



jaga
CLIMATE DESIGNERS

UNIT HEATER

MANUAL

CONTENT

- 1. AVS UNIT HEATER 3
 - 1.1. POSITIONING / MOUNTING 4
 - 1.2. HYDRONIC CONNECTION 6
 - 1.3. DIMENSIONS IN INCHES..... 7
- 2. INSTALLATION 8
 - 2.1. SET A 8
 - 2.2. SET B 9
 - 2.3. FIXING ON METAL CONSTRUCTION 10
- 3. CONTROL 10
 - 3.1. 0 - 10V CONNECTION JAGA EC THERMOSTAT 10
 - 3.2. SPEED CONTROL WITH POTENTIOMETER 10
 - 3.3. SPEED CONTROL WITH POTENTIOMETER AND THERMOSTAT 11
 - 3.4. 0..10V INPUT FROM BUILDING MANAGEMENT SYSTEM 11
- 4. DISCONNECT SWITCH..... 12
- 5. OPTIONAL MODULATING AVS® VERSION 13
 - 5.1. DISCONNECT SWITCH AND MODULATING MOTOR 14
- 6. WARRANTY CONDITIONS..... 15

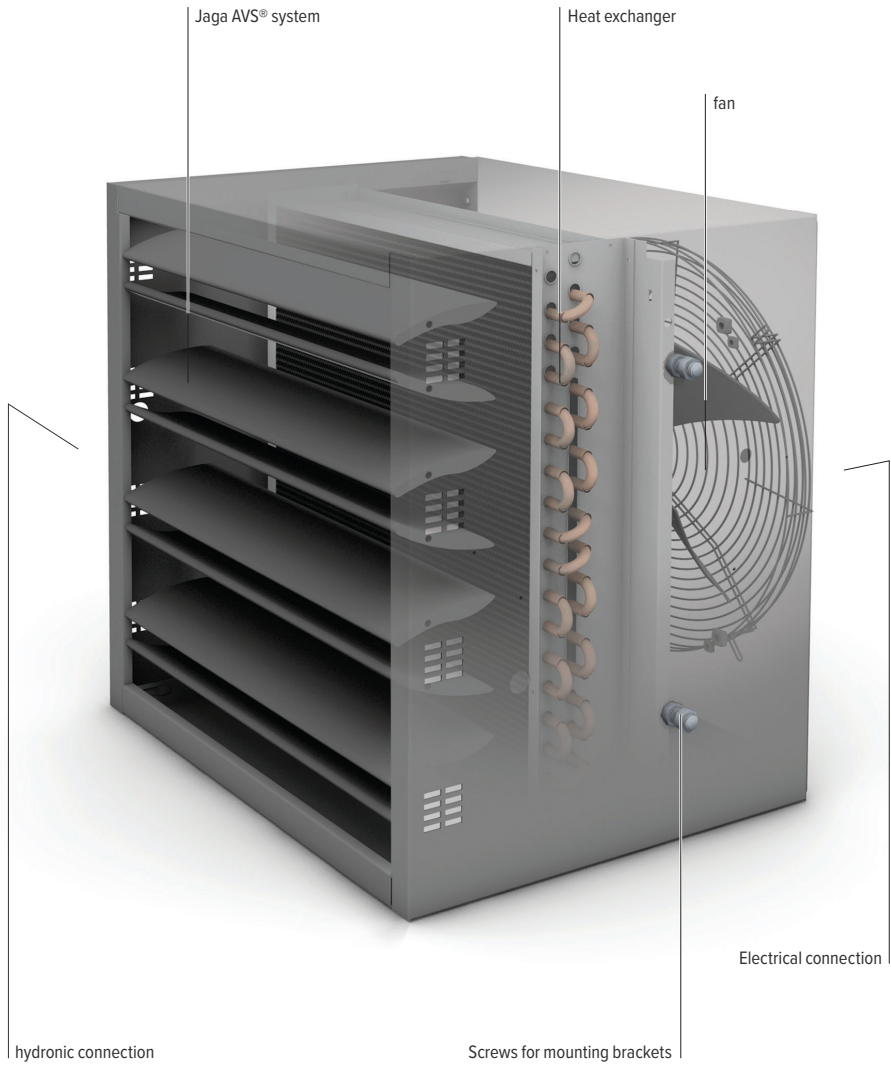


INSTALLATOIN DIRECTIVES

- 1. The Jaga unit heater can be mounted either horizontally or vertically, with the hydronic connections on the left or right side. However, the hydronic supply must always be positioned on the bottom.
 - Connection type 000: ¾" external thread
 - Connection type 100 + 200: 1" external thread
 - Connection type 300 + 400: 1 ½" external thread
- 2. The installer must provide an air vent at the highest point of the installation.
- 3. When connecting the coil, always use a back wrench to support the collector to prevent any damage.
- 4. Verify that the mains voltage matches the indication plate on the unit heater.
- 5. Jaga does not provide any warranty for experimental or provisional connections.
- 6. The safety switch (optional) includes an on/off switch and thermal protection. In the event of a power failure due to an overloaded motor, the switch must be reset after the issue has been resolved and the motor has cooled down.
- 7. Power consumption:

