



AIR UNIT HEATERS ATD (A,G) AIR UNIT HEATER/COOLER ATDC

Coiltech[®] industrial
heat transfer



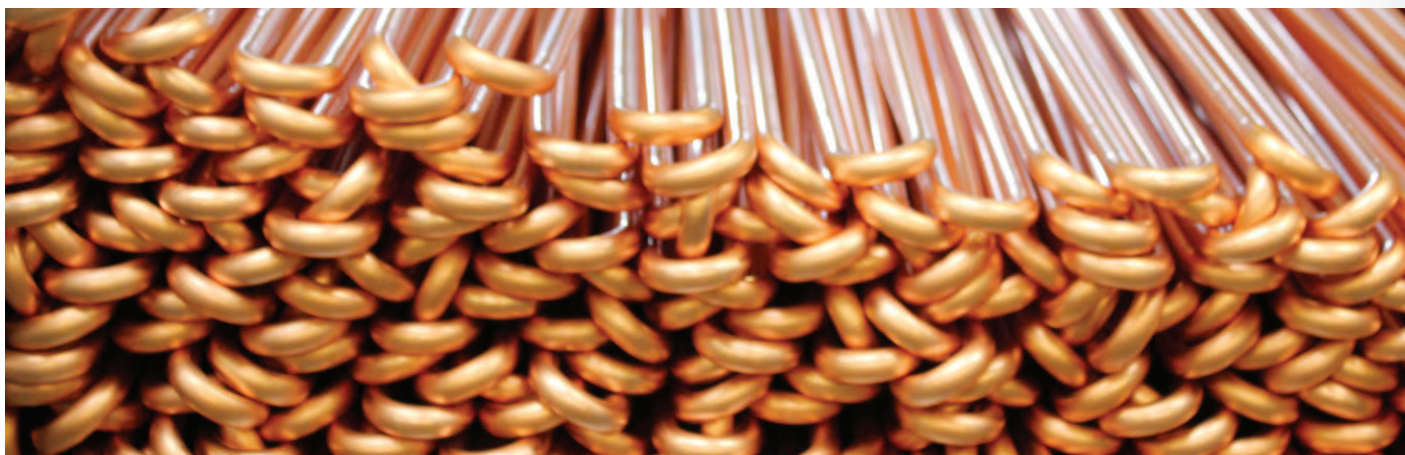
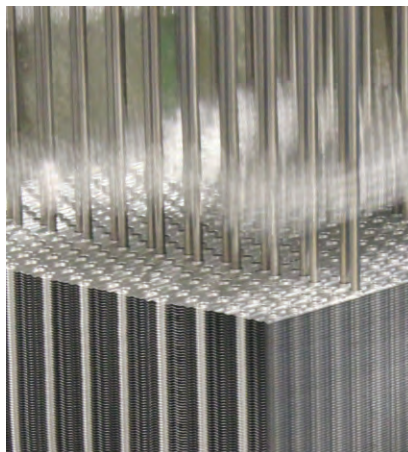
A03





CONTENTS

| | |
|---|---------------|
| COILS product selection software | page 4 |
| Sizing | 5 |
| Installation instructions | 6 |
| Air unit heaters ATDA & ATDG | 7-16 |
| Product description | 7 |
| Dimensions & weight, packaging - ATDA | 8 |
| Dimensions & weight, packaging - ATDG | 9 |
| Technical specifications - ATDA | 10-14 |
| Technical specifications - ATDG | 15-16 |
| Air unit heater/cooler ATDC | 17-20 |
| Product description | 17 |
| Dimensions & weight, packaging - ATDC | 18 |
| Technical specifications - ATDC | 19-20 |
| Installation package | 21-26 |
| Standard | 22 |
| A-box | 23 |
| B-box | 24 |
| C-box | 25 |
| F-box | 26 |
| Accessories | 27-29 |
| Control and regulation equipment | 30-34 |
| Installation examples | 35-39 |
| Product code | 40-41 |



GOOD TO KNOW

For over 70 years, Modine has been developing and producing heat exchangers for air and liquids. We deliver about 3000 industrial heat exchangers per year. All of our operations are characterised by extensive technical know-how and quality awareness.

At Modine, we are committed to work in partnership with our customers. Our focus on results and unfailing reliability make us a partner that customers can build their future on.

QUALITY AND THE ENVIRONMENT - PRIORITIES

Because we supply heat exchangers that are components of larger projects, we know the importance of delivery accuracy. The products should always be delivered on time, to the right place and with the right quality. Our ongoing development and testing facilities ensure that the products remain at the frontline of the market and that they meet the provided specifications.

Several of our products play an active role via their function in energy reuse and a better indoor environment. We work in a deliberate and structured manner to protect the environment throughout the product lifecycle including development, production, use, decommissioning and recycling.

Modine's management system is certified according to ISO 9001:2015, ISO 14001:2015 and ISO 3834-2:2005.



USE COILS TO MAKE SURE YOU'RE GETTING THE PROPER AIR UNIT HEATER/COOLER.

COILS is a flexible, user-friendly software programme that makes it easy to select the correct heater/cooler. You can let COILS choose or provide targets for size or motor. COILS features:

- Eight different display languages
- Option to select printer language independently of display language
- Humidity can be specified in different units
- Liquid flow can be specified in different units
- Most antifreeze liquids are included
- Consideration for altitude
- Ability to select accessories
- Printout containing performance and data on noise level, weight, volume
- Ability to save your calculations
- Installation instructions and manuals

COILS 3g Transformer oil cooler

File View Alternative Help

Motor/Generator Cooler Unit heater/cooler Transformer oil cooler Dry cooler Heating/cooling coils High grade process cooler

Transformer oil cooler Sound calculation

Input data

Capacity, kW: 250
 Oil Flow rate, l/s: 25
 Mean temperature rise, deg C: 26
 Top temperature rise, deg C: 26
 Bottom temperature rise, deg C: 26
 Air Temperature, deg C: 40
 Relative humidity, %: 50
 Max sound pressure level at 2 m, dB(A):
 Ordering code: BETA-3-0-4-4A5SD-1A-11-A-1-A
 No of coolers in parallel: 1
 No of coolers in sequence: 1

Result

| Ordering code | % | Pressure drop, level | Sound level | Rel price | Power consumption |
|------------------------------|-----|----------------------|-------------|-----------|-------------------|
| BETA-3-0-4-4A5SD-1A-11-A-1-A | 4.0 | 80 | 68 | 1.20 | 5.7 |
| BETA-4-0-4-4A5SD-1A-11-A-1-A | 10 | 101 | 61 | 1.10 | 3.4 |
| BETA-4-0-4-4A5SD-1A-11-A-1-A | 2.0 | 101 | 61 | 1.20 | 4.4 |

Capacity, kW: 250.0
 Air Temperature in, deg C: 40.0
 Temperature out, deg C: 59.1
 Oil Flow rate, l/s: 25.0
 Mean temperature rise, deg C: 23.1
 Top temperature rise, deg C: 26.0
 Bottom temperature rise, deg C: 20.2
 Velocity, m/s: 2.7
 Pressure drop, kPa: 101

Calculate



Contact us and we can supply the COILS program to you or help you in selecting the optimal cooler.



SIZING

EXAMPLES OF DESIGN FOR WATER-AIR HEATER

1. Measure the floor area of the premises.

In the case above, it is $8 \text{ m} \times 20 \text{ m} = 160 \text{ m}^2$.

2. Estimate the ceiling height.

Estimated average ceiling height of 3 m.

3. Then estimate the nature of the building and heating.

Select the required capacity according to the capacity requirement chart W/m^2

Average insulation and basic heating through a radiator system provides 60 W/m^2 .

4. Estimate required capacity.

In this case, the capacity required is $160 \times 60 = 9.6 \text{ kW}$.

5. Estimate the number of unit heaters.

Expect that each air unit heater can heat an area of 80 m^2 ($8 \text{ m} \times 10 \text{ m}$), see adjacent picture. Here we have chosen to take two unit heaters and place them facing each other.

6. Then look at the table on page 11-12 with current temperature and inlet air temperature.

We intend to use the existing boiler which provides $60\text{--}30^\circ\text{C}$ water, and will want to quickly increase the heat in the work shop after weekends, during which the temperature is lowered to about 15°C .

7. Size and fan motor speed are found in the the table on page 12.

If two unit heaters are used, each will have to provide a capacity of 4.8 kW . The ATDA-33-1 unit heater by these temperatures will generate 6.0 kW at 1035 RPM, and this capacity will be more than efficient. The motor output required can be read from the Motor Data Table on page 9.

8. Motor.

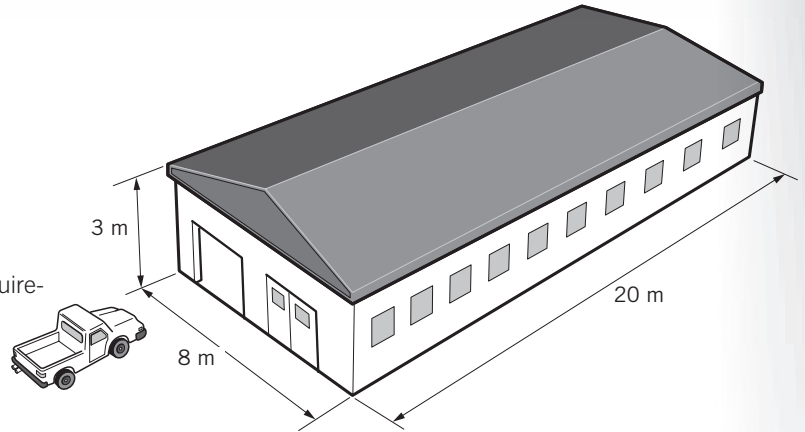
We will select a 1-phase, 230 V motor with manual switch. Should boosted or reduced capacity be required, the motor can easily be reswitched.

9. Control equipment.

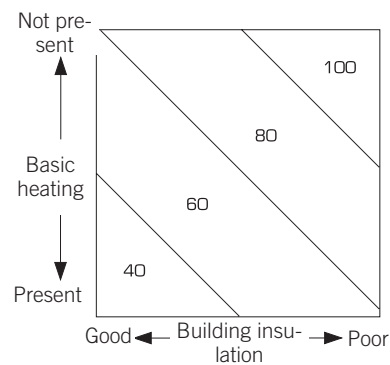
In this case, we will control the unit heater with a room thermostat. Should the need arise to use the unit heaters for automatically controlling the temperature in the premises, we can purchase the automatic unit heater control unit.

10. Select the appropriate accessories from the accessories range.

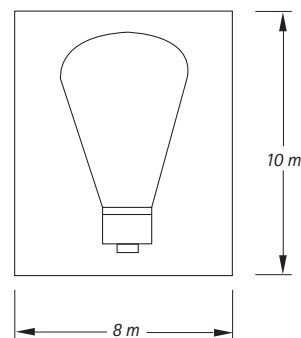
We intend to mount the unit heater on the wall, and therefore we need a set of mounting brackets.



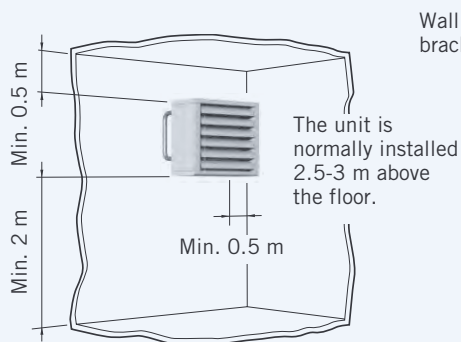
Capacity requirement W/m^2
(with a maximum of 5 m to the roof)



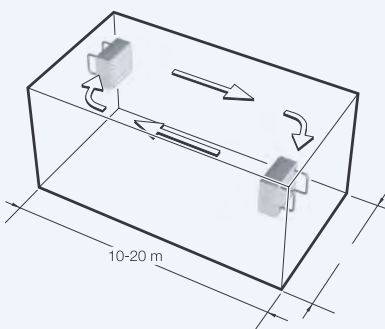
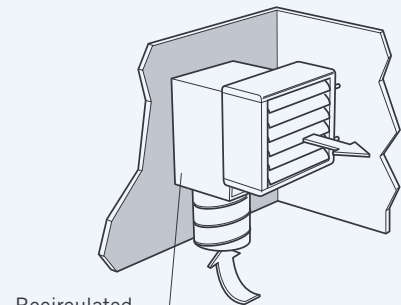
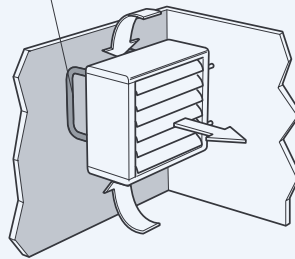
Maximum heating surface per unit heater.



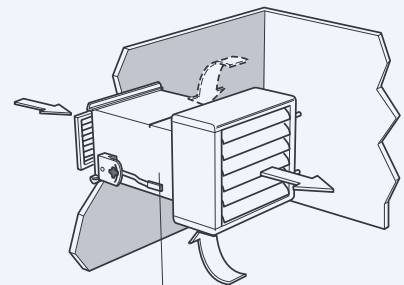
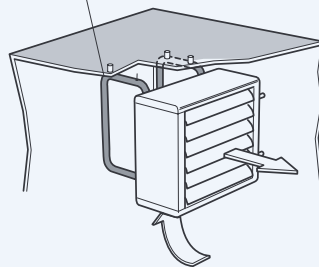
INSTALLATION INSTRUCTIONS



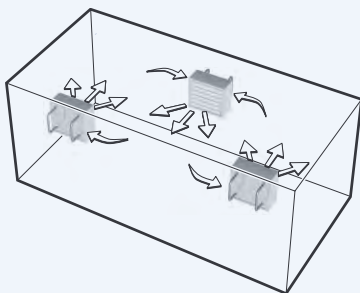
Wall mounting bracket



Ceiling mounting bracket

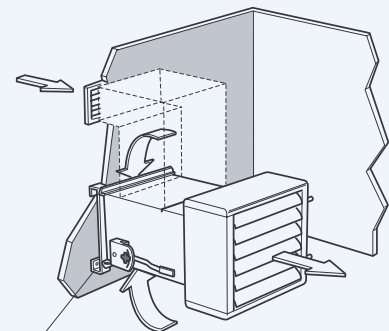
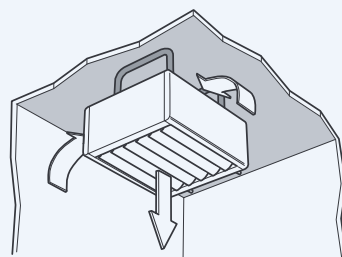


Distance is determined by the size of the unit heaters.



Arrange unit heater(s) in the room so that good circulation is obtained.

NOTE! Not suitable for steam



PRODUCT DESCRIPTION ATDA & ATDG

ATDA & ATDG

The Air unit heaters ATDA and ATDG are designed for heating and ventilating of industrial, manufacturing, retail premises and warehouses, garages, supermarkets and similar spaces. The device is available in two different versions; for heating water (ATDA) and steam (ATDG). Both types of unit heater incorporate a corrosion-resistant coil consisting of aluminium fins and copper tubes.

SIZES

ATDA is available in four physical sizes and ATDG is available in three physical sizes. ATDA is available with different power variants for varying air flow and power requirements that cover most operating conditions.

SIZES ATDA (HEATING WATER):

31, 32, 33, 42, 43, 52, 53, 63

SIZES ATDG (STEAM): 31, 41, 51

OPENABLE CASING

The Air unit heaters ATDA and ATDG have a casing made of corrosion-resistant white lacquered sheet steel or EN 1.4301 stainless steel. The casing can be opened for cleaning the interior. The roof and base are easy to remove with two screws. The pipe connections for water and steam are found at the side of the unit. The motor, fan impeller and protective grille are designed as a compact and composite unit.

GENERAL SPECIFICATIONS

- Contemporary design with smooth, rounded metal surfaces
- Can be opened for easy internal cleaning
- One air deflector is including as standard
- Airflow up to 2.2 m³/s
- Unit heaters have high efficiency
- Motor for single-phase 230V or 3-phase 400V.
- Complies with EU requirements for machine safety, MD 2006/42/EC
- Meets ErP 2015
- Wide range of accessories
- Variety of control options

INSTALLATION

ATDA can be fitted for either horizontal or vertical airflow. ATDG can only be fitted for horizontal airflow.



Air unit heater ATDA with aluminium fins and copper tubes. Inset shows the cross section of ATDA.

MOTOR

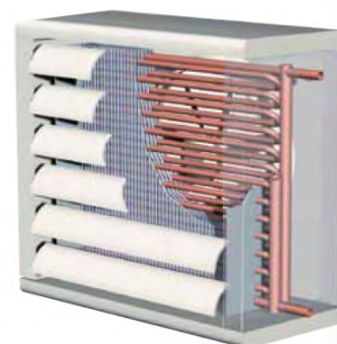
The motor is external rotor type. All single-phase fans can be switched between high and low speed. All motors have a built-in thermal contact. It is retractable for sizes 42 and 43 with three-phase motor and all larger fans. Protection class IP44 for size 31, 32, 33, 42 and 43. IP54 for other motors. Maximum ambient temperature around the motors is 40°C.

MATERIALS AND FINISH

Unit casing: Made of white painted hot-galvanised sheet steel, NCS 0502B or EN 1.4301 stainless steel.

Impeller and protective grille: Black lacquered steel/wire.

Coil: Copper tubes with aluminium fins or materials for corrosive environments. ATDA has headers with smooth 22 mm dia. connection for brazed joints or compression rings. ATDG has threaded connections for steam and condensate.



OTHER DESIGNS

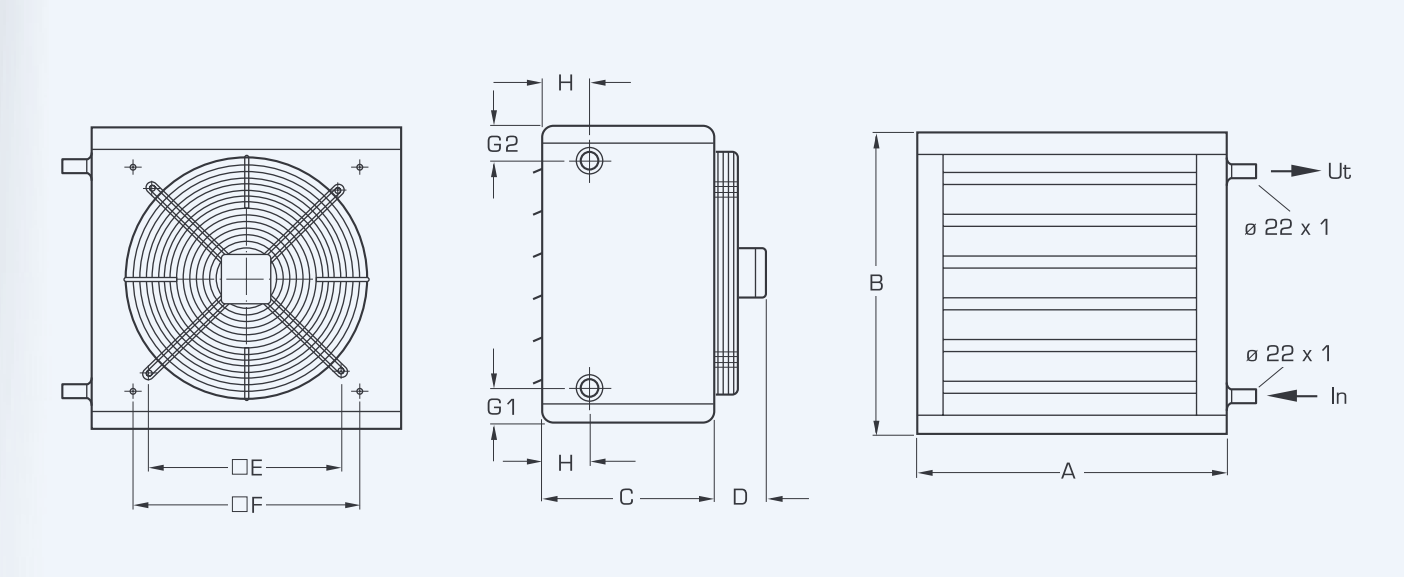
The ATD is also available with a corrosion-protected coil and with stainless steel casing. There are also other motors such as EEx e (increased safety), 500 Volt and higher IP classes. ATD is also available as an industrial model, ATDI, which can be equipped with an explosion-proof motor, steel coils etc.

