Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

- Simple and direct monitoring of the flowing medium
- Timing and data storage
- Power supply via lithium battery

D-EN-FHKU-20220210

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General description
The flow meter FHKU LCD is an universally applicable control device and flow sensor. Its working range can be individually defined according to its nozzle size. It guarantees most precise fluid measurements. Excellent suitably to the monitoring of ion exchanger filter cartridges and for the treatment of water.

Characteristics
- Linear inlet and outlet.
- Time and date administration
- Upward or backwards. Counters
- History with date
- Instantaneous value announcement
- Automatic impulse calibration
- Litres and /or alarm-date
- Securit code prevents tempering by unauthorised persons.
- Current supply over lithium battery. With a battery change all attitudes and values are stored.

Approvals / Standards
EMV-standard:
EN 61326: 1997 +A1:1998 + A2: 2001
(IEC 61326: 2002)
NSF. Component

CE

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Important instructions!
Technical changes and errors reserved.
Pictures can be similar.
The operating instructions belonging to this device must be observed! Download at www.schmidt-messtechnik.com.

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Material	
Housing	PBT 35%GF (Arnite)
Bearing pin	Inox 1.4305 (18/8)
Nozzle: Ø 1.0, 1.2, 2.0, 2.5mm	PPS 40%GF (Ryton)
Nozzle: Ø 3.0, 4.0mm	Inox 1.4305
Nozzle: Ø 5.6mm	5.6mm like housing
O-ring	MVQ (silicone)
Turbine	PVDF
Magnets	ceramic Sr Fe O (wetted parts)
Screw	PT-screws (Phillips cross recessed)

Technical data	
Flow rate	0,041 - 15 l/min, depending on the nozzle diameter
Continuous operation	<500 rpm
Measuring accuracy	±2,0%
Repetition	<±0,25%
Temperature range	0°C to +60°C, 32 °F to 140 °F
Pressure range	10 bar at 20°C
Mounting position	Horizontal*
Nozzle sizes	Ø 1.0, 1.2, 2.0, 2.5, 3.0, 4.0, 5.6 mm

*Horizontal position is, when this side is facing up.

Technical data upper section	
Splash-proof	IP X4
Limit-measurement	1 - 99999 litres
Pulses/Litre	1 - 65000
Statistics memory	The last 5 zero resets
Display	5 digits
Counter	Upward from 0 to 99999 litres, with and without limit Down from 99999 to -9999 litres
Instantaneous value	l/min
Battery	Lithium CR 2032

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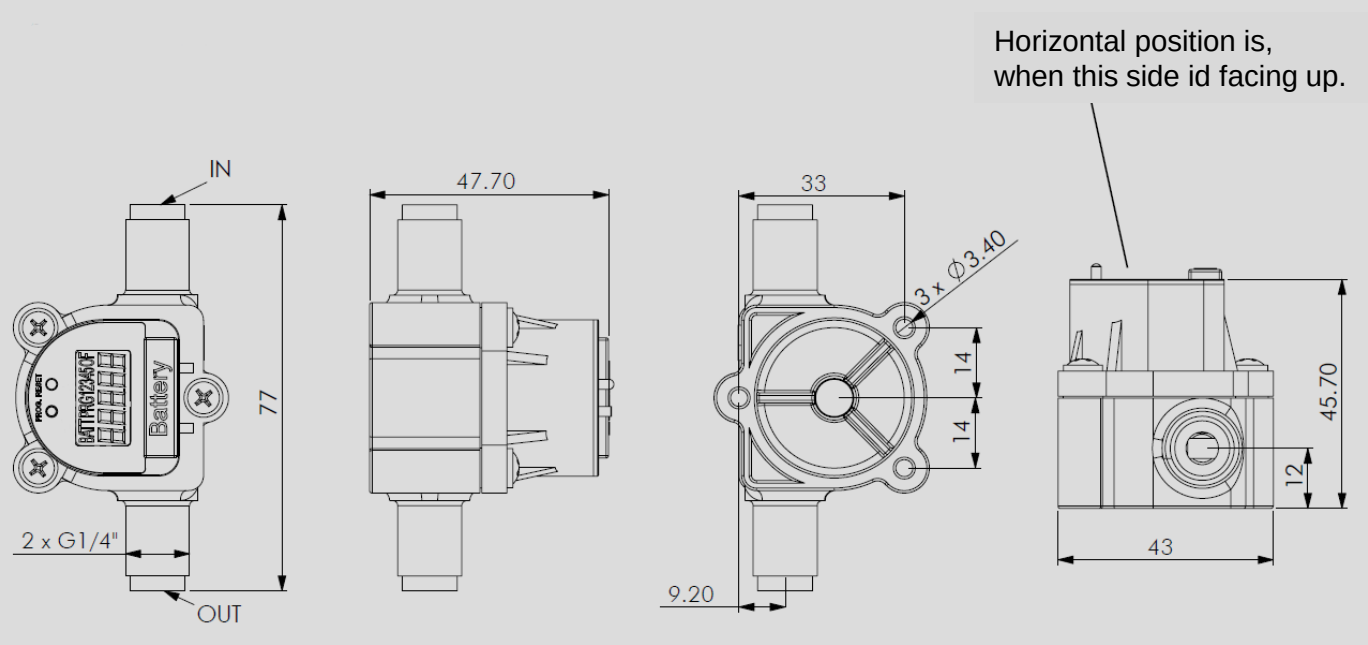
Turbine flow meter for liquids

Dimensions in mm



Battery change
Battery type: CR 2032

Resistance
Each country has specific regulations that the flow meter manufacturer must comply with, such as CE, NSF, FDA, SK. The various media that flow through the flow meter vary from application to application. Clarifications about the resistance of the entire installation and the flow meter (see material) with the medium manufacturer are recommended!

