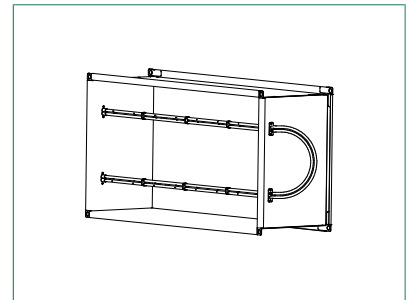


Measuring device ERMA



Key features

- Real-time airflow measurement with FW measuring unit
- Modbus version easily connected to the Building Automation System
- Available in IPSUM compatible version

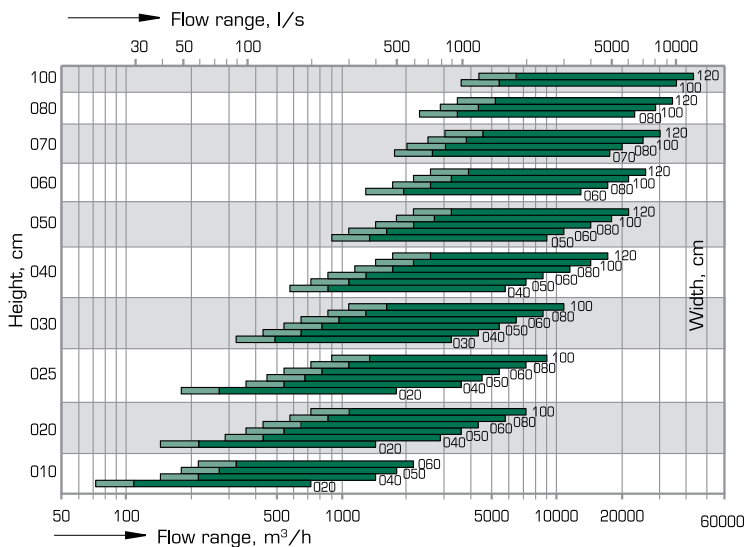


ERMA is a measuring device for the OPTIVENT system. The measuring device generates an electrical voltage which is directly proportional to the measured air flow. ERMA is designed to be used in variable volume (VAV) flow systems to create a balance between the supply and exhaust air in a zone. The ERMA measuring device is available in vast number of sizes.

Specifications

- Air flow measurement device
- Real time air flow display
- Electronic control equipment (analog and Modbus)
- Scalable output signal
- Offset function

Quick Selection



The recommended air flow limits with measuring unit GT correspond to air velocity 1-10 m/s. When air velocity is below 1.5 m/s $\pm 10\%$ measuring accuracy cannot be guaranteed (light green above).

Product code example

Measuring device
ERMA-1-060-030-1

equipped with analog GT measuring unit, width 60 and height 30 cm with slip joint.

AIRTREND Ltd
 Predstavništvo u Beogradu
 Kumanovska 14, 11000 Beograd
 Tel: 011/3836886, 3085740
 Faks: 011/3444113
 e-mail: gobrid@eunet.rs
 web: www.airtrend.rs

ERMA Measuring device

ERMA is a measuring device for the OPTIVENT system. ERMA is designed to be used in variable air volume (VAV) systems to create a balance between the supply and extract air in a zone. The measuring device generates an electrical voltage which is directly proportional to measured air flow. ERMA measures all the supply air to a zone and sends an output signal to an extract air flow damper (e.g. ERVA). The output signal can be shifted using special offset-function. The offset function can be used to compensate constant air flows and control pressure levels in zones and rooms.

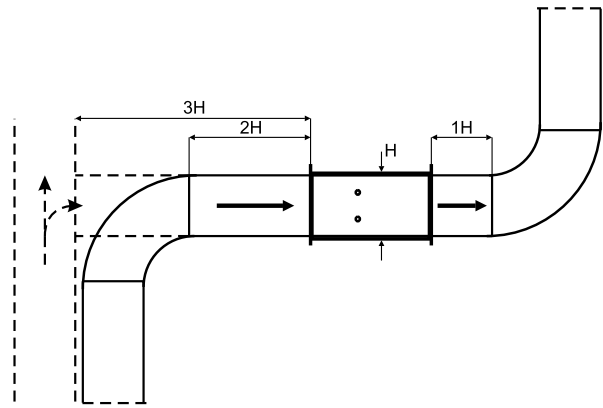
The ERMA measuring device is available in vast number of sizes and with either slip or flange joint.

