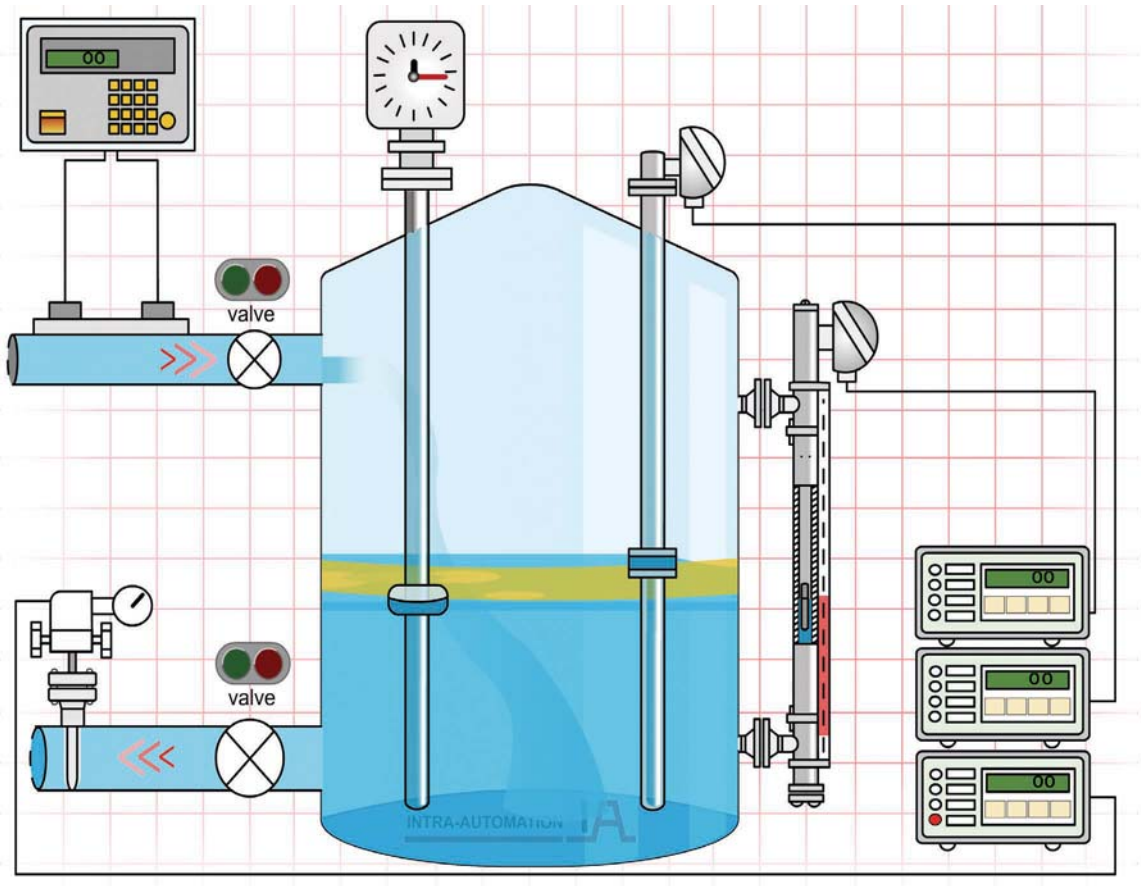
INTRA-AUTOMATION

The Level and Flow Specialist



Measuring instruments successfully in use in 55 different countries since 1977.

Intra-Automation GmbH
Product Overview
Printing 2009
subject to technical changes and misprints

IntraSonic Clamp-on Ultrasonic Flow Meter

Measurement of the volume flow of liquids in closed pipes using the direct transit time measuring principle.

Physical values:
- Volume flow in pipes ranging from 1/2” to 354” outside diameter
- Velocity of fluid
- Speed of sound of fluid
- Acoustical damping of fluid

Advantages of the clamp-on sensors:
- measurement, maintenance, and exchange without breakdown
- no sawing, boring or welding of the pipe is necessary
- simple and fast to install and dismantle
- low cost alternative for accuracy flow measurement in large pipes and high pressure applications

Measurement specifications:
- Measuring accuracy (standard): ±1 to ±3 % of the measured value, depending on upstream and downstream pipe running
- Detection limit: ±0.03 f/s

Wall thickness sensor:
- Measuring range 3 – 40 mm
- Min. outside pipe diameter 80 mm
- Accurancy ±0,1 mm

IS200-P: Design for portable application
It is a low cost and simple device for measuring flow at different measuring points.
Complete portable flow measurement system featuring:
- one channel ultrasonic transmitter with battery and charger
- ultrasonic transducers
- all fitting assemblies, rails and other accessories included

IS200-S: Design for the stationary application
(ATEX EExi / EExd certification available)
Complete portable flow measurement system featuring:
- one- or two-channel transmitter
- ultrasonic transducers
- all fitting assemblies, rails and other accessories included

fig.1: IS200-S

fig.2: IS200-P

fig.3: IS200 clamp-on rails

Itabar-Flow-Sensors

The Itabar flow sensors make it possible to measure the movement of gases, steam and liquids.

