

Magnetically Controlled Liquid Level Indicator Type: ITA

ITA with
Aluminium-
Indication-Rail and
Switch



ITA with mA-Output and Digital Display with Volume
Linearization



ITA with
steam jacke



ITA with
Aramflex®-
Insulation



Inspection/Certificate

- Material Certificate EN 10204 2.1
- Material Certificate EN 10204 3.1
- Pressure Test Certificate
- Pressure Test acc. to "AD-Merkblatt" by German TÜV
- Construction and Pressure Test as per TRD by German TÜV
- Dye Penetration Test DIN 54152
- X-Ray Test acc. DIN 54111, part 1
- PMI-Check
- ATEX-Certificate
- General Approval of Construction Inspection acc. with §19 Water Resources Law about flammable Liquids-Vbf
- Water Level Controller Component-Check as per VdTÜV/WR91/352
- German Lloyd
- Certification of Passivation
- Weight Certificate

ITA, material
PVDF



Intra-Automation
Magnetically Controlled Liquid Level Indicator
Type ITA
Printed 2024
Printing errors and technical changes reserved

Mag. Level Gauge type ITA

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Order Codes

For mag. level gauges (behind each subchapter of chapter 3)	
For add. Equipment	317
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ITA

ISO 9001-Certificate

Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 036028**

Certificate Holder:



Intra Automation GmbH
Otto-Hahn-Str. 20
41515 Grevenbroich
Germany

Scope:

Construction, laying, design and distribution
of measuring and control equipment

Proof has been furnished by means of an audit that the
requirements of ISO 9001:2015 are met.

Validity:

The certificate is valid from 2022-02-05 until 2025-02-04.
First certification 2004

2022-02-07

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

www.tuv.com



TÜVRheinland®
Precisely Right.

Mag. Level Gauge type ITA

ITA

2. Functioning and General Information

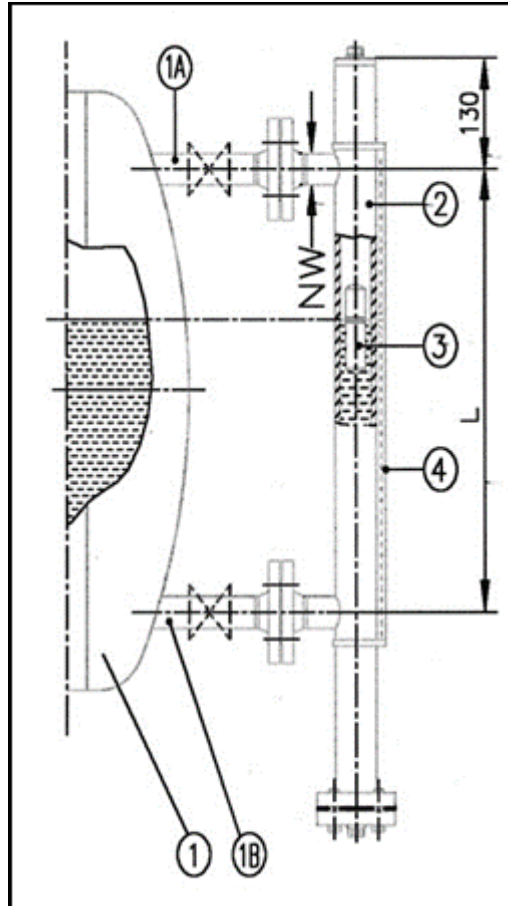
ITA

2.1 Magnetically Controlled Liquid Level Gauge type ITA

The product line ITA is used wherever fluid level has to be monitored, indicated and controlled in a reliable way, especially with corrosive, toxic and inflammable fluids with a viscosity up to max. 5000 mPa s.

The ITA level indicators offer a reliable, accident-free and maintenance-free usage, through a simple and break-resistant construction at a maximum process pressure of 320 bar and a temperature range from -50 through +400 °C. The fluid level is indicated directly with a separation of the measurement and indication area. The magnetic transfer of the fluid level from the tank to the indicator is continuous and vibration-resistant, even in the case of fast changing levels.

It is possible to mount the indication in any position on the pipe circumference. There is no corrosion of the indication. The ITA instruments can be used in open or closed vessels. A definite level measurement without any power supply is guaranteed due to a continuous rotation of the wafers, even if a power loss in the plant occurs.



Functional Principle:

A float chamber [2] is connected [1A and 1B] to the tank [1], and following the law of communicating tubes, the level in the float chamber is equal to the level of the tank. The float [3] follows the fluid level and transmits its movements contact-free to the indication rail [4] mounted on the outside. The float has a special magnet, which rotates the wafers by 180° as it passes them. The result is a clearly defined level indication, with the level shown in a continuous red stripe strongly contrasted to the white above. At increasing level, the colour of the wafer changes from white to red and vice versa.

The indication rail and the wafers are made from Markolon, so that there will never be a problem of corrosion in humid and aggressive atmosphere. Each Wafer has a permanent magnet, that is why the indicator is shock-proof. Moreover, as there is no turbidness because of product contamination of the UV-radiation, the readability remains unobjectable even after some years.

All models are available with electronic alarms, which can be mounted at any position during operation of the system, which renders possible an optimal definition of the min. and max. data points. The indicator can be equipped with a scale for volume or height (depending on the customer's specifications).

Mag. Level Gauge type ITA

ITA

2.2 Level Measurement Tasks

- 1.) Indicating the fluid level
- 2.) Monitoring the level with alarm contacts
- 3.) Transferring the level using measurement value sensors (analogue signal 4...10 mA) to electronic display units
- 4.) Interface level measurement

ITA

2.3 Advantages

No risk of glass breakage as a result of the separation of the measurement and indicator areas. The float principle means that changes of the density in the medium have very little influence on the indication accuracy.

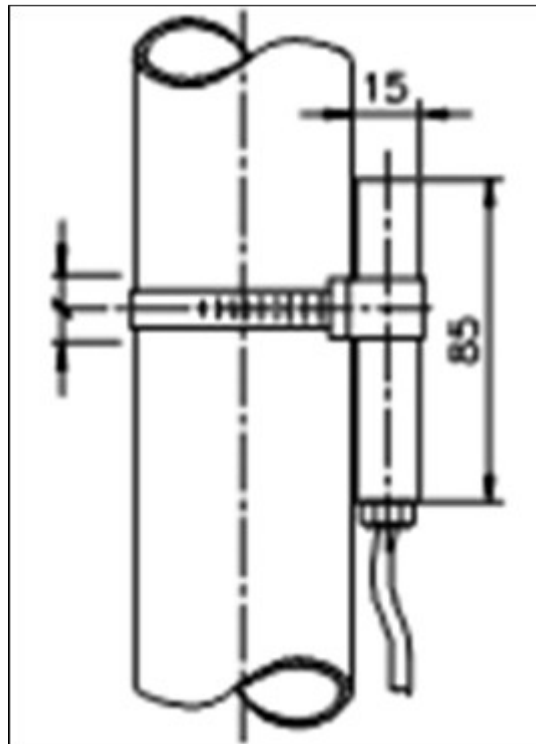
ITA

2.4 Switches / Alarm Contacts

Magnetic level indicators can be equipped with an arbitrary number of switch contacts. In contrast to electric float switches, switch contacts may be installed at any position of the stand pipe. Wherever additional float chambers are needed for float switches, magnetically controlled level gauges offer a considerable price benefit.

Electrical level measurement transducers which use the displacement principle must be recalibrated each time the fluid density has changed. The price of a magnetically controlled level indicator with integral electrical measurement transducer is considerably lower than level measurement transducers. The reed chain with an R/I measurement transducer can be changed without interrupting the operation. The measurement chamber is hermetically sealed – there is no contact between the fluid chamber and the reed chain.

The switches / alarm contacts are secured with pipe clips, and can be adjusted to any desired height. The connection is using 3-core cable or casing terminals. The changeover contact can be used as opener or closer. The switches are also available as explosion-proof version.

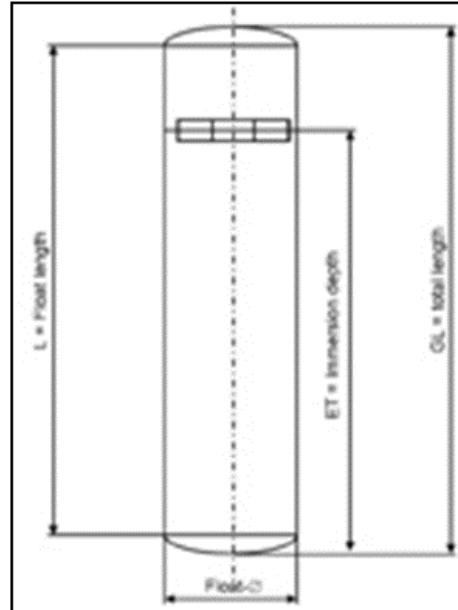


Mag. Level Gauge type ITA

ITA

2.5 Floats

The construction of the float requires a great amount of technical knowledge. The float with its special magnet can rotate freely in the float chamber. The Intra construction avoids a guide wire and other devices. The float materials are stainless steel, 1.4571(316Ti), 1.4435 (316L) or titanium (PVC, PP, PVDF in case of the plastics level gauges). Floats without gas-pre-stressing are used from a minimum density of 0,35 kg/dm³. The maximum process pressure for sealed floats is 250 bar; at higher pressures the floats must be relieved from pressure (not to be used for condensing media). Intra-Automation mag. level gauges type ITA work up to a viscosity of 5000 mPa s.



ITA

2.6 Indication Rail

The ITA level gauges can be supplied with indication rails made from 2 different materials. Makrolon indication rails are resistible to breakage. The max. permissible media temperature is 120°C, with 20°C ambient temperature and natural convection as test conditions. The rails are resistible to UV-radiation and aggressive atmospheres and are sealed against dust by two seal-caps. Aluminium indication rails can be supplied as one-part rail up to a length of 6 m. The sight cover material depends on the temperature, up to 150°C the material is Makrolon and up to 400°C it is glass. The surface of the indication rail can be coated with Sakaphen if required, the standard surface is brown-anodized.

ITA

2.7 Materials

The gauge chamber and the floats are made of stainless steel (1.4571), 254SMO (1.4529), titanium, Hastelloy, PVC, PP, PVDF and PTFE. Other material on request.

ITA

2.8 Special Versions

- 1.) Transmitter, output signal 0...20 or 4...20 mA
- 2.) Steam jacket, e.g. for viscous media
- 3.) Float chamber with Armaflex®-insulation for temperatures below zero (centigrade)
- 4.) Scale made of Gravaloy (white plastic) or aluminium red anodized
- 5.) Two parts version without interruption of the indication, for measuring lengths > 5 m
- 6.) Works report DIN 50049
- 7.) Level Indicator in Marine Design (Germanischer Lloyd, Bureau Veritas, Det Norske Veritas, Lloyd's Register)
- 8.) Usage as an overfilling guard for tanks storing inflammable and non-inflammable water polluting liquids.
- 9.) ITA Cryogenic versions for refrigerants
- 10.) ITA with lining made of PTFE
- 11.) ITA with inside coating made of E-CTFE (Halar)

Mag. Level Gauge type ITA

ITA

2.9 Additional Equipment

- 1.) Anti-freezing heating belt for use in the open air
- 2.) Vent/drain valves, threaded or flanged connection
- 3.) Measuring scale, divisions to client's specifications
- 4.) Armaflex®-insulation
- 5.) Protective hose, additional protection of the indicator against dust, dirt and moisture
- 6.) Plastic indicator with armouring

ITA

2.10 Inspection / Certificates

- 1.) Material certificate EN 10204 2.1
- 2.) Material certificate EN 10204 2.2
- 3.) Material certificate EN 10204 3.1/3.2/3.3
- 4.) Test according to NACE
- 5.) Pressure test certificate
- 6.) Pressure test according to "AD-Merkblatt" by German TÜV
- 7.) Construction and pressure test as per TRD by German TÜV
- 8.) Dye penetration test DIN 54152 part 1
- 9.) X-ray-test in accordance with 54111 part 1
- 10.) PMI-check
- 11.) ATEX certification
- 12.) General approval of construction inspection in accordance with §19 water resources law -WHG- and §12 law about flammable liquids – VbF
- 13.) Water level controller component check as per VdTÜV/WR91-352
- 14.) Germanischer Lloyd
- 15.) Certificate of Passivation
- 16.) Weight certificate
- 17.) PED 97/23/EG

Mag. Level Gauge type ITA

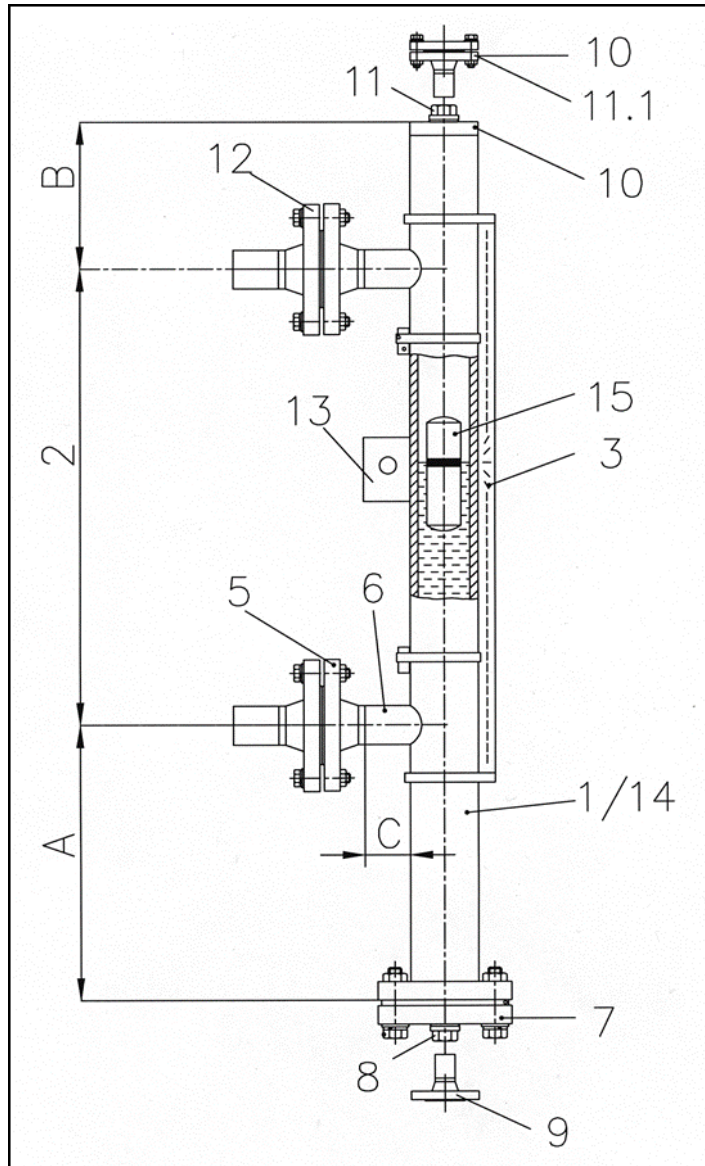
ITA

3. Level Gauges in Detail

ITA-3

3.1.1 ITA-3

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-3

Principle	: Communicating tubes with magnetic float
Mounting position	: Vertical
Measuring range	: max. 5000 mm (one-part) > 5000 mm 2 or multipart
Pipe diameter	: 60,3 x 2 mm welded 60,3 x 2 mm seamless 2" Sch 10
Process connection	: to specify: Flanges DN15...50 (1/2" ...2" 150#), welding or threaded stud
Drain/Vent connections	: Plug R1/2" (for more, please see order codes)
Pipe material	: 1.4404 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titanium (3.7035) (other materials on request)
Flange material	: same as pipe material
Float material	: 1.4404 Titanium; Titanium/E-CTFE-coated
Operation temperature	: -50...+400 °C
Operation pressure	: max. 16 bar
Operation density	: min. 0,3761 kg/dm ³
Viscosity	: max. 5000 mPa s
Bolts & Nuts	: CS SS
Gasket	: PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail	: Makrolon® up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types	: Cylindrical, sealed type Length: - 270 mm - 130 mm - 150 mm - 210 mm - 330 mm - 430 mm - 530 mm - 630 mm
Standard dimensions	: - A = 240 mm* - B = 130 mm - C = 40 mm

Base equipment printed in bold letters!

*for densities <0,7374 kg/dm³, enlarge scale A

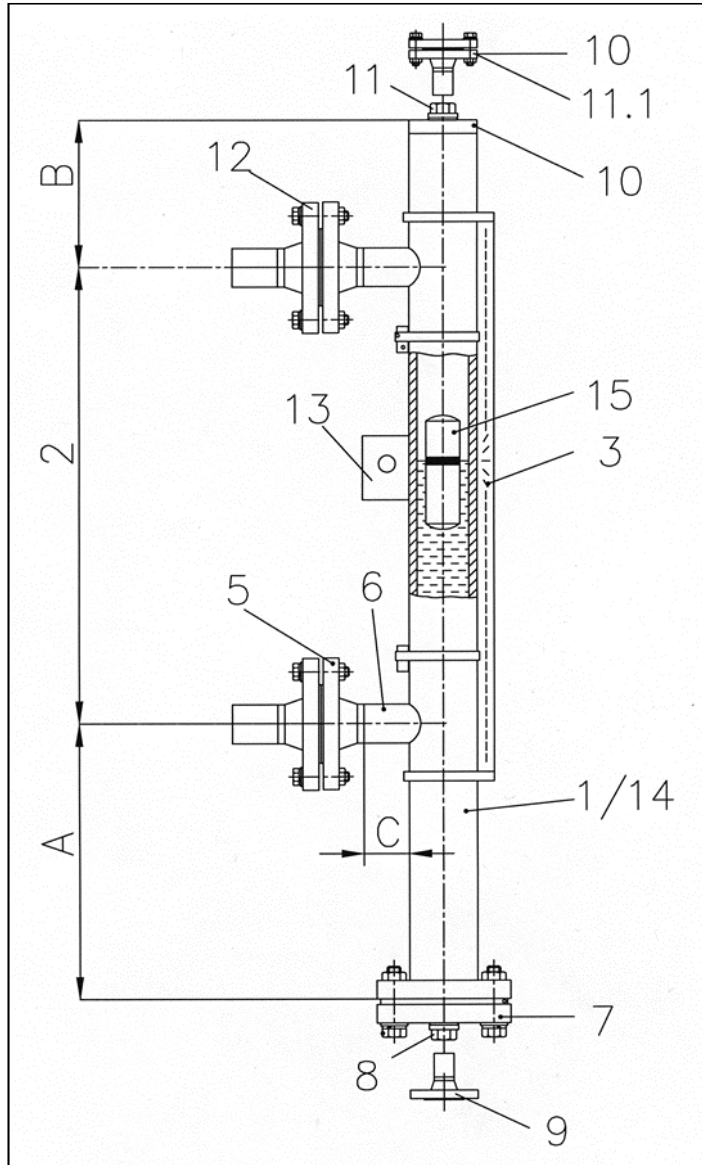
**only with vent- and/or drain flanges DN50 (resp. 2")

Mag. Level Gauge type ITA

ITA-3.0

3.1.2 ITA-3.0

Characteristics: PN16 / Float pipe: 1.4404 and flanges: CS



Key:

- | | | | |
|----------|--|-----------|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-3.0

Principle	: Communicating tubes with magnetic float
Mounting position	: Vertical
Measuring range	: max. 5000 mm (one-part) > 5000 mm 2 or multipart
Pipe diameter	: 60,3 x 2 mm welded 60,3 x 2 mm seamless 2" Sch 10
Process connection	: to specify: Flanges DN15...50 (1/2"...2" 150#), welding or threaded stud
Drain/Vent connections	: Plug R1/2" (for more, please see order codes)
Pipe material	: 1.4404
Flange material	: CS
Float material	: 1.4404 Titanium; Titanium/E-CTFE-coated
Operation temperature	: -50...+400 °C
Operation pressure	: max. 16 bar
Operation density	: min. 0,3761 kg/dm ³
Viscosity	: max. 5000 mPa s
Bolts & Nuts	: CS SS
Gasket	: PTFE up to 100 °C Klingsil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail	: Makrolon® up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types	: Cylindrical, sealed type Length: - 270 mm - 130 mm - 150 mm - 210 mm - 330 mm - 430 mm - 530 mm - 630 mm
Standard dimensions	: - A = 240 mm* - B = 130 mm - C = 40 mm

Base equipment printed in bold letters!

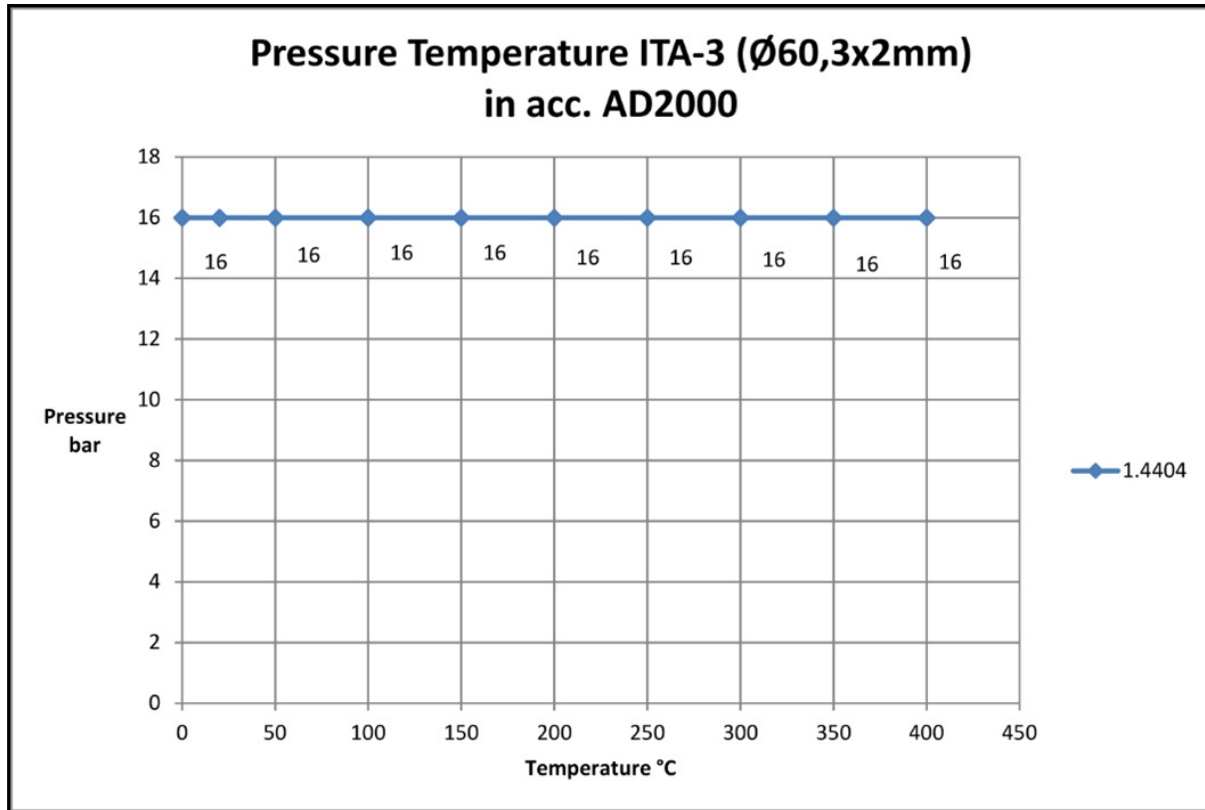
*for densities <0,7374 kg/dm³, enlarge scale A

**only with vent- and/or drain flanges DN50 (resp. 2")

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes

Mag. Level Gauge Type ITA-3 & ITA-3.0 / PN16/150 lbs

Order Codes mag. Level gauge type ITA-3 & ITA-3.0 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-3, PN16/150 lbs
	1. Type
ITA-3	ITA-3, PN16/150 lbs /Float pipe and Flanges: 1.4404
ITA-3.0	ITA-3.0; PN16/150 lbs /Float pipe: 1.4404; Flanges: CS
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
04	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	C to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. B: 240 mm (Standard)
Y	Dim. B. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K33	> 5000 mm - with flange connection: DN32 PN16, two or more parts design
K56	> 5000 mm - with flange connection: DN50 PN16, two or more parts design
KLG	> 5000 mm - with flange connection: 2" ANSI 150 lbs, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	7.2 nominal size / pressure rating
000	welding or threaded connection
A03	DN15 / PN16
A13	DN20 / PN16
A23	DN25 / PN16
A33	DN32 / PN16
A43	DN40 / PN16
A53	DN50 / PN16
AEG	1/2" / 150 lbs
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B33	Flange DN32 PN16 incl. blind flange
B53	Flange DN50 PN16 incl. blind flange
BLG	Flange 2" ANSI 150 lbs incl. blind flange
L53	Flange DN50 PN16 reinforced for shut-off valve on side
LLG	Flange 2" ANSI 150 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side) (only DN50 or 2")
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
00	without
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galvanized (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
CE	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RTJ)
CF	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RTJ)
CG	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RTJ)
CH	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RTJ)
CJ	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RTJ)
CK	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RTJ)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
CL	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RTJ)
CM	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RTJ)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
CN	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RTJ)
CP	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 150lbs RTJ)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
CR	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
CT	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
YY	others, please specify
	10. Drain plug
0	without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	11.2 nominal size / pressure rating
000	without
D03	stud with flange DN15 / PN16
D13	stud with flange DN20 / PN16
D23	stud with flange DN25 / PN16
D33	stud with flange DN32 / PN16
D43	stud with flange DN40 / PN16
DEG	stud with flange 1/2" / 150 lbs
DFG	stud with flange 3/4" / 150 lbs
DGG	stud with flange 1" / 150 lbs
DHG	stud with flange 1 1/4" / 150 lbs
DKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E03	DN15 PN16
E13	DN20 PN16
E23	DN25 PN16
E33	DN32 PN16
E43	DN40 PN16
EEG	1/2" ANSI 150 lbs
EFG	3/4" ANSI 150 lbs
EGG	1" ANSI 150 lbs
EHG	1 1/4" ANSI 150 lbs
DKG	1 1/2" ANSI 150 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C33	Flange with blind flange DN32 PN16
C53	Flange with blind flange DN50 PN16
L53	Flange with blind flange DN50 PN16, reinforced for shut-off-valve on side
CLG	Flange with blind flange 2" ANSI 150 lbs
LLG	Flange with blind flange 2" ANSI 150 lbs, reinforced for shut-off-valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	12.3 Bolts & nuts float pipe top end finish flange
00	without (bottom side = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galvanized (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
CE	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RTJ)
CF	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RTJ)
CG	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RTJ)
CH	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RTJ)
CJ	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RTJ)
CK	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RTJ)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
CL	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RTJ)
CM	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RTJ)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
CN	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RTJ)
CP	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 150lbs RTJ)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
CR	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
CT	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	14.2 Nominal size / pressure rating
000	without
F03	stud with flange DN15 / PN16
F13	stud with flange DN20 / PN16
F23	stud with flange DN25 / PN16
F33	stud with flange DN32 / PN16
F43	stud with flange DN40 / PN16
FEG	stud with flange 1/2" / 150 lbs
FFG	stud with flange 3/4" / 150 lbs
FGG	stud with flange 1" / 150 lbs
FHG	stud with flange 1 1/4" / 150 lbs
FKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G03	DN15 PN16
G13	DN20 PN16
G23	DN25 PN16
G33	DN32 PN16
G43	DN40 PN16
GEG	1/2" ANSI 150 lbs
GFG	3/4" ANSI 150 lbs
GGG	1" ANSI 150 lbs
GHG	1 1/4" ANSI 150 lbs
GKG	1 1/2" ANSI 150 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	14.4 Flange Faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
000	without
AAA	welding or threaded connection
H03	DN15 / PN16
H13	DN20 / PN16
H23	DN25 / PN16
H33	DN32 / PN16
H43	DN40 / PN16
H53	DN50 / PN16
HEG	1/2" / 150 lbs
HFG	3/4" / 150 lbs
HGG	1" / 150 lbs
HHG	1 1/4" / 150 lbs
HKG	1 1/2" / 150 lbs
HLG	2" / 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	15.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
AA	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description
	15.5 Bolts & nuts counter flanges
00	without (bottom side = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galvanized (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
CE	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RTJ)
CF	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RTJ)
CG	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RTJ)
CH	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RTJ)
CJ	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RTJ)
CK	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RTJ)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
CL	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RTJ)
CM	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RTJ)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
CN	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RTJ)
CP	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 150lbs RTJ)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
CR	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
CT	ASME B16.5 UNC: 5/8" x 95 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RTJ)
YY	others, please specify
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3/-3.0

3.1.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
3V0100K1	16	1.4404/316L	52	125	1,4907	sealed	
3V0100K3	16	1.4404/316L	52	125	1,0524	sealed	1
3V0120K1	16	1.4404/316L	52	145	1,2346	sealed	
3V0120K3	16	1.4404/316L	52	145	0,9034	sealed	1
3V0150K1	16	1.4404/316L	52	175	0,9905	sealed	
3V0150K3	16	1.4404/316L	52	175	0,8606	sealed	1
3V0180K1	16	1.4404/316L	52	205	0,8781	sealed	
3V0180K3	16	1.4404/316L	52	205	0,7022	sealed	1
3V0240K1	16	1.4404/316L	52	265	0,7374	sealed	
3V0240K3	16	1.4404/316L	52	265	0,6209	sealed	1
3V1240K1	16	1.4404/316L	52	265	1,0000	sealed	
3T0100K1	16	Titanium	50,8	125	1,1788	sealed	2
3T0100K3	16	Titanium	50,8	125	0,7821	sealed	1, 2
3T0120K1	16	Titanium	50,8	145	0,9646	sealed	2
3T0120K3	16	Titanium	50,8	145	0,6514	sealed	1, 2
3T0150K1	16	Titanium	50,8	175	0,7763	sealed	2
3T0150K3	16	Titanium	50,8	175	0,5674	sealed	1, 2
3T0180K1	16	Titanium	50,8	205	0,6716	sealed	2
3T0180K3	16	Titanium	50,8	205	0,5094	sealed	1, 2
3T0240K1	16	Titanium	50,8	265	0,5723	sealed	2
3T0240K3	16	Titanium	50,8	265	0,4550	sealed	1, 2
3T0300K1	16	Titanium	50,8	325	0,4955	sealed	2
3T0300K3	16	Titanium	50,8	325	0,4063	sealed	1, 2
3T0400K1	16	Titanium	50,8	425	0,4358	sealed	2
3T0400K3	16	Titanium	50,8	425	0,3761	sealed	1, 2
3T0500K1	16	Titanium	50,8	525	0,4017	sealed	2
3T0500K3	16	Titanium	50,8	525	0,3539	sealed	1, 2
3T0600K1	16	Titanium	50,8	625	0,3761	sealed	2
3T0600K3	16	Titanium	50,8	625	0,3371	sealed	1, 2
3H0150K1	16	Titanium, Halar-coated	52	175	0,902	sealed	
3HC012K1	16	Hastelloy C4	52	145	1,2455	sealed	
3HC024K1	16	Hastelloy C4	52	265	0,7510	sealed	
3HC024K3	16	Hastelloy C4	52	265	0,6296	sealed	1

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

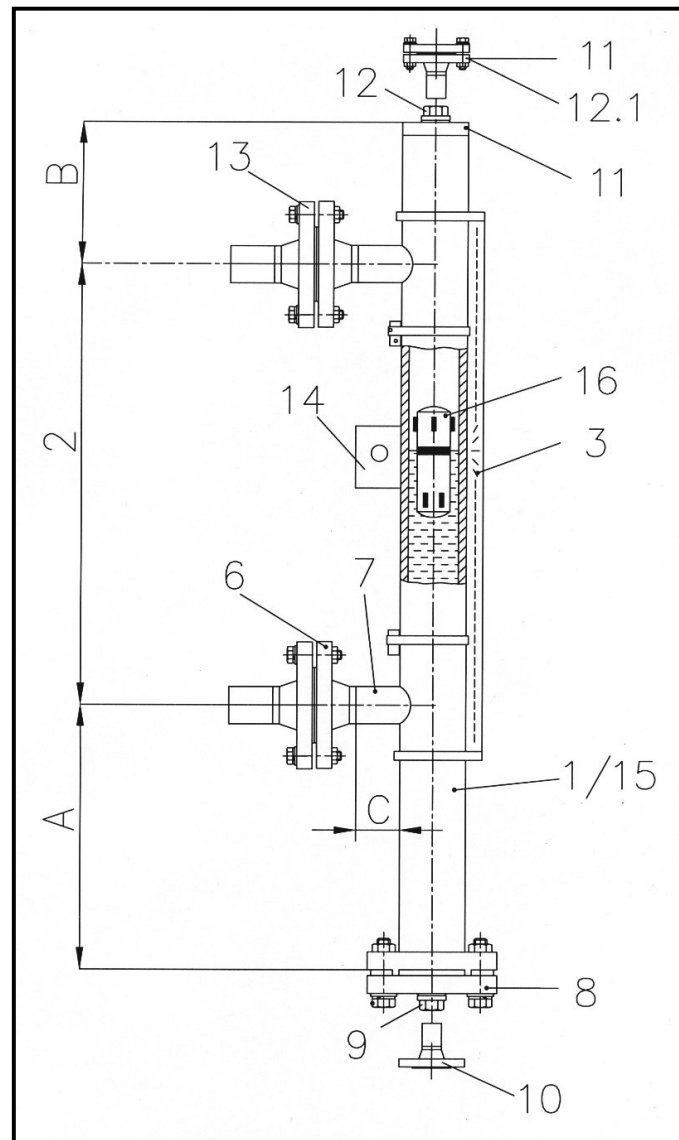
ITA

3. Level Gauges in Detail

ITA-3 Cryo

3.2.1 for cryogenic applicaitons, non-vaporizing fluids

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|----------|--|-----------|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Drain plug |
| 2 | c to c distance | 10 | Additional drain flange, open |
| 3 | Design (Indication rail) | 11 | Float pipe top end finish |
| 4 | Armaflex® insulation | 12 | Vent plug |
| 6 | Process connection side/side | 13 | Counter flanges |
| 7 | Side studs welded with T-pieces
for 100 % X-ray-testing | 14 | Additional bracket |
| 8 | Float removal flange | 15 | Float pipe seamless |
| | | 16 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-3 Cryo

Principle	:	Communicating tubes with magnetic float
Mounting position	:	vertical
Measuring range	:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter	:	60,3 x 2 mm welded,
Process connection	:	to specify: Flanges DN15-50 (1/2"-2"150#), Welding or threaded stud
Drain/vent connections	:	Plug G1/2"
Pipe material	:	1.4404 , 1.4435, 1.4539, Hastelloy C4 (2.4610), Inconel 625 (2.4856), Inconel 825 (2.4858), Titan (3.7035) Other materials also possible (on request)
Flange material	:	same as pipe material
Float material	:	1.4404 Titanium, Titanium/E-CTFE-coated
Operation temperature	:	-200...+100 °C
Operation pressure	:	max. 16 bar
Operation density	:	min. 0,4017 kg/dm ³
Bolts & Nuts	:	CS (min. -10 °C) SS or material in acc. with DIN 17280
Gasket	:	PTFE min. -150 °C Klingersil TOP Chem 2000
Indication rail	:	Aluminium 1.4301
Float types	:	Cylindrical, sealed type Length: - 270 mm*

Base equipment printed in bold letters!

*** not for vaporizing media (e.g. ammonia)**

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Mag. Level Gauge Type ITA-3 Cryo / PN16/150 lbs for cryogenic applications / non-vaporizing fluids

Order Codes mag. Level gauge type ITA-3 Cryo / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-3 Cryo, PN16/150 lbs
	1. Type
ITA-3-Cryo	ITA-3 Cryo, PN16/150 lbs /Float pipe and Flanges: 1.4404
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Armaflex® - Insulation
0	without insulation
F	Thickness 9 mm; up to -15 °C
R	Thickness 30 mm; up to -50 °C
T	Thickness 70 mm; up to -200 °C
	4. Size & material float pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
04	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	5. c to c distance
L	C to c distance in mm
	5.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	5.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	6. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K33	> 5000 mm - with flange connection: DN32 PN16, two or more parts design
K56	> 5000 mm - with flange connection: DN50 PN16, two or more parts design
KLG	> 5000 mm - with flange connection: 2" ANSI 150 lbs, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Code	Description
8.1 Standard	
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
8.2 nominal size / pressure rating	
000	welding or threaded connection
A03	DN15 / PN16
A13	DN20 / PN16
A23	DN25 / PN16
A33	DN32 / PN16
A43	DN40 / PN16
A53	DN50 / PN16
AEG	1/2" / 150 lbs
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
8.3 Flange faces process connection flanges	
00	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
9. Side studs welded with T-pieces for 100 % X-ray testing	
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description
	10. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B33	Flange DN32 PN16 incl. blind flange
B53	Flange DN50 PN16 incl. blind flange
BLG	Flange 2" ANSI 150 lbs incl. blind flange
L53	Flange DN50 PN16 reinforced for shut-off valve on side
LLG	Flange 2" ANSI 150 lbs reinforced for shut-off valve on side
YY	others, please specify
	10.1 Surface float removal flange (bottom side) (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	10.2 Gasket
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	10.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electr. galv. (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electr. galva. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Code	Description
	11. Drain plug
0	without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	12. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	12.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	10.2 Gasket
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	12.2 nominal size / pressure rating
000	without
D03	stud with flange DN15 / PN16
D13	stud with flange DN20 / PN16
D23	stud with flange DN25 / PN16
D33	stud with flange DN32 / PN16
D43	stud with flange DN40 / PN16
DEG	stud with flange 1/2" / 150 lbs
DFG	stud with flange 3/4" / 150 lbs
DGG	stud with flange 1" / 150 lbs
DHG	stud with flange 1 1/4" / 150 lbs
DKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description
	12.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E03	DN15 PN16
E13	DN20 PN16
E23	DN25 PN16
E33	DN32 PN16
E43	DN40 PN16
EEG	1/2" ANSI 150 lbs
EFG	3/4" ANSI 150 lbs
EGG	1" ANSI 150 lbs
EHG	1 1/4" ANSI 150 lbs
EKG	1 1/2" ANSI 150 lbs
999	others, please specify
	12.4 Flange face
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
00	without with welded connection or threaded connection
	13. Float pipe top end finish
CXX	End cap
C33	Flange with blind flange DN32 PN16
C53	Flange with blind flange DN50 PN16
L53	Flange with blind flange DN50 PN16, reinforced for shut-off-valve on side
CLG	Flange with blind flange 2" ANSI 150 lbs
LLG	Flange with blind flange 2" ANSI 150 lbs, reinforced for shut-off-valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Code	Description
	13.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	13.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
TC	Klingsil Top Chem 2000
99	others, please specify
	13.3 Bolts & nuts float pipe top end finish flange
00	without (top = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description
	14. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	15. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	15.2 nominal size / pressure rating
000	without
F03	stud with flange DN15 / PN16
F13	stud with flange DN20 / PN16
F23	stud with flange DN25 / PN16
F33	stud with flange DN32 / PN16
F43	stud with flange DN40 / PN16
FEG	stud with flange 1/2" / 150 lbs
FFG	stud with flange 3/4" / 150 lbs
FGG	stud with flange 1" / 150 lbs
FHG	stud with flange 1 1/4" / 150 lbs
FKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Code	Description
	15.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G03	DN15 PN16
G13	DN20 PN16
G23	DN25 PN16
G33	DN32 PN16
G43	DN40 PN16
GEG	1/2" ANSI 150 lbs
GFG	3/4" ANSI 150 lbs
GGG	1" ANSI 150 lbs
GHG	1 1/4" ANSI 150 lbs
GKG	1 1/2" ANSI 150 lbs
999	others, please specify
	15.4 Flange face
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	16.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description
	16.2 nominal size / pressure rating
000	without
AAA	welding or threaded connection
H03	DN15 / PN16
H13	DN20 / PN16
H23	DN25 / PN16
H33	DN32 / PN16
H43	DN40 / PN16
H53	DN50 / PN16
HEG	1/2" / 150 lbs
HFG	3/4" / 150 lbs
HGG	1" / 150 lbs
HHG	1 1/4" / 150 lbs
HKG	1 1/2" / 150 lbs
HLG	2" / 150 lbs
YYY	others, please specify
	16.3 Flange Face Counter Flanges
00	without
AA	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes

Code	Description
	16.5 Bolts & nuts counter flanges
00	without
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	17. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 Cryo

3.2.3 Order Codes (continuation)

Code	Description						
	18. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
3C0240K1	16	Titanium	50,8	265	0,5723	sealed	2
3C0400K1	16	Titanium	50,8	425	0,4358	sealed	2
3C0500K3	16	Titanium	50,8	525	0,3539	sealed	1, 2

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

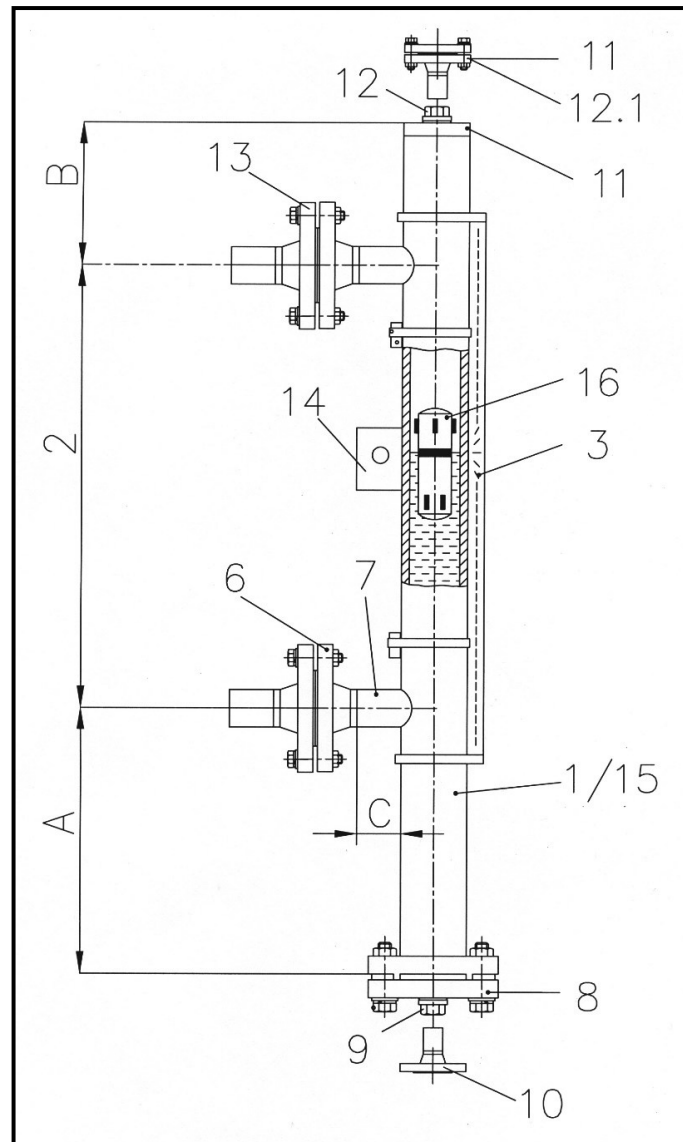
ITA

3. Level Gauges in Detail

ITA-3 CR64

3.3.1 for cryogenic applicaitons, non-vaporizing fluids

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,4 x 2 mm | 9 | Drain plug |
| 2 | c to c distance | 10 | Additional drain flange, open |
| 3 | Design (Indication rail) | 11 | Float pipe top end finish |
| 4 | Armaflex® insulation | 12 | Vent plug |
| 6 | Process connection side/side | 13 | Counter flanges |
| 7 | Side studs welded with T-pieces
for 100 % X-ray-testing | 14 | Additional bracket |
| 8 | Float removal flange | 15 | Float pipe seamless |
| | | 16 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-3 CR64

Principle	:	Communicating tubes with magnetic float
Mounting position	:	vertical
Measuring range	:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter	:	64 x 2 mm welded,
Process connection	:	to specify: Flanges DN15-50 (1/2"-2"150#), Welding or threaded stud
Drain/vent connections	:	Plug G1/2"
Pipe material	:	1.4404 , 1.4435, 1.4539, Hastelloy C4 (2.4610), Inconel 625 (2.4856), Inconel 825 (2.4858), Titan (3.7035) Other materials also possible (on request)
Flange material	:	same as pipe material
Float material	:	Titanium , Titanium/E-CTFE-coated
Operation temperature	:	-200...+100 °C
Operation pressure	:	max. 16 bar
Operation density	:	min. 0,4017 kg/dm ³
Viscosity	:	max. 5000 mPa s
Bolts & Nuts	:	CS (min. -10 °C) SS or material in acc. with DIN 17280
Gasket	:	PTFE min. -150 °C Klingsil TOP Chem 2000
Indication rail	:	Aluminium 1.4301
Float types	:	Cylindrical, sealed type Length: - Ø50,8 x 270 mm* - Ø50,8 x 530 mm

Base equipment printed in bold letters!