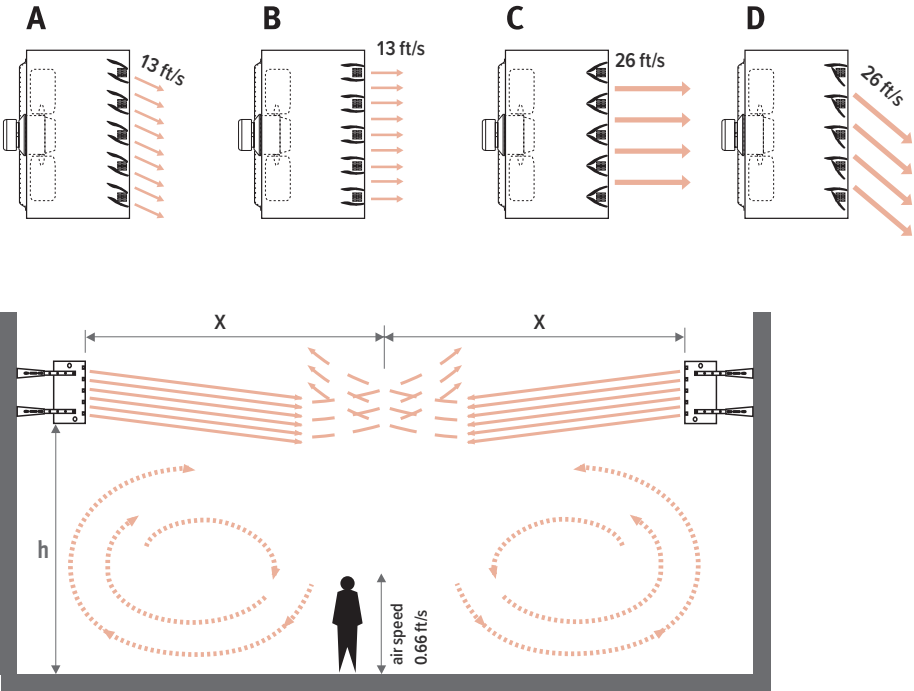
TYPE	WATT	A	RPM (MIN)
000	85 W	0.70 A	1500 RPM
100	85 W	0.73 A	1115 RPM
200	345 W	2.20 A	1300 RPM
300	400 W	1.80 A	1000 RPM
400	780 W	3.20 A	1000 RPM
- 8. Load distribution on the mains: When installing multiple unit heaters, it is advisable to connect or switch them to different phases to ensure an even load distribution on the mains.
- 9. An electrical diagram is included in the packing list.
- 10. To prevent damage during freezing conditions, completely drain the unit heaters when taking them out of service.
- 11. Failure to comply with the above directives will result in the warranty being voided.

1. AVS UNIT HEATER



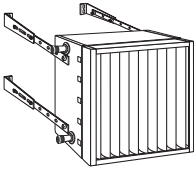
1.1. POSITIONING / MOUNTING

1.1.1. Wall mounting

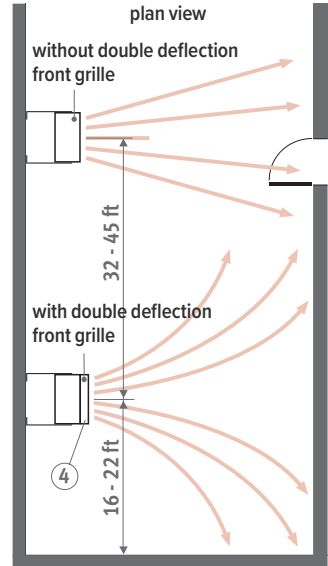


In order to maintain comfort, please avoid blowing heated air directly at people.

