INTRA-AUTOMATION GmbH

elektronische Meß- und Regelinstrumente

MESS- UND REGELINSTRUMENTE

Your Spezialist For Flow- And Level Measurement

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Scope and Validity
This catalogue only covers MAGLINK-Liquid-Level-Gauging-System. Information about other products manufactured by Intra Automation GmbH, such as flow sensor, level, ultra sound, flow computers, purge instruments, signal converters, etc. Can be requested by facsimile (+49-(0) 21 81 / 6 44 92) or e-mail (info@intra-automation.de) or via our home page (http:// www.intra-automation.de).

Categorizing MAGLINK according to Pressure Instruments Guidelines 97/23/EC (PEC)
The MAGLINK-Level-Gauging-System is no pressure instrument in acc. to this guideline.

Miscellaneous
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MAGLINK-LIQUID-LEVEL-GAUGING-SYSTEM

LIST OF CONTENTS:

Advantages of MAGLINK-Level-Gauging-System

- Sealed system for pressure or vaccum services
- High accuracy (linear transmission)
- Materials of construction for corrosive service
- No calibration required
- Electric transmission and/or alarm switches
- Goog readability in eye-level
- Direct reading scale with diameter ∅ 250 mm (10“)
- Double-pointer-execution (standard)
- Mechanical method of working (Ex-approval possible)
- Unaffected by foam
- Simple to operate and maintaín
- Interface measurement
- Weather-proofed housing
- Direct mounting on top of tank, optional **indication on side of tank**
- Suitable for sealed and open tanks
- Suitable for underground tanks
- Suitable for cargo, storage and service tanks on ships and offshore installations
- Gauging system completly sealed from the tank
- Simple mechanical design

Principle of Operating

The three basic components of MAGLINK liquid level gauging system are:

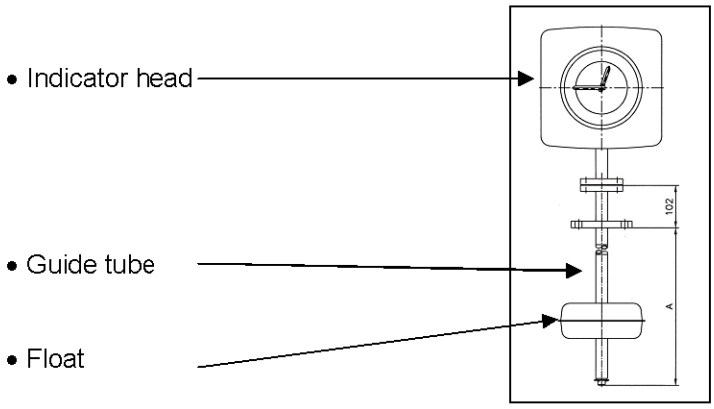


fig. 01: Maglink

The indicator head is mounted on top of the guide tube (standard), but there is an option of an eye-level-mounting on side of tank. A stainless steel wire is attached to a spring-actuated-drum, located within the indicator head. The opposite end of the wire is attached to a stainless-steel-plate which is fastened to be an end stop. The plate is connected by a compensation wire with the follower magnet. The float, containing an annular magnet rises and falls along the guide tube in accordance with the change in liquid level within the vessel. The magnetic bounding between the float and the follower magnet transmits level variations by means of the wire to the linear indicating mechanism in the head. Backlash in the indicator mechanism is eliminated by means of a high-precisio gearbox with spring-motor which compensates the magnets weight. A precision drum serves as a taken-up device for the wire. The standard indicator head is furnished with two pointers, a red one indicating “meters” respectivly “feet” on a dial with inscription in corresponding colour and a black pointer indication “cm” respectivly “inches”. For differnt specifiic gravity different floats as discripted on page 8 can be choosen.

Indicator Head and Scale

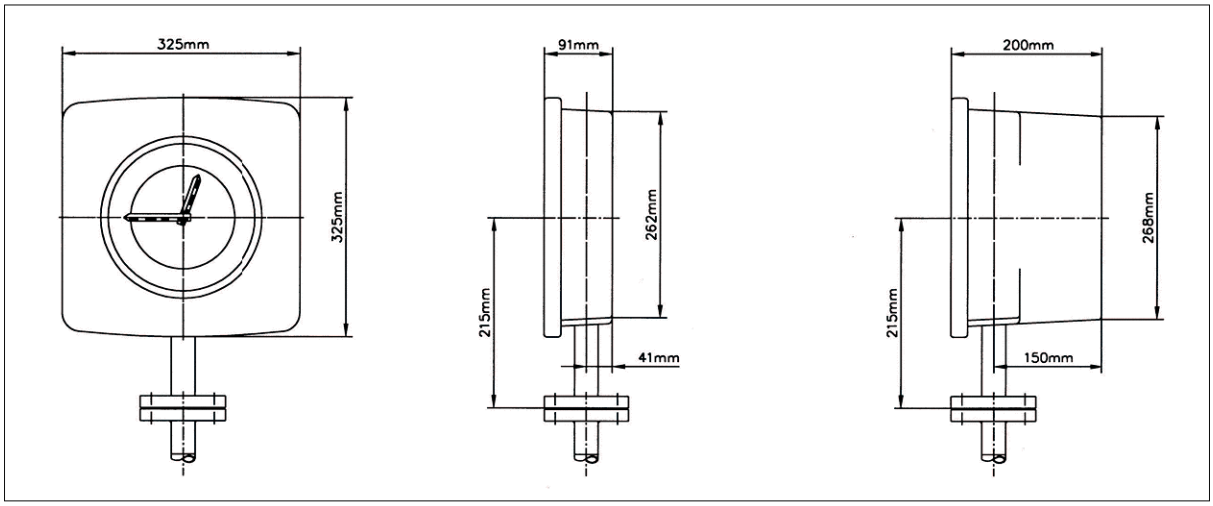


fig. 02: Indicator-head *with flat case* *with deep case*

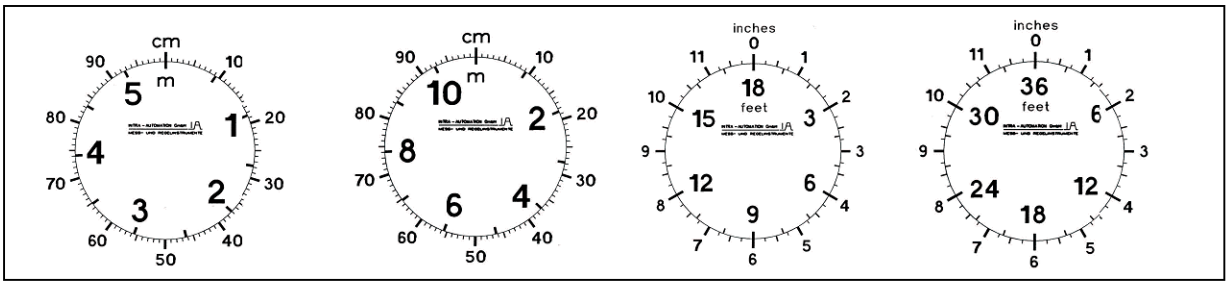
Generally there are three different types of housings:

- Flat die-cast case : used for indication only,
- Deep die-cast case : used for indication and optional, with build-in switches and/ or transmitter. Therefor ethe housing has a back cover for easier mounting, installation and maintenance.
- Nautic-Steel case (welding construction) : Version for seagoing-vessels.