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FHK-LCD query and display functions

Counter up (1 in the display)
Shows the amount that has flowed through in liters.

- Measuring range without limit function: 0 to 99999 liters with a maximum of 3 decimal places (depending on the number of pulses).
- Measuring range with limit function: 0 to 99999 litres (without decimal place).
- If 99999 liters is exceeded, "OF" (OverFlow) is displayed.
- Alarm functions: Display flashes when the limit value or the alarm date is reached.

Counter down (2 in the display)
Shows the remaining amount in liters until alarm on.

- Measuring range without limit function: The counter down is switched off. "OFF" appears in the display.
- Measuring range with limit function: 99999 to -9999 litres (without decimal place).
- If the value falls below -9999 litres, “OF” (OverFlow) is displayed.
- Alarm functions: Display flashes when the value reaches 0 liters or when the alarm date is reached.

Instantaneous value (3 in the display)
Shows the current flow in l/min.

- Measuring range: 0 to 999.99 l/min with 2 decimal places.

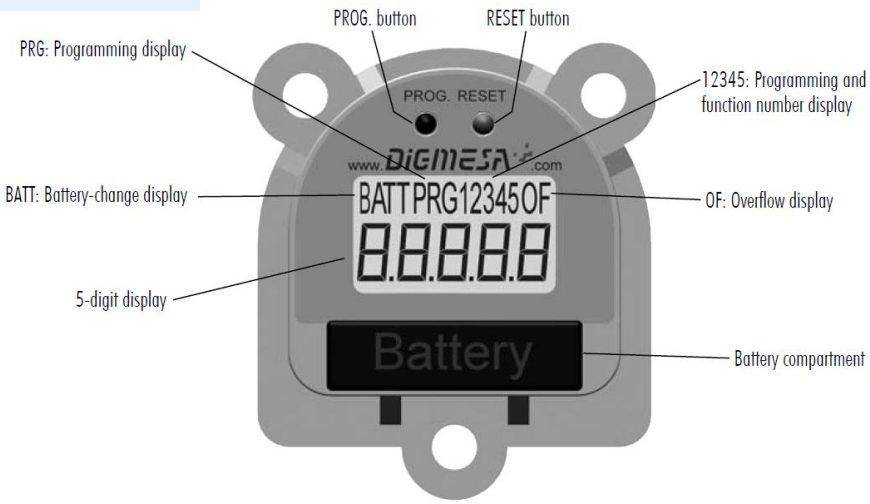
Time / date (4 in the display)
Displays the time and the date.

Alarm date (5 in the display)

- Without time limit function: The alarm date is switched off. "OFF" appears in the display.
- With time limit function: The alarm date is displayed.

History 1-5
The 5 most recent history values are displayed. These are displayed one after the other with the memory level (1-5). The data from the last reset is stored in memory level 1.
The following values are displayed in scrolling text:

- HL (History Litre) Flow volume
- Hd (History Date) reset date



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Turbine flow meter for liquids

FHK.LCD programming functions

PRG Setting the security code
4-digit security code.
The security function is deactivated if the value of the security code is 0000.

PRG1 Setting time / date
24 h time format (hh-mm)/date (DD.MM.YY).
The current date is saved under Hd (history date) each time the unit is reset.

PRG2 Setting the limit value
Limit value in litres (0 to 99999)
The limit value corresponds to the number of litres before an alarm is triggered and is the initial value, when down counting.
The limit function and down counter are deactivated if the limit value is 0..

PRG3 Setting the time limit value
Time limit value in months (0 to 99)
The time limit value corresponds to the number of months before an alarm is triggered.
The time limit function is deactivated if the time limit value is 0.

PRG4 Setting the calibration value (manual)
Calibration value is pulses per litre (1 to 65000).

PRG5 Setting the calibration value (automatically)
This function automatically calculates and sets the calibration value of the entire installation and the medium to be measured.
The weight of the flow medium is entered in gram.

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Nozzle size	pulses/ litre	g/pulse	min. flowrate (l/min] at lnear start	max. flowrate [l/min]	Pressure lost [bar]
Ø 1.00 mm	4126	0.24	0.041	0.56	1.0
Ø 1.20 mm	3400	0.29	0.050	0.82	1.0
Ø 2.00 mm	1976	0.50	0.091	2.40	1.0
Ø 2.5 mm	1520	0.65	0.150	3.74	1.0
Ø 3.00 mm	1130	0.88	0.102	5.63	1.0
Ø 4.00 mm	762	1.31	0.123	8.38	0.80
Ø 5.60 mm	472	2.11	0.308	9.26	0.45

The values specified must be considered as approximate values.
The number of pulses per litre may differ depending on medium and installation.
We recommend to calibrate the number of pulses per litre in line with the complete installation.

