

# Performance squared

**WD-A:** WOLF wall and ceiling mounted air heaters  
Economical heating



Spirit of Air

# Wall and ceiling mounted air heaters

## Efficient and economical

### 1 Fan unit

The fan unit consists of an AC or EC axial fan with sickle-profile blades per ErP Directive 2015. The axial fan is mounted on the rear wall of the housing and protected by a fine-mesh contact grille.

### 2 Heat exchangers

The heat exchangers are manufactured using corrosion-resistant copper piping with pressed-on, continuous, high performance aluminum fins (CuAl). The manifold is made from steel piping.

**Alternative:**

Galvanized or stainless steel

Available with 2, 3, or 4-row heating coils, depending on heating requirements.



### Power heaters

WD-A space heaters are particularly well-suited for efficient heating and ventilation of large rooms and spaces with high ceilings. These units can be mounted on the wall or ceiling.

### Operation and operating modes

WD-A units are heated with site-supplied warm water (PWW), hot water (PHW), thermal oil, or steam (custom design) and are available with two to four-row heat exchangers.

Depending on how the unit is equipped, it can switch between mixed air, fresh air and recirculating air operation manually or via a control unit.

### The drive for quality

A compact, extremely quiet and low-maintenance sickle-blade fan ensures reliable, long-lasting operation. The special shape of the steel fan blades ensures an extremely low noise level. The drive is incorporated into the fan wheel and is available in 5 different motor versions. Depending on the version, the motors feature 2-stage, 5-stage, or stepless control.

The fan fatigue life is over 100,000 hours of operation!

### Air discharge

WD-A air heaters are available with manually adjustable directional louvers or with automatically adjustable energy saving louvers.

When equipped with a discharge cone or energy saving louvers, WD-A air heaters can be used in rooms with ceiling heights above 5 m. For entryway air curtain applications, the unit is equipped with a discharge nozzle.

### WD-U recirculating air unit

WD-U (recirculating air units) are also available with 5 different motor versions, but are designed purely for air recirculation. They do not contain heat exchangers.



### 3 Housing

The housing is manufactured from high-grade galvanized steel plate and is optionally available in a RAL colored finish.

# WD-A

### 4 Electrical connection

The terminal box for the motor wiring is located in an easily accessible location on the outside of the unit housing.

### 5 Discharge louver

Discharge louver with adjustable directional air guides.

## Temperature distribution

Even air distribution also means even temperature distribution in the room.

An even room temperature not only increases the comfort factor, but is also frequently critical in production scenarios, e.g. in order to maintain tolerance values.

Our WD-A air heaters satisfy these requirements perfectly: not only with their high performance fans and broad selection of discharge options, but also via control fine-tuning as needed.

With our proven WD-A units, both the perceptible temperature fluctuations and airflow rates in the living area are extremely low.

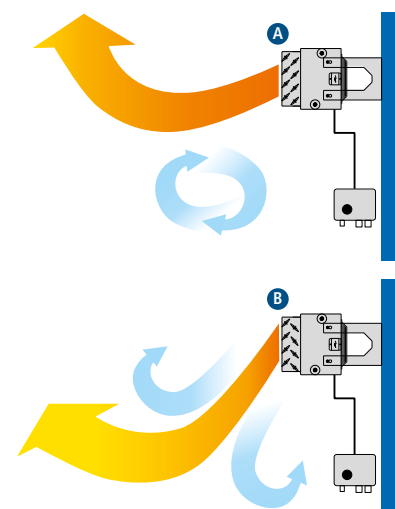
This almost completely eliminates the possibility of swirling dust and bacteria.

## Automatic louver adjustment

Energy saving louvers driven by the 678 control unit prevent the air stream from drifting **A** in cases where there is a high temperature differential between the primary air (from the WD-A) and the secondary air (indoor air). In the choke position **B**, an "aggregate air stream" is created by mixing indoor air with the warm air as it flows out. This serves to increase the temperature evenly throughout the room and saves energy.

The control unit determines the difference between the required and the actual room temperature, and then activates the servomotor for the choke louver.

Optionally, the louver can also be controlled using an expansion cylinder or an open/close button.



