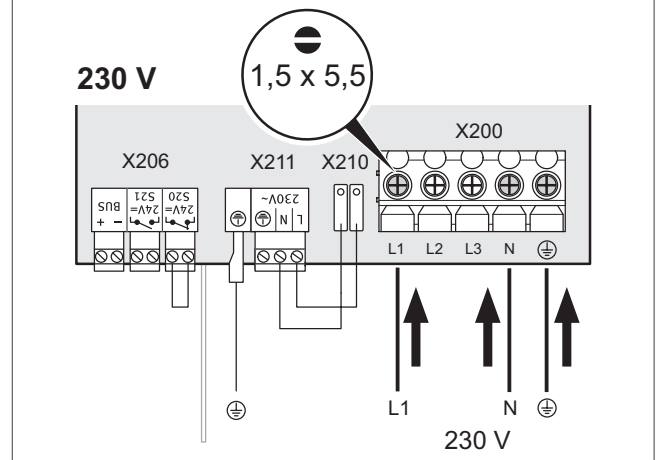
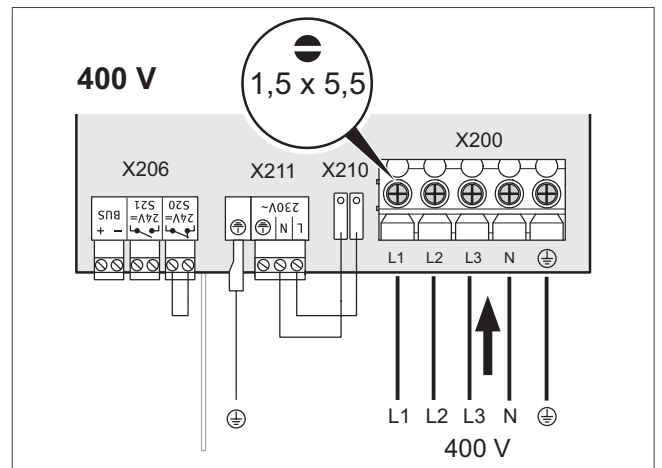