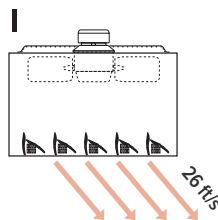
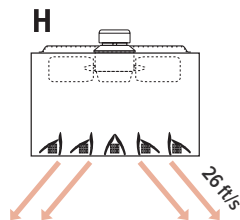
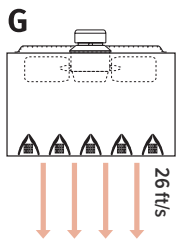
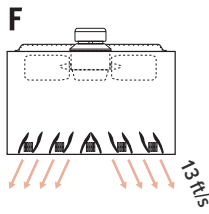
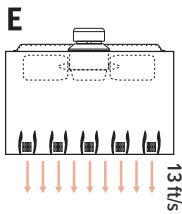
HEIGHT (h)	POSITION	X		
		TYPE	MIN (FT)	MAX (FT)
8 - 10 ft	B or C	021	52	68
10 - 13 ft	A	031	45	62
> 13 ft	D	121	59	75
		131	52	72
Tested with unit heater 221. For other types contact the Jaga technical department.		221	91	121
		231	88	114
		321	98	131
		331	88	118
		421	134	177
		431	121	160

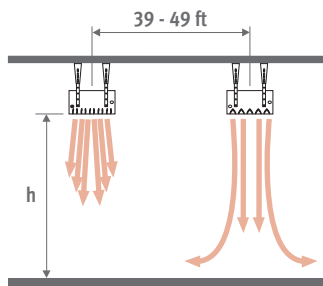


In small rooms, an optional front grille with double deflection can be installed to prevent excessively high temperatures on the opposite wall. The louvers are arranged both vertically and horizontally.

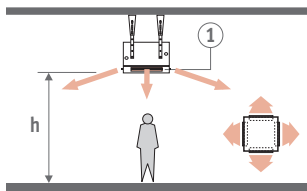


1.1.2. ceiling mounting

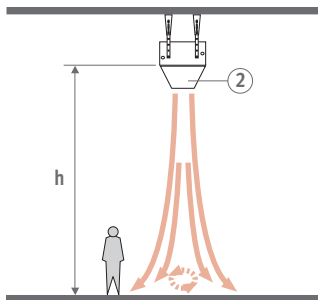




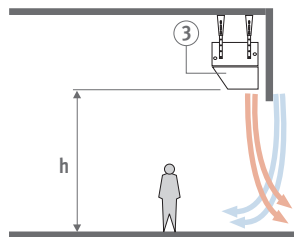
TYPE	HEIGHT (h)	
	POSITION E / F (FT)	POSITION G / H / I (FT)
021	18	26
031	16	25
121	18	26
131	16	25
221	20	33
231	18	31
321	21	34
331	20	31
421	31	36
431	28	33



In case of low ceilings a better horizontal diffusion should be obtained by using a 4 sided air diffuser.

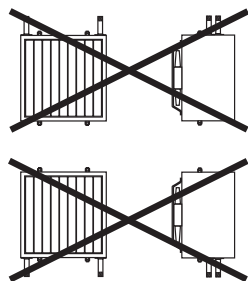
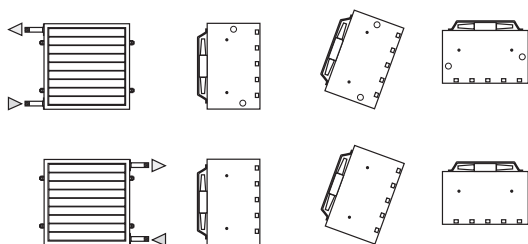


With ceilings higher than 6 metres an exhaust cone must be fitted on the appliance.

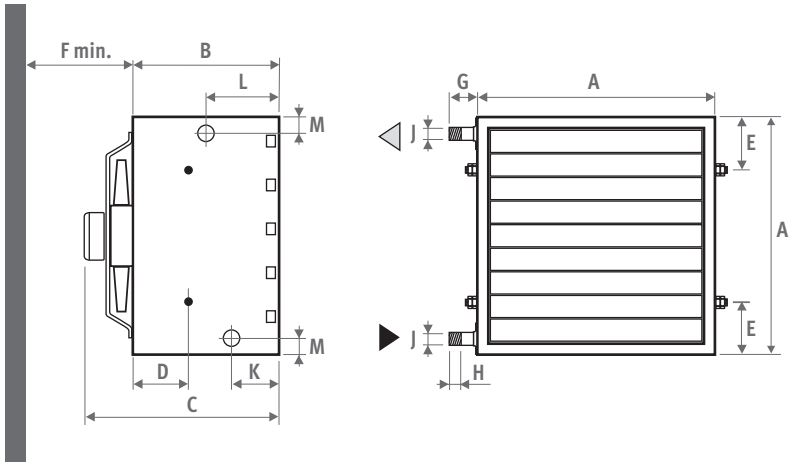


In order to prevent cold air entering the room via openings, a mouth piece is available.