ACCESSORIES

Modine offers a variety of accessories, see page 27.

DIMENSIONS & WEIGHT: ATDA

AIR UNIT HEATER ATDA, HEATING WATER

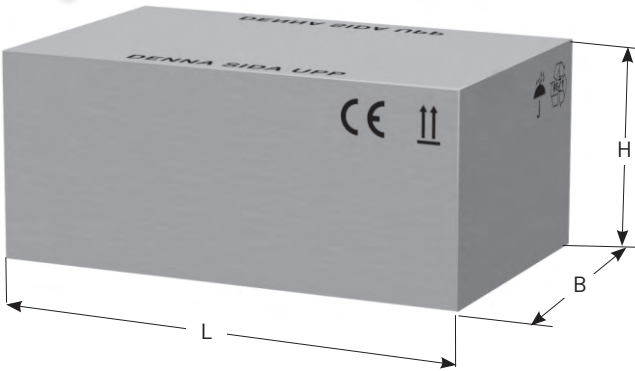


ATDA DIMENSIONS AND WEIGHT (all dimensions in mm)

| Size ATDA | A | B | C | D | E | F | G1 | G2 | H | Weight, kg |
|-----------|-----|-----|-----|-----|-----|-----|----|----|-----|------------|
| 31 | 514 | 465 | 270 | 82 | 290 | 350 | 57 | 69 | 76 | 18 |
| 32 | 514 | 465 | 270 | 82 | 290 | 350 | 57 | 69 | 76 | 18 |
| 33 | 514 | 465 | 270 | 82 | 290 | 350 | 57 | 69 | 76 | 19 |
| 42 | 670 | 632 | 310 | 82 | 355 | 510 | 57 | 57 | 89 | 28 |
| 43 | 670 | 632 | 310 | 82 | 355 | 510 | 57 | 57 | 89 | 29 |
| 52 | 770 | 732 | 340 | 100 | 440 | 610 | 62 | 62 | 89 | 48 |
| 53 | 770 | 732 | 340 | 100 | 440 | 610 | 62 | 62 | 89 | 48 |
| 63 | 990 | 832 | 370 | 136 | 495 | 740 | 62 | 62 | 115 | 65 |

PACKAGING

The air unit heater ATDA with accessories is supplied in a corrugated cardboard carton. The heater is also protected by transparent plastic. CE marked.

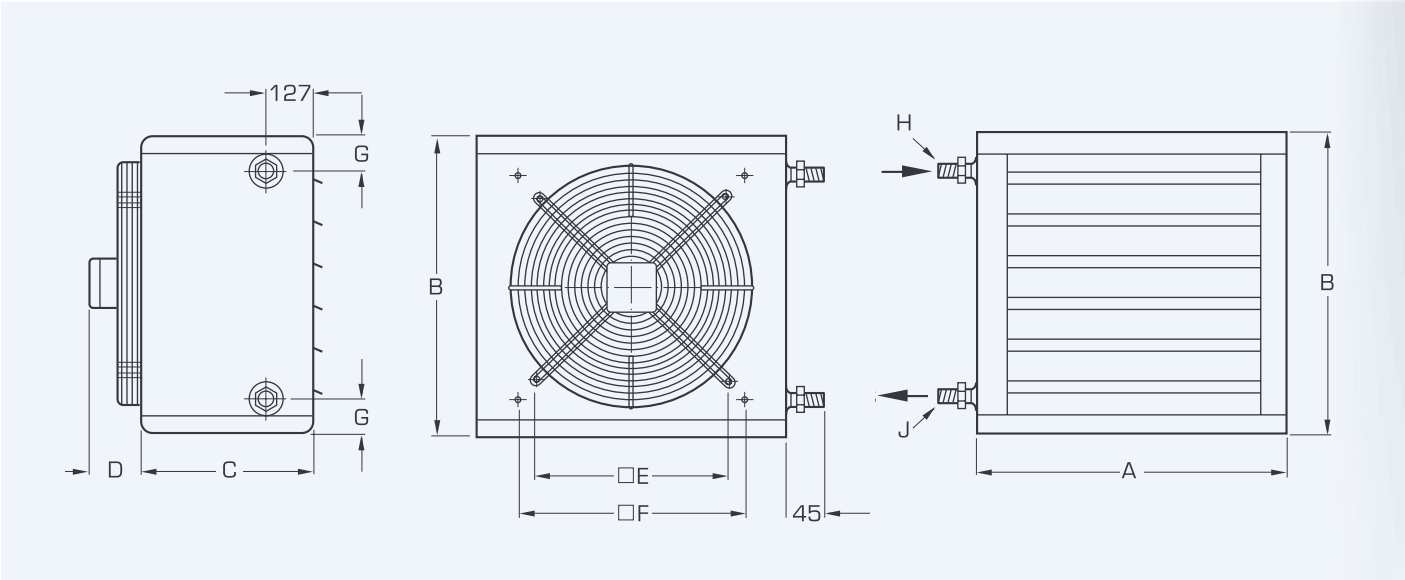


PACKAGING ATDA

| Size ATDA | L (cm) | B (cm) | H (cm) | Weight (kg) |
|------------|--------|--------|--------|-------------|
| 31, 32, 33 | 70 | 48 | 40 | 18 |
| 42, 43 | 84 | 64 | 44 | 30 |
| 52, 53 | 94 | 74 | 46 | 45 |
| 63 | 115 | 83 | 57 | 57 |

DIMENSIONS & WEIGHT: ATDG

AIR UNIT HEATER ATDG, STEAM

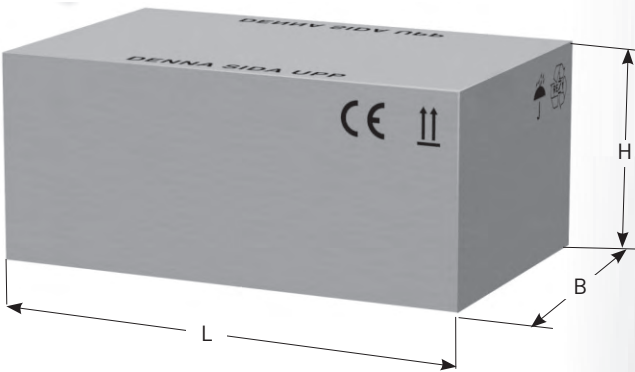


ATDG DIMENSIONS AND WEIGHT (all dimensions in mm)

| Size ATDG | A | B | C | D | E | F | G | pipe conn. | | Weight, kg |
|-----------|-----|-----|-----|-----|-----|-----|----|------------|----|------------|
| | | | | | | | | H | J | |
| 31 | 514 | 465 | 270 | 82 | 290 | 350 | 58 | 25 | 25 | 18 |
| 41 | 670 | 632 | 310 | 82 | 355 | 510 | 61 | 32 | 25 | 28 |
| 51 | 770 | 732 | 340 | 100 | 440 | 610 | 61 | 32 | 32 | 47 |

PACKAGING

Air unit heater ATDG with accessories is supplied in a corrugated cardboard carton. The heater is also protected by transparent plastic. CE marked.



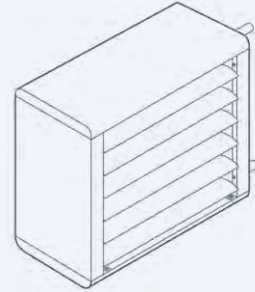
PACKAGING ATDG

| Size ATDG | L (cm) | B (cm) | H (cm) | Weight (kg) |
|-----------|--------|--------|--------|-------------|
| 31 | 70 | 48 | 40 | 18 |
| 41 | 84 | 64 | 44 | 30 |
| 51 | 94 | 74 | 46 | 45 |

TECHNICAL SPECIFICATIONS ATDA

OPERATING DATA ATDA

- Maximum ambient temperature around the motor = + 60 °C.
- Maximum operating pressure: 1.6 MPa at a maximum operating temperature of 100 °C.
- Maximum operating pressure: 1.0 MPa at a maximum operating temperature of 150 °C.
- All heat exchangers are pressure and leak tested with dry air under water.
- Designed and manufactured according to the Pressure Equipment Directive PED/97/23/EC.
- ErP2015-compliant.



SOUND LEVEL, SOUND POWER LEVEL. HEATING WATER - ATDA

| Size ATDA | Speed RPM | Sound level ²⁾ dB(A) | Sound power ³⁾ dB(A) | Linear sound power, dB, octave band, centre frequency, Hz | | | | | | | |
|--------------|--------------|---------------------------------------|---------------------------------------|--|-----|-----|------|------|------|------|--|
| | | | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 31-1 | 1350 | 54 | 70 | 66 | 68 | 65 | 63 | 61 | 57 | 48 | |
| | 1035 | 48 | 65 | 60 | 62 | 59 | 57 | 55 | 51 | 42 | |
| | 685 | 39 | 55 | 51 | 53 | 50 | 48 | 46 | 42 | 33 | |
| 32-1 | 1350 | 54 | 70 | 66 | 68 | 65 | 63 | 61 | 57 | 48 | |
| | 1035 | 48 | 65 | 60 | 62 | 59 | 57 | 55 | 51 | 42 | |
| | 685 | 39 | 55 | 51 | 53 | 50 | 48 | 46 | 42 | 33 | |
| 33-1 | 1350 | 53 | 69 | 65 | 67 | 64 | 62 | 60 | 56 | 47 | |
| | 980 | 47 | 64 | 59 | 61 | 58 | 56 | 54 | 50 | 41 | |
| | 685 | 39 | 55 | 51 | 53 | 50 | 48 | 46 | 42 | 33 | |
| 42-1 | 1430 | 58 | 74 | 68 | 73 | 70 | 66 | 64 | 61 | 53 | |
| | 900 | 48 | 64 | 58 | 63 | 60 | 56 | 54 | 51 | 43 | |
| | 600 | 41 | 57 | 51 | 56 | 53 | 49 | 47 | 44 | 36 | |
| 42-3 | 1450 | 58 | 74 | 68 | 73 | 70 | 66 | 64 | 61 | 53 | |
| 43-1 | 1430 | 57 | 73 | 67 | 72 | 69 | 65 | 63 | 60 | 52 | |
| | 1035 | 50 | 66 | 60 | 65 | 62 | 58 | 56 | 53 | 45 | |
| | 750 | 43 | 59 | 53 | 58 | 55 | 51 | 49 | 46 | 38 | |
| 43-3 | 1450 | 58 | 74 | 68 | 73 | 70 | 66 | 64 | 61 | 53 | |
| 52-1 | 865 | 58 | 74 | 74 | 76 | 65 | 66 | 63 | 58 | 50 | |
| | 720 | 50 | 66 | 68 | 66 | 58 | 59 | 57 | 49 | 38 | |
| | 555 | 43 | 59 | 61 | 59 | 51 | 52 | 50 | 42 | 31 | |
| 52-3 | 1340 | 66 | 82 | 82 | 84 | 73 | 74 | 71 | 66 | 58 | |
| | 1060 | 60 | 76 | 76 | 78 | 67 | 68 | 65 | 60 | 52 | |
| 53-1 | 865 | 58 | 74 | 74 | 76 | 65 | 66 | 63 | 58 | 50 | |
| | 720 | 40 | 56 | 58 | 56 | 48 | 49 | 47 | 39 | 28 | |
| | 555 | 35 | 51 | 53 | 51 | 43 | 44 | 42 | 34 | 23 | |
| 53-3 | 1340 | 66 | 82 | 82 | 84 | 73 | 74 | 71 | 66 | 58 | |
| | 1060 | 59 | 75 | 75 | 77 | 66 | 67 | 64 | 59 | 51 | |
| 63-1 | 920 | 60 | 76 | 78 | 76 | 71 | 70 | 68 | 68 | 59 | |
| | 630 | 52 | 67 | 74 | 65 | 63 | 61 | 61 | 54 | 45 | |
| | 515 | 45 | 61 | 68 | 60 | 57 | 56 | 54 | 44 | 34 | |
| 63-3 | 1350 | 67 | 83 | 80 | 82 | 78 | 77 | 75 | 74 | 69 | |
| | 1110 | 53 | 79 | 79 | 78 | 75 | 73 | 71 | 71 | 65 | |

Tolerance ± 2 dB

2) Noise level at a distance of 5 metres, Q = 2, absorption area = 200 m² Sabine.

3) Noise compliant with ISO 3744.

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

THROW, HORIZONTAL HEATING WATER - ATDA

| Size ATDA | Speed RPM | Single air deflector Throw, m L _{0,2} |
|--------------|--------------|--|
| 31-1 | 1350 | 5.8 |
| | 1035 | 4.5 |
| | 685 | 3.0 |
| 32-1 | 1350 | 5.8 |
| | 1035 | 4.5 |
| | 685 | 3.0 |
| 33-1 | 1350 | 5.0 |
| | 980 | 3.5 |
| | 685 | 2.5 |
| 42-1 | 1430 | 6.0 |
| | 900 | 4.0 |
| | 600 | 3.5 |
| 42-3 | 1450 | 6.0 |
| 43-1 | 1430 | 6.0 |
| | 1035 | 5.0 |
| | 750 | 3.0 |
| 43-3 | 1450 | 6.0 |
| 52-1 | 865 | 7.3 |
| | 720 | 5.3 |
| | 555 | 3.7 |
| 52-3 | 1340 | 10.1 |
| | 1060 | 8.1 |
| 53-1 | 865 | 7.0 |
| | 720 | 2.5 |
| | 555 | 1.5 |
| 53-3 | 1340 | 9.0 |
| | 1060 | 7.5 |
| 63-1 | 920 | 12.0 |
| | 630 | 7.0 |
| | 515 | 5.0 |
| 63-3 | 1350 | 18.0 |
| | 1110 | 15.0 |



The specified throw is applicable to supply air temp. of +40°C and indoor temp. +18°C. The air deflector is placed in horizontal position. The premises are free from interference from air drafts and nearby furnishings. L = L_{0,2} perpendicular distance from fan heater at air speed v = 0.2m/s. The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

MOTOR DATA HEATING WATER - ATDA

| Size ATDA | Speed RPM | Rated output W | Rated current (A), 50 Hz | | | Thermal contact | Enclosure class |
|-----------|-----------------------------------|----------------|--------------------------|-----------------|------------------|-------------------|-----------------|
| | | | 1 Phase 230V | 3 Phase 400 V D | 3 Phase 400 V, Y | | |
| 31-1 | 1350 1000 ¹⁾ | 110 | 0,52 | - | - | Yes ²⁾ | IP44 |
| 32-1 | 1350 1000 ¹⁾ | 110 | 0,52 | - | - | Yes ²⁾ | IP44 |
| 33-1 | 1350 1000 ¹⁾ | 110 | 0,52 | - | - | Yes ²⁾ | IP44 |
| 42-1 | 1430 900 ¹⁾ | 160 | 0,73 | - | - | Yes ²⁾ | IP44 |
| 42-3 | 1450 | 135 | - | - | 0.44 | Yes | IP44 |
| 43-1 | 1430 900 ¹⁾ | 160 | 0,73 | - | - | Yes ²⁾ | IP44 |
| 43-3 | 1450 | 135 | - | - | 0.44 | Yes | IP44 |
| 52-1 | 865 | 220 | 0,97 | - | - | Yes | IP54 |
| 52-3 | 1340 1060 ¹⁾ | 710 480 | - | 1.4 - | - 0.8 | Yes | IP54 |
| 53-1 | 865 | 220 | 0,97 | - | - | Yes | IP54 |
| 53-3 | 1340 1060 ¹⁾ | 710 480 | - | 1.4 - | - 0.8 | Yes | IP54 |
| 63-1 | 920 | 390 | 1,78 | - | - | Yes | IP54 |
| 63-3 | 1350 1110 ¹⁾ | 1100 760 | - | 2.32 - | - 1.3 | Yes | IP54 |

1) Speed is obtained by reswitching the motor (see diagram in the ATD manual).

2) Connected internally, not retractable.

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

AIRFLOW HEATING WATER - ATDA

| Size ATDA | Speed RPM | Airflow m ³ /s | Airflow with accessories m ³ /s ²⁾ |
|-----------|----------------------------|---------------------------|--|
| 31-1 | 1350 1035 685 | 0.51 0.39 0.34 | 0.38 0.29 0.26 |
| 32-1 | 1350 1035 685 | 0.45 0.34 0.30 | 0.34 0.26 0.23 |
| 33-1 | 1350 980 685 | 0.43 0.32 0.22 | 0.32 0.24 0.17 |
| 42-1 | 1430 900 600 | 0.75 0.48 0.35 | 0.56 0.36 0.26 |
| 42-3 | 1450 | 0.75 | 0.56 |
| 43-1 | 1430 1035 750 | 0.72 0.51 0.37 | 0.54 0.38 0.28 |
| 43-3 | 1450 | 0.72 | 0.54 |
| 52-1 | 865 720 555 | 1.10 0.79 0.57 | 0.83 0.59 0.43 |
| 52-3 | 1340 1060 | 1.56 1.22 | 1.17 0.92 |
| 53-1 | 865 720 555 | 1.05 0.45 0.35 | 0.79 0.34 0.26 |
| 53-3 | 1340 1060 | 1.43 1.09 | 1.07 0.82 |
| 63-1 | 920 630 515 | 1.45 1.02 0.83 | - - - |
| 63-3 | 1350 1110 | 1.96 1.61 | - - |

2) Accessories refers to mixing section ATDZ-01 or recirculated air section ATDZ-02, both with filters.