# WD-A air heater in detail

## Go ahead and take a closer look!



### Technical specifications at a glance

- ▶ airflow rate up to 8950 m<sup>3</sup>/h
- ▶ heat exchangers with up to 4 rows
- ▶ heating capacity (air intake = 15 °C; PWW 90 / 70 °C) up to 103.7 kW
- ▶ motor rating up to 750 W
- ▶ power consumption up to 1.5 A
- ▶ available as ceiling mounted and wall mounted air heaters
- ▶ complete line of accessories
- ▶ multiple control options
- ▶ 5 motor versions available
- ▶ optional finish



Unit size	100			
Type	120	130		130
<b>00E, 230 V<sup>1)</sup>, 50 Hz motor (EC motor)</b> Protection class IP 54; insulation class B	12E	13E		13E
<b>001, 400 V, 50 Hz motor (standard motor)</b> Protection class IP 54; insulation class F; motor protection with built-in thermal contact. Terminal box located on housing	121	131		131
<b>002, 400 V, 50 Hz motor, Atex 100 explosion protection, E Ex e II T3</b> Protection class IP 44; insulation class F; motor protection with built-in triple PTC thermistor. Also includes terminal box with explosion protection.	122	132		132
<b>003, 230 V, 50 Hz motor</b> Protection class IP 54; insulation class F; motor protection with built-in thermal contact with start capacitor. Operating capacitor fully wired in terminal box	123	133		133
<b>005, 400 V, 50 Hz motor</b> Terminal box located on housing	125	135		135
Motor speed, rpm (motors 001-005)	1350	1000	1350	1000
Airflow rate, m <sup>3</sup> /h	2000	1520	1820	1380
Heat exchanger	2-row		3-row	
Heating capacity, kW (air intake = 15 °C; PWW 90 / 70 °C)	14.8	13.1	19.2	16.6
Max. motor rating, W (motors 001-005)	110	80	110	80
Max. power consumption, A (motors 001-005)	0.2	0.12	0.2	0.12
Weight	19 kg		20 kg	
Width / length	450 m			
Full height	342 m			

<sup>1)</sup> Unit sizes 300, 400 also available in 400 V





		200				300				400									
140	220	230	240	320	330	340	420	430	440										
14E	22E	23E	24E	32E	33E	34E	42E	43E	44E										
0 - 10 V, adjustable				0 - 10 V, adjustable															
141	221	231	241	321	331	341	421	431	441										
1400 / 1000 rpm				1000 / 700 rpm															
142	222	232	242	322	332	342	422	432	442										
1400 / 1000 rpm				1000 / 700 rpm															
143	223	233	243	323	333	343	423	433	443										
1400 rpm				1000 rpm															
145	225	235	245	325	335	345	425	435	445										
900 rpm				670 rpm			-----												
1350	1000	1375	1050	1375	1050	1375	1050	900	600	900	600	900	600	900	650	900	650	900	650
1620	1180	3425	2600	3260	2400	3020	2150	5250	3275	4810	2880	4390	2725	8950	6540	8280	5910	7720	5580
4-row		2-row		3-row		4-row		2-row		3-row		4-row		2-row		3-row		4-row	
22.7	18.7	26.4	23.1	34.2	29.1	41.5	33.7	43.3	34.1	56.8	41.9	64.8	47.3	68.1	58.5	89.2	74.4	103.7	85.4
110	80	290	210	290	210	290	210	350	250	350	250	350	250	750	470	750	470	750	470
0.2	0.12	0.5	0.32	0.5	0.32	0.5	0.32	0.8	0.46	0.8	0.46	0.8	0.46	1.5	0.83	1.5	0.83	1.5	0.83
21 kg		28.0 kg		30.0 kg		32.0 kg		42.0 kg		45.5 kg		49.0 kg		54.0 kg		59.0 kg		64.0 kg	
m		580 mm				730 mm				860 mm									
m		348 mm				345 mm				365 mm									

# WD-A air conduction

## Ceiling mounted air heaters



### Discharge louver 500 (standard)

Discharge version: ceiling, 2-sided  
360° manually adjustable louvers



### Discharge louver 500 (standard)

#### With substructure discharge louver 503

Discharge version: ceiling, 4-sided  
2-sided, 90° offset  
Louvers manually adjustable inward



### Discharge louver 502 (ceiling mount only)

Discharge version: ceiling, 4-sided  
Louvers manually adjustable outward



### Energy saving louver 506

Discharge version: ceiling, 2-sided  
With directional (LJ) and choke louver (DJ)

LJ adjustable manually or via servomotor; DJ adjustable manually, by servomotor or by non-electrical expansion cylinder

## Wall mounted air heaters



### Discharge louver 500 (standard)

Discharge version: wall, 1-sided  
360° manually adjustable louvers



### Discharge louver 500 (standard)

#### With substructure discharge louver 503

2-sided, 90° offset  
Discharge version: wall, 4-sided  
Louvers manually adjustable inward



### Induction louver 504

Discharge version: wall, 1-sided  
Louvers manually adjustable outward



### Energy saving louver 505

with directional (LJ) and choke louver (DJ)  
discharge version: wall, 1-sided

LJ adjustable manually or via servomotor; DJ adjustable manually, by servomotor or by non-electrical expansion cylinder