Technical Datas of the **housing**:

- material : housing – die-cast-aluminium (standard), optional steel (Nautic) window, Ø220mm – glass (standard), optional macrolon
- painting : PUR- Polyester Powder Coating thickness of coating appr. 70 µm colour black
- ambient temperature : -40 °C (-40 °F) up to 66 °C (150 °F)

Technical Datas **Skale**:



0-5,4m *0-10,8m* *0-18 ft* *0-36 ft*

fig. 03: standard scales

The scale of the Maglink-Liquid-Level-System has a visible diameter of Ø 220 mm (8 $^{2}/_{3}$ “).
Generally you have :o differ between two types of scales :

- Standard scale

execution:	double-pointer *(red/ black)*
dial:	Meter *(red)*/ Zentimeter *(black) or* Feet *(red)*/ inch *(black)*
range:	0 - 5,4 m; 0 – 10,8 m; 0 – 18 ft or 0 – 36 ft
material:	aluminium, white primed

- Special scale (option)

execution:	single-pointer *(black)*
dial:	in acc. to costumers specification (e.g. in cm; mm; ft; inch; Liter; m³)
range:	in acc. to costumers specification
material:	aluminium, white primed

Guide Tube

The guide tube is a unit which consists of following parts:

- Direct weldet head-mounting-flange 1" 150 lbs,
- Tank-mounting-flange (standard DN50 PN16 or 2" 150 lbs RF)
- Tube
- Float Stop or bottom-support for measuring length A > 3000mm.

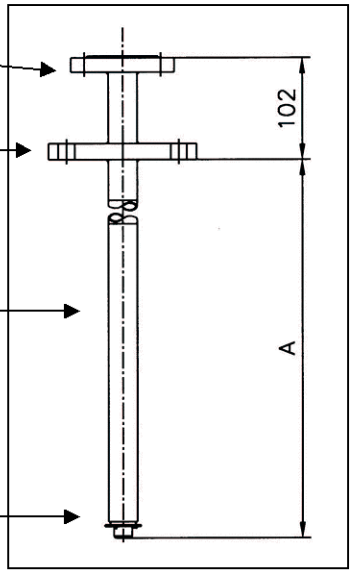


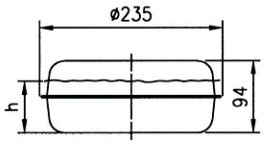
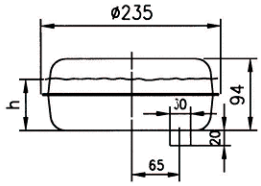
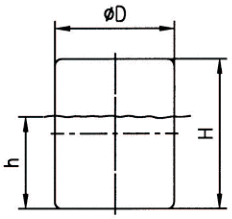
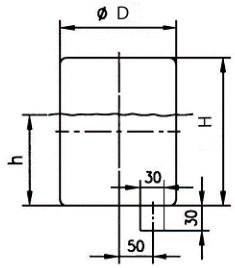
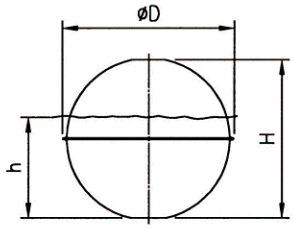
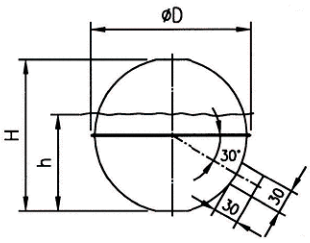
fig. 04: guide tube

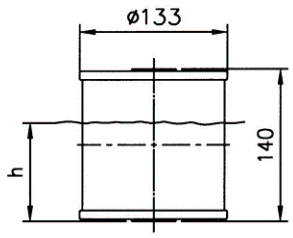
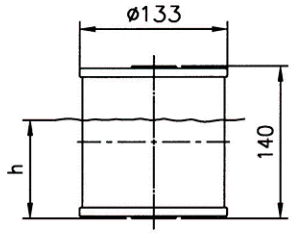
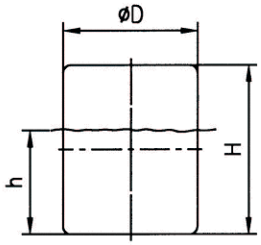
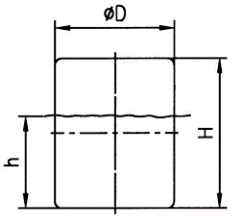
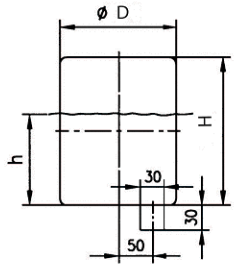
Technical Datas:

• Material	: 316SS (standard), PP, PVC, PVDF (for other materials apply to factory)	
• Max. length	: 14000 mm (> 6000mm 2- or multiparts)	
• Max. oper. temperature	: 0 °C (32 °F) up to 250 °C (480 °F)	→ 316SS (standard);
	0 °C (32 °F) up to 60 °C (140 °F)	→ PP, PVC, PVDF
• Max. oper. pressure	: 118 bar (1734 psig)	→ 316SS (standard),
	254 bar (3735 psig)	→ 316SS (heavy gauge);
	6 bar (102 psig)	→ PP, PVC, PVDF

