



CONTROL DAMPERS 100mm PITCH

WM-10
SERIES

OVERVIEW

OVERVIEW :

The WM-10 series forms a range of calibration dampers. These dampers are used in ventilation systems and for the regulation of the air distribution in the duct system.

The regulation of the air flow is managed from a manual command able to regulate the blade inclination, In alternative the damper can be equipped with an electric servomotor that can be controlled by the individual themselves.

With this scope, a version has also been designed with a control hinge, as shown in the diagrams here below shown.

CHARACTERISTICS:

Frame: extruded aluminium, 30 mm flange, 125 mm thick, built in four parts joined by mechanical assembly.

Blades: drummed to a wing profile in extruded aluminium extruded 100mm internal axis.

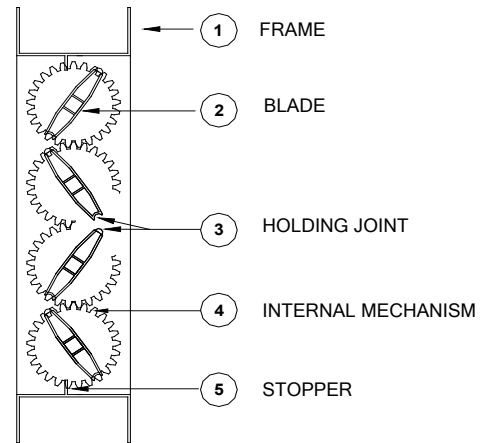
Mechanism : transmission system composed by the movement of the interlocking gears.

Available dimensions :

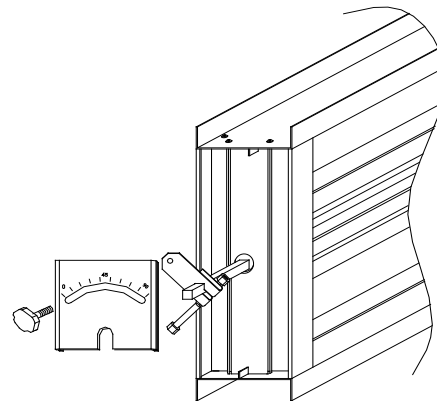
Minimum : 200 x 211

Maximum : 2000 x 2011

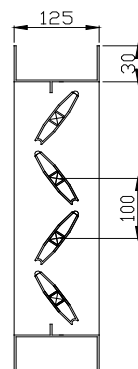
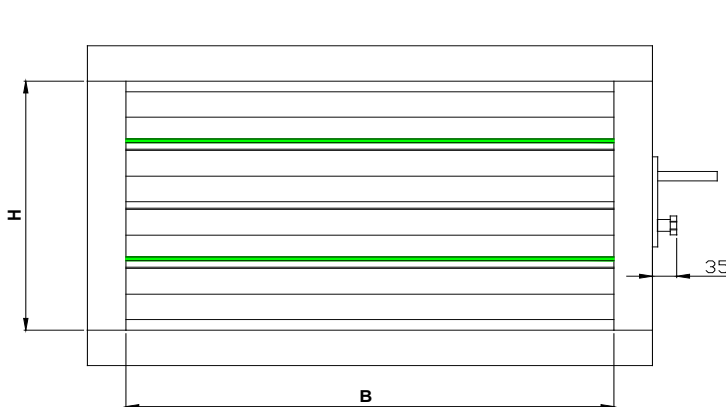
For special sizes please request availability and offer.



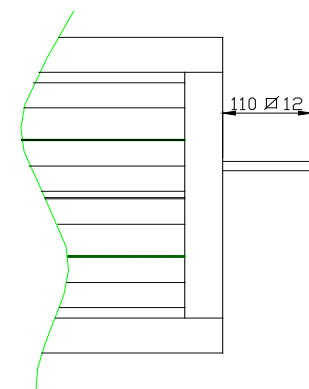
MANUAL COMMAND DETAIL :



OVERALL SIZES



SPECIAL ASSEMBLY WITH HINGE :





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CHARACTERISTICS :

Damper

Mobile closing system mounted into an air duct, designed to control and close air flow.