The sensor is distinguished by the following major engineering and applications features:

- Suitable for measuring the flow of liquid and gaseous media
- Pipe diameters from 15 to 12.000 mm
- Materials: 316L / TP317LN / Hastelloy / Inconnel/ Titan / Monel / Duplex / 314 / PVDF / A335 Gr.P 1 / A335 Gr.P 11 / A335 Gr.P 22 / A335 Gr. P91
- Low assembly costs thanks to simple installation concept
- Excellent long-term accuracy
- Tested for suitability and approved for use in plants requiring certification as per editions 13 and 17 of the Federal Pollution Protection Act and German Federal Air Quality Maintenance Standards; Inspection Report No. 936/808008 + 936/8060114, issued by “TÜV Rheinland” Technical Inspectorate
- All pressure ranges
- Reduced pressure losses in comparison with orifices plates (energy savings)
- No moving parts
- Existing pipe does not need to be cut
- Accuracy ±1 % of measured value
- The measurement converter can be mounted directly, eliminating threaded fittings and pressure tap piping
- Flo Tap models can be installed and removed, for cleaning i.e., without interrupting operations
- Insensitively to water condensation and contamination
- Measurement in both directions possible
- Operating temperatures: -100 °C to +1200 °C (-148 °F to +2192 °F)
- Operating pressures: 0 to 420 bar (up to 6091 PSI)
- Volumetric flue gas measurement for stack gas scrubber plants; model IBF-100 sensors need not be removed from the stack for cleaning; flue diameter up to 12,000 mm (472,44 inch)
- Pipe can be round or angular

fig.1: Itabar

Itabar-Flow-Sensors Type: IBF-100 Stack Gas Measurement

Special design for stack gas volumetric measurement

The IBF-100 flow sensor was developed especially for stack gas measurements. This flow sensor is engineered to be accessible from both ends so that mechanical cleaning can be undertaken if necessary without having to withdraw the sensor from the sleeve or the stack. This design offers major benefits at pipe diameters of 600 mm (23,62 inch) and more.

German Federal Air Quality Maintenance Standards
Tested for suitability and approved for use in plants requiring certifiction as per Ed. 13 and 17 of the Federal Pollution
Protection Act, Inspection Report No. 936/808008, issued by the TÜV Rheinland Technical Inspectorate.

Itabar-Flow-Sensors Type: IBFD

Version for saturated steam and superheated steam

ITABAR type: IBFD flow sensors for saturated steam and superheated steam have proven their qualities in all areas of power generation and industrial and process technologies. In order to guarantee the greatest possible operational safety, ITABAR sensors are manufactured and tested in accordance with the preassure-device-guidelines and/or the ASME Boiler & Pressure Vessels Code.

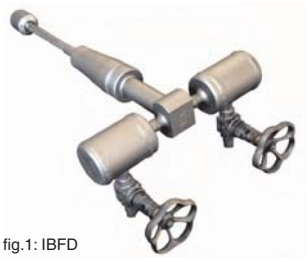


fig.1: IBFD

Special features:
- Simple assembly; existing pipe does not need to be cut.
- With local differential pressure display or electr. differential pressure transmitter for telemonitoring the flow values
- Extremely low persistent pressure loss / lower energy costs (approx. 10 % of differential pressure)
- High long-term accuracy as these models are virtually wear-free
- TÜV Cert HP0 (TRB200), TRD 110
- PED 97/23/EG

Technical specifications:
- Standard materials: 316L / A335 Gr. P1 / A335 Gr. P11 / A335 Gr. P22 / A335 Gr. P31
- Pipe diameters:
- 40 - 100 mm (IBFD-20 / 21)
- 100 - 600 mm (IBFD-25 / 26 / 35 / 36, HT / IBFD-HTG)
- Operating conditions IBFD-HT / HTG:160 bar at 590 °C (2320 PSI at 1094 °F)
- Accuracy: ±1 % of flow
- Repeatability: ±0,1 %
- Flanged version (IBFD / IBFD-HT)
- Welded version (IBFD-HTG)
- Flange-mounted condensate pots are available with a combination shut-off-valve and condensate pot

Air Purge Unit LSP compact Type EJG

The Air Purge Unit is distinguished by the following major engineering and applications features:

- easy handling, mounting
- easy installation (small number of components)
- easy triggering

In order to achieve an optimal measurement result in the case of flow measurement of impure media, until now, the flow sensor had to be pulled out and cleaned in repeated time intervals or as a second option a more complicated air purge unit had to be installed.