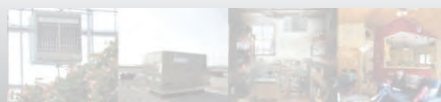
The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

SPEED WITH AUTOMATIC FAN CONTROL, AUTOMATIC UNIT HEATER CONTROL OR FIVE-PHASE VOLTAGE CONTROL

| Voltage | ATDA-31-1 | ATDA-32-1 | ATDA-33-1 | ATDA-42-1 | ATDA-43-1 | ATDA-52-1 | ATDA-53-1 | ATDA-63-1 |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 230 V | 1350 | 1350 | 1350 | 1430 | 1430 | 865 | 865 | 920 |
| 150 V | 1190 | 1190 | 1190 | 1210 | 1030 | 720 | 720 | 595 |
| 130 V | 1035 | 1035 | 980 | 900 | 750 | 555 | 555 | 425 |
| 115 V | 850 | 850 | 850 | 660 | 600 | 455 | 455 | 350 |
| 100 V | 685 | 685 | 680 | 550 | 500 | 365 | 365 | 285 |

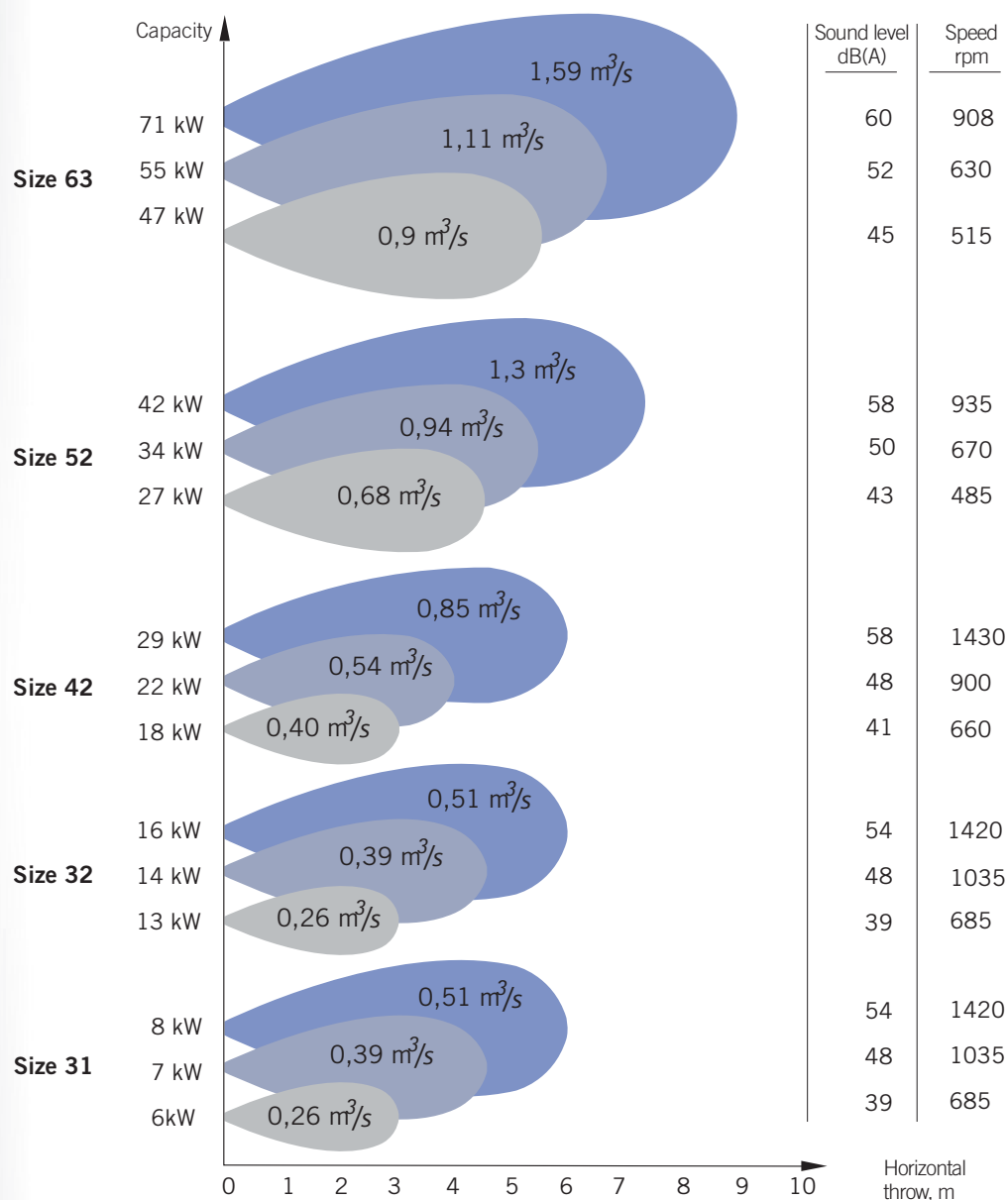
Speed of delivery performance

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side. When calculating capacity, air density at inlet air temperature has been taken into account, which at $\pm 15^\circ\text{C}$ at sea level and normal air pressure is 1.23 kg/m^3 . For a more accurate selection, including for other operating conditions, use the Modine software programme COILS, see page 2.



TECHNICAL SPECIFICATIONS ATDA

OVERVIEW CHART FOR QUICK SELECTION



The above summary chart applies for water temperature 80-60 °C and inlet air temperature of +15 °C with motor type 1-speed 230V (highest speed standard, lower speed is obtained with accessories).

¹⁾ Applies to power variant 1

Careful dimensioning

For a more accurate selection, including for other operating conditions, use the Modine calculation program COILS, see page 2 for more information.

CAPACITY TABLE ATDA - INLET AIR TEMPERATURE $\pm 0^{\circ}\text{C}$

| Size ATDA | Speed RPM | Air flow m^3/s | Heating water | | | | | | | | |
|--------------|--------------|-----------------------------------|--------------------------|--|-------------------|--------------------------|--|-------------------|--------------------------|--|-------------------|
| | | | 70-40 $^{\circ}\text{C}$ | | | 60-30 $^{\circ}\text{C}$ | | | 55-35 $^{\circ}\text{C}$ | | |
| | | | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s |
| 31-1 | 1350 | 0.51 | 6.8 | 10.2 | 0.05 | 4.8 | 7.3 | 0.04 | 5.8 | 8.7 | 0.07 |
| | 1035 | 0.39 | 6.0 | 11.8 | 0.05 | 4.3 | 8.4 | 0.03 | 5.1 | 10.0 | 0.06 |
| | 685 | 0.34 | 5.6 | 12.7 | 0.04 | 4.0 | 9.0 | 0.03 | 4.8 | 10.8 | 0.06 |
| 32-1 | 1350 | 0.45 | 15.6 | 26.7 | 0.12 | 12.1 | 20.7 | 0.10 | 12.9 | 22.1 | 0.16 |
| | 1035 | 0.34 | 13.3 | 30.1 | 0.11 | 10.3 | 23.3 | 0.08 | 11.0 | 24.9 | 0.13 |
| | 685 | 0.30 | 12.3 | 31.6 | 0.10 | 9.6 | 24.5 | 0.08 | 10.2 | 26.2 | 0.12 |
| 33-1 | 1350 | 0.43 | 19.3 | 34.6 | 0.15 | 15.1 | 27.1 | 0.12 | 15.9 | 28.5 | 0.19 |
| | 980 | 0.32 | 15.8 | 38.0 | 0.13 | 12.4 | 29.8 | 0.10 | 13.1 | 31.6 | 0.16 |
| | 685 | 0.22 | 12.0 | 41.9 | 0.10 | 9.4 | 32.9 | 0.08 | 9.9 | 34.7 | 0.12 |
| 42-1 | 1430 | 0.75 | 28.1 | 28.9 | 0.22 | 21.8 | 22.4 | 0.17 | 23.3 | 23.9 | 0.28 |
| | 900 | 0.48 | 21.4 | 34.3 | 0.17 | 16.6 | 26.7 | 0.13 | 17.7 | 28.3 | 0.21 |
| | 600 | 0.35 | 17.2 | 37.9 | 0.14 | 13.4 | 29.6 | 0.11 | 14.2 | 31.3 | 0.17 |
| 42-3 | 1450 | 0.75 | 28.1 | 28.9 | 0.22 | 21.8 | 22.4 | 0.17 | 23.3 | 23.9 | 0.28 |
| 43-1 | 1430 | 0.72 | 34.7 | 37.1 | 0.28 | 27.2 | 29.1 | 0.22 | 28.8 | 30.8 | 0.35 |
| | 1035 | 0.51 | 27.0 | 40.8 | 0.22 | 21.3 | 32.1 | 0.17 | 22.4 | 33.9 | 0.27 |
| | 750 | 0.37 | 21.0 | 43.8 | 0.17 | 16.6 | 34.5 | 0.13 | 17.4 | 36.3 | 0.21 |
| 43-3 | 1450 | 0.72 | 34.7 | 37.1 | 0.28 | 27.2 | 29.1 | 0.22 | 28.8 | 30.8 | 0.35 |
| 52-1 | 865 | 1.10 | 40.1 | 28.1 | 0.32 | 31.0 | 21.7 | 0.25 | 33.3 | 23.3 | 0.40 |
| | 720 | 0.79 | 32.9 | 32.1 | 0.26 | 25.5 | 24.9 | 0.20 | 27.3 | 26.6 | 0.33 |
| | 555 | 0.57 | 26.6 | 36.0 | 0.21 | 20.7 | 27.9 | 0.17 | 22.0 | 29.7 | 0.26 |
| 52-3 | 1340 | 1.56 | 48.5 | 23.9 | 0.39 | 37.4 | 18.5 | 0.30 | 40.3 | 19.9 | 0.48 |
| | 1060 | 1.22 | 42.5 | 26.8 | 0.34 | 32.9 | 20.7 | 0.26 | 35.3 | 22.3 | 0.42 |
| 53-1 | 865 | 1.05 | 49.4 | 36.3 | 0.40 | 38.7 | 28.4 | 0.31 | 41.1 | 30.1 | 0.49 |
| | 720 | 0.45 | 26.0 | 44.5 | 0.21 | 20.5 | 35.0 | 0.16 | 21.6 | 36.9 | 0.26 |
| | 555 | 0.35 | 21.0 | 46.2 | 0.17 | 16.6 | 36.4 | 0.13 | 17.4 | 38.3 | 0.21 |
| 53-3 | 1340 | 1.43 | 60.5 | 32.6 | 0.48 | 47.3 | 25.5 | 0.38 | 49.2 | 26.5 | 0.56 |
| | 1060 | 1.09 | 50.7 | 35.8 | 0.41 | 39.7 | 28.0 | 0.32 | 42.1 | 29.8 | 0.51 |
| 63-1 | 920 | 1.45 | 70.0 | 37.2 | 0.56 | 54.8 | 29.1 | 0.44 | 57.8 | 30.7 | 0.69 |
| | 630 | 1.02 | 55.1 | 41.6 | 0.44 | 43.3 | 32.7 | 0.35 | 45.4 | 34.2 | 0.54 |
| | 515 | 0.83 | 47.4 | 44.0 | 0.38 | 37.3 | 34.6 | 0.30 | 39.0 | 36.2 | 0.47 |
| 63-3 | 1350 | 1.96 | 84.4 | 33.2 | 0.68 | 65.9 | 25.9 | 0.53 | 69.8 | 27.4 | 0.84 |
| | 1110 | 1.61 | 74.8 | 35.8 | 0.60 | 58.5 | 28.0 | 0.47 | 61.8 | 29.6 | 0.74 |

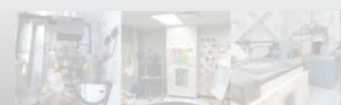
The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing unit without any accessories on the air side. When calculating power, air density at inlet air temperature has been taken into account, which at $\pm 0^{\circ}\text{C}$ is 1.29 kg/m^3 .



CAPACITY TABLE ATDA - INLET AIR TEMPERATURE $\pm 15^{\circ}\text{C}$

| Size ATDA | Speed RPM | Air flow m^3/s | Heating water | | | | | | | | |
|--------------|--------------|--------------------------------|--------------------------|--|-------------------|--------------------------|--|-------------------|--------------------------|--|-------------------|
| | | | 70-40 $^{\circ}\text{C}$ | | | 60-30 $^{\circ}\text{C}$ | | | 55-35 $^{\circ}\text{C}$ | | |
| | | | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s | Capacity kW | $t_{\text{air out}}$ $^{\circ}\text{C}$ | Water flow l/s |
| 31-1 | 1350 | 0.51 | 4.2 | 21.7 | 0.03 | 1.6 | 17.5 | 0.01 | 3.2 | 20.1 | 0.04 |
| | 1035 | 0.39 | 3.7 | 22.7 | 0.03 | 1.4 | 17.8 | 0.01 | 2.8 | 20.5 | 0.03 |
| | 685 | 0.34 | 3.5 | 23.3 | 0.03 | 1.3 | 18.1 | 0.01 | 2.7 | 21.3 | 0.03 |
| 32-1 | 1350 | 0.45 | 10.5 | 33.9 | 0.08 | 6.9 | 27.4 | 0.06 | 7.9 | 29.3 | 0.10 |
| | 1035 | 0.34 | 8.9 | 36.3 | 0.07 | 5.9 | 29.1 | 0.05 | 6.7 | 31.3 | 0.08 |
| | 685 | 0.30 | 8.3 | 37.3 | 0.07 | 5.5 | 29.8 | 0.04 | 6.2 | 31.9 | 0.07 |
| 33-1 | 1350 | 0.43 | 13.0 | 39.5 | 0.10 | 8.8 | 31.6 | 0.07 | 9.8 | 33.6 | 0.12 |
| | 980 | 0.32 | 10.6 | 41.8 | 0.08 | 7.2 | 33.2 | 0.06 | 8.0 | 35.3 | 0.10 |
| | 685 | 0.22 | 8.0 | 44.4 | 0.06 | 5.4 | 35.0 | 0.04 | 6.0 | 37.3 | 0.07 |
| 42-1 | 1430 | 0.75 | 18.9 | 35.4 | 0.15 | 12.4 | 28.5 | 0.10 | 14.3 | 30.5 | 0.17 |
| | 900 | 0.48 | 14.3 | 39.2 | 0.11 | 9.5 | 31.0 | 0.08 | 10.8 | 33.3 | 0.13 |
| | 600 | 0.35 | 11.5 | 41.8 | 0.09 | 7.6 | 32.7 | 0.06 | 8.7 | 35.2 | 0.10 |
| 42-3 | 1450 | 0.75 | 18.9 | 35.4 | 0.15 | 12.4 | 28.5 | 0.10 | 14.3 | 30.5 | 0.17 |
| 43-1 | 1430 | 0.72 | 23.2 | 41.2 | 0.19 | 15.8 | 32.8 | 0.13 | 17.6 | 34.9 | 0.21 |
| | 1035 | 0.51 | 18.1 | 43.8 | 0.14 | 12.3 | 34.5 | 0.10 | 13.7 | 36.8 | 0.16 |
| | 750 | 0.37 | 14.0 | 45.8 | 0.11 | 9.5 | 36.0 | 0.08 | 10.6 | 38.3 | 0.13 |
| 43-3 | 1450 | 0.72 | 23.2 | 41.2 | 0.19 | 15.8 | 32.8 | 0.13 | 17.6 | 34.9 | 0.21 |
| 52-1 | 865 | 1.10 | 26.9 | 34.8 | 0.21 | 17.5 | 28.0 | 0.14 | 20.3 | 30.0 | 0.24 |
| | 720 | 0.79 | 22.0 | 37.6 | 0.18 | 14.4 | 29.8 | 0.12 | 16.6 | 32.1 | 0.20 |
| | 555 | 0.57 | 17.8 | 40.3 | 0.14 | 11.6 | 31.6 | 0.09 | 13.4 | 34.1 | 0.16 |
| 52-3 | 1340 | 1.56 | 32.5 | 31.9 | 0.26 | 21.1 | 26.0 | 0.17 | 24.6 | 27.8 | 0.30 |
| | 1060 | 1.22 | 28.5 | 34.0 | 0.23 | 18.6 | 27.4 | 0.15 | 21.6 | 29.3 | 0.26 |
| 53-1 | 865 | 1.05 | 33.0 | 40.6 | 0.26 | 22.3 | 32.2 | 0.18 | 25.1 | 34.4 | 0.30 |
| | 720 | 0.45 | 17.3 | 46.2 | 0.14 | 11.7 | 36.1 | 0.09 | 13.1 | 38.7 | 0.16 |
| | 555 | 0.35 | 14.0 | 47.4 | 0.11 | 9.4 | 36.9 | 0.08 | 10.6 | 39.5 | 0.13 |
| 53-3 | 1340 | 1.43 | 40.5 | 38.0 | 0.32 | 27.3 | 30.5 | 0.22 | 30.8 | 32.5 | 0.37 |
| | 1060 | 1.09 | 33.9 | 40.3 | 0.27 | 22.9 | 32.0 | 0.18 | 25.7 | 34.2 | 0.31 |
| 63-1 | 920 | 1.45 | 47.2 | 41.4 | 0.38 | 31.8 | 32.8 | 0.25 | 35.6 | 35.0 | 0.43 |
| | 630 | 1.02 | 37.2 | 44.6 | 0.30 | 25.1 | 35.0 | 0.20 | 28.0 | 37.3 | 0.34 |
| | 515 | 0.83 | 32.0 | 46.3 | 0.26 | 21.7 | 36.2 | 0.17 | 24.1 | 38.6 | 0.29 |
| 63-3 | 1350 | 1.96 | 57.0 | 38.6 | 0.46 | 38.2 | 30.8 | 0.31 | 43.0 | 32.8 | 0.52 |
| | 1110 | 1.61 | 50.5 | 40.5 | 0.40 | 33.9 | 32.1 | 0.27 | 38.1 | 34.2 | 0.46 |

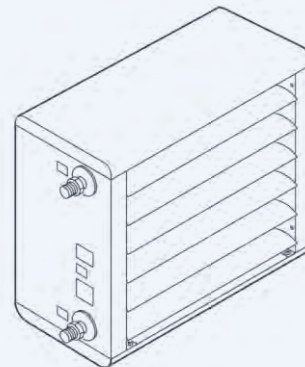
The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side. When calculating capacity, air density at inlet air temperature has been taken into account, which at $\pm 0^{\circ}\text{C}$ is 1.23 kg/m^3 .



TECHNICAL SPECIFICATIONS ATDG

OPERATING DATA ATDG

- Maximum operating temperature: 185°C.
- Maximum operating pressure: 1.0 MPa at a maximum operating temperature of 185°C.
- Test pressure = 1.3 MPa.
- Steam pH value must not fall below 8.5 and should normally be at 9.5.
- Oxygen content - O₂ - should not exceed 0.01 mg/l.
- All heat exchangers are pressure and leak tested with dry air under water.
- Designed and manufactured according to the Pressure Equipment Directive PED/97/23/ec.
- ErP2015-compliant.



SOUND LEVEL, SOUND POWER LEVEL STEAM - ATDG

| Size ATDG | Speed RPM | Noise level ²⁾ dB (A) | Noise level ³⁾ dB (A) | Linear sound power, dB, octave band, centre frequency, Hz | | | | | | |
|--------------|--------------|--|--|--|-----|-----|------|------|------|------|
| | | | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 31-1 | 1350 | 54 | 70 | 66 | 68 | 65 | 63 | 61 | 57 | 48 |
| | 1035 | 48 | 65 | 60 | 62 | 59 | 57 | 55 | 51 | 42 |
| | 685 | 39 | 55 | 51 | 53 | 50 | 48 | 46 | 42 | 33 |
| 41-1 | 1430 | 58 | 74 | 68 | 73 | 65 | 66 | 64 | 57 | 48 |
| | 900 | 48 | 64 | 58 | 63 | 59 | 56 | 54 | 51 | 42 |
| | 600 | 41 | 57 | 51 | 56 | 50 | 49 | 47 | 42 | 33 |
| 41-3 | 1450 | 58 | 74 | 68 | 73 | 70 | 66 | 64 | 61 | 53 |
| 51-1 | 865 | 58 | 74 | 74 | 76 | 64 | 66 | 63 | 58 | 50 |
| | 720 | 50 | 66 | 68 | 66 | 58 | 59 | 57 | 49 | 38 |
| | 555 | 43 | 59 | 61 | 59 | 50 | 52 | 50 | 42 | 31 |
| 51-3 | 1340 | 66 | 82 | 82 | 84 | 73 | 74 | 71 | 66 | 58 |
| | 1060 | 60 | 76 | 76 | 78 | 67 | 68 | 65 | 60 | 52 |

Tolerance ± 2 dB

2) Noise level at a distance of 5 metres, Q = 2, absorption area = 200 m² Sabine.