* not for vaporizing media (e.g. ammonia)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes

Mag. Level Gauge Type ITA-3 CR64 / PN16/150 lbs for cryogenic applications / vaporizing fluids

Order Codes mag. Level gauge type ITA-3 _CR64 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-3 Cryo, PN16/150 lbs
	1. Type
ITA-3-CR64	ITA-3 CR64, PN16/150 lbs /Float pipe and Flanges: 1.4404
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Armaflex® - Insulation
0	without insulation
F	Thickness 9 mm; up to -15 °C
R	Thickness 30 mm; up to -50 °C
T	Thickness 70 mm; up to -200 °C
	4. Size & material float pipe/material flanges
07	Ø64x2,0mm (welded), mat.: 316L/316L
08	Ø64x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	5. c to c distance
L	C to c distance in mm
	5.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	5.2 Lower pipe stand off
A	Dim. B: 240 mm (Standard)
Y	Dim. B. in mm (please advise)
	6. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K33	> 5000 mm - with flange connection: DN32 PN16, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes (continuation)

Code	Description
	8.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	8.2 Nominal size / pressure rating
000	welding or threaded connection
A03	DN15 / PN16
A13	DN20 / PN16
A23	DN25 / PN16
A33	DN32 / PN16
A43	DN40 / PN16
A53	DN50 / PN16
AEG	1/2" / 150 lbs
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
	8.3 Flange faces process connection flanges
00	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9. Side studs welded with T-pieces for 100 % X-ray testing
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes (continuation)

Code	Description
	10. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B33	Flange DN32 PN16 incl. blind flange
B53	Flange DN50 PN16 incl. blind flange
BLG	Flange 2" ANSI 150 lbs incl. blind flange
L53	Flange DN50 PN16 reinforced for shut-off valve on side
LLG	Flange 2" ANSI 150 lbs reinforced for shut-off valve on side
YY	others, please specify
	10.1 Surface float removal flange (bottom side) (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	10.2 Gasket
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes (continuation)

Code	Description
	10.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	11. Drain plug
0	Without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	12. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	12.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes (continuation)

Code	Description
	12.2 nominal size / pressure rating
000	without
D03	stud with flange DN15 / PN16
D13	stud with flange DN20 / PN16
D23	stud with flange DN25 / PN16
D33	stud with flange DN32 / PN16
D43	stud with flange DN40 / PN16
DEG	stud with flange 1/2" / 150 lbs
DFG	stud with flange 3/4" / 150 lbs
DGG	stud with flange 1" / 150 lbs
DHG	stud with flange 1 1/4" / 150 lbs
DKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify
	12.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E03	DN15 PN16
E13	DN20 PN16
E23	DN25 PN16
E33	DN32 PN16
E43	DN40 PN16
EEG	1/2" ANSI 150 lbs
EFG	3/4" ANSI 150 lbs
EGG	1" ANSI 150 lbs
EHG	1 1/4" ANSI 150 lbs
EKG	1 1/2" ANSI 150 lbs
999	others, please specify
	12.4 Flange face
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes (continuation)

Code	Description
	13. Float pipe top end finish
CXX	End cap
C33	Flange with blind flange DN32 PN16
C53	Flange with blind flange DN50 PN16
L53	Flange with blind flange DN50 PN16, reinforced for shut-off-valve on side
CLG	Flange with blind flange 2" ANSI 150 lbs
LLG	Flange with blind flange 2" ANSI 150 lbs, reinforced for shut-off-valve on side
YY	others, please specify
	13.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	13.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
TC	Klingsil Top Chem 2000
99	others, please specify
	13.3 Bolts & nuts float pipe top end finish flange
00	without (top = End cap)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes (continuation)

Code	Description
	14. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	15. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	15.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	15.2 nominal size / pressure rating
000	without
F03	stud with flange DN15 / PN16
F13	stud with flange DN20 / PN16
F23	stud with flange DN25 / PN16
F33	stud with flange DN32 / PN16
F43	stud with flange DN40 / PN16
FEG	stud with flange 1/2" / 150 lbs
FFG	stud with flange 3/4" / 150 lbs
FGG	stud with flange 1" / 150 lbs
FHG	stud with flange 1 1/4" / 150 lbs
FKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes (continuation)

Code	Description
	15.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G03	DN15 PN16
G13	DN20 PN16
G23	DN25 PN16
G33	DN32 PN16
G43	DN40 PN16
GEG	1/2" ANSI 150 lbs
GFG	3/4" ANSI 150 lbs
GGG	1" ANSI 150 lbs
GHG	1 1/4" ANSI 150 lbs
GKG	1 1/2" ANSI 150 lbs
999	others, please specify
	15.4 Flange face
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	16.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes (continuation)

Code	Description
	16.2 nominal size / pressure rating
000	without
AAA	welding or threaded connection
H03	DN15 / PN16
H13	DN20 / PN16
H23	DN25 / PN16
H33	DN32 / PN16
H43	DN40 / PN16
H53	DN50 / PN16
HEG	1/2" / 150 lbs
HFG	3/4" / 150 lbs
HGG	1" / 150 lbs
HHG	1 1/4" / 150 lbs
HKG	1 1/2" / 150 lbs
HLG	2" / 150 lbs
YYY	others, please specify
	16.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
AA	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.3.2 Order Codes (continuation)

Code	Description
	16.5 Bolts & nuts counter flanges
00	without
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	17. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3 CR64

3.2.3 Order Codes

Code	Description						
	18. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
3C0501K1	16	Titanium	50,8	525	0,4017	sealed	2, 3
3C0501K2	16	Titanium	50,8	525	0,3890	sealed	2, 3

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

3: with spacers

Mag. Level Gauge type ITA

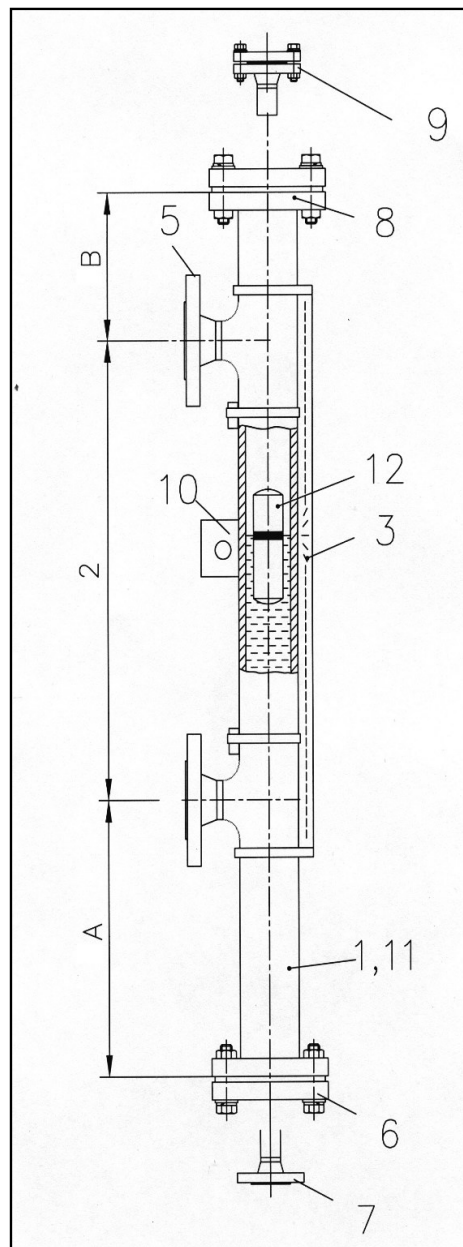
ITA

3. Level Gauges in Detail

ITA-3.5

3.4.1 wetted parts E-CTFE-coated

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|---|----|---------------------|
| 1 | Float pipe welded, dimensions 60,3 x 2 mm | 9 | Additional bracket |
| 2 | c to c distance | 10 | Float pipe seamless |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Float |
| 6 | Float removal flange | | |
| 7 | Additional drain flange, open | | |
| 8 | Float pipe top end finish | | |

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-3.5

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 3100 mm (one-part, total length max. 3500 mm) > 3100 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 150#), Welding or threaded stud
Drain/Vent connections:	see order codes
Pipe material:	1.4404 (wetted parts E-CTFE coated)
Flange material:	same as pipe material
Float material:	Titanium/E-CTFE-coated
Operation temperature:	-50...+160 °C
Operation pressure:	max. 16 bar
Operation density:	min. 0,5645 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE min -150 °C Klingsil TOP Chem 2000
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Length: -270 mm -130 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm

Base equipment printed in bold letters!

*for densities < 1,0 kg/dm³ enlarge the scale A

Mag. Level Gauge type ITA

ITA-3.5

3.4.2 Order Codes

**Mag. Level Gauge
Type ITA-3.5 / PN16/150 lbs
Float pipe and flange material 1.4404
wetted parts E-CTFE-coated (Halar)**

Order Codes mag. Level gauge type ITA-3.5 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-3.5, PN16/150 lbs
	1. Type
ITA-3.5	ITA-3.5; PN16/150 lbs; Wetted parts E-CTFE (HALAR®) coated
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.4.2 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
04	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 3100 mm, total length 3500 mm
00	< 3100 mm - one part design
K53	> 3100 mm - with flange connection: DN50 PN16, two or more parts design
KLG	> 3100 mm - with flange connection: 2" ANSI 150 lbs, two or more parts design
	7. Process Connection side/side
FA	flanged connection
YY	others, please specify
	7.1 standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.3.2 Order Codes (continuation)

Code	Description
	7.2 nominal size / pressure rating
A13	DN20 / PN16
A23	DN25 / PN16
A33	DN32 / PN16
A43	DN40 / PN16
A53	DN50 / PN16
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	8. Float removal flange (bottom side)
B53	Flange DN50 PN16 incl. blind flange
BLG	Flange 2" ANSI 150 lbs incl. blind flange
YY	others, please specify
	8.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	8.2 Gasket
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.4.2 Order Codes (continuation)

Code	Description
	8.3 Bolts & nuts float removal flange (bottom side)
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	9. Drain plug
0	without
	10. Additional drain flange, open
000	Flange 2" ANSI 150 lbs incl. blind flange
D13	others, please specify
D23	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
D33	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
D43	ASME B 16.5 Raised Face (RF)
DFG	ASME B 16.5 Raised Face Smooth Finish (RFSF)
DGG	ASME B 16.5 Flat Face (FF)
DHG	DIN Form C (raised sealing strip ; Rz = 160µm)
DKG	others, please specify
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.3.2 Order Codes (continuation)

Code	Description
	10.1 Surface float removal flange (bottom side)
00	without
E1	stud with flange DN20 PN16
E2	stud with flange DN25 PN16
A1	stud with flange DN32 PN16
A2	stud with flange DN40 PN16
A3	stud with flange 3/4" ANSI 150 lbs
D3	stud with flange 1" ANSI 150 lbs
YY	stud with flange 1 1/4" ANSI 150 lbs
	11. Float pipe top end finish
C53	Flange with blind flange DN50 PN16
CLG	Flange with blind flange 2" ANSI 150 lbs
YY	others, please specify
	11.1 Surface float pipe top end finish flange
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	11.2 Gasket
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.4.2 Order Codes (continuation)

Code	Description
	11.3 Bolts & nuts float pipe top end finish flange
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	12. Vent plug at top end
0	without
	13. Additional venting flange, open
000	without
F13	stud with flange DN20 PN16
F23	stud with flange DN25 PN16
F33	stud with flange DN32 PN16
F43	stud with flange DN40 PN16
FEG	stud with flange 1/2" ANSI 150 lbs
FFG	stud with flange 3/4" ANSI 150 lbs
FGG	stud with flange 1" ANSI 150 lbs
FHG	stud with flange 1 1/4" ANSI 150 lbs
FKG	stud with flange 1 1/2" ANSI 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.3.2 Order Codes (continuation)

Code	Description
	13.1 Flange faces
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	14. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.5

3.4.2 Order Codes (continuation)

Code	Description						
	15. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
35H024K1	16	Titanium, E-CTFE (Halar®) coated	52	265	0,6873	Sealed	
35H024K3	16	Titanium, E-CTFE (Halar®) coated	52	265	0,6209	Sealed	1

- 1: only with 316SS or Aluminium Indication rail
 2: do not use this hydrogen or alcohol compounds
 3: with spacers

Mag. Level Gauge type ITA

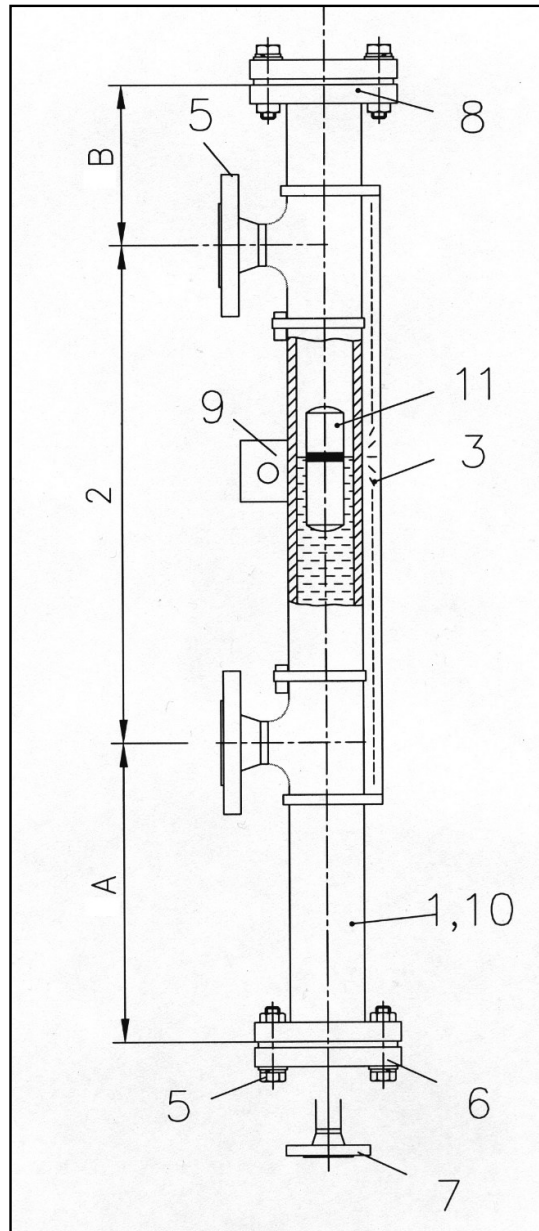
ITA

3. Level Gauges in Detail

ITA-3.8

3.5.1 wetted parts E-TFE-lined, for vacuum service

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|---|----|---------------------|
| 1 | Float pipe welded, dimensions 60,3 x 2 mm | 9 | Additional bracket |
| 2 | c to c distance | 10 | Float pipe seamless |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Float |
| 6 | Float removal flange | | |
| 7 | Additional drain flange, open | | |
| 8 | Float pipe top end finish | | |

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-3.8

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 1700 mm (one-part, total length max. 2100 mm) > 1700 mm 2- or multipart
Pipe diameter:	64 x 2 mm welded
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 150#),
Drain/Vent connections:	see order codes
Pipe material:	1.4404 (wetted parts E-TFE lined)
Thickness of lining:	min. 3,27 mm
Flange material:	same as pipe material
Float material:	Titanium/E-TFE-coated
Operation temperature:	-50...+160 °C
Operation pressure:	max. 16 bar / vacuum resistant
Operation density:	min. 0,6873 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingersil-chem-200 up to 260 °C
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -150 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm -C = 40

Base equipment printed in BOLD letters!

***for densities < 1,0 kg/dm³ enlarge the scale A**

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes

**Mag. Level Gauge
Type ITA-3.8 / PN16/150 lbs
Float pipe and flange material 1.4404
wetted parts E-TFE-lined / applicable for vacuum service**

Order Codes mag. Level gauge type ITA-3.8 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-3.5, PN16/150 lbs
	1. Type
ITA-3.8	ITA-3.8; PN16/150 lbs; Wetted parts E-TFE-lined
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 1700 mm, total length 2100 mm
00	< 1700 mm - one part design
K33	> 1700 mm - with flange connection: DN32 PN16, two or more parts design
	7. Process Connection side/side
FA	flanged connection
YY	others, please specify
	7.1 standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description
	7.2 nominal size / pressure rating
A13	DN20 / PN16
A23	DN25 / PN16
A33	DN32 / PN16
A43	DN40 / PN16
A53	DN50 / PN16
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	8. Float removal flange (bottom side)
B53	Flange DN50 PN16 incl. blind flange
BLG	Flange 2" ANSI 150 lbs incl. blind flange
YY	others, please specify
	8.1 Surface float removal flange (bottom side)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	8.2 Gasket
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description
8.3 Bolts & nuts float removal flange (bottom side)	
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 el. galv. (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
9. Drain plug	
0	without
10. Additional drain flange, open	
000	without
D13	stud with flange DN20 PN16
D23	stud with flange DN25 PN16
D33	stud with flange DN32 PN16
D43	stud with flange DN40 PN16
DFG	stud with flange 3/4" ANSI 150 lbs
DGG	stud with flange 1" ANSI 150 lbs
DHG	stud with flange 1 1/4" ANSI 150 lbs
DKG	stud with flange 1 1/2" ANSI 150 lbs
YYY	others, please specify
10.1 Surface float removal flange (bottom side)	
00	without
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description
	10.2 Gasket
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
YY	others, please specify
	10.3 Bolts & nuts float pipe top end finish flange
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 el. galv. (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	11. Vent plug at top end
0	without
	12. Additional vent flange, open
000	without
F13	stud with flange DN20 PN16
F23	stud with flange DN25 PN16
F33	stud with flange DN32 PN16
F43	stud with flange DN40 PN16
FEG	stud with flange 1/2" ANSI 150 lbs
FFG	stud with flange 3/4" ANSI 150 lbs
FGG	stud with flange 1" ANSI 150 lbs
FHG	stud with flange 1 1/4" ANSI 150 lbs
FKG	stud with flange 1 1/2" ANSI 150 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description
	12.1 Flange face
00	without
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
A1	ASME B 16.5 Raised Face (RF)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
YY	others, please specify
	13. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-3.8

3.5.2 Order Codes (continuation)

Code	Description						
	14. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
34PDV1K1	10	PVDF	50	135	1,300	sealed	
34PDV2K1	10	PVDF	50	255	0,85	sealed	

Mag. Level Gauge type ITA

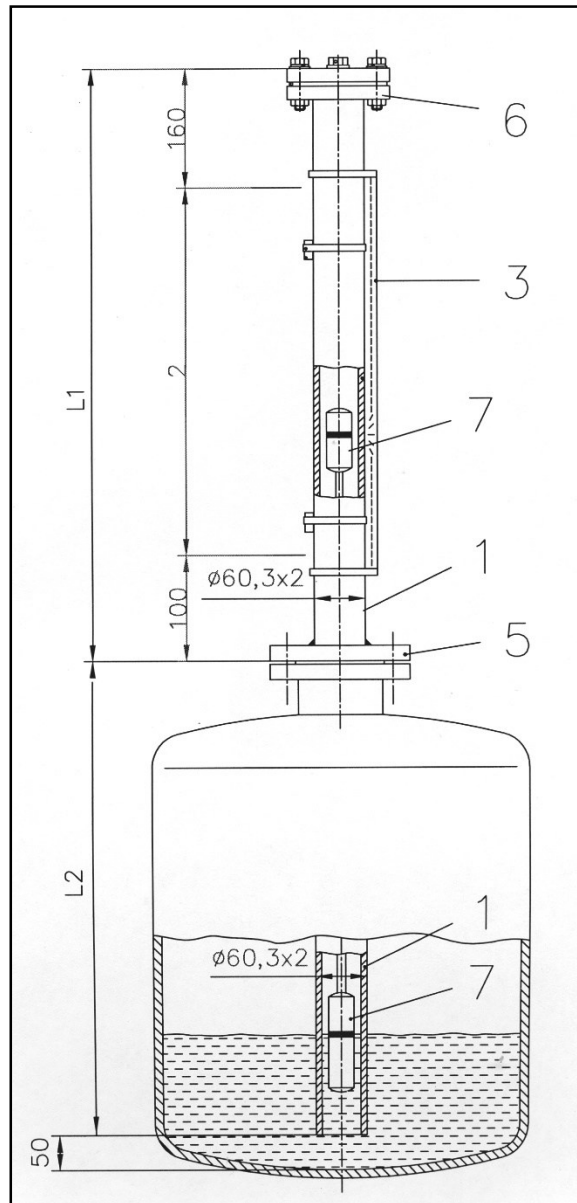
ITA

3. Level Gauges in Detail

ITA-4

3.6.1 mounted from top of tank

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 5 Process connection on tank
- 6 Follower magnet guide tube top side finish
- 7 Float with rod and follower magnet

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-4

Principle:	Communicating tubes with magnetic float
Mounting position:	Top of tank
Measuring range:	max. 2750 mm (depending on fluid's density)
Pipe diameter:	60,3 x 2 mm welded, necking connections
Process connection:	to specify: Flanges DN50 PN 16 pr 2" 150#
Drain/Vent connections:	Plug R1/2"
Pipe material:	1.4404 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 16 bar
Operation density:	min. 0,68 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type, with rod

Base equipment printed in BOLD letters!

Mag. Level Gauge type ITA

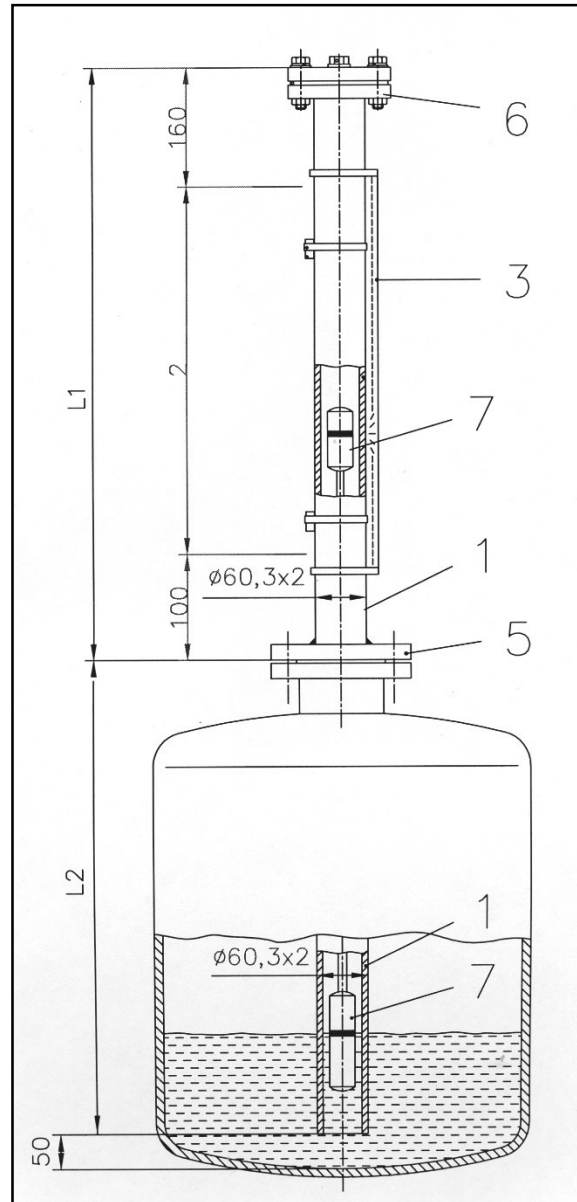
ITA

3. Level Gauges in Detail

ITA-4.0

3.6.2 mounted from top of tank

Characteristics: PN16 / Float pipe: 1.4404 and flanges: C.S.



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 5 Process connection on tank
- 6 Follower magnet guide tube top side finish
- 7 Float with rod and follower magnet

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-4.0

Principle:	Communicating tubes with magnetic float
Mounting position:	Top of tank
Measuring range:	max. 2750 mm (depending on fluid's density)
Pipe diameter:	60,3 x 2 mm welded, necking connections
Process connection:	to specify: Flanges DN50 PN 16 pr 2" 150#
Drain/Vent connections:	Plug R1/2"
Pipe material:	1.4404
Flange material:	CS
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 16 bar
Operation density:	min. 0,68 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingsil C4400 up to 175 °C Graphit spiral wound up to 400 °C
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type, with rod

Base equipment printed in **BOLD** letters!

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes

Mag. Level Gauge Type ITA-4 & ITA-4.0 / PN16/150 lbs mounted on top of tank

Order Codes mag. Level gauge type ITA-4 & ITA-4.0 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-4 & ITA-4.0, PN16/150 lbs
	1. Type
ITA-4 ITA-4.0	ITA-4; PN16/150 lbs; mounted from top of tank, float pipe and flanges: 1.4404 ITA-4.0., PN16/150 lbs; mounted from top of tank, float pipe 1.4404, flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
04	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. Insertion length (L2)
L2	Insertion length in mm
	4.1 Upper pipe stand off
B	Dim. B: 160 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 100 mm (Standard)
Y	Dim. A. in mm (please advise)
	4.3 Measuring length (max. 2750mm, depending on the density of the fluid)
ML	Dim. ML in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Two-parts construction
00	without
53	Connection of the follower guide tube: DN50 PN16
LG	Connection of the follower guide tube: 2" ANSI 150 lbs
	7. Process connection on top of tank
FA	Flanged connection
YY	others, please specify
	7.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes

Code	Description
	7.2 nominal size / pressure rating
A53	DN50 / PN16
A63	DN80 / PN16
A73	DN100 / PN16
A83	DN125 / PN16
A93	DN150 / PN16
AZ3	DN200 / PN16
ALG	2" / 150 lbs
AMG	3" / 150 lbs
ANG	4" / 150 lbs
AOG	5" / 150 lbs
APG	6" / 150 lbs
ARG	8" / 150 lbs
YYY	others, please specify
	7.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Follower guide tube top end finish
C33	Flange with blind flange DN32 PN16
C53	Flange with blind flange DN50 PN16
CHG	Flange with blind flange 2" ANSI 150 lbs
CLG	Flange with blind flange 2" ANSI 150 lbs
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes (continuation)

Code	Description
	8.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes

Code	Description
	8.3 Bolts & nuts float pipe top end finish flange
00	without
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
HE	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7/A194 Gr. 2H electro gal. (1 1/4" 150lbs RF)
HF	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (1 1/4" 150lbs RF)
HG	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (1 1/4" 150lbs RF)
HH	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (1 1/4" 150lbs RF)
HJ	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (1 1/4" 150lbs RF)
HK	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (1 1/4" 150lbs RF)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
HL	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (1 1/4" 150lbs RF)
HM	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (1 1/4" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
HN	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (1 1/4" 150lbs RF)
HP	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (1 1/4" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
HR	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (1 1/4" 150lbs RF)
HT	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (1 1/4" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	9. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes (continuation)

Code	Description
	10. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	10.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	10.2 nominal size / pressure rating
000	without
F03	stud with flange DN15 / PN16
F13	stud with flange DN20 / PN16
F23	stud with flange DN25 / PN16
F33	stud with flange DN32 / PN16
F43	stud with flange DN40 / PN16
FEG	stud with flange 1/2" / 150 lbs
FFG	stud with flange 3/4" / 150 lbs
FGG	stud with flange 1" / 150 lbs
FHG	stud with flange 1 1/4" / 150 lbs
FKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify
	10.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G03	DN15 PN16
G13	DN20 PN16
G23	DN25 PN16
G33	DN32 PN16
G43	DN40 PN16
GEG	1/2" ANSI 150 lbs
GFG	3/4" ANSI 150 lbs
GGG	1" ANSI 150 lbs
GHG	1 1/4" ANSI 150 lbs
GKG	1 1/2" ANSI 150 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes

Code	Description
	10.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4 & ITA-4.0

3.6.3 Order Codes (continuation)

Code	Description							
	11. Floats							
	Pressure [bar]	Material	Diam. [mm]	Length [mm]	min. density [kg/dm ³]	Max. rod length [mm]	Vented? [Y/N]	Notes
4V0240R1A	16	1.4404/316L	52	265	0,9500	500	N	
4V0240R1B	16	1.4404/316L	52	265	1,0000	750	N	
4T0240R1A	16	Titanium	50,8	265	0,7350	500	N	2
4T0240R1B	16	Titanium	50,8	265	0,7750	750	N	2
4R0240R1C	16	Titanium	50,8	265	0,8120	1000	N	2
4T0240R1D	16	Titanium	50,8	265	0,8510	1250	N	2
4T0240R1E	16	Titanium	50,8	265	0,8890	1500	N	2
4T0240R1F	16	Titanium	50,8	265	0,9260	1750	N	2
4T0240R1G	16	Titanium	50,8	265	0,9650	2000	N	2
4T0240K3A	16	Titanium	50,8	265	0,6190	500	N	1 + 2
4T0240K3B	16	Titanium	50,8	265	0,6580	750	N	1 + 2
4R0240K3C	16	Titanium	50,8	265	0,6960	1000	N	1 + 2
4T0240K3D	16	Titanium	50,8	265	0,7350	1250	N	1 + 2
4T0240K3E	16	Titanium	50,8	265	0,7720	1500	N	1 + 2
4T0240K3F	16	Titanium	50,8	265	0,8100	1750	N	1 + 2
4T0240K3G	16	Titanium	50,8	265	0,8490	2000	N	1 + 2
4T0300R1A	16	Titanium	50,8	175	0,6360	500	N	2
4T0300R1B	16	Titanium	50,8	205	0,6670	750	N	2
4R0300R1C	16	Titanium	50,8	205	0,6960	1000	N	2
4T0300R1D	16	Titanium	50,8	265	0,7275	1250	N	2
4T0300R1E	16	Titanium	50,8	265	0,7570	1500	N	2
4T0300R1F	16	Titanium	50,8	325	0,7860	1750	N	2
4T0300R1G	16	Titanium	50,8	325	0,8180	2000	N	2
4T0300K3A	16	Titanium	50,8	325	0,5440	500	N	1 + 2
4T0300K3B	16	Titanium	50,8	325	0,5750	750	N	1 + 2
4R0300K3C	16	Titanium	50,8	325	0,6050	1000	N	1 + 2
4T0300K3D	16	Titanium	50,8	325	0,6360	1250	N	1 + 2
4T0300K3E	16	Titanium	50,8	325	0,6650	1500	N	1 + 2
4T0300K3F	16	Titanium	50,8	325	0,6950	1750	N	1 + 2
4T0300K3G	16	Titanium	50,8	325	0,7260	2000	N	1 + 2

Notes:

1. Only with 316SS or Aluminium indication rail.
2. Do not use with hydrogen or alcohol compounds

Mag. Level Gauge type ITA

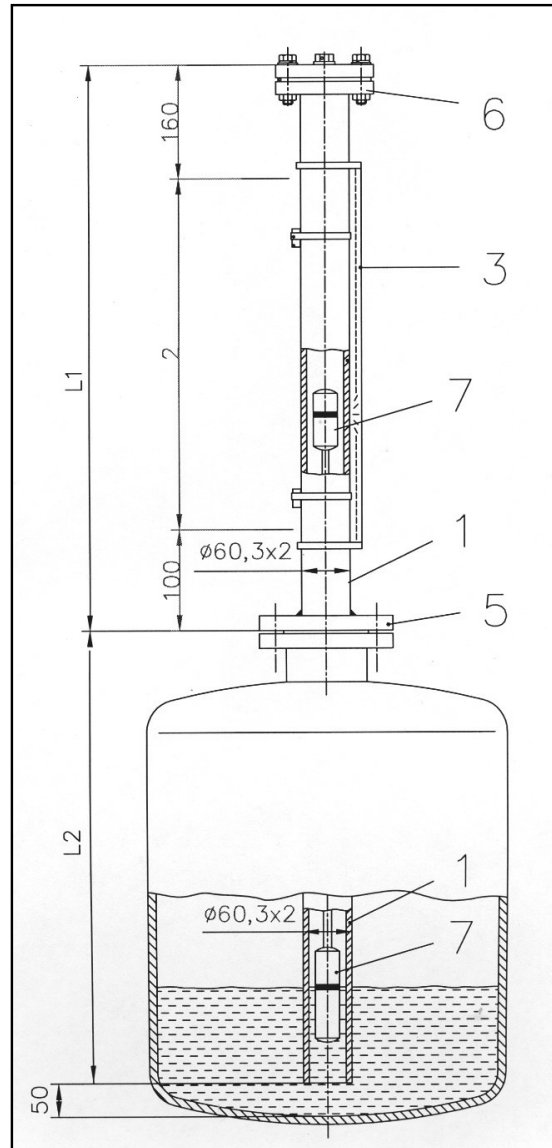
ITA

3. Level Gauges in Detail

ITA-4.1

3.7.1 mounted from top of tank

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- 1 Float pipe welded, dimensions 89 x 2 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 5 Process connection on tank
- 6 Follower magnet guide tube top side finish
- 7 Float with rod and follower magnet

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-4.1

Principle:	Communicating tubes with magnetic float
Mounting position:	Top of tank
Measuring range:	max. 2750 mm (depending on fluid's density)
Pipe diameter:	88,9 x 2 mm welded, necking connections
Process connection:	to specify: Flanges DN50 PN 16 pr 2" 150#
Drain/Vent connections:	Plug R1/2" 1.4404 ; 1.4435; 1.439; Haselloy C4 (2.4610); Inconel 625 (2,5856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Pipe material:	Same as pipe material
Flange material:	Same as pipe material
Float material:	1.4404 Titan
Operation temperature:	-50..+400 °C
Operation pressure:	max. 16 bar
Operation density:	min. 0,35 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type, with rod

Base equipment printed in **BOLD** letters!

Mag. Level Gauge type ITA

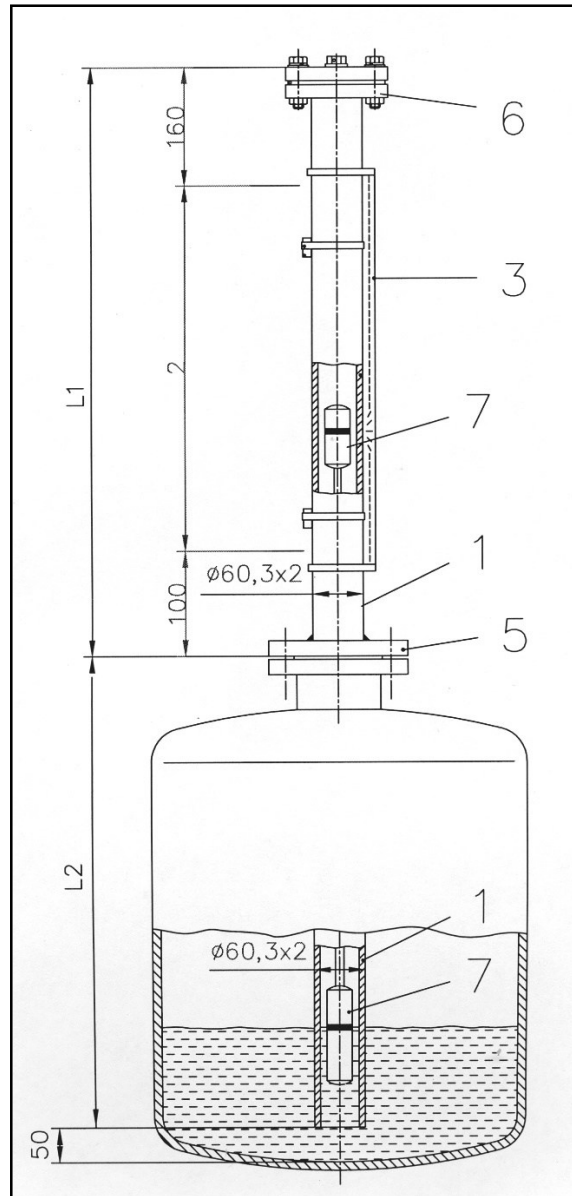
ITA

3. Level Gauges in Detail

ITA-4.1.0

3.7.2 mounted from top of tank

Characteristics: PN16 / Float pipe and flange material: 1.4404



Key:

- 1 Float pipe welded, dimensions 89 x 2 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 5 Process connection on tank
- 6 Follower magnet guide tube top side finish
- 7 Float with rod and follower magnet

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-4.0

Principle:	Communicating tubes with magnetic float
Mounting position:	Top of tank
Measuring range:	max. 2750 mm (depending on fluid's density)
Pipe diameter:	88,3 x 2 mm welded, necking connections
Process connection:	to specify: Flanges DN50 PN 16 pr 2" 150#
Drain/Vent connections:	Plug R1/2"
Pipe material:	1.4404
Flange material:	CS
Float material:	1.4404 Titan
Operation temperature:	-50..+400 °C
Operation pressure:	max. 16 bar
Operation density:	min. 0,35 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type, with rod

Base equipment printed in BOLD letters!

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes

Mag. Level Gauge Type ITA-4.1 & ITA-4.1.0 / PN16/150 lbs mounted on top of tank

Order Codes mag. Level gauge type ITA-4.1 & ITA-4.1.0 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-4.1 & ITA-4.1.0, PN16/150 lbs
	1. Type
ITA-4.1 ITA-4.1.0	ITA-4.1; PN16/150 lbs; mounted from top of tank, float pipe and flanges: 1.4404 ITA-4.1.0., PN16/150 lbs; mounted from top of tank, float pipe 1.4404, flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material pipe/material flanges
11	Ø88,9x2,0mm (welded), mat.: 316L/316L
12	Ø88,9x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. Insertion length (L2)
L2	Insertion length in mm
	4.1 Upper pipe stand off
B	Dim. B: 160 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 100 mm (Standard)
Y	Dim. A. in mm (please advise)
	4.3 Measuring length (max. 2750mm, depending on the density of the fluid)
ML	Dim. ML in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Two-parts construction
00	without
53	Connection of the follower guide tube: DN50 PN16
LG	Connection of the follower guide tube: 2" ANSI 150 lbs
	7. Process connection on top of tank
FA	Flanged connection
YY	others, please specify
	7.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes

Code	Description
	7.2 nominal size / pressure rating
A63	DN80 / PN16
A73	DN100 / PN16
A83	DN125 / PN16
A93	DN150 / PN16
AZ3	DN200 / PN16
AMG	3" / 150 lbs
ANG	4" / 150 lbs
AOG	5" / 150 lbs
APG	6" / 150 lbs
ARG	8" / 150 lbs
YYY	others, please specify
	7.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Follower guide tube top end finish
C33	Flange with blind flange DN32 PN16
C53	Flange with blind flange DN50 PN16
CHG	Flange with blind flange 2" ANSI 150 lbs
CLG	Flange with blind flange 2" ANSI 150 lbs
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes (continuation)

Code	Description
	8.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes

Code	Description
	8.3 Bolts & nuts float pipe top end finish flange
00	without
1A	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN16)
1C	DIN931 / ISO 4014: M16 x 65 mm; mat. Stainless steel A2-70 (DN32/50 PN16)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32/50 PN16)
3C	DIN 2510 Form L: M16 x 80mm; mat. A2-70 (DN32/50 PN16)
1B	DIN931 / ISO 4014: M16 x 65 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN16)
HE	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7/A194 Gr. 2H electro gal. (1 1/4" 150lbs RF)
HF	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (1 1/4" 150lbs RF)
HG	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (1 1/4" 150lbs RF)
HH	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (1 1/4" 150lbs RF)
HJ	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (1 1/4" 150lbs RF)
HK	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (1 1/4" 150lbs RF)
AE	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 150lbs RF)
AF	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 150lbs RF)
AG	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 150lbs RF)
AH	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 150lbs RF)
AJ	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 150lbs RF)
AK	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 150lbs RF)
HL	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (1 1/4" 150lbs RF)
HM	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (1 1/4" 150lbs RF)
AL	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 150lbs RF)
AM	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 150lbs RF)
HN	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (1 1/4" 150lbs RF)
HP	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (1 1/4" 150lbs RF)
AN	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 150lbs RF)
AP	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 150lbs RF)
HR	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (1 1/4" 150lbs RF)
HT	ASME B16.5 UNC: 1/2" x 70 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (1 1/4" 150lbs RF)
AR	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 150lbs RF)
AT	ASME B16.5 UNC: 5/8" x 83 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 150lbs RF)
YY	others, please specify
	9. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes (continuation)

Code	Description
	10. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	10.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	10.2 nominal size / pressure rating
000	without
F03	stud with flange DN15 / PN16
F13	stud with flange DN20 / PN16
F23	stud with flange DN25 / PN16
F33	stud with flange DN32 / PN16
F43	stud with flange DN40 / PN16
FEG	stud with flange 1/2" / 150 lbs
FFG	stud with flange 3/4" / 150 lbs
FGG	stud with flange 1" / 150 lbs
FHG	stud with flange 1 1/4" / 150 lbs
FKG	stud with flange 1 1/2" / 150 lbs
YYY	others, please specify
	10.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G03	DN15 PN16
G13	DN20 PN16
G23	DN25 PN16
G33	DN32 PN16
G43	DN40 PN16
GEG	1/2" ANSI 150 lbs
GFG	3/4" ANSI 150 lbs
GGG	1" ANSI 150 lbs
GHG	1 1/4" ANSI 150 lbs
GKG	1 1/2" ANSI 150 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes

Code	Description
	10.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes (continuation)

Code	Description							
	11. Floats							
	Pressure [bar]	Material	Diam. [mm]	Length [mm]	min. density [kg/dm ³]	Max. rod length [mm]	Vented? [Y/N]	Notes
4T0152R1A	ATM	Titanium	80	175	0,4070	500	N	2
4T0152R1B	ATM	Titanium	80	175	0,4310	750	N	2
4T0152R1C	ATM	Titanium	80	175	0,4540	1000	N	2
4T0152R1D	ATM	Titanium	80	175	0,4770	1250	N	2
4T0152R1E	ATM	Titanium	80	175	0,5000	1500	N	2
4T0152R1F	ATM	Titanium	80	175	0,5240	1750	N	2
4T0152R1H	ATM	Titanium	80	175	0,5470	2000	N	2
4T0152K2A	ATM	Titanium	80	175	0,4700	500	N	2
4T0152K2B	ATM	Titanium	80	175	0,4310	750	N	2
4T0152K2C	ATM	Titanium	80	175	0,4540	1000	N	2
4T0152K2D	ATM	Titanium	80	175	0,4770	1250	N	2
4T0152K2E	ATM	Titanium	80	175	0,5000	1500	N	2
4T0152K2F	ATM	Titanium	80	175	0,5240	1750	N	2
4T0152K2H	ATM	Titanium	80	175	0,5470	2000	N	2
4T0152K3A	ATM	Titanium	80	175	0,4710	500	N	1+2
4T0152K3B	ATM	Titanium	80	175	0,4940	750	N	1+2
4T0152K3C	ATM	Titanium	80	175	0,5180	1000	N	1+2
4T0152K3D	ATM	Titanium	80	175	0,5410	1250	N	1+2
4T0152K3E	ATM	Titanium	80	175	0,5640	1500	N	1+2
4T0152K3F	ATM	Titanium	80	175	0,5870	1750	N	1+2
4T0152K3H	ATM	Titanium	80	175	0,6100	2000	N	1+2
4T0182R1A	ATM	Titanium	80	205	0,3620	500	N	2
4T0182R1B	ATM	Titanium	80	205	0,3810	750	N	2
4T0182R1C	ATM	Titanium	80	205	0,4000	1000	N	2
4T0182R1D	ATM	Titanium	80	205	0,4200	1250	N	2
4T0182R1E	ATM	Titanium	80	205	0,4390	1500	N	2
4T0182R1F	ATM	Titanium	80	205	0,4580	1750	N	2
4T0182R1H	ATM	Titanium	80	205	0,4780	2000	N	2
4T0182K2A	ATM	Titanium	80	205	0,3370	500	N	2
4T0182K2B	ATM	Titanium	80	205	0,3570	750	N	2
4T0182K2C	ATM	Titanium	80	205	0,3760	1000	N	2
4T0182K2D	ATM	Titanium	80	205	0,3950	1250	N	2
4T0182K2E	ATM	Titanium	80	205	0,4150	1500	N	2
4T0182K2F	ATM	Titanium	80	205	0,3430	1750	N	2
4T0182K2H	ATM	Titanium	80	205	0,4530	2000	N	2

Notes:

1. Only with 316SS or Aluminium indication rail.
2. Do not use with hydrogen or alcohol compounds

Mag. Level Gauge type ITA

ITA-4.1 & ITA-4.1.0

3.7.3 Order Codes

Code	Description							
	11. Floats							
	Pressure [bar]	Material	Diam. [mm]	Length [mm]	min. density [kg/dm ³]	Max. rod length [mm]	Vented? [Y/N]	Notes
4T0182K3A	ATM	Titanium	80	205	0,3000	500	N	1+2
4T0182K3B	ATM	Titanium	80	205	0,3190	750	N	1+2
4T0182K3C	ATM	Titanium	80	205	0,3380	1000	N	1+2
4T0182K3D	ATM	Titanium	80	205	0,3580	1250	N	1+2
4T0182K3E	ATM	Titanium	80	205	0,3770	1500	N	1+2
4T0182K3F	ATM	Titanium	80	205	0,3960	1750	N	1+2
4T0182K3H	ATM	Titanium	80	205	0,4160	2000	N	1+2
4T0242R1A	ATM	Titanium	80	265	0,2980	500	N	2
4T0242R1B	ATM	Titanium	80	265	0,3120	750	N	2
4T0242R1C	ATM	Titanium	80	265	0,3270	1000	N	2
4T0242R1D	ATM	Titanium	80	265	0,3410	1250	N	2
4T0242R1E	ATM	Titanium	80	265	0,3560	1500	N	2
4T0242R1F	ATM	Titanium	80	265	0,3700	1750	N	2
4T0242R1H	ATM	Titanium	80	265	0,3850	2000	N	2
4T0242K2A	ATM	Titanium	80	265	0,2800	500	N	2
4T0242K2B	ATM	Titanium	80	265	0,2940	750	N	2
4T0242K2C	ATM	Titanium	80	265	0,3090	1000	N	2
4T0242K2D	ATM	Titanium	80	265	0,3230	1250	N	2
4T0242K2E	ATM	Titanium	80	265	0,3380	1500	N	2
4T0242K2F	ATM	Titanium	80	265	0,3520	1750	N	2
4T0242K2H	ATM	Titanium	80	265	0,3670	2000	N	2
4T0242K3A	ATM	Titanium	80	265	0,2530	500	N	1+2
4T0242K3B	ATM	Titanium	80	265	0,2680	750	N	1+2
4T0242K3C	ATM	Titanium	80	265	0,2820	1000	N	1+2
4T0242K3D	ATM	Titanium	80	265	0,2970	1250	N	1+2
4T0242K3E	ATM	Titanium	80	265	0,3110	1500	N	1+2
4T0242K3F	ATM	Titanium	80	265	0,3260	1750	N	1+2
4T0242K3H	ATM	Titanium	80	265	0,3400	2000	N	1+2

Notes:

1. Only with 316SS or Aluminium indication rail.
2. Do not use with hydrogen or alcohol compounds

Mag. Level Gauge type ITA

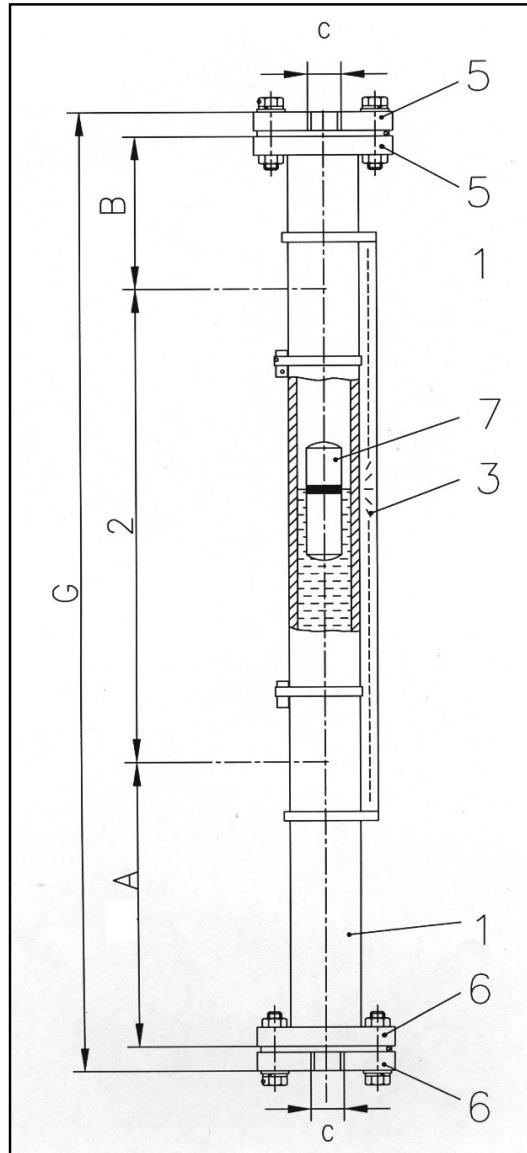
ITA

3. Level Gauges in Detail

ITA-5

3.8.1 tank connections top-bottom

Characteristics: PN16 / Float pipe and flanges: 1.4404



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 Distance between process connections
- 3 Design (Indication rail)
- 5 Process connection top side
- 6 Process connection bottom side
- 7 Float removal flange

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-5

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, 2" Sch10 60,3 x 2...8,7 mm seamless (depending on pressure rating)
Process connection:	to specify: R1/2" threaded (up to PN40) Welding or threaded stud Flanges DN15...50 (1/2"...2" 150#), 1.4404 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Pipe material:	
Flange material:	same as pipe material
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 16 bar , up to 320 bar
Operation density:	min. 0,3371 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type or vented type (Depending on pressure rating)
Standard dimensions:	-A = 240 mm* -B = 130 mm (up to PN64) - C = R1/2" (up to PN40) 1/2"NPT (all pressure ratings)

Base equipment printed in **BOLD** letters!

