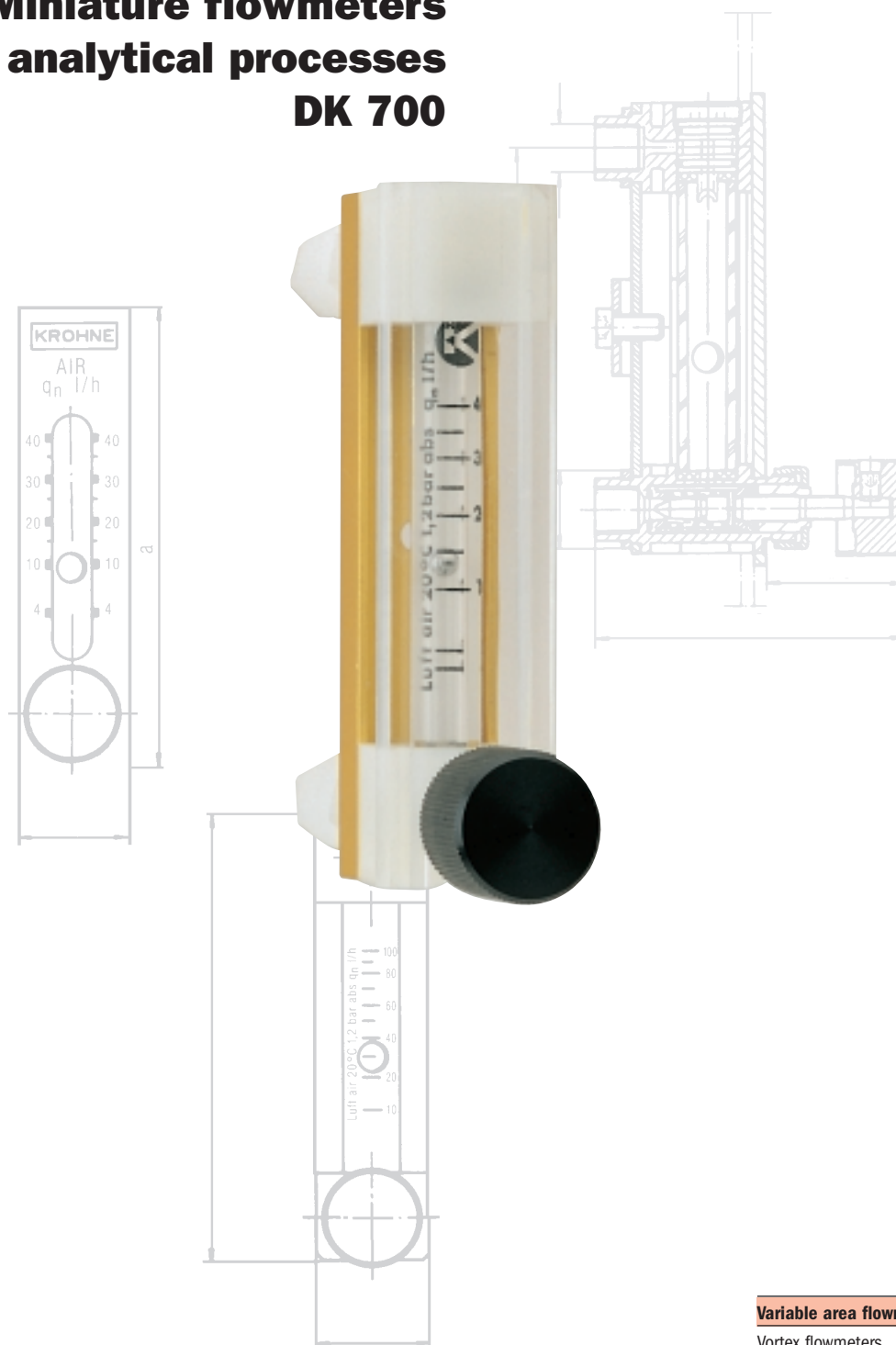


Miniature flowmeters for analytical processes DK 700



Variable area flowmeters

Vortex flowmeters

Flow controllers

Electromagnetic flowmeters

Ultrasonic flowmeters

Mass flowmeters

Level measuring instruments

Communications technology

Engineering systems & solutions



DK 700

Miniature flowmeters with fine-adjusting needle valves ideal for analytical processes

Description

A new-style valve design allows the proportioning of ultra-low flow rates with an approximately linear control characteristic. The instrument is easy to install in switch panels. Clamp clip attachment on the rear of the instrument.

In place of a scale on the measuring glass, types DK 701 and DK 711 have a scale in yellow print on a black face-plate.

Types DK 702 and DK 712 feature a scale on the measuring glass and a face-plate of polycarbonate without a scale.

Special version with a plastic valve made of PEEK mod material and gaskets of TFM/Kalrez; accordingly, all wetted parts are made of materials that are highly resistant to chemical attack.

