

Glass - Tube VA Meter

Model: GTG20

Model: GTR20

Model: GTF20

Model: GTS20

iSOLV

INNOVATIVE SOLUTIONS



analytical

bulk flow

distance

FLOW

level

pressure

temperature

industrial
communication

FLOTECH

PROCESS CONTROL & INSTRUMENTATION

Technical Features

- Large window allows visual control of the process fluid.
- Millimetre scale on the glass cone . The scale is calculated to the calculation method in conformity with VDE / VDI 3513.

The GTG / GTR / GTF / GTS flowmeters for liquids and gases feature a tapered glass tube and operate on the float measuring principle.

They have a common basic design and various standard connections. The flow-meters are installed in a vertical pipe run with flow from bottom to top. The glass tube allows direct reading of the flow

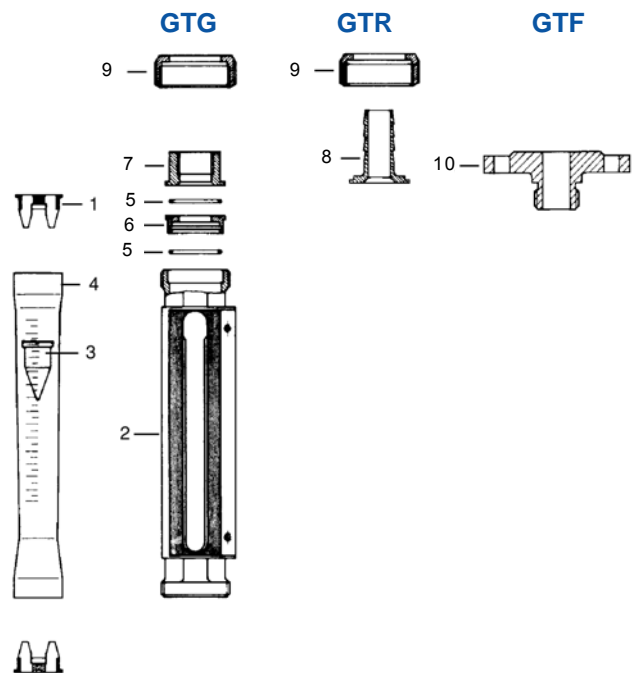
Instrument designation

Glass - Tube VA Meter



Component parts

- 1 Float stop
- 2 Housing
- 3 Float
- 4 Measuring cone
- 5 Washer
- 6 Inset
- 7 Screw connection
- 8 Tube nozzle
- 9 Screw cap
- 10 Flange with screw cap



Responsibility as to suitability and intended use of our instruments rests solely with the purchaser.

Technical data

Measuring ranges (100 % values)

Water 20 °C (68 °F)	0.4 - 10,000 l/h
Air 1.013 bar abs., 20 °C (14.7 psia, 68 °F)	0.016 - 310 m ³ /h

Turn-down ratio

Accuracy class to VDI / VDE Code 3513, Sh. 2	10 : 1
	1.0

Scale

Millimetre scale division or flow units on cone

Float

A III (A III guided on request)

Connection

GTG20	Screw connection G 1/2" to G 2"
GTR20	Tubing nozzle dia. 15 mm to 52 mm (1/2" to 2")
GTF20	
Flanges (metric)	DN 15 to DN 50 with holes drilled to DIN 2501 / PN 40
Flanges (imperial)	1/2" to 2" with holes drilled to ANSI B 16.5, Class 150 lbs / RF or 300 lbs / RF
	other versions on request
GTS20	Sanitary connection DN15 to DN50

Max. allowable operating pressure at 20 °C (68 °F)

(At temperatures > 20 °C pressure drops at the rate of 1% per degree C)	DN 15, DN 25 / 10 bar (1/2", 1" / 145 psig)
	DN 40 / 9 bar (1 1/2" / 130 psig)
	DN 50 / 7 bar (2" / 101 psig)

Max. process temperature

- 20 to + 100 °C

Overall height

GTG20	See Dimensions
GTR20	DN 15:400 mm (1/2":15.75"), ≥DN 25:450 mm (≥1":17.72")
GTF20	425 mm (16.73")
GTS20	375mm (14.76")