*depending on the density scale A can be enlarged

Mag. Level Gauge type ITA

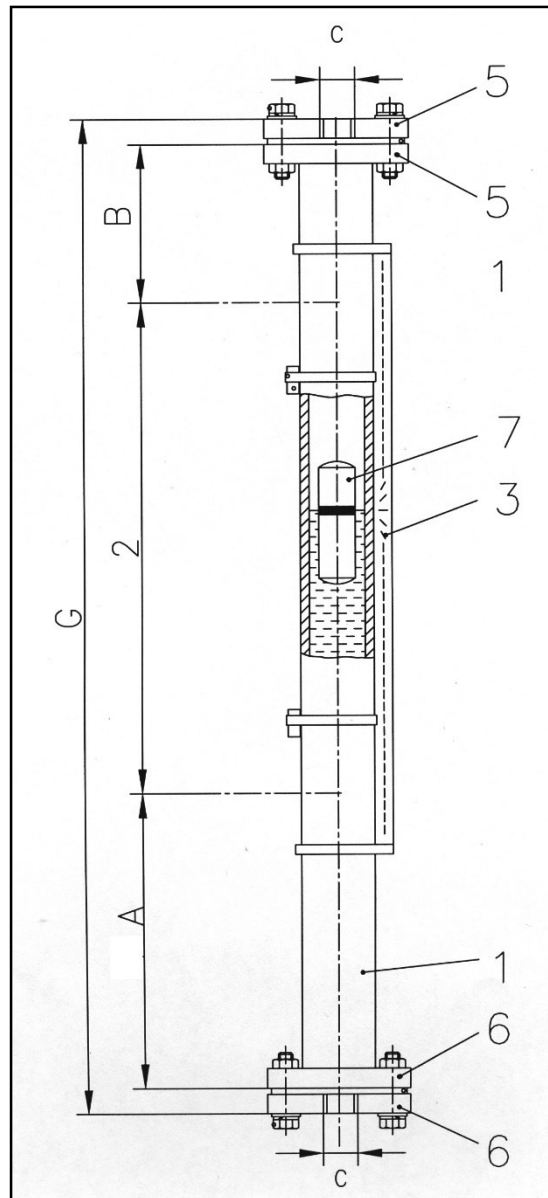
ITA

3. Level Gauges in Detail

ITA-5.0

3.8.2 tank connections top-bottom

Characteristics: PN16 / Float pipe: 1.4404; flanges: C.S.



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 Distance between process connections
- 3 Design (Indication rail)
- 5 Process connection top side
- 6 Process connection bottom side
- 7 Float removal flange

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-5.0

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, 2" Sch10 60,3 x 2...8,7 mm seamless (depending on pressure rating)
Process connection:	to specify: R1/2" threaded (up to PN40) Welding or threaded stud Flanges DN15...50 (1/2"...2" 150#),
Pipe material:	1.4404 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50...+400 °C
Operation pressure:	max. 16 bar , up to 320 bar
Operation density:	min. 0,3371 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	PTFE up to 100 °C Klingsil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type or vented type (Depending on pressure rating)
Standard dimensions:	-A = 240 mm* -B = 130 mm (up to PN64) -C = R1/2" (up to PN40) 1/2"NPT (all pressure ratings)

Base equipment printed in **BOLD** letters!

*depending on the density scale A can be enlarged

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes

Mag. Level Gauge Type ITA-5 & ITA-5.0 / PN40/300 lbs Process connection: top/bottom

Order Codes mag. Level gauge type ITA-5 & ITA-5.0 / PN16/150 lbs

Code	Description
	Mag. Level Gauge type ITA-5 & ITA-5.0, PN40/300 lbs
	1. Type
ITA-5 ITA-5.0	ITA-5; PN40/300 lbs; process conn.: top/bottom, float pipe and flanges: 1.4404 ITA-5.0., PN40/300 lbs; process conn.: top/bottom, float pipe 1.4404, flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material pipe/material flanges
15	Ø60,3x2,0mm (welded), mat.: 316L/316L
16	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. Distance between process connections
L	Distance between process connections in mm
	4.1 Upper pipe stand off process connection
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off process connection
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Distance between process connections > 5000 mm
00	< 5000 mm - one part design
K34	> 5000 mm - with flange connection: DN32 PN40, two or more parts design
K54	> 5000 mm - with flange connection: DN50 PN40, two or more parts design
KLH	> 5000 mm - with flange connection: 2" ANSI 300 lbs, two or more parts design
YYY	others, please specify
	7. Process connection lower side & float removal flange
SA	welding connection
GM	female thread
FA	flanged connection
YY	others, please specify
	7.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes (continuation)

Code	Description
	7.2 nominal size / pressure rating
000	welding or threaded connection
B34	DN32 / PN40
B54	DN50 / PN40
BLH	2" / 300 lbs
YYY	others, please specify
	7.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5 µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3.2-12.5 µm)
E3	EN 1092-1 Form C (tongue; Ra 0.8-3.2 µm)
E4	EN 1092-1 Form C (groove; Ra 0.8-3.2 µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160 µm)
D3	DIN Form C (raised sealing strip; Rz = 160 µm)
D4	DIN Form D (raised sealing strip; Rz = 40 µm)
D5	DIN Form E (raised sealing strip; Rz = 16 µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	7.4 Gasket
PT	PTFE up to 100 °C
C4	Klingersil C440 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal type R-Oval ASME B16.20

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes

Code	Description
	7.5 Bolts & nuts float removal flange (bottom side)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32 PN40)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM elec. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	8. Upper top end finish & process connection
CXS	end cap with welding connection (only with float removal flange (bottom))
CXM	end cap with female thread (only for float removal flange (bottom))
FA	flanged connection
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes (continuation)

Code	Description
8.1 Standard	
0	welding connection (please specify)
1	female thread (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
8.2 nominal size / pressure rating	
000	welding or threaded connection
B34	DN32 / PN40
B54	DN50 / PN40
BLH	2" / 300 lbs
YYY	others, please specify
8.2 nominal size / pressure rating	
00	welding or female thread connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
8.4 Gasket	
00	without (top side = End cap)
PT	PTFE up to 100 °C
C4	Klingsil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes

Code	Description
	8.5 Bolts & nuts flange top side
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32 PN40)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM elec. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	9. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-5 & ITA-5.0

3.8.3 Order Codes (continuation)

Code	Description						
	14. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
6V0100K1	30	1.4404/316L	52	125	1,5188	sealed	
6V0100K3	30	1.4404/316L	52	125	1,0891	sealed	1
6V0120K1	30	1.4404/316L	52	145	1,2780	sealed	
6V0120K3	30	1.4404/316L	52	145	0,9519	sealed	1
6V0150K1	30	1.4404/316L	52	175	1,0711	sealed	
6V0150K3	30	1.4404/316L	52	175	0,8309	sealed	1
6V0180K1	30	1.4404/316L	52	205	0,9486	sealed	
6V0180K3	30	1.4404/316L	52	205	0,8140	sealed	1
6V0240K1	30	1.4404/316L	52	265	0,7738	sealed	
6V0240K3	30	1.4404/316L	52	265	0,6513	sealed	1
6T0100K1	40	Titanium	50,8	125	1,3114	sealed	2
6T0100K3	40	Titanium	50,8	125	0,8975	sealed	1+2
6T0120K1	40	Titanium	50,8	145	1,1007	sealed	2
6T0120K3	40	Titanium	50,8	145	0,7837	sealed	1+2
6T0150K1	40	Titanium	50,8	175	0,9029	sealed	2
6T0150K3	40	Titanium	50,8	175	0,6763	sealed	1+2
6T0180K1	40	Titanium	50,8	205	0,7791	sealed	2
6T0180K3	40	Titanium	50,8	205	0,6100	sealed	1+2
6T0240K1	40	Titanium	50,8	265	0,6391	sealed	2
6T0240K3	40	Titanium	50,8	265	0,5187	sealed	1+2
6T0300K1	40	Titanium	50,8	325	0,5694	sealed	2
6T0300K3	40	Titanium	50,8	325	0,4812	sealed	1+2
6T0400K1	40	Titanium	50,8	425	0,5300	sealed	2
6T0400K3	40	Titanium	50,8	425	0,4373	sealed	1+2
6T0500K1	40	Titanium	50,8	525	0,4463	sealed	2
6T0500K3	40	Titanium	50,8	525	0,4098	sealed	1+2
6T0600K1	40	Titanium	50,8	625	0,4370	sealed	2
6T0600K3	40	Titanium	50,8	625	0,3834	sealed	1+2
6H0200K1	40	Titanium, Halar-coated	52	265	0,7674	sealed	
6H0200K3	40	Titanium, Halar-coated	52	265	0,6470	sealed	
6HC012K1	40	Hastelloy C4	52	145	1,2400	sealed	
6HC024K1	40	Hastelloy C4	52	265	0,7470	sealed	
6HC024K3	40	Hastelloy C4	52	265	0,6600	sealed	1

1.) only with 316SS or Aluminium indication rail

2.) do not use with hydrogen or alcohol compounds

Mag. Level Gauge type ITA

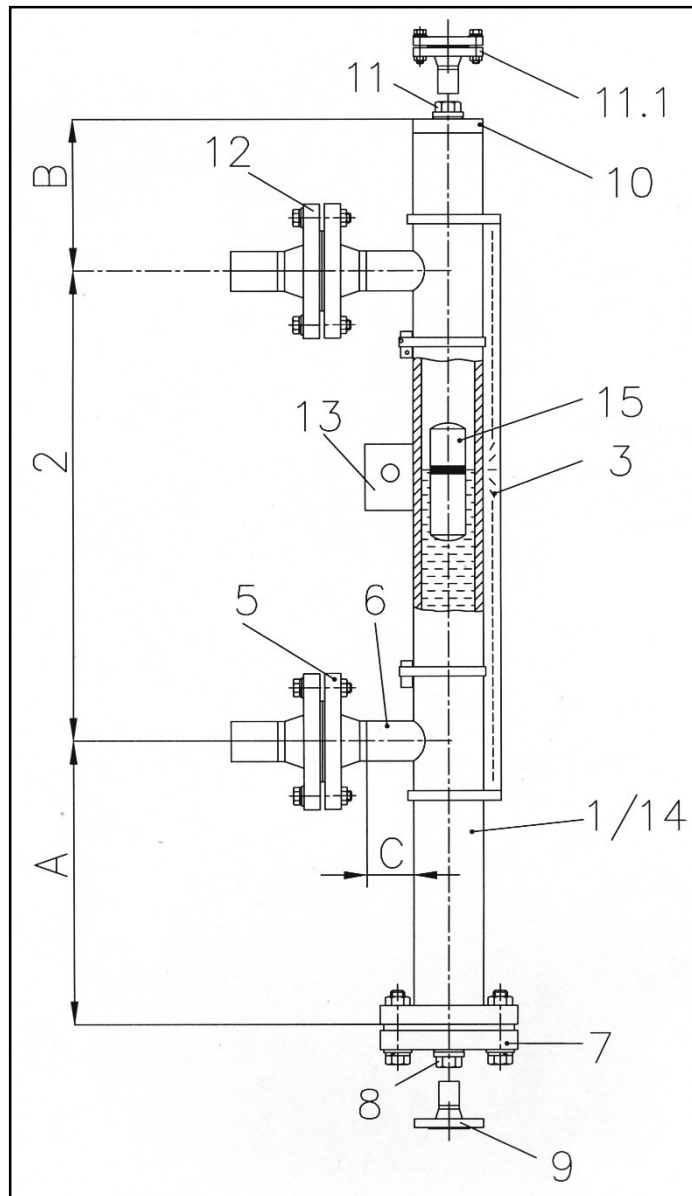
ITA

3. Level Gauges in Detail

ITA-6

3.9.1 ITA-6

Characteristics: PN40 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-6

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, 60,3 x 2 mm seamless 2" Sch10 necking connection or butt weld with T- pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Welding or threaded stud Plug R1/2" (for more please see order codes)
Drain/Vent connections:	
Pipe material:	1.4404; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50...+400 °C
Operation pressure:	max. 40 bar
Operation density:	min. 0,5723 kg/dm ³ up to 20 bar process pressure min. 0,4370 kg/dm ³ up to 40 bar process pressure
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	A193/A194 B7/2H A193/A194 B8/8M CS hot dipped galvanized SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -130 mm / -150 mm / -210 mm / -330 mm / -430 mm / -530 mm / -630 mm
Standard dimensions:	- A = 240 mm* - B = 130 mm - C = 40 mm

Base equipment printed in bold letters!

*for densities <0,7374 kg/dm³, enlarge scale A

**only with vent- and/or drain flanges DN50 (resp. 2")

Mag. Level Gauge type ITA

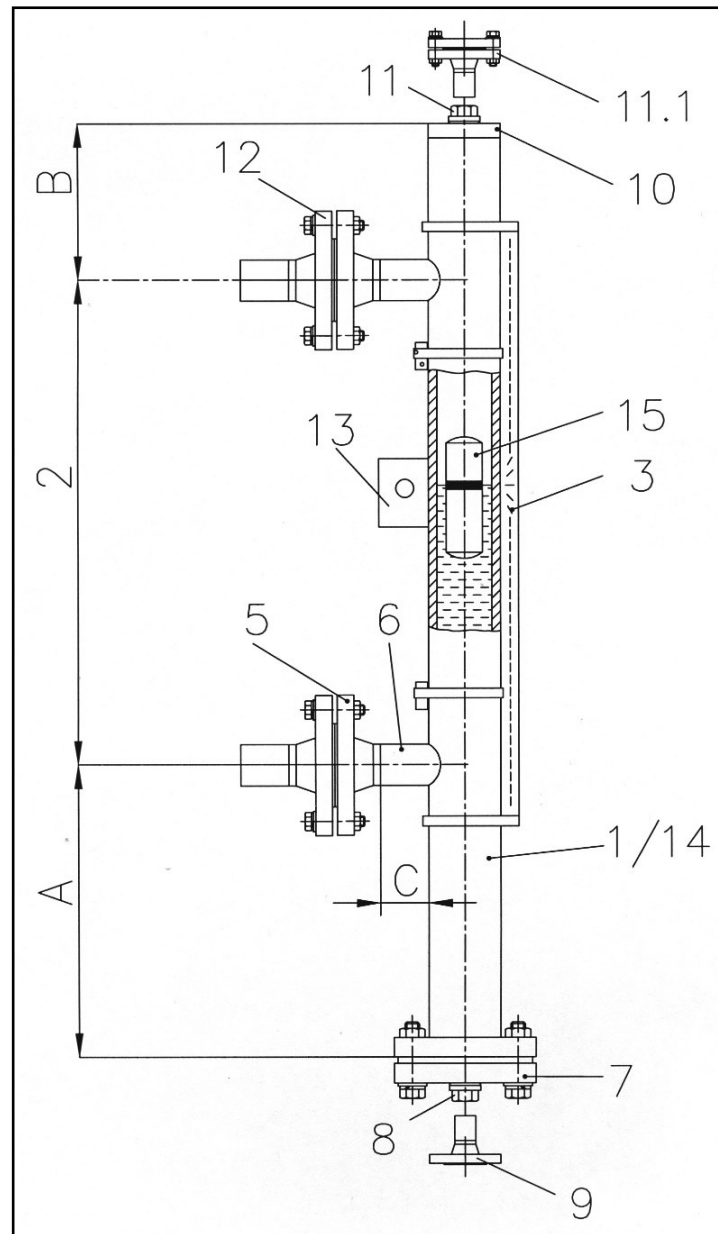
ITA

3. Level Gauges in Detail

ITA-6

3.9.2 ITA-6.0

Characteristics: PN40 / Float pipe: 1.4404, flange material: C.S.



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-6.0

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, 60,3 x 2 mm seamless 2" Sch10 necking connection or butt weld with T- pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Welding or threaded stud
Drain/Vent connections:	Plug R1/2" (for more please see order codes)
Pipe material:	1.4404; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-50...+400 °C
Operation pressure:	max. 40 bar
Operation density:	min. 0,5723 kg/dm ³ up to 20 bar process pressure min. 0,4370 kg/dm ³ up to 40 bar process pressure
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	A193/A194 B7/2H A193/A194 B8/8M CS hot dipped galvanized SS
Gasket	PTFE up to 100 °C Klingersil C4400 up to 175 °C Graphit spiral wound up to 400 °C**
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -130 mm / -150 mm / -210 mm / 330 mm / -630 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm -C = 40 mm

Base equipment printed in bold letters!

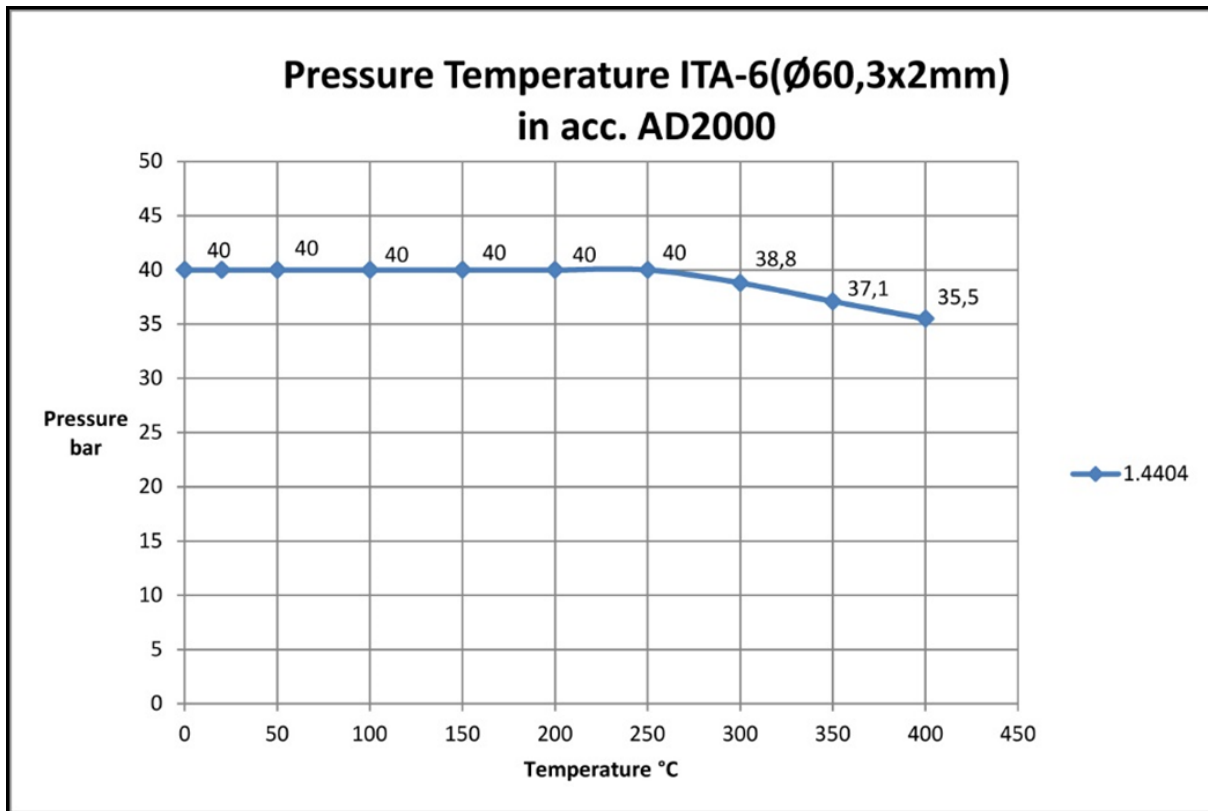
*for densities <0,7374 kg/dm³, enlarge scale A

**only with vent- and/or drain flanges DN50 (resp. 2")

Mag. Level Gauge type ITA

ITA-6/-6.0

3.9.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Mag. Level Gauge Type ITA-6 & ITA-6.0 / PN40/300 lbs

Order Codes mag. Level gauge type ITA-6 & ITA-6.0 / PN40/300 lbs

Code	Description
	Mag. Level Gauge type ITA-6 & ITA-6.0, PN40/300 lbs
	1. Type
ITA-6 ITA-6.0	ITA-6, PN40/300 lbs /Float pipe and Flanges: 1.4404 ITA-6.0, PN40/300 lbs /Float pipe: 1.4404; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
03	Ø60,3x2,0mm (welded), mat.: 316L/316L
04	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	C to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. B: 240 mm (Standard)
Y	Dim. B. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K34	> 5000 mm - with flange connection: DN32 PN40, two or more parts design
K54	> 5000 mm - with flange connection: DN50 PN40, two or more parts design
KLH	> 5000 mm - with flange connection: 2" ANSI 300 lbs, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	7.2 nominal size / pressure rating
000	welding or threaded connection
A04	DN15 / PN40
A14	DN20 / PN40
A24	DN25 / PN40
A34	DN32 / PN40
A44	DN40 / PN40
A54	DN50 / PN40
AEH	1/2" / 300 lbs
AFH	3/4" / 300 lbs
AGH	1" / 300 lbs
AHH	1 1/4" / 300 lbs
AKH	1 1/2" / 300 lbs
ALH	2" / 300 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
9. Float removal flange (bottom side)	
000	without
BXX	End cap (only if float removal flange (top side))
B34	Flange DN32 PN40 incl. blind flange
B54	Flange DN50 PN40 incl. blind flange
BLH	Flange 2" ANSI 300 lbs incl. blind flange
L54	Flange DN50 PN40 reinforced for shut-off valve on side
LLH	Flange 2" ANSI 300 lbs reinforced for shut-off valve on side
YY	others, please specify
9.1 Surface float removal flange (bottom side) (only DN50 or 2")	
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
9.2 Gasket	
00	without
PT	PTFE up to 100 °C
C4	Klingsil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32 PN40)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM elec. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	10. Drain plug
0	without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	11.2 nominal size / pressure rating
000	without
D04	stud with flange DN15 PN40
D14	stud with flange DN20 PN40
D24	stud with flange DN25 PN40
D34	stud with flange DN32 PN40
D44	stud with flange DN40 PN40
DEH	stud with flange 1/2" ANSI 300 lbs
DFH	stud with flange 3/4" ANSI 300 lbs
DGH	stud with flange 1" ANSI 300 lbs
DHH	stud with flange 1 1/4" ANSI 300 lbs
DKH	stud with flange 1 1/2" ANSI 300 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E04	DN15 PN40
E14	DN20 PN40
E24	DN25 PN40
E34	DN32 PN40
E44	DN40 PN40
EEH	1/2" ANSI 300 lbs
EFH	3/4" ANSI 300 lbs
EGH	1" ANSI 300 lbs
EHH	1 1/4" ANSI 300 lbs
EKH	1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C34	Flange with blind flange DN32 PN40
C54	Flange with blind flange DN50 PN40
L54	Flange with blind flange DN50 PN40, reinforced for shut-off-valve on side
CLH	Flange with blind flange 2" ANSI 300 lbs
LLH	Flange with blind flange 2" ANSI 300 lbs, reinforced for shut-off-valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
	12.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
PT	PTFE up to 100 °C
C4	Klingersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	12.3 Bolts & nuts float pipe top end finish flange
00	without (bottom side = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32 PN40)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM elec. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.3 Order Codes

Code	Description
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	14.2 nominal size / pressure rating
000	without
F04	stud with flange DN15 PN40
F14	stud with flange DN20 PN40
F24	stud with flange DN25 PN40
F34	stud with flange DN32 PN40
F44	stud with flange DN40 PN40
FEH	stud with flange 1/2" ANSI 300 lbs
FFH	stud with flange 3/4" ANSI 300 lbs
FGH	stud with flange 1" ANSI 300 lbs
FHH	stud with flange 1 1/4" ANSI 300 lbs
FKH	stud with flange 1 1/2" ANSI 300 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G04	DN15 PN40
G14	DN20 PN40
G24	DN25 PN40
G34	DN32 PN40
G44	DN40 PN40
GEH	1/2" ANSI 300 lbs
GFH	3/4" ANSI 300 lbs
GGH	1" ANSI 300 lbs
GHH	1 1/4" ANSI 300 lbs
GKH	1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
	15.2 nominal size / pressure rating
000	without with welded connection or threaded connection
AAA	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
H04	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
H14	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
H24	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
H34	ASME B 16.5 Raised Face (RF)
H44	ASME B 16.5 Raised Face Smooth Finish (RFSF)
H54	ASME B 16.5 Flat Face (FF)
HEH	ASME B 16.5 Ring-Type Joint (RTJ)
HFH	ASME B 16.5 Tongue (ASME)
HGH	ASME B 16.5 Groove (ASME)
HHH	DIN Form A (without special demand)
HKH	DIN Form B (raised sealing strip ; Rz = 160µm)
HLH	DIN Form C (raised sealing strip ; Rz = 160µm)
YYY	DIN Form D (raised sealing strip ; Rz = 40µm)
	15.3 Flange Face Counter Flanges
00	without
AA	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description
	15.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
C4	Klengersil C4400 up to 200 °C (392 °F)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify
	15.5 Bolts & nuts counter flanges
00	without
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electrogalvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
3D	DIN 2510 Form L: M16 x 80 mm; mat. YK (CK35) electro galvanized (DN32 PN40)
3C	DIN 2510 Form L: M16 x 80 mm; mat. A2-70 (DN32 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 Xylan coated (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv- (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM ele. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes

Code	Description
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

Mag. Level Gauge type ITA

ITA-6 & ITA-6.0

3.9.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
6V0100K1	30	1.4404/316L	52	125	1,5188	sealed	
6V0100K3	30	1.4404/316L	52	125	1,0891	sealed	1
6V0120K1	30	1.4404/316L	52	145	1,2780	sealed	
6V0120K3	30	1.4404/316L	52	145	0,9519	sealed	1
6V0150K1	30	1.4404/316L	52	175	1,0711	sealed	
6V0150K3	30	1.4404/316L	52	175	0,8309	sealed	1
6V0180K1	30	1.4404/316L	52	205	0,9486	sealed	
6V0180K3	30	1.4404/316L	52	205	0,8140	sealed	1
6V0240K1	30	1.4404/316L	52	265	0,7738	sealed	
6V0240K3	30	1.4404/316L	52	265	0,6513	sealed	1
6T0100K1	40	Titanium	50,8	125	1,3114	sealed	
6T0100K3	40	Titanium	50,8	125	0,8975	sealed	2
6T0120K1	40	Titanium	50,8	145	1,1007	sealed	1, 2
6T0120K3	40	Titanium	50,8	145	0,7837	sealed	2
6T0150K1	40	Titanium	50,8	175	0,9029	sealed	1, 2
6T0150K3	40	Titanium	50,8	175	0,6763	sealed	2
6T0180K1	40	Titanium	50,8	205	0,7791	sealed	1, 2
6T0180K3	40	Titanium	50,8	205	0,6100	sealed	2
6T0240K1	40	Titanium	50,8	265	0,6391	sealed	1, 2
6T0240K3	40	Titanium	50,8	265	0,5187	sealed	2
6T0300K1	40	Titanium	50,8	325	0,5694	sealed	1, 2
6T0300K3	40	Titanium	50,8	325	0,4812	sealed	2
6T0400K1	40	Titanium	50,8	425	0,5300	sealed	1, 2
6T0400K3	40	Titanium	50,8	425	0,4373	sealed	2
6T0500K1	40	Titanium	50,8	525	0,4463	sealed	1, 2
6T0500K3	40	Titanium	50,8	525	0,4098	sealed	2
6T0600K1	40	Titanium	50,8	625	0,4370	sealed	1, 2
6T0600K3	40	Titanium	50,8	625	0,3834	sealed	2
6H0200K1	40	Titanium, Halar-coated	52	265	0,7674	sealed	
6H0200K3	40	Titanium, Halar-coated	52	265	0,6470	sealed	
6HC012K1	40	Hastelloy C4	52	145	1,2400	sealed	
6HC024K1	40	Hastelloy C4	52	265	0,7470	sealed	
6HC024K3	40	Hastelloy C4	52	265	0,6600	sealed	1

1: only with 316SS or Alumium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

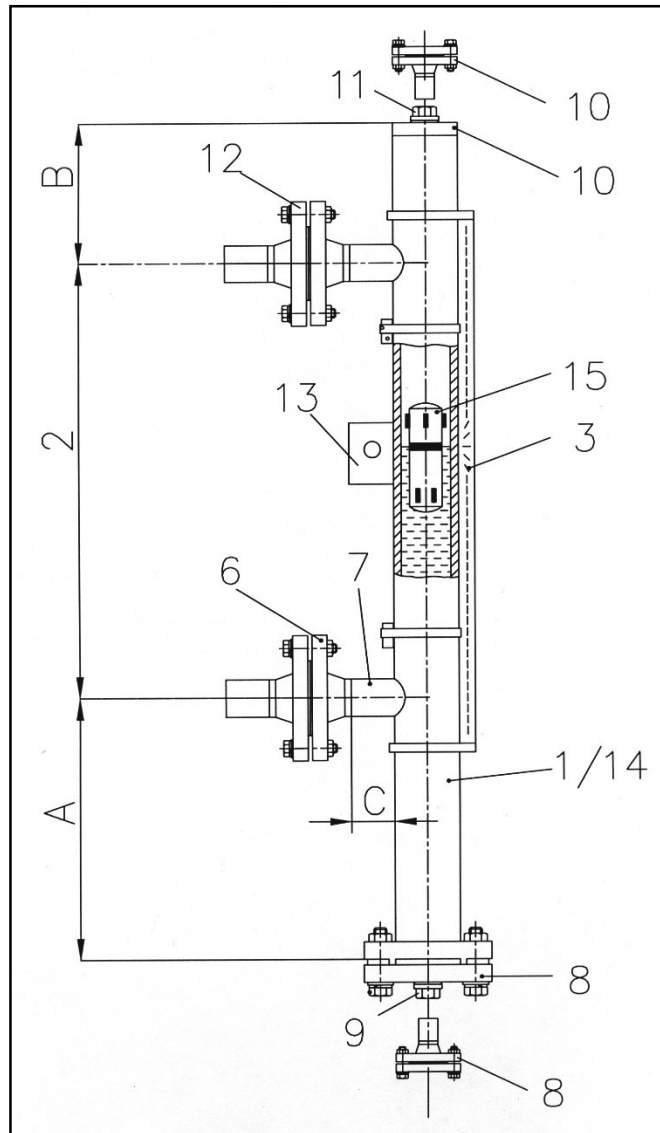
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3. Level Gauges in Detail

ITA-6 Cryo

3.10.1 for cryogenic applications, non-vaporizing fluids

Characteristics: PN40 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60.3 x 2 mm | 9 | Drain plug |
| 2 | c to c distance | 10 | Additional drain flange, open |
| 3 | Design (Indication rail) | 11 | Float pipe top end finish |
| 4 | Armaflex® insulation | 12 | Vent plug |
| 6 | Process connection side/side | 13 | Counter flanges |
| 7 | Side studs welded with T-pieces
for 100 % X-ray-testing | 14 | Additional bracket |
| 8 | Float removal flange | 15 | Float pipe seamless |
| | | 16 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-6 Cryo

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Plug R1/2" (for more please see order codes)
Drain/Vent connections:	
Pipe material:	1.4404 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-200..+100 °C
Operation pressure:	max. 40 bar
Operation density:	min. 0,4693 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS (min. -10°C) SS or material in acc. with DIN 17280
Gasket	PTFE min -150 °C Klingersil TOP Chem 2000
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Dimensions: - Ø50,8 x 270 mm*
Standard dimensions:	A = 240 mm* B = 130 mm C = 40 mm

Base equipment printed in bold letters!

* not for vaporizing media (e.g. ammonia)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes

Mag. Level Gauge Type ITA-6 Cryo / PN40/300 lbs for cryogenic applications / non-vaporizing fluids

Order Codes mag. Level gauge type ITA-6 Cryo / PN40/300 lbs

Code	Description
	Mag. Level Gauge type ITA-6 Cryo, PN40/300 lbs
	1. Type
ITA-6-Cryo	ITA-6 Cryo, PN40/300 lbs /Float pipe and Flanges: 1.4404
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Armaflex® - Insulation
0	without insulation
F	Thickness 9 mm; up to -15 °C
R	Thickness 30 mm; up to -50 °C
T	Thickness 70 mm; up to -200 °C
	4. Size & material float pipe/material flanges
15	Ø60,3x2,0mm (welded), mat.: 316L/316L
16	Ø60,3x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	5. c to c distance
L	c to c distance in mm
	5.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	5.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	6. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K34	> 5000 mm - with flange connection: DN32 PN40, two or more parts design
K54	> 5000 mm - with flange connection: DN50 PN40, two or more parts design
KLH	> 5000 mm - with flange connection: 2" ANSI 300 lbs, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	8.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	8.2 Nominal size / pressure rating
000	welding or threaded connection
A04	DN15 / PN40
A14	DN20 / PN40
A24	DN25 / PN40
A34	DN32 / PN40
A44	DN40 / PN40
A54	DN50 / PN40
AEH	1/2" / 300 lbs
AFH	3/4" / 300 lbs
AGH	1" / 300 lbs
AHH	1 1/4" / 300 lbs
AKH	1 1/2" / 300 lbs
ALH	2" / 300 lbs
YYY	others, please specify
	8.3 Flange faces process connection flanges
00	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9. Side studs welded with T-pieces for 100 % X-ray testing
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	10. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B54	Flange DN50 PN40 incl. blind flange
BLH	Flange 2" ANSI 300 lbs incl. blind flange
YY	others, please specify
	10.1 Surface float removal flange (bottom side) (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	10.2 Gasket
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	10.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	11. Drain plug
0	without
1	Drain plug G1/2" with soft iron gasket
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	12. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	12.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	10.3 Bolts & nuts float removal flange (bottom side)
000	without
D04	stud with flange DN15 PN40
D14	stud with flange DN20 PN40
D24	stud with flange DN25 PN40
D34	stud with flange DN32 PN40
D44	stud with flange DN40 PN40
DEH	stud with flange 1/2" ANSI 300 lbs
DFH	stud with flange 3/4" ANSI 300 lbs
DGH	stud with flange 1" ANSI 300 lbs
DHH	stud with flange 1 1/4" ANSI 300 lbs
DKH	stud with flange 1 1/2" ANSI 300 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	12.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E04	DN15 PN40
E14	DN20 PN40
E24	DN25 PN40
E34	DN32 PN40
E44	DN40 PN40
EEH	1/2" ANSI 300 lbs
EFH	3/4" ANSI 300 lbs
EGH	1" ANSI 300 lbs
EHH	1 1/4" ANSI 300 lbs
EKH	1 1/2" ANSI 300 lbs
999	others, please specify
	12.4 Flange faces
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	13. Float pipe top end finish
CXX	End cap
C54	Flange with blind flange DN50 PN40
CLH	Flange with blind flange 2" ANSI 300 lbs
YY	others, please specify
	13.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	13.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	13.3 Bolts & nuts float pipe top end finish flange
00	without (top = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; Wst. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify
	14. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	15. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	15.2 Nominal size / pressure rating
000	without
F04	stud with flange DN15 PN40
F14	stud with flange DN20 PN40
F24	stud with flange DN25 PN40
F34	stud with flange DN32 PN40
F44	stud with flange DN40 PN40
FEH	stud with flange 1/2" ANSI 300 lbs
FFH	stud with flange 3/4" ANSI 300 lbs
FGH	stud with flange 1" ANSI 300 lbs
FHH	stud with flange 1 1/4" ANSI 300 lbs
FKH	stud with flange 1 1/2" ANSI 300 lbs
YYY	others, please specify
	15.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G04	DN15 PN40
G14	DN20 PN40
G24	DN25 PN40
G34	DN32 PN40
G44	DN40 PN40
GEH	1/2" ANSI 300 lbs
GFH	3/4" ANSI 300 lbs
GGH	1" ANSI 300 lbs
GHH	1 1/4" ANSI 300 lbs
GKH	1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	15.4 Flange faces
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16. Counter Flange Process Connction side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	16.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	16.2 nominal size / pressure rating
000	without
AAA	welding or threaded connection
H04	DN15 / PN40
H14	DN20 / PN40
H24	DN25 / PN40
H34	DN32 / PN40
H44	DN40 / PN40
H54	DN50 / PN40
HEH	1/2" / 300 lbs
HFH	3/4" / 300 lbs
HGH	1" / 300 lbs
HHH	1 1/4" / 300 lbs
HKH	1 1/2" / 300 lbs
HLH	2" / 300 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description
	16.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
TC	Klingsil Top Chem 2000
99	others, please specify
	16.5 Bolts & nuts counter flanges
00	without
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv, (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify
	17. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 Cryo

3.10.2 Order Codes (continuation)

Code	Description						
	18. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
6C0240K1	40	Titanium	50,8	265	0,6391	sealed	2; 3
6C0400K1	40	Titanium	50,8	425	0,5981	sealed	2; 3
6C0500K3	40	Titanium	50,8	525	0,5486	sealed	1; 2; 3

1: only with 316SS or Alumium Indication rail

2: do not use this hydrogen or alcohol compounds

3: without spacers

Mag. Level Gauge type ITA

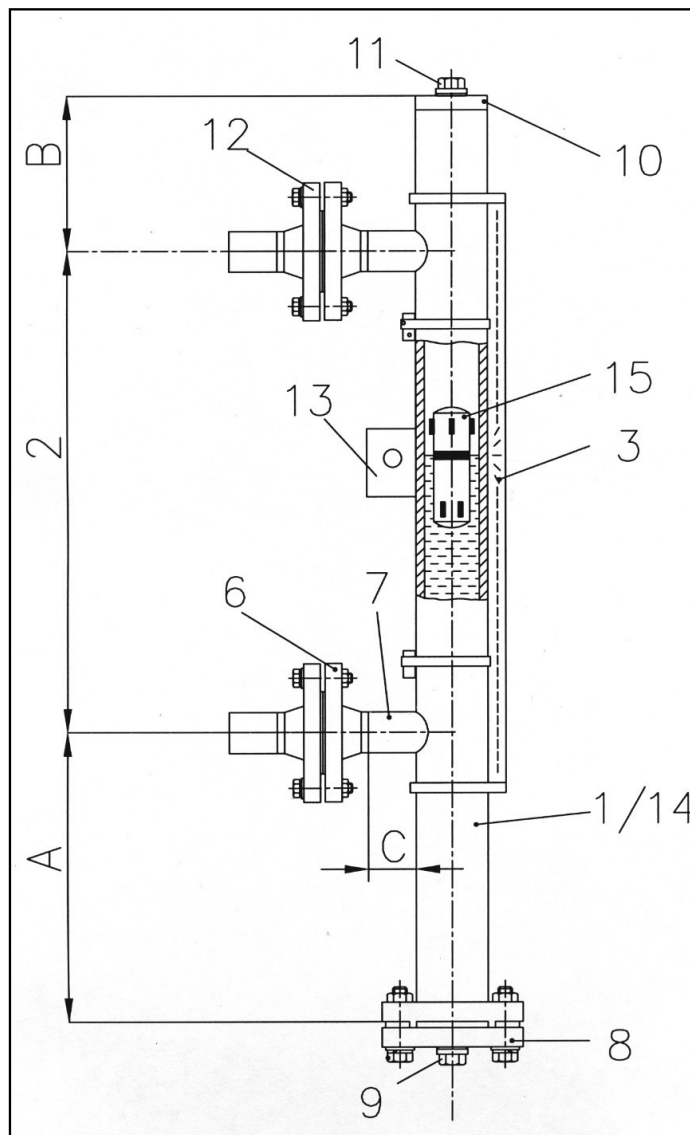
ITA

3. Level Gauges in Detail

ITA-6 CR64

3.11.1 for cryogenic applications, vaporizing fluids

Characteristics: PN40 / Float pipe and flange material: 1.4404



Key:

- 1 Float pipe welded, dimensions 64 x 2 mm
- 2 c to c distance
- 3 Design (Indication rail)
- 4 Armaflex® insulation
- 6 Process connection side/side
- 7 Side studs welded with T-pieces for 100 % X-ray-testing
- 8 Float removal flange

- 9 Drain plug
- 10 Additional drain flange, open
- 11 Float pipe top end finish
- 12 Vent plug
- 13 Counter flanges
- 14 Additional bracket
- 15 Float pipe seamless
- 16 Float

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-6 CR64

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	64 x 2 mm welded,
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Welding or threaded stud
Drain/Vent connections:	Plug G1/2" (for more please see order codes)
Pipe material:	1.4404; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	1.4404 Titan, Titan/E-CTFE-coated
Operation temperature:	-200..+100 °C
Operation pressure:	max. 40 bar
Operation density:	min. 0,4693 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS (min. -10°C) SS or material in acc. with DIN 17280
Gasket	PTFE min -150 °C Klingersil TOP Chem 2000
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Length: -Ø50,8 x 270 mm* -Ø50,8 x 530 mm
Standard dimensions:	A = 240 mm* B = 130 mm C = 40 mm

Base equipment printed in bold letters!