Scan or Click QR-Code for calculating the cable cross section

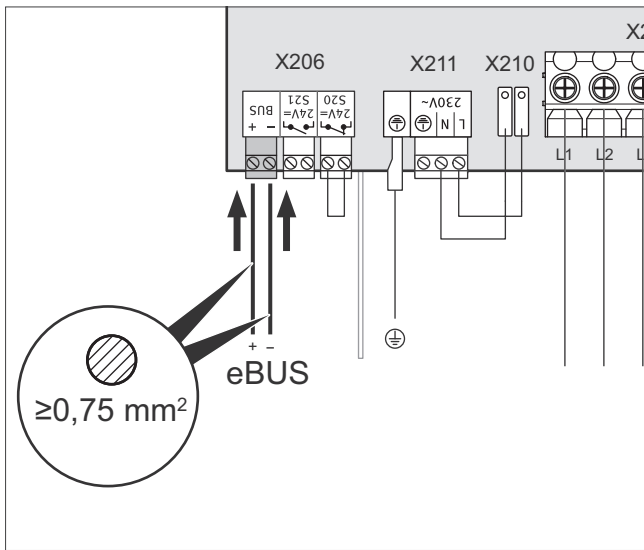
Preparation



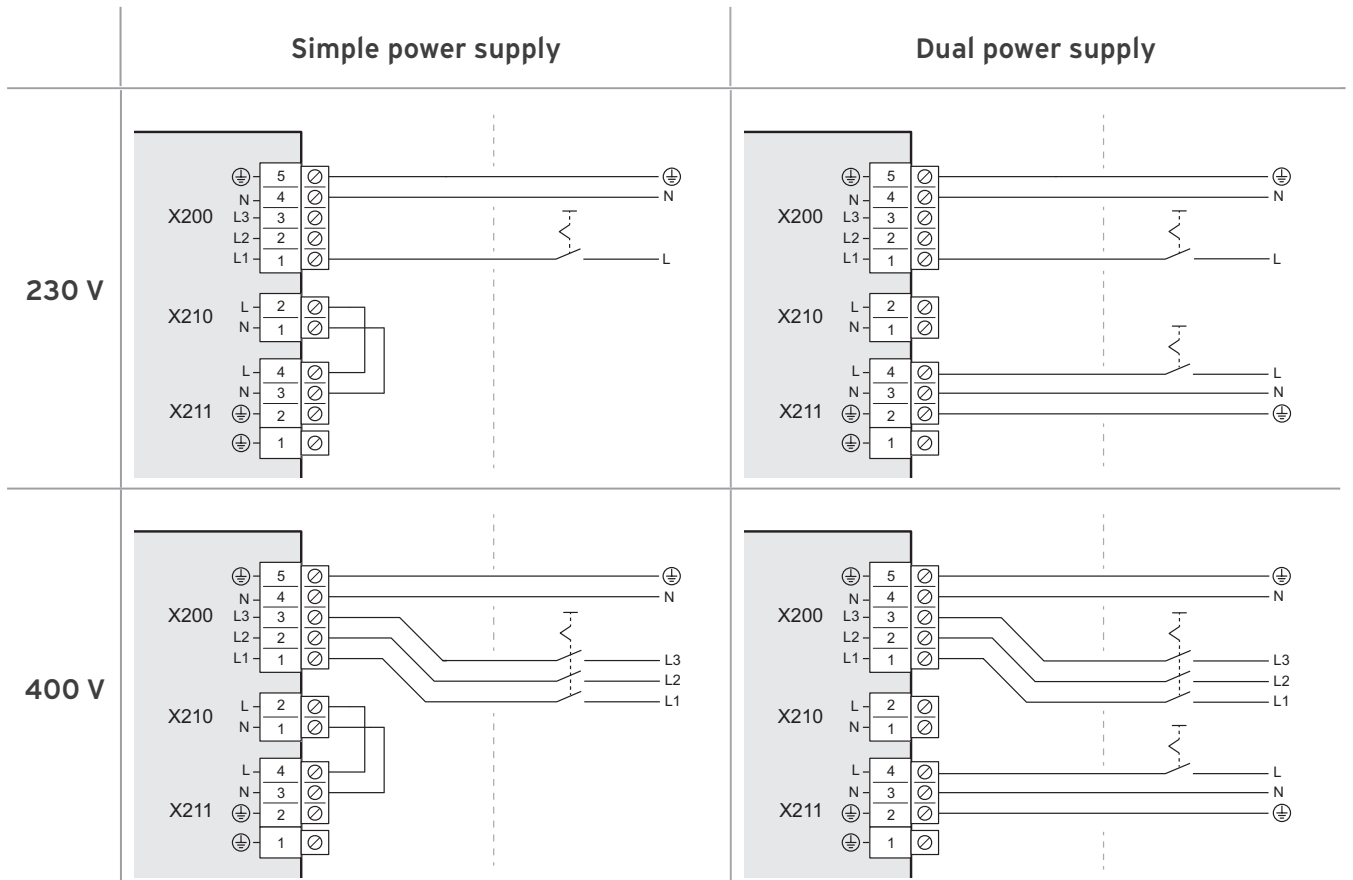
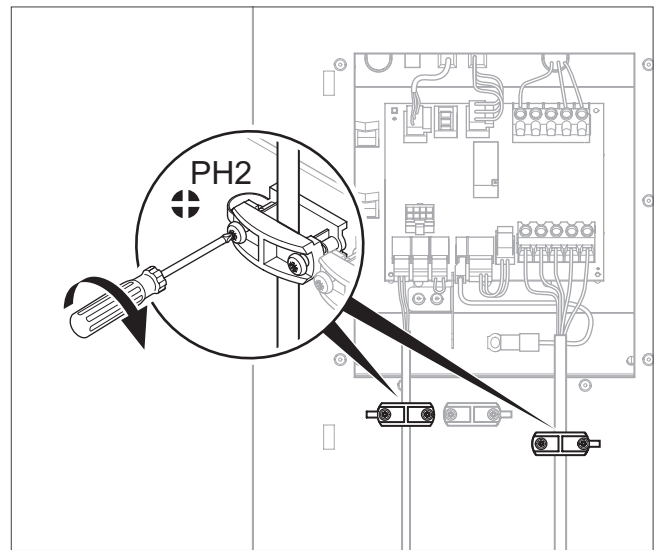
Power supply connection (230 V / 400 V)



