DAF

DAF-M

DAF
WITH ELECTRIC ACTUATOR

# DAF

## DAMPER FOR ROUND DUCT

The single blade dampers DAF are used to regulate or shut off the air supply in round air conditioning ducts.

They are consisted of a cylindrical body and a round blade which rotates inside the body. Both the body and the blade are made from galvanized steel sheet. The blade is rotating from 0º (closed) up to 90º (open).

Manufactured in diameters from Φ100 to Φ450. For bigger diameters a square damper DA is manufactured with round necks in both sides.

We can adjust the damper manually or by electric actuator. The manual adjustment is possible with a plastic controller (upon request a metal controller is available, type **DAF-M,** size Φ450 only with **-M**).

For the electric adjustment two types of actuators are available: **on-off actuator 220V** or **analogue actuator 24V** with 0-10V control signal. **(2Nm,** in Φ400&450 **5Nm)**. When we have high air temperature in the air duct then we can install the electric actuator in distance 3cm from DAF (**-A**).

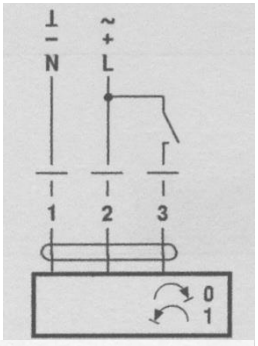
For better air tightness a double blade with rubber seal **(-S)** is available (Only with metal controller or electric actuator, for air temperature up to 100ºC).

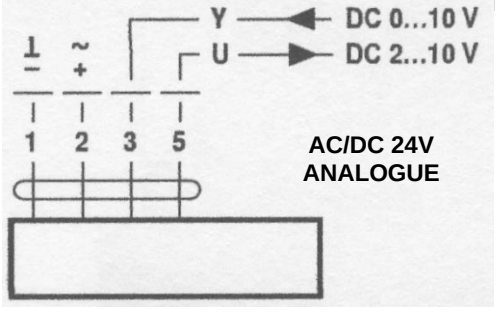
The two sides of the damper are manufactured in a way which allows the easy connection with the air duct. The one side is round (female) and the other has wave shape (male).

### WIRING DIAGRAMS

For the electric actuators:
- Max Temperature: 50ºC
- Max Relative Humidity: 95%

**AC 220V ON-OFF:**




### WAY OF ORDER:

**DAF- -Ø** - 

- **Ø** → Diameter
- Manual: Blank or **–M** or **-M-S**
  With el. act.: Blank or **-S** or **-A** or **-S-A**
- Type and voltage of the electric actuator (if exists).

# AEROGRAMMI

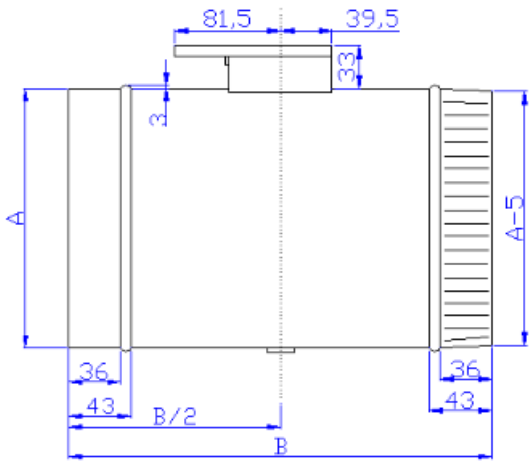
DESIGN AND MANUFACTURE OF GRILLES AND SPECIAL AIR CONDITIONING COMPONENTS

CERT Quality Assurance ISO 9001

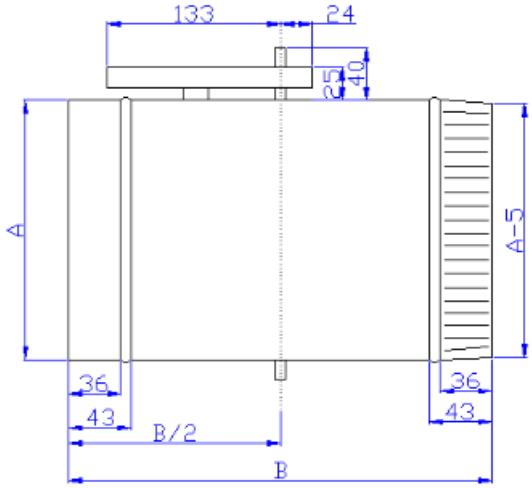
DAF-M-S:

## DIMENSIONS

DAF:




DAF with actuator 2Nm:




### DIMENSIONS TABLE

(mm)

| SIZE | Ø A | B |
|---|---|---|
| **100** | 100 | 325 |
| **125** | 125 | 325 |
| **150** | 150 | 325 |
| **160** | 160 | 325 |
| **180** | 180 | 325 |
| **200** | 200 | 325 |
| **225** | 225 | 325 |
| **250** | 250 | 325 |
| **280** | 280 | 325 |
| **300** | 300 | 400 |
| **320** | 320 | 400 |
| **350** | 350 | 500 |
| **400** | 400 | 500 |
| **450** | 450 | 500 |

The damper DAF is possible to be manufactured with cylindrical body and blade made by stainless steel.

## TECHNICAL DATA

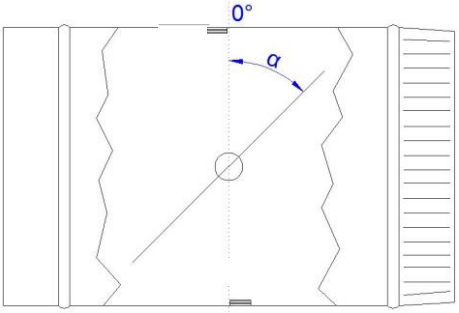
In the table below you can see the pressure drop and the sound power level depended on the angle of the damper blade and the air velocity inside the air duct:

### ANGLE OF DAMPER BLADE α

| | 90° | | 75 ° | | 60 ° | | 45 ° | | 30 ° | |
|---|---|---|---|---|---|---|---|---|---|---|
| **v** | **Lwa** | **ΔP** | **Lwa** | **ΔP** | **Lwa** | **ΔP** | **Lwa** | **ΔP** | **Lwa** | **ΔP** |
| 1 | | | | | | | | 6 | 29 | 35 |
| 1,5 | | | | | | | | 15 | 40 | 84 |
| 2 | | | | | | 5 | 28 | 26 | 59 | 158 |
| 3 | | | | | 28 | 13 | 39 | 63 | | |
| 4 | | | 27 | 5 | 35 | 21 | 48 | 116 | | |
| 5 | | | 33 | 8 | 42 | 32 | 54 | 179 | | |
| 6 | 33 | 6 | 39 | 13 | 48 | 50 | 60 | 263 | | |
| 7 | 37 | 8 | 44 | 17 | 53 | 68 | | | | |
| 8 | 41 | 12 | 46 | 23 | 56 | 89 | | | | |
| 9 | 45 | 15 | 50 | 29 | 60 | 116 | | | | |
| 10 | 46 | 19 | 54 | 37 | 62 | 147 | | | | |
| 15 | 59 | 43 | 65 | 84 | | | | | | |
| 20 | 66 | 79 | 73 | 155 | | | | | | |

In the values of the **Lwa** for each size we add the following correction factors **(C.F.):**

| **Φ** | **C.F.** | | **Φ** | **C.F.** |
|---|---|---|---|---|
| **100** | 0 | | **250** | 8 |
| **125** | 2 | | **280** | 9 |
| **150** | 4 | | **300** | 9 |
| **160** | 4 | | **320** | 10 |
| **180** | 5 | | **350** | 11 |
| **200** | 6 | | **400** | 12 |
| **225** | 7 | | **450** | 13 |




**v:** Air velocity in the air duct **(m/sec)**
**Lwa:** Sound power level **(dB(A))**
**ΔP:** Pressure drop **(Pa)**

**$v=V/(\pi * D^2 * 900)$** where **V** is the supply air volume **($m^3/h$)** and **D** the size of the damper **(m)**.

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