* not for vaporizing media (e.g. ammonia)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes

Mag. Level Gauge Type ITA-6 CR64 / PN40/300 lbs for cryogenic applications / vaporizing fluids

Order Codes mag. Level gauge type ITA-6 CR64 / PN40/300 lbs

Code	Description
	Mag. Level Gauge type ITA-6 CR64, PN40/300 lbs
	1. Type
ITA-6-CR64	ITA-6 CR64, PN40/300 lbs /Float pipe and Flanges: 1.4404
	2. Type approval
00	without
EX	Type approval acc. ATEX
BV	Type approval acc. Bureau Veritas rules
DNV	Type approval acc. DET NORSKE VERITAS rules
GL	Type approval acc. German Lloyd rules
LR	Type approval acc. Lloyd's Register rules
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Armaflex® - Insulation
0	without insulation
F	Thickness 9 mm; up to -15 °C
R	Thickness 30 mm; up to -50 °C
T	Thickness 70 mm; up to -200 °C
	4. Size & material float pipe/material flanges
19	Ø64x2,0mm (welded), mat.: 316L/316L
20	Ø64x2,0mm (welded), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	5. c to c distance
L	c to c distance in mm
	5.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	5.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	6. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K34	> 5000 mm - with flange connection: DN32 PN40, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
8.1 Standard	
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
8.2 Nominal size / pressure rating	
000	welding or threaded connection
A04	DN15 / PN40
A14	DN20 / PN40
A24	DN25 / PN40
A34	DN32 / PN40
A44	DN40 / PN40
A54	DN50 / PN40
AEH	1/2" / 300 lbs
AFH	3/4" / 300 lbs
AGH	1" / 300 lbs
AHH	1 1/4" / 300 lbs
AKH	1 1/2" / 300 lbs
ALH	2" / 300 lbs
YYY	others, please specify
8.3 Flange faces process connection flanges	
00	welding or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
9. Side studs welded with T-pieces for 100 % X-ray testing	
0	without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	10. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B54	Flange DN50 PN40 incl. blind flange
BLH	Flange 2" ANSI 300 lbs incl. blind flange
YY	others, please specify
	10.1 Surface float removal flange (bottom side) (only DN50 or 2")
00	without
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	10.2 Gasket
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	10.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	11. Drain plug
0	without
1	Drain plug G1/2" with soft iron gasket
	12. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	12.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	12.2 Bolts & nuts float removal flange (bottom side)
000	without
D04	stud with flange DN15 PN40
D14	stud with flange DN20 PN40
D24	stud with flange DN25 PN40
D34	stud with flange DN32 PN40
D44	stud with flange DN40 PN40
DEH	stud with flange 1/2" ANSI 300 lbs
DFH	stud with flange 3/4" ANSI 300 lbs
DGH	stud with flange 1" ANSI 300 lbs
DHH	stud with flange 1 1/4" ANSI 300 lbs
DKH	stud with flange 1 1/2" ANSI 300 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	12.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E04	DN15 PN40
E14	DN20 PN40
E24	DN25 PN40
E34	DN32 PN40
E44	DN40 PN40
EEH	1/2" ANSI 300 lbs
EFH	3/4" ANSI 300 lbs
EGH	1" ANSI 300 lbs
EHH	1 1/4" ANSI 300 lbs
EKH	1 1/2" ANSI 300 lbs
999	others, please specify
	12.4 Flange faces
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	13. Float pipe top end finish
CXX	End cap
C54	Flange with blind flange DN50 PN40
CLH	Flange with blind flange 2" ANSI 300 lbs
YY	others, please specify
	13.1 Surface float pipe top end finish flange (only DN50 or 2")
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	13.2 Gasket float pipe top end finish flange
00	without
PT	PTFE up to 100 °C
TC	Klingersil Top Chem 2000
99	others, please specify
	13.3 Bolts & nuts float pipe top end finish flange
00	without (top = End cap)
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; Wst. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; Wst. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify
	14. Vent plug at top end
0	without
1	Vent plug G1/2" with soft iron gasket
	15. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	15.2 Nominal size / pressure rating
000	without
F04	stud with flange DN15 PN40
F14	stud with flange DN20 PN40
F24	stud with flange DN25 PN40
F34	stud with flange DN32 PN40
F44	stud with flange DN40 PN40
FEH	stud with flange 1/2" ANSI 300 lbs
FFH	stud with flange 3/4" ANSI 300 lbs
FGH	stud with flange 1" ANSI 300 lbs
FHH	stud with flange 1 1/4" ANSI 300 lbs
FKH	stud with flange 1 1/2" ANSI 300 lbs
YYY	others, please specify
	15.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G04	DN15 PN40
G14	DN20 PN40
G24	DN25 PN40
G34	DN32 PN40
G44	DN40 PN40
GEH	1/2" ANSI 300 lbs
GFH	3/4" ANSI 300 lbs
GGH	1" ANSI 300 lbs
GHH	1 1/4" ANSI 300 lbs
GKH	1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	15.4 Flange faces
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16. Counter Flange Process Connction side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	16.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	16.2 nominal size / pressure rating
000	without
AAA	welding or threaded connection
H04	DN15 / PN40
H14	DN20 / PN40
H24	DN25 / PN40
H34	DN32 / PN40
H44	DN40 / PN40
H54	DN50 / PN40
HEH	1/2" / 300 lbs
HFH	3/4" / 300 lbs
HGH	1" / 300 lbs
HHH	1 1/4" / 300 lbs
HKH	1 1/2" / 300 lbs
HLH	2" / 300 lbs
YYY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description
	16.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	16.4 Gasket Counter Flanges
00	without
PT	PTFE up to 100 °C
TC	Klingsil Top Chem 2000
99#	others, please specify
	16.5 Bolts & nuts counter flanges
00	without
2A	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 electro galvanised (DN32/50 PN40)
2C	DIN931 / ISO 4014: M16 x 70 mm; mat. Stainless steel A2-70 (DN32/50 PN40)
4D	DIN 2510 Form L: M16 x 85 mm; mat. YK (CK35) electro galvanized (DN50 PN40)
4C	DIN 2510 Form L: M16 x 85 mm; mat. A2-70 (DN50 PN40)
2B	DIN931 / ISO 4014: M16 x 70 mm; mat. Steel 5.6/5.2 (Xylan coated) (DN32/50 PN40)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv, (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
YY	others, please specify
	17. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-6 CR64

3.11.2 Order Codes (continuation)

Code	Description						
	18. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
6C0240K1	40	Titanium	50,8	265	0,6391	sealed	2; 4
6C0500K1	40	Titanium	50,8	525	0,5981	Sealed	2; 4

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

4: with spacers

Mag. Level Gauge type ITA

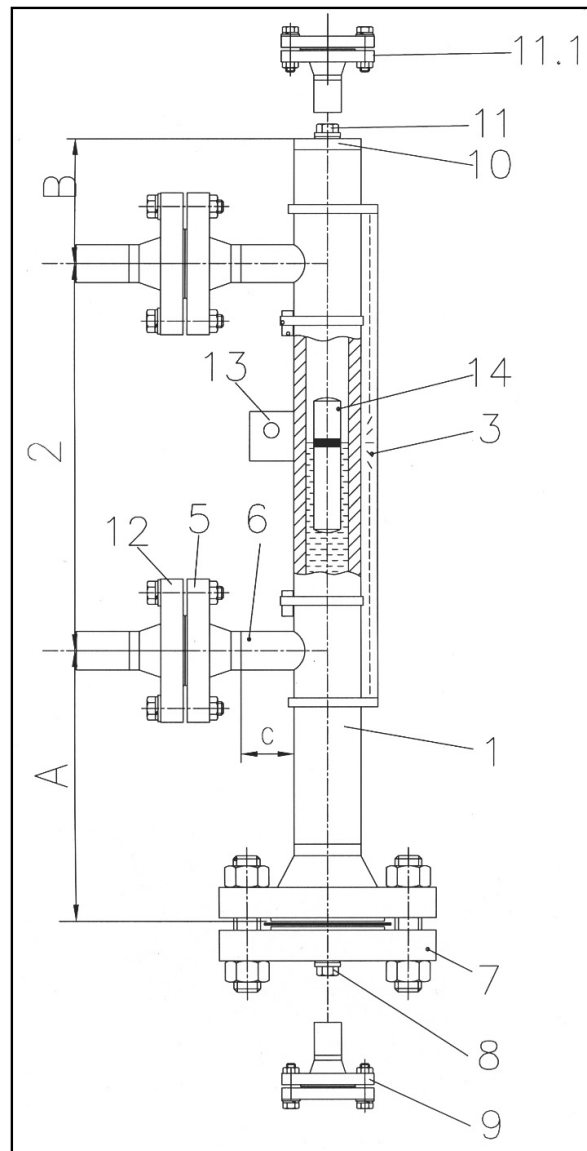
ITA

3. Level Gauges in Detail

ITA-7

3.12.1 ITA-7

Characteristics: PN63 / Float pipe and flange material: 1.4404



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-7

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4404; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858);Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	Titanium** , Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 64 bar
Operation density:	min. 0,4243 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -530 mm -630 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm -C = 40 mm

Base equipment printed in bold letters!

* for densities < 0,4243 kg/dm³ enlarge the scale A

** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

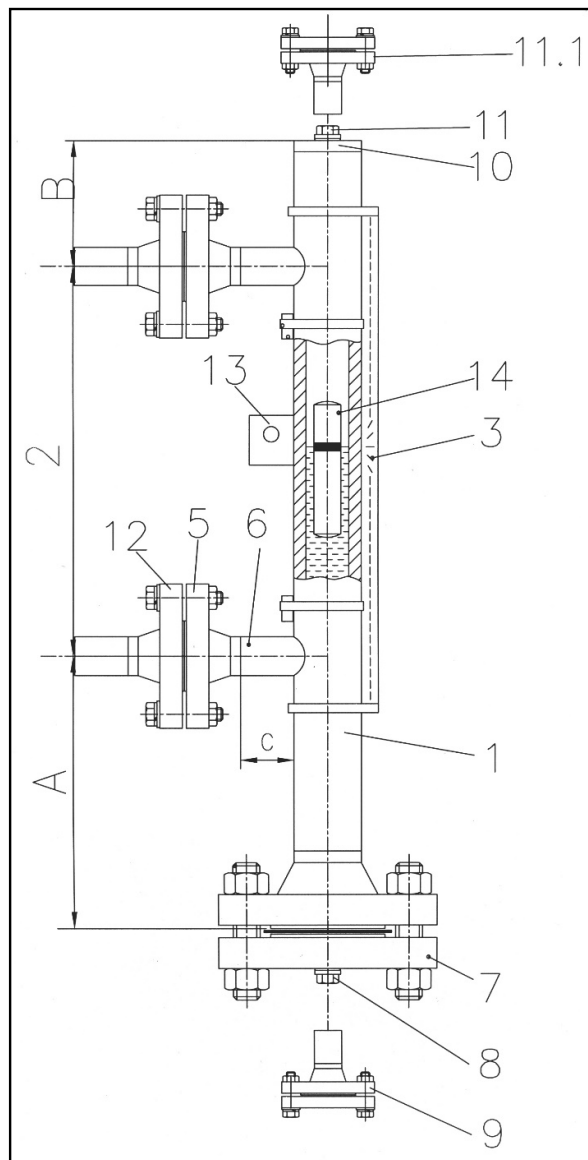
ITA

3. Level Gauges in Detail

ITA-7.0

3.12.2 ITA-7.0

Characteristics: PN63 / Float pipe: 1.4404; flanges: C.S.



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-7.0

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 2 mm welded, butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 300#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571; 1.4404; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858);Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	Titanium** , Titan/E-CTFE-coated
Operation temperature:	-50...+400 °C
Operation pressure:	max. 64 bar
Operation density:	min. 0,4243 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -530 mm -630 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm - C = 40 mm

Base equipment printed in bold letters!

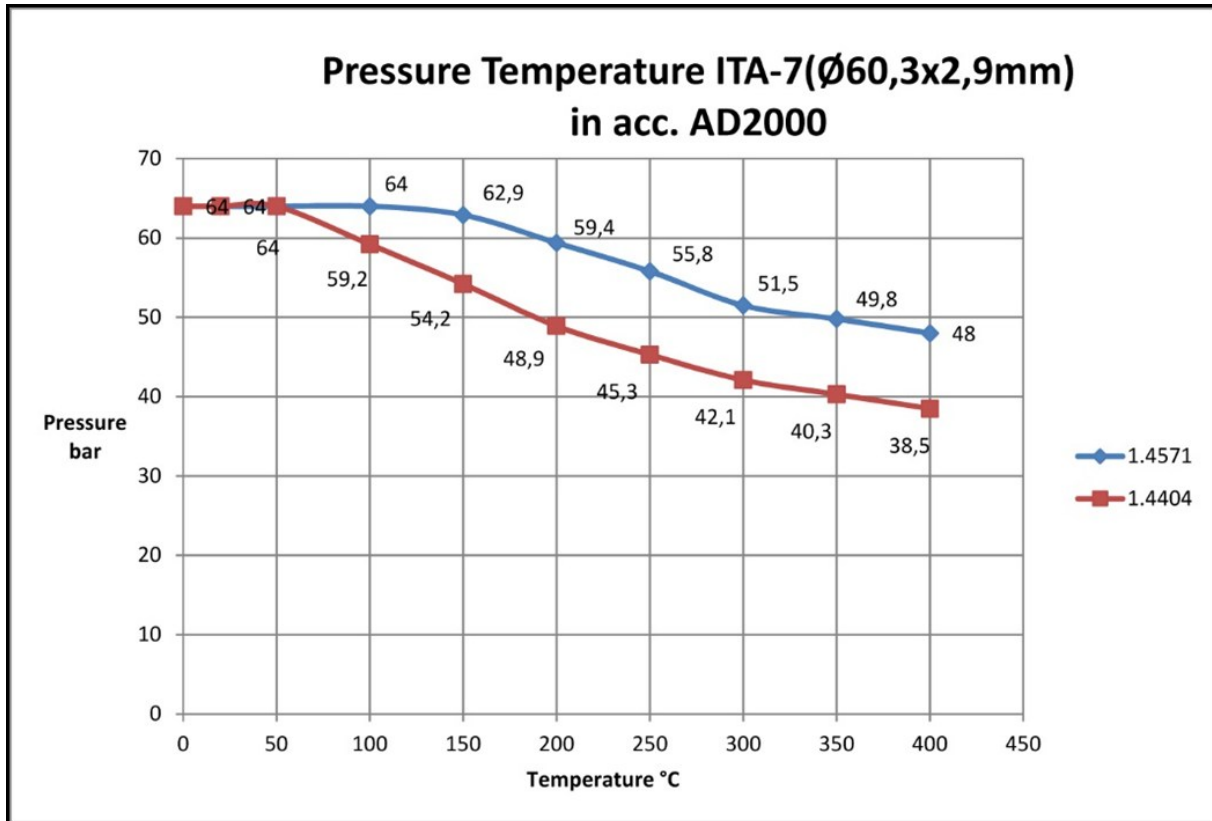
* for densities < 0,4243 kg/dm³ enlarge the scale A

** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

ITA-7/-7.0

3.12.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Mag. Level Gauge Type ITA-7 & ITA-7.0 / PN63/300 lbs

Order Codes mag. Level gauge type ITA-7 & ITA-7.0 / PN63/300 lbs

Code	Description
	Mag. Level Gauge type ITA-7 & ITA-7.0, PN63/300 lbs
	1. Type
ITA-7 ITA-7.0	ITA-7, PN63/300 lbs /Float pipe and Flanges: 1.4404 ITA-7.0, PN63/300 lbs /Float pipe: 1.4404; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.11.2 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
22	Ø60,3x2,9mm (seamless), mat.: 316L/316L
23	Ø60,3x2,9mm (seamless), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K55	> 5000 mm - with flange connection: DN50 PN63, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description
	7.2 Nominal size / pressure rating
000	welding or threaded connection
A05	DN15 / PN63
A15	DN20 / PN63
A25	DN25 / PN63
A35	DN32 / PN63
A45	DN40 / PN63
A55	DN50 / PN63
AEH	1/2" / 300 lbs
AFH	3/4" / 300 lbs
AGH	1" / 300 lbs
AHH	1 1/4" / 300 lbs
AKH	1 1/2" / 300 lbs
ALH	2" / 300 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	Without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B55	Flange DN50 PN63 incl. blind flange
BLH	Flange 2" ANSI 300 lbs incl. blind flange
L55	Flange DN50 PN63 reinforced for shut-off valve on side
LLH	Flange 2" ANSI 300 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Code	Description
	9. Float removal flange (bottom side)
00	without (bottom side = End cap)
5A	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 electrogalvanised (DN50 PN63)
5C	DIN931 / ISO 4014: M20 x 80 mm; mat. Stainless steel A2-70 (DN50 PN63)
6D	DIN 2510 Form L: M20 x 110 mm; mat. YK (CK35) electro galvanized (DN50 PN63)
6C	DIN 2510 Form L: M20 x 110 mm; mat. A2-70 (DN50 PN63)
5B	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 Xylan coated (DN50 PN63)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM ele. galvan. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvan. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM ele. galvan. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvan. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvan. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	10. Drain plug
0	without
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.11.2 Order Codes (continuation)

Code	Description
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	11.2 Nominal size / Pressure rating
000	without
D05	stud with flange DN15 PN63
D15	stud with flange DN20 PN63
D25	stud with flange DN25 PN63
D35	stud with flange DN32 PN63
D45	stud with flange DN40 PN63
DEH	stud with flange 1/2" ANSI 300 lbs
DFH	stud with flange 3/4" ANSI 300 lbs
DGH	stud with flange 1" ANSI 300 lbs
DHH	stud with flange 1 1/4" ANSI 300 lbs
DKH	stud with flange 1 1/2" ANSI 300 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E05	DN15 PN63
E15	DN20 PN63
E25	DN25 PN63
E35	DN32 PN63
E45	DN40 PN63
EEH	1/2" ANSI 300 lbs
EFH	3/4" ANSI 300 lbs
EGH	1" ANSI 300 lbs
EHH	1 1/4" ANSI 300 lbs
EKH	1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C55	Flange DN50 PN63 incl. blind flange
CLH	Flange 2" ANSI 300 lbs incl. blind flange
L55	Flange DN50 PN63 reinforced for shut-off valve on side
LLH	Flange 2" ANSI 300 lbs reinforced for shut-off valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Code	Description
	12.3 Bolts & nuts float pipe top end finish flange
00	without (top = End cap)
5A	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 electrogalvanised (DN50 PN63)
5C	DIN931 / ISO 4014: M20 x 80 mm; mat. Stainless steel A2-70 (DN50 PN63)
6D	DIN 2510 Form L: M20 x 110 mm; mat. YK (CK35) electro galvanized (DN50 PN63)
6C	DIN 2510 Form L: M20 x 110 mm; mat. A2-70 (DN50 PN63)
5B	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 Xylan coated (DN50 PN63)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM ele. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	14.2 Nominal size / pressure rating
000	without
F05	stud with flange DN15 PN63
F15	stud with flange DN20 PN63
F25	stud with flange DN25 PN63
F35	stud with flange DN32 PN63
F45	stud with flange DN40 PN63
FEH	stud with flange 1/2" ANSI 300 lbs
FFH	stud with flange 3/4" ANSI 300 lbs
FGH	stud with flange 1" ANSI 300 lbs
FHH	stud with flange 1 1/4" ANSI 300 lbs
FKH	stud with flange 1 1/2" ANSI 300 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G05	stud with flange DN15 PN63
G15	stud with flange DN20 PN63
G25	stud with flange DN25 PN63
G35	stud with flange DN32 PN63
G45	stud with flange DN40 PN63
GEH	stud with flange 1/2" ANSI 300 lbs
GFH	stud with flange 3/4" ANSI 300 lbs
GGH	stud with flange 1" ANSI 300 lbs
GHH	stud with flange 1 1/4" ANSI 300 lbs
GKH	stud with flange 1 1/2" ANSI 300 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter flange process connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description
15.2 Nominal size / pressure rating	
000	without
H05	DN15 / PN63
H15	DN20 / PN63
H25	DN25 / PN63
H35	DN32 / PN63
H45	DN40 / PN63
H55	DN50 / PN63
HEH	1/2" / 300 lbs
HFH	3/4" / 300 lbs
HGH	1" / 300 lbs
HHH	1 1/4" / 300 lbs
HKH	1 1/2" / 300 lbs
HLH	2" / 300 lbs
YYY	others, please specify
15.3 Flange face counter flanges	
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
15.4 Gasket Counter Flanges	
00	without
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes

Code	Description
	15.5 Bolts & nuts counter flanges
00	without
5A	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 electrogalvanised (DN50 PN63)
5C	DIN931 / ISO 4014: M20 x 80 mm; mat. Stainless steel A2-70 (DN50 PN63)
6D	DIN 2510 Form L: M20 x 110 mm; mat. YK (CK35) electro galvanized (DN50 PN63)
6C	DIN 2510 Form L: M20 x 110 mm; mat. A2-70 (DN50 PN63)
5B	DIN931 / ISO 4014: M20 x 80 mm; mat. Steel 5.6/5.2 Xylan coated (DN50 PN63)
BE	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galvanized (2" 300lbs RF)
BF	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM electro galv. (2" 300lbs RF)
BG	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RF)
BH	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RF)
BJ	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RF)
BK	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RF)
DE	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 300lbs RTJ)
DF	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM ele. galv. (2" 300lbs RTJ)
DG	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 300lbs RTJ)
DH	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 300lbs RTJ)
DJ	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 300lbs RTJ)
DK	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 300lbs RTJ)
BL	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RF)
BM	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan coated (2" 300lbs RF)
DL	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 300lbs RTJ)
DM	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 300lbs RTJ)
BN	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galvanized (2" 300lbs RF)
BP	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galvanized (2" 300lbs RF)
DN	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
DP	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 300lbs RTJ)
BR	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RF)
BT	ASME B16.5 UNC: 5/8" x 89 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RF)
DR	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
DT	ASME B16.5 UNC: 5/8" x 102 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan coated (2" 300lbs RTJ)
YY	others, please specify
	16. Additional bucket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-7 & ITA-7.0

3.12.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
7T0240K1	64	Titanium	50,8	265	0,6820	sealed	2
7T0240K3	64	Titanium	50,8	265	0,5551	sealed	1, 2
7T0300K1	64	Titanium	50,8	325	0,6064	sealed	2
7T0300K3	64	Titanium	50,8	325	0,5168	sealed	1, 2
7T0500K3	64	Titanium	50,8	525	0,4450	sealed	2
7T0600K3	64	Titanium	50,8	625	0,4243	sealed	1, 2

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

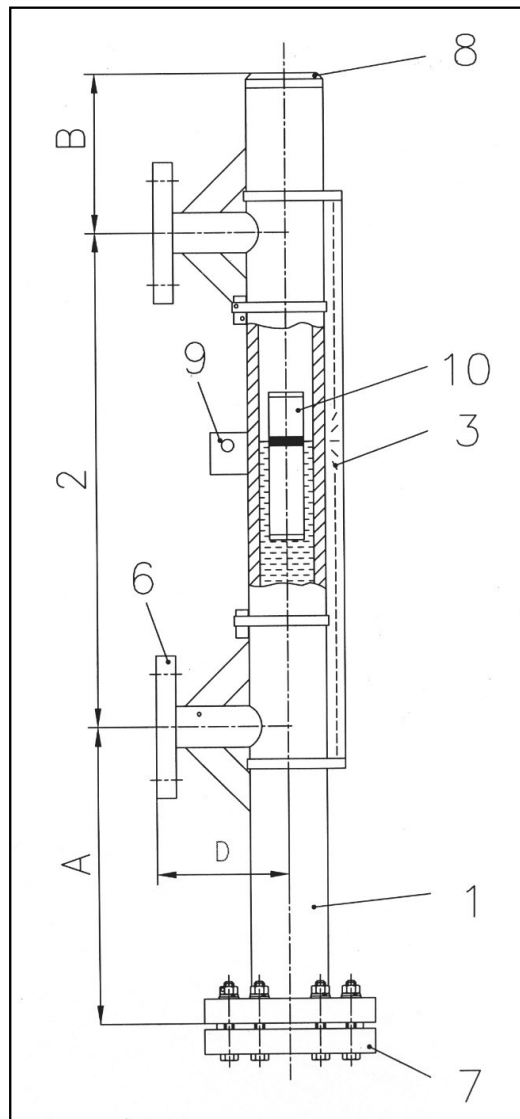
ITA

3. Level Gauges in Detail

ITA-8.1

3.13.1 ITA-8.1 (PVC)

Characteristics: PN6 / Material: PVC



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 c to c distance
- 3 Design (Indication rail)
- 6 Process connection side/side
- 7 Drain plug
- 8 Float pipe top end finish
- 9 Mounting link
- 10 Float

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-8.1 (PVC)

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	63 x 4,7 mm
Process connection:	to specify: Flanges DN15...50 (1/2" ...2")
Drain/Vent connections:	Plug R1/2" (for more please see order codes)
Pipe material:	PVC
Flange material:	same as pipe material
Float material:	PVC
Operation temperature:	-30..+60 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,75 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Length: - 255 mm - 135 mm
Standard dimensions:	A = 240 mm* B = 130 mm C = 110 mm

Baseequipment printed in bold letters!

*** for densities < 0,75 kg/dm³ enlarge the scale A**

Mag. Level Gauge type ITA

ITA-8.1

3.13.2 Order Codes

Mag. Level Gauge Type ITA-8.1 / PN6 / PVC

Order Codes mag. Level gauge type ITA-8.1 / PN6 / PVC

Code	Description
	Mag. Level Gauge type ITA-8.1, PN6 / PVC
	1. Type
ITA-8.1	ITA-8.1, PN6 /Float pipe, Flanges, Float: PVC
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.1

3.13.2 Order Codes (continuation)

Code	Description
	3. Size & material float pipe/material flanges
26	Ø63 x 4,7 mm, mat. PVC
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Reinforcement
0	without
V	Reinforcement of the PVC-guide-tube, mat. 1.4404
A	each 100 mm
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K31	> 5000 mm - with flange connection: DN32 PN6, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	8.1 standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.1

3.13.2 Order Codes

Code	Description
	8.2 Nominal size / pressure rating
000	welding or threaded connection
A01	DN15 / PN6
A02	DN15 / PN10
A11	DN20 / PN6
A12	DN20 / PN10
A21	DN25 / PN6
A22	DN25 / PN10
A31	DN32 / PN6
A32	DN32 / PN10
A41	DN40 / PN6
A42	DN40 / PN10
A51	DN50 / PN6
A52	DN50 / PN10
AEg	1/2" / 150 lbs
AFg	3/4" / 150 lbs
AGg	1" / 150 lbs
AHg	1 1/4" / 150 lbs
AKg	1 1/2" / 150 lbs
ALg	2" / 150 lbs
YYY	others, please specify
	8.3 Flange faces process connection flanges
00	welding or threaded connection
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify
	9. Float removal flange (bottom side)
000	without
B31	Flange DN32 PN16 incl. blind flange
YY	others, please specify
	9.1 Surfac float removal flange (bottom side)
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	9.2 Gasket
00	without
VT	Viton
99	others, please specify
	9.3 Bolts & nuts float removal flange (bottom side)
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.1

3.13.2 Order Codes (continuation)

Code	Description
	10. Drain plug
0	without
7	Drain plug R1/2"
4	Drain plug 1/2" NPT
	11. Additional drain connection
00	without
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C31	Flange with blind flange DN32 PN6
YY	others, please specify
	12.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	12.3 Gasket float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	13. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	14. Additional vent connection
00	without
YY	others, please specify
	14. Additional vent connection
00	without
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
YY	others, please specify
	16. Additional bracket welded to the float pipe
00	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.1

3.13.2 Order Codes

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
8PVC01K1	6	PVC	50	135	1,1500	sealed	
8PVC02K1	6	PVC	50	255	0,7500	sealed	

Mag. Level Gauge type ITA

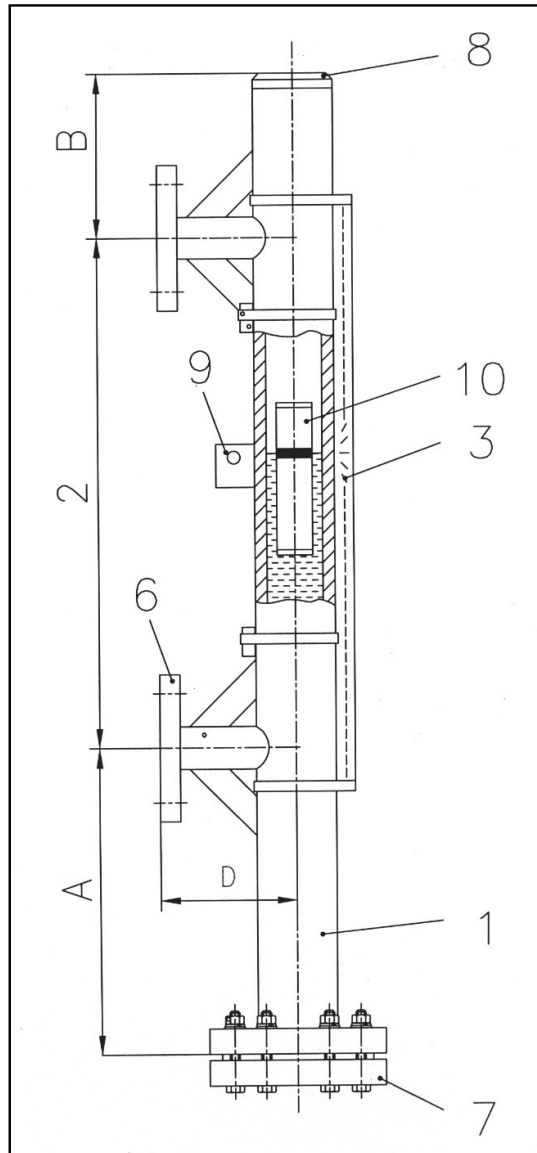
ITA

3. Level Gauges in Detail

ITA-8.2

3.14.1 ITA-8.2 (PP)

Characteristics: PN6 / Material: PVC



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 c to c distance
- 3 Design (Indication rail)
- 6 Process connection side/side
- 7 Drain plug
- 8 Float pipe top end finish
- 9 Mounting link
- 10 Float

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-8.2 (PP)

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	63 x 4,7 mm
Process connection:	to specify: Flanges DN15...50 (1/2"...2") Plug R1/2" (for more please see order codes)
Drain/Vent connections:	
Pipe material:	PP
Flange material:	same as pipe material
Float material:	PP
Operation temperature:	-30...+80 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,65 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Length: - 255 mm - 135 mm
Standard dimensions:	A = 240 mm* B = 130 mm C = 110 mm

Baseequipment printed in bold letters!

* for densities < 0,75 kg/dm³ enlarge the scale A

Mag. Level Gauge type ITA

ITA-8.2

3.14.2 Order Codes (continuation)

Mag. Level Gauge Type ITA-8.2 / PN6 / PP

Order Codes mag. Level gauge type ITA-8.1 / PN6 / PVC

Code	Description
	Mag. Level Gauge type ITA-8.1, PN6 / PVC
	1. Type
ITA-8.1	ITA-8.1, PN6 /Float pipe, Flanges, Float: PVC
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.2

3.14.2 Order Codes

Code	Description
	3. Size & material float pipe/material flanges
26	Ø63 x 3,6 mm, mat. PP
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Reinforcement
0	Without
V	Reinforcement of the PP-guide-tube, mat. 1.4404
A	each 100 mm
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K31	> 5000 mm - with flange connection: DN32 PN6, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	8.1 standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.2

3.14.2 Order Codes (continuation)

Code	Description
	8.2 Nominal size / pressure rating
000	welding or threaded connection
A01	DN15 / PN6
A02	DN15 / PN10
A11	DN20 / PN6
A12	DN20 / PN10
A21	DN25 / PN6
A22	DN25 / PN10
A31	DN32 / PN6
A32	DN32 / PN10
A41	DN40 / PN6
A42	DN40 / PN10
A51	DN50 / PN6
A52	DN50 / PN10
AEg	1/2" / 150 lbs
AFg	3/4" / 150 lbs
AGg	1" / 150 lbs
AHg	1 1/4" / 150 lbs
AKg	1 1/2" / 150 lbs
ALg	2" / 150 lbs
YYY	others, please specify
	8.3 Flange faces process connection flanges
00	welding or threaded connection
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify
	9. Float removal flange (bottom side)
000	without
B31	Flange DN32 PN16 incl. blind flange
YY	others, please specify
	9.1 Surfac float removal flange (bottom side)
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	9.2 Gasket
00	without
VT	Viton
99	others, please specify
	9.3 Bolts & nuts float removal flange (bottom side)
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.2

3.14.2 Order Codes

Code	Description
	10. Drain plug
0	without
7	Drain plug R1/2"
4	Drain plug 1/2" NPT
	11. Additional drain connection
00	without
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C31	Flange with blind flange DN32 PN6
YY	others, please specify
	12.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	12.3 Gasket float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	13. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	14. Additional vent connection
00	without
YY	others, please specify
	14. Additional vent connection
00	without
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
YY	others, please specify
	16. Additional bracket welded to the float pipe
00	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.2

3.14.2 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
8PP001K1	6	PP	50	135	0,9500	sealed	
8PP002K1	6	PP	50	255	0,6500	sealed	

Mag. Level Gauge type ITA

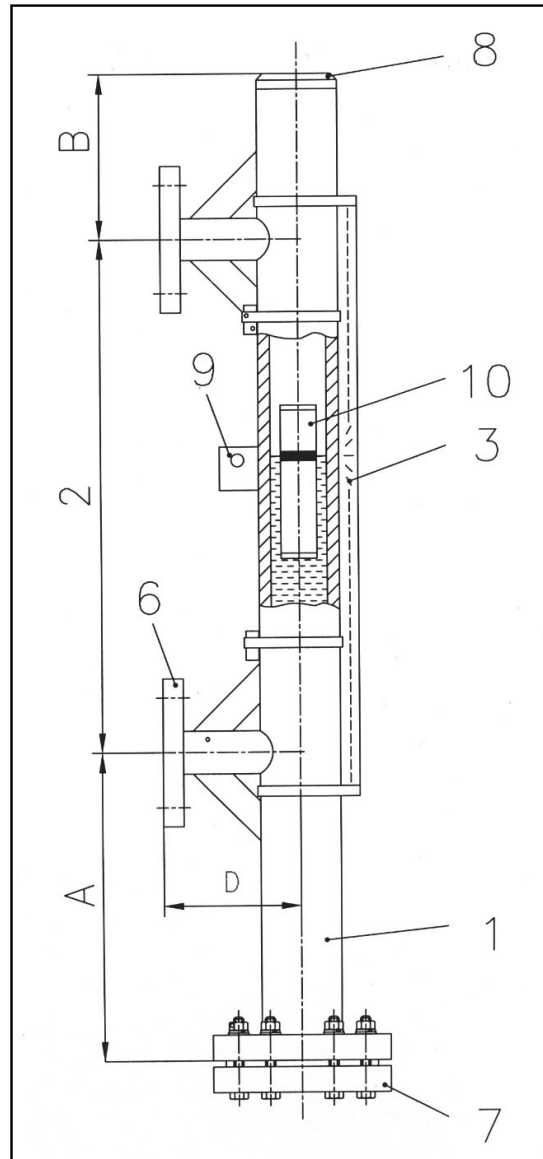
ITA

3. Level Gauges in Detail

ITA-8.3

3.15.1 ITA-8.3 (PVDF)

Characteristics: PN6 / Material: PVDF



Key:

- 1 Float pipe welded, dimensions 60,3 x 2 mm
- 2 c to c distance
- 3 Design (Indication rail)
- 6 Process connection side/side
- 7 Drain plug
- 8 Float pipe top end finish
- 9 Mounting link
- 10 Float

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-8.3 (PVDF)

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	63 x 4,7 mm
Process connection:	to specify: Flanges DN15...50 (1/2"...2") Plug R1/2" (for more please see order codes)
Drain/Vent connections:	
Pipe material:	PVDF
Flange material:	same as pipe material
Float material:	PVDF
Operation temperature:	-40...+120 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,85 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type Length: - 255 mm - 135 mm
Standard dimensions:	A = 240 mm* B = 130 mm C = 110 mm

Baseequipment printed in bold letters!

* for densities < 0,75 kg/dm³ enlarge the scale A

Mag. Level Gauge type ITA

ITA-8.3

3.15.2 Order Codes

Mag. Level Gauge Type ITA-8.3 / PN6 / PVDF

Order Codes mag. Level gauge type ITA-8.3 / PN6 / PVDF

Code	Description
	Mag. Level Gauge type ITA-8.3, PN6 / PVDF
	1. Type
ITA-8.2	ITA-8.3, PN6 /Float pipe, Flanges, Float: PVDF
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.3

3.15.2 Order Codes (continuation)

Code	Description
	3. Size & material float pipe/material flanges
26	Ø63 x 4,7 mm, mat. PVDF
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Reinforcement
0	Without
V	Reinforcement of the PP-guide-tube, mat. 1.4404
A	each 100 mm
	7. c to c distance > 5000 mm
00	< 5000 mm - one part design
K31	> 5000 mm - with flange connection: DN32 PN6, two or more parts design
	8. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	8.1 standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.3

3.15.2 Order Codes

Code	Description
	8.2 Nominal size / pressure rating
000	welding or threaded connection
A01	DN15 / PN6
A02	DN15 / PN10
A11	DN20 / PN6
A12	DN20 / PN10
A21	DN25 / PN6
A22	DN25 / PN10
A31	DN32 / PN6
A32	DN32 / PN10
A41	DN40 / PN6
A42	DN40 / PN10
A51	DN50 / PN6
A52	DN50 / PN10
AEG	1/2" / 150 lbs
AFG	3/4" / 150 lbs
AGG	1" / 150 lbs
AHG	1 1/4" / 150 lbs
AKG	1 1/2" / 150 lbs
ALG	2" / 150 lbs
YYY	others, please specify
	8.3 Flange faces process connection flanges
00	welding or threaded connection
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify
	9. Float removal flange (bottom side)
000	without
B31	Flange DN32 PN16 incl. blind flange
YY	others, please specify
	9.1 Surfac float removal flange (bottom side)
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	9.2 Gasket
00	without
VT	Viton
99	others, please specify
	9.3 Bolts & nuts float removal flange (bottom side)
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.3

3.15.2 Order Codes (continuation)

Code	Description
	10. Drain plug
0	without
7	Drain plug R1/2"
4	Drain plug 1/2" NPT
	11. Additional drain connection
00	without
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C31	Flange with blind flange DN32 PN6
YY	others, please specify
	12.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	12.3 Gasket float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	13. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	14. Additional vent connection
00	without
YY	others, please specify
	14. Additional vent connection
00	without
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
YY	others, please specify
	16. Additional bracket welded to the float pipe
00	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-8.3

3.15.2 Order Codes

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
8PVDF1K1	6	PVDF	50	135	1,3000	sealed	
8PVDF2K1	6	PVDF	50	255	0,8500	sealed	

Mag. Level Gauge type ITA

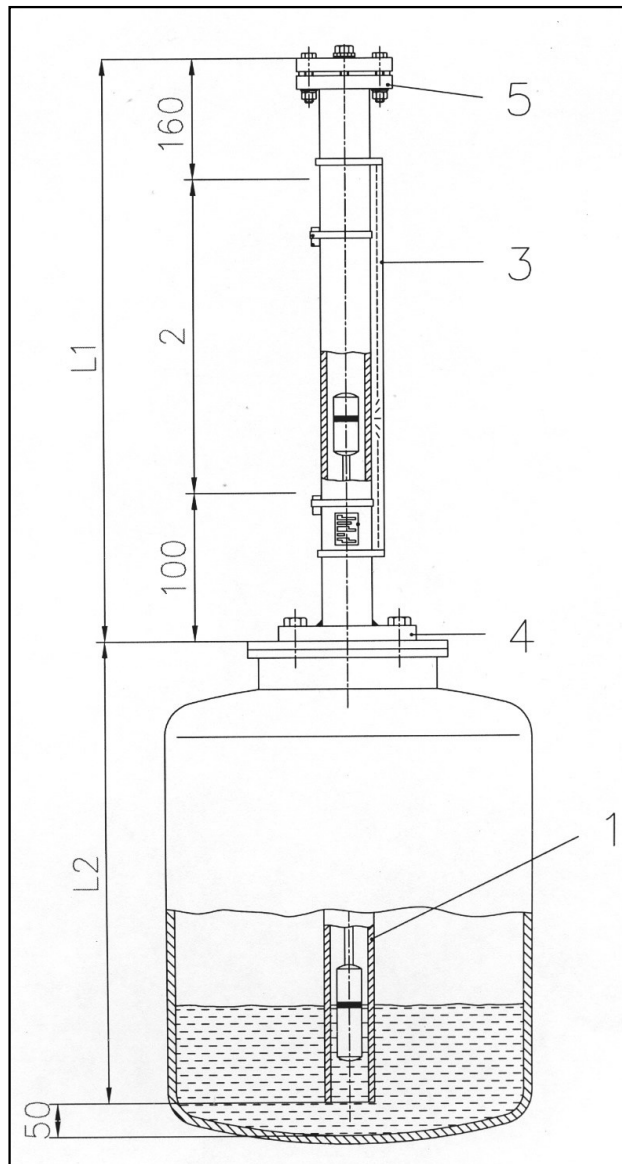
ITA

3. Level Gauges in Detail

ITA-9.1

3.16.1 ITA-9.1 (PVC)

Characteristics: PN6 / Material: PVC
(mounted from top of tank)



Key:

- 1 Float pipe PVC, dimensions 60,3 x 4,7 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 4 Process connection on tank
- 5 Follower magnet guide tube topside finish

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-9.1 (PVC)

Principle:	Communicating tubes with magnetic float
Mounting position:	top of tank
Measuring range:	max. 2500 mm
Pipe diameter:	63 x 4,7 mm
Process connection:	Flanged DN 80 (3") Flanged DN100...DN150 (4"...6")
Drain/Vent connections:	Flanged DN32 PN6
Pipe material:	PVC
Flange material:	same as pipe material
Float material:	PVC
Operation temperature:	-30..+50 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,7 kg/dm ³ (depending on the measuring length)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type, with rod Length: - 250 mm - (special sizes available)

Baseequipment printed in bold letters!

* for densities < 0,75 kg/dm³ enlarge the scale A

Mag. Level Gauge type ITA

ITA-9.1

3.16.2 Order Codes (continuation)

Mag. Level Gauge Type ITA-9.1 / PN6 / PVC

Order Codes mag. Level gauge type ITA-9.1 / PN6 / PVC

Code	Description
	Mag. Level Gauge type ITA-9.1, PN6 / PVC
	1. Type
ITA-9.1	ITA-9.1, PN6 /Float pipe, Flanges, Float: PVC
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.1

3.16.2 Order Codes

Code	Description
	3. Size & material float pipe/material flanges
26	Ø63 x 4,7 mm, mat. PVC
	4. Insertion length (L2)
L2	in mm
	4.1 Upper pipe stand off
B	Dim. B: 160 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off to process connection flange
A	Dim. A: 100 mm (Standard)
Y	Dim. A in mm (please advise)
	4.3 Measuring length (max. 2500 mm, depending on the density of the fluid)
ML	Dim. ML in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Process connection on top of tank
FA	flanged connection
YY	others, please specify
	6.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	6.2 Nominal size / pressure rating
A61	DN80 / PN6
A71	DN100 / PN6
A91	DN150 / PN6
AMG	3" / 150 lbs
ANG	4" / 150 lbs
APG	6" / 150 lbs
YYY	others, please specify
	6.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without special demand)
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.1

3.16.2 Order Codes (continuation)

Code	Description
	8. Follower guide tube top end finish
C31	Flange with blind flange DN32 PN6
YY	Others, please specify
	8.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	8.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	8.3 Bolts & nuts float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	9. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	10. Additional vent connection
00	without
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.1

3.16.2 Order Codes

Code	Description						
	11. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
9PVC03K1	6	PVC	50	135	on request	sealed	1.

1. only with 316SS or Aluminium indication rail

Mag. Level Gauge type ITA

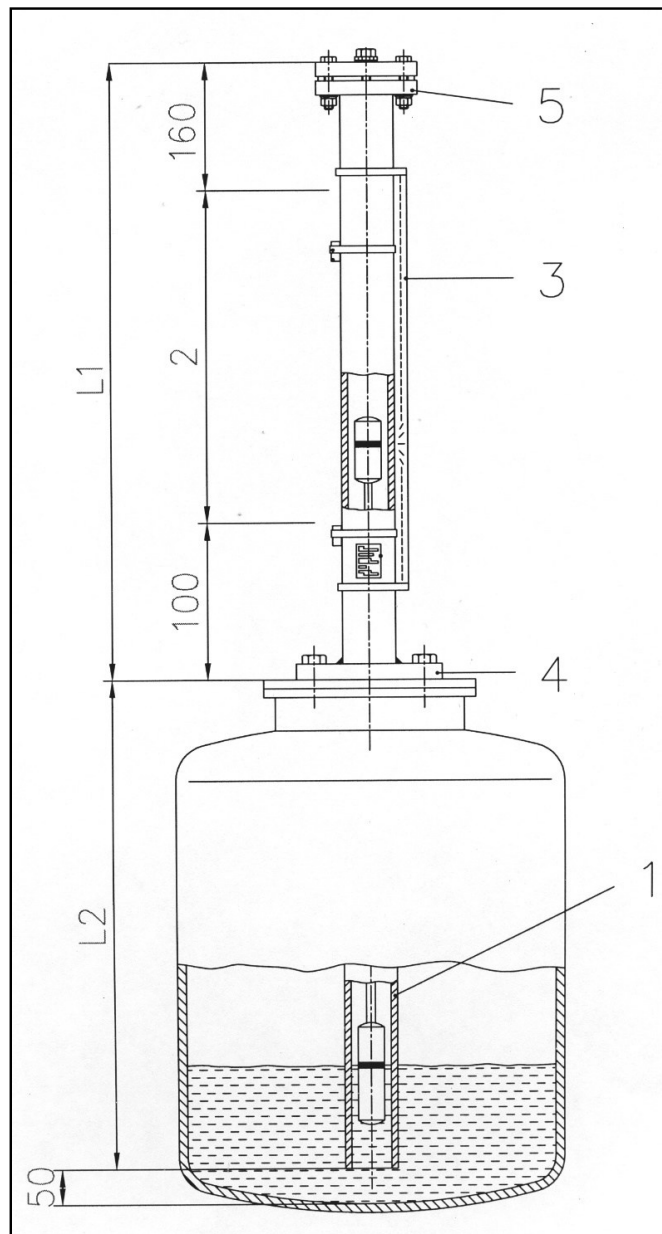
ITA

3. Level Gauges in Detail

ITA-9.2

3.17.1 ITA-9.2 (PP)

Characteristics: PN6 / Material: PP
(mounted from top of tank)



Key:

- 1 Float pipe PP, dimensions 60,3 x 3,6 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 4 Process connection on tank
- 5 Follower magnet guide tube topside finish

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-9.2 (PP)

Principle:	Communicating tubes with magnetic float
Mounting position:	top of tank
Measuring range:	max. 2500 mm
Pipe diameter:	63 x 3,6 mm
Process connection:	Flanged DN 80 (3") Flanged DN100...DN150 (4"...6")
Drain/Vent connections:	Flanged DN32 PN6
Pipe material:	PP
Flange material:	same as pipe material
Float material:	PP
Operation temperature:	-10...+80 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,7 kg/dm ³ (depending on the measuring length)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type, with rod Length: - 250 mm - (special sizes available)

Baseequipment printed in bold letters!