3) Noise compliant with ISO 3744.

The speeds specified in bold type are for the delivery version without the use of an accessory.

Other speeds are available with accessories.

MOTOR DATA STEAM - ATDG

| Size ATDG | Speed RPM | Nominal capacity W | Rated current (A), 50 Hz | | | Thermal contact | Enclosure class |
|--------------|-----------------------------------|--------------------------|--------------------------|--------------------|---------------------|--------------------|--------------------|
| | | | 1 Phase 230V | 3 Phase 400 V D | 3 speed 400 V, Y | | |
| 31-1 | 1350 1000 ¹⁾ | 110 | 0,52 | - | - | Yes ²⁾ | IP44 |
| 41-1 | 1430 900 ¹⁾ | 160 | 0,73 | - | - | Yes ²⁾ | IP44 |
| 41-3 | 1450 | 135 | - | - | 0.44 | Yes | IP44 |
| 51-1 | 865 | 220 | 0,97 | - | - | Yes | IP54 |
| 51-3 | 1340 | 710 | - | 1.4 | - | Yes | IP54 |
| | 1060 ¹⁾ | 480 | - | - | 0.8 | | |

1) The speed is achieved by switching the motor, see the wiring diagram in the manual ATD.

2) Connected internally, not retractable.

The speeds specified in bold type are for the delivery version without the use of an accessory.

Other speeds are available with accessories.

THROW, HORIZONTAL STEAM - ATDG

| Size ATDG | Speed RPM | Simple air deflector Throw, m L _{0,2} |
|--------------|--------------|--|
| 31-1 | 1350 | 5.8 |
| | 1035 | 4.5 |
| | 685 | 3.0 |
| 41-1 | 1430 | 6.0 |
| | 900 | 4.0 |
| | 600 | 3.0 |
| 41-3 | 1450 | 6.0 |
| 51-1 | 865 | 7.3 |
| | 720 | 5.3 |
| | 555 | 3.7 |
| 51-3 | 1340 | 10.1 |
| | 1060 | 8.1 |



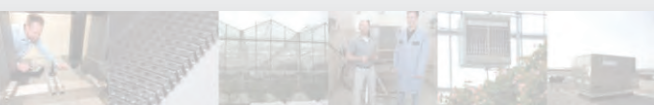
The throw indicated applies to a supply air temperature of +40 °C and indoor temperature of +18 °C. Air deflector is fitted horizontally.

Premises is completely free from disturbance from air draughts and nearby furnishings.

L = 0.2 perpendicular distance from the fan-assisted unit heater at velocity v = 0.2m/s.

The speeds specified in bold type are for the delivery version without the use of an accessory.

Other speeds are available with accessories.



SPEED WITH AUTOMATIC FAN CONTROL, AUTOMATIC UNIT HEATER CONTROL OR THREE-STEP SWITCH – VOLTAGE CONTROL

| Voltage | ATDG-31-1 | ATDG-41-1 | ATDG-51-1 |
|--------------|-----------|-----------|-----------|
| 230 V | 1350 | 1430 | 865 |
| 150 V | 1190 | 1210 | 720 |
| 130 V | 1035 | 900 | 555 |
| 115 V | 850 | 660 | 455 |
| 100 V | 685 | 550 | 365 |

= speed of unit supplied

The accessories ATDZ-15-4 (Automatic fan, unit heater control), ATDZ-24-3 and ATDZ-25-3 and ATDZ-33 include a transformer which, besides 230 V output current, has five lower voltages for lower speed. The ATDZ-15-4 (Automatic fan control) and ATDZ-24-3 and ATDZ-33 (3-step manual switch) operate with 3 different voltages. These accessories are factory-wired to obtain the appropriate speed for each step. The table shows the factory-wired voltages and corresponding speed. The speed can be altered by reconnecting the flexible connections on the transformer. Detailed wiring diagrams for motors and accessories are available in the manual for ATD.

CAPACITY TABLE ATDG - INLET AIR TEMPERATURE $\pm 0^{\circ}\text{C}$

| Size ATDG | Speed RPM | Air flow m^3/s | Steam | | | | | | | |
|--------------|--------------|-----------------------------------|-------------------|----------------------------|-------------------|----------------------------|-------------------|----------------------------|-------------------|----------------------------|
| | | | 110 °C/1.4 bar(a) | | 130 °C/2.7 bar(a) | | 150 °C/4.7 bar(a) | | 170 °C/7.9 bar(a) | |
| | | | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C |
| 31-1 | 1350 | 0.51 | 13.4 | 20.2 | 15.8 | 23.9 | 18.3 | 27.7 | 20.8 | 31.4 |
| | 1035 | 0.39 | 12.0 | 23.7 | 14.2 | 28.1 | 16.5 | 32.5 | 18.7 | 36.9 |
| | 685 | 0.26 | 10.2 | 30.1 | 12.1 | 35.7 | 14.0 | 41.3 | 15.9 | 47.0 |
| 41-1 | 1430 | 0.85 | 27.3 | 24.7 | 32.3 | 29.3 | 37.4 | 33.9 | 42.5 | 38.5 |
| | 900 | 0.54 | 22.6 | 32.2 | 26.8 | 38.2 | 31.0 | 44.2 | 35.3 | 50.3 |
| | 600 | 0.40 | 19.9 | 38.3 | 23.6 | 45.5 | 27.4 | 52.7 | 31.2 | 60.0 |
| 41-3 | 1450 | 0.85 | 27.3 | 24.7 | 32.3 | 29.3 | 37.4 | 33.9 | 42.5 | 38.5 |
| 51-1 | 865 | 1.30 | 40.7 | 24.1 | 48.2 | 28.6 | 55.8 | 33.1 | 63.4 | 37.6 |
| | 720 | 0.94 | 35.6 | 29.2 | 42.2 | 34.6 | 48.9 | 40.0 | 55.6 | 45.5 |
| | 555 | 0.68 | 31.0 | 35.2 | 36.8 | 41.7 | 42.7 | 48.3 | 48.5 | 55.0 |
| 51-3 | 1340 | 1.84 | 46.8 | 19.6 | 55.4 | 23.2 | 64.0 | 26.8 | 72.7 | 30.4 |
| | 1060 | 1.44 | 42.4 | 22.7 | 50.3 | 26.9 | 58.1 | 31.1 | 66.0 | 35.3 |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side. When calculating capacity, air density at inlet air temperature has been taken into account, which at $\pm 0^{\circ}\text{C}$ is 1.29 kg/m^3 .

CAPACITY TABLE ATDG - INLET AIR TEMPERATURE $+15^{\circ}\text{C}$

| Size ATDG | Speed RPM | Air flow m^3/s | Steam | | | | | | | |
|--------------|--------------|-----------------------------------|-------------------|----------------------------|-------------------|----------------------------|-------------------|----------------------------|-------------------|----------------------------|
| | | | 110 °C/1.4 bar(a) | | 130 °C/2.7 bar(a) | | 150 °C/4.7 bar(a) | | 170 °C/7.9 bar(a) | |
| | | | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C | Capacity kW | t _{air out} °C |
| 31-1 | 1350 | 0.51 | 11.5 | 20.2 | 15.8 | 23.9 | 18.3 | 27.7 | 20.8 | 31.4 |
| | 1035 | 0.39 | 10.3 | 23.7 | 14.2 | 28.1 | 16.5 | 32.5 | 18.7 | 36.9 |
| | 685 | 0.26 | 8.7 | 30.1 | 12.1 | 35.7 | 14.0 | 41.3 | 15.9 | 47.0 |
| 41-1 | 1430 | 0.85 | 27.4 | 24.7 | 32.3 | 29.3 | 37.4 | 33.9 | 42.5 | 38.5 |
| | 900 | 0.54 | 19.4 | 32.2 | 26.8 | 38.2 | 31.0 | 44.2 | 35.3 | 50.3 |
| | 600 | 0.40 | 17.0 | 38.3 | 23.6 | 45.5 | 27.4 | 52.7 | 31.2 | 60.0 |
| 41-3 | 1450 | 0.85 | 23.4 | 37.3 | 28.4 | 42.1 | 33.4 | 46.9 | 38.4 | 51.7 |
| 51-1 | 865 | 1.30 | 34.9 | 36.8 | 42.4 | 41.5 | 49.9 | 46.2 | 57.4 | 50.9 |
| | 720 | 0.94 | 30.5 | 41.4 | 37.1 | 47.0 | 43.7 | 52.7 | 50.3 | 58.4 |
| | 555 | 0.68 | 26.7 | 46.9 | 32.4 | 53.7 | 38.2 | 60.7 | 44.1 | 67.6 |
| 51-3 | 1340 | 1.84 | 40.1 | 32.7 | 48.6 | 36.5 | 57.2 | 40.3 | 65.8 | 44.1 |
| | 1060 | 1.44 | 36.4 | 35.5 | 44.1 | 39.9 | 51.9 | 44.3 | 59.8 | 48.7 |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side. When calculating capacity, air density at inlet air temperature has been taken into account, which at $\pm 15^{\circ}\text{C}$ at sea level and normal air pressure is 1.23 kg/m^3 . For a more accurate selection, including for other operating conditions, use the Modine software programme COILS, see page 2.

PRODUCT DESCRIPTION ATDC

ATDC

ATDC is a combined fan unit heater/cooler and is designed for heating and cooling of industrial, manufacturing, retail and warehouse premises, garages, supermarkets and the like.

SIZES

ATDC unit heater/cooler is available in four different sizes for varying air flow and capacity requirements that cover most operating conditions.

ATDC: 33, 43, 53, 63

HYDROPHILIC FINS

ATDC features a corrosion-proof cooling/heating coil of hydrophilic fins and copper tubes. The hydrophilic fins used for ATDC features a hygroscopic design enables a significantly higher rate of speed over the coil surface compared to aluminium. The hydrophilic fins also boasts better corrosion resistance compared with aluminium fins.

OPENABLE CASING

The ATDC unit cooler/heater features a white lacquered sheet steel or EN 1.4301 stainless steel casing. The casing can be opened for interior cleaning. Roof and base are easily removable with two screws. The pipe connection for water and steam are located in the side of the unit. The motor, impeller and protective grille are designed as a compact and composite unit.

GENERAL SPECIFICATIONS

- Contemporary design with smooth, rounded metal surfaces
- Can be opened for easy internal cleaning
- One air deflector included as standard
- Airflows up to 2.15 m³/s
- Motor for single-phase 230V or 3-phase 400V.
- Complies with EU Safety of Machinery requirements, MD 2006/42/EC
- Wide range of accessories
- Variety of control options

INSTALLATION

ATDC is mounted for horizontal airflow.

MOTOR

The motor is external rotor type. All single-phase fans can be switched between high and low speed. All motors have built in thermal contact, which is retractable for size 43 with 3-phase motor and all larger fans. Protection class IP44 for size 33, 43, and IP54 for 53 and 65. Maximum ambient temperature around the motors is 40 °C.

MATERIALS AND FINISH

Unit casing: Made of white painted hot-galvanized sheet steel, NCS 0502B or EN 1.4301 stainless steel. Drip tray is always supplied as a stainless steel design with drain.

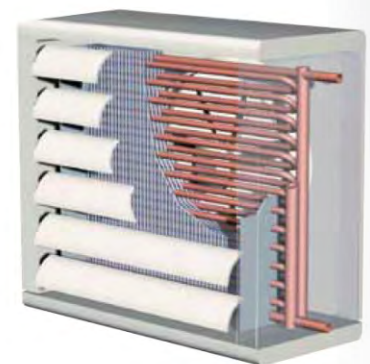
Impeller & protective grille:

Black lacquered steel/wire.

Coil: Copper tubes with hydrophilic fins or materials for corrosive environments. Headers with smooth $\varnothing 22$ mm connection for brazed joints or compression rings.

ACCESSORIES

Modine offers a variety of accessories, see page 27.

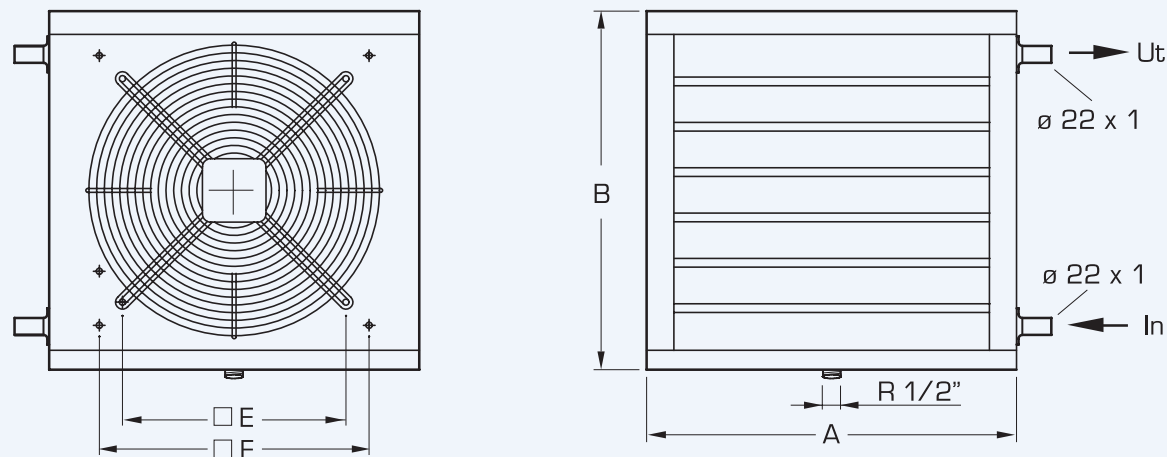


ATDC with hydrophilic fins and copper tubes. Inset shows the cross section of ATDC.



DIMENSIONS & WEIGHT: ATDC

AIR UNIT HEATER/COOLER ATDC

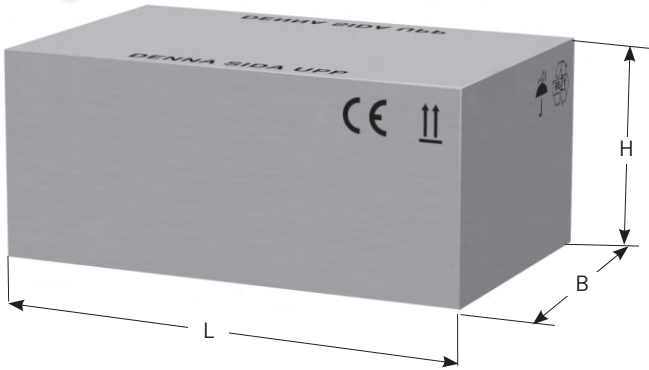


ATDC DIMENSIONS AND WEIGHT (all dimensions in mm)

| Size ATDC | A | B | C | D | E | F | G | H | J | Weight, kg |
|-----------|-----|-----|-----|-----|-----|-----|----|-----|----|------------|
| 33 | 514 | 465 | 270 | 82 | 290 | 350 | 50 | 76 | 81 | 18 |
| 43 | 670 | 632 | 310 | 82 | 355 | 355 | 58 | 89 | 67 | 28 |
| 53 | 770 | 732 | 340 | 100 | 440 | 610 | 58 | 89 | 67 | 47 |
| 63 | 990 | 832 | 370 | 136 | 495 | 740 | 58 | 115 | 70 | 62 |

PACKAGING

The ATDG air unit heater/cooler with accessories is supplied in a corrugated cardboard carton. The fan unit heater is also protected by transparent plastic. CE marked.



PACKAGING ATDC

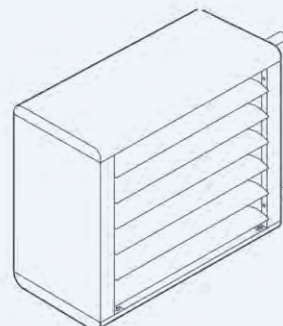
| Size ATDC | L (cm) | B (cm) | H (cm) | Weight (kg) |
|-----------|--------|--------|--------|-------------|
| 33 | 65 | 48 | 40 | 18 |
| 43 | 84 | 64 | 44 | 30 |
| 53 | 94 | 74 | 46 | 45 |
| 66 | 115 | 83 | 57 | 57 |



TECHNICAL SPECIFICATIONS ATDC

OPERATING DATA ATDC

- Maximum ambient temperature around motor = + 60°C.
- Maximum operating pressure: 1.6 MPa at a maximum operating temperature of 100°C.
- Maximum operating pressure: 1.0 MPa at a maximum operating temperature of 150°C.
- All heat exchangers are pressure and leak tested with dry air under water.
- Designed and manufactured according to the Pressure Equipment Directive PED/97/23/ec.
- ErP2015-compliant.



MOTOR DATA - ATDC

| Size ATDC | Speed RPM | Rated output W | Rated current (A), 50 Hz | | | Thermal contact | Protection class |
|-----------|-----------------------------------|----------------|--------------------------|-----------------|------------------|-------------------|------------------|
| | | | 1 Phase 230V | 3 Phase 400 V D | 3 phase 400 V, Y | | |
| 33-1 | 1350 1000 ¹⁾ | 110 | 0,52 | - | - | Yes ²⁾ | IP44 |
| 43-1 | 1430 900 ¹⁾ | 160 | 0,73 | - | - | Yes ²⁾ | IP44 |
| 43-3 | 1450 | 135 | - | 0,44 | - | Yes | IP44 |
| 53-1 | 865 | 220 | 0,97 | - | - | Yes | IP54 |
| 53-3 | 1340 1060 ¹⁾ | 710 480 | - | 1,4 - | - 0,8 | Yes | IP54 |
| 63-1 | 920 | 390 | 1,78 | - | - | Yes | IP54 |
| 63-3 | 1350 1110 ¹⁾ | 1100 760 | - | 2,32 - | - 1,30 | Yes | IP54 |

The speeds specified in bold type are for the delivery version without the use of an accessory.


Other speeds are available with accessories.

1) The speed can be obtained by reswitching the motor, see the wiring diagram in the ATDC manual.

2) Connected internally, not retractable.

SPEED WITH AUTOMATIC UNIT COOLER, HEATER OR THREE-PHASE SWITCH - VOLTAGE CONTROL

| Size ATDC | ATDC-33-1 | ATDC-43-1 | ATDC-53-1 | ATDC-63-1 |
|-----------|-----------|-----------|-----------|-----------|
| 230 V | 1350 | 1430 | 865 | 920 |
| 150 V | 1190 | 1030 | 720 | 595 |
| 130 V | 980 | 750 | 555 | 425 |
| 115 V | 850 | 600 | 455 | 350 |
| 100 V | 680 | 500 | 365 | 285 |

 = speed of unit supplied

Accessory ATDC-38-1 includes a transformer which, besides 230 V output current, has five lower voltages for lower speed. This accessory is factory-wired so that the appropriate speed is obtained for the respective phase. The table above shows the factory-wired voltages and corresponding speed. If for some reason one wishes to alter the speed, this can be achieved by reconnecting the flexible connections on the transformer. Detailed wiring diagrams for motors and accessories are available in the ATDC manual.

