

# Technical Data Mass Flow Measurement Grid



Fig. 1-1 Example of mass flow measurement grid in circular design with flange

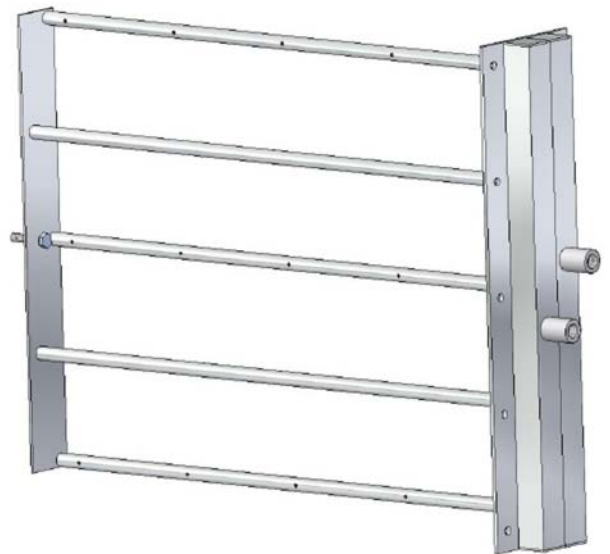


Fig. 1-2 Example of mass flow measurement grid in rectangular design with flange

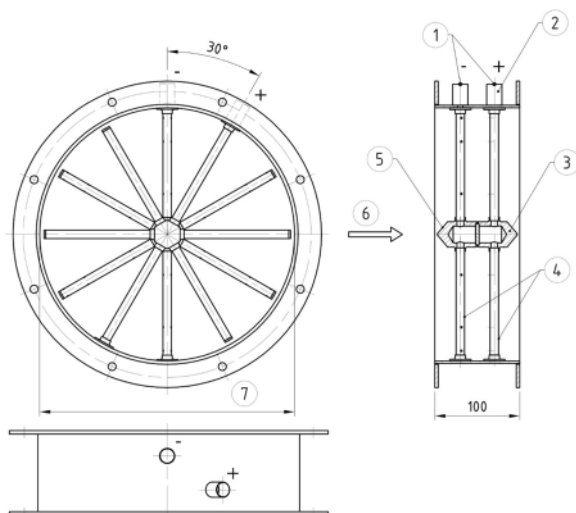


Fig. 1-3 Dimensional drawing of circular version (front/side view)

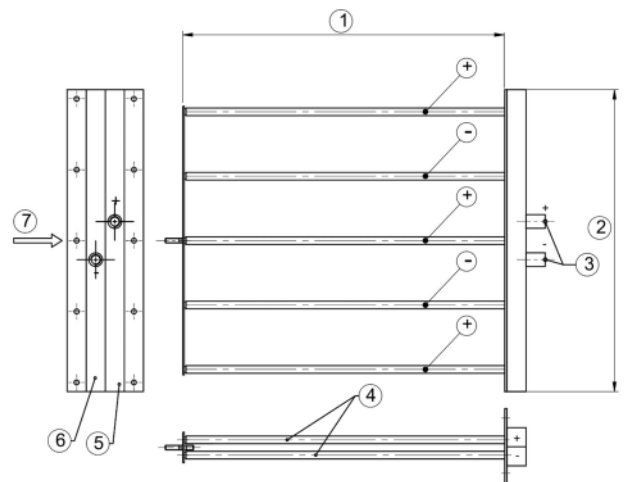


Fig. 1-4 Dimensional drawing of rectangular version (front/side view)

- 1 Welding sleeve G1/4"
- 2 Connecting pipe
- 3 Collector +
- 4 Measuring tube
- 5 Collector -
- 6 Direction of flow
- 7 Nominal diameter ( $\hat{a} \hat{c} \hat{i} \hat{a} \hat{s} \hat{a} \hat{c} \hat{i}$ )

- 1 Air duct width
- 2 Air duct height
- 3 Welded cutting ring fitting G1/4"
- 4 Measuring tube
- 5 Collector +
- 6 Collector -
- 7 Direction of current