Frame, materials and construction method

The frame is manufactured in extruded aluminium and designed to withstand the lateral stress from to air pressure, and built with lateral frame to protect the drive gears.

Flange

Manufactured with 30 mm height.

Blades, materials and construction system

The blades are manufactured from extruded aluminium with a particular profile in order to be a better sealing surface and a good strength to air pressure.

Transversal reinforcement

Present on all dampers with B dimension wider than 1400 mm.

Finishing

Extruded aluminium.

Gear drive, materials and construction system

Opposed rotation gears made from PBT with 30% of glass

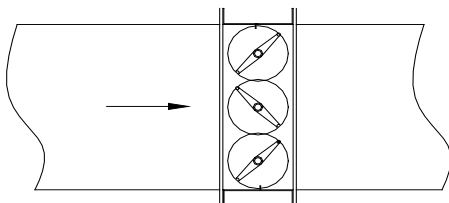
Mounting

By screws through damper flange and duct flange or by self-threading screws through damper flange and air-treatment unit panel.

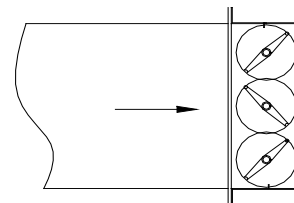
MOUNTING SYSTEM :

Damper mounted inside (figure n° 1) or at the beginning or at the end of the air duct (figure n° 2 and 3) fixed by the frame flange to the duct flange. The control damper can be mounted on the floor or ceiling (figure n° 4).

