



AEROGRAMMI

DESIGN AND MANUFACTURE OF GRILLES AND SPECIAL AIR CONDITIONING COMPONENTS



DAF



DAF-M

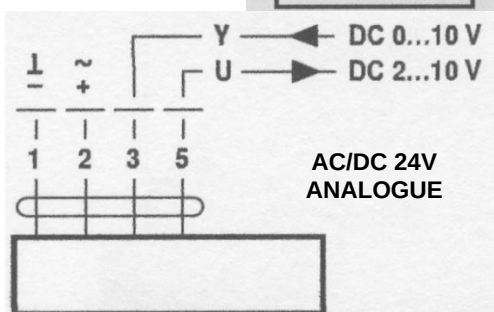
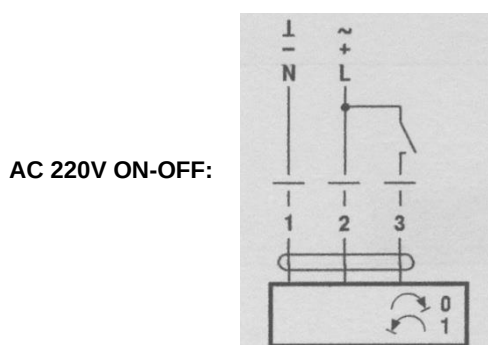


DAF

WITH ELECTRIC ACTUATOR WIRING DIAGRAMS

For the electric actuators:

- Max Temperature: 50°C
- Max Relative Humidity: 95%



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 0° (closed) up to 90° (open).

Manufactured in diameters from $\Phi 100$ to $\Phi 450$. 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 $\Phi 450$ 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 $\Phi 400$ & $\Phi 450$ **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 100°C).

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).

WAY OF ORDER:

DAF- Φ -

Diameter

Type and voltage of the electric actuator (if exists).

Manual: Blank
or **-M** or **-M-S**

With el. act.:
Blank or **-S** or
-A or **-S-A**



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DAF-M-S:

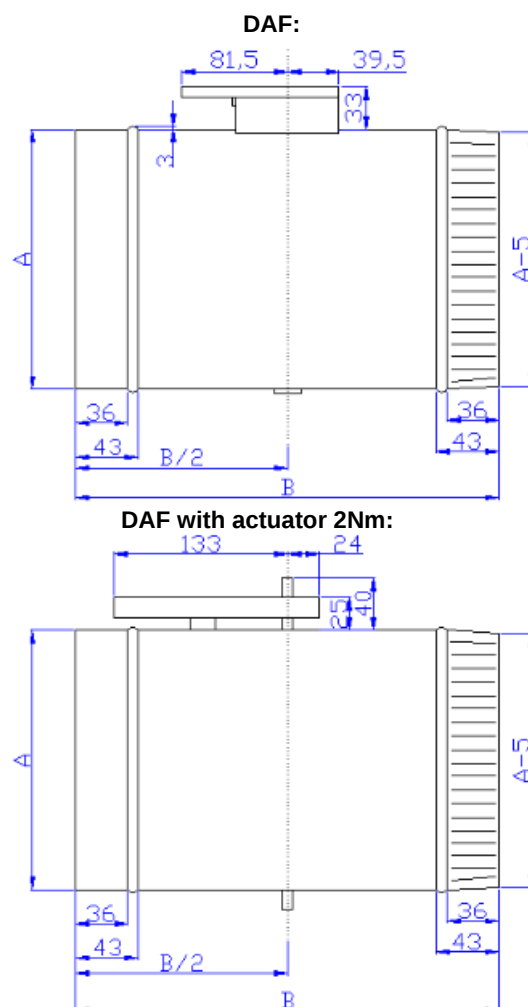
DIMENSIONS

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	395
320	320	395
350	350	495
400	400	495
450	450	495

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 (m³/h) and **D** the size of the damper (m).