ERMA reaches air tightness class B in accordance with EN1751:1998.

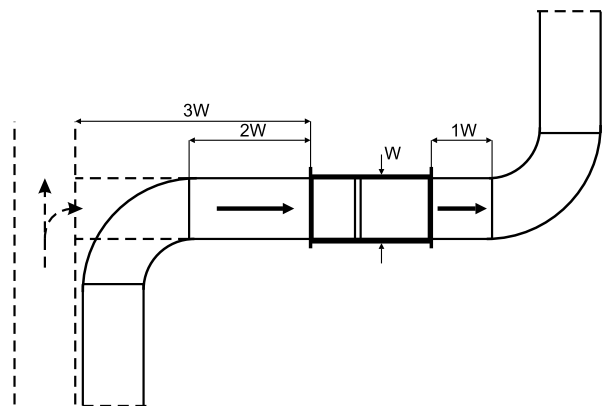
Installation guidelines

Due to accuracy of airflow measurement it is recommended to install ERMA box in a certain distance from other elements of ventilation system which may disturb the airflow pattern. Minimum safety distances after junction and bend are shown below:

Vertical

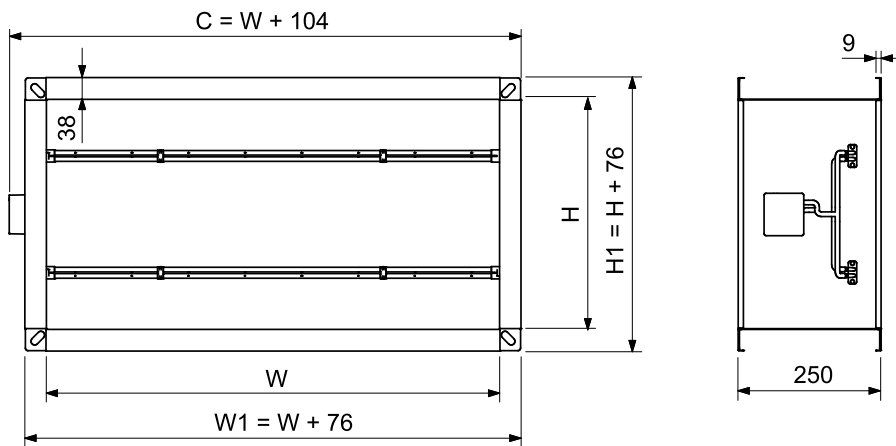


Horizontal

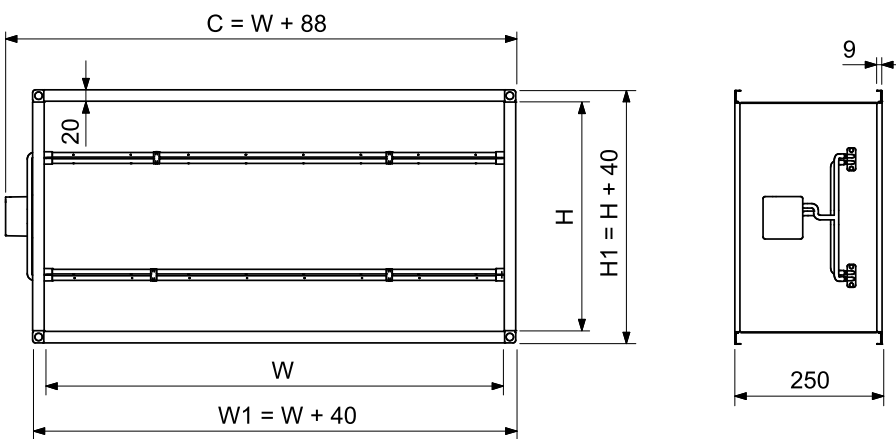


Dimensions and weights

Flange joint



Slip joint



Dimensions given in mm.