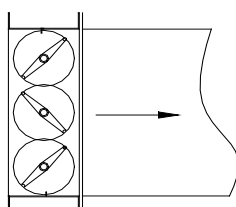
WM-10 Figure no. 1



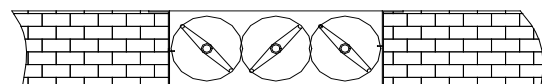
WM-10 Figure no. 2



WM-10 Figure no. 3



WM-10 Figure no. 4

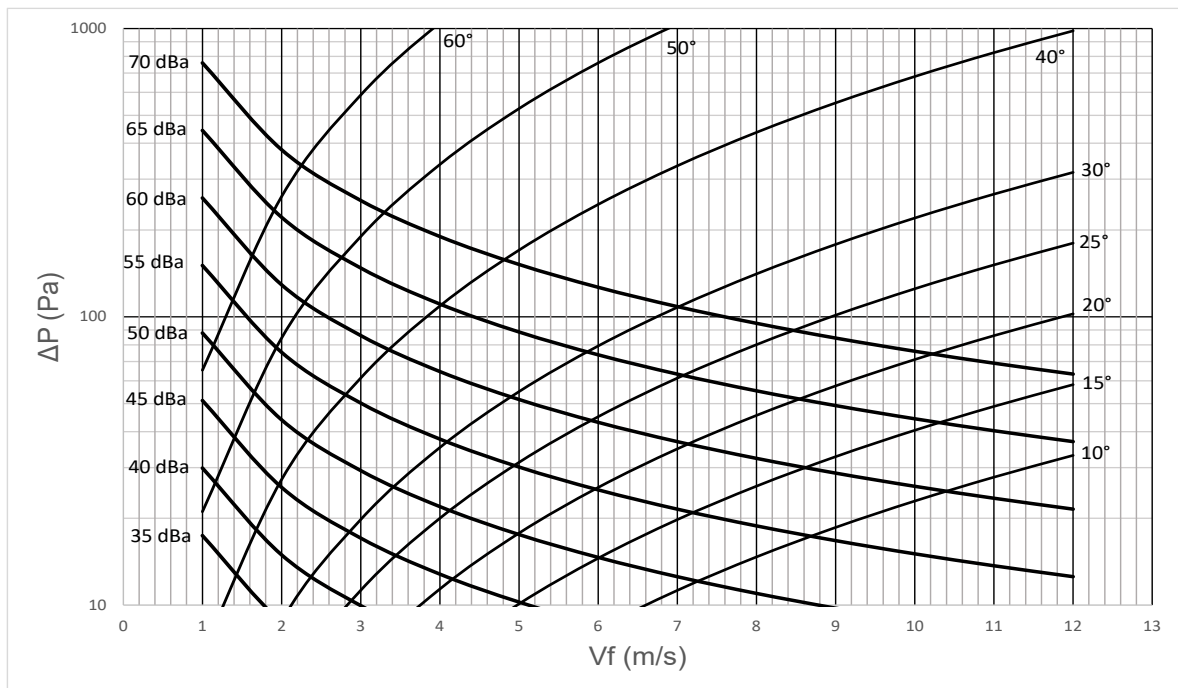




CONTROL DAMPERS
100mm PITCH
PERFORMANCE

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SERIES

Pressure drop and sound power for frontal area = 1m²



Vf Frontal velocity
 Data: B Base in mm
 H Height in mm
 Q Air flow in m³/h
 A= (B/1000)*(H/1000) Area in m²
 Vf= Q/A/3600

| CORRECTION FACTOR "K" OF THE SOUND POWER FOR DAMPERS WITH FRONTAL AREA DIFFERENT FROM 1m ² | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Frontal area m ² | 0,10 | 0,13 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,80 | 1,00 | 1,25 | 1,55 | 2,00 | 3,00 | 4,00 |
| K dB(a) | -9 | -8 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 |

| CORRECTION FACTOR "C" OF THE PRESSURE DROP FOR INSTALLATION DIFFERENT THAN FIGURE 1 | | | | | | | | |
|--|--|-----|-----|-----|-----|-----|-----|-----|
| Type of installation | Control damper opening as function of blades inclination | | | | | | | |
| | 0° | 10° | 20° | 30° | 40° | 50° | 60° | 70° |
| Figure No. 2 | 6,1 | 5,4 | 3,1 | 2,0 | 1,5 | 1,2 | 1,1 | 1,0 |
| Figure No. 3 | 4,0 | 3,6 | 2,3 | 1,8 | 1,4 | 1,3 | 1,2 | 1,1 |
| Figure No. 4 | 8,9 | 8,2 | 4,5 | 2,8 | 2,0 | 1,7 | 1,6 | 1,2 |



CONTROL DAMPERS 100mm PITCH

WM-10 SERIES

HOW TO ORDER

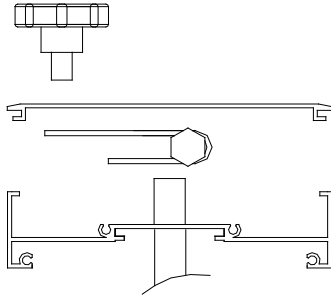
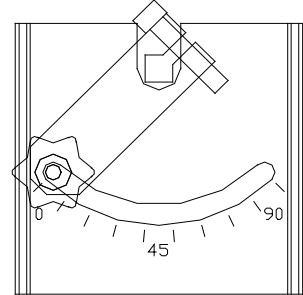
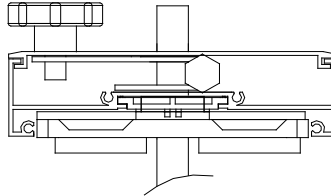


Figure n° 5



Mechanism, manual control: The basic kit (**figure n° 5**) includes a handle for the movement and locking, a transmission lever for the strength of the transmission shaft axle and a numbered modular plate inserted in the internal mechanism, inside the frame.