Measurement tips

- Ensure that there is no fast-pulsatory movement of the media
- Ensure that there are no reverse pressure surges
- Ensure that there is no air in the system
- Keep the pressure loss as small as possible
- Note the mounting position of the flowmeter
- Min/max flow should be in the linear range of the selected flowmeter
- Clean the system at appropriate intervals
- Avoid humidity at the battery and at the electrical contacts
- Avoid stray pick-up via the cable (Do not lay cables in parallel with high current loads)

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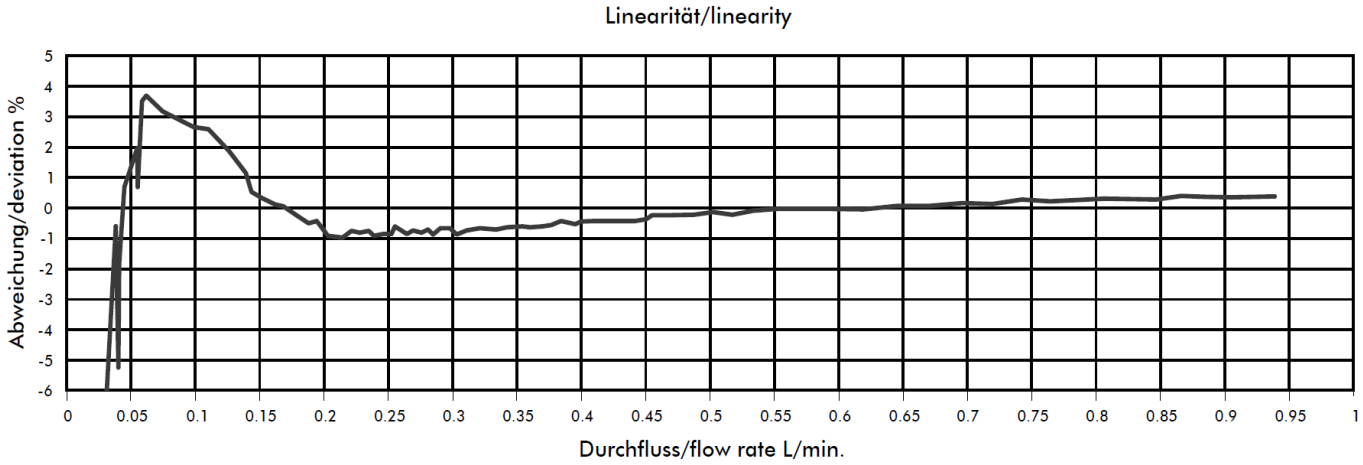
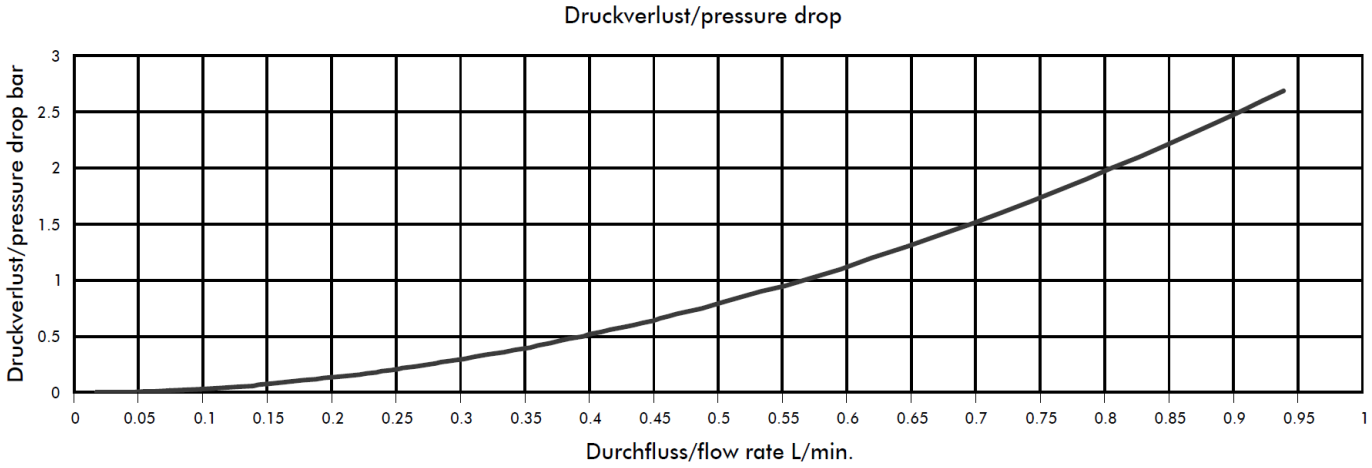
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 1.00 mm.





