



INSTRUCTION MANUAL

Conductivity Flow-Through Measuring Cell

TetraCon DU/T
TetraCon DU/TH

WISSENSCHAFTLICH-TECHNISCHE WERKSTÄTTEN G. M. B. H.

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Instruction manual for conductivity flow-through measuring cell TetraCon DU/T and TetraCon DU/TH

1 Technical data

Parameters	conductivity and temperature
Measuring principle	4-electrode system
Measuring range	10 μ S/cm ... 1000 mS/cm
Cell constant	refer to value indicated on the cell (approx. 0.778/cm)
Pressure resistance	2 bar at 20 °C
Temperature range	0 ... 60 °C
Temperature sensor	NTC 30/6 k Ω
Response time for temperature measurement	$t_{99} < 60$ sec. (in case of flow-through > 500 ml/min)
Accuracy	tolerance < 0.2 K in stationary state, in the agent 37 °C, air 20 °C (in case of flow-through > 150 ml/min)

Material	TetraCon DU/T: graphitic carbon, epoxy, steel 1.4571, PA TetraCon DU/TH: graphitic carbon, epoxy, steel 1.4571, POM
Total volume	TetraCon DU/T: 7.5 ml TetraCon DU/TH: 6.5 ml
Connector	TetraCon DU/T: tube connector GES 10 TetraCon DU/TH: connector "Hansen"-type (dialysis connection acc. to DIN 58352)
Electrical connection	7-pole socket for connection cable model KKDU protection system IP 65 in plugged condition

2 Measurement

Please note: Connect measuring cells only to instruments which are designed for 4-electrode measuring technique.

Fundamentally the instruction manual of the used instrument should be considered.

- Connect connection cable KKDU with instrument and measuring cell
- Adjust exact cell constant (refer to value indicated on the cell) at the instrument (approx. 0.778 cm^{-1})
- Adjust right temperature coefficient (depending on the sample)
- Air bubbles in the measuring cell may cause wrong measuring values.

Application in the dialysis

Please consider that the measuring cell must not be used for patients measurements because we don't have any information from the supplier concerning the unobjectionable physiological requirements of the material.

3 Cleaning and ageing of the flow-through measuring cell

TetraCon DU/T or DU/TH

3.1 Cleaning

Water-soluble substances should be removed by rinsing with de-ionized water.

Other impurities:

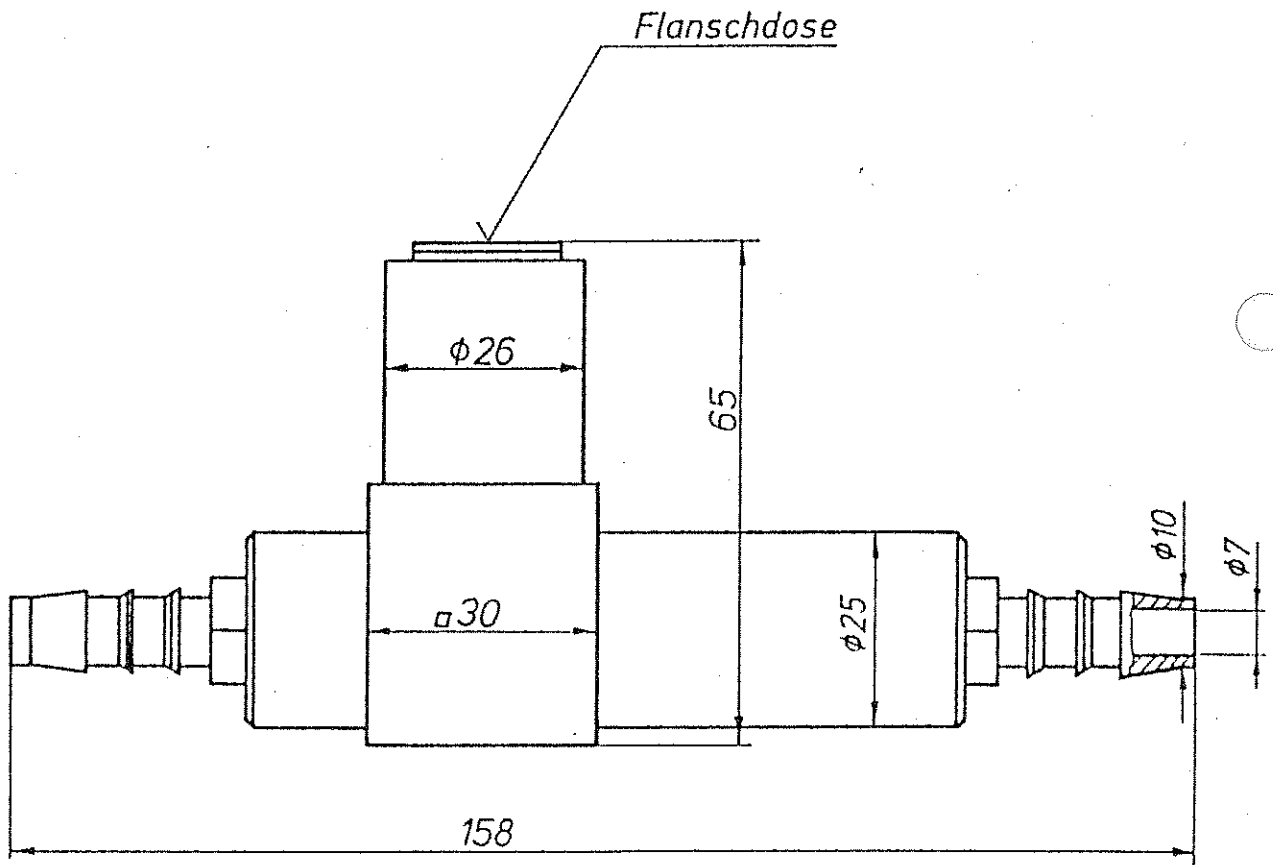
<u>Impurity</u>	<u>Cleaning solution</u>	<u>Induction time</u>
Grease and oil	Warm water and household cleaning solution	Any time
Lime and hydroxide deposits	Acetic acid (10 %)	Any time