Float-systems

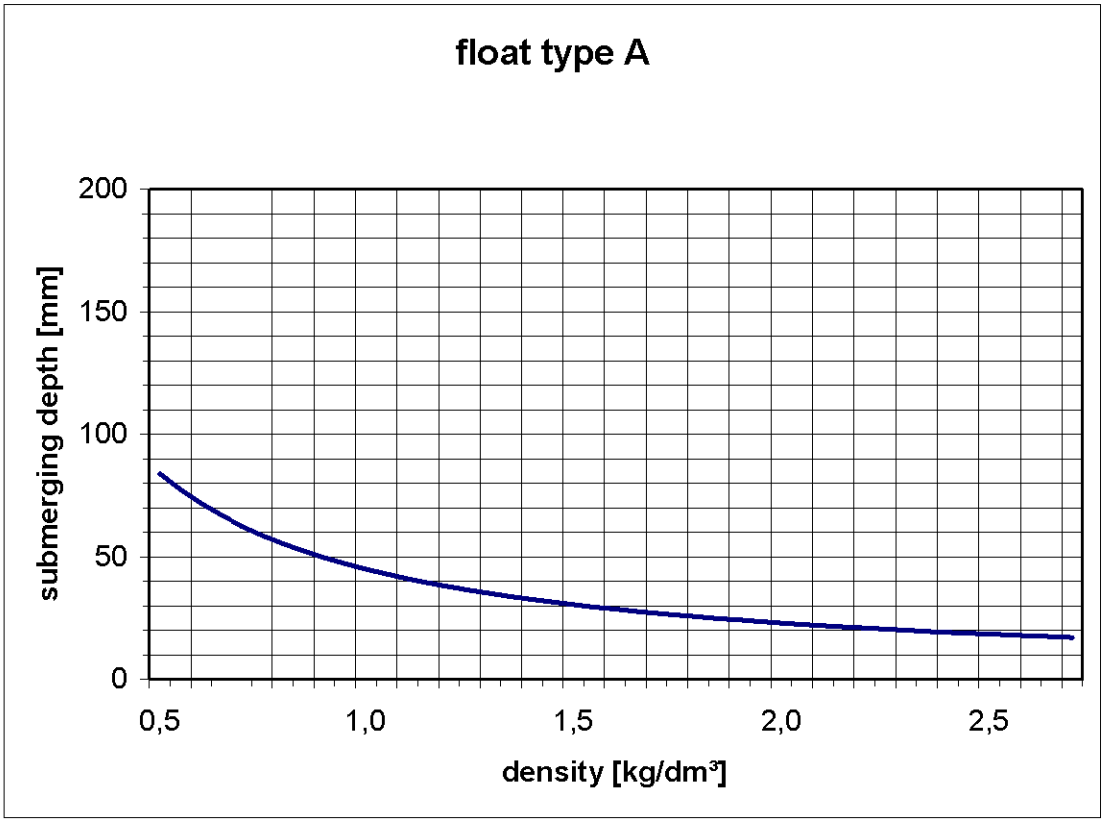
- **Type of floats**

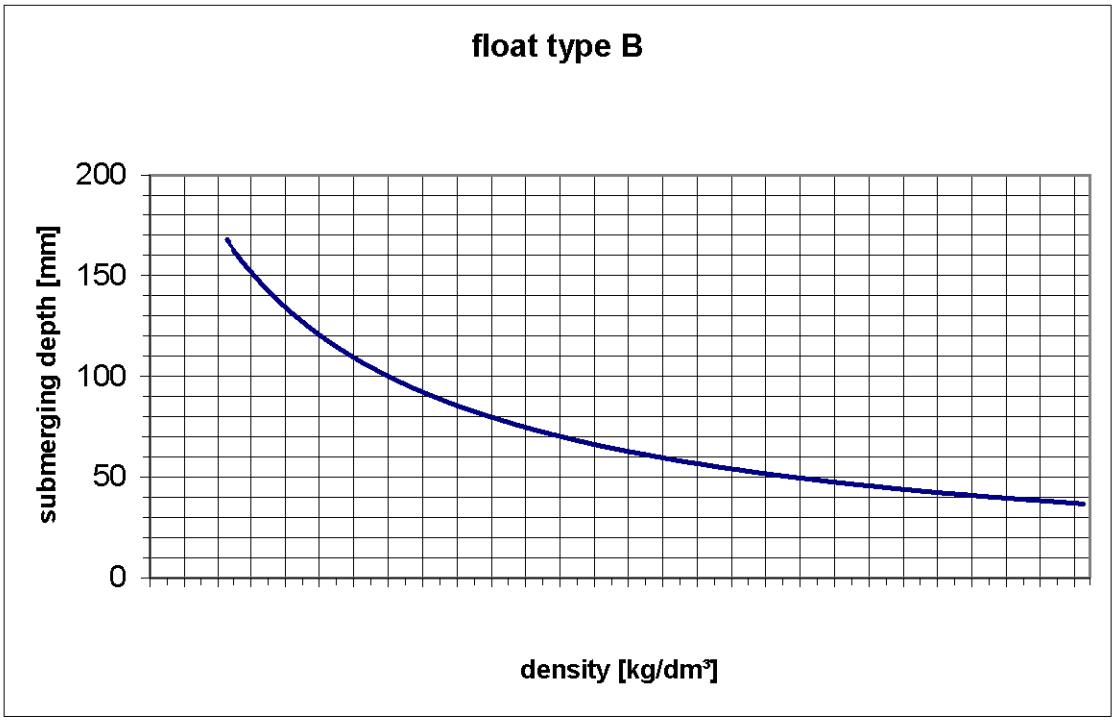
float	datas *(1, 2, 3)*	Standard version	Ex-version
Type A (standard) *(4)*	min. 0,5 kg/dm³ max. 3,5 bar (50 psig) max. 250 °C (480 °F) ***mat.: 1.4571 (316Ti)***		
Type B *(4)*	min. 0,7 kg/dm³ max. 5 bar (150 psig) max. 250 °C (480 °F) ***mat.: 1.4571 (316Ti)*** ØD = 140 mm H = 178 mm		
Type C1 *(4)*	min. 0,75 kg/dm³ max. 25 bar (350 psig) max. 250 °C (480 °F) ***mat.: 1.4571 (316Ti)*** ØD = 190 mm H = 184 mm		
Type C2 *(4)*	min. 0,58 kg/dm³ max. 18 bar (250 psig) max. 250 °C (480 °F) ***mat.: 1.4571 (316Ti)*** ØD = 229 mm H = 206 mm		
Type C3 *(4)*	min. 0,35 kg/dm³ max. 8,5 bar (120 psig) max. 250 °C (480 °F) ***mat.: 1.4571 (316Ti)*** ØD = 267 mm H = 254 mm		

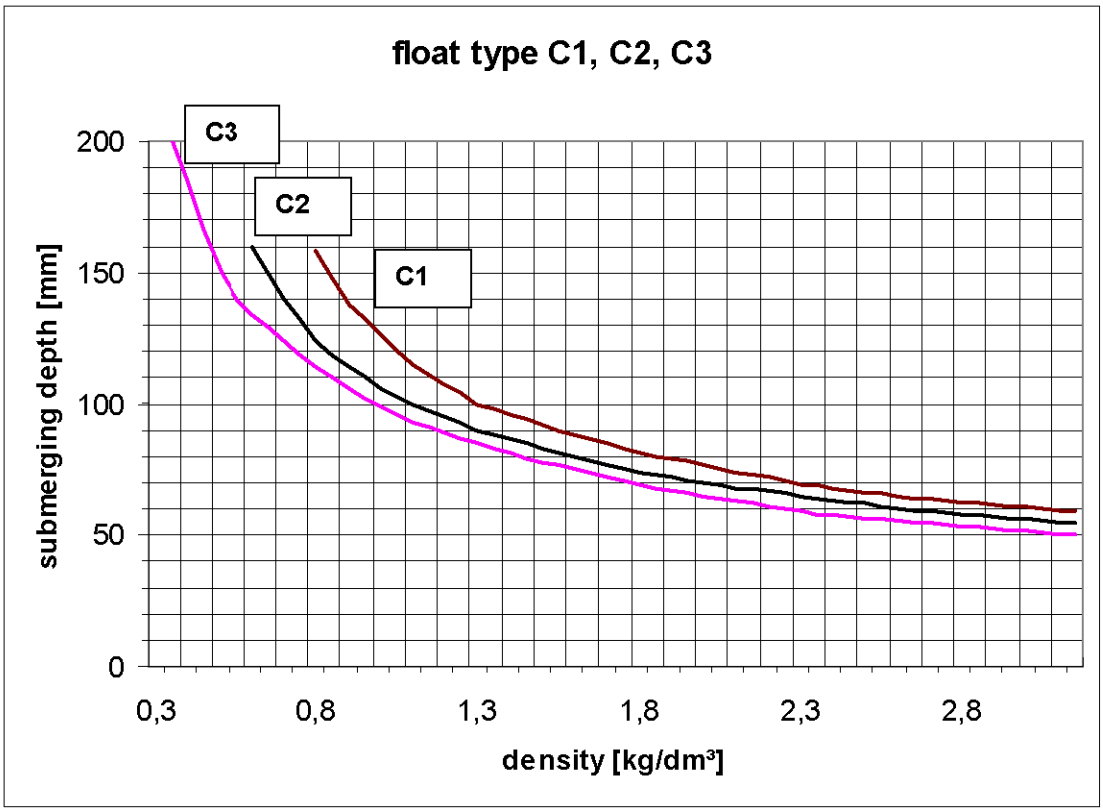
float	datas *(1, 2, 3)*	Standard version	Ex-version
Type F1 *(4)*	min. 0,65 kg/dm³ max. 7 bar (100 psig) max. 60 °C (140 °F) ***mat.: Polypropylen (PP)***		
Type F2 *(4)*	min. 0,80kg/dm³ max. 7 bar (100 psig) max. 60 °C (140 °F) ***mat.: Polyvenyl-chloride (PVC)***		
Type G *(5)*	min. 0,60 kg/dm³ max. 3,2 bar (45 psig) max. 250 °C (480 °F) ***mat.: Glass*** ØD = 150 mm H = 175 mm		
Type T *(4)*	min. 0,52 kg/dm³ max. 18 bar (250 psig) max. 250 °C (480 °F) ***mat.: Titan*** ØD = 94 mm H = 240 mm		