1.2. HYDRONIC CONNECTION



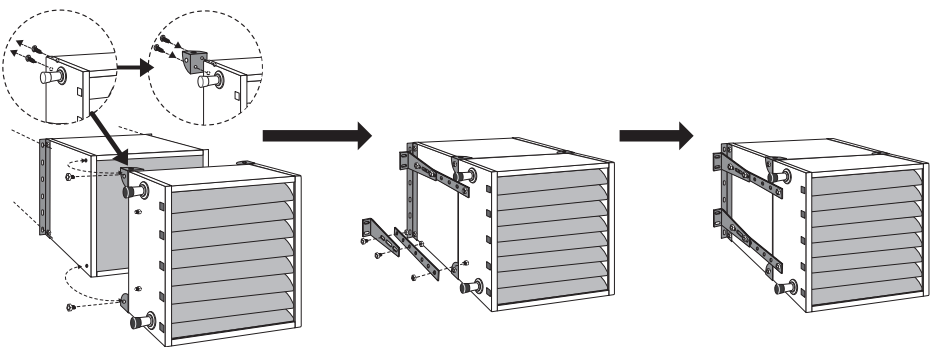
1.3. DIMENSIONS IN INCHES



MINI UNIT HEATER										
TYPE	000		100		200		300		400	
	021	031	121	131	221	231	321	331	421	431
A	16 1⁄8	16 1⁄8	20 7⁄8	20 7⁄8	25 1⁄2	25 1⁄2	30 1⁄4	30 1⁄4	35 1⁄8	35 1⁄8
B	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4	15 3⁄4
C	16 7⁄8	16 7⁄8	18 7⁄8	18 7⁄8	19 5⁄8	19 5⁄8	22 1⁄2	22 1⁄2	21 3⁄4	21 3⁄4
D	6	6	6	6	6	6	6	6	6	6
E	4 1⁄8	4 1⁄8	4 1⁄2	4 1⁄2	4 7⁄8	4 7⁄8	135	5 1⁄4	5 3⁄4	5 3⁄4
F	11 3⁄4	11 3⁄4	13 3⁄4	13 3⁄4	17 3⁄4	17 3⁄4	22	22	25 1⁄2	25 1⁄2
G	1 7⁄8	1 7⁄8	1 7⁄8	1 7⁄8	1 7⁄8	1 7⁄8	2 1⁄8	2 1⁄8	2 1⁄8	2 1⁄8
H	7⁄8	7⁄8	7⁄8	7⁄8	7⁄8	7⁄8	1	1	1	1
Ø J*	NPT 3/4"	NPT 3/4"	NPT 1"	NPT 1"	NPT 1"	NPT 1"	NPT 6/4"	NPT 6/4"	NPT 6/4"	NPT 6/4"
K	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8	5 1⁄8
L	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4	7 3⁄4
M	1 3⁄4	1 3⁄4	1 3⁄4	1 3⁄4	1 3⁄4	1 3⁄4	2 1⁄8	2 1⁄8	2 1⁄8	2 1⁄8
WEIGHT	44	48.5	66	70.5	95	101.5	124	130	156.5	166

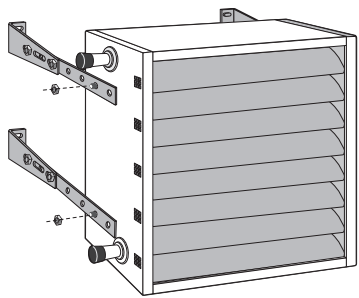
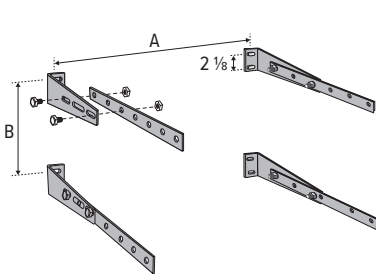
Dimensions in inches

2. INSTALLATION



2.1. SET A

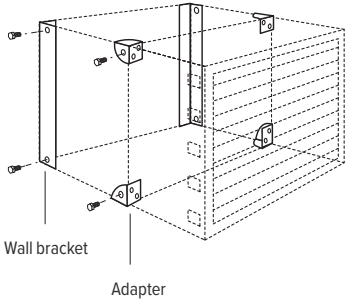
For unit heater without or with one air inlet option