The Air Purge Unit EJG-compact is very trouble-free and easy to install because of its compact construction (small number of components – see picture).
Rendering possible the avoidance of complicated control panel assembly and the reduction of possible stock keeping of spare parts.

The EJG-compact basically is a 2/2-way directly controlled valve type. That is why the EJG-compact can be triggered by the customer through relais or SPS.

Furthermore, the EJG triggering can be realized through the according option of the Digiflow (page20). Then the purge cycle time, clean time and settle time can be freely programmed according to the process. Simultaneously the Digiflow saves the last measured value prior to the air purging.

fig.1: Air Purge Unit

Orifice Assemblies

Orifice Plate SOP
- Suitable for universal flow conditions
- Low cost & high reliability

fig.1: SOP

Orifice Plate with ring SOR
- Used for flow measurement of small and medium sized pipes
- For low pressure only

fig.2: SOR

Orifice plate with integral block SOB
- Used for high pressure and high temperature
- This type is easily removable and interchangeable
- Calibrated bore with burr free sharp edge

fig.3: SOB

Ring joint type orifice plate SOJ
- This Orifice plate is easily removable and interchangeable
- The calibrated bore with it burr free sharp edge is suitable for a fluid with high pressure & high temperature

fig.4: SOJ

Orifice Flange Assemblies SOF
- Used in conjunction with orifice plates
- Suitable for almost all fluid conditions on primary differential devices

fig.5: SOP

Sight Glass

Flapper Sight Glass
- Used for observing the state of fluid flow depending on opening & closing of the flapper on fluid flow

fig.1: Flapper Sight Glass

Ball Sight Glass
- Used for observing the fluid flow of common flow velocity by the motion of balls within the screen

fig.2: Ball Sight Glass

Ring ball sight glass
- Used for observing the fluid flow with rapid flow velocity by the motion of balls within the rigid ring

fig.3: Ring ball sight glass

Lantern Sight Glass
- Used for observing the state of fluid flow for directions and it can be used as a calibration port

fig.4: Lantern Sight Glass

High Pressure Sight Glass
- Used for high pressure & high temperature

fig.5: High Pressure Sight Glass

All the above items are available in C.S., SUS, etc. Others are available on request on customers.

Flow-Sensors based on the differential pressure prinzipal

Integral Orifice
- Suitable for measuring fluid of small bore
- High accuracy
- Combination with differential pressure transmitter
- Easy installation as well as simple maintenance

fig.1: Integral Orifice

Wedge Tube
Suitable for a wide reynolds range of flow measurement, for measuring clean and non-clean fluids such as slurries fluids. With shorter length of straight pipe for upstream & downstream compared to other fluid meter using differential pressure flow meter with excellent repeatability and accuracy. Wedge Tube can be manufactured according to end user‘s specification.

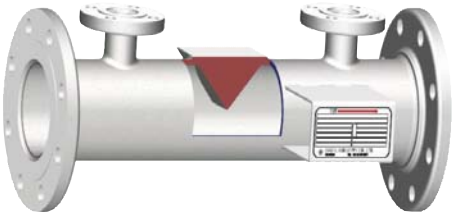


fig.2: Wedge Tube

Venturi with flanged process connection
- Used for measuring slurry fluid, solidified liquids at low temperature
- Satueated or superheated

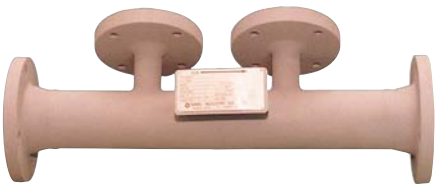


fig.3: Venturi with flanged process connection

Cone Flowmeter
- The new concept of flow measurement by differential pressure theory it eliminates weak points by orifice plate & Vortex FlowMeter
- Turn down ratio 1 to 10

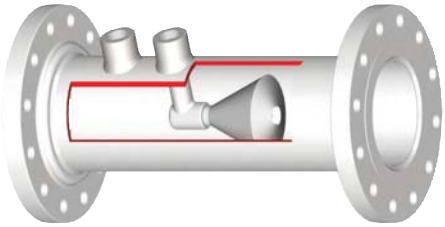


fig.4: V-Cone Flowmeter

Venturi
Used for measurement of flow when is important to keep the permanent net pressure loss at a minimum
Known for a long life span

fig.5: Venturi

Flow-Nozzles
Flow nozzles are custom designed and produced. Compared with the venturi tube, the flow nozzle is cheaper, whereby the pressure recovery is not as high. Similar to venturi tubes, flow nozzles are maintenance free.