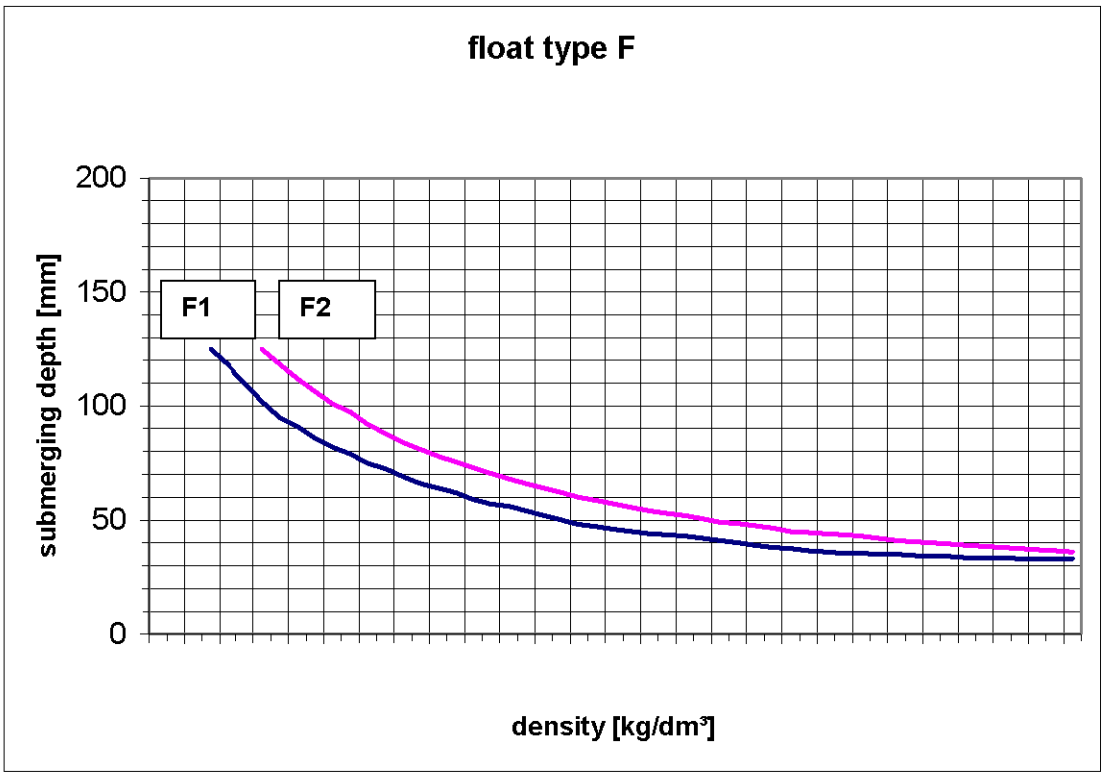
1) All metall floats can be provided with vents for high pressure applications.
2) Use of floats operating near minimum fluid density should be avoided.
3) Apply to factory for other float materials or design.
4) Interface floats with min. spec. gravity difference ***0,2 kg/dm³*** is possible.
5) Interface floats with min. spec. gravity difference ***0,4 kg/dm³*** is possible.

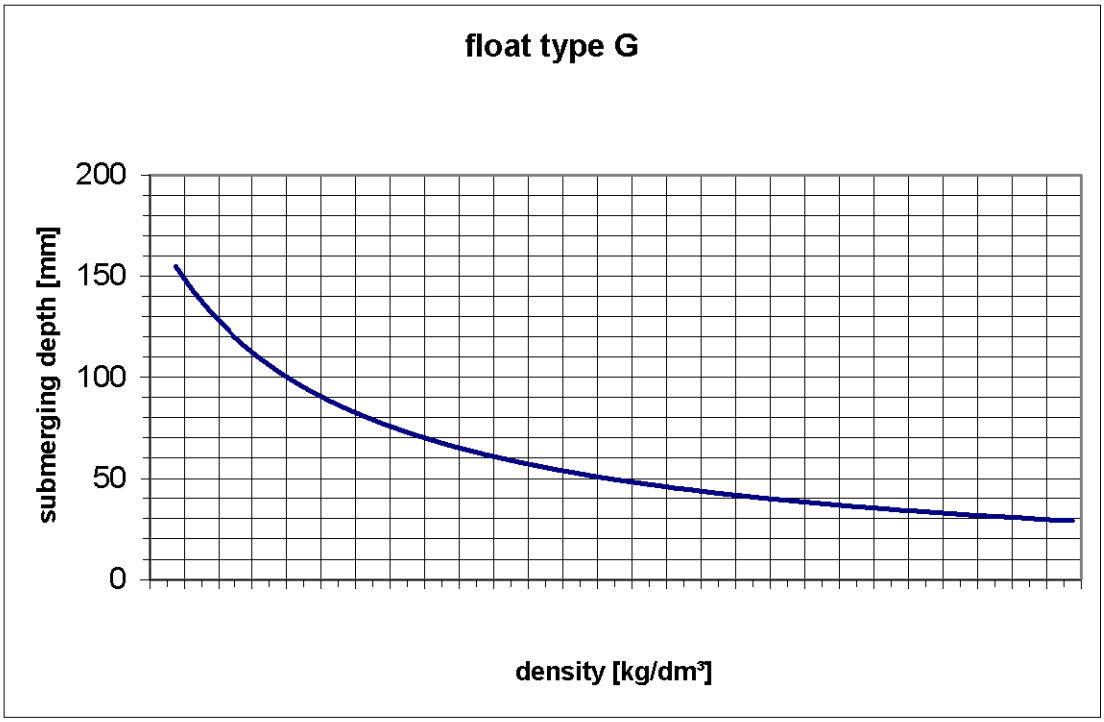
- **Submerging Depth**

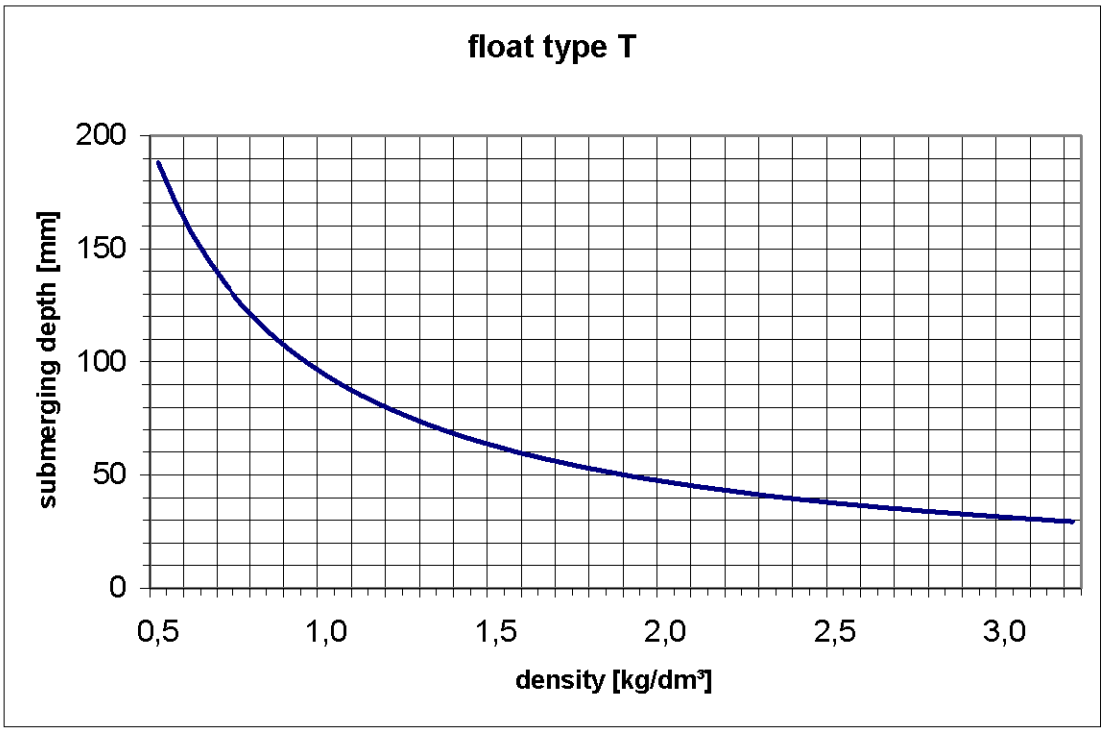





float type C1, C2, C3
C3
C2
C1
200
150
100
50
0
submerging depth [mm]
0,3
0,8
1,3
1,8
2,3
2,8
density [kg/dm³]


float type F
F1
F2
200
150
100
50
0
submerging depth [mm]
density [kg/dm³]


float type G
submerging depth [mm]
200
150
100
50
0
density [kg/dm³]


float type T
submerging depth [mm]
200
150
100
50
0
0,5
1,0
1,5
2,0
2,5
3,0
density [kg/dm³]