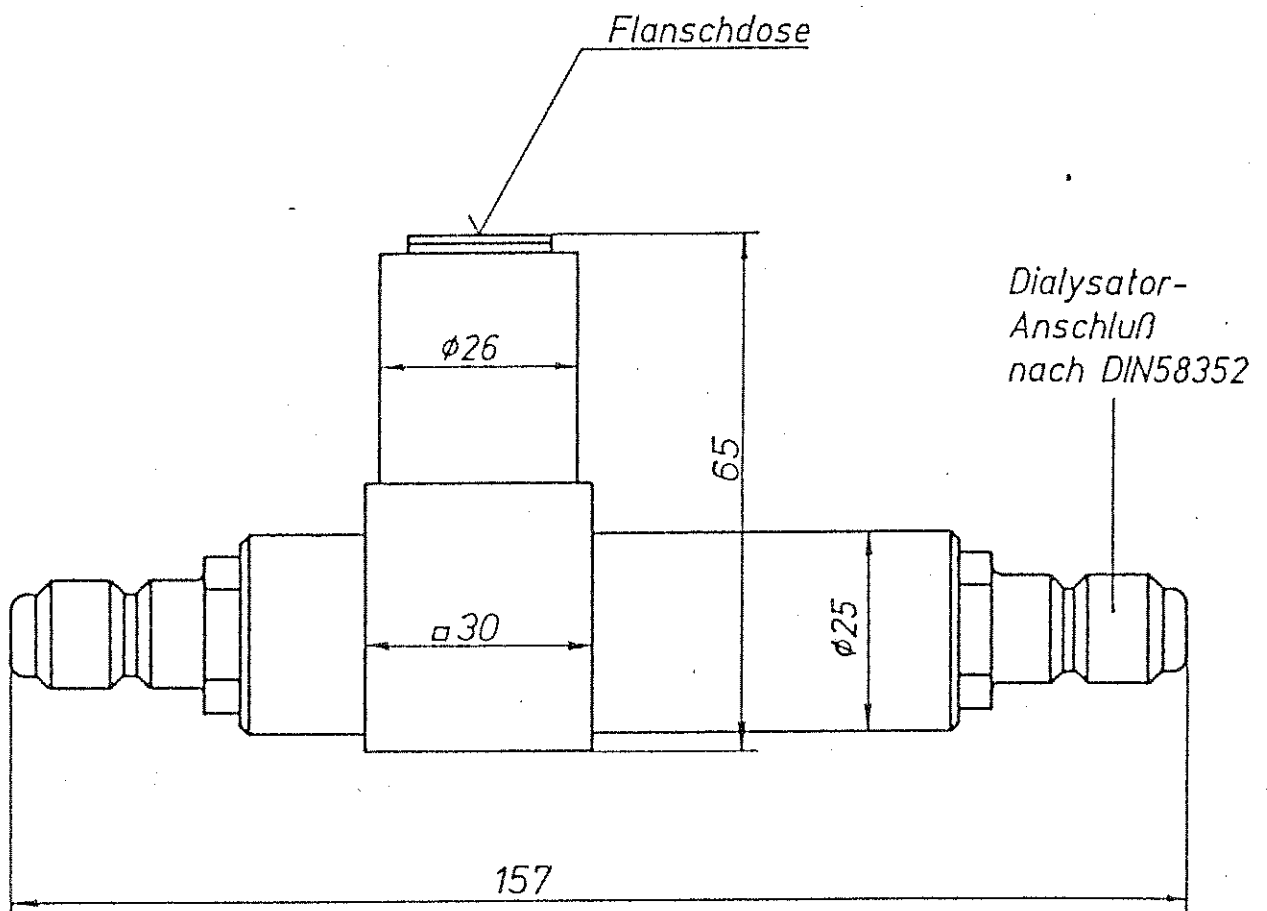
3.2 Alterung

Grundsätzlich altert die Leitfähigkeitsmeßzelle nicht. Spezielle Meßmedien oder zu hohe Temperaturen verkürzen erheblich die Lebensdauer bzw. führen zu Beschädigungen. Für durch das Meßmedium verursachte Ausfälle und bei mechanischen Beschädigungen gibt es keinen Garantieaustausch.

4 Ersatzteile und Zubehör

	<u>Modell</u>	<u>Best.Nr.</u>
Leitfähigkeits- Durchflußmeßzellen (ohne Anschlußkabel)	TetraCon DU/T	301252
	TetraCon DU/TH	301524
Anschlußkabel (serienmäßig 1 m)	KKDU	301532
Eich-Set (6 Flaschen à 50 ml Eich- und Kontrollstandard, KCl 0.01 mol/l zur Überprüfung der Zellenkonstante	E/SET	300572





LF Durchlaufmessstelle TetraConDUITH

Zeichner