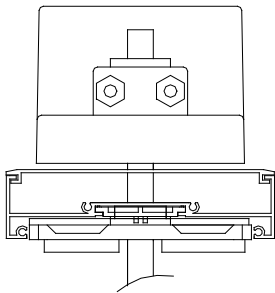
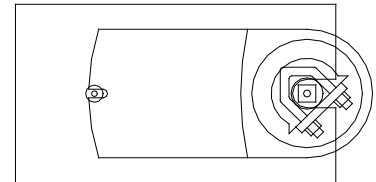
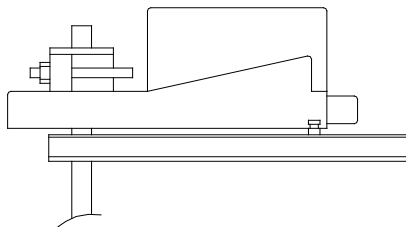
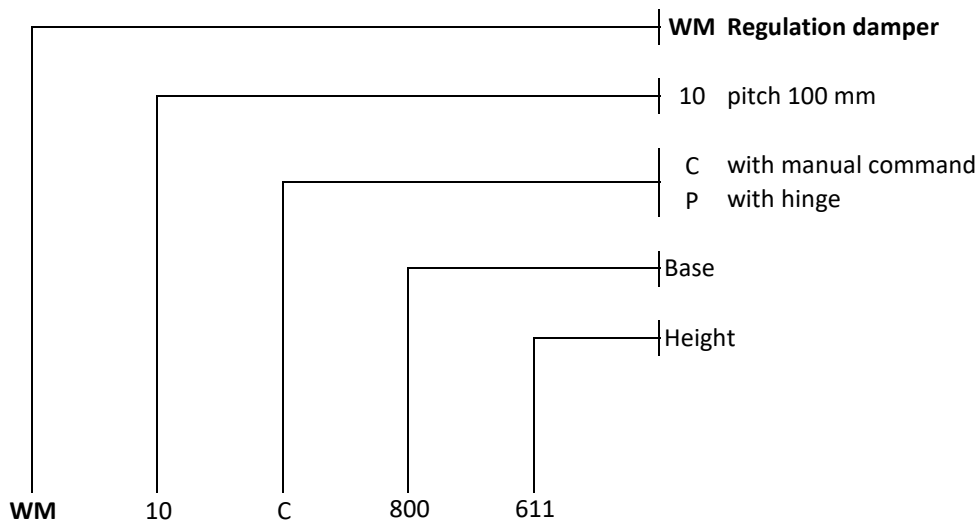


Figure n° 6



Mechanism, servo control: The complete kit (**figure no. 6**) guarantees the functionality of the mechanism via means of an electrical signal. It includes the transmission axle and adjustable plate fixed to the frame. This plate is drilled in order to fix standard actuators available on the market.








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AVAILABLE
ACCESSORIES

| Image | Description | Code |
|--|--|-------|
|  | Aluminium graduated plate for actuator support. | WM 20 |
|  | Fixing lever with fixing bolt, complete with knob for graduated plate for motor support. | WM 21 |
|  | Complete manual command kit, complete with graduated plate, actioning lever, fixing bolt and knob. | WM 22 |

| Model | Description | Torque Nm | Area of the damper up to m ² |
|----------|---|--------------|--|
| LM230A | 230V On/Off servomotor | 5 | 1,0 |
| LM230A-S | 230V On/Off servomotor with 1 microswitch | 5 | 1,0 |
| NM230A | 230V On/Off servomotor | 10 | 2,0 |
| SM230A | 230V On/Off servomotor | 20 | 4,0 |
| SM230A-S | 230V On/Off servomotor with 1 microswitch | 20 | 4,0 |
| GM230A | 230V On/Off servomotor | 40 | 4,0 |
| LF230 | 230V On/Off servomotor with spring return | 4 | 0,8 |
| LF230-S | 230V On/Off servomotor with 1 microswitch and spring return | 4 | 0,8 |
| LM24A | 24V On/Off servomotor | 5 | 1,0 |
| LM24A-S | 24V On/Off servomotor with 1 microswitch | 5 | 1,0 |
| LM24A-SR | 24V Proportional servomotor | 5 | 1,0 |
| NM24A | 24V On/Off servomotor | 10 | 2,0 |
| NM24A-SR | 24V Proportional servomotor | 10 | 2,0 |
| SM24A | 24V On/Off servomotor | 20 | 4,0 |
| SM24A-S | 24V On/Off servomotor with 1 microswitch | 20 | 4,0 |
| SM24A-SR | 24V Proportional servomotor | 20 | 4,0 |
| GM24A | 24V On/Off servomotor | 40 | 8,0 |
| GM24A-SR | 24V Proportional servomotor | 40 | 8,0 |
| LF24 | 24V On/Off servomotor with spring return | 4 | 0,8 |
| LF24-S | 24V On/Off servomotor with 1 microswitch and spring return | 4 | 0,8 |