Mag. Level Gauge type ITA

ITA-9.2

3.17.2 Order Codes (continuation)

Mag. Level Gauge Type ITA-9.2 / PN6 / PP

Order Codes mag. Level gauge type ITA-9.2 / PN6 / PP

Code	Description
	Mag. Level Gauge type ITA-9.2, PN6 / PP
	1. Type
ITA-9.2	ITA-9.2, PN6 /Float pipe, Flanges, Float: PP
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.2

3.17.2 Order Codes

Code	Description
	3. Size & material float pipe/material flanges
30	Ø63 x 3,6 mm, mat. PP
	4. Insertion length (L2)
L2	in mm
	4.1 Upper pipe stand off
B	Dim. B: 160 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off to process connection flange
A	Dim. A: 100 mm (Standard)
Y	Dim. A in mm (please advise)
	4.3 Measuring length (max. 2500 mm, depending on the density of the fluid)
ML	Dim. ML in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Process connection on top of tank
FA	flanged connection
YY	others, please specify
	6.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	6.2 Nominal size / pressure rating
A61	DN80 / PN6
A71	DN100 / PN6
A91	DN150 / PN6
AMG	3" / 150 lbs
ANG	4" / 150 lbs
APG	6" / 150 lbs
YYY	others, please specify
	6.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without special demand)
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.2

3.17.2 Order Codes (continuation)

Code	Description
	8. Follower guide tube top end finish
C31	Flange with blind flange DN32 PN6
YY	Others, please specify
	8.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	8.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	8.3 Bolts & nuts float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	9. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	10. Additional vent connection
00	without
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.2

3.17.2 Order Codes

Code	Description						
	11. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm³]	Type:	Note:
9PP030K1	6	PP	50	on request	on request	sealed	1.

1. only with 316SS or Aluminium indication rail

Mag. Level Gauge type ITA

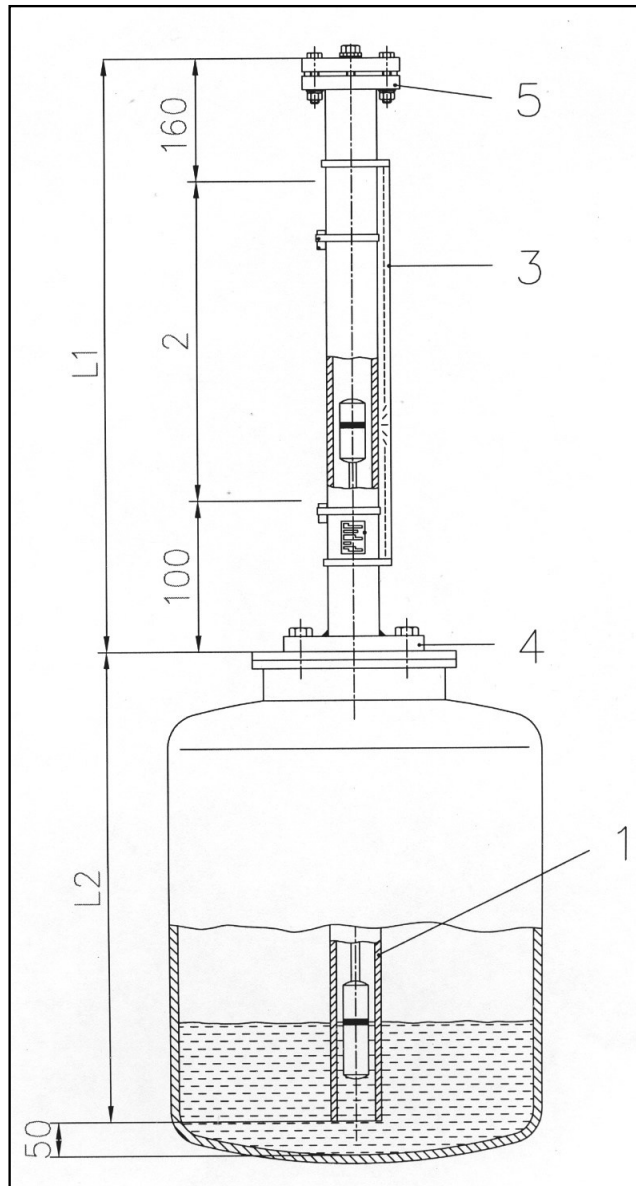
ITA

3. Level Gauges in Detail

ITA-9.3

3.18.1 ITA-9.3 (PVDF)

Characteristics: PN6 / Material: PVDF
(mounted from top of tank)



Key:

- 1 Float pipe PVDF, dimensions 60,3 x 3 mm
- 2 Measuring length
- 3 Design (Indication rail)
- 4 Process connection on tank
- 5 Follower magnet guide tube topside finish

Mag. Level Gauge type ITA

Technical specifications magnetic level gauge type ITA-9.3 (PVDF)

Principle:	Communicating tubes with magnetic float
Mounting position:	top of tank
Measuring range:	max. 2500 mm
Pipe diameter:	63 x 3 mm
Process connection:	Flanged DN 80 (3") Flanged DN100...DN150 (4"...6")
Drain/Vent connections:	Flanged DN32 PN6
Pipe material:	PVDF
Flange material:	same as pipe material
Float material:	PVDF
Operation temperature:	-40..+120 °C
Operation pressure:	max. 6 bar
Operation density:	min. 0,7 kg/dm ³ (depending on the measuring length)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	SS
Gasket	Viton
Indication rail:	Aluminium 1.4301
Float types:	Cylindrical, sealed type, with rod Length: - 250 mm - (special sizes available)

Baseequipment printed in bold letters!

Mag. Level Gauge type ITA

ITA-9.3

3.18.2 Order Codes (continuation)

Mag. Level Gauge Type ITA-9.3 / PN6 / PP

Order Codes mag. Level gauge type ITA-9.3 / PN6 / PVDF

Code	Description
	Mag. Level Gauge type ITA-9.3, PN6 / PVDF
	1. Type
ITA-9.3	ITA-9.3, PN6 /Float pipe, Flanges, Float: PVDF
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.3

3.18.2 Order Codes (continuation)

Code	Description
	3. Size & material float pipe/material flanges
30	Ø63 x 4,7 mm, mat. PVDF
	4. Insertion length (L2)
L2	in mm
	4.1 Upper pipe stand off
B	Dim. B: 160 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off to process connection flange
A	Dim. A: 100 mm (Standard)
Y	Dim. A in mm (please advise)
	4.3 Measuring length (max. 2500 mm, depending on the density of the fluid)
ML	Dim. ML in mm (please advise)
	5. Indication rail
0	without indication rail
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. Process connection on top of tank
FA	flanged connection
YY	others, please specify
	6.1 Standard
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify
	6.2 Nominal size / pressure rating
A61	DN80 / PN6
A71	DN100 / PN6
A91	DN150 / PN6
AMG	3" / 150 lbs
ANG	4" / 150 lbs
APG	6" / 150 lbs
YYY	others, please specify
	6.3 Flange faces process connection flange
E1	EN 1092-1 Form A (without special demand)
A3	ASME B 16.5 Flat Face (FF)
D1	DIN Form A (without special demand)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.3

3.18.2 Order Codes (continuation)

Code	Description
	8. Follower guide tube top end finish
C31	Flange with blind flange DN32 PN6
YY	Others, please specify
	8.1 Surface float pipe top end finish flange
00	without
D1	DIN Form A (without special demand)
YY	others, please specify
	8.2 Gasket float pipe top end finish flange
00	without
VT	Viton
99	others, please specify
	8.3 Bolts & nuts float pipe top end finish flange
00	without
0C	DIN931 / ISO 4014: M8 x 60 mm; mat. Stainless steel A2-70 (DN32 PN6)
YY	others, please specify
	9. Vent plug at top end
0	without
7	vent plug R1/2"
4	vent plug 1/2" NPT
	10. Additional vent connection
00	without
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-9.3

3.18.2 Order Codes

Code	Description						
	11. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
9PVD03K1	6	PVDF	50	on request	on request	sealed	1.

1. only with 316SS or Aluminium indication rail

Mag. Level Gauge type ITA

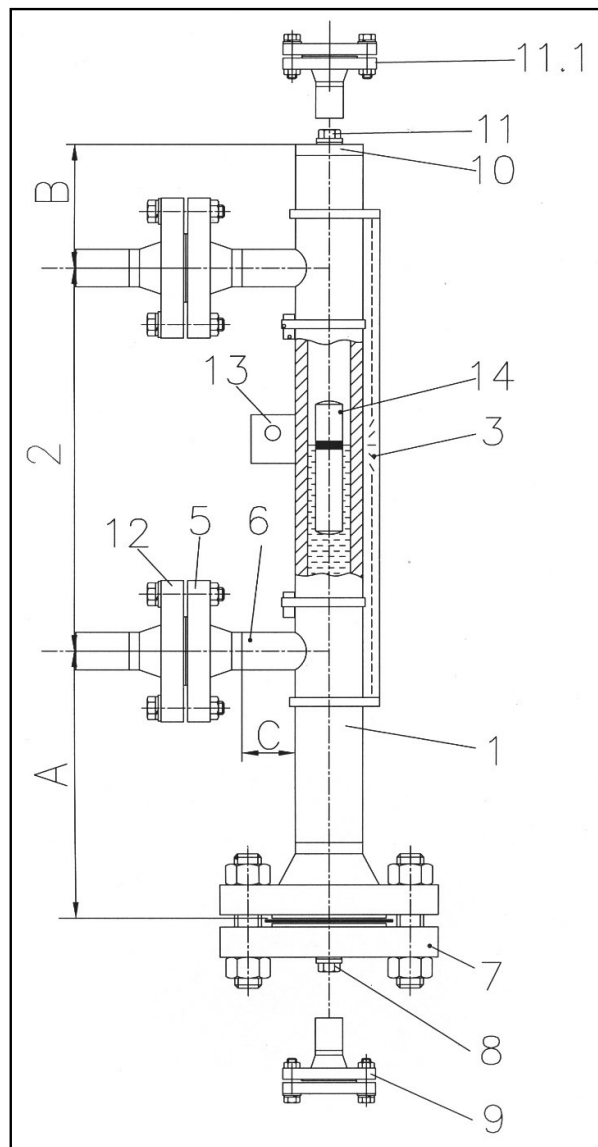
ITA

3. Level Gauges in Detail

ITA-10

3.19.1 ITA-10

Characteristics: PN100 / Float pipe and flange material: 1.4571



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 3,2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-10

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 3,2 mm seamless, butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 600#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	Titanium*** , Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 100 bar
Operation density:	min. 0,4632 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -430 mm -530 mm -630 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 70 mm

Base equipment printed in bold letters!

* for densities < 0,4243 kg/dm³ enlarge the scale A

** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

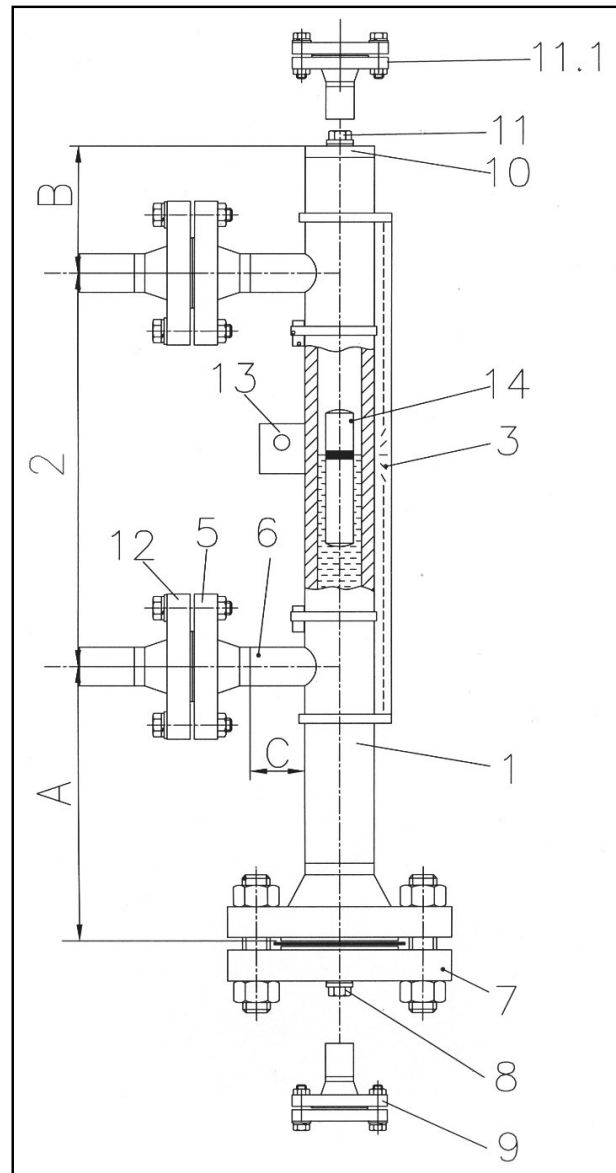
ITA

3. Level Gauges in Detail

ITA-10.0

3.19.2 ITA-10.0

Characteristics: PN100 / Float pipe: 1.4571 and flanges: CS



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 3,2 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-10

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 3,2 mm seamless, butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 600#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	Titanium*** , Titan/E-CTFE-coated
Operation temperature:	-50..+400 °C
Operation pressure:	max. 100 bar
Operation density:	min. 0,4632 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -430 mm -530 mm -630 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 70 mm

Base equipment printed in bold letters!

* for densities < 0,4243 kg/dm³ enlarge the scale A

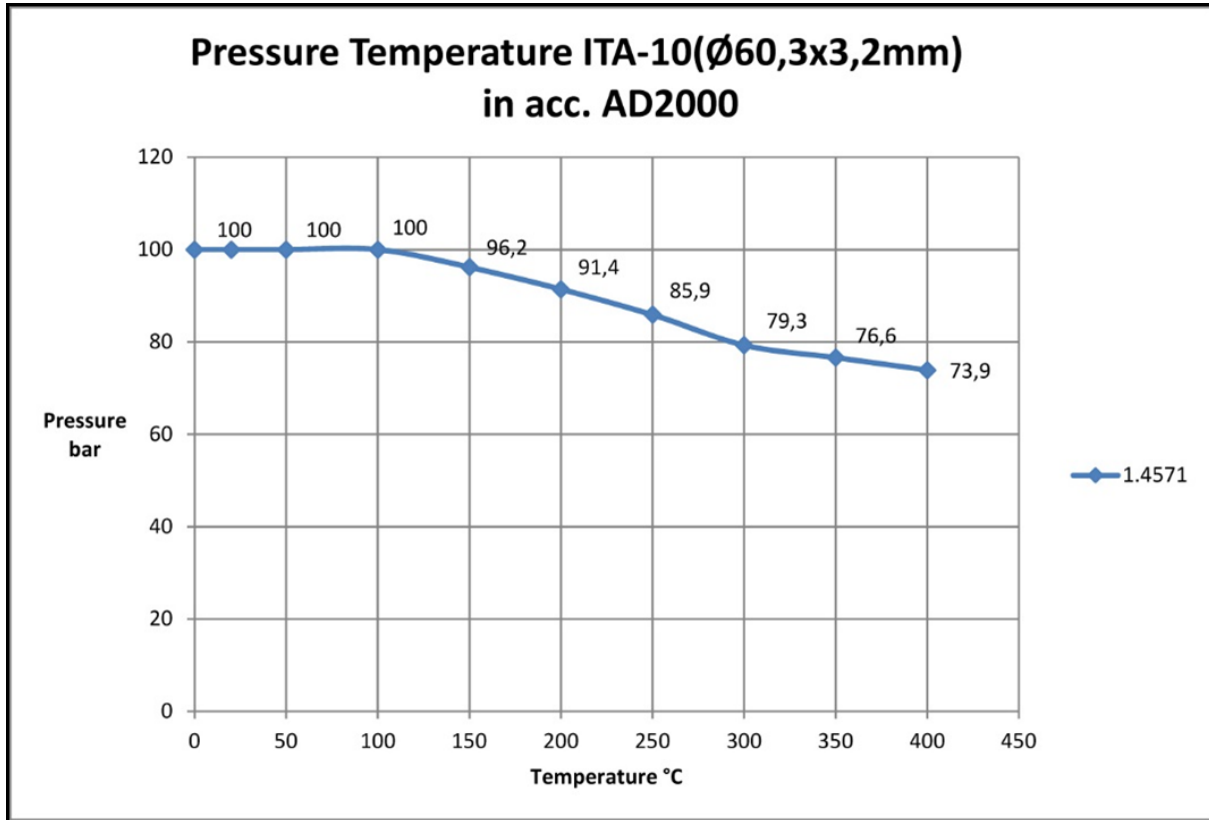
** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

ITA-10/-10.0

3.19.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes

Mag. Level Gauge Type ITA-10 / ITA-10.0 / PN100

Order Codes mag. Level gauge type ITA-10 / ITA-10.0 / PN100

Code	Description
	Mag. Level Gauge type ITA-10 & ITA-10.0, PN100/600 lbs
	1. Type
ITA-10 ITA-10.0	ITA-10, PN100/600 lbs /Float pipe and Flanges: 1.4571 ITA-10.0, PN100/600 lbs /Float pipe: 1.4571; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
22	Ø60,3x3,2mm (seamless), mat.: 316L/316L
23	Ø60,3x3,2mm (seamless), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K55	> 5000 mm - with flange connection: DN50 PN63, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	7.2 Nominal size / pressure rating
000	welding or threaded connection
A06	DN15 / PN100
A16	DN20 / PN100
A26	DN25 / PN100
A36	DN32 / PN100
A46	DN40 / PN100
A56	DN50 / PN100
AEK	1/2" / 600 lbs
AFK	3/4" / 600 lbs
AGK	1" / 600 lbs
AHK	1 1/4" / 600 lbs
AKK	1 1/2" / 600 lbs
ALK	2" / 600 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	Without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B56	Flange DN50 PN100 incl. blind flange
BLK	Flange 2" ANSI 600 lbs incl. blind flange
L56	Flange DN50 PN100 reinforced for shut-off valve on side
LLK	Flange 2" ANSI 600 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN100)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN100)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN100)
EE	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 600lbs RF/RTJ)
EF	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv- (2" 600lbs RF/RTJ)
EG	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 600lbs RF/RTJ)
EH	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 600lbs RF/RTJ)
EJ	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 600lbs RF/RTJ)
EK	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 600lbs RF/RTJ)
EL	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 600lbs RF/RTJ)
EM	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 600lbs RF/RTJ)
EN	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 el. galv. (2" 600lbs RF/RTJ)
EP	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 600lbs RF/RTJ)
ER	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 600lbs RF/RTJ)
ET	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 600lbs RF/RTJ)
YY	others, please specify
	10. Drain plug
0	without
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
00	others, please specify
	11.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	11.2 nominal size / pressure rating
000	without
D06	stud with flange DN15 PN100
D16	stud with flange DN20 PN100
D26	stud with flange DN25 PN100
D36	stud with flange DN32 PN100
D46	stud with flange DN40 PN100
DEK	stud with flange 1/2" ANSI 600 lbs
DFK	stud with flange 3/4" ANSI 600 lbs
DGK	stud with flange 1" ANSI 600 lbs
DHK	stud with flange 1 1/4" ANSI 600 lbs
DKK	stud with flange 1 1/2" ANSI 600 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E06	DN15 PN100
E16	DN20 PN100
E26	DN25 PN100
E36	DN32 PN100
E46	DN40 PN100
EEK	1/2" ANSI 600 lbs
EFK	3/4" ANSI 600 lbs
EGK	1" ANSI 600 lbs
EHK	1 1/4" ANSI 600 lbs
EKK	1 1/2" ANSI 600 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C56	Flange DN50 PN100 incl. blind flange
CLK	Flange 2" ANSI 600 lbs incl. blind flange
L56	Flange DN50 PN100 reinforced for shut-off valve on side
LLK	Flange 2" ANSI 600 lbs reinforced for shut-off valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without (top = End cap)
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN100)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN100)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN100)
EE	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 600lbs RF/RTJ)
EF	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 600lbs RF/RTJ)
EG	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 600lbs RF/RTJ)
EH	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 600lbs RF/RTJ)
EJ	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 600lbs RF/RTJ)
EK	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 600lbs RF/RTJ)
EL	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 600lbs RF/RTJ)
EM	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 600lbs RF/RTJ)
EN	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv- (2" 600lbs RF/RTJ)
EP	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 600lbs RF/RTJ)
ER	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 600lbs RF/RTJ)
ET	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 600lbs RF/RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.2 nominal size / pressure rating
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	14.2 nominal size / pressure rating
000	without
F06	stud with flange DN15 PN100
F16	stud with flange DN20 PN100
F26	stud with flange DN25 PN100
F36	stud with flange DN32 PN100
F46	stud with flange DN40 PN100
FEK	stud with flange 1/2" ANSI 600 lbs
FFK	stud with flange 3/4" ANSI 600 lbs
FGK	stud with flange 1" ANSI 600 lbs
FHK	stud with flange 1 1/4" ANSI 600 lbs
FKK	stud with flange 1 1/2" ANSI 600 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G06	DN15 PN100
G16	DN20 PN100
G26	DN25 PN100
G36	DN32 PN100
G46	DN40 PN100
GEK	1/2" ANSI 600 lbs
GFK	3/4" ANSI 600 lbs
GGK	1" ANSI 600 lbs
GHK	1 1/4" ANSI 600 lbs
GKK	1 1/2" ANSI 600 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	15.2 nominal size / pressure rating
000	without
H06	DN15 / PN100
H16	DN20 / PN100
H26	DN25 / PN100
H36	DN32 / PN100
H46	DN40 / PN100
H56	DN50 / PN100
HEK	1/2" / 600 lbs
HFK	3/4" / 600 lbs
HGK	1" / 600 lbs
HHK	1 1/4" / 600 lbs
HKK	1 1/2" / 600 lbs
HLK	2" / 600 lbs
YYY	others, please specify
	15.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description
	15.4 Gasket Counter Flanges
00	without
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify
	15.5 Bolts & nuts Counter Flanges
00	without
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN100)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN100)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN100)
EE	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 600lbs RF/RTJ)
EF	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 600lbs RF/RTJ)
EG	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 600lbs RF/RTJ)
EH	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 600lbs RF/RTJ)
EJ	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 600lbs RF/RTJ)
EK	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 600lbs RF/RTJ)
EL	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan coated (2" 600lbs RF/RTJ)
EM	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 600lbs RF/RTJ)
EN	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 600lbs RF/RTJ)
EP	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 electro galv. (2" 600lbs RF/RTJ)
ER	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 600lbs RF/RTJ)
ET	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 600lbs RF/RTJ)
YY	others, please specify
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-10 & ITA-10.0

3.19.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
10V324K3	100	1.4404/316L	52	265	0,6122	vented	1
10T024K1	80	Titanium	50,8	265	0,7011	sealed	2
10T024K3	80	Titanium	50,8	265	0,5823	sealed	1,2
10T030K1	80	Titanium	50,8	325	0,6212	sealed	2
10T030K3	80	Titanium	50,8	325	0,5275	sealed	1,2
10T040K1	80	Titanium	50,8	425	0,5515	sealed	2
10T040K3	80	Titanium	50,8	425	0,4871	sealed	1,2
10T050K1	80	Titanium	50,8	525	0,5095	sealed	2
10T050K3	80	Titanium	50,8	525	0,4574	sealed	1,2
10T060K1	80	Titanium	50,8	625	0,4632	sealed	2
10T060K3	80	Titanium	50,8	625	0,4209	sealed	1,2
10T124K1	100	Titanium	50,8	265	0,8299	sealed	2
10T124K3	100	Titanium	50,8	265	0,7006	sealed	1,2
10T130K1	100	Titanium	50,8	325	0,7617	sealed	2
10T130K3	100	Titanium	50,8	325	0,6594	sealed	1,2
10T140K1	100	Titanium	50,8	425	0,6779	sealed	2
10T140K3	100	Titanium	50,8	425	0,6075	sealed	1,2
10T150K1	100	Titanium	50,8	525	0,6321	sealed	2
10T150K3	100	Titanium	50,8	525	0,5775	sealed	1,2
10T160K1	100	Titanium	50,8	625	-	sealed	2
10T160K3	100	Titanium	50,8	625	-	sealed	1,2

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

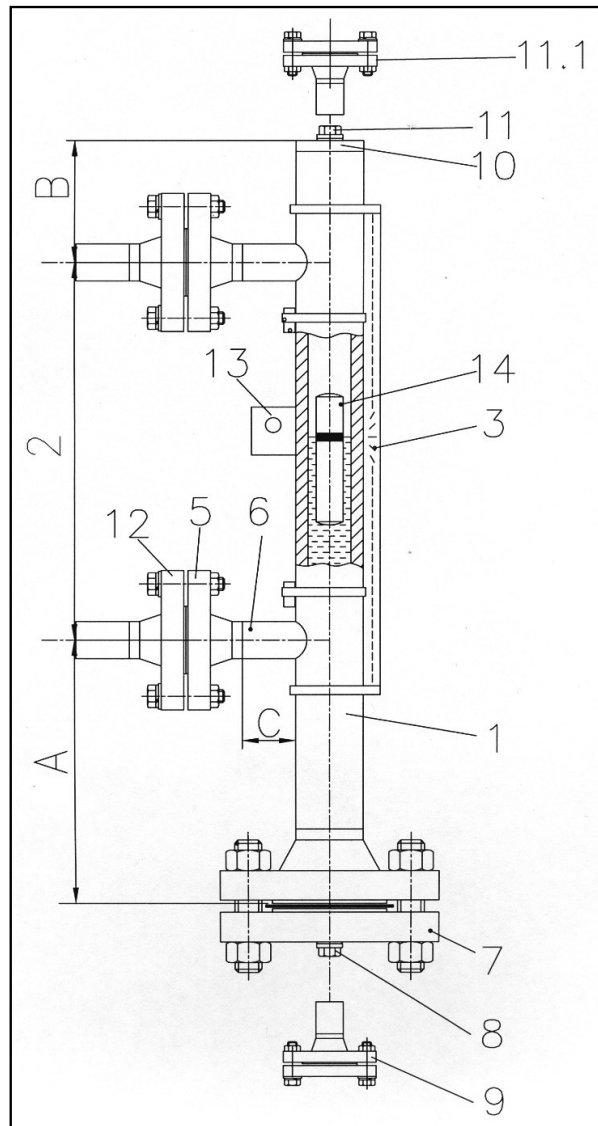
ITA

3. Level Gauges in Detail

ITA-11

3.20.1 ITA-11

Characteristics: PN160 / Float pipe and flange material: 1.4571



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 3,91 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-11

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 3,91 mm seamless, 60,3 x 3,6 mm seamless welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 1500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	316Ti (1.4571); Titanium***
Operation temperature:	-50..+400 °C
Operation pressure:	max. 160 bar
Operation density:	min. 0,6008 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -430 mm -530 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** - C = 70 mm

Base equipment printed in bold letters!

* for densities < 0,4243 kg/dm³ enlarge the scale A

** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

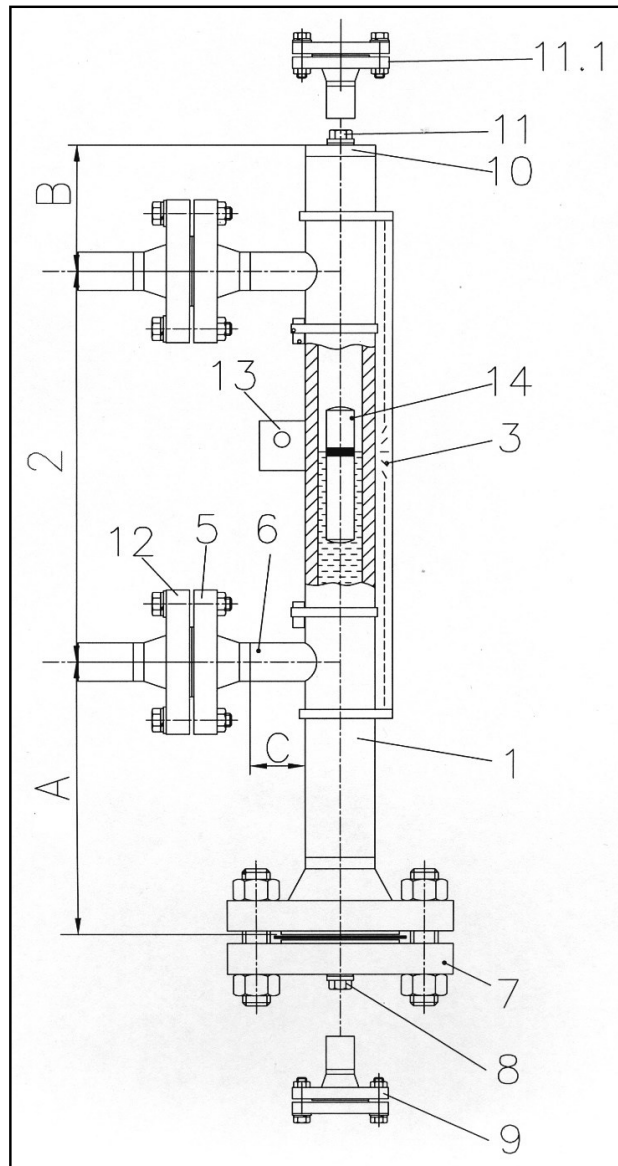
ITA

3. Level Gauges in Detail

ITA-11.0

3.20.2 ITA-11.0

Characteristics: PN160 / Float pipe: 1.4571 and flanges: CS



Key:

- | | | | |
|---|---|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 3,91 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-11.0

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 3,91 mm seamless, 60,3 x 3,6 mm seamless welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 1500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	316Ti (1.4571) ; Titanium***
Operation temperature:	-50...+400 °C
Operation pressure:	max. 160 bar
Operation density:	min. 0,6008 kg/dm ³
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type Length: -270 mm -330 mm -430 mm -530 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 70 mm

Base equipment printed in bold letters!

* for densities < 0,4243 kg/dm³ enlarge the scale A

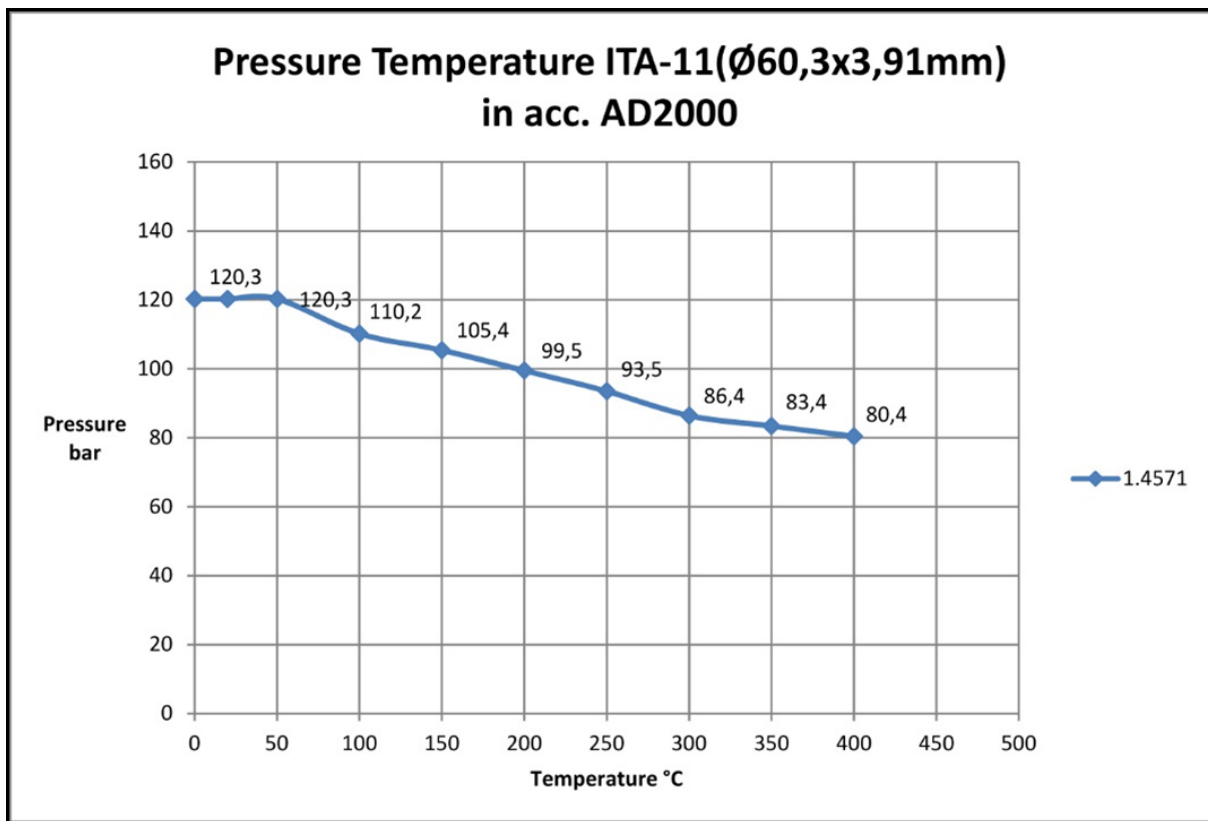
** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

ITA-11/-11.0

3.20.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes

Mag. Level Gauge Type ITA-11 / ITA-11.0 / PN160

Order Codes mag. Level gauge type ITA-11 / ITA-11.0 / PN160

Code	Description
	Mag. Level Gauge type ITA-11 & ITA-11.0, PN160/1500 lbs
	1. Type
ITA-11 ITA-11.0	ITA-11, PN160/1500 lbs /Float pipe and Flanges: 1.4571 ITA-11.0, PN160/1500 lbs /Float pipe: 1.4571; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
36	Ø60,3x3,91mm (seamless), mat.: 316L/316L
37	Ø60,3x3,91mm (seamless), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K57	> 5000 mm - with flange connection: DN50 PN160, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	7.2 Nominal size / pressure rating
000	welding or threaded connection
A07	DN15 / PN160
A17	DN20 / PN160
A27	DN25 / PN160
A37	DN32 / PN160
A47	DN40 / PN160
A57	DN50 / PN160
AEL	1/2" / 1500 lbs
AFL	3/4" / 1500 lbs
AGL	1" / 1500 lbs
AHL	1 1/4" / 1500 lbs
AKL	1 1/2" / 1500 lbs
ALL	2" / 1500 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	Without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B57	Flange DN50 PN160 incl. blind flange
BLL	Flange 2" ANSI 1500 lbs incl. blind flange
L57	Flange DN50 PN160 reinforced for shut-off valve on side
LLL	Flange 2" ANSI 1500 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN160)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN160)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN160)
FE	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
FF	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
FG	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FH	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FJ	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FK	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FL	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 1500lbs RF/RTJ)
FM	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
FN	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 1500lbs RF/RTJ)
FP	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 1500lbs RF/RTJ)
FR	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
FT	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	10. Drain plug
0	without
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	11.2 nominal size / pressure rating
000	without
D07	stud with flange DN15 PN160
D17	stud with flange DN20 PN160
D27	stud with flange DN25 PN160
D37	stud with flange DN32 PN160
D47	stud with flange DN40 PN160
DEL	stud with flange 1/2" ANSI 1500 lbs
DFL	stud with flange 3/4" ANSI 1500 lbs
DGL	stud with flange 1" ANSI 1500 lbs
DHL	stud with flange 1 1/4" ANSI 1500 lbs
DKL	stud with flange 1 1/2" ANSI 1500 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E07	DN15 PN160
E17	DN20 PN160
E27	DN25 PN160
E37	DN32 PN160
E47	DN40 PN160
EEL	1/2" ANSI 1500 lbs
EFL	3/4" ANSI 1500 lbs
EGL	1" ANSI 1500 lbs
EHL	1 1/4" ANSI 1500 lbs
EKL	1 1/2" ANSI 1500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C57	Flange DN50 PN160 incl. blind flange
CLL	Flange 2" ANSI 1500 lbs incl. blind flange
L57	Flange DN50 PN160 reinforced for shut-off valve on side
LLL	Flange 2" ANSI 1500 lbs reinforced for shut-off valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

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3.20.4 Order Codes (continuation)

Code	Description
	12.3 Bolts & nuts float pipe top end finish
00	without (top = End cap)
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN160)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN160)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN160)
EE	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
EF	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
EG	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
EH	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
EJ	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
EK	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
EL	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2"1500lbs RF/RTJ)
EM	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
EN	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv- (2" 1500lbs RF/RTJ)
EP	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 1500lbs RF/RTJ)
ER	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
ET	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.2 nominal size / pressure rating
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

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3.20.4 Order Codes (continuation)

Code	Description
	14.2 nominal size / pressure rating
000	without
F07	stud with flange DN15 PN160
F17	stud with flange DN20 PN160
F27	stud with flange DN25 PN160
F37	stud with flange DN32 PN160
F47	stud with flange DN40 PN160
FEL	stud with flange 1/2" ANSI 1500 lbs
FFL	stud with flange 3/4" ANSI 1500 lbs
FGL	stud with flange 1" ANSI 1500 lbs
FHL	stud with flange 1 1/4" ANSI 1500 lbs
FKL	stud with flange 1 1/2" ANSI 1500 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G07	DN15 PN160
G17	DN20 PN160
G27	DN25 PN160
G37	DN32 PN160
G47	DN40 PN160
GEL	1/2" ANSI 1500 lbs
GFL	3/4" ANSI 1500 lbs
GGL	1" ANSI 1500 lbs
GHL	1 1/4" ANSI 1500 lbs
GKL	1 1/2" ANSI 1500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-11 & ITA-11.0

3.20.4 Order Codes (continuation)

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

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3.20.4 Order Codes (continuation)

Code	Description
	15.2 nominal size / pressure rating
000	without
H07	DN15 / PN160
H17	DN20 / PN160
H27	DN25 / PN160
H37	DN32 / PN160
H47	DN40 / PN160
H57	DN50 / PN160
HEL	1/2" / 1500 lbs
HFL	3/4" / 1500 lbs
HGL	1" / 1500 lbs
HHL	1 1/4" / 1500 lbs
HKL	1 1/2" / 1500 lbs
HLL	2" / 1500 lbs
YYY	others, please specify
	15.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

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3.20.4 Order Codes (continuation)

Code	Description
	15.4 Gasket Counter Flanges
00	without
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify
	15.5 Bolts & nuts Counter Flanges
00	without
7D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN160)
7C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN160)
7B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN160)
EE	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
EF	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
EG	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
EH	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
EJ	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
EK	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
EL	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 1500lbs RF/RTJ)
EM	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
EN	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 1500lbs RF/RTJ)
EP	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2"1500lbs RF/RTJ)
ER	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
ET	ASME B16.5 UNC: 5/8" x 108 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

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3.20.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
11V324K3	160	1.4404/316L	45	265	0,7736	vented	
11T330K3	160	Titanium	45	325	0,4901	vented	2
11T024K1	130	Titanium	45	265	0,8600	sealed	2
11T024K3	130	Titanium	45	265	0,7450	sealed	1,2
11T030K1	130	Titanium	45	325	0,7822	sealed	2
11T030K3	130	Titanium	45	325	0,6949	sealed	1,2
11T040K1	130	Titanium	45	425	0,7028	sealed	2
11T040K3	130	Titanium	45	425	0,6391	sealed	1,2
11T050K1	130	Titanium	45	525	0,6587	sealed	2
11T050K3	130	Titanium	45	525	0,6106	sealed	1,2
11T060K1	130	Titanium	45	625	-	sealed	2
11T060K3	130	Titanium	45	625	-	sealed	1,2
11T124K3	150	Titanium	45	265	0,7324	sealed	2
11T130K3	150	Titanium	45	325	0,7042	sealed	1,2
11T140K3	150	Titanium	45	425	0,6164	sealed	2
11T150K3	150	Titanium	45	525	0,6008	sealed	1,2
11T224K1	160	Titanium	42	265	0,9768	sealed	2
11T224K3	160	Titanium	42	265	0,8120	sealed	1,2
11T230K1	160	Titanium	42	325	0,8871	sealed	2
11T230K3	160	Titanium	42	325	0,7613	sealed	1,2
11T240K1	160	Titanium	42	425	0,7832	sealed	2
11T240K3	160	Titanium	42	425	0,6934	sealed	1,2
11T250K1	160	Titanium	42	525	0,7268	sealed	2
11T250K3	160	Titanium	42	525	0,6571	sealed	1,2
11T260K1	160	Titanium	42	625	-	sealed	2
11T260K3	160	Titanium	42	625	-	sealed	1,2

1: only with 316SS or Alumium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

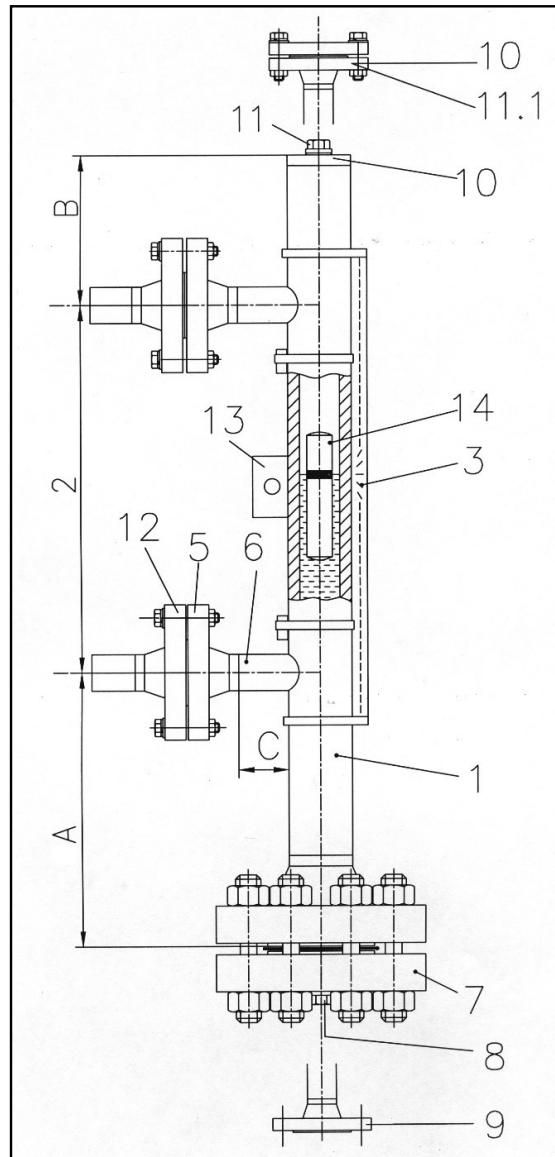
ITA

3. Level Gauges in Detail

ITA-12

3.21.1 ITA-12

Characteristics: PN250 / Float pipe and flange material: 1.4571



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 5,54 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-12

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 5,54 mm seamless, welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 1500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	316Ti (1.4571); Titanium***
Operation temperature:	-50..+400 °C
Operation pressure:	max. 250 bar
Operation density:	min. 0,57 kg/dm ³ (vented float) min. 0,828 kg/dm ³ (sealed float)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type (Titanium) Length: -270 mm -330 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 100 mm

Base equipment printed in bold letters!

* for densities < 0,57 kg/dm³ enlarge the scale A

** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

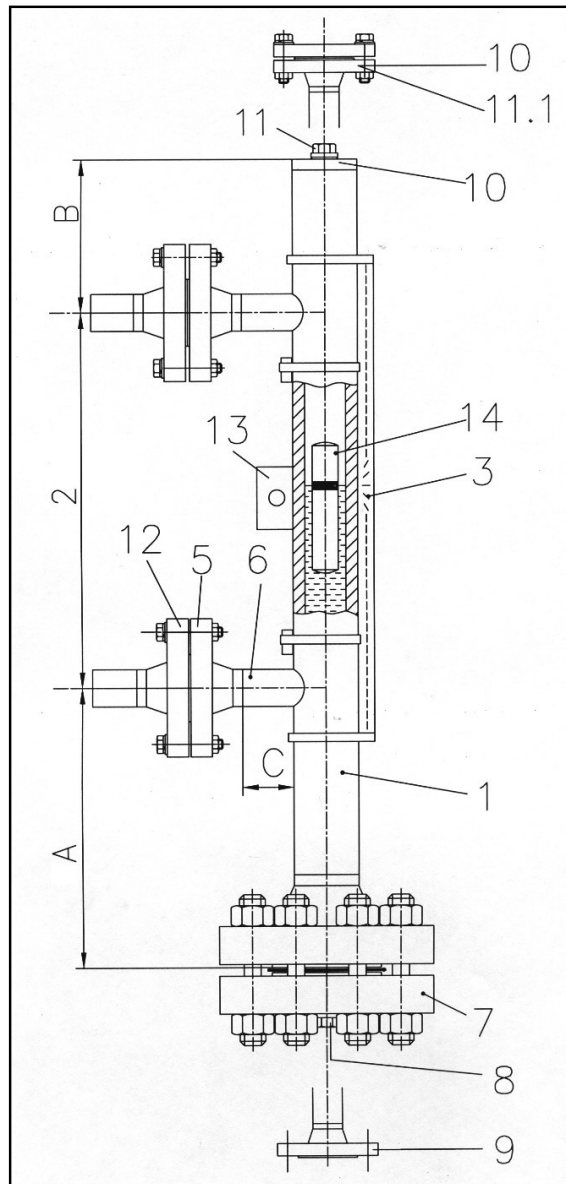
ITA

3. Level Gauges in Detail

ITA-12.0

3.21.2 ITA-12.0

Characteristics: PN250 / Float pipe: 1.4571 and flanges: CS



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 5,54 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-12.0

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 5,54 mm seamless, welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 1500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	316Ti (1.4571); Titanium***
Operation temperature:	-50..+400 °C
Operation pressure:	max. 250 bar
Operation density:	min. 0,57 kg/dm ³ (vented float) min. 0,828 kg/dm ³ (sealed float)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type (Titanium) Length: -270 mm -330 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** - C = 100 mm

Base equipment printed in bold letters!