AIRFLOW - ATDC

| Size ATDC | Speed RPM | Airflow m ³ /s | Airflow with accessories ²⁾ m ³ /s |
|-----------|-------------|---------------------------|--|
| 33-1 | 1350 | 0.48 | 0.36 |
| | 980 | 0.36 | 0.27 |
| | 685 | 0.25 | 0.17 |
| 43-1 | 1430 | 0.82 | 0.62 |
| | 1035 | 0.58 | 0.44 |
| | 750 | 0.43 | 0.32 |
| 43-3 | 1450 | 0.82 | 0.62 |
| 53-1 | 865 | 1.19 | 0.90 |
| | 720 | 0.51 | 0.38 |
| | 555 | 0.39 | 0.30 |
| 53-3 | 1340 | 1.7 | 1.28 |
| | 1060 | 1.3 | 0.98 |
| 63-1 | 920 | 1.59 | - |
| | 630 | 1.11 | - |
| | 515 | 0.90 | - |
| 63-3 | 1350 | 2.15 | - |
| | 1110 | 1.77 | - |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

2) Accessories refers to mixing section ATDZ-01 or recirculated air section ATDZ-02, both with filters.

-) No mixing section.

TECHNICAL SPECIFICATIONS ATDC

CAPACITY TABLE ATDC - INLET AIR TEMPERATURE $\pm 25^{\circ}\text{C}$ (COOLING)

| Size ATDC | Cooling water, 7-14°C | | | |
|-----------|-----------------------|----------|-------------------------|----------------|
| | Speed RPM | Power kW | t _{air out} °C | Water flow l/s |
| 33-1 | 1350 | 4.6 | 18.3 | 0.14 |
| | 980 | 3.9 | 17.6 | 0.12 |
| | 685 | 3.1 | 16.7 | 0.09 |
| 43-1 | 1430 | 8.2 | 18.1 | 0.24 |
| | 1035 | 6.7 | 17.2 | 0.20 |
| | 750 | 5.5 | 16.5 | 0.16 |
| 43-3 | 1450 | 8.2 | 18.1 | 0.25 |
| 53-1 | 865 | 10.9 | 18.4 | 0.32 |
| | 720 | 6.4 | 16.5 | 0.19 |
| | 555 | 5.3 | 15.9 | 0.16 |
| 53-3 | 1340 | 13.2 | 19.2 | 0.40 |
| | 1060 | 11.4 | 18.6 | 0.34 |
| 63-1 | 920 | 13.9 | 18.6 | 0.41 |
| | 630 | 11.2 | 17.8 | 0.33 |
| | 515 | 9.7 | 17.4 | 0.29 |
| 63-3 | 1350 | 16.4 | 19.2 | 0.49 |
| | 1110 | 14.8 | 18.8 | 0.44 |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side.

CAPACITY TABLE ATDC - INLET AIR TEMPERATURE $\pm 15^{\circ}\text{C}$ (HEATING)

| Size ATDC | Heating water, 55-35°C | | | |
|-----------|------------------------|----------|-------------------------|----------------|
| | Speed RPM | Power kW | t _{air out} °C | Water flow l/s |
| 33-1 | 1350 | 9.4 | 30.9 | 0.11 |
| | 980 | 7.7 | 32.4 | 0.09 |
| | 685 | 5.9 | 34.2 | 0.07 |
| 43-1 | 1430 | 17.0 | 31.8 | 0.20 |
| | 1035 | 13.3 | 33.6 | 0.16 |
| | 750 | 10.6 | 35.1 | 0.13 |
| 43-3 | 1450 | 17.1 | 31.8 | 0.21 |
| 53-1 | 865 | 23.6 | 31.1 | 0.28 |
| | 720 | 12.7 | 35.2 | 0.15 |
| | 555 | 10.2 | 36.3 | 0.12 |
| 53-3 | 1340 | 30.0 | 29.3 | 0.36 |
| | 1060 | 25.1 | 30.7 | 0.30 |
| 63-1 | 920 | 32.0 | 31.3 | 0.38 |
| | 630 | 25.0 | 33.3 | 0.30 |
| | 515 | 21.6 | 34.4 | 0.26 |
| 63-3 | 1350 | 39.0 | 29.7 | 0.47 |
| | 1110 | 34.4 | 30.8 | 0.41 |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories. The table applies to free-blowing units without any accessories on the air side. When calculating capacity, air density at inlet air temperature has been taken into account, which at $\pm 15^{\circ}\text{C}$ is 1.23 kg/m³.

SOUND LEVEL, SOUND POWER LEVEL - ATDC

| Size ATDC | Speed RPM | Sound level ²⁾ dB (A) | Sound power ³⁾ dB (A) | Linear sound power, dB Octave band, centre frequency, Hz | | | | | | |
|-----------|-------------|----------------------------------|----------------------------------|--|-----|-----|------|------|------|------|
| | | | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 33-1 | 1350 | 53 | 69 | 65 | 67 | 64 | 62 | 60 | 56 | 47 |
| | 980 | 47 | 64 | 59 | 61 | 58 | 56 | 54 | 50 | 41 |
| | 685 | 39 | 55 | 51 | 53 | 50 | 48 | 46 | 42 | 33 |
| 43-1 | 1430 | 57 | 73 | 67 | 72 | 69 | 65 | 63 | 60 | 52 |
| | 1035 | 50 | 66 | 60 | 65 | 62 | 58 | 56 | 53 | 45 |
| | 750 | 43 | 59 | 53 | 58 | 55 | 51 | 49 | 46 | 38 |
| 43-3 | 1450 | 67 | 83 | 80 | 82 | 78 | 77 | 75 | 74 | 69 |
| 53-1 | 865 | 58 | 74 | 74 | 76 | 65 | 66 | 63 | 58 | 50 |
| | 720 | 40 | 56 | 58 | 56 | 48 | 49 | 47 | 39 | 28 |
| | 555 | 35 | 51 | 53 | 51 | 43 | 44 | 42 | 34 | 23 |
| 53-3 | 1340 | 66 | 82 | 82 | 84 | 73 | 74 | 71 | 66 | 58 |
| | 1060 | 59 | 75 | 75 | 77 | 66 | 67 | 64 | 59 | 51 |
| 63-1 | 920 | 60 | 76 | 78 | 76 | 71 | 70 | 68 | 68 | 59 |
| | 630 | 52 | 67 | 74 | 65 | 63 | 61 | 61 | 54 | 45 |
| | 515 | 45 | 61 | 68 | 60 | 57 | 56 | 54 | 44 | 34 |
| 63-3 | 1350 | 67 | 83 | 80 | 82 | 78 | 77 | 75 | 74 | 69 |
| | 1110 | 53 | 79 | 79 | 78 | 75 | 73 | 71 | 71 | 65 |

The speeds specified in bold type are for the delivery version without the use of an accessory. Other speeds are available with accessories.

Tolerance ± 2 dB

2) Noise level at a distance of 5 metres, Q = 2, absorption area = 200 m² Sabine.

3) Noise compliant with ISO 3744.

INSTALLATION PACKAGE

In order to make it easier to select control equipment, we have developed packaged solutions for the most common control options. The selected installation package may be combined with other accessories, see the Installation example section. The contents of the installation packages are also sold as separate accessories.



INSTALLATION PACKAGE - USES

- A-Box** – Entrances, gateways, warehouses, garages.
- B-Box** – Entrances, workshops, shopping centres, sports arenas.
- C-box** – Entrances, workshops, shopping centres, sports arenas with higher demands such as outdoor air section, night-time temperature reduction, alarms, network connection or microprocessor substation (0-10 V) control.
- F-box** – Most suitable for use in combination with the C-Box which has ready-to-use connector sockets for anti-frost protection thermostat and actuator motor.
- The F-Box can also be combined with the A-Box. To facilitate wiring, the ATDZ-30 connection device should then be used.

INSTALLATION PACKAGE - INCLUDED COMPONENTS

| Aggregate - control and regulation accessories | A-Box | B-Box | C -Box | F-Box |
|--|-------|-------|--------|-------|
| Air unit heater ATDA | x | x | x | - |
| Mounting bracket | x | x | x | - |
| Mixing section | - | - | - | x |
| Room thermostat | x | - | - | - |
| Automatic fan control, FHC, simple | - | x | - | - |
| Automatic unit heater control ATC, advanced | - | - | x | - |
| Temperature sensor | - | x | x | - |
| Liquid valve | x | x | x | - |
| Anti-frost protection indicator | - | - | - | x |
| Damper motor | - | - | - | x |
| Documentation | x | x | x | x |

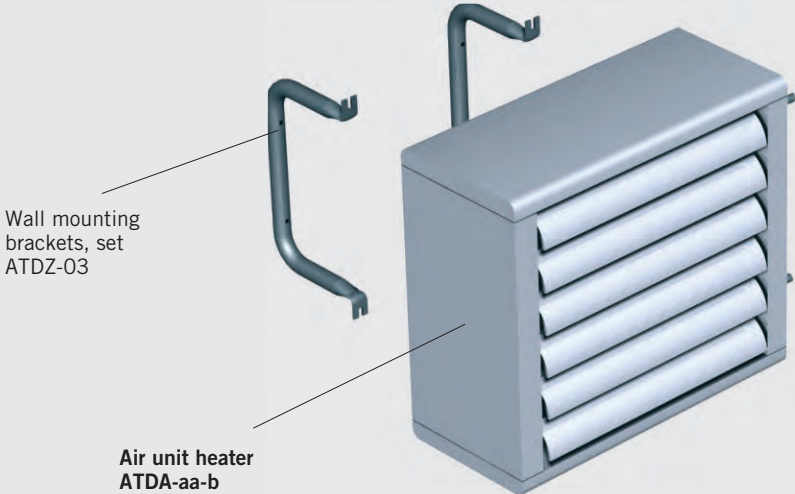
x = included

OVERVIEW, FEATURES

| | |
|--------------|---|
| A-Box | Temperature-steered airflow control on/off with liquid valve on/off. |
| B-Box | Temperature-steered airflow control in 3 phases or off mode with liquid valve on/off. |
| C-Box | Temperature-steered airflow control in 3-phase or off mode with liquid valve on/off. Designed for time control. 0-10 V control. Remote control, network connection, alarm output, anti-frost protection and damper actuators. |
| F-Box | Combined with C-box. Temperature-steered airflow control with exterior air mixing in 3-phase or off position with antifrost protection and damper actuator and liquid valve on/off. |

INSTALLATION PACKAGE STANDARD

STANDARD VERSION (WITHOUT CONTROL EQUIPMENT) CONTAINS:



COMPLETE DELIVERY INCLUDES:

- Air unit heater ATDA-aa-1
- Wall mounting bracket ATDZ-03
- User Guide
Assembly, installation and maintenance instructions.

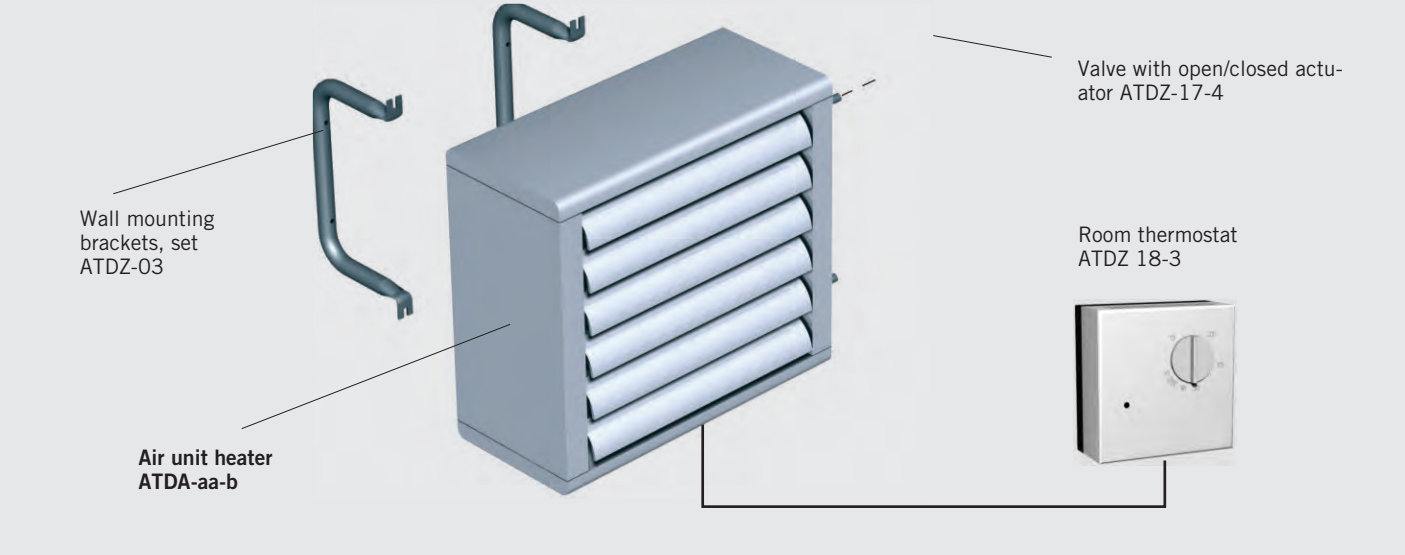
ORDERING EXAMPLE AIR UNIT HEATER

ATDA-aa-b-c-d-e

| | | | | |
|--|--|--|--|--|
| Size (a_) _____ | | | | |
| 31,32, 33, 42, 43, 52, 53, 63 | | | | |
| Capacity variant (_a) _____ | | | | |
| 31, 32, 33, 42, 43, 52, 53, 63 | | | | |
| 1 = High temperature water, low Δt , 1rr 2 = Low temperature water, high Δt , 2rr 3 = Low-temperature water, high Δt , 3rr | | | | |
| Motor (b) _____ | | | | |
| 1 = 1 x 230 V, 50Hz 3 = 3x400 V, 50Hz 5 = 500 V, size 42,43,52,53 6 = EEx e (increased safety), size 42,43,52,53 | | | | |
| Material (c) _____ | | | | |
| Control (d) _____ 0 = without control | | | | |
| Design number (e) _____ | | | | |
| 3 = Internal code | | | | |

INSTALLATION PACKAGE A-BOX

A-BOX CONTAINS:



FUNCTION

A-Box is suitable for entrances, ports, warehouses, garages, etc. If heating is needed, the room thermostat starts the heater and opens the liquid valve. Once the set temperature has been reached, the liquid valve closes and the fan stops.

COMPLETE DELIVERY OF A-BOX CONTAINS:

Fan unit heater **ATDA-aa-1**
aa = desired size: 31, 32, 33, 42, 43, 52, 53, 63

Room thermostat **ATDZ-18-3**
IP 30, 1 phase, 230 V, 16 A.

Valve with actuator, open/closed **ATDZ-17-4**
IP 54, 1 phase, 230 V, temperature range 2-110 °C, kvs 4.0, on/off, time 10 seconds.

User Guide
Assembly, installation and maintenance instructions.

ORDERING EXAMPLE

AIR UNIT HEATER **ATDA-aa-1-c-A-e**

Size (a_) _____
31, 32, 33, 42, 43, 52, 53, 63

Capacity variant (_a) _____
31, 32, 33, 42, 43, 52, 53, 63
1 = high-temperature water, low Δt , 1rr
2 = Low-temperature water, high Δt , 2rr
3 = low-temperature water, high Δt , 3rr

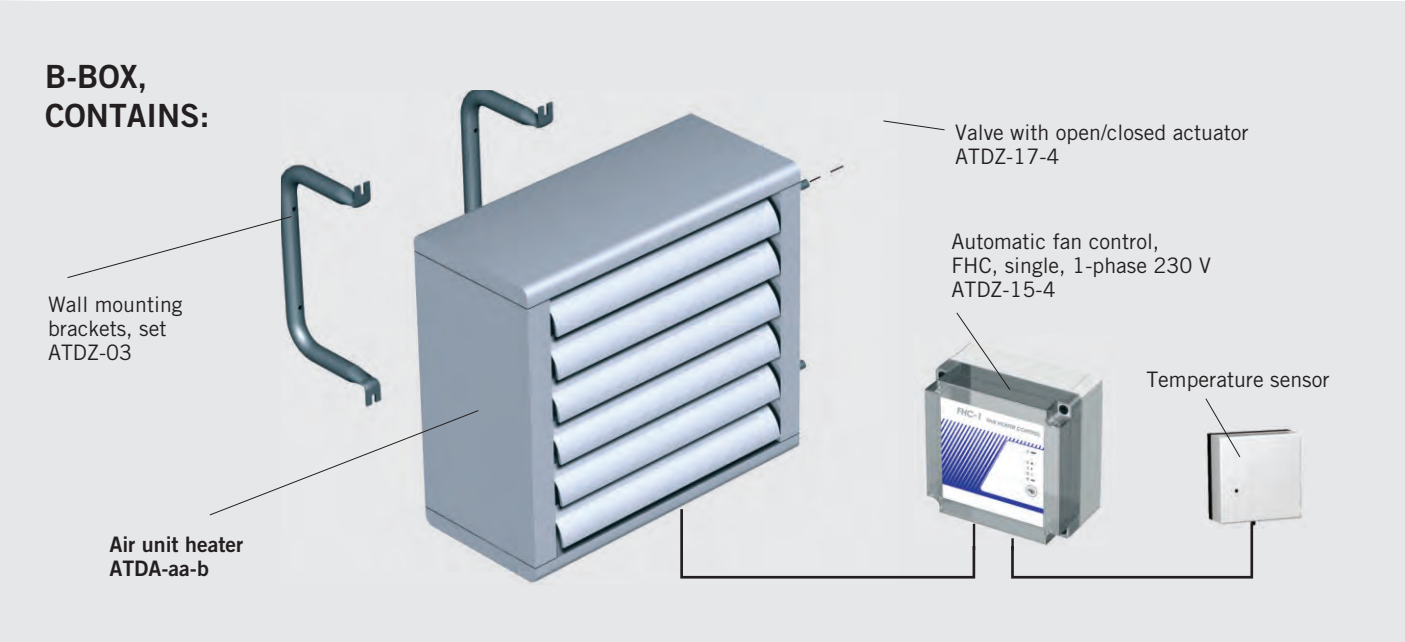
Motor (b) _____
1 = 1 x 230 V, 50 Hz

Material (c) _____

Control (d) _____
A = A-Box

Construction number (e) 3 = Internal code _____

INSTALLATION PACKAGE B-BOX



FUNCTION

B-box is suitable for entrances, workshops, shopping centres and sports centres.

When heating is needed, the liquid valve and temperature sensor guide the fan up or down using the automatic fan control in three fixed steps to maintain the set temperature.

When no heating is needed, the liquid valve closes and the fan stops.

Fan speed can also be adjusted manually in three speeds or stopped. The control LED indicates when the valve is open and which function is selected.

For alternative speeds, see page 9.