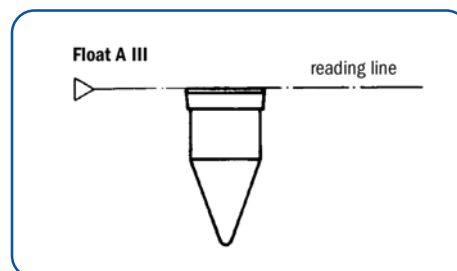
Materials

Instrument connections	
GTG/GTR/GTF20 / SS	Stainless steel 1.4404 (316L)
GTS20	PVDF
Housing	Stainless steel 1.4404 (316L)
Measuring	Cone borosilicate glass
Float	Stainless steel 1.4571 (316Ti)
Float stop and insert	PVDF
Gaskets	
~ Standard	Buna N
~ Special version	On request

Glass measuring cones

The measuring cones are made of high temperature-resistant stress-free borosilicate glass. Cones and floats are individually replaceable (accuracy class 1.6).

The measuring cones are operated with A III floats. These floats feature three notches on the top guiding edge which cause the floats to rotate and maintain a stable position during flow.



Flow table

Flow material: Stainless Steel 316Ti

Float shape A III, (A III guided on request)

100 % flow values, turn-down ratio 10:1

Reference conditions

Water at 20 °C (68 °F)

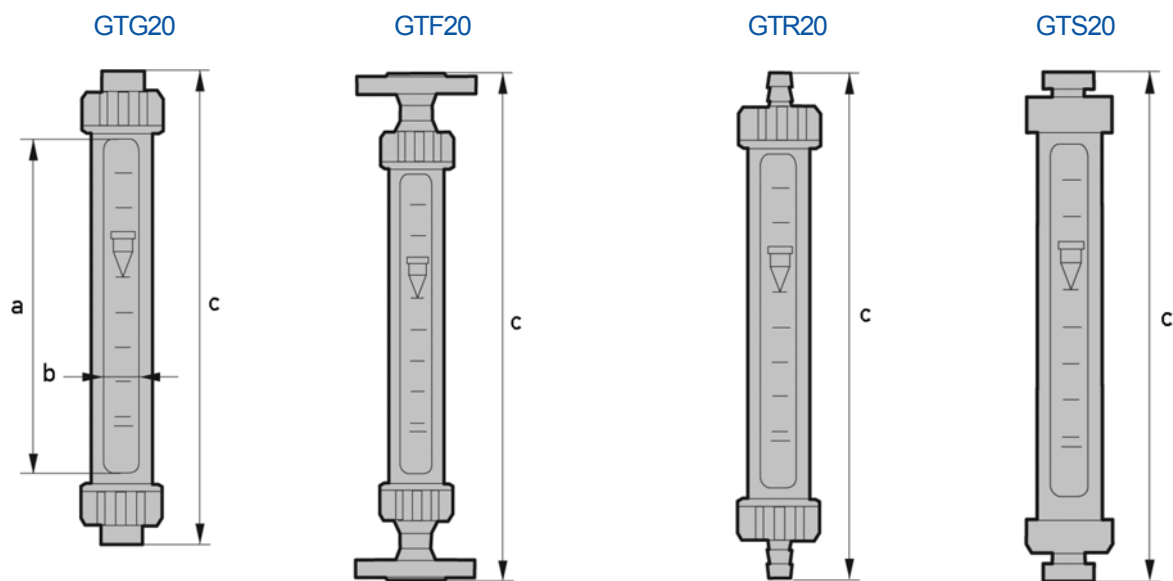
Air at 20 °C, 1.013 bar abs. (68 °F , 14.7 p sia)

Meter size		Water		Air	
DIN	ANSI	l/h	(US GPH)	m ³ /h	(SCFM)
15	1/2	100	(26.42)	3	(1.86)
		160	(42.27)	5	(3.10)
		250	(66.05)	8	(4.96)
		400	(105.7)		
		630	(166.4)		
25	1"	630	(166.4)	20	(12.4)
		1000	(264.2)	30	(18.6)
		1600	(422.7)		
		2500	(660.5)		
40	1 1/2	1600	(422.7)	50	(31.0)
		2500	(660.5)	80	(49.6)
		4000	(1057)		
50	2	4000	(1057)	120	(74.4)
		6300	(1664)	200	(124)
		10000	(2642)		

For liquids, the operating pressure should be twice the pressure loss, and for gases 5 times the pressure loss. The specified pressure losses apply to water and to air at maximum flowrate. Conversion to other products or operating conditions (pressure, temperature, density , viscosity) is carried out using the calculation method to VDE/VDI Code 3513.