* for densities < 0,57 kg/dm³ enlarge the scale A

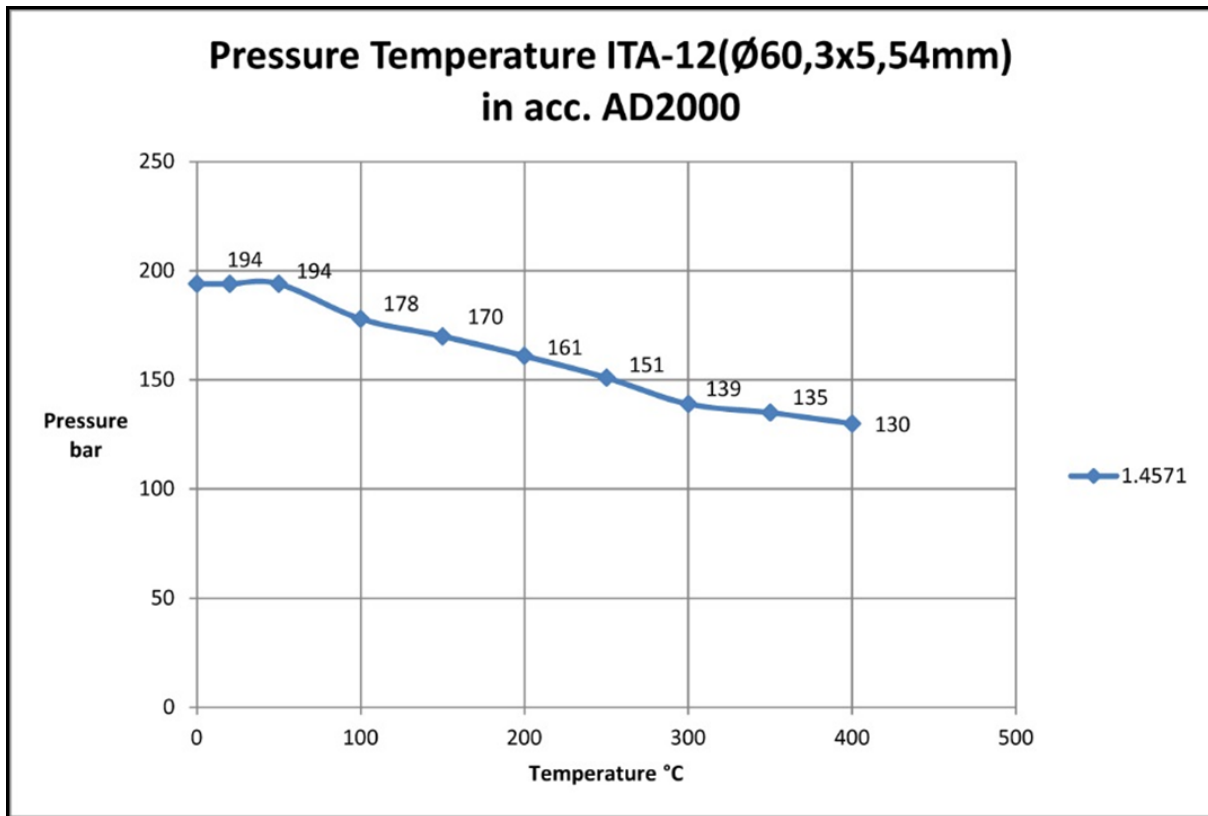
** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

ITA-12/-12.0

3.21.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes

Mag. Level Gauge Type ITA-12 / ITA-12.0 / PN250

Order Codes mag. Level gauge type ITA-12 / ITA-12.0 / PN250

Code	Description
	Mag. Level Gauge type ITA-12 & ITA-12.0, PN250/1500 lbs
	1. Type
ITA-12 ITA-12.0	ITA-12, PN250/1500 lbs /Float pipe and Flanges: 1.4571 ITA-12.0, PN250/1500 lbs /Float pipe: 1.4571; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
40	Ø60,3x5,54mm (seamless), mat.: 316L/316L
41	Ø60,3x5,54mm (seamless), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K58	> 5000 mm - with flange connection: DN50 PN250, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	7.2 Nominal size / pressure rating
000	welding or threaded connection
A08	DN15 / PN250
A18	DN20 / PN250
A28	DN25 / PN250
A38	DN32 / PN250
A48	DN40 / PN250
A58	DN50 / PN250
AEL	1/2" / 1500 lbs
AFL	3/4" / 1500 lbs
AGL	1" / 1500 lbs
AHL	1 1/4" / 1500 lbs
AKL	1 1/2" / 1500 lbs
ALL	2" / 1500 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	Without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B58	Flange DN50 PN250 incl. blind flange
BLL	Flange 2" ANSI 1500 lbs incl. blind flange
L58	Flange DN50 PN250 reinforced for shut-off valve on side
LLL	Flange 2" ANSI 1500 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
8D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN250)
8C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN250)
8B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN250)
FE	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
FF	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
FG	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FH	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FJ	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FK	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FL	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 1500lbs RF/RTJ)
FM	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
FN	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 1500lbs RF/RTJ)
FP	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 1500lbs RF/RTJ)
FR	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
FT	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	10. Drain plug
0	without
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	11.2 nominal size / pressure rating
000	without
D08	stud with flange DN15 PN250
D18	stud with flange DN20 PN250
D28	stud with flange DN25 PN250
D38	stud with flange DN32 PN250
D48	stud with flange DN40 PN250
DEL	stud with flange 1/2" ANSI 1500 lbs
DFL	stud with flange 3/4" ANSI 1500 lbs
DGL	stud with flange 1" ANSI 1500 lbs
DHL	stud with flange 1 1/4" ANSI 1500 lbs
DKL	stud with flange 1 1/2" ANSI 1500 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E08	DN15 PN250
E18	DN20 PN250
E28	DN25 PN250
E38	DN32 PN250
E48	DN40 PN250
EEL	1/2" ANSI 1500 lbs
EFL	3/4" ANSI 1500 lbs
EGL	1" ANSI 1500 lbs
EHL	1 1/4" ANSI 1500 lbs
EKL	1 1/2" ANSI 1500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C58	Flange DN50 PN250 incl. blind flange
CLL	Flange 2" ANSI 1500 lbs incl. blind flange
L58	Flange DN50 PN250 reinforced for shut-off valve on side
LLL	Flange 2" ANSI 1500 lbs reinforced for shut-off valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	12.3 Bolts & nuts float pipe top end finish
00	without (top = End cap)
8D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN250)
8C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN250)
8B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN250)
FE	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
FF	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
FG	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FH	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FJ	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FK	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FL	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2"1500lbs RF/RTJ)
FM	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
FN	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv- (2" 1500lbs RF/RTJ)
FP	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 1500lbs RF/RTJ)
FR	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
FT	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.2 nominal size / pressure rating
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	14.2 nominal size / pressure rating
000	without
F08	stud with flange DN15 PN250
F18	stud with flange DN20 PN250
F28	stud with flange DN25 PN250
F38	stud with flange DN32 PN250
F48	stud with flange DN40 PN250
FEL	stud with flange 1/2" ANSI 1500 lbs
FFL	stud with flange 3/4" ANSI 1500 lbs
FGL	stud with flange 1" ANSI 1500 lbs
FHL	stud with flange 1 1/4" ANSI 1500 lbs
FKL	stud with flange 1 1/2" ANSI 1500 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G08	DN15 PN250
G18	DN20 PN250
G28	DN25 PN250
G38	DN32 PN250
G48	DN40 PN250
GEL	1/2" ANSI 1500 lbs
GFL	3/4" ANSI 1500 lbs
GGL	1" ANSI 1500 lbs
GHL	1 1/4" ANSI 1500 lbs
GKL	1 1/2" ANSI 1500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3,2-12,5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	15.2 nominal size / pressure rating
000	without
H08	DN15 / PN250
H18	DN20 / PN250
H28	DN25 / PN250
H38	DN32 / PN250
H48	DN40 / PN250
H58	DN50 / PN250
HEL	1/2" / 1500 lbs
HFL	3/4" / 1500 lbs
HGL	1" / 1500 lbs
HHL	1 1/4" / 1500 lbs
HKL	1 1/2" / 1500 lbs
HLL	2" / 1500 lbs
YYY	others, please specify
	15.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description
	15.4 Gasket Counter Flanges
00	without
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify
	15.5 Bolts & nuts Counter Flanges
00	without
8D	DIN 2510 Form L: M24 x 140 mm; mat. YK (CK35) electro galvanized (DN50 PN250)
8C	DIN 2510 Form L: M24 x 140 mm; mat. A2-70 (DN50 PN250)
8B	DIN 2510 Form L: M24 x 140 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN360)
FE	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"1500lbs RF/RTJ)
FF	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"1500lbs RF/RTJ)
FG	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FH	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FJ	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 1500lbs RF/RTJ)
FK	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 1500lbs RF/RTJ)
FL	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 1500lbs RF/RTJ)
FM	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"1500lbs RF/RTJ)
FN	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 1500lbs RF/RTJ)
FP	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2"1500lbs RF/RTJ)
FR	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 1500lbs RF/RTJ)
FT	ASME B16.5 UNC: 7/8" x 150 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 1500lbs RF/RTJ)
YY	others, please specify
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-12 & ITA-12.0

3.21.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
12V324K1	250	1.4404/316L	45	265	0,7736	vented	
12T324K3	250	Titanium	45	325	0,5526	vented	2
12T224K1	250	Titanium	42	265	1,0396	sealed	2
12T224K3	250	Titanium	42	265	0,9659	sealed	1,2
12T230K1	250	Titanium	42	325	0,925	sealed	2
12T230K3	250	Titanium	42	325	0,7978	sealed	1,2
12T240K1	250	Titanium	42	425	0,8304	sealed	2
12T240K3	250	Titanium	42	425	0,7394	sealed	1,2
12T250K1	250	Titanium	42	525	0,7763	sealed	2
12T250K3	250	Titanium	42	525	0,7055	sealed	1,2
12T124K3	250	Titanium	38	265	0,8944	sealed	2
12T130K3	250	Titanium	38	325	0,8281	sealed	1,2

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

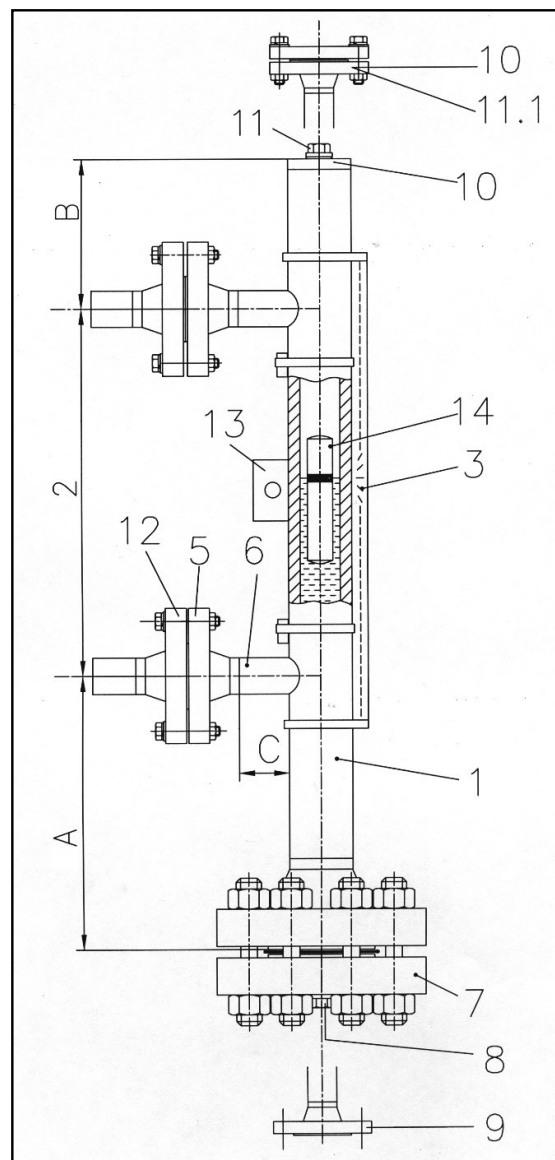
ITA

3. Level Gauges in Detail

ITA-13

3.22.1 ITA-13

Characteristics: PN320 / Float pipe and flange material: 1.4571



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 8,7 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-13

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 8,7 mm seamless, welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 2500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	same as pipe material
Float material:	Titanium***
Operation temperature:	-50..+400 °C
Operation pressure:	max. 320 bar
Operation density:	min. 0,5032 kg/dm ³ (vented float) min. 0,7582 kg/dm ³ (sealed float)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type (Titanium) Length: -270 mm -330 mm -430 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 100 mm

Base equipment printed in bold letters!

* depending on density, enlarge the scale A

** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

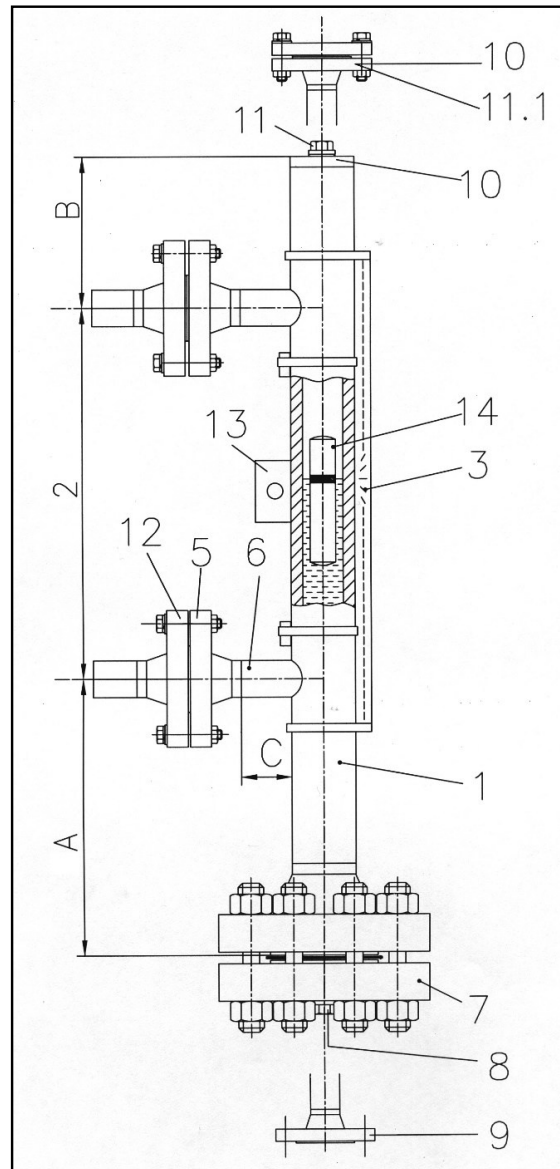
ITA

3. Level Gauges in Detail

ITA-13.0

3.22.2 ITA-13.0

Characteristics: PN320 / Float pipe: 1.4571 and flanges: CS



Key:

- | | | | |
|---|--|----|-------------------------------|
| 1 | Float pipe welded, dimensions 60,3 x 8,7 mm | 9 | Additional drain flange, open |
| 2 | c to c distance | 10 | Float pipe top end finish |
| 3 | Design (Indication rail) | 11 | Vent plug |
| 5 | Process connection side/side | 12 | Counter flanges |
| 6 | Side studs welded with T-pieces
for 100 % X-ray-testing | 13 | Additional bracket |
| 7 | Float removal flange | 14 | Float pipe seamless |
| 8 | Drain plug | 15 | Float |

Mag. Level Gauge type ITA

Technical Specifications magnetic level gauge type ITA-13

Principle:	Communicating tubes with magnetic float
Mounting position:	vertical
Measuring range:	max. 5000 mm (one-part) > 5000 mm 2- or multipart
Pipe diameter:	60,3 x 8,7 mm seamless, welding stud or butt-weld connection wie T-pieces
Process connection:	to specify: Flanges DN15...50 (1/2"...2" 2500#), Welding or threaded stud
Drain/Vent connections:	Plug 1/2"NPT
Pipe material:	1.4571 ; 1.4435; 1.4539; Hastelloy C4 (2.4610); Inconel 625 (2.4856); Inconel 825 (2.4858); Titan (3.7035) (other materials on request)
Flange material:	CS
Float material:	Titanium***
Operation temperature:	-50...+400 °C
Operation pressure:	max. 320 bar
Operation density:	min. 0,5032 kg/dm ³ (vented float) min. 0,7582 kg/dm ³ (sealed float)
Viscosity:	max. 5000 mPa s
Bolts & Nuts:	CS SS
Gasket	Spiral wound, 316Ti Cam profile, 316Ti
Indication rail:	Makrolon up to 120 °C Aluminium up to 400 °C 1.4301 up to 400 °C
Float types:	Cylindrical, sealed type (Titanium) Length: -270 mm -330 mm -430 mm
Standard dimensions:	-A = 240 mm* -B = 130 mm** -C = 100 mm

Base equipment printed in bold letters!

* depending on density, enlarge the scale A

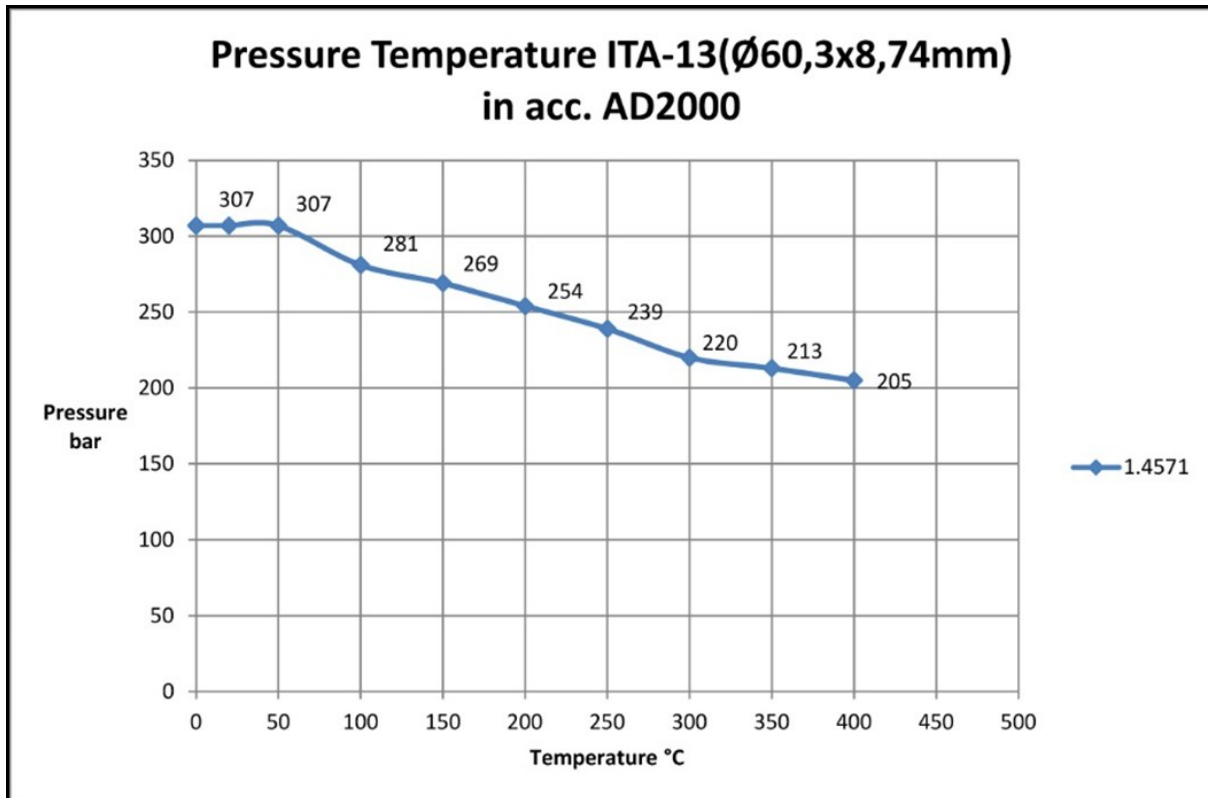
** for end cap B=170 mm for WN

*** not for use for hydrogen or alcohol-compounds

Mag. Level Gauge type ITA

ITA-13/-13.0

3.22.3 Pressure-Temperature Table ITA-3 (float pipe)



Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes

Mag. Level Gauge Type ITA-13 / ITA-13.0 / PN320

Order Codes mag. Level gauge type ITA-13 / ITA-13.0 / PN320

Code	Description
	Mag. Level Gauge type ITA-13 & ITA-13.0, PN320/2500 lbs
	1. Type
ITA-13 ITA-13.0	ITA-13, PN320/2500 lbs /Float pipe and Flanges: 1.4571 ITA-12.0, PN320/2500 lbs /Float pipe: 1.4571; Flanges: C.S.
	2. Type approval
00	without
EX	Type approval acc. ATEX
YY	other type approval
	2.1 Transmitter (selection in connection with type approval EX)
0	without
1	AVK-5333 Exia
2	AVK-5335 Exia
3	AVK-5350 Exia
4	AVK-TMT802/84/85 Exia
5	AVK-TMT142/162 Exia
6	AVK-TMT181 Exia
7	AVK-TMT182 Exia
8	AVK-STT25 Exia
9	AVK-STT17 Exia
A	M500 EExd
B	AT200 EExd
C	FMP EExd
	2.2 Switch (selection in connection with type approval EX)
0	without
1	1690ATEX
2	LMS-A EExd/LMS-AH EExd
3	MS10 EExd/MS10H EExd
4	MS11 EExd/MS11H EExd
5	NI-Ex Exia/NI-ExH Exia

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	2.3 Heat tape (selection in connection with type approval EX)
0	without
1	TSL-X
2	HSQ
3	HSB
4	QTVR2-CT
	3. Size & material float pipe/material flanges
44	Ø60,3x8,74mm (seamless), mat.: 316L/316L
45	Ø60,3x8,74mm (seamless), mat.: 316Ti/316Ti
YY	other (special) materials, please specify
	4. c to c distance
L	c to c distance in mm
	4.1 Upper pipe stand off
B	Dim. B: 130 mm (Standard)
Y	Dim. B. in mm (please advise)
	4.2 Lower pipe stand off
A	Dim. A: 240 mm (Standard)
Y	Dim. A. in mm (please advise)
	5. Indication rail
0	without indication rail
1	indication rail material: Makrolon; max 120 °C
2	indication rail material: Aluminium; max 400 °C
3	indication rail material: 1.4404; max 400 °C
	6. c to c distance > 5000 mm
00	< 5000 mm - one part design
K58	> 5000 mm - with flange connection: DN50 PN250, two or more parts design
	7. Process connection side/side
SA	welding connection
GS	threaded connection
FA	flanged connection
YY	others, please specify
	7.1 Standard
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	7.2 Nominal size / pressure rating
000	welding or threaded connection
A09	DN15 / PN320
A19	DN20 / PN320
A29	DN25 / PN320
A39	DN32 / PN320
A49	DN40 / PN320
A59	DN50 / PN320
AEM	1/2" / 2500 lbs
AFM	3/4" / 2500 lbs
AGM	1" / 2500 lbs
AHM	1 1/4" / 2500 lbs
AKM	1 1/2" / 2500 lbs
ALM	2" / 2500 lbs
YYY	others, please specify
	7.3 Flange faces process connection flanges
00	welding or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	8. Side studs welded with T-pieces for 100 % X-ray testing
0	Without
T	T-pieces

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	9. Float removal flange (bottom side)
000	without
BXX	End cap (only if float removal flange (top side))
B59	Flange DN50 PN320 incl. blind flange
BLM	Flange 2" ANSI 2500 lbs incl. blind flange
L59	Flange DN50 PN320 reinforced for shut-off valve on side
LLM	Flange 2" ANSI 2500 lbs reinforced for shut-off valve on side
YY	others, please specify
	9.1 Surface float removal flange (bottom side)
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip; Rz = 160µm)
D3	DIN Form C (raised sealing strip; Rz = 160µm)
D4	DIN Form D (raised sealing strip; Rz = 40µm)
D5	DIN Form E (raised sealing strip; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	9.2 Gasket
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.34 Order Codes (continuation)

Code	Description
	9.3 Bolts & nuts float removal flange (bottom side)
00	without (bottom side = End cap)
9D	DIN 2510 Form L: M24 x 120 mm; mat. YK (CK35) electro galvanized (DN50 PN320)
9C	DIN 2510 Form L: M24 x 120 mm; mat. A2-70 (DN50 PN320)
9B	DIN 2510 Form L: M24 x 120 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN320)
GE	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2" 2500lbs RF/RTJ)
GF	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2" 2500lbs RF/RTJ)
GG	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GH	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GJ	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GK	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GL	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 2500lbs RF/RTJ)
GM	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2" 2500lbs RF/RTJ)
GN	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 2500lbs RF/RTJ)
GP	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 2500lbs RF/RTJ)
GR	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 2500lbs RF/RTJ)
GT	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 2500lbs RF/RTJ)
YY	others, please specify
	10. Drain plug
0	without
4	Drain plug 1/2" NPT
5	Drain plug 3/4" NPT
6	Drain plug 1" NPT
	11. Additional drain connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	11.1 standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	11.2 nominal size / pressure rating
000	without
D09	stud with flange DN15 PN320
D19	stud with flange DN20 PN320
D29	stud with flange DN25 PN320
D39	stud with flange DN32 PN320
D49	stud with flange DN40 PN320
DEM	stud with flange 1/2" ANSI 2500 lbs
DFM	stud with flange 3/4" ANSI 2500 lbs
DGM	stud with flange 1" ANSI 2500 lbs
DHM	stud with flange 1 1/4" ANSI 2500 lbs
DKM	stud with flange 1 1/2" ANSI 2500 lbs
999	others, please specify
	11.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
E09	DN15 PN320
E19	DN20 PN320
E29	DN25 PN320
E39	DN32 PN320
E49	DN40 PN320
EEM	1/2" ANSI 2500 lbs
EFM	3/4" ANSI 2500 lbs
EGM	1" ANSI 2500 lbs
EHM	1 1/4" ANSI 2500 lbs
EKM	1 1/2" ANSI 2500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	11.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12. Float pipe top end finish
CXX	End cap
C59	Flange DN50 PN320 incl. blind flange
CLM	Flange 2" ANSI 2500 lbs incl. blind flange
L59	Flange DN50 PN320 reinforced for shut-off valve on side
LLM	Flange 2" ANSI 2500 lbs reinforced for shut-off valve on side
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	12.1 Surface float pipe top end finish flange
00	without
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	12.2 Gasket float pipe top end finish flange
00	without (top = End cap)
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	12.3 Bolts & nuts float pipe top end finish
00	without (top = End cap)
9D	DIN 2510 Form L: M24 x 150 mm; mat. YK (CK35) electro galvanized (DN50 PN320)
9C	DIN 2510 Form L: M24 x 150 mm; mat. A2-70 (DN50 PN320)
9B	DIN 2510 Form L: M24 x 150 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN320)
GE	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr.2H electro galv. (2"2500lbs RF/RTJ)
GF	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"2500lbs RF/RTJ)
GG	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GH	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GJ	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GK	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GL	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2"2500lbs RF/RTJ)
GM	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr.B7M/A194 Gr.2HM Xylan ctd(2"2500lbs RF/RTJ)
GN	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv- (2" 2500lbs RF/RTJ)
GP	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2" 2500lbs RF/RTJ)
GR	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 2500lbs RF/RTJ)
GT	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 2500lbs RF/RTJ)
YY	others, please specify
	13. Vent plug at top end
0	without
4	Vent plug 1/2" NPT
5	Vent plug 3/4" NPT
6	Vent plug 1" NPT
	14. Additional vent connection
00	without
SA	welding connection
GS	threaded connection
FA	flanged connection, without blindflange
YY	others, please specify
	14.2 nominal size / pressure rating
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	14.2 nominal size / pressure rating
000	without
F09	stud with flange DN15 PN320
F19	stud with flange DN20 PN320
F29	stud with flange DN25 PN320
F39	stud with flange DN32 PN320
F49	stud with flange DN40 PN320
FEM	stud with flange 1/2" ANSI 2500 lbs
FFM	stud with flange 3/4" ANSI 2500 lbs
FGM	stud with flange 1" ANSI 2500 lbs
FHM	stud with flange 1 1/4" ANSI 2500 lbs
FKM	stud with flange 1 1/2" ANSI 2500 lbs
999	others, please specify
	14.3 Welding neck flange with concentric reducer (X-ray testing)
000	without
G09	DN15 PN320
G19	DN20 PN320
G29	DN25 PN320
G39	DN32 PN320
G49	DN40 PN320
GEM	1/2" ANSI 2500 lbs
GFM	3/4" ANSI 2500 lbs
GGM	1" ANSI 2500 lbs
GHM	1 1/4" ANSI 2500 lbs
GKM	1 1/2" ANSI 2500 lbs
999	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	14.4 Flange faces
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify
	15. Counter Flange Process Connection side/side
00	without
SA	welding connection (To be specified)
GS	threaded connection (To be specified)
FA	flanged connection
YY	others, please specify
	15.1 Standard
0	without
S	welding connection (please specify)
T	threaded connection (please specify)
E	EN 1092-1
A	ASME B 16.5
D	DIN (according to type & pressure rating)
Y	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	15.2 nominal size / pressure rating
000	without
H09	DN15 / PN320
H19	DN20 / PN320
H29	DN25 / PN320
H39	DN32 / PN320
H49	DN40 / PN320
H59	DN50 / PN320
HEM	1/2" / 2500 lbs
HFM	3/4" / 2500 lbs
HGM	1" / 2500 lbs
HHM	1 1/4" / 2500 lbs
HKM	1 1/2" / 2500 lbs
HLM	2" / 2500 lbs
YYY	others, please specify
	15.3 Flange Face Counter Flanges
00	without with welded connection or threaded connection
E1	EN 1092-1 Form A (without sealing strip; Ra 3.2-12.5µm)
E2	EN 1092-1 Form B1 (raised sealing strip; Ra 3,2-12,5µm)
E5	EN 1092-1 Form B2 (raised sealing strip; Ra 0,8-3,2µm)
E3	EN 1092-1 Form C (tongue; Ra 0,8-3,2µm)
E4	EN 1092-1 Form D (groove; Ra 0,8-3,2µm)
A1	ASME B 16.5 Raised Face (RF)
A2	ASME B 16.5 Raised Face Smooth Finish (RFSF)
A3	ASME B 16.5 Flat Face (FF)
A4	ASME B 16.5 Ring-Type Joint (RTJ)
A5	ASME B 16.5 Tongue (ASME)
A6	ASME B 16.5 Groove (ASME)
D1	DIN Form A (without special demand)
D2	DIN Form B (raised sealing strip ; Rz = 160µm)
D3	DIN Form C (raised sealing strip ; Rz = 160µm)
D4	DIN Form D (raised sealing strip ; Rz = 40µm)
D5	DIN Form E (raised sealing strip ; Rz = 16µm)
D6	DIN Form F (tongue acc. DIN 2512)
D7	DIN Form N (groove acc. DIN 2512)
YY	others, please specify

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description
	15.4 Gasket Counter Flanges
00	without
GC	Graphit spiral wound (inner ring: SS/outer ring: CS) up to 400 °C
GS	Graphit spiral wound (inner ring: SS/outer ring: SS) up to 400 °C
RO	Ring-Joint Seal Type R-Oval ASME B16.20
99	others, please specify
	15.5 Bolts & nuts Counter Flanges
00	without
9D	DIN 2510 Form L: M24 x 150 mm; mat. YK (CK35) electro galvanized (DN50 PN320)
9C	DIN 2510 Form L: M24 x 150 mm; mat. A2-70 (DN50 PN320)
9B	DIN 2510 Form L: M24 x 150 mm; mat. Steel YK (CK35) Xylan coated (DN50 PN320)
GE	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr. 2H electro galv. (2"2500lbs RF/RTJ)
GF	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7M/A194 Gr. 2HM el. galv. (2"2500lbs RF/RTJ)
GG	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.1/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GH	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.1/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GJ	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8 Cl.2/A194 Gr. 8 (2" 2500lbs RF/RTJ)
GK	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B8M Cl.2/A194 Gr. 8M (2" 2500lbs RF/RTJ)
GL	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7/A194 Gr. 2H Xylan ctd (2" 2500lbs RF/RTJ)
GM	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. B7M/A194 Gr. 2HM Xylan ctd (2"2500lbs RF/RTJ)
GN	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 electro galv. (2" 2500lbs RF/RTJ)
GP	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 el. galv. (2"2500lbs RF/RTJ)
GR	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7/A194 Gr. 7 Xylan coated (2" 2500lbs RF/RTJ)
GT	ASME B16.5 UNC: 7/8" x 190 mm; mat. A193 Gr. L7M/A194 Gr. 7 Xylan ctd (2" 2500lbs RF/RTJ)
YY	others, please specify
	16. Additional bracket welded to the float pipe
0	without
H	Bracket

(pl. see next page)

Mag. Level Gauge type ITA

ITA-13 & ITA-13.0

3.22.4 Order Codes (continuation)

Code	Description						
	17. Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
13V330K3	320	1.4404/316L	38	325	0,7269	vented	
13T324K3	320	Titanium	38	265	0,5366	vented	2
13T024K3	320	Titanium	38	265	0,8985	sealed	1,2
13T330K3	320	Titanium	38	325	0,5032	vented	1,2
13T040K3	320	Titanium	38	425	0,7582	sealed	1,2
13T050K3	320	Titanium	38	525	0,6700	sealed	1,2

1: only with 316SS or Aluminium Indication rail

2: do not use this hydrogen or alcohol compounds

Mag. Level Gauge type ITA

ITA

4. Equipment

Equipment

4.1 ITA-3 Cryo

If Armaflex is used for insulation ($t=9$ mm) the material for the indication rail will be aluminium. As standard for the level gauge in Cryo-design we use a float chamber $\text{Æ}60,3 \times 2$ mm with a float from titanium ($\text{Æ}50,8 \times 240$ mm length) down to a liquid density of $0,6 \text{ kg/dm}^3$.

For temperatures below -40°C the Armaflex insulation is double ply, the upper layer only up to the indication rail.

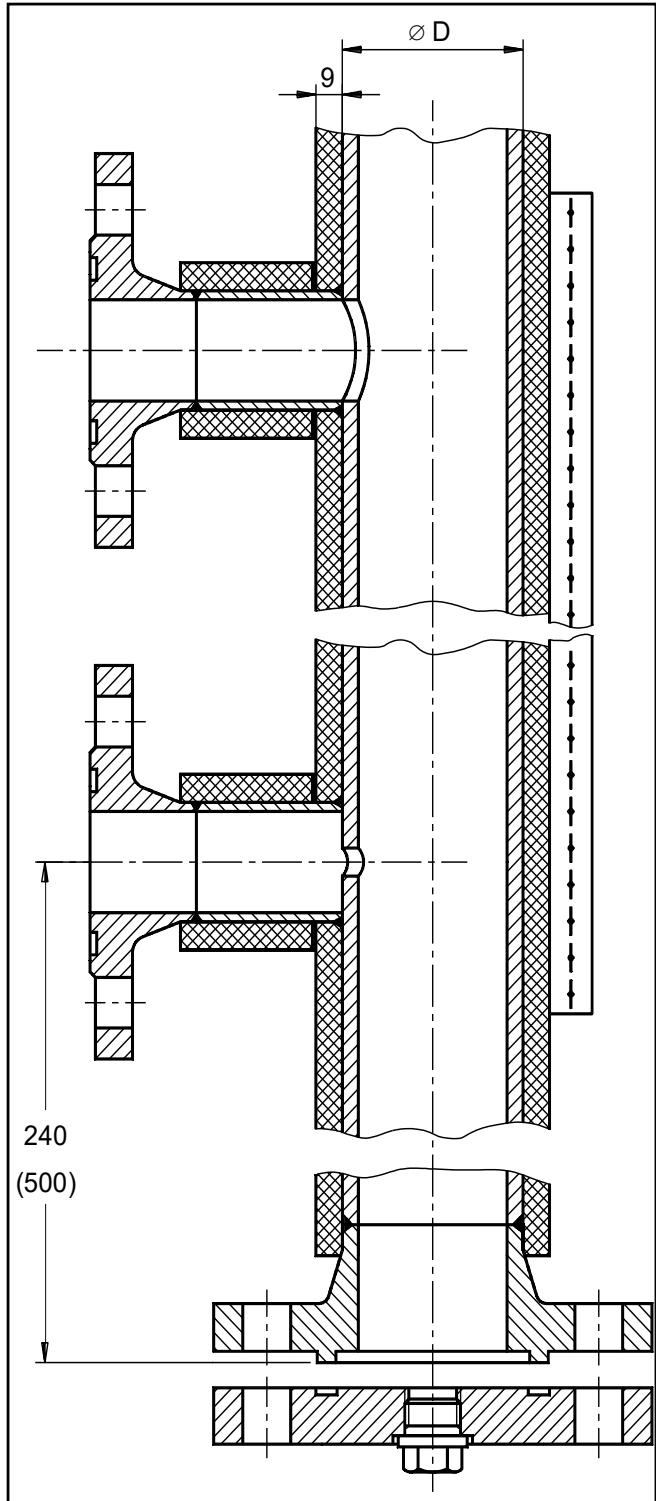
The customer should also insulate the process flanges.

For vaporizing media (for example ammonia) we recommend to use floats with 4 distance sleeves (In this case the floats are smaller than standard floats). This construction prevents catapulting the float upwards (this would cause switch failures) if gas evolution appears.

For temperatures down to -20°C we are using a float chamber $\text{Æ}60,3 \times 2$ mm and a titanium float $\text{Æ}45 \times 400$ mm, for temperatures below -20°C we are using a float chamber $\text{Æ}64 \times 2$ mm and a titanium float $\text{Æ}50,8 \times 500$ mm.

In every case we use flanges DN50 as drain connections (weld neck and blind flanges with groove and tongue). When the dimension of the float chamber is $\text{Æ}64 \times 2$ mm, it is necessary to modify the weld neck flange.

On request by the customer we make use of small hole (throttling part) to transmit the liquid level to the float chamber. It stabilizes the float movement (damping).

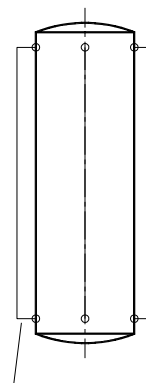


Mag. Level Gauge type ITA

throttling part dependence on the temperature:

Ø 4 mm for T -20°C

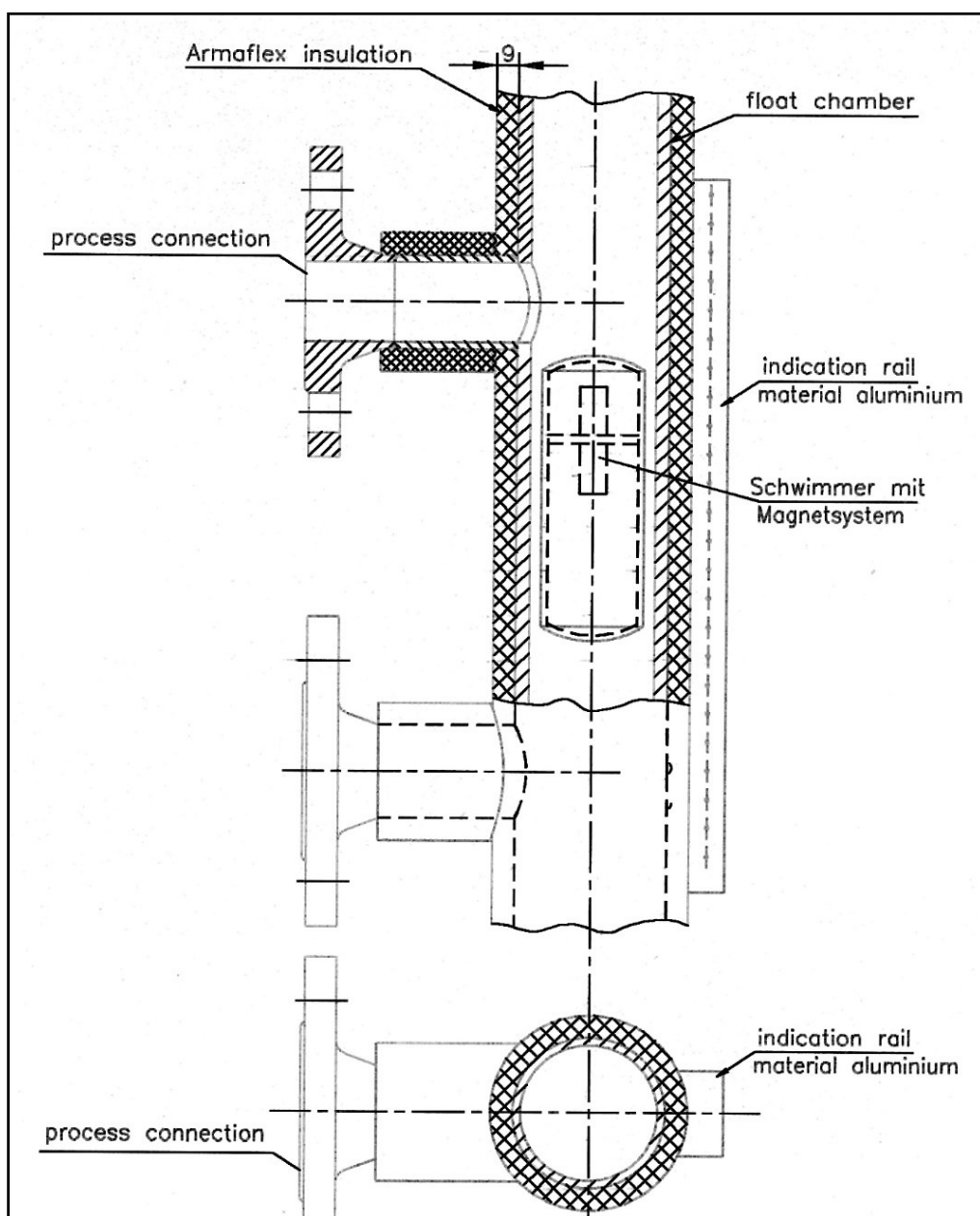
Ø 2 mm for T < -20°C



distance sleeve

Equipment

4.2. Armaflex® - Insulation



Equipment

4.3 Heat Insulation

Isolation and sealing material:

made of e-glassyarns

Technical data:

Composition in %:	: 53 % SiO ₂ , 16 % CaO, 13 % Al ₂ O ₃ , 7 % B ₂ O ₃ , 4 % MgO, 1 % Na ₂ + K ₂ O
Portion organic substance	: < 1 % (combust at first heating-up)
Density (g/cm ³)	: 2,5
Temperature resistance	: 500°C/550°C
Degree of moisture	: 1%
Annealing loss	: 0,6%
Shrinking	: 500°C = 0 %
Resistance against	: Oil, grease, water, temporary steam and numerous organic acids/solvents. Good resistance against sudden heat waves. Good thermal electrical and acoustical insulation resistance: Toxicologically harmless No handling obligations

Mag. Level Gauge type ITA

Equipment

4.4 Switches

Technical Data

1. General Table

Switch	1690	1690ATEX	LMS-A	LMS-A-EExd	MS09K	MS10 EExd
Part-no.	6417512712 ¹⁾ 6417512713 ²⁾	MAK-1215-M-3-EX ¹⁾ MAK-1215-M-15-EX ²⁾				
Housing	synthetic	synthetic	Al Si 12	Al Si 12	synthetic	Aluminium
Contact Function	bistable change-over contact	bistable change-over contact	bistable change-over contact**	bistable change-over contact	break-or make- contact, change-over contact	break-or make- contact, change-over contact
Dimensions	20x15x80	20x15x80	65x65x40	Ø138x80	110x75x50	120x120x110
Breaking on rupt. capacity	250 V AC/DC	250 V AC/DC	220 VAC	220 VAC	250 VAC	250 VAC
	1,0 A	1,0 A	1,5 A	1,5 A	10 A	10 A
	80 VA	80 VA	80 VA	80 VA	----	----
Protective System	IP67 EN 60529	IP67 EN 60529	IP65 EN 60529	IP65 EN 60529	IP65 EN 60529	IP65 EN 60529
Switch-hysteresis	15 mm	15 mm	8...12 mm	8...12 mm	----	----
Medium temperature	max. 130 °C	max. 130 °C	max. 200 °C*	max. 200 °C	max. 100 °C	max. 200 °C
EEx-protection	----	II 2G Ex mb IIC T6 Gb; II 2 D Ex mt	----	EEx d II CT6	----	EEx d II CT6
Connection	----	----	PG7,5	4 connection (3/4" NPT)	PG11	3/4" NPT

Electric connection with 3-channel plug and earth.

For all switches the international standard EN 60529 is valid.

1) Part no. for 3 m cable

2) Part no. for 15 m cable

*Type LMS-A in heat protection version can stand a max. temp. of 400 °C

**available with gold contact

2. NI Ex NJ switch

Inherent safety EEx-switch, on request with define error message.