Medium: Water / max. pressure: 3.3 bar

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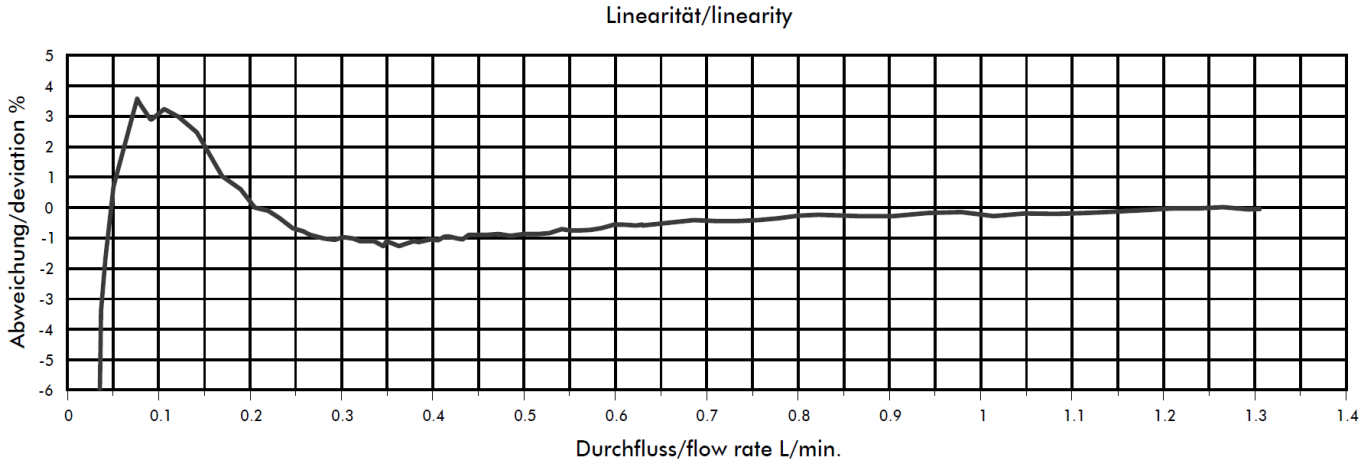
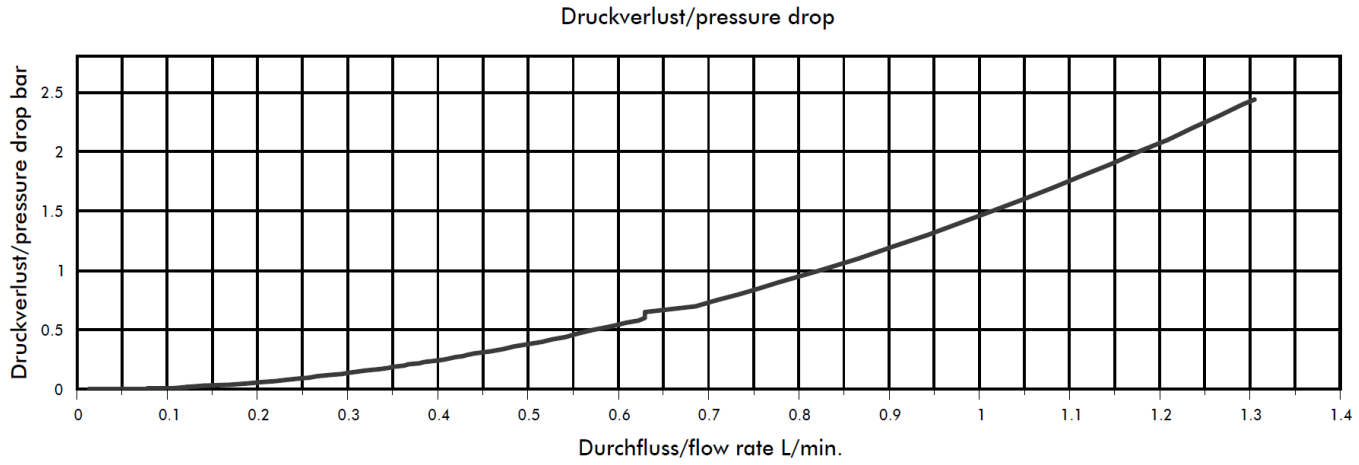
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 1.20 mm.