eBUS connection

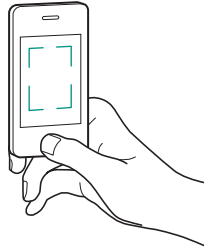


Fasten cable strain reliefs

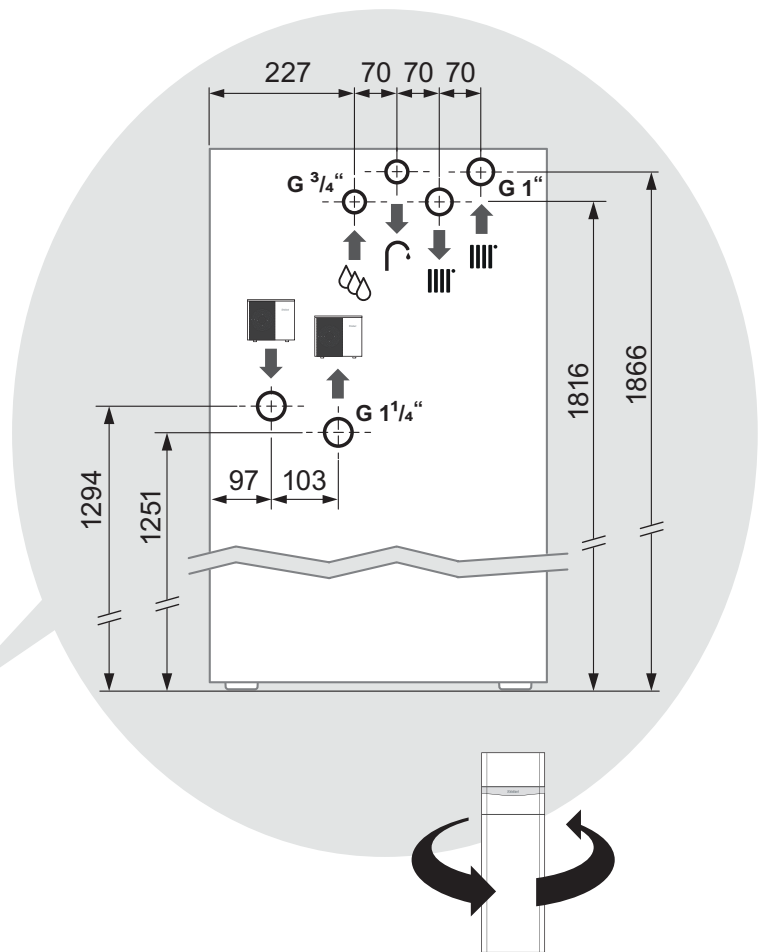
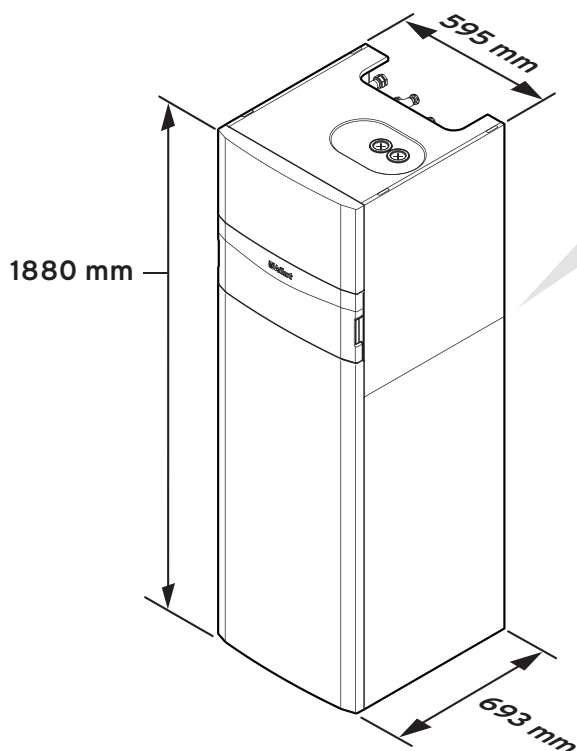