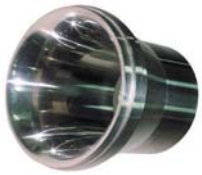


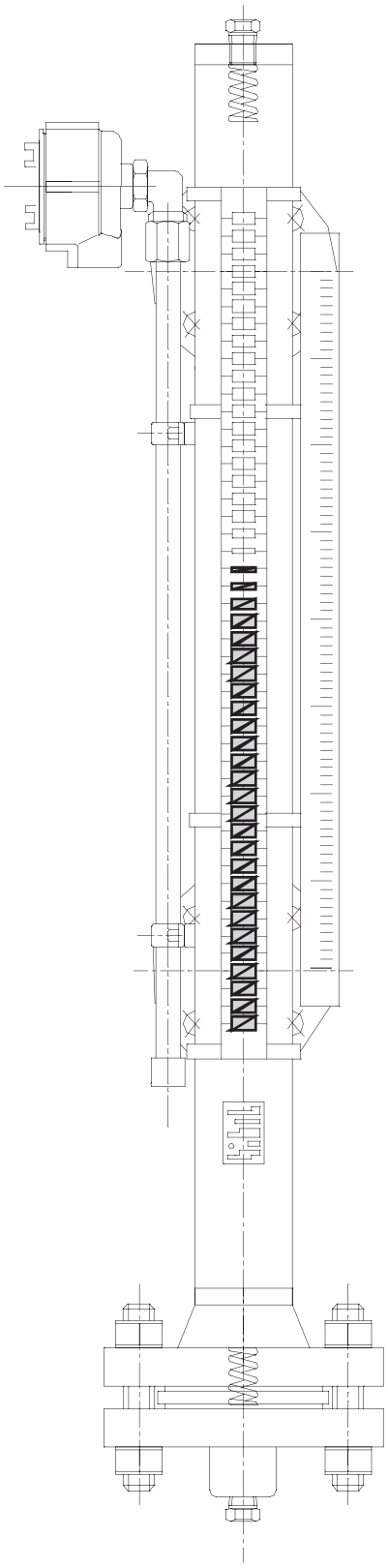
fig.6: Flow-Nozzles

The above items are available in Carbon steel, Stainless steel & Alloy steel and Titanium. Others are available on customer’s request.

Magnetically Controlled Fill Level Indicators ITA

Fill level gauges incorporating magnetic indicators are used for the following fill level measurement tasks:

- Indication of the liquid level for corrosive, toxic or flammable media with separation between measurement and display compartments
- Magnetic transmission of the liquid level from the vessel to the gauge is continuous and resistant to vibration
- Can be used to measure levels both in atmospheric and pressurized vessels
- Perfect readability of the display elements even at greater distances and after several years, since there is no clouding by product contamination resulting from exposure to ultraviolet light
- Simple, unbreakable and a no-maintenance design
- Great reliability even at high temperatures and pressures
- Alarm contacts can be attached at any point along the gauge
- Measuring scale of the display can be set at customer's request for volume or height
- Floats without gas pre-load as of a minimum density of 0,35 kg/dm³
- Maximum process pressure for sealed floats: 320 bar; at higher pressures the float is provided with pressure relief (not to be used for condensing media)
- Separation of the measurement and display compartments eliminates the hazards associated with glass tube breakage
- The float principle minimizes the influence which changes in density have on measurement accuracy
- Display of fill level
- Monitoring the extreme fill level with alarm contacts (explosion-proof version available)
- Transfer of the fill level using measured value transducers (4 - 20 mA Hart / Profibus PA) to electrical indicator units (explosion-proof version available)
- Interface level measurement



Magnetically Controlled Fill Level Indicators ITA

Overview Standard Designs:
Liquid Level Indicators for low and medium pressures, series ITA-3/6/7

- Components in contact with the media are made of corrosion-resistant stainless steel (316L) as standard equipment
- Pressure ranges PN 16, PN 40, PN 64 / ANSI 150lb, 300lb, 400lb, 600lb
- DIN or ANSI connector flanges
- Float design matched exactly to the operating conditions
- Versions up to 12 m long (in two sections)
- Special materials for special application parameters:
- Titanium, Hastelloy C4, Inconel 625, TP 317 LN, Monel
- PTFE lining (16 bar / 232 PSI version only)
- Accessories drain and vent flanges, valves, reducers etc.