TYPE	A	B
000	-	-
100	20 7/8	14
200	25 5/8	17 7/8
300	30 1/4	21 7/8
400	35	25 3/4

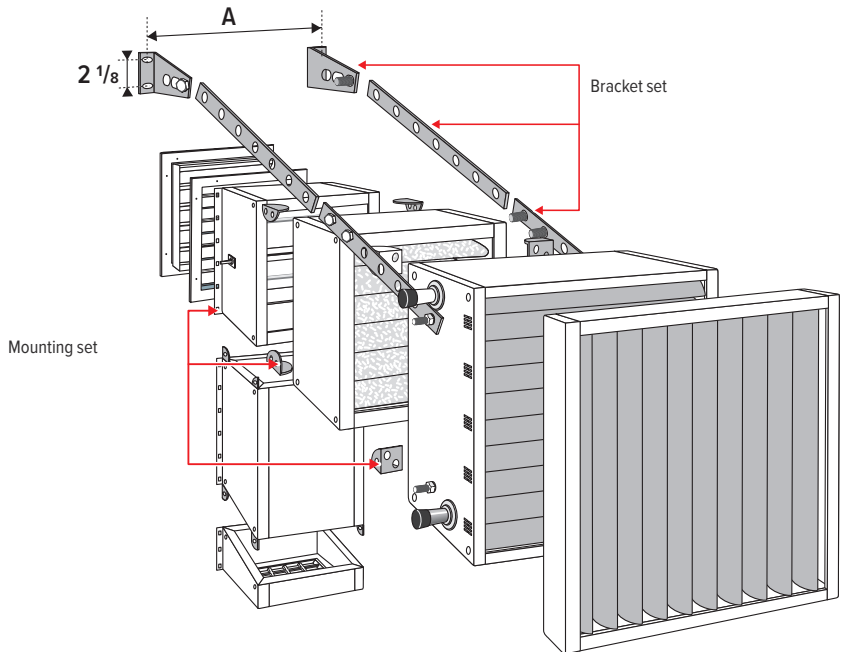
In inches

Mounting brackets



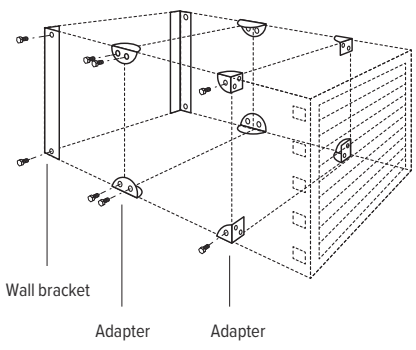
2.2. SET B

For unit heater with two air inlet options

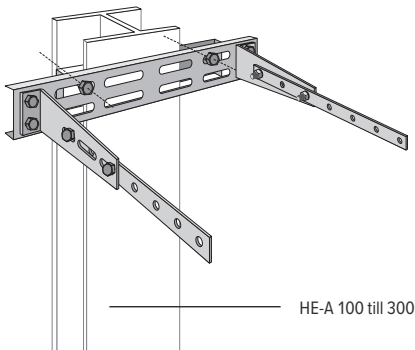


TYPE	A
000	-
100	25
200	29 3/4
300	34 1/2
400	39 1/4
In inches	

Mounting brackets



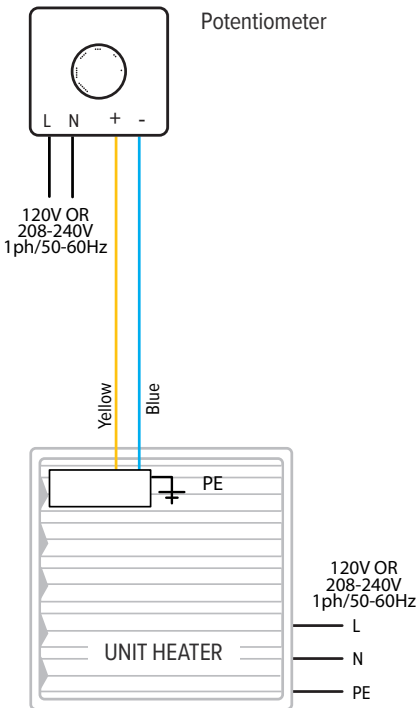
2.3. FIXING ON METAL CONSTRUCTION



3. CONTROL

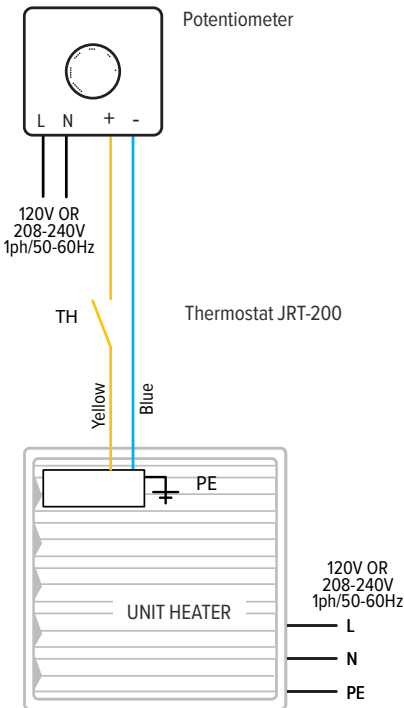