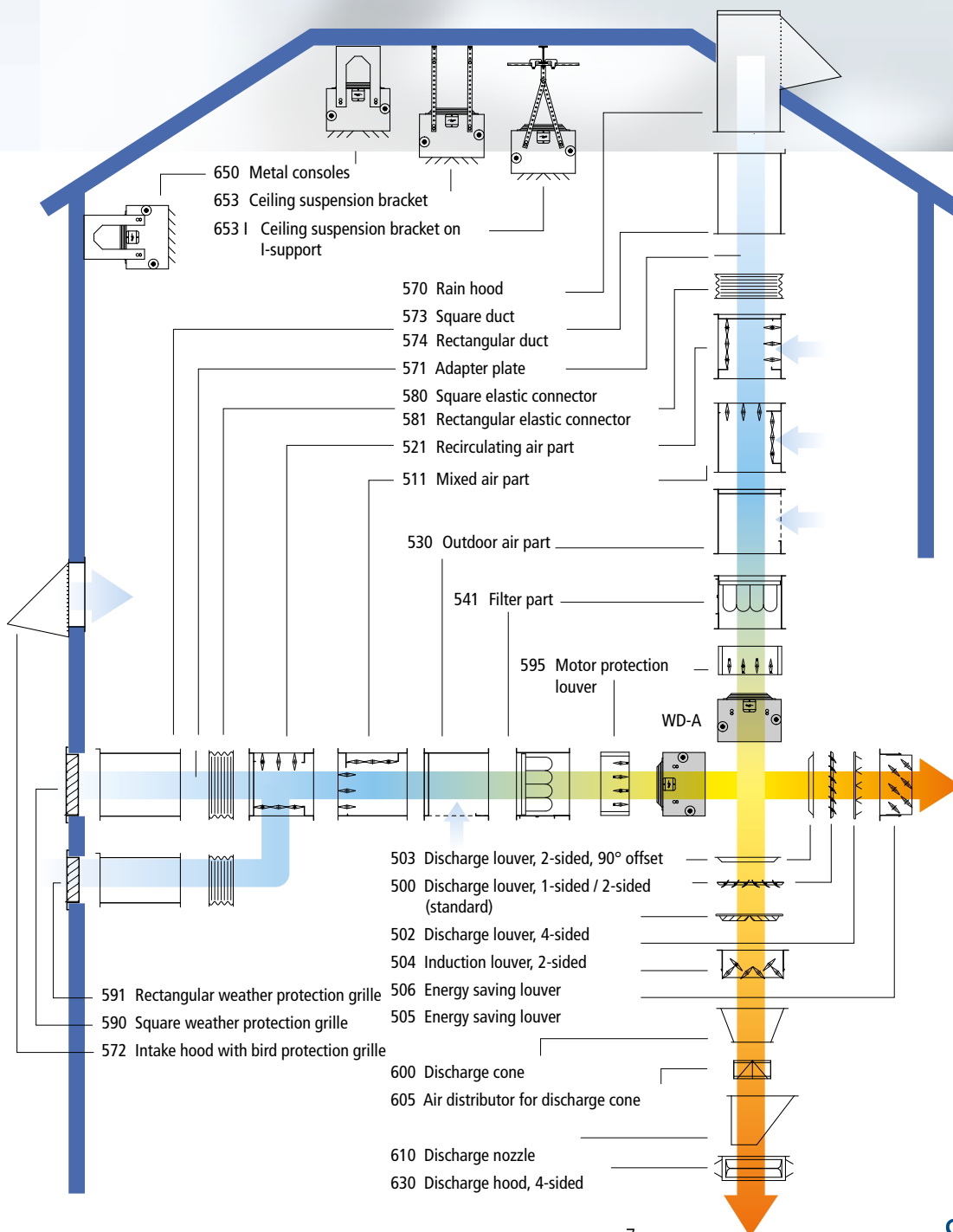
An ample range of accessories is available to extend the application range of WD-A units and optimize their performance.

## Accessories

Our line of accessories includes wall and ceiling brackets, air ducts, elastic fasteners, filter parts, intake and discharge hoods, and electrical accessories (control devices, thermostats, servomotors, etc.).

## Control unit

Up to 19 WD-A air heaters or WD-U recirculating air units can be operated with a single control device. Depending on the version, the motors feature 2-stage, 5-stage or stepless control, allowing them to cover a wide range of applications. The temperature can be controlled based on the room temperature, the time, or a combination of time and room temperature conditions.



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