Switches/ Transmitter

- **Switches**

Type	*Description*				
B	Slot initiator	Explosion proofed Protection Class Nom. Voltage Nom. Current Nom. Power Inductivity Capazity EMC	Ex II 2 G EEx ia IIC T6 IP 67 max. 16 VDC (EEx i power supply) max. 25 mA max. 34 mW 30 nF 100 µH EN 50014:1997; EN 50020:1994		
C	Microswitch (SPDT)	Explosion proofed Protection class Category Nom. Voltage Nom. Current	Ex II 2 G EEx de IIC resp. EEx d IIC IP 66 AC-15 max. 250 V max. 4 A	AC-15 max. 400 V max. 2 A	DC-13 max. 250 V max. 0,15 A

- **Transmitter**

Type	*Description*		
E	Transmitter for angular position	Explosion proofed Approval Nom. Voltage Nom. Current Nom. Power Capazity Loade external EMC Accuracy mA-output	Ex II 2 G EEx ia IIC T6 German Lloyd max. 30 VDC max. 160 mA max. 1 W ≤ 10 nF (internal) R = (Power supply voltage-12V)/ Signal end value I EN 50014:1997; EN 50020:1994 ≤ 1,5 % of measured value 4..20 mA (2-, 3- or 4-wire-connection) 0..10/20 mA (3- or 4-wire-connection)

Approvals

- Maglink Series **5300 (without Explosion-proofed)**

Type	Approval
53__-**GL-**...	German Lloyd

- Maglink Series **5400 (Explosion-proofed)**

Type	Approval
54__-**GL-**...	German Lloyd
54**4**_-**D-**...	(Ex)d 3n G5
54**4**_-**I-**... 54**8**_-**I-**... 54**9**_-**I-**...	EEx ib IIC T4
54**1**_-**0-**...	Zone 0

Accuracy

- Accuracy of measuring : ± (2 + L) mm
  with *„L" = Length of guide tube in Meter*
- Response sensitivity to float movement : ± 2 mm
- Repeatability : ± 2 mm

Order Code Maglink Series 5300 (none-explosion-proofed)

1. Maglink-Type	
53	Standard, none-explosion-proofed
2. Maglink-Head	
1	only local indication
4	local indication, max. 4 electr. switches or max. 3 slot-initiators possible
8	local indication, max. 1 electr. transmitter, max. 3 electr. switches or max. 3 slot-initiators possible
9	local indicator, max. 1 electr. transmitter possible
3. Skale	
1	0.. 5,4m
2	0..10,8m
3	0..18 feet
4	0..36 feet
5	single-pointer (e.g.: mm, %, inches)
Y3	others
-	
4. cassification	
0	without
GL	German Lloyd for freight-, cargo and service-tanks on ships or off-shore
WHG	Approval in acc. to WHG ***(in preparation)***
Y4	others
5. Transmitter	
0	without
E	1 electr. Transmitter; output: (0)4...20 mA; power supply: 12...36 V; -20...70 °C; accuracy: <= 1,5%
Y5	others
6. Switches	
00	without
B1	1 Slot-initiator type B
B2	2 Slot-initiator type B
B3	3 Slot-initiator type B
C1	1 electr. Micro-switch type C; SPDT; 0,25A/250VDC; 5A/250VAC
C2	2 electr. Micro-switch type C; SPDT; 0,25A/250VDC; 5A/250VAC
C3	3 electr. Micro-switch type C; SPDT; 0,25A/250VDC; 5A/250VAC
C4	4 electr. Micro-switch type C; SPDT; 0,25A/250VDC; 5A/250VAC
Y6	others
7. float	
A	∅ 235x94mm; 1.4571; min. 0,5 kg/dm³; max. 3,5 bar; max. 250 °C
B	∅ 140x178mm; 1.4571; min. 0,7 kg/dm³; max. 5 bar; max. 250 °C
C1	∅ 190x184mm; 1.4571; min. 0,75 kg/dm³; max. 25 bar; max. 250 °C
C2	∅ 229x206mm; 1.4571; min. 0,58 kg/dm³; max. 18 bar; max. 250 °C
C3	∅ 267x254mm; 1.4571; min. 0,35 kg/dm³; max. 8,5 bar; max. 250 °C
F1	∅ 133x140mm; PP; min. 0,65 kg/dm³; max. 7 bar; max. 60 °C
F2	∅ 133x140mm; PVC; min. 0,8 kg/dm³; max. 7 bar; max. 60 °C
G	∅ 150x175mm; Glas; min. 0,6 kg/dm³; max. 3,2 bar; max. 250 °C
T	∅ 94x240mm; 3.7035 (Titan); min. 0,52 kg/dm³; max. 18 bar; max. 250 °C
Y7	andere
8. Interface ***[min. difference of density: 0,2 kg/dm³ (0,4 kg/dm³ for glass)]***	
0	without
E	Interface measurement
Y8	others
9. Coating of float *(without float type G)*	
0	without
H	Coating with Halar (E-CTFE) *{not for float type G}*
P	Coating with PVDF *{not for float type G}*
Y9	others

Order Code Maglink Series 5300 (continued)

10. Length of guide tube		
RM	guide tube; Ø32x2mm; length <= *3000mm*	Length in mm
RZ	guide tube; 1" Sch40; length > *3000mm*	Length in mm
RZ5	guide tube; 1" Sch40; length > *5500mm (multi-part)*	Length in mm

11. Material of guide tube	
S	316SS (Standard)
P	PP
Q	PVC
L	PVDF
Y11	others

12. distance between indicator head/ tank-mounting-flange		
B0	Standard, B=102mm	
BG	Mounting on manhole; Basic B=500mm;	add. length in mm
Y12	others	

13. Tank-mounting-flange, material identically to guide tube	
SM	flange acc. DIN
SA	flange acc. ANSI
Y13	others

14. surface of flange	
1	DIN form C
2	ANSI RF
3	ANSI RF SF (smooth finish)
5	ANSI FF
Y14	others

