

## Magnetic level gauge PN 40/CL 300

Magnetic indicating bar scale with fine resolution, indirect level indication  
Fully closed housing with gapless weldings and butt-welded connections  
Float magnet field totally circular with strong far field  
Float defect control with indicating field in lower display end

Product group **710**

Type **104.0**

Sheet: 1/2

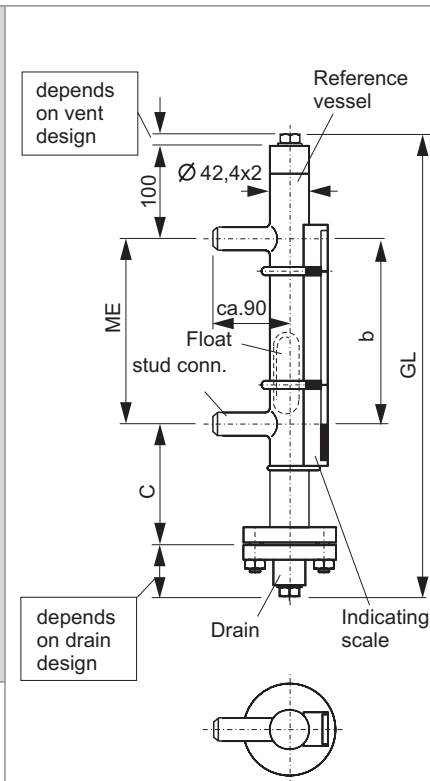
Revision: 8

Date:

04/07



Typ 104.0 e. g. equipped with magnetic switch type 740.0066 and indicator 710.AVG3



### Field of Application

The magnetic level gauge is for indicating the level height of liquids in any vessel via bypass. Simultaneously you can use level switches (s. 740.XXXX) or level sensors (s. 745.XXXX) mounted onto the reference vessel tube to signal level limits or measure the level height by remote means.

### General Data

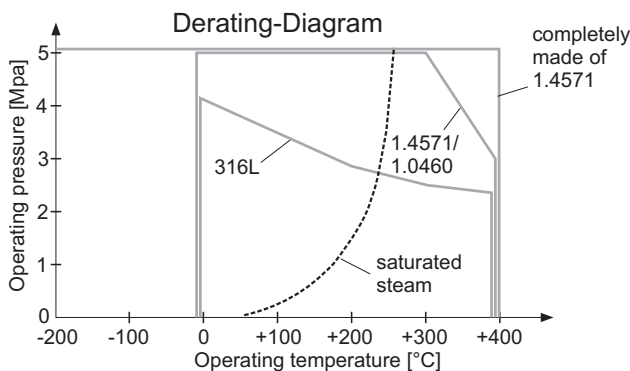
Density, float 1.4571: from 0,74 g/cm<sup>3</sup>  
Titanium: from 0,48 g/cm<sup>3</sup>  
Precision for Interface or density: from ±0,01 g/cm<sup>3</sup>  
Measuring range (=ME): single piece up to 5000 mm, above split construction, from 3000 mm holding bracket each 1500 mm  
Measuring error: ±10 mm  
Viscosity: max 1000 mPas  
Display type: 710.AVG3  
Connection: weld end (Standard), Flanges DIN and ANSI  
Drain/vent: Cap (Standard), plug 1/2" NPT, as option 3/4" NPT, G1/2A, G3/4A  
Valve DN6, optional DN8, Flange stud DIN and ANSI and acc. to customer spec.  
Material tube, stud, 1.4571 (Standard), ANSI-coded  
flanges, fixtures: Titanium, Hastelloy, etc.,  
float: 1.4571, Titanium etc.  
Weight: Basic 7 kg + 0,33 kg/100mm ME

### Design Data

Operating pressure: up to 5,2 MPa/300 lbs (see Derating-Diagram)  
Temperature Media  
Reference vessel cpl. 1.4571: -200 ... +400 °C  
flanges 1.0460: -10 ... +400 °C (see Derating-Diagram)  
Below -10 °C Indicating scale .AVG2 and below -20 °C add frost protection with 710.ISOL  
In both cases preparation for insulation included.