3.1. SPEED CONTROL WITH POTENTIOMETER

Speed control 0 .. 10VDC



3.2. SPEED CONTROL WITH POTENTIOMETER AND THERMOSTAT

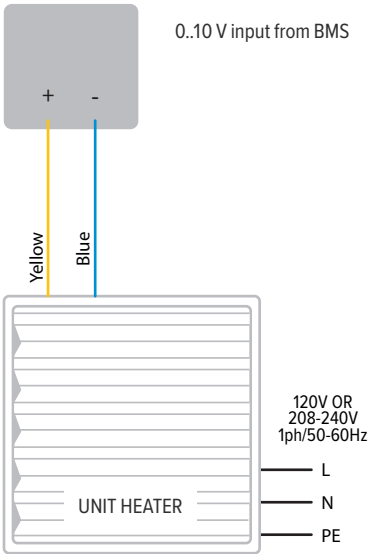
Speed control 0 .. 10VDC



⚠ Verify motor voltage before connecting to the unit!

3.3. 0..10V INPUT FROM BUILDING MANAGEMENT SYSTEM

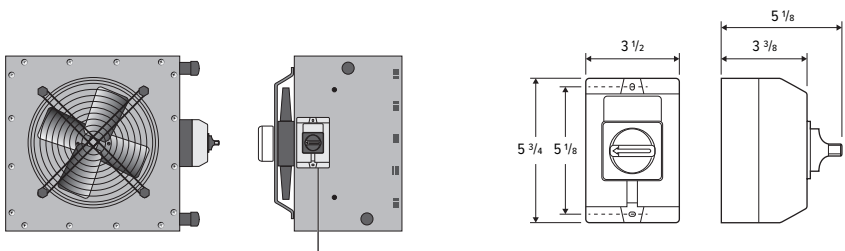
Connection to an existing building management system



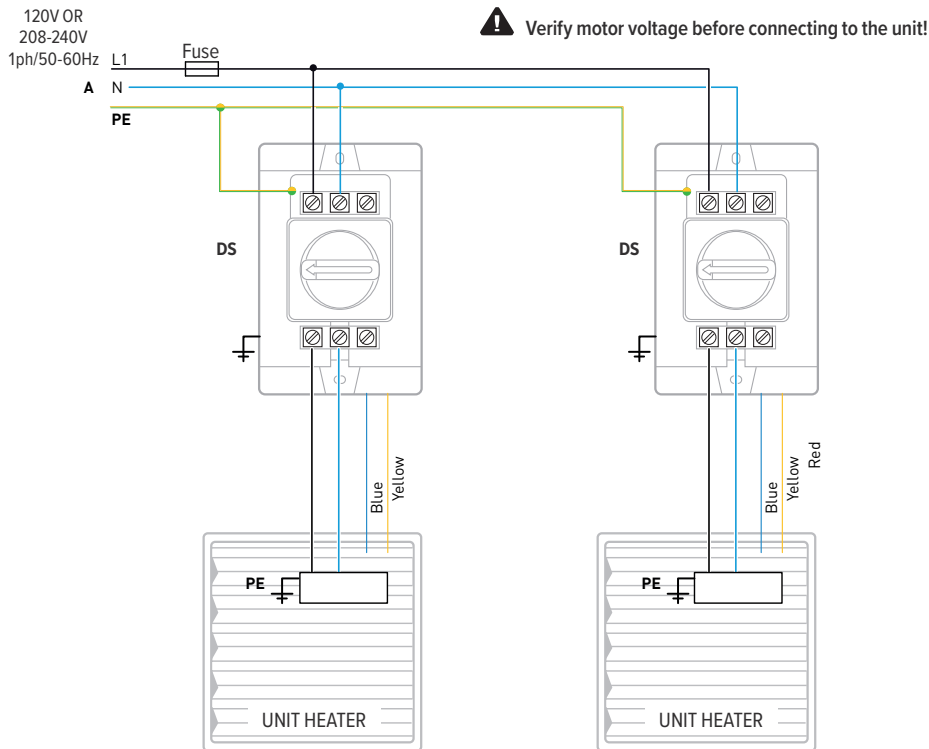
Verify motor voltage before connecting to the unit!