Connect the uniTOWER or MEH 97

Install the uniTOWER



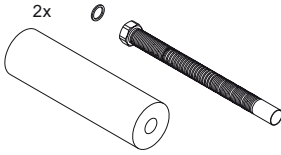

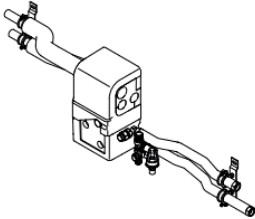

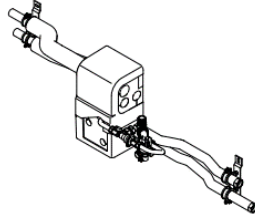

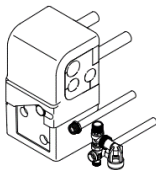

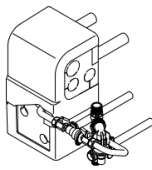

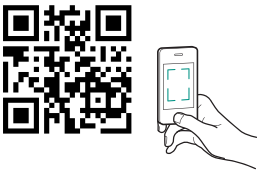

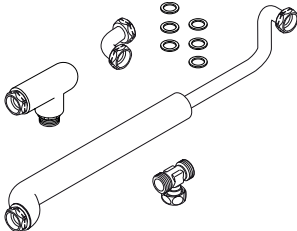

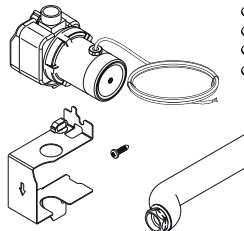



Scan or Click QR-Code for installation video



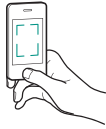
Select hydraulic accessories for the uniTOWER



Connection ...	to heat pump	
 <p>Scan or Click QR-Code for installation video</p> 	<p>uniTOWER connection kit (HP circuit) Art.-No.: 0010027979</p>  	
Connection ...	to heating circuit	to heating circuit with filling
<p>On-wall</p>	<p>uniTOWER connection kit, on-wall Art.-No.: 0020250219</p>  	<p>uniTOWER connection kit, on-wall with filling Art.-No.: 0020250221</p>  
<p>In-wall</p>	<p>uniTOWER connection kit, in-wall Art.-No.: 0020250220</p>  	<p>uniTOWER connection kit, in-wall with filling Art.-No.: 0020250222</p>  
Circulation ...	without pump	with integrated pump
 <p>Scan or Click QR-Code for installation video</p> 	<p>Recirculation pipe set Art.-No.: 0020170502</p>  	<p>Recirculation pump Art.-No.: 0020170503</p>  

Select hydraulic accessories for the uniTOWER (Continuation)