Medium: Water / max. pressure: 3.3 bar

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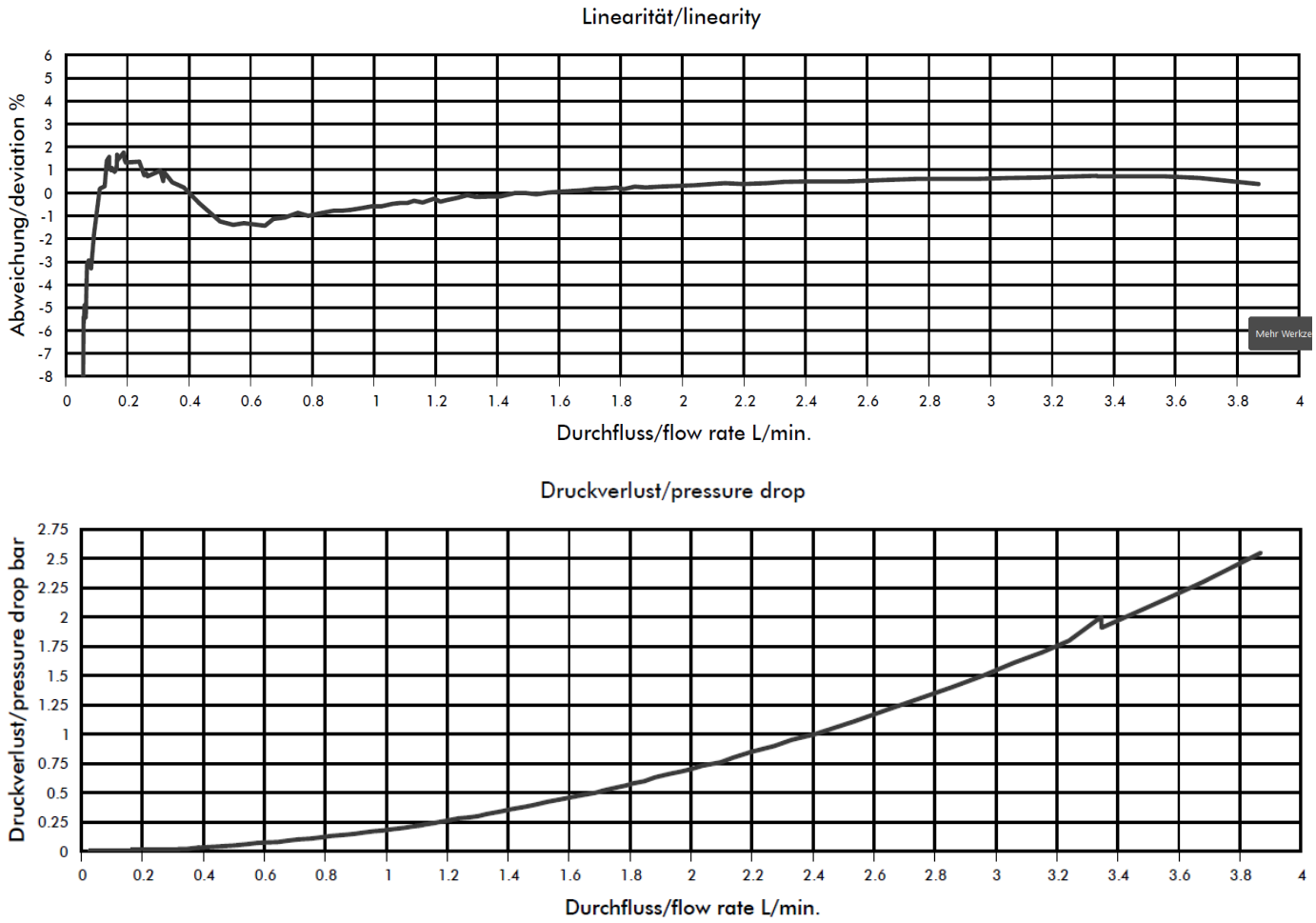
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 2.00 mm.



Medium: Water / max. pressure: 3.3 bar

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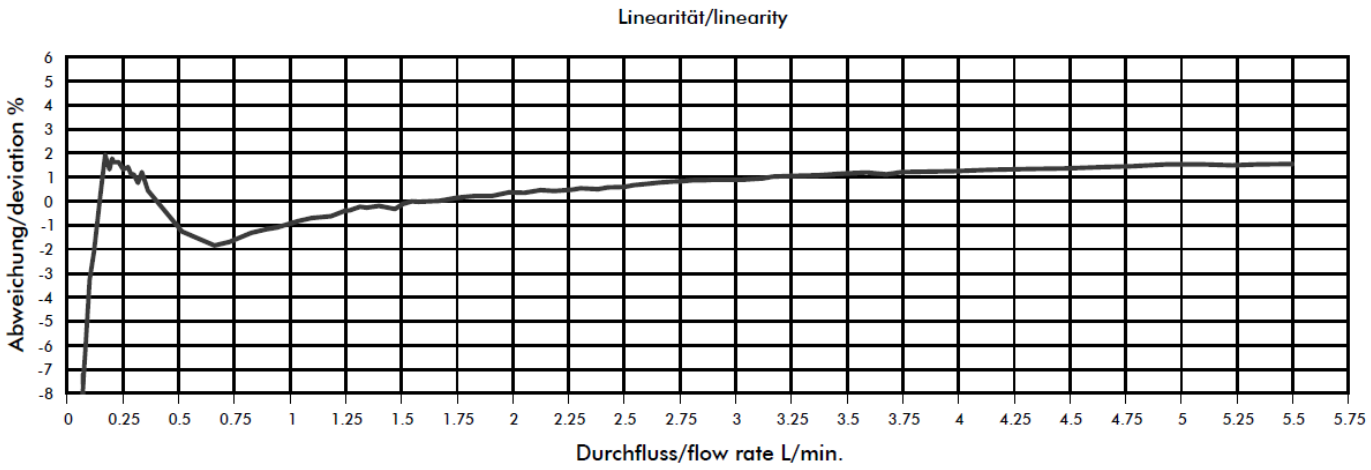
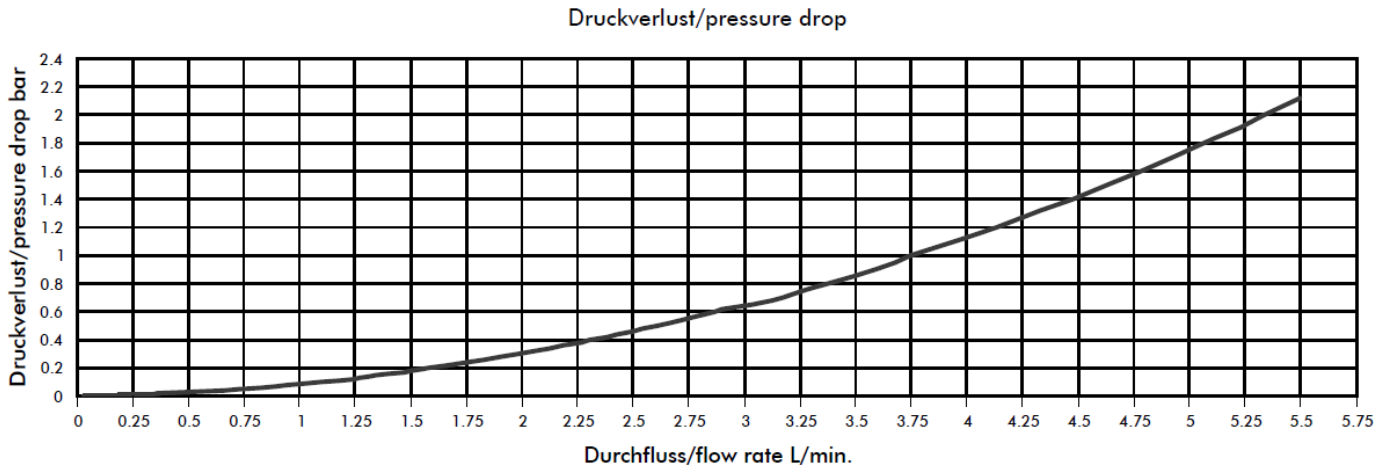
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 2.50 mm.