Weight (kg)

H (cm)/ W (cm)	020	025	030	040	050	060	070	080	100	120	140	160
010	1.5	1.7	1.9	2.2	2.6	3.0	-	-	-	-	-	-
020	1.9	2.0	2.2	2.6	3.0	3.4	3.8	4.1	4.9	-	-	-
025	2.0	2.2	2.4	2.8	3.2	3.6	3.9	4.3	5.1	-	-	-
030	-	-	2.6	3.0	3.4	3.8	4.1	4.5	5.3	-	-	-
040	-	-	-	3.4	3.8	4.2	4.6	4.9	5.7	6.5	7.2	8.0
050	-	-	-	-	4.1	4.5	4.9	5.3	6.1	6.8	7.6	8.4
060	-	-	-	-	-	4.9	5.3	5.7	6.4	7.2	8.0	8.8
070	-	-	-	-	-	-	5.7	6.1	6.9	7.7	8.4	9.2
080	-	-	-	-	-	-	-	6.5	7.3	8.0	8.8	9.6
100	-	-	-	-	-	-	-	-	8.0	8.8	9.6	10.4

Operating range

Following table shows recommended minimum V_{\min} [m³/h] and limiting V_{nom} [m³/h] airflow value preset by manufacturer. *)

H [cm]/W [cm]	020	025	030	040	050	060
010	72-720	90-900	108-1080	144-1440	180-1800	216-2160
020	144-1440	180-1800	216-2160	288-2880	360-3600	432-4320
025	180-1800	225-2250	270-2700	360-3600	450-4500	540-5400
030	-	-	324-3240	432-4320	540-5400	648-6480
040	-	-	-	576-5760	720-7200	894-8640
050	-	-	-	-	900-9000	1080-10800
060	-	-	-	-	-	1296-12960
070	-	-	-	-	-	-
080	-	-	-	-	-	-
100	-	-	-	-	-	-

H [cm]/W [cm]	070	080	100	120	140	160
010	-	-	-	-	-	-
020	504-5040	576-5760	720-7200	-	-	-
025	630-6300	720-7200	900-9000	-	-	-
030	756-7560	864-8640	1080-10800	-	-	-
040	1008-10080	1152-11520	1440-14400	1728-17280	2016-20160	2304-23040
050	1260-12600	1440-14400	1800-18000	2160-21600	2520-25200	2880-28800
060	1512-15120	1728-17280	2160-21600	2592-25920	3024-30240	3456-34560
070	1764-17640	2016-20160	2520-25200	3024-30240	3528-35280	4032-40320
080	-	2304-23040	2880-28800	3456-34560	4032-40320	4608-46080
100	-	-	3600-36000	4320-43200	5040-50400	5460-57600

*) Other settings of V_{nom} value on request.

V_{max} corresponds to air going through the VAV box with velocity of 10 m/s.

V_{min} corresponds to air going through the VAV box with velocity of 1.0 m/s.

When air velocity is below 1.5 m/s measuring accuracies cannot be guaranteed.

Measuring accuracy

Velocity m/s	Measuring accuracy %
≥ 1.5	± 10
≥ 4	± 8
≥ 8	± 5

Product Code

Measuring device ERMA-a-bbb-ccc-d

Measurement unit (a)

1 = GT

5 = GT-MB (Modbus)

6 = GT-MB-ST for IPSUM (Modbus, Plug-in)

Width (bbb)

020, 025, 030, 040, 050, 060, 070, 080, 100, 120, 140, 160

Height (ccc)

010, 020, 025, 030, 040, 050, 060, 070, 080, 100

Joint type (d)

1 = Slip joint

2 = Flange joint

Technical data for measurement units and installation examples, see "Optivent controls" technical catalogues.