Special features

- Resistant to extreme chemical conditions
Standard: all wetted parts of PVDF, glass, stainless steel and Viton
optional: PVDF, PEEK mod, glass, and TFM/Kalrez
- Suitable for products containing chlorine additives and in corrosive atmospheres
- Easy panel mounting
- 19" plug-in unit for DK 701 and DK 702 to DIN 41494 Part 5, 6 modules wide and 3 modules high
- replaceable measuring glasses
- Needle valve for fine adjustment
- Max. allowable operating pressure: 4 bar (58 psig)
- Max. allowable product temperature: 100°C (212°F)
- Measuring range: max. 1000 l/h (37 SCFH) air or 40 l/h (0.16 US GPM water)
- Option: 6 mm (0.24") PVDF flexible tube connection

Technical data

Measuring ranges (100% values)

Water 20°C (68°F)	2.5 to 40 l/h (0.01 to 0.16 US GPM)
Air 1.2 bar abs., 20°C (17.4 psia, 68°F)	5 to 1000 l/h (0.2 to 37 SCFH)
See Flow Table for range selection	

Rangeability	10:1
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Accuracy class to VDI/VDE Code 3513, Sh. 2

DK 701	6
DK 702, DK 711	4
DK 712	2.5

Measuring cone

Type	NG 50
Length	
DK 701, DK 702	60 mm (2.36")
DK 711, DK 712	100 mm (3.94")
Scale division	flow units
Float shape	ball

Operating data

Max. allowable operating pressure	4 bar (58 psig)
Max. product temperature	100°C (212°F)

Connection

Standard	G ¹ / ₈
Adapters	tube connections 6 mm (0.24")
Fitting dimension	
DK 701, DK 702	075 mm (2.95")
DK 711, DK 712	115 mm (4.53")

Diameter of needle valve

Flow ranges	< 5 l/h water, ≤ 100 l/h air = 1.0 mm (< 0.02 US GPM water, ≤ 4 SCFH air = 0.04") > 5 l/h water, > 100 l/h air = 2.5 mm (> 0.02 US GPM water, > 4 SCFH air = 0.1")
PEEK mod	2.5 mm (0.1") for all ranges

Materials

Measuring cone	borosilicate glass
Float	stainless steel 1.4401 (316), glass
Gaskets	
Standard	Viton/TFM
Option	TFM/Kalrez
Valve spindle	stainless steel 1.4571 (316 Ti) (optionally: PEEK mod)
Mount	
Rear section	aluminium, anodized
Front section	aluminium, anodized or polycarbonate

Limit switch	on request
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DK 700

Flow table

Float material stainless steel 1.4571 (316 Ti), glass

Calibration data

Water at 20°C (68°F)

Air at 20°C (68°F), 1.2 bar abs. (17.4 psia)

100% flow values, Rangeability 10:1

Ball		Water		Air		DK 701	
		DK 702		DK 702		DK 711	
dia.		DK 712		DK 712		DK 711	
mm	inches	l/h	US GPM	l/h	SCFH	l/h	SCFH
4	0.16	-	-	5	0.2	-	-
4	0.16	-	-	8	0.3	-	-
4	0.16	-	-	16	0.6	-	-
4	0.16	-	-	25	1.6	-	-
4	0.16	-	-	40	1.5	-	-
4	0.16	2.5	0.01	60	2.5	40	1.5
6	0.24	5	0.02	100	4	100	4
6	0.24	12	0.05	250	10	150	6
6	0.24	25	0.10	500	20	250	10
6	0.24	40	0.16	800	30	-	-
6	0.24	-	-	1000*	37*	-	-

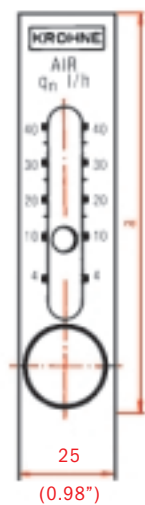
* DK 712 only

Dimensions and weights in mm (inches)

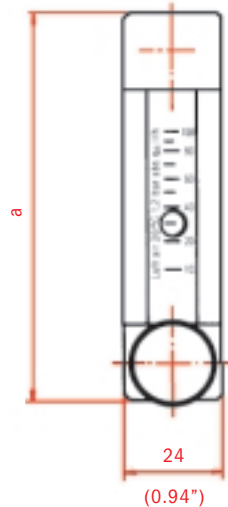
Instrument type	Dimensions					approx. Weight		
	a		b		c*		kg	lbs
	mm	inches	mm	inches	mm	inches		
DK 701	097	3.82	075	2.95	094	3.70	0.1	0.22
DK 702	097	3.82	075	2.95	094	3.70	0.1	0.22
DK 711	137	5.39	115	4.53	134	5.28	0.12	0.26
DK 712	137	5.39	115	4.53	134	5.28	0.12	0.26

* for the panel recess

DK 701/DK 711



DK 702/DK 712



Panel recess

