

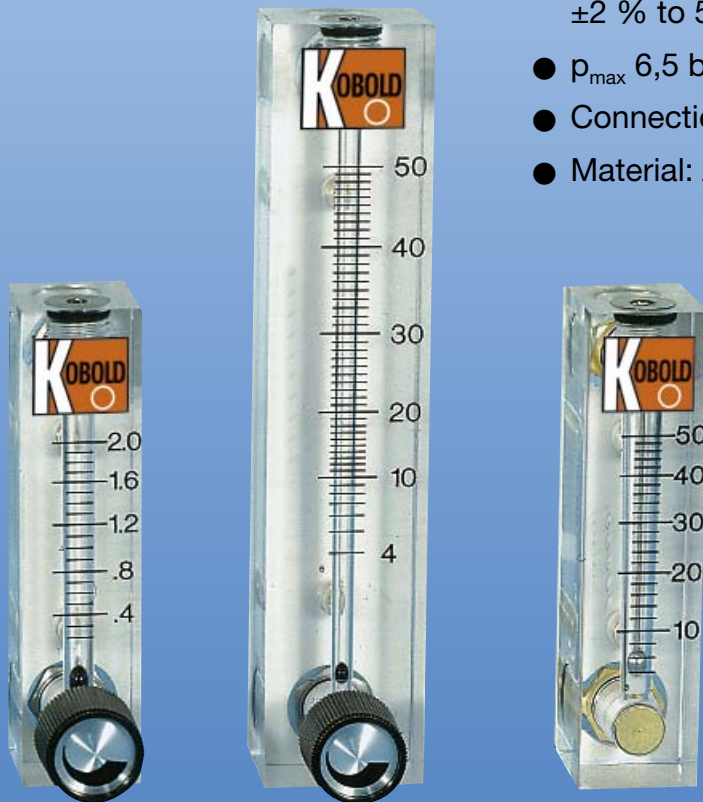


## Low Volume Variable Area Overview Meters for Liquids and Gases



measuring  
•  
monitoring  
•  
analysing

### KFR



- Measuring ranges:  
Water: 5 - 50 cm<sup>3</sup>/min...  
5 - 75 L/min  
Air: 0,05 - 0,5 L/min...  
400 - 4 000 L/min
- Accuracy:  
±2 % to 5 % of full scale
- p<sub>max</sub> 6,5 bar; t<sub>max</sub> 65 °C
- Connection: 1/8 ... 1 NPT female
- Material: Acrylic



KOBOLD companies worldwide:

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**Method of Operation**

The KOBOLD flow meter model KFR operates on the proven suspended float system, that is, the installation position is vertical and the flow is from bottom to top.

The instrument is constructed as a single unit, that is, it has an acrylic housing with removable connections made of PVC, brass or stainless steel.

The flow meter is thus very reasonably priced.

**Areas of Application**

- Gas analysis
- Water applications

**KFR versions**

1. KFR-21... and KFR-41...:  
acrylic with brass connection at the back
2. KFR-22... and KFR-42...:  
acrylic with stainless steel connection at the back
2. KFR-53...:  
acrylic with PVC connection at top and bottom

**Technical Details**

See at Order Details for Technical Details and Measuring ranges

Accuracy:

- KFR-2...: ±5 % of full scale
- KFR-4...: ±3 % of full scale
- KFR-5...: ±2 % of full scale

Max. temperature: 65 °C

Max. pressure: 6.5 bar

Connection:

KFR-2.. and KFR-4...: 1/8" NPT female at the back

Accessories: hose connector PPH, white, straight for 1/4" hose diameter

KFR-5...: 1 NPT female at bottom and top

KFR-5..PM (with panel mounting option): Connection at the back

**Materials**

Wetted parts	KFR-21 + KFR-41	KFR-22 + KFR-42	KFR-53
Housing	Acrylic	Acrylic	Acrylic
Connection	Brass	St. steel	PVC
Gasket	NBR	FPM	NBR
Float	Glass or st. steel	Glass or st. steel	St. steel