COMPLETE DELIVERY OF B-BOX CONTAINS:

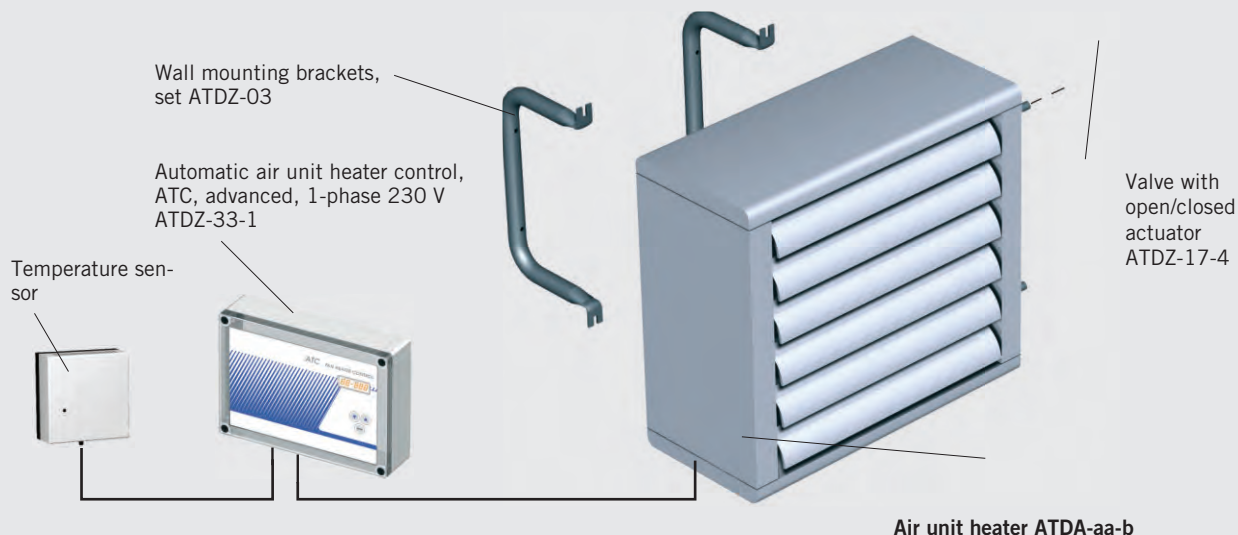
- | | |
|--|------------------|
| Air unit heater | ATDA-aa-1 |
| aa = desired size: 31, 32, 33, 42, 43, 52, 53, 63 | |
| Automatic fan control, FHC, simple | ATDZ 15-4 |
| IP 54, 1-phase 230 V, 2 A. | |
| Temperature sensor | |
| IP 30 | |
| Valve with actuator, open/closed | ATDZ-17-4 |
| IP 54, 1-phase 230 V, temperature range 2-110 °C, kvs 4.0, on/off, time 10 seconds. | |
| User Guide | |
| Assembly, installation and maintenance instructions. | |

ORDERING EXAMPLE

| | |
|--|------------------------|
| AIR UNIT HEATER | ATDA-aa-1-c-B-e |
| Size (a_) _____ | |
| 31,32, 33, 42, 43, 52, 53, 63 | |
| Capacity variant (_a) _____ | |
| 31, 32, 33, 42, 43, 52, 53, 63 | |
| 1 = high-temperature water, low Δt , 1rr | |
| 2 = Low-temperature water, high Δt , 2rr | |
| 3 = low-temperature water, high Δt , 3rr | |
| Motor (b) _____ | |
| 1 = 1-phase 230 V, 50Hz. | |
| Material (c) _____ | |
| Control (d) _____ | |
| A = B-Box | |
| Design number (e) _____ | |
| 3 = Internal code | |

INSTALLATION PACKAGE C-BOX

C-BOX CONTAINS:



FUNCTION

C-box is suitable for entrances, garages, shopping malls, sports arenas with higher demands such as outdoor air section, night-time temperature reduction, alarms, network connection or micro-processor substation (0-10 V) control. When heating is needed, the liquid valve and temperature sensor guide the fan up or down using the automatic fan control in three fixed steps to maintain the set temperature. When no heating is needed, the liquid valve closes and the fan stops. Set temperature is shown on the display. Control unit is prepared for the following accessories: Alarm indicator for external alarm, timer for day/night operation, remote control via wire or infra-red light, damper motor, frost protection thermostat, network connection. Software for connection to computer is included, LAN, 0-10 V signal (DUC). *For alternative speeds, see page 9.*

COMPLETE DELIVERY OF C-BOX CONTAINS:

Air unit heater **ATDA-aa-1**
aa = desired size: 31, 32, 33, 42, 43, 52, 53, 63

Automatic air unit heater control, ATC, advanced **ATDZ-33-1**
IP 54, 1-phase 230 V, 2 A.

Temperature sensor IP 30

Valve with actuator, open/closed **ATDZ-17-4**
IP 54, 1-phase 230 V, temperature range 2-110 °C, kvs 4.0, on/off, time 10 seconds.

User Guide

Assembly, installation and maintenance instructions.

ORDERING EXAMPLE

AIR UNIT HEATER

ATDA-aa-1-c-C-e

Size (a_) _____
31, 32, 33, 42, 43, 52, 53, 63

Capacity variant (_a) _____
31, 32, 33, 42, 43, 52, 53, 63

1 = high-temperature water, low Δt , 1rr
2 = Low-temperature water, high Δt , 2rr
3 = low-temperature water, high Δt , 3rr

Motor (b) _____
1 = 1-phase 230 V, 50Hz.

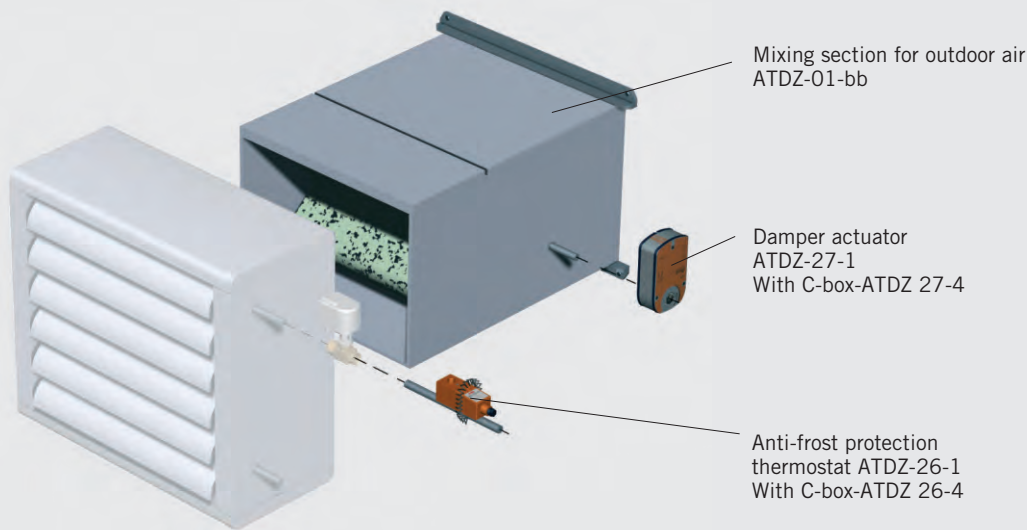
Material (c) _____

Control (d) _____
C = C-Box

Design number (e) _____
3 = Internal code

INSTALLATION PACKAGE F-BOX

F-BOX CONTAINS:



FUNCTION

At startup, the liquid valve opens before the damper motor and the fan start. When the control unit detects excessively low temperature from the freeze protection thermostat, the outdoor air damper closes first. If the return temperature does not increase, the fan motor stops and the liquid valve opens while an alarm is emitted. The frost protection thermostat is mounted on the heater return line. The F-box is best combined with a C-box which has ready connections for a frost protection thermostat and damper motor. The F-box can also be combined with the A-box. To facilitate wiring, the ATDZ-30 connection device should then be used, see section: Accessories, control equipment. When the anti frost protection is triggered, the damper closes and the motor stops while the liquid valve opens.

COMPLETE DELIVERY OF F-BOX CONTAINS:

Mixing section for outdoor air **ATDZ-01-bb**
bb = desired size: 30, 40, 50

Anti-frost protection thermostat **ATDZ-26-1**

Damper actuator **ATDZ-27-1**

User Guide

Assembly, installation and maintenance instructions.

ORDERING EXAMPLE

MIXING SECTION

ATDZ-aa-F-b-c

Size (aa) _____
30, 40, 50

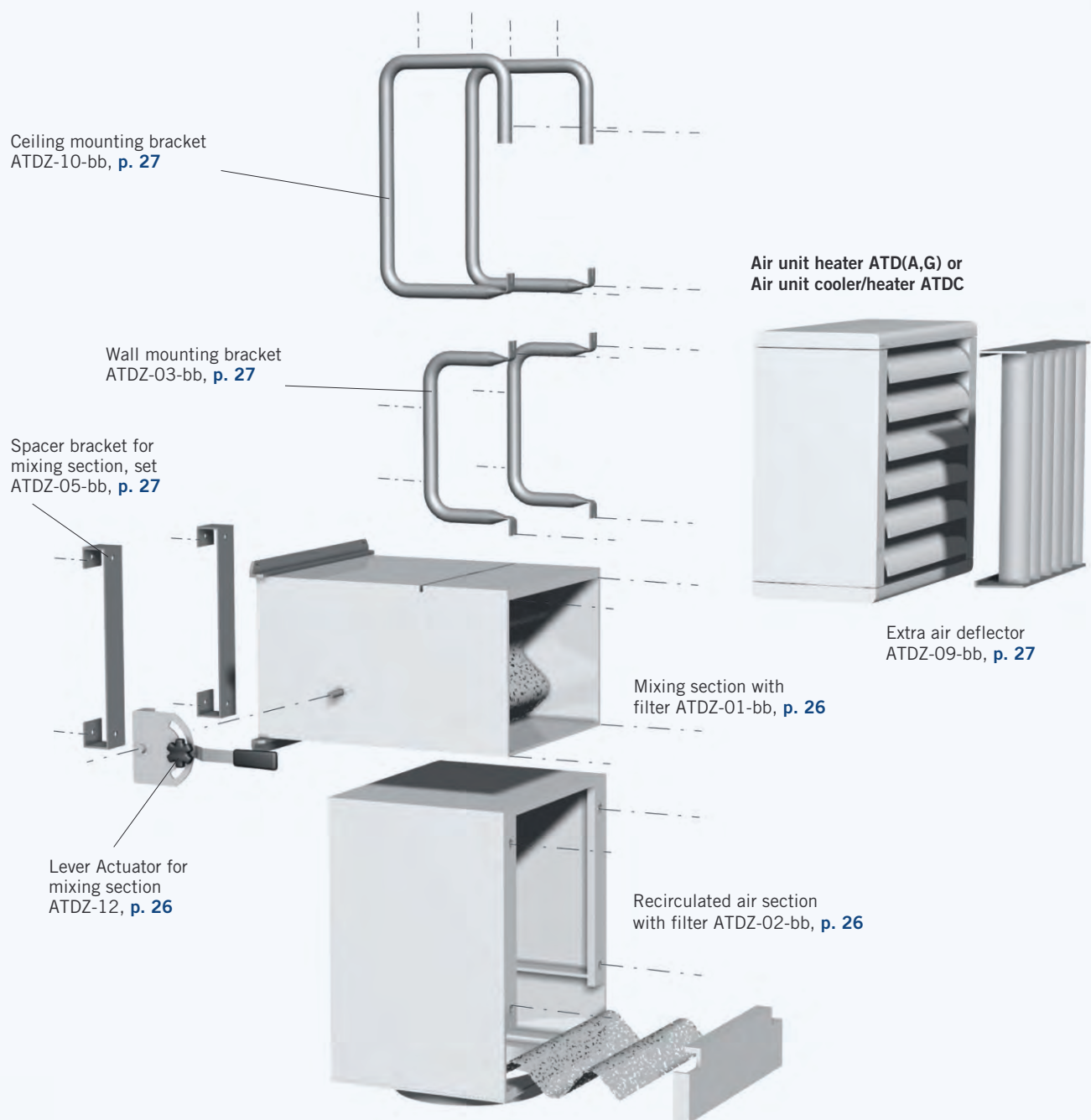
Type (b) _____
A = for installation package A-box
C = for installation package C-box

Construction number (C) _____
3 = Internal code



ACCESSORIES FOR ATD (A,G,C)

Accessories for Air unit heater ATDA
Air unit heater ATDG
Air unit heater/cooler ATDC



ACCESSORIES FOR ATD (A,G,C)

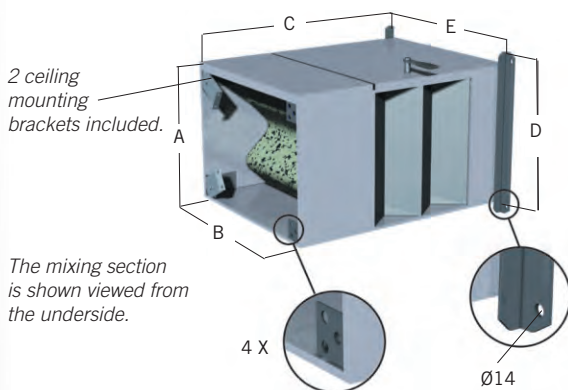
MIXING SECTION WITH FILTER, ATDZ-01-BB

Consists of a white painting casing of the the same type as for the fan unit heater, internally insulated with non-combustible insulation. The damper is uninsulated. The mixing section has a short pleated disposable filter, easily replaceable through the inspection cover on the top or bottom.

The filter material is flame retardant polyester in filter class G85 according to VVS AMA 98 (EU3. according to EUROVENT 4/5). A sector valve regulates air flow through the inlet openings for outdoor and return air. The damper is not completely tight fitting. The damper shaft protrudes on both sides of the mixing section, so that the actuator can be placed on either side. Max. torque control of the damper is 0.5 Nm for all sizes.

The mixing section is normally mounted with a horizontal spindle. If there is no risk that the damper will become frozen in place, the mixing section can be fitted with vertical spindle. The mixing section is secured to the unit with the supplied screws. The inlet side features clearance holes in the brackets for the mixing section wall mounting. A mounting bracket of galvanised plate steel and screws for fitting to the front edge of the mixing section are supplied.

NOTE When the mixing section is combined with automatic fan control in a cold climate, anti-frost thermostat ATDZ-26-1 and damper actuator ATDZ-27-1 must be used.



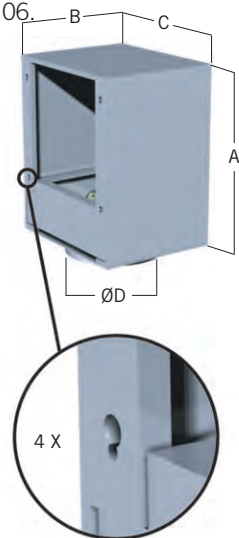
| Size (bb) | A | B | C | D | E | Weight (kg) |
|-----------|-----|-----|------|-----|-----|-------------|
| 30 | 428 | 428 | 790 | 456 | 456 | 23 |
| 40 | 608 | 608 | 980 | 636 | 636 | 40 |
| 50 | 708 | 708 | 1080 | 736 | 736 | 50 |
| 60 | - | - | - | - | - | - |

RECIRCULATED AIR SECTION WITH FILTER, ATDZ-02-BB

Consists of a white painted uninsulated casing, the same type as for the fan unit heater. Delivered fully assembled. The return air section has a short pleated filter, disposable, easily replaceable through the inspection cover on the front. The filter material is flame retardant polyester in filter class G85 in accordance with VVS AMA 98 (EU3. according to EUROVENT 4/5).

For connection on the air side, there is a spigot that fits to circular duct standard SIS 82 72 06.

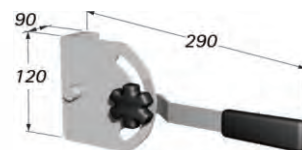
The return air section both provides a filter and gives increased air circulation when a duct is mounted, as the temperature gradient in the premises is utilized for maximum heating.



| Size (bb) | Dimensions (mm) | | | | | Weight (kg) |
|-----------|-----------------|-----|-----|-----|-----|-------------|
| | A | B | C | D | E | |
| 30 | 550 | 370 | 390 | 315 | 350 | 12 |
| 40 | 710 | 550 | 570 | 500 | 520 | 21 |
| 50 | 810 | 550 | 670 | 500 | 610 | 26 |
| 60 | - | - | - | - | - | - |

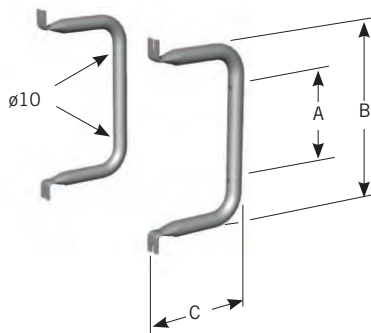
LEVER ACTUATOR FOR MIXING SECTION, ATDZ-12

For mixing section ATDZ-01-bb. For manual control of airflow through the inlet openings for outdoor air and return air. Made of hot-galvanized sheet steel with locking knob for securing the desired position.



WALL MOUNTING BRACKETS, SET, ATDZ-03-BB

For attachment to the wall of air unit heaters without mixing or return air section. The brackets are supplied as pairs, to be secured to the inlet side of the unit. Mounting screws are supplied. The bracket is made of tubular steel and is painted in light grey.

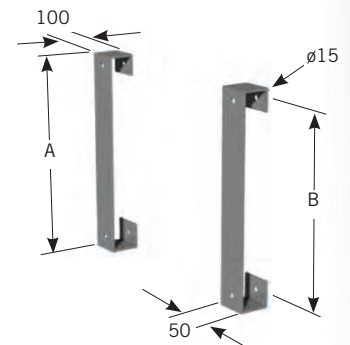


| Size (bb) | Dimensions (mm) | | | Weight, kg per pair |
|-----------|-----------------|-----|-----|---------------------|
| | A | B | C | |
| 30 | 180 | 340 | 200 | 1 |
| 40 | 340 | 500 | 250 | 2 |
| 50 | 440 | 600 | 300 | 3 |
| 60 | 540 | 700 | 300 | 4 |

SPACER MOUNTING BRACKETS FOR MIXING SECTION, SET, ATDZ-05-BB

For hanging devices with mixing section at the return air inlet from the back side. The brackets are supplied as pairs. Bolts and nuts for mounting are supplied.

The bracket is made of flat bar and is painted in light grey.

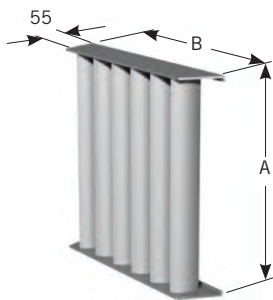


| Size (bb) | Dimensions (mm) | | Weight, kg per pair |
|-----------|-----------------|-----|---------------------|
| | A | B | |
| 30 | 516 | 456 | 3,5 |
| 40 | 696 | 636 | 4 |
| 50 | 796 | 736 | 4,5 |
| 60 | - | - | - |

EXTRA AIR DEFLECTOR, ATDZ-09-BB

Consists of a frame and a number of adjustable blades. Frame and air deflector blades are made of anodised aluminium. Mounted on the air unit heater with supplied metal screw.