15. pressure rating, material and nom. Diameter of guide tube flange for tank-mounting			
CC1	PN16 / 150 lbs	material: carbon steel	DN50 / 2"
CC2	PN40 / 300 lbs	material: carbon steel	DN50 / 2"
C01	PN16 / 150 lbs	material: 316SS	DN50 / 2"
C02	PN40 / 300 lbs	material: 316SS	DN50 / 2"
C80	PN16 / 150 lbs	material: PP	DN50 / 2"
C90	PN16 / 150 lbs	material: PVC	DN50 / 2"
CX1	PN16 / 150 lbs	material: 316SS/PVDF	DN50 / 2"
CX2	PN40 / 300 lbs	material: 316SS/PVDF	DN50 / 2"
EC1	PN16 / 150 lbs	material: carbon steel	DN80 / 3"
EC2	PN40 / 300 lbs	material: carbon steel	DN80 / 3"
E01	PN16 / 150 lbs	material: 316SS	DN80 / 3"
E02	PN40 / 300 lbs	Material: 316SS	DN80 / 3"
E80	PN16 / 150 lbs	material: PP	DN80 / 3"
E90	PN16 / 150 lbs	material: PVC	DN80 / 3"
EX1	PN16 / 150 lbs	material: 316SS/PVDF	DN80 / 3"
EX2	PN40 / 300 lbs	material: 316SS/PVDF	DN80 / 3"
FC1	PN16 / 150 lbs	material: carbon steel	DN100 / 4"
FC2	PN40 / 300 lbs	material: carbon steell	DN100 / 4"
F01	PN16 / 150 lbs	material: 316SS	DN100 / 4"
F02	PN40 / 300 lbs	material: 316SS	DN100 / 4"
F80	PN16 / 150 lbs	material: PP	DN100 / 4"
F90	PN16 / 150 lbs	material: PVC	DN100 / 4"
FX1	PN16 / 150 lbs	material: 316SS/PVDF	DN100 / 4"
FX2	PN40 / 300 lbs	material: 316SS/PVDF	DN100 / 4"

Order Code Maglink Series 5300 (continued)

GC1	PN16 / 150 lbs	material: carbon steel	DN150 / 6"
GC2	PN40 / 300 lbs	material: carbon steel	DN150 / 6"
G01	PN16 / 150 lbs	material: 316SS	DN150 / 6"
G02	PN40 / 300 lbs	material: 316SS	DN150 / 6"
G80	PN16 / 150 lbs	material: PP	DN150 / 6"
G90	PN16 / 150 lbs	material: PVC	DN150 / 6"
GX1	PN16 / 150 lbs	material: 316SS/PVDF	DN150 / 6"
GX2	PN40 / 300 lbs	material: 316SS/PVDF	DN150 / 6"
HC1	PN16 / 150 lbs	material: carbon steel	DN200 / 8"
HC2	PN40 / 300 lbs	material: carbon steel	DN200 / 8"
H01	PN16 / 150 lbs	material: 316SS	DN200 / 8"
H02	PN40 / 300 lbs	material: 316SS	DN200 / 8"
H80	PN16 / 150 lbs	material: PP	DN200 / 8"
H90	PN16 / 150 lbs	material: PVC	DN200 / 8"
HX1	PN16 / 150 lbs	material: 316SS/PVDF	DN200 / 8"
HX2	PN40 / 300 lbs	material: 316SS/PVDF	DN200 / 8"
JC1	PN16 / 150 lbs	material: carbon steel	DN300 / 10"
JC2	PN40 / 300 lbs	material: carbon steel	DN300 / 10"
J01	PN16 / 150 lbs	material: 316SS	DN300 / 10"
J02	PN40 / 300 lbs	material: 316SS	DN300 / 10"
J80	PN16 / 150 lbs	material: PP	DN300 / 10"
J90	PN16 / 150 lbs	material: PVC	DN300 / 10"
JX1	PN16 / 150 lbs	material: 316SS/PVDF	DN300 / 10"
JX2	PN40 / 300 lbs	material: 316SS/PVDF	DN300 / 10"
Y15	others		

16. bottom support for guide tube length >3000mm

0	without
C	bottom support; material: carbon steel/PTFE
S	bottom support; material: 316SS/PTFE
Y16	others

17. side tank mounting (tube mat.: carbon steel, painted; ellbows material: alu, painted)

0	without
SA	with eye-level-mounting

18. distance tank border (G)/ top of tank up to eye-level (H)

G/H	G in mm / H in mm

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Order Code Maglink Series 5400 (explosion-proofed)

1. Maglink-Type	
54	explosion-proofed

2. Maglink-Head	
1	only local indication
4	local indication, max. 4 electr. switches or max. 3 slot-initiators possible
8	local indication, max. 1 electr. transmitter, max. 3 electr. switches or max. 3 slot-initiators possible
9	local indication, max. 1 electr. Transmitter possible

3. Skale	
1	0.. 5,4m
2	0..10,8m
3	0..18 feet
4	0..36 feet
5	single-pointer (e.g.: mm, %, inches)
Y3	others
-	

4. Approval	
D	[(Ex)d 3n G5]; PTB-Nr. III B/E-29 929; - only in combination with type 544.. -
I	[Eex ib IIc T4];PTB-Nr. Ex-82/2049; - only in combination with types 544../ 548/ 549.. -
O	[Zone 0]; PTB-Nr. III B/S 1497; - only in combination with type 541.. -
GL	German Lloyd-; Approval: 87 365-82 HH
WHG	Approval in acc. to WHG ***(in preparation)***
Y4	others

5. Transmitter ***(depends on classifications)***	
0	without
E	1 electr. transmitter; output: (0)4...20 mA; [Ex II 2 G EEx ia IIC T6]; power supply: 12...30 VDC; -20...70 °C; accuracy: <= 1,5%
Y5	others

6. switches ***(depends on classification)***	
00	without
B1	1 slot-initiator type B; [Ex II 2 G EEx ia IIC T6]
B2	2 slot-initiator type B; [Ex II 2 G EEx ia IIC T6]
B3	3 slot-initiator type B; [Ex II 2 G EEx ia IIC T6]
C1	1 electr. Micro-switch type C;SPDT; [II 2 G Eex de II C bzw. EExd II C]
C2	2 electr. Micro-switch type C;SPDT; [II 2 G Eex de II C bzw. EExd II C]
C3	3 electr. Micro-switch type C;SPDT; [II 2 G Eex de II C bzw. EExd II C]
C4	4 electr. Micro-switch type C;SPDT; [II 2 G Eex de II C bzw. EExd II C]
Y6	others

7. float	
A	∅ 235x94mm; 1.4571; min. 0,5 kg/dm³; max. 3,5 bar; max. 250 °C
B	∅ 140x178mm; 1.4571; min. 0,7 kg/dm³; max. 5 bar; max. 250 °C
C1	∅ 190x184mm; 1.4571; min. 0,75 kg/dm³; max. 25 bar; max. 250 °C
C2	∅ 229x206mm; 1.4571; min. 0,58 kg/dm³; max. 18 bar; max. 250 °C
C3	∅ 267x254mm; 1.4571; min. 0,35 kg/dm³; max. 8,5 bar; max. 250 °C
F1	∅ 133x140mm; PP; min. 0,65 kg/dm³; max. 7 bar; max. 60 °C
F2	∅ 133x140mm; PVC; min. 0,8 kg/dm³; max. 7 bar; max. 60 °C
G	∅ 150x175mm; Glas; min. 0,6 kg/dm³; max. 3,2 bar; max. 250 °C
T	∅ 94x240mm; 3.7035 (Titan); min. 0,52 kg/dm³; max. 18 bar; max. 250 °C
Y7	andere

8. interface ***[min. difference of density: 0,2 kg/dm³ (0,4 kg/dm³ for glass)]***	
0	without
E	interface measurement
Y8	others

Order Code Maglink Series 5400 (continued)

9. coating of float *(without float type G)*		
0	without	
H	coating with Halar (E-CTFE) { not for float type G}	
P	coating with PVDF [not for float type G}	
Y9	others	

10.Length of guide tube		
RM	guide tube Ø32x2mm; length <= ***3000mm***	length in mm
RZ	guide tube; 1" Sch40; length > ***3000mm***	length in mm
RZ5	guide tube; 1" Sch40; length > ***5500mm (multi-part)***	length in mm

11. Material of guide tube		
S	316SS (standard)	
P	PP	
Q	PVC	
L	PVDF	
Y11	others	

12. distance between indicator head/ tank-mounting-flange		
B0	standard, B=102mm (4")	
BG	mounting on manhole, basic B=500mm ($19^2/_3$ ")	add. length in mm
Y12	others	