Dimension

Device	Nominal size	Inch	a	b	GTG20	GTF20	GTR20	GTS20
GT...20	DN15	1/2"	239	26	375	425	400	375
	DN25	1"	239	36	375	425	450	375
	DN40	1 1/2"	235	46	375	425	450	375
	DN50	2"	227	62	375	425	450	375

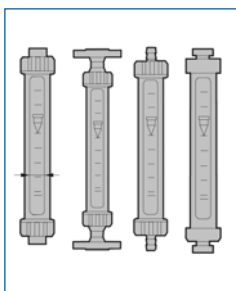


Limit switch RJ10-SN for GTG / GTF / GTR / GTS20

Technical data RJ10-SN

Clamp Type	Connection box M16 x 1.5
Cable Diameter	4...8mm
Switching Function	Bistable, NAMUR
Connection Technology	NAMUR, 2 wire
Rated Voltage	8 VDC
Power Consumption	
Active Area Clear	≥3 mA
Active Area Obscured	≤1 mA
Protection Category EN 60529/IEC 529	IP 67 (NEMA 6)
Ambient Temperature	-25°C ... +100°C

Ordering Information



(Example)

GT

Model

G

Connection Type

- G - Screw
- R - Flexible tube
- F - Flange
- S - Sanitary / Clamp

20

Housing Material

- 20 - Stainless steel 316Ti

S

Over/ Undersized Connection

- O - Oversized
- U - Undersized
- S - Standard size

G2

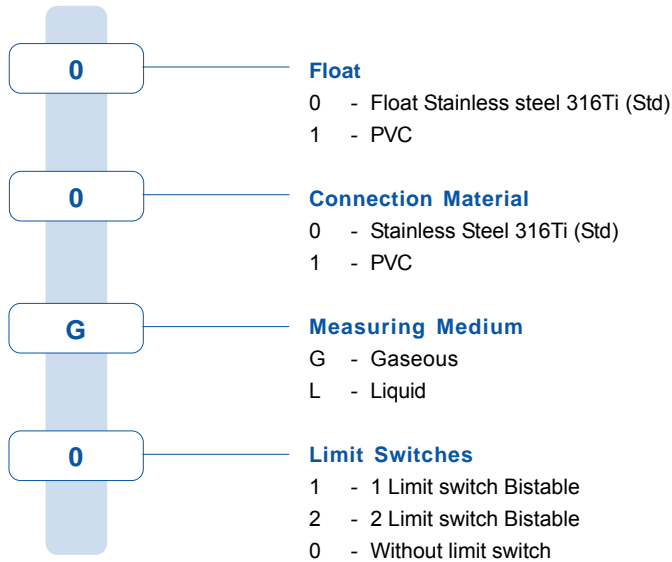
Connection Type and Size

- G0 - G1/2
- G1 - G3/8
- G2 - 1/2" NPT
- G3 - G1
- G4 - G3/4
- G5 - 1" NPT
- G6 - G1 1/2
- N0 - 1/2" NPTF
- N1 - 3/4" NPTF
- N2 - 1" NPTF
- N3 - 1 1/4" NPTF
- N4 - 1 1/2" NPTF
- N5 - 2" NPTF
- D0 - DN15/PN40
- D1 - DN25/PN40
- D2 - DN40/PN40
- D3 - DN50/PN40
- A0 - ANSI 1/2", 150 lbs
- A1 - ANSI 1", 150 lbs
- A2 - ANSI 1 1/4", 150 lbs
- A3 - ANSI 1 1/2", 150 lbs
- A4 - ANSI 2", 150 lbs
- S1 - DN15 Clamp
- S2 - DN25 Clamp
- S3 - DN40 Clamp
- S4 - DN50 Clamp

0

Gasket Material

- 0 - BunaN (Standard)
- 2 - Viton
- Other upon request



Ordering Code: (Example)



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