4. DISCONNECT SWITCH

Jaga recommends an optional disconnect switch for every unit heater.



Disconnect switch (DS)
Mounted on the side used
with accessories for air inlet



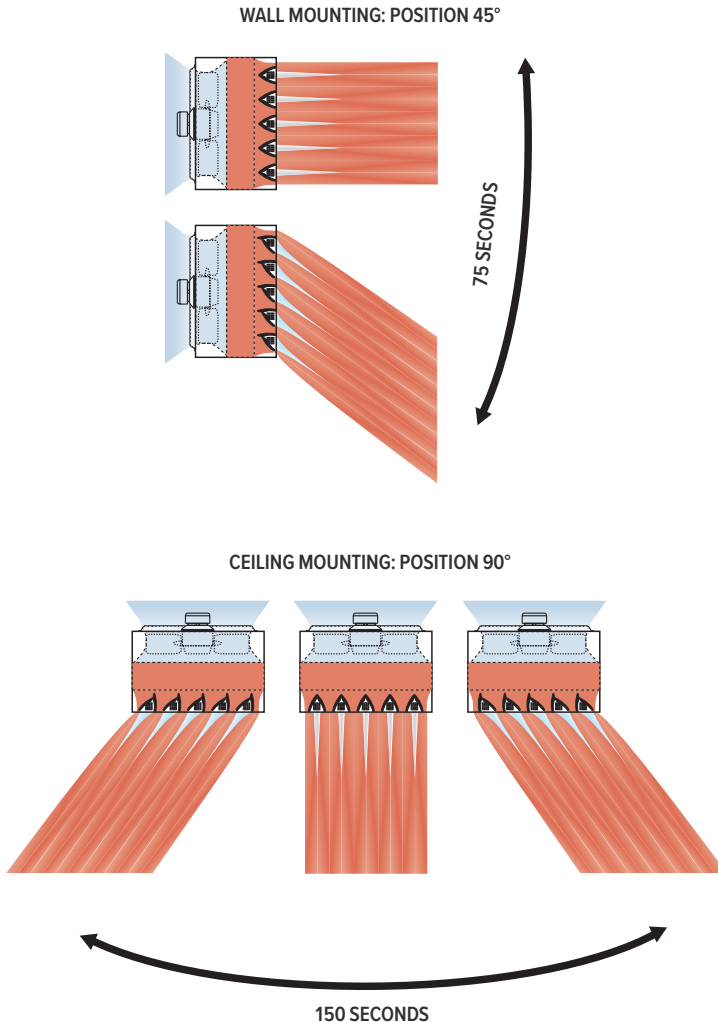
! The red and white wires from the control cable are not used and must remain sealed.

5. OPTIONAL MODULATING AVS® VERSION

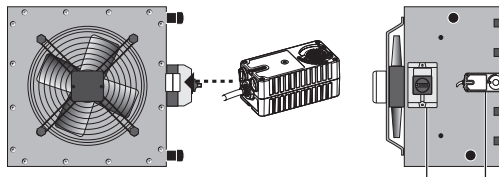
In the modulating AVS® version, the exhaust louvres are paired and connected to a servo motor. This motor generates a continuous back-and-forth movement of the adjustable louvres, creating turbulence and resulting in even better temperature distribution. The angle of movement can be easily adjusted from 0° to 90°. A complete cycle takes approximately 150 seconds.

The modulating operation is integrated into the equipment and therefore cannot be provided as an accessory.

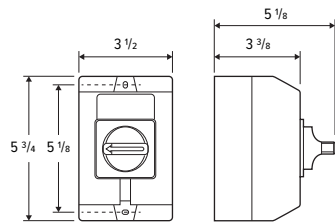
Mini unit heaters (code 021 and 031) are not available in a modulating version.