System separation

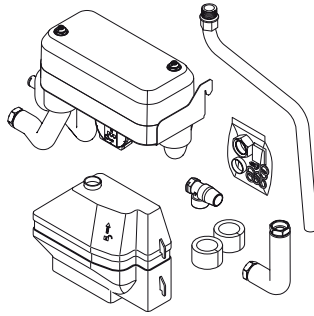


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installation video



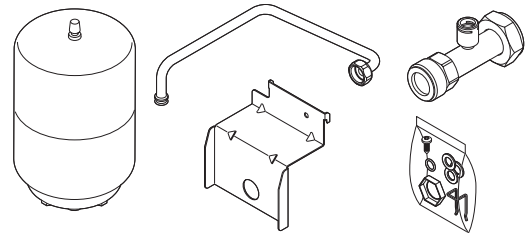
uniTOWER decoupling module

Art.-No.: 0010027973
0010027982

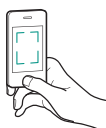


Brine expansion vessel

Art.-No.: 0020218627



Additional system components

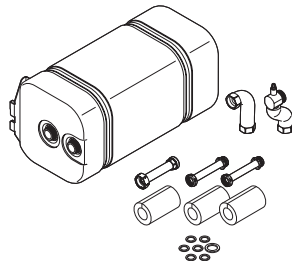


Scan or Click
QR-Code for
installation video



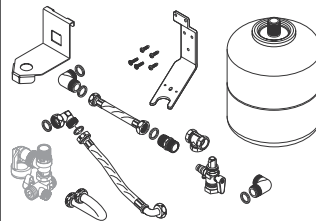
18l Buffer tank for uniTOWER

Art.-No.: 0020269273



Expansion vessel, 8l (domestic hot water)

Art.-No.: 0020180979

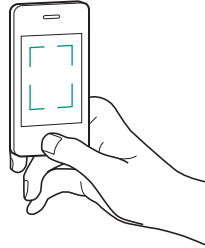


Set bypass valve

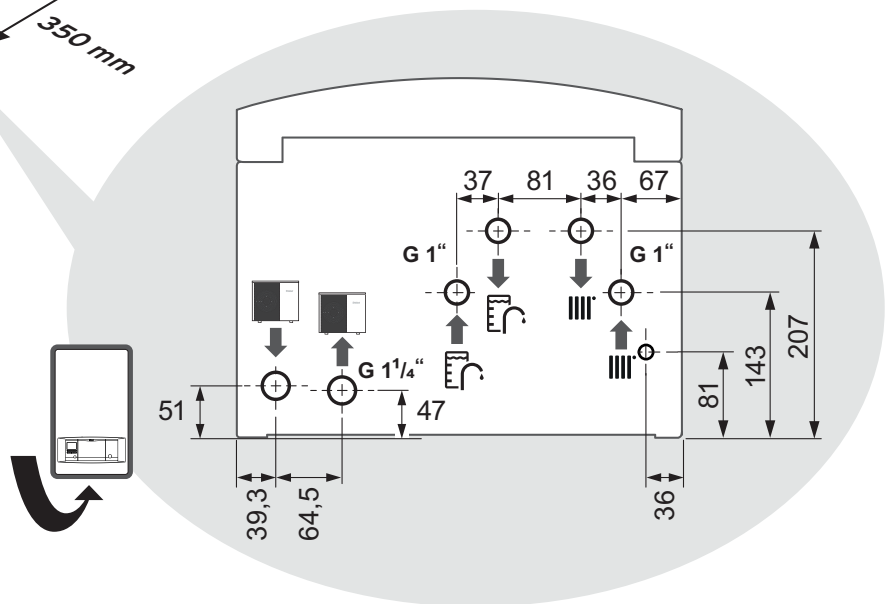
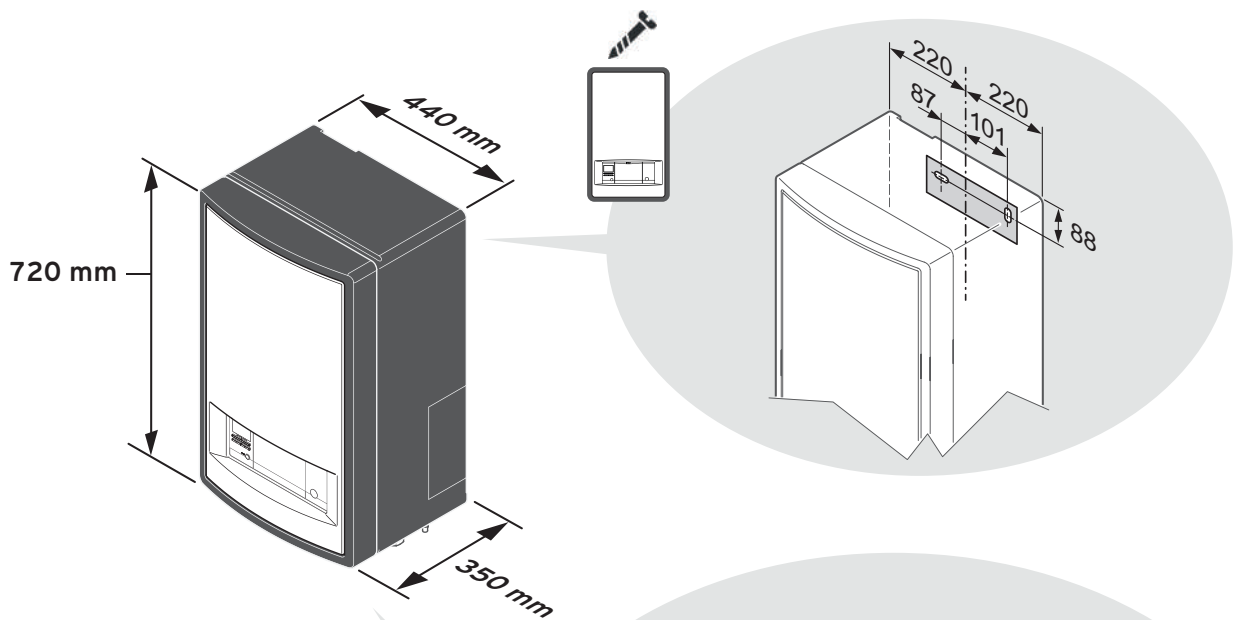
Art.-No.: 0020059561