-Types: ITA-3.0/6.0/7.0 with carbon steel flanges

fig.1: ITA-3

Liquid Level Indicators made of plastic – Type ITA-8

- It is hardly possible to imagine pipe and vessel engineering without the use of modern plastics
- In utility and waste water applications and when handling corrosive media, liquid level gauges made of plastic do away with such costly fixes like metal tube linings and ceramic or glass tubes
- Materials: PVC (polyvinyl chloride), PP (Polypropylene), PVDF (polyvinyldene fluoride)
- Connection flanges from 15 mm / 6 bar (87 PSI) to 32 mm / 6 bar (87 PSI)

Liquid Level Indicators – Power plant technique ITA-10/11/12/13

- Applications in the chemical industry, industrial processes and offshore operations
- Sealed float up to 320 bar (4641 PSI)
- Minimum operating density 0.42 kg / dm³
- Special materials for special application conditions: Titanium, Hastelloy C4, Inconel 825, 1.4539 alloyed steel
- Pressure range from PN100, PN160, PN250, PN320
- DIN or ANSI standard connector flanges
- Accessories: drain and vent flanges, valves, reducers etc.

Indication Rails:

- Aluminium and stainless steel Indication rails are for media up to 752 °F
- Makrolon Indication rails are for media up to 248 °F

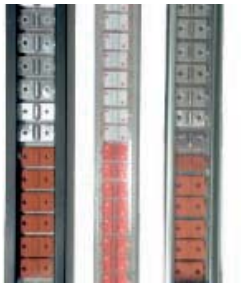


fig.2: Indication Rails

Switches and alarm contacts:

- Attached with a pipe clamp for positioning at any desired height
- Connection via 3-wire cable or terminals in the housing
- SPDP contact can be wired for neither NC or No function
- Explosion-proof (EExi / EExd)
- up to +725 °F measurement temperature
- various types; changeover contact, proximity switch

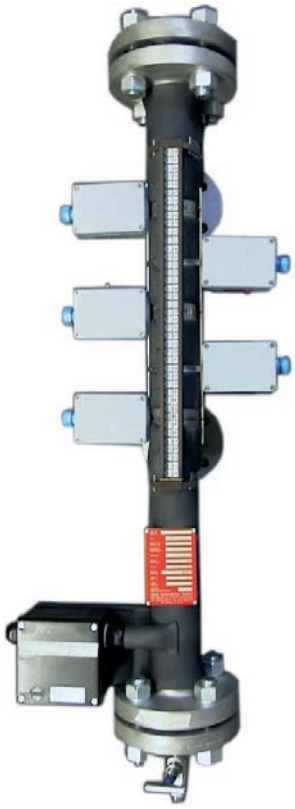


fig.3: ITA-3 with heating jacket and NI-Ex Switch

Magnetically Controlled Fill Level Indicators ITA

Special Designs:
- Two-section version, at customer's request or at measurement lenght or more than 6 m
- Steam jacket with treaded or flanged connectors, to heat the indicator with steam e.g. when handling viscous media
- Liquid level indicator with Armaflex insulation. Dependable insulation in a range from -328 to +221 °F. Can be used in refrigeration plants, for ammonia.
- PTFE-lined for use with corrosive media
- German Lloyd, DNV, Lloyds Register
- Overfill monitor for containers e.g. used to store flammable and non-flammable, water-polluting liquids
- ITA cryogenic version for refrigerants
- Special versions to suit requirements of customer operations

Supplementary equipment:
- Liquid heating jacket to protect against frost when used outdoors
- Vent and drain valves for threaded or flanged attachment
- Measurement scales with graduations as per customer's specifications
- Ceramic insulation

Approvals / certificates:
- Material certificates 3.1 as per DIN EN 10204
- General construction surveillance approval as per Article 19 of the Water Resources Management Act (WHG) and Article 12 of the Flammable Liquids code (VbF) Approved for Zone 0
- Prototype-inspected water fill regulator, certificate VdTÜV / WR91-352
- German Lloyd
- X-ray inspection as per DIN 54111, Part 1
- Dye penetrant tests as per DIN 54152
- NACE approval; Technical Rules for pressure Vessels; design pressure testing and acceptance by the TÜV Technical Inspectorate
- Pressure Equipment Directive PED
- IBR-Certificate available
- Explosion-proof version available

Guided Wave Radar

Intra Automation combines the principle of conventional magnet flap indicator type ITA with the guided wave radar level transmitter for redundant measurement.