Glass: black glass

Edelstahl: AISE 316 SS

Acetal: Acetal copolymer

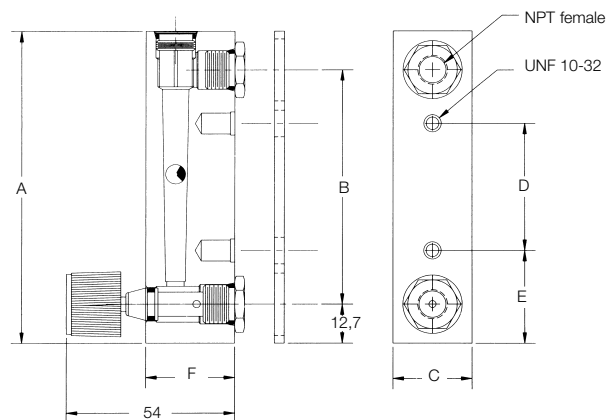
**Options**

Optional needle valves in brass or stainless steel are available for models KFR-2.. and KFR-4...

We can supply model KFR-5.. with a panel installation kit. Please note that in this case the connections are at the rear.

**Dimensions KFR-2... and KFR-4... (in mm)**

Model	A	B	C	D	E	F
KFR-2...	101.6	76.2	25.4	41.3	30.2	28.6
KFR-4...	165.1	139.7	34.9	88.9	38.1	28.6





**Model KFR-2... (overall length 101.6 mm, connection at the back, accuracy  $\pm 5$  % of full scale)**

Measuring range (water)	Float material	Brass connection	Stainless steel connection	Air measuring range (at 1 bar abs., 20°C)	Float material	Brass connection	Stainless steel connection	Option
5 ... 50 cm <sup>3</sup> /min	Glass	KFR-2109	KFR-2209	0.05 ... 0.5 L <sub>N</sub> /min	Glass	KFR-2112	KFR-2212	00 = no option NO = Needle valve
10 ... 100 cm <sup>3</sup> /min	Glass	KFR-2110	KFR-2210	0.1 ... 1 L <sub>N</sub> /min	St. steel	KFR-2113	KFR-2213	
20 ... 240 cm <sup>3</sup> /min	St. steel	KFR-2111	KFR-2211	0.2 ... 2.5 L <sub>N</sub> /min	Glass	KFR-2129	KFR-2229	
				0.5 ... 5 L <sub>N</sub> /min	Glass	KFR-2114	KFR-2214	
				1 ... 10 L <sub>N</sub> /min	St. steel	KFR-2115	KFR-2215	
				2.5 ... 25 L <sub>N</sub> /min	Glass	KFR-2116	KFR-2216	
				5 ... 50 L <sub>N</sub> /min	St. steel	KFR-2117	KFR-2217	
				10 ... 100 L <sub>N</sub> /min	St. steel	KFR-2118	KFR-2218	
Accessories: hose connector set, straight for ¼ hose						KFR-PPH W 024		