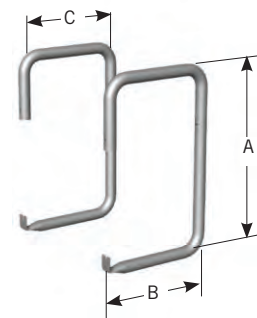
NOTE Horizontal air deflector is supplied with the fan unit heater ATD.



| Size (bb) | Dimensions (mm) | | Weight (kg) |
|-----------|-----------------|-----|-------------|
| | A | B | |
| 30 | 404 | 436 | 1 |
| 40 | 554 | 586 | 2 |
| 50 | 654 | 686 | 3 |
| 60 | 742 | 686 | 3 |

CEILING MOUNTING BRACKETS, SETS, ATDZ-10-BB

For attachment to the upper edge of fan unit heaters without mixing or return air section. The brackets are supplied in pairs, to be secured to the inlet side of the device. Mounting screws are supplied. The bracket is made of tubular steel and painted in light grey.



| Size (bb) | Dimensions (mm) | | | Weight, kg per pair |
|-----------|-----------------|-----|-----|---------------------|
| | A | B | C | |
| 30 | 590 | 360 | 200 | 3 |
| 40 | 750 | 450 | 290 | 4 |
| 50 | 850 | 500 | 340 | 5 |
| 60 | - | - | - | - |

CONTROL & REGULATION EQUIPMENT, OVERVIEW

CONTROL AND REGULATION EQUIPMENT



Automatic fan control,
simple, FHC.

ATDZ-15-4 p. 31
(included in B-box)



Automatic air unit heater control,
advanced, ATC.

ATDZ-33-1 p. 31
(included in C-box)

ACCESSORIES, CONTROL AND REGULATION EQUIPMENT



Speed selector
ATDZ-13-1 p. 32



Valve with thermal actuator
ATDZ-17-3 p. 32



Valve with actuator
ATDZ-17-4 p. 32
(included in A, B, C-box)



Room thermostat for fan operation
ATDZ-18-3 p. 32
(included in A-box)



Room thermostat for fan operation
ATDZ-19-3 p. 32



Remote control for ATC
ATDZ-21-4 p. 33



Timer for ATC
ATDZ-22-3 p. 33



Speed selector
ATDZ-24-3 p. 33



Transformer
ATDZ-25-3 p. 33



Frost protection thermostat
ATDZ-26-1 p. 34



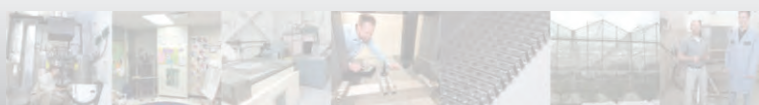
Damper actuator
ATDZ-27-1 p. 34



Connection unit
ATDZ-30-1 p. 34



Temperature sensor RG Moisture
ATDZ-35-1
ATDZ-35-2 p. 34



CONTROL & REGULATION EQUIPMENT

AUTOMATIC FAN CONTROL FHC-1, SIMPLE, ATDZ-15-4

Included in the B-box installation package. Fan control (ATDZ-15-4) controls the fan speed automatically in three phases, depending on the heating requirement, and stops the fan when no heating is needed. Automatic fan control also controls the liquid valve (ATDZ-17-3, ATDZ-17-4) between the open and closed positions. The desired temperature is set on the internal potentiometer, the temperature sensor which is supplied separately is included. The fan speed can be set manually in three positions, or stopped with the touch buttons on the lid. An LED indicates when the valve is open.

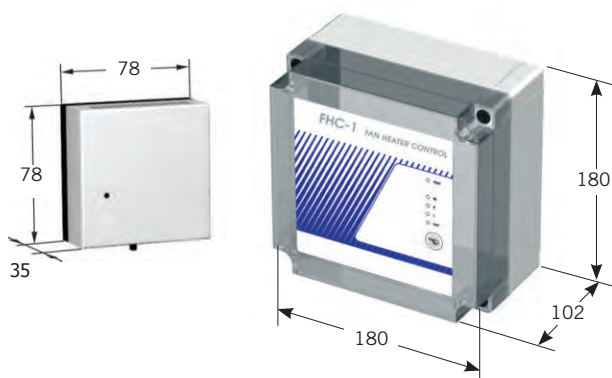
Detailed technical description of regulation:
When the ambient air temperature is 0.4 °C below the set point value, the fan starts at the lowest preset speed. At 0.5 °C below the set point, the connected water valve opens. At 1.5 °C below the set point, the fan switches to intermediate speed. At 2.5 °C below the set point, the fan switches to the highest preset speed.

Automatic fan control is supplied as separate accessories, protection class IP 54.

Temperature sensor IP 30.

Voltage 1-phase 230 V.

Current max 2 A.



AUTOMATIC AIR UNIT HEATER CONTROL ATC, ADVANCED, ATDZ-33-1

Included in the C-box installation package. Air unit heater control (ATDZ-33) controls the fan speed automatically in three phases, depending on the heating requirement, and stops the fan when no heating is needed. The control system also adjusts the liquid valve (17-3 ATDZ-or-ATDZ 17-4) between the open and closed positions. The desired temperature is set via the button on the cover, if the regulation is to regulate to an alternate temperature via a timer (ATDZ-22), this temperature is set as well.

The control system is compatible with the frost protection function, which means that it has an inlet for the frost protection thermostat (ATDZ-26-4). It also controls the damper (ATDZ-27-4) from the open to the closed position, adjustable 0 - 100% fresh air.

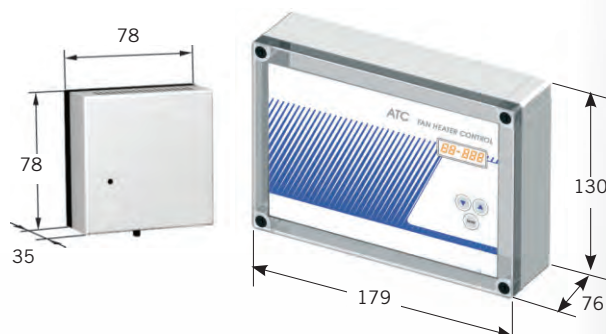
Detailed technical description of regulation:
When the ambient air temperature is 0.4°C below the set point value, the fan starts at the lowest preset speed. At 0.5°C below the set point, the connected water valve opens. At 1.5°C below the set point, the fan switches to intermediate speed. At 2.5°C below the set point, the fan switches to the highest preset speed. The corresponding values for the 0-10 V signal are: 1.5 V - 2 V - 5 V - 8 V. Accessories include remote control via a cable (ATDZ-21-4). The speed control system has provision for control by means of a 0-10 V signal (DUC). An external defect alarm signal inlet can be wired to the control system. Set temperature is shown on the display.

The automatic heater control ATC is supplied mounted on the air heater, protection class IP 54.

The temperature sensor is supplied separately, IP 30.

Voltage 1-phase 230 V.

Current max 2 A.



ACCESSORIES, CONTROL & REGULATION EQUIPMENT

SPEED SWITCH, ATDZ-13-1

For manual switching between speeds and shut-off position on ATDA, size 30, 33 and 44. Plastic casing can be mounted on the wall.

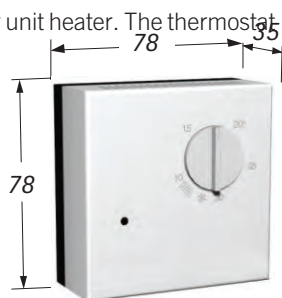
Protection class IP 42.
Voltage 1-phase 230 V.
Max 10 A.



ROOM THERMOSTAT FOR FAN OPERATION, ATDZ-18-3

For starting and stopping the air unit heater. The thermostat can also be wired to ATDZ-24-3 and ATDZ 25-3. Valve with motor ATDZ-17-3 or ATDZ-17-4 can be wired to the thermostat.

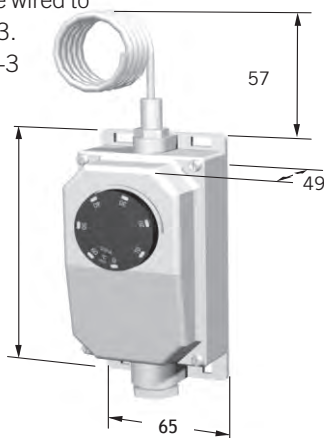
Protection class IP 30.
Voltage 1-phase 230 V.
Current max 16 A.



ROOM THERMOSTAT FOR FAN OPERATION, ATDZ-19-3

For starting and stopping of the air unit heater. The thermostat can also be wired to ATDZ-24-3 and ATDZ 25-3. Valve with motor ATDZ-17-3 or ATDZ-17-4 can be wired to the thermostat.

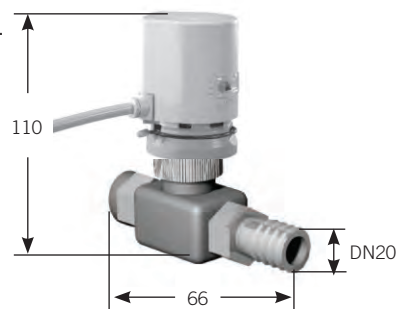
Protection class IP 65.
Voltage 1-phase 230 V.
Current max 10 A.



VALVE WITH THERMAL ACTUATOR, OPEN/CLOSED ATDZ-17-3

For use with ATDZ-15-4, ATDZ-18-3, ATDZ-19-3, ATDZ-24-3, ATDZ-25-3, ATDZ-33. The valve works in the open/closed position. Valve housing made of red brass. Temperature range 2 – 110 °C, kvs 4.0. Thermal actuator. Opening time 4 minutes. Non-energised valve is open. Max. ambient temperature of 50 °C. Adapters for fitting to relevant water connection are supplied. Threaded pipe connection for further pipe routing.

Cable length 1.5 m.
Protection class IP 40.
Voltage 1-phase 230 V.

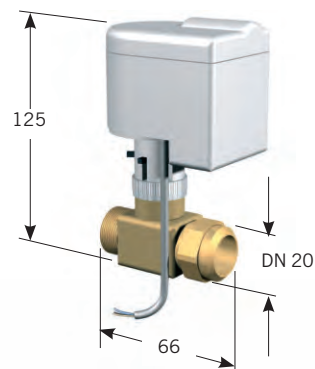


VALVE WITH ACTUATOR, OPEN/CLOSED, ATDZ-17-4

For use with ATDZ-15-4, ATDZ 18-3, ATDZ-19-3, ATDZ-33. The valve works in the open/closed position. Valve housing made of red brass. Temperature range. 2 – 110 °C, kvs 4.0. Motor valve with built-in frost protection, opens 10% in the event of power failure. Opening time: 10 seconds. Non-energised valve is open. Max. ambient temperature 50 °C.

Adapters for fitting to relevant water connection are supplied. Threaded pipe connection for further pipe routing.

Cable length 1.5 m.
Protection class IP 54.
Voltage 1-phase 230 V.



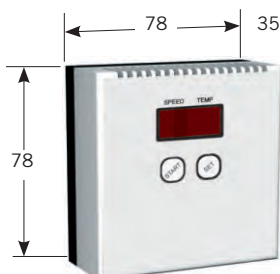
ACCESSORIES, CONTROL & REGULATION EQUIPMENT

REMOTE CONTROL FOR AUTOMATIC TEMPERATURE CONTROL ATDZ-21-4 TO ATDZ-33

For remote control of automatic unit heater ATDZ-33. The desired set point temperature is set on the control unit. Automatic or manual operation and shutoff mode are selected with the use of a button. For manual operation, preset speeds of low, medium or high can be selected. Set point, fan speed and temperature are shown on the display.

Connection cable length 5 m with connector to supplied heater. The connection cable can be extended to 100 m.

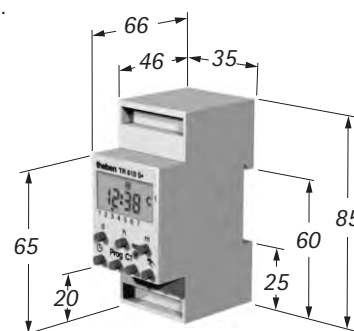
Protection class IP 30.



TIMER FOR AUTOMATIC TEMPERATURE CONTROL ATDZ-22-3

For switching between preset day and night temperatures in ATDZ-33 (Automatic unit heater). The timer enables a connection to a second preset temperature in the automatic unit heater control. This allows for lower temperatures on the premises during nights and weekends to conserve energy. The timer can also be wired to ATDZ-24-3 and ATDZ 25-3.

Current max 10 A.



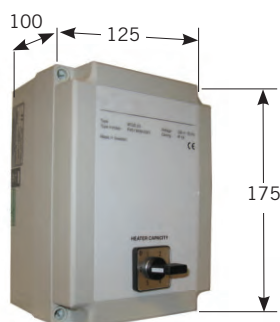
SPEED SWITCH, ATDZ-24-3

For manual switching between five preset speeds and shut-down. The switch has a plastic casing and can be mounted in various locations, including the wall. Valve ATDZ-17-3 and room thermostat ATDZ 18-3 or 19-3 ATDZ and timer ATDZ-22-3 can be connected to the switch. For connection options, see installation examples.

Protection class IP 54.

Voltage 1-phase 230 V.

Max 2 A.



TRANSFORMER, ATDZ-25-3

For obtaining a lower fixed speed than the design speed.

Transformer ATDZ-25-3 max capacity:

3 ATDA 3x, 4x; 2 ATDA 4x; 1 ATDA 5x, 63.

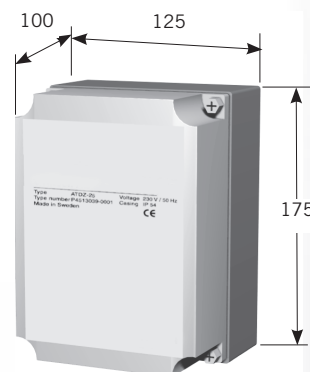
The transformer has a plastic casing. The transformer has provision for connecting an ATDZ-17-3 or ATDZ-17-4 valve, ATDZ-18-3 or ATDZ-19-3 room thermostat and an ATDZ-22-3 timer.

For connection options, see installation examples.

Protection class IP 54.

Voltage 1 x 230 V.

Max 2 A.



ACCESSORIES, CONTROL & REGULATION EQUIPMENT

FROST PROTECTION THERMOSTAT, ATDZ-26-1

For use with mixing section ATDZ-01-bb the thermostat shuts down a connected device in the event of frost risk. Temperature setting takes place under the hood. The thermostat is fitted directly to the return pipe. The attached spring clip is used to affix the thermostat against the pipe.

Temperature range. +20/+90 °C.

Protection class IP 20.

Voltage 1-phase 230 V.

Current max 15 A.



DAMPER ACTUATOR, ATDZ-27-1

For use with mixing section ATDZ-01-bb Spring return actuators used to control the damper to the open or closed position, 0-100%. When electric power is connected to the actuator, the actuator sets itself to the service position and tensions the return spring.

If the power supply is opened, this trips the stored spring energy that returns the damper actuator to its safety position. The actuator is designed for mounting on the damper shaft by means of the universal locking clamp.

The actuator is supplied with pivotal circuit breaker.

The actuator is overload-resistant and stops automatically at preset stops.

Protection class IP 54.

Voltage 1-phase 230 V.



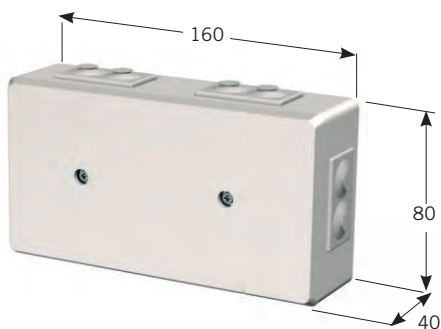
CONNECTION DEVICE, ATDZ-30-1

Connection device for connecting the unit heater together with an ATDZ-18-3 or ATDZ-19-3 room thermostat, ATDZ-17-3 or ATDZ-17-4 valve with actuator, ATDZ-01-bb mixing section, ATDZ-27 damper actuator and an ATDZ-26 anti-frost protection thermostat.

Protection class IP 44.

Voltage 1 x 230 V.

Current max 2 A.

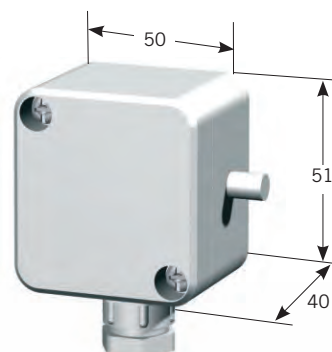


TEMPERATURE SENSOR RG HUMIDITY, ATDZ-35-2

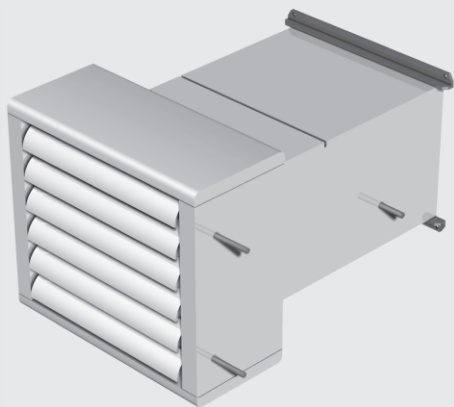
Temperature sensor for humid environment. Used as necessary instead of supplied temperature sensor for the following control conditions:

The ATDZ-35-2 should be used for the ATDZ-15-4 and ATDZ-33-1 Automatic unit heater control, ATC.

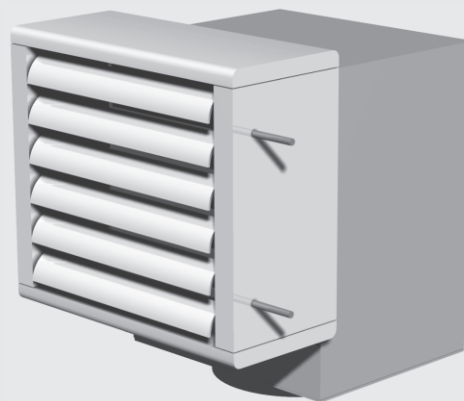
Protection class IP 54.