Features:
- Measuring lengths up to 18 m (59.06 ft)
- Operation pressure up to 320 bar (4641.2 psi)
- Operation temperature up to 752 °F)
- Very high accuracy (mm)
- Independent Installation regardless heater coils or agitators in the tank
- Insensitively to process conditions such as vibrations or extreme steam formation
- To be used in critical applications
- Redundant measurement of the actual level
- Precise visual measurement with highly exact sensors
- Hard, Profi BUS Pa or Foundation Fieldbus available
- On site Digital Display available
- explosion-proof version available (EEx D; EEx ia)

fig.1: ITA-10 with Radar

Maglink Liquid Level Measurement System for Tanks

The „MAGLINK“ liquid level measurement system is designed for use with pressurized tanks or those open to the atmosphere, particularly in the chemical industry, where especially difficult operating conditions could prevail in regard to corrosion, temperature and pressure. All parts which are in contact with the medium being measured are made of rust- and acid-resistant steel or special materials. Which allows these devices to be used in various industries like the chemical, foods, petroleum processing and marine industries (with PTB National Physical Testing Laboratories at Braunschweig and German Lloyd underwriter's certification), to include acids, liquefied petroleum gas, etc. The magnetic link between the float and the interior magnet is so stable that even rapid changes of the fluid level do not influence the accuracy of the level measurement.

fig.1: Maglink

Design features:
- pressure- and vacuum-tight system
- HIGH ACCURACY (linear transmission)
- corrosion-resistant materials
- no calibration needed
- Option for pneumatic of electrical remote display scale
- can be read at eye level
- easy legibility with the 10" diam. direct display scale
- Dual-pointer-system (standard)
- Mechanical operation (explosion proof design/ATEX optional)
- Undisturbed by foam formation
- simple to use and maintain
- interface level measurement
- mounted on top of the tank; optional display at the side of the tank

Materials:
Guide Tube and Mounting Flange:
- rust- and acid resistant steel (standard: 316L alloy)
- PVDF; PP; PVC

Float:
- rust- and acid resistant steel (standard: 316L alloy)
- Polypropylene PP
- PVC
- PVDF
- Monel
- Glass
- Halar-coated stainless steel (316L)

Housing:
- Die-cast painted aluminium housing (standard)
- 316L steel alloy

Scale Window:
- Glass
- Makrolon

Mounting flange:
- 2" 150# Standard RF flange as per ANSI B 16.5 or DIN 2627, 50 mm diam. / 40 bar nom. others are available on customers request

Liquid Level Gauges

Tubular Level Gauge SBG-1
- Used for observing the fluid level
- For low temperature & low pressure

Reflex Level Gauge SRG-1,2,3,4
- Used for observing the level of various liquids by using the reflection of light
- For high pressure & high temperature
- Not suitable for steam lines

Transparent Level Gauge STG-1,2,3,4
- Used for observing the fluid level
- For high pressure & high temperature
- Especially for steam line through transmission of light

Illuminator Level Gauge STG-IL
- Used for observing the fluid level in a dim place or at night
- Available in explosion-proof or weather-proof. (Explosion-Proof: KOSHA I Exd II B + H2 T5 & CENELEC / EExd II B + H2 T4. IP66; weather-proof)

Flat Self-Closing Level Gauge for Marine SRG-1SM
- Used for observing the fluid level of oil tank on ships and vessels
- The light weight is specially designed for marine use

Special design:
- Large Chamber Design (SRLG, STLG) suitable for high viscosity & high specific gravity
- Non-frosting Design (SRNG, STNG) used for minus degrees
- Jacket Type for heating & cooling (SRJG, STJG) used for observing the fluid level by changing it into a state of liquid after heating & cooling it through jacket as per features of fluid

Approvals / certificates:
The following explosion proof certificate are available for the illuminator STG-IL level gage.
FM approval for:
- Division 1 and 2
- Class I, Group B,C,D
- Class II, Group E, F, G
- Class III, Group Type 4

The above items are available in Carbon steel, Stainless steel & Alloy steel and Titanium. Others are available on customer's request.

fig.1: SBG-1

fig.2: SBR-1

fig.3: STG-1

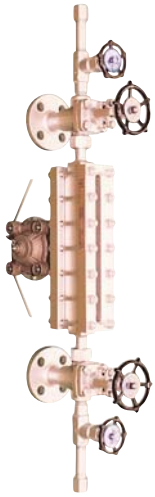


fig.4: STG-IL

fig.5: SRG-1SM

Boiler Steam Water Level Gauge

SEL - G Series is used wherever fluid level has to be monitored, indicated and controlled in a reliable way, especially high temperature and high pressure. Fluid with steam.