Contact transmitter	: Supply voltage	: 8 V DC
	: Max. temperature	: 60°C
	: Cable connection at housing	: PG11
Section switch appliance	: Supply voltage	: 220 V + 15 % (45...60 Hz)
	: Power consumption	: Appr. 1,5 V
	: Open circuit voltage	: 8 V DC
	: Allowed charge	: 4A/250 V/250 VA
	: Allowed temperature	: -20...+60-°C

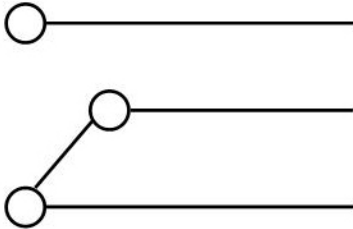
Mag. Level Gauge type ITA

Equipment

4.4 Switches (continuation)

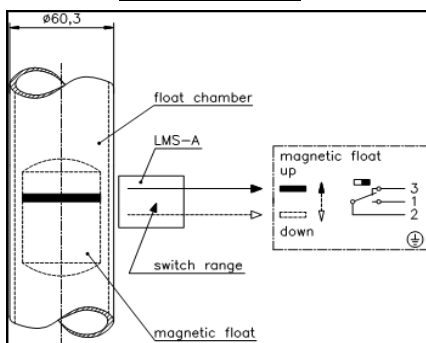
3. Switch diagrams

Types: 1690, 1690ATEX, LMS-A, LMS-A-EExd, MS09K and MS10 EExd

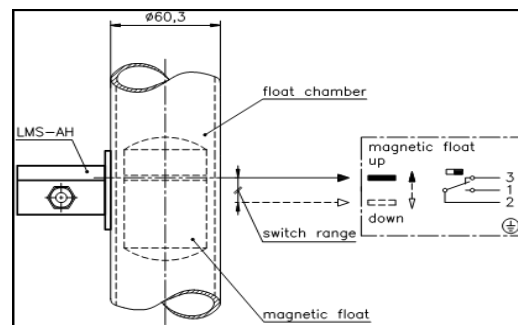


bistable change-over contact

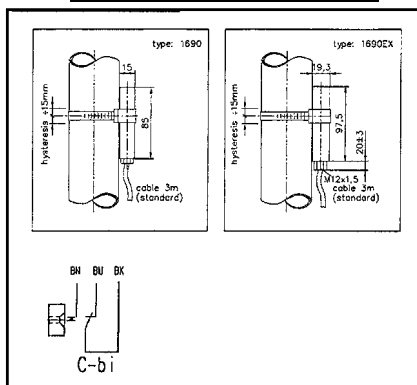
Switch LMS-A



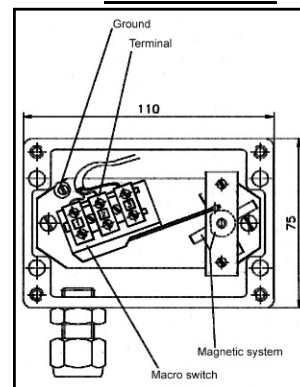
Switch LMS-AH



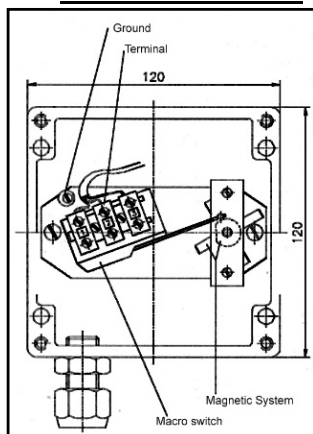
Switch 1690/1690ATEX



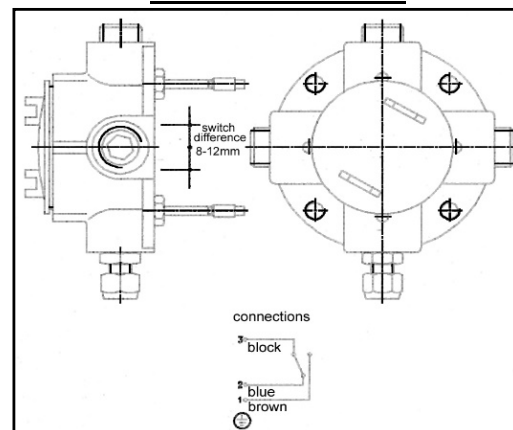
Switch MS9K



Switch MS10 EExd



Switch LMS-A-EExd

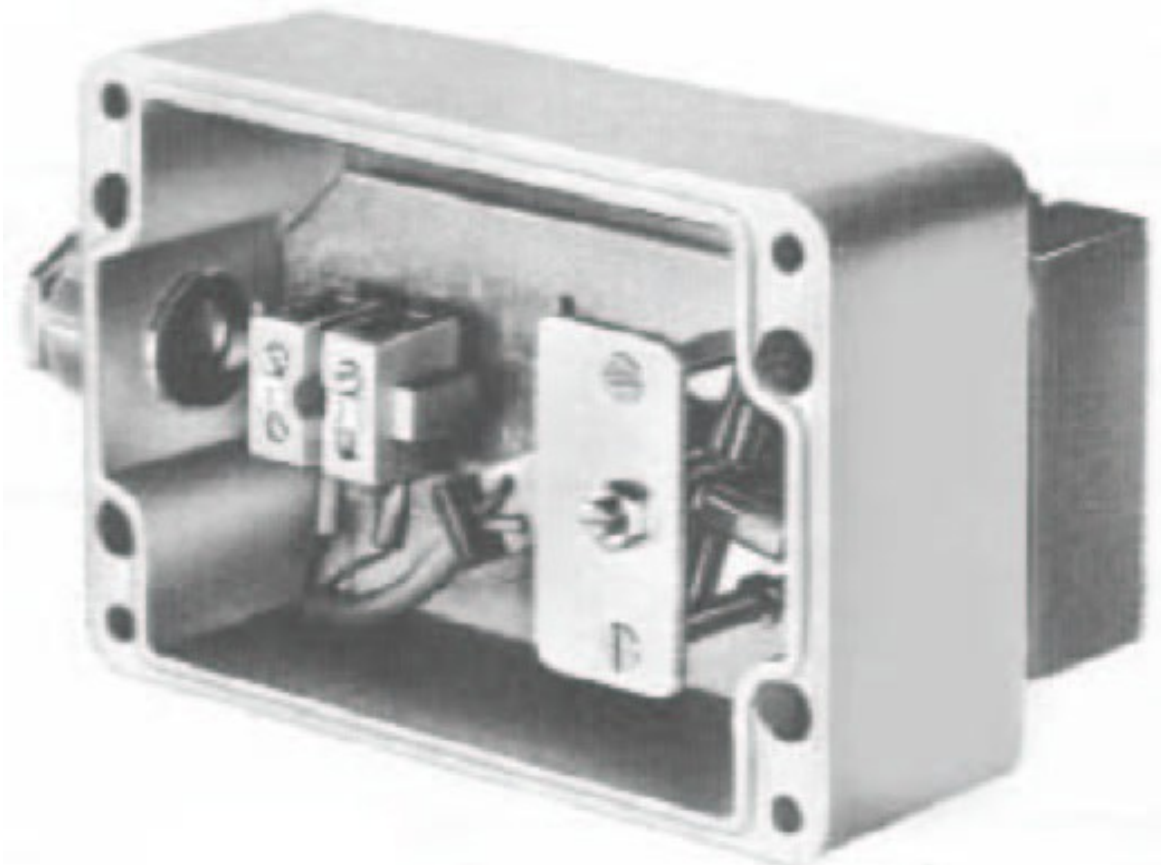
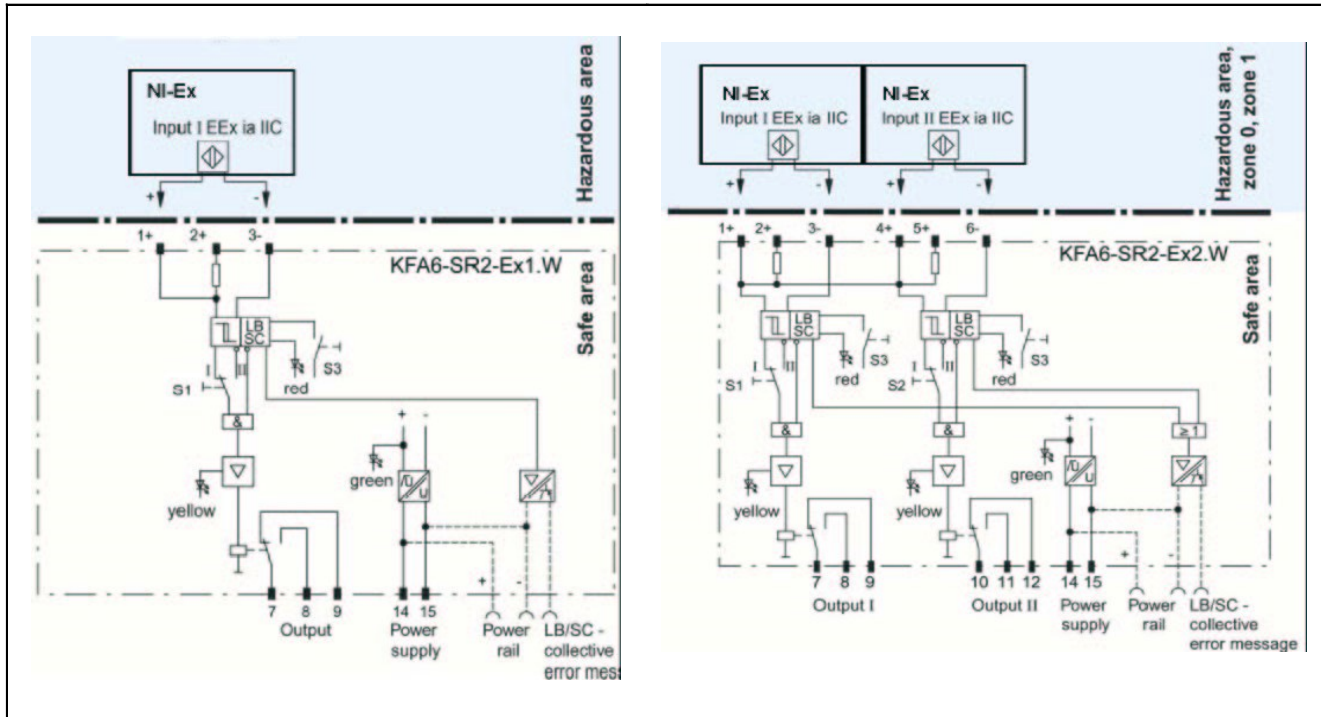


Mag. Level Gauge type ITA

Equipment

4.4 Switches (continuation)

Switch Ni Ex NJ



Switch NI-Ex-NJ

Mag. Level Gauge type ITA

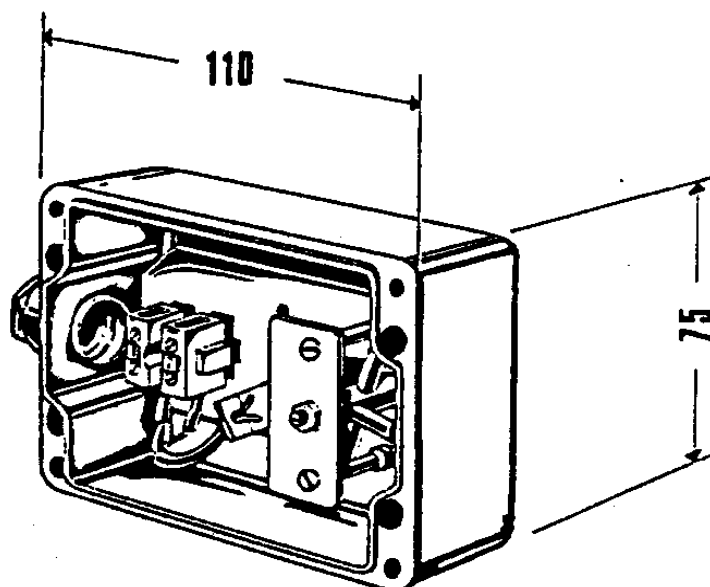
Equipment

4.5 Contact NJ Ex

The contact NJ-EX is an inductive contact NJ 1.5-6.5 N, kontex system, Protective system EEx ia IIC T6

Function:

Actuation is provided by the magnet installed in the float. The follower magnet system of the contact maker moves the switching disk, which serves for releasing the contact between two small inductances for the slotted initiator and thereby varies the attenuation of the resonant circuit.



Technical data:

Electrical connection	:	8 V DC
Temp. / ambient temp.	:	60°C
Cable connections	:	M20x1,5

Switch relay:

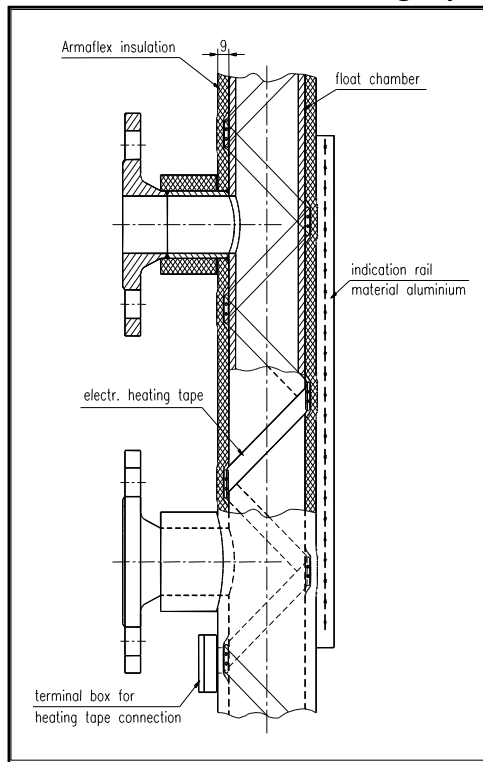
KFA6-SR2-Ex1.W	:	for 1 inductive contact EEx ia IIC
KFA6-SR2-Ex2.W	:	for 2 inductive contacts EEx ia IIC

Mag. Level Gauge type ITA

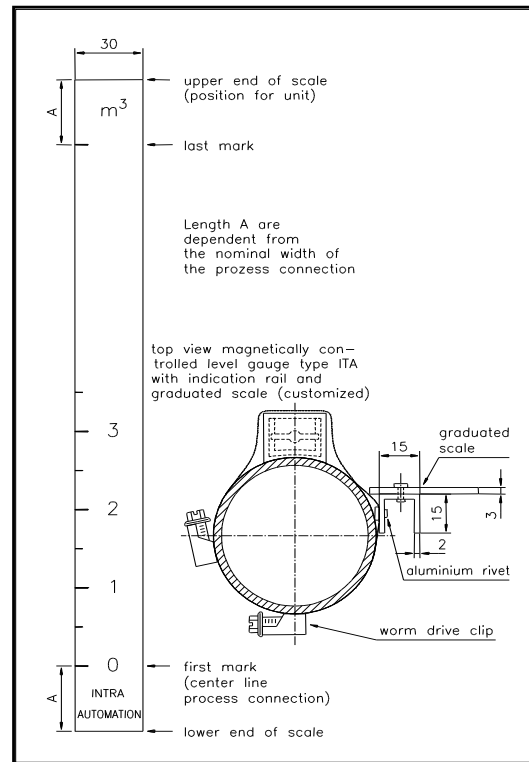
Equipment

4.6 Indication rails

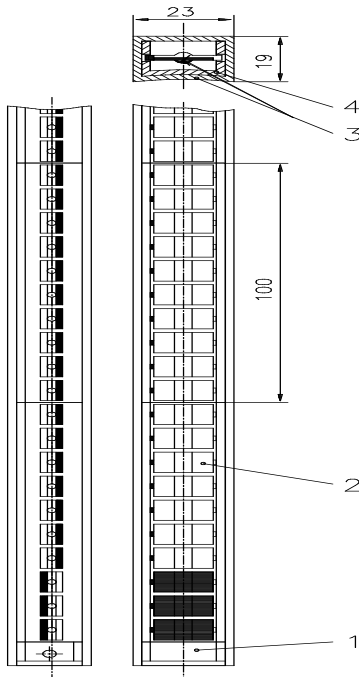
Armaflex®-insulation and heating tape ITA



Indication rail with scale for ITA

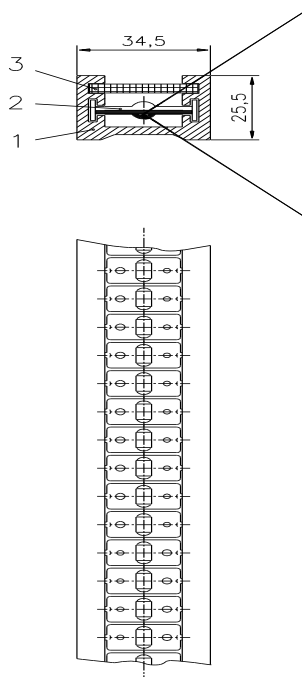


Makrolon



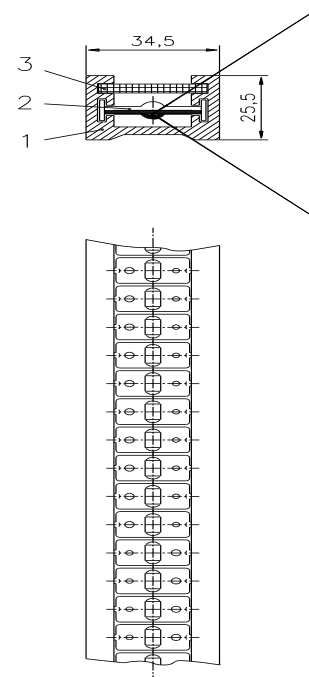
1. Sealing cap
2. Indication lamina with magnet
3. Rectangular profile
4. U-profile

Indication rails: Aluminium



1. U-profile
2. Indication lamina with magnet
3. Transparent covering
4. Hermetically sealed

316SS

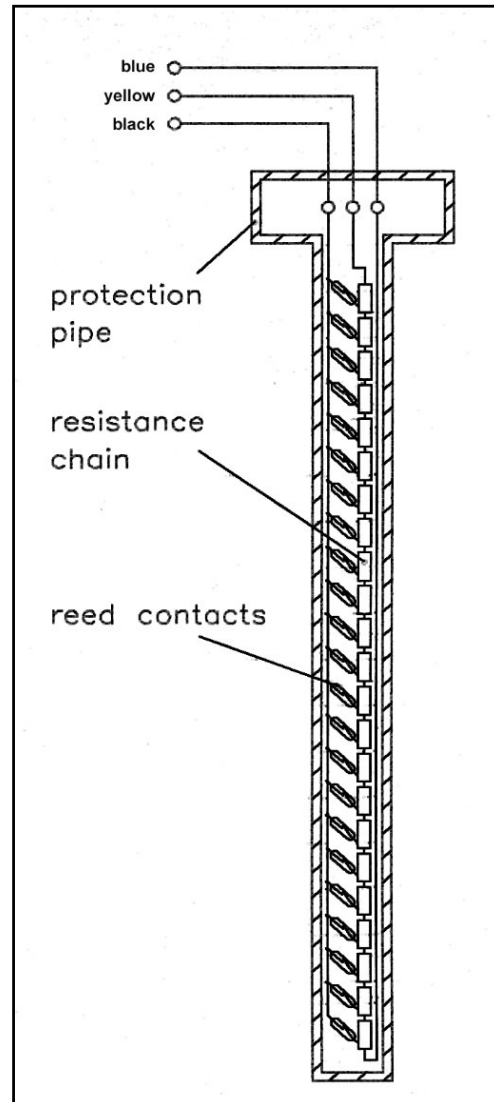
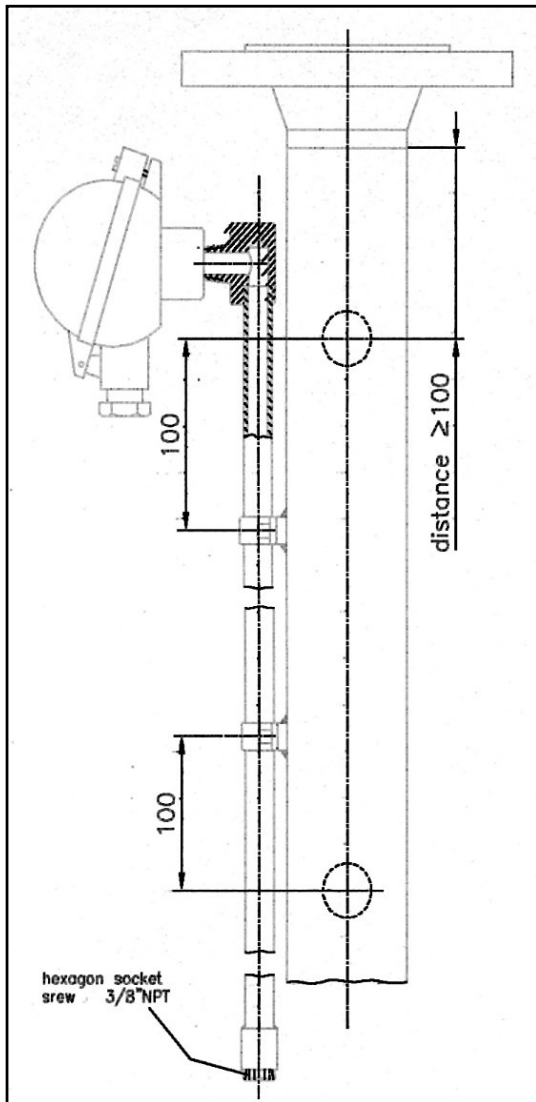


5. U-profile
6. Indication lamina with magnet
7. Transparent covering
8. Hermetically sealed

Mag. Level Gauge type ITA

Equipment

4.7 Niveau-Source



Measuring principle

The resistance chain with the reed contacts are built in a pipe made of material 316SS. This so-called "Reed-chain" is mounted on the float chamber with tube clamps. According to the movement of the float, the float magnet closes one reed contact which produces a voltage (or resistance) proportional to the height of the liquid in the tank.

You get a near-analogous output signal, with a resolution of about 10 mm.

The resistance chain receives its power supply from the transmitter. The 4...20 mA transmitter output signal can be transferred to an indicator or can be used to drive alarm contacts. In the case of an error the output signal becomes higher than 22 mA.

Connection:

As a standard, the reed chain is supplied with a transmitter that is installed inside the housing-head, 2-wire connection to the transmitter is only required.

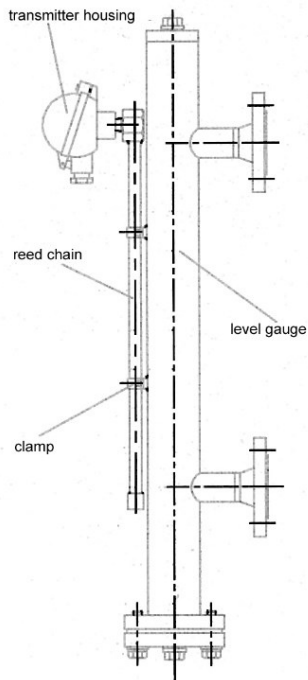
Mag. Level Gauge type ITA

Equipment

4.8 Reed-contact

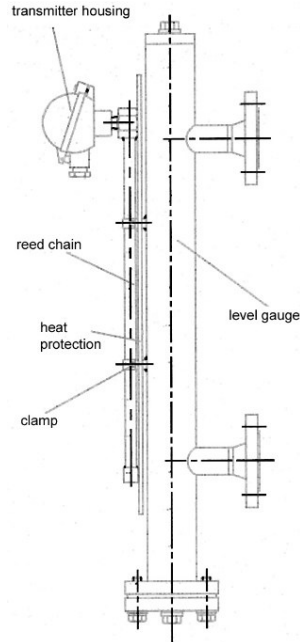
Standard-reed chain

Max. medium temperature	: 150°C
Protection pipe	: Ø14 mm
Material	: 316 Ti
Housing	: IP65

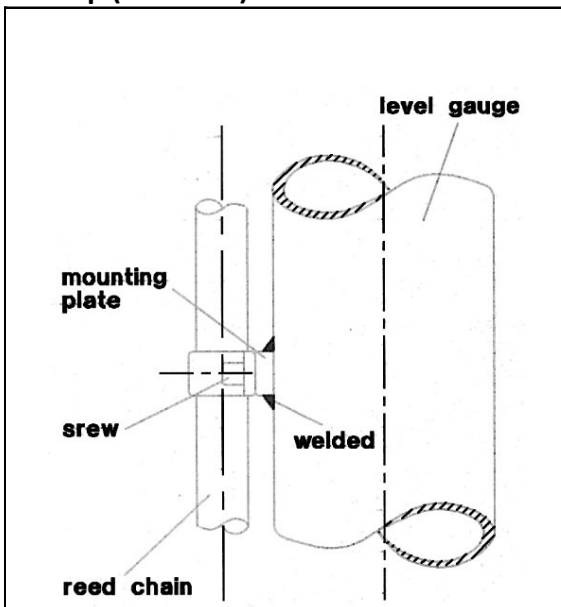


Reed chain for higher temperature

Max. medium temperature	: 400°C
Protection pipe	: Ø14 mm
Material	: 316Ti
Housing	: IP65
Heat protection	: 50x4 mm

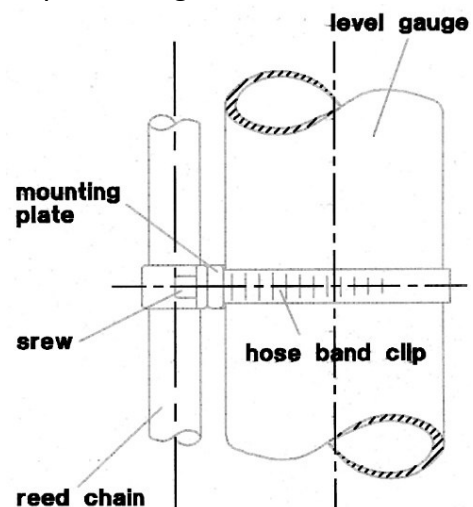


Clamp (standard)



Clamp (special)

Will be needed by Armaflex®-insulation and secondary mounting of a reed chain.



Mag. Level Gauge type ITA

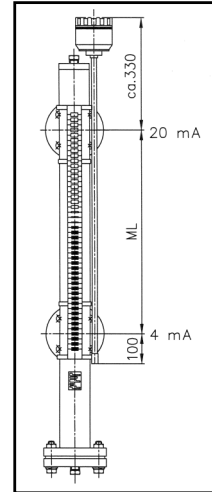
Equipment

4.9 Magnetostrictive Level Transmitter

M-500 / M600

Magnetostrictive transmitter for mounting to a level gauge type ITA.

M-500 / M-600 series working on the magnetostrictive principle is high accuracy transmitter for affordable price. The float inside the level gauge type ITA moves along the magnetostrictive wire. A pulse generated by the electronics travels along the wire. When the pulse reaches the float's magnetic field, a twist develops in the wire. Reflected from the torsion point, the pulse creates an acoustic wave that travels back along the wire. The 4...20 mA output from the transmitter is proportional to the level.



Technical data:

Type:	rigid version	flexible version
principle/design	magnetostrictive 2- wire transmitter	
measured process values	level, interface level	
sensor length	0,5...4,5 m	2...10 m
materials	sensor: 316Ti (1.4571), housing: Aluminium, powder paint coated or plastic (PTB)	
max. pressure	depends on the level gauge type ITA	
temperature	ambient: -40 °C...+70 °C	
linearity with dry calibration	± 1 mm	
resolution	0,1 mm or 1 mm (order-dependent)	
temperature coefficient	0,04 mm/°C	
measuring range	min. 200 mm	
medium density	depends on the level gauge type ITA	
outputs	serial: HART interface /min. loop resistance: 250 Ohm	
damping	0...60 s, programmable	
error indication	3,8 mA or 22 mA	
output load	$R_t = (U_s - 12,5V) / 0,02A$; U_s = voltage of power supply	
power supply	12,5...36 V DC	
ATEX approval	Ex II2G EEx d IIV T6...T5	
intrinsically safe area	Ex II	
protection	ingress: IP67	
electrical connection	cable gland PG16 or M20x1,5 cable diameter: 8...15 mm, wire cross section: max. 1,5 mm²	
weight:	1,7 kg + sensor (sensor = 0,6 kg/m)	2,9 kg + sensor (sensor=0,3 kg/m)
Temperature classification for Ex-Application:		
Temperature class	ambient temperature	process temperature
T6	-25...+70 °C	max. 400 °C, because no wetted parts
T5	-25...+59 °C	
T4	-25...+45 °C	

Mag. Level Gauge type ITA

Equipment

4.9 Magnetostrictive Level Transmitter (continuation)

Order specifications:

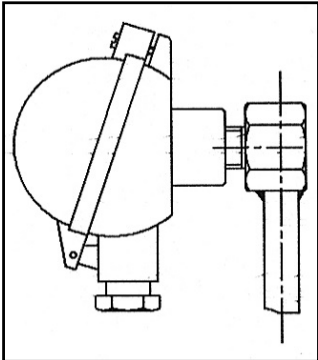
M	Magnetostrictive Level Transmitter					
	Function		/sensor design (depends on tube length)			
	T	with transmitter	/rigid (0,5...3m); flexible (> 3 m)			
	B	with transmitter and display	/rigid (0,5...3m); flexible (> 3 m)			
	Connection to level gauge type ITA					
	U	Direct welded clamps (stainless steel)				
	UX	Hose clamps (stainless steel)				
	-					
	Material electronic housing					
	5	Aluminium (powder paint coated)				
	6	Plastic (PTB fiber-glass reinforced, flame retardant)				
	Measuring length					
	ML	measuring length in mm				
	-					
	Output		/resolution		/approval	
	1	4...20 mA	/0.1mm			
	2	4...20 mA	/1mm			
	3	4...20 mA; HART®	/0.1mm			
	4	4...20 mA; HART®	/1mm			
	5	4...20 mA	/0.1mm		/Ex ia G	
	6	4...20 mA	/1mm		/Ex ia G	
	7	4...20 mA; HART®	/0.1mm		/Ex ia G	
	8	4...20 mA; HART®	/1mm		/Ex ia G	
	A	4...20 mA	/0.1mm		/Ex d G	
	B	4...20 mA; HART®	/0.1mm		/Ex d G	
	C	4...20 mA	/0.1mm		/Ex d ia G	
	D	4...20 mA; HART®	/0.1mm		/Ex d ia G	
M			-		-	

Mag. Level Gauge type ITA

Equipment

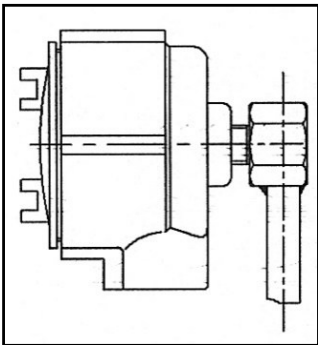
4.10 Transmitters

Available housings

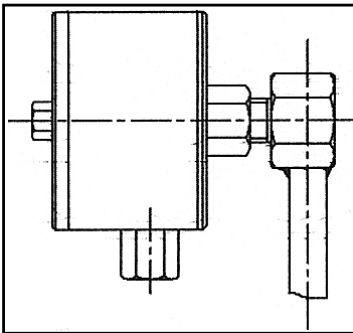


Standard-transmitter-housing

- ◆ material: aluminium
- ◆ PG16 Entry



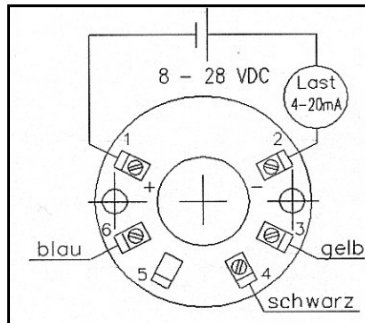
EExd-transmitter-housing
 ♦ material:
 almunium, epoxy coated
 ♦ ½" NPT cable entry



Stainless steel
transmitter
housing

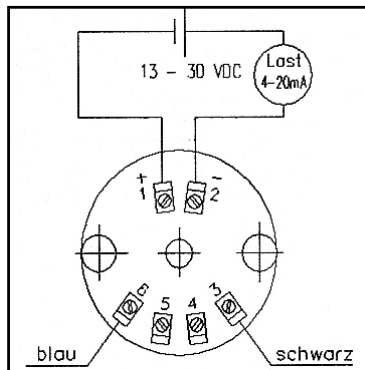
- ◆ material: 316Ti
- ◆ M20x1,5 entry

Available transmitters



Type: INT5333D

- ◆ EExia ia IIC T5/T6
- ◆ output 4...20 mA
- ◆ power supply:
2...36 V DC
- ◆ linearity: +/- 1 %



Type: TMT82

- ◆ EEx ia IIC T4
- ◆ output: 4...20 mA
(Hart®-protocol)
- ◆ power supply:
13...30 V DC
- ◆ linearity:
400Ω-area $\pm 0,04\Omega$
4000Ω-area $\pm 0,5\Omega$
- ◆ input:
5...400Ω/50...4000Ω

Other types of transmitters on request!

Equipment

4.10 Transmitters (continuation)

Transmitter type: INT5333

INT5333

2-wire

programmable transmitter



2-WIRE PROGRAMMABLE TRANSMITTER INT-5333

- ◆ RTD or Ohm input
- ◆ High measurement accuracy
- ◆ 3-wire connection
- ◆ programmable sensor error value
- ◆ for DIN form B sensor head mounting

Application:

- Linearized temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor
- Conversion of linear resistance variation to a standard analogue current signal, for instance from values or Ohmic level transmitters.

Technical characteristics:

- within a few seconds the user can program the INT5333 to measure temperatures with all RTD ranges defined by the standards.
- The RTD and resistance inputs have cable compensation for 2- and 3- wire connection.

Mounting/Installation:

- For DIN form B sensor head or DIN rail mounting with a special fitting.

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Order Information:

Type	Version	
INT5333	Standard	:A
	EEx	:D
	FM and EEx	:C

Electrical Specifications:

Specification range:

-40...+85 °C

Common Specifications:

Supply voltage, DC	
Standard, INT5333A	8...35 V
EEx and FM, INT5333B and C	8...28 V DC
Internal consumption	35 mW...0,8 W
Voltage drop	8 V DC
Warm-up time	5 min.
Communications interface	Loop Link 5905
Signal/noise ratio	min. 60 dB
Response time (programmable)	0,33...60 s
Signal dynamics, input	19 bit
Signal dynamics, output	19 bit
Calibration temperature	20...28 °C

Accuracy, the greater of general and basic values:

General values		
Input type:	Absolute accuracy	Temperature coefficient
all	$\leq \pm 0,1$ % of span	$\leq \pm 0,1$ % of span / °C

Basic values		
Input type:	Basic accuracy	Temperature coefficient
RTD	$\leq \pm 0,3$ °C	$\leq \pm 0,01$ °C / °C
Lin. R.	$\leq \pm 0,2$ Ω	$\leq \pm 20$ Ω / °C

EMC immunity influence	$\leq \pm 0,5$ % of span
------------------------	--------------------------

Effect of supply voltage	$\leq \pm 0,005$ % of span / V DC
--------------------------	-----------------------------------

Vibration:	IEC 68-2-6 Test FC
------------	--------------------

Lloyd's specification no. 1	4 g / 3...100 Hz
-----------------------------	------------------

Max. wire size	1 x 1,5 mm ²
----------------	-------------------------

Humidity	< 95 % RH (non-cond.)
----------	-----------------------

Dimensions	Ø44 x 20,2 mm
------------	---------------

Tightness (enclosure/terminal)	IP68/IP00
-----------------------------------	-----------

Weight:	50 g
---------	------

Electrical specifications, input:

RTD-type	min. value	max. value	min. span
Pt100	-200 °C	+850 °C	25 °C
Ni100	-60 °C	250 °C	25 °C
Lin.R.	0 Ω	10000 Ω	30 Ω

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

RTD and linear resistance input:

50 % of selected max.

Max. offset	value
Cable resistance per wire (max.)	10 Ω
Sensor current	> 0,2 mA < 0,4 mA
Effect of sensor cable resistance (3-wire)	< 0,002 Ω/Ω
Sensor error detection	Yes

Output:

Current output:

Signal range	4...20 mA
Min signal range	16 mA
Updating time	135 ms
Load resistance	$\leq (V_{\text{supply}} - 8) / 0,023 [\Omega]$
Load stability	< $\pm 0,01$ % of span / 100 Ω

Sensor error detection:

Programmable	3,5...23 mA
NAMUR NE 43 upscale	23 mA
NAMUR NE 43 downscale	3,5 mA

Ex data:

U_i	28 V DC
I_i	120 mA DC
P_i	0,84 W
L_i	$\leq 10 \mu\text{H}$
C_i	$\leq 1 \text{ nF}$

EEx approval CENELEC:

DEMKO 03	ATEX 13705X
ATEX	0539 Ex II 1 GEExia IIC T1...T6
max. amb. temperature for T1...T4	85 $^{\circ}\text{C}$
max. amb. temperature for T5 and T6	60 $^{\circ}\text{C}$
Applicable in zone:	0, 1 or 2
FM	IS, Cl.I, Div.1 Gp.A-D
Entity, FM control drawing no.	5300Q502

Observed authority requirements:

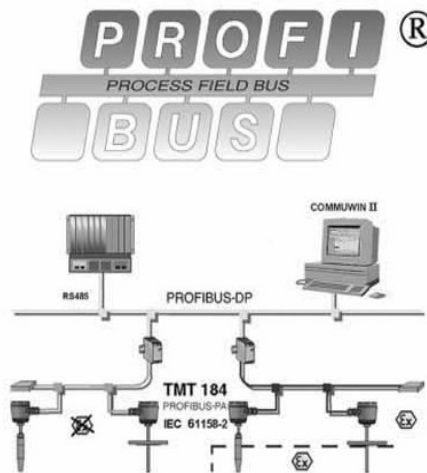
Standard:

EMC	
89/339/EEC	
Emission	EN50081-1, EN50081-2
Immunity	EN50082-2, EN50082-1
ATEX 94/9/EC	EN50014 and EN50020
FM class	
number	3600, 3610

Of span: of the presently selected range

Resistance transmitter Type: TMT84

Head transmitter with Profibus-PA® interface. Supply and digital communication using PROFIBUS-PA®, for installation in a form B sensor head.



Features and benefits:

- Universally programmable for various input signals using PROFIBUS-PA®.
- DIP switch for address setting (as option)
- High accuracy in the total ambient temperature range
- EMC to NAMUR NE 21, CE
- Certification:
 - ATEX
 - FM
 - CSA
- PROFIBUS-PA profile V3.0
- Galvanic isolation
- Customer specific address setting or expanded setup (see questionnaire page)

Application areas:

- Applied in a PROFIBUS-PA® environment, the process industry fieldbus, an open standard to EN50170 and IEC 61158-2
- Temperature head transmitter with PROFIBUS-PA® protocol for converting various input signals into a digital output signal
- Input:
 - Resistance thermometer (RTD)
 - Thermocouple (TC)
 - Resistance transmitter (Ω)
 - Voltage transmitter (mV)
- Swift and easy operation, visualization and maintenance using a PC direct from the control panel, e.g. using the COMMUWIN II operation software.

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

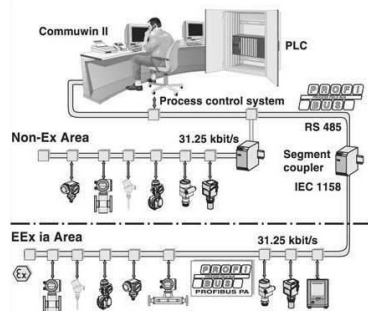
Operation and system construction

Measurement principle

Electronic measurement and conversion of input signals in industrial temperature measurement.

Measurement system

The TMT184 temperature head transmitter is a 2-wire transmitter with measurement inputs for resistance thermometers and resistance transmitters in 2-, 3- or 4-wire connection, thermocouples and voltage transmitters. Applications are in the measurement and control areas for process monitoring. The TMT184 setup is done using the PROFIBUS-PA® protocol combined with a PC operating software (e.g. COMMWIN II).



PROFIBUS-PA® is an open field bus standard in accordance with EN50170 and IEC61158-2, which has been specifically designed to handle the requirements of the process industry. In the simplest case a complete measurement circuit consists of a TMT184 fitted into a temperature sensor, a segment coupler, a PROFIBUS-PA® connection resistance, a PLC or a PC with an operating software.

The maximum number of transmitters that can be connected per bus segment is determined by the transmitter consumption, the maximum power of the segment coupler as well as the required bus length.

Normally:

- max. 9 TMT184 in an EEx ia explosion hazardous area per bus segment.
- max. 32 TMT184 in a non-explosion hazardous area per bus segment.

More detailed information for detailed project planning can be found in the operating manual.

Input values

Measurement value:

Temperature (temperature linear), resistance and voltage

Measurement range:

Dependent on the sensor connection and input signal the transmitter evaluates a number of different measurement ranges.

Type of input:

Resistance thermo meter (RTD)	Type	Measurement ranges	Min. measurement range
	Pt100	-200...850 °C (-328...1562 °F)	10 K
	Pt500	-200...250 °C (-328... 482 °F)	10 K
	Pt1000	-200...250 °C (-328... 482 °F)	10 K
	acc.to IEC 751		
	Ni100	-60...250 °C (-78...482 °F)	10 K
	Ni500	-60...150 °C (-78...302 °F)	10 K
	Ni1000	-60...150 °C (-78...302 °F)	10 K
	acc.to DIN43760		
	- Connection type: 2-, 3- or 4-wire connection		
	- cable resistance compensation possible in the 2-wire system (0...30 Ω)		
- Sensor cable resistance: max. 11 Ω per cable			
- Sensor current: ≤ 0.2 mA			
Resistance transmitter	Resistance (Ω)	10...400 Ω 10...2000 Ω	10 Ω 100 Ω
Thermocouples (TC)	B(PtRh30-PtRh6)	0...1820°C (32...3308 °F)	500 K
	C(Wi5Re-W26Re) ^I	0...2320°C (32...4208 °F)	500 K
	D(W3Re-W25Re) ^I	0...2495°C (32...4523 °F)	500 K
	E(Ni Cr-CuNi)	-270...1000°C (-454...1832 °F)	50 K
	J(Fe-CuNi)	-210...1200°C (-346...2192 °F)	50 K
	K(NiCr-Ni)	-270...1372°C (-454...2502 °F)	50 K
	L(Fe-CuNi) ^{II}	-200...900°C (-328...1652 °F)	50 K
	N(Ni Cr-Si-Ni Si)	-270...1300°C (-454...2372 °F)	50 K
	R(PtRh13-Pt)	-50...1768°C (-58...3214 °F)	500 K
	S(PtRh10-Pt)	-50...1768°C (-58...3214 °F)	500 K
	T(Cu-CuNi)	-270...400°C (-454...752 °F)	50 K
	U(Cu-CuNi) ^{II}	-200...600°C (-328...1112 °F)	50 K
	MoRe5-MoRe41 ^{III}	0...2000°C (32...3632 °F)	500 K
	acc.to IEC 584 Part 1		
- Cold junction: internal (Pt100)			
- Cold junction accuracy: ± 1 K			
Voltage transmitters (mV)	Millivolt transmitter (mV)	-10...75 mV	5 mV

I: according to ASTM E 988
II: according to DIN 43710

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Output values

Output signal

Physical data transmission (Physical layer type):
Fieldbus interface in acc. to IEC 61158-2.

Failure signal

Status message acc. to the PROFIBUS-PA® profile V3.0 specification.

Galvanic isolation

2 kV AC

Filter

Digital filter 1st degree 0...60 s

Current consumption

10 mA ± 1 mA

Error current

0 mA

Switch on delay

- 10 s

Data transmission speed

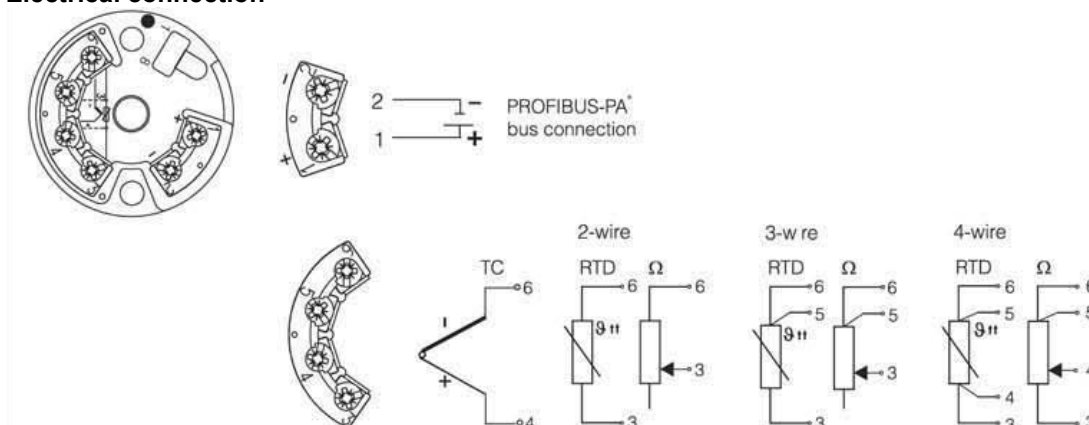
31,25 kBit/s, voltage mode

Signal code

Manchester II

Auxiliary energy

Electrical connection



Head transmitter terminal layout

Power supply

U_b = 9...30 V DC non Ex area, polarity protected
U_b = 9...15 V DC Ex area, polarity protected

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Accuracy

Response time: 1 s

Reference conditions: Calibration temperature: +23 °C ± 5 K

Maximum measured error:

	Type:	Measurement accuracy
Resistance Thermometer (RTD)	Pt100, Ni100	0,15 K
	Pt500, Ni500	0,5 K
	Pt1000, Ni1000	0,3 K
Thermocouple (TC)	K, J, T, E, L, U	typ. 0,5 K
	N, C, D	typ. 1,0 K
	S, V, R, MoRe5-MoRe41	typ. 2,0 K
	Meas. accuracy:	Measurement range
Resistance Transmitter (Ω)	± 0,1 Ω or 0,08 %	10...400 Ω
	± 0,15 Ω or 0,12 %	20...2000 Ω
Voltage Transmitter (mV)	20 μV or 0,08 %	-10...75 mV

Influence of ambient

temperature (temperature drift):

Resistance thermometer:

$T_d = \pm(15\text{ppm/K} \cdot \text{max.meas.range} + 50\text{ppm/K} \cdot \text{preset meas.range}) \cdot \Delta\delta$
Thermocouple

$T_d = \pm(15\text{ppm/K} \cdot \text{max.meas.range} + 50\text{ppm/K} \cdot \text{preset meas.range}) \cdot \Delta d$

$\Delta\delta$ = Deviation to the ambient temperature according to the reference condition.