Install the MEH 97



Scan or Click QR-Code for installation video



Check your installation!

Tick your installation checklist 

- Heat pump positioned according to type of installation (ground, wall, roof)
- Dirt filter installed in the return flow
- Safety valve installed
- Expansion vessel installed and connected
- Manometer installed
- All valves installed in system
- Hydraulic connected and tight (pressure test performed)
- Wiring connection done
- Heating system vented
- Optional: Warranty extension/ maintenance and service contract signed

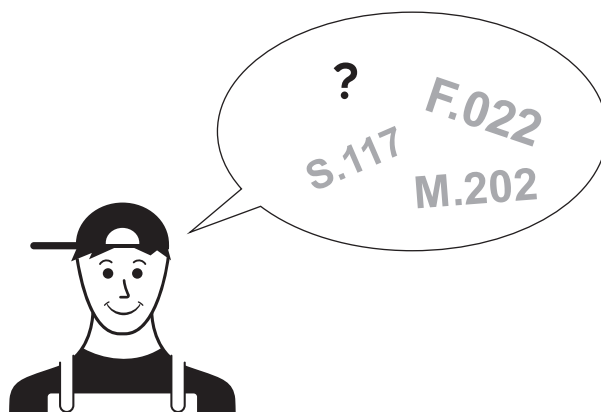
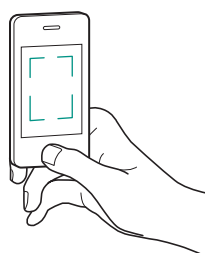
... and start your System

Scan the QR code to easily set up the system ...



Just in case ...