1. SEL - G300B
- Used for super high pressure & super high temperature
- Easy to maintain

2. SEL - G200B
- Used for low & medium temperature (<200ºC)

fig.1: SEL - G300B

SEL - S Series is used for detecting and remote indicating of fluid for level control systems.
- Used for alarm & control of the fluid with arranged level points
- For high temperature & pressure fluids
- Level switches can be added and moved freely

fig.2: SEL - G300B

Transparent two-color Level Gauge

Transparent two-color Level Gauge
- Used for observing the fluid level in boiler steam line.

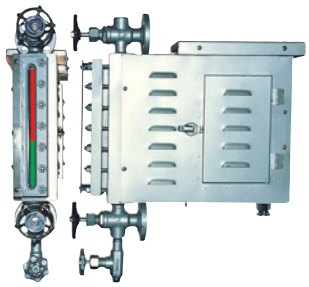


fig.1: SGC-1B.20B

Two colors Multi Port Level Gauge
- Used for steam line of high pressure with 5 or 7 round visual ports & keeping its outstanding safety in boiler steam line.

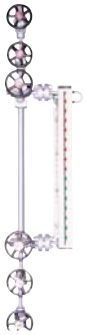


fig.2: SGC-200B

Digital Panel Meter

IntraDigit IA-N11
The programmable digital panel meters IntraDigit IA-N11 are destined for measurement of d.c. voltage, d.c. current, temperature, resistance and other non-electrical quantities converted into an electrical signal.
They have two versions of display field:
- 5 digits of 14 mm high,
- 4 digits of 20 mm high.
In red or green colour.

fig.1: IA-N11

IntraDigit IA-N12
The programmable digital panel meters IntraDigit IA-N12 are designed for measurement of d.c. voltage, d.c. current, temperature, resistance and other non-electrical quantities converted into an electrical signal. Available with RS-485 Interface and analog output

fig.2: IA-N12

IntraDigit IA-N15
The Digital panel meters IntraDigit IA-N15 are designed for temperature, resistance, d.c. voltage and d.c. current measurement.
They have two versions of display field:
- 5 digits of 14 mm high,
- 4 digits of 20 mm high.
In red or green colour.
IA-N15 meters have an output to supply object transducers. The IA-N15Z is destined for the measurement of resistance, a.c. voltage, a.c. current and frequency.

fig.3: IA-N15Z

Further versions are available on request.

Electronic Transmitters INT Series

The INT series measurement transducers are used to measure pressure , absolute pressure or differential pressure.

The output signal, from 4 to 20 mA / Hart, can be transmitted over great distances to controllers, recording devices, display, etc.

These measurement transducers are fitted with water and dust-resistant housings for industrial use.

When intended for use in potentially hazardous atmospheres, the measurement transducers are supplied in an flame-proof-version enclosure (EEx d) or in an intrinsically safe version (EEx ia), as defined in ATEX standards.

A broad selection of materials is available (stainless steel, Hastelloy C, tantalum, Monel), selected to suit the particular operating environment. The main areas of use are in chemicals, petrochemicals, power generation, water purification, the food industry, paper-making and smelting technology.

You can install INT series wherever you need it and calibrate it from a remote point. For our smart transmitter naturally uses the HART-protocol for communications with PCs, handheld communicators and all other process control systems with HART capability.

The communications capability of the HART-“clan” also means that a laptop or PC can be used both for remote calibration and feedback documentation. In other words, the start-of-scale and full-scale values can be set without having to use a reference pressure. Damping and output characteristics (linear/ square root proportion) can be modified in the same way.

The Windows software offers a user interface and numerous help functions.

Not to forget second-to-none reliability and precision resulting mainly from the field-proven measuring principle employed. The use of special materials, such as Hastelloy and tantalum, gives the transmitters a very wide range of application and a long life expectancy.

The measuring error is less than 0,1 % and variations in the ambient temperature only affect measurements by a mere 0,005 % per 10 K. The INT series therefore provides complete accuracy throughout the year.

And not only for one year! Our new transmitters lose only 0,1 % of their functionality a year, which makes them still 99 % functional after ten years and more. So you hardly ever have to check up on them. If long-term stability is what you’re looking for, our INT series is the transmitter you need.

fig.1: INT-433

Microprozessor Controller

IntraCon IA-RE15
The IntraCon IA-RE15 is a versatile temperature or process programmer/controller. It is designed to monitor and control temperature, pressure, flow, level, humidity and others, in a wide range of applications in industries such as food, glass, plastics, ceramics, etc.

fig.1: IA-RE15

IntraCon IA-RE23
The IntraCon IA-RE23 is designed to a constant-valued or a programmed control of temperature and other physical quantities e.g. pressure, humidity, level, flow. The measured value, the set value parameters of the realized program or the output signal are displayed on two displays.