### Certificates

Pressure Vessel Directive (PED) 97/23/EG  
EC-Type Examination Certificate: TÜV 03 ATEX 2190  
Zone 0  
Subject to alterations



### Ordering no.

7 1 0 . 1 0 4 . 0 - XXX - XXXX - XXXXXXXX

Density, e.g.  
054=0,54 g/cm<sup>3</sup>

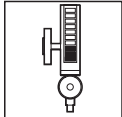
Center to center ME  
in mm

Connections etc.  
see sheet  
710.VAR

### PHÖNIX

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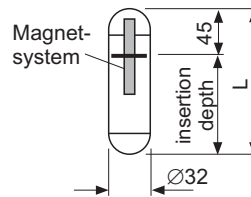


<b>Details</b>	Product group <b>710</b>	
	Type <b>104.0</b>	
	Sheet: 2/2	Revision: 8
	Date: 04/07	

Float, Vent, Drain and Connection

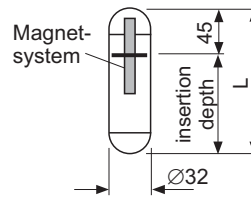
**Float material 1.4571, Ø32, PN40/CL300**

Density range [g/cm <sup>3</sup> ]	Measure C [mm]	Total length L [mm]	Weight [g]	Part no.
1,32 ... 1,67	139	125	93	BG1001044167
1,10 ... 1,31	169	155	106	BG1001044131
0,97 ... 1,09	199	185	118	BG1001044109
0,87 ... 0,96	239	225	134	BG1001044096
0,80 ... 0,86	279	265	149	BG1001044086
0,74 ... 0,79	329	315	169	BG1001044079
Interface float (individually designed ±0.01 g/cm <sup>3</sup> )				BG1001044TRX



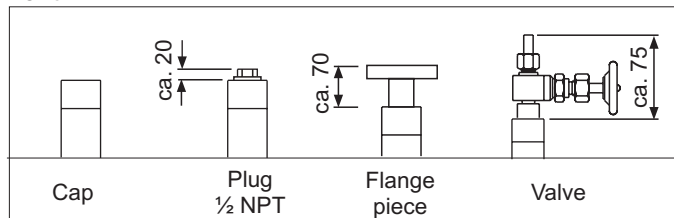
**Float material Titanium, Ø32, PN40/CL300**

Density range [g/cm <sup>3</sup> ]	Measure C [mm]	Total length L [mm]	Weight [g]	Part no.
1,09 ... 1,43	139	125	77	BG1001049143
0,89 ... 1,08	174	160	87	BG1001049108
0,75 ... 0,88	214	200	99	BG1001049188
0,66 ... 0,74	254	240	109	BG1001049074
0,60 ... 0,65	304	290	124	BG1001049065
0,55 ... 0,59	364	350	141	BG1001049059
0,51 ... 0,54	434	420	162	BG1001049054
0,48 ... 0,50	524	510	187	BG1001049050
Interface float (individually designed ±0.01 g/cm <sup>3</sup> )				BG1001049TRX

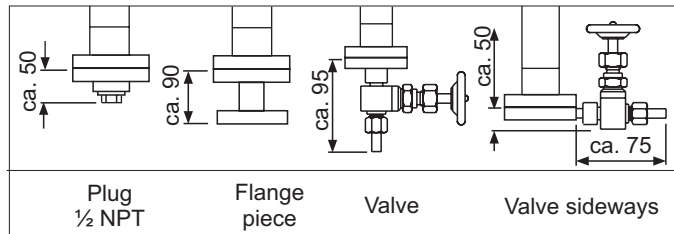


Density range corresponds to measuring error ±10 mm

**Vent**



**Drain**

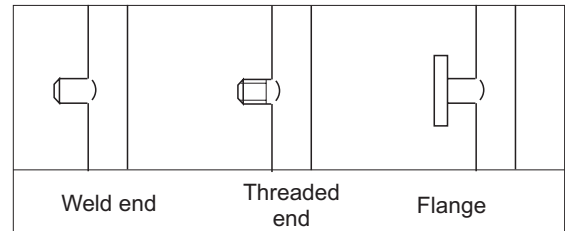


**Design Data**

Operating pressure: up to 5,2 MPa/300 lbs  
(see Derating-Diagram for 1.4571)  
Test pressure: Operating pressure x 1,3  
Operating temperature: -200 ... +400 °C  
(see Derating-Diagram for 1.4571)

Subject to alterations

**Connections**



**Ordering no.**

**Accessories:**

Device	Product group
Magnetic switch	740.XXXX
Level sensor	745.XXXX
Indicating scale	710.AVGX
Frost protection	710.PLEXI
Heating	710.HEAT

**Spare parts:**

Designation	Part no.
Float	s. Float table above
Indicating scale	BG10.AVGX
Sealing	04750395XXX
Fixing springs	3813000672
Align magnet	BG10XXXXMAKU

There may be any other customer specified connections, materials and special floats.

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