13. Tank-mounting-flange, material identically to guide tube material	
SM	flange acc. DIN
SA	flange acc. ANSI
Y13	others

14. surface of flange	
1	DIN form C
2	ANSI RF
3	ANSI RF SF (smooth finish)
5	ANSI FF
Y14	others

15. Pressure rating, material and nom. Diameter of guide-tube-flange fro tank-mounting			
CC1	PN16 / 150 lbs	material: carbon steel	DN50 / 2"
CC2	PN40 / 300 lbs	material: carbon steel	DN50 / 2"
C01	PN16 / 150 lbs	material: 316SS	DN50 / 2"
C02	PN40 / 300 lbs	material: 316SS	DN50 / 2"
C80	PN16 / 150 lbs	material: PP	DN50 / 2"
C90	PN16 / 150 lbs	material: PVC	DN50 / 2"
CX1	PN16 / 150 lbs	material: 316SS/PVDF	DN50 / 2"
CX2	PN40 / 300 lbs	material: 316SS/PVDF	DN50 / 2"
EC1	PN16 / 150 lbs	material: carbon steel	DN80 / 3"
EC2	PN40 / 300 lbs	material: carbon steel	DN80 / 3"
E01	PN16 / 150 lbs	material: 316SS	DN80 / 3"
E02	PN40 / 300 lbs	material: 316SS	DN80 / 3"
E80	PN16 / 150 lbs	material: PP	DN80 / 3"
E90	PN16 / 150 lbs	material: PVC	DN80 / 3"
EX1	PN16 / 150 lbs	material:: 316SS/PVDF	DN80 / 3"
EX2	PN40 / 300 lbs	material: 316SS/PVDF	DN80 / 3"
FC1	PN16 / 150 lbs	material: carbon steel	DN100 / 4"
FC2	PN40 / 300 lbs	material: carbon steel	DN100 / 4"
F01	PN16 / 150 lbs	material: 316SS	DN100 / 4"
F02	PN40 / 300 lbs	material: 316SS	DN100 / 4"
F80	PN16 / 150 lbs	material: PP	DN100 / 4"
F90	PN16 / 150 lbs	material: PVC	DN100 / 4"
FX1	PN16 / 150 lbs	material: 316SS/PVDF	DN100 / 4"
FX2	PN40 / 300 lbs	material: 316SS/PVDF	DN100 / 4"

Order Code Maglink Series 5400 (continued)

GC1	PN16 / 150 lbs	material: carbon steel	DN150 / 6"
GC2	PN40 / 300 lbs	material: carbon steel	DN150 / 6"
G01	PN16 / 150 lbs	material: 316SS	DN150 / 6"
G02	PN40 / 300 lbs	material: 316SS	DN150 / 6"
G80	PN16 / 150 lbs	material: PP	DN150 / 6"
G90	PN16 / 150 lbs	material: PVC	DN150 / 6"
GX1	PN16 / 150 lbs	material:: 316SS/PVDF	DN150 / 6"
GX2	PN40 / 300 lbs	material: 316SS/PVDF	DN150 / 6"
HC1	PN16 / 150 lbs	material: carbon steel	DN200 / 8"
HC2	PN40 / 300 lbs	material: carbon steel	DN200 / 8"
H01	PN16 / 150 lbs	material: 316SS	DN200 / 8"
H02	PN40 / 300 lbs	material: 316SS	DN200 / 8"
H80	PN16 / 150 lbs	material: PP	DN200 / 8"
H90	PN16 / 150 lbs	material: PVC	DN200 / 8"
HX1	PN16 / 150 lbs	material: 316SS/PVDF	DN200 / 8"
HX2	PN40 / 300 lbs	material: 316SS/PVDF	DN200 / 8"
JC1	PN16 / 150 lbs	material: carbon steel	DN300 / 10"
JC2	PN40 / 300 lbs	material: carbon steel	DN300 / 10"
J01	PN16 / 150 lbs	material: 316SS	DN300 / 10"
J02	PN40 / 300 lbs	material: 316SS	DN300 / 10"
J80	PN16 / 150 lbs	material: PP	DN300 / 10"
J90	PN16 / 150 lbs	material: PVC	DN300 / 10"
JX1	PN16 / 150 lbs	material: 316SS/PVDF	DN300 / 10"
JX2	PN40 / 300 lbs	material: 316SS/PVDF	DN300 / 10"
Y15	others		

16. bottom support for guide tube length >3000mm	
0	without
C	bottom support; material: carbon steel/PTFE
S	bottom support: material 316SS/PTFE
Y16	others

17. side tank mounting (tube mat.: carbon steel, painted; ellbows material: alu, painted)	
0	without
SA	with eye-level-mounting

18. distance tank border (G)/ top of tank up to eye-level (H)	
G/H	G in mm / H in mm

54			-																

Order Code Maglink Series Nautik-5400 (explosion-proofed)

1. Maglinktype	
N -54	Nautic mit Explosionsschutz
2. Maglink head	
1	only local indicator
4	local indicator, max. 2 electr. Micro-switches possible (guide tube Zone 0)
3. Skale	
2	0..10,8m
4	0..36 feet
5	single-pointer (e.g.: mm, %, inches)
Y3	others
-	
4. approval	
WHG	Approval in acc. to WHG ***(in preparation)***
Y4	others
5. Transmitter	
0	without
6. switches	
00	without
B1	1 slot-initiator type B; [EEx ia/b IIC T6]; 3mA/8VDC
B2	2 slot-initiator type B; [EEx ia/b IIC T6]; 3mA/8VDC
C1	1 electr. microswitch type C; [II 2 G Eex de II C] resp. [EExd IIC]; SPDT; 0,25A/250VDC; 5A/250VAC
C2	2 electr. microswitch type C; [II 2 G Eex de II C] resp. [EExd IIC]; SPDT; 0,25A/250VDC; 5A/250VAC
Y6	others
7. float	
A	∅ 235x94mm; 1.4571; min. 0,5 kg/dm³; max. 3,5 bar; max. 250 °C
B	∅ 140x178mm; 1.4571; min. 0,7 kg/dm³; max. 5 bar; max. 250 °C
C1	∅ 190x184mm; 1.4571; min. 0,75 kg/dm³; max. 25 bar; max. 250 °C
C2	∅ 229x206mm; 1.4571; min. 0,58 kg/dm³; max. 18 bar; max. 250 °C
C3	∅ 267x254mm; 1.4571; min. 0,35 kg/dm³; max. 8,5 bar; max. 250 °C
F1	∅ 133x140mm; PP; min. 0,65 kg/dm³; max. 7 bar; max. 60 °C
F2	∅ 133x140mm; PVC; min. 0,8 kg/dm³; max. 7 bar; max. 60 °C
T	∅ 94x240mm; 3.7035 (Titan); min. 0,52 kg/dm³; max. 18 bar; max. 250 °C
Y7	others
8. interface measurement ***[min. difference in density: 0,2 kg/dm³ (0,4 kg/dm³ for glass)]***	
0	without
E	interface measurement
Y8	others
9. coating *(without float type G)*	
0	without
H	coating Halar (E-CTFE)
P	Coating PVDF
Y9	others
10. Length of guide tube	
RZ	guide tube; 1" Sch40 — length in mm
RZ5	guide tube; 1" Sch40; length > ***5500mm (multi-part)*** — length in mm
11. material of guide tube	
S	316SS (standard)
P	PP
Q	PVC
L	PVDF
Y11	others
12. distance head/ tank-mounting-flange	
B0	Standard, B=102mm (4")
BG	mounting on manhole; basic B=500mm (16 $^{2}/_{3}$"); add. Length in mm
Y12	others
13. Tank mounting flange, material identically to guide tube material	
SM	flange acc. DIN
SA	Flange acc. ANSI
Y13	others