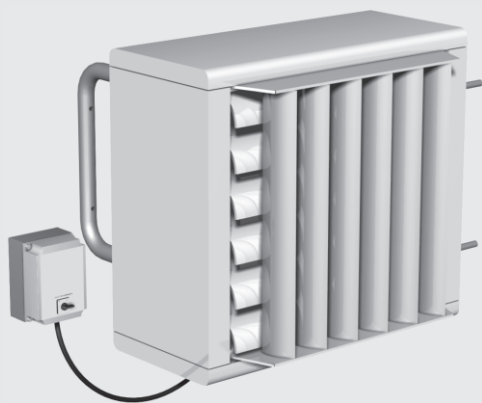
INSTALLATION EXAMPLE



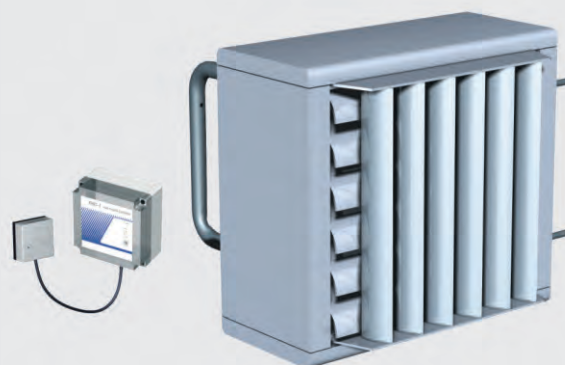
MIXING SECTION WITH FILTER ATDZ-01-BB



**RECIRCULATED AIR SECTION WITH FILTER
ATDZ-02-BB**



**WALL MOUNTING BRACKET ATDZ-03-BB
EXTRA AIR DEFLECTOR ATDZ-09-BB
MANUAL 3-PHASE SPEED SELECTOR ATDZ-24-3**

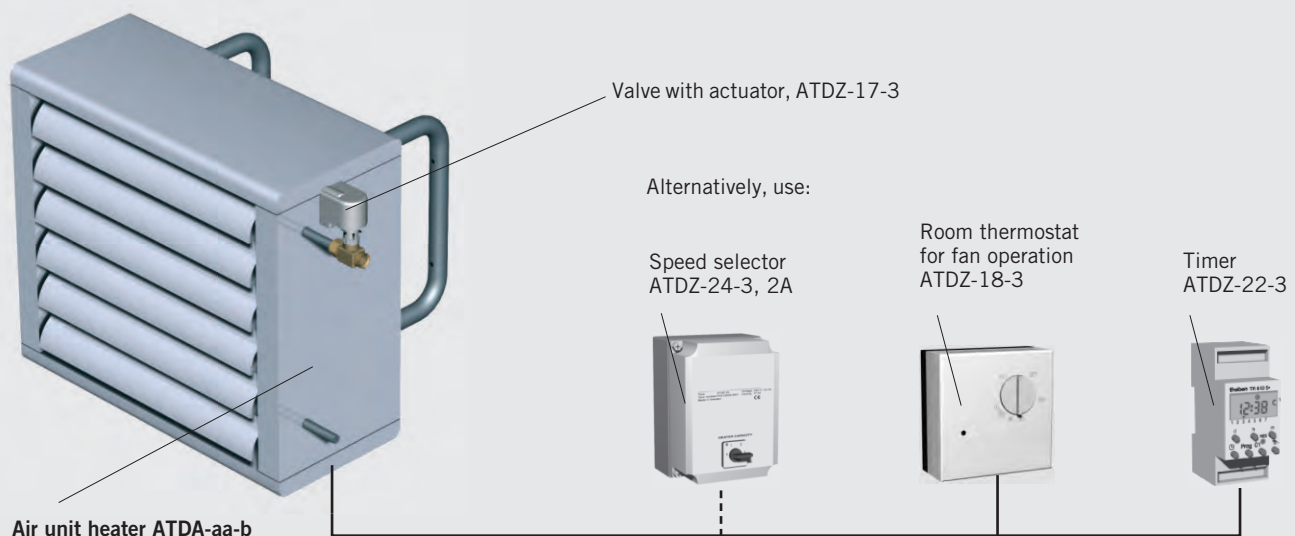


**WALL MOUNTING BRACKET ATDZ-03-BB
AUTOMATIC FAN CONTROL, FHC, SIMPLE ATDZ 15-4
EXTRA AIR DEFLECTOR ATDZ-09-BB**



INSTALLATION EXAMPLE

CONNECTION OPTIONS FOR SPEED SELECTOR ATDZ-24-3



Temperature-controlled airflow control, on/off, fixed speeds with night-time temperature reduction and on/off valve.

Function

The speed switch is used when manually output (speed) setting is desired. Switching takes place between three preset speeds: low, medium, high, and shutdown.

The switch has provision for connecting an ATDZ-17-3 or ATDZ-17-4 valve, ATDZ-18-3 or ATDZ-19-3 room thermostat and an ATDZ-22-3 timer. Simple and cost-effective control equipment for the unit heater can be obtained using the switch and one or several accessories shown above. Several unit heaters can be wired to one and the same speed selector, however the total capacity must not exceed 2A and 9A respectively. See motor data for the relevant sizes.

Voltage 1 x 230 V.

For alternative speeds, see pages 11, 16.

INSTALLATION EXAMPLE

SPEED CONTROL



Air unit heater
ATDA-aa-b

Air unit heater/cooler
ATDC-aa-b

Speed switch,
ATDZ-13-1



FUNCTION

Using the manual speed switch (ATDZ-13-1) speed can be switched between high and medium, or turned off.

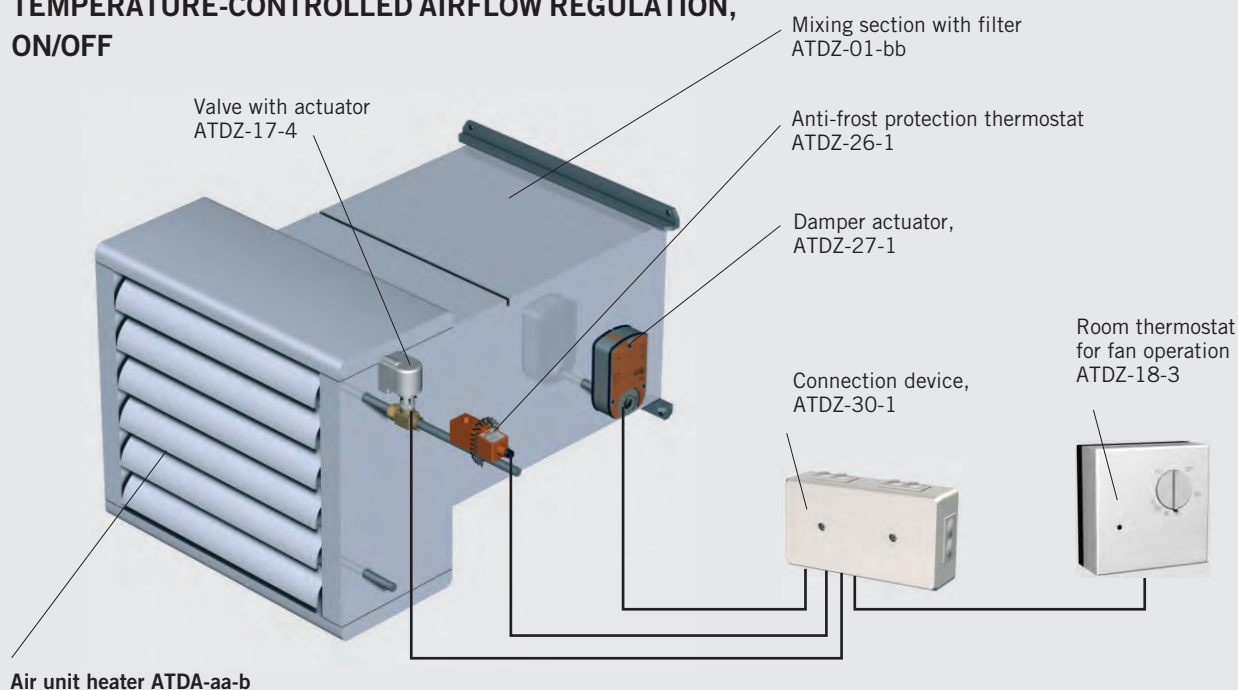
Voltage 1 x 230 V.

Current max 10 A.



INSTALLATION EXAMPLE

TEMPERATURE-CONTROLLED AIRFLOW REGULATION, ON/OFF



Temperature-controlled airflow regulation on/off with outdoor air mixing and frost protection.

FUNCTION

When heating is required, the room thermostat (ATDZ 18-3, ATDZ-19) starts, and the damper motor (ATDZ-27-1) and liquid valve (ATDZ-17-4) open, when heating is not needed, the fan stops and the valve and damper close.

If the frost protection thermostat (ATDZ-26-1) identifies an excessively low return temperature, the fan stops and the damper closes and the liquid valve opens, the connection device (ATDZ-30-1) is used to obtain the correct function and simplify wiring.

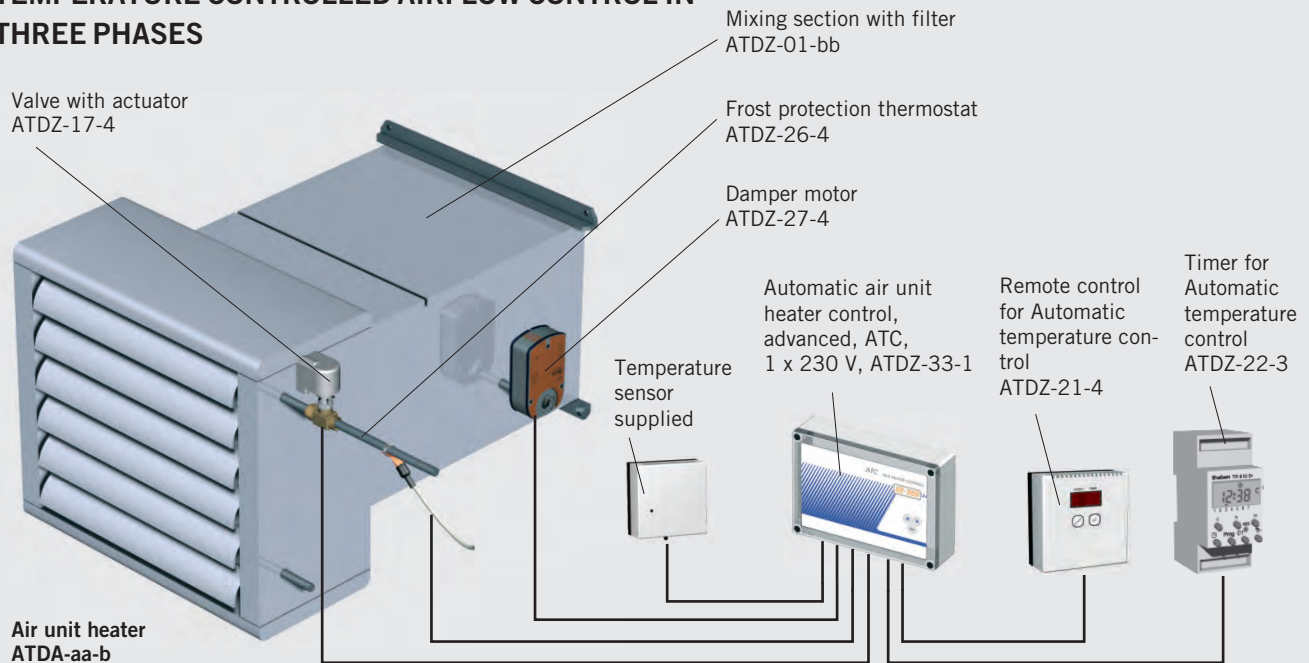
Voltage 1 x 230 V.

Current max 2 A.



INSTALLATION EXAMPLE

TEMPERATURE CONTROLLED AIRFLOW CONTROL IN THREE PHASES



Temperature-controlled airflow control in three stages with night-time temperature reduction, remote control, frost protection and liquid valve on/off.

FUNCTION

When heat is needed, the liquid valve (ATDZ-17-4) and temperature sensor guide the fan up or down using the automatic fan control in three fixed steps to maintain the set temperature. When no heating is needed, the liquid valve closes and the fan stops. When the automatic unit heater control detects excessively low temperature from the frost protection thermostat (ATDZ-26-4), the damper motor (ATDZ-27-4) closes first; if the return temperature does not increase, the fan stops and the fluid valve opens while an alarm signal is emitted.

The temperature is set under the cover with potentiometer A; if the system is equipped with a timer for an alternative temperature, it is set with potentiometer B.

The control system can be supplemented with remote control via a cable (ATDZ-21-4). Then the fan can operate in automatic mode or three fixed speeds 1,2,3, or stop in position 0.

The control system is designed for regulation via 0-10 V DUC.

An external defect alarm signal can be connected to the controller.

For alternative speed, see page 11, 16.

PRODUCT CODE

AIR UNIT HEATER ATDA

ATDA – aa-b-c-d-e

a_ = Size: 31, 32, 33, 42, 43, 52, 53, 63

_a = Capacity variant: 31, 32, 33, 42, 43, 52, 53, 63

1 = high temp. water, low Δt 1rr

2 = high temp. water, low Δt 2rr

3 = low temp. water, high Δt 3rr

b = Motor:

1 = 1x230 V, 50 Hz

3 = 3x400 V, 50 Hz (without regulation d=0)

5 = 500 V, size 42, 43, 52, 53

6 = EEx e* (increased safety), size 42, 43, 52, 53

c = Material fin/casing:

1 = Al/painted steel, white (std)

2 = Cu/aainted steel, white (std)

3 = Al + Heresite painted/painted steel, white (std)

4 = Al/Stainless steel

5 = Al/Stainless steel

6 = Al + Heresite painted/Stainless steel

d = Control:

0 = no control

A = A-box (only b=1)

B = B-box (only b=1)

C = C-box (only b=1)

e = Design number:

3 = Internal code

* When b = 6, c must be 2 or 5

AIR UNIT HEATER/COOLER ATDC

ATDC – aa-b-c-d-e

a_ = Size: 33, 43, 53, 63

_a = Capacity variant: 33, 43, 53, 63

3 = low temp. water, high Δt 3rr

b = Motor:

1 = 1x230 V, 50 Hz

3 = 3x400 V, 50 Hz (without control d=0)

5 = 500 V, size 43, 53

c = Material fin/casing:

1 = Al/painted steel, white (std)

4 = Al/Stainless steel

d = Control:

0 = no control

e = Design number:

3 = Internal code

AIR UNIT HEATER ATDG

ATDG – aa-b-c-0-e

aa = Size: 31, 41, 51

b = Motor:

1 = 1x230 V, 50 Hz

3 = 3x400 V, 50 Hz (without regulation d = 0)

5 = 500 V, size 42, 41, 51, 53

6 = EEx e* (increased safety), size 41, 51

c = Material fin/casing:

1 = Al/painted steel, white (std)

2 = Cu/painted steel, white (std)

3 = Al + Heresite painted/painted steel, white (std)

4 = Al/Stainless steel

5 = Al/Stainless steel

6 = Al + Heresite painted/Stainless steel

0 = Control: 0 = no control

e = Design number:

3 = Internal code

* When b = 6, c must be 2 or 5

MIXING SECTION ATDZ

Mixing section ATDZ – aa-F-b-c

aa = Size: 30, 40, 50

b = Type:

A = Installation package A-Box

C = Installation package C-Box

c = Design number:

3 = Internal code

INSTALLATION PACKAGE FOR AIR UNIT HEATERS

Installation package for unit heaters ATDZ-a-1

a = Type:

A = A-box

B = B box

C = C-box

Accessories for mixing section ATDZ-F-b-1

b = Type:

A = installation package A-Box

C = installation package C-Box



PRODUCT CODE

ACCESSORIES

| | |
|--|--------------------------------|
| Recirculated air section with filter | ATDZ-01-bb^{*)} |
| Recirculated air section with filter | ATDZ-02-bb^{*)} |
| Wall bracket, set | ATDZ-03-bb |
| Spacer bracket for mixing section, set, | ATDZ-05-bb^{*)} |
| Extra air deflector | ATDZ-09-bb |
| Ceiling bracket, set | ATDZ-10-bb^{*)} |
| bb = size 30, 40, 50 *) not size 63 | |
| Lever actuator for mixing section | ATDZ-12-1 |

CONTROL AND REGULATION EQUIPMENT

| | |
|--|------------------|
| Automatic fan control, FHC-1, simple | ATDZ-15-4 |
| Including sensor IP30 for wall mounting. Supplied separately. 1 x 230 V. Max 2 A. | |
| Automatic air unit heater controller, ATC, advanced | ATDZ-33-1 |
| Including sensor IP30 for wall mounting supplied separately. 1 x 230 V. Max 2 A. | |

ACCESSORIES, CONTROL AND REGULATION EQUIPMENT

| | |
|--|------------------|
| Speed switch | ATDZ-13-1 |
| Speed switch | ATDZ-24-3 |
| Manual 5-speed. Motor 1 x 230 V. 2 A. | |
| Valve with thermal actuator | ATDZ-17-3 |
| Open/closed. 1 x 230 V. | |
| Valve with actuator | ATDZ-17-4 |
| Open/closed. 1 x 230 V. | |
| Room thermostat | ATDZ-18-3 |
| On/off, 1 x 230 V. IP 30. | |
| Room thermostat | ATDZ-19-3 |
| On/off, 1 x 230 V. IP 65. | |
| Remote control | ATDZ-21-4 |
| to automatic unit heater controller ATDZ-33. | |
| Timer | ATDZ-22-3 |
| Temperature control day/night, for Automatic unit heater control. | |

| | |
|--|-------------------------|
| Transformer | ATDZ-25-3 |
| Lower speeds. Motor 1 x 230 V. | |
| Frost protection thermostat | ATDZ-26-1 (230V) |
| Cuts off power in event of freeze risk. | |
| Actuator | ATDZ-27-1 (230V) |
| With spring return, steers damper to open/closed position. | |
| Connection device | ATDZ-30-1 |
| Temperature sensor | ATDZ-35-2 |
| to automatic fan, unit heater controller ATDZ-15-4, -33-1, IP 54. | |

Spare parts

| | |
|---------------------|-----------------------|
| Battery pack | ATDA-99-3-cc-3 |
| | ATDG-99-3-31 |
| | ATDG-99-3-41 |
| | ATDG-99-3-51 |
| | ATDC-99-3-33-3 |
| | ATDC-99-3-43-3 |
| | ATDC-99-3-53-3 |
| | ATDC-99-3-63-3 |

cc = Size: 30 (only ATDA), 3x, 4x, 5x, 63
d = Design number (ATDA, ATDC)

| | |
|---|-----------------------|
| Fan and motor assembly With protective grid | ATDA-99-2-cc-d |
| cc = Size: 3x, 4x, 5x, 63 d = motor: 1 = 1 x 230 V, 3 = 3 x 400 V (only size 4x, 5x, 63) | |
| Temperature sensor | ATDA-99-16-3 |
| to automatic unit heater controller ATDZ-29-1 | |
| Temperature sensor | ATDA-99-16-4 |
| to automatic fan, unit heater controller ATDZ-15-4, -33-1 | |
| Temperature sensor | ATDA-99-16-5 |
| to automatic fan, unit heater controller ATDZ-33-4 | |
| Replacement filter | ATDZ-99-01 cc |
| for Mixing/recirculated air section cc = Size: 3x, 4x, 5x, 63 | |

NOTES





To learn more, visit
www.modine.com

 Follow us @ModineHVAC
 See us at [YouTube.com/ModineHVAC](https://www.youtube.com/ModineHVAC)

ATDC1807A03EP_U

©2018 Modine Manufacturing Co.

About Modine

Modine specializes in thermal management systems and components, bringing highly engineered heating and cooling components, original equipment products, and systems to diversified global markets through its three complementary business units: Vehicular Thermal Solutions (VTS); Commercial & Industrial Solutions (CIS); and Building HVAC Systems (BHVC).

Modine is a global company headquartered in Racine, Wisconsin (USA), with operations in North America, South America, Europe, Asia and Africa.

Contacts:

Sweden

Industrigatan 2
SE-614 81 Söderköping, Sweden
Tel +46 121.191.00
inquiry-sodese@modine.com

Italy

Via Giulio Locatelli, 22
33050 Pordenone (UD), Italy
Tel +39 0432.772.001

Belgium

Poortakkerstraat 41
B - 9051 Sint-Denijs-Westrem - Belgium

PRC

No. 19 Xin Nan Zhong Road,
Mei Cun, Wuxi New District
Wuxi 214112 Jiangsu
Tel +86 510.8855.3982

USA

PO Box 1457, 1000 Heatcraft Dr.
Grenada, MS 38902
Tel +1 662.229.4116
Fax +1 662.229.2002