Find remedies to error, status and maintenance codes



Scan or Click QR-Code to find remedies

Technical Data - aroTHERM plus

aroTHERM plus	VWL 45/6 A S3	VWL 55/6 A S3	VWL 65/6 A S3	VWL 85/6 A S3	VWL 125/6 A S3	VWL 125/6 A S3 400V	VWL 155/6 A S3	VWL 155/6 A S3 400 V
Rated voltage (+10%/- 15%), 50 Hz	230 V 1~/N/PE				230 V 1~/N/PE	400 V 3~/N/PE	230 V 1~/N/PE	400 V 3~/N/PE
Rated power, maximum	3,40 kW		3,50 kW		5,40kW	8,00 kW	5,40 kW	8,00 kW
Rated power factor	1							
Rated current, maximum	14,3 A		15,0 A		23,3 A	15,0 A	23,2 A	15,0 A
In-rush current	14,3 A		15,0 A		23,3 A	15,0 A	23,2 A	15,0 A
IP rating	IP 15 B							
Heating circuit								
Heating water temperature (min/max)	20 ... 75 °C							
Maximum pipe length one-way between outdoor and indoor unit	20 m							
Maximum height difference between outdoor and indoor unit	15 m							
Operating pressure, minimum	0,05 MPa (0,50 bar)							
Operating pressure, maximum	0,30 MPa (3,00 bar)							
Volume flow, minimum	400 l/h		540 l/h		995 l/h			
Volume flow, maximum	860 l/h		1205 l/h		2065 l/h			
Water volume, in the outdoor unit	1,5 l		2,0 l		2,5 l			
Water volume, in the heating circuit, minimum	40 l		40 l		60 l			
Heating output / Cooling output								
A-7/W35	4,40 kW	4,90 kW	6,00 kW	6,50 kW	10,20kW	11,30 kW		
A2/W35	1,90 kW	1,90 kW	3,10 kW	3,10 kW	5,60 kW	5,70 kW		
A7/W35	4,10 kW	4,20 kW	5,10kW	7,80 kW	11,60 kW	14,30 kW		
A7/W45	3,10 kW	3,10 kW	4,20 kW	4,20 kW	8,10 kW	8,10 kW		
A7/W55	3,60 kW	4,80 kW	5,80 kW	7,60 kW	13,20 kW	14,20 kW		
A7/W65	4,50 kW	4,50 kW	6,30 kW	6,30 kW	11,40 kW	11,40 kW		
A35/W7 (cooling)	5,20 kW	5,20 kW	7,20 kW	7,20 kW	12,10 kW	12,00 kW		
A35/W18 (cooling)	4,50 kW	4,50 kW	6,40 kW	6,40 kW	10,90 kW	10,80 kW		
Coefficient of performance COP, EN 14511 (heating) / Energy efficiency ratio EER, EN 14511 (cooling)								
A-7/W35	2,9	2,4	3,0	2,5	2,8	2,4		
A2/W35	3,7	3,7	4,1	4,1	4,3	4,2		
A7/W35	4,6	4,4	4,7	4,4	4,7	4,3		
A7/W45	3,6	3,6	3,6	3,6	4,1	4,1		
A7/W55	2,8	2,8	2,9	2,9	2,9	2,8		
A7/W65	2,3	2,3	2,3	2,3	2,3	2,3		
A35/W7 (cooling)	2,6	2,6	2,7	2,7	2,8	2,8		
A35/W18 (cooling)	4,3	4,3	4,2	4,2	4,6	4,6		