Order Code Maglink Series Nautic-5400 (continued)

14. surface of flange	
1	DIN form C
2	ANSI RF
3	ANSI RF SF (smooth finish)
5	ANSI FF
Y14	others

14. pressure rating, material and nom. Diameter of guide tube flange for tank-mounting			
CC1	PN16 / 150 lbs	material: carbon steel	DN50 / 2"
CC2	PN40 / 300 lbs	material: carbon steel	DN50 / 2"
C01	PN16 / 150 lbs	material: 316SS	DN50 / 2"
C02	PN40 / 300 lbs	material: 316SS	DN50 / 2"
C80	PN16 / 150 lbs	material: PP	DN50 / 2"
C90	PN16 / 150 lbs	material: PVC	DN50 / 2"
CX1	PN16 / 150 lbs	material: 316SS /PVDF	DN50 / 2"
CX2	PN40 / 300 lbs	material: 316SS /PVDF	DN50 / 2"
EC1	PN16 / 150 lbs	material: carbon steel	DN80 / 3"
EC2	PN40 / 300 lbs	material: carbon steel	DN80 / 3"
E01	PN16 / 150 lbs	material: 316SS	DN80 / 3"
E02	PN40 / 300 lbs	material: 316SS	DN80 / 3"
E80	PN16 / 150 lbs	material: PP	DN80 / 3"
E90	PN16 / 150 lbs	material: PVC	DN80 / 3"
EX1	PN16 / 150 lbs	material: 316SS /PVDF	DN80 / 3"
EX2	PN40 / 300 lbs	material: 316SS /PVDF	DN80 / 3"
FC1	PN16 / 150 lbs	material: carbon steel	DN100 / 4"
FC2	PN40 / 300 lbs	material: carbon steel	DN100 / 4"
F01	PN16 / 150 lbs	material: 316SS	DN100 / 4"
F02	PN40 / 300 lbs	material: 316SS	DN100 / 4"
F80	PN16 / 150 lbs	material: PP	DN100 / 4"
F90	PN16 / 150 lbs	material: PVC	DN100 / 4"
FX1	PN16 / 150 lbs	material: 316SS /PVDF	DN100 / 4"
FX2	PN40 / 300 lbs	material: 316SS /PVDF	DN100 / 4"
GC1	PN16 / 150 lbs	material: carbon steel	DN150 / 6"
GC2	PN40 / 300 lbs	material: carbon steel	DN150 / 6"
G01	PN16 / 150 lbs	material: 316SS	DN150 / 6"
G02	PN40 / 300 lbs	material: 316SS	DN150 / 6"
G80	PN16 / 150 lbs	material: PP	DN150 / 6"
G90	PN16 / 150 lbs	material: PVC	DN150 / 6"
GX1	PN16 / 150 lbs	material: 316SS /PVDF	DN150 / 6"
GX2	PN40 / 300 lbs	material: 316SS /PVDF	DN150 / 6"
HC1	PN16 / 150 lbs	material: carbon steel	DN200 / 8"
HC2	PN40 / 300 lbs	material: carbon steel	DN200 / 8"
H01	PN16 / 150 lbs	material: 316SS	DN200 / 8"
H02	PN40 / 300 lbs	material: 316SS	DN200 / 8"
H80	PN16 / 150 lbs	material: PP	DN200 / 8"
H90	PN16 / 150 lbs	material: PVC	DN200 / 8"
HX1	PN16 / 150 lbs	material: 316SS /PVDF	DN200 / 8"
HX2	PN40 / 300 lbs	material: 316SS /PVDF	DN200 / 8"

Order Code Maglink Series Nautic-5400 (continued)

JC2	PN40 / 300 lbs	material: carbon steel	DN300 / 10"
J01	PN16 / 150 lbs	material: 316SS	DN300 / 10"
J02	: 316SS		DN300 / 10"
J80	PN16 / 150 lbs	material: PP	DN300 / 10"
J90	PN16 / 150 lbs	material: PVC	DN300 / 10"
JX1	PN16 / 150 lbs	material: 316SS /PVDF	DN300 / 10"
JX2	PN40 / 300 lbs	material: 316SS /PVDF	DN300 / 10"
Y15	others		

16. bottom support for guide tube	
C	bottom support; material: carbon steel /PTFE
S	bottom support; material: 316SS /PTFE
Y16	others

N	**54**			-												

Datasheet for MAGLINK

General information

Costumer

Ref.-N°. :

TAG-N°. :

Data of tank

Height of tank (inside)

Shape of tank

Tank connection : ☐ DIN-Flange ☐ ANSI-Flange ☐ other

Nominal size:

Nominal rating :

material :

Data of liquid

Fluid :

Conzentration :

Max. temperature :

Max. pressure :

Data of Instrument

☐ Standard ☐ EEx i ☐ EEx d ☐ GL

☐ only indication ☐ + switches (quant.) ☐ + 1 of transmitter

Mounting/ Dimensions

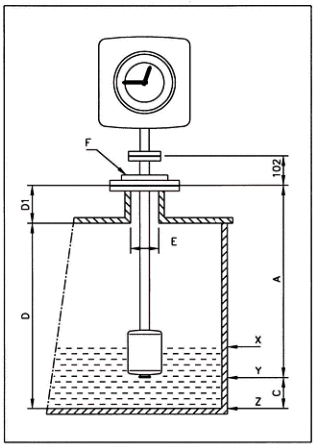

fig. 05: Standard mounting on top of tank

Dim.	Description	Value (fig. 05)
A	Length of guide tube	
C	Distance guide tube end / tank bottom	
D	Height of tank (inside)	
D1	Height of extension	
E	Innerside diameter of extension	
F	Flange size/ -rating	

Scale Zero at:

X	Submerging depth	
Y	End of guide tube	
Z	Tank bottom	

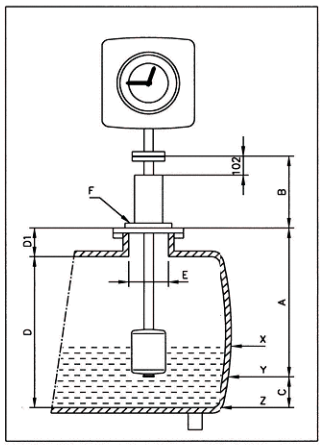

fig. 06: Mounting on manhole with strengthened guide tube

Dim.	Description	Value (fig. 06)
A	Length of guide tube	
B	Length of guide tube extension	
C	Distance guide tube end / tank bottom	
D	Height of tank (inside)	
D1	Height of extension	
E	Innerside diameter of extension	
F	Flange size/ -rating	

Scale Zero at:

X	Submerging depth	
Y	End of guide tube	
Z	Tank bottom	

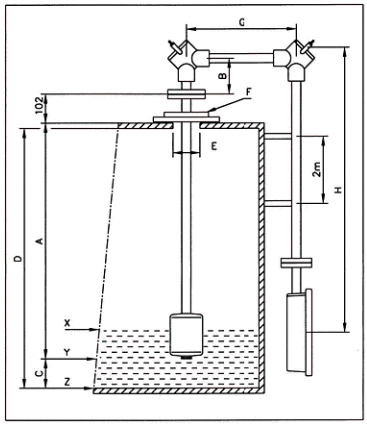

fig. 07: Eye-level-mounting on side of tank

Dim.	Description	Value (fig. 07)
A	Length of guide tube	
B	Length of guide tube extension	
C	Distance guide tube end / tank bottom	
D	Height of tank (inside)	
E	Innerside diameter of extension	
F	Flange size/ -rating	
G	Distance tank-flange/ -wall	
H	Length of eye-level	

Scale Zero at:

X	Submerging depth	
Y	End of guide tube	
Z	Tank bottom	