

# PRESSURE MEASUREMENT



CONSTANT PRESSURE &  
VOLUME CONTROLLERS

**EODR** MODEL CD&CV

ACIN's pressure controllers are in house designed and produced. We make them on customer specifications. We deliver this quality product to navy companies for years now, where it has to stay functioning under the most heavy conditions.

**ACIN** instrumenten bv

made to measure

# EODR

## MODEL CD & CV

### CONSTANT PRESSURE & VOLUME CONTROLLERS

The ACIN constant pressure controller (CD-version) is a device designed to maintain a constant air pressure difference between two rooms (or between one room and outdoors), unaffected by the air flow between those rooms

The ACIN constant volume controller (CV-version) is a device designed to maintain a constant air flow through a duct, unaffected by the pressure difference between that duct and the air outlet or room.

Both types of controllers (CD and CV) consist of the following parts:

1 or more motor actuated valves	model: 187.0
1 control cabinet	model: 187.10

#### MOTOR ACTUATED VALVE 187.0

The unit consists of a steel actuator housing and a aluminium valve housing, bolted together.

A tapered aluminium control valve is operated by a rotating actuator with return spring. The actuator is connected to the valve by means of a crank, fork and valve axle.

In a normal control situation, when the upstream pressure is higher than the downstream pressure, the valve is pushed against the end stop of the valve axle. The actuator controls the valve position.

As the valve can slide freely over the axle a sudden pressure increase at the downstream side (blast) will quickly close the valve, regardless of the actuator position.

When the power supply to the actuator is shut off, actuator and valve will close by action of the return spring.

Shock resistance of the unit is  $500 \text{ m/s}^2$  in all directions.



#### CONTROL CABINET 187.10

The unit consists of a stainless steel cabinet (IP-65) with door and lock.

It contains terminals for input/ output, a transformer, 5-fold fuse block, main switch (off/on/ remote control), power supply, pressure sensor, P+I controller and a LED-bar displaying the actuator position of the motor actuated valve.

External connection cables enter the cabinet via cable glands according to DIN 89280.

Connections for pressure differences are suitable for copper tube  $\varnothing 8 \times 1 \text{ mm}$ .

Shock resistance of the unit is  $280 \text{ m/s}^2$  in all directions. Applications of yielding straps permits higher values.

# EODR

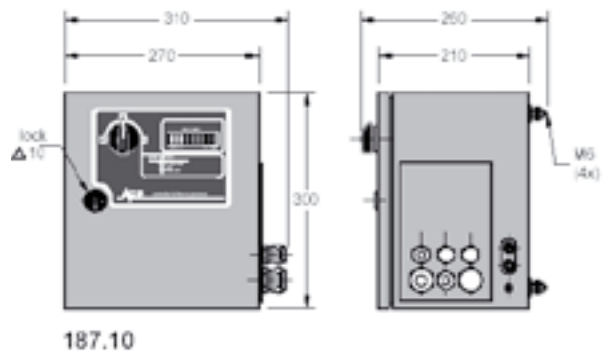
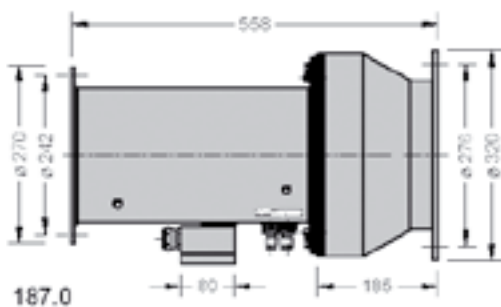
## MODEL CD & CV

### CONSTANT PRESSURE & VOLUME CONTROLLERS

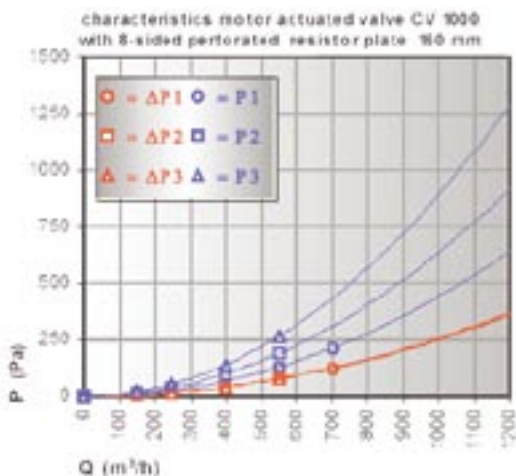
#### TECHNICAL DATA

valve model	air quantity range	valve diameter	duct diameter	cabinet model	pressure range	pressure sensor
187.0 CD-300	30..300 m <sup>3</sup> /h	Ø 100 mm	Ø 200 mm	187.10 CD / CV	20..75 Pa	187.20 A
187.0 CD-1000	100..1000 m <sup>3</sup> /h	Ø 200 mm	Ø 200 mm	187.10 CD / CV	50..150 Pa	187.20 B
187.0 CD-2500	250..2500 m <sup>3</sup> /h	Ø 350 mm	Ø 350 mm	187.10 CD / CV	100..300 Pa	187.20 C
187.0 CV-300 190	30..150 m <sup>3</sup> /h	Ø 100 mm	Ø 200 mm	187.10 CD / CV	200..600 Pa	187.20 D
187.0 CV-300 184	45..225 m <sup>3</sup> /h	Ø 100 mm	Ø 200 mm			
187.0 CV-1000 160	120..600 m <sup>3</sup> /h	Ø 200 mm	Ø 200 mm			
187.0 CV-1000 150	160..800 m <sup>3</sup> /h	Ø 200 mm	Ø 200 mm			
187.0 CV-1000 P160	200..1000 m <sup>3</sup> /h	Ø 200 mm	Ø 200 mm			

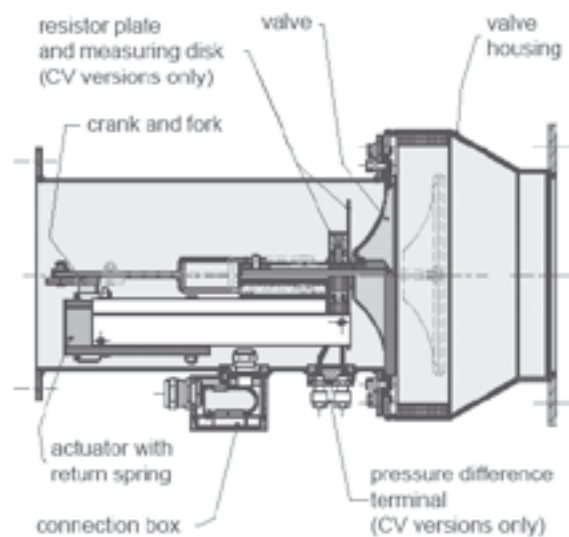
#### DIMENSIONS (MM) - all models except 187.0 CD-2500



#### EXAMPLE CHARACTERISTICS



#### CROSS SECTION





## **acin instrumenten bv**

handelskade 76  
2288 bg rijswijk  
the netherlands

po box 1111  
2280 cc rijswijk  
the netherlands

tel +31 70 3070703  
fax +31 70 3070938

info@acin.nl  
www.acin.nl

**ACIN**