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## Design

Circular design	Inside duct L = 100 mm Wall thickness from 2 up to 3 mm with flange EN 12220 as an option (counter flange must be ordered separately)
Rectangular design	to be flanged at the duct Pneumatic connection is at the side which is signerd with the air duct hight (s. Fig 1-4)

## Dimensions

Measures (h x b)/ $\varnothing$	as size in mm
Weight	as size in kg
Material	Stainless steel (other material on request)

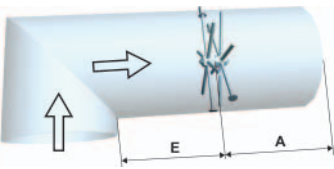
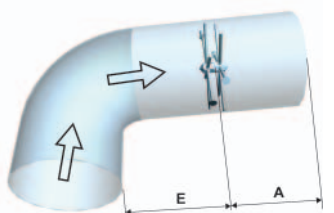
## Characteristic

Pneumatic connection	Pipe coupling G 1/4"
Mounting design	- Flange connection - Welded - Clamping connection for "Jacobrohr"
Measuring media	Any non-aggressive, non-explosive, gaseous media with known density
System pressure	-0,5 ... +0,5 bar (negative/positive media)
Repetition accuracy	standard repetition accuracy $\leq \pm 1\%$ of measurement value
Calibration accuracy	Calibrated grids on the test bench $\leq \pm 1\%$ of measurement value - Calculated grids $\leq \pm 5\%$ of measurement value - Calibrated grids on site $\leq \pm 2\%$ of measurement value
Lost of pressure	The loss of pressure is evaluated depending on size of the grid and part of documentation at order.

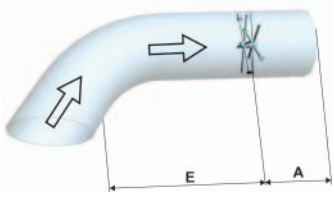
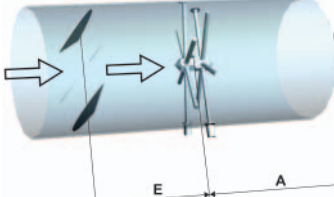
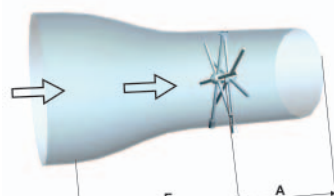
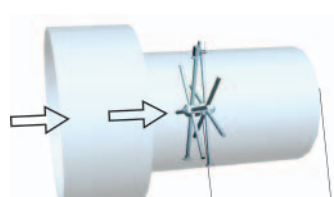
## Environmental Conditions

Temperature of measuring media	-20 °C ... +400 °C (other temperature ranges on request)
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## Table of- Inlets

		Tolerance $\pm 1\%$ Inlet E	Tolerance $\pm 3\%$ Inlet E	Tolerance $\pm 5\%$ Inlet E
Rectangular deflection		6 x $\varnothing$	5 x $\varnothing$	3 x $\varnothing$
Elbow 90° Radius 1 D or smaller		5 x $\varnothing$	4 x $\varnothing$	2 x $\varnothing$

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Type of obstacle		Tolerance $\pm 1\%$ Inlet E	Tolerance $\pm 3\%$ Inlet E	Tolerance $\pm 5\%$ Inlet E
Elbow 30°		3 x $\varnothing$	2 x $\varnothing$	1 x $\varnothing$
Contrary multi leaf damper		4 x $\varnothing$	3 x $\varnothing$	2 x $\varnothing$
Gradually taper		2 x $\varnothing$	1 x $\varnothing$	1 x $\varnothing$
Sudden constriction		3 x $\varnothing$	1 x $\varnothing$	1 x $\varnothing$

The tolerances are based on the measuring value

Calculation formular:

Inlet E = Tolerance multiplier ' Type of obstacle x mass flow measurement grid  $\varnothing$  (circular) or diameter (square or rectangular)

### Calculation example of the Inlet

For type of obstacle 'Rectangular deflection' with a tolerance of +/- 1 %;  
Mass flow measurement grid DN 300 mm

$$E = 6 \times 300 \text{ mm}$$

$$E = 1800 \text{ mm}$$

For type of obstacle 'Elbow 30 °' with a tolerance of +/- 3 %;  
Mass flow measurement grid 800 mm x 300 mm

$$E = 2 \times 854 \text{ mm}$$

$$E = 1708 \text{ mm}$$

Outlet A shall consist of the length of the diameter/diagonal of the mass flow measurement grid as a minimum.