fig.2: IA-RE23

Digital Meter with Bargraph

IntraGraph IA-NA 3,5,6
Digital-analogue meters of IA-NA series with a multicolour bargraph have an universal input destined to measure: temperature, resistance, shunt voltage, standard signals, DC voltage and DC current. They can find application in various industrial fields, e.g. food industry, pumping stations and savage-treatment plants, chemical industry, weather stations, brewing industry and many other fields where they are destined for visualisation of the measured value and evaluation of the monitored manufacturing process change trend. They can also find application in automation systems where programmable controllers are applied.

fig.4: IA-NA5 / IA-NA6

fig.4: IA-NA3

Further versions are available on request.

Flow Computer & Indicator DigiFlow

The Flow Computer & Indicator Series DigiFlow are designed to visualise, control as well as to calculate different physical units.
The backlit two rows alphanumeric display shows the instantaneous readings of flow or totals. The four-key-touchpad is used to program and configure the unit.
The DigiFlow is powered 115/230 V AC 50/60 Hz.
Optionally voltages between 24 and 28 V AC / DC.

The DigiFlow characterised also by features like easy programming, user menus in three languages and a long life span.

There are four different DigiFlows typs available.

DigiFlow 505
Microprocessor controlled Flow Indicator-Integrator

fig.1: DigiFlow505

Functions:
- Full scaleable input signals 4-20 mA analogue or frequency.
- 2 inputs, either two independent measurements, dual range, median of two sensors or two different channels.
- Integration and indication of totals when time depended signals
- Simplified programming
- User menus in three languages
- Control of a sensor-purge-unit
- RS232 Data logging output

Optionally there are up to three scaleable analogue outputs 4-20 mA available.
Furthermore an optionally equipment to control a sensor purge unit can be ordered.
The DigiFlow 505 provides an adjustable voltage between 17V and 19V DC for powering sensors. Maximum current is 100 mA.

DigiFlow 514
Batch Controller-Presentable Counter

fig.2: DigiFlow514

Functions:
- Full scaleable input signals 4-20 mA analogue or frequency
- Display of rank total value, preset quantity, flow rate and accumulated quantity
- Two relay outputs for either slow and fast run or two flow channels.
- Automatic overrun compensation
- Alert at signal fault
- Remote Start-Stop
- Simplified programming
- Three languages user interface
- RS232-protocol-interface

DigiFlow 515
Microprocessor Gas and Steam Flow Computer / Energy Flow computer (Consumption and Enthalpy)

fig.3: DigiFlow515

Functions:
- Indication of flow rate and total of volume, mass and energy
- Temperature and Pressure compensation
- Input signals 4-20 mA analogue or frequency for flow input
- Dual ranged d.p. transmitter input
- Simplified programming
- User menus in three languages
- Control of a sensor-purge-unit
- Data logging output

Flow Computer & Indicator DigiFlow

DigiFlow 516
Microprocessor Heat and Energy Flow Computer (Consumption and specific heat capacity)

fig.4: DigiFlow516

Functions:
- Indication of flow rate, heat and total of volume, heat
- Can be used for energy calculation
- Temperature and pressure compensation
- Input signals 4-20 mA analogue or frequency for flow input
- Dual ranged d.p. transmitter inputs
- Simplified Programming
- User Menus in three languages
- Control of a sensor-purge-unit
- Data logging output
- Includes tables to calculate the specific gravity and the specific heat capacity of the flowing medium based on the first main clause of the thermodynamic.

Valve Manifolds

3-Way-Manifold
This 3 valve manifold is designed for remote / direct mounting to a transmitter. It has two block valves (+ and - lines) and an equalize valve.

5-Way-Manifold
The 5-valve manifold is designed to allow the direct mounting of a transmitter on a differential pressure sensor.
The 5-valve manifold is equipped with two additional vent valves.

INTRA-AUTOMATION IA

Head office in Grevenbroich

Since the founding of Intra-Automation GmbH more than 32 years ago, the corporate activities were focused 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 driving forces for the successful development of Intra-Automation GmbH.

Over the years, we have extended our product portfolio with devices for flow correction and ultrasonic measurement as well as auxiliary equipment for flow and level.

Today, Intra products are well known in more than 55 countries and in many industries around the world, including chemicals and pharmaceuticals and the oil and gas sector, in ship building, machinery and plant construction, in the foodstuffs industry, water treatment and environmental engineering.

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

A continuous quality management according to DIN EN ISO 9001 and frequent redevelopment of our products secure a recognized quality and reliability as well as reproducible parameters for all products.

♦HEAD OFFICE♦

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