Technical Data - aroTHERM plus

aroTHERM plus	VWL 45/6 A S3	VWL 55/6 A S3	VWL 65/6 A S3	VWL 85/6 A S3	VWL 125/6 A S3	VWL 125/6 A S3 400V	VWL 155/6 A S3	VWL 155/6 A S3 400 V
Power consumption, effective								
A-7/W35	1,38 kW	2,04 kW	2,00 kW	2,60 kW	3,64 kW		4,71 kW	
A2/W35	0,51 kW	0,51 kW	0,76 kW	0,76 kW	1,30 kW		1,36 kW	
A7/W35	0,89 kW	0,95 kW	1,09 kW	1,77 kW	2,47 kW		3,33 kW	
A7/W45	0,86 kW	0,86 kW	1,17 kW	1,17 kW	1,98 kW		1,98 kW	
A7/W55	1,29 kW	1,71 kW	2,00 kW	2,62 kW	4,55 kW		5,07 kW	
A7/W65	1,96 kW	1,96 kW	2,74 kW	2,74 kW	4,96 kW		4,96 kW	
A35/W7 (cooling)	2,00 kW	2,00 kW	2,67 kW	2,67 kW	4,32 kW		4,29 kW	
A35/W18 (cooling)	1,05 kW	1,05 kW	1,52 kW	1,52 kW	2,37 kW		2,35 kW	
Power consumption								
A-7/W35	6,80 A	9,30 A	9,40 A	11,60 A	16,40 A	6,10 A	20,90 A	7,60 A
A2/W35	2,60 A	2,60 A	3,70 A	3,70 A	6,20 A	2,90 A	6,70 A	2,70 A
A7/W35	4,20 A	4,50 A	5,20 A	8,00 A	11,20 A	4,40 A	15,10 A	5,60 A
A7/W45	4,00 A	4,00 A	5,40 A	5,40 A	9,40 A	3,60 A	9,40 A	3,60 A
A7/W55	6,30 A	7,70 A	9,40 A	11,70 A	20,10 A	7,30 A	22,50 A	8,10 A
A7/W65	9,00 A	9,00 A	12,20 A	12,20 A	22,20 A	7,90 A	22,20 A	7,90 A
A35/W7 (cooling)	9,10 A	9,10 A	11,90 A	11,90 A	10,20 A	4,00 A	19,20 A	7,00 A
A35/W18 (cooling)	4,90 A	4,90 A	7,00 A	7,00 A	10,90 A	4,20 A	10,90 A	4,20 A
Sound power (EN12102, EN ISO 9614-1)								
A7/W65	54 dB(A)	54 dB(A)	55 dB(A)	55 dB(A)	61 dB(A)	59 dB(A)	61 dB(A)	59 dB(A)
A7/W35	46 dB(A)	46 dB(A)	46 dB(A)	46 dB(A)	51 dB(A)	51 dB(A)	51 dB(A)	51 dB(A)
A35/W7 (cooling)	53 dB(A)	53 dB(A)	55 dB(A)	55 dB(A)	59 dB(A)	59 dB(A)	59 dB(A)	59 dB(A)

Technical Data - uniTOWER

	VIH QW 190/6 E
Rated voltage 230 V (+10%/- 15%), 50 Hz	230 V 1~/N/PE
Rated voltage 400 V (+10%/- 15%), 50 Hz	400 V 3~/N/PE
Rated power, maximum	8,6 kW
Rated current, maximum , 230 V	23,5 A
Rated current, maximum , 400 V	13,6 A
IP rating	IP 10B
Heating circuit	
Max. heating mode flow temperature with compressor	75 °C
Water content	16 l
Operating pressure, minimum	0,05 MPa (0,50 bar)
Operating pressure, maximum	0,30 Mpa (3,00 bar)
Domesitc hot water circuit	
Water capacity hot water tank	185 l
Cylinder temperature by heat pump max.	70 °C

Technical Data - hydraulic module VWZ MEH 97/6

	VWZ MEH 97/6
Rated voltage 230 V (+10%/- 15%), 50 Hz	230 V 1~/N/PE
Rated voltage 400 V (+10%/- 15%), 50 Hz	400 V 3~/N/PE
Rated power, maximum	8,6 kW
Rated current, maximum , 230 V	23,5 A
Rated current, maximum , 400 V	13,6 A
IP rating	IP 10B
Heating circuit	
Max. heating mode flow temperature with compressor	75 °C
Water content	8 l
Operating pressure, minimum	0,05 MPa (0,50 bar)
Operating pressure, maximum	0,30 Mpa (3,00 bar)



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