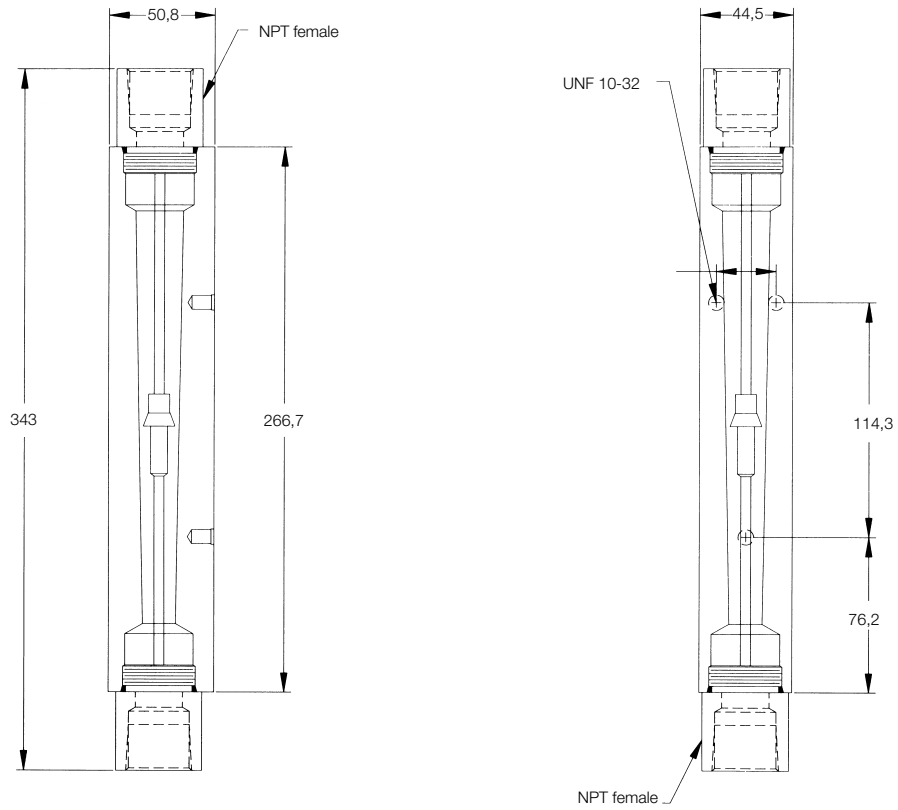
**Model KFR-4... (overall length 165.1 mm, connection at the back, accuracy  $\pm 3$  % of full scale)**

Measuring range (water)	Float material	Brass connection	Stainless steel connection	Air measuring range (at 1 bar abs., 20°C)	Float material	Brass connection	Stainless steel connection	Option
4 ... 50 cm <sup>3</sup> /min	Glass	KFR-4138	KFR-4238	100 ... 1 000 cm <sup>3</sup> <sub>N</sub> /min	Acetate	KFR-4139	KFR-4239	00 = no option NO = Needle valve
10 ... 120 cm <sup>3</sup> /min	St. steel	KFR-4156	KFR-4256	0,4 ... 5 L <sub>N</sub> /min	St. steel	KFR-4140	KFR-4240	
25 ... 225 cm <sup>3</sup> /min	Glass	KFR-4151	KFR-4251	1 ... 10 L <sub>N</sub> /min	Glass	KFR-4141	KFR-4241	
40 ... 400 cm <sup>3</sup> /min	St. steel	KFR-4150	KFR-4250	2 ... 20 L <sub>N</sub> /min	St. steel	KFR-4142	KFR-4242	
50 ... 650 cm <sup>3</sup> /min	St. steel	KFR-4152	KFR-4252	3 ... 30 L <sub>N</sub> /min	St. steel	KFR-4143	KFR-4243	
100 ... 1 500 cm <sup>3</sup> /min	St. steel	KFR-4153	KFR-4253	4 ... 50 L <sub>N</sub> /min	St. steel	KFR-4144	KFR-4244	
200 ... 3 000 cm <sup>3</sup> /min	St. steel	KFR-4154	KFR-4254	10 ... 100 L <sub>N</sub> /min	St. steel	KFR-4147	KFR-4247	
300 ... 3 700 cm <sup>3</sup> /min	St. steel	KFR-4155	KFR-4255					
Accessories: hose connector set, straight for ¼ hose						KFR-PPH W 024		

**Model KFR-5... (overall length 343 mm (277 mm for panel mounting), accuracy  $\pm 2$  % of full scale)**

Measuring range (water)	Float material	PVC connection	Air measuring range (at 1 bar abs., 20°C)	Float material	PVC connection	Option
1 ... 15 L/min	St. steel	KFR-5359	100 ... 700 L <sub>N</sub> /min	St. steel	KFR-5353	00 = no option
4 ... 36 L/min	St. steel	KFR-5360	100 ... 1 400 L <sub>N</sub> /min	St. steel	KFR-5354	PM = Panel mounting with Rear connections
5 ... 75 L/min	St. steel	KFR-5361	400 ... 4 000 L <sub>N</sub> /min	St. steel	KFR-5355	

KFR-5...



KFR-5...PM (for Panel mounting)