Medium: Water / max. pressure: 3.3 bar

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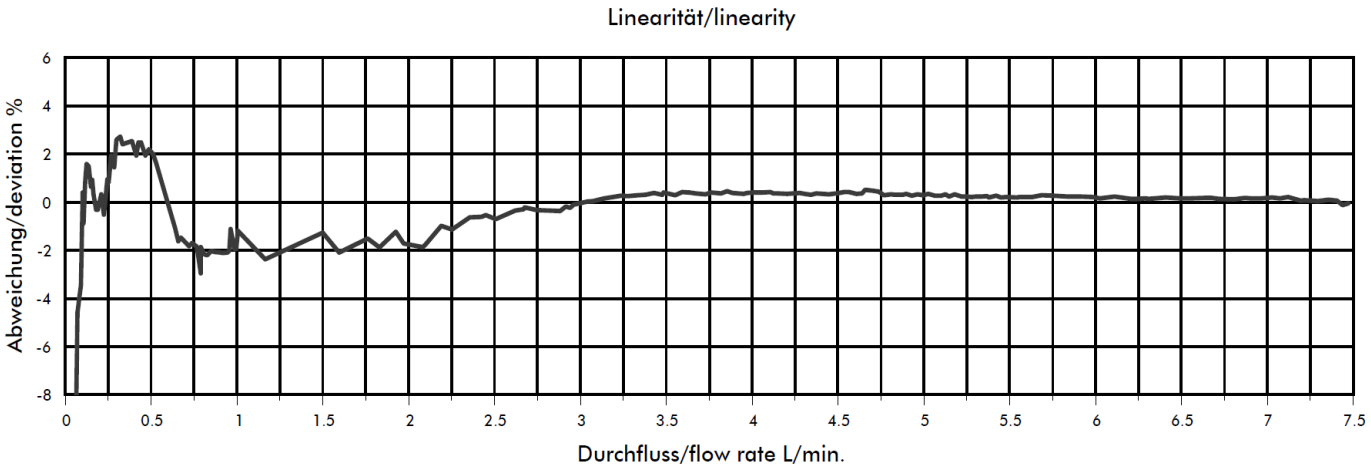
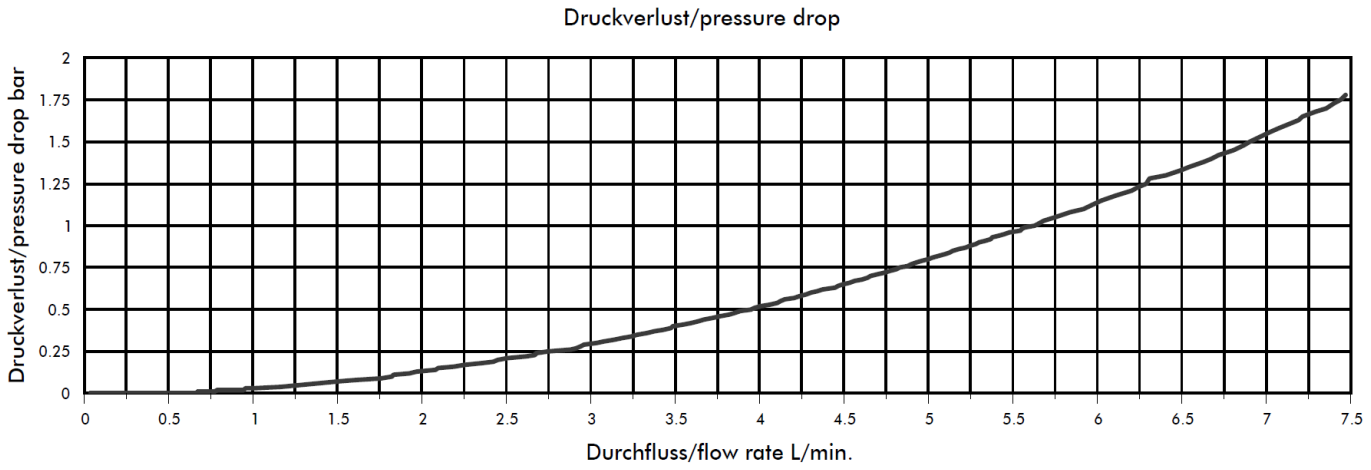
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 3.00 mm.