## Ordering Information Mass Flow Measurement Grid

### Mass Flow Measurement Grid – Circular Design – Default Sizes, Material: Stainless Steel

Description/Type (Dimensions Ø)*	Order No.
Mass flow measurement grid circular design Ø 300 mm, in conduit section without flange, length 100 mm	654RU300
Mass flow measurement grid circular design Ø 300 mm, Mass flow measurement grid round, Ø 300 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU300F
Mass flow measurement grid circular design Ø 400 mm, in conduit section without flange, Länge 100 mm	654RU400
Mass flow measurement grid circular design Ø 400 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU400F
Mass flow measurement grid circular design Ø 500 mm, in conduit section without flange, Länge 100 mm	654RU500
Mass flow measurement grid circular design Ø 500 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU500F
Mass flow measurement grid circular design Ø 600 mm, in conduit section without flange, , length 100 mm	654RU600
Mass flow measurement grid circular design Ø 600 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU600F
Mass flow measurement grid circular design Ø 700 mm, in conduit section without flange, , length 100 mm	654RU700
Mass flow measurement grid circular design Ø 700 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU700F
Mass flow measurement grid circular design Ø 800 mm, in conduit section without flange, , length 100 mm	654RU800
Mass flow measurement grid circular design Ø 800 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU800F
Mass flow measurement grid circular design Ø 900 mm, in conduit section without flange, , length 100 mm	654RU900
Mass flow measurement grid circular design Ø 900 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU900F
Mass flow measurement grid circular design Ø 1.000 mm, in conduit section without flange, , length 100 mm	654RU1000
Mass flow measurement grid circular design Ø 1.000 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU1000F
Mass flow measurement grid circular design Ø 1.300 mm, in conduit section without flange, , length 100 mm	654RU1300
Mass flow measurement grid circular design Ø 1.300 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU1300F
Mass flow measurement grid circular design Ø 1.600 mm, in conduit section without flange, , length 100 mm	654RU1600
Mass flow measurement grid circular design Ø 1.600 mm, in conduit section with flange, in acc. to EN12220, length 100 mm	654RU1600F

### Mass Flow Measurement Grid – Rectangular Design – Default Sizes, Material: Stainless Steel

Description/Type (Dimensions h x w)*	Order No.
Mass flow measurement grid hight 300 mm x width 300 mm	654RE300x300
Mass flow measurement grid hight 350 mm x width 400 mm	654RE350x400
Mass flow measurement grid hight 400 mm x width 400 mm	654RE400x400
Mass flow measurement grid hight 500 mm x width 600 mm	654RE500x600
Mass flow measurement grid hight 700 mm x width 700 mm	654RE700x700
Mass flow measurement grid hight 750 mm x width 750 mm	654RE750x750
Mass flow measurement grid hight 800 mm x width 800 mm	654RE800x800
Mass flow measurement grid hight 850 mm x width 850 mm	654RE850x850
Mass flow measurement grid hight 900 mm x width 900 mm	654RE900x900
Mass flow measurement grid hight 950 mm x width 950 mm	654RE950x950
Mass flow measurement grid hight 1.000 mm x width 1.000 mm	654RE1000x1000
Mass flow measurement grid hight 1.700 mm x width 380 mm	654RE1700x380
Mass flow measurement grid hight 1.200 mm x width 1.200 mm	654RE1200x1200

\* other sizes on request



The information in this publication is subject to technical changes.

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**LAMTEC Meß- und Regeltechnik**  
für Feuerungen GmbH & Co. KG

Wiesenstraße 6  
D-69190 Walldorf  
Phone: +49 (0) 6227 / 6052-0  
Fax: +49 (0) 6227 / 6052-57  
e-mail: info@lamtec.de  
www.lamtec.de

**LAMTEC Leipzig GmbH & Co. KG**

Portitzer Straße 69  
D-04425 Taucha  
Phone: +49 (0) 34298 / 4875-0  
Fax: +49 (0) 34298 / 4875-99

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