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CFR-2 – Constant Flow Regulator

• air distribtuin systems - air volume control units

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Air Distribution Systems

PRODUCTS CATALOGUE

CFR-2 – Constant Flow Regulator

Constant air volume control dampers are installed in supply and exhaust air ducts in the ventilation systems, in order to maintain the constant airflow regardless the the pressure changes in the system.

A constant air flow and pressure is enabled through a balance between the aerodynamic force resulting from the air flow and the force of the closing mechanism spring. Damper can be set to default factory settings or it can be defined by the customer, according to the project requirements. Settings changes are possible after the instalation, if so required.

CONSTRUCTION

- Circular housing from galvanized steel, with the air flow adjusting mechanism and settings tube;
- Special bearings and shock absorbers connected to the blade prevent oscilations and ensure accurate flow rate control.

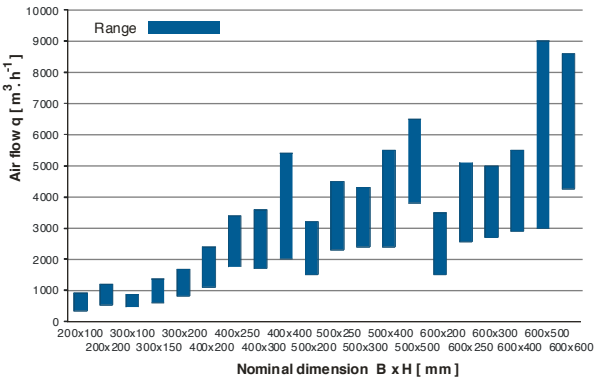
ACCESSORIES

- Thermal and acoustic insulation of the casing;

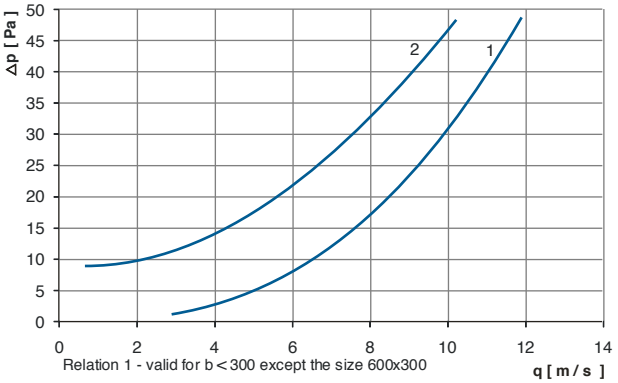
SCOPE OF USE AND WORKING RANGE:

- When designing a system with constant air regulators, it is necessarry to consider that recommended air velocity in the duct is between 3 - 8 m/s, recommended around 6,5 m/s., with maximum pressure differential of 500 Pa. Possible deviations due to the knee bends or narrowings of the ducting system needs to be considered as well.
- CFR-1 dampers working range is between a minimum pressure drop, which depends on air flow velocity and maximum pressure drop of 1000 Pa, with air flow deviation of 10%. Temperature operating range is from -15oC to 80 oC. Model, resistant for temperatures up to 250 oC is available upon request.
- Main advantage is:
  - Regulating accurancy
  - Easy installation
  - Maintenance free

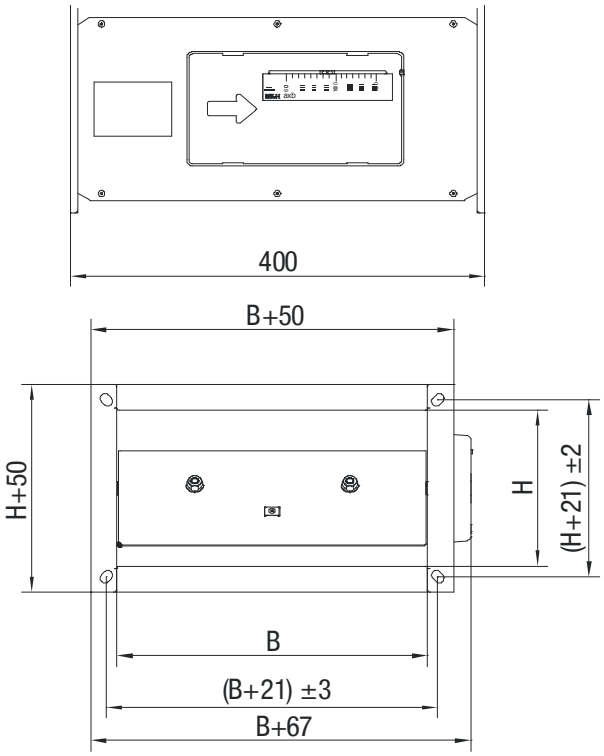
Quick selection diagram and pressure loss chart:



Pressure loss when open:



Dimensional drawing:



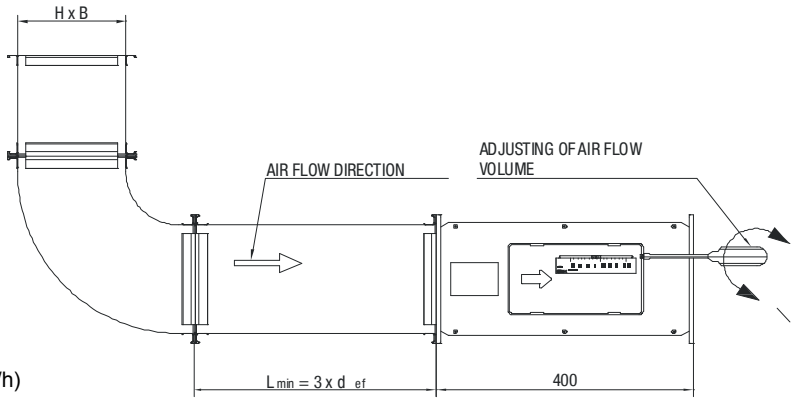
Scope of dimensions and selection guide:

Dimension BxH	Qmin (m3/h)	Qmax (m3/h)
200x100	330	580
200x200	510	1200
300x100	470	850
300x150	600	1350
300x200	800	1670
400x200	1100	2400
400x250	1750	3400
400x300	1700	3600
400x400	2000	5400
500x200	1500	3200
500x250	2300	4500
500x300	2400	4300
500x400	2400	5500
500x500	3800	6500
600x200	1500	3500
600x250	2550	5100
600x300	2700	5000
600x400	2900	5500
600x500	3000	9000
600x600	4250	8600

Mounting and maintenance:

Mounting of the regulator into duct system is done by common methods as normally used at mounting of ventilation elements. During the installation, any damage or deformation of the unit must be avoided, as any damage can block the blade operation and subsequently causes irregularity in the operation. Regulator can be mounted in horizonta, diagonal or vertical duct in the way that the rotation axis of the blade is always horizontaly. It is also necessary to respect the indicated direction of the air flow. Connection of the duct and regulator must be done according to the installation manual of the rectangular duct. Air flow can be adjusted by turning the working screw, that must have ease of access to after the installation is done. Bearing, that comes out of the casing must not be blocked during the installation.

Recommended lenght of the direct duct in front of and behing the regulator is: **L > = 3 x def, where def = 2BH / (B+H).**



Ordering key

CFR-2 150x150/300

- Air vloume rate (m^3/h)
- **BxH** – Dimension
- Constant flow regulator:
  - **1** – circular
  - **2** – rectangular

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