Medium: Water / max. pressure: 3.3 bar

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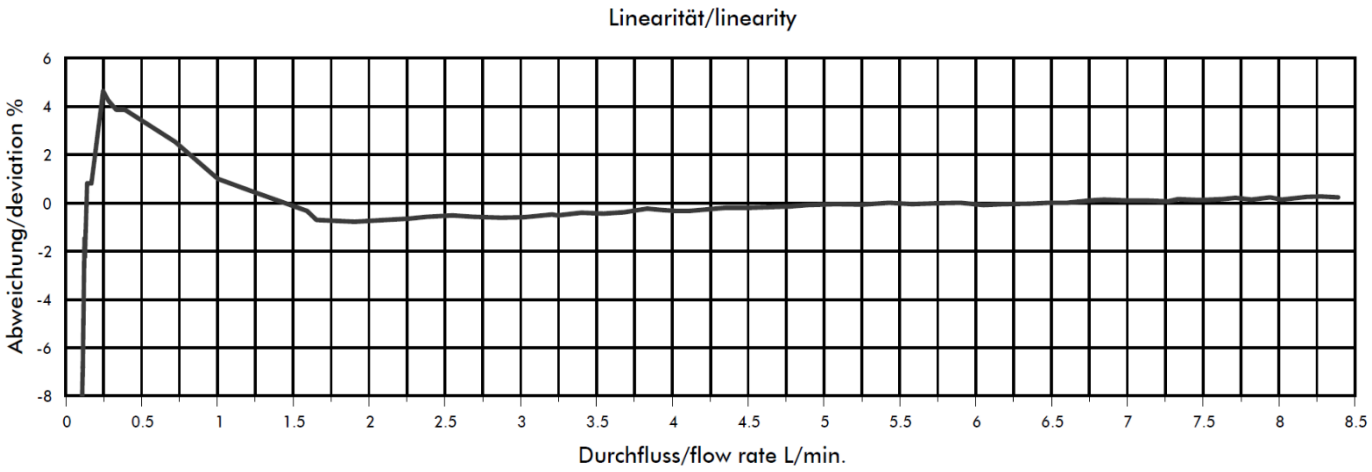
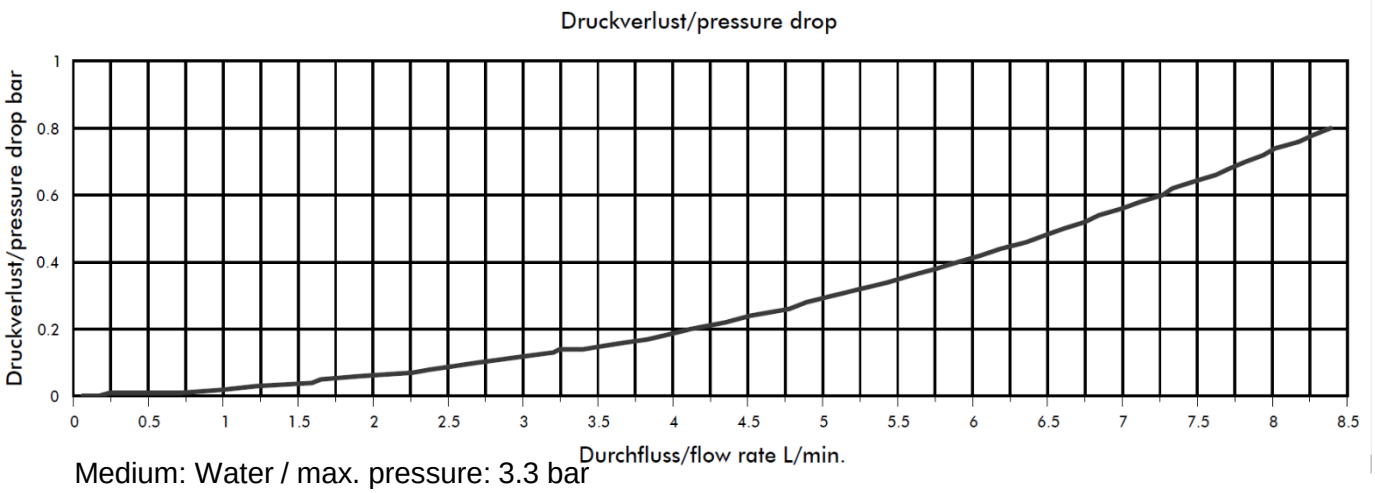
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 4.00 mm.