Long term stability:

≤ 0,1 K/year or ≤ 0,05 %/year

Influence of reference junction:

Pt100 DIN IEC 751 Cl. B (internal reference junction for thermocouples)

Application conditions (installation conditions)

Installation hints:

- installation angle: no limitations

- installation area:

connection head acc. to DIN 43729 Form B; field housing TAF 10

Application conditions (ambient conditions)

Ambient temperature: -40...+85 °C (for hazardous area see Ex-certificate)

Storage temperature: -40...+100 °C

acc. to EN 60654-1, Class

Climate class:

C

Condensation:

allowable

Ingress protection:

IP00, IP66 installed

Shock and vibration resistance:

4g/2...150 Hz acc. to IEC 60068-2-6

Electromagnetic compatibility (EMC):

Interference immunity and interference emission acc. to EN 61326-1 (IEC 1326) and NAMUR NE 21

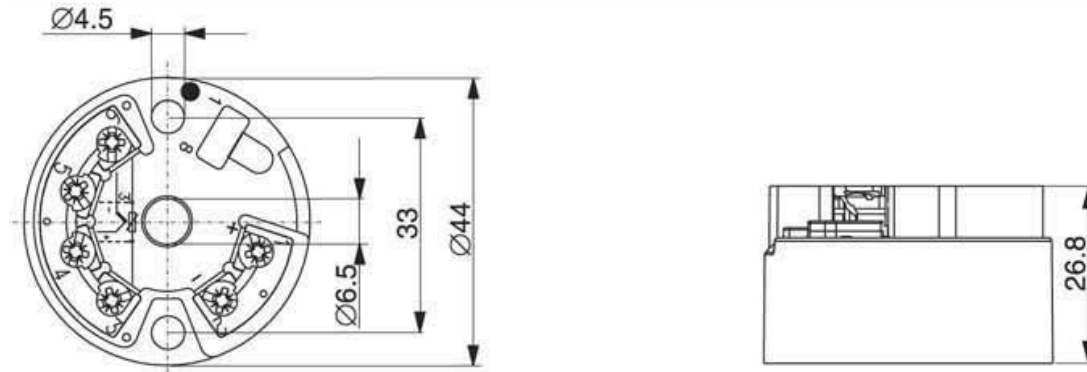
Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Mechanical construction

Dimensions:



Head transmitter (dimensions in mm)

Weight:

approx. 40 g

Material:

- housing: PC
- potting:
PUR

Terminals:

cable up to max. 1,75 mm² (secure screws)

Display and operating system

Remote operation

Operation via PROFIBUS-PA® using a suitable configuration or operating software.

Certification

Ex-certification

Details regarding the availability of the Ex-versions (ATEX, FM, CSA etc.) can be obtained from your local sales organization. All relevant data for hazardous area protection can be found in separate Ex-documentation, which can be requested separately.

CE marking

The measurement system complies with the legal requirements laid out within the EU regulations.

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Ordering codes TMT84:

Code	Description
TMT84	Head Transmitter
	Temperature transmitter with 2 sensor inputs and enhanced diagnosis functions for sensor monitoring. PROFIBUS-PA® protocol profile 3.01; Galvanic isolation 2 kV (input/output) Application: RTD, TC, Ω and MV; Consumption: max. 11 mA; Installation: connection head for B acc. to DIN 43729; UL listed, CSA general purpose
	Approvals / Certifications:
A1	ex-free area
B1	ATEX II 1G Ex ia IIC T4/T5/T6
B2	ATEX II 3G Ex nA IIC T4/T5/T6
B3	ATEX II 3D
B4	ATEX II 1G Ex ia IIC T6, II 3D
B5	ATEX II 3G Ex nA IIC T6, II 3D
CA	FM+CSA IS, NI I/1+2/ABCD
C1	FM IS, NI I/1+2/ABCD
C2	CSA IS, NI I/1+2/ABCD
D1	NEPSI Ex ia IIC T4/T5/T6
D2	TIIS Ex ia IIC T6
E1	IECEX Ex ia IIC T4/T5/T6
	Communication, output signal
A	PROFIBUS-PA®
	Electrical connection
1	Spring terminals
2	Screw terminals
9	Special version, please specify
	Mounting parts
A	Standard-DIN mounting set
B	US-M4 mounting screws
TMT84	

<== Ordering code [part 1] - 1 option each category has to be cho

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Additional options- no or multiple choice allowed.

					Configuration input:		
					A1	Ch1: RTD 2-wire, Ch2: not active	
					A2	Ch1: RTD 2-wire, Ch2: RTD 2-wire	
					A3	Ch1: RTD 2-wire, Ch2: RTD 3-wire	
					A4	Ch1: RTD 2-wire, Ch2: TC	
					B1	Ch1: RTD 3-wire, Ch2: not active	
					B2	Ch1: RTD 3-wire, Ch2: RTD 2-wire	
					B3	Ch1: RTD 3-wire, Ch2: RTD 3-wire	
					B4	Ch1: RTD 3-wire, Ch2: TC	
					C1	Ch1: RTD 4-wire, Ch2: not active	
					C2	Ch1: RTD 4-wire, Ch2: TC	
					D1	Ch1: TC, Ch2: not active	
					D2	Ch1: TC, Ch2: TC	
					Display + Operation		
					E1	meas. Value indication & dip switch, attachable (TID10)	
					Calibration + Test		
					F1	Works calibration cert. 6-point (fixed points)	
					Tagging		
					X1	TAG, field bus	
					X2	TAG, paper (3 lines, each 16 characters)	
					X3	TAG, metal (2 lines, each 16 characters)	
					X4	Bus address (PA: 0...126)	
					X5	TAG on transmitter	
TMT84							

Mag. Level Gauge type ITA

Equipment

4.10 Transmitters (continuation)

Questionnaire TMT84 temperature transmitter			
Customer specific setup			
Standard setup			
Channel 1 (Ch1)		Channel 2, Ch2	
RTD		RTD	
☐ Pt50, GOST		☐ Pt50, GOST	
☐ Pt100, IEC751		☐ Pt100, IEC751	
☐ Pt100, JIS C1604-81		☐ Pt100, JIS C1604-81	
☐ Pt100, GOST		☐ Pt100, GOST	
☐ Pt200, IEC 751		☐ Pt200, IEC 751	
☐ Pt500, IEC 751		☐ Pt500, IEC 751	
☐ Pt1000, IEC 751		☐ Pt1000, IEC 751	
☐ Ni100, DIN 43760		☐ Ni100, DIN 43760	
☐ Ni120, Edison Curve		☐ Ni120, Edison Curve	
☐ Ni1000, DIN 43760		☐ Ni1000, DIN 43760	
☐ Cu10 Edison Curve no. 15		☐ Cu10 Edison Curve no. 15	
☐ Cu50, GOST		☐ Cu50, GOST	
☐ Cu100, GOST		☐ Cu100, GOST	
TC		TC	
☐ B		☐ B	
☐ N		☐ N	
☐ C		☐ C	
☐ L		☐ L	
☐ E		☐ E	
☐ R		☐ R	
☐ D		☐ D	
☐ U		☐ U	
☐ J		☐ J	
☐ S		☐ S	
☐ K		☐ K	
☐ T		☐ T	
☐ IEC584		☐ IEC584	
ASTM E988		ASTM E988	
DIN 43710		DIN 43710	
Unit		Unit	
☐ °C		☐ °F	
Interconnection*			
☐ PV1 = Ch1; PV2 = Ch2 (default)			
☐ PV1 = Ch1-Ch2; Difference value			
☐ PV1 = 0,5 x (Ch1+Ch2); Average value			
☐ PV1 = Ch1 (or Ch2) Backup			

*only if Channel 2 is active

Mag. Level Gauge type ITA

Equipment

4.11 Special Equipment & Accessories

Order Codes for Electronic Accessories and Switches

Code	Description
	Switches
S10	mag. switch type 1690, 3 m cable Protection class: IP68, max. operation temperature: 120°C <i>(Art.-No. 641.6502.380LI)</i>
S20	mag. switch type 1690 ATEX, 3 m cable Protection class: IP67 BVS03 ATEX, max. operation temperature 120°C <i>(Art.-Nr. 610.045N1001)</i>
SXK	Cable length > 3 m, each additional m (please specify)
SXS	Hose clamp for switch 1690 and 1690 ATEX material 1.4404, 1 off each switch
S30	Mag. switch type LMS-A Protection class IP65, max. operation temperature: 200°C <i>(without special equipment)</i>
S3G	Mag. switch type LMS-A with gold plated contacts 8 VDC
S3D	Mag. switch type LMS-A mounted in EExd housing
S3E	Mag. switch type LMS-A with gold plated contacts 8 VDC + mounted in Eexd housing
S40	Mag. switch type: LMS-AH Protection class IP65, max. operation temperature 400°C <i>(without special equipment)</i>
S4G	Mag. switch type LMS-AH with gold plated contacts 8 VDC
S4D	Mag. switch type LMS-AH mounted in EExd housing
S4E	Mag. switch type LMS-AH with gold plated contacts 8 VDC + mounted in Eexd housing
S50	Mag. switch type NI-EX with P&F proximation initiator acc. NAMUR Protection class IP65 EExia ATEX, max. operation temperature: 60 °C
S5H	Mag. switch type NI-EX with P&F proximation initiator acc. NAMUR with additional heat protection, max. operation temperature: 400 °C
S6H	Switch type MS9, with micro switch and additional heat protection max. operation temperature: 400°C
S70	Switch type MS10, with micro switch Protection class IP65, max. operation temperature: 200°C, max. 250 VAC/10A mounted in Eexd housing
S7H	Switch type MS10, with micro switch with additional heat protection Protection class IP65, max. operation temperature: 400°C, max. 250 VAC/10A mounted in Eexd housing
S80	Switch type MAK 9924
	Cable entry for switch (all switches, except 1690/1690ATEX)
1	M20 x 1,5
2	1/2" NPT
3	3/4" NPT
	Isolation amplifier for NI-EX switch
T01	Isolation amplifier for NI-EX switch; type: KFAG-SR2-EX1.W; one channel
T02	Isolation amplifier for NI-EX switch; type: KFAG-SR2-EX2.W; two channels

Mag. Level Gauge type ITA

Equipment

4.11 Special Equipment & Accessories (continuation)

Code	Description
	Reed chain
R05	Reed chain, resolution 5 mm, base price
L	add. price each 100 mm
0	without heat protection
H	with heat protection, max 400 °C / each 100 mm
R10	Reed chain, resolution 10 mm, max. 150 °C, base price
L	add. price each 100 mm
0	without heat protection
H	with heat protection, max 400 °C / each 100 mm
R20	Reed chain, resolution 20 mm, base price
L	add. price each 100 mm
0	without heat protection
H	with heat protection, max 400 °C / each 100 mm
RXS	Clamps for reed chain / 2 pcs. <i>(Only for supplementary mounting!)</i>
	Transmitter
M10	Transmitter type: INT5333A
M11	Transmitter type: INT5333A with ExD-housing
M12	Transmitter type: INT5333A with stainless steel housing
M20	Transmitter type: INT5333B EX intrinsically safe
M22	Transmitter type: INT5333B EX intrinsically safe with stainless steel housing
M30	Transmitter type: INT5335A SMART/HART-technology
M32	Transmitter type: INT5335B Ex-proof with SMART/HART-technology with stainless steel housing
M33	Transmitter type: INT5350B with Foundation Fieldbus
M35	Transmitter type: INT5350B with Foundation Fieldbus; EExia ATEX
M34	Transmitter type: TMT142 with Foundation Fieldbus and digital indicator additional prices:
0	without Ex-protection
1	EExia ATEX
M36	Transmitter type STT 3000 with digital indicator electr. Class EExd; output 4...20 mA
	Cable entry for transmitter housings
1	M20 x 1,5
2	1/2" NPT
3	3/4" NPT
	Digital indicator
D10	Digital indicator mounted in transmitter housing (only with reed-chain) DSM-40-indicator, standard version input 4-20 mA; display $\pm$ 19999
D11	Digital indicator mounted in transmitter housing (only with reed-chain) DSM-40-indicator, standard version input 4-20 mA; display $\pm$ 19999; EEx-version
D20	Digital indicator IA-N24-S, input 4-20 mA; 24 VDC for 2-wire-transmitters
D21	Digital indicator IA-N30U, input 4-20 mA; 24 VDC for 2-wire-transmitters add. 4-20 mA-output
D22	Digital indicator IA-N30U, input 4-20 mA; 24 VDC for 2-wire-transmitters add- 2 off. contacts
D23	Digital indicator IA-N30U, input 4-20 mA; 24 VDC for 2-wire-transmitters add. 2 off contacts and 4-20 mA-output

Mag. Level Gauge type ITA

Equipment

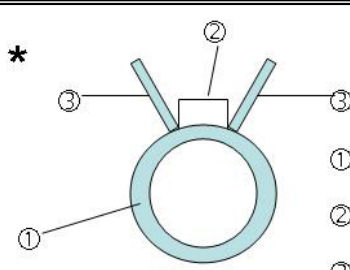
4.11 Special Equipment & Accessories (continuation)

Code	Description
	Electronic heat tape
H10	Electronic heat tape without Ex-protection, base price add. price each 100 mm
H11	Electronic heat tape connection set
H12	Electronic heat tape connection socket, material CS
H20	Electronic heat tape, Ex-version add. price each 100 mm
H21	Electronic heat tape connection set Ex-version
H22	Electronic heat tape connection socket, material CS / EExd housing
H23	Electronic heat tape thermostat Ex-version
H30	Electronic heat tape for high temperature applications (> 200 °C)
H31	Electronic heat tape for high temperature applications (> 200 °C), Ex-Version
	Power supply
SG1	Power supply 220 V / 50 Hz
	Indication rail
Z01	Aluminium indication rail coated (Epoxy-coat: Saekaphen); colour: white add. price each 100 mm
	Measuring scale
Z02	Graduated scale, graved, material: 316SS, base price add. price each 100 mm:
Z02	Graduated scale, graved, material: Aluminium, base price add. price each 100 mm:
	Steam jacket
Z05	Steam jacket, max. 6 bar, threaded connection, material 1.4404 (only available with Aluminium indication rail and Titanium float) add. price each 100 mm:
Z06	Steam jacket, max. 6 bar, flanged connection DN 15 PN 16 (1/2" 150#), material 1.4404 (only available with Aluminium indication rail and Titanium float) add. price each 100 mm:
	Vent/drain fittings
Z07	Vent-/drain valve 1/2" NPT / material 1.4401
Z08	Vent-/drain valve 1/2" NPT / material PTFE
Z09	Vent-/drain valve 1/2" NPT / material PP
Z10	Vent-/drain valve 1/2" NPT / material PVDF
Z11	Vent-/drain ball valve 1/2" NPT / material 1.4401
Z12	Vent-/drain valve 1/2" NPT, einseitig geflanscht mit DN 15 PN 16 (1/2" 150#) / material: 1.4401/1.4571
Z13	Vent-/drain valve 1/2" NPT / material: 1.4401 seitlich am Blindflansch DN50 (2"), 1.4571, angeschweißt
	Insulation
Z14	Low-temperature-insulation Armaflex -75...+105 °C (only available with Aluminium-indication rail and Titanium float) (each 100 mm)
Z15	Low-temperature-insulation with mineral wool with 316SS arming (each 100 mm)
Z16	Heat insulation ceramic tape; op. temperature up to 600 °C (only available with Aluminium-indication rail and Titanium float) (each 100 mm)
Z17	Insulation guide plate*, material 1.4404; height = 80 mm Equipment for Armaflex- or ceramic insulation (each 100 mm)
Z18	Makrolon window for insulation (each 100 mm)

Mag. Level Gauge type ITA

Equipment

4.11 Special Equipment & Accessories (continuation)

Code	Description
	Painting
Z19	Device completely painted with RAL-colour (grounding + main paint)
Z20	Aluminium grey RAL 9007 (80°C) with Hempel's Silicone Aluminium 56910 (600°C)
ZPY	other paintings
	Security Springs
Z21	spring at top of gauge
Z22	spring at bottom of gauge
 ① Float pipe ② Indication rail ③ Guide plate for insulation mounting	

Mag. Level Gauge type ITA

Equipment

4.12 Special Design

Ordering Codes for Special designs

Code	Description
ITA-3 BV	Bureau Veritas
ITA-6 BV	Bureau Veritas
ITA-3 GL	Design for maritime and inland navigation acc. rules of "German Lloyd" (Individual Acceptance Test)
ITA-6 GL	Design for maritime and inland navigation acc. rules of "German Lloyd" (Individual Acceptance Test)
ITA-3 LR	Lloyd's Register
ITA-6 LR	Lloyd's Register
ITA-6 D	Design as steam regulator acc. TRD incl. 2 switches type: LMS-AH
ITA-7-D	Design as steam regulator acc. TRD incl. 2 switches type: LMS-AH
ITA-3 / 3.0 Ex	Design for Ex-zone 0 (following 94/9/EG: II 1 Gc IIC T1...T6) According to the "Statement of application for directive 94/9/EC", issued by "TÜV Industrie Service GmbH" (notified body), the directive 94/9/EC is not applicable for ITA mag. level gauges, as they have no ignition sources of their own. So the level gauge can be used in Ex-zone 0 without being certified, once the technical specifications described in the statement have been followed.
ITA-4 / 4.0 Ex	
ITA-4.1 / 4.1.0 Ex	
ITA-5 / 5.0 Ex	
ITA-6 / 6.0 Ex	
ITA-7 / 7.0 Ex	
ITA-10 / 10.0 Ex	
ITA-11 / 11.0 Ex	
ITA-12 / 12.0 Ex	

Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-3 and ITA-3.0 (PN16/150 lbs)							
3V0100K1	16	1.4404/316L	52	125	1,4907	sealed	
3V0100K3	16	1.4404/316L	52	125	1,0524	sealed	1
3V0120K1	16	1.4404/316L	52	145	1,2346	sealed	
3V0120K3	16	1.4404/316L	52	145	0,9034	sealed	1
3V0150K1	16	1.4404/316L	52	175	0,9905	sealed	
3V0150K3	16	1.4404/316L	52	175	0,8606	sealed	1
3V0180K1	16	1.4404/316L	52	205	0,8781	sealed	
3V0180K3	16	1.4404/316L	52	205	0,7022	sealed	1
3V0240K1	16	1.4404/316L	52	265	0,7374	sealed	
3V0240K3	16	1.4404/316L	52	265	0,6209	sealed	1
3V1240K1	40	1.4404/316L	52	265	1,000	sealed	
3T0100K1	16	Titanium	50,8	125	1,1788	sealed	2
3T0100K3	16	Titanium	50,8	125	0,7821	sealed	1,2
3T0120K1	16	Titanium	50,8	145	0,9646	sealed	2
3T0120K3	16	Titanium	50,8	145	0,6514	sealed	1,2
3T0150K1	16	Titanium	50,8	175	0,7763	sealed	2
3T0150K3	16	Titanium	50,8	175	0,5675	sealed	1,2
3T0180K1	16	Titanium	50,8	205	0,6716	sealed	2
3T0180K3	16	Titanium	50,8	205	0,5094	sealed	1,2
3T0240K1	16	Titanium	50,8	265	0,5723	sealed	2
3T0240K3	16	Titanium	50,8	265	0,4550	sealed	1,2
3T0300K3	16	Titanium	50,8	325	0,4955	sealed	1,2
3T0400K1	16	Titanium	50,8	325	0,4063	sealed	2
3T0400K3	16	Titanium	50,8	425	0,4358	sealed	1,2
3T0500K1	16	Titanium	50,8	425	0,3719	sealed	2
3T0500K3	16	Titanium	50,8	525	0,4017	sealed	1,2
3T0600K1	16	Titanium	50,8	525	0,3539	sealed	2
3T0600K3	16	Titanium	50,8	625	0,3761	sealed	1,2
3H0150K1	16	Titanium	50,8	625	0,3371	sealed	2
3HC012K1	16	Titanium, Halar-coated	52	175	0,9020	sealed	
3HC024K1	16	Hastelloy C4	52	175	1,2455	sealed	
3HC024K3	16	Hastelloy C4	52	265	0,7510	sealed	1
Floats for ITA-3 Cryo (PN16/150 lbs, for cryogenic applications)							
3C0240K1	16	Titanium	Titanium	50,8	265	sealed	2
3C0500K1	16	Titanium	Titanium	50,8	525	sealed	2,3
3C0500K3	16	Titanium	Titanium	50,8	525	sealed	1,2,3

1: only with 316SS or Alumium Indication rail

2: do not use this hydrogen or alcohol compounds

3: with spacers

Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-3-CR64 (PN16/150 lbs, for cryogenic applications)							
3C0501K1	16	Titanium	50,8	525	1,4907	0,4017	2,3
3C0501K2	16	Titanium	50,8	525	1,0524	0,3890	2,3
Floats for ITA-3.5-CR64 (PN16/150 lbs, wetted parts E-CTFE (Halar)-coated)							
35H024K1	16	Titanium, Halar-coated	52	240	0,6873	sealed	1
35H024K3	16	Titanium, Halar-coated	52	240	0,5645	sealed	1
Floats for ITA-3.8 (PN16/150 lbs, wetted parts E-CTFE (Halar)-coated, appl. for vacuum-service)							
34PVD1K1	10	E-TFE	50	135	1,3000	sealed	
34PVD2K1	10	E-TFE	50	255	0,8500	sealed	1
34GLA2K2	10	Borosilicate	50	255	0,8500	sealed	
Floats for ITA-4 and ITA-4.0 (PN16/150 lbs, top-of tank mounting)							
[max. Rod length: A = 500 mm; B = 750 mm; C = 1000 mm; D = 1250 mm; E = 1500 mm; F = 1750 mm; H = 2000 mm]							
4V0240R1A	16	316L	52,0	265	0,9500	sealed	
4V0240R1B	16	316L	52,0	265	1,0000	sealed	
4T0240R1A	16	Titanium	50,8	265	0,6890	sealed	2
4T0240R1B	16	Titanium	50,8	265	0,7250	sealed	2
4T0240R1C	16	Titanium	50,8	265	0,7610	sealed	2
4T0240R1D	16	Titanium	50,8	265	0,7970	sealed	2
4T0240R1E	16	Titanium	50,8	265	0,8330	sealed	2
4T0240R1F	16	Titanium	50,8	265	0,8690	sealed	2
4T0240R1H	16	Titanium	50,8	265	0,9050	sealed	2
4T0240K2A	16	Titanium	50,8	265	0,6480	sealed	2
4T0240K2B	16	Titanium	50,8	265	0,6840	sealed	2
4T0240K2C	16	Titanium	50,8	265	0,7200	sealed	2
4T0240K2D	16	Titanium	50,8	265	0,7560	sealed	2
4T0240K2E	16	Titanium	50,8	265	0,7920	sealed	2
4T0240K2F	16	Titanium	50,8	265	0,8280	sealed	2
4T0240K2H	16	Titanium	50,8	265	0,8640	sealed	2
4T0240K3A	16	Titanium	50,8	265	0,5820	sealed	1,2
4T0240K3B	16	Titanium	50,8	265	0,6810	sealed	1,2
4T0240K3C	16	Titanium	50,8	265	0,6540	sealed	1,2
4T0240K3D	16	Titanium	50,8	265	0,6900	sealed	1,2
4T0240K3E	16	Titanium	50,8	265	0,7260	sealed	1,2
4T0240K3F	16	Titanium	50,8	265	0,7620	sealed	1,2
4T0240K3H	16	Titanium	50,8	265	0,7980	sealed	1,2

- 1: only with 316SS or Aluminum Indication rail
- 2: do not use this hydrogen or alcohol compounds
- 3: with spacers

Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm³]	Type:	Note:
Floats for ITA-4 and ITA-4.0 (PN16/150 lbs, top-of tank mounting) (continuation)							
[max. Rod length: A = 500 mm; B = 750 mm; C = 1000 mm; D = 1250 mm; E = 1500 mm; F = 1750 mm; H = 2000 mm]							
4T0300R1A	16	Titanium	50,8	325	0,6010	sealed	
4T0300R1B	16	Titanium	50,8	325	0,6290	sealed	
4T0300R1C	16	Titanium	50,8	325	0,6580	sealed	2
4T0300R1D	16	Titanium	50,8	325	0,6870	sealed	2
4T0300R1E	16	Titanium	50,8	325	0,7160	sealed	2
4T0300R1F	16	Titanium	50,8	325	0,7450	sealed	2
4T0300R1H	16	Titanium	50,8	325	0,7730	sealed	2
4T0300K2A	16	Titanium	50,8	325	0,5680	sealed	2
4T0300K2B	16	Titanium	50,8	325	0,5970	sealed	2
4T0300K2C	16	Titanium	50,8	325	0,6250	sealed	2
4T0300K2D	16	Titanium	50,8	325	0,6540	sealed	2
4T0300K2E	16	Titanium	50,8	325	0,6830	sealed	2
4T0300K2F	16	Titanium	50,8	325	0,7120	sealed	2
4T0300K2H	16	Titanium	50,8	325	0,7410	sealed	2
4T0300K3A	16	Titanium	50,8	325	0,5120	sealed	1,2
4T0300K3B	16	Titanium	50,8	325	0,5410	sealed	1,2
4T0300K3C	16	Titanium	50,8	325	0,5690	sealed	1,2
4T0300K3D	16	Titanium	50,8	325	0,5980	sealed	1,2
4T0300K3E	16	Titanium	50,8	325	0,6270	sealed	1,2
4T0300K3F	16	Titanium	50,8	325	0,6560	sealed	1,2
4T0300K3H	16	Titanium	50,8	325	0,6850	sealed	1,2
Floats for ITA-4-1 and ITA-4.1.0 (atm., top-of tank mounting)							
[max. Rod length: A = 500 mm; B = 750 mm; C = 1000 mm; D = 1250 mm; E = 1500 mm; F = 1750 mm; H = 2000 mm]							
4T0152R1A	ATM	Titanium	80	175	0,4070	sealed	2
4T0152R1B	ATM	Titanium	80	175	0,4310	sealed	2
4T0152R1C	ATM	Titanium	80	175	0,4540	sealed	2
4T0152R1D	ATM	Titanium	80	175	0,4770	sealed	2
4T0152R1E	ATM	Titanium	80	175	0,5000	sealed	2
4T0152R1F	ATM	Titanium	80	175	0,5240	sealed	2
4T0152R1H	ATM	Titanium	80	175	0,5470	sealed	2
4T0152K2A	ATM	Titanium	80	175	0,4700	sealed	2
4T0152K2B	ATM	Titanium	80	175	0,4310	sealed	2
4T0152K2C	ATM	Titanium	80	175	0,4540	sealed	2
4T0152K2D	ATM	Titanium	80	175	0,4770	sealed	2
4T0152K2E	ATM	Titanium	80	175	0,5000	sealed	2
4T0152K2F	ATM	Titanium	80	175	0,5240	sealed	2
4T0152K2H	ATM	Titanium	80	175	0,5470	sealed	2

- 1: only with 316SS or Alumium Indication rail
- 2: do not use this hydrogen or alcohol compounds
- 3: with spacers

Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-4-1 and ITA-4.1.0 (atm., top-of tank mounting) (Continuation)							
[max. Rod length: A = 500 mm; B = 750 mm; C = 1000 mm; D = 1250 mm; E = 1500 mm; F = 1750 mm; H = 2000 mm]							
4T0182R1A	ATM	Titanium	80	205	0,3620	sealed	2
4T0182R1B	ATM	Titanium	80	205	0,3810	sealed	2
4T0182R1C	ATM	Titanium	80	205	0,4000	sealed	2
4T0182R1D	ATM	Titanium	80	205	0,4200	sealed	2
4T0182R1E	ATM	Titanium	80	205	0,4390	sealed	2
4T0182R1F	ATM	Titanium	80	205	0,4580	sealed	2
4T0182R1H	ATM	Titanium	80	205	0,4780	sealed	2
4T0182K2A	ATM	Titanium	80	205	0,3370	sealed	2
4T0182K2B	ATM	Titanium	80	205	0,3570	sealed	2
4T0182K2C	ATM	Titanium	80	205	0,3760	sealed	2
4T0182K2D	ATM	Titanium	80	205	0,3950	sealed	2
4T0182K2E	ATM	Titanium	80	205	0,4150	sealed	2
4T0182K2F	ATM	Titanium	80	205	0,4340	sealed	2
4T0182K2H	ATM	Titanium	80	205	0,4530	sealed	2
4T0182K3A	ATM	Titanium	80	205	0,3000	sealed	1,2
4T0182K3B	ATM	Titanium	80	205	0,3190	sealed	1,2
4T0182K3C	ATM	Titanium	80	205	0,3380	sealed	1,2
4T0182K3D	ATM	Titanium	80	205	0,3580	sealed	1,2
4T0182K3E	ATM	Titanium	80	205	0,3770	sealed	1,2
4T0182K3F	ATM	Titanium	80	205	0,3960	sealed	1,2
4T0182K3H	ATM	Titanium	80	205	0,4160	sealed	1,2
4T0242R1A	ATM	Titanium	80	265	0,2980	sealed	2
4T0242R1B	ATM	Titanium	80	265	0,3120	sealed	2
4T0242R1C	ATM	Titanium	80	265	0,3270	sealed	2
4T0242R1D	ATM	Titanium	80	265	0,3410	sealed	2
4T0242R1E	ATM	Titanium	80	265	0,3560	sealed	2
4T0242R1F	ATM	Titanium	80	265	0,3700	sealed	2
4T0242R1H	ATM	Titanium	80	265	0,3850	sealed	2
4T0242K2A	ATM	Titanium	80	265	0,2800	sealed	2
4T0242K2B	ATM	Titanium	80	265	0,2940	sealed	2
4T0242K2C	ATM	Titanium	80	265	0,3090	sealed	2
4T0242K2D	ATM	Titanium	80	265	0,3230	sealed	2
4T0242K2E	ATM	Titanium	80	265	0,3380	sealed	2
4T0242K2F	ATM	Titanium	80	265	0,3520	sealed	2
4T0242K2H	ATM	Titanium	80	265	0,3670	sealed	2

- 1: only with 316SS or Aluminium Indication rail
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- 3: with spacers

Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-4-1 and ITA-4.1.0 (atm., top-of tank mounting) (Continuation)							
[max. Rod length: A = 500 mm; B = 750 mm; C = 1000 mm; D = 1250 mm; E = 1500 mm; F = 1750 mm; H = 2000 mm]							
4T0242K3A	ATM	Titanium	80	265	0,2530	sealed	1,2
4T0242K3B	ATM	Titanium	80	265	0,2680	sealed	1,2
4T0242K3C	ATM	Titanium	80	265	0,2820	sealed	1,2
4T0242K3D	ATM	Titanium	80	265	0,2970	sealed	1,2
4T0242K3E	ATM	Titanium	80	265	0,3110	sealed	1,2
4T0242K3F	ATM	Titanium	80	265	0,3260	sealed	1,2
4T0242K3H	ATM	Titanium	80	265	0,3400	sealed	1,2
Floats for ITA-5 (top-bottom connection)							
Please see ITA-3 to ITA-13							
Floats for ITA-6 and ITA-6.0 (PN40/300 lbs)							
6V0100K1	30	316L	52	125	0,2980	sealed	
6V0100K3	30	316L	52	125	0,3120	sealed	1
6V0120K1	30	316L	52	145	0,3270	sealed	
6V0120K3	30	316L	52	145	0,3410	sealed	1
6V0150K1	30	316L	52	175	0,3560	sealed	
6V0150K3	30	316L	52	175	0,3700	sealed	1
6V0180K1	30	316L	52	205	0,3850	sealed	
6V0180K3	30	316L	52	205	0,2800	sealed	1
6V0240K1	30	316L	52	265	0,2940	sealed	
6V0240K3	30	316L	52	265	0,3090	sealed	1
6T0100K1	40	Titanium	50,8	125	1,3114	sealed	2
6T0100K3	40	Titanium	50,8	125	0,8975	sealed	1,2
6T0120K1	40	Titanium	50,8	145	1,1007	sealed	2
6T0120K3	40	Titanium	50,8	145	0,7837	sealed	1,2
6T0150K1	40	Titanium	50,8	175	0,9029	sealed	2
6T0150K3	40	Titanium	50,8	175	0,6763	sealed	1,2
6T0180K1	40	Titanium	50,8	205	0,7791	sealed	2
6T0180K3	40	Titanium	50,8	205	0,6100	sealed	1,2
6T0240K1	40	Titanium	50,8	265	0,6391	sealed	2
6T0240K3	40	Titanium	50,8	265	0,5187	sealed	1,2
6T0300K1	40	Titanium	50,8	325	0,5694	sealed	2
6T0300K3	40	Titanium	50,8	325	0,4812	sealed	1,2
6T0400K1	40	Titanium	50,8	425	0,5300	sealed	2
6T0400K3	40	Titanium	50,8	425	0,4373	sealed	1,2
6T0500K1	40	Titanium	50,8	525	0,4463	sealed	2
6T0500K3	40	Titanium	50,8	525	0,4098	sealed	1,2
6T0600K1	40	Titanium	50,8	625	0,4370	sealed	2
6T0600K3	40	Titanium	50,8	625	0,3834	sealed	1,2

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Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-6 and ITA-6.0 (PN40/300 lbs) (Continuation)							
6H0200K1	40	Titanium, Halar-coated	52	265	0,7674	sealed	
6H0200K3	40	Titanium, Halar-coated	52	265	0,6470	sealed	2
6HC012K1	40	Hastelloy C4	52	145	1,2400	sealed	
6HC024K1	40	Hastelloy C4	52	265	0,7470	sealed	
6HC024K3	40	Hastelloy C4	52	265	0,6600	sealed	2
Floats for ITA-6 Cryo (PN40/300 lbs; cryogenic applications)							
6C0240K1	40	Titanium	50,8	265	0,6391	sealed	2
6C0500K1	40	Titanium	45	525	0,5981	sealed	2,3
6HC024K3	24	Hastelloy C4	52	265	0,6600	sealed	1, 3
Floats for ITA-6 CR64 (PN40/300 lbs; cryogenic applications)							
6C0240K1	40	Titanium	50,8	265	0,6391	sealed	2
6C0501K1	40	Titanium	45	525	0,5981	sealed	2, 3
Floats for ITA-7 and ITA-7.0 (PN63/300 lbs)							
7T0240K1	64	Titanium	50,8	265	0,6820	sealed	1
7T0240K3	64	Titanium	50,8	265	0,5551	sealed	1, 2
7T0300K1	64	Titanium	50,8	325	0,6064	sealed	1
7T0300K3	64	Titanium	50,8	325	0,5168	sealed	1, 2
7T0500K3	64	Titanium	50,8	525	0,4450	sealed	1, 2
7T0600K3	64	Titanium	50,8	625	0,4243	sealed	1, 2
Floats for ITA-8.1 (PN6, PVC)							
8PVC01K1	10	PVC	50	135	1,1500	sealed	1
8PVC02K1	10	PVC	50	255	0,7500	sealed	1
Floats for ITA-8.2 (PN6, PP)							
8PVC01K1	10	PP	50	135	0,9500	sealed	1
8PVC02K1	10	PP	50	255	0,6500	sealed	1
Floats for ITA-8.3 (PN6, PVDF)							
8PVC01K1	10	PVDF	50	135	1,3000	sealed	1,2
8PVC02K1	10	PVDF	50	255	0,8500	sealed	2
Floats for ITA-9.1 (PN6, PVC, mounted from top of tank)							
9PVC03K1	6	PVC	50	135	---	sealed	1,
Floats for ITA-9.2 (PN6, PP, mounted from top of tank)							
9PP030K1	6	PP	50	---	---	sealed	1
Floats for ITA-9.3 (PN6, PVDF, mounted from top of tank)							
9PVD03K1	6	PVDF	50	---	---	sealed	1

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Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-10 and ITA-10.0 (PN100/600 lbs)							
10V324K3	100	316L	52	265	0,6122	vented	1
10T024K1	80	Titanium	50,8	265	0,7011	sealed	2
10T024K3	80	Titanium	50,8	265	0,5823	sealed	1, 2
10T030K1	80	Titanium	50,8	325	0,6212	sealed	2
10T030K3	80	Titanium	50,8	325	0,5275	sealed	1, 2
10T040K1	80	Titanium	50,8	425	0,5515	sealed	2
10T040K3	80	Titanium	50,8	425	0,4871	sealed	1, 2
10T050K1	80	Titanium	50,8	525	0,5095	sealed	2
10T050K3	80	Titanium	50,8	525	0,4574	sealed	1, 2
10T060K1	80	Titanium	50,8	625	0,4632	sealed	2
10T060K3	80	Titanium	50,8	625	0,4209	sealed	1, 2
10T124K1	100	Titanium	50,8	265	0,8299	sealed	2
10T124K3	100	Titanium	50,8	265	0,7006	sealed	1, 2
10T130K1	100	Titanium	50,8	325	0,7617	sealed	2
10T130K3	100	Titanium	50,8	325	0,6594	sealed	1, 2
10T140K1	100	Titanium	50,8	425	0,6779	sealed	2
10T140K3	100	Titanium	50,8	425	0,6075	sealed	1, 2
10T150K1	100	Titanium	50,8	525	0,6321	sealed	2
10T150K3	100	Titanium	50,8	525	0,5775	sealed	1, 2
Floats for ITA-11 and ITA-11.0 (PN160/1500 lbs)							
11V324K2	160	316L	46	265	0,7736	vented	
11T330K2	160	Titanium	46	325	0,4901	vented	1
11T018K1	130	Titanium	45	205	1,0185	sealed	1
11T018K3	130	Titanium	45	205	0,8455	sealed	1,2
11T024K1	130	Titanium	45	265	0,8600	sealed	1
11T024K3	130	Titanium	45	265	0,7450	sealed	1,2
11T030K1	130	Titanium	45	325	0,7822	sealed	1
11T030K3	130	Titanium	45	325	0,6949	sealed	1,2
11T040K1	130	Titanium	45	425	0,7028	sealed	1
11T040K3	130	Titanium	45	425	0,6391	sealed	1,2
11T050K1	130	Titanium	45	525	0,6587	sealed	1
11T050K3	150	Titanium	45	525	0,6106	sealed	1,2
11T124K3	150	Titanium	46	265	0,7324	sealed	1
11T130K3	150	Titanium	46	325	0,7042	sealed	1,2
11T140K3	150	Titanium	46	425	0,6164	sealed	1
11T150K3	150	Titanium	46	525	0,6008	sealed	1,2

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Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description						
	Spare Floats						
	Pressure [bar]	Material	Diameter [mm]	Length [mm]	min. density [kg/dm ³]	Type:	Note:
Floats for ITA-11 and ITA-11.0 (PN160/1500 lbs) (Continuation)							
11T230K1	160	Titanium	42	325	0,8871	sealed	2
11T230K3	160	Titanium	42	325	0,7613	sealed	1, 2
11T240K1	160	Titanium	42	425	0,7832	sealed	2
11T240K3	160	Titanium	42	425	0,6934	sealed	1, 2
11T250K1	160	Titanium	42	525	0,7268	sealed	2
11T250K3	160	Titanium	42	525	0,6571	sealed	1, 2
Floats for ITA-12 and ITA-12.0 (PN250/1500 lbs)							
12V324K3	250	316L	46	265	0,7736	vented	
12T324K3	250	Titanium	46	265	0,5526	vented	1, 2
12T218K1	250	Titanium	42	205	1,2085	sealed	2
12T218K3	250	Titanium	42	205	0,9659	sealed	1, 2
12T224K1	250	Titanium	42	265	1,0396	sealed	2
12T224K3	250	Titanium	42	265	0,9659	sealed	1, 2
12T230K1	250	Titanium	42	325	0,9250	sealed	2
12T230K3	250	Titanium	42	325	0,7978	sealed	1, 2
12T240K1	250	Titanium	42	425	0,8304	sealed	2
12T240K3	250	Titanium	42	425	0,7394	sealed	1, 2
12T124K3	250	Titanium	38	265	0,8944	sealed	2
12T130K3	250	Titanium	38	325	0,8281	sealed	1, 2
12T250K1	250	Titanium	42	525	0,7763	sealed	2
12T250K3	250	Titanium	42	525	0,7055	sealed	1, 2
Floats for ITA-13 and ITA-13.0 (PN320/2500 lbs)							
13V330K3	320	316L	38	325	0,7269	vented	2
13T324K3	320	Titanium	38	265	0,5366	sealed	1, 2
13T024K3	320	Titanium	38	265	0,8985	sealed	1, 2
13T330K3	320	Titanium	38	325	0,5032	vented	1, 2
13T040K3	320	Titanium	38	425	0,7582	sealed	1, 2

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Mag. Level Gauge type ITA

Equipment

4.12 Spare Parts

Code	Description	
	Spare parts	
	Description	Material
E01	Indication Rail, max. oper. temp. 100 °C	Markolon
E02	Indication Rail, max. oper. temp. 400 °C	Aluminium
E03	Indication Rail, max. oper. temp. 400 °C	1.4301
E04	Gasket for ITA-3...ITA-7, max oper. temp. 100 °C	PTFE
E05	Gasket for ITA-3...ITA-7, max oper. temp. 400 °C	Klingersil
E06	Spiral wound or comb profiled gasket for ITA7...ITA11, max oper. Temp. 400 °C	1.4571
E07	spiral wound or comb profiled gasket for ITA12...ITA13, max oper. Temp. 400 °C	1.4571
E08	Gaskets for all mag. level gauges made from plastics	Viton
E09	Clamp for indication rails	VA
E10	Gaskets for vent-/drain plug R1/2"	Copper
E11		PTFE
E12		Soft Iron

General Documentation

Code	Description
D001	Certificate of Conformity
D003	Drawings for special types (2D, pdf-file)
D003.1	Drawings for special types (3D, step-file)
D004	Certificate of origin
D005	Certificate of origin by German Chamber of Commerce
D006	Legalised by Embassy of recipient
D007	Standard QA-Plan
D008	Inspection certificate by IA QA/QM
D009	QA-Manual
D009a	Calibration certificate
D009b	Legalised by Embassy of recipient

Orderwise Documentation

Code	Description
D010	Production schedule
D011	Manufacturing Progress Status Report
D012	Test Procedures (Covering Manufacturing)
D013	Welding Procedures (WPS, PQR), Standard material
D014	Welding Procedures (WPS, PQR), Special material

Mag. Level Gauge type ITA

ITA

5. Documentation

Material Certificates	
Code	Description
D015	EN10204-2.1, Declaration of Compliance with the order
D015.1	EN 10204:2004-2.2, Factory Certificate - wetted parts
D016	EN 10204:2004-3.1, for ITA-3 to ITA-6, Acceptance Test Certificate – Material of wetted parts (please advise if cast marking for pressure retaining parts required) Cast marking of pressure retaining parts
D016a	for special material (ITA3 to ITA-6) Cast marking of pressure retaining parts
D017	EN 10204:2004-3.1, for ITA-7 to ITA-13 Acceptance Test Certificate – Material of wetted parts (please advise if cast marking for pressure retaining parts required) Cast marking of pressure retaining parts
D017a	for special material (ITA3 to ITA-6) Cast marking of pressure retaining parts
D018	EN 10204:2004-3.2 Acceptance Test Certificate – Material of wetted parts incl. restamping certificate

CE Declaration of Conformity acc. PED 2014/68/EU	
Code	Description
D019	Declaration of Conformity 2014/68/EU “sound engineering practice (SEP)”
D020	Declaration of Conformity 2014/68/EU Category I, II und III acc. Module H
D022	Declaration of Conformity 2014/68/EU (PED) Category IV acc. to Module G. Design examination and acceptance by notified body. (only <u>with</u> EN10204 material certificates)

Inspection and Testing	
Code	Description
D023	Hydr. pressure with water test incl. test certificate
D024	Declaration of Conformity 2014/68/EU (PED) Category IV acc. to Module G. Design examination and acceptance by notified body. (only <u>with</u> EN10204 material certificates), for Standard ITA
D025	Declaration of Conformity 2014/68/EU (PED) Category IV acc. to Module G. Design examination and acceptance by notified body. (only <u>with</u> EN10204 material certificates), for Special Constructed ITA
D026	Radiographic Examination Of Welds (Only Buttwelds) acc. DIN EN ISO 17636-1 test class B (film)
D023.1	Radiographic Examination Of Welds (Only Buttwelds) acc. ASME Sec. VIII Div. 1 (film)

Mag. Level Gauge type ITA

ITA

5. Documentation

<i>Inspection and Testing (Continuation)</i>	
Code	Description
D027	Dye penetrant Examination Of Welds acc. DIN EN ISO 3452-1:2013
D27.1	Dyepenetrant Examination Of Welds acc. ASME Sec. VIII
D028	Hardness test acc. NACE MR01-75 , incl. NACE cert. of conformity (only with EN10204-3.1 material certificates)
D029	Weight Certificate (for all units of an order)
D030	PMI-Test (XRF), internal procedure, wetted metallic stainless steel parts, Acceptance Test Certificate
D031	Ferrite measurement of the weld seams
D032	Endoscopy (weldings inside) + Photo/Video

<i>Certificates for Electronic Equipment</i>	
Code	Description
D033	Standard wiring plans and data sheets
D034	Declaration of conformity 2014/34/EU (ATEX)

General notes:

The standard documentation mentioned in our quotations and order acknowledgements consist of:

1 off Installation and Operation Manual (IOM) (Hard copy)

CONTACT

DO YOU NEED SUPPORT?

Are you searching for solutions regarding level and flow measurement?

Do you search for special accessories for your metering point?

Do you need support regarding calculation or design of your special application?

Please contact us! Intra-Automation is not just manufacturer and supplier of hardware, we are also

THE EXPERT IN LEVEL AND FLOW

and are willing to share our knowledge on request.



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INTRA-AUTOMATION



MESS- UND REGELINSTRUMENTE / MEASUREMENT AND CONTROL



Since its founding in 1977, Intra-Automation GmbH focused its corporate activities on measurement and control systems for flow, level, pressure, absolute pressure and differential pressure. Our mag. level gauges ITA and our flow sensors Itabar were the locomotives for the successful development of Intra-Automation GmbH.

Over the years, our product range has been extended by devices for flow correction and ultrasonic measurement as well as auxiliary equipment for flow and level. In a further step, the core competences "differential pressure flow measurement" and "bypass level measurement" have been strengthened by broadening the product line.

Today, Intra-products enjoy a good reputation in more than 72 countries and many industries all around the world, including chemical and pharmaceutical industry, the oil and gas sector, shipbuilding, machinery and plant construction, the food and beverage industry, water treatment as well as environmental engineering.

Our product range includes instruments for level measurement and control for temperatures up to 400°C and a pressure range up to PN320 as well as differential pressure measuring instruments up to 1200°C and up to PN400.

A continuous quality management according to DIN EN ISO 9001 and constant development guarantee recognized quality and reliability as well as reproducible parameters for all products.

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