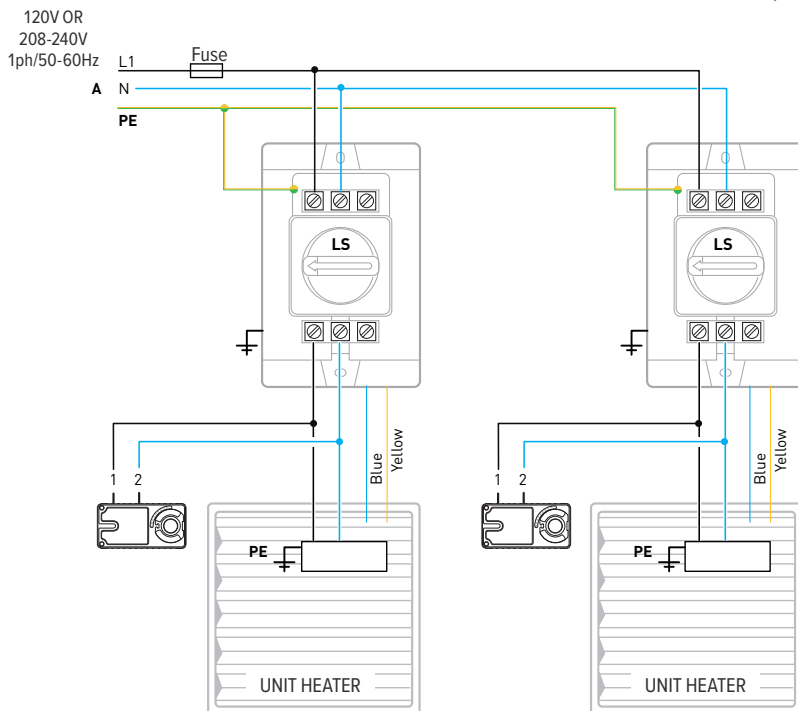
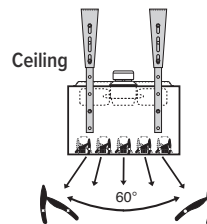
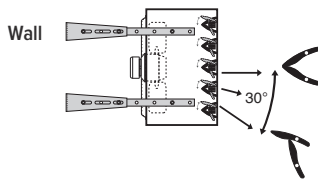
5.1. DISCONNECT SWITCH AND MODULATING MOTOR



Disconnect switch (DS) Modulating motor Airflow Louvers
Mounted on the side used with accessories for air inlet



Working principle:



! The red and white wires from the control cable are not used and must remain sealed.

6. WARRANTY CONDITIONS

1. The guarantee is valid only if the equipment is used properly and correctly by its first owner and installed in accordance with the norms and instructions specified in the installation manual and current practices.
2. The guarantee applies solely to the equipment and spare parts. Jaga reserves the right to choose between repairing or replacing the equipment or spare parts. If the model has been updated, Jaga is authorized to replace the guaranteed equipment with an equivalent model or equivalent spare parts.
3. The guarantee period is specified in this certificate. A repair or replacement does not extend the original guarantee period.
4. No guarantee is provided for equipment or spare parts lacking type or serial information, or if this information has been removed or altered. The guarantee is also void if the equipment has been repaired or modified by persons not authorized by Jaga.
5. The customer is responsible for any damage resulting from improper installation, fittings, electrical connections, faulty or damaged electrical installations or appliances, incorrect voltage or hydronic pressure, and any other errors not related to the product supplied by Jaga. The guarantee is also void if unsuitable parts are used.
6. The guarantee for our heat exchangers is invalid if they are emptied at set intervals, during certain periods, or if they are heated using industrial water, steam, or an open loop system is used. The quality of the system water must comply with the VDI 2035-2 directive.
7. The buyer must take all necessary precautions to protect the device from damage, including covering the device to keep it dust-free during further construction work. The guarantee is also void if the heat exchangers are installed in aggressive environments (e.g., ammonia, corrosive substances). In such cases, the buyer must address the cause of the damage. Lacquered radiators should not be used in (humid) areas such as above a bath with a built-in shower unit, in or near a shower cubicle, in a swimming pool (chlorine), or in a sauna.
8. Jaga does not provide a guarantee for equipment that is damaged due to improper handling, incorrect use, dropping, or transport without necessary precautions, or for equipment that is installed in a way that makes it inaccessible. The guarantee is valid only if the equipment is properly and correctly used by its first owner and installed in accordance with the norms and instructions specified in the instruction leaflet and current practices.
9. The warranty is limited to the equipment only and does not cover labor costs.
10. The warranty begins on the date of the invoice. If the invoice is not available, the serial number or production date will be used.