Medium: Water / max. pressure: 3.3 bar

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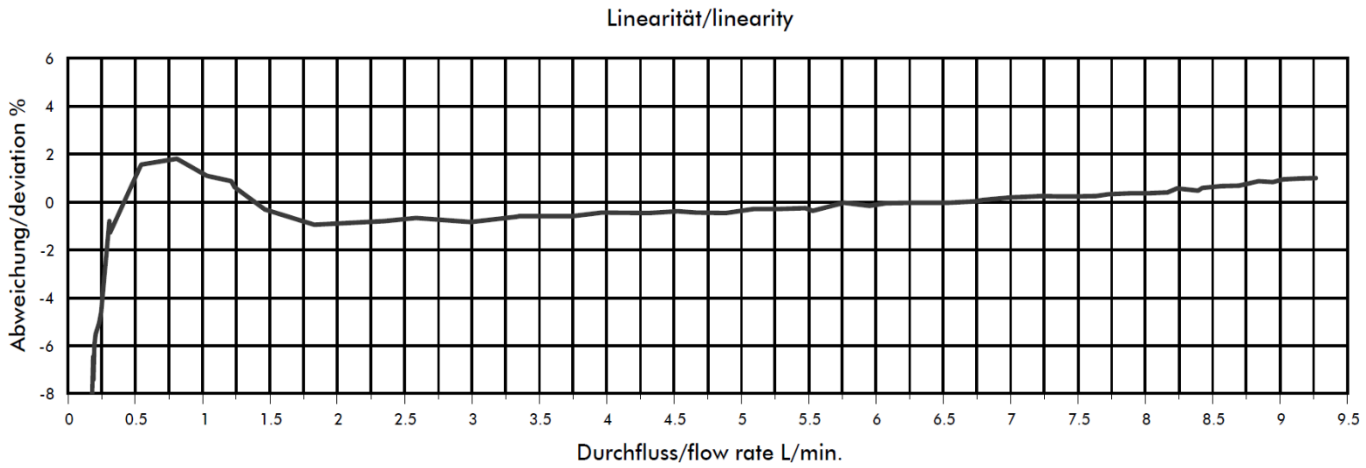
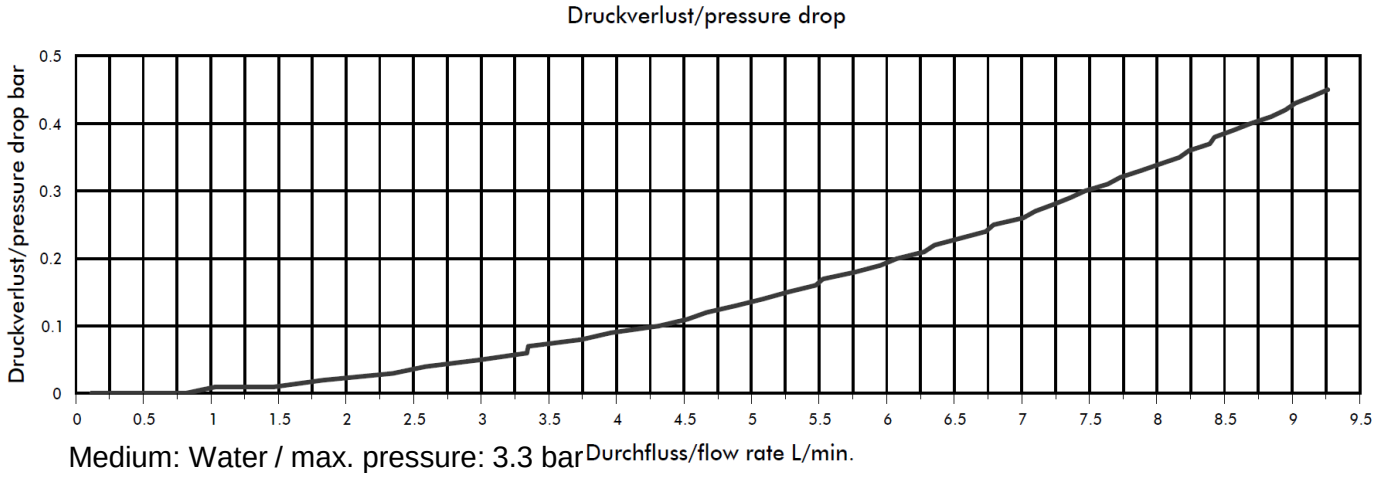
Data sheet FHKU LCD G1/4“ Arnite

Turbine flow meter for liquids

Measurement curve FHKU G1/4“ 5.60 mm.





Medium: Water / max. pressure: 3.3 bar

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